

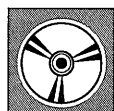
Publications of the U.S. Geological Survey, 1995

U.S. DEPARTMENT OF THE INTERIOR

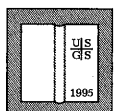
C O N T E N T S



Availability of books and maps by mail	v
Availability of books and maps over the counter	v



CD-ROM's	1
Digital Data Series	1



Books	1
Professional Papers	1
Bulletins	4
Water-Supply Papers	12
Circulars	13
Techniques of Water-Resources Investigations	22
Miscellaneous and Special Books	22
Geographic Names Information System	22
Catalog	22
Yearbook	22



Fact Sheets	23
-------------------	----



Periodicals	24
Earthquakes and Volcanoes	24
Preliminary Determination of Epicenters	24



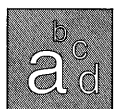
Informal Reports	25
Water-Resources Investigations Reports	25
Open-File Reports	41
Reports Available Only Through U.S. Geological Survey, Information Services	41
Reports Available Only Through Certain U.S. Geological Survey Field Offices	96



Thematic Maps and Charts	96
Geologic Quadrangle Maps	96
Geophysical Investigations Maps	97
Miscellaneous Investigations Series Maps	97
Quaternary Geological Atlas of the United States	101
Circum-Pacific Map Series	101
Coal Investigations Maps	101
Oil and Gas Investigations Charts	101
Miscellaneous Field Studies Maps	102
Special Geologic Map	103
Hydrologic Investigations Atlases	103
Special Map	103



Outside Publications	103
Articles and Reports	103
Abstracts	149



Index	216
Subject and Geographic Index	216
Authors	460

Publications of the U.S. Geological Survey

This catalog is a list of (1) books and maps¹ that were published during 1995 and (2) articles by U.S. Geological Survey personnel in non-U.S. Geological Survey journals and books that came to our attention in 1995; it supplements the permanent catalogs "Publications of the Geological Survey, 1879-1961," "Publications of the Geological Survey, 1962-1970," and "Publications of the U.S. Geological Survey, 1971 through 1981." These permanent catalogs, as well as some others, are available under the conditions indicated below from U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, CO 80225. The catalogs are also available over the counter at any of the U.S. Geological Survey offices that sell books.

Permanent catalogs "Publications of the Geological Survey, 1879-1961" and "Publications of the Geological Survey, 1962-1970" may be purchased in paperback book form for \$6 and as microfiche for \$4.

Permanent catalog "Publications of the U.S. Geological Survey, 1971 through 1981" may be purchased in paperback book form (two volumes, publications listing and index) for \$15 and as a set of microfiche for \$8.

Supplements for 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, and 1994 may be purchased in paperback book form and are priced as follows: 1982, \$3; 1983, \$3; 1984, \$3.25; 1985, \$3.75; 1986, \$4.25; 1987, \$4; 1988, \$3.75; 1989, \$4; 1990, \$4.50; 1991, \$4.25; 1992, \$5; 1993, \$7.50; 1994, \$7.50.

State catalogs currently available may be purchased in paperback book form and are priced as follows: Alaska, \$3.50; Arkansas, \$1; California, \$4.75; Colorado, \$3.50; Florida, \$1; Massachusetts/Rhode Island/Connecticut, \$1; New York, \$1; Oregon, \$1; Pennsylvania/New Jersey, \$2.50; Utah, \$3.

Copies of the monthly catalog "New Publications of the U.S. Geological Survey" may be obtained free on request.

Those wishing to be placed on a free subscription list of the monthly catalog "New Publications of the U.S. Geological Survey" should apply in writing to the U.S. Geological Survey, 569 National Center, Reston, VA 22092.

Prices of available publications, except informal reports released to the open files and through the National Technical Information Service (NTIS), are given in (1) current issues of the monthly catalog "New Publications of the U.S. Geological Survey" and (2) "Price and Availability List of U.S. Geological Survey Publications (year)." Limited quantities of Circulars and publications of general interest are free. Publications listed in this catalog but not found in the price and availability list are no longer available.

Prices of reports released to the open files (including reports prefixed OF and WRI) are given in a listing "U.S. Geological Survey Open-File Reports," updated bimonthly, available in microfiche for \$3.50 from U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, CO 80225.

"New Publications of the U.S. Geological Survey" is also available electronically on the USGS's World Wide Web Home Page, which is located on the Internet at <http://www.usgs.gov>.

¹Individual topographic quadrangle maps are not listed; they are shown on State indexes to topographic maps, which are free on application to U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, CO 80225, and to offices where books and maps are sold over the counter. These indexes also show commercial dealers in each State.

PUBLICATIONS OF THE U.S. GEOLOGICAL SURVEY, 1995

AVAILABILITY OF BOOKS AND MAPS BY MAIL

In ordering books give the series designation and number, such as U.S. Geological Survey Bulletin 738, and the full title. In ordering maps give name or series designation and number, such as Fairfax, Va., 7.5-minute or GQ-851. Include your full address and zip code, plainly printed. Prepayment is required and should be made by check or money order payable to U.S. Department of the Interior - USGS, except for periodicals (see below). Postage stamps are not accepted. Do not send cash. Remittances must be in United States funds.

For prices of publications listed in this catalog, refer to the January through December 1995 issues of the monthly list "New Publications of the U.S. Geological Survey." Prices listed include cost of domestic surface transportation. For transmittal outside the U.S.A. (except to Canada and Mexico), a surcharge of 25 percent of the net bill should be included to cover surface transportation.

Books

Professional Papers, Bulletins, Water-Supply Papers, Techniques of Water-Resources Investigations, Circulars, single copies of Earthquakes and Volcanoes, Preliminary Determination of Epicenters, the annual catalog Publications of the U.S. Geological Survey, and some miscellaneous reports, including some from the foregoing series that have gone out of print at the Superintendent of Documents, are obtainable by mail from

**USGS Information Services
Box 25286, Federal Center
Denver, CO 80225**

On orders of 100 copies or more of the same report to the same address, a 25-percent discount is allowed (limited quantities of Circulars and publications of general interest are usually free of charge). Open-file reports should be ordered according to instructions under appropriate headings in this announcement. Discount does not apply to open-file reports.

Subscriptions to periodicals (Earthquakes and Volcanoes and Preliminary Determination of Epicenters) can be obtained ONLY from the

**Superintendent of Documents, Government Printing Office,
Washington, DC 20402**

Domestic remittance should be made by check or money order (payable to Superintendent of Documents) or charged to VISA or MasterCard. Please add 25 percent for mailing to countries outside the U.S.A. and its possessions.

Maps

Address map mail orders to

**USGS Information Services
Box 25286, Federal Center
Denver, CO 80225**

A \$3.50 handling charge is applicable on each order. Check or money order should be payable to Department of the Interior - USGS.

AVAILABILITY OF BOOKS AND MAPS OVER THE COUNTER

Books and Maps

Book reports and maps of the U.S. Geological Survey are available *over the counter* at the following USGS Earth Science Information Centers (ESIC), all of which are authorized agents of the Superintendent of Documents:

ANCHORAGE, Alaska—Rm. 101, 4230 University Dr.

LAKEWOOD, Colorado—Bldg. 810, Federal Center.

MENLO PARK, California—Bldg. 3, Rm. 3128, 345 Middlefield Rd.

RESTON, Virginia—Rm 1C402, USGS National Center, 12201
Sunrise Valley Dr.

SALT LAKE CITY, Utah—2222 West 2300 South, 2d floor.

SPOKANE, Washington—Rm. 135, U.S. Post Office Bldg., 904 West
Riverside Ave.

WASHINGTON, D.C.—Rm. 2650, Main Interior Bldg., 18th and
C Sts., NW.

Maps Only

Maps may be purchased *over the counter* at the following U.S. Geological Survey offices:

ROLLA, Missouri—1400 Independence Rd.

STENNIS SPACE CENTER, Mississippi—Bldg. 3101

Survey maps are also sold by some 2,800 commercial dealers throughout the United States. Prices charged are generally higher than those shown on this list. Dealers are listed in each "State Catalog of Topographic and Other Published Maps," obtainable free of charge by mail or over the counter from U.S. Geological Survey offices listed on this page.



CD-ROM's

DIGITAL DATA SERIES

The Digital Data Series distributes large amounts of digital data (up to 680MB) through the medium of Compact Disc-Read Only Memory technology. This medium takes advantage of the latest technological advances in digital mass-storage and in the internationally recognized standards (ISO-9660) for CD-ROM's. Full instructions on computer technology required to use each CD-ROM are given with each entry. CD-ROM's in the Digital Data Series are available by mail from: U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, CO 80225. No discounts apply to CD-ROM's.

DDS-0014. National geochronological and natural radioelement data bases, by R. E. Zartman, C. A. Bush and C. C. Abston. 1995. One CD-ROM.

The minimum system requirements to access the data with the software provided on the CD-ROM are as follows: (1) IBM or compatible personal computer, (2) 640K RAM, (3) MS or PC-DOS version 5.0 or later, (4) SVGA graphic card (640x480), (5) SVGA color monitor, (6) Microsoft MSCDEX version 2.1 or later, (7) CD-ROM drive with ISO 9660 software driver, and (8) hard disk drive.

A. National Geochronological Data Base, by R. E. Zartman, C. A. Bush and C. C. Abston.

B. Natural Radioelement Data Base, by C. A. Bush and C. C. Abston.

DDS-0017. NEW MEXICO. Geology and mineral and energy resources, Roswell Resource Area, New Mexico; an interactive computer presentation, by R. R. Tidball and S. B. Bartsch-Winkler. 1995. One CD-ROM.

The program is accessible with any Macintosh II-series (or later) computer having a CD-ROM device complying with the HFS standard. Operating system version 7.0 or later is required to accommodate scaleable fonts. Additional hardware requirements include a color graphics display, and a minimum of 11MB of available disk storage (if the program is to be located on the hard disk).

DDS-0024. HAWAII. Images of Kilauea East Rift Zone eruption, 1983-1993, by T. J. Takahashi, C. C. Abston and C. C. Heliker. 1995. One CD-ROM.

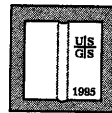
The minimum requirements to access the data with the software provided on this disc are: (1) IBM or compatible personal computer, (2) 640K RAM, (3) MS- or PC-DOS version 5.0 or later, (4) SVGA graphics card (640x480x256 colors), (5) SVGA color monitor, (6) Microsoft MSCDEX version 2.1 or later, (7) CD-ROM drive with ISO 9660 software driver, and (8) hard disk drive.

DDS-0030. 1995 National assessment of United States oil and gas resources; results, methodology, and supporting data, edited by D. L. Gautier, G. L. Dolton, K. I. Takahashi and K. L. Varnes. 1995. One CD-ROM.

This program requires a Macintosh with a 13-inch color monitor and CD-ROM drive or a PC system running Microsoft Windows with an SVGA color monitor and CD-ROM drive. The Macintosh should have at least 8MB of RAM and be running system 7 or greater. The Windows system should have at least 4MB and be running Windows 3.1.

DDS-0031. Profiles of gamma-ray and magnetic data for aerial surveys over parts of the Western United States from longitude 108 to 126 degrees W. and from latitude 34 to 49 degrees N., by J. S. Duval. 1995. One CD-ROM.

This CD-ROM was produced in accordance with the ISO 9660 standard; however, it is intended for use only on DOS-based computer systems. The minimum system requirements to use the data with the software provided on this disc are as follows: (1) IBM or compatible personal computer, (2) 386 or higher processor, (3) 640K RAM (510K available), (4) MS- or PC-DOS version 5.0 or later, (5) SVGA graphics card (640 (col) by 480 (row) by 256 colors), (6) VESA video driver, (7) SVGA color monitor, (8) Microsoft MSCDEX version 2.1 or later, (9) CD-ROM drive with ISO 9660 software driver, (10) hard disk drive, and (11) Microsoft compatible mouse.



BOOKS

PROFESSIONAL PAPERS

Professional Papers are mainly comprehensive scientific reports of wide and lasting interest and importance to professional scientists and engineers. Included are reports on the results of resource studies, and of topographic, hydrologic, and geologic investigations. They also include collections of related papers addressing different aspects of a single scientific topic.

P 1386-B. Antarctica, by Charles Swithinbank. 1988 (1993). p. B1-B278. 2 plates in pocket. (Satellite image atlas of glaciers of the world, edited by R. S. Williams, Jr., and J. G. Ferrigno.) (Reprint.)

The "dry valleys" of Victoria Land, by T. J. Chinn, Ministry of Works and Development, New Zealand. p. B39-B41.

Landsat images of Antarctica, by R. S. Williams, Jr., and J. G. Ferrigno, U.S. Geological Survey. p. B139-B278.

P 1386-C. Greenland, by Anker Weidick, Geological Survey of Greenland. 1995. p. C1-C141. 1 plate in pocket. (Satellite image atlas of glaciers of the world, edited by R. S. Williams, Jr., and J. G. Ferrigno.)

Landsat images of Greenland, by R. S. Williams, Jr., and J. G. Ferrigno, U.S. Geological Survey. p. C94-C101.

P 1402-F. Geochemistry of water in aquifers and confining units of the Northern Great Plains in parts of Montana, North Dakota, South Dakota, and Wyoming, by J. F. Busby, B. A. Kimball, J. S. Downey and K. D. Peter. 1995. p. F1-F146. 2 plates in pocket. (Regional Aquifer-System Analysis; Northern Great Plains.)

P 1406-A. ARIZONA. Summary of the Southwest Alluvial Basins, Regional Aquifer-System Analysis, south-central Arizona and parts of adjacent states, by T. W. Anderson. 1995. p. A1-

2 PUBLICATIONS OF THE U.S. GEOLOGICAL SURVEY, 1995

- A33. (Regional Aquifer-System Analysis; Southwest alluvial basins, Arizona and adjacent states.)
- P 1408-C. IDAHO, OREGON. Streamflow gains and losses in the Snake River and ground-water budgets for the Snake River plain, Idaho and eastern Oregon, by L. C. Kjelstrom. 1995. p. C1-C47. 1 plate in pocket. (Regional Aquifer-System Analysis; Snake River plain, Idaho.)
- P 1410-C. Regional hydrology and simulation of deep ground-water flow in the Southeastern Coastal Plain aquifer system in Mississippi, Alabama, Georgia, and South Carolina, by R. A. Barker and Maribeth Pernik. 1994. p. C1-C87. 10 plates in separate case. (Regional Aquifer-System Analysis; Southeastern Coastal Plain.)
- P 1415-A. CONNECTICUT, NEW YORK, MAINE. Application of surface-geophysical methods to investigations of sand and gravel aquifers in the glaciated Northeastern United States, by F. P. Haeni. 1995. p. A1-A70. (Regional Aquifer-System Analysis; Northeast glacial valleys.)
- P 1453. An album of map projections, by J. P. Snyder, U.S. Geological Survey; and P. M. Voxland, University of Minnesota. 1989 (1994). 249 p. (Reprint)
- P 1525. IDAHO. Geology and mineral resource assessment of the Challis 1°x2° Quadrangle, Idaho, edited by F. S. Fisher and K. M. Johnson, U.S. Geological Survey. 1995. 243 p. 23 plates and Map I-1819 in box. (Supersedes Open-file report 87-480.)
- Introduction, by F. S. Fisher, U.S. Geological Survey. p. 2-3.
- Geologic setting and history of mineralization, by F. S. Fisher, U.S. Geological Survey. p. 4-6.
- Geologic terranes, by F. S. Fisher, U.S. Geological Survey. p. 7-11.
- Proterozoic terrane, by S. W. Hobbs and T. M. Cookro, U.S. Geological Survey. p. 12-17.
- Carbonate terrane, by S. W. Hobbs, U.S. Geological Survey. p. 18-24.
- Black shale terrane, by W. E. Hall and S. W. Hobbs, U.S. Geological Survey. p. 25-35.
- Idaho Batholith terrane, by T. H. Kiilsgaard, U.S. Geological Survey; and E. H. Bennett, Idaho Geological Survey. p. 36-40.
- Challis volcanic terrane, by F. S. Fisher and K. M. Johnson, U.S. Geological Survey. p. 41-43.
- Eocene plutonic terrane, by T. H. Kiilsgaard, U.S. Geological Survey; and E. H. Bennett, Idaho Geological Survey. p. 44-47.
- Alluvial terrane, by T. H. Kiilsgaard and F. S. Fisher, U.S. Geological Survey. p. 48-49.
- Trans-Challis fault system terrane, by T. H. Kiilsgaard and F. S. Fisher, U.S. Geological Survey. p. 50-52.
- Geophysical anomalies, by M. W. Webring and D. R. Mabey, U.S. Geological Survey. p. 53-62.
- Geochemistry, by K. M. Johnson, U.S. Geological Survey. p. 63-78.
- Mineral resources, by F. S. Fisher, U.S. Geological Survey. p. 79-95.
- Precious-metal veins, by F. S. Fisher, T. H. Kiilsgaard, K. M. Johnson, U.S. Geological Survey; and E. H. Bennett, Idaho Geological Survey. p. 96-102.
- Mixed base- and precious-metal veins, by T. H. Kiilsgaard, U.S. Geological Survey; and E. H. Bennett, Idaho Geological Survey. p. 103-107.
- Lead-silver-zinc-antimony-tin veins, by W. E. Hall, U.S. Geological Survey. p. 108-115.
- Fluorspar veins, by F. S. Fisher, K. M. Johnson, and S. W. Hobbs, U.S. Geological Survey. p. 116-118.
- Uranium veins, by K. M. Johnson and T. M. Cookro, U.S. Geological Survey. p. 119-121.
- Tungsten vein and replacement deposits, by T. M. Cookro, S. W. Hobbs, and W. E. Hall, U.S. Geological Survey. p. 122-124.
- Manganese veins, by T. H. Kiilsgaard, U.S. Geological Survey. p. 125.
- Semiprecious-opal veins, by F. S. Fisher, U.S. Geological Survey. p. 126.
- Cretaceous molybdenum stockworks, by W. E. Hall, U.S. Geological Survey. p. 127-130.
- Tertiary molybdenum stockworks, by T. H. Kiilsgaard, U.S. Geological Survey; and E. H. Bennett, Idaho Geological Survey. p. 131-134.
- Precious-metal deposits hosted by high-level rhyolites, by K. M. Johnson and F. S. Fisher, U.S. Geological Survey. p. 135-137.
- Graphite in metamorphic rocks, by T. H. Kiilsgaard, U.S. Geological Survey. p. 138.
- Mica, feldspar, columbite, and rare-mineral pegmatites, by T. H. Kiilsgaard, U.S. Geological Survey. p. 139-140.
- Pegmatites containing piezoelectric quartz crystals, by T. H. Kiilsgaard, U.S. Geological Survey. p. 141.
- Semiprecious gemstones in miarolitic cavities, by E. H. Bennett, Idaho Geological Survey. p. 142.
- Polymetallic skarn deposits, by T. M. Cookro, W. E. Hall, and S. W. Hobbs, U.S. Geological Survey. p. 143-145.
- Rare-earth-mineral deposits in shear zones, by T. M. Cookro, U.S. Geological Survey. p. 146.
- Irregular replacement deposits of base and precious metals, by S. W. Hobbs, F. S. Fisher, and K. M. Johnson, U.S. Geological Survey. p. 147-149.
- Mercury replacement deposits, by B. F. Leonard and T. M. Cookro, U.S. Geological Survey. p. 150-152.
- Zeolite deposits in tuffaceous rocks, by F. S. Fisher and K. M. Johnson, U.S. Geological Survey. p. 153.
- Precious-metal deposits in epiclastic sediments, by F. S. Fisher and K. M. Johnson, U.S. Geological Survey. p. 154-156.

- Precious-metal deposits in volcanic tuffs, by F. S. Fisher and K. M. Johnson, U.S. Geological Survey. p. 157-162.
- Stratabound, stratiform, breccia-controlled fluorspar deposits in carbonate rocks, by S. W. Hobbs, U.S. Geological Survey. p. 163-165.
- Stratiform barite deposits, by W. E. Hall and T. H. Kiilsgaard, U.S. Geological Survey. p. 166.
- Stratiform uranium deposits in sedimentary rocks, by K. M. Johnson and T. M. Cookro, U.S. Geological Survey. p. 167-168.
- Stratabound vanadium deposits, by W. E. Hall, U.S. Geological Survey. p. 169-171.
- Stratabound, syngenetic deposits of base and precious metals in argillite and micritic limestone, by W. E. Hall, U.S. Geological Survey. p. 172-174.
- Stratabound, syngenetic cobalt-copper deposits, by K. M. Johnson, U.S. Geological Survey; and E. H. Bennett, Idaho Geological Survey. p. 175-177.
- Gold placer deposits, by F. S. Fisher and K. M. Johnson, U.S. Geological Survey. p. 178-182.
- Radioactive black-sand placer deposits, by T. H. Kiilsgaard and W. E. Hall, U.S. Geological Survey. p. 183-189.
- Rock products, by F. S. Fisher and S. W. Hobbs, U.S. Geological Survey. p. 190.
- Opalite-type mercury veins, by T. M. Cookro and B. F. Leonard, U.S. Geological Survey. p. 191.
- Uranium in sedimentary rocks in contact zones with granitic rocks, by T. M. Cookro and K. M. Johnson, U.S. Geological Survey. p. 192.
- Vein and replacement alunite deposits, by K. M. Johnson, U.S. Geological Survey. p. 193.
- Silver deposits in caldera-filling lake sediments, by F. S. Fisher and K. M. Johnson, U.S. Geological Survey. p. 194.
- Carlin-type carbonate-replacement gold deposits, by W. E. Hall, T. M. Cookro, and S. W. Hobbs, U.S. Geological Survey. p. 195.
- Stratabound copper-silver deposits in Proterozoic quartzites, by E. H. Bennett, Idaho Geological Survey. p. 196.
- Appendix. Description of map units and tables to accompany Miscellaneous Investigations Series Map I-1819, Geologic map of the Challis 1°x2° Quadrangle, Idaho, compiled by F. S. Fisher, D. H. McIntyre, and K. M. Johnson, U.S. Geological Survey. 39 p.
- P 1528. UTAH. The role of salt in the structural development of central Utah, by I. J. Witkind. 1994. 145 p.
- P 1529. VIRGINIA. Early Paleozoic alkalic and calc-alkalic plutonism and associated contact metamorphism, central Virginia Piedmont, by Louis Pavlides, J. G. Arth, J. F. Sutter, T. W. Stern and Henry Cortesini, Jr. 1994. 147 p. 2 plates in pocket.
- P 1538-E. Geophysical setting of the Reelfoot Rift and relations between rift structures and the New Madrid seismic zone, by T. G. Hildenbrand and J. D. Hendricks. 1995. p. E1-E30. (Investigations of the New Madrid seismic zone; edited by K. M. Shedlock and A. C. Johnston.)
- P 1538-H. A search for paleoliquefaction and evidence bearing on the recurrence behavior of the great 1811-12 New Madrid earthquakes, by S. G. Wesnousky, University of Nevada; and L. M. Leffler, Memphis State University. 1994. p. H1-H42. (Investigations of the New Madrid seismic zone; edited by K. M. Shedlock and A. C. Johnston.)
- P 1538-I. TENNESSEE. Characterization of the Cottonwood Grove and Ridgely faults near Reelfoot Lake, Tennessee, from high-resolution seismic reflection data, by W. J. Stephenson, K. M. Shedlock and J. K. Odum. 1995. p. I1-I10. (Investigations of the New Madrid seismic zone; edited by K. M. Shedlock and A. C. Johnston.)
- P 1538-J. ARKANSAS. Shallow deformation along the Crittenden County fault zone near the southeastern margin of the Reelfoot Rift, northeastern Arkansas, by E. A. Luzietti, Chevron USA Production Co.; L. R. Kanter, University of Memphis; E. S. Schweig III, K. M. Shedlock, U.S. Geological Survey; and R. B. VanArsdale, University of Memphis. 1995. p. J1-J23. (Investigations of the New Madrid seismic zone; edited by K. M. Shedlock and A. C. Johnston.)
- P 1538-L. Gravity of the New Madrid seismic zone; a preliminary study, by V. E. Langenheim. 1995. p. L1-L18. (Investigations of the New Madrid seismic zone; edited by K. M. Shedlock and A. C. Johnston.)
- P 1538-M. Elements of infrastructure and seismic hazard in the central United States, compiled by R. L. Wheeler, B. S. Rhea and A. C. Tarr. 1994. p. M1-M18. 3 plates in separate case. (Investigations of the New Madrid seismic zone; edited by K. M. Shedlock and A. C. Johnston.)
- P 1538-N. Evidence of contemporary and ancient excess fluid pressure in the New Madrid seismic zone of the Reelfoot Rift, central United States, by F. A. McKeown and S. F. Diehl. 1994. p. N1-N24. (Investigations of the New Madrid seismic zone; edited by K. M. Shedlock and A. C. Johnston.)
- P 1538-O. INDIANA. Reflection seismic profiling of the Wabash Valley fault system in the Illinois Basin, by R. M. René, Indiana Geological Survey; and F. L. Stanonis, University of Southern Indiana. 1995. p. O1-O33. (Investigations of the New Madrid seismic zone; edited by K. M. Shedlock and A. C. Johnston.)
- P 1538-P. MISSOURI. High-resolution, shallow, seismic reflection surveys of the Northwest Reelfoot Rift boundary near Marston, Missouri, by J. K. Odum, U.S. Geological Survey; E. A. Luzietti, Chevron USA Production Co.; W. J. Stephenson, K. M. Shedlock, and J. A. Michael, U.S. Geological Survey. 1995. p. P1-P18. (Investigations of the New Madrid seismic zone; edited by K. M. Shedlock and A. C. Johnston.)
- P 1538-Q. ILLINOIS, KENTUCKY. Structure of the Reelfoot-Rough Creek rift system, Fluorspar area fault complex, and Hicks Dome, southern Illinois and western Kentucky; new constraints from regional seismic reflection data, by C. J. Potter, M. B. Goldhaber, U.S. Geological Survey; P. C. Heigold, Illinois State Geological Survey; and J. A. Drahovzal, Kentucky Geological Survey. 1995. p. Q1-Q19. 1 plate in pocket. (Investigations of

4 PUBLICATIONS OF THE U.S. GEOLOGICAL SURVEY, 1995

- the New Madrid seismic zone; edited by K. M. Shedlock and A. C. Johnston.)
- P 1538-R. Geomorphic evidence of deformation in the northern part of the New Madrid seismic zone, by K. F. Boyd and S. A. Schumm, Ayres Associates, Fort Collins, Colorado. 1995. p. R1-R35. (Investigations of the New Madrid seismic zone; edited by K. M. Shedlock and A. C. Johnston.)
- P 1543 A-B. The diatom genus *Actinocyclus* in the Western United States, edited by J. P. Bradbury, U.S. Geological Survey; and W. N. Krebs, Amoco Production Co. 1995. 73 p.
- A. *Actinocyclus* (Bacillariophyta) species from lacustrine Miocene deposits of the Western United States, by J. P. Bradbury, U.S. Geological Survey; and W. N. Krebs, Amoco Production Co. p. 1-47.
- B. Geologic ranges of lacustrine *Actinocyclus* species, Western United States, by W. N. Krebs, Amoco Production Co.; and J. P. Bradbury, U.S. Geological Survey. p. 53-67.
- P 1544. ALASKA. Systematic paleontology of Quaternary ostracode assemblages from the Gulf of Alaska; Part 3, Family Cytheruridae, by E. M. Brouwers. 1994. 68 p. 1 plate in pocket.
- P 1545. ALASKA. Depositional framework and regional correlation of pre-Carboniferous metacarbonate rocks of the Snowden Mountain area, central Brooks Range, Northern Alaska, by J. A. Dumoulin and A. G. Harris. 1994. 66 p.
- P 1547. WASHINGTON. Sedimentology, behavior, and hazards of debris flows at Mount Rainier, Washington, by K. M. Scott, J. W. Vallance and P. T. Pringle. 1995. 56 p.
- P 1549. Origin and character of loesslike silt in the southern Qinghai-Xizang (Tibet) Plateau, China, by T. L. Péwé, Arizona State University; Liu Tungsheng, Academia Sinica, China; R. M. Slatt, Colorado School of Mines; and Li Bingyuan, Academia Sinica. 1995. 55 p.
- P 1554. NEW JERSEY. Evolutionary, biostratigraphic, and taxonomic study of calcareous nannofossils from a continuous Paleocene-Eocene boundary section in New Jersey, by L. M. Bybell and J. M. Self-Trail. 1994. 74 p.
- P 1559. NEVADA. Geochemistry and petrology of Oligocene and Miocene ash-flow tuffs of the southeastern Great Basin, Nevada, by E. A. du Bray. 1995. 62 p.
- P 1561. Paleogeography and the Late Cretaceous of the Western Interior of middle North America; coal distribution and sediment accumulation, by L. N. Roberts and M. A. Kirschbaum. 1995. 115 p. 1 plate in pocket.
- P 1564. ALASKA. Characteristics and petrogenesis of alaskan-type ultramafic-mafic intrusions, Southeastern Alaska, by G. R. Himmelberg, U.S. Geological Survey and University of Missouri; and R. A. Loney, U.S. Geological Survey. 1995. 47 p.
- P 1565-A. NEW JERSEY. Late Proterozoic diabase dikes of the New Jersey Highlands; a remnant of Iapetan rifting in the north-central Appalachians, by R. A. Volkert, New Jersey Geological Survey; and J. H. Puffer, Rutgers University. Prepared in cooperation with the New Jersey Geological Survey. 1995. p. A1-A21. (Geologic studies in New Jersey and eastern Pennsylvania.)
- P 1566. CALIFORNIA. Geochemistry of minor elements in the Monterey Formation, California; seawater chemistry of deposition, by D. Z. Piper and C. M. Isaacs. 1995. 41 p.

BULLETINS

Bulletins contain significant data and interpretations that are of lasting scientific interest but are generally more limited in scope or geographic coverage than Professional Papers. They include the results of resource studies and of geologic and topographic investigations; as well as collections of short papers related to a specific topic.

- B 1589-E. GEORGIA. Genesis and residence times of soil and weathering profiles on residual and transported parent materials in the Pine Mountain area of west-central Georgia, by H. W. Markewich, M. J. Pavich, W. C. Lynn, G. J. Thomas, R. C. Johnson, T. R. Gerald and G. G. Phillips. Prepared in cooperation with the U.S. Department of Agriculture, Soil Conservation Service. 1994. p. E1-E69. (Pedologic studies in the Eastern United States; relations to geology.)
- B 1738-E. OREGON. Mineral resources of the Spaulding Wilderness Study Area, Lake and Harney counties, Oregon, by M. G. Sawlan, H. D. King, Donald Plouff, U.S. Geological Survey; and M. S. Miller, U.S. Bureau of Mines. 1995. p. E1-E18. (Mineral resources of wilderness study areas; south-central Oregon.)
- B 1741-H. OREGON. Mineral resources of the Malheur River-Bluebucket Creek Wilderness Study Area, Harney County, Oregon, by M. G. Sawlan, R. L. Turner, R. C. Jachens, U.S. Geological Survey; T. J. Peters, and R. A. Winters, U.S. Bureau of Mines. 1995. p. H1-H16. (Mineral resources of wilderness study areas; east-central Oregon.)
- B 1808-P. Authigenic albite in a Jurassic alkaline, saline lake deposit, Colorado Plateau; evidence for early diagenetic origin, by N. S. Fishman, C. E. Turner and I. K. Brownfield. 1995. p. P1-P14. (Evolution of sedimentary basins; San Juan Basin.)
- B 1904-T. Archean and early Proterozoic tectonic framework of north-central United States and adjacent Canada, by P. K. Sims. 1995. p. T1-T12. 1 plate in pocket. (Contributions to Precambrian geology of Lake Superior region; edited by P. K. Sims and L. M. H. Carter.)
- B 1904-U. MINNESOTA. Precambrian crustal blocks in Minnesota; neodymium isotope evidence from basement and metasedimentary rocks, by S. R. Hemming, G. N. Hanson, and S. M. McLennan, State University of New York at Stony Brook. 1995. p. U1-U15. (Contributions to Precambrian geology of Lake Superior region; edited by P. K. Sims and L. M. H. Carter.)
- B 1917-S. SOUTH DAKOTA. Fluvial architecture of the Lower Cretaceous Lakota Formation, southwestern flank of the Black Hills uplift, South Dakota, by D. J. Dahlstrom, Barr Engineering Co., Minneapolis; and J. E. Fox, South Dakota School of Mines and Technology. 1995. p. S1-S20. 1 plate in pocket. (Evolution of sedimentary basins; Powder River basin.)
- B 1982. CALIFORNIA. The Owens Valley fault zone, eastern California, and surface faulting associated with the 1872 earthquake, by Sarah Beanland, Institute of Geological and Nuclear

- Sciences, New Zealand; and M. M. Clark, U.S. Geological Survey. 1994. 29 p. 4 plates in pocket.
- B 1988-I. NEVADA. Reconnaissance study of Mississippian siliciclastic sandstones in eastern Nevada, by Hugh McLean. 1995. p. I1-I19. (Evolution of sedimentary basins; eastern Great Basin; H. E. Cook and C. J. Potter, project coordinators.)
- B 1988-K. NEVADA. Summary of chemical analyses and $^{40}\text{Ar}/^{39}\text{Ar}$ age-spectra data for Eocene volcanic rocks from the central part of the Northeast Nevada volcanic field, by W. E. Brooks, C. H. Thorman, L. W. Snee, C. J. Nutt, C. J. Potter and R. F. Dubiel. 1995. p. K1-K33. (Evolution of sedimentary basins; eastern Great Basin; H. E. Cook and C. J. Potter, project coordinators.)
- B 1989-F. MISSOURI, ARKANSAS. Feldspar diagenesis in Cambrian clastic rocks of the southern Ozark Mountains and Reelfoot Rift, southeastern Missouri and northeastern Arkansas; implications for mississippi valley-type ore genesis, by S. F. Diehl and M. B. Goldhaber. 1995. p. F1-F17. (Strategic and critical minerals in the Midcontinent region, United States; edited by W. C. Day and D. E. Lane.)
- B 1989-G. Regional potential of selected Paleozoic carbonate units in the northern Midcontinent for undiscovered mississippi valley-type deposits, by W. P. Pratt. Prepared in cooperation with the Geological Surveys of Arkansas, Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, Oklahoma, and Wisconsin. 1995. p. G1-G14. 3 plates in pocket. (Strategic and critical minerals in the Midcontinent region, United States; edited by W. C. Day and D. E. Lane.)
- B 1995-H,I. CALIFORNIA. Conglomerates of the upper middle Eocene to lower Miocene Sespe Formation along the Santa Ynez Fault; implications for the geologic history of the eastern Santa Maria Basin area, California. Reconnaissance bulk-rock and clay mineralogies of argillaceous Great Valley and Franciscan strata, Santa Maria Basin Province, California, by J. L. Howard, Wayne State University; R. M. Pollastro, Hugh McLean, and L. L. Zink, U.S. Geological Survey. 1995. 50 p. (Evolution of sedimentary basins/onshore oil and gas investigations, Santa Maria Province; edited by M. A. Keller.) (Chapters H and I are issued as a single volume and are not available separately.)
- H. Conglomerates of the upper middle Eocene to lower Miocene Sespe Formation along the Santa Ynez Fault; implications for the geologic history of the eastern Santa Maria Basin area, California, by J. L. Howard, Wayne State University. p. H1-H37.
- I. Reconnaissance bulk-rock and clay mineralogies of argillaceous Great Valley and Franciscan strata, Santa Maria Basin Province, California, by R. M. Pollastro, Hugh McLean, and L. L. Zink, U.S. Geological Survey. p. I1-I13.
- B 1995-J,K. CALIFORNIA. Neogene geohistory analysis of Santa Maria Basin, California, and its relationship to transfer of Central California to the Pacific Plate. Diatom biochronology of the Sisquoc Formation in the Santa Maria Basin, California, and its paleoceanographic and tectonic implications, by P. A. McCrory, U.S. Geological Survey; D. S. Wilson, University of California at Santa Barbara; J. C. Ingle, Jr., Stanford University; R. G. Stanley, U.S. Geological Survey; M. P. Dumont, ARCO Oil and Gas Company; and J. A. Barron, U.S. Geological Survey. 1995. 55 p. (Evolution of sedimentary basins/onshore oil and gas investigations, Santa Maria Province; edited by M. A. Keller.) (Chapters J and K are issued as a single volume and are not available separately.)
- J. Neogene geohistory analysis of Santa Maria Basin, California, and its relationship to transfer of Central California to the Pacific Plate, by P. A. McCrory, U.S. Geological Survey; D. S. Wilson, University of California at Santa Barbara; J. C. Ingle, Jr., Stanford University; and R. G. Stanley, U.S. Geological Survey. p. J1-J38.
- K. Diatom biochronology of the Sisquoc Formation in the Santa Maria Basin, California, and its paleoceanographic and tectonic implications, by M. P. Dumont, ARCO Oil and Gas Company; and J. A. Barron, U.S. Geological Survey. p. K1-K17.
- B 1995-L. CALIFORNIA. Recognition of middle Miocene foraminifers in highly indurated rocks of the Monterey Formation, coastal Santa Maria Province, Central California, by K. L. Finger, Irvine Valley College. 1995. p. L1-L30. (Evolution of sedimentary basins/onshore oil and gas investigations, Santa Maria Province; edited by M. A. Keller.)
- B 2000-H. Carbon dioxide in Mississippian rocks of the Paradox Basin and adjacent areas, Colorado, Utah, New Mexico, and Arizona, by J. A. Cappa, Colorado Geological Survey; and D. D. Rice, U.S. Geological Survey. 1995. p. H1-H21. 7 plates in pocket. (Evolution of sedimentary basins, Paradox Basin; coordinated by A. C. Huffman, Jr.)
- B 2000-J. UTAH. Ground-water flow and migration of hydrocarbons to the Lower Permian White Rim Sandstone, Tar Sand Triangle, southeastern Utah, by R. F. Sanford. 1995. p. J1-J24. (Evolution of sedimentary basins, Paradox Basin; coordinated by A. C. Huffman, Jr.)
- B 2000-L. UTAH. Palynology of part of the Paradox and Honaker Trail formations, Paradox Basin, Utah, by R. M. Kosanke. 1995. p. L1-L7. (Evolution of sedimentary basins, Paradox Basin; coordinated by A. C. Huffman, Jr.)
- B 2021-E. ARIZONA. Area adjacent to the Turkey Creek Caldera, Cochise County, Arizona; analytic data and geologic sample catalog, by E. A. du Bray and J. S. Pallister. 1995. p. E1-E27. 1 plate in pocket. (Geologic sampling of the Chiricahua Mountains, Arizona.)
- B 2022. CALIFORNIA. Geologic, hydrothermal, and biologic studies at Escanaba Trough, Gorda Ridge, offshore Northern California, edited by J. L. Morton, R. A. Zierenberg, and C. A. Reiss, U.S. Geological Survey. 1994. 359 p.
1. Geologic, hydrothermal, and biologic studies at Escanaba Trough; an introduction, by J. L. Morton, R. A. Zierenberg, and C. A. Reiss, U.S. Geological Survey. p. 1-18.
 2. Structural setting and interaction of volcanism and sedimentation at Escanaba Trough; geophysical results, by J. L. Morton, U.S. Geological Survey; and C. G. Fox, NOAA. p. 21-43.
 3. Thermal and tectonic structure of Escanaba Trough; new heat-flow measurements and seismic-reflection profiles, by E. E. Davis, Geological Survey of Canada; and Keir Becker, University of Miami. p. 45-64.

4. A thermal and mechanical model for sediment hills and associated sulfide deposits along Escanaba Trough, by R. P. Denlinger and M. L. Holmes, U.S. Geological Survey. p. 65-75.
5. Crustal magnetization and basement structure of Escanaba Trough, by R. E. Karlin, Mackay School of Mines; and J. L. Morton, U.S. Geological Survey. p. 77-90.
6. Sediment fill of Escanaba Trough, by W. R. Normark, C. E. Gutmacher, R. A. Zierenberg, F. L. Wong, and R. J. Rosenbauer, U.S. Geological Survey. p. 91-129.
7. Sedimentation and neotectonism in the SESCO area, Escanaba Trough, southern Gorda Ridge, by R. E. Karlin, Mackay School of Mines; and R. A. Zierenberg, U.S. Geological Survey. p. 131-141.
8. Volcanic geomorphology of the SESCO and NESCA sites, Escanaba Trough, by S. L. Ross and R. A. Zierenberg, U.S. Geological Survey. p. 143-151.
9. Petrology and mineral chemistry of basalt from Escanaba Trough, by A. S. Davis, D. A. Clague, and W. B. Friesen, U.S. Geological Survey. p. 153-170.
10. Geologic setting of massive sulfide mineralization in Escanaba Trough, by R. A. Zierenberg, J. L. Morton, R. A. Koski, and S. L. Ross, U.S. Geological Survey. p. 171-197.
11. Chemistry of hydrothermal fluids from Escanaba Trough, Gorda Ridge, by A. C. Campbell, C. R. German, M. R. Palmer, Massachusetts Institute of Technology; Toshitaka Gamo, University of Tokyo; and J. M. Edmond, Massachusetts Institute of Technology. p. 201-221.
12. Stable isotope study of hydrothermal vents at Escanaba Trough; observed and calculated effects of sediment-seawater interaction, by J. K. Böhlke and W. C. Shanks III, U.S. Geological Survey. p. 223-239.
13. Evidence for hydrothermal fluid flow through surficial sediments, Escanaba Trough, by A. J. Magenheimer and J. M. Gieskes, Scripps Institution of Oceanography. p. 241-255.
14. Sediment alteration associated with massive sulfide formation in Escanaba Trough, Gorda Ridge; the importance of seawater mixing and magnesium metasomatism, by R. A. Zierenberg and W. C. Shanks III, U.S. Geological Survey. p. 257-277.
15. Hydrocarbons in sediment from Escanaba Trough, by K. A. Kvenvolden, J. B. Rapp, and F. D. Hostettler, U.S. Geological Survey. p. 279-292.
16. Composition and growth history of hydrothermal deposits in Escanaba Trough, southern Gorda Ridge, by R. A. Koski, L. M. Benninger, R. A. Zierenberg, U.S. Geological Survey; and I. R. Jonasson, Geological Survey of Canada. p. 293-324.
17. Soft-sediment hydrothermal vent communities of Escanaba Trough, by J. F. Grassle and R. F. Petrecca, Rutgers University. p. 327-335.
18. Quaternary foraminifers from Escanaba Trough, Northeast Pacific Ocean, by P. J. Quintero, U.S. Geological Survey. p. 337-359.
- B 2056. NEVADA, UTAH, ARIZONA. Geologic studies in the Basin and Range-Colorado Plateau transition in southeastern Nevada, southwestern Utah, and northwestern Arizona, 1992, by R. B. Scott and W. C. Swadley, U.S. Geological Survey. 1995. 275 p.
 - A. Stratigraphic relationships of Tertiary volcanic rocks in central Lincoln County, southeastern Nevada, by R. B. Scott, C. S. Grommé, U.S. Geological Survey; M. G. Best, Brigham Young University; J. G. Rosenbaum, and M. R. Hudson, U.S. Geological Survey. p. 7-41.
 - B. Stratigraphy of Miocene ash-flow tuffs in and near the Caliente Caldera complex, southeastern Nevada and southwestern Utah, by P. D. Rowley, L. D. Nealey, D. M. Unruh, L. W. Snee, H. H. Mehnert, R. E. Anderson, and C. S. Grommé, U.S. Geological Survey. p. 47-88.
 - C. Preliminary geochemistry of Miocene ash-flow tuffs in and near the Caliente Caldera complex, southeastern Nevada and southwestern Utah, by L. D. Nealey, P. D. Rowley, D. M. Unruh, J. R. Budahn, L. W. Snee, H. H. Mehnert, and R. E. Anderson, U.S. Geological Survey. p. 91-110.
 - D. Strontium and neodymium isotopic survey of ash-flow tuffs and related rocks from the Caliente Caldera complex, southeastern Nevada and southwestern Utah, by D. M. Unruh, L. D. Nealey, P. D. Rowley, L. W. Snee, H. H. Mehnert, and R. E. Anderson, U.S. Geological Survey. p. 113-129.
 - E. Evidence of the Kane Springs Wash Caldera in the Meadow Valley Mountains, southeastern Nevada, by A. E. Harding, University of Colorado; R. B. Scott, H. H. Mehnert, and L. W. Snee, U.S. Geological Survey. p. 135-179.
 - F. Preliminary correlation of Quaternary and late Tertiary alluvial deposits in southeastern Nevada, by W. C. Swadley, D. L. Schmidt, R. R. Shroba, V. S. Williams, and D. L. Hoover, U.S. Geological Survey. p. 183-202.
 - G. Low-angle normal faults in Devonian rocks of the southern Delamar Mountains, Lincoln County, Nevada, by W. R. Page, U.S. Geological Survey. p. 205-218.
 - H. Paleomagnetic data from the Miocene Hiko Tuff, southeastern Nevada, and their tectonic implications, by M. R. Hudson, J. G. Rosenbaum, R. B. Scott, and P. D. Rowley, U.S. Geological Survey. p. 221-232.
 - I. Decoupling of mid-Tertiary rocks, Red Hills-western Markagunt Plateau, southwestern Utah, by Florian Maldonado, U.S. Geological Survey. p. 235-254.
 - J. Quaternary geology and tectonics of the Red Hills area of the Basin and Range-Colorado Plateau transition zone, Iron County, Utah, by V. S. Williams and Florian Maldonado, U.S. Geological Survey. p. 257-275.
- B 2057. VIRGIN ISLANDS. Geochemistry, mineralogy, and geochronology of the U.S. Virgin Islands, by H. V. Alminas, E. E. Foord, U.S. Geological Survey; and R.E. Tucker, U.S. Army. 1994. 36 p.
- B 2060. Stratigraphic notes, 1992. 1994. 33 p. 4 plates in pocket.
 1. Changes in stratigraphic nomenclature in the eastern cover sequence in the Green Mountain massif from Ludlow to West

- Bridgewater, Vermont, by N. M. Ratcliffe, U.S. Geological Survey. p. 1-10.
2. The Wilcox Formation of Vermont assigned to the Mount Holly Complex, by N. M. Ratcliffe, U.S. Geological Survey. p. 11-18.
3. Definition and nomenclature of the Robertson River Igneous Suite, Blue Ridge Province, Virginia, by R. P. Tollo, George Washington University. p. 19-24.
4. The Dalecarlia Intrusive Suite and Clarendon Granite in the Potomac Valley, Washington, D.C., Virginia, and Maryland, by A. A. Drake, Jr., and A. H. Fleming, U.S. Geological Survey. p. 25-33.
- B 2063. NEW MEXICO. Mineral and energy resources of the Roswell Resource Area, east-central New Mexico, edited by S. B. Bartsch-Winkler and A. J. Donatich. 1995. 145 p. 15 plates in box.
- Geology of east-central New Mexico, by S. B. Bartsch-Winkler, *with a section on* Tertiary intrusive and extrusive alkaline rocks of the Lincoln County porphyry belt by T. J. Armbrustmacher. p. 5-34.
- Geochemistry of sediments, and uranium in groundwater, by J. A. Erdman, R. R. Tidball and R. B. Tripp. p. 35-44.
- Geophysics; aeromagnetic and gravity data; aerial gamma-ray data, by D. M. Kulik and J. S. Duval. p. 45-53.
- Mineral resources of the Roswell Resource Area, by S. B. Bartsch-Winkler, *with sections on* Potash and Iodine and bromine in saline brines and brine deposits by Sherilyn Williams-Stroud and Sulfur by C. S. Spirakis. p. 54-78.
- Metal resources; mining history and production; descriptions of metal deposits, by D. M. Sutphin, T. J. Armbrustmacher and S. B. Bartsch-Winkler. p. 78-103.
- Estimate of undiscovered mineral resources using the MARK-3 simulator computer program, by D. M. Sutphin. p. 103-110.
- Uranium and vanadium; uranium deposits and occurrences; vanadium, by W. I. Finch, J. K. Otton, C. T. Pierson and G. N. Breit. p. 110-117.
- Energy resources of the Roswell Resource Area; petroleum geology; nonhydrocarbon gas; coal production and estimated resources, by M. M. Ball, G. L. Dolton, R. F. Mast, R. R. Charpentier, M. E. Henry, K. W. Robinson, C. J. Wandrey, R. A. Crovelli, C. W. Spencer, W. C. Butler, S. B. Bartsch-Winkler and G. D. Stricker. p. 118-136.
- Appendix. Geologic and mineral resources information for the Roswell Resources Area, New Mexico, by D. M. Sutphin. p. 138-145.
- B 2064-A-R. IDAHO. Geology and mineral resources of the Hailey 1°x2° Quadrangle and the western part of the Idaho Falls 1°x2° Quadrangle, Idaho, edited by R. G. Worl, U.S. Geological Survey; P. K. Link, U.S. Geological Survey and Idaho State University; G. R. Winkler, and K. M. Johnson, U.S. Geological Survey. Prepared in cooperation with the Idaho Geological Survey, Idaho State University, and University of Idaho. 1995. 330 p. 4 plates in box. (Chapters A-R are issued as a single volume and are not available separately.)
- A. Geology and mineral deposits of the Hailey 1°x2° Quadrangle and the western part of the Idaho Falls 1°x2° Quadrangle, south-central Idaho; an overview, by R. G. Worl and K. M. Johnson, U.S. Geological Survey. p. A1-A21.
- B. Structural framework of mineral deposits hosted by Paleozoic rocks in the northeastern part of the Hailey 1°x2° Quadrangle, south-central Idaho, by D. W. Rodgers, P. K. Link, and A. D. Huerta, Idaho State University. p. B1-B18.
- C. Stratigraphic setting of sediment-hosted mineral deposits in the eastern part of the Hailey 1°x2° Quadrangle and part of the southern part of the Challis 1°x2° Quadrangle, south-central Idaho, by P. K. Link, U.S. Geological Survey and Idaho State University; J. B. Mahoney, U.S. Geological Survey and University of British Columbia; D. J. Bruner, L. D. Batatian, Eric Wilson, Idaho State University; and F. J. C. Williams, Westmont Mining Inc., Spokane, Washington. p. C1-C33.
- D. Mineral deposits of the Muldoon-Star Hope area, southern Pioneer Mountains, south-central Idaho, by G. R. Winkler, U.S. Geological Survey; K. W. Kunkel, Idaho State University; R. F. Sanford, R. G. Worl, U.S. Geological Survey; and F. J. Moye, Challis, Idaho. p. D1-D24.
- E. Structural and stratigraphic setting of the Triumph stratiform zinc-lead-silver deposit, Devonian Milligen Formation, central Idaho, by R. J. W. Turner, Geological Survey of Canada; and B. R. Otto, Boise, Idaho. p. E1-E27.
- F. Structural setting of ore deposits in the Lake Creek mineralized area, Blaine County, south-central Idaho, by B. R. Burton, University of Wyoming; and P. K. Link, U.S. Geological Survey and Idaho State University. p. F1-F15.
- G. Geologic setting of mineral deposits in the Washington Basin area, Custer County, south-central Idaho, by J. B. Mahoney, U.S. Geological Survey and University of British Columbia. p. G1-G12.
- H. Mineral deposits at Leadbelt, Lava Creek mining district, south-central Idaho, by S. J. Soulliere, A. B. Wilson, and B. A. Skipp, U.S. Geological Survey. p. H1-H10.
- I. Mineral deposits of the Mackay and Copper Basin mineralized areas, White Knob Mountains, south-central Idaho, by A. B. Wilson, S. J. Soulliere, and B. A. Skipp, U.S. Geological Survey. p. I1-I16.
- J. Jasperoid-associated precious-metal deposits in the northwestern part of the Idaho Falls 1°x2° Quadrangle, south-central Idaho, by S. J. Soulliere, A. B. Wilson, and B. A. Skipp, U.S. Geological Survey. p. J1-J5.
- K. Tertiary sedimentary rocks of the Payette Formation (Miocene) and the lower part (Miocene and Pliocene) of the Idaho Group, Hailey 1°x2° Quadrangle and vicinity, west-central Idaho, by A. B. Gibbons, U.S. Geological Survey. p. K1-K9.
- L. Interpretation of the regional geochemistry of the Hailey 1°x2° Quadrangle, south-central Idaho, by C. L. Smith, U.S. Geological Survey. p. L1-L22.
- M. Lead-isotope characteristics of ore systems in central Idaho, by B. R. Doe and R. F. Sanford, U.S. Geological Survey. p. M1-M29.

- N. Sources of lead in ore deposits of central Idaho, by R. F. Sanford and J. L. Wooden, U.S. Geological Survey. p. N1-N24.
- O. Geochemical evidence for epithermal metallization in Mississippian turbidites of the McGowan Creek Formation, Lava Creek mining district, south-central Idaho, by J. A. Erdman, U.S. Geological Survey; F. J. Moye, Idaho State University, B. A. Skipp, and P. K. Theobald, U.S. Geological Survey. p. O1-O23.
- P. Petrogenesis of silver-lead-zinc veins on the eastern margin of the Idaho Batholith in the Carriatown mineralized area, Blaine and Camas counties, south-central Idaho, by R. S. Darling, State University of New York College at Cortland; H. W. Campbell, U.S. Bureau of Mines; and P. K. Link, Idaho State University. p. P1-P18.
- Q. Metamorphism and deformation on the eastern margin of the Idaho Batholith, Blaine and Camas counties, south-central Idaho, by S. K. Whitman, Matney Frantz Engineering, Bozeman, Montana. p. Q1-Q12.
- R. Regional geophysical studies applied to mineral resource assessment of the Hailey 1°x2° Quadrangle and the western part of the Idaho Falls 1°x2° Quadrangle, south-central Idaho, by M. D. Kleinkopf, A. E. McCafferty, and G. A. Abrams, U.S. Geological Survey. p. R1-R12.
- B 2072. ALASKA. Guide to the volcanoes of the western Wrangell Mountains, Alaska; Wrangell-St. Elias National Park and Preserve, by D. H. Richter, U.S. Geological Survey; D. S. Rosenkrans, and M. J. Steigerwald, U.S. National Park Service. 1995. 31 p.
- B 2079. Imaging the sea floor, by J. S. Schlee, H. A. Karl and M. E. Torresan. 1995. 24 p.
- B 2081. Advances in research on mineral resources, 1994, edited by B. R. Berger, U.S. Geological Survey. 1994. 77 p.
- Introduction; USGS, an international perspective on mineral resources and resource technologies, by B. R. Berger, U.S. Geological Survey. p. 1-2.
- A. Pb isotope compositions of the Bandelier Tuff, Valles Caldera, Jemez Mountains, New Mexico; an active geothermal system associated with Mo mineralization, by R. A. Ayuso and R. L. Smith, U.S. Geological Survey. p. 3-12.
- B. Implications of Eocene through Miocene ages for volcanic rocks, Snowstorm Mountains and vicinity, northern Nevada, by A. R. Wallace and E. H. McKee, U.S. Geological Survey. p. 13-18.
- C. $^{40}\text{Ar}/^{39}\text{Ar}$ and U-Th-Pb ages associated with base- and precious-metal deposits in central Idaho, by K. V. Evans, L. W. Snee, and R. E. Zartman, U.S. Geological Survey. p. 19-23.
- D. Geology and mineral deposits in the Terrill Mountains area, Holy Cross District, Churchill County, Nevada, by S. G. Peters, R. F. Hardyman, and K. A. Connors, U.S. Geological Survey. p. 25-32.
- E. Time-pH- fO_2 paths of hydrothermal fluids and the origin of quartz-alunite-gold deposits, by G. V. Albino, U.S. Geological Survey. p. 33-42.
- F. Remote-sensing spectral properties of selected industrial minerals and ores, by J. K. Crowley, U.S. Geological Survey. p. 43-51.
- G. Geochemical exploration studies in the Portuguese pyrite belt, by D. J. Grimes, U.S. Geological Survey; and Delfim de Carvalho, Serviços Geológicos de Portugal. p. 53-77.
- B 2084. ALASKA. Geochemical survey of the Valdez 1°x3° Quadrangle, south-central Alaska, by R. J. Goldfarb, J. C. Borden and G. R. Winkler. 1995. 77 p. 1 plate in pocket.
- B 2085-A. WASHINGTON. Stratigraphy, sedimentology, and provenance of the Raging River Formation (early? and middle Eocene), King County, Washington, by S. Y. Johnson and J. T. O'Connor. 1994. p. A1-A33. (Evolution of sedimentary basins, Cenozoic sedimentary basins in Southwest Washington and Northwest Oregon; coordinated by S. Y. Johnson)
- B 2085-C. WASHINGTON. Thermal effects of thin igneous intrusions on diagenetic reactions in a Tertiary basin of southwestern Washington, by K. J. Esposito and C. G. Whitney. 1995. p. C1-C36. (Evolution of sedimentary basins; Cenozoic sedimentary basins in Southwest Washington and Northwest Oregon; coordinated by S. Y. Johnson.)
- B 2086. NEW YORK. Revised stratigraphy and correlations of the Niagaran provincial series (Medina, Clinton, and Lockport groups) in the type area of western New York, by C. E. Brett, University of Rochester; D. H. Tepper, U.S. Geological Survey; W. M. Goodman, Sear-Brown Group, Rochester, New York; S. T. LoDuca, Eastern Michigan University; and Bea-Yeh Eckert, Guelph, Ontario. Prepared in cooperation with the U.S. Environmental Protection Agency and the University of Rochester, Department of Earth and Environmental Sciences. 1995. 66 p.
- B 2090. NEVADA. Geology and geochemistry of Tertiary volcanic host rocks, Sleeper gold-silver deposit, Humboldt County, Nevada, by J. T. Nash, U.S. Geological Survey; W. C. Utterback, and W. S. Trudel, AMAX Gold Inc. 1995. 63 p. 2 plates in pocket.
- by J. T. Nash, U.S. Geological Survey; W. C. Utterback, and W. S. Trudel, AMAX Gold Inc
- B 2094-B. Lead isotopes from the Upper Mississippi Valley District; a regional perspective, by T. M. Millen, Northern Illinois University; R. E. Zartman, U.S. Geological Survey; and A. V. Heyl, Evergreen, Colorado. 1995. p. B1-B13. (Evolution of sedimentary basins, Illinois Basin; coordinated by J. L. Ridgley.)
- B 2094-C. ILLINOIS. Problems with applying topographically driven flow to genesis of the Upper Mississippi Valley zinc-lead district and to fluid flow in the Illinois Basin, by C. S. Spirakis. 1995. p. C1-C12. (Evolution of sedimentary basins, Illinois Basin; coordinated by J. L. Ridgley.)
- B 2094-D. INDIANA. Source rock potential of the lower part of the Mississippian St. Louis Limestone in south-central Indiana, by J. L. Ridgley and V. F. Nuccio. 1995. p. D1-D12. (Evolution of sedimentary basins, Illinois Basin; coordinated by J. L. Ridgley.)
- B 2096. Lithofacies and palynostratigraphy of some Cretaceous and Paleocene rocks, Surghar and Salt Range coal fields, northern Pakistan, by P. D. Warwick, U.S. Geological Survey; Shahid

- Javed, S. T. A. Mashhadi, Tariq Shakoor, Geological Survey of Pakistan; A. M. Khan, and A. L. Khan, Hydrocarbon Development Institute of Pakistan. Prepared in cooperation with the Geological Survey of Pakistan. 1995. 35 p.
- B 2097. NURE geochemical and geophysical surveys; defining prospective terranes for United States placer exploration, by A. E. Grosz and P. G. Schruben. 1994. 9 p. 2 plates in pocket.
- B 2098. ALASKA. Geology, geochemistry, and uranium favorability of Tertiary rocks in south-central Alaska. 1995. 70 p.
- A. Geology, geochemistry, and uranium favorability of the Tertiary Kenai Group in the Susitna Lowlands at the northern end of Cook Inlet basin, Alaska, by K. A. Dickinson, U.S. Geological Survey. p. A1-A33.
- B. Geology, geochemistry, and uranium favorability of Tertiary continental sedimentary rocks in the northwestern part of the Cook Inlet area, Alaska, by K. A. Dickinson, U.S. Geological Survey; J. A. Campbell, Fort Lewis College; and W. F. Dula, Jr., ARCO Exploration and Production Technology Co. p. B1-B37.
- B 2102. Applications of velocity-stack methods to seismic data processing, by M. W. Lee and W. F. Agena. 1994. 25 p.
- B 2103. Selected papers in the applied computer sciences 1994, edited by D. A. Wiltshire, U.S. Geological Survey. 1995. 39 p. (Chapters A-C are issued as a single volume and are not available separately.)
- A. Using geographic information, image processing, and animation systems to visualize a digital terrain flyby, by R. G. Clark, J. W. Jones, T. E. Ciciarelli, U.S. Geological Survey; and D. F. Stanfill IV, California Institute of Technology. p. A1-A6.
- B. Digitizing options for hydrologic maps; scanning or hand digitizing?, by A. J. Cohen, U.S. Geological Survey. p. B1-B3.
- C. Simple mixed-vendor networking for remote sites, by B. R. Johnson, U.S. Geological Survey. p. C1-C30.
- B 2104. COLORADO. Isotopic geochronology of the Leadville 1°x2° Quadrangle, west-central Colorado; summary and discussion, by A. R. Wallace. 1995. 51 p. 1 plate in pocket.
- B 2105. IDAHO. The early Pleistocene (latest Blancan-earliest Irvingtonian) Froman Ferry fauna and history of the Glenns Ferry Formation, southwestern Idaho, by C. A. Repenning, U.S. Geological Survey; T. R. Weasma, U.S. Bureau of Land Management; and G. R. Scott, BLM Volunteer Program. 1995. 86 p.
- B 2106. Garnet dissolution in oxalic acid; a possible analog for natural etching of garnet by dissolved organic matter, by P. L. Hansley and P. H. Briggs. 1994. 14 p.
- B 2107. ALASKA. Geologic studies in Alaska by the U.S. Geological Survey, 1993, edited by A. B. Till and T. E. Moore, U.S. Geological Survey. 1994. 217 p.
- Mercury in the environment and its implications, Kuskokwim River region, Southwestern Alaska, by J. E. Gray, P. M. Theodorakos, J. R. Budahn, and R. M. O'Leary, U.S. Geological Survey. p. 3-13.
- High arsenic content in sediments from the Koyukuk National Wildlife Refuge, West-Central Alaska, by R. G. Eppinger, J. M. Motooka, and S. J. Sutley, U.S. Geological Survey. p. 15-20.
- Environmental geochemistry of mesothermal gold deposits, Kenai Fjords National Park, south-central Alaska, by B. A. Cieutat, R. J. Goldfarb, J. C. Borden, J. B. McHugh, and C. D. Taylor, U.S. Geological Survey. p. 21-25.
- Paleowind directions for late Holocene dunes on the western Arctic Coastal Plain, Northern Alaska, by J. P. Galloway and L. D. Carter, U.S. Geological Survey. p. 27-30.
- Methane in the Fox permafrost tunnel near Fairbanks, Alaska, by K. A. Kvenvolden, T. D. Lorenson, and Valerie Barber, U.S. Geological Survey. p. 31-37.
- The 1993 Nelson Mountain Landslide, Chitina Valley, Southern Alaska, an aerial view, by L. A. Yehle, U.S. Geological Survey; and D. S. Rosenkrans, Wrangell-St. Elias National Park and Preserve. p. 39-41.
- Importance of landslides in the geomorphic development of the upper Caribou Creek area, Talkeetna Mountains, Alaska, by S. W. Nelson, U.S. Geological Survey. p. 43-47.
- Possible active fault traces on or near the Castle Mountain Fault between Houston and the Hatcher Pass Road, by P. J. Haeussler, U.S. Geological Survey. p. 49-58.
- High stand and catastrophic draining of intracaldera Surprise Lake, Aniakchak Volcano, Alaska, by R. G. McGimsey, C. F. Waythomas, and C. A. Neal, U.S. Geological Survey. p. 59-71.
- Isotopic constraints on the genesis of base-metal-bearing mineral occurrences near Columbia Glacier, northern Prince William Sound, Alaska, by R. J. Goldfarb, C. A. Gent, J. E. Gray, and S. W. Nelson, U.S. Geological Survey. p. 73-82.
- Gold in heavy-mineral-concentrate samples from the Howard Pass Quadrangle, Brooks Range, Alaska, by K. D. Kelley, E. A. Bailey, B. A. Cieutat, and J. C. Borden, U.S. Geological Survey. p. 83-89.
- Calculated gold resource in Circle and Fortymile placers, by W. E. Yeend, U.S. Geological Survey. p. 91-93.
- Miocene coal-bearing strata of the Tyonek Formation; braided-stream deposits in the Chuit Creek-Chuitna River drainage basin, Southern Alaska, by R. M. Flores, G. D. Stricker, and S. B. Roberts, U.S. Geological Survey. p. 95-114.
- Preliminary results of a tectonic subsidence analysis of the central North Slope, Alaska, by F. E. Cole, K. J. Bird, and D. G. Howell, U.S. Geological Survey. p. 115-132.
- Cyrtospirifer* from Upper Devonian rocks of the Endicott Group, west-central Brooks Range, Alaska, by J. T. Dutro, Jr., R. B. Blodgett, U.S. Geological Survey; and C. G. Mull, Alaska Division of Geologic and Geophysical Surveys. p. 133-141.
- New late(?) Proterozoic-age formations in the vicinity of Lone Mountain, McGrath Quadrangle, West-Central Alaska, by L. E. Babcock, Ohio State University; R. B. Blodgett, U.S. Geological Survey; and James St. John. p. 143-155.

Possible occurrence of lower to middle Paleozoic rocks south of the Denali Fault, Denali National Park, Alaska, and implications for Denali Fault displacement, by Bela Csejty, Jr., U.S. Geological Survey; P. F. Brease, Denali National Park; A. B. Ford, and W. H. Nelson, U.S. Geological Survey. p. 157-160.

Chemical characteristics of major plutonic belts of the Coast plutonic-metamorphic complex near Juneau, Southeastern Alaska, by J. L. Drinkwater, D. A. Brew, and A. B. Ford, U.S. Geological Survey. p. 161-172.

Geochemical reconnaissance of alkalic plutons on Prince of Wales Island, Southeastern Alaska, by J. L. Drinkwater and J. P. Calzia, U.S. Geological Survey. p. 173-184.

Evaluation and application of garnet amphibolite thermobarometry, Western Metamorphic Belt near Juneau, Alaska, by G. R. Himmelberg, University of Missouri-Columbia; D. A. Brew, and A. B. Ford, U.S. Geological Survey. p. 185-198.

GPS versus template; simple field and office experiments concerning GPS-determined positions and template-scaled map locations, by D. A. Brew, A. B. Ford, R. D. Koch, M. F. Diggles, J. L. Drinkwater, R. A. Loney, and J. G. Smith, U.S. Geological Survey. p. 199-205.

U.S. Geological Survey reports on Alaska released in 1993, compiled by E. R. White, U.S. Geological Survey. p. 207-210.

Reports about Alaska in non-USGS publications released in 1993 that include USGS authors, compiled by E. R. White, U.S. Geological Survey. p. 211-217.

- B 2108. OREGON. Zeolitic diagenesis of tuffs in Miocene lacustrine rocks near Harney Lake, Harney County, Oregon, by R. A. Sheppard. 1994. 28 p.

- B 2109. COLORADO. Ages of selected intrusive rocks and associated ore deposits in the Colorado mineral belt, by C. G. Cunningham, C. W. Naeser, R. F. Marvin, R. G. Luedke and A. R. Wallace. 1994. 31 p.

- B 2110. Predictive stratigraphic analysis; concept and application, edited by C. B. Cecil and N. T. Edgar, U.S. Geological Survey. 1994. 72 p.

Introduction to predictive stratigraphic analysis, by C. B. Cecil and N. T. Edgar, U.S. Geological Survey. p. 1-2.

Carboniferous paleocontinental reconstructions, by C. R. Scotese, University of Texas. p. 3-6.

Global cyclostratigraphy, by M. A. Perlmutter and M. D. Matthews, Texaco. p. 6-8.

Paleomagnetism and Carboniferous climate, by N. D. Opdyke, University of Florida; and V. J. DiVenere, Lamont-Doherty Earth Observatory. p. 8-10.

Relative effects of tectonism, eustasy, paleoclimate, and paleo-oceanography on Atlantic passive-margin sedimentation, by C. W. Poag, U.S. Geological Survey. p. 10-13.

Pennsylvanian vegetation and soils, by G. J. Retallack, University of Oregon. p. 13-19.

Geochemical variations in Pennsylvanian black shales may reflect changes in climatic conditions, by R. M. Coveney, Jr., University of Missouri. p. 20-21.

Chemical and mineral variations in Pennsylvanian black shales; depositional and diagenetic indicators in marine evaporite cycles, Hermosa Formation, Paradox Basin, Utah, by C. G. Whitney, M. L. Tuttle, T. R. Klett, D. E. Tromp, U.S. Geological Survey; and Mark Richardson, Exxon Production Research Co. p. 21-24.

Contributions of dependent and independent paleontological data to predictive stratigraphic analysis, by C. G. Maples, Kansas Geological Survey; and R. R. West, Kansas State University. p. 24.

Tectonic framework of the Appalachian Basin, by R. C. Milici, Virginia Division of Mineral Resources. p. 24-27.

Carboniferous paleoclimates, sedimentation, and stratigraphy, by C. B. Cecil, F. T. Dulong, N. T. Edgar, and T. S. Ahlbrandt, U.S. Geological Survey. p. 27-28.

Applications of coal palynology to biostratigraphic and paleo-ecologic analyses of Pennsylvanian coal beds, by C. F. Eble, Kentucky Geological Survey. p. 28-32.

Diverse factors controlling sedimentation in the Northern Appalachians during the Pennsylvanian, by V. W. Skema and L. J. Lentz, Pennsylvania Bureau of Topographic and Geological Survey. p. 33-37.

Significance of Midcontinent Pennsylvanian cyclothems to deciphering global Pennsylvanian stratigraphy, by P. H. Heckel, University of Iowa. p. 37-42.

Pennsylvanian cyclic deposition, Paradox Basin, southwestern Colorado and southeastern Utah, by A. C. Huffman, Jr., S. M. Condon, and K. J. Franczyk, U.S. Geological Survey. p. 42-44.

Pennsylvanian and Early Permian paleogeography of northwestern Colorado and northeastern Utah, by S. Y. Johnson, U.S. Geological Survey; M. A. Chan, University of Utah; and E. H. Konopka, University of Wisconsin. p. 45-46.

Cyclostratigraphic correlation of Desmoinesian-lower Missourian shelf carbonates (Horquilla Limestone) of the Pedregosa Basin with Midcontinent cyclothems, by W. M. Connolly, Texas A&M University. p. 46-51.

Evidence of climate change in the Lower and Middle Carboniferous shallow-water carbonate rocks of Arctic Alaska, New Mexico, and Arizona, by A. K. Armstrong, U.S. Geological Survey; and B. L. Marnet, Université de Montréal. p. 52-58.

Climatic influence on basin sedimentation; application to the Ouachita Basin, by C. B. Cecil and N. T. Edgar, U.S. Geological Survey. p. 59-62.

Cyclic eolian sedimentation; a climatic response, by T. S. Ahlbrandt, U.S. Geological Survey. p. 62-67.

Paleoclimatic and sea-level effects on a range of metallic mineral-deposit types, by E. R. Force, U.S. Geological Survey. p. 67-68.

- Petroleum resource evaluation in the predictive stratigraphic analysis program, by W. L. Watney and J. A. French, Kansas Geological Survey. p. 68-70.
- Use of a general circulation model to simulate paleoclimates and evaluate economic resources, by G. T. Moore, D. N. Hayashida, S. R. Jacobson, and C. A. Ross, Chevron. p. 70.
- B 2111. Industrial minerals of the Midcontinent; proceedings of the Midcontinent industrial minerals workshop, edited and compiled by A. L. Bush and T. S. Hayes, U.S. Geological Survey. Prepared in cooperation with the U.S. Bureau of Mines, Arkansas Geological Commission, Illinois State Geological Survey, Kansas Geological Survey, Kentucky Geological Survey, Missouri Division of Geology and Land Survey, Nebraska Division of Conservation and Survey, and Oklahoma Geological Survey. 1995. 126 p.
- The highway infrastructure and industrial minerals, by A. R. Kane, Federal Highway Administration. p. 4-9.
- Industrial minerals resource identification and evaluation, by M. W. Leighton, Illinois State Geological Survey. p. 9-20.
- Land-use planning to ensure industrial minerals availability, by E. T. Sieben, Kane County Development Board, Illinois. p. 21-24.
- Economic limitations on industrial minerals availability, by A. F. Barsotti, V. V. Tepordei, U.S. Bureau of Mines; and S. B. Bhagwat, Illinois Geological Survey. p. 25-33.
- Environmental issues that affect production and consumption of industrial minerals, by T. L. Haithcoat, University of Missouri. p. 33-37.
- Overview of the status of the industrial minerals industry, by C. D. Blancke, Hot Springs, Arkansas. p. 37-39.
- If only Dick and Jane had gone to the mines, by C. G. Groat, American Geological Institute. p. 67-71.
- B 2112. MONTANA, NORTH DAKOTA. Geologic history of salt beds and related strata in the upper part of the Madison Group (Mississippian), Williston Basin, Montana and North Dakota, by W. J. Sando. 1995. 51 p.
- B 2113. Shorter contributions to the stratigraphy and geochronology of Upper Cretaceous rocks in the Western Interior of the United States. 1995. 32 p. 1 plate in pocket. (Chapters A-C are issued as a single volume and are not available separately.)
- A. Conglomerate facies and contact relationships of the Upper Cretaceous upper part of the Frontier Formation and lower part of the Beaverhead Group, Lima Peaks area, southwestern Montana and southeastern Idaho, by T. S. Dyman, J. C. Haley and W. J. Perry, Jr. p. A1-A10.
- B. U-Pb ages of volcanogenic zircon from porcellanite beds in the Vaughn Member of the Mid-Cretaceous Blackleaf Formation, southwestern Montana, by R. E. Zartman, T. S. Dyman, R. G. Tysdal and R. C. Pearson. p. B1-B15.
- C. Occurrences of the free-swimming Upper Cretaceous crinoids *Uintacrinus* and *Marsupites* in the Western Interior of the United States, by W. A. Cobban. p. C1-C6.
- B 2115-A. UTAH. Sedimentological Descriptions and depositional interpretations, in sequence stratigraphic context, of two 300-meter cores from the Upper Cretaceous Straight Cliffs Formation, Kaiparowits Plateau, Kane County, Utah, by R. D. Hettinger. 1995. p. A1-A32. 2 plates in pocket. (Sedimentologic and stratigraphic investigations of coal-bearing strata in the Upper Cretaceous Straight Cliffs Formation, Kaiparowits Plateau, Utah.)
- B 2115-B. UTAH. Palynostratigraphy in relation to sequence stratigraphy, Straight Cliffs Formation (Upper Cretaceous), Kaiparowits Plateau, Utah, by D. J. Nichols. 1995. p. B1-B21. (Sedimentologic and stratigraphic investigations of coal-bearing strata in the Upper Cretaceous Straight Cliffs Formation, Kaiparowits Plateau, Utah.)
- B 2116. COLORADO. Copper and uranium in Pennsylvanian and Permian sedimentary rocks, northern Sangre de Cristo Range, Colorado, by D. A. Lindsey and R. F. Clark. 1995. 23 p.
- B 2117. Summary statistics for selenium in vegetation calculated from U.S. Geological Survey data, by T. F. Harms. 1995. 31 p.
- B 2118. GEOPLAY, a knowledge-based expert system; a model for exploration play analysis, by B. M. Miller. 1995. 53 p.
- B 2119. Compositional characteristics of middle to upper Tertiary volcanic rocks of the Bolivian Altiplano, by E. A. du Bray, S. D. Ludington, W. E. Brooks, B. M. Gamble, J. C. Ratté, D. H. Richter and Eduardo Soria-Escalante. 1995. 30 p.
- B 2120. The "checkerboard method"; a new way to estimate the numbers of undiscovered hydrocarbon accumulations in sparsely drilled areas, by R. G. Stanley. 1995. 8 p.
- B 2126. Tectonics of the Potwar Plateau region and the development of syntaxes, Punjab, Pakistan, by H. D. Drewes. 1995. 22 p.
- B 2129. Gazetteer of planetary nomenclature 1994, edited by R. M. Batson and J. F. Russell. Prepared in cooperation with the International Astronomical Union, Working Group for Planetary System Nomenclature. 1995. 295 p. (Supersedes Open-file report 84-692.)
- B 2131. Thermodynamic properties of minerals and related substances at 298.15 K and 1 bar (10^5 Pascals) pressure and at higher temperatures, by R. A. Robie and B. S. Hemingway. 1995. 461 p.
- B 2135. VIRGINIA, KENTUCKY, ALASKA. Stratigraphic notes, 1994. 1995. 28 p.
1. Middle Ordovician Stickley Run Member (new name) of the Martinsburg Formation, Shenandoah Valley, northern Virginia, by J. B. Epstein, R. C. Orndorff, U.S. Geological Survey; and E. K. Rader, Virginia Division of Mineral Resources. p. 1-13.
 2. Middle Pennsylvanian Arnett Member (new name) of the Breathitt Formation, eastern Kentucky, by C. L. Rice, U.S. Geological Survey. p. 15-19.
 3. The Coast Mountains Complex of Southeastern Alaska and adjacent regions, by D. A. Brew, A. B. Ford, G. R. Himmelberg, and J. L. Drinkwater, U.S. Geological Survey. p. 21-28.
- B 2137. ILLINOIS, INDIANA, KENTUCKY. Feasibility study of material-balance assessment of petroleum from the New Albany Shale in the Illinois Basin, by M. D. Lewan, U.S. Geological

- Survey; J. B. Comer, Indiana Geological Survey; Terence Hamilton-Smith, Kentucky Geological Survey; N. R. Hasenmueller, Indiana Geological Survey; J. M. Guthrie, Indiana University; J. R. Hatch, D. L. Gautier, U.S. Geological Survey; and W. T. Frankie, Illinois State Geological Survey. 1995. 31 p.
- B 2138. ARIZONA. Base- and precious-metal concentrations of early Proterozoic massive sulfide deposits in Arizona; crustal and thermochemical controls of ore deposition, by Ed DeWitt. 1995. 36 p.
- B 2139. ALASKA. The 1992 eruptions of Crater Peak vent, Mount Spurr Volcano, Alaska, edited by T. E. C. Keith, U.S. Geological Survey. 1995. 220 p.
- The 1992 eruptions of Crater Peak vent, Mount Spurr Volcano, Alaska; chronology and summary, by J. C. Eichelberger, University of Alaska; T. E. C. Keith, T. P. Miller, U.S. Geological Survey; and C. J. Nye, Alaska Division of Geological and Geophysical Surveys. p. 1-18.
- Real-time C-band radar observations of 1992 eruption clouds from Crater Peak, Mount Spurr Volcano, Alaska, by W. I. Rose, A. B. Kostinski, Michigan Technological University; and Lee Kelley, National Weather Service. p. 19-26.
- Tracking of 1992 eruption clouds from Crater Peak vent of Mount Spurr Volcano, Alaska, using AVHRR, by D. J. Schneider, W. I. Rose, Michigan Technological University; and Lee Kelley, National Weather Service. p. 27-36.
- Explosive emissions of sulfur dioxide from the 1992 Crater Peak eruptions, Mount Spurr Volcano, Alaska, by G. J. S. Bluth, Michigan Technological University; C. J. Scott, I. E. Sprod, Hughes STX Corporation; C. C. Schnetzler, University of Maryland; A. J. Krueger and L. S. Walter, NASA Goddard Space Center. p. 37-45.
- Sulfur dioxide scrubbing during the 1992 eruptions of Crater Peak, Mount Spurr Volcano, Alaska, by M. P. Doukas and T. M. Gerlach, U.S. Geological Survey. p. 47-57.
- Chemistry of crater lake waters prior to the 1992 eruptions of Crater Peak, Mount Spurr Volcano, Alaska, by T. E. C. Keith, J. M. Thompson, and R. G. McGimsey, U.S. Geological Survey. p. 59-63.
- Tephra-fall deposits from the 1992 eruptions of Crater Peak, Mount Spurr Volcano, Alaska; a preliminary report on distribution, stratigraphy, and composition, by C. A. Neal, R. G. McGimsey, C. A. Gardner, U.S. Geological Survey; M. L. Harbin, University of Alaska; and C. J. Nye, Alaska Division of Geological and Geophysical Surveys. p. 65-79.
- Pyroclastic flows of the 1992 Crater Peak eruptions; distribution and origin, by T. P. Miller, C. A. Neal, and R. B. Waitt, U.S. Geological Survey. p. 81-87.
- Ballistic showers during Crater Peak eruptions of Mount Spurr Volcano, summer 1992, by R. B. Waitt, L. G. Mastin, and T. P. Miller, U.S. Geological Survey. p. 89-106.
- Hybrid wet flows formed by hot pyroclasts interacting with snow during the 1992 eruptions of Crater Peak, Mount Spurr Volcano, Alaska, by R. B. Waitt, U.S. Geological Survey. p. 107-118.
- Whole-rock major- and trace-element chemistry of 1992 ejecta from Crater Peak, Mount Spurr Volcano, Alaska, by C. J. Nye, Alaska Division of Geological and Geophysical Surveys; M. L. Harbin, University of Alaska; T. P. Miller, U.S. Geological Survey; S. E. Swanson, University of Georgia; and C. A. Neal, U.S. Geological Survey. p. 119-128.
- Use of volcanic glass from ash as a monitoring tool; an example from the 1992 eruptions of Crater Peak, Mount Spurr Volcano, Alaska, by S. E. Swanson, University of Georgia; M. L. Harbin, University of Alaska; and J. R. Riehle, U.S. Geological Survey. p. 129-137.
- Preliminary petrology and chemistry of proximal eruptive products; 1992 eruptions of Crater Peak, Mount Spurr Volcano, Alaska, by M. L. Harbin, University of Alaska; S. E. Swanson, University of Georgia; C. J. Nye, Alaska Division of Geological and Geophysical Surveys; and T. P. Miller, U.S. Geological Survey. p. 139-148.
- Seismicity and forecasting of the 1992 eruptions of Crater Peak vent, Mount Spurr Volcano, Alaska; an overview, by J. A. Power, U.S. Geological Survey; A. D. Jolly, University of Alaska; R. A. Page, U.S. Geological Survey; and S. R. McNutt, University of Alaska. p. 149-159.
- Preliminary analyses of volcanic tremor associated with the 1992 eruptions of Crater Peak, Mount Spurr Volcano, Alaska, by S. R. McNutt, G. C. Tytgat, University of Alaska; and J. A. Power, U.S. Geological Survey. p. 162-177.
- Lightning associated with the August 18, 1992, eruption of Crater Peak vent, Mount Spurr Volcano, Alaska, by J. F. Paskievitch, T. L. Murray, R. P. Hoblitt, and C. A. Neal, U.S. Geological Survey. p. 179-182.
- Lahars from the 1992 eruptions of Crater Peak, Mount Spurr Volcano, Alaska, by D. F. Meyer and D. C. Trabant, U.S. Geological Survey. p. 183-198.
- June 29, 1993, outburst flood from Kidazgeni Glacier, Mount Spurr Volcano, Alaska, by C. J. Nye, Alaska Division of Geological and Geophysical Surveys; W. R. Hammond, U.S. Geological Survey; G. C. Tytgat, University of Alaska; and J. M. Dorava, U.S. Geological Survey. p. 199-204.
- Effects of the 1992 Crater Peak eruptions on airports and aviation operations in the United States and Canada, by T. J. Casadevall and M. D. Krohn, U.S. Geological Survey. p. 205-220.
- B 2140. The distribution of rare-earth elements in minerals of the monazite family, by Sam Rosenblum, U.S. Geological Survey (retired) and Michael Fleischer, Smithsonian Institution. 1995. 62 p.
- B 2220. COLORADO. Environmental considerations of active and abandoned mine lands; lessons from Summitville, Colorado, edited by T. V. V. King, *with contributions from* C. M. Ager, W. W. Atkinson, L. S. Balistrieri, R. J. Bisdorf, D. J. Bove, R. N. Clark, M. F. Coolbaugh, J. A. Erdman, L. P. Gough, J. E. Gray, Paul von Guerard, T. V. V. King, F. E. Lichte, W. R. Miller, R. F. Ortiz, G. S. Plumlee, W. I. Ridley, K. S. Smith, G. A. Swayze, R. R. Tidball, Katherine Walton-Day, and T. M. Yanosky. 1995. 38 p.

WATER-SUPPLY PAPERS

Water-Supply Papers are comprehensive reports that present significant interpretive results of hydrologic investigations of wide interest to profes-

sional geologists, hydrologists and engineers. The series covers investigations in all phases of hydrology, including hydrogeology, availability of water, quality of water, and use of water.

W 2220. Basic ground-water hydrology, by R. C. Heath. Prepared in cooperation with the North Carolina Department of Natural Resources and Community Development. 1983 (1995). 84 p. (Reprint.)

W 2352-B. KANSAS, NEBRASKA. Surface-water-quality assessment of the lower Kansas River basin, Kansas and Nebraska; analysis of available data through 1986, edited by P. R. Jordan and J. K. Stamer, U.S. Geological Survey. 1995. 161 p. (Supersedes Open-file report 91-75.)

Description of lower Kansas River basin, by J. T. Dugan, R. A. Engberg, and P. R. Jordan, U.S. Geological Survey. p. 10-20.

Assessment approach, by P. R. Jordan, U.S. Geological Survey. p. 20-25.

Sources and characteristics of available surface-water-quality data, by P. R. Jordan, U.S. Geological Survey. p. 25-31.

Streamflow, by P. R. Jordan, U.S. Geological Survey. p. 31-32.

pH, alkalinity, and acidity, by J. K. Stamer, U.S. Geological Survey. p. 32-40.

Dissolved solids and major ions, by P. R. Jordan, U.S. Geological Survey. p. 40-64.

Suspended sediment, by P. R. Jordan, U.S. Geological Survey. p. 65-72.

Nutrients, by J. K. Stamer and P. R. Jordan, U.S. Geological Survey. p. 72-93.

Dissolved oxygen and biochemical oxygen demand, by J. K. Stamer, U.S. Geological Survey. p. 93-100.

Major metals and trace elements, by J. K. Stamer, R. F. Sanzalone, and J. L. Ryder, U.S. Geological Survey. p. 100-121.

Radionuclides, by J. K. Stamer, U.S. Geological Survey. p. 121-122.

Organic carbon, by J. K. Stamer, U.S. Geological Survey. p. 122-124.

Pesticides and other synthetic-organic compounds, by H. E. Bevans, U.S. Geological Survey. p. 124-141.

Fecal-indicator bacteria, by T. A. Goodman, R. M. Wilson, U.S. Fish and Wildlife Service; and P. R. Jordan, U.S. Geological Survey. p. 141-148.

Aquatic biological community, by T. A. Goodman, R. M. Wilson, T. J. Kelly, and R. L. Kibler, Jr., U.S. Fish and Wildlife Service. p. 148-153.

W 2399. MARYLAND. Ground-water, surface-water, and bottom-sediment contamination in the O-Field area, Aberdeen Proving Ground, Maryland, and the possible effects of selected remedial actions on ground water, by D. A. Vroblesky, M. M. Lorah and J. P. Oliveros. Prepared in cooperation with the Department of Defense, Office of Environmental Management, Ab-

erdeen Proving Ground, Maryland. 1995. 95 p. (Supersedes Open-file report 89-399.)

W 2401. VIRGINIA. Hydrogeology and analysis of the ground-water-flow system of the Eastern Shore, Virginia, by D. L. Richardson. Prepared in cooperation with Accomack County, Northampton County, and the Virginia Water Control Board. 1994. 108 p. 1 plate in pocket. (Supersedes Open-file report 91-490.)

W 2409. FLORIDA. Chemical and isotopic composition and potential for contamination of water in the upper Floridan Aquifer, west-central Florida, 1986-89, by Amy Swancar and C. B. Hutchinson. Prepared in cooperation with the Southwest Florida Water Management District. 1995. 68 p. (Supersedes Open-file report 92-47.)

W 2418. MASSACHUSETTS. Estimation of low-flow duration discharges in Massachusetts, by K. G. Ries, III. Prepared in cooperation with the Massachusetts Department of Environmental Management, Office of Water Resources. 1994. 50 p. (Supersedes Open-file report 93-38.)

W 2419. KANSAS, NEBRASKA. The occurrence and transport of agricultural pesticides in the Tuttle Creek lake-stream system, Kansas and Nebraska, by H. E. Bevans, U.S. Geological Survey; C. H. Fromm, Kansas Department of Environment and Health; and S. A. Watkins, U.S. Geological Survey. Prepared in cooperation with the Kansas Department of Health and Environment. 1995. 34 p. 1 plate in pocket.

W 2429. ARIZONA. Channel change on the Santa Cruz River, Pima County, Arizona, 1936-86, by J. T. Parker. Prepared in cooperation with the Pima County Department of Transportation and Flood Control District. 1995. 58 p.

W 2432. OHIO. Estimation of peak-frequency relations, flood hydrographs, volume-duration-frequency relations of ungaged small urban streams in Ohio, by J. M. Sherwood. Prepared in cooperation with the Ohio Department of Transportation and the U.S. Department of Transportation, Federal Highway Administration. 1994. 42 p.

W 2435. NORTH CAROLINA. Effects of agricultural land-management practices on water quality in northeastern Guilford County, North Carolina, 1985-90, by D. A. Harned. Prepared in cooperation with the Guilford County Soil and Water Conservation District. 1995. 64 p. (Supersedes Open-file report 94-60.)

CIRCULARS

Circulars present technical or nontechnical information of wide popular interest in a format designed for distribution at no cost to the public. They are published to disseminate administrative information or important scientific information of an ephemeral nature.

C 1108. Energy and the environment; application of geosciences to decision-making, edited by L. M. H. Carter, U.S. Geological Survey. 1995. 134 p.

What has driven the mix in U.S. energy demand; supply and demand or regulation?, by B. A. McGregor and T. S. Ahlbrandt, U.S. Geological Survey. p. 1-3.

Energy resource assessments; who cares?, by D. W. Houseknecht, U.S. Geological Survey. p. 3-5.

Geospatial data in a digital world, by N. D. Tosta, U.S. Geological Survey. p. 6.

Energy realities of the world; a projected role for fossil fuels, by C. D. Masters, U.S. Geological Survey. p. 7-9.

Oil and gas resources of the United States; how much is left and where is it?, by D. L. Gautier and G. L. Dolton, U.S. Geological Survey. p. 8-9.

Is "unconventional" gas a sustainable energy source?, by D. D. Rice, R. C. Charpentier, T. D. Fouch, J. W. Schmoker, and E. D. Attanasi, U.S. Geological Survey. p. 10-12.

Assessing the nation's coal resources; is it really a burning question?, by H. J. Gluskoter, U.S. Geological Survey. p. 12-14.

Coal quality; a Clean Air Act perspective, by R. B. Finkelman, U.S. Geological Survey. p. 14-15.

Natural variations in atmospheric CO₂; does what we know hurt us?, by E. T. Sundquist, U.S. Geological Survey. p. 16-17.

Atmospheric methane and other energy-related trace gases; effects on global warming and ozone, by R. S. Oremland and K. A. Kvenvolden, U.S. Geological Survey. p. 17-20.

The paradigm of rapid climate change; a current controversy, by J. J. Fitzpatrick, U.S. Geological Survey. p. 20-22.

Natural radionuclides in earth, air, and water, and the effect on human health, by L. C. S. Gundersen and Zoltan Szabo, U.S. Geological Survey. p. 22-24.

Water quality degradation associated with natural energy sources, by Y. K. Kharaka and R. B. Wanty, U.S. Geological Survey. p. 25-27.

Our future energy use; environmental concerns beyond the year 2000, by P. J. McCabe, U.S. Geological Survey. p. 27-29.

Effects of energy resource development on lakes; what do we need to know?, by J. T. Turk, U.S. Geological Survey. p. 30-32.

How can geoscientists help policy makers assess the impact of energy extraction in marine ecosystems?, by H. A. Karl, R. L. Bernknopf, D. R. Soller, and P. S. Chavez, Jr., U.S. Geological Survey. p. 33-34.

Consequences of energy use on water quality, by M. J. Baedeker, William Back, and C. A. Cravotta III, U.S. Geological Survey. p. 34-36.

A little learning is a dangerous thing; but how do we apply our geoscience knowledge to the regulatory process?, by L. H. Filipek and J. K. Otton, U.S. Geological Survey. p. 36-37.

Easy access to coal quality information; COALQUAL, the new USGS coal quality CD-ROM database, by L. J. Bragg, C. L. Oman, S. J. Tewalt, and R. B. Finkelman, U.S. Geological Survey. p. 38-41.

CD-ROM publication of the 1995 National Assessment of Oil and Gas Resources of the United States, by K. I. Takahashi and D. L. Gautier, U.S. Geological Survey. p. 41-42.

Geological and geophysical information from the National Petroleum Reserve Alaska on CD-ROM as a tool in support of

geoscientific decision-making, by D. J. Taylor and F. N. Zihlman, U.S. Geological Survey. p. 42-43.

Cretaceous and Tertiary coals and coal-bearing rocks of the Western United States; a bibliography of the U.S. Geological Survey data for resource estimation, quality determination, and reclamation potential evolution, by R. H. Affolter and J. R. Hatch, U.S. Geological Survey. p. 44-45.

The future of oil and gas in Northern Alaska, by K. J. Bird, F. E. Cole, D. G. Howell, and L. B. Magoon, U.S. Geological Survey. p. 45-47.

Federal and state coal availability/recoverability studies in Eastern United States; a new approach to coal resource assessment, by M. D. Carter, U.S. Geological Survey; T. J. Rohrbacher, U.S. Bureau of Mines; G. A. Weisenfluh, Kentucky Geological Survey; Nick Fedorko, West Virginia Geological and Economic Survey; A. G. Axon, Ohio Division of Geological Survey; C. G. Treworgy, Illinois State Geological Survey; Haluk Cetin, Indiana Geological Survey; D. D. Teeters, R. I. Geroyan, U.S. Bureau of Mines; R. S. Sites, Virginia Division of Mineral Resources; and N. K. Gardner, U.S. Geological Survey. p. 48-50.

Coal resource assessment in the Western United States; factors for consideration in the management of Federal lands, by R. D. Hettinger, L. R. H. Biewick, Karen Bryant, M. S. Ellis, U.S. Geological Survey; D. A. Ferderer, U.S. Bureau of Mines; M. A. Kirschbaum, C. L. Molnia, L. N. R. Roberts, S. B. Roberts, G. D. Stricker, and W. D. Watson, U.S. Geological Survey. p. 50-51.

Forest planning and oil and gas resources; how they work together, by M. R. Holm and J. S. Dersch, U.S. Forest Service. p. 52-54.

Interagency cooperation for mining leasing and operations on Federal lands, by G. W. Horton, U.S. Bureau of Land Management. p. 55-56.

Oil in California; quality, availability, and environmental concerns, by C. M. Isaacs, L. C. Price, L. A. Beyer, K. J. Bird, J. R. Herring, M. A. Keller, P. G. Lillis, L. B. Magoon, D. Z. Piper, R. G. Stanley, and M. E. Tennyson, U.S. Geological Survey. p. 56-58.

Energy studies on Native American lands funded by U.S. Department of Energy; gas resources and sandstone reservoirs of the Wind River Reservation, Wyoming, by R. C. Johnson, R. M. Flores, and W. R. Keefer, U.S. Geological Survey. p. 58-60.

Energy resources on lands of Native Americans; cooperative investigations by the U.S. Geological Survey, U.S. Bureau of Indian Affairs, and tribal governments, by E. A. Merewether, B. D. Smith, U.S. Geological Survey; and S. A. Manydeeds, U.S. Bureau of Indian Affairs. p. 60-63.

Conventional energy resources from the Federal outer continental shelf, U.S.A., by P. K. Ray and George Carpenter, U.S. Minerals Management Service. p. 63-64.

Energy resources and environment issues in the U.S. Gulf Coast, by C. J. Schenk, R. J. Viger, and R. M. Pollastro, U.S. Geological Survey. p. 64-65.

Energy studies on Native American lands funded by U.S. Department of Energy; near-surface methane and hydrocarbon occurrence, Southern Ute Indian Reservation, Colorado, and Jicarilla Apache Indian Reservation, New Mexico, by R. S. Zech, J. L. Ridgley, K. I. Cunningham, G. M. Reimer, A. C. Huffman, Jr., S. M. Condon, and B. S. Larson, U.S. Geological Survey. p. 66-67.

Resource and climate implications of natural gas hydrates, by W. P. Dillon, J. S. Booth, T. S. Collett, K. A. Kvenvolden, D. F. Coleman, M. W. Lee, W. J. Winters, and K. L. Fehlhaber, U.S. Geological Survey. p. 68-70.

Low-permeability (tight) gas reservoirs; an environmentally acceptable major source of energy for the 21st century?, by B. E. Law, C. W. Spencer, R. A. Crovelli, J. W. Schmoker, R. T. Ryder, U.S. Geological Survey; W. M. Sutherland, U.S. Bureau of Land Management; and K. H. Frohne, U.S. Department of Energy. p. 70-72.

Coalbed methane; from hazard to environmental concern and untapped energy resource, by D. D. Rice, R. B. Wanty, U.S. Geological Survey; C. W. Byrer, U.S. Department of Energy; and D. W. Kruger, U.S. Environmental Protection Agency. p. 72-74.

International coal-related activities of the U.S. Geological Survey and their environmental applications, by J. R. SanFilipo and P. D. Warwick, U.S. Geological Survey. p. 75-77.

Atmospheric methane flux from coals, by J. L. Clayton, J. S. Leventhal, and D. D. Rice, U.S. Geological Survey. p. 78-79.

Is increasing atmospheric CO₂ really a harbinger of global warming; a perspective through geologic time, by C. W. Holmes, U.S. Geological Survey. p. 79-81.

Methane budget and global change in coastal wetlands, by J. S. Leventhal, U.S. Geological Survey. p. 81-82.

South Florida ecosystems studies; geochemical history of ecosystem conditions and variability, by E. C. Spiker, A. L. Bates, L. P. Gough, J. R. Herring, C. W. Holmes, R. K. Kotra, H. E. Lerch, W. H. Orem, and V. C. Weintraub, U.S. Geological Survey. p. 82-84.

Springtime emission of methane from north temperate lakes, by R. G. Striegl and C. M. Michmerhuizen, U.S. Geological Survey. p. 84-86.

The effects of oil-field brines on aquifers; tracing the movement of brines using geochemical tools, by M. M. Abbott, U.S. Geological Survey. p. 87-88.

U.S. Bureau of Mines research into the environmental effects of energy resource development, by T. E. Ackman, R. F. Chaiken, A. G. Kim, S. J. Schatzel, D. E. Siskind, and M. A. Trevits, U.S. Bureau of Mines. p. 88-89.

Acid rain, by O. P. Bricker and K. C. Rice, U.S. Geological Survey. p. 90-91.

Energy-related selenium and vanadium contamination in San Francisco Bay, California; effects on biological resources?, by C. L. Brown and S. N. Luoma, U.S. Geological Survey. p. 91-92.

Hydrogeology and potential of intrinsic bioremediation at a manufactured gas plant, Charleston, South Carolina, by B. G. Campbell, M. D. Petkewich, J. E. Landmeyer, and F. H. Chapelle, U.S. Geological Survey. p. 93-95.

The effects of oil-field brines on aquifers; brine disposal in the East Poplar oil field, Fort Peck Indian Reservation, northeastern Montana, by S. D. Craig and J. N. Thamke, U.S. Geological Survey. p. 95-98.

Potential impact of oil and gas drilling operations on Carlsbad Caverns National Park, New Mexico, by K. I. Cunningham, G. M. Reimer, U.S. Geological Survey; H. R. DuChene, Axem Resources; E. J. LaRock, Denver, Colorado; S. L. Szarzi, and J. M. Been, U.S. Geological Survey. p. 98, 100-101.

State coal resources and extraction; impacts on the economy and environment, by American Association of State Geologists; prepared by H. H. Damberger, Illinois State Geological Survey. p. 99, 102.

Environmental aspects of carbonate use in energy generation, by J. R. Eggleston and R. B. Finkelman, U.S. Geological Survey. p. 102-103.

Multi-criterion decision and analysis for comparing hydropower and environmental impacts from operation of Glen Canyon Dam, northernmost Arizona, by Marshall Flug, National Biological Survey. p. 103-104.

Reclaiming the scars of energy's past; examples from the National Park Service, by B. A. Heise, U.S. National Park Service. p. 105.

Oil spills in Prince William Sound, Alaska, by K. A. Kvenvolden and P. R. Carlson, U.S. Geological Survey. p. 105-107.

Using geomorphology in mapping for oil spill planning, by Robert Pavia, NOAA; and Jacqueline Michel, Research Planning, Columbia, South Carolina. p. 107-108.

Red slime, oily films, and black rocks; sensing the iron bacteria that make neutral streams look acid, by E. I. Robbins, U.S. Geological Survey; J. E. Anderson, U.S. Army Corps of Engineers; M. H. Podwysocki, U.S. Geological Survey; H. M. Edenborn, U.S. Bureau of Mines; J. R. Eggleston, U.S. Geological Survey; Douglas Growitz, U.S. Office of Surface Mining; R. L. Kleinmann, U.S. Bureau of Mines; A. W. Norden, Maryland Department of Natural Resources; M. E. Passmore, U.S. Environmental Protection Agency; B. J. Prugh, Jr., M. R. Stanton, U.S. Geological Survey; P. C. Sweet, Virginia Division of Mineral Resources; and T. M. Vandyke, Pennsylvania Bureau of Mining and Reclamation. p. 109-111.

Radionuclides; energy resources and environmental hazards, by R. R. Schumann, S. A. Asher-Bolinder, W. I. Finch, L. C. S. Gundersen, J. K. Otton, D. E. Owen, C. T. Pierson, G. M. Reimer, and R. A. Zielinski, U.S. Geological Survey. p. 111-113.

The effects of oil-field brines on aquifers; geophysical applications in oil field environmental studies, by B. D. Smith, U.S. Geological Survey; and A. T. Mazzella, U.S. Environmental Protection Agency. p. 114-116.

Environmental impacts of oil and gas pipelines, by H. G. Wilshire, U.S. Geological Survey. p. 117-118.

- Environmental significance of New Mexico coal quality data, by Stephanie Begay, Suzette Martin, and S. C. Semken, Navajo Community College. p. 118.
- Fossil energy technologies for the 21st century, by T. F. Bechtel, U.S. Department of Energy. p. 119-120.
- The outlook for the natural gas industry, by M. I. German, American Gas Association. p. 120-123.
- Application of geosciences to decision-making; it's an idea worth trying and long overdue, by R. L. Lawson, National Coal Association. p. 123-124.
- Geoscientists, fossil fuels, and climate change; a defector's view, by J. K. Leggett, Greenpeace. p. 124-126.
- Ten reasons why natural gas prices will not rise, by D. M. Nesbitt, Decision Focus, Mountain View, California. p. 126-127.
- Global geologic economic aspects of oil and gas resources, by Nahum Schneidemann, Chevron Overseas Petroleum. p. 127-128.
- The gas and oil industry in the year 2024; a question of the road not taken, by R. W. Spiller, U.S. Department of Energy. p. 128-130.
- C 1109. Geomagnetism applications, by W. H. Campbell. 1995. 31 p.
- C 1112. Design of the National Water-Quality Assessment Program; occurrence and distribution of water-quality conditions, by R. J. Gilliom, W. M. Alley and M. E. Gurtz. 1995. 33 p.
- C 1117. ALASKA. The Alaska Mineral Resource Assessment Program; background information to accompany geologic and mineral-resource maps of the Killik River 1°x3° Quadrangle, Northern Alaska, by K. D. Kelley and C. G. Mull. 1995. 15 p.
- C 1118. 1995 National assessment of United States oil and gas resources, by U.S. Geological Survey, National Oil and Gas Resource Assessment Team. 1995. 20 p.
- C 1120-F. Propagation and composition of the flood wave on the upper Mississippi River, 1993, by J. A. Moody. 1995. 21 p. (Floods in the upper Mississippi River basin, 1993.)
- C 1120-G. Postflood occurrence of selected agricultural chemicals and volatile organic compounds in near-surface unconsolidated aquifers in the upper Mississippi River basin, 1993, by D. W. Kolpin and E. M. Thurman. 1995. 20 p. (Floods in the upper Mississippi River basin, 1993.)
- C 1120-H. Flood volumes in the upper Mississippi River basin, April 1 through September 30, 1993, by R. E. Southard. 1995. 32 p. (Floods in the upper Mississippi River basin, 1993.)
- C 1121. Catalogue of U.S. Geological Survey strong-motion records, 1993, compiled by J. C. Switzer and R. L. Porcella. 1995. 10 p.
- C 1122. COLORADO. Geochemical reconnaissance study of Vassar Meadow (Adams Rib) wetlands and vicinity, Eagle County, Colorado, by D. E. Owen and G. N. Breit. 1995. 16 p.
- C 1123. The stream-gaging program of the U.S. Geological Survey, by K. L. Wahl, W. O. Thomas, Jr. and R. M. Hirsch. 1995. 22 p.
- C 1124. The Midcontinent Strategic and Critical Minerals Project; summary and background information to accompany folio of maps of the northern Midcontinent area, latitude 36°-46° N. and longitude 88°-100° W., by W. P. Pratt. Prepared in cooperation with the geological surveys of Arkansas, Illinois, Iowa, Kansas, Kentucky, Minnesota, Missouri, Nebraska, Oklahoma, South Dakota, Tennessee, and Wisconsin. 1995. 19 p.
- C 1129. The origin of granites and related rocks, edited by Michael Brown and P. M. Piccoli, University of Maryland. 1995. 170 p.
- Petrology and geochemistry of the Polly Wright Cove Pluton, Blue Ridge Province, Virginia; perspectives on late Neoproterozoic anorogenic magmatism, central Laurentian Appalachians, by W. J. Abbey, R. P. Tollo, George Washington University; and J. N. Aleinikoff, U.S. Geological Survey. p. 7.
- Melting and generation of leucogranites associated with the emplacement of Ronda peridotites, by Antonio Acosta and L. G. Menéndez, University of Granada. p. 7-8.
- Migmatite sheaths as indicators of the emplacement mechanisms of granitic plutons; a case study for the Al-Amar Suture, eastern Arabian Shield, Kingdom of Saudi Arabia, by Ahmad Al-Saleh, King Saud University. p. 8-9.
- Status of thermobarometry in granite batholiths, by J. L. Anderson, University of Southern California. p. 9-10.
- An experimental method for determining compositions of aqueous fluids coexisting with silicate melts, by L. M. Anovitz, J. G. Blencoe, Juske Horita, and D. R. Cole, Oak Ridge National Laboratory. p. 10-11.
- Compositional variations in granitic rocks of the Northern Appalachians, USA, by R. A. Ayuso and J. G. Arth, U.S. Geological Survey. p. 11-12.
- Crystallization of Pinatubo magma, by Leslie Baker and M. J. Rutherford, Brown University. p. 12-13.
- The enclave swarms in some granitoids of the Sierra Nevada Batholith, California; indicators of magma interactions and evolution, by Bernard Barbarin, Université de Paris-Sud. p. 13-14.
- Grenville-age A-type granitic rocks in Texas, by C. G. Barnes, W. M. Shannon, Texas Tech University; D. R. Smith, Trinity University; and E. James, University of Texas. p. 15-16.
- The dynamics of dehydration melting and implications for melt extraction in the lower crust following underplating; an example from the Ivrea-Verbano Zone, northern Italy, by S. A. Barboza and G. W. Bergantz, University of Washington. p. 14-15.
- Petrochemistry and origin of Silurian-Devonian plutons in the "Central Mobile Belt" of Cape Breton Island, Nova Scotia, Canada, in comparison with Newfoundland and New Brunswick, by S. M. Barr and Michael O'Neill, Acadia University. p. 16.
- Phanerozoic granitoids and associated mineral deposits in southwestern North America, by M. D. Barton, University of Arizona. p. 17-18.

Time-space evolution of a two-mica granite; the Birch Creek Pluton, California, USA, by M. D. Barton, G. A. Ghidotti, University of Arizona; P. N. Holden, University of California at Los Angeles; L. B. Goodwin, and M. T. Heizler, New Mexico Institute of Mining and Technology. p. 18-19.

Controls on the trace element chemistry of crustal melts, by Fernando Bea, University of Granada. p. 19-20.

The residence of REE, Y, Th, and U in granites and crustal protoliths; implications for the chemistry of crustal melts, by Fernando Bea, University of Granada. p. 20-21.

Tonalites as barometers and hygrometers; an example from the southern Virginia Appalachians, by J. S. Beard, Virginia Museum of Natural History. p. 21.

Linking phase relations, thermal budgets and deformation during partial melting; two contrasting styles of basalt-crust interaction, by G. W. Bergantz, University of Washington. p. 21-22.

Mineralogy and geochemistry of Tertiary A-type granitoids at a continental rift margin, southern Red Sea, by Suzanne Blakey, M. F. Thirlwall, and M. A. Menzies, University of London. p. 23-24.

Methods for determining the thermodynamic mixing properties of hydrous haplogranitic melts; progress, problems and prospects, by J. G. Blencoe and L. M. Anovitz, Oak Ridge National Laboratory. p. 24-25.

A metallogenic template for eastern Australia based on granite source and evolution, by P. L. Blevin, C. M. Allen, C. J. Bryant, and B. W. Chappell, Australian National University. p. 25-26.

Intraplate A-type bimodal magmatism; why and how?, by Bernard Bonin, Université de Paris-Sud. p. 26-27.

Rapid ascent rates of granitoid magmas determined from epidote dissolution kinetics, by A. D. Brandon, Carnegie Institution of Washington; R. A. Creaser, and Thomas Chacko, University of Alberta. p. 27-28.

Generation of leucogranites at granulite facies conditions; a case study from the Kerala khondalite belt in southern India, by I. Braun, Universität Bonn. p. 28-29.

The Taku Transect and its granitic rocks, Coast Mountains Complex, Southeastern Alaska, by D. A. Brew, J. L. Drinkwater, A. B. Ford, and G. R. Himmelberg, U.S. Geological Survey. p. 29-30.

Prosecuting the connection between migmatites and granites, by Michael Brown, University of Maryland. p. 30-31.

Optimal conditions for porphyry copper ore genesis based on experimental, theoretical and field observations; an overview, by P. A. Candela, University of Maryland. p. 31-32.

Hercynite-bearing granites and associated metasedimentary enclaves from the Taltson magmatic zone, Alberta, Canada; a natural example of high-temperature pelite melting, by Thomas Chacko and R. A. Creaser, University of Alberta. p. 32-33.

Causes of compositional variation within granite suites, by B. W. Chappell, Australian National University. p. 34.

Plutons emplaced in dextral strike-slip deformation zones in the Abitibi Subprovince, Canada, by E. H. Chown, Université du Québec. p. 35.

Granites, subduction, and extension in the Basin and Range Province, western USA, by E. H. Christiansen, Brigham Young University. p. 35-36.

Respective roles of source composition and melting conditions in the high-K content of some magmas; geochemical constraints, by Alain Cocherie and Philippe Rossi, BRGM, France. p. 36-37.

S- and I-type granitoids of the eastern Lachlan fold belt; three-component mixing, not restite unmixing, by W. J. Collins, University of Newcastle, Australia. p. 37-38.

Pervasive magma transfer through the lower middle crust during non-coaxial compressional deformation; an alternative to diking, by W. J. Collins, University of Newcastle, Australia; and E. W. Sawyer, Université du Québec. p. 38.

Radiogenic isotopes in granitic systems; studies of melting and mixing at the source, by R. A. Creaser, University of Alberta. p. 38-39.

Granitoid magmatism and crustal evolution in the Southwest Baltic Shield, by D. P. F. Darbyshire, NERC Isotope Geosciences Laboratory, United Kingdom; T. S. Brewer, Leicester University; S. A. Larson, and K. I. Ahall, University of Goteborg. p. 39-40.

S-type granites in the northern Slave Province, Northwest Territories, Canada?, by A. M. Davis and E. J. Krogstad, University of Maryland. p. 40-41.

Microgranitoid enclaves and associated intrusives; a comparative petrographic and geochemical study, by A. A. Dean, Monash University. p. 41-42.

New experimental constraints on the physical properties of granitic melts, by D. B. Dingwell, K. U. Hess, Ruth Knoche, and S. L. Webb, Universität Bayreuth. p. 42.

Generation, ascent and emplacement of granitic magma in the northeastern Gander Zone, Newfoundland Appalachians, by R. S. D'Lemos, T. R. King, J. W. Pembroke and I. R. Tribe, Oxford Brookes University. p. 42-43.

The petrogenesis of slab-derived trondhjemite-tonalite-dacite/adakite magmas, by M. S. Drummond, University of Alabama; M. J. Defant, and P. K. Kepezhinskias, University of South Florida. p. 44-45.

Tismana (Neoproterozoic) granitoid pluton from the Danubian basement (South Carpathians-Romania); a geochemical approach, by J. C. Duchesne, University of Liege; T. Berza, Geological Institute of Romania; J. P. Liegeois, Royal Museum of Central Africa, Belgium; and M. Tatu, Geological Institute of Romania. p. 45-46.

Late Variscan amphibole-bearing granitoids in Lusatia (northern part of Bohemian Massif) as melting products of metasomatically overprinted mafic lower crustal rocks, by Joerg Eidam and Joerg Hammer, Universität Greifswald, Germany. p. 46-47.

Zircon inheritance in an S-type granite and its microgranitoid enclaves, Lachlan fold belt, Australia, by M. A. Elburg, Monash University. p. 47-48.

Could some regional metamorphism be induced by flowing of magma? The case of Hercynian metamorphic domes and plutonic intrusions of the eastern Pyrenees, by Pedro Enrique, University of Barcelona. p. 48.

Amphibole-rich clots in calc-alkalic granitoids and in their mafic microgranular enclaves from two foldbelts, NE Brazil, by V. P. Ferreira, A. N. Sial, Federal University of Pernambuco; A. E. Fallick, Scottish Universities Research and Reactor Centre; and M. J. M. Cruz, Federal University of Bahia. p. 49.

Hercynian evolution from calc-alkaline to peraluminous A-type leucogranites, Catalan Coastal Ranges, NE Spain, by M. Ferres, University of Geneva; Pedro Enrique, University of Barcelona; Michel Delaloye, University of Geneva; and J. Sole, University of Barcelona. p. 50.

Granitoids from oceanic to continental environments; the example of the Urals (Russia), by G. B. Fershtater, Institute of Geology and Geochemistry, Ekaterinburg, Russia; and Fernando Bea, University of Granada. p. 51.

Non-linear dynamics and the distribution and compositions of enclaves in granitoid magmas, by James Flinders, University of Manchester; and J. D. Clemens, Kingston University, United Kingdom. p. 52.

Granites and microgranitoid enclaves; the importance of cumulates, by R. H. Flood and S. E. Shaw, Macquarie University. p. 53.

Significance of magmatic epidote in the Zeljin Pluton, Serbia, by Istvan Forizs, Hungarian Academy of Sciences; M. Vukov and Vidojko Jovic, University of Belgrade. p. 53-54.

Extreme compositional variability in granitic monazites, by H. J. Förster and D. Rhede, GeoForschungsZentrum Potsdam. p. 54-55.

Geochronology of the Idaho-Bitterroot Batholith and Bitterroot Dome; an example of magmatism preceding and contemporaneous with core complex extension, by D. A. Foster, La Trobe University; and C. M. Fanning, Australian National University. p. 56.

Pluton emplacement mechanisms; a view from the roof, by T. K. Fowler, Jr., S. R. Paterson, A. Crossland, and A. Yoshinobu, University of Southern California. p. 57.

Sr-Nd isotopic record of multi-stage interactions between mantle-derived magmas and crustal components in a collision context; ultramafic-granitoid association from Vivero, NW Spain, by Gumer Galan, University of Barcelona; Christian Pin, and Jean-Louis Duthou, Université Blaise Pascal. p. 58.

Amphibole mineral chemistry of the anorogenic Robertson River igneous suite, Blue Ridge Province, Virginia, by K. J. Gray, U.S. Geological Survey. p. 59.

Shoshonitic granitoids of the Borborema Province, NE Brazil, by I. P. Guimaraes and A. F. Da Silva Filho, Federal University of Pernambuco. p. 60-61.

Miocene rapakivi-like granites of southern Newberry Mountains, Nevada, USA; comparison to the Proterozoic rapakivi granites of Finland, by Ilmari Haapala, O. T. Ramo, University of Helsinki; and Alexis Volborth, Montana College of Mineral Science and Technology. p. 61-62.

Geochemistry and petrogenesis of Lusatian Cadomian granitoids (northern margin of Bohemian Massif), by Joerg Hammer and Joerg Eidam, Universität Greifswald, Germany. p. 62-63.

Hydrodynamics of magmatic and meteoric fluids in vicinity of granite plutons, by R. B. Hanson, Science, Washington, DC. p. 63-64.

Experimental study of the distribution of H₂O between cordierite and peraluminous melt, and its bearing on the generation and evolution of migmatites and granites, by S. L. Harley and D. Carrington, University of Edinburgh. p. 64-65.

A detailed Sr-Pb isotope study of Naivasha comendites, Kenya, by A. Heumann, G. R. Davies, and Hubert Staudigel, Vrije Universiteit Amsterdam. p. 65-66.

Geochemical constraints on magma sources of Mesozoic continental arc plutonic complexes, Andean plate boundary zone, North Chile, by D. Hodkinson, E. J. Krogstad, and Michael Brown, University of Maryland. p. 66-67.

Insights from igneous reaction space; a holistic approach to granite crystallization, by J. P. Hogan, University of Oklahoma. p. 67-68.

Petrogenesis of A-type sheet-granites from an ancient rift, by J. P. Hogan, M. C. Gilbert, J. D. Price, University of Oklahoma; and J. E. Wright, Rice University. p. 68-69.

Comparative granitoid geochemistry and lateral repetition of magmatic arcs, by J. M. Horak, National Museum of Wales; and Wes Gibbons, University of Wales. p. 71.

Effects of dissolved C-O-H species on chemical and physical properties of ascending granitic magmas, by François Holtz and Bruno Scaillet, CNRS, France. p. 70.

Late Neoproterozoic A-type granites and rhyolites associated with rift-related clastic rocks within the Grenvillian basement of Virginia, by F. E. Hutson, University of Texas; and R. P. Tollo, George Washington University. p. 72-73.

A mechanism for the segregation and collection of crustal melts, by M. D. Jackson, M. J. Cheadle, and M. P. Atherton, University of Liverpool. p. 73.

Interaction of tectonic-related strain fields during pluton construction; Argyll Suite, SW Grampian Highlands, Scotland, by J. M. Jacques, University of Durham, United Kingdom; and R. J. Reavy, University College Cork. p. 74.

Evolution of granites and continental crust by dehydration-melting of amphibolites and tonalites, by Wilhelm Johannes, University of Hannover; and Jagmohan Singh, Guru Nanak Dev University. p. 74-75.

Evidence for magmatic fracturing and small-scale melt segregation during late stage pluton emplacement, by B. E. John, University of Wyoming; Holger Stunitz, Universität Basel; and J. D. Blundy, University of Bristol. p. 75-76.

New approaches to crustal evolution studies and the origin of granitoids through the Lu-Hf and Re-Os isotope systems, by C. M. Johnson, K. M. Barovich, University of Wisconsin; and S. B. Shirey, Carnegie Institution of Washington. p. 76-77.

Anatectic melt generation and migration in a shear zone associated with a lower crustal mafic intrusion, Ivrea-Verbano Zone,

Italy, by T. J. Kalakay and A. W. Snoke, University of Wyoming. p. 77-78.

Neogene granitoids in North Fossa Magna, central Japan, by Yoshinobu Kawano, Saga University. p. 78.

Crust-mantle interaction at Bingie Bingie Point; implications for I-type granite petrogenesis in the Lachlan fold belt, by Sue Keay and W. J. Collins, University of Newcastle, Australia. p. 79.

Rb-Sr and Sm-Nd study of the Sao Rafael Batholith, Rio Grande do Norte, Northeast Brazil, by D. H. Ketcham, L. E. Long, University of Texas; and A. N. Sial, Federal University of Pernambuco. p. 79-80.

Origin of the Shir-Kih Granite, South-West Yazd, central Iran, by M. Khalili, University of Isfahan. p. 80-81.

Hercynian granite rocks of the Western Carpathians; products of crustal reactivation, by Milan Kohut, Dionyz Stur Institute of Geology, Slovakia; A. B. Kotov, E. B. Salnikova, V. P. Kovach, Institute of Precambrian Geology and Geochronology, Russia; and J. Michalko, Dionyz Stur Institute of Geology. p. 81-82.

Remnants of lower crustal mineral assemblages in granitoid rocks; examples from the South Bohemian Pluton, Austria, by F. Koller and U.S. Kloetzli, University of Vienna. p. 82-83.

Emplacement of the Abukuma Pluton, Northeast Japan, inferred from the subsurface distribution of gabbroic xenoblocks and structure of the wall-rocks, by Kazuya Kubo, Geological Survey of Japan. p. 83.

Geochemical constraints of enclaves and pre-Himalayan Champawat granitoids of Kumaun Lesser Himalaya, India, by Santosh Kumar, Banaras Hindu University. p. 83-84.

Petrology and geochemistry of a calcic, peraluminous and ferrous granitoid pluton; the Mitsuhashi Granite in the Ryoke Belt, Southwest Japan, by Toshio Kutsukake, Aichi University. p. 84.

Geochemistry and evolution of the 1.89-1.81 Ga granitoids in the Tampere-Hameenlinna area, southern Finland, by Raimo Lahtinen, Geological Survey of Finland. p. 85-86.

S-type granites of the Hillgrove plutonic suite, New England Batholith, eastern Australia; products of partial melting of an intermediate greywacke source, by B. Landenberger and W. J. Collins, University of Newcastle, Australia. p. 86.

Himalaya and Karakorum leucogranites; a comparison, by Patrick LeFort, Institut Dolomieu. p. 86-87.

Oxygen isotope mapping of young anatectic migmatites from the Nanga Parbat Massif, Pakistan, by Karen Leslie, D. P. Mattey, University of London; and N. B. W. Harris, Open University, Milton Keynes. p. 87-88.

Origin of syenite magmas in anorogenic granitoid series; field, geochemical and experimental data from East Central Asia, by B. A. Litvinovsky, Russian Academy of Sciences; S. M. Wickham, University of Chicago; A. N. Zanzivich, Russian Academy of Sciences; and R. C. Newton, University of Chicago. p. 88-89.

Pegmatites, by David London, University of Oklahoma. p. 89-90.

The phosphorus cycle in peraluminous granitic magmas, by David London, M. B. Wolf, G. B. Morgan VI, University of Oklahoma; and Marcos Gallego, Nuevo Baztan, Madrid. p. 90-91.

Some Pampean pre-Taconic and Taconic (Famatinian) granites of southwestern South America, by M. G. López de Luchi, Centro de Investigaciones en Recursos Geológicos, Argentina; and L. H. Dalla Salda, Centro de Investigaciones Geológicas, Argentina. p. 91.

Intrusive degassing at the magma/wallrock interface, by J. B. Lowenstern, U.S. Geological Survey. p. 92.

Some thermal constraints on crustal assimilation in calc-alkaline batholiths, by Lusius Matile, A. B. Thompson, and Peter Ulmer, ETH Zurich. p. 93.

Isotopic constraints on petrogenesis of the Jurassic Eagle Mountain Intrusion, southeastern California, by D. P. Mayo, J. L. Anderson, University of Southern California; and J. L. Wooden, U.S. Geological Survey. p. 93-94.

Sheet-like assembly of the Jackass Lakes Pluton, central Sierra Nevada, California; multiple mode emplacement, by B. A. McNulty, Weixing Tong and O. T. Tobisch, University of California at Santa Cruz. p. 94-95.

Plutonism in a rapidly evolving continental rift system, Eldorado Mountains, southern Nevada, by C. F. Miller, D. W. Patrick, Vanderbilt University; J. S. Miller, University of North Carolina; M. T. Heizler, New Mexico Institute of Mining and Technology; J. L. Wooden, U.S. Geological Survey; S. J. Hook, California Institute of Technology; Jason Unkefer, Y. F. S. Lee, and C. M. Falkner, Vanderbilt University. p. 95-96.

Construction of mid-crustal magma chambers during regional contraction, North Cascades, Washington, by R. B. Miller, San Jose State University; and S. R. Paterson, University of Southern California. p. 97-98.

The Ardara Pluton, Co Donegal, NW Ireland; a straightforward example of a ballooning pluton, by S. J. Molyneux and D. H. W. Hutton, University of Durham, United Kingdom. p. 98.

Accumulation of rare earth and high field strength elements in peralkaline granitoids; the Galiñeiro Pluton, NW Spain, by P. G. Montero, University of Granada. p. 98-99.

Melt inclusion, matrix glass and mineral compositions from a zoned S-type peraluminous rhyolite suite, Morococala volcanic field, Bolivia, by G. B. Morgan VI, David London, University of Oklahoma; and R. G. Luedke, U.S. Geological Survey. p. 99-100.

Kilometer scale vertical translation, concordancy, and nonrotation of porphyroblasts surrounding the Papoose Flat Pluton; inclusion trails and AMS reveal the kinematics of emplacement, by S. S. Morgan, R. D. Law, Virginia Polytechnic Institute and State University; Michel de Saint Blanquat, and Jean-Luc Bouchez, Université Paul Sabatier. p. 100-101.

Geochemistry and structural petrology of the Father Pluton, Abitibi Subprovince, Canada, by Abdelai Moukhsil, Université du Québec. p. 101-102.

- Sodic granitoid magmas formed by melting of mafic lithosphere; the Separation Point Batholith, New Zealand, by R. J. Muir and S. D. Weaver, University of Canterbury. p. 102-103.
- REE-depleted leucogranites as a consequence of disequilibrium melting of monazite-bearing schists, the Black Hills, South Dakota, by P. I. Nabelek and M. D. Glascock, University of Missouri. p. 103-104.
- Cretaceous granitoids in Southwest Japan and their bearing on crust-forming processes in the eastern Eurasian margin, by Takashi Nakajima, Geological Survey of Japan. p. 104.
- Panafrican stratioid granites of Madagascar; a new post-collisional alkaline province, by Anne Nédélec, Université Paul-Sabatier; W. E. Stephens, University of St. Andrews; and J. L. Bouchez, Université Paul-Sabatier. p. 105.
- Geochemistry of granitic rocks and their minerals from the Kavala Pluton, northern Greece, by A. M. R. Neiva, Coimbra University, Portugal; G. Christofides, G. E. Eleftheriadis, and T. Soldatos, Thessaloniki University. p. 105-106.
- Experimental and theoretical constraints on the differentiation of high temperature crustal magmas, by Hanna Nekvasil, Charles Jensen, and W. J. Carroll, State University of New York at Stony Brook. p. 106-107.
- The "mantle-like" component in felsic complexes of the Lachlan fold belt, by I. A. Nicholls and Steve Bagaric, Monash University. p. 107-108.
- Petrogenesis of a 1.87 Ga post-tectonic granite suite in the Svecofennian of Finland; general and Nd isotope geochemistry, by Mikko Nironen, Geological Survey of Finland; and O. T. Ramo, University of Helsinki. p. 109.
- Midcrustal pluton emplacement in a contractional setting; c 1400 Ma synkinematic granites of the Southwestern United States, by M. W. Nyman and K. E. Karlstrom, University of New Mexico. p. 110.
- Mesozoic-Miocene granitoid evolution and petrogenesis in southern Chile, by R. J. Pankhurst, British Antarctic Survey; S. D. Weaver, University of Canterbury, New Zealand; and Francisco Herve, Universidad de Chile. p. 111.
- Pluton emplacement in arcs; a crustal-scale recycling process, by S. R. Paterson, T. K. Fowler, Jr., University of Southern California; and R. B. Miller, San Jose State University. p. 111-112.
- Effects of pressure, H₂O activity, and Fe/Mg ratio on the compositions of anatectic melts, by A. E. Patiño Douce, University of Georgia; and J. S. Beard, Virginia Museum of Natural History. p. 112-113.
- Recognition and significance of mixing in granites, by J. W. Pembroke and R. S. D'Lemos, Oxford Brookes University. p. 113-114.
- Granite ascent; dykes or diapirs?, by Nick Petford, University of Kingston, United Kingdom. p. 114-115.
- Metal partitioning from melts into vapor and vapor/brine mixtures in shallow granitic systems, by P. M. Piccoli and P. A. Candela, University of Maryland. p. 115-116.
- Control of redox state and Sr isotopic composition of magmas; source or processes?, by Michel Pichavant and T. Hammouda, CNRS, France. p. 116-117.
- Trace element and isotopic exchange during acid-basic magma interaction, by Giampiero Poli, University of Perugia; F. R. Davies, and Simone Tommasini, Vrije Universiteit Amsterdam. p. 117-118.
- Discordant cores in zircons and granite genesis, by Jean-Pierre Pupin, Université de Nice. p. 118-119.
- Monzonite suites; the innermost Cordilleran plutonism of Patagonia, by C. W. Rapela, Universidad Nacional de La Plata, Argentina; and R. J. Pankhurst, British Antarctic Survey. p. 119-120.
- Cordierites in S-type granites; restites following low pressure, high degree partial melting of metapelites, by C. W. Rapela, Universidad Nacional de La Plata, Argentina; R. J. Pankhurst, British Antarctic Survey; E. Baldo, Universidad de Cordoba, Argentina; and J. Saavedra, Instituto de Recursos Naturales y Agrobiologia, Spain. p. 120-121.
- Estimation of initial and saturation water contents of three Mesozoic granitic plutons in the north-central Great Basin, Nevada, by Kent Ratajeski and P. A. Candela, University of Maryland. p. 121-122.
- Experimental determination of rare earth element distribution between chloride-bearing volatile phase and granitic melt, by M. J. Reed, University of Maryland. p. 122-123.
- A complex strain and intrusion fabric related to trans-solidus deformation; the Wolf Mountain Intrusion, Llano Uplift, Texas, by R. M. Reed, University of Texas. p. 124-125.
- The albite granites of the central Eastern Desert (Egypt); the evolution of a hot and dry granulite-derived melt to a pegmatoid intrusion, by A. D. Renni, Freiberg University, Germany. p. 125-126.
- The perils of AFC modelling, by M. P. Roberts, Manchester University; and J. D. Clemens, University of Kingston, United Kingdom. p. 126-127.
- Are enclaves significant in granite petrogenesis?, by M. P. Roberts, University of Manchester; and J. D. Clemens, University of Kingston, United Kingdom. p. 127-128.
- The plutonic zone; significance of the lower crust between the Conrad and Mohorovicic discontinuities, by J. A. Roddick, Geological Survey of Canada. p. 128.
- A belt of high-K plutonic rocks related to crustal extension; evidence from the European Variscan, by Philippe Rossi and Alain Cocherie, BRGM, France. p. 128-129.
- Contrasting Fe-enrichment trends in calc-alkaline granitoid plutons from Cima d'Asta and Monte Croce, Southern Alps, Italy, by Alessandro Rottura, Università di Bologna; Aldo Del Moro, CNR, Pisa; Alfredo Caggianelli, Università della Basilicata; G. M. Bargossi, Istituto di Petrografia e Giacimenti Minerari, Parma; Giorgio Gasparotto, Università di Bologna; and Laura Pinarelli, CNR, Pisa. p. 129-130.
- Application of rock deformation experiments to melt segregation in the lower crust, by Tracy Rushmer, University of Vermont. p. 130-131.

Melt segregation and melt geochemistry; what can experiments tell us?, by Tracy Rushmer, University of Vermont. p. 132.

Geochemical and Nd-Sr isotopic composition of Alleghanian granites of the Southern Appalachians; origin, tectonic setting, and source characterization, by S. D. Samson, D. G. Coler, Syracuse University; and J. A. Speer, Mineralogical Society of America. p. 132-133.

Melt segregation or magma mobility; the difference between migmatites and granites, by E. W. Sawyer, Université du Québec. p. 133-134.

Melt segregation or magma mobility and the migmatite-granite connection; the field and geochemical evidence, by E. W. Sawyer, Université du Québec. p. 134-135.

Effects of f_{O_2} on phase equilibria in granitic systems; conditions of stability and compositional variation of biotite and amphibole, by Bruno Scaillet, Michel Pichavant and Roberto Dall'Agnol, CNRS, France. p. 135-136.

Quantifying spatial relationships between faults and plutons, by K. L. Schmidt, S. R. Paterson, and S. P. Lund, University of Southern California. p. 136-137.

The Crooks Canyon intrusive complex; bimodal magmatism in a Proterozoic island arc setting, central Arizona, by S. J. Seaman and M. L. Williams, University of Massachusetts. p. 137-138.

Sr and Nd isotope geochemistry of Mesozoic plutonic rocks from Hong Kong; implications for granite petrogenesis, regional structure, and crustal evolution in SE China, by R. J. Sewell, Hong Kong Geological Survey; and D. P. F. Darbyshire, NERC Isotope Geosciences Laboratory, United Kingdom. p. 138.

Origin of granites at an active plate margin, by S. E. Shaw, Macquarie University; and V. R. Todd, U.S. Geological Survey. p. 139.

An assimilation role in the crystallization of S-type tonalite magma at granulite facies conditions, Hidaka metamorphic belt, Hokkaido, northern Japan, by Toshiaki Shimura, Niigata University; and Masayuki Komatsu, Ehime University. p. 139-141.

Magmatic epidote-bearing granitoids from NW Argentina and NE Brazil, by A. N. Sial, Federal University of Pernambuco; A. J. Toselli, National University of Tucuman, Argentina; J. Saavedra, Instituto de Recursos Naturales y Agrobiología, Spain; V. P. Ferreira, Federal University of Pernambuco; and J. N. Rossi de Toselli, National University of Tucuman. p. 141-142.

Contrasting migmatite terrains, Tumbledown Mountain area, west-central Maine, by G. S. Solar and Michael Brown, University of Maryland. p. 142-143.

Petrology and geochemistry of mafic enclaves in granitoids of the Robertson River igneous suite, Blue Ridge Province, central Virginia, by J. L. Tegeler, University of Maryland. p. 143.

The partitioning of Fe and Co between plagioclase and biotite and the Eu^{2+}/Eu^{3+} ratio for plagioclase in granitic rocks from the inner zone of Southwest Japan, by Yasutaka Terakado, Kobe University; and Tatsuya Fujitani, Marine Technical College. p. 144.

Fluid inclusion evidence of the evolution of magmatic fluids in the Harney Peak Leucogranite, Black Hills, South Dakota, by K. A. Ternes and P. I. Nabelek, University of Missouri. p. 144-145.

Assessment of water content in granitic melts using melt inclusion homogenization data; method, results, problems, by Rainer Thomas, GeoForschungsZentrum Potsdam. p. 145-146.

Fertility of crustal rocks during anatexis, by A. B. Thompson, ETH Zurich. p. 146-147.

Tectonic setting and geochemistry of granitoids; the potential and problems of discrimination diagrams, by Gerhard Tischendorf, H. J. Förster, and R. B. Trumbull, GeoForschungsZentrum Potsdam. p. 147-148.

Polygenetic microgranitoid enclave swarms in granitic rocks, central Sierra Nevada, California, by O. T. Tobisch, University of California at Santa Cruz; R. H. Vernon, Macquarie University; and B. A. McNulty, University of California at Santa Cruz. p. 148-149.

Petrology and geochemistry of late Neoproterozoic anorogenic granitoids, Laurentian Appalachians, Virginia and North Carolina; implications for extension-related encratonic magmatism, by R. P. Tollo, George Washington University; F. E. Hutson, University of Texas; and J. N. Aleinikoff, U.S. Geological Survey. p. 149-150.

Geochemistry and geochronology of evolved granitic rocks in southwestern Maine; tectonic implications, by P. B. Tomascak, R. J. Walker and E. J. Krogstad, University of Maryland. p. 150-151.

Li isotope geochemistry of the Tin Mountain Pegmatite, Black Hills, South Dakota, by P. B. Tomascak, S. J. Lynton, R. J. Walker, and E. J. Krogstad, University of Maryland. p. 151-152.

The Carboniferous-Ordovician connection in the Sardinia-Corsica Batholith; constraints from the Carboniferous calc-alkaline granitoids and Ordovician metavolcanics, by Simone Tommasini, Vrije Universiteit Amsterdam; Giampiero Poli, Università di Perugia; A. N. Halliday, University of Michigan; and Piero Manetti, Università di Firenze. p. 152-153.

Mesozoic plutonism in western New Zealand; a 50 Ma transition from subduction to continental rifting on the Gondwana margin, by A. J. Tulloch, Institute of Geological and Nuclear Sciences, New Zealand; and D. L. Kimbrough, San Diego State University. p. 153-154.

Granites from source to emplacement; the view from geophysics, by J. L. Vigneresse, CREGU, France. p. 154-156.

Mid-Cretaceous plutonism associated with crustal extension; the Hohonu Batholith, New Zealand, by Tod Waight, University of Canterbury. p. 156.

Heterogeneous sources for granitic rocks, Black Hills, South Dakota; do granites really serve as interpretable crustal probes?, by R. J. Walker and E. J. Krogstad, University of Maryland. p. 156-157.

Crustal evolution and the generation of magmas akin to adakites in western Palmer Land, Antarctic Peninsula, by C. D.

Wareham and I. L. Millar, British Antarctic Survey. p. 157-158.

Zircon dissolution and overgrowth in granitic melts; effects of thermal history and local melt volume, with implications for chemical zoning and relative core size in natural zircons showing an inherited isotope component, by E. B. Watson and J. M. Hanchar, Rensselaer Polytechnic Institute. p. 158-159.

Geochemical evidence for deformation enhanced melt segregation; an example from the Kirtomy Migmatite Suite, Sutherland, Scotland, by G. R. Watt and I. M. Burns, Oxford Brookes University. p. 159-160.

Early exsolution of chlorine-enriched "fluids" from felsic magmas; a crucial but poorly-understood process, by J. D. Webster, American Museum of Natural History. p. 160-161.

Diapirism of crustal magmas, by R. F. Weinberg, Australian National University. p. 161-162.

Diapirism and decompression melting, by R. F. Weinberg, Australian National University. p. 162-163.

Mafic-silicic layered intrusions, by R. A. Wiebe, Franklin and Marshall College. p. 164.

Enclave-rich zones in the Gouldsboro Granite, Maine; a record of eruption and compositional stratification in a silicic magma chamber, by R. A. Wiebe and S. D. Adams, Franklin and Marshall College. p. 165.

Testing fault-controlled magma emplacement mechanisms, by A. S. Yoshinobu, D. A. Okaya, S. R. Paterson, and T. K. Fowler, Jr., University of Southern California. p. 166.

One-dimensional thermal modelling of crustal anatexis in an extensional regime, by E-an Zen, University of Maryland. p. 167-168.

Anatomy and genesis of Shuiximiao asymmetrically layered pegmatite-aplite dikes, by Zu Jinchu, Rao Bing and Xiong Xiaolin, Nanjing University. p. 168.

- C 1130. CALIFORNIA. Look before you build; geologic studies for safer land development in the San Francisco Bay area, by M. B. Tyler, Spangler Associates. 1995. 54 p.

TECHNIQUES OF WATER-RESOURCES INVESTIGATION

- TWI 03-A21. Stream-gaging cableways, by C. R. Wagner. 1995. 56 p. (Supersedes Open-file report 91-84.)

MISCELLANEOUS AND SPECIAL BOOKS

Geographic Names Information System (GNIS)

GNIS, developed by the Geographic Names Information Section, Branch of Geographic and Cartographic Research, National Mapping Division, is the basis for Professional Paper 1200—*The National Gazetteer of the United States*, which is being published as a series of individual state gazetteer volumes. Prior to publication of any volume, the interim materials described may meet the needs of potential users. The information contained in GNIS is interactively available at the U.S. Geological Survey's information offices. Special searches of the system may be requested for a modest cost with the results available in bound listings and on magnetic tape. The GNIS is also available on CD-ROM and includes all names presently in the data base, as

well as the necessary software for searching, analyzing, and exporting the data. The software must be installed onto a hard disk before the data can be used. The CD-ROM, which can be purchased for \$57, contains the NGNDB, TMNDB, and RDB data bases. Each record in the NGNDB and TMNDB can contain a variety of location and description fields. All can be displayed, and some can be searched. Not all fields, however, contain data. The RDB contains one field—bibliography. The CD-ROM is accompanied by a users manual entitled the GNIS Digital Gazetteer.

Volumes of the National Gazetteer

This product is available only in book form and only for State files that have undergone the second phase of data compilation. The second phase of data compilation entails the inclusion of names found in Federal, State, and other sources as well as historical material. In addition to official names, known variant names of features are listed cross-referenced to the appropriate official name. A variant name is any other known name or spelling applied to a feature.

Official State Gazetteers must be ordered from: U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, CO 80225.

Catalog

Publications of the U.S. Geological Survey, 1994. 1995. 427 p.

Yearbook

U.S. Geological Survey yearbook, fiscal year 1994. 1995. 134 p.

The Northridge earthquake, by J. J. Mori and L. A. Wald. p. 3-8.

The scientific assessment and strategy team, by J. A. Kelmelis. p. 8-12.

Missouri River Basin Earth Resources Mapping Group, by W. H. Langer. p. 12.

Impact of the 1993 floods in the upper Mississippi River basin, by J. C. Dohrenwend and B. D. Stone. p. 12-17.

The Independence Day flood of 1994, by T. W. Hale and T. C. Stamey. p. 17-20.

Debris-flow hazards at Mount Rainier, by J. S. Walder. p. 20-22.

Comet collision with Jupiter, by C. S. Shoemaker. p. 22-26.

The future of energy gases. p. 29-32.

Monitoring the High Plains Aquifer, by J. T. Dugan and D. A. Cox. p. 32-35.

Watershed modeling systems, by H. F. Lins. p. 35-37.

Hydrogeologic effects of the partial collapse of the Retsof salt mine in western New York, by D. H. Tepper, T. S. Miller, W. M. Kappel and J. H. Williams. p. 38-39.

The San Francisco Bay and Delta; an estuary undergoing change, by F. H. Nichols. p. 39-42.

Nitrate in the South Platte River alluvial aquifer, Colorado, by P. B. McMahon, J. K. Bohlke and D. W. Litke. p. 45-47.

Environmental and resource studies in the U.S.-Mexico border region, by N. J. Page. p. 47-48.

Pesticides in the atmosphere, by M. S. Majewski. p. 48-51.

Contaminants in the Mississippi River, by R. H. Meade and J. A. Leenheer. p. 52-55.

Effects of energy-resource development on lakes; what do we need to know?, by J. T. Turk. p. 56-57.

CALIFORNIA. Multi-resolution land characteristics monitoring system, by T. R. Loveland. p. 61-63.

National Spatial Data Infrastructure, by T. M. McCulloch. p. 63-65.

Internet; earth science link to the information superhighway, by W. G. Miller. p. 65-67.

GeoMedia2 shows the wonder of earth science, by D. A. Wiltshire and C. F. Ferrigno. p. 67-69.

Using geographic information, image processing, and animation systems to visualize a digital terrain flyby, by R. G. Clark. p. 69-70.

Parallelizing a coastal circulation computer model, by H. L. Jenter and P. Y. Wang. p. 70-73.

"National Water Conditions" report goes "online", by K. J. Lanfear. p. 73-74.

A Distributed Spatial Data Library for the U.S. Geological Survey, by D. D. Nebert. p. 74-77.

Experiments with volume visualization, by Gerry Lebing. p. 77-78.

Technology transfer and outreach; the USGS at work with industry. p. 78-80.

Videoconferencing, by J. C. O'Donnell. p. 80.

National Performance Review; Reinvention Lab at the U.S. Geological Survey. p. 80-81.

Opening new doors to scientific cooperation and exploration for energy resources in the former Soviet Union, by G. F. Ulmishek, B. S. Pierce, D. J. Taylor, W. F. Agena, E. R. Landis and H. E. Cook. p. 85-88.

Mining and environmental mercury in Venezuela, by L. P. Gough and Floyd Gray. p. 88-91.

Contaminant migration in fractured Swedish rock, by C. I. Voss. p. 91-92.

Scientific contributions to the Middle East Peace Initiative, by A. M. Lenox. p. 92-93.

Water in the desert; ground-water studies in the United Arab Emirates, by C. B. Hutchinson and A. M. Lenox. p. 93-95.

Toward a safer world; natural disaster reduction, by W. W. Hayes. p. 95-96.

Honors and awards. p. 105-111.

U.S. Geological Survey diversity plan. p. 111-113.

Earth Science Corps; volunteers mapping the Nation, by M. Y. Ellis. p. 113-114.

Volunteer for Science Program. p. 115.

Electronic job hunting. p. 116.

Reengineering the time and attendance process. p. 116.

Coalition for Earth Science Education. p. 116-117.



FACT SHEETS

Fact Sheets are used to disseminate timely information on scientific and technical programs of the U.S. Geological Survey and are available, at no cost, from U.S. Geological Survey, Information Services, Box 25286, Denver, CO 80225.

FS 0046-95. VIRGINIA. United States Geological Survey programs in Virginia. 1995. 4 p.

FS 0079-95. Aerial infrared surveys in the investigation of geothermal and volcanic heat sources. 1995. 4 p.

FS 0085-95. KANSAS. U.S. Geological Survey Federal-State Cooperative Water-Resources Program in Kansas. 1995. 2 p.

FS 0088-95. TEXAS. National Water-Quality Assessment Program; pesticides in the Trinity River basin study unit, Texas, 1968-91, by R. L. Ulery. 1995. 2 p.

FS 0090-95. TEXAS. Water-quality assessment of the Trinity River basin, Texas; data collection, 1992-95, by L. F. Land. 1995. 2 p.

FS 0096-95. CALIFORNIA. The Los Angeles Dam story, by R. A. Page, D. M. Boore and R. F. Yerkes. 1995. 2 p.

FS 0112-95. CALIFORNIA. Debris-flow hazards in the San Francisco Bay region, by U. S. Geological Survey. 1995. 2 p.

FS 0114-95. Occurrence of the gasoline additive MTBE in shallow ground water in urban and agricultural areas, by P. J. Squillace, D. A. Pope and C. V. Price. 1995. 4 p.

FS 0115-95. NEVADA. Water budget and salinity of Walker Lake, western Nevada, by J. M. Thomas. Prepared in cooperation with the Walker River Paiute Tribe. 1995. 4 p.

FS 0116-95. National Water-Quality Assessment Program; Ozark Plateaus biological study, by S. R. Femmer. 1995. 2 p.

FS 0117-95. Sea level change; lessons from the geologic record, by U. S. Geological Survey. 1995. 2 p.

FS 0118-95. LOUISIANA. The Lake Pontchartrain watershed; a unique resource of the Louisiana coast, by D. K. Demcheck. 1995. 2 p.

FS 0120-95. ARIZONA. Monitoring channel sand storage in the Colorado River in Grand Canyon, by S. M. Jansen, J. B. Graf, J. E. Marlow and G. G. Fisk. 1995. 2 p.

FS 0121-95. Site characterization techniques, by U. S. Geological Survey. 1995. 4 p.

FS 0132-95. Echo-sounding method aids earthquake hazard studies. 1995. 1 p.

FS 0134-95. FLORIDA. South Florida Ecosystem Program of the U.S. Geological Survey, by B. F. McPherson, A. L. Higer, Sarah Gerould and I. H. Kantrowitz. 1995. 4 p.

FS 0136-95. MARYLAND. Seasonal cycles in streamwater quality on Catocin Mountain, Maryland, by K. C. Rice and O. P. Bricker. 1995. 2 p.

24 PUBLICATIONS OF THE U.S. GEOLOGICAL SURVEY, 1995

- FS 0137-95. National Water-Quality Assessment program; the Allegheny-Monongahela River basin, by S. D. McAuley. 1995. 2 p.
- FS 0138-95. NEW HAMPSHIRE. The Mirror Lake fractured-rock research site; a multidisciplinary research effort in characterizing ground-water flow and chemical transport in fractured rock, by A. M. Shapiro, P. A. Hsieh and T. C. Winter. 1995. 2 p.
- FS 0139-95. MASSACHUSETTS. Continuous-record network for collection of streamflow data in Massachusetts, 1994, by T. B. Shepard. 1995. 2 p.
- FS 0149-95. CALIFORNIA. Availability of ground-water data for California, water year 1994. 1995. 2 p.
- FS 0151-95. FLORIDA. Springs of Florida, by R. M. Spechler and D. M. Schiffer. 1995. 2 p.
- FS 0153-95. COLORADO. Review of sediment data in the South Platte River basin, Colorado, 1980-92, by J. S. Heiny. 1995. 2 p.
- FS 0154-95. Fish communities in the plains region of the South Platte River, August 1993 and 1994, by C. M. Tate and L. M. Martin. 1995. 2 p.
- FS 94-0007. NEVADA. 500,000-year temperature record challenges ice age theory, by K. M. Snow. 1994. 2 p.
- FS 94-0009. Satellite image atlas of glaciers of the world, by U. S. Geological Survey. 1994. 2 p.
- FS 94-0010. NORTH CAROLINA, SOUTH CAROLINA. National Water-Quality Assessment Program; the Santee Basin and coastal drainage, N.C. and S.C., by W. B. Hughes. 1994. 2 p.
- FS 94-0014. Zebra mussels in Eastern United States, by K. H. Haag. 1994. 2 p.
- FS 94-0015. National Water-Quality Assessment Program; Ozark Plateaus surface-water quality study, by S. R. Femmer and R. L. Joseph. 1994. 2 p.
- FS 94-0016. ARIZONA. National Water-Quality Assessment Program; central Arizona basins, by G. E. Cordy. 1994. 2 p.
- FS 94-0017. MASSACHUSETTS. Observation-well network for collection of ground-water level data in Massachusetts, by R. S. Socolow. 1994. 2 p.
- FS 94-0018. ILLINOIS. National Water-Quality Assessment Program; the lower Illinois River basin, by K. L. Warner and A. R. Schmidt. 1994. 2 p.
- FS 94-0019. WEST VIRGINIA, VIRGINIA, NORTH CAROLINA. National Water-Quality Assessment Program; the Kanawha-New River basin, W. Va., Va., and N.C., by J. H. Eychaner. 1994. 2 p.
- FS 94-0026. IDAHO. Idaho's surface-water-quality monitoring program; results from five sites sampled during water years 1990-93. 1994. 2 p.
- FS 94-0027. National Water-Quality Assessment Program; the Northern New England Basins study unit, by S. M. Flanagan and K. W. Robinson. 1994. 2 p.
- FS 94-0029. CALIFORNIA. National Water-Quality Assessment Program; the Sacramento River basin, by J. L. Domagalski and L. R. Brown. 1994. 2 p.
- FS 94-0031. IOWA. National Water-Quality Assessment Program; eastern Iowa basins, by S. J. Kalkhoff. 1994. 2 p.
- FS 94-0033. WEST VIRGINIA. Water use in West Virginia, 1990, by J. C. Wheeler. 1995. 2 p.
- FS 94-0047. National Water-Quality Assessment Program; the Mississippi Embayment, by M. J. Mallory. 1994. 2 p.
- FS 94-0048. TEXAS. National Water-Quality Assessment Program; south-central Texas. 1994. 2 p.
- FS 94-0049. CALIFORNIA. Subsidence and carbon fluxes in the Sacramento/San Joaquin Delta, California. 1994. 2 p.
- FS 94-0056. National Water-Quality Assessment Program; Lake Erie-Lake St. Clair basin, by D. N. Myers and D. P. Finnegan. 1995. 2 p.
- FS 94-0057. VIRGINIA. Water use in Virginia; surface-water and ground-water withdrawals during 1992, by U. S. Geological Survey. 1995. 2 p.
- FS 94-0060. MISSISSIPPI. Estimated water withdrawals in Mississippi during 1990, by P. M. Johnson. 1994. 2 p.
- FS 94-0073. TEXAS. Floods in Southeast Texas, October 1994, by Fred Liscum and J. W. East. 1995. 2 p.
- FS 94-0074. Accounting for consumptive use of lower Colorado River water in Arizona, California, Nevada, and Utah, by S. J. Owen-Joyce and R. P. Wilson. 1994. 2 p.
- FS 94-0075. MISSISSIPPI. Selected reports of the U.S. Geological Survey on water resources in Mississippi, 1990-94, by C. P. Moss. 1995. 2 p.
- FS 95-0002. NEW HAMPSHIRE. Assessment of ground-water supply potential of bedrock in New Hampshire, by R. B. Moore and S. F. Clark. 1995. 2 p.



PERIODICALS

EARTHQUAKES AND VOLCANOES

For a complimentary copy write to Earthquakes and Volcanoes, U.S. Geological Survey, MS 967, Denver Federal Center, Denver, CO 80225-0046.

Earthquakes and Volcanoes, v. 24, no. 5. 1993. p. 205-240.

Earthquakes and Volcanoes, v. 24, no. 6. 1993. p. 241-295.

Earthquakes and Volcanoes, v. 25, no. 1. 1994. p. 1-56.

Earthquakes and Volcanoes, v. 25, no. 2. 1994. p. 57-112.

PRELIMINARY DETERMINATION OF EPICENTERS

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Single copies of monthly issues may be purchased only from U.S. Geological Survey, Information Services, Box 25286, Denver, CO 80225.

Preliminary determination of epicenters. Monthly listing for June 1994. 40 p.

Preliminary determination of epicenters. Monthly listing for July 1994. 32 p.

Preliminary determination of epicenters. Monthly listing for August 1994. 28 p.

Preliminary determination of epicenters. Monthly listing for September 1994. 32 p.

Preliminary determination of epicenters. Monthly listing for October 1994. 36 p.

Preliminary determination of epicenters. Monthly listing for November 1994. 32 p.

Preliminary determination of epicenters. Monthly listing for December 1994. 24 p.

Preliminary determination of epicenters. Monthly listing for January 1995. 44 p.

Preliminary determination of epicenters. Monthly listing for February 1995. 32 p.

Preliminary determination of epicenters. Monthly listing for March 1995. 28 p.



INFORMAL REPORTS

WATER-RESOURCES INVESTIGATIONS REPORTS

Water-resources investigations reports are papers of an interpretive nature made available to the public outside the formal USGS publications series. Copies are reproduced on request unlike formal USGS publications, and they are also available for public inspection at depositories indicated in USGS catalogs.

The following WRI reports are available from: U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, CO 80225 (telephone 303-236-7476). For specific ordering instructions, please refer to "Reports Available Only Through U.S. Geological Survey, Information Services" under "Open-File Reports." When ordering, use the WRI number preceding each item, and do not mix orders for WRI reports and open-file reports with orders for other U.S. Geological Survey products.

In the water-resources investigations report and the open-file report listings that follow, offices where reports may be inspected are identified by the symbols listed below:

- A Earth Science Information Center, Rm. 101, 4230 University Dr., Anchorage, AK 99508-4664.
- Da Library, Rm. C2002, Bldg. 20, Denver Federal Center, Lakewood, CO 80225.
- F Library, 2255 North Gemini Dr., Flagstaff, AZ 86001.
- M Library, 345 Middlefield Rd., Menlo Park, CA 94025.
- NC Library, Rm. 4A100, National Center, 12201 Sunrise Valley Dr., Reston, VA 22092.
- S Earth Science Information Center, Rm. 135, U.S. Post Office Bldg., 904 West Riverside Ave., Spokane, WA 99201-1088.

U Earth Science Information Center, 2222 West 2300 South, 2d floor, Salt Lake City, UT 84119.

Wb U.S. Department of the Interior, Natural Resources Library, Gifts and Exchange Section, 18th and C Sts., NW., Washington, DC 20240.

WRI 87-4136. PENNSYLVANIA. A feasibility study to estimate minimum surface-casing depths of oil and gas wells to prevent ground-water contamination in four areas of western Pennsylvania, by T. F. Buckwalter and P. J. Squillace. Prepared in cooperation with the Pennsylvania Department of Environmental Resources, Bureau of Oil and Gas Management. 1995. 55 p., 1 over-size sheet. (NC, Da, M, Wb.)

WRI 89-4179. OREGON, WASHINGTON. Application of a geographic information system for regridding a ground-water flow model of the Columbia Plateau regional aquifer system, Walla Walla River basin, Oregon-Washington, by M. E. Darling and L. E. Hubbard. 1994. 23 p. (NC, Da, M, Wb, S; USGS, The Library, 5400 MacArthur, Vancouver, WA 98661; and USGS, WRD, Luis Fuste, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402.)

WRI 90-4095. NEW JERSEY. Interactions of metallic substances and acidic ground water in the New Jersey coastal plain, by J. L. Barringer. Prepared in cooperation with the New Jersey Department of Environmental Protection and Energy. 1994. 68 p. (NC, Da, M, Wb; USGS, WRD, Mountain View Office Park, 810 Bear Tavern Rd., Suite 206, West Trenton, NJ 08628.)

WRI 90-4112. ALABAMA. Water withdrawals in the Black Warrior-Tombigbee Basin in Alabama, 1985-87, by W. S. Mooty. Prepared in cooperation with the U.S. Army Corps of Engineers. 1995. 41 p. (NC, Da, M, Wb; USGS, WRD, 520 19th Ave., Tuscaloosa, AL 35401-1589; and P.O. Box 210337, Montgomery, AL 36121.)

WRI 90-4168. NEW YORK. Glacial geology and the origin and distribution of aquifers at the Valley Heads Moraine in the Virgil Creek and Dryden Lake-Harford valleys, Tompkins and Cortland counties, New York, by T. S. Miller. 1993. 34 p., 3 over-size sheets; sheets 1-2, scale 1:12,000 (1 inch = 1,000 feet). (NC, Da, M, Wb; USGS, WRD, P.O. Box 1669, Albany, NY 12201.)

WRI 91-4051. INDIANA. Instrumentation, methods of flood-data collection and transmission, and evaluation of streamflow-gaging network in Indiana, by D. R. Glatfelter and G. K. Butch. Prepared in cooperation with the Indiana Department of Natural Resources, Division of Water. 1994. 75 p. (NC, Da, M, Wb; USGS, WRD, 5957 Lakeside Blvd., Indianapolis, IN 46278-1996.)

WRI 91-4138. NEW YORK. Hydrogeology of unconsolidated deposits in Chenango County, New York, by W. S. McPherson. Prepared in cooperation with Chenango County. 1993. 43 p., 6 over-size sheets, scale 1:50,000 (1 inch = about 4,200 feet). (NC, Da, M, Wb; USGS, WRD, P.O. Box 1669, Albany, NY 12201.)

WRI 91-4141. NEW JERSEY. Statistical characteristics of stream discharge in tributaries of selected estuaries in southern New Jersey, by R. E. Hickman. Prepared in cooperation with the New Jersey Department of Environmental Protection. 1995. 53 p. (NC, Da, M, Wb; USGS, WRD, Mountain View Office Park, 810 Bear Tavern Rd., Suite 206, West Trenton, NJ 08628.)

- WRI 91-4183. PUERTO RICO. Effects of changing irrigation practices on the ground-water hydrology of the Santa Isabel-Juana Díaz area, south central Puerto Rico, by Orlando Ramos-Ginés. Prepared in cooperation with the Puerto Rico Department of Agriculture. 1994. 22 p. (NC, Da, M, Wb; USGS, WRD, GSA Ctr., 651 Federal Dr., Suite 400-15, Guaynabo, PR 00965.)
- WRI 92-4010. OREGON, WASHINGTON. Estimation of ground-water recharge from precipitation, runoff into drywells, and on-site waste-disposal systems in the Portland Basin, Oregon and Washington, by D. T. Snyder, D. S. Morgan and T. S. McGrath. Prepared in cooperation with the City of Portland Bureau of Water Works, Intergovernmental Resource Center, and Oregon Water Resources Department. 1994. 34 p. (NC, Da, M, Wb, S; USGS, The Library, 5400 MacArthur, Vancouver, WA 98661; and USGS, WRD, Luis Fuste, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402.)
- WRI 92-4013. NEW HAMPSHIRE. Geohydrology and water quality of stratified-drift aquifers in the lower Connecticut River basin, southwestern New Hampshire, by R. B. Moore, C. D. Johnson and E. M. Douglas. Prepared in cooperation with the New Hampshire Department of Environmental Services, Water Resources Division. 1994. 325 p., 2 over-size sheets, scale 1:48,000 (1 inch = 4,000 feet). (NC, Da, M, Wb; USGS, WRD, 525 Clinton St., Bow, NH 03304.)
- WRI 92-4017. WASHINGTON. Areal extent of petroleum-related compounds from a gasoline and diesel-fuel leak in ground water at a site in Yakima, Washington, 1984-89, by R. J. Wagner. Prepared in cooperation with the State of Washington Department of Ecology. 1995. 87 p., 1 over-size sheet. (NC, Da, M, Wb.)
- WRI 92-4052. NEW YORK. Physical and chemical limnology of Ides Cove near Rochester, New York, 1970-82, by R. C. Bubeck, W. W. Staubitz, A. D. Weidemann and L. P. Spittal. Prepared in cooperation with the Monroe County Environmental Health Laboratory. 1995. 45 p. (NC, Da, M, Wb; USGS, WRD, 425 Jordan Rd., Troy, NY 12180.)
- WRI 92-4088. PENNSYLVANIA. Radium and radon in ground water in the Chickies Quartzite, southeastern Pennsylvania, by L. A. Senior and K. L. Vogel. Prepared in cooperation with the Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geologic Survey, Bureau of Radiation Protection. 1995. 145 p., 1 over-size sheet, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M, Wb; USGS, WRD, Malvern, PA.)
- WRI 92-4098. WASHINGTON. Occurrence and quality of ground water in southwestern King County, Washington, by D. G. Woodward, F. A. Packard, N. P. Dion and S. S. Sumioka. Prepared in cooperation with the State of Washington Department of Ecology, Regional Water Association of South King County, and Seattle-King County Department of Public Health. 1995. 69 p., 4 over-size sheets, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M, Wb; USGS Library, Spokane, WA.)
- WRI 92-4109. WASHINGTON. Hydrology and quality of ground water in northern Thurston County, Washington, by N. P. Dion, G. L. Turney and M. A. Jones. Prepared in cooperation with the Thurston County Department of Health. 1994. 188 p., 6 over-size sheets. (NC, Da, M, Wb, S; USGS, WRD, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402; USGS Library, Room 656, West 920 Riverside Ave., Spokane, WA 99201.)
- WRI 92-4111. VIRGINIA. Hydrogeologic framework of the shallow aquifer system of York County, Virginia, by A. R. Brockman and D. L. Richardson. Prepared in cooperation with the York County Department of Environmental Services, and Virginia Department of Environmental Quality. 1995. 34 p. (NC, Da, M, Wb; USGS, WRD, 603 Morris St., Charleston, WV 25301; 208 Carroll Bldg., 8600 La Salle Road, Towson, MD 21204; and 300 South New St., Federal Bldg., Room 1201, Dover, DE 19904.) (Revision.)
- WRI 92-4122. NEW JERSEY. Contamination of shallow ground water in the area of Building 95, Picatinny Arsenal, New Jersey, 1985-90, by B. P. Sargent and D. A. Storck. Prepared in cooperation with the U.S. Army Armament Research Development and Engineering Center. 1994. 72 p. (NC, Da, M, Wb; USGS, WRD, Mountain View Office Park, 810 Bear Tavern Rd., Suite 206, West Trenton, NJ 08628.)
- WRI 92-4134. NEW JERSEY. Hydrology of, and water quality in, the open burning area and vicinity, Picatinny Arsenal, New Jersey, 1989-90, by D. A. Storck. Prepared in cooperation with the U.S. Army Armament Research Development and Engineering Center. 1994. 69 p. (NC, Da, M, Wb; USGS, WRD, Mountain View Office Park, 810 Bear Tavern Rd., Suite 206, West Trenton, NJ 08628.)
- WRI 92-4143. COLORADO. Vulnerability of the uppermost ground water to contamination in the greater Denver area, Colorado, by G. A. Hearne, Michael Wireman, A. S. Campbell, Sandy Turner and G. P. Ingersoll. Prepared in cooperation with the Colorado Department of Health, U.S. Environmental Protection Agency, and U.S. Soil Conservation Service. 1995. 244 p., 1 over-size sheet, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M, U, Wb; USGS, WRD, Room H-2101, Bldg. 53, Denver Federal Ctr., Denver, CO 80225-0046; and Room H-2313, 2nd Floor, Bldg. 53, Denver Federal Ctr., Denver, CO 80225-0046.)
- WRI 92-4144. NEW JERSEY. Natural radioactivity in, and inorganic chemistry of, ground water in the Kirkwood-Cohansey aquifer system, southern New Jersey, 1983-89, by Jane Kozinski, Zoltan Szabo, O. S. Zapecza and T. H. Barringer. Prepared in cooperation with the New Jersey Department of Environmental Protection. 1995. 130 p. (NC, Da, M, Wb; USGS, WRD, Mountain View Office Park, 810 Bear Tavern Rd., Suite 206, West Trenton, NJ 08628.)
- WRI 92-4152. NEW JERSEY. Simulated effects of projected withdrawals from the Wenonah-Mount Laurel Aquifer on ground-water levels in the Camden, New Jersey, area and vicinity, by A. S. Navoy. Prepared in cooperation with the New Jersey Department of Environmental Protection and Energy. 1994. 22 p. (NC, Da, M, Wb; USGS, WRD, Mountain View Office Park, 810 Bear Tavern Rd., Suite 206, West Trenton, NJ 08628.)
- WRI 92-4154. NEW HAMPSHIRE. Geohydrology and water quality of stratified-drift aquifers in the Contoocook River basin, south-central New Hampshire, by P. T. Harte and William Johnson, with a section on Geohydrologic setting by R. B. Moore. Prepared in cooperation with the New Hampshire Department of Environmental Services, Water Resources Division. 1995. 255 p., 2 over-size sheets, scale 1:48,000 (1 inch = 4,000 feet). (NC, Da, M, Wb.)

- WRI 92-4159. FLORIDA. Hydrogeology, water quality, and potential for contamination of the upper Floridan Aquifer in the Silver Springs ground-water basin, central Marion County, Florida, by G. G. Phelps. Prepared in cooperation with the Florida Department of Environmental Protection, City of Ocala, Marion County, and the St. Johns River Water Management District. 1994. 69 p., 6 over-size sheets. (NC, Da, M, Wb; USGS, WRD, Suite 1006, 224 West Central Pkwy., Altamonte Springs, FL 32714.)
- WRI 92-4171. NEW YORK. Selected hydrogeologic and water-quality data from Jones Beach Island, Long Island, New York, by M. P. Scorca, T. E. Reilly and O. L. Franke. Prepared in cooperation with the New York State Department of Environmental Conservation and Suffolk County Department of Health Services. 1995. 21 p. (NC, Da, M, Wb; USGS, WRD, P.O. Box 1669, Albany, NY 12201.)
- WRI 92-4174. FLORIDA. Saltwater intrusion and quality of water in the Floridan aquifer system, northeastern Florida, by R. M. Spechler. Prepared in cooperation with the City of Jacksonville and the St. Johns River Water Management District. 1994. 76 p., 1 over-size sheet, scale 1:240,000 (1 inch = about 3.8 miles). (NC, Da, M, Wb; USGS, WRD, 224 West Central Pkwy., Suite 1006, Altamonte Springs, FL 32714.)
- WRI 92-4181. LOUISIANA. Louisiana hydrologic atlas map No. 7; water-quality survey of the Mermentau River basin, 1989-90, by D. K. Demcheck. Prepared in cooperation with the Louisiana Department of Transportation and Development. 1994. 3 over-size sheets; sheet 1, scale 1:600,000 (1 inch = about 9.6 miles). (NC, Da, M, Wb; USGS, WRD, 3535 South Sherwood Forest Blvd., Suite 120, Baton Rouge, LA 70816.)
- WRI 92-4187. COLORADO. Hydrology and geochemistry of a surface coal mine in northwestern Colorado, by R. S. Williams, Jr. and G. M. Clark. Prepared in cooperation with the U.S. Bureau of Land Management and the Colorado Department of Natural Resources. 1994. 61 p. (NC, Da, M, Wb, U; USGS, WRD, Mail Stop 415, Box 25046, Denver Federal Ctr., Denver, CO 80225.)
- WRI 93-4003. CALIFORNIA. Ground-water flow and quality, and geochemical processes, in Indian Wells Valley, Kern, Inyo, and San Bernardino counties, California, 1987-88, by C. E. Berenbrock and R. A. Schroeder. Prepared in cooperation with the Indian Wells Valley Water District and the U.S. Department of the Navy, China Lake Naval Air Weapons Station. 1994. 59 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- WRI 93-4004. NEW YORK. Distribution and thickness of unconsolidated deposits in Schuyler County, New York, by W. S. McPherson and T. S. Miller. Prepared in cooperation with Schuyler County, New York. 1993. 2 over-size sheets. (NC, Da, M, Wb; USGS, WRD; P.O. Box 1669, Albany, NY 12201.)
- WRI 93-4020. Nonlinear-regression flow model of the Gulf Coast aquifer systems in the south-central United States, by L. K. Kuiper. 1994. 171 p. (NC, Da, M, Wb; USGS, WRD, GC RASA, 8011 Cameron Rd., Bldg. B, Austin, TX 78753-6700.)
- WRI 93-4028. UTAH. Salt budget for West Pond, Utah, April 1987 to June 1989, by S. R. Wold and K. M. Waddell. Prepared in cooperation with the Utah Geological Survey and the Utah Department of Natural Resources, Division of Water Resources. 1994. 20 p. (NC, Da, M, Wb, U.)
- WRI 93-4029. NEW YORK. Generalized stratigraphy, surficial geology, types of aquifers, and 1988-89 ground-water pumpage in eastern Saratoga County, New York, by P. M. Heisig. Prepared in cooperation with the Saratoga County Environmental Management Council. 1994. 16 p., 8 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, Wb; USGS, WRD, P.O. Box 1669, Albany, NY 12201.)
- WRI 93-4039. TEXAS. Simulations of flow in the Edwards-Trinity aquifer system and contiguous hydraulically connected units, west-central Texas, by E. L. Kuniansky and K. Q. Holligan. 1994. 40 p., 3 over-size sheets, scale 1:750,000 (1 inch = about 12 miles). (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. B, Austin, TX 78754-3898.)
- WRI 93-4053. WISCONSIN. Water resources of the Menominee Indian Reservation of Wisconsin, by J. T. Krohelski, P. A. Kammerer, Jr. and T. D. Conlon. Prepared in cooperation with the Menominee Indian Tribe of Wisconsin. 1994. 54 p., 4 over-size sheets. (NC, Da, M, Wb; USGS, WRD, 6417 Normandy Lane, Madison, WI 53719-1133.)
- WRI 93-4073. WEST VIRGINIA. Geohydrology, ground-water availability, and ground-water quality of Berkeley County, West Virginia, with emphasis on the carbonate-rock area, by R. A. Shultz, W. A. Hobba, Jr. and M. D. Kozar. Prepared in cooperation with the Eastern Panhandle Regional Planning and Development Council, Region 9. 1995. 88 p. (NC, Da, M, Wb; USGS, WRD, 11 Dunbar St., Charleston, WV 25301.)
- WRI 93-4096. NEW HAMPSHIRE. Estimated withdrawals and use of freshwater in New Hampshire, 1990, by Laura Medalie and M. A. Horn. Prepared in cooperation with the New Hampshire Department of Environmental Services, Water Resources Division, Water Management Bureau. 1994. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 525 Clinton St., Bow, NH 03304.)
- WRI 93-4098. MAINE. Estimated withdrawals and use of fresh water in Maine, 1990, by M. C. Loiselle, M. A. Horn and Laura Medalie. Prepared in cooperation with the Maine Department of Conservation, Maine Geological Survey, and Maine Department of Health Services. 1994. 1 over-size sheet, scale 1:2,500,000 (1 inch = about 40 miles). (NC, Da, M, Wb; USGS, WRD, 26 Ganneston Dr., Augusta, ME 04330.)
- WRI 93-4100. TEXAS. Analysis of data from test-well sites along the down-dip limit of freshwater in the Edwards Aquifer, San Antonio, Texas, 1985-87, by G. E. Groschen. Prepared in cooperation with the San Antonio Water System, Edwards Underground Water District, and Texas Water Development Board. 1994. 92 p. (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. B, Austin, TX 78754-3898.)
- WRI 93-4101. NEW JERSEY. Agricultural pesticides in six drainage basins used for public water supply in New Jersey, 1990, by Tamara Ivahnenko and D. E. Buxton. Prepared in cooperation with the New Jersey Department of Environmental Protection and Energy. 1994. 56 p. (NC, Da, M, Wb; USGS, WRD, Mountain View Office Park, 810 Bear Tavern Rd., Suite 206, West Trenton, NJ 08628.)

- WRI 93-4103. FLORIDA. Quality of water and bottom sediments, and nutrient and dissolved-solids loads in the Apopka-Beaclair Canal, Lake County, Florida, 1986-90, by D. M. Schiffer. Prepared in cooperation with the St. Johns River Water Management District. 1993. 84 p. (NC, Da, M, Wb; USGS, WRD, Suite 1006, 224 West Central Pkwy., Altamonte Springs, FL 32714.)
- WRI 93-4109. PENNSYLVANIA. Geohydrology of, and nitrogen and chloride in, the glacial aquifer, Milford-Matamoras area, Pike County, Pennsylvania, by L. A. Senior. Prepared in cooperation with the Pike County Planning Commission. 1994. 43 p., 3 over-size sheets. (NC, Da, M, Wb; USGS, WRD, 111 Great Valley Pkwy., Malvern, PA 19355.)
- WRI 93-4113. NEW MEXICO. Analysis of meteorological data and water chemistry of Latir Lakes, Taos County, New Mexico, 1985-88, by S. K. Anderholm, R. G. Roybal, D. W. Risser and Georgene Somers. Prepared in cooperation with New Mexico Highlands University. 1994. 123 p. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110.)
- WRI 93-4116. GUAM. Application of the precipitation-runoff modeling system model to simulate dry season runoff for three watersheds in south-central Guam, by L. Y. Nakama. Prepared in cooperation with the U.S. Department of the Navy. 1994. 38 p. (NC, Da, M, Wb; USGS, WRD, 677 Ala Moana Blvd., Suite 415, Honolulu, HI 96813.)
- WRI 93-4122. A comparison of simultaneous plasma, atomic absorption, and iron colorimetric determinations of major and trace constituents in acid mine waters, by J. W. Ball and D. K. Nordstrom. 1994. 151 p. (NC, Da, M, Wb.)
- WRI 93-4126. TEXAS. Dissolved-solids concentrations and hydrochemical facies in water of the Edwards-Trinity aquifer system, west-central Texas, by P. W. Bush, R. L. Ulery and R. L. Rittmaster. 1994. 29 p., 2 over-size sheets; sheet 2, scale 1:2,000,000 (1 inch = about 32 miles). (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. B, Austin, TX 78754-3898.)
- WRI 93-4130. FLORIDA. Water resources of Duval County, Florida, by G. G. Phelps. Prepared in cooperation with the City of Jacksonville, Florida. 1994. 78 p. (NC, Da, M, Wb; USGS, WRD, Suite 1006, 224 West Central Pkwy., Altamonte Springs, FL 32714.)
- WRI 93-4134. ARKANSAS. Potentiometric-surface maps of the Cockfield and lower Wilcox aquifers in Arkansas, 1991, by P. W. Westerfield. Prepared in cooperation with the Arkansas Geological Commission. 1994. 2 over-size sheets. (NC, Da, M, Wb; USGS, WRD, 401 Hardin Rd., Little Rock, AR 72211.)
- WRI 93-4140. CALIFORNIA. Potential for chemical transport beneath a storm-runoff recharge (retention) basin for an industrial catchment in Fresno, California, by R. A. Schroeder. Prepared in cooperation with the Fresno Metropolitan Control District. 1995. 38 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- WRI 93-4154. MISSOURI. Development, description, and application of a geographic information system data base for water resources in karst terrane in Greene County, Missouri, by L. A. Waite and K. C. Thomson. Prepared in cooperation with the Watershed Committee of the Ozarks, City of Springfield, City Utilities of Springfield, Greene County, Missouri Department of Natural Resources, Southwest Missouri State University, and U.S. Environmental Protection Agency. 1993. 31 p., 2 over-size sheets; sheet 1, scale 1:120,000 (1 inch = 10,000 feet); sheet 2, scale 1:35,000 (1 inch = about 3,000 feet). (NC, Da, M, Wb.)
- WRI 93-4156. OREGON, IDAHO. Reconnaissance investigation of water quality, bottom sediment, and biota associated with irrigation drainage in the Owyhee and Vale projects, Oregon and Idaho, 1990-91, by F. A. Rinella, W. H. Mullins and C. A. Schuler. Prepared in cooperation with the U.S. Fish and Wildlife Service, U.S. Bureau of Reclamation, and U.S. Bureau of Indian Affairs. 1994. 101 p. (NC, Da, M, Wb, S; USGS, Library, 5400 MacArthur, Vancouver, WA 98661; USGS, WRD, Luis Fuste, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402.)
- WRI 93-4158. FLORIDA. Hydrogeology and simulated effects of ground-water withdrawals for citrus irrigation, Hardee and De Soto counties, Florida, by P. A. Metz. Prepared in cooperation with the Southwest Florida Water Management District. 1995. 83 p. (NC, Da, M, Wb; USGS, WRD, Suite B-5, 4710 Eisenhower Blvd., Tampa, FL.)
- WRI 93-4160. NEW YORK, NEW JERSEY, PENNSYLVANIA. Calibration of a streamflow-routing model for the Delaware River and its principal tributaries in New York, New Jersey, and Pennsylvania, by H. N. Flippo, Jr. and T. M. Madden, Jr. 1994. 31 p. (NC, Da, M, Wb; USGS, WRD, 840 Market St., Lemoyne, PA 17043-1586.)
- WRI 93-4162. VIRGIN ISLANDS. Hydrogeology of south-central St. Croix, U.S. Virgin Islands, by R. P. Graves. Prepared in cooperation with the U.S. Virgin Islands Water and Power Authority. 1995. 33 p. (NC, Da, M, Wb; USGS, WRD, GSA Ctr., 651 FED-DR, Suite 400-15, Guaynabo, PR 00965.)
- WRI 93-4163. NEW MEXICO. Hydrology of the Estancia Basin, central New Mexico, by R. R. White. Prepared in cooperation with the New Mexico State Engineer Office. 1993. 83 p., 1 over-size sheet. (NC, Da, M, Wb, U; USGS, WRD, Suite 200, 4501 Indian School Road NE, Albuquerque, NM 87110.)
- WRI 93-4171. FLORIDA. Hydrogeology and results of tracer tests at the Old Tampa well field in Hillsborough County, with implications for wellhead-protection strategies in west-central Florida, by J. L. Robinson. Prepared in cooperation with the Southwest Florida Water Management District. 1995. 63 p. (NC, Da, M, Wb; USGS, WRD, Suite B-5, 4710 Eisenhower Blvd., Tampa, FL 33634-6381.)
- WRI 93-4180. HAWAII. Estimated water use in 1990, Island of Kauai, Hawaii, by P. J. Shade. Prepared in cooperation with the Kauai County Department of Water. 1995. 23 p. (NC, Da, M, Wb; USGS, WRD, 677 Ala Moana Blvd., Suite 415, Honolulu, HI 96813.)
- WRI 93-4181. OREGON. Use of a precipitation-runoff model for simulating effects of forest management on streamflow in 11 small drainage basins, Oregon Coast Range, by J. C. Risley. Prepared in cooperation with the U.S. Bureau of Land Management. 1994. 61 p. (NC, Da, M, Wb, S; USGS, The Library, 5400 MacArthur, Vancouver, WA 98661; and USGS, WRD, Luis Fuste, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402.)

- WRI 93-4185. SOUTH CAROLINA. Hydrogeologic framework and simulation of shallow ground-water flow in the vicinity of a hazardous-waste landfill near Pinewood, South Carolina, by D. A. Vroblesky. Prepared in cooperation with the South Carolina Public Service Authority. 1994. 76 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, Stephenson Ctr., Suite 129, 720 Gracern Rd., Columbia, SC 29210-7651.)
- WRI 93-4186. ALABAMA. Low-flow and flow-duration characteristics of Alabama streams, by J. B. Atkins and J. L. Pearman. Prepared in cooperation with the Alabama Department of Environmental Management and the Tennessee Valley Authority. 1994. 264 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 520 19th Ave., Tuscaloosa, AL 35401-1589.)
- WRI 93-4188. ILLINOIS. Relations of changes in wastewater-treatment practices to changes in stream-water quality during 1978-88 in the Chicago area, Illinois, and implications for regional and national water-quality assessments, by P. J. Terrio. 1994. 56 p. (NC, Da, M, Wb; USGS, WRD, 102 East Main St., 4th Floor, Urbana, IL 61801.)
- WRI 93-4190. TEXAS. Estimated freshwater withdrawals in Texas, 1990, by D. L. Lurry. Prepared in cooperation with the Texas Water Development Board. 1994. 2 over-size sheets. (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. B, Austin, TX 78754-3898.)
- WRI 93-4192. NEW MEXICO. Geohydrology of the High Energy Laser System Test Facility site, White Sands Missile Range, Tularosa Basin, south-central New Mexico, by G. T. Basabivazo, R. G. Myers and E. L. Nickerson. Prepared in cooperation with the U.S. Department of the Army, White Sands Missile Range. 1994. 59 p. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110.)
- WRI 93-4195. SOUTH DAKOTA. Water resources of Lincoln and Union counties, South Dakota, by C. A. Niehus. Prepared in cooperation with the South Dakota Geological Survey and Lincoln and Union counties. 1994. 57 p. (NC, Da, M, Wb, U.)
- WRI 93-4200. NORTH DAKOTA, MINNESOTA. Simulated effects of the proposed Garrison Diversion Unit on streamflow and dissolved solids in the Sheyenne River and the Red River of the North, North Dakota and Minnesota, by R. S. Guenther. Prepared in cooperation with the U.S. Bureau of Reclamation. 1993. 121 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 821 East Interstate Ave., Bismarck, ND 58501.)
- WRI 93-4204. Data on natural organic substances in dissolved, colloidal, suspended-silt and -clay, and bed-sediment phases in the Mississippi River and some of its tributaries, 1987-90, by J. A. Leenheer, T. I. Noyes and P. A. Brown. 1994. 71 p. (NC, Da, M, Wb.)
- WRI 93-4207. TENNESSEE. Hydrogeology and simulation of ground-water flow at Arnold Air Force Base, Coffee and Franklin counties, Tennessee, by C. J. Haugh and E. N. Mahoney. Prepared in cooperation with the U.S. Air Force, Arnold Air Force Base. 1994. 69 p. (NC, Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville, TN 37203; 1013 North Broadway, Knoxville, TN 37917; and AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)
- WRI 93-4208. External quality-assurance results for the National Atmospheric Deposition Program/National Trends Network during 1991, by M. A. Nilles, J. D. Gordon, L. J. Schroder and C. E. Paulin. 1995. 36 p. (NC, Da, M, Wb, U; USGS, WRD, Box 25046, Mail Stop 401, Denver Federal Ctr., Denver, CO 80225.)
- WRI 93-4219. UTAH. Physical characteristics and quality of water from selected springs and wells in the Lincoln Point-Bird Island area, Utah Lake, Utah, by R. L. Baskin, L. E. Spangler and W. F. Holmes. Prepared in cooperation with the Central Utah Water Conservancy District. 1994. 54 p., 2 over-size sheets. (NC, Da, M, Wb, U.)
- WRI 93-4221. UTAH. Hydrogeology of recharge areas and water quality of the principal aquifers along the Wasatch Front and adjacent areas, Utah, by P. B. Anderson, D. D. Susong, S. R. Wold, V. M. Heilweil and R. L. Baskin. Prepared in cooperation with the Utah Department of Environmental Quality, Division of Water Quality. 1994. 74 p., 5 over-size sheets. (NC, Da, M, Wb, U.)
- WRI 93-4224. FLORIDA. Ground-water quality and trends at two industrial wastewater-injection sites in northwestern Florida, 1975-91, by W. J. Andrews. Prepared in cooperation with the Florida Department of Environmental Protection. 1994. 25 p. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301.)
- WRI 93-4225. MARYLAND. Water withdrawal and use in Maryland, 1990-1991, by J. C. Wheeler. Prepared in cooperation with the Maryland Water Resources Administration and Maryland Geological Survey. 1995. 42 p. (NC, Da, M, Wb; USGS, WRD, 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21204.)
- WRI 93-4229. IDAHO, WYOMING. Assessment of selected constituents in surface water of the upper Snake River basin, Idaho and western Wyoming, water years 1975-89, by G. M. Clark. 1994. 49 p. (NC, Da, M, Wb; USGS, WRD, 230 Collins Rd., Boise 83702.)
- WRI 93-4230. OKLAHOMA. Effects of municipal ground-water withdrawals on the Arbuckle-Simpson Aquifer, Pontotoc County, Oklahoma, by M. E. Savoca and D. L. Bergman. Prepared in cooperation with the City of Ada and the Oklahoma Water Resources Board. 1994. 37 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, Wb; USGS, WRD, 202 NW 66 St., Bldg. 7, Oklahoma City, OK 73116.)
- WRI 93-4231. MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA. Nutrients, suspended sediment, and pesticides in waters of the Red River of the North basin, Minnesota, North Dakota, and South Dakota, 1970-1990, by L. H. Tornes and M. E. Brigham. 1994. 62 p. (NC, Da, M, Wb.)
- WRI 93-4233. TEXAS. Use of Landsat thematic mapper data to identify crop types and estimate irrigated acreage, Uvalde and Medina counties, Texas, 1991, by L. H. Raymond and S. I. McFarlane. Prepared in cooperation with the Edwards Underground Water District. 1994. 19 p. (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. B, Austin, TX 78754-3898.)
- WRI 94-4002. Nationwide summary of U.S. Geological Survey regional regression equations for estimating magnitude and frequency of floods at ungaged sites, 1993, by M. E. Jennings, W. O. Thomas, Jr. and H. C. Riggs. 1994. 203 p., one 3 1/2 inch

- DS/HD IBM compatible diskette. (NC, Da, M, Wb; USGS, WRD, 415 National Ctr., 12201 Sunrise Valley Dr., Reston, VA 22092; and 8011 Cameron Road, Bldg. 1, Austin, TX, 78754-3898.)
- WRI 94-4003. MASSACHUSETTS. Factors affecting water quality and net flux of solutes in two stream basins in the Quabbin Reservoir drainage basin, central Massachusetts, 1983-85, by R. L. Rittmaster and J. B. Shanley. Prepared in cooperation with the Metropolitan District Commission and Massachusetts Department of Environmental Protection, Division of Water Pollution Control. 1995. 66 p. (NC, Da, M, Wb.)
- WRI 94-4010. FLORIDA. Hydrogeology and the distribution and origin of salinity in the Floridan aquifer system, southeastern Florida, by R. S. Reese. Prepared in cooperation with the South Florida Water Management District, Miami-Dade Water and Sewer Department. 1994. 56 p. (NC, Da, M, Wb; USGS, WRD, Suite 107, 9100 NW 36th St., Miami, FL 33178.)
- WRI 94-4012. SOUTH CAROLINA. Description and application of capture zone delineation for a wellfield at Hilton Head Island, South Carolina, by J. E. Landmeyer. Prepared in cooperation with the South Carolina Department of Health and Environmental Control. 1994. 33 p. (NC, Da, M, Wb.)
- WRI 94-4022. Environmental and hydrologic setting of the Ozark Plateaus study unit, Arkansas, Kansas, Missouri, and Oklahoma, by J. C. Adamski, J. C. Petersen, D. A. Freiwald and J. V. Davis. 1995. 69 p. (NC, Da, M, Wb; USGS, WRD, 401 Hardin Rd., Little Rock, AR 72211.)
- WRI 94-4029. KENTUCKY. Surface-water-quality assessment of the Kentucky River basin, Kentucky; fixed-station network and selected water-quality data, April 1987 through August 1991, by M. S. Griffin, G. R. Martin and K. D. White. 1994. 149 p. (NC, Da, M, Wb.)
- WRI 94-4030. WASHINGTON. Reconnaissance investigation of petroleum products in soil and ground water at Longmire, Mount Rainier National Park, Washington, 1990, by S. S. Sumioka. Prepared in cooperation with the National Park Service. 1995. 24 p. (NC, Da, M, Wb.)
- WRI 94-4034. ILLINOIS. Interaction of ground water with the Rock River near Byron, Illinois, by C. F. Avery. Prepared in cooperation with the U.S. Environmental Protection Agency. 1994. 22 p. (NC, Da, M, Wb; USGS, WRD, 102 East Main St., 4th Floor, Urbana, IL 61801.)
- WRI 94-4036. TEXAS. Characteristics of streams and aquifers and processes affecting the salinity of water in the upper Colorado River basin, Texas, by R. M. Slade, Jr. and P. M. Buszka. Prepared in cooperation with the Colorado River Municipal Water District. 1994. 81 p., 6 over-size sheets. (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. B, Austin, TX 78754-3898.)
- WRI 94-4037. COLORADO. Ground-water flow and effects of agricultural application of sewage sludge and other fertilizers on the chemical quality of sediments in the unsaturated zone and ground water near Platteville, Colorado, 1985-89, by N. G. Gaggiani. Prepared in cooperation with the Metro Wastewater Reclamation District, Denver, Colorado. 1995. 41 p. (NC, Da, M, Wb, U; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver CO 80225.)
- WRI 94-4039. TEXAS. Geologic history and hydrogeologic setting of the Edwards-Trinity aquifer system, west-central Texas, by R. A. Barker, P. W. Bush and E. T. Baker, Jr. 1994. 51 p. (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. B, Austin, TX 78754-3898.)
- WRI 94-4040. CALIFORNIA. Hydrogeology and geochemistry of acid mine drainage in ground water in the vicinity of Penn Mine and Camanche Reservoir, Calaveras County, California; first-year summary, by S. N. Hamlin and C. N. Alpers. Prepared in cooperation with the California State Water Resources Control Board and the East Bay Municipal Utility District. 1995. 45 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- WRI 94-4041. COLORADO, UTAH. Reconnaissance investigation of water quality, bottom sediment, and biota associated with irrigation drainage in the Dolores Project area, southwestern Colorado and southeastern Utah, 1990-91, by D. L. Butler, R. P. Krueger, B. C. Osmundson and E. G. Jensen. Prepared in cooperation with the U.S. Fish and Wildlife Service, U.S. Bureau of Reclamation, and U.S. Bureau of Indian Affairs. 1995. 126 p. (NC, Da, M, Wb, U; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80225-0046.)
- WRI 94-4042. VIRGINIA. Relation of stream quality to streamflow, and estimated loads of selected water-quality constituents in the James and Rappahannock rivers near the fall line of Virginia, July 1988 through June 1990, by D. L. Belval, M. D. Woodside and J. P. Campbell. Prepared in cooperation with the Virginia Department of Environmental Quality, Division of Intergovernmental Coordination. 1994. 85 p. (NC, Da, M, Wb; USGS, WRD, 603 Morris St., Charleston, WV 25301; 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21204; and 300 South New St., Federal Bldg., Room 1201, Dover, DE 19904.)
- WRI 94-4047. WASHINGTON. Data and statistical summaries of background concentrations of metals in soils and streambed sediments in part of Big Soos Creek drainage basin, King County, Washington, by E. A. Prych, D. L. Kresch, J. C. Ebbert and G. L. Turney. Prepared in cooperation with the State of Washington Department of Ecology. 1995. 81 p. (NC, Da, M, Wb; USGS Library, Spokane, WA; USGS, WRD, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402.)
- WRI 94-4051. COLORADO. Irrigation water for the Fort Lyon Canal, southeastern Colorado, 1989-90, by R. G. Dash. Prepared in cooperation with the Bent County Board of County Commissioners. 1995. 47 p. (NC, Da, M, Wb, U; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80225-0046.)
- WRI 94-4052. HAWAII. Estimation of magnitude and frequency of floods for streams on the Island of Oahu, Hawaii, by M. F. Wong. Prepared in cooperation with the City and County of Honolulu, Department of Public Works. 1994. 37 p. (NC, Da, M, Wb; USGS, WRD, 677 Ala Moana Blvd., Suite 415, Honolulu, HI 96813.)
- WRI 94-4053. IDAHO. Iodine-129 in the Snake River Plain Aquifer at and near the Idaho National Engineering Laboratory, Idaho, 1990-91, by L. J. Mann and T. M. Beasley. 1994. 27 p. (NC, Da, M, Wb; USGS, WRD, 230 Collins Rd., Boise, ID 83702.)

- WRI 94-4054. COLORADO. Use of frequency analysis and the extended streamflow prediction procedure to estimate evacuation dates for the joint-use pool of Pueblo Reservoir, Colorado, by Gerhard Kuhn and R. C. Nickless. Prepared in cooperation with the Southeastern Colorado Water Conservancy District. 1994. 46 p. (NC, Da, M, Wb, U; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80225.)
- WRI 94-4056. PENNSYLVANIA. Effects of surface mining on the hydrology and biology in the Stony Fork basin, Fayette County, Pennsylvania, 1978-85, by D. R. Williams, J. R. Ritter and T. M. Mastrilli; with a section on Aquatic biology by Thomas Proch. Prepared in cooperation with the Pennsylvania Department of Environmental Resources. 1995. 33 p. (NC, Da, M, Wb; USGS, WRD, 100 Liberty Ave., Room 2204, Federal Bldg., Pittsburgh, PA 15222; and 840 Market St., Lemoyne, PA 17043-1586.)
- WRI 94-4057. NEBRASKA. Reconnaissance of ground-water quality in the North Platte Natural Resources District, western Nebraska, June-July 1991, by I. M. Verstraeten, S. S. Sibray, J. C. Cannia and D. Q. Tanner. Prepared in cooperation with the North Platte Natural Resources District, Nebraska Natural Resources Commission, and University of Nebraska-Lincoln Conservation and Survey Division. 1995. 114 p. (NC, Da, M, Wb.)
- WRI 94-4058. NORTH DAKOTA. Calibration, verification, and use of water-quality model to simulate effects of discharging treated wastewater to the Red River of the North at Fargo, North Dakota, by E. A. Wesolowski. Prepared in cooperation with the North Dakota State Department of Health. 1994. 143 p. (NC, Da, M, Wb; USGS, WRD, 821 East Interstate Ave., Bismarck, ND 58501.)
- WRI 94-4060. PENNSYLVANIA. Land use, organochlorine compound concentrations, and trends in benthic-invertebrate communities in selected stream basins in Chester County, Pennsylvania, by M. A. Hardy, K. L. Wetzel and C. R. Moore. Prepared in cooperation with the Chester County Water Resources Authority. 1995. 78 p. (NC, Da, M, Wb; USGS, WRD, 840 Market St., Lemoyne, PA 17043.)
- WRI 94-4061. COLORADO, NEW MEXICO, TEXAS. Water-quality assessment of the Rio Grande Valley study unit, Colorado, New Mexico, and Texas; analysis of selected nutrient, suspended-sediment, and pesticide data, by S. K. Anderholm, M. J. Radell and S. F. Richey. 1995. 203 p., 3 over-size sheets. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110-3929.)
- WRI 94-4062. MINNESOTA. Quality of ground water around Vadnais Lake and in Lambert Creek watershed, and interaction of ground water with Vadnais Lake, Ramsey County, Minnesota, by J. F. Ruhl. Prepared in cooperation with the St. Paul Utility and the Vadnais Lake Area Watershed Management Organization. 1994. 59 p. (NC, Da, M, Wb; USGS, WRD, 2280 Woodale Dr., Mounds View, MN 55112.)
- WRI 94-4065. KENTUCKY. Yields of selected constituents in base flow and stormflow in urban watersheds of Jefferson County, Kentucky, 1988-92, by R. D. Evaldi and B. L. Moore. Prepared in cooperation with the Louisville and Jefferson County Metropolitan Sewer District. 1994. 70 p. (NC, Da, M, Wb.)
- WRI 94-4066. INDIANA. Effects of combined-sewer overflows and urban runoff on the water quality of Fall Creek, Indianapolis, Indiana, by J. D. Martin. Prepared in cooperation with the Indianapolis Department of Public Works. 1995. 92 p. (NC, Da, M, Wb; USGS, WRD, 5957 Lakeside Blvd., Indianapolis, IN 46278-1996.)
- WRI 94-4067. VIRGINIA, NORTH CAROLINA. Flow and salinity in West Neck Creek, Virginia, 1989-92, and salinity in North Landing River, North Carolina, 1991-92, by J. D. Bales and S. C. Skrobialowski. Prepared in cooperation with the Nongame Advisory Board, North Carolina Wildlife Resources Commission; Division of Water Resources; and Albemarle-Pamlico Estuarine Study of the North Carolina Department of Environment, Health, and Natural Resources. 1994. 37 p. (NC, Da, M, Wb; USGS, WRD, 3916 Sunset Ridge Rd., Raleigh, NC 27607.)
- WRI 94-4071. NEW MEXICO. Traveltime and reaeration characteristics for a reach of the Rio Grande, Albuquerque, New Mexico, October 1991, by S. D. Waltemeyer. Prepared in cooperation with the City of Albuquerque. 1994. 19 p. (NC, Da, M, Wb, U; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110.)
- WRI 94-4072. NEW MEXICO. Subsurface recharge to the Tesuque aquifer system from selected drainage basins along the western side of the Sangre De Cristo Mountains near Santa Fe, New Mexico, by Maryann Wasiolek. Prepared in cooperation with the Santa Fe Metropolitan Water Board and New Mexico State Engineer Office. 1995. 57 p. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110.)
- WRI 94-4073. ALASKA. Scour assessment at bridges from Flag Point to Million Dollar Bridge, Copper River Highway, Alaska, by T. P. Brabets. Prepared in cooperation with the Alaska Department of Transportation and Public Facilities. 1994. 57 p. (NC, Da, M, Wb, A, S; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775; and P.O. Box 21568, Juneau, AK 99802.)
- WRI 94-4074. ALABAMA. Hydrogeology and ground-water quality in the Black Belt area of west-central Alabama, and estimated water use for aquaculture, 1990, by R. E. Kidd and D. S. Lambeth. Prepared in cooperation with the U.S. Department of Agriculture, Soil and Conservation Service, and Alabama Department of Economic and Community Affairs. 1995. 52 p., 3 over-size sheets. (NC, Da, M, Wb; USGS, WRD, P.O. Box 210337, Montgomery, AL 36121.)
- WRI 94-4076. FLORIDA. Spatial and temporal statistical analysis of a ground-water level network, Broward County, Florida, by E. D. Swain and R. S. Sonenshein. Prepared in cooperation with the South Florida Water Management District. 1994. 67 p. (NC, Da, M, Wb; USGS, WRD, Suite 107, 9100 NW 36th St., Miami, FL 33178.)
- WRI 94-4077. KANSAS, NEBRASKA. Surface-water-quality assessment of the lower Kansas River basin, Kansas and Nebraska; dissolved oxygen and *Escherichia coli* bacteria in streams during low flow, July 1988 through July 1989, by L. M. Pope. 1995. 102 p. (NC, Da, M, Wb.)
- WRI 94-4078. NEW MEXICO. Ground-water recharge near Santa Fe, north-central New Mexico, by S. K. Anderholm. Prepared in cooperation with the Santa Fe Metropolitan Water Board and the New Mexico State Engineer Office. 1994. 68 p., 2 over-

- size sheets. (NC, Da, M, Wb, U; USGS, WRD, 451 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110.)
- WRI 94-4079. NEVADA. Hydrogeologic setting and ground-water quality of areas tributary to Lake Tahoe in Douglas County and Carson City, Nevada, through 1987, by C. E. Thodal. Prepared in cooperation with Douglas County and Carson City. 1995. 31 p. (NC, Da, M, Wb, U; USGS, WRD, 333 West Nye Lane, Carson City, NV 89706-0866; and 6770 South Paradise, Las Vegas, NV 89119-3721.)
- WRI 94-4081. FLORIDA. Summary of sediment resuspension monitoring activities, Old Tampa Bay and Hillsborough Bay, Florida, 1988-91, by V. A. Levesque and D. H. Schoellhamer. Prepared in cooperation with the Southwest Florida Water Management District, Hillsborough County, Pinellas County, City of St. Petersburg, and Tampa Port Authority. 1995. 31 p. (NC, Da, M, Wb; USGS, WRD, Suite B-5, 4710 Eisenhower Blvd., Tampa, FL 33634-6381.)
- WRI 94-4082. WASHINGTON. Geohydrology and ground-water quality of East King County, Washington, by G. L. Turney, S. C. Kahle and N. P. Dion. Prepared in cooperation with the Seattle-King County Department of Public Health. 1995. 123 p., 5 over-size sheets; sheets 1-4, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M, Wb; USGS Library, Spokane, WA; USGS, WRD, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402.)
- WRI 94-4084. MASSACHUSETTS. Effects of storm paths on precipitation chemistry, and variations of within-storm chemistry during selected storms in central Massachusetts, by J. C. Risley and J. B. Shanley. Prepared in cooperation with the Commonwealth of Massachusetts Development of Environmental Protection, Division of Water Pollution Control. 1994. 34 p. (NC, Da, M, Wb.)
- WRI 94-4085. LOUISIANA. Guide to Louisiana's ground-water resources, by C. G. Stuart, D. D. Knochenmus and B. D. McGee. Prepared in cooperation with the Louisiana Department of Transportation and Development. 1994. 55 p. (NC, Da, M, Wb; USGS, WRD, 3535 South Sherwood Forest Blvd., Suite 120, Baton Rouge, LA 70816.)
- WRI 94-4088. MISSISSIPPI. Permeability of soils in Mississippi, by C. G. O'Hara. Prepared in cooperation with the Mississippi Department of Environmental Quality, Office of Pollution Control; and the Mississippi Department of Agriculture and Commerce. 1994. 1 over-size sheet, scale 1:500,000 (1 inch = about 8 miles). (NC, Da, M, Wb; USGS, WRD, 100 West Capitol St., Suite 710, Jackson, MS 39269.)
- WRI 94-4092. TEXAS. Hydrogeology and selected water-quality aspects of the Hueco Bolson Aquifer at the Hueco Bolson Recharge Project area, El Paso, Texas, by P. M. Buszka, R. D. Brock and R. P. Hooper. Prepared in cooperation with the El Paso Water Utilities-Public Service Board, Texas Water Development Board, and U.S. Bureau of Reclamation. 1994. 37 p. (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. B, Austin, TX 78754-3898.)
- WRI 94-4094. ILLINOIS, INDIANA, WISCONSIN. Surface-water-quality assessment of the upper Illinois River basin in Illinois, Indiana, and Wisconsin; analysis of relations between fish-community structure and environmental conditions in the Fox, Des Plaines, and Du Page River basins in Illinois, 1982-84, by P. M. Ruhl. 1995. 50 p. (NC, Da, M, Wb; USGS, WRD, 102 East Main St., 4th Floor, Urbana, IL 61801.)
- WRI 94-4095. COLORADO, NEBRASKA, WYOMING. Water-quality assessment of the South Platte River basin, Colorado, Nebraska, and Wyoming; analysis of available nutrient, suspended-sediment, and pesticide data, water years 1980-92, by K. F. Dennehy, D. W. Litke, P. B. McMahon, J. S. Heiny and C. M. Tate. 1995. 145 p. (NC, Da, M, Wb, U; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80025-0046.)
- WRI 94-4097. COLORADO. Physical, chemical, and biological characteristics of Pueblo Reservoir, Colorado, 1985-89, by M. E. Lewis and P. R. Edelmann. Prepared in cooperation with the Pueblo Board of Water Works, Fountain Valley Authority, South-eastern Colorado Water Conservancy District, Pueblo West Metropolitan District, St. Charles Mesa Water District, and U.S. Bureau of Reclamation. 1994. 71 p., 1 over-size sheet. (NC, Da, M, Wb, U; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80225.)
- WRI 94-4099. KENTUCKY. Ground-water levels in and pump-age from the alluvial aquifer at Louisville, Kentucky, May 1989-May 1991, by M. D. Unthank, C. L. Stevens, H. L. Nelson, Jr. and J. M. Poole. Prepared in cooperation with the Louisville and Jefferson County Metropolitan Sewer District. 1994. 2 over-size sheets. (NC, Da, M, Wb.)
- WRI 94-4100. MASSACHUSETTS. Estimating the magnitude and frequency of low flows of streams in Massachusetts, by J. C. Risley. Prepared in cooperation with the Massachusetts Department of Environmental Protection, Division of Water Pollution Control. 1994. 29 p. (NC, Da, M, Wb.)
- WRI 94-4101. WISCONSIN. Hydrology and water quality of Whitewater and Rice lakes in southeastern Wisconsin, 1990-91, by G. L. Goodard and S. J. Field. Prepared in cooperation with the Whitewater-Rice Lakes Management District. 1994. 36 p. (NC, Da, M, Wb; USGS, WRD, 6417 Normandy Lane, Madison, WI 53719-1133.)
- WRI 94-4105. OHIO. Analysis of ground-water flow along a regional flow path of the Midwestern Basins and Arches aquifer system in Ohio, by R. H. Hanover. 1994. 29 p. (NC, Da, M, Wb; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80225; 4821 Quail Crest Pl., Lawrence, KS 66049; 100 Centennial Mall North, Room 406, Federal Bldg., Lincoln, NE 68508; 202 NW 66 St., Bldg. 7, Oklahoma City, OK 73116; 1608 Mountain View Rd., Rapid City, SD 57702; 8011 Cameron Rd., Bldg. A, Austin, TX 78754-3898; and 2617 East Lincolnway, Suite B, Cheyenne, WY 82001.)
- WRI 94-4108. VERMONT. Hydrogeology, simulated ground-water flow, and ground-water quality at two landfills in Bristol, Vermont, by T. J. Mack. Prepared in cooperation with the Vermont Department of Environmental Conservation, Agency of Natural Resources, Solid Waste Division. 1995. 111 p. (NC, Da, M, Wb.)
- WRI 94-4109. PENNSYLVANIA. Hydrogeology and ground-water quality of northern Bucks County, Pennsylvania, by R. A. Sloto and C. L. Schreffler. Prepared in cooperation with New Hope Borough and Bridgeton, Buckingham, Nockamixon, Plumstead, Solebury, Springfield, Tinicum, and Wrightstown town-

- ships. 1994. 85 p., 1 over-size sheet, scale 1:50,000 (1 inch = about 4,200 feet). (NC, Da, M, Wb; USGS, WRD, 111 Great Valley Pkwy., Malvern, PA 19355.)
- WRI 94-4111. COLORADO. Hydrologic assessment of a riparian section along Boulder Creek near Boulder, Colorado, September 1989-September 1991, by R. A. Kimbrough. Prepared in cooperation with the City of Boulder, Colorado. 1995. 25 p. (NC, Da, M, Wb, U; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80225.)
- WRI 94-4113. NEW JERSEY. Water quality of the Potomac-Raritan-Magothy aquifer system in the coastal plain, west-central New Jersey, by E. M. Ervin, L. M. Voronin and T. V. Fusillo. Prepared in cooperation with the New Jersey Department of Environmental Protection and Energy. 1994. 114 p. (NC, Da, M, Wb; USGS, WRD, Mountain View Office Park, 810 Bear Tavern Rd., Suite 206, West Trenton, NJ 08628.)
- WRI 94-4114. ARIZONA. Quality of water and chemistry of bottom sediment in the Rillito Creek basin, Tucson, Arizona, 1986-92, by Saeid Tadayon and C. F. Smith. Prepared in cooperation with the Arizona Department of Water Resources and Pima County Department of Transportation and Flood Control District. 1994. 90 p. (NC, Da, M, Wb; USGS, WRD, 375 South Euclid Ave., Tucson, AZ 85719-6644; 1545 West University Dr., Tempe, AZ 85281; 2255 North Gemini Dr., Flagstaff, AZ 86001; and 1940 South 3rd Ave., Yuma, AZ 85364.)
- WRI 94-4115. User's guide to revised method-of-characteristics solute-transport model (MOC, version 3.1), by L. F. Konikow, G. E. Granato and G. Z. Hornberger. 1994. 63 p. (NC, Da, M, Wb.)
- WRI 94-4116. IDAHO. Configuration of the water table, 1970 and 1992, and water-table change between 1970 and 1992 in the Boise area, Idaho, by A. M. Tungate and C. E. Berenbrock. Prepared in cooperation with the City of Boise, Public Works Department, and Idaho Department of Health and Welfare, Division of Environmental Quality. 1995. 1 over-size sheet, scale 1:75,000 (1 inch = about 6,000 feet). (NC, Da, M, Wb; USGS, WRD, 230 Collins Rd., Boise, ID 83702.)
- WRI 94-4117. TEXAS. Geologic framework and hydrogeologic characteristics of the Edwards Aquifer outcrop, Comal County, Texas, by T. A. Small and J. A. Hanson. Prepared in cooperation with the Edwards Underground Water District. 1994. 10 p., 1 over-size sheet, scale 1:75,000 (1 inch = about 6,250 feet). (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. B, Austin, TX 78754-3898.)
- WRI 94-4118. COLORADO. Quality of water in the alluvial aquifer and tributary alluvium of the Fountain Creek valley, southwestern El Paso County, Colorado, 1991-92, by M. E. Lewis. Prepared in cooperation with Colorado Springs Utilities, Wastewater Department. 1994. 61 p., 4 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, Wb, U; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80225-0046.)
- WRI 94-4119. IDAHO. Bathymetric map of Coeur d'Alene Lake, Idaho, by P. F. Woods and C. E. Berenbrock. Prepared in cooperation with the Idaho Department of Health and Welfare, Division of Environmental Quality. 1994. 1 over-size sheet, scale 1:48,000 (1 inch = 4,000 feet). (NC, Da, M, Wb; USGS, WRD, 230 Collins Rd., Boise, ID 83702.)
- WRI 94-4123. NORTH CAROLINA. Sediment characteristics and sedimentation rates in Lake Michie, Durham County, North Carolina, 1990-92, by J. C. Weaver. Prepared in cooperation with the City of Durham Department of Water Resources and North Carolina Department of Environment, Health, and Natural Resources. 1994. 34 p. (NC, Da, M, Wb; USGS, WRD, 3916 Sunset Ridge Rd., Raleigh, NC 27622.)
- WRI 94-4124. NEVADA. Ground-water discharge by evapotranspiration in a desert environment of southern Nevada, 1987, by M. J. Johnson. Prepared in cooperation with the State of Nevada and the Las Vegas Valley Water District. 1994. 20 p. (NC, Da, M, Wb.)
- WRI 94-4125. NEW MEXICO. Geohydrology of the San Agustin Basin, Alamosa Creek basin upstream from Monticello Box, and upper Gila Basin in parts of Catron, Socorro, and Sierra counties, New Mexico, by R. G. Myers, J. T. Everheart and C. A. Wilson. Prepared in cooperation with the New Mexico State Engineer Office. 1994. 70 p., 2 over-size sheets. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110.)
- WRI 94-4126. NEVADA. Potential for, and possible effects of, artificial recharge in Carson Valley, Douglas County, Nevada, by D. K. Maurer and L. A. Peltz. Prepared in cooperation with the Douglas County Utility Division. 1994. 4 over-size sheets, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M, Wb, U; USGS, WRD, 333 West Nye Lane, Room 102, Carson City, NV 89706; and 6770 South Paradise Rd., Las Vegas, NV 89119.)
- WRI 94-4127. CALIFORNIA. Geohydrology, water quality, and nitrogen geochemistry in the saturated and unsaturated zones beneath various land uses, Riverside and San Bernardino counties, California, 1991-93, by T. F. Rees, D. J. Bright, R. G. Fay, A. H. Christensen, R. B. Anders, B. S. Baharie and M. T. Land. Prepared in cooperation with the Eastern Municipal Water District, Metropolitan Water District of Southern California, and Orange County Water District. 1995. 267 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- WRI 94-4128. FLORIDA. Water quality of the Boca Raton canal system and effects of the Hillsboro Canal inflow, southeastern Florida, 1990-91, by D. J. McKenzie. Prepared in cooperation with the City of Boca Raton. 1995. 18 p. (NC, Da, M, Wb; USGS, WRD, Suite 107, 9100 NW 36th St., Miami, FL 33178.)
- WRI 94-4129. COLORADO. Hydrogeologic characteristics of the alluvial aquifer and adjacent deposits of the Fountain Creek valley, El Paso County, Colorado, by M. J. Radell, M. E. Lewis and K. R. Watts. Prepared in cooperation with Colorado Springs Utilities, Wastewater Department. 1994. 4 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, Wb, U; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80225-0046.)
- WRI 94-4130. IOWA. Selected nutrients in stormwater runoff from Davenport, Iowa, 1992, by B. D. Schaap and K. J. Lucey. Prepared in cooperation with the City of Davenport, Iowa. 1994. 29 p. (NC, Da, M, Wb.)
- WRI 94-4131. OHIO. Simulated ground-water flow and sources of water in the Killbuck Creek valley near Wooster, Wayne

- County, Ohio, by K. J. Breen, A. L. Kontis, G. L. Rowe and R. J. Haefner. 1995. 104 p., 8 over-size sheets; sheets 1 and 7, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, Wb.)
- WRI 94-4134. KENTUCKY. Water-quality assessment of the Kentucky River basin, Kentucky; distribution of metals and other trace elements in sediment and water, 1987-90, by S. D. Porter, K. D. White and J. R. Clark. 1995. 184 p. 1 over-size sheet, scale 1:500,000 (1 inch = about 8 miles). (NC, Da, M, Wb.)
- WRI 94-4135. IDAHO, WYOMING. Analysis of data on nutrients and organic compounds in ground water in the upper Snake River basin, Idaho and western Wyoming, 1980-91, by M. G. Rupert. 1994. 40 p. (NC, Da, M, Wb; USGS, WRD, 230 Collins Rd., Boise, ID 83702.)
- WRI 94-4138. RHODE ISLAND. A technique for estimating ground-water levels at sites in Rhode Island from observation-well data, by R. S. Socolow, M. H. Frimpter, Michael Turtora and R. W. Bell. Prepared in cooperation with the Rhode Island Department of Environmental Management. 1994. 43 p. (NC, Da, M, Wb; USGS, WRD, 275 Promenade St., Suite 150, Providence, RI 02908.)
- WRI 94-4139. WASHINGTON. Runoff, precipitation, mass balance, and ice velocity measurements at South Cascade Glacier, Washington, 1993 balance year, by R. M. Krimmel. 1994. 35 p. (NC, Da, M, Wb, A, S; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks AK 99775; and P.O. Box 21568, Juneau, AK 99802.)
- WRI 94-4140. VIRGINIA, NORTH CAROLINA. Land use in, and water quality of, the Pea Hill Arm of Lake Gaston, Virginia and North Carolina, 1988-90, by M. D. Woodside. Prepared in cooperation with the City of Virginia Beach. 1994. 54 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 3600 West Broad St., Room 606, Richmond, VA 23230.)
- WRI 94-4141. ILLINOIS. Differences in results of analyses of concurrent and split stream-water samples collected and analyzed by the U.S. Geological Survey and the Illinois Environmental Protection Agency, 1985-91, by C. S. Melching and R. H. Coupe. Prepared in cooperation with the Illinois Environmental Protection Agency. 1995. 46 p. (NC, Da, M, Wb; USGS, WRD, 102 East Main St., 4th Floor, Urbana, IL 61801.)
- WRI 94-4142. SAMOA. Ground-water quality reconnaissance, Tutuila, American Samoa, 1989, by P. R. Eyre. Prepared in cooperation with the American Samoa Environmental Protection Agency. 1994. 15 p. (NC, Da, M, Wb.)
- WRI 94-4143. NEW MEXICO. Computer simulation of storm runoff for three watersheds in Albuquerque, New Mexico, by R. L. Knutilla and J. E. Veenhuis. Prepared in cooperation with the Albuquerque Metropolitan Arroyo Flood Control Authority and the City of Albuquerque. 1994. 61 p. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110-3929.)
- WRI 94-4146. MINNESOTA. Relation of fracture orientation to linear terrain features, anisotropic transmissivity, and seepage to streams in the karst Prairie du Chien Group, southeastern Minnesota, by J. F. Ruhl. Prepared in cooperation with the Minnesota Department of Natural Resources and Legislative Commission on Minnesota Resources. 1995. 42 p. (NC, Da, M, Wb; USGS, WRD, 2280 Woodale Dr., Mounds View, MN 55112.)
- WRI 94-4148. VIRGINIA. Methods for estimating the magnitude and frequency of peak discharges of rural, unregulated streams in Virginia, by J. A. Bisese. Prepared in cooperation with the Virginia Department of Transportation. 1995. 70 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 603 Morris St., Charleston, WV 25301; 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21204; and 300 South New St., Federal Bldg, Room 1201, Dover, DE 19904.)
- WRI 94-4149. MINNESOTA. Characterization of the hydrogeology and water quality at the Management Systems Evaluation Area near Princeton, Minnesota, 1991-92, by G. N. Delin, M. K. Landon, J. A. Lamb and J. L. Anderson. Prepared in cooperation with the University of Minnesota Department of Soil Science, U.S. Department of Agriculture, and Minnesota Pollution Control Agency. 1994. 54 p. (NC, Da, M, Wb; USGS, WRD, 2280 Woodall Dr., Mounds View, MN 55112.)
- WRI 94-4151. CALIFORNIA. Database of well and areal data, South San Francisco Bay and Peninsula area, California, by D. A. Leighton, J. L. Fio and L. F. Metzger. Prepared in cooperation with the Bay Area Water Users Association. 1995. 47 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- WRI 94-4155. MASSACHUSETTS. Development and application of generalized-least-squares regression models to estimate low-flow duration discharges in Massachusetts, by K. G. Ries, III. Prepared in cooperation with the Massachusetts Department of Environmental Management, Office of Water Resources. 1994. 33 p. (NC, Da, M, Wb.)
- WRI 94-4156. MASSACHUSETTS. Identification of potential public-water-supply areas of the Cape Cod Aquifer, Massachusetts, using a geographic information system, by S. L. Harris and P. A. Steeves. Prepared in cooperation with the Cape Cod Commission. 1994. 23 p., 1 over-size sheet, scale 1:63,360 (1 inch = 1 mile). (NC, Da, M, Wb.)
- WRI 94-4157. Water-level changes in the High Plains Aquifer; predevelopment to 1993, by J. T. Dugan and D. A. Cox. 1994. 60 p. (NC, Da, M, Wb; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80225; 4821 Quail Crest Pl., Lawrence, KS 66049; Room 406 Federal Bldg., 100 Centennial Mall North, Lincoln, NE 68508; 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110-3929; 202 NW 66 St., Bldg. 7, Oklahoma City, OK 73116; 1608 Mountain View Rd., Rapid City, SD 57702; 8011 Cameron Rd., Bldg. A, Austin, TX 78754-3893; and 2617 East Lincolnway, Suite B, Cheyenne, WY 82001.)
- WRI 94-4158. GEORGIA. Effects of urban flood-detention reservoirs on peak discharges and flood frequencies, and simulation of flood-detention reservoir outflow hydrographs in two watersheds in Albany, Georgia, by G. W. Hess and E. J. Inman. Prepared in cooperation with the City of Albany, Georgia. 1994. 31 p. (NC, Da, M, Wb; USGS, WRD, Peachtree Business Ctr., Suite 130, 3039 Amwiler Rd., Atlanta, GA 30360-2824.)
- WRI 94-4159. UTAH, ARIZONA, NEVADA. Flood on the Virgin River, January 1989, in Utah, Arizona, and Nevada, by D. D.

- Carlson and D. F. Meyer. 1995. 21 p., 1 over-size sheet. (NC, Da, M, Wb, U.)
- WRI 94-4162. FLORIDA. Nitrate in ground water and spring water near four dairy farms in North Florida, 1990-93, by W. J. Andrews. Prepared in cooperation with the Florida Department of Environmental Protection. 1994. 63 p. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301.)
- WRI 94-4163. MINNESOTA. Characterization of ground-water discharge from bedrock aquifers to the Mississippi and Minnesota rivers at three areas, Minneapolis-St. Paul area, Minnesota, by M. E. Schoenberg. Prepared in cooperation with the Legislative Commission on Minnesota Resources and the Minnesota Department of Natural Resources. 1994. 45 p. (NC, Da, M, Wb; USGS, WRD, 2280 Woodall Dr., Mounds View, MN 55112.)
- WRI 94-4164. Use of fathometers and electrical-conductivity probes to monitor riverbed scour at bridge piers, by D. C. Hayes and F. E. Drummond. Prepared in cooperation with the Delaware Department of Transportation, Maryland Department of Transportation, and Virginia Department of Transportation. 1995. 17 p. (NC, Da, M, Wb; USGS, WRD, 603 Morris St., Charleston, WV 25301; 208 Carroll Bldg., 8500 La Salle Rd., Towson, MD 21204; and 300 South New St., Federal Bldg., Room 1201, Dover, DE 19904.)
- WRI 94-4165. ALASKA. Application of surface geophysical techniques in a study of the geomorphology of the lower Copper River, Alaska, by T. P. Brabets. Prepared in cooperation with the Alaska Department of Transportation and Public Facilities. 1995. 47 p. (NC, Da, M, Wb, A, S; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775; and P.O. Box 21568, Juneau, AK 99802.)
- WRI 94-4166. KANSAS. Hydrogeology and water-quality conditions at the City of Olathe landfill, east-central Kansas, 1990-93, by P. P. Rasmussen, J. C. Shockley and D. A. Hargadine. Prepared in cooperation with the City of Olathe, Kansas. 1994. 44 p. (NC, Da, M, Wb; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80225; 4821 Quail Crest Pl., Lawrence, KS 66049; 100 Centennial Mall North, Room 406, Federal Bldg., Lincoln, NE 68508; 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110-3929; 202 NW 66 St., Bldg. 7, Oklahoma City, OK 73116; 1608 Mountain View Rd., Rapid City, SD 57702; 8011 Cameron Rd., Bldg. A, Austin, TX 78754-3898; and 2617 East Lincolnway, Suite B, Cheyenne, WY 82001.)
- WRI 94-4167. FLORIDA. A hydrogeologic approach to identify land uses that overlie ground-water flow paths, Broward County, Florida, by R. S. Sonenshein. Prepared in cooperation with the Broward County Department of Natural Resource Protection and South Florida Water Management District. 1995. 59 p. (NC, Da, M, Wb; USGS, WRD, Suite 107, 9011 NW 36 St., Miami, FL 33178.)
- WRI 94-4168. Users manual for an expert system (HSPEXP) for calibration of the hydrological simulation program; Fortran, by A. M. Lumb, R. B. McCammon and J. L. Kittle, Jr. 1994. 102 p. (NC, Da, M, Wb.)
- WRI 94-4170. MARYLAND. Relation of land use to nitrogen concentration in ground water in the Patuxent River basin, Maryland, by E. R. McFarland. Prepared in cooperation with the Maryland Department of the Environment. 1995. 20 p. (NC, Da, M, Wb; USGS, WRD, 603 Morris St., Charleston, WV 25301; 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21204; and 300 South New St., Federal Bldg., Room 1201, Dover, DE 19904.)
- WRI 94-4171. NORTH DAKOTA. Sources and cycling of major ions and nutrients in Devils Lake, North Dakota, by R. M. Lent. Prepared in cooperation with the North Dakota State Department of Health and Consolidated Laboratories, North Dakota State Water Commission, and North Dakota Game and Fish Department. 1994. 63 p. (NC, Da, M, Wb; USGS, WRD, 821 East Interstate Ave., Bismarck, ND 58501-1199.)
- WRI 94-4172. MISSISSIPPI. Thickness of the upper and lower confining units of the Mississippi River alluvial aquifer in northwestern Mississippi, by J. K. Arthur. Prepared in cooperation with the Yazoo Mississippi Delta Joint Water Management District. 1994. 1 over-size sheet, scale 1:500,000 (1 inch = about 8 miles). (NC, Da, M, Wb; USGS, WRD, 100 West Capitol St., Suite 710, Jackson, MS 39269.)
- WRI 94-4176. Spatial data in geographic information system format on agricultural chemical use, land use, and cropping practices in the United States, by W. A. Battaglin and D. A. Goolsby. Prepared in cooperation with the U.S. Environmental Protection Agency. 1995. 87 p. (NC, Da, M, Wb, U; USGS, WRD, Bldg. 53, Rooms H-2101 and H-2313, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80225.)
- WRI 94-4178. NEW MEXICO. Hydrogeology of Cibola County, New Mexico, by J. A. Baldwin and D. R. Rankin. Prepared in cooperation with the New Mexico Bureau of Mines and Mineral Resources and New Mexico State Engineer Office. 1995. 102 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110-3929.)
- WRI 94-4180-A. CALIFORNIA. Measurements of heat and mass flow from thermal areas in Lassen Volcanic National Park, California, 1984-93, by M. L. Sorey and E. M. Colvard. 1994. 35 p. (NC, Da, M, Wb.)
- WRI 94-4184. CALIFORNIA. Determination of land subsidence related to ground-water-level declines using Global Positioning System and leveling surveys in Antelope Valley, Los Angeles and Kern counties, California, 1992, by M. E. Ikehara and S. P. Phillips. Prepared in cooperation with the Antelope Valley Water Group. 1994. 101 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2223, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- WRI 94-4185. MASSACHUSETTS. Identification, characterization, and analysis of hydraulically conductive fractures in granitic basement rocks, Millville, Massachusetts, by F. L. Paillet and P. W. Ollila. 1994. 38 p. (NC, Da, M, Wb.)
- WRI 94-4186. NORTH CAROLINA. Hydrogeology and simulation of ground-water flow at U.S. Marine Corps Air Station, Cherry Point, North Carolina, 1987-90, by J. L. Eimers, C. C. Daniel, III and R. W. Coble. Prepared in cooperation with the U.S. Marine Corps. 1994. 75 p. (NC, Da, M, Wb; USGS, WRD, 3916 Sunset Ridge Rd., Box 30728, Raleigh, NC 27622.)
- WRI 94-4187. KANSAS, NEBRASKA. Surface-water-quality assessment of the lower Kansas River basin, Kansas and Nebraska; suspended-sediment conditions, May 1987 through April 1990,

- and trends, 1963 through April 1990, by P. R. Jordan. 1995. 36 p. (NC, Da, M, Wb.)
- WRI 94-4188. DELAWARE. Storm and flood of July 5, 1989, in northern New Castle County, Delaware, by G. N. Paulachok, R. H. Simmons and A. J. Tallman. 1995. 29 p. (NC, Da, M, Wb; USGS, WRD, 300 South New St., Federal Bldg., Room 1201, Dover, DE 19901.)
- WRI 94-4189. KENTUCKY. Summary and interpretation of dye-tracer tests to investigate the hydraulic connection of fractures at a ridge-and-valley-wall site, near Fishtrap Lake, Pike County, Kentucky, by C. J. Taylor. Prepared in cooperation with the U.S. Office of Surface Mining Reclamation and Enforcement. 1994. 83 p., 1 over-size sheet. (NC, Da, M, Wb.)
- WRI 94-4190. ILLINOIS. Dendrogeomorphic estimate of changes in sedimentation rate along the Kankakee River near Momence, Illinois, by R. L. Phipps, G. P. Johnson and P. J. Terrio. Prepared in cooperation with the Kankakee Soil and Water Conservation District. 1995. 30 p. (NC, Da, M, Wb; USGS, WRD, 102 East Main St., 4th Floor, Urbana, IL 61801.)
- WRI 94-4191. Data on natural organic substances in dissolved, colloidal, suspended-silt and -clay, and bed-sediment phases in the Mississippi River and some of its tributaries, 1991-92, by J. A. Leenheer, L. B. Barber, C. E. Rostad and T. I. Noyes. 1995. 47 p. (NC, Da, M, Wb, U.)
- WRI 94-4192. ARIZONA, NEW MEXICO. Radioactivity in the environment; a case study of the Puerco and Little Colorado River basins, Arizona and New Mexico, by Laurie Wirt. Prepared in cooperation with the Office of Navajo and Hopi Indian Relocation. 1994. 23 p. (NC, Da, M, Wb; USGS, WRD, 375 South Euclid Ave., Tucson, AZ 85719-6644; 1545 West University Dr., Tempe, AZ 85281; 2255 North Gemini Dr., Flagstaff, AZ 86001; and 1940 South 3rd Ave., Yuma, AZ 85364.)
- WRI 94-4194. COLORADO. Water quality of storm runoff and comparison of procedures for estimating storm-runoff loads, volume, event-mean concentrations, and the mean load for a storm for selected properties and constituents for Colorado Springs, southeastern Colorado, 1992, by Paul von Guerard and W. B. Weiss. Prepared in cooperation with the Colorado Springs City Engineering Division. 1995. 68 p. (NC, Da, M, Wb, U; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80225-0046.)
- WRI 94-4195. INDIANA. Directions of ground-water flow and locations of ground-water divides in the Lost River watershed near Orleans, Indiana, by E. R. Bayless, C. J. Taylor and M. S. Hopkins. Prepared in cooperation with the U.S. Army Corps of Engineers. 1994. 25 p., 2 over-size sheets. (NC, Da, M, Wb; USGS, WRD, 5957 Lakeside Blvd., Indianapolis, IN 46278-1996.)
- WRI 94-4199. MINNESOTA. Water resources of the Grand Portage Indian Reservation, northeastern Minnesota, by J. F. Ruhl. Prepared in cooperation with the Grand Portage Indian Reservation Tribal Council. 1995. 28 p. (NC, Da, M, Wb; USGS, WRD, 2280 Woodall Dr., Mounds View, MN 55112.)
- WRI 94-4200. MISSOURI. Investigation of bridge scour at selected sites on Missouri streams, by L. D. Becker. Prepared in cooperation with the Missouri Highway and Transportation Commission. 1994. 40 p. (NC, Da, M, Wb; USGS, WRD, 1400 Independence Rd., Mail Stop 200, Rolla, MO 65401.)
- WRI 94-4202. LOUISIANA. Louisiana ground-water map No. 7; potentiometric surface, 1991, and water-level changes, 1969-91, of the Chicot equivalent aquifer system in southeastern Louisiana, by D. J. Walters. Prepared in cooperation with the Louisiana Department of Transportation and Development. 1995. 2 over-size sheets, scale 1:375,000 (1 inch = about 6 miles). (NC, Da, M, Wb; USGS, WRD, 3535 South Sherwood Forest Blvd., Suite 120, Baton Rouge, LA 70816.)
- WRI 94-4204. MINNESOTA. Hydrogeology and ground-water flow of the drift and Platteville aquifer system, St. Louis Park, Minnesota, by R. J. Lindgren. Prepared in cooperation with the U.S. Environmental Protection Agency. 1995. 79 p. (NC, Da, M, Wb; USGS, WRD, 2280 Woodale Dr., Mounds View, MN 55112.)
- WRI 94-4205. NEW MEXICO. Erosion assessment at the Petroglyph National Monument area, Albuquerque, New Mexico, by A. C. Gellis. Prepared in cooperation with the U.S. National Park Service. 1995. 39 p. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110-3929.)
- WRI 94-4207. MINNESOTA. Hydrology and relation of selected water-quality constituents to selected physical factors in Dakota County, Minnesota, 1990-91, by J. E. Almendinger and G. B. Mitton. Prepared in cooperation with the Minnesota Department of Natural Resources, Legislative Commission on Minnesota Resources, and Dakota County Soil and Water Conservation District. 1995. 26 p. (NC, Da, M, Wb; USGS, WRD, 2280 Woodale Dr., Mounds View, MN 55112.)
- WRI 94-4208. CALIFORNIA. Land use and water use in the Antelope Valley, California, by W. E. Templin, S. P. Phillips, D. E. Cherry, M. L. DeBortoli, T. C. Haltom, K. R. McPherson and C. A. Mrozek. Prepared in cooperation with the Antelope Valley Water Group. 1995. 97 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- WRI 94-4209. SOUTH CAROLINA. Assessment of concentrations of trace elements in ground water and soil at the Small-Arms Firing Range, Shaw Air Force Base, South Carolina, by J. E. Landmeyer. Prepared in cooperation with the U.S. Department of Defense, U.S. Air Force, Air Combat Command. 1994. 60 p. (NC, Da, M, Wb.)
- WRI 94-4210. NEVADA. Dissolved-solids contribution to the Colorado River from public lands in southeastern Nevada, through September 1993, by C. L. Westenburg. Prepared in cooperation with the U.S. Bureau of Land Management. 1995. 25 p. (NC, Da, M, Wb, U; USGS, WRD, 6770 South Paradise, Las Vegas, NV 89119-3721; and 333 West Nye Lane, Carson City, NV 89706-0866.)
- WRI 94-4211. IOWA. Effect of the Cedar River on the quality of ground-water supply for Cedar Rapids, Iowa, by P. M. Schulmeyer. Prepared in cooperation with the City of Cedar Rapids, Iowa. 1995. 68 p. (NC, Da, M, Wb.)
- WRI 94-4212. TENNESSEE. Hydrogeology, ground-water quality, and source of ground water causing water-quality changes in

- the Davis well field at Memphis, Tennessee, by W. S. Parks, J. E. Mirecki and J. A. Kingsbury. Prepared in cooperation with the City of Memphis, Memphis Light, Gas and Water Division, and the University of Memphis. 1995. 58 p. (NC, Da, M, Wb; USGS, WRD, AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)
- WRI 94-4213. TEXAS. Sources of trends in water-quality data for selected streams in Texas, 1975-89 water years, by T. L. Schertz, F. C. Wells and D. J. Ohe. 1994. 49 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. B, Austin, TX 78754-3898.)
- WRI 94-4215. WASHINGTON, IDAHO. Nutrients, suspended sediment, and pesticides in streams and irrigation systems in the central Columbia Plateau in Washington and Idaho, 1959-1991, by K. E. Greene, J. C. Ebbert and M. D. Munn. 1994. 167 p. (NC, Da, M, Wb; USGS Library, Spokane, WA; USGS, WRD, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402.)
- WRI 94-4216. ARKANSAS. Verification and adjustment of regional regression models for urban storm-runoff quality using data collected in Little Rock, Arkansas, by C. S. Barks. Prepared in cooperation with the City of Little Rock, Arkansas. 1995. 37 p. (NC, Da, M, Wb; USGS, WRD, 401 Hardin Rd., Little Rock, AR 72211.)
- WRI 94-4217. FLORIDA. Efficiency of a stormwater detention pond in reducing loads of chemical and physical constituents in urban streamflow, Pinellas County, Florida, by I. H. Kantrowitz and W. M. Woodham. Prepared in cooperation with Pinellas County, Florida. 1995. 18 p. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301.)
- WRI 94-4218. TEXAS. Water-quality assessment of the Trinity River basin, Texas; review and analysis of available pesticide information, 1968-91, by R. L. Ulery and M. F. Brown. 1995. 88 p. (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. B, Austin, TX 78754-3898.)
- WRI 94-4219. MISSISSIPPI. Analysis of ground-water flow in the Catahoula aquifer system in the vicinity of Laurel and Hattiesburg, Mississippi, by K. J. Halford and N. L. Barber. Prepared in cooperation with the Pat Harrison Waterway District and Mississippi Department of Environmental Quality. 1995. 73 p. (NC, Da, M, Wb; USGS, WRD, 100 West Capitol St., Suite 710, Jackson, MS 39269.)
- WRI 94-4221. IDAHO, WYOMING. Water-quality assessment of the upper Snake River basin, Idaho and western Wyoming; environmental setting, 1980-92, by M. A. Maupin. 1995. 35 p. (NC, Da, M, Wb; USGS, WRD, 230 Collins Rd., Boise, ID 83702.)
- WRI 94-4222. NEVADA. Water resources and potential effects of ground-water development in Maggie, Marys, Susie Creek basins, Elko and Eureka counties, Nevada, by R. W. Plume. Prepared in cooperation with the Nevada Division of Water Resources. 1995. 87 p. (NC, Da, M, Wb, U; USGS, WRD, 333 West Nye Lane, Carson City, NV 89706; and 6770 South Paradise Rd., Las Vegas, NV 89119.)
- WRI 94-4223. MISSISSIPPI. Hydrogeology and simulation of ground-water flow in the Eutaw-McShan Aquifer and in the Tuscaloosa aquifer system in northeastern Mississippi, by E. W. Strom and M. J. Mallory. Prepared in cooperation with the Tom-bigbee River Valley Water Management District and Mississippi Department of Environmental Quality. 1995. 83 p. (NC, Da, M, Wb; USGS, WRD, 100 West Capitol St., Suite 710, Jackson, MS 39269.)
- WRI 94-4224. MASSACHUSETTS. Relation of precipitation quality to storm type, and deposition of dissolved chemical constituents from precipitation in Massachusetts, 1983-85, by F. B. Gay and C. S. Melching. Prepared in cooperation with the Massachusetts Department of Environmental Protection, Division of Water Pollution Control. 1995. 82 p. (NC, Da, M, Wb.)
- WRI 94-4225. VIRGINIA. Selected characteristics of stormflow and base flow affected by land use and cover in the Chickahominy River basin, Virginia, 1989-91, by M. J. Focazio and R. E. Cooper. Prepared in cooperation with the City of Newport News, Department of Public Utilities. 1995. 37 p. (NC, Da, M, Wb; USGS, WRD, 603 Morris St., Charleston, WV 25301; and 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21204.)
- WRI 94-4226. NORTH CAROLINA. Effects of water-control structures on hydrologic and water-quality characteristics in selected agricultural drainage canals in eastern North Carolina, by M. W. Treece, Jr. and M. L. Jaynes. Prepared in cooperation with the North Carolina Department of Environment, Health, and Natural Resources, Division of Environmental Management. 1994. 62 p. (NC, Da, M, Wb; USGS, WRD, 3916 Sunset Ridge Rd., Raleigh, NC 27607.)
- WRI 94-4227. KENTUCKY. Water-quality assessment of the Kentucky River basin, Kentucky; nutrients, sediments, and pesticides in streams, 1987-90, by K. H. Haag and S. D. Porter. 1995. 135 p. (NC, Da, M, Wb.)
- WRI 94-4228. LOUISIANA. Quality of water in the Red River alluvial aquifer, Pool 2, Red River waterway area, Ruby, Louisiana, by C. W. Smoot, R. C. Seanor and G. F. Huff. 1995. 35 p. (NC, Da, M, Wb; USGS, WRD, 3535 South Sherwood Forest Blvd., Suite 120, Baton Rouge, LA 70816.)
- WRI 94-4229. TENNESSEE. Methods for assessing channel conditions related to scour-critical conditions at bridges in Tennessee, by B. A. Bryan, Andrew Simon, G. S. Outlaw and Randy Thomas. Prepared in cooperation with the Tennessee Department of Transportation and U.S. Department of Transportation, Federal Highway Administration. 1995. 54 p. (NC, Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville, TN 37203; 1013 North Broadway, Knoxville, TN 37917; and AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)
- WRI 94-4230. MONTANA. Simulated monthly hydrologic data and estimated flood characteristics for Cherry Creek at a proposed reservoir site near Terry, Montana, by Charles Parrett and D. R. Johnson. Prepared in cooperation with the U.S. Bureau of Land Management and the Montana Bureau of Mines and Geology. 1995. 25 p. (NC, Da, M, Wb, S, U; USGS, WRD, Room 428, Federal Bldg., 301 South Park Ave., Helena, MT 59626-0076; Eastern Montana Coll., 1500 North 30th, Billings, MT 59101.)
- WRI 94-4231. OHIO. Contributing recharge areas of water-supply wells at Wright-Patterson Air Force Base, Ohio, by R. A. Sheets. Prepared in cooperation with Wright-Patterson Air Force Base. 1994. 35 p. (NC, Da, M, Wb; USGS, WRD, 975 West 3rd Ave., Columbus, OH 43212.)

- WRI 94-4233. NEVADA. Potential hydrologic effects of mining in the Humboldt River basin, northern Nevada, by E. J. Crompton. Prepared in cooperation with the U.S. Bureau of Land Management. 1995. 2 over-size sheets; sheet 1, scale 1:1,000,000 (1 inch = about 16 miles). (NC, Da, M, Wb, U; USGS, WRD, 333 West Nye Lane, Carson City, NV 89706; and 6770 South Paradise Rd., Las Vegas, NV 89119.)
- WRI 94-4236. WASHINGTON. Hydrogeology and quality of ground water on Guemes Island, Skagit County, Washington, by S. C. Kahle and T. D. Olsen. Prepared in cooperation with Guemes Island Environmental Trust and Skagit County Conservation District. 1995. 83 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, Wb.)
- WRI 94-4238. COLORADO. Hydrogeology and simulation of flow between the alluvial and bedrock aquifers in the upper Black Squirrel Creek basin, El Paso County, Colorado, by K. R. Watts. Prepared in cooperation with the Cherokee Metropolitan District, Colorado Springs Utilities, and Upper Black Squirrel Creek Ground Water Management District. 1995. 82 p. (NC, Da, M, Wb, U; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80225-0046.)
- WRI 94-4239. KENTUCKY. Geohydrology and simulation of ground-water flow in the aquifer system near Calvert City, Kentucky, by J. J. Starn, L. D. Arihood and M. F. Rose. Prepared in cooperation with the Kentucky Natural Resources and Environmental Protection Cabinet. 1995. 52 p., 1 over-size sheet. (NC, Da, M, Wb.)
- WRI 94-4240. ARIZONA. Statistical summary of selected physical, chemical, and microbial characteristics, and estimates of constituent loads in urban stormwater, Maricopa County, Arizona, by T. J. Lopes, K. D. Fossum, J. V. Phillips and J. E. Monical. Prepared in cooperation with the Flood Control District of Maricopa County. 1995. 62 p. (NC, Da, M, Wb; USGS, WRD, 375 South Euclid Ave., Tucson, AZ 85719-6644; 1545 West University Dr., Tempe, AZ 85281; 2255 North Gemini Dr., Flagstaff, AZ 86001; and 1940 South 3rd Ave., Yuma, AZ 85364.)
- WRI 94-4241. MISSISSIPPI. Scour at selected bridge sites in Mississippi, by K. V. Wilson, Jr. Prepared in cooperation with the Mississippi Department of Transportation. 1995. 44 p. (NC, Da, M, Wb; USGS, WRD, 100 West Capitol St., Suite 710, Jackson, MS 39269.)
- WRI 94-4243. OHIO. Evaluation of ground-water flow by particle tracking, Wright-Patterson Air Force Base, Ohio, by W. L. Cunningham, R. A. Sheets and C. W. Schalk. Prepared in cooperation with Wright-Patterson Air Force Base. 1994. 11 p. (NC, Da, M, Wb.)
- WRI 94-4244. IOWA. Hydrogeologic and agricultural-chemical data for the South Skunk River alluvial aquifer at a site in Story County, Iowa, 1992-93, by R. C. Buchmiller. Prepared in cooperation with the U.S. Department of Agriculture, Agricultural Research Service, and U.S. Environmental Protection Agency. 1995. 30 p. (NC, Da, M, Wb.)
- WRI 94-4247. IDAHO. Tritium, stable isotopes, and nitrogen in flow from selected springs that discharge to the Snake River, Twin Falls-Hagerman area, Idaho, 1990-93, by L. J. Mann and W. H. Low. Prepared in cooperation with the U.S. Department of Energy. 1994. 21 p. (NC, Da, M, Wb.)
- WRI 94-4250. Refining 1970's land-use data with 1990 population data to indicate new residential development, by K. J. Hitt. 1995. 15 p. (NC, Da, M, Wb; USGS, WRD, Mail Stop 413, National Ctr., Reston, VA 22092.)
- WRI 94-4251. NEW MEXICO. Simulation of ground-water flow in the Albuquerque Basin, central New Mexico, 1901-1994, with projections to 2020, by J. M. Kernodle, D. P. McAda and C. R. Thorn. Prepared in cooperation with the City of Albuquerque Public Works Department, Water Utility Division. 1995. 114 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110-3929.)
- WRI 94-4252. Estimated use of water in the New England states, 1990, by B. A. Korzendorfer and M. A. Horn. Prepared in cooperation with the Connecticut Department of Environmental Protection, Maine Geological Survey, Maine Department of Human Services, Massachusetts Department of Environmental Management, Massachusetts Department of Environmental Protection, Narragansett Bay Commission, New Hampshire Department of Environmental Services, Rhode Island Department of Environmental Management, Providence Water Supply Board, and Vermont Department of Environmental Conservation. 1995. 21 p. (NC, Da, M, Wb; USGS, WRD, 450 Main St., Room 525, Hartford CT 06103; and 525 Clinton St., Bow, NH 03304.)
- WRI 94-4255. CONNECTICUT. Hydrogeology and ground-water flow at the Muddy Brook riparian zone, north-central Connecticut, by J. R. Mullaney. 1995. 31 p. (NC, Da, M, Wb.)
- WRI 94-4256. MASSACHUSETTS. Estimated availability of water from stratified-drift aquifers in the Concord River basin, Massachusetts, by Lisa Bratton and G. W. Parker. Prepared in cooperation with the Massachusetts Department of Environmental Management, Office of Water Resources. 1995. 35 p. (NC, Da, M, Wb.)
- WRI 94-4257. IDAHO. Analysis of steady-state flow and advective transport in the eastern Snake River plain aquifer system, Idaho, by D. J. Ackerman. 1995. 25 p. (NC, Da, M, Wb.)
- WRI 95-4001. HAWAII. Total and non-seasalt sulfate and chloride measured in bulk precipitation samples from the Kilauea Volcano area, Hawaii, by M. A. Scholl and S. E. Ingebritsen. 1995. 32 p. (NC, Da, M, Wb.)
- WRI 95-4005. ILLINOIS, INDIANA, WISCONSIN. Water-quality assessment of the upper Illinois River basin in Illinois, Indiana, and Wisconsin; nutrients, dissolved oxygen, and fecal-indicator bacteria in surface water, April 1987 through August 1990, by P. J. Terrio. 1995. 79 p. (NC, Da, M, Wb; USGS, WRD, 102 East Main St., 4th Floor, Urbana, IL 61801.)
- WRI 95-4006. IDAHO, WYOMING. Water-quality assessment of the upper Snake River basin, Idaho and western Wyoming; summary of aquatic biological data for surface water through 1992, by T. R. Maret. 1995. 59 p. (NC, Da, M, Wb; USGS, WRD, 230 Collins Rd., Boise, ID 83702.)
- WRI 95-4010. ARIZONA. Hydrology and deformation of sandbars in response to fluctuations in flow of the Colorado River in the Grand Canyon, Arizona, by M. C. Carpenter, R. L. Carruth, J. B. Fink, J. K. Boling and B. L. Cluer. Prepared in cooperation with the U.S. Bureau of Reclamation. 1995. 16 p. (NC, Da, M, Wb; USGS, WRD, 375 South Euclid Ave., Tucson, AZ 85719-)

6644; 1545 West University Dr., Tempe, AZ 85281; 2255 North Gemini Dr., Flagstaff, AZ 86001; and 1940 South 3rd Ave., Yuma, AZ 85364.)

WRI 95-4011. TENNESSEE. Hydrogeology of post-Wilcox Group stratigraphic units in the area of the Naval Air Station Memphis, near Millington, Tennessee, by J. A. Kingsbury and J. K. Carmichael. Prepared in cooperation with the U.S. Department of the Navy, Naval Facilities Engineering Command. 1995. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville TN 37203; 1013 North Broadway, Knoxville, TN 37917; and AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)

WRI 95-4012. A computer program (MACPUMP) for interactive aquifer-test analysis, by F. D. Day-Lewis, M. A. Person and L. F. Konikow. 1995. 36 p., one 3 1/2 inch DS/HD Macintosh-compatible diskette. (NC, Da, M, Wb.)

MACPUMP is a stand-alone application and requires 390K of disk space. It is recommended that the application be run on a Macintosh having a 68030 or newer CPU. It can be used with either color or black-and-white monitors. The program requires that the Macintosh computer include a math coprocessor (FPU) and requires 2MB of RAM to run.

WRI 95-4013. MISSISSIPPI. Hydrogeology and analysis of ground-water withdrawal in the Mendenhall-D'Lo area, Simpson County, Mississippi, by E. W. Strom and W. T. Oakley. Prepared in cooperation with the Pearl River Basin Development District and Mississippi Department of Environmental Quality, Office of Land and Water Resources. 1995. 18 p. (NC, Da, M, Wb; USGS, WRD, 100 West Capitol St., Suite 710, Jackson, MS 39269.)

WRI 95-4014. NEBRASKA. Simulated response of the High Plains Aquifer to ground-water withdrawals in the Upper Republican Natural Resources District, Nebraska, by J. M. Peckenpaugh, R. A. Kern, J. T. Dugan and J. M. Kilpatrick. Prepared in cooperation with the Upper Republican Natural Resources District and the Nebraska National Resources Commission. 1995. 60 p. (NC, Da, M, Wb; USGS, WRD, Box 25046, Mail Stop 415, Denver Federal Ctr., Denver, CO 80225; 4821 Quail Crest Pl., Lawrence, KS 66049; 100 Centennial Mall North, Room 406, Federal Bldg., Lincoln, NE 68508; 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110-3929; 202 NW 66 St., Bldg. 7, Oklahoma City, OK 73116; 1608 Mt. View Rd., Rapid City, SD 57702; 8011 Cameron Rd., Bldg. A., Austin, TX 78754-3898; and 2617 East Lincolnway, Suite B, Cheyenne, WY 82001.)

WRI 95-4017. GEORGIA. Flood-frequency relations for urban streams in Georgia; 1994 update, by E. J. Inman. Prepared in cooperation with the Georgia Department of Transportation, De Kalb County, Consolidated Government of Columbus, City of Albany, City of Moultrie, City of Thomasville, and City of Valdosta. 1995. 27 p. (NC, Da, M, Wb; USGS, WRD, Peachtree Business Ctr., Suite 130, 3039 Amwiler Rd., Atlanta GA 30360-2824.)

WRI 95-4019. TEXAS. Multiple-regression equations to estimate peak-flow frequency for streams in Hays County, Texas, by R. M. Slade, Jr., W. H. Asquith and G. D. Tasker. Prepared in cooperation with the Federal Energy Management Agency and U.S. Army Corps of Engineers. 1995. 1 over-size sheet, scale

1:500,000 (1 inch = about 8 miles). (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. B., Austin, TX 78754-3898.)

WRI 95-4021. ILLINOIS, INDIANA, WISCONSIN. Surface-water-quality assessment of the upper Illinois River basin in Illinois, Indiana, and Wisconsin; cross-sectional and depth variation of water-quality constituents and properties in the upper Illinois River basin, 1987-88, by D. C. Marron and S. F. Blanchard. 1995. 19 p. (NC, Da, M, Wb; USGS, WRD, 102 East Main St., 4th Floor, Urbana, IL 61801.)

WRI 95-4022. MONTANA. Synthesis of natural flows at selected sites in and near the Milk River basin, Montana, 1928-89, by L. E. Cary and Charles Parrett. Prepared in cooperation with the U.S. Bureau of Reclamation. 1995. 42 p. (NC, Da, M, Wb, S, U; USGS, WRD, Room 428, Federal Bldg., 301 South Park Ave., Helena, MT 59626-0076; Montana State Univ., 1500 North 30th, Billings, MT 59101.)

WRI 95-4023. ILLINOIS. Regional rainfall-runoff relations for simulation of streamflow for watersheds in Lake County, Illinois, by J. J. Duncker, T. J. Vail and C. S. Melching. Prepared in cooperation with the Lake County Stormwater Management Commission. 1995. 71 p. (NC, Da, M, Wb.)

WRI 95-4025. UTAH. Hydrology of the north fork of the right fork of Miller Creek, Carbon County, Utah, before, during, and after underground coal mining, by C. B. Slaughter, G. W. Freethy and L. E. Spangler. Prepared in cooperation with the Utah Department of Natural Resources, Division of Oil, Gas, and Mining. 1995. 56 p. (NC, Da, M, Wb, U.)

WRI 95-4030. TEXAS. Geologic framework and hydrogeologic characteristics of the Edwards Aquifer recharge zone, Bexar County, Texas, by W. G. Stein and G. B. Ozuna. Prepared in cooperation with the San Antonio Water System. 1995. 8 p., 1 over-size sheet, scale 1:75,000 (1 inch = about 6,000 feet). (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. B., Austin, TX 78754-3898.)

WRI 95-4031. Nutrients in ground water and surface water of the United States; an analysis of data through 1992, by D. K. Mueller, P. A. Hamilton, D. R. Helsel, K. J. Hitt and B. C. Ruddy. 1995. 74 p. (NC, Da, M, Wb.)

WRI 95-4033. PENNSYLVANIA. A strategy for delineating the area of ground-water contribution to wells completed in fractured bedrock aquifers in Pennsylvania, by D. W. Risser and G. J. Barton. Prepared in cooperation with the Pennsylvania Department of Environmental Resources, Bureau of Water Supply and Community Health. 1995. 30 p. (NC, Da, M, Wb; USGS, WRD, 840 Market St., Lemoyne, PA 17043.)

WRI 95-4034. MONTANA. Geohydrologic conditions and land use in the Gallatin Valley, southwestern Montana, 1992-93, by S. E. Slagle. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1995. 2 over-size sheets, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M, Wb, U, S; USGS, WRD, 428 Federal Bldg., 301 South Park, Helena, MT 59626-0076; and 1500 North 30th St., Billings, MT 59101.)

WRI 95-4037. OHIO. Determination of base-flow characteristics at selected streamflow-gaging stations on the Mad River, Ohio, by G. F. Koltun. Prepared in cooperation with the Ohio Department

- of Natural Resources, Division of Water. 1995. 12 p. (NC, Da, M, Wb.)
- WRI 95-4038. TEXAS. Geology and hydrogeology of Naval Air Station Chase Field and Naval Auxiliary Landing Field Goliad, Bee and Goliad counties, Texas, by G. L. Snyder. Prepared in cooperation with the U.S. Department of the Navy, Naval Facilities Engineering Command. 1995. 25 p. (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. B, Austin, TX 78754-3898.)
- WRI 95-4047. MINNESOTA, NORTH DAKOTA. Aquatic communities and contaminants in fish from streams of the Red River of the North Basin, Minnesota and North Dakota, by R. M. Goldstein. 1995. 34 p. (NC, Da, M, Wb; USGS, WRD, 2280 Woodale Dr., Mounds View, MN 55112.)
- WRI 95-4048. CALIFORNIA. Areal distribution of selected trace elements, salinity, and major ions in shallow ground water, Tulare Basin, southern San Joaquin Valley, California, by Roger Fujii and W. C. Swain. Prepared in cooperation with the California Department of Water Resources and San Joaquin Valley Drainage Program. 1995. 67 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- WRI 95-4050. NEW MEXICO. Bridge-scour analysis on Cuchillo Negro Creek at the Interstate 25 crossing near Truth or Consequences, New Mexico, by S. D. Waltemeyer. Prepared in cooperation with the New Mexico State Highway and Transportation Department. 1995. 29 p. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110-3929.)
- WRI 95-4052. NEVADA. Estimated natural ground-water recharge, discharge, and budget for the Dixie Valley area, west-central Nevada, by J. R. Harrill and L. B. Hines. 1995. 12 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 333 West Nye Lane, Room 102, Carson City, NV 89706; and 6770 South Paradise Rd., Las Vegas, NV 89119.)
- WRI 95-4053. ARIZONA. Historical overview and limnological reconnaissance of Theodore Roosevelt Lake, Arizona, by L. K. Ham. Prepared in cooperation with the Arizona Department of Environmental Quality. 1995. 36 p. (NC, Da, M, Wb, U, S; USGS, WRD, 375 South Euclid Ave., Tucson, AZ 85719-6644; 1940 South 3rd Ave., Yuma, AZ 85364; 1545 West University Dr., Tempe, AZ 85281; and 2255 North Gemini Dr., Bldg. 3, Flagstaff, AZ 86001.)
- WRI 95-4059. ARIZONA. Channel change and sediment transport in two desert streams in central Arizona, 1991-92, by J. T. Parker. Prepared in cooperation with the Flood Control District of Maricopa County. 1995. 42 p. (NC, Da, M, Wb, U, S; USGS, WRD, 375 South Euclid Ave., Tucson, AZ 85719-6644; 1940 South 3rd Ave., Yuma, AZ 85364; 1545 West University Dr., Tempe, AZ 85281; and 2255 North Gemini Dr., Bldg. 3, Flagstaff, AZ 86001.)
- WRI 95-4062. ARIZONA. Quality of water and chemistry of bottom sediment in the Rillito Creek basin, Tucson, Arizona, 1992-93, by Saeid Tadayon. Prepared in cooperation with the Pima County Department of Transportation and Flood Central District. 1995. 57 p. (NC, Da, M, Wb, U, S; USGS, WRD, 375 South Euclid Ave., Tucson, AZ 85719-6644; 1940 South 3rd Ave., Yuma, AZ 85364; 1545 West University Dr., Tempe, AZ 85281; and 2255 North Gemini Dr., Bldg. 3, Flagstaff, AZ 86001.)
- WRI 95-4072. UTAH. Water budget and simulation of one-dimensional unsaturated flow for a flood- and a sprinkler-irrigated field near Milford, Utah, by D. D. Susong. Prepared in cooperation with the Utah Department of Natural Resources, Division of Water Rights. 1995. 32 p. (NC, Da, M, Wb, U.)
- WRI 95-4074. ARIZONA. Selected chemical characteristics and acute toxicity of urban stormwater, streamflow, and bed material, Maricopa County, Arizona, by T. J. Lopes and K. D. Fossum. Prepared in cooperation with the Arizona Department of Environmental Quality. 1995. 52 p. (NC, Da, M, Wb, U, S; USGS, WRD, 375 South Euclid Ave., Tucson, AZ 85719-6644; 1940 South 3rd Ave., Yuma, AZ 85364; 1545 West University Dr., Tempe, AZ 85281; and 2255 North Gemini Dr., Bldg. 3, Flagstaff, AZ 86001.)
- WRI 95-4083. NEW MEXICO, ARIZONA. Summary statistics and trend analysis of water-quality data at sites in the Gila River basin, New Mexico and Arizona, by Stanley Baldys, III, L. K. Ham and K. D. Fossum. Prepared in cooperation with the Arizona Department of Environmental Quality. 1995. 86 p. (NC, Da, M, Wb, U, S; USGS, WRD, 375 South Euclid Ave., Tucson, AZ 85719-6644; 1940 South 3rd Ave., Yuma, AZ 85364; 1545 West University Dr., Tempe, AZ 85281; and 2255 North Gemini Dr., Bldg. 3, Flagstaff, AZ 86001.)
- WRI 95-4085. User's manual for ANNIE, version 2, a computer program for interactive hydrologic data management, by K. M. Flynn, P. R. Hummel, A. M. Lumb and J. L. Kittle, Jr. 1995. 211 p. (NC, Da, M, Wb.)
- WRI 95-4087. NORTH DAKOTA. Transport and source of sediment in the Missouri River between Garrison Dam and the headwaters of Lake Oahe, North Dakota, May 1988 through April 1991, by W. R. Berkas. Prepared in cooperation with the U.S. Army Corps of Engineers. 1995. 26 p. (NC, Da, M, Wb; USGS, WRD, 821 East Interstate Ave., Bismarck, ND 58501-1199.)
- WRI 95-4095. WYOMING. Water resources of Fremont County, Wyoming, by Maria Plafcan, C. A. Eddy-Miller, G. F. Ritz, and J. P. R. Holland II; with a section on Water-right administration by R. G. Stockdale. Prepared in cooperation with the Wyoming State Engineer. 1995. 133 p., 1 over-size sheet, scale 1:500,000 (1 inch = about 8 miles). (NC, Da, M, U, Wb; USGS, WRD, 2617 East Lincolnway, Suite B, Cheyenne, WY 82001-5662.)
- WRI 95-4102. NORTH DAKOTA. Variations in surface-water quality in the Chain of Lakes and its tributaries, Devils Lake basin, North Dakota, 1957-92, by R. M. Lent and S. D. Zainhofsky. Prepared in cooperation with the North Dakota State Water Commission and the Devils Lake Basin Joint Water Resource Board. 1995. 87 p. (NC, Da, M, Wb; USGS, WRD, 821 East Interstate Ave., Bismarck, ND 58501-1199.)
- WRI 95-4105. Filtration of water-sediment samples for the determination of organic compounds, by M. W. Sandstrom. 1995. 13 p. (NC, Da, M, Wb.)
- WRI 95-4111. SOUTH CAROLINA. Assimilative capacity of the Waccamaw River and the Atlantic Intracoastal Waterway near Myrtle Beach, South Carolina, 1989-92, by P. A. Drewes and P.

A. Conrads. Prepared in cooperation with the Waccamaw Regional Planning and Development Council. 1995. 58 p. (NC, Da, M, Wb.)

WRI 95-4119. NEVADA. Ground-water conditions and effects of mine dewatering in Desert Valley, Humboldt and Pershing counties, northwestern Nevada, 1962-91, by D. L. Berger. Prepared in cooperation with the Nevada Division of Water Resources. 1995. 94 p., 1 over-size sheet, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M, Wb; USGS, WRD, 333 West Nye Lane, Room 107, Carson City, NV 89706; 6770 South Paradise Rd., Las Vegas, NV 89119; and Federal Bldg., Room 208, Elko, NV 89801.)

WRI 95-4127. MISSISSIPPI. Changes in the volume of water in the Mississippi River alluvial aquifer in The Delta, northwestern Mississippi, 1980-94, by J. K. Arthur. Prepared in cooperation with the Mississippi Department of Environmental Quality, Office of Land and Water Resources, and the Natural Resources Conservation Service. 1995. 12 p. (NC, Da, M, Wb.)

OPEN-FILE REPORTS

Open-file reports include unpublished manuscript reports, maps, and other material that are made available for public consultation at depositories. They are a nonpermanent form of publication that may be cited in other publications as sources of information.

Most open-file reports are available from: U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, CO 80225 (telephone: 303-202-4210). The following listing of open-file reports is subdivided to show which reports are available from the Denver facility and which ones are not. Specific instructions for ordering and availability of reports are given under each sublisting.

Open-file reports are also available for reference only, **not for purchase**, at additional locations indicated in each open-file listing. Symbols for these locations are defined above for water-resources investigations reports.

Reports Available Only Through U.S. Geological Survey, Information Services

Microfiche and (or) black and white paper copies of most reports may be obtained from: U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, CO 80225 (telephone 303-202-4210). When ordering, please use the open-file number and full title. Do not mix orders for open-file reports with orders for other Geological Survey products. Prices for microfiche and (or) black and white paper duplicates of reports are indicated. Prices for duplicate slides and color photographs can be obtained on request. Check or money order, in exact amount for open-file reports ordered, should be payable to U.S. Department of the Interior—USGS. Prepayment is required. No discount is applicable. For transmittal outside the U.S.A. (except Canada and Mexico), a surcharge of 25 percent of the bill should be included to cover surface transportation.

OF 88-0607. MONTANA. Geologic map of the Diamond G Butte NW Quadrangle, McCone and Prairie counties, Montana, by R. B. Colton, J. P. McGraw and S. L. Durst. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)

OF 88-0608. MONTANA. Geologic map of the Heitz School Quadrangle, Prairie and McCone counties, Montana, by R. B. Colton, J. P. McGraw and D. K. Bozeman. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1

over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)

OF 88-0609. MONTANA. Geologic map of the Johnson Reservoir Quadrangle, Dawson County, Montana, by R. B. Colton, J. P. McGraw, D. K. Bozeman and S. L. Durst. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)

OF 88-0610. MONTANA. Geologic map of the Johnson Coulee East Quadrangle, McCone County, Montana, by R. B. Colton, J. P. McGraw and D. K. Bozeman. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)

OF 88-0611. MONTANA. Geologic map of the Johnson Reservoir NE Quadrangle, Dawson County, Montana, by R. B. Colton, J. P. McGraw, D. K. Bozeman and S. L. Durst. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)

OF 88-0612. MONTANA. Geologic map of the Upper Cracker Box School Quadrangle, Dawson County, Montana, by R. B. Colton, J. P. McGraw and D. K. Bozeman. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)

OF 88-0613. MONTANA. Geologic map of the Johnson Reservoir NW Quadrangle, Dawson County, Montana, by R. B. Colton, J. P. McGraw and D. K. Bozeman. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)

OF 88-0614. MONTANA. Geologic map of the Lindsay Quadrangle, Dawson County, Montana, by R. B. Colton, J. P. McGraw and S. L. Durst. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)

OF 88-0615. MONTANA. Geologic map of the Lindsay SW Quadrangle, Dawson County, Montana, by R. B. Colton, J. P. McGraw and D. K. Bozeman. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)

OF 88-0617. MONTANA. Geologic map of the Union School Quadrangle, Dawson and Prairie counties, Montana, by R. B. Colton, J. P. McGraw and S. L. Durst. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S;

- Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 88-0618. MONTANA. Geologic map of the Quick Reservoir Quadrangle, McCone County, Montana, by R. B. Colton, J. P. McGraw and S. L. Durst. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 88-0619. MONTANA. Geologic map of the North Coulee Quadrangle, Prairie County, Montana, by R. B. Colton, J. P. McGraw and D. K. Bozeman. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 88-0620. MONTANA. Geologic map of the Olson Coulee North Quadrangle, Dawson County, Montana, by R. B. Colton, J. P. McGraw, D. K. Bozeman and S. L. Durst. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 88-0621. MONTANA. Geologic map of the Olson Coulee South quadrangle, Dawson County, Montana, by R. B. Colton, J. P. McGraw and S. L. Durst. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 88-0624. MONTANA. Geologic map of the Watkins SE Quadrangle, McCone and Prairie counties, Montana, by R. B. Colton, J. P. McGraw and S. L. Durst. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 88-0625. MONTANA. Geologic map of the Woodrow Quadrangle, Dawson County, Montana, by R. B. Colton, J. P. McGraw and S. L. Durst. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 88-0626. MONTANA. Geologic map of the Woodworth Hill Quadrangle, McCone and Dawson counties, Montana, by R. B. Colton, J. P. McGraw and D. K. Bozeman. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 88-0627. MONTANA. Geologic map of the Youngquist Mine Quadrangle, McCone County, Montana, by R. B. Colton, J. P. McGraw and D. K. Bozeman. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 88-0635. MONTANA. Geologic map of the Diamond G Butte Quadrangle, Dawson, McCone, and Prairie counties, Montana, by R. B. Colton, J. P. McGraw and S. L. Durst. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 88-0753. CALIFORNIA. Geologic map of the Riverside West Quadrangle, Riverside County, California, by D. M. Morton and B. F. Cox. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 88-0754. CALIFORNIA. Geologic map of the Riverside East Quadrangle, Riverside County, California, by D. M. Morton and B. F. Cox. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 89-0284. HAWAII. Preliminary geologic map of the Puu Anahulu Quadrangle, Hawaii, by R. B. Moore, D. A. Clague, W. A. Bohrsen and W. S. Wise. 1994. 18 p., 2 over-size sheets; sheet 1, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; Div. of Water and Land Dev., P.O. Box 373, Honolulu, HI 96809.)
- OF 91-0132. NEVADA. Preliminary geologic map of the Devils Throat Quadrangle, Clark County, Nevada, by L. S. Beard and D. J. Campagna. 1991. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)
- OF 91-0175. ILLINOIS, INDIANA, WISCONSIN. Surface-water-quality assessment of the upper Illinois River basin in Illinois, Indiana, and Wisconsin; fixed-station network and selected water-quality data for April 1987-September 1990, by D. J. Sullivan and S. F. Blanchard. 1994. 213 p. (NC, Da, W, Wb; USGS, WRD, 102 East Main St., 4th Floor, Urbana, IL 61801.)
- OF 91-0320. MARIANA ISLANDS. Volcanic investigations in the Commonwealth of the Northern Mariana Islands, September-October 1990, by R. B. Moore, R. Y. Koyanagi, M. K. Sako, F. A. Trusdell, George Kojima, R. L. Ellorda and S. K. Zane. Prepared in cooperation with the Office of Civil Defense, Commonwealth of the Northern Mariana Islands. 1991. 31 p. (NC, Da, M; Div. of Water and Land Dev., P.O. Box 373, Honolulu, HI 96809.)
- OF 91-0503. VIRGIN ISLANDS. Water wells on St. Croix, U.S. Virgin Islands, by B. K. Green and Gregory Cherry. Prepared in cooperation with the U.S. Virgin Islands Department of Planning and Natural Resources. 1994. 119 p. (NC, Da, M, Wb; USGS, WRD, Hwy. 28, KM 7.2, Bldg. 652, GSA Ctr., Guaynabo, PR 00657; USDA Agricultural Research Station, Upper Bethlehem E. Airport Rd., Route 64, Library Bldg. 1, Christiansted, St. Croix,

- VI 00851-2210; and 45A Estate Nisky, Nisky Ctr., Suite 222, Charlotte Amalie, St. Thomas, VI 00802-1103.)
- OF 91-0592. CALIFORNIA. Determination of amplitude and duration magnitudes and site residuals from short-period seismographs in Northern California, by J. P. Eaton. 1991. 100 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 91-0596. An empirical equation for modeling rare earth element mineral-mineral partitioning; an application to mantle metasomatism, by J. R. Budahn. 1995. 44 p. (NC, Da, M.)
- OF 91-0635. Calibration of a linear spring-supported, vertical-component moving-coil seismometer by means of damping test and/or a current release test, by J. P. Eaton. 1992. 29 p. (NC, Da, M.)
- OF 92-0139. INDIANA. Hydrogeology and hydrochemistry of dunes and wetlands along the southern shore of Lake Michigan, Indiana, by R. J. Shedlock, D. A. Cohen, T. E. Imbriotta and T. A. Thompson. Prepared in cooperation with the U.S. National Park Service. 1994. 85 p. (NC, Da, M, Wb; USGS, WRD, 5957 Lakeside Blvd., Indianapolis, IN 46278.)
- OF 92-0140. WEST VIRGINIA. Distribution of fluoride in ground water of West Virginia, by M. V. Mathes and M. C. Waldron. 1993. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 603 Morris St., Charleston, WV 25301.)
- OF 92-0179. CALIFORNIA. Geologic map of the Cow Cove Quadrangle, San Bernardino County, California, by H. G. Wilshire. 1992. 26 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 92-0181. CALIFORNIA. Geologic map of the Indian Spring Quadrangle, San Bernardino County, California, by H. G. Wilshire. 1992. 26 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 92-0182. CALIFORNIA. Geologic map of the Marl Mountains Quadrangle, San Bernardino County, California, by H. G. Wilshire. 1992. 26 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 92-0183. CALIFORNIA. Geologic map of the Granite Spring Quadrangle, San Bernardino County, California, by H. G. Wilshire. 1992. 26 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 92-0284. CALIFORNIA. Regional seismic networks in California, by J. P. Eaton. 1992. 60 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 92-0326. NEVADA, ARIZONA. Preliminary geologic map of the St. Thomas 7.5-minute Quadrangle, Clark County, Nevada, and Mohave County, Arizona, by L. S. Beard. 1992. 11 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 92-0372-A. System 8. Programs to assist workers in the earth sciences in using geodetic or Cartesian XYZ data from row column (GSPV85) files; GSPDC, contours and grids interpolated from triangulated network; PCS, graphic sections; GSPUV, univariate statistics and histograms; GSPPROB, probability diagrams; GSPXY, regression statistics and XY plots; GSPTD, ternary diagrams; and GSPV85 post-plots, for IBM PC compatible computers, by G. I. Selner and R. B. Taylor. 1992. 83 p. (NC, Da, M.) (Customer needs to purchase both A and B.)
- OF 92-0372-B. System 8. Programs to assist workers in the earth sciences in using geodetic or Cartesian XYZ data from row column (GSPV85) files; GSPDC, contours and grids interpolated from triangulated network; PCS, graphic sections; GSPUV, univariate statistics and histograms; GSPPROB, probability diagrams; GSPXY, regression statistics and XY plots; GSPTD, ternary diagrams; and GSPV85 post-plots, for IBM PC compatible computers, by G. I. Selner and R. B. Taylor. 1992. One 5 1/4 inch diskette. (NC, Da, M.) (Customer needs to purchase both A and B.)
- Requirements: an IBM PC (or compatible) microcomputer with 640K of RAM or more, hard disk or other mass storage device, math co-processor chip, an RS232C serial port, EGA or VGA graphics. The GSPDC, GSPCS, and GSPV85 programs support the use of a Microsoft-compatible mouse as a pointing device on graphic screens, if one is available and driver software has been installed. Plotter output from GSPCS and GSPV85, and from GSMAP data bases created by GSPCS, GSPUV, and GSPDC requires a plotter that supports HPGL (Hewlett Packard Graphics Language) at the level of the HP 7475 or above. The HPGL files created by these programs can be printed on certain graphics printers, some with the help of proprietary software.
- OF 92-0458. NEVADA. Evidence of prehistoric flooding and the potential for future extreme flooding at Coyote Wash, Yucca Mountain, Nevada, by P. A. Glancy. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1994. 31 p., 1 over-size sheet. (NC, Da, M, Wb.)
- OF 92-0538. User document; PAGEIT user document version 1.1, 9/12/92, by A. N. Bittenbinder. 1992. 40 p. (NC, Da, M.)
- OF 92-0635. PENNSYLVANIA. Evaluation of methods for delineating areas that contribute water to wells completed in valley-fill aquifers in Pennsylvania, by D. W. Risser and T. M. Madden, Jr. Prepared in cooperation with the Pennsylvania Department of Environmental Resources, Bureau of Community

- Environmental Control. 1994. 82 p. (NC, Da, M, Wb; USGS, WRD, 840 Market St., Lemoyne, PA 17043.)
- OF 92-0657. NEVADA. Geohydrologic data collected from shallow neutron-access boreholes and resultant-preliminary geohydrologic evaluations, Yucca Mountain area, Nye County, Nevada, by D. O. Blout, D. P. Hammermeister, C. L. Loskot and M. P. Chornack. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1994. 147 p. (NC, Da, M, Wb.)
- OF 93-0026. FLORIDA. Influence of evaporation, ground water, and uncertainty in the hydrologic budget of Lake Lucerne, Florida, October 1985-September 1986, by T. M. Lee and Amy Swancar. Prepared in cooperation with the South Florida Water Management District. 1994. 191 p. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301; Suite 1006, 224 West Central Pkwy., Altamonte Springs, FL 32714; Suite 107, 9100 NW 36 St., Miami, FL 33178; Suite B-5, 4710 Eisenhower Blvd., Tampa, FL 33634-6381; and Suite 222, 3728 Phillips Hwy., Jacksonville, FL 32207.)
- OF 93-0033. NEVADA, CALIFORNIA. Ground-water quality and geochemistry in Carson and Eagle valleys, western Nevada and eastern California, by A. H. Welch. 1994. 99 p. (NC, Da, M, Wb; USGS, WRD, 333 West Nye Lane, Room 203, Carson City, NV 89706.)
- OF 93-0046. MINNESOTA, SOUTH DAKOTA. Physical characteristics of stream subbasins in the Lac qui Parle River basin, southwestern Minnesota and eastern South Dakota, by D. L. Lorenz, C. A. Sanocki and T. A. Winterstein. Prepared in cooperation with the Minnesota Department of Transportation and U.S. Army Corps of Engineers. 1993. 12 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 2280 Woodale Dr., Mounds View, MN 55112.)
- OF 93-0047. MINNESOTA. Physical characteristics of stream subbasins in the Pomme de Terre River basin, west-central Minnesota, by D. L. Lorenz and G. A. Payne. Prepared in cooperation with the Minnesota Department of Transportation and U.S. Army Corps of Engineers. 1993. 8 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 2280 Woodale Dr., Mounds View, MN 55112.)
- OF 93-0068. CALIFORNIA. Flood data for the Sacramento River and Butte Basin, Sacramento Valley, California, 1980-90, by J. G. Harmon. Prepared in cooperation with the California Department of Water Resources. 1994. 30 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 93-0098. NEVADA. Water levels in continuously monitored wells in the Yucca Mountain area, Nevada, 1989, by D. H. Lobmeyer, R. R. Luckey, G. M. O'Brien and D. J. Burkhardt. Prepared in cooperation with the U.S. Department of Energy. 1995. 173 p. (NC, Da, M, Wb; Yucca Mountain Project Branch Office, USGS, WRD, Room H-2726, 2d Floor, Bldg. 53, Denver Federal Center, Mail Stop 421, Denver, CO 80225-0046.)
- OF 93-0141. ILLINOIS. U.S. Geological Survey ground-water studies in Illinois, by C. F. Avery. 1994. 2 p. (NC, Da, M, Wb, A, S, U.) (Water fact sheet.)
- OF 93-0161. NEW YORK. Estimates of roughness coefficients for selected natural stream channels with vegetated banks in New York, by W. F. Coon. Prepared in cooperation with the New York State Department of Transportation. 1995. 127 p. (NC, Da, M, Wb; USGS, WRD, 903 Hanshaw Rd., Ithaca, NY 14850.)
- OF 93-0269. NEVADA. Characterizing fractured rock for fluid-flow, geomechanical, and paleostress modeling; methods and preliminary results from Yucca Mountain, Nevada, by C. C. Barton, Eric Larsen, W. R. Page and T. M. Howard. Prepared in cooperation with the U.S. Department of Energy. 1993. 62 p., 1 over-size sheet. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)
- OF 93-0356. NEVADA. Ground-water quality and geochemistry in Dayton, Stagecoach, and Churchill valleys, western Nevada, by J. M. Thomas and S. J. Lawrence. 1994. 67 p. (NC, Da, M, Wb; USGS, WRD, 333 West Nye Lane, Carson City, NV 89706; 6770 South Paradise Rd., Las Vegas, NV 89119; and Room 208 Federal Bldg., 275 3rd St., Elko, NV 89801.)
- OF 93-0374. ARKANSAS. Water-level maps of the Mississippi River valley alluvial aquifer in eastern Arkansas, spring 1992, by P. W. Westerfield and D. T. Poynter. Prepared in cooperation with the Arkansas Geological Commission, Arkansas Soil and Water Conservation Commission, local conservation districts, and U.S. Soil Conservation Service. 1993. 1 over-size sheet. (NC, Da, M, Wb.)
- OF 93-0397-A. NEVADA, UTAH. Gravity, magnetic, and physical property data of the Deep Creek Range and vicinity, eastern Nevada and western Utah, by D. A. Ponce and V. E. Langenheim. 1993. 15 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1491.)
- OF 93-0397-B. NEVADA, UTAH. Gravity, magnetic, and physical property data of the Deep Creek Range and vicinity, eastern Nevada and western Utah, by D. A. Ponce and V. E. Langenheim. 1993. One 3 1/2 inch diskette. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1491.)
- Requirements: (1) an IBM personal computer or compatible computer running PC- or MS-DOS, and (2) a double-sided high-density disk drive. The diskette contains a total of 4 files.
- OF 93-0417. PENNSYLVANIA. Altitude and configuration of the potentiometric surface in Buckingham and Wrightstown townships, Bucks County, Pennsylvania, June 1992 through January 1993, by B. C. McManus, C. L. Schreffler and C. J. Rowland. Prepared in cooperation with New Hope Borough and Bridgeton, Buckingham, Nockamixon, Plumstead, Solebury, Springfield, Tinicum, and Wrightstown townships, Bucks County, Pennsylvania. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, Wb; USGS, WRD, 111 Great Valley Pkwy., Malvern, PA 19355.)
- OF 93-0435. MINNESOTA. Cyclic injection, storage, and withdrawal of heated water in a sandstone aquifer at St. Paul, Minnesota; analysis of thermal data and nonisothermal modeling of short-term test cycles, by R. T. Miller and G. N. Delin. Prepared in cooperation with the University of Minnesota and the

- Minnesota Geological Survey. 1994. 70 p. (NC, Da, M, Wb; USGS, WRD, 2280 Woodale Dr., Mounds View, MN 55112.)
- OF 93-0464. RHODE ISLAND. Sources of geologic and hydrologic information pertinent to ground-water resources in Rhode Island, by E. C. Trench. Prepared in cooperation with the Rhode Island Department of Environmental Management. 1995. 98 p. (NC, Da, M, Wb; USGS, WRD, 237 John O. Pastore Federal Bldg., Providence, RI 02908.)
- OF 93-0465. PUERTO RICO. Geologic and hydrologic data collected at test holes NC-6 and NC-11, Hatillo and Isabela, northwestern Puerto Rico, by Jesús Rodríguez-Martínez and J. L. Hartley. Prepared in cooperation with the Puerto Rico Department of Natural Resources. 1994. 39 p. (NC, Da, M, Wb; USGS, WRD, Highway 29, Bldg. 652, GSA Ctr., San Juan, PR 00936.)
- OF 93-0466. PUERTO RICO. Geologic and hydrologic data collected at test hole NC-8, Vega Alta, Puerto Rico, by Jesús Rodríguez-Martínez and R. A. Scharlach. Prepared in cooperation with the Puerto Rico Department of Natural Resources. 1994. 16 p. (NC, Da, M, Wb; USGS, WRD, Highway 29, Bldg. 652, GSA Ctr., San Juan, PR 00936.)
- OF 93-0477. NEVADA. Lithology, fault displacement, and origin of secondary calcium carbonate and opaline silica at trenches 14 and 14D on the Bow Ridge Fault at Exile Hill, Nye County, Nevada, by E. M. Taylor and H. E. Huckins. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1995. 38 p., 1 over-size sheet. (NC, Da, M, Wb.)
- OF 93-0495. MISSOURI. Quantity and quality of stormwater in Independence, Missouri; October 1991 to February 1993, by G. K. Schalk. Prepared in cooperation with the City of Independence. 1994. 69 p. (NC, Da, M, Wb.)
- OF 93-0499. PUERTO RICO. Potentiometric surfaces of the upper and lower aquifers, North Coast limestone aquifer system, Puerto Rico, by R. A. Renken and Fernando Gómez-Gómez. 1994. 16 p., 4 over-size sheets. (NC, Da, M, Wb.)
- OF 93-0521. MONTANA. Geologic map of the Watkins Quadrangle, Prairie and McCone counties, Montana, by R. B. Colton, J. P. McGraw and D. K. Bozeman. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 93-0529. MONTANA. Geologic map of the Big Sheep Mountain Quadrangle, Prairie County, Montana, by R. B. Colton, J. P. McGraw and D. K. Bozeman. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 93-0540-A. NEVADA. Gravity and magnetic data of Midway Valley, Southwest Nevada, by D. A. Ponce, V. E. Langenheim and R. F. Sikora. 1993. 7 p., 1 over-size sheet. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)
- OF 93-0540-B. NEVADA. Gravity and magnetic data of Midway Valley, Southwest Nevada, by D. A. Ponce, V. E. Langenheim and R. F. Sikora. 1993. One 3 1/2 inch diskette. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)
- The 3 1/2-inch, high density, and double-sided diskette formatted for IBM personal computers, requires the following hardware: (1) an IBM personal computer or compatible computer running PC- or MS-DOS, and (2) a double-sided high-density disk drive. The diskette contains a total of 12 files.
- OF 93-0586-A. NEVADA. Gravity and magnetic study of Yucca Wash, Southwest Nevada, by V. E. Langenheim, D. A. Ponce, H. W. Oliver and R. F. Sikora. 1993. 14 p., 2 over-size sheets. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)
- OF 93-0586-B. NEVADA. Gravity and magnetic study of Yucca Wash, Southwest Nevada, by V. E. Langenheim, D. A. Ponce, H. W. Oliver and R. F. Sikora. 1993. One 3 1/2 inch diskette. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)
- The 3 1/2-inch, high density, and double-sided diskette formatted for IBM personal computers, requires the following hardware: (1) an IBM personal computer or compatible computer running PC- or MS-DOS, and (2) a double-sided high-density disk drive. The diskette contains a total of 16 files.
- OF 93-0591. Interpretation of coal quality data, the inorganic constituents; with comments on the quality of coal from the Sonda coal field, Sindh Province, Pakistan, by R. B. Finkelman, C. L. Oman, J. R. SanFilipo and Ishaq Ghasnavi. 1995. 109 p. (NC, Da, M.)
- OF 93-0600-D. Preliminary determination of epicenters; monthly listing October-December 1993, by National Earthquake Information Center. 1993. 100 p. (NC, Da, M.)
- OF 93-0610-A. Earthquake data report, October 1993, by National Earthquake Information Center. 1993. 420 p. (NC, Da, M.)
- OF 93-0610-B. Earthquake data report, October 1993, by National Earthquake Information Center. 1993. Five 5 1/4 inch diskettes (NC, Da, M.)
- The EDR data are written on 1.2MB, high density, 5 1/4 inch diskettes and are readable by IBM PC or compatible computers running DOS version 2.0 or higher. All files are ASCII.
- OF 93-0611-A. Earthquake data report, November 1993, by National Earthquake Information Center. 1993. 403 p. (NC, Da, M.)
- OF 93-0611-B. Earthquake data report, November 1993, by National Earthquake Information Center. 1993. Four 5 1/4 inch diskettes. (NC, Da, M.)
- The EDR data are written on 1.2MB, high density, 5 1/4 inch diskettes and are readable by IBM PC or compatible computers running DOS version 2.0 or higher. All files are ASCII.
- OF 93-0612-A. Earthquake data report, December 1993, by National Earthquake Information Center. 1993. 365 p. (NC, Da, M.)
- OF 93-0612-B. Earthquake data report, December 1993, by National Earthquake Information Center. 1993. Four 5 1/4 inch diskettes. (NC, Da, M.)

The EDR data are written on 1.2MB, high density, 5 1/4 inch diskettes and are readable by IBM PC or compatible computers running DOS version 2.0 or higher. All files are ASCII.

- OF 93-0628. Intercomparison experiments on dissolved trace-metal data from the Mississippi River and some of its tributaries, 1989-90, by H. E. Taylor, A. M. Shiller, J. R. Garbarino and T. I. Brinton. 1995. 28 p. (NC, Da, M, Wb.)
- OF 93-0629. PUERTO RICO, VIRGIN ISLANDS. Publications of the U.S. Geological Survey, Water Resources Division, for Puerto Rico and the U.S. Virgin Islands, 1899-1992, by R. I. Guzmán-Otero. 1994. 107 p. (NC, Da, M, Wb; USGS, WRD, P.O. Box 364424, San Juan, PR 00936-4424; P.O. Box 2210, St. Croix, U.S. Virgin Islands 00851-2210; and Nisky Mail Boxes P18, 8000 Nisky Shopping Ctr., Suite 14, Charlotte Amalie, St. Thomas, U.S. Virgin Islands 00802-1103.)
- OF 93-0657. Pesticide, nutrient, water-discharge and physical-property data for the Mississippi River and some of its tributaries, April 1991-September 1992, by R. H. Coupe, D. A. Goolsby, J. L. Iverson, D. J. Markovchick and S. D. Zaugg. 1995. 116 p. (NC, Da, M, Wb, U; USGS, WRD, Room H-2822, Bldg. 53, Denver Federal Ctr., Denver, CO 80225; and Room H-2313, 2d Floor, Bldg. 53, Denver Federal Ctr., Denver, CO 80225.)
- OF 93-0659. PENNSYLVANIA. Altitude and configuration of the potentiometric surface, May and June 1993, and change in water level 1983-93, in the carbonate rocks of East Whiteland and Charlestown townships, Chester County, Pennsylvania, by B. C. McManus and R. A. Sloto. Prepared in cooperation with the Chester County Water Resources Authority. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, Wb; USGS, WRD, 111 Great Valley Pkwy., Malvern, PA 19355.)
- OF 93-0662. NEW JERSEY. Flood magnitude and frequency of Delaware River tributary at the culvert on New Jersey Route 29, at Lambertville, New Jersey, by Paul Dunne and R. D. Schopp. Prepared in cooperation with the New Jersey Department of Transportation. 1994. 8 p. (NC, Da, M, Wb; USGS, WRD, Mountain View Office Park, 810 Bear Tavern Rd., Suite 206, West Trenton, NJ 08528.)
- OF 93-0663. Hydrogeology of the Silurian and Devonian carbonate-rock aquifer system in the Midwestern Basins and Arches region of Indiana, Ohio, Michigan, and Illinois, by G. D. Casey. 1994. (NC, Da, M, Wb; USGS, WRD, 975 West 3rd Ave., Columbus, OH 43212.)
- OF 93-0684. CALIFORNIA. Maps showing recently active fault breaks along the San Andreas Fault from Mussel Rock to the central Santa Cruz Mountains, California, by E. H. Pampeyan. 1995. 14 p., 6 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 93-0698. CALIFORNIA. Reconnaissance stream-sediment geochemistry of Death Valley National Monument, California, by A. H. Hofstra, D. L. Fey, J. M. Motooka, B. H. Roushey and Lee-Ann Bradley. 1993. 102 p. 1 over-size sheet, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 93-0716. NEVADA. Preliminary geologic map of the Whitney Pocket 7.5-Quadrangle, Clark County, Nevada, by L. S. Beard. 1993. 17 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)
- OF 93-0722. Benthic Acoustic Stress Sensor (BASS); electronics check-out procedures, December 9, 1994, by M. A. Martini and A. J. Williams, III. 1994. 37 p. (NC, Da, M.)
- OF 93-0723. PENNSYLVANIA. Surficial geologic map of part of the Allentown 30'x60' Quadrangle, Berks, Bucks, Carbon, Lehigh, Luzerne, Monroe, Northampton, and Schuylkill counties, Pennsylvania, compiled by D. D. Braun and J. B. Epstein. Prepared in cooperation with the Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geologic Survey. 1993. 15 p., 1 over-size sheet, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M.) (Also available for sale from Jon Inners, Pennsylvania Geol. Surv., P.O. Box 8453, Harrisburg, PA 17105; telephone 717-787-6029.)
- OF 94-0015. Descriptive and chemical data for hydrothermal sulfide-sulfate-silica chimneys from the northern Cleft Segment, Juan de Fuca Ridge, by V. K. Smith and R. A. Koski. 1994. 20 p. (NC, Da, M.)
- OF 94-0022-A. COLORADO. Colorado areas of oil and gas production, by R. F. Mast, D. H. Root, L. P. Williams and W. R. Beeman. 1994. 3 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 94-0022-B. WYOMING. Wyoming areas of oil and gas production, by R. F. Mast, D. H. Root, L. P. Williams and W. R. Beeman. 1994. 3 p. (NC, Da, M, U; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071.)
- OF 94-0022-C. MONTANA. Montana areas of oil and gas production, by R. F. Mast, D. H. Root, L. P. Williams and W. R. Beeman. 1994. 3 p. (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 94-0022-D. NORTH DAKOTA. North Dakota areas of oil and gas production, by R. F. Mast, D. H. Root, L. P. Williams and W. R. Beeman. 1994. 3 p. (NC, Da, M; North Dakota Geol. Surv., University Station, Grand Forks, ND 58202-8156.)
- OF 94-0022-E. SOUTH DAKOTA. South Dakota areas of oil and gas production, by R. F. Mast, D. H. Root, L. P. Williams and W. R. Beeman. 1994. 3 p. (NC, Da, M; Dep. of Water and Natural Resources, South Dakota Geol. Surv., Sci. Ctr., Univ. of South Dakota, Vermillion, SD 57069.)
- OF 94-0022-F. NEBRASKA. Nebraska areas of oil and gas production, by R. F. Mast, D. H. Root, L. P. Williams and W. R. Beeman. 1994. 3 p. (NC, Da, M; Conservation and Surv. Div., Inst. of Agriculture and Natural Resources, 113 Nebraska Hall, Univ. of Nebraska, Lincoln, NE 68588-0517.)

- OF 94-0022-G. KANSAS. Kansas areas of oil and gas production, by R. F. Mast, D. H. Root, L. P. Williams and W. R. Beeman. 1994. 3 p. (NC, Da, M; Kansas Geol. Surv., 1930 Constant Ave., Campus West. Univ. of Kansas, Lawrence, KS 66046.)
- OF 94-0022-H. OKLAHOMA. Oklahoma areas of oil and gas production, by R. F. Mast, D. H. Root, L. P. Williams and W. R. Beeman. 1994. 3 p. (NC, Da, M; Oklahoma Geol. Surv., Univ. of Oklahoma, 830 Van Vleet Oval, Room 163, Norman, OK 73019.)
- OF 94-0022-I. UTAH. Utah areas of oil and gas production, by R. F. Mast, D. H. Root, L. P. Williams and W. R. Beeman. 1994. 3 p. (NC, Da, M, U; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1403.)
- OF 94-0022-J. NEW MEXICO. New Mexico areas of oil and gas production, by R. F. Mast, D. H. Root, L. P. Williams and W. R. Beeman. 1994. 3 p. (NC, Da, M, U; New Mexico Bur. of Mines and Mineral Resources, Campus Station, Socorro, NM 87801.)
- OF 94-0031. NEVADA. Ground-water quality and geochemistry, Carson Desert, western Nevada, by M. S. Lico and R. L. Seiler. 1994. 91 p. (NC, Da, M, Wb; USGS, WRD, 333 West Nye Lane, Room 203, Carson City, NV 89706.)
- OF 94-0036. Trihalomethane and nonpurgeable total organic-halide formation potentials for the Mississippi River and some of its tributaries, September-October 1991, by R. E. Rathbun and L. M. Bishop. 1994. 53 p. (NC, Da, M, Wb.)
- OF 94-0045. CALIFORNIA. Calculation of a water budget and delineation of contributing sources to drainflows in the western San Joaquin Valley, California, by J. L. Fio. Prepared in cooperation with the Panoche Water District and the California Department of Water Resources. 1994. 39 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 94-0061. INDIANA. Policy and procedures for the management and archival storage of data collected for hydrologic investigations of the U.S. Geological Survey, Indiana District, by J. D. Martin and D. A. Cohen. 1993. 21 p. (NC, Da, M, Wb; USGS, WRD, 5957 Lakeside Blvd., Indianapolis, IN 46278.)
- OF 94-0065. NEW JERSEY. Development, installation, and operation of a flood-monitoring system in Somerset County, New Jersey, by Paul Dunne and A. J. Velnich. Prepared in cooperation with the Somerset County Board of Chosen Freeholders. 1994. 23 p. (NC, Da, M, Wb; USGS, WRD, 810 Bear Tavern Rd., Suite 206, West Trenton, NJ 08628.)
- OF 94-0068. TENNESSEE. Rainfall, streamflow, and water-quality data for five small watersheds, Nashville, Tennessee, 1990-92, by G. S. Outlaw, A. B. Hoos and J. T. Pankey. Prepared in cooperation with the Metropolitan Government of Nashville and Davidson County. 1994. 43 p. (NC, Da, M, Wb; WRD, USGS, 810 Broadway, Suite 500, Nashville, TN 37203; 1013 North Broadway, Knoxville, TN 37917; and AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)
- OF 94-0072. CALIFORNIA. Effects of ground-water chemistry and flow on quality of drainflow in the western San Joaquin Valley, California, by J. L. Fio and D. A. Leighton. Prepared in cooperation with the Panoche Water District and the California Department of Water Resources. 1994. 28 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 94-0081. FLORIDA. Potentiometric surface of the upper Floridan Aquifer, west-central Florida, September 1993, by R. A. Mularoni. Prepared in cooperation with the Southwest Florida Water Management District. 1994. 1 over-size sheet. (NC, Da, M, Wb, USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301; and 4710 Eisenhower Blvd., Tampa, FL 33634-6381.)
- OF 94-0090. Understanding water-quality in the Hudson River basin: working together to solve the puzzle, by K. R. Murray and W. O. Freeman. 1994. 4 p. (NC, Da, M, Wb; USGS, WRD, 343 James T. Foley Federal Courthouse, 445 Broadway, Albany, NY 12201.)
- OF 94-0105. CALIFORNIA, NEVADA. Slope and aspect classifications of Lake Tahoe Basin, California and Nevada, by L. A. Peltz, K. D. Cartier and J. L. Smith. Prepared in cooperation with the Tahoe Regional Planning Agency. 1994. 1 over-size sheet, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M, Wb; USGS, WRD, 333 West Nye Lane, Carson City, NV 89706.)
- OF 94-0108. WASHINGTON. National Water-Quality Assessment Program; Puget Sound basin, Washington, by W. W. Staubitz. 1994. 2 p. (NC, Da, M, Wb.) (Water fact sheet.)
- OF 94-0109. IDAHO, WASHINGTON. Experimental drawdown study, Lower Granite Reservoir, north-central Idaho, March 1992, by R. W. Harper and S. W. Lipscomb. Prepared in cooperation with the U.S. Army Corps of Engineers. 1994. 622 p. (NC, Da, M, Wb; USGS, WRD, 230 Collins Rd., Boise, ID 83702-4520.)
- OF 94-0113. ILLINOIS. Rainfall in and near Lake County, Illinois, December 1989-September 1993, by J. J. Duncker, T. J. Vail and S. M. Robinson. Prepared in cooperation with the Lake County Stormwater Management Commission. 1994. 228 p. (NC, Da, M, Wb; USGS, WRD, 102 East Main St., 4th Floor, Urbana, IL 61801.)
- OF 94-0116. FLORIDA. Storm-tide elevations produced by Hurricane Andrew along the southern Florida coasts, August 24, 1992, by M. H. Murray. Prepared in cooperation with the Federal Emergency Management Agency. 1994. 18 p., 19 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301; 4710 Eisenhower Blvd., Tampa, FL 33634-5381; Suite 107, 9100 NW 36 St., Miami, FL 33178; and Suite 1006, 224 West Central Pkwy., Altamonte Springs, FL 32714.)
- OF 94-0175. NEVADA. Preliminary geologic map of the Wheatgrass Spring Quadrangle, Lincoln County, Nevada, by R. B. Scott, W. C. Swadley and W. J. Taylor. 1994. 44 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)
- OF 94-0194. ALASKA. Tectonostratigraphic terrane and overlap assemblage map of Alaska, by W. J. Nokleberg, E. J. Moll-Stalcup, T. P. Miller, D. A. Brew, Arthur Grantz, J. C. Reed, Jr., George Plafker, T. E. Moore, S. R. Silva, and W. W. Pat-

- ton, Jr.; *with contributions on specific regions* by R. B. Blodgett, S. E. Box, D. C. Bradley, T. K. Bundtzen, Cynthia Dusel-Bacon, B. M. Gamble, D. G. Howell, H. L. Foster, S. M. Karl, M. L. Miller, and S. W. Nelson. 1994. 53 p., 1 over-size sheet, scale 1:2,500,000 (1 inch = about 40 miles). (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 94-0201. NEW HAMPSHIRE. Distribution of sand and gravel in New Hampshire, by Carl Koteff and D. R. Soller. 1994. (NC, Da, M.)
- OF 94-0215. ALASKA. Paleontology of the Livengood Quadrangle, Alaska, by F. R. Weber, R. B. Blodgett, A. G. Harris and J. T. Dutro, Jr. 1994. 24 p., 1 over-size sheet, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 94-0217. VIRGINIA. Paleogene stratigraphy of the Putneys Mill, New Kent County, Virginia, corehole, by L. M. Bybell and T. G. Gibson. 1994. 38 p. (NC, Da, M; Virginia Div. of Mineral Resources, Natural Resources Bldg., Alderman and McCormick Rd., P.O. Box 3667, Charlottesville, VA 22903.)
- OF 94-0221. Computer programs ASPAR, GSAS and ENAS and APROB for the statistical modeling of aftershock sequences and estimation of aftershock hazard, by P. A. Reasenber. 1994. 36 p. (NC, Da, M.)
- OF 94-0225-A. VERMONT. Preliminary bedrock geologic map of the Plymouth Quadrangle and eastern portion of the Killington Peak Quadrangle, Windsor and Rutland counties, Vermont, by G. J. Walsh and N. M. Ratcliffe. Prepared in cooperation with the State of Vermont, Geological Survey. 1994. 36 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC.)
- OF 94-0225-B. VERMONT. Preliminary bedrock geologic map of the Plymouth Quadrangle and eastern portion of the Killington Peak Quadrangle, Windsor and Rutland counties, Vermont, by G. J. Walsh and N. M. Ratcliffe. Prepared in cooperation with the State of Vermont, Geological Survey. 1994. Six 35-mm color slides. (NC.)
- OF 94-0227. TEXAS. $^{49}\text{Ar}/^{39}\text{Ar}$ age-spectrum data for the Davis Mountains, Trans-Pecos volcanic field, Texas, by M. J. Kunk, C. D. Henry and Henry Cortesini, Jr. 1994. 202 p. (NC, Da, M.)
- OF 94-0228. Proceedings of Workshop LXIII; USGS Red-Book conference on the Mechanical involvement of fluids in faulting, edited by S. H. Hickman, R. H. Sibson, R. L. Bruhn and M. L. Jacobson. 1994. 616 p. (NC, Da, M.)
- Introduction, by S. H. Hickman, R. H. Sibson and R. L. Bruhn. p. 1-3.
- Deformation processes and controls on fault mechanics during fault-valve behavior in the Wattle Gully fault zone, central Victoria, Australia, by S. F. Cox. p. 5-17.
- Mesothermal gold-quartz veins and earthquakes, by Francois Robert and Anne-Marie Boullier. p. 18-30.
- Geological evidence for fluid involvement in the rupture processes of crustal earthquakes, by R. H. Sibson. p. 31-38.
- Fluids and faulting; suggestive evidence and crucial tests at Parkfield, by P. A. Johnson and T. V. McEvilly. p. 39-71.
- Triggered earthquakes and deep well activities, by Craig Nicholson and R. L. Wesson. p. 72-86.
- The role of crustal fluids in the triggered response of Long Valley Caldera to the $M = 7.3$ Landers, California, earthquake, by D. P. Hill, M. J. Johnston, J. O. Langbein and Jeffrey Behr. p. 87-91.
- Reversed-polarity seismic reflections along faults of the Oregon accretionary prism; indicators of fluid migration and accumulation, by J. C. Moore, G. R. Cochrane and G. F. Moore. p. 92-106.
- Anatomy of a regionally extensive fracture network in the Kodiak accretionary prism, by D. M. Fisher, S. L. Brantley, M. C. Everett and Brett Wambold. p. 107-137.
- The nature of high fluid pressure in sedimentary basins, by Terry Engelder, S. D. Weedman and J. T. Leftwich, Jr. p. 138-143.
- Surface geophysical methods to detect fluids related to faulting, by Donna Eberhart-Phillips, W. D. Stanley and B. D. Rodriguez. p. 144-161.
- Fluids in the Earth's crust; electromagnetic inferences on existence and distribution, by P. E. Wannamaker. p. 162-177.
- Widespread fluids in the lower crust; a source to crustal penetrating faults?, by R. D. Hyndman. p. 178-188.
- Cyclic fluid flow along faults, by J. M. Logan and C. L. Decker. p. 190-203.
- Syn-deformational gold transport and deposition in brittle-ductile shear zones; some chaotic thoughts, by R. W. Henley and M. A. Etheridge. p. 204-215.
- Permeability structure of a thrust fault, by C. B. Forster, J. V. Goddard and J. P. Evans. p. 216-223.
- Hill fault/fracture meshes as migration conduits for overpressured fluids, by R. H. Sibson. p. 224-230.
- Fracturing in normal fault zones; implications for fluid transport and fault stability, by R. L. Bruhn. p. 231-246.
- The permeability of faults, by C. H. Scholz and M. H. Anders. p. 247-253.
- The role of water in the evolution of large crustal faults such as the San Andreas in California, by J. D. Byerlee. p. 254-261.
- Magnetic and electric fields associated with changes in high pore pressure in fault zones; application to the Loma Prieta ULF emissions, by M. A. Fenoglio, M. J. Johnston and J. D. Byerlee. p. 262-278.
- Pressure solution as a mechanism for crack sealing around faults, by J. P. Gratier, T. Chen and Roland Hellmann. p. 279-300.
- Micromechanisms of deformation and fluid behaviour during faulting, by R. J. Knipe. p. 301-310.

Remarks on the mechanics and kinetics of permeability changes in rocks, by B. J. Evans, Matthias Imhoff and Gunter Siddiqi. p. 311-333.

Fault fluid compositions from fluid inclusion observations, by W. T. Parry. p. 334-348.

The geochemistry and role of fluids in large continental structures; an overview, by R. K. Kerrich and T. K. Kyser. p. 349-388.

Effects of faulting mode on pore fluid stabilization of slip, by J. W. Rudnicki. p. 390-398.

Near-tip stress fields for dynamically propagating mode-II fractures, by A. M. Rubin and C. B. Parker. p. 399-405.

Quasi-static simulations of earthquakes and slip complexity along a 2D fault in a 3D elastic solid, by Yehuda Ben-Zion and J. R. Rice. p. 406-435.

A friction-feedback model for Recent earthquakes at Parkfield, California, by P. E. Malin, V. G. Oancea, Eylon Shalev and T. Laursen. p. 436-442.

Dynamics and frictional heat generation in a foam rubber model of earthquake stick-slip, by Abdolrasool Anooshehpour and J. N. Brune. p. 443-459.

Porosity loss in the evolution of accretionary wedges; some mechanical and seismic implications, by D. M. Davis. p. 460-465.

The impact of earthquakes on fluids in the crust, by R. Muir Wood and G. C. King. p. 466-475.

Long-lived permeability changes in the shallow crust associated with earthquakes, by S. A. Rojstaczer, S. C. Wolf and R. L. Michel. p. 476-481.

Effects of temperature and H₂O on frictional strength of granite, by M. L. Blanpied, J. D. Byerlee and D. A. Lockner. p. 483-486.

Rheologic model of crustal faults; influence of fluids on strength and stability, by F. M. Chester. p. 487-500.

Low friction during sliding on simulated faults in porous quartz sandstone at hydrothermal conditions, by S. F. Cox. p. 501-508.

The effect of pore fluid chemistry on the friction of quartz gouge, by T. E. Tullis. p. 509-513.

Fluid-rock interaction and weakening in faults of the San Andreas system; inferences from San Gabriel fault-rock geochemistry and microstructures, by J. P. Evans and F. M. Chester. p. 514-532.

Water-rock reaction in fault zones; reaction hardening versus reaction softening, by R. P. Wintsch, R. G. Christoffersen and A. K. Kronenberg. p. 533-539.

The kinetics of pressure solution at halite-silica interfaces and intergranular clay films, by S. H. Hickman and B. J. Evans. p. 540-575.

Rate laws for water-assisted densification and stress-induced water-rock interaction in sandstones, by T. A. Dewers and Andrew Hajash. p. 576-611.

OF 94-0253. VIRGINIA, NORTH CAROLINA. Aeroradiometric maps of parts of the South Boston and Emporia 30' x 60' quadrangles, Virginia and North Carolina. 1994. 8 over-size sheets, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M; Div. of Land Resources, Dep. of Natural Resources and Community Dev., P.O. Box 27687, Raleigh, NC 27611; Virginia Div. of Mineral Resources, P.O. Box 3667, Charlottesville, VA 22903.)

OF 94-0254. Deconvolution of continuous borehole temperature logs; example from the Greenland GISP2 icecore hole, by R. W. Saltus and G. D. Clow. 1994. 42 p. (NC, Da, M.)

OF 94-0259. CALIFORNIA. Resolving the tectonic framework of the San Francisco Bay area, California; a report of the April 18-20, 1994 workshop, by T. M. Brocher and K. P. Furlong. 1994. 16 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 94-0261. OREGON. Temporal, spatial and petrologic variations of lava flows from the Mount Bachelor volcanic chain, central Oregon High Cascades, by C. A. Gardner. 1994. 100 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)

OF 94-0262. VERMONT. Preliminary geologic map of the Arlington Quadrangle and Vermont portion of the Shushan Quadrangle, Bennington County, Vermont, by P. T. Lyttle. Prepared in cooperation with the State of Vermont, Geological Survey. 1994. 18 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC.)

OF 94-0263. Lake Baikal, 1992; processing of multichannel seismic reflection data, by W. F. Agena, M. W. Lee, J. J. Miller and D. R. Hutchinson. 1994. 37 p. (NC, Da, M.)

OF 94-0268. ALASKA. The Coast Mountains plutonic-metamorphic complex and related rocks between Haines, Alaska, and Fraser, British Columbia; tectonic and geologic sketches and Klondike Highway road log, by D. A. Brew and A. B. Ford. 1994. 25 p. (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)

OF 94-0269. NEW MEXICO. Bureau of Land Management resource study areas, New Mexico, by J. D. Sanchez, S. B. Bartsch-Winkler, R. R. Tidball and V. L. Clark. 1994. One VHS videotape. (NC, Da, M, U; New Mexico Bur. of Mines and Mineral Resources, Campus Station, Socorro, NM 87801.)

OF 94-0270-A. NEVADA, UTAH. Analytical data, sample localities, and basic statistical data for stream-sediment, heavy-mineral-concentrate, magnetite, and rock samples collected from the Goshute Indian Reservation, Nevada and Utah, by R. G. Eppinger, J. H. Bullock, Jr., Lee-Ann Bradley, P. L. Hageman, D. M. Hopkins, A. H. Love, J. M. Motooka, C. J. Nutt, B. H. Roushey and E. P. Welsch. 1994. 138 p., 1 over-size sheet, scale 1:50,000 (1 inch = about 4,200 feet). (NC, Da, M, U; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1403.)

- OF 94-0270-B. NEVADA, UTAH. Analytical data, sample localities, and basic statistical data for stream-sediment, heavy-mineral-concentrate, magnetite, and rock samples collected from the Goshute Indian Reservation, Nevada and Utah, by R. G. Eppinger, J. H. Bullock, Jr., Lee-Ann Bradley, P. L. Hageman, D. M. Hopkins, A. H. Love, J. M. Motooka, C. J. Nutt, B. H. Roushey and E. P. Welsch. 1994. One 3 1/2 inch diskette. (NC, Da, M, U; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1403.)
- Requirements: IBM PC or compatible computer; 3 1/2 inch, 1.44MB floppy disk drive; PC or MS DOS; software capable of importing dBase III .DBF files.
- OF 94-0272. ALASKA. Mineral resource assessment of the Chugach National Forest Special Study Area in northern Prince William Sound, Alaska, by S. W. Nelson, M. L. Miller, R. J. Goldfarb, L. W. Snee, G. E. Sherman, C. H. Roe and M. D. Balen. 1994. 20 p. (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 94-0274. Report on drilling activities in the Thar Desert, Sindh Province, Pakistan, by R. E. Thomas, J. E. Fassett, P. D. Warwick, B. R. Wardlaw, A. A. Shah, S. A. Khan, M. A. Tagar, A. R. Memon, G. S. Lashari, Z. M. Khan, M. D. Khan, A. H. Chandio, Mohammad Anwar, M. A. Nizamani, Mujeeb Ahmad and Mehtab-ur-Rahman. Prepared jointly by the Geological Survey of Pakistan and the U.S. Geological Survey under the auspices of the U.S. Agency for International Development. 1994. 1254 p. (NC.)
- OF 94-0275. LOUISIANA. Processes of coastal wetlands loss in Louisiana; results from a multi-year collaborative study by the U.S. Geological Survey, National Biological Survey, and Louisiana State University as presented at Coastal zone '93, New Orleans, Louisiana, edited by S. J. Williams and H. A. Cichon. 1994. 226 p. (NC, Da, M.)
- Depositional sediment on intertidal marshes near Terrebonne Bay and Atchafalaya Bay, Louisiana, by F. C. Wang and Menglou Wang. p. 5-19.
- Processes affecting coastal wetland loss in the Louisiana deltaic plain, by S. J. Williams, Shea Penland and H. H. Roberts. p. 21-29.
- Short-term water and suspended-sediment fluctuations in a Louisiana marsh, by J. R. Dingler. p. 31-40.
- Impacts of winter storms on sediment transport within the Terrebonne Bay marsh complex, by S. P. Murray, N. D. Walker and C. E. Adams, Jr. p. 41-55.
- Meteorological forcing on Louisiana wetlands, by Shih-Ang Hsu and B. W. Blanchard. p. 56-68.
- Marsh submergence vs. marsh accretion; interpreting accretion deficit data in coastal Louisiana, by D. J. Reed and D. R. Cahoon. p. 69-81.
- Natural resource problem solving; an interdisciplinary approach in coastal Louisiana, by A. L. Foote, Virginia Burkett and S. J. Williams. p. 83-91.
- Are landscape patterns related to marsh loss processes?, by J. A. Nyman, M. Carlross, R. D. DeLaune and W. H. Patrick, Jr. p. 95-106.
- An analysis of wetland change mapping for the Mississippi River deltaic plain, Louisiana, by M. R. Byrnes, R. A. McBride and Q. Tao. p. 107-108.
- Production and decomposition of *Spartina patens* in a degrading coastal marsh, by L. A. Johnson, K. A. Reynolds and A. L. Foote. p. 109-119.
- A method for classifying land loss by geomorphology and process, by L. D. Wayne, M. R. Byrnes, L. D. Britsch, Shea Penland, P. L. Wilkey, T. A. Williams and S. J. Williams. p. 121-131.
- Crevasses on the lower course of the Mississippi River, by D. W. Davis. p. 133-151.
- Changes in Louisiana coastal wetlands since 1978, by L. R. Handley. p. 153.
- Critical small-scale physical processes that contribute to marsh loss on Louisiana's subsiding coastal plain, by J. N. Suhayda, D. J. Reed, R. M. Boumans, J. W. Day, Jr., G. P. Kemp, D. R. Cahoon, N. Latif and S. J. Williams. p. 155.
- Managing the Mississippi River to ensure long-term restoration and creation of wetlands in coastal Louisiana, by I. L. van Heerden. p. 157-158.
- Anthropogenic modification and the induced hydrologic changes in a small bayou and adjacent salt marshes in a sediment-rich coastal basin, by W. B. Sikora and F. C. Wang. p. 161-171.
- Processes of coastal geomorphic development; land building and land loss along the Louisiana deltaic coastline, by O. K. Huh, H. H. Roberts, C. Moeller and W. P. Menzel. p. 173.
- Consolidation settlement potential in South Louisiana, by G. J. Kuecher, N. Chandra, H. H. Roberts, J. N. Suhayda, S. J. Williams, Shea Penland and W. J. Autin. p. 175-192.
- Subsidence properties of Holocene sediments; S. LA, by J. N. Suhayda, A. M. Bailey, H. H. Roberts, Shea Penland and G. J. Kuecher. p. 193-207.
- Salinity variations in two Louisiana estuaries, by W. J. Wiseman and Masamichi Inoue. p. 209-221.
- Jump starting the Atchafalaya Delta; a management plan to reinstate delta growth, by I. L. van Heerden. p. 223.
- OF 94-0277-A. ALASKA. Analytical results and sample locality maps of samples of the ash of dwarf arctic birch, black spruce, white spruce, and tamarack from the Medfra Quadrangle, West-Central Alaska, by H. D. King, D. A. Risoli and E. F. Cooley. 1994. 102 p., 3 over-size sheets, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M, A, S; Alaska Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645; U.S. Dep. of Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513.)
- OF 94-0277-B. ALASKA. Analytical results and sample locality maps of samples of the ash of dwarf arctic birch, black spruce, white spruce, and tamarack from the Medfra Quadrangle, West-Central Alaska, by H. D. King, D. A. Risoli and E. F. Cooley.

1994. One 5 1/4 inch diskette. (NC, Da, M, A, S; Alaska Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645; U.S. Dep of Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513.)

This report contains digital geochemical data and text documentation on a 5 1/4 inch, 1.2MB distribution diskette. The data files on diskette are in USGS STATPAC (.STP) format. A data format conversion program, STP2DAT.EXE has been included on the diskette to provide eight additional formats into which the .STP files can be changed. The text files are in standard ASCII format.

OF 94-0281. PRISM 8° × 10° North Hemisphere paleoclimate reconstruction; digital data, by PRISM project members: J. A. Barron, T. M. Cronin, H. J. Dowsett, F. R. Fleming, T. R. Holtz, Jr., S. E. Ishman, R. Z. Poore, R. S. Thompson, and D. A. Willard. 1994. 23 p. (NC, Da, M.)

OF 94-0282. NEVADA. Analytical results and sample locality map of rock-and-soil samples from aerial gamma-ray anomalies, Getchell gold trend, Humboldt County, Nevada, by J. A. Pitkin. 1994. 38 p., 1 over-size sheet, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, NV 89557-0088.)

OF 94-0283. NEVADA. Preliminary geologic map of the Deadman Spring NE Quadrangle, Lincoln County, Nevada, by W. C. Swadley, W. R. Page and R. B. Scott. 1994. 14 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)

OF 94-0285. The 1992 Basin & Range Province GPS survey; 1, Point descriptions, by B. R. Julian and G. R. Foulger. 1994. 79 p. (NC, Da, M.)

OF 94-0286. The 1992 Basin & Range Province GPS survey; 2, The field survey, by G. R. Foulger. 1994. 21 p. (NC, Da, M.)

OF 94-0287. The 1992 Basin & Range Province GPS survey; 3, Data processing and results, by G. R. Foulger. 1994. 39 p. (NC, Da, M.)

OF 94-0288. HAWAII. GPS measurements on the Island of Hawaii in 1992, by Asta Miklius, E. Y. Iwatsubo, R. P. Denlinger, A. T. Okamura, M. K. Sako and K. M. Yamashita. 1994. 44 p. (NC, Da, M.)

OF 94-0289. COLORADO. Analytical results for monitored soil-gas concentrations (1991-1992) and for analyses of soil samples collected at the Kokomo Mine, Central City, Colorado, by M. E. Hinkle, B. M. Adrian, P. M. Briggs, D. L. Fey, J. M. Motooka, R. M. O'Leary and C. S. Papp. 1994. 25 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)

OF 94-0290. ARIZONA. Geologic map of the Little Clayhole Valley Quadrangle, northern Mohave County, Arizona, by G. H. Billingsley. 1994. 11 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)

OF 94-0291. COLORADO. Some magnetic properties of rocks from the Silverton Caldera area, western San Juan Mountains, Colorado, by M. E. Gettings, F. S. Fisher, P. E. Gettings and R. G. Luedke. 1994. 37 p., 1 over-size sheet. (NC, Da, M, U; Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203.)

OF 94-0292. NEBRASKA. Preliminary chemical and mineralogical analyses of the major volcanic ash beds in the Oligocene Brule Formation, northwestern Nebraska, by K. A. Dickinson. 1994. 36 p. (NC, Da, M; Conservation and Surv. Div., Inst. of Agriculture and Natural Resources, 113 Nebraska Hall, Univ. of Nebraska, Lincoln, NE 68588-0517.)

OF 94-0293. Initial field report; U.S. Geological Survey participation in the 1993/94 Antarctic Crustal Profile (ACRUP) seismic project, Ross Sea area, Antarctica, by A. K. Cooper, U. S. ten Brink, Jie Zhang and G. K. Miller. 1994. 21 p. (NC, Da, M.)

OF 94-0295. COLORADO. Methane, carbon dioxide, oxygen, and nitrogen in soil gas overlying coal beds of the Upper Cretaceous Fruitland Formation in the San Juan Basin, La Plata County, southwestern Colorado, by J. R. Herring, J. S. Ciener, J. M. Been, S. L. Szarzi, G. M. Reimer, D. D. Rice and B. C. Boyce. 1994. 12 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)

OF 94-0296. UTAH, NEVADA. Magnetotelluric data on and near the Goshute Indian Reservation, Utah and Nevada; location map and data report, by J. A. Sampson. 1994. 105 p. (NC, Da, M, U; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1403; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)

OF 94-0298. ILLINOIS, INDIANA, KENTUCKY. Proceedings of the Illinois Basin energy and mineral resources workshop, edited by J. L. Ridgley, J. A. Drahovzal, B. D. Keith and D. R. Kolata. Prepared in cooperation with the Illinois Basin Consortium. 1994. 46 p. (NC, Da, M; Illinois State Geol. Surv., Natural Resources Bldg., 615 East Peabody Dr., Room 121, Champaign, IL 61820; Indiana Geol. Surv., Dep. of Natural Resources, 611 North Walnut Grove, Bloomington, IN 47405; Kentucky Geol. Surv., Univ. of Kentucky, 311 Breckinridge Hall, Lexington, KY 40506; Pirth Geol. Library, 100 Bowman Hall, Univ. of Kentucky, Lexington, KY 40506.)

A comprehensive core book of Pennsylvanian rocks of the Illinois Basin; its construction and its applications, by M. L. Barnhill and Huitang Zhou. p. 1-2.

Alteration of oils during migration in the Illinois Basin; geochemical constraints on paleohydrology, by R. C. Burruss. p. 2-3.

Coal resources of Daviess County, Indiana; a GIS-based resource assessment, by J. G. Callis and J. A. Rupp. p. 3-4.

A GIS approach to calculate available coal resources in Alfordsville 7.5 minute Quadrangle, Indiana, by Haluk Cetin, Carol Conolly and J. A. Rupp. p. 4-5.

The Illinois State Geological Survey's digital database of underground mines, by C. A. Chenoweth, M. H. Bargh and C. G. Treworgy. p. 5.

- Ichnology of Morrowan through basal Desmoinesian rocks in Indiana, by J. A. Devera. p. 6-7.
- Basin-floor fan complexes; a new exploration strategy for the Rough Creek Graben, by J. A. Drahovzal. p. 7-8.
- Basin-wide paleofluid flow in Cambro-Ordovician siliciclastic rocks of the Illinois Basin; diagenetic and geochemical evidence from the Mt. Simon and St. Peter sandstones, by N. S. Fishman and J. K. Pitman. p. 8-9.
- Basement tectonics in the eastern Illinois Basin of Indiana, by L. C. Furer. p. 9-10.
- The Illinois Basin as a flow path for low temperature hydrothermal fluids, by M. B. Goldhaber, E. L. Rowan, J. R. Hatch, R. E. Zartman, J. K. Pitman and R. L. Reynolds. p. 10-12.
- Geology of the Elm Lick coal zone, Tradewater Formation; a low-sulfur coal in the western Kentucky coal field, by S. F. Greb, D. A. Williams, C. F. Eble, W. J. Nelson, J. A. Devera and W. A. DiMichele. p. 12-13.
- Unexpected results from a geochemical approach to typing and correlation of Ordovician oils in the Illinois Basin, by J. M. Guthrie. p. 14.
- Western Kentucky tar sands and Illinois Basin oil, by Terence Hamilton-Smith. p. 14-15.
- Diagenesis and fluid flow in Lower Pennsylvanian rocks, Illinois Basin, by P. L. Hansley. p. 15-16.
- Lithostratigraphy and hydrocarbon potential of the Cambrian (pre-Knox) interval in the Conoco No. 1 Turner Well, Rough Creek Graben, western Kentucky, by D. C. Harris. p. 16-17.
- Porosity loss in Mississippian oolitic grainstones, southern Illinois; implications for hydrocarbon migration, by M. E. Henry. p. 17-18.
- Geophysical setting of the northern Reelfoot Rift and southern Illinois Basin region, by T. G. Hildenbrand, V. E. Langenheim and P. C. Heigold. p. 18-20.
- History of the Illinois Basin; an overview, by D. R. Kolata. p. 20-21.
- Waulsortian mounds and hydrocarbon-bearing facies in the Ullin ("Warsaw") Limestone of the Illinois Basin, by Zakaria Lasemi, J. D. Treworgy, R. D. Norby and J. P. Grube. p. 21.
- Seismic character analysis of a mixed siliciclastic-carbonate reservoir, by H. E. Leetaru. p. 22.
- Tectonic history of the Wabash Valley rift using seismic reflection and stress field effects, by J. J. Lewis. p. 22.
- Subsurface geometry and petrography of clastic rocks of the Beech Creek ("Barlow") Limestone (Chesterian) to Springfield Coal (Desmoinesian) stratigraphic interval of part of the La Salle Anticlinorium, Lawrence County, Illinois, by D. K. Lumm. p. 23-24.
- Hydrocarbon plays within the Illinois Basin Province for the National Petroleum Assessment, by D. L. Macke. p. 24-25.
- Assessment of the 3,000 and 10,000 ppm total dissolved solids boundaries in the Mississippian and Pennsylvanian aquifers of southwestern Indiana using geophysical logs, by W. M. Mitchell. p. 25-27.
- Preliminary identification of transgressive-regressive depositional cycles in the Chesterian Series in southern Illinois, by W. J. Nelson and J. D. Treworgy. p. 27.
- Thermal history modeling in the Illinois Basin, by V. F. Nuccio. p. 28-29.
- A proposal for an atlas of the major oil and gas plays of the Illinois and Michigan basins, by B. C. Nuttall and J. A. Drahovzal. p. 29-30.
- The Mid-West region of the Petroleum Technology Transfer Council, by D. F. Oltz and L. D. Moore. p. 31.
- Data from Illinois Basin samples contained in the U.S. Geological Survey's new coal quality CD-ROM, by C. L. Oman, S. J. Tewalt and L. J. Bragg. p. 32.
- Origin and timing of carbonate cements in the St. Peter Sandstone, Illinois Basin; evidence for a genetic link to MVT-type mineralization, by J. K. Pitman, Christoph Spötl and M. B. Goldhaber. p. 32-33.
- The regional configuration of the Cambrian Reelfoot-Rough Creek-Rome Rift system, by C. J. Potter and J. A. Drahovzal. p. 34-35.
- Structural and stratigraphic patterns on regional seismic data, southern Illinois Basin, by C. J. Potter, J. A. Drahovzal, M. L. Sargent and J. J. Lewis. p. 35-36.
- Sedimentology and trace element and stable isotope geochemistry of the lower part of the Mississippian St. Louis Limestone in the Illinois Basin, by J. L. Ridgley, F. A. Hills and C. L. Rice. p. 37-38.
- Character and depositional environments of potential source rocks in the lower part of the Mississippian St. Louis Limestone of the Illinois Basin, by J. L. Ridgley and V. F. Nuccio. p. 39-40.
- Biomarker and fluid inclusion measurements as constraints on the time-temperature and fluid-flow history of the northern Illinois Basin and Upper Mississippi Valley zinc district, by E. L. Rowan, M. B. Goldhaber and J. R. Hatch. p. 40-41.
- Diagenetic alteration and porosity enhancement of two Middle Mississippian sandstone reservoirs in the Illinois Basin, by Beverly Seyler and D. S. Beaty. p. 42.
- The possible role of thermal convection as a result of fracturing of radioactive basement rocks and implications for fluid flow, heat flow, and the genesis of the Upper Mississippi Valley zinc-lead ores, by C. S. Spirakis. p. 42-43.
- Geological constraints on the mining of coal in Illinois, by C. G. Treworgy, R. J. Jacobson, C. A. Chenoweth and M. H. Bargh. p. 43-44.
- Reservoir simulation studies of Aux Vases and Cypress reservoirs in Illinois, by E. O. Udegbumam. p. 44-45.
- Indiana coal mine information project, by L. A. Weber. p. 45.
- Seismotectonic maps of the New Madrid area; a model for maps of the lower Wabash Valley, by R. L. Wheeler and B. S. Rhea. p. 45-46.

- OF 94-0299. International inventory of automated databases in the geosciences, edited by K. D. Gunderson. 1994. 321 p. (NC, Da, M.)
- OF 94-0301. VIRGINIA. Hydrogeologic and water-quality data for the main site, Naval Surface Warfare Center, Dahlgren Laboratory, Dahlgren, Virginia, by C. F. Bell, T. P. Bolles and G. E. Harlow, Jr. Prepared in cooperation with the Naval Surface Warfare Center, Environmental Division. 1994. 81 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 3600 West Broad St., Room 606, Richmond, VA 23230.)
- OF 94-0302. TEXAS. Determination of chlorinated insecticides in bottom sediment using an electron-capture gas chromatography screening method, Austin, Texas, 1991 and 1992, by R. D. Brock and L. K. Murtagh. Prepared in cooperation with the City of Austin Environmental and Conservation Services Department. 1994. 18 p. (NC, Da, M, Wb, U.)
- OF 94-0303. NEVADA. Water levels in wells J-11 and J-12, 1989-91, Yucca Mountain area, Nevada, by M. S. Boucher. Prepared in cooperation with the U.S. Department of Energy. 1994. 9 p. (NC, Da, M, Wb.)
- OF 94-0305. CALIFORNIA, NEVADA. Hydrochemical data base for the Death Valley region, California and Nevada, by D. L. Perfect, C. C. Faunt, W. C. Steinkampf and A. K. Turner. 1994. 13 p., two 3 1/2 inch DS/HD IBM compatible diskettes. (NC, Da, M, Wb, U; USGS, WRD, Bldg. 53, Denver Federal Ctr., Mail Stop 421, Box 25046, Denver, CO 80225-0046; and Room H-2313, 2d Floor, Bldg. 53, Denver Federal Ctr., Mail Stop 415, Box 25046, Denver, CO 80225-0046.)
- OF 94-0307. GEORGIA. Water-resources activities in Georgia, 1993, by C. A. Casteel and M. D. Ballew. Prepared in cooperation with the Georgia Department of Natural Resources and other state, local, and federal agencies. 1994. 69 p. (NC, Da, M, Wb.)
- OF 94-0308. WASHINGTON. Surface-water-quality assessment of the Yakima River basin in Washington; major- and minor-element data for sediment, water, and aquatic biota, 1987-91, by G. J. Fuhrer, S. L. Fluter, S. W. McKenzie, J. F. Rinella, J. K. Crawford, D. J. Cain, M. I. Hornberger, J. L. Bridges and K. A. Skach. 1994. 223 p. (NC, Da, M, Wb.)
- OF 94-0309. UTAH. Bibliography of U.S. Geological Survey water-resources reports for Utah, 1886-1993, compiled by E. E. Hardy and S. L. Dragos. 1994. 74 p. (NC, Da, M, Wb.)
- OF 94-0311. NEVADA. Water levels in the Yucca Mountain area, Nevada, 1992, by G. M. O'Brien, Patrick Tucci and D. J. Burkhardt. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1995. 74 p. (NC, Da, M, Wb.)
- OF 94-0315. WASHINGTON. Sediment-quality assessment of Franklin D. Roosevelt Lake and the upstream reach of the Columbia River, Washington, 1992, by G. C. Bortleson, S. E. Cox, M. D. Munn, R. J. Schumaker, E. K. Block, L. R. Bucy and R. J. Cornelius. Prepared in cooperation with the U.S. Environmental Protection Agency. 1994. 130 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402.)
- OF 94-0316. MASSACHUSETTS. Simulation of the effects of ground-water withdrawals and recharge on ground-water flow in Cape Cod, Martha's Vineyard, and Nantucket Island basins, Massachusetts, by J. P. Masterson and P. M. Barlow. Prepared in cooperation with the Massachusetts Department of Environmental Management, Office of Water Resources. 1994. 80 p., 1 over-size sheet. (NC, Da, M, Wb.)
- OF 94-0317. NEVADA. Selected hydrologic data from Fortymile Wash in the Yucca Mountain area, Nevada, water year 1992, by C. S. Savard. Prepared in cooperation with the U.S. Department of Energy. 1995. 38 p. (NC, Da, M, Wb, U; USGS, WRD, Bldg. 53, Denver Federal Ctr., Mail Stop 421, Box 25046, Denver, CO 80225-0046; and Room H-2313, 2d Floor, Bldg. 53, Denver Federal Ctr., Mail Stop 415, Box 25046, Denver, CO 80225-0046.)
- OF 94-0318. CALIFORNIA. Preliminary digital geologic maps of the Mariposa, Kingman, Trona, and Death Valley sheets, California, by F. A. D'Agnese, C. C. Faunt and A. K. Turner. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1995. 19 p. (NC, Da, M, Wb, U; USGS, WRD, Bldg. 53, Denver Federal Ctr., Mail Stop 421, Box 25046, Denver, CO 80225-0046; and Room H-2313, 2d Floor, Bldg. 53, Denver Federal Ctr., Mail Stop 415, Box 25046, Denver, CO 80225-0046.)
- OF 94-0319. SOUTH DAKOTA. Compilation of selected hydrologic data, through water year 1992, Black Hills Hydrology Study, western South Dakota, by D. G. Driscoll and W. L. Bradford. Prepared in cooperation with the South Dakota Department of Environment and Natural Resources and the West Dakota Water Development District. 1994. 158 p. (NC, Da, M, Wb.)
- OF 94-0320. SOUTH DAKOTA. Water levels through 1989 in bedrock aquifers in South Dakota, by D. R. Winter. Prepared in cooperation with the South Dakota Department of Environment and Natural Resources. 1994. 279 p. (NC, Da, M, Wb.)
- OF 94-0324. OKLAHOMA. Suitability of ponds formed by strip mining in eastern Oklahoma for public water supply, aquatic life, waterfowl habitat, livestock watering, irrigation, and recreation, by R. S. Parkhurst. Prepared in cooperation with the Oklahoma Geological Survey. 1994. 192 p. (NC, Da, M, Wb.)
- OF 94-0329. TEXAS. Hydrogeologic and water-quality data from wells near the Hueco Bolson Recharge Project area, El Paso, Texas, 1990 and 1991, by R. D. Brock, P. M. Buszka and E. M. Godsy. Prepared in cooperation with the El Paso Water Utilities-Public Service Board, Texas Water Development Board, and U.S. Bureau of Reclamation. 1994. 85 p. (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. A, Austin, TX 78754-3898.)
- OF 94-0331. COLORADO. Bibliography of selected water-resources information for the Arkansas River basin in Colorado through 1985, by J. M. Kuzmiak and H. H. Strickland. Prepared in cooperation with the Southeastern Colorado Water Conservancy District. 1994. 266 p. (NC, Da, M, Wb, U; USGS, WRD, Room H-2101, Bldg. 53, Denver Federal Ctr., Mail Stop 415, Box 25046, Denver, CO 80225-0046; and Norwest Bank Bldg., Suite 200, 201 West 8th St., Pueblo, CO 81003-3031.)
- OF 94-0332. MISSOURI. Occurrence of herbicides, nitrite plus nitrate, and selected trace elements in ground water from northwestern and northeastern Missouri, July 1991 and 1992, by D. H. Wilkison and R. D. Maley. Prepared in cooperation with the Missouri Department of Health. 1994. 64 p. (NC, Da, M, Wb.)

- OF 94-0333. MISSOURI. Historical land-use changes and potential effects on stream disturbance in the Ozark Plateaus, Missouri, by R. B. Jacobson and A. T. Primm. Prepared in cooperation with the Missouri Department of Conservation. 1994. 95 p. (NC, Da, M, Wb; USGS, WRD, 1400 Independence Rd., Rolla, MO 65401.)
- OF 94-0334. CALIFORNIA. Water-quality, lithologic, and water-level data for wells in Tulare Basin, Kings, Kern, and Tulare counties, California, August 1990 to February 1993, by S. L. Beard, Roger Fujii and W. G. Shanks. Prepared in cooperation with the California Department of Water Resources. 1994. 29 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 94-0336. Trihalomethane and nonpurgeable total organic-halide formation potentials for the Mississippi River and some of its tributaries, March-April 1992, by R. E. Rathbun. 1995. 55 p. (NC, Da, M, Wb.)
- OF 94-0337. MINNESOTA. Hydrogeologic and water-quality data used to characterize the Management Systems Evaluation Area near Princeton, Minnesota, 1991, by G. N. Delin, M. K. Landon, J. A. Lamb and J. L. Anderson. Prepared in cooperation with the University of Minnesota Department of Soil Science, U.S. Department of Agriculture, and the Minnesota Pollution Control Agency. 1994. 42 p. (NC, Da, M, Wb; USGS, WRD, 2280 Woodale Dr., Mounds View, MN 55112.)
- OF 94-0338. MINNESOTA. Water-resources activities of the U.S. Geological Survey in Minnesota, 1993 water year, compiled by G. L. Amos. 1994. 72 p. (NC, Da, M, Wb; USGS, WRD, 2280 Woodale Dr., Mounds View, MN 55112.)
- OF 94-0342. NEVADA. Summary of lithologic logging of new and existing boreholes at Yucca Mountain, Nevada, August 1993 to February 1994, by J. K. Geslin, T. C. Moyer and D. C. Buesch. Prepared in cooperation with the U.S. Department of Energy. 1995. 39 p. (NC, Da, M, Wb.)
- OF 94-0343. Comparison of vertical discretization techniques in finite-difference models of ground-water flow; example from a hypothetical New England setting, by P. T. Harte. 1994. 25 p. (NC, Da, M, Wb; USGS, WRD, 525 Clinton St., Bow, NH 03304.)
- OF 94-0345. TEXAS. Approximate changes in water levels in wells completed in the Chicot and Evangeline aquifers, 1990-94 and 1993-94, in Fort Bend County and adjacent areas, Texas, by L. S. Coplin and H. X. Santos. Prepared in cooperation with the Fort Bend Subsidence District. 1994. 4 over-size sheets. (NC, Da, M, Wb.)
- OF 94-0346. TEXAS. Approximate changes in water levels in wells completed in the Chicot and Evangeline aquifers, 1977-94 and 1993-94, and measured compaction, 1973-93, in the Houston-Galveston region, Texas, by M. C. Kasmarek, L. S. Coplin and H. X. Santos. Prepared in cooperation with the City of Houston and Harris-Galveston Coastal Subsidence District. 1994. 6 over-size sheets. (NC, Da, M, Wb.)
- OF 94-0349. NEW MEXICO. Water-level data for the Albuquerque Basin, New Mexico, October 1, 1986, through September 30, 1990, by D. R. Rankin. Prepared in cooperation with the City of Albuquerque. 1994. 29 p. (NC, Da, M, Wb, U; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110.)
- OF 94-0350. GEORGIA. Water-resources data for the Valdosta area, south-central Georgia, 1961-93, by J. B. McConnell, Eurybiades Busenberg and L. N. Plummer. Prepared in cooperation with the City of Valdosta, Georgia. 1994. 58 p. (NC, Da, M, Wb.)
- OF 94-0351. U.S. Geological Survey approved inorganic and organic methods for the analysis of water and fluvial sediment, 1954-94, by M. J. Fishman, J. W. Raese, C. N. Gerlitz and R. A. Husband. 1994. 55 p. (NC, Da, M, Wb, U.)
- OF 94-0352. Willie hace una excursion al campo; un libro de colorear [Willie makes a field trip; a coloring book], by D. V. Arvin; translated by Daniel Lucy. Prepared in cooperation with the Indiana Department of Natural Resources, Division of Water. 1994. 37 p. (NC, Da, M, Wb; USGS, WRD, 5957 Lakeside Blvd., Indianapolis, IN 46278.)
- OF 94-0353. Hydrologic Instrumentation Facility of the U.S. Geological Survey, annual report for fiscal year 1993, by V. J. Latkovich and D. C. Tracey. 1994. 47 p. (NC, Da, M, Wb; USGS, WRD, Bldg. 2101, Stennis Space Center, MS 39529-6000; Spalding Wood Office Park, 3850 Holcomb Bridge Rd., Suite 160, Norcross, GA 30092.)
- OF 94-0354. TENNESSEE. Water resources publications of the U.S. Geological Survey for Tennessee, 1987-1993, by E. G. Baker and B. B. Oldson. 1994. 20 p. (NC, Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville, TN 37203; 1013 North Broadway, Knoxville, TN 37917; and AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis TN 38120.)
- OF 94-0356. ARIZONA, NEW MEXICO. Chemical, geologic and hydrologic data in the Little Colorado River basin, Arizona and New Mexico, 1988-91, by G. G. Fisk, S. A. Ferguson, D. R. Rankin and Laurie Wirt. Prepared in cooperation with the Office of Navajo and Hopi Indian Relocation, U.S. Bureau of Indian Affairs, Arizona Department of Environmental Quality, Arizona Department of Water Resources, Navajo Nation, and New Mexico Environment Department. 1994. 468 p. (NC, Da, M, Wb; USGS, WRD, 375 South Euclid Ave., Tucson, AZ 85719-6644; 1545 West University Dr., Tempe, AZ 85281; 1940 South 3rd Ave., Yuma, AZ 85364; and 2255 North Gemini Dr., Bldg. 3, Flagstaff, AZ 86001.)
- OF 94-0357. CALIFORNIA. Geohydrologic framework, historical development of the ground-water system, and general hydrologic and water-quality conditions in 1990, South San Francisco Bay and Peninsula area, California, by J. L. Fio and D. A. Leighton. Prepared in cooperation with the Bay Area Water Users Association. 1995. 46 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 94-0359. Conversion of geologic quadrangle maps to geologic coverages, by J. F. Connell, W. R. Barron, Jr. and R. L. Mitchell, III. Prepared in cooperation with the Tennessee Division of Environment and Conservation, U.S. Army Corps of Engineers, Tennessee Valley Authority, and the U.S. Soil Conservation Service. 1994. 23 p. (NC, Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville, TN 37203; 1013 North Broad-

- way, Knoxville TN 37917; and AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)
- OF 94-0360. User's guide to SAC, a computer program for computing discharge by slope-area method, by J. M. Fulford. 1994. 31 p. (NC, Da, M, Wb.)
- OF 94-0362. CALIFORNIA. Methods of analysis and quality-assurance practices of the U.S. Geological Survey Organic Laboratory, Sacramento, California; determination of pesticides in water by solid-phase extraction and capillary-column gas chromatography/mass spectrometry, by K. L. Crepeau, J. L. Domagalski and K. M. Kuivila. 1994. 17 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 94-0363. Proceedings of a U.S. Geological Survey pressure-sensor workshop, Denver, Colorado, July 28-31, 1992, compiled by S. L. Wilbourn. 1994. 55 p. (NC, Da, M, Wb.)
- Evaluation of a double-bubbler system for sensing water levels, by P. E. Hughes. p. 3.
- Comparison of WaterGage II and mercury-type manometers at three streams in Michigan, by C. L. Ebsch. p. 5.
- WaterGage II; an alternative for present water-stage instruments, by H. A. Hitchcock. p. 7.
- Evaluation of a nonsubmersible pressure sensor in Montana, by L. G. Sultz and R. R. Shields. p. 9-11.
- Evaluation of the balance-beam manometer, by G. B. O'Neill. p. 13-14.
- Oregon district experiences using Paroscientific pressure transducers interfaced with Campbell Scientific data loggers, by R. L. Kittelson. p. 15-16.
- Digital pneumatic tide gages at National Oceanic and Atmospheric Administration; a progress report, by H. H. Shih, J. J. Sprengle and M. A. Basileo. p. 17.
- History of the use of submersible and nonsubmersible transducers in Arkansas, by T. E. Lamb. p. 19-20.
- Comparison of two pressure sensors, by Bill Bemis. p. 21.
- Various sensors used in monitoring water levels by the Sacramento Field Office, California District of the U.S. Geological Survey, by M. D. Webster. p. 23.
- Installation and operation of submersible pressure transducers; Design Analysis model H300, by W. D. Wiggins. p. 25-26.
- Evaluation of pressure transducers on small drainage areas near Steamboat Springs, Colorado, by E. A. Wilson. p. 27.
- Comparison of a balance-beam manometer and a mercury manometer in recording peaks stages in the Rio Grande de Loiza, Puerto Rico, by P. L. Diaz. p. 29.
- Iowa District stage-sensing test, by N. B. Melcher and J. G. Gorman. p. 31.
- Stage-accuracy considerations, by E. D. Cobb. p. 33-34.
- Analysis of errors in stage measurements by pressure sensors, by W. H. Kirby. p. 35-36.
- Testing of submersible pressure transducers installed in crest-stage gage pipes, by W. R. Kaehrle and K. G. Thibodeaux. p. 37.
- Testing of pressure sensors at the Hydrologic Instrumentation Facility, by P. W. Potter. p. 39-41.
- Fluid data systems WaterGage II laboratory test results, by D. H. Rapp and T. E. Olive. p. 43-44.
- Pressure transducer characteristics and manufacturer's specifications, by R. A. Johnson. p. 45-47.
- OF 94-0364. ARKANSAS, OKLAHOMA. Annual yield and selected hydrologic data for the Arkansas River Basin Compact, Arkansas-Oklahoma, 1993 water year, by J. E. Porter and C. S. Barks. Prepared in cooperation with the Arkansas River Compact Commission Arkansas-Oklahoma. 1994. 61 p. (NC, Da, M, Wb.)
- OF 94-0365. KANSAS, NEBRASKA. Surface-water-quality assessment of the lower Kansas River basin, Kansas and Nebraska; results of investigations, 1987-90, edited by J. O. Helgesen. 1995. 129 p. (NC, Da, M, Wb; USGS, WRD, 4821 Quail Crest Pl., Lawrence, KS 66049; 206 Fulton Terrace, Garden City, KS 67846; 415 South Main, Wichita, KS 67202; and Room 406 Federal Bldg., 100 Centennial Mall North, Lincoln, NE 68508.)
- OF 94-0367. ALASKA. Assessment of the hydrologic interaction between Imikpuk Lake and the adjacent airstrip site near Barrow, Alaska, 1993, by K. A. McCarthy, G. L. Solin and D. C. Trabant. Prepared in cooperation with the U.S. Navy Engineering Field Activity Northwest. 1994. 27 p. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and Federal Bldg., Room 420, 709 West 9th St., Juneau, AK 99802.)
- OF 94-0368. NEW YORK. Work plan of the Neversink watershed study in the Catskill Mountains of southeastern New York, by G. B. Lawrence, D. A. Burns, P. S. Murdoch, B. P. Baldigo and Y. H. Baevsky. Prepared in cooperation with the New York City Department of Environmental Protection. 1994. 42 p. (NC, Da, M, Wb; USGS, WRD, 445 Broadway, Albany, NY 12201.)
- OF 94-0369. Report on the U.S. Geological Survey's evaluation program for standard reference samples distributed in April 1994; T-129 (trace constituents), M-130 (major constituents), N-42 (nutrients), P-22 (low ionic strength), and Hg-18 (mercury), by H. K. Long and J. W. Farrar. 1994. 101 p. (NC, Da, M, Wb.)
- OF 94-0370. VIRGINIA. Potentiometric surface of the Brightseat-upper Potomac Aquifer in Virginia 1993, by E. C. Hammond, E. R. McFarland and M. J. Focazio. Prepared in cooperation with the Virginia Department of Environmental Quality, York County, City of Newport News, City of Williamsburg, James City Service Authority, and Hampton Roads Planning District Commission. 1994. 1 p. (NC, Da, M, Wb; USGS, WRD, 3600 West Broad St., Room 606, Richmond, VA 23230.)
- OF 94-0372. VIRGINIA. Potentiometric surface of the middle Potomac Aquifer in Virginia 1993, by E. C. Hammond, E. R. McFarland and M. J. Focazio. Prepared in cooperation with the Virginia Department of Environmental Quality, York County, City of Newport News, City of Williamsburg, James City Service Authority, and Hampton Roads Planning District Commission.

1994. 1 p. (NC, Da, M, Wb; USGS, WRD, 3600 West Broad St., Room 606, Richmond, VA 23230.)
- OF 94-0373. VIRGINIA. Potentiometric surface of the lower Potomac Aquifer in Virginia 1993, by E. C. Hammond, E. R. McFarland and M. J. Focazio. Prepared in cooperation with the Virginia Department of Environmental Quality, York County, City of Newport News, City of Williamsburg, James City Service Authority, and Hampton Roads Planning District Commission. 1994. 1 p. (NC, Da, M, Wb; USGS, WRD, 3600 West Broad St., Room 606, Richmond, VA 23230.)
- OF 94-0374. IDAHO. Mineralogy of selected sedimentary interbeds at or near the Idaho National Engineering Laboratory, Idaho, by M. F. Reed and R. C. Bartholomay. Prepared in cooperation with the U.S. Department of Energy. 1994. 19 p. (NC, Da, M, Wb; USGS, WRD, 230 Collins Rd., Boise, ID 83702.)
- OF 94-0375. MONTANA. Water-quality, bed-sediment, and biological data (October 1992 through September 1993) and statistical summaries of water-quality data (March 1985 through September 1993) for streams in the upper Clark Fork Basin, Montana, by J. H. Lambing, M. I. Hornberger, E. V. Axtmann and D. A. Pope. Prepared in cooperation with the U.S. Environmental Protection Agency. 1994. 85 p. (NC, Da, M, Wb; USGS, WRD, 428 Federal Bldg., 301 South Park, Helena, MT 59626-0076; and Eastern Montana Coll., 1500 North 30th, Billings, MT 59101.)
- OF 94-0376. Concentrations and mass transport of pesticides and organic contaminants in the Mississippi River and some of its tributaries, 1987-89 and 1991-92, by W. E. Pereira, J. A. Moody, F. D. Hostettler, C. E. Rostad and T. J. Leiker. 1995. 169 p. (NC, Da, M, Wb.)
- OF 94-0377. NEW MEXICO. Hydrologic data for the Puerco River basin, western New Mexico, October 1, 1991, through September 30, 1992, by R. L. Gold and D. R. Rankin. Prepared in cooperation with the Arizona Department of Environmental Quality and the New Mexico Environment Department. 1994. 33 p. (NC, Da, M, Wb, U; USGS, WRD, Suite 300, 4501 Indian School Rd. NE, Albuquerque, NM 87110.)
- OF 94-0378. Biomonitoring our streams, by T. D. Byl and G. F. Smith. Prepared in cooperation with the University of Tennessee, Agricultural Extension Service. 1994. 2 p. (NC, Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville, TN 37203; 1013 North Broadway, Knoxville, TN 37917; and AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)
- OF 94-0379. NORTH CAROLINA. Water-quality data for selected North Carolina streams and reservoirs in the Triangle Area Water Supply Monitoring Project, 1988-92, by R. G. Garrett, J. E. Taylor and T. L. Middleton. Prepared in cooperation with the Triangle Area Water Supply Monitoring Project Steering Committee and the North Carolina Department of Environment, Health, and Natural Resources. 1994. 255 p. (NC, Da, M, Wb.)
- OF 94-0381. PENNSYLVANIA. Hydrologic data for northern Bucks County, Pennsylvania, by C. L. Schreffler, B. C. McManus, C. J. Rowland-Lesitsky and R. A. Sloto. Prepared in cooperation with Bridgeton, Buckingham, Nockamixon, Plumstead, Solebury, Springfield, Tinicum, and Wrightstown townships and New Hope Borough. 1994. 90 p., 1 over-size sheet, scale 1:50,000 (1 inch = about 4,200 feet). (NC, Da, M, Wb; USGS, WRD, 111 Great Valley Pkwy., Malvern, PA 19355.)
- OF 94-0382. A workbook for preparing surface water quality-assurance plans for districts of the U.S. Geological Survey, Water Resources Division, by D. V. Arvin. 1995. 40 p. (NC, Da, M, Wb; USGS, WRD, 5957 Lakeside Blvd., Indianapolis, IN 46278-1996.)
- OF 94-0383. COLORADO. Summary of water-resources activities of the U.S. Geological Survey in Colorado; fiscal years 1992-93. 1994. 56 p., 1 over-size sheet, scale 1:1,000,000 (1 inch = about 16 miles). (NC, Da, M, Wb, U.)
- OF 94-0384. MASSACHUSETTS. Hydrologic and chemical data from an experiment to examine temporal variability in water samples from screened wells on Cape Cod, Massachusetts, edited by T. E. Reilly. 1994. 34 p. (NC, Da, M, Wb.)
- Experimental design, by T. E. Reilly and D. R. LeBlanc. p. 2.
- Well and multilevel-sampler installation, by S. P. Coppola and D. R. LeBlanc. p. 2-5.
- Distribution of hydraulic conductivity, by K. M. Hess. p. 5-6.
- Well pumping system and measurement of pumping rate and water levels, by D. R. LeBlanc, P. L. Provencher, S. A. Boutilier and T. E. Reilly. p. 6.
- Measurement of specific conductance and pH, by D. R. LeBlanc and T. E. Reilly. p. 7-8.
- Chemical analysis of ferrous iron, by K. W. Bussey and D. B. Kent. p. 8.
- Chemical analyses of boron, calcium, iron, magnesium, manganese, phosphorus, potassium, sodium, and zinc, by L. D. Anderson. p. 9.
- Chemical analyses of nitrous oxide, ammonium, nitrate and nitrite, by M. H. Brooks. p. 9-10.
- Chemical analyses of chloride, by R. L. Van Hoven and R. A. Williams. p. 10.
- OF 94-0385. SOUTH CAROLINA. Hydrologic data collection at Crowders Creek and Steel Creek, York County, South Carolina, 1991-92, by J. W. Gissendanner. Prepared in cooperation with York County Planning and Development Board. 1994. 18 p. (NC, Da, M, Wb.)
- OF 94-0387. OKLAHOMA, TEXAS. Steady-state simulation of ground-water flow in the Blaine Aquifer, southwestern Oklahoma and northwestern Texas, by D. L. Runkle and J. S. McLean. Prepared in cooperation with the Oklahoma Water Resources Board and the Oklahoma Geological Survey. 1995. 92 p., one 3 1/2 inch DS/HD IBM compatible diskette. (NC, Da, M, Wb.)
- OF 94-0388. Global energy and water cycle experiment (GEWEX) continental-scale international project (GCIP); reference data sets CD-ROM, by A. H. Rea and J. R. Cederstrand. 1995. One CD-ROM. (NC, Da, M, Wb.)
- OF 94-0390. MARYLAND. Potentiometric surface of the Aquia Aquifer in southern Maryland, September 1993, by S. E. Curtin, F. K. Mack and D. C. Andreasen. Prepared in cooperation with the Maryland Geological Survey and the Maryland Tidewater

- Administration. 1994. 1 p. (NC, Da, M, Wb; USGS, WRD, 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21286; and Tawes State Office Bldg., E-2, 580 Taylor Ave., Annapolis, MD 21401.)
- OF 94-0391. MARYLAND. Potentiometric surface of the Magothy Aquifer in southern Maryland, September 1993, by S. E. Curtin, F. K. Mack and D. C. Andreasen. Prepared in cooperation with the Maryland Geological Survey and the Maryland Tidewater Administration. 1994. 1 p. (NC, Da, M, Wb; USGS, WRD, 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21286; and Tawes State Office Bldg., E-2, 580 Taylor Ave., Annapolis, MD 21401.)
- OF 94-0392. MARYLAND. Potentiometric surface of the upper Patapsco Aquifer in southern Maryland, September 1993, by S. E. Curtin, F. K. Mack and D. C. Andreasen. Prepared in cooperation with the Maryland Geological Survey and the Maryland Tidewater Administration. 1994. 1 p. (NC, Da, M, Wb; USGS, WRD, 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21286; and Tawes State Office Bldg., E-2, 580 Taylor Ave., Annapolis, MD 21401.)
- OF 94-0393. MARYLAND. Potentiometric surface of the lower Patapsco Aquifer in southern Maryland, September 1993, by S. E. Curtin, F. K. Mack and D. C. Andreasen. Prepared in cooperation with the Maryland Geological Survey and the Maryland Tidewater Administration. 1994. 1 p. (NC, Da, M, Wb; USGS, WRD, 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21286; and Tawes State Office Bldg., E-2, 580 Taylor Ave., Annapolis, MD 21401.)
- OF 94-0394. MARYLAND. The difference between the potentiometric surfaces of the Aquia Aquifer of September 1982 and September 1993 in southern Maryland, by S. E. Curtin, F. K. Mack and D. C. Andreasen. Prepared in cooperation with the Maryland Geological Survey and the Maryland Tidewater Administration. 1994. 1 p. (NC, Da, M, Wb; USGS, WRD, 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21286; and Tawes State Office Bldg., E-2, 580 Taylor Ave., Annapolis, MD 21401.)
- OF 94-0395. MARYLAND. The difference between the potentiometric surfaces of the Magothy Aquifer of September 1975 and September 1993 in southern Maryland, by S. E. Curtin, F. K. Mack and D. C. Andreasen. Prepared in cooperation with the Maryland Geological Survey and the Maryland Tidewater Administration. 1994. 1 p. (NC, Da, M, Wb; USGS, WRD, 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21286; and Tawes State Office Bldg., E-2, 580 Taylor Ave., Annapolis, MD 21401.)
- OF 94-0396. Concentrations of selected herbicides, two triazine metabolites, and nutrients in storm runoff from nine stream basins in the Midwestern United States, 1990-92, by E. A. Scribner, D. A. Goolsby, E. M. Thurman, M. T. Meyer and M. L. Pomes. 1994. 144 p. (NC, Da, M, Wb.)
- OF 94-0398. NEW HAMPSHIRE. Inventory of wells near former waste-disposal site, Nashua, New Hampshire, June 1993, by S. M. Flanagan. Prepared in cooperation with the U.S. Environmental Protection Agency. 1994. 9 p. (NC, Da, M, Wb; USGS, WRD, 525 Clinton St., Bow, NH 03304.)
- OF 94-0399. Regional estimates of the amount of U.S. agricultural land located in watersheds with poor water quality, by R. A. Smith, G. E. Schwarz and R. B. Alexander. 1994. 24 p. (NC, Da, M, Wb.)
- OF 94-0403. WASHINGTON. Preliminary geologic map of the Mount Baker 30- by 60-minute Quadrangle, Washington, by R. W. Tabor, R. A. Haugerud, D. B. Booth and E. H. Brown. Prepared in cooperation with the Washington State Department of Natural Resources, Division of Geology and Earth Resources. 1994. 60 p., 2 over-size sheets; sheet 1, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M, S; Washington DNR/Geol. and Earth Resources Library, 1111 Washington St. SE, Olympia, WA 98501.)
- OF 94-0405. Analytical data-management systems; 1, Data management strategy for geological databases, by J. T. O'Connor. 1994. 33 p. (NC, Da, M.)
- OF 94-0406. Analytical data-management systems; 2, Normalization, atomicity, and structure of geosciences data, by J. T. O'Connor. 1994. 19 p. (NC, Da, M.)
- OF 94-0410. VERMONT, NEW HAMPSHIRE. Preliminary bed-rock geologic map of parts of the Lower Waterford, Concord, Littleton, and Miles Pond 7 1/2-minute quadrangles, Vermont and New Hampshire, by D. W. Rankin. 1994. 28 p., 3 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC.)
- OF 94-0412. COLORADO. Geochemical and lead-isotopic studies of river and lake sediments, upper Arkansas River basin, Twin Lakes to Pueblo, Colorado, by S. E. Church, S. A. Wilson, R. B. Vaughn and D. L. Fey. 1994. 44 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 94-0417. UTAH. Solution-collapse breccia pipes of Spanish Valley, southeastern Utah, by G. W. Weir, W. P. Puffett and C. L. Dodson. 1994. 33 p., 1 over-size sheet. (NC, Da, M, U; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1491.)
- OF 94-0430. MISSOURI, ARKANSAS. Geologic map of the Harrison 1° x 2° Quadrangle, Missouri and Arkansas, by M. A. Middendorf, K. C. Thomas, C. E. Robertson, J. W. Whitfield, E. E. Glick, W. V. Bush, B. R. Haley and J. D. McFarland, III. Prepared in cooperation with the Missouri Department of Natural Resources, Division of Geology and Land Survey, and the Arkansas Geological Commission. 1994. 15 p., 1 over-size sheet, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M; Missouri Geol. Surv., P.O. Box 250, 111 Fairgrounds Rd., Rolla, MO 65401; Arkansas Geol. Commission, 3815 West Roosevelt Rd., Little Rock, AR 72204.)
- OF 94-0437. COLORADO. Proterozoic geology of the western and southeastern Needle Mountains, Colorado; field trip guidebook, by D. A. Gonzales, C. M. Conway, J. A. Ellingson and J. A. Campbell. 1994. 79 p., 2 over-size sheets; sheet 1, scale 1:15,000 (1 inch = about 1,300 feet); sheet 2, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203.)
- The Needle Mountains Proterozoic complex; a summary, by D. A. Gonzales and C. M. Conway. p. 31-50.
- Are there other Precambrian conglomerates in the San Juan Mountains?, by J. A. Campbell. p. 51-54.
- OF 94-0443. IDAHO. Analytical results, sample locality map, geochemical maps, and histograms for samples from the Stibnite

- Mill tailings pond, Stibnite, Valley County, Idaho, by H. D. King, R. T. Hopkins and G. C. Curtin. 1994. 24 p. (NC, Da, M, U, S; Idaho Geol. Surv., Univ. of Idaho Campus, Morrill Hall, Room 332, Moscow, ID 83843.)
- OF 94-0444. CALIFORNIA. Aeromagnetic map of Cape Mendocino and vicinity, North Carolina. 1994. 1 over-size sheet, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0445. Cores collected in Lake Baikal, Siberia, by the U.S. Geological Survey, 1990 to 1992; visual descriptions, photographs, X-radiographs, bulk-density measurements, and grain-size analyses, by S. M. Colman, S. J. Carter, Josephine Hatton and B. J. Haskell. 1994. 101 p. (NC, Da, M.)
- OF 94-0447. MINNESOTA. Graphic lithologic and alteration logs from diamond drill holes on and near the Red Lake Indian Reservation lands in the International Falls, Roseau, and Bimidi 1°x2° quadrangles, northern Minnesota, by T. L. Klein. 1994. 70 p. (NC, Da, M.)
- OF 94-0450. ARKANSAS. Geochemical data of drill core samples of carbonatites and associated igneous rocks, Benton, Arkansas, by M. J. Flohr and J. M. Howard. 1994. 21 p. (NC, Da, M.)
- OF 94-0451. NEVADA. Summary of lithologic logging of new and existing boreholes at Yucca Mountain, Nevada, March 1994 to June 1994, by J. K. Geslin and T. C. Moyer. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1995. 16 p. (NC, Da, M, Wb, U; USGS, WRD, Yucca Mountain Project, Bldg. 53, Denver Federal Ctr., Mail Stop 421, Box 25046, Denver, CO 80225-0046; Room H-2313, 2d Floor, Bldg. 53, Denver Federal Ctr., Mail Stop 415, Box 25046, Denver, CO 80225-0046.)
- OF 94-0452. MISSISSIPPI. Water resources activities of the Mississippi District, 1993-94, by C. P. Moss. 1994. 24 p. (NC, Da, M, Wb.)
- OF 94-0454. NORTH CAROLINA. Simulation of hydrodynamics and solute transport in the Pamlico River estuary, North Carolina, by J. D. Bales and J. C. Robbins. Prepared in cooperation with the North Carolina Department of Environment, Health, and Natural Resources, Albemarle-Pamlico Estuarine Study. 1995. 85 p. (NC, Da, M, Wb; USGS, WRD, 3916 Sunset Ridge Rd., Raleigh, NC 27607.)
- OF 94-0455. Field guide for collecting and processing stream-water samples for the National Water-Quality Assessment Program, by L. R. Shelton. 1994. 42 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 7535 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 94-0456. NEVADA. Meteorological, stream-discharge, and water-quality data for water year 1992 from two basins in central Nevada, by P. W. McKinley and T. A. Oliver. Prepared in cooperation with the U.S. Department of Energy. 1995. 56 p. (NC, Da, M, Wb.)
- OF 94-0457. FLORIDA. Computation of the time-varying flow rate from an artesian well in central Dade County, Florida, by analytical and numerical simulation methods, by M. L. Merritt. Prepared in cooperation with the Metro-Dade County Department of Environmental Resources Management. 1995. 47 p. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301; Suite 107, 9100 NW 36 St., Miami, FL 33178; Suite 1006, 224 West Central Pkwy., Altamonte Springs, FL 32714; and Suite B-5, 4710 Eisenhower Blvd., Tampa, FL 33634-6381.)
- OF 94-0458. Guidelines for collecting and processing samples of stream bed sediment for analysis of trace elements and organic contaminants for the National Water-Quality Assessment Program, by L. R. Shelton and P. D. Capel. 1994. 20 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 94-0459. User's manual for SEDCALC, a computer program for computation of suspended-sediment discharge, by G. F. Koltun, J. R. Gray and T. J. McElhone. 1994. 9 p. (NC, Da, M, Wb; USGS, WRD, 975 West 3rd Ave., Columbus, OH 43212.)
- OF 94-0460. NEVADA. Lithostratigraphy of the Calico Hills Formation and Prow Pass Tuff (Crater Flat Group) at Yucca Mountain, Nevada, by T. C. Moyer and J. K. Geslin. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1995. 59 p. (NC, Da, M, Wb.)
- OF 94-0463. Source code and ancillary data files for the MODPATH particle tracking package of the ground-water flow model MODFLOW; version 3, release 1, by D. W. Pollock. 1994. 6 p., two 3 1/2 inch DS/HD IBM compatible diskettes. (NC, Da, M, Wb.)
- OF 94-0464. User's guide for MODPATH/MODPATH-PLOT, version 3; a particle tracking post-processing package for MODFLOW, the U.S. Geological Survey finite-difference ground-water flow model, by D. W. Pollock. 1994. 249 p. (NC, Da, M, Wb.)
- OF 94-0465. Aquifer descriptions from the U.S. Geological Survey Regional Aquifer-System Analysis Program, 1978-1993, compiled by C. B. Davidson, *with a section on Use of the aquifer database* by H. B. Doherty. 1994. 22 p., one 3 1/2 inch DS/HD diskette. (NC, Da, M, Wb.)
- This report contains aquifer text and documentation on a 3 1/2 inch, 1.4MB distribution diskette. The data file AQUIFER.LZH on the diskette is in compressed ASCII and binary format. A data decompression program LHA.EXE and a help file LHA.HLP have been included on the diskette. The data are also available through the Internet following directions contained in the report. The minimum system requirements to use the data with the software provided on this disk are as follows: an IBM or compatible personal computer with 640K RAM; MS- or PC-DOS version 3.0 or later; a hard disk drive; a color monitor.
- OF 94-0466. WYOMING. Ground-water levels in Wyoming, 1984 through September 1993, by H. I. Kennedy and S. L. Green. 1994. 123 p. (NC, Da, M, Wb; USGS, WRD, 2617 East Lincolnway, Suite B, Cheyenne, WY 82001; 2020 Fairgrounds Rd., Suite 102, Casper WY 82604; and 1225 Market St., Riverton, WY 82501.)

- OF 94-0467. State water-data reports; hydrologic records of the United States water years 1990, 1991, 1992, and 1993, by D. F. Alt. 1994. One CD-ROM. (NC, Da, M, Wb.)
- OF 94-0468. A data input program (MFI) for the U.S. Geological Survey modular finite-difference ground-water flow model, by A. W. Harbaugh. 1994. 24 p. (NC, Da, M, Wb.)
- OF 94-0470. CALIFORNIA. Particulate carbon and nitrogen and suspended particulate matter in the Sacramento River at Rio Vista, California, January 3-May 26, 1983 and October 31, 1983-November 29, 1984, by S. W. Hager. 1994. 35 p. (NC, Da, M, Wb.)
- OF 94-0471. CALIFORNIA. Dissolved nutrient and suspended particulate matter data for the San Francisco Bay estuary, California, October 1991 through November 1993, by S. W. Hager. 1994. 53 p. (NC, Da, M, Wb.)
- OF 94-0472. NEW YORK, VERMONT. Geochemical data on concentrations of inorganic constituents and polychlorinated biphenyl congeners in streambed sediments in tributaries to Lake Champlain, in New York, Vermont, and Quebec, 1992, by J. A. Coleman and S. F. Clark. 1994. 65 p. (NC, Da, M, Wb.)
- OF 94-0473. A selected bibliography of references on geology, hydrology, and geochemistry of the Midwestern Basins and Arches region; Ohio, Indiana, Michigan, and Illinois, by Anthony Robinson and E. F. Bugliosi. 1994. 38 p. (NC, Da, M, Wb; USGS, WRD, 975 West 3rd Ave., Columbus OH 43212.)
- OF 94-0474. Hydrologic and sedimentologic data collected during three cruises on the Mississippi River and some of its tributaries from Minneapolis, Minnesota to New Orleans, Louisiana, July 1991-May 1992, by J. A. Moody and R. H. Meade. 1995. 159 p. (NC, Da, M, Wb.)
- OF 94-0475. VERMONT. Water, energy, and biogeochemical budget research at Sleepers River Research Watershed, Vermont, by J. B. Shanley, E. T. Sundquist and Carol Kendall. 1995. 22 p. (NC, Da, M, Wb; USGS, WRD, 525 Clinton St., Bow, NH 03304.)
- OF 94-0476. ARIZONA. Summary of ground-water conditions in Arizona, 1987-90, by D. W. Anning and N. R. Duet. Prepared in cooperation with the Arizona Department of Water Resources. 1994. 2 over-size sheets; sheet 2, scale 1:1,000,000 (1 inch=about 16 miles.) (NC, Da, M, Wb; USGS, WRD, 375 South Euclid Ave., Tucson, AZ 85719-6644; 1545 West University Dr., Tempe, AZ 85281; 1940 South 3rd Ave., Yuma, AZ 85364; and 2255 North Gemini Dr., Bldg. 3, Flagstaff, AZ 86001.)
- OF 94-0478. MINNESOTA. Ground-water baseflow to the upper Mississippi River upstream of the Minneapolis-St. Paul area, Minnesota during July 1988, by G. A. Payne. Prepared in cooperation with the U.S. Army Corps of Engineers. 1995. 28 p. (NC, Da, M, Wb.)
- OF 94-0481. ALASKA. Overview of environmental and hydrogeologic conditions at Saint Marys, Alaska, by A. S. Nakanishi and J. M. Dorava. Prepared in cooperation with the Federal Aviation Administration. 1994. 26 p. (NC, Da, M, Wb, A, S; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775; and P.O. Box 21568, Juneau, AK 99802.)
- OF 94-0482. ALASKA. Overview of environmental and hydrogeologic conditions at Dillingham, Alaska, by B. B. Palcasak and J. M. Dorava. Prepared in cooperation with the Federal Aviation Administration. 1994. 15 p. (NC, Da, M, Wb, A, S; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775; and P.O. Box 21568, Juneau, AK 99802.)
- OF 94-0483. TENNESSEE. Ground-water use by public-supply systems in Tennessee in 1990, by S. S. Hutson. Prepared in cooperation with the Tennessee Department of Environment and Conservation, Division of Water Supply. 1995. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville, TN 37203; 1013 North Broadway, Knoxville, TN 37917; and 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)
- OF 94-0485. ARIZONA. Water-level fluctuations, water temperatures, and tilts in sandbars -6.5R, 43.1L, and 172.3L, Grand Canyon, Arizona, 1990-93, by M. C. Carpenter, J. A. Crosswhite and R. L. Carruth. Prepared in cooperation with the U.S. Bureau of Reclamation. 1995. 17 p. (NC, Da, M, Wb; 375 South Euclid Ave., Tucson, AZ 85719; 1545 West University Dr., Tempe, AZ 85281; 1940 South 3rd Ave., Yuma, AZ 85364; and 2255 North Gemini Dr., Flagstaff, AZ 86001.)
- OF 94-0486. SOUTH CAROLINA. Reconnaissance investigations of potential ground-water and sediment contamination at three former underground storage tank locations, Fort Jackson, South Carolina, 1994, by J. F. Robertson, D. D. Nagle and L. C. Rhodes. Prepared in cooperation with the U.S. Army Corps of Engineers. 1994. 20 p. (NC, Da, M, Wb; USGS, WRD, Stephenson Ctr., Suite 129, 720 Gracern Rd., Columbia, SC 29210-7651.)
- OF 94-0487. SOUTH CAROLINA. Ground-water and precipitation data for South Carolina, 1990, by P. A. Conrads, K. H. Jones and W. J. Stringfield. Prepared in cooperation with the South Carolina Department of Natural Resources, Water Resources Division. 1994. 137 p. (NC, Da, M, Wb; USGS, WRD, Stephenson Ctr., Suite 129, 720 Gracern Rd., Columbia, SC 29210-7651.)
- OF 94-0488. MINNESOTA. Physical characteristics of stream subbasins in the Chippewa River basin, west-central Minnesota, by C. A. Sanocki and J. R. Krumrie. 1994. 16 p., 1 over-size sheet. (NC, Da, M, Wb.)
- OF 94-0489. NEVADA. Selected meteorological data for an arid site near Beatty, Nye County, Nevada, calendar years 1990 and 1991, by J. L. Wood and B. J. Andraski. 1995. 49 p. (NC, Da, M, Wb, U; USGS, WRD, 333 West Nye Lane, Carson City, NV 89706-0866; and 6770 South Paradise, Las Vegas, NV 89119-3721.)
- OF 94-0490. Report of the Interagency biological methods workshop, edited by M. E. Gurtz and T. A. Muir. 1994. 85 p. (NC, Da, M, Wb; USGS, WRD, 3916 Sunset Ridge Rd., Raleigh, NC 27607.)
- OF 94-0491. NEVADA. Meteorological data for four sites at surface-disruption features in Yucca Flat, Nevada Test Site, Nye County, Nevada, 1985-86, by R. L. Carman. Prepared in cooperation with the U.S. Department of Energy. 1994. 43 p. (NC, Da, M, Wb, U; USGS, WRD, 333 West Nye Lane, Carson City,

- NV 89706-0866; 6770 South Paradise, Las Vegas, NV 89119-3721; and 275 3rd St., Federal Bldg. Room 10, Elko, NV 89801.)
- OF 94-0493. ILLINOIS. Water-resources activities of the U.S. Geological Survey in Illinois, 1993, compiled by G. O. Balding. 1994. 86 p. (NC, Da, M, Wb.)
- OF 94-0494. CALIFORNIA. Data from the Woodland land-subsidence monitoring station, Yolo County, California, water years 1988-92, by M. E. Ikehara. Prepared in cooperation with the California Department of Water Resources. 1995. 77 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 94-0495. FLORIDA. Potentiometric surface of the upper Floridan Aquifer in the St. Johns River Water Management District and vicinity, Florida, May 1994, by D. M. Schiffer, A. M. O'Reilly, G. G. Phelps, L. A. Bradner, K. J. Halford and R. M. Spechler. Prepared in cooperation with the St. Johns River Water Management District, South Florida Water Management District, and Southwest Florida Water Management District. 1994. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301; Suite 1006, 224 West Central Pkwy., Altamonte Springs, FL 32714.)
- OF 94-0496. NEBRASKA. A selected bibliography on the hydrology of the Platte River basin in Nebraska through 1991, by Melissa Hardgree and J. A. McChesney. Prepared in cooperation with the U.S. Environmental Protection Agency. 1995. 80 p. (NC, Da, M, Wb; USGS, WRD, 4821 Quail Crest Pl., Lawrence, KS 66049; Room 406 Federal Bldg., 100 Centennial Mall North, Lincoln, NE 68508; 206 Fulton Terrace, Garden City KS 67846; and 415 South Main, Wichita, KS 67202.)
- OF 94-0497. KANSAS. Concentrations of triazine herbicides in the unsaturated zone in western Harvey County, Kansas, spring and fall 1992-93, by K. E. Juracek. Prepared in cooperation with the Harvey County Conservation District. 1994. 23 p. (NC, Da, M, Wb, USGS, WRD, 4821 Quail Crest Pl., Lawrence, KS, 66049; 206 Fulton Terrace, Garden City, KS 67846; and 415 South Main, Wichita, KS 67202.)
- OF 94-0499. NEW JERSEY. Flood magnitude and frequency of Pochack Creek at two sites, at Pennsauken Township, New Jersey, by Paul Dunne. Prepared in cooperation with the New Jersey Department of Transportation. 1994. 11 p. (NC, Da, M, Wb; USGS, WRD, Mountain View Office Park, 810 Bear Tavern Rd., Suite 206, West Trenton, NJ 08628.)
- OF 94-0500. NEW JERSEY. Flood magnitude and frequency of Chandlers Run at two sites, at Pennsauken Township, New Jersey, by Paul Dunne. Prepared in cooperation with the New Jersey Department of Transportation. 1994. 12 p. (NC, Da, M, Wb; USGS, WRD, Mountain View Office Park, 810 Bear Tavern Rd., Suite 206, West Trenton, NJ 08628.)
- OF 94-0501. A Fortran coding convention for use in the U.S. Geological Survey, Water Resources Division, by K. M. Flynn, J. L. Kittle, Jr. and A. M. Lumb. 1994. 64 p. (NC, Da, M, Wb.)
- OF 94-0503. IDAHO. Radionuclides, stable isotopes, inorganic constituents, and organic compounds in water from selected wells and springs from the southern boundary of the Idaho National Engineering Laboratory to the Hagerman area, Idaho, 1993, by R. C. Bartholomay, D. D. Edwards and L. J. Campbell. Prepared in cooperation with the U.S. Department of Energy and Idaho Department of Water Resources. 1994. 35 p. (NC, Da, M, Wb; USGS, 230 Collins Rd., Boise, ID 83702.)
- OF 94-0504. OKLAHOMA. Hydrologic data for the alluvium and terrace deposits of the Cimarron River from Freedom to Guthrie, Oklahoma, by G. P. Adams, D. L. Bergman, D. J. Pruitt, J. E. May and J. K. Kurklin. Prepared in cooperation with the Oklahoma Geological Survey. 1994. 231 p. (NC, Da, M, Wb.)
- OF 94-0505. OREGON, WASHINGTON. Simulation of the ground-water flow system in the Portland Basin, Oregon and Washington, by D. S. Morgan and W. D. McFarland. Prepared in cooperation with the Oregon Water Resources Department, City of Portland Bureau of Water Works, and Intergovernmental Resource Center. 1994. 85 p., 9 over-size sheets; sheet 1, scale 1:250,000 (1 inch = about 4 miles); sheets 2-9, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M, Wb.)
- OF 94-0506. Pesticides in the atmosphere; distribution, trends, and governing factors, by M. S. Majewski and P. D. Capel. 1995. 191 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 94-0507. MARYLAND. Ground-water flow, geochemistry, and effects of agricultural practices on nitrogen transport at study sites in the Piedmont and Coastal Plain physiographic provinces, Patuxent River basin, Maryland, by E. R. McFarland. Prepared in cooperation with the Maryland Department of the Environment. 1995. 78 p. (NC, Da, M, Wb; USGS, WRD, 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21286.)
- OF 94-0508. ARIZONA. Hydrologic data from the study of acidic contamination in the Miami Wash-Pinal Creek area, Arizona, water years 1992-93, by D. J. Gellenbeck and Y. R. Hunter. 1994. 103 p. (NC, Da, M, Wb; USGS, WRD, 375 South Euclid Ave., Tucson, AZ 85719; 1545 West University Dr., Tempe, AZ 85281; 1940 South 3rd Ave., Yuma, AZ 85364; and 2255 North Gemini Dr., Bldg. 3, Flagstaff, AZ 86001.)
- OF 94-0509. NORTH CAROLINA. Hydrologic, water-quality, and meteorologic data from selected sites in the upper Catawaba River basin, North Carolina, January 1993 through March 1994, by M. L. Jaynes. Prepared in cooperation with the Western Piedmont Council of Governments. 1994. 77 p. (NC, Da, M, Wb; USGS, WRD, 3916 Sunset Ridge Rd., Raleigh, NC 27609.)
- OF 94-0511. NORTH CAROLINA. Simulation of hydrodynamics and solute transport in the Neuse River estuary, North Carolina, by J. C. Robbins and J. D. Bales. Prepared in cooperation with the North Carolina Department of Environment, Health, and Natural Resources, Albemarle-Pamlico Estuarine Study. 1995. 85 p. (NC, Da, M, Wb; USGS, WRD, 3916 Sunset Ridge Rd., Raleigh, NC 27607.)
- OF 94-0512. ALASKA. Observations of the surge-type Black Rapids Glacier, Alaska, during a quiescent period, 1970-92, by T. A. Heinrichs, L. R. Mayo, D. C. Trabant and R. S. March. 1995. 125 p., one 3 1/2 inch diskette. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775; and P.O. Box 21568, Juneau, AK 99802.)

3 1/2 inch DS/HD IBM diskette. DOS 6.0, ASCII and Lotus version 2.01 formats.

OF 94-0514. WASHINGTON. Using chloride and chlorine-36 as soil-water tracers to estimate deep percolation at selected locations on the U.S. Department of Energy Hanford Site, Washington, by E. A. Prych. 1995. 125 p. (NC, Da, M, Wb; USGS, WRD, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402-4384.)

OF 94-0515. ILLINOIS. Well-construction, hydrogeologic, and ground-water-quality data in the vicinity of Belvidere, Boone County, Illinois, by T. A. Brown and P. C. Mills. 1994. 33 p., 3 over-size sheets, one 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da, M, Wb; USGS, WRD, 102 East Main St., 4th Floor, Urbana, IL 61801.)

OF 94-0520. GEORGIA. Selected ground-water data, and results of aquifer tests for the upper Floridan Aquifer, Brunswick, Glynn County, Georgia, area, by L. E. Jones and M. L. Maslia. Prepared in cooperation with the City of Brunswick, Glynn County. 1994. 107 p. (NC, Da, M, Wb; USGS, WRD, 3039 Amwiler Rd., Suite 130, Atlanta, GA 30360-2824.)

OF 94-0522. NORTH CAROLINA. Estimated water use, by county, in North Carolina, 1990, by Silvia Terziotti, T. P. Schrader and M. W. Treece, Jr. Prepared in cooperation with the North Carolina Department of Environment, Health, and Natural Resources, Division of Water Resources. 1994. 102 p. (NC, Da, M, Wb; USGS, WRD, 3916 Sunset Ridge Rd., Raleigh, NC 27607.)

OF 94-0525. ALASKA. Overview of environmental and hydrogeologic conditions at Galena, Alaska, by A. S. Nakanishi and J. M. Dorava. Prepared in cooperation with the Federal Aviation Administration. 1994. 172 p. (NC, Da, M, Wb; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and P.O. Box 21568, Juneau, AK 99802.)

OF 94-0526. ALASKA. Overview of environmental and hydrogeologic conditions at Fort Yukon, Alaska, by A. S. Nakanishi and J. M. Dorava. Prepared in cooperation with the Federal Aviation Administration. 1994. 126 p. (NC, Da, M, Wb; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and P.O. Box 21568, Juneau, AK 99802.)

OF 94-0527. ALASKA. Overview of environmental and hydrogeologic conditions at Tanana, Alaska, by A. S. Nakanishi and J. M. Dorava. Prepared in cooperation with the Federal Aviation Administration. 1994. 177 p. (NC, Da, M, Wb; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and P.O. Box 21568, Juneau, AK 99802.)

OF 94-0528. FLORIDA. Potentiometric surface of the upper Floridan aquifer system, west-central Florida, May 1994, by P. A. Metz and D. L. Brendle. Prepared in cooperation with the Southwest Florida Water Management District. 1994. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301; and Suite B-5, 4710 Eisenhower Blvd., Tampa, FL 33614.)

OF 94-0529. FLORIDA. Potentiometric surface of the intermediate aquifer system, west-central Florida, May 1994, by P. A. Metz and D. L. Brendle. Prepared in cooperation with the Southwest

Florida Water Management District. 1994. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301; and Suite B-5, 4710 Eisenhower Blvd., Tampa, FL 33614.)

OF 94-0531. Proceedings of a U.S. Geological Survey workshop on the Application and needs of submersible pressure sensors, Denver, Colorado, June 7-10, 1994, compiled by K. J. Hollett, S. L. Wilbourn and V. J. Latkovich. 1994. 53 p.

Conversion of transducer data to water levels using the National Water Information Systems (NWIS), by D. J. Burkhardt. p. 3-4.

High-accuracy measurements with inexpensive pressure sensors; assembly, calibration and use, by M. C. Carpenter. p. 5-9.

Geohydrologic data collection using Design Analysis model H-300 submersible pressure transducers at Edwards Air Force Base, California, by L. A. Freeman. p. 11-14.

Accuracy of pressure transducer readings, 1991 to 1992, Black Swamp, eastern Arkansas, by G. J. Gonthier. p. 15-20.

Monitoring of specific conductance and ground-water level fluctuations in a municipal wellfield, Pinellas County, Florida, by R. A. Mularoni. p. 21.

Possible designs and installation of submersible pressure transducers for use during floods, by N. C. Myers. p. 23-25.

Equipment and procedures for monitoring deep water levels at Yucca Mountain, Nevada, by G. M. O'Brien. p. 27-29.

Problems associated with the H-300-30 pressure transducer, by Keith Overton. p. 31-35.

Installation of the Paroscientific submersible transducer, by A. W. Records. p. 37-38.

Current-mode operation of a silicon diaphragm pressure transducer for measuring pneumatic pressure, by J. P. Rousseau. p. 39-40.

Evaluation of digital pressure sensors used to measure water levels at the Nevada Test Site, Nye County, Nevada, by R. W. Unger. p. 41.

Correction of water-level data from a submersible pressure transducer collected using erroneous transducer coefficients, by K. R. Watts. p. 43-46.

Pressure transducers used in monitoring ground water levels for the Central Valley Aquifer Project at the Zamora well site, Yolo County, California, by M. D. Webster. p. 47.

OF 94-0536. MONTANA. Records of water levels in monitoring wells in the Gallatin Valley, southwestern Montana, 1947-93, by S. E. Slagle. Prepared in cooperation with the Montana Bureau of Mines and Geology. 1995. 41 p. (NC, Da, M, Wb, S, U; USGS, WRD, 428 Federal Bldg., 301 South Park, Helena, MT 59626-0076; and 1500 North 30th St., Billings, MT 59101.)

OF 94-0537. ARKANSAS. Water-quality reconnaissance and streamflow gain and loss of Yocum Creek basin, Carroll County, Arkansas, by R. L. Joseph and W. R. Green. Prepared in cooperation with the Arkansas Soil and Water Conservation Commission. 1994. 14 p. (NC, Da, M, Wb.)

- OF 94-0538. MISSOURI. Water-resources activities of the U.S. Geological Survey in Missouri, 1993-94, compiled by K. L. Jenkins-Bartle and F. D. Headrick. 1995. 101 p. (NC, Da, M, Wb.)
- OF 94-0539. U.S. Geological Survey protocol for the collection and processing of surface-water samples for the subsequent determination of inorganic constituents in filtered water, by A. J. Horowitz, C. R. Demas, K. K. Fitzgerald, T. L. Miller and D. A. Rickert. 1994. 57 p. (NC, Da, M, Wb.)
- OF 94-0543. CALIFORNIA. Summary of suspended-solids concentration data, Central and South San Francisco Bays, California, water years 1992 and 1993, by P. A. Buchanan and D. H. Schoellhamer. Prepared in cooperation with the San Francisco Regional Water Quality Board and the U.S. Army Corps of Engineers. 1995. 15 p. (NC, Da, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2880 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 94-0544. MISSOURI. Methodology for the assessment of scour at bridge sites in Missouri, by R. J. Huizinga and L. A. Waite. Prepared in cooperation with the Missouri Highway and Transportation Department. 1994. 23 p. (NC, Da, M, Wb; USGS, WRD, 140 Independence Rd., Mail Stop 200, Rolla, MO 65401.)
- OF 94-0545. Streamflow, water-temperature, and specific-conductance data for selected streams draining into Lake Fryxell, lower Taylor Valley, Victoria Land, Antarctica, 1990-92, by Paul von Guerard, D. M. McKnight, R. A. Harnish, J. W. Gartner and E. D. Andrews. Prepared in cooperation with the National Science Foundation. 1995. 65 p., 1 over-size sheet. (NC, Da, M, Wb, U; USGS, WRD, Room H-2101, Bldg. 53, Denver Federal Ctr., Mail Stop 415, Box 25046, 80225-0046; and Norwest Bank Bldg., Suite 200, 201 West 8th St., Pueblo, CO 81003-3031.)
- OF 94-0546. NORTH DAKOTA. Climatic and lake temperature data for wetland P1, Cottonwood Lake area, Stutsman County, North Dakota, 1982-87, by R. S. Parkhurst, A. M. Sturrock, D. O. Rosenberry and T. C. Winter. 1995. 40 p. (NC, Da, M, Wb.)
- OF 94-0547. NEW MEXICO. Analytical results from an environmental investigation of six sites on Kirtland Air Force Base, New Mexico, 1993-94, by R. W. Wilcox. Prepared in cooperation with the U.S. Air Force. 1995. 55 p. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110.)
- OF 94-0551. TEXAS. Some macrofossils from the Cretaceous (Campanian) Anacacho Limestone of Texas, by W. P. Elder. 1994. 22 p. (NC, Da, M.)
- OF 94-0552. CALIFORNIA. Seismic velocities and geologic logs at seven strong-motion stations that recorded the 1989 Loma Prieta, California, earthquake; Part IV, by J. F. Gibbs and T. E. Fumal. 1994. 89 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0553. HAWAII. Volcanic activity and ground deformation hazard analysis for the Hawaii Geothermal Project environmental impact statement, by J. P. Kauahikaua, R. B. Moore and P. T. Delaney. 1994. 44 p. (NC, Da, M.)
- OF 94-0554. ARIZONA. Geologic map of the Hat Knoll Quadrangle, northern Mohave County, Arizona, by G. H. Billingsley. 1994. 14 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 94-0555. ILLINOIS. Analyses of Illinois coal and associated rock samples collected in 1975 and 1976, by C. L. Oman. 1994. 54 p. (NC, Da, M.)
- OF 94-0556. Bibliography of the World Energy Resources Program, by C. D. Masters. 1994. 10 p. (NC, Da, M.)
- OF 94-0557. Analytical results on coal samples collected from drilling activities in the Thar Desert, Sindh Province, Pakistan, by R. E. Thomas, A. A. Shah, S. A. Khan, M. A. Tagar, A. R. Memon, G. S. Lashari, Z. M. Khan, M. D. Khan, A. H. Chandio, Mohammad Anwar and M. A. Nizamani. Prepared jointly by the Geological Survey of Pakistan and the U.S. Geological Survey under the auspices of the U.S. Agency for International Development. 1994. 437 p. (NC.)
- OF 94-0558. MISSISSIPPI. Preliminary lithologic log for a stratigraphic corehole on Horn Island, Mississippi Sound, by G. S. Gohn, Juergen Reinhardt, D. S. Powars, J. S. Schindler, B. D. Stone, D. G. Queen and E. F. Cobbs. Prepared in cooperation with the U.S. National Park Service, Gulf Islands National Seashore. 1994. 39 p. (NC.)
- OF 94-0559. Undiscovered petroleum of southern South America, by John Kingston. 1994. 443 p. (NC, Da, M.)
- OF 94-0560. Probabilistic and statistical relationships between number of vehicles and number of visitors at a geologic site in a national park, by R. A. Crovelli. 1994. 14 p. (NC, Da, M, U; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1403.)
- OF 94-0563. ARIZONA. Topographic map of the Granite Park area, Grand Canyon, Arizona, by Richard Hereford and K. S. Thompson. Prepared in cooperation with the U.S. Bureau of Reclamation, Glen Canyon Environmental Studies. 1994. 1 over-size sheet, scale 1:2,000 (1 inch = 167 feet). (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 94-0564. ARIZONA. Topographic map of the Nankoweap Rapids area, Marble Canyon, Arizona, by Richard Hereford and K. S. Thompson. Prepared in cooperation with the U.S. Bureau of Reclamation, Glen Canyon Environmental Studies. 1994. 1 over-size sheet, scale 1:2,000 (1 inch = 167 feet). (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 94-0566. ARIZONA. Mineral resource assessment of undiscovered solution-collapse breccia pipe uranium deposits in the Coconino National Forest, Arizona, by J. D. Bliss and C. T. Pierson. 1994. 12 p. (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 94-0567. HAWAII. Motion of Kilauea Volcano during sustained eruption from the Puu Oo and Kupaianaha vents, 1983-1991; supplemental information, by P. T. Delaney, Asta Miklius, Thora Arnadottir, A. T. Okamura and M. K. Sako. 1994. 23 p. (NC, Da, M.)

OF 94-0568. Proceedings of the workshop on Paleoseismology, convened by C. S. Prentice, D. P. Schwartz and R. S. Yeats. 1994. 210 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

Introduction, by C. S. Prentice and D. P. Schwartz. p. 1-2.

Paleoseismology studies in Canada; a dozen years of progress, by John Adams. p. 3-4.

Near-term probability of the future Cascadia megaquake, by John Adams and Dieter Weichert. p. 5-7.

Paleoseismicity in the southern Arava Rift, Israel, by R. Amit, J. B. Harrison, Yehuda Enzel and Naomi Porat. p. 8-10.

A model for geomorphic displacements applied to hillslope development in areas of active tectonics, by J. R. Arrowsmith. p. 11-13.

Potential of a large earthquake in the Erzincan region following the 1992 Erzincan earthquake, $M=6.9$; preliminary trench study results, by A. A. Barka and S. G. Wesnousky. p. 14-15.

New data from Mahia Peninsula, New Zealand pertaining to a model of coseismic coastal uplift, by K. R. Berryman, A. G. Beu and Sarah Irwin. p. 16-17.

Quantitative approaches to event dating and constraint, by G. P. Biasi and R. J. Weldon. p. 18-20.

Paleoseismicity of the Souli Fault, Epirus, western Greece, by Mario Boccaletti, R. Caputo, D. M. Mountrakis, S. B. Pavlides and N. Zouros. p. 21-23.

The Sangamon strandline in northern San Francisco Bay and its significance for paleoseismic studies, by Glenn Borchardt. p. 24-25.

Paleoseismic data and probabilistic seismic hazard maps, Los Angeles, Orange, and Ventura counties, California, by W. A. Bryant, M. D. Petersen and C. H. Cramer. p. 26-27.

Earthquake recurrence intervals for the Alpine Fault, New Zealand, by W. B. Bull. p. 28-30.

Slip rates and earthquake hazard along the Foothills thrust belt in the southern San Francisco Bay area, by Roland Bürgmann, J. R. Arrowsmith and T. A. Dumitru. p. 31-33.

Surface rupture characteristics and slip distribution for the 16 December 1954 Fairview Peak ($M=7.2$) and Dixie Valley ($M=6.9$) earthquakes and preliminary results of paleoseismic investigations along the Fairview Peak Fault, central Nevada, by S. J. Caskey, S. G. Wesnousky and P. Zhang. p. 34.

Late Quaternary fault scarps and paleoseismology of the active basin of Mygdonia, Thessaloniki seismogenic area, northern Greece, by A. Chatzipetros and S. B. Pavlides. p. 35-37.

Investigations of active faulting in Italy; observations of surface breaking faults, by F. R. Cinti, Daniela Pantosti and Giuliana D'Addezio. p. 38.

Quaternary faulting and perspectives for paleoseismological studies in the southeastern Sierras Pampeanas, Argentina, by C.

H. Costa, M. V. Murillo, Claudio Vita Finzi and C. E. Gardini. p. 39.

Paleoseismology of Quaternary faults in the "stable" interior of Australia and North America; insight into the long-term behavior of seismogenic faults, by A. J. Crone and M. N. Machette. p. 40-42.

Trenching activity along the Digdig Fault, central Luzon, Philippines, by J. A. Daligdig, Hiroshi Sato, Takashi Nakata, N. M. Tungol and Toshio Nakamura. p. 43.

Paleoseismology along the range-front fault of Helan Shan, China, by Deng Qidong and Liao Yuhua. p. 44-45.

Paleoseismology in the northern piedmont of Tianshan Mountain, northwestern China, by Deng Qidong, Zhang Peizhen, Xu Xiwei, Yang Xiaoping, Peng Sizhen and Feng Xianye. p. 46-47.

Estimating fault rates in Great Basin, USA, by C. M. dePolo. p. 48-49.

The 1932 Cedar Mountain earthquake, central Nevada, USA; a major Basin and Range Province earthquake that had a widely distributed surface faulting pattern, by C. M. dePolo, A. R. Ramelli and J. W. Bell. p. 50-52.

Paleoearthquakes and segmentation of the active Altun Fault, by Ding Guoyu. p. 53-55.

Paleoseismological analysis of the Santa Monica-Hollywood fault system; implications for earthquake size and frequency in the northern Los Angeles Basin, by J. F. Dolan, K. E. Sieh and T. K. Rockwell. p. 56-58.

Paleoseismicity and liquefaction potential of a Sangamon marine terrace near the San Andreas Fault, Sonoma County, California, by M. J. Dwyer and Glenn Borchardt. p. 59-61.

Length-displacement profiles and rates of displacement decay on surface rupturing Basin and Range normal faults; evidence for characteristic earthquakes?, by C. H. Fenton and S. S. Olig. p. 62.

Paleoseismology in northwestern Europe; investigations of post-glacial intraplate faulting, by C. H. Fenton. p. 63-65.

Luminescence geochronology; shedding light on the timing of paleoseismic events, by S. L. Forman. p. 66-68.

Seismic potential of the capital city of Tehran (Iran), by M. Ghorashi. p. 69.

Paleoseismicity of the SW extent of the 1964 Alaskan earthquake rupture zone, eastern Aleutian Arc, Kodiak Islands, Alaska, by L. M. Gilpin, G. A. Carver and Eileen Hemphill-Haley. p. 70.

Paleoseismicity of the San Andreas Fault in the Carrizo Plain; implications for characteristic earthquakes, segmentation models and seismic hazard, by L. B. Grant. p. 71-73.

Style and rate of Quaternary deformation of the San Simeon and Hosgri fault zones, onshore and offshore south-central California, by K. L. Hanson and W. R. Lettis. p. 74-76.

Geometric structures, Holocene slip rates and paleoearthquakes along the Xidatan-Dongdattan of Kusaihu-Maqu active fault in

northern Qinghai-Xizang Plateau, by He Qunlu and Zhao Guo Guang. p. 77-78.

The characteristic earthquake revisited; geological evidence of the size and location of successive earthquakes on large faults, by Suzanne Hecker and D. P. Schwartz. p. 79-80.

Late Quaternary paleoseismicity and segmentation along the southern Lemhi Fault, southeastern Idaho, by M. A. Hemphill-Haley, T. L. Sawyer, P. L. Knuepfer, S. L. Forman and I. G. Wong. p. 81-83.

Holocene liquefaction in Quito (Ecuador); a paleoseismic record, by Christian Hibschi, Hugo Yepes, Alexandra Alvarado, Hugo Perez and Michel Sebbier. p. 84-85.

Cataclastic rocks associated with extreme crustal extension, southern Basin and Range; evidence for paleoseismicity along low-angle normal fault?, by B. E. John. p. 86-87.

Interdisciplinary evidence of paleoseismicity along the Dead Sea Rift; assumptions and reliability, by Iakov Karcz. p. 88-89.

A history of past earthquakes in the Puget Sound area recorded in Holocene sediments from Lake Washington, by R. E. Karlin and S. E. Abella. p. 90.

North Oso Canyon Fault; candidate for San Andreas parallel left lateral paleoquakes?, by B. L. Keller. p. 91.

Multiple Holocene earthquakes along the Reelfoot Fault, central New Madrid seismic zone, by K. I. Kelson, G. D. Simpson, C. C. Haraden, W. R. Lettis, R. B. VanArsdale and J. B. Harris. p. 92-93.

Holocene slip rate and recurrence of the northern Calaveras Fault at Leyden Creek, Alameda County, California, by K. I. Kelson, G. D. Simpson, W. R. Lettis, C. C. Haraden, C. R. Williams and S. C. Thompson. p. 94-95.

Studies of paleoseismology at Okushiri Island, Hokkaido, northern Japan, by Yoshihiro Kinugasa. p. 96.

Implications for the nature of rupture segmentation from paleoseismic studies of normal faults, east-central Idaho, by P. L. Knuepfer. p. 97-99.

Large pre-historic earthquake(s) in coastal San Diego County, California, by Gerry Kuhn, M. R. Legg and E. G. Frost. p. 100-103.

Active fault map of Turkey and its implication on paleoseismology, by Ismail Kescu, Fuat Saroglu and Omer Emre. p. 104.

Evidence of early Holocene earthquakes in northern Fennoscandia, by Robert Lagerbaeck. p. 105-107.

Holocene slip rate of the Hayward Fault at Union City, California, by J. J. Lienkaemper and Glenn Borchardt. p. 108-109.

Digital map and computer database of major active faults (and folds), Western Hemisphere, by M. N. Machette, K. M. Haller and R. L. Dart. p. 110-111.

A 50,000 year continuous record of earthquakes and surface ruptures in the Lisan Formation, the Dead Sea Graben, by Shmuel Marco, Amotz Agnon, Mordechai Stein and Hagai Ron. p. 112-114.

Holocene paleoseismicity and temperature clustering on the Wasatch fault zone, Utah, USA, by J. P. McCalpin and S. P. Nishenko. p. 115-117.

Variability of surficial slip in the 1992 Landers earthquake; implications for studies of prehistoric ruptures, by S. F. McGill and C. M. Rubin. p. 118-120.

The Mendocino triple junction; active faults, paleoseismicity, and rapid uplift, by D. J. Merritts and A. E. Brustolon. p. 121-123.

Paleoseismology and historical seismicity for seismic hazard assessment in Italy; examples from the Fucino and Pollino tectonic structures, by A. M. Michetti, L. Ferrelli, Leonello Serva and E. Vittori. p. 124-126.

Geological, geomorphological and geophysical evidence for paleoseismic events in western Puerto Rico, by Juan-Carlos Moya and W. R. McCann. p. 127-129.

Paleoseismology of blind thrusts through analysis of their fault-related folds, by K. J. Mueller and John Suppe. p. 130-132.

Paleoseismological behavior of sea floor active faults in Beppu Bay, Kyushu, Japan, by Takashi Nakata, Kunihiko Shimazaki, Noboru Chida, Makoto Okamura, Takashi Miyatake and Toshio Nakamura. p. 133.

A potential record of tsunamis generated by great earthquakes along the southern Cascadia subduction zone, by A. R. Nelson, H. M. Kelsey, Eileen Hemphill-Haley and R. C. Witter. p. 134-136.

Recognition of paleoearthquakes within southern Tien Shan Mountains by studying of slope disturbances, by A. A. Nikonov. p. 137.

Seismic archaeology; using human prehistory to date paleoearthquakes and assess deformation rates of active fault zones, by J. S. Noller, W. R. Lettis and G. D. Simpson. p. 138-140.

Paleoliquefaction effects as indicators of strong prehistoric earthquakes, by S. F. Obermeier. p. 141-142.

Surface faulting on the North Anatolian Fault in these two millennia, by Koji Okumura and Toshikazu Yoshioka. p. 143-144.

Preliminary interpretations of temporal surface-faulting patterns on the southern Lost River fault zone, northeastern Basin and Range Province, USA, by S. S. Olig, A. E. Gorton, J. D. Bott, I. G. Wong, P. L. Knuepfer, S. L. Forman and R. P. Smith. p. 145-147.

Late Quaternary coseismic events on the Huon Peninsula, Papua New Guinea, deduced from coral terraces, by Yoko Ota and John Chappell. p. 148.

Quaternary paleoseismology and Neogene tectonics at Yucca Mountain, Nevada, by S. K. Pezzopane, C. M. Menges and J. W. Whitney. p. 149-151.

Historical earthquakes and morpho-structural analysis; the example of south-central Italy, by L. Piccardi, Paul Tapponnier and Mario Boccaletti. p. 152.

- Tectonic paroxysm in the eastern Mediterranean during historical times, by P. A. Pirazzoli, Jacques Laborel and S. C. Stiros. p. 153-154.
- Paleoseismic evidence for "yo-yo" tectonics above the eastern Aleutian subduction zone; coseismic uplift alternating with even larger interseismic submergence, by George Plafker and Meyer Rubin. p. 155-157.
- Timing and size of the most recent earthquake along the central Septentrional Fault, Dominican Republic, by C. S. Prentice, Paul Mann, G. S. Burr and L. R. Peña. p. 158-160.
- Clustered ancient earthquakes in the Imperial Valley, Southern California, preserved in coeval lacustrine strata, by T. K. Rockwell and K. E. Sieh. p. 161.
- Long recurrence interval for the Emerson Fault; implications for characteristic earthquakes, slip rates and probabilistic seismic hazard calculations, by C. M. Rubin and K. E. Sieh. p. 162.
- Tsunami heights in the Pacific Northwest from Cascadia subduction earthquakes, by Kenji Satake, Joanne Bourgeois and M. A. Reinhart. p. 163-165.
- The Pitman Canyon paleoseismic record will test San Andreas Fault segmentation, by G. G. Seitz, R. J. Weldon and G. P. Biasi. p. 166-168.
- Fault-controlled offset of the ocean floor, by Kunihiro Shimazaki. p. 169.
- Stream channel offset and abandonment and a 200-year average recurrence interval of earthquakes on the San Andreas Fault at Phelan Creeks, Carrizo Plain, California, by J. D. Sims. p. 170-172.
- Complications in making evaluations within the Basin and Range Province, Western United States, by D. B. Slemmons. p. 173.
- Paleoseismology in extension volcanic terrains, by R. P. Smith, S. M. Jackson and W. R. Hackett. p. 174-176.
- Paleoseismological investigations on anthropogenic constructions, and implications for the earthquake recurrence intervals, by S. C. Stiros. p. 177-178.
- Earthquake surface ruptures; quantitative analysis and paleoseismological implications, by A. L. Strom and A. A. Nikonov. p. 179.
- Paleoseismological studies in South Carolina, by Pradeep Talwani. p. 180-181.
- Geomorphic clues to paleoseismicity; examples from the eastern Ventura Basin, Los Angeles County, California, by J. A. Treiman. p. 182-184.
- Segmentation and history of Holocene surface faulting on the Median Tectonic Line, Southwest Japan, by Hiroyuki Tsutsumi and Atsumasa Okada. p. 185.
- Recognizing and dating prehistoric earthquake-induced liquefaction features in the New Madrid seismic zone, central United States, by M. P. Tuttle and E. S. Schweig. p. 186-188.
- Active vs. seismogenic faulting in the Santa Cruz Mts.; can field observations alone tell the difference?, by Gianluca Valentini. p. 189-191.
- Apparent non-clustering of surface-rupture earthquakes in the past 1000 years in the Wellington region, New Zealand, by R. J. Van Dissen and K. R. Berryman. p. 192-193.
- Research on paleoseismology by large combinative trench across the piedmont fault of Mt. Daqingshan, Inner Mongolia, by Wu Weimin and Li Ke. p. 194-196.
- Using the shallow marine record to detect the geometry and recurrence behavior of active faults, by P. L. Williams and B. L. Ingram. p. 197-199.
- Preliminary results of paleoseismic studies of the Concord Fault at Galindo Creek, Concord, California, by C. J. Willis, D. L. Snyder and Glenn Borchardt. p. 200-201.
- Research on nonlinear characteristics of paleoseismicity in China, by Xu Xiwei and Deng Qidong. p. 202-203.
- Boundary behavior and paleoearthquake pattern along strike-slip fault systems in central Japan, by Xu Xiwei and Nobuyuki Yonekura. p. 204.
- Reconstruction of fault behavior and paleoseismicity in the onshore plate convergence zone, central Japan, by Haruo Yamazaki. p. 205-207.
- Historical paleoseismology, by R. S. Yeats. p. 208-210.
- OF 94-0571. Proceedings of the National Earthquake Prediction Evaluation Council, June 3-4, 1993, Herndon, Virginia, by V. A. Frizzell, Jr. 1994. 211 p. (NC, Da, M.)
- OF 94-0573. VIRGINIA. A structural and stratigraphic excursion through the Shenandoah Valley, Virginia, by R. C. Orndorff and J. B. Epstein. 1994. 24 p. (NC; Virginia Div. of Mineral Resources, Natural Resources Bldg., Alderman and McCormick Rd., P.O. Box 3667, Charlottesville, VA 22903.)
- OF 94-0575. Enthalpy and Gibbs energy for formation of dolomite, $\text{CaMg}(\text{CO}_3)_2$, at 298.15 K from HCl solution calorimetry, by B. S. Hemingway and R. A. Robie. 1994. 12 p. (NC, Da, M.)
- OF 94-0576. A reevaluation of the calorimetric data for the enthalpy of formation of some K- and Na-bearing silicate minerals, by B. S. Hemingway and H. T. Haselton, Jr. 1994. 33 p. (NC, Da, M.)
- OF 94-0577. CALIFORNIA. Volcanic-rich lithic sandstone from the Eocene of the west-central San Joaquin Basin, California, by J. A. Bartow. 1994. 17 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3500, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0578. MINNESOTA. A high-resolution record of climatic change in Elk Lake, Minnesota for the last 1500 years, by W. E. Dean, J. P. Bradbury, R. Y. Anderson, L. R. Bader and K. V. Dieterich-Rurup. 1994. 121 p. (NC, Da, M; Geol. Surv., 2642 University Ave., St. Paul, MN 55114-1057.)
- OF 94-0579. COLORADO. Active-, inactive-, and abandoned-mine information and selected geochemical data for the State of Colorado, by J. L. Ryder. 1994. One 5 1/4 inch DS/HD IBM compatible diskette. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203;

Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)

Requirement: MS-DOS 2.0 or higher.

OF 94-0580. COLORADO. Listing of geochemical data and assessment of variability for soils and alfalfa of the Uncompahgre Project area, Colorado, by J. G. Crock, K. C. Stewart and R. C. Severson. 1994. 83 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)

OF 94-0582. Catalog of thin sections and related drill hole information, available at the USGS Core Research Center, Denver, Colorado, by D. L. Richards. 1994. 330 p. (NC, Da, M.)

OF 94-0583. COLORADO. Measured stratigraphic sections in the Ouray area, western San Juan Mountains, Colorado, by R. G. Luedke and W. S. Burbank. 1994. 28 p. (NC, Da, M, U.)

OF 94-0584. Description of a hydraulic sediment squeezer, by F. T. Manheim, E. G. Brooks and W. J. Winters. 1994. 39 p. (NC, Da, M.)

OF 94-0585. WASHINGTON, OREGON, CALIFORNIA. Preparing for the next eruption in the Cascades, prepared by J. W. Ewert, B. M. Myers, and S. R. Brantley. 1994. 4 p. (NC, Da, M, S; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232; Washington DNR/Geol. and Earth Resources Library, 1111 Washington St. SE, Olympia, WA 98501.)

OF 94-0586. HAWAII. Chemistry of spring and well waters on Kilauea Volcano, Hawaii, and vicinity, by C. J. Janik, Manuel Nathenson and M. A. Scholl. Prepared in cooperation with the U.S. Department of Energy. 1994. 166 p. (NC, Da, M.)

OF 94-0587. CALIFORNIA. $^{40}\text{Ar}/^{39}\text{Ar}$ ages of volcanic rocks from offshore southern and peninsular California and the Southern California Borderland, by W. A. Bohrson and A. S. Davis. 1994. 20 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 94-0588. Pliocene high-latitude climate records, edited by S. E. Ishman. 1994. 35 p. (NC, Da, M.)

Introduction; Pliocene high-latitude climate records, by S. E. Ishman. p. 1-2.

Beetle and seed fossils from the Meyer Desert Formation, Sirius Group; new records for Antarctica, by A. C. Ashworth, D. M. Harwood and P. N. Webb. p. 3.

PRISM reconstructions of SST and sea ice in the Southern Ocean, by J. A. Barron. p. 4.

Warm Pliocene high sea-level records from Arctic Alaska and possible implications for Antarctic ice volume 2.8-2.2 Ma, by

Julie Brigham-Grette, L. D. Carter, Louie Marincovich, Jr., E. M. Brouwers and D. M. Hopkins. p. 5-6.

Global climate model simulations of the middle Pliocene, continued..., by M. A. Chandler. p. 7-8.

The Pliocene record in the central Arctic Ocean, by D. L. Clark. p. 9.

Middle-Pliocene planktonic foraminifer assemblage from ODP Site 704; paleoceanographic implications, by H. J. Dowsett. p. 10.

North Atlantic deep water temperature change during late Pliocene and Quaternary climatic cycles, by G. S. Dwyer and T. M. Cronin. p. 11-12.

Evidence of Pliocene *Nothofagus* in Antarctica from DSDP/ODP cores, by R. F. Fleming and J. A. Barron. p. 13.

Solved and unsolved paleogeographic problems of the sub-arctic Pliocene of Russia, by Y. B. Gladenkov. p. 14.

Sea-ice absence and 3°C marine seas; is this all it takes?, by D. M. Harwood, Aradhna Srivastava and D. M. Winter. p. 15.

The palynological record of Antarctic Neogene vegetation, by D. M. Harwood and Xinhua Jiang. p. 16.

A review of Pliocene Antarctic paleoclimate and ice sheet response to global warmth, by D. M. Harwood and P. N. Webb. p. 17.

Pliocene *Nothofagus* of the Sirius Group, Transantarctic Mountains, by R. S. Hill. p. 18-19.

Paleoclimatic implications of a late Neogene Antarctic marginal marine record, by S. E. Ishman. p. 20.

Pliocene of Northwind Ridge, western Arctic Ocean, by R. Z. Poore, R. L. Phillips, D. A. Schneider and S. E. Ishman. p. 21-22a.

Review of the deep-sea oxygen isotope record regarding early Pliocene Antarctic deglaciation, by M. L. Prentice. p. 23.

Modeling of mid-Pliocene climate with the NCAR Genesis GCM, by L. C. Sloan. p. 24.

Pliocene vegetation and climate in Arctic Russia, by R. S. Thompson. p. 25.

Major deglaciation of East Antarctica during the early late Pliocene? Not likely; evidence from the sub-antarctic South Atlantic, by D. A. Warnke, B. Marzo, D. A. Hodell and K. A. Venz. p. 26.

Recent progress in the investigation of late Neogene records adjacent to the East Antarctic Craton-West Antarctic rift system lithosphere boundary, by P. N. Webb, D. M. Harwood, B. C. McKelvey and M. G. Mabin. p. 27-29.

A direct, high-resolution, Southern Hemisphere record of late Neogene glacioeustasy, important constraints, and a possible stratotype for ice volume, sea-level and climate change, by G. S. Wilson. p. 30-32.

OF 94-0589. WASHINGTON. Preliminary estimates of the strength of prehistoric shaking in the Columbia River valley and southern half of coastal Washington, with emphasis for a Cascadia subduction zone earthquake about 300 years ago, by S. F. Obe-

- rmeier. 1995. 46 p. (NC, Da, M, S; Washington DNR/Div. of Geol. and Earth Resources Library, 1111 Washington St. SE, Olympia, WA 98501; Dep. of Geol. and Mineral Industries, 800 NE Oregon St. #28, Portland, OR 97232.)
- OF 94-0590. CALIFORNIA. The July 1992 seismic calibration experiment along the Landers, California earthquake rupture, by Donna Eberhart-Phillips and J. J. Mori. 1994. 23 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0591. WASHINGTON. Geologic map of the East Canyon Ridge Quadrangle, southern Cascade Range, Washington, by D. A. Swanson. 1994. 31 p., 2 over-size sheets; sheet 1, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, S; Washington DNR/Geol. and Earth Resources Library, 1111 Washington St. SE, Olympia, WA 98501.)
- OF 94-0592. VIRGINIA. Federal District boundary markers in northern Virginia; condition and preservation issues, by E. S. McGee. 1994. 11 p. (NC; Virginia Div. of Mineral Resources, Natural Resources Bldg., Alderman and McCormick Rd., P.O. Box 3667, Charlottesville, VA 22903.)
- OF 94-0593. CALIFORNIA. Lithologic description of a sediment core from Butte Valley, Siskiyou County, California, by D. P. Adam, H. J. Rieck, M. L. McGann, K. H. Schiller, A. M. Sarna-Wojcicki and A. P. Roberts. 1994. 84 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0594. ARIZONA. Internal structure of bars in Grand Canyon, Arizona, and evaluation of proposed flow alternatives for Glen Canyon Dam, by D. M. Rubin, J. C. Schmidt, R. A. Anima, K. M. Brown, R. E. Hunter, Hiroshi Ikeda, B. E. Jaffe, R. R. McDonald, J. M. Nelson, T. E. Reiss, Rex Sanders and R. G. Stanley. Prepared in cooperation with the U.S. Bureau of Reclamation. 1994. 56 p. (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 94-0595. Results of exploratory drilling from February 1992 to July 1992, Coal Resource Exploration and Assessment Program (COALREAP), Thar Desert, Lakhra South, Indus Plain, and adjacent areas, Sindh Province, Pakistan; Part I, Text, by J. R. SanFilipo, A. H. Chandio, S. A. Khan, R. A. Khan and A. A. Shah. Prepared jointly by the Geological Survey of Pakistan and the U.S. Geological Survey under the auspices of the U.S. Agency for International Development. 1994. 62 p. (NC, Da, M.) (Accompanies OF 94-596 A-D.)
- OF 94-0596-A. Results of exploratory drilling from February 1992 to July 1992, Coal Resource Exploration and Assessment Program (COALREAP), Thar Desert, Lakhra South, Indus Plain, and adjacent areas, Sindh Province, Pakistan; Part IIa, Lithologic and geophysical logs for the Indus Plain area, compiled by J. R. SanFilipo, R. A. Khan and A. A. Shah. Prepared jointly by the Geological Survey of Pakistan and the U.S. Geological Survey under the auspices of the U.S. Agency for International Development. 1994. 82 p., 10 over-size sheets. (NC, Da, M.) (Accompanies OF 94-595.)
- OF 94-0596-B. Results of exploratory drilling from February 1992 to July 1992, Coal Resource Exploration and Assessment Program (COALREAP), Thar Desert, Lakhra South, Indus Plain, and adjacent areas, Sindh Province, Pakistan; Part IIb, Lithologic and geophysical logs for the Lakhra South area, compiled by J. R. SanFilipo, R. A. Khan and A. A. Shah. Prepared jointly by the Geological Survey of Pakistan and the U.S. Geological Survey under the auspices of the U.S. Agency for International Development. 1994. 182 p., 13 over-size sheets. (NC, Da, M.) (Accompanies OF 94-595.)
- OF 94-0596-C. Results of exploratory drilling from February 1992 to July 1992, Coal Resource Exploration and Assessment Program (COALREAP), Thar Desert, Lakhra South, Indus Plain, and adjacent areas, Sindh Province, Pakistan; Part IIc, Lithologic and geophysical logs for the Meting-Jhimpir extended area, compiled by J. R. SanFilipo, R. A. Khan and A. A. Shah. Prepared jointly by the Geological Survey of Pakistan and the U.S. Geological Survey under the auspices of the U.S. Agency for International Development. 1994. 92 p., 16 over-size sheets. (NC, Da, M.) (Accompanies OF 94-595.)
- OF 94-0596-D. Results of exploratory drilling from February 1992 to July 1992, Coal Resource Exploration and Assessment Program (COALREAP), Thar Desert, Lakhra South, Indus Plain, and adjacent areas, Sindh Province, Pakistan; Part IId, Lithologic and geophysical logs for the Thar Desert area, compiled by J. R. SanFilipo, R. A. Khan and A. A. Shah. Prepared jointly by the Geological Survey of Pakistan and the U.S. Geological Survey under the auspices of the U.S. Agency for International Development. 1994. 168 p., 13 over-size sheets. (NC, Da, M.) (Accompanies OF 94-595.)
- OF 94-0597. ARIZONA. Measurements of sand thicknesses in Grand Canyon, Arizona, and a conceptual model for characterizing changes in sand-bar volume through time and space, by D. M. Rubin, R. A. Anima and Rex Sanders. Prepared in cooperation with the U.S. Bureau of Reclamation. 1994. 9 p. (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 94-0598. MudView++; QMIPS sonar file viewer for Windows, by J. T. Gann. 1994. 12 p., two 3 1/2 inch DS/HD IBM compatible diskettes. (NC, Da, M.)
- Requirements: Microsoft Windows 3.1 or later; 8MB RAM, VGA with 256 colors, min. 386 processor.
- OF 94-0599. CALIFORNIA. Aeromagnetic map of the Oceanside 1:100,000-scale Quadrangle, California, by R. C. Jachens and V. E. Langenheim. 1994. 1 over-size sheet, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0600-A. Preliminary determination of epicenters; monthly listing January-March 1994, by National Earthquake Information Center. 1994. 112 p. (NC, Da, M.)
- OF 94-0600-B. Preliminary determination of epicenters; monthly listing April-June 1994, by National Earthquake Information Center. 1994. 112 p. (NC, Da, M.)

OF 94-0600-C. Preliminary determination of epicenters; monthly listing July-September 1994, by National Earthquake Information Center. 1994. 92 p. (NC, Da, M.)

OF 94-0601-A. Earthquake data report, January 1994, by National Earthquake Information Center. 1994. 483 p. (NC, Da, M.)

OF 94-0601-B. Earthquake data report, January 1994, by National Earthquake Information Center. 1994. Five 5 1/4 inch diskettes. (NC, Da, M.)

The EDR data are written on 1.2MB, high density, 5 1/4 inch diskettes and are readable by IBM PC or compatible computers running DOS version 2.0 or higher. All files are ASCII.

OF 94-0602-A. Earthquake data report, February 1994, by National Earthquake Information Center. 1994. 393 p. (NC, Da, M.)

OF 94-0602-B. Earthquake data report, February 1994, by National Earthquake Information Center. 1994. Four 5 1/4 inch diskettes. (NC, Da, M.)

The EDR data are written on 1.2MB, high density, 5 1/4 inch diskettes and are readable by IBM PC or compatible computers running DOS version 2.0 or higher. All files are ASCII.

OF 94-0603-A. Earthquake data report, March 1994, by National Earthquake Information Center. 1994. 339 p. (NC, Da, M.)

OF 94-0603-B. Earthquake data report, March 1994, by National Earthquake Information Center. 1994. Four 5 1/4 inch diskettes. (NC, Da, M.)

The EDR data are written on 1.2MB, high density, 5 1/4 inch diskettes and are readable by IBM PC or compatible computers running DOS version 2.0 or higher. All files are ASCII.

OF 94-0604-A. Earthquake data report, April 1994, by National Earthquake Information Center. 1994. 404 p. (NC, Da, M.)

OF 94-0604-B. Earthquake data report, April 1994, by National Earthquake Information Center. 1994. Four 5 1/4 inch diskettes. (NC, Da, M.)

The EDR data are written on 1.2MB, high density, 5 1/4 inch diskettes and are readable by IBM PC or compatible computers running DOS version 2.0 or higher. All files are ASCII.

OF 94-0605-A. Earthquake data report, May 1994, by National Earthquake Information Center. 1994. 445 p. (NC, Da, M.)

OF 94-0605-B. Earthquake data report, May 1994, by National Earthquake Information Center. 1994. Five 5 1/4 inch diskettes. (NC, Da, M.)

The EDR data are written on 1.2MB, high density, 5 1/4 inch diskettes and are readable by IBM PC or compatible computers running DOS version 2.0 or higher. All files are ASCII.

OF 94-0606-A. Earthquake data report, June 1994, by National Earthquake Information Center. 1994. 419 p. (NC, Da, M.)

OF 94-0606-B. Earthquake data report, June 1994, by National Earthquake Information Center. 1994. Four 5 1/4 inch diskettes. (NC, Da, M.)

The EDR data are written on 1.2MB, high density, 5 1/4 inch diskettes and are readable by IBM PC or compatible computers running DOS version 2.0 or higher. All files are ASCII.

OF 94-0607-A. Earthquake data report, July 1994, by National Earthquake Information Center. 1994. 527 p. (NC, Da, M.)

OF 94-0607-B. Earthquake data report, July 1994, by National Earthquake Information Center. 1994. Four 5 1/2 inch diskettes. (NC, Da, M.)

The EDR data are written on 1.2MB, high density, 5 1/4 inch diskettes and are readable by IBM PC or compatible computers running DOS version 2.0 or higher. All files are ASCII.

OF 94-0608-A. Earthquake data report, August 1994, by National Earthquake Information Center. 1994. 435 p. (NC, Da, M.)

OF 94-0608-B. Earthquake data report, August 1994, by National Earthquake Information Center. 1994. Five 5 1/4 inch diskettes. (NC, Da, M.)

The EDR data are written on 1.2MB, high density, 5 1/4 inch diskettes and are readable by IBM PC or compatible computers running DOS version 2.0 or higher. All files are ASCII.

OF 94-0609-A. Earthquake data report, September 1994, by National Earthquake Information Center. 1994. 387 p. (NC, Da, M.)

OF 94-0609-B. Earthquake data report, September 1994, by National Earthquake Information Center. 1994. Four 5 1/4 inch diskettes. (NC, Da, M.)

The EDR data are written on 1.2MB, high density, 5 1/4 inch diskettes and are readable by IBM PC or compatible computers running DOS version 2.0 or higher. All files are ASCII.

OF 94-0613. CALIFORNIA. Aeromagnetic map of the Stockton 1:100,000-scale Quadrangle, California, by R. C. Jachens. 1994. 1 over-size sheet, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 94-0614. ALASKA. Video of the August 18, 1992, eruption of Crater Peak vent on Spurr Volcano, Alaska, by R. G. McGimsey and J. M. Dorava. 1994. 14 p., one videotape. (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of National Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)

OF 94-0615. NEW YORK. Landslide susceptibility in the Tully Valley area, Finger Lakes region, New York, by Stefan Jäger and G. F. Wiczorek. 1994. 1 over-size sheet, scale 1:50,000 (1 inch = about 4,200 feet). (NC, Da, M; New York State Geol. Surv. Library, Room 3128, Cultural Education Ctr., Empire State Plaza, Albany, NY 12230.)

OF 94-0618. NEVADA. Measurement of seismic P- and S-wave attenuation in volcanic tuff, Rainier Mesa tunnels, Nevada Test Site, by R. D. Carroll. Prepared in cooperation with the U.S. Defense Nuclear Agency. 1994. 109 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)

OF 94-0620. Trace metal concentrations in sediments from eastern Long Island Sound, by A. M. Moffett, L. J. Poppe and R. S. Lewis. 1994. 17 p. (NC, Da, M.)

- OF 94-0622. CALIFORNIA. Preliminary geologic map emphasizing bedrock formations in Contra Costa County, California; a digital database, compiled by R. W. Graymer, D. L. Jones and E. E. Brabb. 1994. 11 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0623-A. Geochemical data from the departments of Choco and Antioquia, Colombia; Part A, General discussion, compiled by G. J. Orris, H. A. Pierce and T. W. Wells. 1994. 12 p. (NC, Da, M.)
- OF 94-0623-B. Geochemical data from the departments of Choco and Antioquia, Colombia; Part B, Printout of analytical data, compiled by G. J. Orris, H. A. Pierce and T. W. Wells. 1994. 345 p. (NC, Da, M.)
- OF 94-0623-C. Geochemical data from the departments of Choco and Antioquia, Colombia; Part C, Diskettes with analytical data, compiled by G. J. Orris, H. A. Pierce and T. W. Wells. 1994. Two 3 1/2 inch DS/HD IBM compatible diskettes. (NC, Da, M.)
- OF 94-0624-A. A selected bibliography of alkaline igneous rocks and related mineral deposits, with an emphasis on western North America, compiled by F. E. Mutschler, D. C. Johnson and T. C. Mooney. 1994. 222 p. (NC, Da, M.)
- OF 94-0624-B. A selected bibliography of alkaline igneous rocks and related mineral deposits, with an emphasis on western North America, compiled by F. E. Mutschler, D. C. Johnson and T. C. Mooney. 1994. One 3 1/2 inch diskette. (NC, Da, M.)
- Apple Macintosh computer-readable 3 1/2 inch DS/DD diskette; 725K Word (version 5.0) document.
- OF 94-0625. NEVADA. Preliminary geologic map of the Farrier Quadrangle, Clark and Lincoln Counties, Nevada, by D. L. Schmidt. Prepared in cooperation with the Las Vegas Valley Water District. 1994. 32 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)
- OF 94-0626. Topographic data requirements for EOS global change research, by D. B. Gesch. 1994. 60 p. (NC, Da, M.)
- OF 94-0627. ALASKA. Development of a digital land cover data base for the Selawik National Wildlife Refuge, by Carl Markon and William Kirk. 1994. 22 p. (NC, Da, M.)
- OF 94-0629. VIRGINIA, NORTH CAROLINA. Geologic map of the Clarksville South and Tungsten 7.5-minute quadrangles, Virginia and North Carolina, by J. D. Peper, T. W. Clark and K. A. Kanahale. 1995. 1 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; Virginia Div. of Mineral Resources, Natural Resources Bldg., Alderman and McCormick Rd., P.O. Box 3667, Charlottesville, VA 22903; Div. of Land Resources, Dep. of Environment, Health, and Natural Resources, 512 North Salisbury St., P.O. Box 27687, Raleigh, NC 27611.)
- OF 94-0630. CALIFORNIA. An assessment of the vertebrate paleoecology and biostratigraphy of the Sespe Formation, Southern California, by T. M. Bown. 1994. 24 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0631. Coal petrographic laboratory procedures and safety manual II, by James Pontolillo and R. W. Stanton. 1994. 69 p. (NC, Da, M; Library, Geol. Surv. of Alabama, P.O. Box Drawer O, University Station, Tuscaloosa, AL 35486; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St. Box 36, Anchorage, AK 99513; Pirtle Geol. Library, 100 Bowman Hall, Univ. of Kentucky, Lexington, KY 40506; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701; New Mexico Bur. of Mines and Mineral Resources, Campus Station, Socorro, NM 87801; Library, South Dakota School of Mines and Technol., Rapid City, SD 57701; Utah Geol. Surv., 2363 South Foothill Dr., Salt Lake City, UT 84109-1491; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071.)
- OF 94-0633. CALIFORNIA. Preliminary geomagnetic paleointensities from Long Valley Caldera, California, by E. A. Mankinen. 1994. 17 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0634. ARIZONA. Geologic map of the Moriah Knoll Quadrangle, northern Mohave County, Arizona, by G. H. Billingsley. 1994. 16 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 94-0636. WASHINGTON. Teacher's guide and geologic field trip guide, Little Spokane River-Dartford area, Spokane County; Washington, by T. P. Frost. 1994. 27 p. (NC, Da, M, S; Washington DNR/Geol. and Earth Resources Library, 1111 Washington St. SE, Olympia, WA 98501.)
- OF 94-0638. HAWAII. Stability of submerged slopes on the flanks of the Hawaiian Islands, a simplified approach, by H. J. Lee, M. E. Torresan and W. G. McArthur. 1994. 54 p. (NC, Da, M.)
- OF 94-0639. CALIFORNIA. High-resolution seismic-reflection profiles and interpretation pitfalls created by acoustic anomalies from Holocene muds beneath South San Francisco Bay, by M. S. Marlow, P. E. Hart, P. R. Carlson, J. R. Childs, D. M. Mann, R. J. Anima and R. E. Kayen. 1994. 16 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0640-A. CALIFORNIA. Analytical results, mineralogical data, and distributions of anomalies for elements and minerals in three mother lode-type gold deposits, Hodson mining district, Calaveras County, California, by M. A. Chaffee and S. J. Sutley. 1994. 216 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0640-B. CALIFORNIA. Analytical results, mineralogical data, and distributions of anomalies for elements and minerals in

- three mother lode-type gold deposits, Hodson mining district, Calaveras County, California, by M. A. Chaffee and S. J. Sutley. 1994. One 5 1/4 inch DS/DD IBM compatible diskette. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0641. CALIFORNIA. Pleistocene fresh-water ostracodes from a sediment core in Butte Valley, Siskiyou County, California, by Claire Carter. 1994. 9 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0642. The future of energy gases, by J. P. Swinchatt and Energy Gases Committee. 1994. One VHS videotape. (NC, Da, M.)
- OF 94-0643. Proceedings of the working group meeting on North-east United States earthquake probability, edited by M. E. Williams, S. P. Nishenko and J. E. Ebel. 1995. 24 p. (NC, Da, M.)
- OF 94-0648. COLORADO. Assessment of geochemical variability and a listing of geochemical data for surface soils of the Front Range urban corridor, Colorado, by R. C. Severson and H. A. Tourtelot. 1994. 123 p., one 5 1/4 inch diskette. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- This file is written in USGS STATPAC format. STP2DAT.EXE will provide translation of the STATPAC format to a number of common database formats. To run this translation program, type STP2DAT and follow the on-screen instructions. Requirements: IBM PC or compatible; minimum 512K RAM.
- OF 94-0649. MASSACHUSETTS. Circulation and contaminant transport in Massachusetts coastal waters; a summary of achievements and future plans, by M. H. Bothner, M. R. Buchholtz-ten Brink, Bradford Butman, H. J. Knebel, F. T. Manheim and R. P. Signell. Prepared in cooperation with the Massachusetts Water Resources Authority. 1994. 43 p. (NC, Da, M.)
- OF 94-0650. CALIFORNIA. Geologic road guide to Kings Canyon and Sequoia national parks, central Sierra Nevada, California, by J. G. Moore, W. J. Nokleberg and T. W. Sisson. 1994. 61 p., 1 over-size sheet. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0651. CALIFORNIA. Lithologic description of sediment cores from Grass Lake, Siskiyou County, California, by D. P. Adam, H. J. Rieck, M. L. McGann, K. H. Schiller and A. M. Sarna-Wojcicki. 1994. 36 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0652-A. Bibliography of well-log applications, annual update; October 1, 1993 to September 30, 1994, by S. E. Prensky. 1994. 150 p. (NC, Da, M.)
- OF 94-0652-B. Bibliography of well-log applications, annual update; October 1, 1993 to September 30, 1994, by S. E. Prensky. 1994. One 3 1/2 inch diskette. (NC, Da, M.)
- Macintosh version consisting of one text file on one 3-1/2 inch 1.44MB disk. Formatted in Microsoft Word, version 5.1.
- OF 94-0652-C. Bibliography of well-log applications, annual update; October 1, 1993 to September 30, 1994, by S. E. Prensky. 1994. One 3 1/2 inch diskette. (NC, Da, M.)
- IBM-PC or compatible version, consisting of one text file on one 3 1/2 inch 1.44MB disk. Formatted in WordPerfect, version 5.1.
- OF 94-0653. ALASKA. Palynomorph biostratigraphy of Eocene samples from the Sagavanirktok Formation at Franklin Bluffs, North Slope of Alaska, by N. O. Frederiksen, L. E. Edwards, T. D. Fouch, L. D. Carter and T. S. Collett. 1994. 32 p. (NC, Da, M, A, S; Alaska Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513.)
- OF 94-0655. KANSAS. Preliminary geologic map of the Ashland NW Quadrangle and parts of the Englewood, Profitt Lake and Mount Helen quadrangles, Clark County, Kansas, by G. M. Fairer and M. W. Green. Prepared in cooperation with the Kansas Geological Survey. 1994. 7 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; Kansas Geol. Surv., 1930 Constant Ave., Campus West, Univ. of Kansas, Lawrence, KS 66046.)
- OF 94-0656. KANSAS. Preliminary geologic map of the Mount Jesus Quadrangle and parts of the Mount Jesus NW, Lexington, and Turkey Creek quadrangles, Clark County, Kansas, by M. W. Green and G. M. Fairer. Prepared in cooperation with the Kansas Geological Survey. 1994. 8 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; Kansas Geol. Surv., 1930 Constant Ave., Campus West, Univ. of Kansas, Lawrence, KS 66046.)
- OF 94-0657. KANSAS. Preliminary geologic map of the Ashland Quadrangle and part of the Ashland SE Quadrangle, Clark County, Kansas, by G. M. Fairer and M. W. Green. Prepared in cooperation with the Kansas Geological Survey. 1994. 6 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; Kansas Geol. Surv., 1930 Constant Ave., Campus West, Univ. of Kansas, Lawrence, KS 66046.)
- OF 94-0658. KANSAS. Preliminary geologic map of the Sitka Quadrangle and parts of the Sitka SW, Sugarloaf, and Trout Creek quadrangles, Clark County, Kansas, by M. W. Green and G. M. Fairer. Prepared in cooperation with the Kansas Geological Survey. 1994. 7 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; Kansas Geol. Surv., 1930 Constant Ave., Campus West, Univ. of Kansas, Lawrence, KS 66046.)
- OF 94-0659. IDAHO. Preliminary geologic map of Craters of the Moon 30- x 60-minute Quadrangle, Idaho, by M. A. Kuntz, B. A. Skipp and F. J. Moyer. 1994. 41 p., 2 over-size sheets; sheet 1, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M, U, S;

Idaho Geol. Surv., Univ. of Idaho Campus, Morrill Hall, Room 332, Moscow, ID 83843.)

OF 94-0662. CALIFORNIA. Hazard of earthquake-induced lateral-spread ground failure on the Central California coast modeled from earth-science map data in a geographic information system, by R. J. Pike, R. L. Bernknopf, J. C. Tinsley, III and R. K. Mark. 1994. 46 p., 1 over-size sheet, scale 1:62,500 (1 inch = about 1 mile). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 94-0663. Using ground-failure features for paleoseismic analysis, edited by S. F. Obermeier and R. W. Jibson. 1994. 148 p. (NC, Da, M.)

A. Using liquefaction-induced features for paleoseismic analysis, by S. F. Obermeier. p. A1-A98.

B. Using landslides for paleoseismic analysis, by R. W. Jibson. p. B1-B50.

OF 94-0664. NEVADA. Preliminary geologic map of the Galena Canyon Quadrangle, Lander County, Nevada, by J. L. Doebrich. Prepared in cooperation with Santa Fe Pacific Mining Co. 1994. 14 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)

OF 94-0666. OREGON. Geochemical analyses of rock samples from the Black Butte District and Holderman Mountain area, Lane County, Oregon, by J. A. Peterson. 1994. 15 p. (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)

OF 94-0667-A. Make your own paper fossils; a computer animation and paper models, by T. R. Alpha, S. W. Starratt and J. W. Hendley, II. 1994. 42 p. (NC, Da, M.)

OF 94-0667-B. Make your own paper fossils; a computer animation and paper models, by T. R. Alpha, S. W. Starratt and J. W. Hendley, II. 1994. One 3 1/2 inch diskette. (NC, Da, M.)

DS/HD Macintosh 1.4MB diskette running HyperCard 2.0.

OF 94-0668. NEVADA. Digital data for OF 93-249, Quantitative geochemistry of rocks from the Adelaide mining district, Humboldt County, Nevada, by T. M. Cookro. 1994. One 3 1/2 inch diskette. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)

Lotus WK1 format, translatable to more recent Lotus and Excel programs.

OF 94-0669-A. HyperCard database for Correlation of Marine and Terrestrial Records Project, by T. N. Phi and J. V. Gardner. 1994. 12 p. (NC, Da, M.)

OF 94-0669-B. HyperCard database for Correlation of Marine and Terrestrial Records Project, by T. N. Phi and J. V. Gardner. 1994. Two 3 1/2 inch diskettes. (NC, Da, M.)

Requirements: Macintosh computer with color monitor; at least 8MB of RAM; system 7.01 or higher; Apple HyperCard v. 2.1; 3 to 4MB of free space on the hard drive.

OF 94-0670. Abstracts of the U.S. Geological Survey, central region, 1994 poster review, compiled by C. E. Barker and A. B. Coury. 1994. 29 p. (NC, Da, M.)

Element characterization of coals from the Franklin coal zone, Puget Group, John Henry No. 1 Mine, King County, Washington, by M. E. Brownfield, R. H. Affolter and J. D. Cathcart. p. 1.

Distribution of hazardous air pollutant trace elements, total sulfur, and ash in coals from five Tertiary basins in Rocky Mountain region, by M. S. Ellis, G. D. Stricker and R. M. Flores. p. 2.

Late Campanian coal-bearing and tidally influenced strata of the Neslen Formation, Book Cliffs, Utah and Colorado, by M. A. Kirschbaum, R. D. Hettinger and P. J. McCabe. p. 3.

Late Cretaceous paleogeography, sediment accumulation, and coal distribution, the Western Interior of middle North America, by L. N. Roberts and R. A. Kirschbaum. p. 4.

Irrigation leaches uranium from soils and shales and concentrates it in Arkansas Valley waters of southeastern Colorado, by S. A. Asher-Bolinder and R. A. Zielinski. p. 5.

Regional geochemical studies in the Kaibab National Forest, Arizona, by M. A. Chaffee, R. R. Carlson and P. M. Theodorakos. p. 6-7.

Atmospheric transport of atrazine and its subsequent degradation at Isle Royale National Park, by A. E. Cromwell and E. M. Thurman. p. 8.

Probabilistic relationships between number of vehicles and number of visitors at a geologic site in a national park, by R. A. Crovelli. p. 9.

A first application of ELISA for screening cyclodiene insecticides in ground-water, by Tonya Dombrowski and E. M. Thurman. p. 10.

Determining the three-dimensional distribution and transport of herbicides in reservoirs using Earth Vision and immunoassay, by J. D. Fallon, E. M. Thurman and D. P. Tierney. p. 11.

National Water-Quality Assessment Program; Ozark Plateaus, by D. A. Freiwald. p. 12-12a.

Part-per-trillion analysis of soil for atrazine using immunoassay, by B. J. Hill, D. S. Aga, E. M. Thurman and K. E. Juracek. p. 13.

Tertiary and Quaternary alluvial history of the lower Virgin and Muddy rivers, Clark County, Nevada, by V. S. Williams. p. 14.

Computer atlas and database of earthquake intensities for the central United States, by M. G. Hopper. p. 15.

Geologic implications from gravity anomaly maps of the Crescent Valley 1/2° × 1° Quadrangle including Pine Valley, Nevada, by S. L. Robbins, Courteney Williamson and H. W. Oliver. p. 16.

REE, Th, Nb, F enrichment in the New Madrid test well, Reelfoot Rift, Southeast Missouri; evidence of a deep carbonatite complex?, by S. F. Diehl and M. B. Goldhaber. p. 17.

The development and application of an analytical method for the determination of gold in ground water, by J. B. McHugh and D. J. Grimes. p. 18.

Genesis of the Homestake breccia Au-Ag-Cu deposits, New World District, Cooke City, Montana, by B. S. Van Gosen. p. 19.

Natural desorption of gas as a cause of overpressuring in the Madden Anticline, Wind River basin, Wyoming, by C. E. Barker and B. L. Crysdale. p. 20.

Comparison of vitrinite reflectance models; examples from the Late Cretaceous Mesaverde Formation, Wind River basin, Wyoming, by B. L. Crysdale and C. E. Barker. p. 21.

3-D fluid-flow model of the House Creek Field, Powder River basin, Wyoming, by D. K. Higley. p. 22.

Pre-Oligocene structure of central Railroad Valley area and adjacent Pancake Range, Nevada, western margin of the Paleogene Sheep Pass Basin, by W. J. Perry, Jr. and J. A. Peterson. p. 23.

Back-thrusting and triangle zone development associated with Laramide basement uplift, Bridger Range, southwestern Montana, by D. R. Lageson and B. A. Skipp. p. 24.

Structural elements related to plate convergence of the Quetta-Muslim Bagh-Sibi-region, Balochistan Province, Pakistan, by Florian Maldonado, S. H. Khan and J. M. Mengal. p. 25.

Footprints in the rocks; new evidence from the Raton Basin that dinosaurs flourished on land until the terminal Cretaceous impact event, by C. L. Pillmore, M. G. Lockley, R. F. Fleming, K. R. Johnson and A. P. Hunt. p. 26.

Preliminary geologic map of the Big Lue Mtns. 15-minute Quadrangle, Greenlee Co., Arizona, and Catron Co., New Mexico, by J. C. Ratté, W. E. Brooks and D. J. Bove. p. 27-28.

Comparison of regional trends of sandstone and carbonate porosity, by T. C. Hester and J. W. Schmoker. p. 29.

OF 94-0671. Heat capacity of polystyrene from 275 to 315 K, by B. S. Hemingway and R. A. Robie. 1994. 3 p. (NC, Da, M.)

OF 94-0672. The geology of Stellwagen Bank, by R. N. Oldale. 1994. 20 p. (NC, Da, M.)

OF 94-0673. SOUTH CAROLINA, GEORGIA. Preliminary geologic map of the Barnwell 30' x 60' Quadrangle, South Carolina and Georgia, by D. C. Prowell. 1994. 21 p., 1 over-size sheet, scale 100,000 (1 inch = about 1.6 miles). (NC; Georgia Geol. Surv., 19 Martin Luther King Jr. Dr. SW, Room 400, Atlanta, GA 30334; South Carolina Geol. Surv., 5 Geology Rd., Columbia, SC 29210-9998.)

OF 94-0675-A. ALASKA. Status of geologic mapping in Alaska; a digital bibliography, by J. P. Galloway and Jim Laney. 1994. 100 p. (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St. Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)

OF 94-0675-B. ALASKA. Status of geologic mapping in Alaska; a digital bibliography, by J. P. Galloway and Jim Laney. 1994. One 3 1/2 inch diskette. (NC, Da, M, A, S; U.S. Dep. of the

Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)

Requirements: IBM or IBM-compatible computers with Microsoft Word for Windows version 2.0 for MS-DOS or higher.

OF 94-0675-C. ALASKA. Status of geologic mapping in Alaska; a digital bibliography, by J. P. Galloway and Jim Laney. 1994. One 3 1/2 inch diskette. (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)

Requirements: Apple Macintosh computer with Microsoft Word version 5.0 for Macintosh or higher.

OF 94-0676. UTAH, NEVADA, ARIZONA. A direct-current resistivity survey of the Beaver Dam Wash Drainage in Southwest Utah, Southeast Nevada, and Northwest Arizona, by A. A. Zohdy, R. J. Bisdorf and J. S. Gates. 1994. 87 p. (NC, Da, M, U; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1403; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088; Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

OF 94-0677. OREGON. Grade, tonnage, and other models of blue-mountain-type Au-Ag polymetallic veins, Blue Mountains, Oregon for use in resource and environmental assessment, by J. D. Bliss. 1994. 33 p. (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)

OF 94-0678. CALIFORNIA. Coccolith correlation of Late Cretaceous Point Loma Formation at La Jolla and Carlsbad, San Diego County, California, by David Bukry. 1994. 23 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 94-0680-A. WASHINGTON. Geochemical data and sample locality maps for stream-sediment, heavy-mineral-concentrate, mill tailing, water, and precipitate samples collected in and around the Holden Mine, Chelan County, Washington, by J. E. Kilburn, C. G. Whitney, W. M. d'Angelo, D. L. Fey, R. T. Hopkins, A. L. Meier, J. M. Motooka, B. H. Roushey and S. J. Sutley. 1994. 33 p. (NC, Da, M, S; Geol. and Earth Resources Div., Dep. of Natural Resources, P.O. Box 47007, Olympia, WA 98504-7007; David A. Johnston Cascade Volcano Observatory, 5400 MacArthur Blvd., Vancouver, WA 98661.)

OF 94-0680-B. WASHINGTON. Geochemical data and sample locality maps for stream-sediment, heavy-mineral-concentrate, mill tailing, water, and precipitate samples collected in and around the Holden Mine, Chelan County, Washington, by J. E. Kilburn, C. G. Whitney, W. M. d'Angelo, D. L. Fey, R. T. Hopkins, A. L. Meier, J. M. Motooka, B. H. Roushey and S. J. Sutley. 1994. One 5 1/4 inch DS/DD IBM compatible diskette. (NC, Da, M, S; Geol. and Earth Resources Div., Dep. of Natural Resources, P.O. Box 47007, Olympia, WA 98504-7007; David A. Johnston Cascade Volcano Observatory, 5400 MacArthur Blvd., Vancouver, WA 98661.)

This report contains digital geochemical data and text documentation on a 5 1/4 inch, 360K distribution diskette. The data files on diskette are in data base format (.dbf). The text files are in standard ASCII format.

- OF 94-0681. CALIFORNIA. Geologic map of the Yermo Annex and vicinity, Marine Corps Logistics Base, Barstow, California, by B. F. Cox and H. G. Wilshire. 1994. 1 over-size sheet, scale 1:12,000 (1 inch = 1,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0682. Terranes and overlap sequences in the Central and Southern Appalachians, an expanded explanation for part of the Circum-Atlantic terrane map, by J. W. Horton, Jr., A. A. Drake, Jr. and D. W. Rankin. 1994. 40 p. (NC, Da, M.)
- OF 94-0683. MARYLAND. Miocene stratigraphy of the Solomons Island, Maryland, corehole, by T. G. Gibson and G. W. Andrews. 1994. 35 p. (NC, Da, M.)
- OF 94-0684. HAWAII. Whole-rock analyses of core samples from the 1967, 1975, 1979 and 1981 drillings of Kilauea Iki lava lake, Hawaii, by R. T. Helz, H. K. Kirschenbaum, J. W. Marinenko and Rachel Qian. 1994. 65 p. (NC, Da, M.)
- OF 94-0685. Geologic map of the Los Tamales chalcopyrite-molybdenite stockwork, northern Sonora, Mexico, by R. G. Eppinger and P. K. Theobald. 1994. 1 over-size sheet, scale 1:5,000 (1 inch = about 450 feet). (NC, Da, M.)
- OF 94-0686. IDAHO. Petrography, age, and paleomagnetism of basaltic lava flows in coreholes at Test Area North (TAN), Idaho National Engineering Laboratory, by M. A. Lanphere, M. A. Kuntz and D. E. Champion. 1994. 49 p. (NC, Da, M, U, S; Idaho Geol. Surv., Morrill Hall, Room 332, Univ. of Idaho Campus, Moscow, ID 83843.)
- OF 94-0687. NEVADA. Geologic map of Windy Peak 7.5' Quadrangle, White Pine County, Nevada, by E. L. Miller, P. B. Gans, and S. P. Grier; compiled by J. L. Brown. Prepared in cooperation with the U.S. National Park Service. 1995. 23 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)
- OF 94-0688. Heat capacity and enthalpy of formation of synthetic alunite, by B. S. Hemingway and R. A. Robie. 1994. 8 p. (NC, Da, M.)
- OF 94-0690. IDAHO. Mineral deposit modeling using components for complex mineral deposits; mixed base- and precious-metal veins of the Idaho Batholith, Idaho, by J. D. Bliss. 1994. 53 p. (NC, Da, M, U, S; Idaho Geol. Surv., Morrill Hall, Room 332, Univ. of Idaho Campus, Moscow, ID 83843.)
- OF 94-0691. NEW MEXICO. Analytical data for gold, silver, cadmium, copper, lead, and zinc in samples of stream sediments from the Mogollon and Holt Mountain quadrangles, Catron County, New Mexico, by T. F. Harms. 1994. 12 p. (NC, Da, M, U; New Mexico Bur. of Mines and Mineral Resources, Campus Station, Socorro, NM 87801.)
- OF 94-0692. CALIFORNIA. Heat-flow measurements in the vicinity of the Hayward Fault, California, by C. F. Williams and S. P. Galanis, Jr. 1994. 36 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0693. CALIFORNIA. Descriptions and elevations for first order, Class II leveling bench marks in the vicinity of Medicine Lake, California, by J. W. Kleinman, K. M. Yamashita and W. P. Kaiser. 1994. 64 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0694. Permafrost, the active layer, and changing climate, by A. H. Lachenbruch. 1994. 43 p. (NC, Da, M.)
- OF 94-0695. NEW MEXICO. Six regionally extensive upper-crustal seismic refraction profiles in Southwest New Mexico, by H. D. Ackermann, L. W. Pankratz and D. P. Klein. 1994. 18 p., 1 over-size sheet, scale 1:635,000 (1 inch = about 10 miles). (NC, Da, M, U; New Mexico Bur. of Mines and Mineral Resources, Campus Station, Socorro, NM 87801.)
- OF 94-0696. COLORADO. Preliminary geologic map of the Silt Quadrangle, Garfield County, Colorado, by R. R. Shroba, G. M. Fairer and M. W. Green. 1994. 24 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 94-0697-A. SCRNDIGW; a Windows screen digitizing program (an image quantitating tool), by P. S. Powers. 1994. 22 p. (NC, Da, M.)
- OF 94-0697-B. SCRNDIGW; a Windows screen digitizing program (an image quantitating tool), by P. S. Powers. 1994. One 3 1/2 inch diskette. (NC, Da, M.)
- The BASIC code was written using Microsoft's visual BASIC version 1.0. System requirements to run the executable: Microsoft's run time file (vbrun100.dll) that is free to distribute, an IBM compatible PC, Windows 3.0/3.1, mouse, 640x480 video graphics adapter or better including a display unit, and an estimated 1MB of RAM. Files are on one 3 1/2 inch 1.44MB disk.
- OF 94-0698. The selective salvation of Zeiss Ni 1 levelings, by R. O. Castle and T. D. Gilmore. 1994. 30 p. (NC, Da, M.)
- OF 94-0699. CALIFORNIA. Mapping time-dependent changes in soil slip-debris flow probability, by R. H. Campbell, R. L. Bernknopf and D. R. Soller. 1994. 73 p., 2 over-size sheets; sheet 1, scale 1:24,000 (1 inch = about 2,000 feet); sheet 2, scale 1:40,000 (1 inch = about 3,500 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0702. MISSISSIPPI. Neogene and Quaternary foraminifera and paleoenvironments of a corehole from Horn

- Island, Mississippi, by T. G. Gibson. Prepared in cooperation with the U.S. National Park Service, Gulf Islands National Seashore. 1994. 24 p. (NC, Da, M; Library, Geol. Surv. of Alabama, P.O. Box Drawer O, University Station, Tuscaloosa, AL 35486; Office of Geol., P.O. Box 20307, Jackson, MS 39289-1307.)
- OF 94-0702-W. TEXAS, NEW MEXICO. Hydrologic and ecologic influence of playa basins in the southern High Plains, Texas and New Mexico, by L. M. Bexfield. 1995. 16 p. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110.)
- OF 94-0703. A control and data acquisition system for use with a hydrothermal diamond-anvil cell, by H. T. Haselton, Jr. and I-Ming Chou. 1994. 24 p. (NC, Da, M.)
- OF 94-0705. MARIANA ISLANDS. Volcanic investigations in the Commonwealth of the Northern Mariana Islands, April to May 1994, by M. K. Sako, F. A. Trusdell, R. Y. Koyanagi, George Kojima and R. B. Moore. Prepared in cooperation with the Commonwealth of the Northern Mariana Islands, Disaster Control Office. 1995. 57 p. (NC, Da, M.)
- OF 94-0705-W. MISSOURI. Hydrology and water quality in claypan soil and glacial till at the Missouri Management Systems Evaluation Area near Centralia, Missouri; May 1991 to September 1993, by D. H. Wilkison, D. W. Blevins, B. P. Kelly and W. C. Wallace. 1994. 64 p. (NC, Da, M, Wb; USGS, WRD, 1400 Independence Rd., Mail Stop, 200 Rolla, MO 65401.)
- OF 94-0706. CALIFORNIA. Seismic velocities and geologic logs from boreholes at three downhole arrays in San Francisco, California, by J. F. Gibbs, T. E. Fumal, R. D. Borchardt, R. E. Warrick, Hsi-Ping Liu and R. E. Westerlund. 1994. 40 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0706. CALIFORNIA. Seismic velocities and geologic logs from boreholes at three downhole arrays in San Francisco, California, by J. F. Gibbs, T. E. Fumal, R. D. Borchardt, R. E. Warrick, Hsi-Ping Liu and R. E. Westerlund. 1995. 42 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0706-W. ARKANSAS. Water-quality conditions and streamflow gain and loss of the South Prong of Spavinaw Creek basin, Benton County, Arkansas, by R. L. Joseph and W. R. Green. Prepared in cooperation with the Arkansas Department of Pollution Control and Ecology. 1994. 16 p. (NC, Da, M, Wb.)
- OF 94-0708. MARYLAND. Paleogene stratigraphy of the Solomons Island, Maryland corehole, by T. G. Gibson and L. M. Bybell. 1994. 39 p. (NC, Da, M.)
- OF 94-0708-W. Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory; determination of volatile organic compounds in water by purge and trap capillary gas chromatography/mass spectrometry, by D. L. Rose and M. P. Schroeder. 1995. 26 p. (NC, Da, M, Wb.)
- OF 94-0709. CALIFORNIA. Subsurface investigation for liquefaction analysis and piezometer calibration at Treasure Island Naval Station, California, by M. J. Bennett. 1994. 43 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0709-W. FLORIDA. Statistical summaries of surface-water hydrologic data collected in the Suwannee River Water Management District, Florida, 1906-93, by M. A. Franklin, G. L. Giese and P. R. Mixson. 1995. 173 p. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301; Suite 1006, 224 West Central Pkwy., Altamonte Springs, FL 32714; and Suite 107, 9100 NW 36 St., Miami, FL 33178.)
- OF 94-0710. CALIFORNIA. Homestead Valley, California, aftershocks (March 17-18, 1979) recorded on portable seismographs, by S. C. Perry-Houston and Donna Eberhart-Phillips. 1994. 15 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0710-W. Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory; determination of chlorinated pesticides in aquatic tissue by capillary-column gas chromatography with electron-capture detection, by T. J. Leiker, J. E. Madsen, J. R. Deacon and W. T. Foreman. 1995. 41 p. (NC, Da, M, Wb, U.)
- OF 94-0711. Preliminary report of the 1988 A2-88-NC Gorda Ridge cruise, by C. A. Reiss and R. A. Zierenberg. 1994. 109 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 94-0711-W. IOWA. Hydrologic data from the lower Cedar River basin, Iowa, 1989-91, by P. M. Schulmeyer, K. K. Barnes and P. J. Squillace. 1995. 116 p. (NC, Da, M, Wb; USGS, WRD, Room 269, Federal Bldg., 400 South Clinton St., Iowa City, IA 52244.)
- OF 94-0712. NEVADA, CALIFORNIA. Resource assessment of the Bureau of Land Management's Winnemucca District and Surprise Resource Area, Northwest Nevada and Northeast California, by J. L. Doebrich, G. V. Albino, C. E. Barker, W. A. Duffield, V. C. Dunn, W. F. Hanna, J. P. McFarlan, D. J. McGuire, M. S. Miller, S. G. Peters, Donald Plouff, G. L. Raines, D. L. Sawatzky and G. T. Spanski. 1994. 101 p. (NC, Da, M, U; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)
- OF 94-0712-W. ALASKA. Overview of environmental and hydrogeologic conditions at three Federal Aviation Administration facilities near Anchorage International Airport, Anchorage, Alaska, by A. S. Nakanishi and D. D. Graham. Prepared in co-

- operation with the Federal Aviation Administration. 1995. 35 p. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and Federal Bldg., Room 420, 709 West 9th St., Juneau, AK 99802.)
- OF 94-0713. HAWAII. Timelapse film logs from the Pb'u'O'o-Kupaianaha eruption of Kilauea Volcano; January 1983 through September 1994, by T. N. Mattox, C. C. Heliker, J. P. Hoffmann, Ken Hon, M. T. Mangan, C. A. Neal, G. E. Ulrich and E. W. Wolfe. 1995. 237 p. (NC, Da, M.)
- OF 94-0713-W. ALASKA. Overview of environmental and hydrogeologic conditions at Yakutat, Alaska, by W. F. Holmes and J. M. Dorava. Prepared in cooperation with the Federal Aviation Administration. 1995. 17 p. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and Federal Bldg., Room 420, 709 West 9th St., Juneau, AK 99802.)
- OF 94-0714. Circum-North Pacific tectonostratigraphic terrane map, by W. J. Nokleberg, L. M. Parfenov, J. W. Monger, B. V. Baranov, S. G. Byalobzhesky, T. K. Bundtzen, T. D. Feeney, Kazuya Fujita, S. P. Gordey, Arthur Grantz, A. I. Khanchuk, B. A. Natal'in, L. M. Natapov, I. O. Norton, W. W. Patton, Jr., George Plafker, D. W. Scholl, S. D. Sokolov, G. M. Sosunov, D. B. Stone, R. W. Tabor, N. V. Tsukanov, T. L. Vallier and Koji Wakita. Prepared in cooperation with the Russian Academy of Sciences, Geological Survey of Canada, Alaska Division of Geological and Geophysical Surveys, Russian Committee on Geology, Michigan State University, Exxon Production Research Company, University of Alaska, and Geological Survey of Japan. 1994. 221 p., 5 over-size sheets; sheets 1-2, scale 1:5,000,000 (1 inch = about 80 miles); sheets 4-5, scale 1:10,000,000 (1 inch = about 160 miles). (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St. Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0001. UTAH. Stratigraphy, sedimentology, paleontology, and paleomagnetism of Pliocene-early Pleistocene lacustrine deposits in two cores from western Utah, by R. S. Thompson, C. G. Oviatt, A. P. Roberts, J. Buchner, R. Kelsey, C. J. Bracht, R. M. Forester and J. P. Bradbury. 1995. 94 p. (NC, Da, M, U; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1403.)
- OF 95-0002. NEVADA. Joint networks in the Tiva Canyon and Topopah Spring tuffs of the Paintbrush Group, southwestern Nevada, by C. K. Throckmorton and E. R. Verbeek. 1995. 179 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)
- OF 95-0003. FLORIDA. Preliminary analysis of integrated stratigraphic data from the South Venice corehole, Sarasota County, Florida, by G. L. Wingard, S. D. Weedman, T. M. Scott, L. E. Edwards and R. C. Green. Prepared in cooperation with the Florida Geological Survey. 1994. 129 p. (NC, Da, M.)
- OF 95-0004. VIRGINIA. Preliminary geologic map of the Lunenburg and Fort Mitchell 7.5' quadrangles, Virginia, by W. C. Burton. 1995. 14 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; Virginia Div. of Mineral Resources, Natural Resources Bldg., Alderman and McCormick Rd., P.O. Box 3667, Charlottesville, VA 22903.)
- OF 95-0006. OREGON. Analytical results and sample locality map of rock and soil samples, and samples of the ash of big sagebrush, rabbit brush, and western juniper from the Badlands Wilderness Study Area and the Badlands Wilderness Study Area additions (OR-005-021), Crook and Deschutes counties, Oregon, by H. D. King, P. H. Briggs, M. S. Erickson and J. R. Bergquist. 1995. 33 p., one 5 1/4 inch DS/DD IBM diskette. (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232-2162.)
- OF 95-0007. FLORIDA. Biogeochemical study of the pinelands in Everglades National Park, Florida, by L. L. Jackson, P. H. Briggs, L. P. Gough and K. W. Stolte. 1995. 85 p. (NC, Da, M; Dep. of Natural Resources, Div. of Resource Management, 903 West Tennessee St., Tallahassee, FL 32304.)
- OF 95-0008. HAWAII. Deformational features resulting from slope movement in the Manoa Valley, City and County of Honolulu, Hawaii, by R. W. Fleming. 1995. 12 p., 5 over-size sheets. (NC, Da, M; Div. of Water and Land Dev., P.O. Box 373, Honolulu, HI 96809.)
- OF 95-0009. UTAH. Preliminary geologic map of the Panguitch Quadrangle, Garfield County, Utah, by D. W. Moore and A. W. Straub. 1995. 13 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1403.)
- OF 95-0010. NEVADA, UTAH. Geologic map of Kiou Spring and Garrison 7.5' quadrangles, White Pine County, Nevada and Millard County, Utah, by A. J. McGrew and E. L. Miller; compiled by J. L. Brown. Prepared in cooperation with the U.S. National Park Service. 1995. 21 p., 3 over-size sheets; sheets 1-2, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1403.)
- OF 95-0011-A. MONTANA. Geologic maps of the northern and western parts of Gallatin National Forest, Montana; digital and hard copy formats, compiled by A. B. Wilson and J. E. Elliott. 1995. 2 p., 2 over-size sheets, scale 1:126,720 (1 inch = 2 miles). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 95-0011-B. MONTANA. Geologic maps of the northern and western parts of Gallatin National Forest, Montana; digital and hard copy formats, compiled by A. B. Wilson and J. E. Elliott. 1995. One 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- The user may purchase OF 95-11-A or OF 95-11-A and B. OF 95-11-B includes the digital and text files, on one 1.44MB (3 1/2 inch) diskette, used to produce OF 95-11-A and is not recommended or intended to stand alone.
- OF 95-0013. CALIFORNIA. Reconnaissance stream-sediment geochemistry of Twentynine Palms Marine Corps Base, California, by A. H. Hofstra, D. L. Fey, J. M. Motooka and D. A. Hopkins. 1994. 103 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K

- St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0014. CALIFORNIA. Tables of subsurface formation depths for exploration wells in Santa Maria Basin, Santa Barbara and San Luis Obispo counties, California, compiled from publications of the California Division of Oil and Gas, compiled by M. E. Tennyson. 1994. 22 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0015. CALIFORNIA. Variations in titanium and chromium concentrations in magnetite separates from beach and offshore sediments, San Francisco and San Mateo counties, California; Part A, by Gretchen Luepke. 1994. 6 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0016. CALIFORNIA. Isostatic gravity map of the Victorville 1:100,000 scale Quadrangle, California, by R. L. Morin. 1995. 1 over-size sheet, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0017. HAWAII. Final report; acoustic mapping of dredged material disposal sites and deposits in Mamala Bay, Honolulu, Hawaii, by M. E. Torresan, M. A. Hampton, M. H. Gowen, J. H. Barber, Jr., L. L. Zink, T. E. Chase, F. L. Wong, J. T. Gann and Peter Dartnell. 1995. 53 p., 1 over-size sheet, scale 1:39,370 (1 inch = about 3,000 feet). (NC, Da, M.)
- OF 95-0022. Dog "bites" earthquake; a handout for the valley/mountain shaking model, by J. R. Evans and J. M. Coakley. 1995. 13 p. (NC, Da, M.)
- OF 95-0023. COLORADO. An update on USGS studies of the Summitville Mine and its downstream environmental effects, by G. S. Plumlee and P. R. Edelman. 1995. 10 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 95-0024. COLORADO. Slope map of the Telluride Quadrangle, San Miguel, Ouray, and San Juan counties, Colorado, by R. G. Luedke. 1995. 6 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, U.)
- OF 95-0025. CALIFORNIA. Preliminary digital geologic map of the Santa Maria 30' x 60' Quadrangle, California, in ARC/INFO, with exploration well locations and subsurface formation depths, by M. E. Tennyson, W. R. Beeman and S. B. Urban. 1995. 2 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- The database can be downloaded via "anonymous ftp" from a USGS system named greenwood.cr.usgs.gov (136.177.48.5). The files are located in a directory named /pub/open-file-reports/ofr-95-0025. This directory contains ARC/INFO coverage comprising geologic and basemap data for the Santa Maria, California, 30' x 60' Quadrangle, along with AML's to produce sample graphics files and plot files.
- OF 95-0026. COLORADO. Map showing potential metal-mine drainage hazards in Colorado, based on mineral-deposit geology, by G. S. Plumlee, R. K. Streufert, K. S. Smith, S. M. Smith, A. R. Wallace, M. I. Toth, J. T. Nash, R. A. Robinson, W. H. Ficklin and G. K. Lee. 1995. 1 over-size sheet, scale 1:750,000 (1 inch = about 12 miles). (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 95-0028. High-temperature permeability studies; 1, Permeability of granite and novaculite at 300° to 500° C, by D. E. Moore, L. Q. Liu, D. A. Lockner, R. S. Summers and J. D. Byerlee. 1995. 79 p. (NC, Da, M.)
- OF 95-0030. CALIFORNIA. Trace metals and major and rare earth elements in cuttings from five high-temperature wells in the northwest region of The Geysers, California, vapor-dominated geothermal system, by R. O. Fournier and J. N. Moore. 1995. 11 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0031. ARIZONA. An evaluation of sand and gravel resources in and near the Verde Valley of the Coconino National Forest, Arizona, by L. J. Cox. 1995. 20 p., 1 over-size sheet, scale 1:126,720 (1 inch = 2 miles). (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 95-0032. ARIZONA, COLORADO, WYOMING. Data collection and reduction procedures for 1900 km of total intensity magnetic field data collected with a truck-mounted system in southeastern Arizona, southwestern Colorado, and northwestern Wyoming, by P. E. Gettings, M. E. Gettings and M. W. Bultman. 1995. 13 p. (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719; Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82701.)
- OF 95-0033. OREGON. Lithologic description of a sediment core from Round Lake, Klamath County, Oregon, by D. P. Adam, H. J. Rieck, M. L. McGann, K. H. Schiller and A. M. Sarna-Wojcicki. 1995. 49 p. (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)
- OF 95-0034. Report of 1994 workshop on the Correlation of marine and terrestrial records of climate changes in the Western United States, by D. P. Adam, J. P. Bradbury, W. E. Dean, J. V. Gardner, and A. M. Sarna-Wojcicki. 1995. 92 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

- Overview of the marine-terrestrial correlations project, by D. P. Adam, J. P. Bradbury, W. E. Dean, J. V. Gardner and A. M. Sarna-Wojcicki. p. 4-9.
- Carp Lake; a long record from the Columbia Basin, by Cathy Whitlock. p. 10-12.
- Status report on cores taken in 1991-1992 in the upper Klamath Basin and vicinity, Oregon and California, by Klamath Core Study Team. p. 13-29.
- Climate records from Quaternary sediment, Buck Lake and Caledonia Marsh, southern Oregon; comparison of magnetic and pollen data, by J. G. Rosenbaum, R. L. Reynolds, D. P. Adam, A. M. Sarna-Wojcicki, C. G. Whitney, M. W. Kerwin and P. L. Fitzmaurice. p. 30-35.
- An 800,000-yr paleoclimatic record from Core OL-92, Owens Lake, Southeast California, by Owens Lake Core Study Team. p. 36-55.
- Fine resolution pollen analysis of Core OL-92, Owens Lake, California, by W. B. Woolfenden. p. 56-57.
- Direct marine-terrestrial paleoclimatic correlation of the last 160,000 years; evidence from high-resolution pollen data in marine cores from the Northeast Pacific Ocean, by L. E. Heusser. p. 58-59.
- Correlations of latest Pleistocene and Holocene tephra layers in sediments of the Pacific margin and adjacent land areas, western conterminous U.S., by Elmira Wan, C. E. Meyer and A. M. Sarna-Wojcicki. p. 60-61.
- Inorganic and organic geochemical analyses of California margin marine cores, by W. E. Dean and L. R. Bader. p. 62-67.
- Centennial-scale changes in the fluxes of carbonate, organic carbon, and biogenic opal within the California Current and their relationships to paleoproductivity over the past 50,000 yrs, by J. V. Gardner and Peter Dartnell. p. 68-70.
- Preliminary biostratigraphic results of planktonic and benthic foraminifers from cores collected off Central California, by P. J. Quintero and B. A. Carlin. p. 71-78.
- Sea surface conditions in the northeastern Pacific during the last 20,000 years, by A. L. Sabin and N. G. Pisias. p. 79-82.
- Foraminiferal evidence of paleoceanographic changes off Central California during the last 16,000 years, Farallones Core F8-90-G21, by M. L. McGann. p. 83-89.
- Marine diatom studies for the Correlation of the Marine and Terrestrial Records of Climate (CMTR) Project, by Eileen Hemphill-Haley. p. 90-92.
- OF 95-0035. NEVADA. Preliminary geologic map of the Arrow Canyon NW Quadrangle, Clark County, Nevada, by W. R. Page. Prepared in cooperation with the Las Vegas Valley Water District. 1995. 16 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)
- OF 95-0037. Paleoclimatic, paleohydrologic and tectonic applications of uranium-series dating of travertine and calcite vein samples from southern Great Basin and Grand Canyon areas, by B. J. Szabo and I. J. Winograd. 1995. 26 p. (NC, Da, M, U; Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)
- OF 95-0038. CALIFORNIA. Seismicity of the San Francisco Bay block, California, by J. A. Olson and M. L. Zoback. 1995. 50 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0039. CALIFORNIA. Geology, geochemistry, and resource potential of carbonate rocks in the San Bernardino National Forest, California, by J. P. Calzia, J. C. Matti and M. E. Gantenbein. 1995. 38 p., 2 over-size sheets, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0040. OREGON. Petrology of late Eocene lavas erupted in the forearc of central Oregon, by A. S. Davis, P. D. Snavey, Jr., Leda-Beth Gray and D. L. Minasian. 1995. 58 p. (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)
- OF 95-0041. Bibliography of USGS marine organic geochemistry; 1976-1995, by K. A. Kvenvolden. 1995. 32 p. (NC, Da, M.)
- OF 95-0042. CALIFORNIA. Hydrologic effects associated with the June 28, 1992 Landers, California, earthquake sequence, by E. A. Roeloffs, W. R. Danskin, C. D. Farrar, D. L. Galloway, S. N. Hamlin, E. G. Quilty, H. M. Quinn, D. H. Schaefer, M. L. Sorey and D. E. Woodcock. 1995. 68 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0043. COLORADO. Impact of the lower Alamosa River water on alfalfa, southwestern San Luis Valley, Colorado; 1994 follow-up study, by J. A. Erdman and K. S. Smith. 1995. 13 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 95-0044. Lithology and X-ray mineralogy of the Shell 410-1 Well, U.S. North Atlantic outer continental shelf, by L. J. Poppe. 1995. 9 p. (NC, Da, M.)
- OF 95-0045. Bibliography of mineral resource and regional geologic studies for the states of Virginia, North Carolina, South Carolina, and Georgia, by K. J. Gray and T. L. Klein. 1995. One 3 1/2 inch DS/HD diskette. (NC, Da, M; Virginia Div. of Mineral Resources, Natural Resources Bldg., Alderman and McCormick Rd., P.O. Box 3667, Charlottesville, VA 22903; Division of Land Resources, Dep. of Natural Resources and Community Dev., 512 North Salisbury St., P.O. Box 27687, Raleigh, NC 27611; Georgia Geol. Surv., 19 Martin Luther King Jr. Dr. SW, Room 400, Atlanta, GA 30334; South Carolina Geol. Surv., 5 Geology Rd., Columbia, SC 29210-9998.)

Requirements: IBM PC or compatible.

- OF 95-0046. A bibliography of geomorphometry, the quantitative representation of topography; Supplement 1.0, by R. J. Pike. 1995. 30 p. (NC, Da, M.)
- OF 95-0047. ALASKA. Geochemical data of fumarolically altered rocks, Valley of Ten Thousand Smokes, Alaska, by T. E. Keith. 1995. 20 p. (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0048. ARIZONA. Geologic map of the Cane Springs Southeast Quadrangle, Mohave County, Arizona, by Ivo Lucchitta, C. M. Dehler and P. O. Basdekas. 1995. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 95-0049. Acetic acid leachability of lead from clinoptilolite-rich rocks that extracted heavy metals from polluted drainage water in Colorado, by G. A. Desborough. 1995. 10 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 95-0051. CALIFORNIA. Preliminary geologic map of the Calabasas 7.5' Quadrangle, Southern California; a digital database, compiled by R. F. Yerkes and R. H. Campbell. 1995. 9 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0052. COLORADO. Preliminary geologic map of the Rifle Quadrangle, Garfield County, Colorado, by R. R. Shroba, M. W. Green and G. M. Fairer. 1995. 22 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 95-0054. CALIFORNIA. Basic data and preliminary density profile from a borehole gravity survey made in the 341-11P Well, Kettleman North Dome oil field, Kings County, California, by L. A. Beyer, F. G. Clutson and F. V. Grubb. 1995. 24 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0055. ALASKA. A compilation of sulfur dioxide and carbon dioxide emission-rate data from Cook Inlet volcanoes (Redoubt, Spurr, Iliamna, and Augustine), Alaska during the period from 1990 to 1994, by M. P. Doukas. 1995. 16 p. (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St. Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0056. Extraction of metals from raw clinoptilolite-rich rocks exposed to water in heavy-metal-polluted drainages, by G. A. Desborough and David Frishman. 1995. 30 p. (NC, Da, M.)
- OF 95-0057. ARIZONA. Late Holocene debris fans and alluvial chronology of the Colorado River, eastern Grand Canyon, Arizona, by Richard Hereford, K. S. Thompson, K. J. Burke and H. C. Fairley. Prepared in cooperation with the U.S. Bureau of Reclamation, Glen Canyon Environmental Studies. 1995. 28 p. (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 95-0058. GPRMODV2; one-dimensional full waveform forward modeling of dispersive ground penetrating radar data, version 2.0, by M. H. Powers and G. R. Olhoeft. 1995. 41 p., one 3 1/2 inch diskette. (NC, Da, M.)
- DS/HD IBM diskette, 386 or better, DOS 3.0 or later.
- OF 95-0059. WYOMING. Yellowstone; restless volcanic giant, by Daniel Dzuris, R. L. Christiansen and K. L. Pierce. 1995. 2 p. (NC, Da, M, S, U; Idaho Geol. Surv., Morrill Hall, Room 332, Univ. of Idaho Campus, Moscow, ID 83843; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82701.) (Volcano hazards fact sheet.)
- OF 95-0060. Application of nonlinear dynamics to understanding earthquake sequences in time and space; G. K. Gilbert fellowship report, by D. J. Varnes and C. G. Bufo. 1995. 11 p. (NC, Da, M.)
- OF 95-0061-A. ALASKA. 10 years of volcanic activity in Alaska; 1983 to 1992; a video, by M. P. Doukas, R. G. McGimsey and J. M. Dorava. 1995. One VHS videotape. (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0061-B. ALASKA. 10 years of volcanic activity in Alaska; 1983 to 1992; a video, by M. P. Doukas, R. G. McGimsey and J. M. Dorava. 1995. 23 p. (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St. Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0062. CALIFORNIA. Ground deformation in Granada Hills and Mission Hills resulting from the January 17, 1994, Northridge, California, earthquake, by Suzanne Hecker, D. J. Ponti, C. D. Garvin, T. J. Powers, T. E. Fumal, J. C. Hamilton, R. V. Sharp, M. J. Rymer, C. S. Prentice and F. R. Cinti. 1995. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0063. COLORADO. Bristlecone pine frost-ring and light-ring chronologies, from 569 B.C. to A.D. 1993, Colorado, by F. C. Brunstein. 1995. 24 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)

- OF 95-0064-A. Bibliography of well-log applications; cumulative edition; to September 30, 1994, by S. E. Prensky. 1995. 791 p. (NC, Da, M.)
- OF 95-0064-B. Bibliography of well-log applications; cumulative edition; to September 30, 1994, by S. E. Prensky. 1995. One 3 1/2 inch diskette. (NC, Da, M.)
- Macintosh version formatted in Microsoft Word, version 5.1.
- OF 95-0064-C. Bibliography of well-log applications; cumulative edition; to September 30, 1994, by S. E. Prensky. 1995. One 3 1/2 inch diskette. (NC, Da, M.)
- IBM-PC, or compatible, version formatted in WordPerfect, version 5.1.
- OF 95-0065-A. Bibliography of publications by members of the Branch of Coal Geology, Office of Energy and Marine Geology, U.S. Geological Survey, January 1, 1985-September 30, 1994, by M. S. Ellis. 1995. 196 p. (NC, Da, M.)
- OF 95-0065-B. Bibliography of publications by members of the Branch of Coal Geology, Office of Energy and Marine Geology, U.S. Geological Survey, January 1, 1985-September 30, 1994, by M. S. Ellis. 1995. 5 p., two 3 1/2 inch DS/HD diskettes. (NC, Da, M.)
- Requirements: IBM-compatible personal computer (386 or higher), DOS version 3.3 or later, and a hard drive with at least 6MB of free space.
- OF 95-0066-A. SOUTH DAKOTA, WYOMING. Updated database and mine locations for metallic mineral districts and mines of the Black Hills, South Dakota and Wyoming, by A. B. Wilson and Ed DeWitt. 1995. 8 p. (NC, Da, M, U; Dep. of Water and Natural Resources, South Dakota Geol. Surv., Sci. Ctr., Univ. of South Dakota, Vermillion, SD 57069; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071.)
- OF 95-0066-B. SOUTH DAKOTA, WYOMING. Updated database and mine locations for metallic mineral districts and mines of the Black Hills, South Dakota and Wyoming, by A. B. Wilson and Ed DeWitt. 1995. Two 3 1/2 inch DS/HD IBM diskettes. (NC, Da, M, U; Dep. of Water and Natural Resources, South Dakota Geol. Surv., Sci. Ctr., Univ. of South Dakota, Vermillion, SD 57069; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071.)
- OF 95-0067. Scaling laws for natural disaster fatalities, by S. P. Nishenko and C. C. Barton. 1995. 22 p. (NC, Da, M.)
- OF 95-0070. ALASKA. Methane in coastal sea water, sea ice, and bottom sediments, Beaufort Sea, Alaska, by T. D. Lorenson and K. A. Kvenvolden. 1995. 84 p. (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0071. COLORADO. Calculations of pre-mining geochemical baselines at three stream junctions in the vicinity of Summitville, Colorado, by W. R. Miller, J. B. McHugh and A. L. Meier. 1995. 26 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 95-0072. PUERTO RICO. Historical shoreline changes at Rincón, Puerto Rico, by E. R. Thiel and Milton Carlo. 1995. 29 p., 1 over-size sheet, scale 1:5,000 (1 inch = about 425 feet). (NC.)
- OF 95-0075-A. Economics and coalbed gas in the 1995 National assessment of U.S. oil and gas resources, by E. D. Attanasi and D. D. Rice. 1995. 22 p. (NC, Da, M.)
- OF 95-0075-B. Descriptions of continuous-type (unconventional) plays of the U.S. Geological Survey 1995 National assessment of United States oil and gas resources, by J. W. Schmoker and S. A. Oscarson. 1995. 44 p. (NC, Da, M.)
- OF 95-0075-C. Areas of historical oil and gas exploration and production in the conterminous United States, by R. F. Mast, D. H. Root, L. P. Williams and W. R. Beeman. 1995. 3 p. (NC, Da, M.)
- OF 95-0075-E. Potential additions to technically recoverable resources for each continuous-type (unconventional) play of the U.S. Geological Survey 1995 National assessment of United States oil and gas resources; graphical and tabular presentations, by J. W. Schmoker, R. A. Crovelli and R. H. Balay. 1995. 58 p. (NC, Da, M.)
- OF 95-0075-F. Economics and continuous-type oil and gas accumulations in the 1995 National assessment of U.S. oil and gas resources, by E. D. Attanasi, J. W. Schmoker and J. C. Quinn. 1995. 35 p. (NC, Da, M.)
- OF 95-0076. ARIZONA. Preliminary results of modeling the gravity anomaly field in the upper San Pedro Basin, southeastern Arizona, by M. E. Gettings and B. B. Houser. 1995. 9 p., 5 over-size sheets. (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 95-0077. A bibliography of some geophysical computer programs, data bases, and maps from the U.S. Geological Survey, 1971-1994, by Viki Bankey and W. L. Anderson. 1995. 30 p. (NC, Da, M.)
- OF 95-0078. ARIZONA. Geometeorological data collected by the USGS Desert Winds Project at Gold Spring, Great Basin desert, northeastern Arizona, 1979-1992, by P. J. Helm, C. S. Breed, R. K. Tigges and P. A. Garcia. 1995. One CD-ROM. (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- The minimum system requirements to use the data with the "geomet" software provided on this disc are (based on limited testing on a Sun SPARCstation 2): (1) a UNIX (Sun) computer system with 16MB RAM; (2) SunOS version 4.1.3 and OpenWindows version 3; (3) CD-ROM drive with ISO 9660 software driver; (4) hard disk; and (5) EGA/VGA graphics system.
- OF 95-0079. COLORADO. Chemical analyses of 33 surface water samples from the Redcloud Peak area, Colorado, by J. B. McHugh, W. R. Miller, A. L. Meier and W. M. d'Angelo. 1995. 5 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)

- OF 95-0080. NEVADA. Concentrations of N₂, O₂, CO₂, and He in soil gases collected over and near the Dixie Valley Known Geothermal Resource area, northern Dixie Valley, Nevada, by M. E. Hinkle. 1995. 26 p., one 5 1/4 inch DS/DD IBM diskette. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)
- OF 95-0082. Recommendations for assessments of undiscovered mineral resources, by P. B. Barton, D. A. Brew, R. A. Ayuso, B. M. Gamble, D. A. John, S. D. Ludington, D. A. Lindsey, E. R. Force, R. J. Goldfarb and K. M. Johnson. 1995. 139 p. (NC, Da, M.)
- OF 95-0083. ALASKA. Volcanic activity in Alaska; summary of events and response of the Alaska Volcano Observatory, 1992, by R. G. McGimsey, C. A. Neal and M. P. Doukas. 1995. 26 p. (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3545.)
- OF 95-0084. NEVADA. Reconnaissance geology and resources of Miocene diatomite, Trinity Pass area, Pershing County, Nevada, by J. T. Nash. 1995. 16 p., 1 over-size sheet, scale 1:48,000 (1 inch = 4,000 feet). (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)
- OF 95-0085. Volcanic gas, by K. A. McGee and T. M. Gerlach. 1995. 2 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.) (Volcano hazards fact sheet.)
- OF 95-0086. ARIZONA. Geologic map of the Cane Springs Quadrangle, northern Mohave County, Arizona, by Ivo Lucchitta, P. O. Basdekas, R. G. Bohannon, H. J. Reick and C. M. Dehler. 1995. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 95-0087. COLORADO. Potential remediation measures for acidic irrigation water derived from the Alamosa River in south-central Colorado, by G. A. Desborough and W. H. Raymond. 1995. 22 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 95-0088. CALIFORNIA. Preliminary geologic map of the Thousand Oaks 7.5' Quadrangle, Southern California; a digital database, compiled by R. F. Yerkes and R. H. Campbell. 1995. 8 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0089. CALIFORNIA. Preliminary geologic map of the Oat Mountain 7.5' Quadrangle, Southern California; a digital database, compiled by R. F. Yerkes and R. H. Campbell. 1995. 8 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0090. CALIFORNIA. Preliminary geologic map of the Canoga Park 7.5' Quadrangle, Southern California; a digital database, compiled by R. F. Yerkes and R. H. Campbell. 1995. 8 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0091. CALIFORNIA. Preliminary geologic map of the Topanga 7.5' Quadrangle, Southern California; a digital database, compiled by R. F. Yerkes and R. H. Campbell. 1995. 8 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0092. CALIFORNIA. Intensity distribution and isoseismal maps for the Northridge, California, earthquake of January 17, 1994, by J. W. Dewey, B. G. Reagor, L. A. Dengler and Kathy Moley. 1995. 35 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0093. OREGON. Natural hydrocarbon gases in the Coast Range of southern Oregon, by K. A. Kvenvolden, T. D. Lorenson and A. R. Niem. 1995. 19 p. (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)
- OF 95-0094. NEVADA. Preliminary geologic map of the Deadman Spring Quadrangle, Lincoln County, Nevada, by R. B. Scott, W. C. Swadley, W. J. Taylor and A. E. Harding. 1995. 35 p., 2 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)
- OF 95-0095. CALIFORNIA. Preliminary maps showing location of reported damage and intensity of shaking in part of northern Santa Clara and southern San Mateo counties, California, from October 17, 1989 M 7.1 Loma Prieta earthquake, by E. H. Pampeyan and R. A. Loney. 1995. 9 p., 2 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0097. COLORADO. Chemical analyses of 33 surface water samples from the Gunnison area, Colorado, by J. B. McHugh, W. R. Miller, A. L. Meier and W. M. d'Angelo. 1995. 4 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 95-0098. MONTANA. Complete analytical data for samples of the Big Timber Stock, Crazy Mountains, Montana, by E. A. du Bray. 1995. 6 p. (NC, Da, M, U, S; Montana Bur. of Mines and

- Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)
- OF 95-0099. OREGON. Elevations and descriptions for leveling bench marks at Newberry Crater, Oregon, by K. M. Yamashita, D. E. Wieprecht and M. K. Sako. 1995. 18 p. (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. # 28, Portland, OR 97232.)
- OF 95-0101. UTAH. Selected hydrologic data for Juab Valley, Utah, 1935-94, by J. I. Steiger. Prepared in cooperation with the Central Utah Water Conservancy District and the East Juab Water Conservancy District. 1995. 85 p., 1 over-size sheet. (NC, Da, M, Wb, U; Library of Congress, Washington, DC 20540.)
- OF 95-0102. NEVADA. Summary of lithologic logging of new and existing boreholes at Yucca Mountain, Nevada, July 1994 to November 1994, by T. C. Moyer, J. K. Geslin and D. C. Buesch. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1995. 22 p. (NC, Da, M, Wb.)
- OF 95-0103. TEXAS. Biological and associated water-quality data for lower Olmos Creek and upper San Antonio River, San Antonio, Texas, March-October 1990, by R. L. Taylor. 1995. 73 p. (NC, Da, M, Wb.)
- OF 95-0104. UTAH. Selected hydrologic data for the Bonneville Salt Flats and Pilot Valley, western Utah, 1991-93, by J. L. Mason, W. C. Brothers, L. J. Gerner and P. S. Muir. Prepared in cooperation with the U.S. Bureau of Land Management. 1995. 56 p. (NC, Da, M, Wb, U; USGS, WRD, 1745 West 1700 South, Room 1016 Administrative Bldg., Salt Lake City, UT 84104.)
- OF 95-0105. NORTH DAKOTA. Water-resources activities, North Dakota District, fiscal year 1994-95, compiled by C. R. Martin. 1995. 55 p. (NC, Da, M, Wb; USGS, WRD, 821 East Interstate Ave., Bismarck, ND 58501.)
- OF 95-0106. MISSOURI. Hydrologic data for the Fristoe Unit of the Mark Twain National Forest, southern Missouri, 1988-93, by M. J. Kleeschulte and S. J. Sutley. Prepared in cooperation with the Missouri Department of Conservation. 1995. 106 p. (NC, Da, M, Wb; USGS, WRD, 1400 Independence Rd., Mail Stop 200, Rolla, MO 65401.)
- OF 95-0107. NEVADA. Irrigated croplands, estimated pumpage, and water-level changes in Diamond Valley, Eureka and Elko counties, Nevada, through 1990, by F. E. Arteaga, J. L. Smith and J. R. Harrill. Prepared in cooperation with the Nevada Division of Water Resources. 1995. 68 p., 1 over-size sheet, scale 1:63,360 (1 inch = 1 mile). (NC, Da, M, Wb, U; USGS, WRD, 333 West Nye Lane, Carson City, NV 89706-0866; and 6770 South Paradise, Las Vegas, NV 89119-3721.)
- OF 95-0109. MISSOURI. Hydrologic data for the Columbia/Eagle Bluffs Wetland Complex, Columbia, Missouri; 1992-93, by J. M. Richards. Prepared in cooperation with the Missouri Department of Conservation and the City of Columbia, Missouri. 1995. 50 p. (NC, Da, M, Wb.)
- OF 95-0110. CALIFORNIA. Dissolved pesticide data for the San Joaquin River at Vernalis and the Sacramento River at Sacramento, California, 1991-94, by D. E. MacCoy, K. L. Crepeau and K. M. Kuivila. Prepared in cooperation with the U.S. Environmental Protection Agency and the California Regional Water Quality Control Board. 1995. 27 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 95-0111. NEW MEXICO, TEXAS. Selected hydrologic data for the Mesilla ground-water basin, 1987 through 1992 water years, Doña Ana County, New Mexico, and El Paso County, Texas, by E. L. Nickerson. Prepared in cooperation with the New Mexico State Engineer Office, Elephant Butte Irrigation District, City of Las Cruces, New Mexico State University, El Paso Water Utilities, Jornada Resource Conservation and Development, and International Boundary and Water Commission-U.S. Section. 1995. 123 p. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110.)
- OF 95-0113. PENNSYLVANIA. Geographic information system data sets of hydrogeologic conditions in Pequea and Mill Creek watersheds, Pennsylvania; Part I, Basic data, by D. L. Dugas, S. J. Char and G. E. Baumbach. Prepared in cooperation with the Pennsylvania Department of Environmental Resources, Bureau of Water Quality Management. 1995. 8 p. (NC, Da, M, Wb; USGS, WRD, 840 Market St., Lemoyne, PA 17043.)
- OF 95-0115. FLORIDA. Potentiometric surface of the upper Floridan Aquifer in the St. Johns River Water Management District and vicinity, September 1994, by Leel Knowles, Jr. Prepared in cooperation with the Saint Johns River Water Management District, South Florida Water Management District, and Southwest Florida Water Management District. 1995. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301; Suite 1006, 224 West Central Pkwy., Altamonte Springs, FL 32714; Suite 222, 3728 Phillips Hwy., Jacksonville, FL 32207; Suite 107, 9100 NW 36 St., Miami, FL 33178; and Suite B-5, 4710 Eisenhower Blvd., Tampa, FL 33634.)
- OF 95-0116. MINNESOTA. Presence and distribution of nitrate and selected pesticides in surficial-sand aquifers and selected lakes, 1993-1994, East Otter Tail County, Minnesota, by S. E. Smith and J. F. Ruhl. Prepared in cooperation with the East Otter Tail County Soil and Water Conservation District and the Minnesota Department of Natural Resources. 1995. 18 p. (NC, Da, M, Wb; USGS, WRD, 2280 Woodale Dr., Mounds View, MN 55112.)
- OF 95-0117. Report on the U.S. Geological Survey's evaluation program for standard reference samples distributed in October 1994; T-131 (trace constituents), T-133 (trace constituents), M-132 (major constituents), N-43 (nutrients), N-44 (nutrients), P-23 (low ionic strength) and Hg-19 (mercury), by H. K. Long and J. W. Farrar. 1995. 139 p. (NC, Da, M, Wb, U.)
- OF 95-0119. PENNSYLVANIA. Altitude and configuration of the potentiometric surface in part of lower Providence Township, Montgomery County, Pennsylvania, May and June 1994, by B. C. McManus. Prepared in cooperation with the Valley Forge National Historic Park. 1995. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, Wb; USGS, WRD, 111 Great Valley Pkwy., Malvern, PA 19355.)
- OF 95-0120. KANSAS. Water-resources reports prepared by or in cooperation with the U.S. Geological Survey, Kansas, 1886-1994, compiled by D. J. Roberts and L. J. Combs. 1995. 122 p. (NC, Da, M, Wb; USGS, WRD, 4821 Quail Crest Pl., Lawrence,

- KS 66049; 206 Fulton Terrace, Garden City, KS 67846; and 415 South Main, Wichita, KS 67202.)
- OF 95-0121. WYOMING. Field screening of water quality, bottom sediment, and biota associated with irrigation drainage, Wind River Indian Reservation, Wyoming, 1992-93, by D. N. Grasso, M. E. Jennings and W. J. Sadler. 1995. 41 p. (NC, Da, M, Wb, U; USGS, WRD, 2617 East Lincolnway, Suite B, Cheyenne, WY 82001.)
- OF 95-0122. ARIZONA. Meteorological and associated data collected over agricultural fields in Pinal County, Arizona, 1989 and 1990, by S. J. Owen-Joyce and P. W. Brown. Prepared in cooperation with the U.S. Bureau of Reclamation. 1995. 52 p. (NC, Da, M, Wb; USGS, WRD, 375 South Euclid Ave., Tucson, AZ 85719-6644; 1940 South 3rd Ave., Yuma, AZ 85364; 1545 West University Dr., Tempe, AZ 85281; and 2255 North Gemini Dr., Bldg. 3, Flagstaff, AZ 86001.)
- OF 95-0123. NORTH DAKOTA. Lake-level frequency analysis for Devils Lake, North Dakota, by G. J. Wiche and A. V. Vecchia. Prepared in cooperation with the North Dakota State Water Commission. 1995. 65 p. (NC, Da, M, Wb; USGS, WRD, 821 East Interstate Ave., Bismarck, ND 58501.)
- OF 95-0126. NEVADA. Water-related scientific activities of the U.S. Geological Survey in Nevada, fiscal years 1993-94, compiled by M. T. Foglesong. 1995. 69 p. (NC, Da, M, Wb; USGS, WRD, 333 West Nye Lane, Carson City, NV 89706-0866; and 6770 South Paradise Rd., Las Vegas, NV 89119-3721.)
- OF 95-0128. ALASKA. Surficial geologic map of northern Adak Island, Alaska, by C. F. Waythomas. Prepared in cooperation with the U.S. Navy. 1995. 6 p., 1 over-size sheet. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508; 800 Yukon Dr., Fairbanks, AK 99775-5170; and Federal Bldg., Room 420, 709 West 9th St., Juneau, AK 99802.)
- OF 95-0129. WEST VIRGINIA, OHIO. Water-quality data for the Ohio River from New Cumberland Dam to Pike Island Dam, West Virginia and Ohio, June-November 1992, by K. F. Miller, C. W. Faulkenburg, D. B. Chambers and M. C. Waldron. Prepared in cooperation with the City of New Martinsville, West Virginia. 1995. 46 p. (NC, Da, M, Wb; USGS, WRD, 11 Dunbar St., Charleston, WV 25301.)
- OF 95-0136. NORTH CAROLINA, VIRGINIA. Water-quality assessment of the Albemarle-Pamlico drainage basin, North Carolina and Virginia; environmental setting and water-quality issues, by Gerard McMahon and O. B. Lloyd, Jr. 1995. 73 p. (NC, Da, M, Wb; USGS, WRD, 3916 Sunset Ridge Rd., Raleigh, NC 27607.)
- OF 95-0137. User's guide to the culvert analysis program, by J. M. Fulford. 1995. 69 p. (NC, Da, M, Wb.)
- OF 95-0138. UTAH. Water-resources activities in Utah by the U.S. Geological Survey, October 1, 1992, to September 30, 1993, compiled by E. E. Hardy and S. L. Dragos. 1995. 37 p. (NC, Da, M, Wb, U; USGS, WRD, Room 1016 Administration Bldg., 1745 West 1700 South, Salt Lake City, UT 84104.)
- OF 95-0139. COLORADO. Maximum-accumulation snowpack chemistry at selected sites in northwestern Colorado during spring 1994, by G. P. Ingersoll. Prepared in cooperation with Routt County, Colorado. 1995. 14 p. (NC, Da, M, Wb, U; USGS, WRD, Room H-2101, Bldg. 53, Denver Federal Ctr., Mail Stop 415, Box 25046, Denver, CO 80225-0046; and Norwest Bank Bldg., Suite 200, 201 West 8th St., Pueblo, CO 81003-3031.)
- OF 95-0140. Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory; determination of organochlorine pesticides and polychlorinated biphenyls in bottom sediment by dual capillary-column gas chromatography with electron-capture detection, by W. T. Foreman, B. F. Connor, E. T. Furlong, D. G. Vaught and L. M. Merten. 1995. 78 p. (NC, Da, M, Wb, U; USGS, WRD, 5293 Ward Rd., Arvada, CO 80002; and Room H-2313, 2d Floor, Bldg. 53, Denver Federal Ctr., Lakewood, CO 80225.)
- OF 95-0141. U.S. Geological Survey nutrient preservation experiment; nutrient concentration data for surface-, ground-, and municipal-supply water samples and quality-assurance samples, by C. J. Patton and E. P. Truitt. 1995. 140 p. (NC, Da, M, Wb, U.)
- OF 95-0142. NEW HAMPSHIRE. Results of geophysical surveys of glacial deposits near a former waste-disposal site, Nashua, New Hampshire, by J. D. Ayotte and T. H. Dorgan. Prepared in cooperation with the U.S. Environmental Protection Agency. 1995. 16 p. (NC, Da, M, Wb; USGS, WRD, 525 Clinton St., Bow, NH 03304.)
- OF 95-0143. MONTANA. Hydrogeologic data for the Northern Rocky Mountains intermontane basins, Montana, by D. M. Dutton, S. M. Lawlor, D. W. Briar and R. E. Tresch. 1995. 94 p., 1 over-size sheet. (NC, Da, M, Wb, S, U; USGS, WRD, Federal Bldg., Room 428, 301 South Park Ave., Drawer 10076, Helena, MT 59626-0076; and Eastern Montana Coll., Box 111, 1500 North 30th, Billings, MT 59101.)
- OF 95-0149. Concentration and transport data for selected dissolved inorganic constituents and dissolved organic carbon in water collected from the Mississippi River and some of its tributaries, July 1991-May 1992, by J. R. Garbarino, R. C. Antweiler, T. I. Brinton, D. A. Roth and H. E. Taylor. 1995. 149 p. (NC, Da, M, Wb.)
- OF 95-0150. CALIFORNIA. Activities of the Water Resources Division, California District, fiscal year 1994, compiled by M. L. DeBortoli. 1995. 77 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 95-0153. SOUTH DAKOTA. Records of wells and chemical analyses of ground water in Charles Mix and Douglas counties, South Dakota, by K. M. Neitzert. Prepared in cooperation with the South Dakota Department of Environment and Natural Resources. 1995. 129 p. (NC, Da, M, Wb; USGS, WRD, Room 408, Federal Bldg., 200 4th St. SW, Huron, SD 57350.)
- OF 95-0155. NEVADA. Lithologic and geophysical logs of drill holes Felderhoff Federal 5-1 and 25-1, Amargosa Desert, Nye County, Nevada, by W. J. Carr, S. M. Keller and J. A. Grow. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1995. 14 p. (NC, Da, M, Wb, U; USGS, WRD, Bldg. 53, Denver Federal Ctr., Mail Stop 421, Box 25046, Denver, CO 80225-0046; Room H-2313, 2d Floor, Bldg. 53, Denver Federal Ctr., Mail Stop 415, Box 25046, Denver, CO 80225-0046.)

OF 95-0156. TENNESSEE. Collection of short papers on Beaver Creek watershed studies in West Tennessee, 1989-94, compiled by W. H. Doyle, Jr. and E. G. Baker. 1995. 54 p. (NC, Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville, TN 37203; 1013 North Broadway, Knoxville, TN 37917; and AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)

Assessment of agricultural nonpoint-source pollution and best management practices for the Beaver Creek watershed, West Tennessee; an overview, by A. J. Roman-Mas, R. W. Stogner, Sr., W. H. Doyle, Jr. and S. J. Klaine. p. 1-10.

Evaluation of biomonitoring techniques used in assessing agricultural nonpoint source pollution, by T. D. Byl and A. J. Roman-Mas. p. 11-20.

Transport and degradation of aldicarb in the soil profile; a comparison of conventional tillage and non-tillage, by L. D. Olsen, A. J. Roman-Mas, C. P. Weisskopf and S. J. Klaine. p. 21-32.

Relation between nitrate concentrations and potential nitrate sources for water-table aquifers in the Beaver Creek watershed, West Tennessee; a statistical analysis, by S. D. Williams and A. J. Roman-Mas. p. 33-40.

Fate and transport of nitrogen in an agricultural watershed, by A. J. Roman-Mas, H. H. Cochrane, J. A. Smink and S. J. Klaine. p. 41.

Suspended-sediment yield and channel evolution in a small agricultural catchment, by R. W. Stogner, Sr. and T. H. Diehl. p. 43.

Mechanistic evaluation of pesticide temporal patterns for a first-order stream, by A. J. Roman-Mas, C. P. Weisskopf and S. J. Klaine. p. 45.

Research and monitoring needs for the implementation of the USDA water quality HUA program; the Beaver Creek watershed project, by H. C. Hankin and G. F. Smith. p. 47-54.

OF 95-0158. NEVADA, CALIFORNIA. Selected ground-water data for Yucca Mountain region, southern Nevada and eastern California, calendar year 1993, by G. S. Hale and C. L. Westenburg. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1995. 67 p., 1 over-size sheet. (NC, Da, M, Wb, U; USGS, WRD, 333 West Nye Lane, Carson City, NV 89706-0866; and 6770 South Paradise Rd., Las Vegas NV 89119-3721.)

OF 95-0160. NEVADA. Ground-water data for the Nevada Test Site and selected other areas in south-central Nevada, 1992-93, by S. R. Reiner, G. L. Locke and L. S. Robie. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1995. 32 p., 1 over-size sheet, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M, Wb, U; USGS, WRD, 333 West Nye Lane, Carson City, NV 89706-0866; and 6770 South Paradise Rd., Las Vegas, NV 89119-3721.)

OF 95-0162. MINNESOTA, SOUTH DAKOTA, NORTH DAKOTA. Physical characteristics of stream subbasins in the upper Minnesota River basin, west-central Minnesota, northeastern South Dakota and southeastern North Dakota, by C. A. Sanocki. Prepared in cooperation with the Minnesota Department of Trans-

portation. 1995. 16 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 2280 Woodale Dr., Mounds View, MN 55112.)

OF 95-0163. WISCONSIN, MICHIGAN. National Water-Quality Assessment Program, western Lake Michigan drainages; summaries of liaison committee meeting, Green Bay, Wisconsin, March 28-29, 1995, compiled by C. A. Peters. 1995. 57 p. (NC, Da, M, Wb; USGS, WRD, 6417 Normandy Lane, Madison, WI 53719-1133.)

Overview of the U.S. Geological Survey National Water-Quality Assessment Program, by M. C. Yurewicz. p. 5-6.

Accomplishments in the western Lake Michigan drainages in FY 1994, by C. A. Peters. p. 7-8.

Workplans for the western Lake Michigan drainages for FY 1995, by C. A. Peters. p. 9-10.

Developing a current land-cover data layer for the western Lake Michigan drainages, by J. S. Stewart. p. 11-12.

Overview of the Upper Midwest Gap Analysis Program, by D. J. Fitzpatrick. p. 13-14.

Plans for analysis and comparison of two benthic invertebrate population data bases, by B. N. Lenz and S. J. Rheume. p. 17-18.

Effects of season, habitat, and an impoundment on 25 benthic community metrics used to assess water quality, by S. W. Szczytko. p. 19.

Trace elements in caddisflies and streambed sediments, by B. C. Scudder, F. A. Fitzpatrick, S. J. Rheume and D. J. Sullivan. p. 21.

Zebra mussel impacts on Wisconsin aquatic systems, by Clifford Kraft. p. 23.

Introduction to the upper East River Watershed Project, by T. H. McIntosh, Paul Baumgart, D. M. Robertson and Kevin Erb. p. 27-29.

Application of Soil and Water Assessment Tool (SWAT) to the upper East River watershed, by Paul Baumgart, T. H. McIntosh, D. M. Robertson and Kevin Erb. p. 31-32.

Bottom sediment behavior and composition as a tool for watershed analysis; a focus on the upper East River watershed, by G. W. Mason, III, M. J. Tenor, T. H. McIntosh and D. M. Robertson. p. 33-34.

Variability in nutrient concentrations and transport throughout the upper East River watershed during high- and low-flow conditions, by D. M. Robertson. p. 35-36.

Variability in nutrient concentrations and transport throughout the Fox/Wolf River basin during high- and low-flow conditions, by D. M. Robertson. p. 37-38.

Overview of Wisconsin's Nonpoint Pollution Abatement Priority Watershed Program, by Robin McLennan. p. 41.

Watershed restoration activities of the Oneida Tribe of Indians of Wisconsin, by M. A. Finney. p. 43-44.

Pesticides in surface waters of the western Lake Michigan drainages, Wisconsin and Michigan, by D. J. Sullivan. p. 45-46.

Pesticides in Duck Creek, by Kristin Girvin. p. 47.

Hydrologic importance of the Sinipee Group in the lower Fox River valley, by T. D. Conlon. p. 51.

Pesticides and nutrients in ground water of two agricultural land-use areas in the western Lake Michigan drainages, by D. A. Saad. p. 53-54.

Fate and transport of nutrients and pesticides along a ground-water flow path in the western Lake Michigan drainages, by D. A. Saad. p. 55-57.

OF 95-0164. NORTH CAROLINA. The U.S. Geological Survey's Albemarle-Pamlico National Water-Quality Assessment Study; background and design, by T. B. Spruill, D. A. Harned and Gerard McMahon. 1995. 4 p. (NC, Da, M, Wb; USGS, WRD, 3916 Sunset Ridge Rd., Raleigh, NC 27607.)

OF 95-0165. CALIFORNIA. Nonpoint sources of pesticides in the San Joaquin River, California; input from winter storms, 1992-93, by J. L. Domagalski. 1995. 15 p. (NC, Da, M, Wb; WRD, USGS, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)

OF 95-0167. FLORIDA. Hydrologic conditions, habitat characteristics, and occurrence of fishes in the Apalachicola River floodplain, Florida; second annual report of progress, October 1993-September 1994, by H. M. Light, M. R. Darst and J. W. Grubbs. Prepared in cooperation with the Northwest Florida Water Management District. 1995. 33 p. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301.)

OF 95-0171. ALASKA. Overview of environmental and hydrogeologic conditions at Merrill Field Airport, Anchorage, Alaska, by A. S. Nakanishi. Prepared in cooperation with the Federal Aviation Administration. 1995. 48 p. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)

OF 95-0172. ALASKA. Environmental overview and hydrogeologic conditions at Federal Aviation Administration facilities near Fairbanks, Alaska, by D. B. Hawkins. Prepared in cooperation with the Federal Aviation Administration. 1995. 11 p. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)

OF 95-0173. ALASKA. Overview of environmental and hydrogeologic conditions at Bethel, Alaska, by J. M. Dorava and E. V. Hogan. Prepared in cooperation with the Federal Aviation Administration. 1995. 45 p. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)

OF 95-0174. ALASKA. Overview of environmental and hydrogeologic conditions on Fire Island, Anchorage, Alaska, by A. S. Nakanishi. Prepared in cooperation with the Federal Aviation Administration. 1995. 27 p. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)

OF 95-0175. ALASKA. Overview of environmental and hydrogeologic conditions at Farewell, Alaska, by J. M. Dorava and J. D. Hall. Prepared in cooperation with the Federal Aviation Administration. 1995. 9 p. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)

OF 95-0176. ALASKA. Overview of environmental and hydrogeologic conditions on Hinchinbrook Island, Alaska, by J. M. Dorava and R. P. Murray. Prepared in cooperation with the Federal Aviation Administration. 1995. 8 p. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)

OF 95-0177. ALASKA. Overview of environmental and hydrogeologic conditions at Puntilla Lake, Alaska, by J. M. Dorava and J. D. Hall. Prepared in cooperation with the Federal Aviation Administration. 1995. 6 p. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)

OF 95-0178. ALASKA. Overview of environmental and hydrogeologic conditions at Nome, Alaska, by J. M. Dorava. Prepared in cooperation with the Federal Aviation Administration. 1995. 12 p. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)

OF 95-0179. ALASKA. Overview of environmental and hydrogeologic conditions at Cold Bay, Alaska, by W. A. Rice and E. V. Hogan. Prepared in cooperation with the Federal Aviation Administration. 1995. 37 p. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)

OF 95-0180. ALASKA. Overview of environmental and hydrogeologic conditions near Big Delta, Alaska, by G. L. Nelson. Prepared in cooperation with the Federal Aviation Administration. 1995. 11 p. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)

OF 95-0181. Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory; determination of pesticides in water by C-18 solid-phase extraction and capillary-column gas chromatography/mass spectrometry with selected-ion monitoring, by S. D. Zaugg, M. W. Sandstrom, S. G. Smith and K. M. Fehlberg. 1995. 49 p. (NC, Da, M, Wb, U; USGS, WRD, 5293 Ward Rd., Arvada, CO 80002; and Room H-2313, 2d Floor, Bldg. 53, Denver Federal Ctr., Lakewood, CO 80226.)

OF 95-0182. TEXAS. Water-level altitudes 1995, water-level changes 1977-95 and 1994-95, and compaction 1973-94 in the Chicot and Evangeline aquifers, Houston-Galveston region, Texas, by M. C. Kasmarek, L. S. Coplin and H. X. Santos. Prepared in cooperation with the City of Houston and Harris-Galveston Coastal Subsidence District. 1995. (NC, Da, M, Wb;

- USGS, WRD, 8011 Cameron Rd., Bldg. 1, Austin, TX 78754-3898.)
- OF 95-0183. TEXAS. Water-level altitudes 1995 and water-level changes 1990-95 and 1994-95 in the Chicot and Evangeline aquifers, Fort Bend County and adjacent areas, Texas, by L. S. Coplin, M. C. Kasmarek, H. X. Santos and J. E. Noble. Prepared in cooperation with the Fort Bend Subsidence District. 1995. (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Bldg. 1, Austin, TX 78754-3898.)
- OF 95-0184. WEST VIRGINIA, OHIO. Water-quality data for the Ohio River from Willow Island Dam to Belleville Dam, West Virginia and Ohio, June-November 1992, by M. C. Waldron, K. F. Miller, D. B. Chambers and C. W. Faulkenburg. Prepared in cooperation with the City of Martinsville, West Virginia. 1995. 74 p. (NC, Da, M, Wb.)
- OF 95-0185. FLORIDA. Bibliography of U.S. Geological Survey reports on the water resources of Florida, 1886-1995, by C. A. Garcia and N. D. Hoy. 1995. 176 p. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301.)
- OF 95-0186. SOUTH CAROLINA. Changes in bathymetry for Lake Katherine and Wood Lake, Richland County, South Carolina, 1989-93, by G. G. Patterson. Prepared in cooperation with the South Carolina Department of Transportation. 1995. 9 p. (NC, Da, M, Wb.)
- OF 95-0188. MASSACHUSETTS, RHODE ISLAND. Map showing location of observation wells in Massachusetts and Rhode Island, by J. C. Rader. Prepared in cooperation with the states of Massachusetts and Rhode Island. 1995. 1 over-size sheet, scale 1:400,000 (1 inch = about 6 miles). (NC, Da, M, Wb; USGS, WRD, 28 Lord Rd., Suite 280, Marlborough, MA 01752.)
- OF 95-0193. PENNSYLVANIA. Geographic information system data sets of hydrogeologic conditions in Pequea and Mill Creek watersheds, Pennsylvania; Part II, Hydrogeologic interpretations, by D. J. Low, D. C. Chichester and S. J. Char. Prepared in cooperation with the Pennsylvania Department of Environmental Resources, Bureau of Water Quality Management. 1995. 7 p. (NC, Da, M, Wb; USGS, WRD, 840 Market St., Lemoyne, PA 17043.)
- OF 95-0194. MONTANA. Water-resources activities of the U.S. Geological Survey in Montana, October 1993 through September 1995, compiled by C. J. Harksen and K. S. Midtlyng. Prepared in cooperation with Federal, State, and local agencies. 1995. 71 p. (NC, Da, M, Wb, S, U; USGS, WRD, Federal Bldg., Room 428, 301 South Park Ave., Helena, MT 59626-0076; and Montana State Univ., 1500 North 30th, Billings, MT 59101.)
- OF 95-0195. WASHINGTON. Concentrations of mercury and other trace elements in walleye, smallmouth bass, and rainbow trout in Franklin D. Roosevelt Lake and the upper Columbia River, Washington, 1994, by M. D. Munn, S. E. Cox and C. J. Dean. Prepared in cooperation with the U.S. Environmental Protection Agency and Colville Confederated Tribes. 1995. 35 p. (NC, Da, M, Wb, S; USGS, WRD, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402.)
- OF 95-0201. National Mapping Program user evaluation of selected current products, by G. I. Snyder. 1995. 35 p. (NC, Da, M.)
- OF 95-0202. ARIZONA. Geologic map of the southern Galiuro Mountains in Pinal, Graham, and Cochise counties, Arizona, as compiled for the U.S. Bureau of Land Management Muleshoe Ecosystem planning document, by L. J. Cox. 1995. 6 p., 1 over-size sheet. (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 95-0204. CALIFORNIA. The Southern California Network Bulletin; January-December 1994, by L. A. Wald, Katrin Hafner and A. S. Bryant. 1995. 49 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0206. Methods for analysis of $^{15}\text{N}/^{14}\text{N}$ and $^{13}\text{C}/^{12}\text{C}$ in solid and aqueous cyanides; an interim report, by C. A. Johnson. 1995. 11 p. (NC, Da, M.)
- OF 95-0207. A method of biomarker enrichment for natural gas condensates, by H. D. Wang. 1995. 10 p. (NC, Da, M.)
- OF 95-0208. LOUISIANA, MISSISSIPPI. Palynology of Paleocene lignite beds and associated detrital strata from Louisiana and Mississippi, by N. O. Frederiksen and P. D. Warwick. 1995. 22 p. (NC, Da, M; Office of Geol., P.O. Box 20307, Jackson, MS 39289-1307.)
- OF 95-0209. KANSAS. Core descriptions and preliminary geochemical data for the Amoco Production Company Rebecca K. Bounds #1 Well, Greeley County, Kansas, by W. E. Dean, M. A. Arthur, B. B. Sageman and M. D. Lewan. 1995. 243 p. (NC, Da, M; Kansas Geol. Surv., 1930 Constant Ave., Campus West, Univ. of Kansas, Lawrence, KS 66046.)
- OF 95-0213. CALIFORNIA. Inventory of landslides triggered by the 1994 Northridge, California earthquake, by E. L. Harp and R. W. Jibson. 1995. 18 p., 2 over-size sheets; sheet 1, scale 1:100,000 (1 inch = about 1.6 miles); sheet 2, scale 1:50,000 (1 inch = about 4,200 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0215. ALASKA. Geologic map of the Craig, Dixon Entrance, and parts of the Ketchikan and Prince Rupert quadrangles, Southeastern Alaska, compiled by D. A. Brew. 1995. 1 over-size sheet, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0216. FLORIDA. Centimeter-level orthometric heights at reference points along Florida's Big Bend coastline from Global Positioning System (GPS) static surveys, by N. J. Marth, E. A. Raabe, R. P. Stumpf and E. C. Stone. 1995. 22 p. (NC, Da, M.)
- OF 95-0217-A. ALASKA. $^{40}\text{Ar}/^{39}\text{Ar}$ age-spectrum data for hornblende, plagioclase and biotite from tephra collected at Dan Creek

- and McCallum Creek, Alaska and in the Klondike placer district near Dawson, Yukon Territory, Canada, by M. J. Kunk. 1995. 52 p. (NC, Da, M, A, S; U.S. Dep. of Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0217-B. ALASKA. $^{40}\text{Ar}/^{39}\text{Ar}$ age-spectrum data for hornblende, plagioclase and biotite from tephra collected at Dan Creek and McCallum Creek, Alaska and in the Klondike placer district near Dawson, Yukon Territory, Canada, by M. J. Kunk. 1995. One 3 1/2 inch DS/HD IBM diskette. (NC, Da, M, A, S; U.S. Dep. of Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- Document in Wordperfect 5.2. Figures in Hp-GL/2 graphics language can be reproduced by putting an HP Series III or other compatible printer in graphics mode and then reading out and printing the values in the file.
- OF 95-0218. HAWAII. Relation of slow-moving landslides to earth materials and other factors in valleys of the Honolulu District of Oahu, Hawaii, by S. D. Elleri, L. S. Liu, R. W. Fleming, M. E. Reid and M. J. Johnsson. 1995. 47 p., 1 over-size sheet, scale 1:40,000 (1 inch = about 3,300 feet). (NC, Da, M.)
- OF 95-0219. OREGON. Preliminary geologic map of the Mount Hood 30- by 60-minute Quadrangle, northern Cascade Range, Oregon, by D. R. Sherrod and W. E. Scott. 1995. 35 p., 1 over-size sheet, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)
- OF 95-0221. Compilation of sample preparation and analytical methods and results of chemical, isotopic, and fluid inclusion analyses, Rodalquilar gold-alunite deposit, Spain, by Antonio Arribas, Jr., C. G. Cunningham, E. H. McKee, R. O. Rye, J. J. Rytuba, R. M. Tosdal, M. D. Wasserman and Masahiro Aoki. 1995. 33 p. (NC, Da, M.)
- OF 95-0222. ALASKA. Analysis of firn gases collected at shallow depths in the Wrangell-St. Elias Range, Alaska, the GISP2 site, Greenland, and the Taylor Dome site, East Antarctica, by G. P. Landis, J. J. Fitzpatrick and T. Everett. 1995. 48 p. (NC, Da, M, S, A; U.S. Dep. of Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0224. Proceedings, 3rd annual Lake Erie Coastal Erosion Study workshop, January 31-February 1, 1995, edited by D. W. Folger. 1995. 70 p. (NC, Da, M.)
- Quantity and fate of sediment in the coastal ice along the Ohio Lake Erie coast, by P. W. Barnes, D. E. Guy, Jr., Frederick Todd and Gita Dunhill. p. 7-8.
- Suggestions for final stages of the USGS/Ohio Geological Survey cooperative Lake Erie Coastal Erosion Study, by M. J. Chrzastowski. p. 9-11.
- Sedimentary environments in the western basin of Lake Erie, by R. C. Circé and J. A. Fuller. p. 12.
- Sidescan sonar survey of Lake Erie in Ohio waters, by D. S. Foster, D. W. Folger, J. A. Fuller and R. C. Circé. p. 13-14.
- The geology of the Ohio area of Lake Erie from shallow seismic data, by J. A. Fuller, R. N. Oldale, R. C. Circé, D. L. Liebenthal, K. E. Parolski and D. R. Nichols. p. 15-17.
- The surficial sediment distribution near the Ohio shore of Lake Erie determined with sidescan sonar, by J. A. Fuller, D. L. Liebenthal, V. A. Cross, D. R. Nichols and B. J. Irwin. p. 18-19.
- Distribution of nearshore sediment and nearshore bars, Lake County, Ohio, by D. E. Guy, Jr. p. 20-23.
- A preliminary assessment of recession rates of the bluff at Painesville-on-the-Lake, by D. E. Guy, Jr. p. 24-28.
- Remote video monitoring of the shoreline at Painesville-on-the-Lake, by J. W. Haines and William Townsley. p. 29.
- Process/predictive models of bluff recession along the Ohio shore of Lake Erie, by J. W. Haines, D. E. Guy, Jr. and S. D. Mackey. p. 30-31.
- Objectives for the Lake Erie study during 1995-1996, by J. W. Haines and S. D. Mackey. p. 32-33.
- Lake Erie sediment budget, by S. D. Mackey. p. 34-37.
- Lake Erie wetlands-Metzger Marsh restoration project, by S. D. Mackey. p. 38-41.
- Coastal lithologies of the Perry Quadrangle, Lake County, Ohio, by R. R. Pavey, B. D. Stone and P. W. Bruno. p. 42-49.
- Marine geologic atlases on CD-ROM; a method of assembling, integrating, and displaying information, by C. F. Polloni. p. 50.
- Surficial materials and erosion in the coastal area of the North Kingsville 7.5' Quadrangle, Ashtabula County, Ohio, by B. D. Stone, R. R. Pavey and P. W. Bruno. p. 51-58.
- Glacially modified bedrock-surface topography and overlying surficial geologic materials in the western Lake Erie coastal area, northwestern Ohio and southeastern Michigan, by B. D. Stone and G. L. Shideler. p. 59-62.
- OF 95-0225. EAST93; geophysical traverse from the Transantarctic Mountains to the Wilkes Basin, East Antarctica; a joint United States-New Zealand science project, by U. S. ten Brink and S. C. Bannister. 1995. 98 p. (NC, Da, M.)
- OF 95-0226. Late Cenozoic foraminifers from northern Chile; Mejillones-Antofagasta region, by S. E. Ishman, E. F. Polanco, Eduardo Valenzuela and Ruben Martínez-Pardo. 1995. 20 p. (NC, Da, M.)
- OF 95-0227-A. OREGON, CALIFORNIA. Geochemical compositions of metavolcanic and metasedimentary rocks, western Jurassic and western Paleozoic and Triassic belts, Klamath Mountains, Oregon and California, by C. G. Barnes, M. M. Donato, M. A. Barnes, J. D. Yule, B. R. Hacker and M. A. Helper. 1995. 63 p. (NC, Da, M, S; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 95-0227-B. OREGON, CALIFORNIA. Geochemical compositions of metavolcanic and metasedimentary rocks, western Jurassic and western Paleozoic and Triassic belts, Klamath Mountains, Oregon and California, by C. G. Barnes, M. M. Donato, M. A. Barnes, J. D. Yule, B. R. Hacker and M. A. Helper. 1995. One 3 1/2 inch diskette. (NC, Da, M, S; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

Requirements: IBM PC or compatible, with DOS v. 2.0 or higher, 3 1/2 inch disk drive and spreadsheet and word-processing software or Apple Macintosh with Microsoft Word v. 5.1 or higher; Excel 4.0 or higher. Mac users will need Apple File exchange or disk drive capable of reading IBM-formatted disks.

OF 95-0228. CALIFORNIA. Multichannel seismic-reflection profiling on the R/V Maurice Ewing during the Los Angeles Region Seismic Experiment (LARSE), California, by T. M. Brocher, R. W. Clayton, K. D. Klitgord, R. G. Bohannon, R. W. Sliter, J. K. McRaney, J. V. Gardner and J. B. Keene. 1995. 70 p., 3 over-size sheets. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 95-0229. MONTANA. Active-, inactive-, and abandoned-mine information and selected geochemical data for the State of Montana, by J. L. Ryder. 1995. One 3 1/2 inch DS/HD diskette. (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)

Minimum requirements: IBM-PC compatible computer with a minimum of 11MB of hard drive disk space for unarchiving files and software capable of importing dBase (.DBF) formatted files up to 8MB in size.

OF 95-0230. WASHINGTON. Acid mine drainage at the Holden Deposit, Chelan County, Washington, by J. E. Kilburn, S. J. Sutley and C. G. Whitney. 1995. 11 p. (NC, Da, M, S; Geol. and Earth Resources Div., Dep. of Natural Resources, P.O. Box 47007, Olympia, WA 98504-7007; David A. Johnston Cascade Volcano Observatory, 5400 MacArthur Blvd., Vancouver, WA 98661.)

OF 95-0231. Hazardous phenomena at volcanoes, by B. M. Myers and S. R. Brantley. 1995. 2 p. (NC, Da, M.) (Volcano hazards fact sheet.)

OF 95-0232. COLORADO. Digital generalized geologic map of the Iron Hill, Colorado, alkaline rock complex, by T. L. Bowers. 1995. 7 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet); two 3 1/2 inch DS/HD IBM-compatible diskettes. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)

OF 95-0234. Statistical methodology for analysis of vehicle encounter rates in a national park, by R. A. Crovelli. 1995. 14 p. (NC, Da, M.)

OF 95-0235. The digital coal map of South America in ARC/INFO format, by L. R. Biewick and J. N. Weaver. 1995. 6 p. (NC, Da, M.)

In order to use this data base, ARC/INFO software and hardware and FTP software to copy the data base to the ARC/INFO platform are required. The data base can be downloaded via 'anonymous ftp' from a USGS system named greenwood.cr.usgs.gov (136-177.48.5). The files are located in a directory named /pub/open-file-reports/ofr-95-0235. To install the data base, type: &r LOAD.AML. To create the MAP COMPOSITION and ARC/INFO graphics file type: &r SAMER.AML (in ARC 6) or &r SAMER7.AML (in ARC 7). When creating a plot file, use the opaque option.

OF 95-0236. ALASKA. Preliminary report on major and minor elements in cores from the Triassic Shublik Formation, Jurassic and Cretaceous Kingak Shale, and Cretaceous pebble shale unit, Hue Shale, and Torok Formation, North Slope, Alaska, by C. M. Isaacs, K. J. Bird, M. D. Medrano, M. A. Keller, D. Z. Piper and D. L. Gautier. 1995. 30 p. (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)

OF 95-0237. CALIFORNIA. Descriptions, photographs and positions for Global Positioning System (GPS) bench marks in the vicinity of Lassen Peak, California, by K. M. Yamashita, E. Y. Iwatsubo and E. T. Endo. 1995. 36 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 95-0238. Digital grid of isostatic residual gravity of North America; a digital database, by R. W. Simpson and R. C. Jachens. 1995. 8 p. (NC, Da, M.)

OF 95-0239. WYOMING. Audio-magnetotelluric geoelectric soundings in Jackson Hole, Wyoming, by R. M. Senterfit, D. L. Campbell, B. T. Nolan and Marilla Senterfit. 1995. 130 p. (NC, Da, M, U; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071.)

OF 95-0240. PENNSYLVANIA, WEST VIRGINIA. The Mississippian Loyalhanna Limestone (Formation); a Paleozoic eolianite in the Appalachian Basin (*in* Cecil, C. B., ed., Predictive stratigraphic analyses guidebook series No. 1, The Mississippian and Pennsylvanian systems in West Virginia), by T. S. Ahlbrandt. 1995. 25 p. (NC, Da, M; West Virginia Geol. and Economic Surv., Mont Chateau Research Ctr., P.O. Box 879, Morgantown, WV 26507-0879.)

OF 95-0241. Elements of infrastructure and seismic hazard in the central United States; database, by B. S. Rhea. 1995. 4 p. (NC, Da, M.)

ESRI ARC/INFO version 7.0.2 coverages used to generate the plates in P 1538-M (1994). Total database size is 37.5MB. The data base may be downloaded via "anonymous ftp" from a USGS data server named greenwood.cr.usgs.gov (136.177.48.5). The files are located in a directory named /pub/open-file-reports/ofr-95-0241.

- OF 95-0242. COLORADO. Petrographic reconnaissance of uraniferous fractures in Precambrian gneisses, Laramie River valley, Larimer County, Colorado, by F. A. Hills. 1995. 8 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 95-0246. Branch of Petroleum Geology, bibliography, 1994, compiled by S. A. Oscarson. 1995. 17 p. (NC, Da, M.)
- OF 95-0247. Final report of the Polar Research Program strategies workshop, coordinated by R. S. Williams, Jr. 1995. 72 p. (NC, Da, M, A; U.S. Dep. of Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0248. NEVADA. Cenozoic volcanic rocks and Cenozoic mineral deposits of Nevada, by E. H. McKee, B. C. Moring and D. F. Huber. 1995. 1 over-size sheet, scale 1:1,000,000 (1 inch = about 16 miles). (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)
- OF 95-0250. COLORADO. Geochemical and lead-isotopic studies of stream and river sediments, Alamosa River basin, Colorado, by S. E. Church, S. A. Wilson and P. H. Briggs. 1995. 73 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 95-0252. OHIO. Maps and sidescan sonar images showing interpretation of acoustic backscatter overlain on historically mapped bottom sediments of the Ohio part of Lake Erie, by D. S. Foster, D. W. Folger, R. C. Circé and J. A. Fuller. 1995. 16 p., 2 over-size sheets, scale 1:200,000 (1 inch = about 3.2 miles). (NC, Da, M.)
- OF 95-0253. NEW JERSEY. Geologic map of New Jersey; central sheet, by J. P. Owens, P. J. Sugarman, N. F. Sohl, R. A. Parker, H. F. Houghton, R. A. Volkert, A. A. Drake, Jr. and R. C. Orndorff. 1995. 60 p., 3 over-size sheets; sheet 1, scale 1:100,000 (1 inch = about 1.6 miles). (NC.)
- OF 95-0254. NEW JERSEY. Geological map of New Jersey; southern sheet, by J. P. Owens, P. J. Sugarman, N. F. Sohl and R. C. Orndorff. 1995. 45 p., 2 over-size sheets; sheet 1, scale 1:100,000 (1 inch = about 1.6 miles). (NC.)
- OF 95-0255. Heat capacity and thermodynamic properties for coesite and jadeite, by B. S. Hemingway, S. R. Bohlen and W. B. Hankins. 1995. 14 p. (NC.)
- OF 95-0256. KANSAS. Geologic overview of Clark County, Kansas, by M. W. Green and G. M. Fairer. 1995. 18 p. (NC, Da, M; Kansas Geol. Surv., 1930 Constant Ave., Campus West, Univ. of Kansas, Lawrence, KS 66046.)
- OF 95-0257-A. Seismic sources and recurrence rates as adopted by USGS staff for the production of the 1982 and 1990 probabilistic ground motion maps for Alaska and the conterminous United States, by S. L. Hanson and D. M. Perkins. 1995. 39 p. (NC, Da, M, S, A; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0257-B. Seismic sources and recurrence rates as adopted by USGS staff for the production of the 1982 and 1990 probabilistic ground motion maps for Alaska and the conterminous United States, by S. L. Hanson and D. M. Perkins. 1995. One 3 1/2 inch DS/HD IBM-compatible diskette (DOS format). (NC, Da, M, S, A; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0257-C. Seismic sources and recurrence rates as adopted by USGS staff for the production of the 1982 and 1990 probabilistic ground motion maps for Alaska and the conterminous United States, by S. L. Hanson and D. M. Perkins. 1995. One 3 1/2 inch DS/HD Macintosh-compatible diskette. (NC, Da, M, S, A; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0258. Program development tools for General Earthquake Observation System (GEOS) in C language, by Meei-You Lee and G. L. Maxwell. 1995. 91 p. (NC, Da, M.)
- OF 95-0260. Silicoflagellates and their geologic applications, by David Bukry. 1995. 27 p. (NC, Da, M.)
- OF 95-0261. FLORIDA. Geologic map of the Sarasota and Arcadia, Florida 30 by 60-minute quadrangles, by Lucy McCartan and Wai-See Moy. 1995. 5 over-size sheets, scale 1:100,000 (1 inch = about 1.6 miles). (NC.)
- OF 95-0262. Application of heat flow equation to analyses of bottom simulation reflections, by M. W. Lee. 1995. 32 p. (NC, Da, M.)
- OF 95-0263. ARIZONA, NEW MEXICO. Preliminary geologic map of the Big Lue Mountains 15-minute Quadrangle, Greenlee County, Arizona, and Catron and Grant counties, New Mexico, by J. C. Ratté and W. E. Brooks. 1995. 1 over-size sheet, scale 1:48,000 (1 inch = 4,000 feet). (NC, Da, M, U; Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719; New Mexico Bur. of Mines and Mineral Resources, Campus Station, Socorro, NM 87801.)
- OF 95-0265. CALIFORNIA. Palynomorph distributions in the Rincon Shale (lower Miocene) of the Tajiguas Landfill section, Santa Barbara County, California, by N. O. Frederiksen. 1995. 19 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0266. COLORADO. Generalized surficial geologic map of the Bayfield Quadrangle, La Plata County, Colorado, by D. W. Moore and G. R. Scott. 1995. 4 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)

- OF 95-0269. CALIFORNIA. Merging of analog and digital data in the Northern California Seismic Network, and characteristics of the principal seismic systems it employs, by J. P. Eaton. 1995. 28 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0270. IDAHO, WYOMING. Partitioning of minor elements and major-element oxides between rock components and calculation of the marine derived fraction of the minor elements in rocks of the Phosphoria Formation, Idaho and Wyoming, by M. D. Medrano and D. Z. Piper. 1995. 79 p. (NC, Da, M, U, S; Idaho Geol. Surv., Morrill Hall, Room 332, Univ. of Idaho Campus, Moscow, ID 83843; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82701.)
- OF 95-0271. ALASKA. 1994 volcanic activity in Alaska; summary of events and response of the Alaska Volcano Observatory, by C. A. Neal, M. P. Doukas and R. G. McGimsey. 1995. 18 p. (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0275. CALIFORNIA. Data report for the 1993 Mendocino triple junction seismic experiment, by N. J. Godfrey, B. C. Beaudoin, Christof Lendl, A. S. Meltzer and J. H. Luetgert. 1995. 83 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0277. FLORIDA. Potentiometric surface of the upper Floridan Aquifer, west-central Florida, September 1994, by P. A. Metz. Prepared in cooperation with the Southwest Florida Water Management District. 1994. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301; and 4710 Eisenhower Blvd., Tampa, FL 33634-6381.)
- OF 95-0278. TENNESSEE. Hydrologic data of two wetlands at Spring City, Tennessee, December 1991 through November 1992, by G. C. Johnson and L. M. Brede. Prepared in cooperation with the Tennessee Department of Transportation. 1995. 16 p. (NC, Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville, TN 37203; 1013 North Broadway, Knoxville, TN 37917; and AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)
- OF 95-0281. NEW HAMPSHIRE. Reassessment of hydrogeologic data and refinement of a regional ground-water-flow model for the Milford-Souhegan glacial-drift aquifer, Milford, New Hampshire, by J. R. Olimpio and P. T. Harte. Prepared in cooperation with U.S. Environmental Protection Agency. 1995. 40 p. (NC, Da, M, Wb; USGS, WRD, 525 Clinton St., Bow, NH 03304.) (Supplement to WRI 91-4177.)
- OF 95-0283. MINNESOTA, NORTH DAKOTA. Pesticide amounts are small in streams in the Red River of the North Basin, 1993-94, by L. H. Tornes and M. E. Brigham. 1995. 2p. (NC, Da, M, Wb; USGS, WRD, 2280 Woodale Dr., Mounds View, MN 55112.)
- OF 95-0284. NEVADA. Ground-water data for the Nevada Test Site, 1992, and for selected other areas in south-central Nevada, 1952-92, by L. S. Robie, S. R. Reiner and G. L. Locke. Prepared in cooperation with the U.S. Department of Energy, Nevada Field Office. 1995. 48 p., 1 over-size sheet, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M, Wb, U; USGS, WRD, 333 West Nye Lane, Carson City, NV 89706; and 6770 South Paradise Rd., Las Vegas, NV 89119.)
- OF 95-0285. OREGON. A selected bibliography of water-related research in the upper Klamath Basin, Oregon, by D. L. Brownell and M. R. Rinallo. Prepared in cooperation with the U.S. Bureau of Reclamation. 1995. 23 p. (NC, Da, M, Wb.)
- OF 95-0286. CALIFORNIA. Effects of two contrasting agricultural land uses on shallow groundwater quality in the San Joaquin Valley, California; design and preliminary interpretation, by N. M. Dubrovsky, K. R. Burow and J. A. Gronberg. 1995. 8 p. (NC, Da, M, Wb; USGS, WRD, Federal Bldg., Room W-2233, 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 95-0288. Direct solution package based on alternating diagonal ordering for the U.S. Geological Survey modular finite-difference ground-water flow model, by A. W. Harbaugh. 1995. 46 p. (NC, Da, M, Wb.)
- OF 95-0290. MASSACHUSETTS. A nitrogen-rich septage-effluent plume in a glacial aquifer, Cape Cod, Massachusetts, February 1990 through December 1992, by L. A. DeSimone, P. M. Barlow and B. L. Howes. Prepared in cooperation with the Massachusetts Department of Environmental Protection, Office of Watershed Management. 1995. 92 p. (NC, Da, M, Wb.)
- OF 95-0291. CALIFORNIA. Benthic macrofauna data for San Francisco Bay, California, September 1986, by L. E. Schemel, J. K. Thompson, J. G. Harmon and B. T. Yost. Prepared in cooperation with the California State Water Resources Control Board. 1995. 33 p. (NC, Da, M, Wb.)
- OF 95-0296. COLORADO. Summary of bridge scour analyses at selected sites in Colorado, 1991-93, by J. E. Vaill, J. M. Kuzmiak, M. R. Stevens and Peter Montoya. Prepared in cooperation with the Colorado Department of Transportation. 1995. (NC, Da, M, Wb, U; USGS, WRD, Room H-2101, Bldg. 53, Denver Federal Ctr., Mail Stop 415, Box 25046, Denver, Colorado 80225-0046; and Norwest Bank Bldg., Suite 200, 201 West 8th St., Pueblo, CO 81003-3031.)
- OF 95-0299. CALIFORNIA. Near field receiving water monitoring of trace metals in clams (*Macoma balthica*) and sediments near the Palo Alto and San Jose/Sunnyvale water quality control plants in South San Francisco Bay; June 1993 through October 1994, by S. N. Luoma, D. J. Cain, C. L. Brown, M. I. Hornberger and R. M. Bouse-Schaenemann. Prepared in cooperation with the cities of Palo Alto, San Jose, and Sunnyvale, California. 1995. 83 p. (NC, Da, M, Wb.)
- OF 95-0302. GEORGIA. Ground-water conditions in Georgia, 1994, by A. M. Cressler, L. E. Jones and C. N. Joiner. Prepared in cooperation with the Georgia Department of Natural Resources, Georgia Geologic Survey, Albany Water, Gas, and Light Commission, City of Brunswick, Glynn County, and City of Valdosta. 1995. 135 p. (NC, Da, M, Wb.)

- OF 95-0303. FLORIDA. Potentiometric surfaces of the intermediate aquifer system, west-central Florida, September 1994, by P. A. Metz. Prepared in cooperation with the Southwest Florida Water Management District. 1995. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301; and 4710 Eisenhower Blvd., Tampa, FL 33634-6381.)
- OF 95-0304. NORTH DAKOTA. Water-resources data for the Fort Berthold Indian Reservation, west-central North Dakota, by J. D. Wald and S. W. Cates. Prepared in cooperation with the Three Affiliated Tribes. 1995. 272 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 821 East Interstate Ave., Bismarck, ND 58501-1199.)
- OF 95-0305. RHODE ISLAND. Hydrologic data for the Usquepaug-Queen River basin, Rhode Island, by J. D. Kliever. Prepared in cooperation with the Rhode Island Water Resources Board. 1995. 68 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, Wb.)
- OF 95-0308. Report of the River Master of the Delaware River for the period December 1, 1991 to November 30, 1992, by W. E. Harkness and B. E. Kremjas, *with a section on Water quality* by K. E. White. 1995. 88 p. (NC, Da, M, Wb.)
- OF 95-0312. TENNESSEE. An overview of the Beaver Creek study in West Tennessee. Prepared in cooperation with the University of Tennessee, Agricultural Extension Service. 1995. 2 p. (NC, Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville, TN 37203; 1013 North Broadway, Knoxville, TN 37917; and AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)
- OF 95-0313. SOUTH DAKOTA. Hydrologic data through 1993 for the Huron Project of the High Plains Ground-Water Demonstration Program, by J. M. Carter. Prepared in cooperation with South Dakota State University, South Dakota Department of Environment and Natural Resources, and City of Huron. 1995. 151 p. (NC, Da, M, Wb; USGS, WRD, Room 408, Federal Bldg., 200 4th St. SW, Huron, SD 57350.)
- OF 95-0314. NEW MEXICO. U.S. Geological Survey activities in New Mexico 1995, by R. K. Livingston. 1995. 21 p. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110-3929.)
- OF 95-0316. CALIFORNIA, NEVADA. Hydrologic basins and hydrologic-monitoring sites of Lake Tahoe Basin, California and Nevada, by K. D. Cartier, L. A. Peltz and K. F. Long. 1995. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 333 West Nye Lane, Room 107, Carson City, NV 89706; 6770 South Paradise Rd., Las Vegas, NV 89119; and Federal Bldg., Room 208, Elko, NV 89801.)
- OF 95-0326. CALIFORNIA. Measurements of salinity, temperature, and tides in South San Francisco Bay, California, at Dumbarton Bridge; 1990-93 water years, by L. E. Schemel. Prepared in cooperation with the California State Department of Water Resources. 1995. 62 p., four 3 1/2 inch DS/HD IBM-compatible diskettes. (NC, Da, M, Wb.)
- OF 95-0327. CALIFORNIA. Supporting data for hydrologic studies in San Francisco Bay, California; meteorological measurements at the Port of Redwood City during 1992-94, by L. E. Schemel. 1995. 34 p., one 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da, M, Wb.)
- OF 95-0329. TENNESSEE. Pesticide movement in soils; a comparison of no-tillage and conventional tillage in the Beaver Creek watershed in West Tennessee, by L. D. Olsen. Prepared in cooperation with the University of Tennessee, Agricultural Extension Service. 1995. 2 p. (NC, Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville, TN 37203; 1013 North Broadway, Knoxville, TN 37917; and AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)
- OF 95-0330. NEBRASKA. Elevation contours of the bedrock surface, North Platte 1- by 2-degree Quadrangle, Nebraska, digitized from a published 1:250,000-scale geological map, by R. B. Zelt. 1995. One 3 1/2 inch DS/HD IBM-compatible diskette, MS-DOS format. (NC, Da, M, Wb.)
- OF 95-0333. MINNESOTA. Physical characteristics of stream subbasins in the Cottonwood River basin, southwestern Minnesota, by C. A. Sanocki. Prepared in cooperation with the Minnesota Department of Transportation. 1995. 14 p., 1 over-size sheet. (NC, Da, M, Wb.)
- OF 95-0338. ALASKA. Hydrologic and water-quality data for the lower Bradley River, Alaska, March 1993 to April 1994, by R. L. Rickman. Prepared in cooperation with the Alaska Energy Authority. 1995. 30 p. (NC, Da, M, Wb, A; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)
- OF 95-0340. UTAH. Origin of water that discharges from Calf Creek Spring, Garfield County, Utah, by D. E. Wilberg. Prepared in cooperation with the U.S. Bureau of Land Management. 1995. 10 p. (NC, Da, M, U, Wb; USGS, WRD, 1745 West 1700 South, Salt Lake City, UT 84104.)
- OF 95-0342. ALASKA. Overview of environmental and hydrogeologic conditions near Petersburg, Alaska, by E. V. Hogan. Prepared in cooperation with the Federal Aviation Administration. 1995. 28 p. (NC, Da, M, A, Wb; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)
- OF 95-0343. ALASKA. Overview of environmental and hydrogeologic conditions at Bettles Field, Alaska, by J. R. Cowan. Prepared in cooperation with the Federal Aviation Administration. 1995. 43 p. (NC, Da, M, A, Wb; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)
- OF 95-0344. ALASKA. Overview of environmental and hydrogeologic conditions at Wrangell, Alaska, by E. V. Hogan. Prepared in cooperation with the Federal Aviation Administration. 1995. 19 p. (NC, Da, M, A, Wb; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)
- OF 95-0345. ALASKA. Overview of environmental and hydrogeologic conditions at Sitka, Alaska, by E. V. Hogan. Prepared in cooperation with the Federal Aviation Administration.

1995. 24 p. (NC, Da, M, A, Wb; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)
- OF 95-0346. ALASKA. Overview of environmental and hydrogeologic conditions at Iliamna, Alaska, by J. D. Hall. Prepared in cooperation with the Federal Aviation Administration. 1995. 66 p. (NC, Da, M, A, Wb; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)
- OF 95-0347. ALASKA. Overview of environmental and hydrogeologic conditions at Unalakleet, Alaska, by J. M. Dorava. Prepared in cooperation with the Federal Aviation Administration. 1995. 54 p. (NC, Da, M, A, Wb; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)
- OF 95-0348. ALASKA. Overview of environmental and hydrogeologic conditions at Chandalar Lake, Alaska, by J. R. Cowan. Prepared in cooperation with the Federal Aviation Administration. 1995. 9 p. (NC, Da, M, Wb; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 641 West Willoughby Ave., Room 202, Juneau, AK 99801.)
- OF 95-0355. RHODE ISLAND. Map showing location of observation wells in Rhode Island, by J. C. Rader. Prepared in cooperation with the State of Rhode Island. 1995. 1 over-size sheet, scale 1:125,000 (1 inch = about 2 miles). (NC, Da, M, Wb.)
- OF 95-0357. OHIO. Data on ground-water levels and ground-water/surface-water relations in the Great Miami River and Little Miami River valleys, southwestern Ohio, by W. P. Yost. Prepared in cooperation with the U.S. Environmental Protection Agency. 1995. 63 p. (NC, Da, M, Wb.)
- OF 95-0360. NEW MEXICO. Description of geophysical-log data base for boreholes and wells in and adjacent to the Albuquerque Basin, New Mexico, by D. W. Wilkins. Prepared in cooperation with the City of Albuquerque Public Works Department. 1995. 16 p. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110-3929.)
- OF 95-0363. NEW HAMPSHIRE. Geohydrology of the Flints Pond Aquifer, Hollis, New Hampshire, by J. D. Ayotte and T. H. Dorgan. Prepared in cooperation with the New Hampshire Department of Environmental Services, Water Supply and Pollution Control Division. 1995. 23 p. (NC, Da, M, Wb; USGS, WRD, 525 Clinton St., Bow, NH 03304.)
- OF 95-0371. OHIO. Screening for volatile organic compounds in soil and groundwater by use of a portable gas chromatograph during field investigations at an Air Force installation in Ohio, by J. M. Parnell. Prepared in cooperation with Wright-Patterson Air Force Base. 1995. 15 p. (NC, Da, M, Wb.)
- OF 95-0372. TENNESSEE. Characterizing water quality in the North Fork-Fall Creek Hydrologic Unit Area, Tennessee, by T. D. Byl and H. C. Matraw, Jr. 1995. 2 p. (NC, Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville, TN 37203; 1013 North Broadway, Knoxville, TN 37917; and AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)
- OF 95-0373. OREGON. Analytical data from phases I and II of the Willamette River basin water quality study, Oregon, by H. E. Harrison, C. W. Anderson, F. A. Rinella, T. M. Gasser and T. R. Pogue, Jr. Prepared in cooperation with the Oregon Department of Environmental Quality and Willamette River Technical Advisory Steering Committee. 1995. 167 p. (NC, Da, M, Wb.)
- OF 95-0379. COLORADO, NEBRASKA, WYOMING. Inventory of biological investigations related to stream water quality in the South Platte River basin, Colorado, Nebraska, and Wyoming, 1891-1994, by C. M. Tate and J. R. Ortiz-Zayas. 1995. 12 p. (NC, Da, M, Wb, U; USGS, WRD, Room H-2101, Bldg. 53, Denver Federal Ctr., Mail Stop 415, Box 25046, Denver, CO 80225-0046; and Norwest Bank Bldg., Suite 200, 201 West 8th St., Pueblo, CO 81003-3031.)
- OF 95-0418. Hydrologic records of the United States, water year 1994, by D. F. Alt. 1995. One CD-ROM. (NC, Da, M, Wb.) (State Water-Data Reports.)
- The minimum system requirements for using the software are: IBM PC compatible with color monitor; 640K RAM, MS-DOS 3.0 or higher; Microsoft MSCDEX 2.1 or higher; CD-ROM reader with ISO 9660 driver; and hard disk with at least 1MB free space.
- OF 95-0476. WYOMING. Trona resources in the Green River basin, Southwest Wyoming, by S. V. Wiig, W. D. Grundy and J. R. Dyni. Prepared in cooperation with the U.S. Bureau of Land Management. 1995. 88 p. (NC, Da, M, Wb; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071.)
- OF 95-0477. TENNESSEE. Characterization of secondary minerals formed as the result of weathering of the Anakeesta Formation, Alum Cave, Great Smoky Mountains National Park, Tennessee, by M. J. Flohr, R. G. Dillenburg and G. S. Plumlee. 1995. 22 p. (NC, Da, M.)
- OF 95-0478. DELAWARE. Cenozoic calcareous nannofossil biostratigraphy of the Dover Je32-04 drillhole, Kent County, Delaware, by L. M. Bybell, J. M. Self-Trail and T. G. Gibson. 1995. 20 p. (NC, Da, M.)
- OF 95-0479. CALIFORNIA. A teacher's guide to the San Francisco Bay area geophysics maps (U.S. Geological Survey GP-1006 and GP-1007), by V. E. Langenheim and L. C. Gordon. 1995. 35 p. (NC.)
- OF 95-0480. Earth science information and GIS technology in emergency management, by C. E. Mortenson, E. A. Wegenka and J. K. Buika. 1995. 13 p. (NC, Da, M.)
- OF 95-0484. CALIFORNIA. Seismicity patterns in Southern California before and after the 1994 Northridge earthquake; a preliminary report, by P. A. Reasenber. 1995. 39 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0485. NEVADA. Analytical results for soil samples and plots of results of R-mode factor analysis of soil and soil-gas data;

Dixie Valley Known Geothermal Resource Area, northern Dixie Valley, Nevada, by M. E. Hinkle, P. H. Briggs, J. M. Motooka and R. J. Knight. 1995. 35 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)

OF 95-0486. The physical preparation and chemical analysis of NIST SRMs 2786 and 2787, lead paint in soil, by S. A. Wilson, P. H. Briggs, J. S. Mee, P. L. Hageman, D. F. Siems, M. J. Malcolm and J. Curry. 1995. 24 p. (NC, Da, M; Maryland Geol. Surv., 2300 St. Paul St., Baltimore, MD 21218; Connecticut Geol. and Natural History Surv., Natural Resource Ctr., 165 Capitol Ave., Room 553, Hartford, CT 06106.)

OF 95-0489. CALIFORNIA. Paleontology and significance of the Imperial Formation at Garnet Hill, Riverside County, California, by C. L. Powell, II. 1995. 10 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 95-0491. UTAH. Physical processes of shallow mafic dike emplacement near the San Rafael Swell, Utah, by P. T. Delaney and A. E. Gartner. 1995. 47 p. (NC, Da, M, U; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1491.)

OF 95-0493. Geology of the Venezuelan Guayana Shield at 1:500,000 scale; a digital representation of maps published by the U.S. Geological Survey, by P. G. Schruben. 1995. 11 p. (NC, Da, M.)

ARC/INFO version 6.1.2 Export format. The files are further processed with the UNIX "tar" and "compress" commands and are available via "anonymous ftp".

OF 95-0494. Digital geologic map of the Altiplano and Cordillera Occidental, Bolivia, by S. P. Marsh, D. H. Richter, S. D. Ludington, Eduardo Soria-Escalante and Angel Escobar-Diaz. 1995. 3 p. (NC, Da, M.)

The database consists of 19 files in ARC/INFO Export format. The database can be downloaded via "anonymous ftp" from a USGS system named greenwood.cr.usgs.gov (136.177.48.5). The files are located in a directory named /pub/open-file-reports/ofr-95-0494.

OF 95-0495. IDAHO. A pyrolysis-gas chromatographic study of organic matter from Snake River flake-type placer gold particles, by J. R. Watterson and J. S. Leventhal. 1995. 28 p. (NC, Da, M, U, S; Idaho Geol. Surv., Univ. of Idaho Campus, Morrill Hall, Room 332, Moscow, ID 83843.)

OF 95-0496. HAWAII. The Pu'u O'o-Kupaianaha eruption of Kilauea Volcano; June 1990 through August 1994 lava sample archive, by M. T. Mangan, C. C. Heliker, T. N. Mattox, J. P. Kauahikaua, R. T. Helz and B. C. Hearn, Jr. 1995. 70 p. (NC, Da, M.)

OF 95-0498. WASHINGTON. Potential volcanic hazards from future activity of Mount Baker, Washington, by C. A. Gardner, K. M. Scott, C. D. Miller, B. M. Myers, Wes Hildreth and P. T. Pringle. 1995. 16 p., 1 over-size sheet, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M, S; Washington DNR/Geol. and Earth Resources Library, 1111 Washington St. SE, Olympia, WA 98501.)

OF 95-0500. Observation of volcanic activity during the A.D. 1610 voyage of the Discovery, by J. D. Friedman and Gudrun Larsen. Prepared in cooperation with the University of Iceland, Science Institute. 1995. 20 p. (NC, Da, M.)

OF 95-0502. CALIFORNIA. Preliminary geologic map of the Fillmore 7.5' Quadrangle, Southern California, compiled by R. F. Yerkes and R. H. Campbell. 1995. 10 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 95-0503. CALIFORNIA. Preliminary geologic map of the Newhall 7.5' Quadrangle, Southern California, compiled by R. F. Yerkes and R. H. Campbell. 1995. 12 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 95-0504. CALIFORNIA. Preliminary geologic map of the Val Verde 7.5' Quadrangle, Southern California, compiled by R. F. Yerkes and R. H. Campbell. 1995. 9 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 95-0505. Mineralogy and chemistry of hydrothermal chimneys from the northern Cleft Segment, Juan de Fuca Ridge, by W. B. Friesen and R. A. Koski. 1995. 56 p. (NC, Da, M.)

OF 95-0506. NEW MEXICO. Structure of the basins and ranges, Southwest New Mexico, an interpretation of seismicity velocity sections, by D. P. Klein, *with plates* by G. A. Abrams and P. L. Hill. 1995. 60 p., 2 over-size sheets, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M, U; New Mexico Bur. of Mines and Mineral Resources, Campus Station, Socorro, NM 87801.)

OF 95-0507. SOUTH CAROLINA. Geophysical logs and groundwater chemistry in the A/M area, interim report, Savannah River Site, South Carolina, by P. H. Nelson and J. E. Kibler. 1995. 68 p. (NC, Da, M; South Carolina Geol. and Geodetic Surv., Harbison Forest Rd., Columbia, SC 28210.)

OF 95-0508. COLORADO. Preliminary evolution of the fire-related debris flows on Storm King Mountain, Glenwood Springs, Colorado, by S. H. Cannon, P. S. Powers, R. A. Pihl and W. P. Rogers. 1995. 38 p., 1 over-size sheet, scale 1:10,000 (1 inch = about 850 feet). (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)

OF 95-0509. ALASKA. Analytical results and sample locality maps of stream-sediment, heavy-mineral-concentrate, and rock samples from the Gulkana Quadrangle, south-central Alaska, by H. A. Folger, R. D. Koch, R. T. Hopkins, B. A. Cieutat, R. J. Goldfarb, W. J. Nokleberg and J. D. Hoffman. 1995. 105 p., 2 over-size sheets, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M, A, S; Alaska Div. of Geol. and Geophys. Surv., 794

- University Ave., Suite 200, Fairbanks, AK 99709-3645; U.S. Dep. of Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513.)
- OF 95-0510. Variation of the enthalpy of solution of quartz in aqueous HF as a function of sample particle size, by B. S. Hemingway and A. M. Nitkiewicz. 1995. 5 p. (NC, Da, M.)
- OF 95-0511. CALIFORNIA. Preliminary geologic map of the Piru 7.5' Quadrangle, Southern California, compiled by R. F. Yerkes and R. H. Campbell. 1995. 9 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0514. Cerro Prieto geothermal field, Mexico; chemical analyses and other data for 58 samples collected in 1977-1979, edited by J. D. Bliss. 1995. 75 p. (NC, Da, M.)
- Chemical analyses and other data for 58 fluid samples collected in 1977 to 1979, by J. W. Ball and E. A. Jenne. p. 2-12.
- Evaluation of data, by J. D. Bliss. p. 13-75.
- OF 95-0515. UTAH. Geomorphic history of the Virgin River in the Zion National Park area, Southwest Utah, by Richard Hereford, G. C. Jacoby and V. A. McCord. Prepared in cooperation with the National Park Service. 1995. 75 p. (NC, Da, M, U; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1491.)
- OF 95-0516. PLOTSEIS v2.5.3; a DOS display program for SEG-Y formatted seismic data, by F. N. Zihlman. 1995. (NC, Da, M.)
- Intel 80286 or higher processor (an 80386 or greater is strongly recommended); video card capable of EGA, VGA, or Hercules displays; DOS 3.0 or later; a hard disk drive or CD-ROM containing the input file(s); a math coprocessor is NOT required, but will be used if available.
- OF 95-0517. Revised heat capacity values for topaz and staurolite based upon a better analysis of the water content of the samples, by B. S. Hemingway. 1995. 10 p. (NC, Da, M.)
- OF 95-0518. SOUTH CAROLINA. High resolution mapping of stratigraphy using seismic tomography; a feasibility test at the M-area basin, Savannah River Site, South Carolina, by K. J. Ellefsen. 1995. 46 p. (NC, Da, M; South Carolina Geol. and Geodetic Surv., Harbison Forest Rd., Columbia, SC 28210.)
- OF 95-0519. Use and presentation of Magellan quantitative data in Venus mapping, by B. A. Campbell. 1995. 32 p. (NC, Da, M.)
- OF 95-0520. ALASKA. Quick reference to Alaska's active volcanoes and listing of historical eruptions, 1760-1994, by R. G. McGimsey and T. P. Miller. 1995. 13 p. (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St. Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0522. CALIFORNIA. Geology of the Mount Laguna Quadrangle, San Diego County, California, by V. R. Todd. 1995. 34 p., 1 over-size sheet, scale 1:62,500 (1 inch = about 1 mile). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0523. WASHINGTON. Geology of part of the Mazama Quadrangle, Okanogan County, Washington, by V. R. Todd. 1995. 36 p., 1 over-size sheet, scale 1:62,500 (1 inch = about 1 mile). (NC, Da, M, S; Washington DNR/Geol. and Earth Resources Library, 1111 Washington St. SE, Olympia, WA 98501.)
- OF 95-0525. Draft cartographic and digital standard for geologic map information. 1995. 257 p. (NC, Da, M.)
- OF 95-0526. Digital files of geologic map symbols with cartographic specifications. 1995. Two 3 1/2 inch DS/HD IBM-compatible diskettes. (NC, Da, M.)
- OF 95-0527. CALIFORNIA. Geochemistry of surface sediments in the Gulf of the Farallones, by W. E. Dean and J. V. Gardner. 1995. 57 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0528. NEW MEXICO. Active-, inactive-, and abandoned-mine information and selected geochemical data for the State of New Mexico, by J. L. Ryder. 1995. One 3 1/2 inch diskette. (NC, Da, M, U; New Mexico Bur. of Mines and Mineral Resources, Campus Station, Socorro, NM 87801.)
- Minimum requirements: IBM-PC compatible computer with a minimum of 8.2MB of hard drive disk space for copying and unarchiving these files and software capable of importing dBase (.DBF) formatted files up to 5MB in size.
- OF 95-0529. ARIZONA. Topographic map of the Nankoweap-Kwagunt area, Grand Canyon, Arizona, by Ivo Lucchitta. Prepared in cooperation with the U.S. Bureau of Reclamation. 1995. 1 over-size sheet, scale 1:5,000 (1 inch = about 400 feet). (NC, Da, M, Wb; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 95-0530. CALIFORNIA. Preliminary report on petroleum source potential and thermal maturity of the Lospe Formation (lower Miocene) near Point Sal, onshore Santa Maria Basin, California, by R. G. Stanley, M. J. Pawlewicz, D. R. Vork, S. Y. Johnson and Z. C. Valin. 1995. 36 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0532. HAWAII. Composition of waters from the research drill hole at the summit of Kilauea Volcano, Hawaii; 1973-1991, by R. I. Tilling and B. F. Jones. 1995. 41 p. (NC, Da, M.)
- OF 95-0533. CALIFORNIA. P-wave velocity, wet bulk density, magnetic susceptibility, acoustic impedance, and visual core descriptions of sediment recovered during research cruise EW9504; data, techniques, and procedures, by J. V. Gardner, B. D. Edwards, W. E. Dean and June Wilson. 1995. 288 p. (NC, Da, M.)
- OF 95-0535. CALIFORNIA. Sand and gravel resources of the San Bernardino National Forest, California, by R. C. Greene and J. P. Calzia. 1995. 16 p., 1 over-size sheet, scale 1:250,000 (1 inch

- = about 4 miles). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0536. COLORADO. Nitrogen isotopes in nitrate from surface water and shallow ground water at Sixmile Creek, southeastern Colorado, by C. A. Johnson, R. A. Zielinski and S. A. Asher-Bolinder. 1995. 12 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 95-0537. The National Mineral Resource Surveys Program; a plan for mineral-resource and mineral-environmental research for national land-use, environmental, and mineral-supply decision making, by U.S. Geological Survey, National Plan Committee. 1995. 45 p. (NC, Da, M.)
- OF 95-0544. Theoretical models of heterogeneous media for electrical prospecting methods with direct currents, translated by A. A. R. Zohdy from paper in French by S. S. Stefanescu, published in Bucharest, Romania, 1950. 1995. 32 p. (NC, Da, M.)
- OF 95-0545. NEVADA. Stratigraphic identification of middle Tertiary ash-flow tuffs using trace-element abundances, Worthington Mountains, Nevada, by E. A. du Bray. 1995. 11 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)
- OF 95-0546. ARIZONA. Analytical results and other information for 415 water samples collected from wells, springs, and streams, 1976-1987, Pima, Pinal, and Maricopa counties, Arizona, by G. A. Nowlan. 1995. 3 p., one 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da, M, U; Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)
- OF 95-0555. Relative performance of several inexpensive accelerometers, by J. R. Evans and J. A. Rogers. 1995. 38 p. (NC, Da, M.)
- OF 95-0556. CONNECTICUT. The texture of surficial sediments in north-central Long Island Sound off Hammonasset Beach State Park, Connecticut, by L. J. Poppe, A. E. Harmon, B. B. Taylor, D. S. Blackwood and R. S. Lewis. 1995. 15 p. (NC, Da, M; Connecticut Geol. and Natural History Surv., 165 Capitol Ave., Room 553, Hartford, CT 06106.)
- OF 95-0557. NEW JERSEY. Conodont age and CAI data for New Jersey, by A. G. Harris, J. E. Repetski, N. R. Stamm and D. J. Weary. 1995. 31 p. (NC, Da, M.)
- OF 95-0558. CALIFORNIA, OREGON. A bibliography of Klamath Mountains geology, California and Oregon, listing authors from Aalto to Zucca for the years 1849 to mid-1995, compiled by W. P. Irwin. 1995. 151 p. (NC, Da, M, S; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)
- OF 95-0559. ARIZONA. Geologic map of the Littlefield Quadrangle, northern Mohave County, Arizona, by G. H. Billingsley. 1995. 16 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 95-0560. ARIZONA. Geologic map of the Elbow Canyon Quadrangle, northern Mohave County, Arizona, by G. H. Billingsley and R. G. Bohannon. 1995. 17 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)
- OF 95-0561. Data base of impact craters on Venus based on analysis of Magellan radar images and altimetry data, by G. G. Schaber, R. L. Kirk and R. G. Strom. Prepared for the National Aeronautics and Space Administration. 1995. 19 p. (NC, Da, M.)
- OF 95-0562. Geological factors affecting seismic monitoring in China, by J. R. Matzko. 1995. 44 p. (NC, Da, M.)
- OF 95-0566. Activities to explore acid rain and building stones, by E. S. McGee. 1995. 38 p. (NC, Da, M.)
- OF 95-0567. NEVADA. Preliminary digital geologic map database of the Nevada Test Site area, Nevada, by D. A. Sawyer, R. R. Wahl, J. C. Cole, S. A. Minor, R. J. Laczniak, R. G. Warren, C. M. Engle and R. G. Vega. 1995. 62 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)
- The digital database is available, in GRASS ASCII vector, DLG-3 (optional), and in ARC/INFO ASCII (Generate) and export formats, from the USGS, Denver, on-line repository on Internet (via "anonymous ftp") at greenwood.cr.usgs.gov [136.177.48.5], path (/pub/open-file-reports/ofr-95-0567).
- OF 95-0569. COLORADO. Geochemical and biogeochemical surveys near the Mineral and Valley View Hot Springs Known Geothermal Resource Areas, northern San Luis Valley, Colorado, by M. E. Hinkle and J. A. Erdman. 1995. 44 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 95-0571. Stratigraphic distribution of uranium clusters in the Rocky Mountain and Intermontane Basins Uranium Province, by W. I. Finch. 1995. 13 p., 1 over-size sheet. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203; New Mexico Bur. of Mines and Mineral Resources, Campus Station, Socorro, NM 87801; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071.)
- OF 95-0572. Selected bibliography of Appalachian coalbed methane, by P. C. Lyons and R. T. Ryder. 1995. 23 p. (NC, Da, M.)
- OF 95-0573. Sea-floor spreading; a computer animation and paper model, by T. R. Alpha, J. P. Galloway and M. V. Bonito. 1995. 35 p., one 3 1/2 inch Macintosh-compatible diskette. (NC, Da, M.)
- OF 95-0574. MISSOURI. Seismotectonic maps in the vicinity of New Madrid, Missouri; database, by B. S. Rhea. 1995. 12 p.

(NC, Da, M; Dep. of Natural Resources, Div. of Geol. and Land Surv., 111 Fairgrounds Rd., P.O. Box 250, Rolla, MO 55401.)

ESRI ARC/INFO version 7.0.2 coverages used to generate the maps in MF-2264 A-E. Total database size is 4.5MB. The database may be downloaded via "anonymous ftp" from a USGS data server named greenwood.cr.usgs.gov (136.177.48.5). The files are located in a directory named /pub/open-file reports/ofr-95-0574.

OF 95-0578. ARIZONA. Active-, inactive-, and abandoned-mine information and selected geochemical data for the State of Arizona, by J. L. Ryder. 1995. One 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da, M, U; Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

Minimum requirements: IBM-PC compatible computer with a minimum of 15.7MB of hard drive disk space for copying and unarchiving these files and software capable of importing dBase (.DBF) formatted files up to 12MB in size.

OF 95-0582. Geologic characterization of natural aggregate; a field geologist's guide to natural aggregate resource assessment, by W. H. Langer and D. H. Knepper, Jr. 1995. 32 p. (NC, Da, M.)

OF 95-0585. CALIFORNIA. Compositional data on partial melt products in upper mantle and lower crustal xenoliths and their host basaltic rocks, world localities and Cima volcanic field, San Bernardino County, California, by A. V. McGuire and H. G. Wilshire. 1995. 76 p., six 3 1/2 inch DS/HD IBM-compatible diskettes. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 95-0587. CALIFORNIA. Heavy minerals from cores in a deep-sea channel off Cape Mendocino, California, by Gretchen Luepke. 1995. 7 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 95-0588. A basic ARC/INFO ARC macro language program for plotting 7.5-minute quadrangle maps displaying geologic data, by Karen Bryant and W. D. Watson. 1995. 3 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet), one 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da, M.)

OF 95-0589. Assessment of acreages in road and cultural feature buffers in six major longwall mining counties, by Karen Bryant, J. K. Tully and W. D. Watson. 1995. 9 p., 2 over-size sheets, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M.)

OF 95-0590. Digital aeromagnetic anomaly data from eastern-most Guyana, by H. A. Pierce, Natalia Backjinski and John-James Manes. 1995. 12 p., seven 3 1/2 inch DS/HD IBM-compatible diskettes. (NC, Da, M.)

OF 95-0591. ARIZONA. Quaternary geology of the Granite Park area, Grand Canyon, Arizona; aggradation-downcutting cycles, calibration of soils stages, and response of fluvial system to volcanic activity, by Ivo Lucchitta, G. H. Curtis, M. E. Davis, S. W. Davis, and B. D. Turrin; *with an appendix* Synopsis of Granite

Park archeology, by Christopher Coder. 1995. 59 p. (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)

OF 95-0593. An AVS module to convert geographic coordinates to cartesian coordinates using map projection functions, by E. L. Wright. 1995. 10 p. (NC, Da, M.)

OF 95-0597. CALIFORNIA. Geologic map of the Hayward fault zone, Contra Costa, Alameda, and Santa Clara counties, California; a digital database, by R. W. Graymer, D. L. Jones and E. E. Brabb. 1995. 8 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3500, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

Requirements: UNIX operating system to extract the database tar file, and ARC/INFO is required for its use or conversion to other format. Compilation was done using version 7.0.2 of ARC/INFO with version 3.0 of the menu interface ALACARTE. A 18.6MB compressed tar file of the database and related files can be obtained by "anonymous ftp" over Internet.

OF 95-0598. CALIFORNIA. Preliminary geologic map of the Little Piute Mountains, San Bernardino County, California, by K. A. Howard, M. L. Dennis, K. E. Karlstrom and G. A. Phelps. 1995. 18 p., 2 over-size sheets, scale 1:10,000 (1 inch = about 850 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 95-0617. ARIZONA. Review of slope stability issues at the proposed Carlota Copper Project, Pinal and Gila counties, Arizona, by R. L. Baum and W. L. Ellis. Prepared in cooperation with the U.S. Department of Agriculture and U.S. Forest Service. 1995. 16 p. (NC, Da, M, U; Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

OF 95-0623. ALASKA. Digital release of stream-sediment, heavy-mineral-concentrate, and other geochemical data collected in the McCarthy 1 deg x 3 deg Quadrangle, Alaska, by S. L. George. 1995. 11 p., one 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da, M, A, S; Alaska Div. Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645; U.S. Dep. of Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513.)

OF 95-0625. ALASKA. Digital release of stream-sediment, heavy-mineral-concentrate, soil, and other geochemical data collected in the Nabesna 1 deg x 3 deg Quadrangle, Alaska, by S. L. George. 1995. 10 p., one 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da, M, A, S; Alaska Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645; U.S. Dep. of Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513.)

OF 95-0626. ALASKA. Digital release of stream-sediment, heavy-mineral-concentrate, and other geochemical data collected in the Circle 1 deg x 3 deg Quadrangle, Alaska, by S. L. George. 1995. 12 p., one 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da, M, A, S; Alaska Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645; U.S.

Dep. of Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513.)

OF 95-0627. ALASKA. Digital release of stream-sediment, heavy-mineral-concentrate, soil, and other geochemical data collected in Big Delta 1 deg \times 3 deg Quadrangle, Alaska, by S. L. George. 1995. 10 p., one 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da, M, A, S; (Alaska Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645; U.S. Dep. of Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513.)

OF 95-0644. IDAHO. Active-, inactive-, and abandoned-mine information and selected geochemical data for the State of Idaho, by J. L. Ryder. 1995. One 3 1/2 inch diskette. (NC, Da, M, U, S; Idaho Geol. Surv., Univ. of Idaho Campus, Morrill Hall, Room 332, Moscow, ID 83843.)

Minimum requirements: IBM-PC compatible computer with a minimum of 15MB of hard drive disk space for copying and unarchiving these files and software capable of importing dBase (.DBF) formatted files up to 11.4MB in size.

OF 95-0651. Land cover classification from SPOT multispectral and panchromatic images using neural network classification of fuzzy clustered spectral and textural features, by G. P. Lemeschewsky and Ann Frazier. 1995. 14 p. (NC, Da, M.)

OF 95-0652. Integrating multisource land use and land cover data, by B. E. Wright, Mike Tait, K. F. Lins, J. S. Crawford, S. P. Benjamin and J. F. Brown. Prepared in cooperation with the Environmental Systems Research Institute. 1995. 22 p. (NC, Da, M.)

Reports Available Only Through Certain USGS Field Offices

For information on availability and price of these reports, write to the address indicated by a dagger (†) in the listing for the report.

OF 94-0647. CALIFORNIA, NEVADA. Earthquakes in California and Nevada, by S. K. Guter, D. H. Oppenheimer, J. J. Mori, M. K. Savage and R. P. Massé. 1994. 1 over-size sheet, scale 1:1,000,000 (1 inch = about 16 miles). (NC, Da, M, U; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 3600, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.) †Kay Massé, USGS, Box 25046, Denver Federal Ctr., Mail Stop 967, Denver, CO 80225; telephone 303-273-8477.

OF 94-0654-A. VERMONT. Digital bedrock geologic map of the Plymouth Quadrangle, Vermont, by G. J. Walsh and N. M. Ratcliffe. 1994. 2 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M.) †Vermont Agency of Natural Resources, Vermont Geol. Surv., 103 South Main St., Center Bldg., Office of Information Management Services, Waterbury, VT 05671-0301; telephone 802-241-3488.

OF 94-0654-B. VERMONT. Digital bedrock geologic map of the Plymouth Quadrangle, Vermont, by G. J. Walsh and N. M. Ratcliffe. 1994. Two 3 1/2 inch DS/HD diskettes. (NC, Da, M.) †Vermont Agency of Natural Resources, Vermont Geol. Surv., 103 South Main St., Center Bldg., Office of Information Manage-

ment Services, Waterbury, VT 05671-0301; telephone 802-241-3488.

Digital files developed on an IBM compatible personal computer using PC ARC/INFO version 3.4D Plus.

OF 95-0203-A. VERMONT. Digital bedrock geologic map of the Cavendish Quadrangle, Vermont, by N. M. Ratcliffe. 1995. 2 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC.) †Vermont Agency of Natural Resources, Vermont Geol. Surv., 103 South Main St., Center Bldg., Office of Information Management Services, Waterbury, VT 05671-0301; telephone 802-241-3488.

OF 95-0203-B. VERMONT. Digital bedrock geologic map of the Cavendish Quadrangle, Vermont, by N. M. Ratcliffe. 1995. Two 3 1/2 inch DS/HD diskettes. (NC.) †Vermont Agency of Natural Resources, Vermont Geol. Surv., 103 South Main St., Center Bldg., Office of Information Management Services, Waterbury, VT 05671-0301; telephone 802-241-3488.

Digital files developed on an IBM compatible personal computer using PC ARC/INFO version 3.4D Plus.

OF 95-0483-A. VERMONT. Digital bedrock geologic map of the Arlington Quadrangle and Vermont portion of the Shushan Quadrangle, Vermont, by P. T. Lytle. 1995. 2 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M.) †Vermont Agency of Natural Resources, Vermont Geol. Surv., 103 South Main St., Center Bldg., Office of Information Management Services, Waterbury, VT 05671-0301; telephone 802-241-3488.

OF 95-0483-B. VERMONT. Digital bedrock geologic map of the Arlington Quadrangle and Vermont portion of the Shushan Quadrangle, Vermont, by P. T. Lytle. 1995. Two 3 1/2 inch DS/HD diskettes. (NC, Da, M.) †Vermont Agency of Natural Resources, Vermont Geol. Surv., 103 South Main St., Center Bldg., Office of Information Management Services, Waterbury, VT 05671-0301; telephone 802-241-3488.

Digital files developed on an IBM compatible personal computer using PC ARC/INFO version 3.4D Plus.



THEMATIC MAPS AND CHARTS

GEOLOGIC QUADRANGLE MAPS

Multicolor geologic maps on topographic bases in 7 1/2- or 15-minute quadrangle units; scales mainly 1:24,000 or 1:62,500; show bedrock, surficial, or engineering geology. Maps are accompanied by brief texts and some maps by structure and columnar sections also.

GQ-0351. KENTUCKY. Geology of the Mammoth Cave Quadrangle, Kentucky, by D. D. Haynes. Prepared in cooperation with the Commonwealth of Kentucky, University of Kentucky, Kentucky Geological Survey. 1964 (1995). Lat 37°07'30" to 37°15', long 86° to 86°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 34 by 30 inches (in color). (Reprint.)

GQ-1212. KENTUCKY. Geologic map of the Cranston Quadrangle, northeastern Kentucky, by J. C. Philley, D. K. Hylbert and H. P. Hoge. Prepared in cooperation with the Commonwealth of Kentucky, University of Kentucky, Kentucky Geological Survey. 1974 (1995). Lat 43°55' to 44°, long 108°35' to 108°40'. Scale

1:24,000 (1 inch = 2,000 feet). Sheet 36 by 29 inches (in color). (Reprint.)

GQ-1342. KENTUCKY. Geologic map of the Crestwood Quadrangle, north-central Kentucky, by R. C. Kepferle. Prepared in cooperation with the Commonwealth of Kentucky, University of Kentucky, Kentucky Geological Survey. 1976 (1995). Lat 38°15' to 38°22'30", long 85°22'30" to 85°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 36 by 29 inches (in color). (Reprint.)

GQ-1681. WASHINGTON. Geologic map of the Spirit Lake West Quadrangle, Skamania and Cowlitz counties, Washington, by R. C. Everts and R. P. Ashley. 1993. Lat 46°15' to 46°22'30", long 122°07'30" to 122°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 41 by 33 inches (in color). (Accompanied by 11-page text.)

GQ-1722. UTAH. Geologic map of the Hatch Rock Quadrangle, San Juan County, Utah, by G. W. Weir, C. L. Dodson and W. P. Puffett. 1994. Lat 38° to 38°15', long 109°15' to 109°30'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 25 by 28 inches (in color). (Accompanied by 13-page text.)

GQ-1748. DISTRICT OF COLUMBIA, MARYLAND, VIRGINIA. Geologic map of the Washington West Quadrangle, District of Columbia, Montgomery and Prince Georges counties, Maryland, and Arlington and Fairfax counties, Virginia, by A. H. Fleming, A. A. Drake, Jr. and Lucy McCartan. 1994. Lat 38°52'30" to 39°, long 77° to 77°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 58 by 41 inches (in color).

GQ-1755. VIRGINIA. Geologic map of the Purcellville Quadrangle, Loudoun County, Virginia, by C. S. Southworth. Prepared in cooperation with the Loudoun County Department of Environmental Resources. 1995. Lat 39°07'30" to 39°15', long 77°37'30" to 77°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 54 by 40 inches (in color).

GQ-1756. NEVADA. Geologic map of the Round Mountain Quadrangle, Nye County, Nevada, by D. R. Shawe. 1995. Lat 38°37'30" to 38°45', long 117° to 117°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 54 by 40 inches (in color).

GQ-1757. MONTANA. Geologic map of the Bear Trap Creek Quadrangle, Madison County, Montana, by K. S. Kellogg. 1995. Lat 45°30' to 45°37'30", long 111°30' to 111°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 44 by 36 inches (in color).

GQ-1758. NEVADA. Geologic map of the Lehman Caves Quadrangle, White Pine County, Nevada, by E. L. Miller, Stanford University, and S. P. Grier, Core Laboratories, Carrollton, TX; compiled by J. L. Brown, U.S. Geological Survey. Prepared in cooperation with the U.S. National Park Service. 1995. Lat 39° to 39°07'30", long 114°07'30" to 114°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 40 by 29 inches (in color).

GQ-1759. UTAH, NEVADA. Geologic map of the Scarecrow Peak Quadrangle, Washington County, Utah, and Lincoln County, Nevada, by L. F. Hintze, Brigham Young University; and G. J. Axen, Centro de Investigación Científica y de Educación Superior de Ensenada, San Diego, California. Prepared in cooperation with the Utah Geological Survey. 1995. Lat 37°07'30" to 37°15', long 114° to 114°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 44 by 32 inches (in color).

GQ-1763. COLORADO. Geologic map of the Granby Quadrangle, Grand County, Colorado, by D. A. Schroeder. 1995. Lat

40° to 40°07'30", long 105°52'30" to 106°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 39 1/2 by 36 1/2 inches (in color).

GQ-1764. COLORADO. Geologic map of the Strawberry Lake Quadrangle, Grand County, Colorado, by D. A. Schroeder. 1995. Lat 40° to 40°07'30", long 105°45' to 105°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 28 inches (in color).

GEOPHYSICAL INVESTIGATIONS MAPS

Maps on topographic or planimetric bases; various scales; show results of surveys using geophysical techniques, such as gravity, magnetic, seismic, or radioactivity, which reflect subsurface structures that are of economic or geologic significance. Many maps are correlated with the geology.

GP-0998-A. OKLAHOMA. Total-field aeromagnetic and derivative maps of the Lawton area, southwestern Oklahoma, by Meridee Jones-Cecil. 1995. Two sheets. Sheet 1, lat 34°30' to 35°05', long 98° to 99°; sheet 2, lat 34°30' to 35°05', long 98°22'30" to 99°15'. Sheet 2, scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 37 by 33 inches; sheet 2, 34 by 58 inches. (all in color).

GP-1011. World map of volcanoes and principal aeronautical features, by T. J. Casadevall and T. B. Thompson. Prepared in cooperation with Jeppesen Sanderson, Inc. Sponsored by Aerospace Industries Association of America; Air Line Pilots Association; Air Transport Association of America; American Institute of Aeronautics and Astronautics; Federal Aviation Administration; Flight Safety Foundation; International Association of Volcanology and Chemistry of the Earth's Interior; International Civil Aviation Organization; National Oceanic and Atmospheric Administration; National Transportation Safety Board; Smithsonian Institution; and U.S. Geological Survey. 1995. Lat 70° to 80°, long 90° to 90°. Scale 1:34,268,000 at the equator (1 inch = about 540 miles). Sheet 64 by 39 inches (in color). (Mercator projection.) (Accompanied by 9-page text; Spanish and French translations of text and warning chart have been designed to place over English text on the map sheet.)

GP-1012. Gravity and basin-depth maps of the Basin and Range Province, Western United States, by R. W. Saltus and R. C. Jachens. 1995. Lat 32° to 42°, long 110° to 120°. Scale 1:2,500,000 (1 inch = about 40 miles). Sheet 37 by 58 inches (in color).

MISCELLANEOUS INVESTIGATIONS SERIES MAPS

Maps on planimetric or topographic bases; regular and irregular areas; various scales; a wide variety of format and subject matter. The series also includes 7 1/2-minute quadrangle photogeologic maps on planimetric bases which show geology as interpreted from aerial photographs. Series also includes maps of Mars and the Moon.

I-0711. WYOMING. Geologic map of Yellowstone National Park. Prepared in cooperation with the National Aeronautics and Space Administration and the National Park Service. 1972. Lat 44°08' to 45°07', long 109°48' to 111°10'. Scale 1:125,000 (1 inch = about 2 miles). Sheet 50 by 40 inches (in color). (Reprinted 1975, 1988, 1995.)

I-1970-D. Map showing the thickness and character of Quaternary sediments in the glaciated United States east of the Rocky Mountains; Northern Plains states (west of 102° west longitude), by D. R. Soller. 1994. Lat 46° to 49°, long 102° to 113°. Scale

1:1,000,000 (1 inch = about 16 miles). Sheet 47 by 37 inches (in color).

I-1987-D. Map showing distribution of surficial sediment on the mid-Atlantic continental margin, Cape Cod to Albemarle Sound, by L. J. Poppe, J. S. Schlee and H. J. Knebel. Prepared in cooperation with the U.S. Geological Survey—National Oceanic and Atmospheric Administration, Joint Office for Mapping and Research. 1994. Lat 36°N to 42°N, long 69°W to 78°W. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 44 by 33 inches (in color).

I-2017. ARIZONA. Geologic map of the Tohono O'odham Indian Nation, southern Arizona, by H. M. Beikman, G. B. Haxel and R. J. Miller. Prepared in cooperation with Tohono O'odham Tribe and the Bureau of Indian Affairs. 1995. Two sheets. Sheet 1, lat 31°30' to 32°45', long 111°15' to 112°; sheet 2, lat 31°45' to 32°45', long 112° to 112°45'. Each sheet, scale 1:125,000 (1 inch = about 2 miles). Sheet 1, 32 by 54 inches; sheet 2, 24 by 45 inches (all in color).

I-2148. CALIFORNIA, OREGON. Geologic map of the Klamath Mountains, California and Oregon, compiled by W. P. Irwin. 1994. Two sheets. Sheet 1, lat 40° to 43°, long 122° to 124°. Sheet 1, scale 1:500,000 (1 inch = about 8 miles). Sheet 1, 44 by 34 inches; sheet 2, 29 by 32 inches (all in color).

I-2150-B. LOUISIANA. Louisiana barrier island erosion study; atlas of sea-floor changes from 1878 to 1989, by J. H. List, B. E. Jaffe, A. H. Sallenger, Jr., and S. J. Williams, U.S. Geological Survey; R. A. McBride, and Shea Penland, Louisiana State University. 1994. p. 81. Lat 28°45' to 29°25', long 89°30' to 91°10'. Scales 1:250,000 (1 inch = about 4 miles) and 1:100,000 (1 inch = about 1.6 miles). 81 p., spiral bound, 19 by 22 inches (in color).

I-2174. GEORGIA, ALABAMA. Geologic map of the Americus 30' x 60' Quadrangle, Georgia and Alabama, by Juergen Reinhardt, J. S. Schindler and T. G. Gibson. 1994. Lat 32° to 32°30', long 84° to 85°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 55 by 37 inches (in color). (Accompanied by 8-page text.)

I-2210. UTAH, WYOMING. Geologic map of the Logan 30' x 60' Quadrangle, Cache and Rich counties, Utah, and Lincoln and Uinta counties, Wyoming, by J. H. Dover. 1995. Lat 41°30' to 42°, long 111° to 112°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 57 by 37 inches (in color).

I-2225-A. ALASKA. Maps showing areas of potential for mineral resources in the Killik River 1°x3° Quadrangle, Alaska, by K. D. Kelley and C. G. Mull. 1995. Lat 68° to 69°, long 153° to 156°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 58 by 41 inches (in color). (Accompanied by 25-page text.)

I-2225-B. ALASKA. Geochemistry of minus-100-mesh and minus-80-mesh sediment samples from the Killik River 1°x3° Quadrangle, Alaska, by K. D. Kelley and C. G. Mull. 1995. Two sheets. Lat 68° to 69°, long 153° to 156°. Each sheet, scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 54 by 41 inches; sheet 2, 45 by 41 inches.

I-2225-C. ALASKA. Maps showing distribution of selected elements in minus-30-mesh stream sediment samples from the southern part of Killik River 1°x3° Quadrangle, Alaska, by K. D. Kelley, C. G. Mull and H. N. Barton. 1995. Two sheets. Lat

68° to 69°, long 153° to 156°. Each sheet, scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 58 by 41 inches; sheet 2, 45 by 41 inches.

I-2225-D. ALASKA. Geochemistry and mineralogy of heavy-mineral concentrates from the southern part of the Killik River 1°x3° Quadrangle, Alaska, by K. D. Kelley, C. G. Mull and H. N. Barton. 1995. Two sheets. Lat 68° to 69°, long 153° to 156°. Each sheet, scale 1:250,000 (1 inch = about 4 miles). Each sheet 58 by 41 inches.

I-2233. WYOMING. Geologic map, petrochemistry, and geochronology of the Precambrian rocks of the Fletcher Park-Johnson Mountain area, Albany and Platte counties, Wyoming, by G. L. Snyder, D. F. Siems, J. N. Grossman, K. R. Ludwig, and L. D. Nealey, U.S. Geological Survey; with a section on the Fletcher Park shear zone by B. R. Frost, K. R. Chamberlain, University of Wyoming; and G. L. Snyder, U.S. Geological Survey. 1995. Three sheets. Sheet 1, lat 42°07'30" to 42°15', long 105°07'30" to 105°22'30". Sheet 1, scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 56 by 41 inches (in color); sheet 2, 57 by 41 inches; sheet 3, 42 by 56 inches. (Supersedes Open-file report 86-201.)

I-2272. ALASKA. Geologic map of the Port Moller, Stepovak Bay, and Simeonof Island quadrangles, Alaska Peninsula, Alaska, by F. H. Wilson, R. L. Detterman, J. W. Miller and J. E. Case. 1995. Two sheets. Lat 54°45' to 56°, long 158°30' to 162°. Sheet 1, scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 44 by 35 inches; sheet 2, 37 by 30 inches (all in color).

I-2291-C. Map showing distribution, composition, and age of early and middle Cenozoic volcanic centers in Idaho, Montana, west-central South Dakota, and Wyoming, by R. G. Luedke. 1994. Two sheets. Lat 41° to 49°, long 103° to 117°. Each sheet, scale 1:1,000,000 (1 inch = about 16 miles). Each sheet 52 by 40 inches (all in color). (Accompanied by 15-page text.)

I-2295. CALIFORNIA. Reconnaissance geologic map of the southern Sierra Nevada, Kern, Tulare, and Inyo counties, California, by D. C. Ross. 1995. Lat 35°30' to 36°, long 117°45' to 119°. Scale 1:125,000 (1 inch = about 2 miles). Sheet 40 by 46 inches (in color).

I-2341. CALIFORNIA. Geologic map of the Duncan Peak and southern part of the Cisco Grove 7-1/2' quadrangles, Placer and Nevada counties, California, by D. S. Harwood, G. R. Fisher, Jr. and B. J. Waugh. 1995. Lat 39°07'30" to 39°20', long 120°30' to 120°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 39 by 45 inches (in color). (Accompanied by 12-page text.)

I-2359. WASHINGTON. Maps showing growth of the lava dome at Mount St. Helens, Washington, by R. T. Holcomb and W. E. Colony. 1995. Lat 46°11'42" to 46°12'23", long 122°10'53" to 122°11'37". Scale 1:5,000 (1 inch = about 417 feet). Sheet 56 by 40 inches (in color). (Accompanied by 12-page text.)

I-2362. CALIFORNIA. Geologic map and structure sections of the Clear Lake Volcanics, Northern California, by B. C. Hearn, Jr., J. M. Donnelly-Nolan and F. E. Goff. 1995. Three sheets. Sheet 1, lat 38°52'30" to 39°05', long 122°30' to 122°52'30"; sheet 2, lat 38°42'30" to 38°52'30", long 122°37'30" to 122°55'. Sheets 1-2, scale 1:24,000 (1 inch = 2,000 feet). Sheets 1 and 3, 56 by 42 inches; sheet 2, 58 by 42 inches (all in color).

I-2364-A. WEST VIRGINIA. Mineral resources of West Virginia, by W. F. Cannon, S. H. B. Clark, F. G. Lesure, M. E.

- Hinkle, R. L. Paylor, U.S. Geological Survey; H. M. King, Simard, C. M., K. C. Ashton, and J. S. Kite, West Virginia Geological and Economic Survey. Prepared in cooperation with the West Virginia Geological and Economic Survey. 1994. Lat 37°30' to 40°30', long 78° to 82°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 58 by 39 inches (in color). (Accompanied by 14-page text.)
- I-2364-J. WEST VIRGINIA. Geologic structure and mineral occurrences in eastern West Virginia, by H. A. Pohn. Prepared in cooperation with the West Virginia Geological and Economic Survey. 1994. Sheet 36 by 27 inches (in color).
- I-2387. PUERTO RICO. Geologic maps of the southwestern Puerto Rico Parguera to Guánica insular shelf, by Jack Morelock, E. A. Winget and Carlos Goenaga. Prepared in cooperation with the Commonwealth of Puerto Rico, Department of Natural Resources. 1994. Lat 17°51'30" to 17°59'30", long 66°52'30" to 67°07'30". Scale 1:40,000 (1 inch = 3,333 feet). Sheet 40 by 58 inches (in color). (Accompanied by 6-page text.)
- I-2396. ARIZONA. Geologic map of Sullivan Draw and vicinity, Mohave County, northwestern Arizona, by G. H. Billingsley. 1994. Lat 36°30' to 36°45', long 113°30' to 113°45'. Scale 1:31,680 (1 inch = 2,640 feet). Sheet 48 by 41 inches (in color).
- I-2397. Geologic and topographic maps of the Elysium paleolake basin, Mars, by D. H. Scott and M. G. Chapman. Prepared for the National Aeronautics and Space Administration. 1995. Lat -15° to 25°, long 170° to 225°. Scale 1:5,000,000 (1 mm = 5 km) at 0° lat. Sheet 55 by 41 inches (in color). (Mercator projection.)
- I-2399. NEW MEXICO. Geologic map of the Taylor Creek Rhyolite and adjacent rocks, Catron and Sierra counties, New Mexico, by W. A. Duffield, D. H. Richter, and S. S. Priest. 1995. Lat 33°15' to 33°37'30", long 107°47'30" to 108°07'30". Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 35 by 38 inches (in color). (Accompanied by 16-page text.)
- I-2402. Geologic map of MTM-15147 Quadrangle, Mangala Valles region of Mars, by J. R. Zimbelman, R. A. Craddock and Ronald Greeley. Prepared for the National Aeronautics and Space Administration. 1994. Lat -17.5° to -12.5°, long 145° to 150°. Scale 1:502,000 (1 mm = 502 m) at 150° long. Sheet 45 by 41 inches (in color). (Transverse Mercator projection.)
- I-2403. Controlled photomosaic of the MTM 20182 Quadrangle, Orcus Patera region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat 17.5° to 22.5°, long 180° to 185°. Scale 1:502,000 (1 mm = 502 m) at 190° long. Sheet 27 by 38 inches. (Transverse Mercator projection.)
- I-2404. Controlled photomosaic of the MTM 20187 Quadrangle, Orcus Patera region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat 17.5° to 22.5°, long 185° to 190°. Scale 1:502,000 (1 mm = 502 m) at 190° long. Sheet 26 by 38 inches. (Transverse Mercator projection.)
- I-2405. Controlled photomosaic of the MTM 20192 Quadrangle, Orcus Patera region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat 17.5° to 22.5°, long 190° to 195°. Scale 1:502,000 (1 mm = 502 m) at 190° long. Sheet 26 1/2 by 38 inches. (Transverse Mercator projection.)
- I-2406. Controlled photomosaic of the MTM 20197 Quadrangle, Orcus Patera region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat 17.5° to 22.5°, long 195° to 200°. Scale 1:502,000 (1 mm = 502 m) at 10° long. Sheet 27 by 38 inches. (Transverse Mercator projection.)
- I-2407. Controlled photomosaic of the MTM 20202 Quadrangle, Orcus Patera region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat 17.5° to 22.5°, long 200° to 205°. Scale 1:502,000 (1 mm = 502 m) at 210° long. Sheet 25 1/2 by 38 inches. (Transverse Mercator projection.)
- I-2410. Voyager images of irregularly shaped satellites of the outer planets. Prepared for the National Aeronautics and Space Administration. 1995. Sheet 29 by 41 inches.
- I-2411. Controlled photomosaic of the MTM 45352 Quadrangle, Acidalia Planitia region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat 42.5° to 47.5°, long 350° to 355°. Scale 1:502,000 (1 mm = 502 m) at 350° long. Sheet 20 by 38 inches. (Transverse Mercator projection.)
- I-2412. Controlled photomosaic of the MTM 45357 Quadrangle, Acidalia Planitia region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat 42.5° to 47.5°, long 355° to 360°. Scale 1:502,000 (1 mm = 502 m) at 350° long. Sheet 22 by 38 inches. (Transverse Mercator projection.)
- I-2413. Controlled photomosaic of the MTM 45002 Quadrangle, Acidalia Planitia region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat 42.5° to 47.5°, long 0° to 5°. Scale 1:502,000 (1 mm = 502 m) at 10° long. Sheet 22 by 38 inches. (Transverse Mercator projection.)
- I-2417. Controlled photomosaic of the MTM 45022 Quadrangle, Acidalia Planitia region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat 42.5° to 47.5°, long 20° to 25°. Scale 1:502,000 (1 mm = 502 m) at 30° long. Sheet 22 by 38 inches. (Transverse Mercator projection.)
- I-2418. Controlled photomosaic of the MTM 40002 Quadrangle, Acidalia Planitia region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat 37.5° to 42.5°, long 0° to 5°. Scale 1:502,000 (1 mm = 502 m) at 10° long. Sheet 22 by 38 inches. (Transverse Mercator projection.)
- I-2419. Controlled photomosaic of the MTM 40012 Quadrangle, Acidalia Planitia region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat 37.5° to 42.5°, long 10° to 15°. Scale 1:502,000 (1 mm = 502 m) at 10° long. Sheet 22 by 38 inches. (Transverse Mercator projection.)
- I-2421. Controlled photomosaic of the MTM 40007 Quadrangle, Acidalia Planitia region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat 37.5° to 42.5°, long 5° to 10°. Scale 1:502,000 (1 mm = 502 m) at 10° long. Sheet 22 by 38 inches. (Transverse Mercator projection.)
- I-2422. Controlled photomosaic of the MTM 00142 Quadrangle, Gordii Dorsum region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat -2.5° to 2.5°, long 140° to 145°. Scale 1:502,000 (1 mm = 502 m) at 150° long. Sheet 27 by 38 inches. (Transverse Mercator projection.)
- I-2425. Controlled photomosaic of the MTM 05142 Quadrangle, Gordii Dorsum region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat 2.5° to 7.5°, long

- 140° to 145°. Scale 1:502,000 (1 mm = 502 m) at 150° long. Sheet 27 by 38 inches. (Transverse Mercator projection.)
- I-2428. Controlled photomosaic of the MTM-10117 Quadrangle (revised), Arsia Mons region of Mars. Prepared for the National Aeronautics and Space Administration. 1995. Lat -12.5° to -7.5°, long 115° to 120°. Scale 1:502,000 (1 mm = 502 m) at 110° long. Sheet 27 by 38 inches. (Transverse Mercator projection.) (Supersedes I-2221.)
- I-2429. INDIANA. Physiography and sediment distribution of Indiana Shoals, southern Lake Michigan, by J. S. Schlee, D. W. Folger, U.S. Geological Survey; J. S. Risch, University of Wisconsin-Milwaukee; B. A. Seekins, D. S. Foster, C. F. Polloni, C. L. Brown, U.S. Geological Survey; M. J. Chrzastowski, Illinois State Geological Survey; and T. A. Thompson, Indiana Geological Survey. 1995. Two sheets. Lat 41°40'30"N to 41°43'30"N, long 87°22'W to 87°25'30"W. Each sheet, scale 1:10,000 (1 inch = 833 feet). Sheet 1, 44 by 38 inches; sheet 2, 45 by 29 inches (all in color).
- I-2433-B. WYOMING. Geologic map showing thickness of sedimentary rocks from the ground surface to the top of the Upper Cretaceous Pierre Shale in the south half of the Powder River basin, northeastern Wyoming and adjacent areas, by N. M. Denson, C. T. Pierson and W. D. Grundy. 1995. Lat 42°30' to 44°, long 104° to 107°. Scale 1:200,000 (1 inch = about 3.2 miles). Sheet 58 by 41 inches (in color).
- I-2445. SOUTH DAKOTA, WYOMING. Map showing metallic mineral districts and mines in the Black Hills, South Dakota and Wyoming, by A. B. Wilson and Ed DeWitt. 1995. Lat 43°15' to 44°32'30", long 103°15' to 104°30'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 33 by 50 inches (in color). (Accompanied by 72-page text.)
- I-2446. MONTANA. Map showing sand and gravel deposits in the Bigfork-Avon area, Flathead, Lake, Lewis and Clark, Missoula, and Powell counties, Montana, by I. J. Witkind. 1995. Two sheets. Sheet 1, lat 46°30' to 48°07'30", long 112°30' to 114°07'30". Sheet 1, scale 1:125,000 (1 inch = about 2 miles). Sheet 1, 41 by 58 inches; sheet 2, 54 by 34 inches (all in color).
- I-2450. ARIZONA. Geologic map of the Portal Quadrangle and vicinity, Cochise County, Southeast Arizona, by H. D. Drewes, E. A. du Bray and J. S. Pallister. 1995. Lat 31°52'30" to 32°, long 109°07'30" to 109°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 52 by 37 inches (in color).
- I-2451. Wetlands of modern and ancestral lakes Erie and St. Clair, Michigan, Ohio, Indiana, Pennsylvania, and New York, U.S.A., and Ontario, Canada, by E. I. Robbins, R. A. Rybicki, David Hockey, U.S. Geological Survey; J. A. Fuller, Ohio Department of Natural Resources; and S. S. Indrick, U.S. Department of Agriculture. 1994. Lat 41° to 43°, long 78° to 85°30'. Scale 1:500,000 (1 inch = about 8 miles). Sheet 52 by 30 inches (in color).
- I-2452. WYOMING, COLORADO. Geologic map of Precambrian rocks of the Sierra Madre, Carbon County, Wyoming, and Jackson and Routt counties, Colorado, by R. S. Houston and P. J. Graff. 1995. Two sheets. Sheet 1, lat 41° to 41°30', long 106°15' to 107°15'; sheet 2, lat 41° to 41°22'30", long 106°30' to 107°15'. Sheet 1, scale 1:50,000 (1 inch = about 4,200 feet). Sheet 1, 58 by 41 inches; sheet 2, 34 by 31 inches (all in color). (Accompanied by 9-page text.)
- I-2454. ARIZONA. Geologic map of southeastern Kofa Mountains and western Tank Mountains, southwestern Arizona, by M. J. Grubensky, G. B. Haxel and K. A. Demsey. Prepared in cooperation with the Arizona Geological Survey. 1995. Lat 33° to 33°22', long 113°45' to 114°10'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 55 by 38 inches (in color).
- I-2455. OREGON. Geologic map of Newberry Volcano, Deschutes, Klamath, and Lake counties, Oregon, by N. S. MacLeod, D. R. Sherrod, L. A. Chitwood and R. A. Jensen. 1995. Two sheets. Sheet 1, lat 43°30' to 44°, long 121° to 121°30'; sheet 2, lat 43°40' to 43°45', long 121°10' to 121°17'30". Each sheet, scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 54 by 41 inches; sheet 2, 40 by 24 inches (all in color). (Accompanied by 23-page text.)
- I-2456. NEW YORK, CONNECTICUT, RHODE ISLAND. Map showing the distribution of surficial sediments in Fishers Island Sound, New York, Connecticut, and Rhode Island, by L. J. Poppe, U.S. Geological Survey; R. S. Lewis, Sidney Quarrier, Connecticut State Geological Survey; Roman Zajac, University of New Haven; and A. M. Moffet, U.S. Geological Survey. Prepared in cooperation with the State of Connecticut, Department of Environmental Protection, Geological and Natural History Survey. 1994. Lat 41°15' to 41°20', long 71°51' to 72°03'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 24 inches (in color).
- I-2460. WASHINGTON. Geologic map of the Mount Adams volcanic field, Cascade Range of southern Washington, by Wes Hildreth and J. E. Fierstein. 1995. Two sheets. Sheet 1, lat 45°53'27" to 46°22'30", long 121°15' to 121°41'36". Sheet 1, scale 1:50,000 (1 inch = about 4,200 feet). Sheet 1, 30 by 48 inches; sheet 2, 28 by 30 inches (all in color). (Accompanied by 39-page text.)
- I-2462. UTAH. Geologic map of the Price 1° × 2° Quadrangle, Utah, by I. J. Witkind. 1995. Lat 39° to 40°, long 110° to 112°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 54 by 40 inches (in color).
- I-2464. NEVADA, CALIFORNIA. Geologic map of late Cenozoic deposits and faults in parts of the Mt. Barcroft, Piper Peak, and Soldier Pass 15' quadrangles, Esmeralda County, Nevada, and Mono County, California, by M. C. Reheis, J. L. Slate and T. L. Sawyer. 1995. Two sheets. Sheet 1, lat 37°35' to 37°45', long 117°55' to 118°10'; sheet 2, lat 37°25' to 37°35', long 117°50' to 118°05'. Each sheet, scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 58 by 40 inches; sheet 2, 42 by 32 inches (all in color).
- I-2469. COLORADO, KANSAS. Historic trail map of the Lamar 1° × 2° Quadrangle, Colorado and Kansas, by G. R. Scott. 1995. Lat 38° to 39°, long 102° to 104°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 44 by 32 inches (in color).
- I-2472. WASHINGTON, IDAHO. Surficial geologic map of the Chewelah 30' × 60' Quadrangle, Washington and Idaho, by P. E. Carrara, E. P. Kiver and D. F. Stradling. 1995. Lat 48° to 48°30', long 117° to 118°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 58 by 30 inches (in color).
- I-2473. NEVADA, CALIFORNIA. Map showing the distribution, mineralogy, and geochemistry of hydrothermally altered rocks in

the Reno 1° × 2° Quadrangle, Nevada and California, by L. C. Rowan, B. A. Eiswerth, D. B. Smith, W. J. Ehmann and T. L. Bowers. 1995. Lat 39° to 40°, long 118° to 120°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 36 by 33 inches (in color). (Accompanied by 17-page text.)

I-2474-A. MONTANA, SOUTH DAKOTA, MINNESOTA. West-east stratigraphic transect of Cretaceous rocks in the Northern Rocky Mountains and Great Plains regions, southwestern Montana to southwestern Minnesota, by T. S. Dyman, K. W. Porter, R. G. Tysdal, W. A. Cobban, J. E. Fox, R. H. Hammond, D. J. Nichols, W. J. Perry, Jr., D. D. Rice, D. R. Setterholm, G. W. Shurr, J. C. Haley, D. E. Lane, S. B. Anderson and E. B. Campen. 1995. Sheet 54 by 38 inches.

I-2489. ARIZONA. Geologic map, cross sections, isotopic dates, and mineral deposits of the Alamo Lake 30'×60' Quadrangle, west-central Arizona, by B. H. Bryant. 1995. Three sheets. Sheets 1 and 3, lat 34° to 34°30', long 113° to 114°. Sheets 1 and 3, scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 58 by 42 inches; sheet 2, 31 by 32 inches; sheet 3, 50 by 34 inches (all in color).

I-2496. NEBRASKA. Geologic map of Morrill County, Nebraska, by J. B. Swinehart and R. F. Diffendal, Jr., Nebraska Geological Survey; with a section on New ⁴⁰Ar/³⁹Ar laser fusion ash dates from the Wildcat Ridge, Nebraska, by C. C. Swisher III, Geochronology Center, Berkeley, California. Prepared in cooperation with the University of Nebraska-Lincoln, Institute of Agriculture and Natural Resources, Conservation and Survey Division. 1995. Lat 41°30' to 42°, long 102°40' to 103°20'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 54 by 41 inches (in color).

I-2498. KANSAS. Geologic map of the Irish Flats NE Quadrangle, Meade County, Kansas, by G. A. Izett and J. G. Honey. 1995. Lat 37°07'30" to 37°15', long 100°15' to 100°22'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 44 by 34 inches (in color).

I-2501. NEVADA. Map showing modern fissures and Quaternary faults in the Dry Lake valley area, Lincoln County, Nevada, by W. C. Swadley. 1995. Lat 37°15' to 38°, long 114°37'30" to 115°. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 53 by 38 inches (in color).

I-2504. COLORADO. Neogene geomorphic evolution of central San Juan Mountains near Creede, Colorado, by T. A. Steven, Ken Hon and M. A. Lanphere. 1995. Lat 37°45' to 38°, long 106°45' to 107°15'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 52 by 41 inches (in color).

I-2521. MISSOURI. Maps showing synopsis of seismotectonic features in the vicinity of New Madrid, Missouri, by B. S. Rhea and R. L. Wheeler. 1995. Lat 35° to 37°, long 89° to 91°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 50 by 40 inches (in color).

I-2536. NEVADA. Geologic map of the Rowland-Bearpaw Mountain area, Elko County, Nevada, by K. B. Ketner, J. E. Repetski, B. R. Wardlaw and R. G. Stamm. 1995. Lat 41°52'30" to 41°57'30", long 115°32'30" to 115°40'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 29 by 26 inches (in color).

I-2555. COLORADO. Chart showing lithology, mineralogy, and paleontology of the Pennsylvanian Hermosa Group at Hermosa Mountain, La Plata County, Colorado, by K. J. Franczyk, Germa-

ine Clark, D. C. Brew and J. K. Pitman. 1995. Sheet 58 by 38 inches. (Accompanied by 18-page text.)

Quaternary Geological Atlas of the United States

I-1420 (NL-14). NORTH DAKOTA, SOUTH DAKOTA, MINNESOTA. Quaternary geologic map of the Dakotas 4° × 6° Quadrangle, United States, State compilations by D. S. Fullerton, J. P. Bluemle, Lee Clayton, F. V. Steece, M. J. Tipton, R. F. Bretz, and J. E. Goebel. Edited and integrated by D. S. Fullerton. Prepared in cooperation with the North Dakota Geological Survey, South Dakota Geological Survey, and Minnesota Geological Survey. 1995. Lat 44° to 48°, long 96° to 102°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 58 by 40 inches (in color). (Accompanied by 9-page text.)

I-1420 (NM-15). MINNESOTA. Quaternary geologic map of the Lake of the Woods 4° × 6° Quadrangle, United States and Canada, State and Province compilations by E. V. Sado, D. S. Fullerton, J. E. Goebel, and S. M. Ringrose. Edited and integrated by D. S. Fullerton. Prepared in cooperation with the Ontario Geological Survey, Minnesota Geological Survey, and the Manitoba Department of Energy and Mines. 1995. Lat 48° to 52°, long 90° to 96°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 46 by 30 inches (in color).

CIRCUM-PACIFIC MAP SERIES

Multicolor equal-area maps at scales of 1:10,000,000 for the Northwest, Northeast, Southwest, Southeast quadrants of the Pacific and the Arctic and Antarctic regions, and of 1:17,000,000 for the whole Pacific Basin. The series consists of base, geographic, geodynamic, plate-tectonic, geologic, tectonic, mineral-resources, and energy-resources maps, as well as other miscellaneous maps.

CP-0043. Natural hazards potential map of the Circum-Pacific region; southwest quadrant, compiled by R. W. Johnson (chairperson, Southwest Quadrant Panel), R. J. Blong, and C. J. Ryan. Prepared by the Circum-Pacific Council for Energy and Mineral Resources. 1995. Lat 70°S to 10°N, long 160°W to 90°E. Scale 1:10,000,000 (1 inch = about 160 miles). Sheet 54 by 41 inches (in color). (Accompanied by 60-page text.)

COAL INVESTIGATIONS MAP

Geologic maps on topographic or planimetric bases; various scales; show bedrock geology, stratigraphy, and structural relations in certain coal-resource areas.

C-0146. WYOMING. Stratigraphy and coal geology of the lower part of the Fort Union Formation in the Grass Creek coal mine area, southwestern Bighorn Basin, Wyoming, by S. B. Roberts and Dominique Bossiroy. 1995. Lat 43°55' to 44°, long 108°35' to 108°40'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 58 by 36 inches.

OIL AND GAS INVESTIGATIONS CHARTS

Charts show stratigraphic information for certain oil and gas fields and other areas having hydrocarbon potential.

OC-0144. COLORADO. Correlation of Middle Jurassic and related rocks from Slick Rock to Salter Canyon in southwestern

Colorado, by R. B. O'Sullivan. 1995. Sheet 49 by 38 inches (in color).

OC-0145. COLORADO. Correlation of Jurassic San Rafael Group, Junction Creek Sandstone, and related rocks from McElmo Canyon to Salter Canyon in southwestern Colorado, by R. B. O'Sullivan. 1995. Sheet 56 by 30 inches (in color).

MISCELLANEOUS FIELD STUDIES MAPS

Multicolor or black and white maps on topographic or planimetric bases; quadrangle or irregular areas; various scales. Pre-1971 maps show bedrock geology in relation to specific mining or mineral-deposit problems; the majority of post-1971 maps are preliminary black and white maps on various subjects such as environmental studies or Wilderness mineral investigations.

MF-2021-G. ALASKA. Mesozoic macrofossil locality map, checklists, and pre-Quaternary stratigraphic section of the Mt. Katmai and adjacent parts of the Afognak and Naknek quadrangles, Alaska Peninsula, Alaska, by J. W. Miller, W. P. Elder and R. L. Determan. 1995. Three sheets. Sheet 1, lat 58° to 59°, long 153° to 157°. Sheet 1, scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 50 by 41 inches; sheet 2, 32 by 44 inches; sheet 3, 25 by 34 inches. (Folio of the Mount Katmai area.)

MF-2058-D. ALASKA. Mineralogical maps showing the distribution of ore-related minerals in the minus-30-mesh, nonmagnetic heavy-mineral fraction of stream sediment, Healy Quadrangle, Alaska, by R. B. Tripp, H. D. King and T. D. Light. 1995. Two sheets. Lat 63° to 64°, long 147° to 150°. Each sheet, scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 52 by 40 inches; sheet 2, 34 by 28 inches.

MF-2246. Geologic map of the Ciudad Piar and part of the Ciudad Bolívar 2°x3° quadrangles, Bolívar State, Venezuela, by J. H. Stewart, Félix Martínez and W. E. Brooks. Prepared in cooperation with the Corporación Venezolana de Guayana, Técnica Minera. 1994. Lat 6°N to 8°30'N, long 63°W to 66°W. Scale 1:500,000 (1 inch = about 8 miles). Sheet 42 by 34 inches.

MF-2247. Geologic map of part of the San Fernando de Apure 2°x3° Quadrangle, Venezuela, by J. H. Stewart. Prepared in cooperation with the Corporación Venezolana de Guayana, Técnica Minera. 1994. Lat 6°N to 8°N, long 66°W to 68°W. Scale 1:500,000 (1 inch = about 8 miles). Sheet 26 by 30 inches.

MF-2257. NEVADA. Geologic map of the northern part of the Simpson Park Mountains, Eureka County, Nevada, by E. H. McKee and J. E. Conrad. 1994. Lat 40° to 40°07'39", long 116°20' to 116°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 34 by 36 inches (in color).

MF-2268. Maps showing gas-hydrate distribution off the east coast of the United States, by W. P. Dillon, K. L. Fehlhaber, D. F. Coleman, M. W. Lee and D. R. Hutchinson. Prepared in cooperation with the U.S. Department of Energy. 1995. Two sheets. Lat 31° to 39°, long 70° to 79°. Each sheet, Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 1, 58 by 41 inches; sheet 2, 40 by 58 inches (all in color).

MF-2277. MISSOURI. Geologic map of the Eolia 7.5-minute Quadrangle, Lincoln and Pike counties, Missouri, by R. W. Harrison. 1995. Lat 39°07'30" to 39°15', long 91° to 91°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 54 by 41 inches (in color).

MF-2278. IDAHO. Geologic map of part of the Clifton Creek Quadrangle, Bannock and Power counties, southeastern Idaho, by L. B. Platt. 1994. Lat 42°37'30" to 42°45', long 112°22'30" to 112°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 30 inches.

MF-2279. MISSOURI, ARKANSAS. Paleoseismic studies of the Bootheel Lineament, southeastern Missouri, and the Crittenden County fault zone, northeastern Arkansas, New Madrid seismic zone, central United States, by A. J. Crone, U.S. Geological Survey; Marco Giardino, University of Turin, Italy; and E. S. Schweig III, U.S. Geological Survey and University of Memphis. 1995. Sheet 40 by 27 inches. (Accompanied by 21-page text.)

MF-2280. MASSACHUSETTS. Maps and diagrams showing acoustic and textural characteristics and distribution of bottom sedimentary environments, Boston Harbor and Massachusetts Bay, by H. J. Knebel and R. C. Circé. Prepared in cooperation with the Massachusetts Water Resources Authority. 1995. Two sheets. Lat 42°10'N to 42°40'N, long 70°30'W to 71°W. Each sheet, scale 1:150,000 (1 inch = about 2.4 miles). Sheet 1, 54 by 40 inches; sheet 2, 35 by 42 inches.

MF-2281. MONTANA. Photogeologic and reconnaissance geologic map of the Schultz Coulee Quadrangle, Rosebud County, Montana, by R. B. Colton, J. L. Klockenbrink, M. S. Ellis, U.S. Geological Survey; and E. L. Heffern, U.S. Bureau of Land Management. Prepared in cooperation with the U.S. Bureau of Land Management and the Montana Bureau of Mines and Geology. 1995. Lat 46°22'30" to 46°30', long 106°30' to 106°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 24 by 31 inches.

MF-2282. COLORADO. Geologic map of the McCarty Park Quadrangle, Costilla and Huerfano counties, Colorado, by D. A. Lindsey. 1995. Lat 37°22'30" to 37°30', long 105°07'30" to 105°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 43 by 34 inches (in color).

MF-2283. COLORADO. Geologic map of the Cuchara Quadrangle, Huerfano County, Colorado, by D. A. Lindsey. 1995. Lat 37°22'30" to 37°30', long 105° to 105°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 50 by 37 inches (in color).

MF-2284. Maps of upper Mississippi Embayment Paleozoic and Precambrian rocks, by R. L. Dart. 1995. Lat 34° to 38°, long 88° to 92°. Scale 1:1,500,000 (1 inch = about 24 miles). Sheet 54 by 38 inches (in color).

MF-2289. MONTANA. Photogeologic and reconnaissance geologic map of the Griffin Coulee NE and NW quadrangles, Rosebud County, Montana, by R. B. Colton, M. S. Ellis, J. L. Klockenbrink, M. A. Grout, U.S. Geological Survey; E. L. Heffern, P. R. Bierbach, and M. C. Keifer, U.S. Bureau of Land Management. Prepared in cooperation with the U.S. Bureau of Land Management and the Montana Bureau of Mines and Geology. 1995. Lat 46°07'30" to 46°15', long 106°45' to 107°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 45 by 31 1/2 inches.

MF-2290. MONTANA. Photogeologic and reconnaissance geologic map of the Rosebud and Thurlow quadrangles, Rosebud County, Montana, by R. B. Colton, M. S. Ellis, J. L. Klockenbrink, M. A. Grout, U.S. Geological Survey; and E. L. Heffern, U.S. Bureau of Land Management. Prepared in cooperation with the U.S. Bureau of Mines and Geology. 1995. Lat

46°15' to 45°22'30", long 106°15' to 106°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 45 by 32 inches.

MF-2291. MONTANA. Geologic map showing distribution of Cretaceous intrusive rocks in the central Big Belt Mountains, Broadwater and Meagher counties, Montana, by E. A. du Bray. 1995. Lat 46°22'30" to 46°42'30", long 111°07'30" to 111°30". Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 44 by 38 inches.

MF-2292. ARIZONA. Geologic map showing the Oligocene Rhyolite Canyon Tuff in part of the Bruno Peak Quadrangle, southeastern Arizona, by D. B. Yager. 1995. Lat 31°37'30" to 31°45', long 109°22'30" to 109°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 54 by 40 inches (in color). (Accompanied by 16-page text.)

MF-2295. COLORADO. Photogeologic map showing distribution of sinkholes south of Fairplay, Park County, Colorado; a possible geologic hazard, by D. R. Shawe, T. A. Steven, R. B. Taylor and C. H. Maxwell. 1995. Lat 39°03' to 39°10', long 105°57'30" to 106°02'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 40 by 32 inches.

MF-2296. ARKANSAS. Detailed lithologic log of the Dow Chemical #1 B.L. Garrigan drill hole, Mississippi County Arkansas, by D. S. Collins and G. L. Skipp. 1995. Two sheets. Each sheet 42 by 57 inches.

MF-2297. WASHINGTON. Surficial geologic map of the Maple Valley Quadrangle, King County, Washington, by D. B. Booth. Prepared in cooperation with King County. 1995. Lat 47°22'30" to 47°30', long 122° to 122°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 35 by 36 inches.

SPECIAL GEOLOGIC MAP

Geologic map of the United States (exclusive of Alaska and Hawaii), compiled by P. B. King and H. M. Beikman. 1974 (1995). Three sheets. Sheet 1, lat 23° to 48°, long 64° to 96°; sheet 2, lat 23° to 48°, long 96° to 128°. Sheets 1 and 2, scale 1:2,500,000 (1 inch = about 40 miles). Sheets 1 and 2, 40 by 51 inches; sheet 3, 32 by 51 inches (all in color). (Reprint.)

HYDROLOGIC INVESTIGATIONS ATLASES

Multicolored or black and white maps on topographic or planimetric bases presenting a wide range of geohydrologic data; both regular and irregular areas.

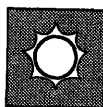
HA-0729. WASHINGTON. Debris flow, debris avalanche, and flood hazards at and downstream from Mount Rainier, Washington, by K. M. Scott and J. W. Vallance. 1995. Two sheets. Sheet 1, lat 46°28' to 47°29', long 121°22' to 122°45'; sheet 2, lat 46°44' to 47°, long 121°35' to 121°55'. Sheet 1, scale 1:100,000 (1 inch = about 1.6 miles); sheet 2, scale 1:50,000 (1 inch = about 4,200 feet). Sheet 1, 42 by 51 inches; sheet 2, 24 by 28 inches (all in color). (Accompanied by 9-page text.) (Supersedes Open-file report 92-654.)

HA-0730-H. IDAHO, OREGON, WASHINGTON. Ground water atlas of the United States; Segment 7, Idaho, Oregon, and Washington, by R. L. Whitehead. 1994. p. H1-H31. Each sheet 18 by 23 inches (all in color).

HA-0730-K. Ground water atlas of the United States; Segment 10, Illinois, Indiana, Kentucky, Ohio, Tennessee, by O. B. Lloyd, Jr. and W. L. Lyke. 1995. p. K1-K30. Each sheet 18 by 23 inches (all in color).

SPECIAL MAP

This dynamic planet; world map of volcanoes, earthquakes, impact craters, and plate tectonics, compiled by Tom Simkin, Smithsonian Institution; J. D. Unger, R. I. Tilling, U.S. Geological Survey; P. R. Vogt, U.S. Naval Research Laboratory; and H. R. Spall, U.S. Geological Survey. Prepared in cooperation with the Smithsonian Institution. 1989 (1994). Lat 70° to 70°, long 100° to 100°. Scale 1:30,000,000 at the equator (1 cm = approximately 300 km (186 miles) at the equator; 1 inch = approximately 473 miles (762 km) at the equator). Sheet 58 by 40 inches (in color). (Mercator projection.) (Revision.)



OUTSIDE PUBLICATIONS

ARTICLES AND REPORTS

Articles by U.S. Geological Survey personnel in non-U.S. Geological Survey publications that came to our attention in 1995. Non-U.S. Geological Survey personnel who share authorship in articles with U.S. Geological Survey personnel are indicated by an asterisk (*) immediately following the name. These publications are not available from the U.S. Geological Survey.

OP-1. J. M. Adrain*, B. D. Chatterton* and R. B. Blodgett. ALASKA. Silurian trilobites from Southwestern Alaska. *Journal of Paleontology*. v. 69, no. 4, July 1995. p. 723-736.

OP-2. S. M. Agar* and K. D. Klitgord. A mechanism for decoupling within the oceanic lithosphere revealed in the Troodos Ophiolite. *Nature (London)*. v. 374, no. 6519, March 16, 1995. p. 232-238.

OP-3. J. N. Aleinikoff, R. E. Zartman, Marianne Walter, D. W. Rankin, P. T. Lyttle and W. C. Burton. U-Pb ages of metarhyolites of the Catoctin and Mount Rogers formations, Central and Southern Appalachians; evidence for two pulses of Iapetan rifting. *American Journal of Science*. v. 295, no. 4, April 1995. p. 428-454.

OP-4. W. M. Alley. Ground-water quality surveys, *in* Regional ground-water quality. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 63-85.

OP-5. W. M. Alley. Geostatistical models, *in* Regional ground-water quality. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 87-108.

OP-6. W. M. Alley. General design considerations, *in* Regional ground-water quality. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 3-21.

OP-7. W. M. Alley (editor). Regional ground-water quality. New York, NY: Van Nostrand Reinhold, 1993. 634 p.

OP-8. W. M. Alley. Establishing a conceptual framework, *in* Regional ground-water quality. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 23-60.

- OP-9. C. N. Alpers, D. W. Blowes*, D. K. Nordstrom and J. L. Jambor*. Secondary minerals and acid mine-water chemistry. Short Course Handbook, in Short course handbook on Environmental geochemistry of sulfide mine-wastes. (J. L. Jambor, editor and others). 22, May 1994. p. 247-270.
- OP-10. E. L. Ambos*, W. D. Mooney and G. S. Fuis. ALASKA. Seismic refraction measurements within the Peninsular Terrane, south central Alaska. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 3, March 10, 1995. p. 4079-4095.
- OP-11. R. G. Amundson*, O. A. Chadwick*, Carol Kendall, Yang Wang* and M. J. DeNiro*. WYOMING. Isotopic evidence for shifts in atmospheric circulation patterns during the late Quaternary in mid-North America. *Geology (Boulder)*. v. 24, no. 1, January 1996. p. 23-26.
- OP-12. J. G. Anderson*, J. N. Brune*, D. M. dePolo*, J. S. Gombert, S. C. Harmsen, M. K. Savage*, A. F. Sheehan* and K. D. Smith*. NEVADA. Preliminary report; the Little Skull Mountain earthquake, June 29, 1992, in Dynamic analysis and design considerations for high-level nuclear waste repositories. (Q. A. Hossain, editor). New York, NY: American Society of Civil Engineers, 1993. p. 162-175.
- OP-13. L. D. Anderson, D. B. Kent and J. A. Davis. Batch experiments characterizing reduction of Cr(VI) using suboxic material from a mildly reducing sand and gravel aquifer. *Environmental Science & Technology, ES & T*. v. 28, no. 1, January 1994. p. 178-185.
- OP-14. M. G. Anderson*, N. E. Peters and D. E. Walling* (editors). Scale issues in hydrological/environmental modelling. *Hydrological Processes*. v. 9, no. 3-4, May 1995. 243 p.
- OP-15. R. E. Anderson, T. P. Barnhard and L. W. Snee. NEVADA, ARIZONA. Roles of plutonism, midcrustal flow, tectonic rafting, and horizontal collapse in shaping the Miocene strain field of the Lake Mead area, Nevada and Arizona. *Tectonics*. v. 13, no. 6, December 1994. p. 1381-1410.
- OP-16. R. R. Anderson*, J. B. Hartung*, B. J. Witzke*, E. M. Shoemaker and D. J. Roddy. IOWA. Preliminary results of the U.S. Geological Survey-Iowa Department of Natural Resources Geological Survey Bureau Manson core drilling project. Special Paper - Geological Society of America, in Large meteorite impacts and planetary evolution. (B. O. Dressler, editor and others). 293, 1994. p. 237-247.
- OP-17. K. Andreassen*, P. E. Hart and Arthur Grantz. ALASKA. Seismic studies of a bottom simulating reflection related to gas hydrate beneath the continental margin of the Beaufort Sea. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 7, July 10, 1995. p. 12,659-12,673.
- OP-18. E. D. Andrews and J. M. Nankervis*. Effective discharge and the design of channel maintenance flows for gravel-bed rivers. *Geophysical Monograph, in Natural and anthropogenic influences in fluvial geomorphology; the Wolman Volume*. (J. E. Costa, editor and others). 89, 1995. p. 151-164.
- OP-19. M. Arattano* and W. Z. Savage. Modelling debris flows as kinematic waves. *Bulletin of the International Association of Engineering Geology*. 49, April 1994. p. 3-13.
- OP-20. G. B. Arehart*, K. A. Foland*, C. W. Naeser and S. E. Kesler*. NEVADA. $^{40}\text{Ar}/^{39}\text{Ar}$, K/Ar, and fission-track geochronology of sediment-hosted disseminated gold deposits at Post-Betze, Carlin Trend, northeastern Nevada; reply. *Economic Geology and the Bulletin of the Society of Economic Geologists*. v. 90, no. 1, February 1995. p. 210-212.
- OP-21. A. K. Armstrong, R. G. Stamm, F. E. Kottlowski*, B. L. Mamet*, J. T. Dutro, Jr. and D. J. Weary. NEW MEXICO. Facies and age of the Oso Ridge Member (new), Abo Formation, Zuni Mountains, New Mexico. *New Mexico Geology*. v. 16, no. 2, May 1994. p. 26-30.
- OP-22. Antonio Arribas, Jr.*, C. G. Cunningham, J. J. Rytuba, R. O. Rye, W. C. Kelly*, M. H. Podwysocki, E. H. McKee and R. M. Tosdal. *Geology, geochronology, fluid inclusions, and isotope geochemistry of the Rodalquilar gold alunite deposit, Spain. Economic Geology and the Bulletin of the Society of Economic Geologists*. v. 90, no. 4, July 1995. p. 795-822.
- OP-23. J. G. Arth. ALASKA. Isotopic composition of the igneous rocks of Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in the collection *The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 781-795.
- OP-24. G. M. Atkinson* and D. M. Boore. Ground motion relations for eastern North America. *Bulletin of the Seismological Society of America*. v. 85, no. 1, February 1995. p. 17-30.
- OP-25. G. M. Atkinson* and T. C. Hanks. A high-frequency magnitude scale. *Bulletin of the Seismological Society of America*. v. 85, no. 3, June 1995. p. 825-833.
- OP-26. B. F. Atwater, A. R. Nelson, J. J. Clague*, G. A. Carver*, D. K. Yamaguchi*, P. T. Bobrowsky*, Joanne Bourgeois*, M. E. Darienzo*, W. C. Grant, Eileen Hemphill-Haley*, H. M. Kelsey*, G. C. Jacoby*, S. P. Nishenko, S. P. Palmer*, C. D. Peterson* and M. A. Reinhart*. Summary of coastal geologic evidence for past great earthquakes at the Cascadia subduction zone. *Earthquake Spectra*. v. 11, no. 1, February 1995. p. 1-18.
- OP-27. R. A. Ayuso, Antonia Messina*, Benedetto De Vivo*, Selma Russo*, L. G. Woodruff, J. F. Sutter and H. E. Belkin. Geochemistry and argon thermochronology of the Variscan Sila Batholith, southern Italy; source rocks and magma evolution. *Contributions to Mineralogy and Petrology*. v. 117, no. 1, June 1994. p. 87-109.
- OP-28. William Back, M. J. Baedeker and W. W. Wood. Scales in chemical hydrogeology; a historical perspective, in *Regional ground-water quality*. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 111-129.
- OP-29. C. R. Bacon, S. H. Gunn, M. A. Lanphere and J. L. Wooden. OREGON. Multiple isotopic components in Quaternary volcanic rocks of the Cascade Arc near Crater Lake, Oregon. *Journal of Petrology*. v. 35, no. 6, December 1994. p. 1521-1556.
- OP-30. A. L. Baehr and C. J. Joss*. An updated model of induced airflow in the unsaturated zone. *Water Resources Research*. v. 31, no. 2, February 1995. p. 417-421.

- OP-31. John Bain*, L. P. Black*, R. S. Blewett*, Bob Bluttitude*, Janice Knutson*, D. E. Mackenzie*, C. F. Pain*, J. R. Wilford*, J. C. Dohrenwend, S. S. Sun*, David Trail*, Friedrich von Gnielinski* and Peter Wellman*. Cape York Peninsula update. BMR Research Newsletter. 16, April 1992. p. 18-22.
- OP-32. N. T. Baker. ARKANSAS. Utilization of a geographic information system to identify the primary aquifer providing ground water to individual wells in eastern Arkansas. Water Resources Bulletin. v. 29, no. 3, June 1993. p. 445-448.
- OP-33. V. R. Baker*, M. H. Carr, V. C. Gulick*, C. R. Williams* and M. S. Marley*. Channels and valley networks, in Mars. (H. H. Kieffer, editor and others), in the collection Space science series. (Tom Gehrels, editor). Tucson, AZ: University of Arizona Press, 1992. p. 493-522.
- OP-34. L. S. Balistrieri, L. P. Gough, R. C. Severson* and A. S. Archuleta*. COLORADO. The biogeochemistry of wetlands in the San Luis Valley, Colorado; the effects of acid drainage from natural and mine sources. Special Publication - Colorado Geological Survey, in Proceedings; Summitville forum '95. (H. H. Posey, editor and others). Report no. 38, 1995. p. 219-226.
- OP-35. W. B. Banerdt*, M. P. Golombek* and K. L. Tanaka. Stress and tectonics on Mars, in Mars. (H. H. Kieffer, editor and others), in the collection Space science series. (Tom Gehrels, editor). Tucson, AZ: University of Arizona Press, 1992. p. 249-297.
- OP-36. L. B. Barber. MASSACHUSETTS. Sorption of chlorobenzenes to Cape Cod aquifer sediments. Environmental Science & Technology, ES & T. v. 28, no. 5, May 1994. p. 890-897.
- OP-37. L. B. Barber, E. M. Thurman, Yoshi Takahashi* and M. C. Noriega. Comparison of purge and trap GC/MS and purgeable organic chloride analysis for monitoring volatile chlorinated hydrocarbons. Ground Water. v. 30, no. 6, December 1992. p. 836-842.
- OP-38. K. E. Bargar. OREGON. Hydrothermal alteration in the SUNEDCO 58-28 geothermal drill hole near Breitenbush Hot Springs, Oregon. Oregon Geology. v. 56, no. 4, July 1994. p. 75-87.
- OP-39. Fred Barker, J. N. Aleinikoff, S. E. Box, B. W. Evans*, G. E. Gehrels*, M. D. Hill*, A. J. Irving*, J. S. Kelley, W. P. Leeman*, J. S. Lull, W. J. Nokleberg, J. S. Pallister, B. E. Patrick*, George Plafker and C. M. Rubin*. ALASKA. Some accreted volcanic rocks of Alaska and their elemental abundances, in The geology of Alaska. (George Plafker, editor and others), in the collection The geology of North America. Boulder, CO: Geological Society of America. G-1, 1994. p. 555-587.
- OP-40. Fred Barker, T. P. Miller and G. E. Gehrels. ALASKA. Map showing major occurrences of accreted volcanic rocks and the pre-Cenozoic and some early Tertiary plutonic rocks of the Alaska, in The geology of Alaska. (George Plafker, editor and others), in the collection The geology of North America. Boulder, CO: Geological Society of America. G-1, 1994. 1 sheet.
- OP-41. C. G. Barnes*, Kenneth Johnson*, M. A. Barnes*, Tore Prestvik, R. W. Kistler* and Bjorn Sundvoll*. OREGON. The Grayback Pluton; magmatism in a Jurassic back-arc environment, Klamath Mountains, Oregon. Journal of Petrology. v. 36, no. 2, April 1995. p. 397-416.
- OP-42. D. F. Barnes, John Marino*, R. L. Morin, C. W. Roberts and R. C. Jachens. ALASKA. Incomplete isostatic gravity map of Alaska, in The geology of Alaska. (George Plafker, editor and others), in the collection The geology of North America. Boulder, CO: Geological Society of America. G-1, 1994. 1 sheet.
- OP-43. P. W. Barnes, E. W. Kempema*, Erk Reimnitz and Michael McCormick. The influence of ice on southern Lake Michigan coastal erosion. Journal of Great Lakes Research, in The southern Lake Michigan coastal erosion study. (D. W. Folger, editor and others). v. 20, no. 1, 1994. p. 179-195.
- OP-44. Warren Barrash*, R. H. Morin, S. H. Wood* and W. M. Bennecke*. IDAHO. Hydrostratigraphic interpretation of the upper portion of the Snake River Plain Aquifer near the Idaho Chemical Processing Plant at the INEL. Proceedings of the Symposium on Engineering Geology and Geotechnical Engineering, in Hydrogeology, waste disposal, science and politics; proceedings of the 30th symposium on Engineering geology and geotechnical engineering. (P. K. Link, editor). 30, March 1994. p. 181-193.
- OP-45. A. P. Barth*, J. L. Wooden, R. M. Tosdal and Jean Morrison*. CALIFORNIA. Crustal contamination in the petrogenesis of a calc-alkalic rock series; Josephine Mountain Intrusion, California. Geological Society of America Bulletin. v. 107, no. 2, February 1995. p. 201-212.
- OP-46. A. P. Barth*, J. L. Wooden, R. M. Tosdal, Jean Morrison*, D. L. Dawson* and B. M. Hernly*. CALIFORNIA. Origin of gneisses in the aureole of the San Gabriel anorthosite complex and implications for the Proterozoic crustal evolution of Southern California. Tectonics. v. 14, no. 3, June 1995. p. 736-752.
- OP-47. G. A. Barth*, M. C. Kleinrock* and R. T. Helz. HAWAII. The magma body of Kilauea Iki lava lake; potential insights into mid-ocean ridge magma chambers. Journal of Geophysical Research, B, Solid Earth and Planets. v. 99, no. 4, April 10, 1995. p. 7199-7217.
- OP-48. C. C. Barton. Fractal analysis of scaling and spatial clustering of fractures, in Fractals in the earth sciences. (C. C. Barton, editor and others). New York, NY: Plenum Press, 1995. p. 141-178.
- OP-49. C. C. Barton and P. R. La Pointe* (editors). Fractals in the earth sciences. New York, NY: Plenum Press, 1995. 265 p.
- OP-50. A. R. Basu*, R. J. Poreda*, P. R. Renne*, Friedrich Teichmann*, Y. R. Vasiliev*, N. V. Sobolev* and B. D. Turrin. High-³He plume origin and temporal-spatial evolution of the Siberian flood basalts. Science. v. 269, no. 5225, August 11, 1995. p. 822-825.
- OP-51. M. E. Baxter* and R. B. Blodgett. ALASKA. A new species of Droharhynchia (Brachiopoda) from the lower Middle Devonian (Eifelian) of West-Central Alaska. Journal of Paleontology. v. 68, no. 6, November 1994. p. 1235-1240.
- OP-52. Keir Becker*, R. H. Morin and E. E. Davis*. Permeabilities in the Middle Valley hydrothermal system measured with packer and flowmeter experiments. Proceedings of the Ocean Drilling Program, Scientific Results, in Scientific results; Middle

- Valley, Juan de Fuca Ridge; covering Leg 139 of the cruises of the drilling vessel JOIDES Resolution, San Diego, California, to Victoria, British Columbia, Canada, sites 855-858, 4 July-11 September, 1991. (M. J. Mottl and others). 139, October 1994. p. 613-626.
- OP-53. N. M. Beeler and T. E. Tullis*. Implications of Coulomb plasticity for the velocity dependence of experimental faults. *Pure and Applied Geophysics*. v. 144, no. 2, 1995. p. 251-276.
- OP-54. J. C. Behrendt, D. D. Blankenship*, Detlef Damaske* and A. K. Cooper. Glacial removal of late Cenozoic subglacially emplaced volcanic edifices by the West Antarctic ice sheet. *Geology* (Boulder). v. 23, no. 12, December 1995. p. 1111-1114.
- OP-55. J. C. Behrendt, Detlef Damaske* and Jürgen Fritsch*. Geophysical characteristics of the Western Antarctic rift system. *Geologisches Jahrbuch. Reihe E: Geophysik, in German Antarctic North Victoria Land expedition 1988/89; GANOVEX V.* (Detlef Damaske, editor and others). 47, 1993. p. 49-101.
- OP-56. J. H. Behrmann*, S. D. Lewis, S. C. Cande*, R. J. Musgrave*, N. L. Bangs*, Per Bodén*, K. M. Brown*, Hélène Collombat*, A. N. Didenko*, B. M. Didyk*, P. N. Froelich*, Xenia Golovchenko*, Randy Forsythe*, Victor Kurnosov*, Nancy Lindsley-Griffin*, K. M. Marsaglia*, Soichi Osozawa*, D. J. Prior*, Dale Sawyer*, D. W. Scholl, Dorothee Spiegler*, Kari Strand*, Kozo Takahashi*, M. E. Torres*, Marta Vega-Faundez*, Hernán Vergara* and Amane Waseda*. Tectonics and geology of spreading ridge subduction at the Chile triple junction; a synthesis of results from Leg 141 of the Ocean Drilling Program. *Geologische Rundschau*. v. 83, no. 4, December 1994. p. 832-852.
- OP-57. M. J. Belton*, C. R. Chapman*, P. C. Thomas*, M. E. Davies*, Richard Greenberg*, K. P. Klaasen*, D. Byrnes*, L. D'Amario*, S. P. Synnott*, T. V. Johnson*, A. S. McEwen, W. J. Merline*, D. R. Davis*, J. M. Petit*, A. D. Storrs*, Joseph Veverka* and B. Zellner*. Bulk density of asteroid 243 Ida from the orbit of its satellite Dactyl. *Nature* (London). v. 374, no. 6525, April 27, 1995. p. 785-788.
- OP-58. M. J. Belton*, Ronald Greeley*, Richard Greenberg*, A. S. McEwen, K. P. Klaasen*, J. W. Head*, C. M. Pieters*, Gerhard Neukum*, C. R. Chapman*, P. E. Geissler*, C. Heffernan*, H. Breneman*, C. D. Anger*, M. H. Carr, M. E. Davies*, F. P. Fanale*, P. J. Gierasch*, A. P. Ingersoll*, T. V. Johnson*, C. B. Pilcher*, W. R. Thompson*, Joseph Veverka* and Carl Sagan*. Galileo multispectral imaging of the North Polar and eastern limb regions of the Moon. *Science*. v. 264, no. 5162, May 20, 1994. p. 1112-1115.
- OP-59. L. V. Benson, Michaela Kashgarian* and Meyer Rubin. NEVADA. Carbonate deposition, Pyramid Lake subbasin, Nevada; 2, Lake levels and polar jet stream positions reconstructed from radiocarbon ages and elevations of carbonates (tufas) deposited in the Lahontan Basin. *Palaeogeography, Palaeoclimatology, Palaeoecology*. v. 117, no. 1-2, August 1995. p. 1-30.
- OP-60. H. M. Benz, J. E. Vidale and J. J. Mori*. Using regional seismic networks to study the Earth's deep interior. *Eos, Transactions, American Geophysical Union*. v. 75, no. 20, May 17, 1994. p. 225, 229.
- OP-61. W. A. Berggren*, F. J. Hilgen*, C. G. Langereis*, D. V. Kent*, J. D. Obradovich, Isabella Raffi*, M. E. Raymo* and N. J. Shackleton*. Late Neogene chronology; new perspectives in high-resolution stratigraphy. *Geological Society of America Bulletin*. v. 107, no. 11, November 1995. p. 1272-1287.
- OP-62. G. C. Beroza*, A. T. Cole and W. L. Ellsworth. CALIFORNIA. Stability of coda wave attenuation during the Loma Prieta, California, earthquake sequence. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 3, March 10, 1995. p. 3977-3987.
- OP-63. C. R. Berquist, Jr.*, A. A. Drake, Jr., N. H. Evans*, S. S. Farrar*, W. S. Henika*, J. W. Horton, Jr., P. T. Lyttle, J. D. Marr, Jr., Louis Pavlides and D. W. Rankin*. VIRGINIA. Blue Ridge and Piedmont, in *Geologic map of Virginia; expanded explanation*. (E. K. Rader, editor and others). Charlottesville, VA: Virginia Department of Mines, Minerals and Energy, 1993. p. 25-59.
- OP-64. B. G. Bills*, D. R. Currey* and G. A. Marshall. Viscosity estimates for the crust and upper mantle from patterns of lacustrine shoreline deformation in the eastern Great Basin. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 11, November 10, 1994. p. 22,059-22,086.
- OP-65. K. J. Bird. ALASKA. Ellesmerian(!) petroleum system, North Slope, Alaska, U.S.A. AAPG Memoir, in *The petroleum system; from source to trap*. (L. B. Magoon, III, editor and others). 60, 1994. p. 339-358.
- OP-66. J. L. Bischoff, K. R. Ludwig, J. F. Garcia*, Eudald Carbonell*, M. Vaquero*, T. W. Stafford, Jr.* and A. J. Jull*. Dating of the basal Aurignacian sandwich at Abric Romani (Catalunya, Spain) by radiocarbon and uranium-series. *Journal of Archaeological Science*. v. 21, no. 4, July 1994. p. 541-551.
- OP-67. R. J. Bisdorf. COLORADO. Correlation of electrical geophysical data with lithology and degree of alteration at the Summitville Mine site. *Special Publication - Colorado Geological Survey, in Proceedings; Summitville forum '95*. (H. H. Posey, editor and others). Report no. 38, 1995. p. 70-74.
- OP-68. N. L. Blair. Use of a citation index to quantify the influence of earth science researchers on the work of others. *Proceedings - Geoscience Information Society*. 23, 1992. p. 65-68.
- OP-69. B. M. Blake, Jr.*, A. F. Keiser* and C. L. Rice. WEST VIRGINIA. Revised stratigraphy and nomenclature for the Middle Pennsylvanian Kanawha Formation in southwestern West Virginia. *Special Paper - Geological Society of America, in Elements of Pennsylvanian stratigraphy, central Appalachian Basin*. (C. L. Rice, editor). 294, 1994. p. 41-53.
- OP-70. R. J. Blakely. OREGON. Extent of partial melting beneath the Cascade Range, Oregon; constraints from gravity anomalies and ideal-body theory. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 2, February 10, 1994. p. 2757-2773.
- OP-71. R. J. Blakely. *Potential theory in gravity & magnetic applications*. Cambridge: Cambridge University Press, 1995. 441 p.
- OP-72. R. J. Blakely, R. E. Wells, T. S. Yelin, I. P. Madin* and M. H. Beeson*. OREGON, WASHINGTON. Tectonic setting of the Portland-Vancouver area, Oregon and Washington;

- constraints from low-altitude aeromagnetic data. *Geological Society of America Bulletin*. v. 107, no. 9, September 1995. p. 1051-1062.
- OP-73. M. L. Blanpied, D. A. Lockner and J. D. Byerlee. Frictional slip of granite at hydrothermal conditions. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 7, July 10, 1995. p. 13,045-13,064.
- OP-74. J. D. Bliss. Grade-tonnage and other models for diamond kimberlite pipes. *Nonrenewable Resources*. v. 1, no. 3, 1992. p. 214-230.
- OP-75. J. D. Bliss and N. J. Page. Modeling surficial sand and gravel deposits. *Nonrenewable Resources*. v. 3, no. 3, 1994. p. 237-249.
- OP-76. R. B. Blodgett and J. G. Johnson*. ALASKA. First recognition of the genus *Verneuilia* Hall and Clarke (Brachiopoda, Spiriferida) from North America (West-Central Alaska). *Journal of Paleontology*. v. 68, no. 6, November 1994. p. 1240-1242.
- OP-77. R. B. Blodgett and J. G. Johnson*. Merriamites, a new name for the bellerophonitid gastropod genus *Merriamella* Blodgett and Johnson. *Journal of Paleontology*. v. 69, no. 3, May 1995. p. 608.
- OP-78. C. D. Blome and K. M. Reed*. NEVADA. Radiolarian biostratigraphy of the Quinn River Formation, Black Rock Terrane, north-central Nevada; correlations with eastern Klamath Terrane geology. *Micropaleontology*. v. 41, no. 1, 1995. p. 49-68.
- OP-79. A. E. Blum. Feldspars in weathering. NATO ASI Series. Series C: Mathematical and Physical Sciences, in *Feldspars and their reactions*. (Ian Parsons, editor). 421, 1994. p. 595-630.
- OP-80. John Boatwright and G. L. Choy. Acceleration source spectra anticipated for large earthquakes in northeastern North America. *Bulletin of the Seismological Society of America*. v. 82, no. 2, April 1992. p. 660-682.
- OP-81. P. A. Bodin and J. S. Gomborg. Earthquake hazard. *Nature (London)*. v. 374, no. 6522, April 6, 1995. p. 492.
- OP-82. R. G. Bohannon and T. E. Parsons. Tectonic implications of post-30 Ma Pacific and North American relative plate motions. *Geological Society of America Bulletin*. v. 107, no. 8, August 1995. p. 937-959.
- OP-83. S. R. Bohlen, J. O. Eckert, Jr. and W. B. Hankins. Experimentally determined solidi in the Ca-bearing granite system $\text{NaAlSi}_3\text{O}_8\text{-CaAl}_2\text{Si}_2\text{O}_8\text{-KAlSi}_3\text{O}_8\text{-SiO}_2\text{-H}_2\text{O-CO}_2$. *American Mineralogist*. v. 80, no. 7-8, August 1995. p. 752-756.
- OP-84. B. F. Bohor. Shocked quartz and more; impact signatures in Cretaceous/Tertiary boundary clays. Special Paper - Geological Society of America, in *Global catastrophes in Earth history; an interdisciplinary conference on impacts, volcanism, and mass mortality*. (V. L. Sharpton, editor and others). 247, 1990. p. 335-342.
- OP-85. K. R. Bond. MAINE. Complete Bouguer gravity anomaly map of Maine and vicinity. Augusta, ME: Maine Geological Survey, Department of Conservation, 1993. 1 sheet.
- OP-86. K. R. Bond. ALASKA. Gravity studies of Annette Island, in *Special symposium 1993 on Economic mineral resources of the Annette Islands Reserve, Alaska*. (S. A. Manydeeds, chairperson). Spokane, WA: Northwest Mining Association, 1993. p. 73-76.
- OP-87. A. A. Bookstrom. Magmatic features of iron ores of the Kiruna type in Chile and Sweden; ore textures and magnetite geochemistry; a discussion. *Economic Geology and the Bulletin of the Society of Economic Geologists*. v. 90, no. 2, April 1995. p. 469-473.
- OP-88. D. M. Boore and G. M. Atkinson*. Source spectra for the 1988 Saguenay, Quebec, earthquakes. *Bulletin of the Seismological Society of America*. v. 82, no. 2, April 1992. p. 683-719.
- OP-89. D. M. Boore and W. B. Joyner. Prediction of high-frequency strong ground motion, in *Proceedings of International workshop on Earthquake engineering*. (Li Guohao, chairperson). Shanghai: Tongji University, 1984. p. A3.1-A3.17.
- OP-90. J. S. Booth. ILLINOIS. Wave climate and nearshore lakebed response, Illinois Beach State Park, Lake Michigan. *Journal of Great Lakes Research*, in *The southern Lake Michigan coastal erosion study*. (D. W. Folger, editor and others). v. 20, no. 1, 1994. p. 163-178.
- OP-91. R. D. Borchardt and G. N. Glassmoyer. CALIFORNIA. On the characteristics of local geology and their influence on ground motions generated by the Loma Prieta earthquake in the San Francisco Bay region, California. *Bulletin of the Seismological Society of America*. v. 82, no. 2, April 1992. p. 603-641.
- OP-92. D. J. Bove, T. F. Barry*, J. P. Kurtz*, Ken Hon, A. B. Wilson, R. E. Van Loenen and R. M. Kirkham*. COLORADO. Geology of hydrothermally altered areas within the upper Alamosa River basin, Colorado, and probable effects on water quality. Special Publication - Colorado Geological Survey, in *Proceedings; Summitville forum '95*. (H. H. Posey, editor and others). Report no. 38, 1995. p. 35-41.
- OP-93. T. M. Boyd, E. R. Engdahl and William Spencer. ALASKA. Seismic cycles along the Aleutian arc; analysis of seismicity from 1957 through 1991. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 1, January 10, 1995. p. 621-644.
- OP-94. J. P. Bradbury, Y. V. Bezrukova*, G. P. Chernyaeva*, S. M. Colman, G. K. Khursevich*, J. W. King* and Y. V. Likoshway*. A synthesis of post-glacial diatom records from Lake Baikal. *Journal of Paleolimnology*. v. 10, no. 3, 1994. p. 213-252.
- OP-95. P. M. Bradley, C. M. Aelion* and D. A. Vroblesky*. Influence of environmental factors on denitrification in sediment contaminated with JP-4 jet fuel. *Ground Water*. v. 30, no. 6, December 1992. p. 843-848.
- OP-96. T. J. Bralower*, M. A. Arthur*, R. M. Leckie*, W. V. Sliter, D. J. Allard* and S. O. Schlanger*. Timing and paleoceanography of oceanic dysoxia/anoxia in the late Barremian to early Aptian (Early Cretaceous). *Palaaios*. v. 9, no. 4, August 1994. p. 335-369.

- OP-97. J. D. Bredehoeft. Hazardous waste remediation; a 21st century problem. *Ground Water Monitoring & Remediation*. v. 14, no. 1, 1994. p. 95-100.
- OP-98. G. N. Breit. COLORADO. Origin of clay minerals associated with V-U deposits in the Entrada Sandstone, Placerville mining district, southwestern Colorado. *Economic Geology and the Bulletin of the Society of Economic Geologists*. v. 90, no. 2, April 1995. p. 407-419.
- OP-99. D. A. Brew. ALASKA. Regional geologic setting of mineral resources in Southeastern Alaska, in *Special symposium 1993 on Economic mineral resources of the Annette Islands Reserve, Alaska*. (S. A. Manydeeds, chairperson). Spokane, WA: Northwest Mining Association, 1993. p. 13-20.
- OP-100. D. A. Brew. ALASKA. Latest Mesozoic and Cenozoic magmatism in Southeastern Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in the collection *The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 621-656.
- OP-101. M. C. Brewer, L. D. Carter, R. K. Glenn* and D. F. Murray*. ALASKA. Sudden drainage of a thaw lake on the Alaskan Arctic coastal plain. *International Conference on Permafrost, Proceedings, in Permafrost; sixth international conference proceedings*. (Cheng Guodong, chairperson). 6, Vol. 1, July 1993. p. 48-53.
- OP-102. M. E. Brigham. NORTH DAKOTA. Pesticides detected in surface water and fish of the Red River of the North drainage basin, in *North Dakota water quality symposium; proceedings*. (B. D. Seelig, chairperson). Fargo, ND: N.D. Water Resour. Res. Inst. 1994. p. 256-269.
- OP-103. S. R. Brockman and G. A. Bollinger*. UTAH. Q estimates along the Wasatch Front in Utah derived from Sg and Lg wave amplitudes. *Bulletin of the Seismological Society of America*. v. 82, no. 1, February 1992. p. 135-147.
- OP-104. R. R. Brooks* and J. R. Watterson. The noble metal biogeochemistry of microorganisms, in *Noble metals and biological systems; their role in medicine, mineral exploration, and the environment*. (R. R. Brooks). Boca Raton, FL: CRC Press, 1992. p. 159-196.
- OP-105. W. E. Brooks, C. H. Thorman and L. W. Snee. NEVADA. The $^{40}\text{Ar}/^{39}\text{Ar}$ ages and tectonic setting of the middle Eocene Northeast Nevada volcanic field. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 6, June 10, 1995. p. 10,403-10,416.
- OP-106. E. T. Brown*, R. F. Stallard, M. C. Larsen, G. M. Raisbeck* and Françoise Yiou*. PUERTO RICO. Denudation rates determined from the accumulation of in situ-produced ^{10}Be in the Luquillo experimental forest, Puerto Rico. *Earth and Planetary Science Letters*. v. 129, no. 1-4, January 1995. p. 193-202.
- OP-107. R. D. Brown. CALIFORNIA. 1906 surface faulting on the San Andreas Fault near Point Delgada, California. *Bulletin of the Seismological Society of America*. v. 85, no. 1, February 1995. p. 100-110.
- OP-108. M. E. Brownfield, R. H. Affolter, G. D. Stricker and R. T. Hildebrand. WASHINGTON. High chromium contents in Tertiary coal deposits of northwestern Washington; a key to their depositional history. *International Journal of Coal Geology*. v. 27, no. 2-4, March 1995. p. 153-169.
- OP-109. M. J. Burianyk*, E. R. Kanasevich*, R. M. Ellis*, D. J. White*, T. Côté*, J. H. Luetgert, R. M. Clowes*, G. D. Spence* and D. A. Forsyth*. Preliminary results from SCoRE '90. *Lithoprobe Report, in Project Lithoprobe; Southern Canadian Cordillera transect workshop*. (University of Calgary). 16, March 1991. p. 20-21.
- OP-110. R. C. Burruss. USGS oil and gas CD hits the charts. *Geotimes*. v. 40, no. 7, July 1995. p. 14-16.
- OP-111. A. L. Bush. Memorial to Richard Philip Fischer, 1910-1991. *Memorials - Geological Society of America*. 25, 1995. p. 57-60.
- OP-112. A. L. Bush, D. A. Brobst, J. E. Gair, H. S. Johnson, Jr., F. G. Lesure, N. P. Lesure, W. C. Overstreet and S. H. Patterson. Memorial to Henry Bell, III, 1923-1989. *Memorials - Geological Society of America*. 25, 1995. p. 79-82.
- OP-113. G. K. Butch and Richard Lumia. NEW YORK. Effects of flow duration on local scour at bridge piers in New York. *Hydraulic Engineering: Proceedings of the National Conference on Hydraulic Engineering, in Hydraulic engineering '94*. (G. V. Cotroneo, editor and others). 1994; 1994. p. 46-50.
- OP-114. D. E. Buxton and D. A. Stedfast. NEW JERSEY. Estimating the vulnerability to pesticide contamination of drainage basins used for public supply in New Jersey. *Proceedings of the ... National Conference on Pesticides, in New directions in pesticide research, development, management, and policy; proceedings of the Fourth national conference on pesticides*. (D. L. Weigmann, editor). 4, 1994. p. 184-199.
- OP-115. H. T. Buxton and Edward Modica*. NEW YORK. Patterns and rates of ground-water flow on Long Island, New York. *Ground Water*. v. 30, no. 6, December 1992. p. 857-866.
- OP-116. D. A. Cacchione, D. E. Drake, J. T. Ferreira and G. B. Tate. CALIFORNIA. Bottom stress estimates and sand transport on Northern California inner continental shelf. *Continental Shelf Research, in Sediment transport events on shelves and slopes; STRESS*. (J. H. Trowbridge, editor and others). v. 14, no. 10-11, September 1994. p. 1273-1289.
- OP-117. D. A. Cacchione, D. E. Drake, R. E. Kayen, R. W. Sternberg*, G. C. Kineke* and G. B. Tate. Measurements in the bottom boundary layer on the Amazon subaqueous delta. *Marine Geology, in Geological significance of sediment transport and accumulation on the Amazon continental shelf*. (C. A. Nittrouer, editor and others). v. 125, no. 3-4, 1995. p. 235-257.
- OP-118. J. P. Calvo*, B. F. Jones, Manuel Bustillo*, Rafael Fort*, A. M. Alonso Zarza* and Carol Kendall. Sedimentology and geochemistry of carbonates from lacustrine sequences in the Madrid Basin, central Spain. *Chemical Geology*. v. 123, no. 1-4, June 20, 1995. p. 173-191.
- OP-119. G. S. Campbell*, J. D. Jungbauer, Jr.*, W. R. Bidlake and R. D. Hungerford*. Predicting the effect of temperature on soil thermal conductivity. *Soil Science*. v. 158, no. 5, November 1994. p. 307-313.

- OP-120. Rosanna Cappellato* and N. E. Peters. GEORGIA. Dry deposition and canopy leaching rates in deciduous and coniferous forests of the Georgia Piedmont; an assessment of a regression model. *Journal of Hydrology*. v. 169, no. 1-4, July 1995. p. 131-150.
- OP-121. P. E. Carrara. MONTANA. A 12 000 year radiocarbon date of deglaciation from the continental divide of northwestern Montana. *Canadian Journal of Earth Sciences = Journal Canadien des Sciences de la Terre*. v. 32, no. 9, September 1995. p. 1303-1307.
- OP-122. A. L. Carreño* and T. M. Cronin. Middle Eocene Ostracoda from Baja California Sur, Mexico. *Journal of Micropalaeontology*. 12, Part 2, December 1993. p. 141-153.
- OP-123. Bobb Carson*, Erol Seke*, V. F. Paskevich and M. L. Holmes. Fluid expulsion sites on the Cascadia accretionary prism; mapping diagenetic deposits with processed GLORIA imagery. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 6, June 10, 1994. p. 11,959-11,969.
- OP-124. L. D. Carter. ALASKA. Late Pleistocene stabilization and reactivation of eolian sand in Northern Alaska; implications for the effects of future climatic warming on an eolian landscape in continuous permafrost. *International Conference on Permafrost, Proceedings, in Permafrost; sixth international conference proceedings*. (Cheng Guodong, chairperson). 6, Vol. 1, July 1993. p. 78-83.
- OP-125. R. O. Castle and D. H. Lindsley*. An exsolution silica-pump model for the origin of myrmekite. *Contributions to Mineralogy and Petrology*. v. 115, no. 1, October 1993. p. 58-65.
- OP-126. François Chabaux*, A. S. Cohen*, R. K. O'Nions* and J. R. Hein. ^{238}U - ^{234}U - ^{230}Th chronometry of Fe-Mn crusts; growth processes and recovery of thorium isotope ratios of seawater. *Geochimica et Cosmochimica Acta*. v. 59, no. 3, February 1995. p. 633-638.
- OP-127. E. F. Chacho, Jr.*, W. W. Emmett and R. L. Burrows. Monitoring gravel movement using radio transmitters. *Hydraulic Engineering: Proceedings of the National Conference on Hydraulic Engineering, in Hydraulic engineering '94*. (G. V. Cotroneo, editor and others). 1994, 1994. p. 785-789.
- OP-128. W. W. Chadwick, Jr.* and J. H. Dieterich. Mechanical modeling of circumferential and radial dike intrusion on Galapagos volcanoes. *Journal of Volcanology and Geothermal Research, in Models of magmatic processes and volcanic eruptions*. (Yoshiaki Ida, editor and others). v. 66, no. 1-4, July 1995. p. 37-52.
- OP-129. D. E. Champion and J. M. Donnelly-Nolan. CALIFORNIA. Duration of eruption at the Giant Crater lava field, Medicine Lake Volcano, California, based on paleomagnetic secular variation. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 8, August 10, 1994. p. 15,595-15,604.
- OP-130. E. C. Chao and Xie Xiande*. Mineralogical approaches to geological investigations. Beijing: Sci. Press, 1990. 338 p.
- OP-131. F. H. Chapelle, P. M. Bradley and P. B. McMahon. Subsurface microbiology, *in Regional ground-water quality*. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 181-198.
- OP-132. F. H. Chapelle, P. B. McMahon, N. M. Dubrovsky, Roger Fujii, E. T. Oaksford and D. A. Vroblecky. Deducing the distribution of terminal electron-accepting processes in hydrologically diverse groundwater systems. *Water Resources Research*. v. 31, no. 2, February 1995. p. 359-371.
- OP-133. Dominique Chapellier*, D. V. Fitterman, C. Meyer de Stadelhofen*, D. S. Parasnis*, D. W. Steeples* and Pierre Valla* (editors). *Geophysics and environment. Journal of Applied Geophysics*. v. 31, no. 1-4, February 15, 1994. 289 p.
- OP-134. C. R. Chapman*, Joseph Veverka*, P. C. Thomas*, K. P. Klaasen*, M. J. Belton*, A. Harch*, A. S. McEwen, T. V. Johnson*, Paul Helfenstein*, M. E. Davies*, W. J. Merline* and Tilmann Denk*. Discovery and physical properties of Dactyl, a satellite of asteroid 243 Ida. *Nature (London)*. v. 374, no. 6525, April 27, 1995. p. 783-785.
- OP-135. R. R. Charpentier, G. L. Dolton and G. F. Ulmishek. Annotated bibliography of methodology for assessment of undiscovered oil and gas resources. *Nonrenewable Resources*. v. 4, no. 2, 1995. p. 154-186.
- OP-136. Claudio Chiarabba*, Alessandro Amato* and J. R. Evans. CALIFORNIA. Variations on the NeHT high-resolution tomography method; a test of technique and results for Medicine Lake Volcano, Northern California. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 3, March 10, 1995. p. 4035-4052.
- OP-137. C. T. Chiou and D. E. Kile. Effects of polar and nonpolar groups on the solubility of organic compounds in soil organic matter. *Environmental Science & Technology, ES & T*. v. 28, no. 6, June 1994. p. 1139-1144.
- OP-138. C. T. Chiou, D. W. Rutherford* and Milton Manes*. Sorption of N_2 and EGME vapors on some soils, clays, and mineral oxides and determination of sample surface areas by use of sorption data. *Environmental Science & Technology, ES & T*. v. 27, no. 8, August 1993. p. 1587-1594.
- OP-139. I-Ming Chou, W. A. Bassett* and T. B. Bai*. Hydrothermal diamond-anvil cell study of melts; eutectic melting of the assemblage $\text{Ca}(\text{OH})_2 + \text{CaCO}_3$ with excess H_2O and lack of evidence for "portlandite II" phase. *American Mineralogist*. v. 80, no. 7-8, August 1995. p. 865-868.
- OP-140. G. L. Choy and Rainer Kind*. A broadband body-wave analysis of the Armenia S.S.R. earthquake of 7 December 1988. *Geologisches Jahrbuch. Reihe E: Geophysik*. 44, 1990. p. 37-48.
- OP-141. N. I. Christensen* and W. D. Mooney. Seismic velocity structure and composition of the continental crust; a global view. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 6, June 10, 1995. p. 9761-9788.
- OP-142. P. R. Christensen* and H. J. Moore. The Martian surface layer, *in Mars*. (H. H. Kieffer, editor and others), *in the collection Space science series*. (Tom Gehrels, editor). Tucson, AZ: University of Arizona Press, 1992. p. 686-729.
- OP-143. S. C. Christenson and A. H. Rea. OKLAHOMA. Factors related to pesticide occurrence in ground water in the Oklahoma City urban area. *Oklahoma Geology Notes*. v. 54, no. 4, August 1994. p. 144-146.

- OP-144. S. C. Christenson and A. H. Rea. OKLAHOMA. Ground-water quality in the Oklahoma City urban area, *in* Regional ground-water quality. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 589-612.
- OP-145. D. J. Chure*, Christopher Turner and Fred Peterson. UTAH. An embryo of *Camptosaurus* from the Morrison Formation (Jurassic, middle Tithonian) in the Dinosaur National Monument, Utah, *in* Dinosaur eggs and babies. (Kenneth Carpenter, editor and others). Cambridge: Cambridge University Press, 1994. p. 298-311.
- OP-146. H. C. Claassen and J. S. Downey. A model for deuterium and oxygen 18 isotope changes during evergreen interception of snowfall. *Water Resources Research*. v. 31, no. 3, March 1995. p. 601-618.
- OP-147. D. A. Clague, J. G. Moore, J. E. Dixon* and W. B. Friesen. HAWAII. Petrology of submarine lavas from Kilauea's Puna Ridge, Hawaii. *Journal of Petrology*. v. 36, no. 2, April 1995. p. 299-349.
- OP-148. J. R. Clark, A. L. Meier and G. O. Riddle. MINNESOTA. Enzyme leaching of surficial geochemical samples for determining hydromorphic trace-element anomalies associated with precious-metal mineralized bedrock buried beneath glacial overburden in northern Minnesota, *in* Gold '90; proceedings of the symposium. (D. M. Hausen, editor and others). Littleton, CO: Society for Mining, Metallurgy, and Exploration, 1990. p. 189-207.
- OP-149. J. R. Clark and J. G. Viets. Multielement extraction system for determining 19 trace elements in gold exploration samples, *in* Gold '90; proceedings of the symposium. (D. M. Hausen, editor and others). Littleton, CO: Society for Mining, Metallurgy, and Exploration, 1990. p. 175-179.
- OP-150. R. N. Clark, T. V. King, C. M. Ager and G. A. Swayze. COLORADO. Initial vegetation species and senescence/stress indicator mapping in the San Luis Valley, Colorado using imaging spectrometer data. Special Publication - Colorado Geological Survey, *in* Proceedings; Summitville forum '95. (H. H. Posey, editor and others). Report no. 38, 1995. p. 64-69 and 371-373.
- OP-151. J. S. Clarke, W. F. Falls, L. E. Edwards, N. O. Frederiksen, L. M. Bybell, T. G. Gibson and R. J. Litwin. GEORGIA. Geologic, hydrologic, and water-quality data for a multi-aquifer system in coastal plain sediments near Millers Pond, Burke County, Georgia, 1992-93. Information Circular - Georgia Geologic Survey. Report no. 96, 1994. 34 p.
- OP-152. J. W. Clarke. The Timan-Pechora oil-gas basin; a geological review. *International Geology Review*. v. 36, no. 1, January 1994. p. 3-14.
- OP-153. J. W. Clarke. Petroleum habitat of East Siberia, Russia. *International Geology Review*. v. 36, no. 3, March 1994. p. 238-249.
- OP-154. J. W. Clarke. Observations on the geology of Azerbaijan. *International Geology Review*. v. 35, no. 12, December 1993. p. 1089-1092.
- OP-155. J. L. Clayton, C. W. Spencer and Istvan Koncz*. Totkomlos-Szolnok(.) petroleum system of southeastern Hungary. AAPG Memoir, *in* The petroleum system; from source to trap. (L. B. Magoon, III, editor and others). 60, 1994. p. 587-598.
- OP-156. G. R. Cochrane, A. K. Cooper, J. R. Childs, P. E. Hart and Giuliano Brancolini*. Preliminary results of a 1989 seismic refraction survey in the Ross Sea, Antarctica. *Geologisches Jahrbuch. Reihe E: Geophysik, in German Antarctic North Victoria Land expedition 1988/89; GANOVEX V.* (Detlef Damaske, editor and others). 47, 1993. p. 313-333.
- OP-157. G. R. Cochrane, J. C. Moore*, M. E. MacKay* and G. F. Moore*. OREGON. Velocity and inferred porosity model of the Oregon accretionary prism from multichannel seismic reflection data; implications on sediment dewatering and overpressure. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 4, April 10, 1995. p. 7033-7043.
- OP-158. J. E. Coker*, M. G. Steltenpohl*, Arild Andresen* and M. J. Kunk. An $^{40}\text{Ar}/^{39}\text{Ar}$ thermochronology of the Ofoten-Troms region; implications for terrane amalgamation and extensional collapse of the northern Scandinavian Caledonides. *Tectonics*. v. 14, no. 2, April 1995. p. 435-447.
- OP-159. R. B. Cole* and R. G. Stanley. CALIFORNIA. Middle Tertiary extension recorded by lacustrine fan-delta deposits, Plush Ranch Basin, western Transverse Ranges, California. *Journal of Sedimentary Research, Section B: Stratigraphy and Global Studies*. v. 65, no. 4, November 15, 1995. p. 455-468.
- OP-160. D. S. Coleman*, A. F. Glazner*, J. S. Miller, K. J. Bradford*, T. P. Frost*, J. L. Joye* and C. A. Bachl*. CALIFORNIA. Exposure of a Late Cretaceous layered mafic-felsic magma system in the central Sierra Nevada Batholith, California. *Contributions to Mineralogy and Petrology*. v. 120, no. 2, 1995. p. 129-136.
- OP-161. T. S. Collett and K. J. Bird. ALASKA. Unfrozen, high-salinity intervals within ice-bearing permafrost, North Slope of Alaska. *International Conference on Permafrost, Proceedings, in Permafrost; sixth international conference proceedings*. (Cheng Guodong, chairperson). 6, Vol. 1, July 1993. p. 94-99.
- OP-162. Jean-Yves Collot*, H. G. Greene, M. A. Fisher and E. L. Geist. Tectonic accretion and deformation of the accretionary wedge in the North d'Entrecasteaux Ridge-New Hebrides island arc collision zone; evidence from multichannel seismic reflection profiles and Leg 134 results. *Proceedings of the Ocean Drilling Program, Scientific Results, in Proceedings of the Ocean Drilling Program, scientific results; Vanuatu, covering Leg 134 of the cruises of the drilling vessel JOIDES Resolution, Port of Townsville, Queensland, Australia, to Suva, Republic of Fiji, sites 827-833, 11 October-17 December 1990*. (H. G. Greene and others). 134, October 1994. p. 5-18.
- OP-163. S. M. Colman, R. M. Forester, R. L. Reynolds, D. S. Sweetkind, J. W. King*, Paul Gangemi*, G. A. Jones*, L. D. Keigwin* and D. S. Foster. Lake-level history of Lake Michigan for the past 12,000 years; the record from deep lacustrine sediments. *Journal of Great Lakes Research, in The southern Lake Michigan coastal erosion study*. (D. W. Folger, editor and others). v. 20, no. 1, 1994. p. 73-92.
- OP-164. S. M. Colman and D. S. Foster. A sediment budget for southern Lake Michigan; source and sink models for different time intervals. *Journal of Great Lakes Research, in The southern Lake*

- Michigan coastal erosion study. (D. W. Folger, editor and others). v. 20, no. 1, 1994. p. 215-228.
- OP-165. S. M. Colman, J. A. Peck*, E. B. Karabanov*, S. J. Carter, J. P. Bradbury, J. W. King* and D. F. Williams*. Continental climate response to orbital forcing from biogenic silica records in Lake Baikal. *Nature* (London). v. 378, no. 6559, December 28, 1995. p. 769-771.
- OP-166. A. P. Colvocoresses. Planimetric mapping from spacecraft. Reports of the Department of Geodetic Science and Surveying, in *The changing world of geodetic science*. (U. A. Uotila, editor). 250, 1977. p. 352-358.
- OP-167. J. J. Connor and K. V. Evans. IDAHO. Cobalt mineralization in the northern Lemhi Range, Lemhi County, Idaho. Guidebook of the Annual Tobacco Root Geological Society Field Conference, in *Geology and ore deposits of the trans-Challis fault system/Great Falls tectonic zone*. (F. J. Moye, editor). 15, August 1990. p. 93-95.
- OP-168. J. E. Constantz. Determination of water retention in stratified porous materials. Transport in Porous Media, in *Effective constitutive laws for heterogeneous porous media*. (Rachid Ababou, editor and others). v. 18, no. 3, March 1995. p. 217-229.
- OP-169. H. E. Cook, V. G. Zhemchuzhnikov*, V. M. Buytyshkin*, L. Y. Golub*, Y. A. Gatovsky* and A. Y. Zorin*. Devonian and Carboniferous passive-margin carbonate platform of southern Kazakhstan; summary of depositional and stratigraphic models to assist in the exploration and production of coeval giant carbonate platform oil and gas fields in the North Caspian Basin, western Kazakhstan. Memoir - Canadian Society of Petroleum Geologists, in *Pangea; global environments and resources*. (A. F. Embry, editor and others). 17, December 1994. p. 363-381.
- OP-170. P. G. Cook*, D. K. Solomon*, L. N. Plummer, Eurybiades Busenberg and S. L. Schiff*. Chlorofluorocarbons as tracers of groundwater transport processes in a shallow, silty sand aquifer. *Water Resources Research*. v. 31, no. 3, March 1995. p. 425-434.
- OP-171. R. L. Cooley and M. C. Hill. A comparison of three Newton-like nonlinear least-squares methods for estimating parameters of ground water flow models. Proceedings of the International Conference on Computational Methods in Water Resources, in *Numerical methods in water resources*. (T. F. Russell, editor and others). 9, Vol. 1, 1992. p. 379-386.
- OP-172. W. F. Coon. NEW YORK. Design of Manning's-roughness-coefficient study in New York State. Hydraulic Engineering: Proceedings of the National Conference on Hydraulic Engineering, in *Hydraulic engineering '94*. (G. V. Cotroneo, editor and others). 1994, 1994. p. 677-681.
- OP-173. A. K. Cooper. Strides made in understanding Antarctic stratigraphy and Cenozoic glacial history. *Eos, Transactions, American Geophysical Union*. v. 76, no. 10, March 7, 1995. p. 97, 101.
- OP-174. T. B. Coplen. Uses of environmental isotopes, in *Regional ground-water quality*. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 227-254.
- OP-175. T. B. Coplen. Discontinuance of SMOW and PDB. *Nature* (London). v. 375, no. 6529, May 25, 1995. p. 285.
- OP-176. Massimo Cortini and C. C. Barton. Chaos in geomagnetic reversal records; a comparison between Earth's magnetic field data and model disk dynamo data. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 9, September 10, 1994. p. 18,021-18,033.
- OP-177. J. E. Costa, A. J. Miller*, K. W. Potter* and P. R. Wilcock (editors). Natural and anthropogenic influences in fluvial geomorphology; the Wolman Volume. *Geophysical Monograph*. 89, 1995. 239 p.
- OP-178. J. E. Costa and J. E. O'Connor. Geomorphically effective floods. *Geophysical Monograph*, in *Natural and anthropogenic influences in fluvial geomorphology; the Wolman Volume*. (J. E. Costa, editor and others). 89, 1995. p. 45-56.
- OP-179. T. K. Cowdery and Karin Goff. NORTH DAKOTA. Nitrogen concentrations near the water table of the Sheyenne Delta Aquifer beneath cropland areas, Ransom and Richard counties, North Dakota, in *North Dakota water quality symposium; proceedings*. (B. D. Seelig, chairperson). Fargo, ND: N.D. Water Resource. Res. Inst. 1994. p. 89-102.
- OP-180. K. C. Creager*, Ling-Yun Chiao*, J. P. Winchester, Jr.* and E. R. Engdahl. Membrane strain rates in the subducting plate beneath South America. *Geophysical Research Letters*, in June 9, 1994 Mw = 8.3 deep Bolivian earthquake. (T. C. Wallace, prefacer). v. 22, no. 16, August 15, 1995. p. 2321-2324.
- OP-181. A. T. Cross* and R. M. Kossanke. History and development of Carboniferous palynology in North America during the early and middle twentieth century. Memoir - Geological Society of America, in *Historical perspective of early twentieth century Carboniferous paleobotany in North America*. (P. C. Lyons, editor and others). 185, 1995. p. 353-387.
- OP-182. A. T. Cross*, R. M. Kossanke and T. L. Phillips*. James Morton Schopf (1911-1978); paleobotanist, palynologist, and coal geologist. Memoir - Geological Society of America, in *Historical perspective of early twentieth century Carboniferous paleobotany in North America*. (P. C. Lyons, editor and others). 185, 1995. p. 203-214.
- OP-183. R. A. Crovelli. Environmental probabilistic quantitative assessment methodologies. *Computers & Geosciences*, in *Environmental geology*. (K. M. Morgan, editor and others). v. 21, no. 8, October 1995. p. 971-984.
- OP-184. S. S. Crowley, D. A. Dufek*, R. W. Stanton and T. A. Ryer*. The effects of volcanic ash disturbances on a peat-forming environment; environmental disruption and taphonomic consequences. *Palaos*. v. 9, no. 2, April 1994. p. 158-174.
- OP-185. S. S. Crowley, L. F. Ruppert, R. W. Stanton, H. E. Belkin and T. A. Moore*. MONTANA. Geochemical studies of the Anderson-Dietz 1 coal bed, Powder River basin; origin of inorganic elements and environmental implications. Public Information Circular - Geological Survey of Wyoming, in *Organics and the Rockies; field guide*. (R. M. Flores, editor and others). Report no. 33, 1994. p. 173-184.

- OP-186. S. S. Crowley, R. W. Stanton and L. F. Ruppert. Air toxics in coal; the distribution of twelve trace elements in a thick, subbituminous coal bed and impact on mining applications. *The Journal of Coal Quality*. v. 12, no. 4, December 1993. p. 141-146.
- OP-187. K. M. Cuffey*, G. D. Clow, R. B. Alley*, Minze Stui-ver*, E. D. Waddington* and R. W. Saltus. Large Arctic temperature change at the Wisconsin-Holocene glacial transition. *Science*. v. 270, no. 5235, October 20, 1995. p. 455-458.
- OP-188. C. G. Cunningham, Hugo Aparicio N.*, Fernando Murillo S.*, Néstor Jiménez C.*, J. L. Lizeca B.*, E. H. McKee, G. E. Ericksen and Franz Tavera V.*. Relationship between the Porco, Bolivia, Ag-Zn-Pb-Sn deposit and the Porco Caldera. *Economic Geology and the Bulletin of the Society of Economic Geologists*, in *A special issue on volcanic centers as targets for mineral exploration*. (W. E. Elston, editor and others). v. 89, no. 8, December 1994. p. 1833-1841.
- OP-189. C. G. Cunningham, T. A. Steven, P. D. Rowley, C. W. Naeser, H. H. Mehnert, C. E. Hedge and K. R. Ludwig. UTAH. Evolution of volcanic rocks and associated ore deposits in the Marysvale volcanic field, Utah. *Economic Geology and the Bulletin of the Society of Economic Geologists*, in *A special issue on volcanic centers as targets for mineral exploration*. (W. E. Elston, editor and others). v. 89, no. 8, December 1994. p. 2003-2005.
- OP-190. K. I. Cunningham, D. E. Northup*, R. M. Pollastro, W. G. Wright and E. J. LaRock*. NEW MEXICO. Bacteria, fungi and biokarst in Lechuguilla Cave, Carlsbad Caverns National Park, New Mexico. *Environmental Geology*, in *Deep-seated geochemical environments in karst*. (A. N. Palmer, editor). v. 25, no. 1, February 1995. p. 2-8.
- OP-191. S. E. Curtin and J. R. Dine (compilers). MARYLAND. Ground-water level data in southern Maryland, 1946-94. *Water Resources Basic Data Report* (1972). Report no. 21, 1995. 365 p.
- OP-192. S. R. Dallimore* and T. S. Collett. Intrapermafrost gas hydrates from a deep core hole in the Mackenzie Delta, Northwest Territories, Canada. *Geology* (Boulder). v. 23, no. 6, June 1995. p. 527-530.
- OP-193. G. B. Dalrymple. CALIFORNIA. Preliminary report on $^{40}\text{Ar}/^{39}\text{Ar}$ incremental heating experiments on feldspar samples from the felsite unit, Geysers geothermal field. *Guidebook Series*, in *Active geothermal systems and gold-mercury deposits in the Sonoma-Clear Lake volcanic fields, California*. (J. J. Ryuba, editor). 16, October 1993. p. 131-141.
- OP-194. G. B. Dalrymple, G. K. Czamanske, V. A. Fedorenko*, O. N. Simonov, M. A. Lanphere* and A. P. Likhachev*. Areconnaissance $^{40}\text{Ar}/^{39}\text{Ar}$ geochronologic study of ore-bearing and related rocks, Siberian Russia. *Geochimica et Cosmochimica Acta*. v. 59, no. 10, May 1995. p. 2071-2083.
- OP-195. M. E. Davies*, R. M. Batson and S. S. Wu. Geodesy and cartography, in Mars. (H. H. Kieffer, editor and others), in *the collection Space science series*. (Tom Gehrels, editor). Tucson, AZ: University of Arizona Press, 1992. p. 321-342.
- OP-196. W. E. Davies, Susan Moorlag and J. H. Wittmann. WEST VIRGINIA, MARYLAND, VIRGINIA. Physical and historical geography of the eastern panhandle of West Virginia, nearby Maryland and Virginia, in *Association of American Geographers field trip guide*. (W. W. Abbe and others). Washington, DC: Association of American Geographers, 1983. p. 105-119.
- OP-197. A. S. Davis, S. H. Gunn, W. A. Bohrson*, Leda-Beth Gray and J. R. Hein. CALIFORNIA. Chemically diverse, sporadic volcanism at seamounts offshore Southern and Baja California. *Geological Society of America Bulletin*. v. 107, no. 5, May 1995. p. 554-570.
- OP-198. Inacio de Medeiros Delgado*, A. J. Pedreilha* and C. H. Thorman. Geology and mineral resources of Brazil; a review. *International Geology Review*. v. 36, no. 6, June 1994. p. 503-544.
- OP-199. Benedetto De Vivo*, R. A. Ayuso, H. E. Belkin, Annamaria Lima*, Antonia Messina*, Selma Russo* and Anna Viscardi*. Whole-rock geochemistry and fluid inclusions as exploration tools for mineral deposits assessment in the Serre Batholith, Calabria, southern Italy. *European Journal of Mineralogy*, in *Proceedings of the Eleventh European symposium on Fluid inclusions research (ECROFI XI)*. (Benedetto De Vivo, editor and others). v. 4, no. 5, October 1992. p. 1035-1051.
- OP-200. Patrick De Wever*, Jacques Bourgois*, J. P. Caulet*, Elisabeth Fourtanier*, J. A. Barron and Paulian Dumitrica*. Stratigraphic significance of siliceous microfossils collected during NAUTIPERC dives (off Peru, 5°-6°S). *Marine Micropaleontology*. v. 24, no. 3-4, February 1995. p. 287-305.
- OP-201. J. E. Decker*, S. C. Bergman*, R. B. Blodgett*, S. E. Box, T. K. Bundtzen*, J. G. Clough*, W. L. Coonrad, W. G. Gilbert*, M. L. Miller, J. M. Murphy, M. S. Robinson* and W. K. Wallace*. ALASKA. Geology of Southwestern Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 285-310.
- OP-202. J. A. Deen*, R. O. Rye, J. L. Munoz* and J. W. Drexler*. The magmatic hydrothermal system at Julcani, Peru; evidence from fluid inclusions and hydrogen and oxygen isotopes. *Economic Geology and the Bulletin of the Society of Economic Geologists*, in *A special issue on volcanic centers as targets for mineral exploration*. (W. E. Elston, editor and others). v. 89, no. 8, December 1994. p. 1924-1938.
- OP-203. L. A. Dengler*, Kathy Moley*, R. C. McPherson*, M. E. Pasyanos*, J. W. Dewey and M. H. Murray. CALIFORNIA. The September 1, 1994, Mendocino Fault earthquake. *California Geology*. v. 48, no. 2, April 1995. p. 43-53.
- OP-204. K. F. Dennehy. Analysis of nutrient, sediment, and pesticide data from the South Platte River basin, water years 1980-92. *Information Series - Colorado Water Resources Research Institute*, in *Basin planning and management; water quantity and quality*. (D. K. Mueller, editor). Report no. 73, March 1993. p. 44-46.
- OP-205. D. P. Dethier, Fred Pessl, Jr., R. F. Keuler, M. A. Balzarini* and D. R. Pevear*. WASHINGTON. Late Wisconsinan glaciomarine deposition and isostatic rebound, northern Puget Lowland, Washington. *Geological Society of America Bulletin*. v. 107, no. 11, November 1995. p. 1288-1303.
- OP-206. M. D. Dettinger, Michael Ghil*, C. M. Strong*, W. L. Weibel* and Pascal Yiou*. Software expedites singular-spectrum

- analysis of noisy time series. *Eos, Transactions, American Geophysical Union*. v. 76, no. 2, January 10, 1995. p. 12, 14, 21.
- OP-207. W. W. Dickinson*, R. H. Newman*, J. Newman* and L. C. Price. ^{13}C NMR spectra and selected maturation parameters of isorank coals, west coast, South Island, New Zealand. *Geology Board of Studies Publication*. 10, June 1994. 38 p.
- OP-208. T. H. Diehl. TENNESSEE. Causes and effects of valley plugs in West Tennessee. *American Water Resources Association Technical Publication Series TPS, in Symposium on Responses to changing multiple-use demands; new directions for water resources planning and management*. (M. J. Sale, editor and others). 94-2, April 1994. p. 97-98.
- OP-209. J. H. Dieterich. A constitutive law for rate of earthquake production and its application to earthquake clustering. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 2, February 10, 1994. p. 2601-2618.
- OP-210. J. H. Dieterich and B. D. Kilgore. Direct observation of frictional contacts; new insights for state-dependent properties. *Pure and Applied Geophysics*. v. 143, no. 1-3, 1994. p. 283-302.
- OP-211. J. R. Dine, J. C. Adamski and M. T. Duigon*. MARYLAND. Water resources of Howard County, Maryland. *Bulletin - Maryland Geological Survey*. Report no. 38, 1995. 128 p.
- OP-212. D. A. Dodge*, G. C. Beroza* and W. L. Ellsworth. CALIFORNIA. Foreshock sequence of the 1992 Landers, California, earthquake and its implications for earthquake nucleation. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 6, June 10, 1995. p. 9865-9880.
- OP-213. J. L. Doebrich. NEVADA. Geology and mineral deposits of the Antler Peak 7.5-minute quadrangle, Lander County, Nevada. *Bulletin - Nevada Bureau of Mines and Geology*. Report no. 109, 1995. 44 p.
- OP-214. E. W. Domack*, S. E. Ishman, A. B. Stein*, C. E. McClennen* and A. J. Jull*. Late Holocene advance of the Müller ice shelf, Antarctic Peninsula; sedimentological, geochemical and palaeontological evidence. *Antarctic Science*. v. 7, no. 2, June 1995. p. 159-170.
- OP-215. J. L. Domagalski and K. M. Kuivila. CALIFORNIA. Distributions of pesticides and organic contaminants between water and suspended sediment, San Francisco Bay, California. *Estuaries, in Trace contaminants and nutrients in estuaries*. (J. S. Kuwabara, editor and others). v. 16, no. 3A, September 1993. p. 416-426.
- OP-216. J. M. Donnelly-Nolan, M. G. Burns*, F. E. Goff*, E. K. Peters* and J. M. Thompson. CALIFORNIA. The Geysers-Clear Lake area, CA; thermal waters, mineralization, volcanism, and geothermal potential. *Guidebook Series, in Active geothermal systems and gold-mercury deposits in the Sonoma-Clear Lake volcanic fields, California*. (J. J. Rytuba, editor). 16, October 1993. p. 1-25.
- OP-217. J. H. Dover. ALASKA. Geology of part of East-Central Alaska, *in The geology of Alaska*. (George Plafker, editor and others), *in the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 153-204.
- OP-218. H. J. Dowsett, R. S. Thompson, J. A. Barron, T. M. Cronin, R. F. Fleming, S. E. Ishman, R. Z. Poore, D. A. Willard and T. R. Holtz, Jr. Joint investigations of the middle Pliocene climate; I, PRISM paleoenvironmental reconstructions. *Global and Planetary Change*. v. 9, no. 3-4, December 1994. p. 169-195.
- OP-219. F. J. Doyle. Space photography in the shuttle era. Reports of the Department of Geodetic Science and Surveying, *in The changing world of geodetic science*. (U. A. Uotila, editor). 250, 1977. p. 411-421.
- OP-220. L. J. Drew, R. F. Mast and J. H. Schuenemeyer. The space-time structure of oil and gas field growth in a complex depositional system. *Nonrenewable Resources*. v. 3, no. 3, 1994. p. 169-182.
- OP-221. N. E. Driver. COLORADO. Water quality and urban supply planning; the upper Colorado NAWQA study. *Information Series - Colorado Water Resources Research Institute, in Proceedings; Colorado water workshop, quenching the urban giant*. 78, February 1995. p. 136-141.
- OP-222. R. F. Dubiel. Lacustrine deposits of the Upper Triassic Chinle Formation, Colorado Plateau, USA, *in Global geological record of lake basins; Volume 1*. (Elizabeth Gierlowski-Kordesch, editor and others), *in the collection World and regional geology*. Cambridge: Cambridge University Press. 4, 1994. p. 151-154.
- OP-223. R. F. Dubiel. ARIZONA. Depositional setting of the Owl Rock Member of the Upper Triassic Chinle Formation, Petrified Forest National Park and vicinity, Arizona. *Bulletin of the New Mexico Museum of Natural History and Science, in The nonmarine Triassic*. (S. G. Lucas, editor and others). 3, October 1993. p. 117-121.
- OP-224. R. F. Dubiel, S. R. Ash* and S. T. Hasiotis*. NEW MEXICO, ARIZONA. Syndepositional deformation in the Monitor Butte Member of the Chinle Formation at Fort Wingate, NM and St. Johns, AZ. *Bulletin of the New Mexico Museum of Natural History and Science, in The nonmarine Triassic*. (S. G. Lucas, editor and others). 3, October 1993. p. G27-G29.
- OP-225. R. F. Dubiel and J. P. Smoot. Criteria for interpreting paleoclimate from red beds; a tool for Pangean reconstructions. *Memoir - Canadian Society of Petroleum Geologists, in Pangea; global environments and resources*. (A. F. Embry, editor and others). 17, December 1994. p. 295-310.
- OP-226. N. M. Dubrovsky, S. J. Deverel and R. J. Gilliom. CALIFORNIA. Multiscale approach to regional ground-water-quality assessment; selenium in the San Joaquin Valley, California, *in Regional ground-water quality*. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 537-562.
- OP-227. Vittorio Duchi*, M. E. Campana*, Angelo Minissale* and J. M. Thompson. Geochemistry of thermal fluids on the volcanic Isle of Pantelleria, southern Italy. *Applied Geochemistry*. v. 9, no. 2, March 1994. p. 147-160.
- OP-228. R. J. Durrheim* and W. D. Mooney. Evolution of the Precambrian lithosphere; seismological and geochemical constraints. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 8, August 10, 1994. p. 15,359-15,374.

- OP-229. Cynthia Dusel-Bacon. ALASKA. Metamorphic history of Alaska, *in* The geology of Alaska. (George Plafker, editor and others), *in the collection* The geology of North America. Boulder, CO: Geological Society of America. G-1, 1994. p. 495-533.
- OP-230. Cynthia Dusel-Bacon. ALASKA. Map and table showing metamorphic rocks of Alaska, *in* The geology of Alaska. (George Plafker, editor and others), *in the collection* The geology of North America. Boulder, CO: Geological Society of America. G-1, 1994. 2 sheets.
- OP-231. Cynthia Dusel-Bacon, V. L. Hansen* and J. A. Scala. ALASKA. High-pressure amphibolite facies dynamic metamorphism and the Mesozoic tectonic evolution of an ancient continental margin, East-Central Alaska. *Journal of Metamorphic Geology*, *in* Special issue on Cordilleran high-pressure metamorphic terranes. (B. E. Patrick, editor and others). v. 13, no. 1, January 1995. p. 9-24.
- OP-232. J. J. Dvorak. HAWAII. An earthquake cycle along the south flank of Kilauea Volcano, Hawaii. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 5, May 10, 1994. p. 9533-9541.
- OP-233. G. S. Dwyer*, T. M. Cronin, P. A. Baker*, M. E. Raymo*, J. S. Buzas* and Thierry Corrège*. North Atlantic deepwater temperature change during late Pliocene and late Quaternary climatic cycles. *Science*. v. 270, no. 5240, November 24, 1995. p. 1347-1351.
- OP-234. Daniel Dzurisin, J. P. Lockwood, T. J. Casadevall and Meyer Rubin. HAWAII. The Uwekahuna Ash Member of the Puna Basalt; product of violent phreatomagmatic eruptions at Kilauea Volcano, Hawaii, between 2800 and 2100 ¹⁴C years ago. *Journal of Volcanology and Geothermal Research*, *in* Models of magmatic processes and volcanic eruptions. (Yoshiaki Ida, editor and others). v. 66, no. 1-4, July 1995. p. 163-184.
- OP-235. D. A. Eash. A geographic information system procedure to quantify drainage-basin characteristics. *Water Resources Bulletin*. v. 30, no. 1, February 1994. p. 1-8.
- OP-236. G. P. Eaton. Ecosystems and environmental earth science. *Environmental Geology*. v. 24, no. 4, December 1994. p. 309-311.
- OP-237. G. P. Eaton. Transforming the U.S. Geological Survey; an invited comment. *Natural Hazards Observer*. v. 19, no. 4, March 1995. p. 1-2.
- OP-238. G. P. Eaton. Re-shaping America's earth-science curriculum. *Geotimes*. v. 40, no. 1, January 1995. p. 4.
- OP-239. J. P. Eaton. CALIFORNIA. Determination of amplitude and duration magnitudes and site residuals from short-period seismographs in Northern California. *Bulletin of the Seismological Society of America*. v. 82, no. 2, April 1992. p. 533-579.
- OP-240. Donna Eberhart-Phillips, W. D. Stanley, B. D. Rodriguez and W. J. Lutter*. Surface seismic and electrical methods to detect fluids related to faulting. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 7, July 10, 1995. p. 12,919-12,936.
- OP-241. D. D. Eberl, Bruce Velde* and T. C. McCormick*. Synthesis of illite-smectite from smectite at Earth surface temperatures and high pH. *Clay Minerals*. v. 28, no. 1, March 1993. p. 49-60.
- OP-242. Kathleen Edwards and P. A. Davis. The use of intensity-hue-saturation transformation for producing color shaded-relief images. *Photogrammetric Engineering and Remote Sensing*. v. 60, no. 11, November 1994. p. 1369-1373.
- OP-243. L. E. Edwards and E. R. Wicander*. Palynology. *Geotimes*. v. 40, no. 2, February 1995. p. 26-27.
- OP-244. R. P. Eganhouse* and M. I. Venkatesan. CALIFORNIA. Chemical oceanography and geochemistry, *in* Ecology of the Southern California Bight; a synthesis and interpretation. (M. D. Dailey, editor and others). Berkeley, CA: University of California Press, 1993. p. 71-189.
- OP-245. S. L. Eittreim. Transition from continental to oceanic crust on the Wilkes-Adelie margin of Antarctica. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 12, December 10, 1994. p. 24,189-24,205.
- OP-246. S. L. Eittreim, A. K. Cooper* and Jacques Wanneson*. Seismic stratigraphic evidence of ice-sheet advances on the Wilkes Land margin of Antarctica. *Sedimentary Geology*, *in* Selected topics relating to the Indian Ocean basins and margins. (T. A. Davies, editor and others). v. 96, no. 1-2, April 1995. p. 131-156.
- OP-247. S. L. Eittreim, H. S. Gribidenko*, C. E. Helseley*, R. W. Sliter, D. M. Mann and Nikita Ragozin*. Oceanic crustal thickness and seismic character along a Central Pacific transect. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 2, February 10, 1994. p. 3139-3145.
- OP-248. R. M. Ellis*, B. C. Zelt*, R. M. Clowes*, E. R. Kanasevich*, Isa Asudeh*, J. H. Luetgert, G. D. Spence*, R. D. Hyndman*, Zoltan Hajnal* and Akira Ikami*. The 1989 southern Cordillera refraction program. Lithoprobe Report, *in* Project Lithoprobe; southern Canadian Cordillera transect workshop. (F. A. Cook, chairperson and others). 11, March 1990. p. 131-138.
- OP-249. W. L. Ellsworth and G. C. Beroza*. Seismic evidence for an earthquake nucleation phase. *Science*. v. 268, no. 5212, May 12, 1995. p. 851-855.
- OP-250. W. E. Elston* and G. S. Plumlee (editors). A special issue on volcanic centers as targets for mineral exploration. *Economic Geology and the Bulletin of the Society of Economic Geologists*. v. 89, no. 8, December 1994. p. 1661-2015.
- OP-251. W. E. Elston* and G. S. Plumlee (prefacers). A special issue on volcanic centers as targets for mineral exploration; preface. *Economic Geology and the Bulletin of the Society of Economic Geologists*, *in* A special issue on volcanic centers as targets for mineral exploration. (W. E. Elston, editor and others). v. 89, no. 8, December 1994. p. 1661.
- OP-252. E. R. Engdahl, R. D. van der Hilst* and Jesus Berrocal*. Imaging of subducted lithosphere beneath South America. *Geophysical Research Letters*, *in* June 9, 1994 Mw = 8.3 deep Bolivian earthquake. (T. C. Wallace, prefacer). v. 22, no. 16, August 15, 1995. p. 2317-2320.
- OP-253. J. A. Erdman, K. S. Smith, M. A. Dillon* and Maya ter Kuile*. COLORADO. Impact of Alamosa River water on

- alfalfa, southwestern San Luis Valley, Colorado. Special Publication - Colorado Geological Survey, *in* Proceedings; Summitville forum '95. (H. H. Posey, editor and others). Report no. 38, 1995. p. 263-271.
- OP-254. J. R. Evans, B. R. Julian, G. R. Foulger* and Alwyn Ross*. CALIFORNIA. Shear-wave splitting from local earthquakes at The Geysers geothermal field, California. *Geophysical Research Letters*. v. 22, no. 4, February 15, 1995. p. 501-504.
- OP-255. J. R. Evans and A. M. Pitt. CALIFORNIA. Reliable automatic detection of long-period volcanic earthquakes at Long Valley Caldera, California. *Bulletin of the Seismological Society of America*. v. 85, no. 5, October 1995. p. 1518-1522.
- OP-256. W. C. Evans, L. D. White, M. L. Tuttle, G. W. Kling*, Gregory Tanyileke* and R. L. Michel. Six years of change at Lake Nyos, Cameroon, yield clues to the past and cautions for the future. *Geochemical Journal, in Geochemistry of crater lakes*. (Minoru Kusakabe, prefacer). v. 28, no. 3, 1994. p. 139-162.
- OP-257. J. H. Eychaner. ARIZONA. Inorganic contaminants in acid water near Globe, Arizona. *Proceedings of the Arizona Hydrological Society Annual Symposium, in Proceedings; Arizona Hydrological Society third annual symposium; Survival in the desert; water quality and quantity issues into the 21st century*. 3, 1990. p. 242-252.
- OP-258. C. M. Falkner*, C. F. Miller*, J. L. Wooden and M. T. Heizler*. COLORADO. Petrogenesis and tectonic significance of the calc-alkaline, bimodal Aztec Wash Pluton, Eldorado Mountains, Colorado River extensional corridor. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 6, June 10, 1995. p. 10,453-10,476.
- OP-259. F. P. Fanale*, S. E. Postawko*, J. B. Pollack*, M. H. Carr and R. O. Pepin*. Mars; epochal climate change and volatile history, *in Mars*. (H. H. Kieffer, editor and others), *in the collection Space science series*. (Tom Gehrels, editor). Tucson, AZ: University of Arizona Press, 1992. p. 1135-179.
- OP-260. G. L. Farmer*, A. F. Glazner*, H. G. Wilshire, J. L. Wooden, W. J. Pickthorn and M. Katz*. CALIFORNIA. Origin of late Cenozoic basalts at the Cima volcanic field, Mojave Desert, California. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 5, May 10, 1995. p. 8399-8415.
- OP-261. C. D. Farrar, M. L. Sorey, W. C. Evans, J. F. Howle, B. D. Kerr, B. M. Kennedy*, Chi-Yu King and J. R. Southon*. CALIFORNIA. Forest-killing diffuse CO₂ emission at Mammoth Mountain as a sign of magmatic unrest. *Nature (London)*. v. 376, no. 6542, August 24, 1995. p. 675-678.
- OP-262. M. A. Fenoglio*, M. J. Johnston and J. D. Byerlee. CALIFORNIA. Magnetic and electric fields associated with changes in high pore pressure in fault zones; application to the Loma Prieta ULF emissions. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 7, July 10, 1995. p. 12,951-12,958.
- OP-263. M. L. Ferns*, J. G. Evans and M. L. Cummings*. OREGON, IDAHO. Geologic map of the Mahogany Mountain 30 x 60 Minute Quadrangle, Malheur County, Oregon, and Owyhee County, Idaho. *Geological Map Series (Portland)*. Report no. GMS-78, 1993. 12 p., 1 sheet.
- OP-264. O. J. Ferrians, Jr. ALASKA. Permafrost in Alaska, *in The geology of Alaska*. (George Plafker, editor and others), *in the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 845-854.
- OP-265. E. H. Field*, A. C. Clement*, K. H. Jacob*, Vigen Aharonian*, S. E. Hough, P. A. Friberg*, T. O. Babaian*, S. S. Karapetian*, S. M. Hovanessian* and A. A. Abramian*. Earthquake site response study in Giumri (formerly Leninakan), Armenia, using ambient noise observations. *Bulletin of the Seismological Society of America*. v. 85, no. 1, February 1995. p. 349-353.
- OP-266. J. E. Findley. Automating base sheet generation for digital map production at the U.S. Geological Survey. *Proceedings of the Annual ESRI User Conference, in Thirteenth annual ESRI user conference; proceedings*. 13, Vol. 2, 1993. p. 155-162.
- OP-267. R. B. Finkelman and J. C. Sarnecki*. SOUTH DAKOTA. Lignites of South Dakota; an overview, *in Geology and utilization of Fort Union lignites*. (R. B. Finkelman, editor and others). Reston, VA: Environ. Coal Assoc. 1992. p. 198-206.
- OP-268. R. B. Finkelman, S. J. Tewalt* and D. J. Daly* (editors). *Geology and utilization of Fort Union lignites*. Reston, VA: Environ. Coal Assoc. 1992. 359 p.
- OP-269. J. B. Finley*, J. I. Drever* and J. T. Turk. WYOMING. Sulfur isotope dynamics in a high-elevation catchment, West Glacier Lake, Wyoming. *Water, Air and Soil Pollution, in Biogeochemical monitoring in small catchments*. (Jiri Cerny, editor and others). v. 79, no. 1-4, January 1995. p. 227-241.
- OP-270. C. A. Finn. Aeromagnetic evidence for a buried Early Cretaceous magmatic arc, Northeast Japan. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 11, November 10, 1994. p. 22,165-22,185.
- OP-271. C. A. Finn, Gaku Kimura* and Kiyoshi Suyehiro*. Introduction to the special section Northeast Japan; a case history of subduction. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 11, November 10, 1994. p. 22,137-22,145.
- OP-272. E. E. Fischer. IOWA. Contraction scour at a bridge over the Iowa River. *Hydraulic Engineering: Proceedings of the National Conference on Hydraulic Engineering, in Hydraulic engineering '94*. (G. V. Cotroneo, editor and others). 1994, 1994. p. 31-35.
- OP-273. J. N. Fischer. Hydrogeology. *Geotimes*. v. 40, no. 2, February 1995. p. 34-35.
- OP-274. K. M. Fischer*, L. A. Salvati*, S. E. Hough, Edward Gonzalez*, C. E. Nelsen* and E. G. Roth*. RHODE ISLAND. Sediment-induced amplification in the northeastern United States; a case study in Providence, Rhode Island. *Bulletin of the Seismological Society of America*. v. 85, no. 5, October 1995. p. 1388-1397.
- OP-275. M. A. Fisher, H. G. Greene, E. L. Geist and Jean-Yves Collot*. Seismic stratigraphy of the North Aoba Basin, central New Hebrides island arc. *Proceedings of the Ocean Drilling Program, Scientific Results, in Proceedings of the Ocean Drilling Program, scientific results; Vanuatu, covering Leg 134 of the cruises of the drilling vessel JOIDES Resolution, Port of Townsville, Queensland, Australia, to Suva, Republic of Fiji, sites 827-*

- 833, 11 October-17 December 1990. (H. G. Greene and others). 134, October 1994. p. 59-69.
- OP-276. Michael Fleischer and J. A. Mandarino. The second list of additions and corrections to the Glossary of mineral species, 6th edition (1991). *The Mineralogical Record*. v. 24, no. 5, October 1993. p. 403-406.
- OP-277. J. B. Fletcher, L. M. Baker, Paul Spudich, Peter Goldstein, J. D. Sims and M. A. Hellweg. CALIFORNIA. The USGS Parkfield, California, dense seismography array; UPSAR. *Bulletin of the Seismological Society of America*. v. 82, no. 2, April 1992. p. 1041-1070.
- OP-278. R. M. Flores, C. W. Keighin and S. B. Roberts. WYOMING, MONTANA. Road log and general geology of the northwestern Powder River basin, Wyoming and Montana. Public Information Circular - Geological Survey of Wyoming, in *Organics and the Rockies; field guide*. (R. M. Flores, editor and others). Report no. 33, 1994. p. 149-152.
- OP-279. R. M. Flores, C. W. Keighin and S. B. Roberts. WYOMING. Road log and general geology of the Wind River basin, Wyoming. Public Information Circular - Geological Survey of Wyoming, in *Organics and the Rockies; field guide*. (R. M. Flores, editor and others). Report no. 33, 1994. p. 39-52.
- OP-280. R. M. Flores, C. W. Keighin and S. B. Roberts. WYOMING. Road log and general geology of the Bighorn Basin, Wyoming. Public Information Circular - Geological Survey of Wyoming, in *Organics and the Rockies; field guide*. (R. M. Flores, editor and others). Report no. 33, 1994. p. 109-123.
- OP-281. R. M. Flores, K. T. Mehring*, R. W. Jones* and T. L. Beck* (editors). *Organics and the Rockies; field guide*. Public Information Circular - Geological Survey of Wyoming. Report no. 33, 1994. 184 p.
- OP-282. R. M. Flores and T. A. Moore*. MONTANA. Mechanisms of splitting of the Anderson-Dietz coal bed in the Decker area, Montana; a synthesis. Public Information Circular - Geological Survey of Wyoming, in *Organics and the Rockies; field guide*. (R. M. Flores, editor and others). Report no. 33, 1994. p. 153-161.
- OP-283. R. M. Flores, S. B. Roberts and W. J. Perry, Jr. WYOMING. Paleocene paleogeography of the Wind River, Bighorn, and Powder River basins, Wyoming. Public Information Circular - Geological Survey of Wyoming, in *Organics and the Rockies; field guide*. (R. M. Flores, editor and others). Report no. 33, 1994. p. 1-16.
- OP-284. N. K. Foley and R. A. Ayuso. COLORADO. Lead isotope compositions as guides to early gold mineralizations; the North Amethyst vein system, Creede District, Colorado. *Economic Geology and the Bulletin of the Society of Economic Geologists*, in *A special issue on volcanic centers as targets for mineral exploration*. (W. E. Elston, editor and others). v. 89, no. 8, December 1994. p. 1842-1859.
- OP-285. D. W. Folger, S. M. Colman and P. W. Barnes (editors). The southern Lake Michigan coastal erosion study. *Journal of Great Lakes Research*. v. 20, no. 1, 1994. 326 p.
- OP-286. D. W. Folger, S. M. Colman and P. W. Barnes. Overview of the southern Lake Michigan coastal erosion study. *Journal of Great Lakes Research*, in *The southern Lake Michigan coastal erosion study*. (D. W. Folger, editor and others). v. 20, no. 1, 1994. p. 2-8.
- OP-287. E. E. Foord, S. D. Birmingham*, Francesco Demartin*, Tullio Pilati*, C. M. Gramaccioli and F. E. Lichte*. MONTANA. Thortveitite and associated Sc-bearing minerals from Ravalli County, Montana. *The Canadian Mineralogist*. 31, Part 2, June 1993. p. 337-346.
- OP-288. E. E. Foord, William Chirnside, A. M. Davis*, F. E. Lichte and K. J. Esposito. UTAH. A new U-Ti-Ca-HREE hydrated oxide and associated niobian rutile from Topaz Valley, Utah. *The Mineralogical Record*. v. 26, no. 2, April 1995. p. 123-128.
- OP-289. E. E. Foord, William Chirnside, F. E. Lichte and P. H. Briggs. UTAH. Pink topaz from the Thomas Range, Juab County, Utah. *The Mineralogical Record*. v. 26, no. 1, February 1995. p. 57-60.
- OP-290. M. P. Foose and J. M. McLelland*. NEW YORK, NEW JERSEY. Proterozoic low-Ti iron-oxide deposits in New York and New Jersey; relation to Fe-oxide (Cu-U-Au-rare earth element) deposits and tectonic implications. *Geology (Boulder)*. v. 23, no. 7, July 1995. p. 665-668.
- OP-291. E. R. Force, W. R. Dickinson* and J. T. Hagstrum. ARIZONA. Tilting history of the San Manuel-Kalamazoo porphyry system, southeastern Arizona. *Economic Geology and the Bulletin of the Society of Economic Geologists*. v. 90, no. 1, February 1995. p. 67-80.
- OP-292. R. M. Forester, S. M. Colman, R. L. Reynolds and L. D. Keigwin*. Lake Michigan's late Quaternary limnological and climate history from ostracode, oxygen isotope, and magnetic susceptibility. *Journal of Great Lakes Research*, in *The southern Lake Michigan coastal erosion study*. (D. W. Folger, editor and others). v. 20, no. 1, 1994. p. 93-107.
- OP-293. A. M. Forte*, J. X. Mitrovica* and R. L. Woodward. Seismic-geodynamic determination of the origin of excess ellipticity of the core-mantle boundary. *Geophysical Research Letters*. v. 22, no. 9, May 1, 1995. p. 1013-1016.
- OP-294. A. M. Forte*, R. L. Woodward and A. M. Dziewonski*. Joint inversion of seismic and geodynamic data for models of three-dimensional mantle heterogeneity. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 11, November 10, 1994. p. 21,857-21,877.
- OP-295. D. S. Foster and D. W. Folger. The geologic framework of southern Lake Michigan. *Journal of Great Lakes Research*, in *The southern Lake Michigan coastal erosion study*. (D. W. Folger, editor and others). v. 20, no. 1, 1994. p. 44-60.
- OP-296. H. L. Foster, T. E. Keith and W. D. Menzie. ALASKA. Geology of the Yukon-Tanana area of East-Central Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 205-240.
- OP-297. T. D. Fouch, V. F. Nuccio, D. E. Anders, D. D. Rice, J. K. Pitman and R. F. Mast. UTAH. Green River(!) petroleum system, Uinta Basin, Utah, U.S.A. *AAPG Memoir*, in *The*

- petroleum system; from source to trap. (L. B. Magoon, III, editor and others). 60, 1994. p. 399-421.
- OP-298. G. R. Foulger*, A. D. Miller*, B. R. Julian and J. R. Evans. Three-dimensional v_p and v_p/v_s structure of the Hengill triple junction and geothermal area, Iceland, and the repeatability of tomographic inversion. *Geophysical Research Letters*. v. 22, no. 10, May 15, 1995. p. 1309-1312.
- OP-299. R. O. Fournier. CALIFORNIA. Geothermal setting of The Geysers steam field, Northern California. Guidebook Series, in *Active geothermal systems and gold-mercury deposits in the Sonoma-Clear Lake volcanic fields, California*. (J. J. Rytuba, editor). 16, October 1993. p. 124-130.
- OP-300. R. O. Fournier, B. M. Kennedy*, Masahiro Aoki* and J. M. Thompson. WYOMING. Correlation of gold in siliceous sinters with $^3\text{He}/^4\text{He}$ in hot spring waters of Yellowstone National Park. *Geochimica et Cosmochimica Acta*. v. 58, no. 24, December 1994. p. 5401-5419.
- OP-301. Arthur Frankel. CALIFORNIA. Simulating strong motions of large earthquakes using recordings of small earthquakes; the Loma Prieta mainshock as a test case. *Bulletin of the Seismological Society of America*. v. 85, no. 4, August 1995. p. 1144-1160.
- OP-302. Irving Friedman. WYOMING, MONTANA. Effect of potential geothermal development on the thermal features of Yellowstone National Park; Part 1, Perspective 3; Possible effect of nearby geothermal development on Yellowstone National Park. *GSA Today*. v. 4, no. 12, December 1994. p. 297-299.
- OP-303. J. D. Friedman, J. E. Conrad, E. H. McKee, F. E. Mutschler* and R. E. Zartman. NEW YORK. Possible Mesozoic age of Ellenville Zn-Pb-Cu(Ag) deposit, Shawangunk Mountains, New York. *Mineralium Deposita*. v. 29, no. 6, December 1994. p. 474-487.
- OP-304. G. S. Fuis, A. R. Levander*, W. J. Lutter, E. S. Wissinger*, T. E. Moore and N. I. Christensen*. ALASKA. Seismic images of the Brooks Range, Arctic Alaska, reveal crustal-scale duplexing. *Geology (Boulder)*. v. 23, no. 1, January 1995. p. 65-68.
- OP-305. L. R. Gaddis. CALIFORNIA. Evaluation of an empirical radar backscatter model for predicting backscatter characteristics of geologic units at Pissgah volcanic field, California. *Geophysical Research Letters*. v. 21, no. 17, August 15, 1994. p. 1803-1806.
- OP-306. J. E. Gair. The Blue Ridge massive-sulfide model, in *Exploration for metallic resources in the Southeast*. (G. O. Allard, convener and others). Athens, GA: University of Georgia, 1982. p. 41-43.
- OP-307. M. O. Garcia*, J. M. Rhodes*, E. W. Wolfe, G. E. Ulrich* and R. A. Ho*. HAWAII. Petrology of lavas from episodes 2-47 of the Puu Oo eruption of Kilauea Volcano, Hawaii; evaluation of magmatic processes. *Bulletin of Volcanology*. v. 55, no. 1-2, December 1992. p. 1-16.
- OP-308. G. E. Gehrels*, W. R. Dickinson*, G. M. Ross*, J. H. Stewart and D. G. Howell. Detrital zircon reference for Cambrian to Triassic miogeoclinal strata of western North America. *Geology (Boulder)*. v. 23, no. 9, September 1995. p. 831-834.
- OP-309. D. J. Geist*, K. A. Howard and P. B. Larson*. The generation of oceanic rhyolites by crystal fractionation; the basalt-rhyolite association at Volcán Alcedo, Galápagos Archipelago. *Journal of Petrology*. v. 36, no. 4, August 1995. p. 965-982.
- OP-310. A. C. Gellis. PUERTO RICO. The effects of Hurricane Hugo on suspended-sediment loads, Lago Loiza Basin, Puerto Rico. *Earth Surface Processes and Landforms*. v. 18, no. 6, September 1993. p. 505-517.
- OP-311. J. F. Genise* and T. M. Bown. Francisco Lucas Roselli (1902-1987); homage to "Don Lucas". *Ichnos (Chur, Switzerland)*. v. 3, no. 4, 1995. p. 311-312.
- OP-312. K. P. Georgakakos*, Deg-Hyo Bae* and D. R. Cayan. Hydroclimatology of continental watersheds; 1, Temporal analysis. *Water Resources Research*. v. 31, no. 3, March 1995. p. 655-675.
- OP-313. M. E. Gerber*, C. F. Miller* and J. L. Wooden. CALIFORNIA. Plutonism at the interior margin of the Jurassic magmatic arc, Mojave Desert, California. Special Paper - Geological Society of America, in *Jurassic magmatism and tectonics of the North American Cordillera*. (D. M. Miller, editor and others). 299, 1995. p. 351-374.
- OP-314. T. M. Gerlach. Thermodynamic evaluation and restoration of volcanic gas analyses; an example based on modern collection and analytical methods. *Geochemical Journal*, in *Matsuo memorial issue; magmatic volatiles and volcanic discharges*. (Minoru Kusakabe, prefacer and others). v. 27, no. 4-5, 1993. p. 305-322.
- OP-315. T. M. Gerlach and K. A. McGee. WASHINGTON. Total sulfur dioxide emissions and pre-eruption vapor-saturated magma at Mount St. Helens. *Geophysical Research Letters*. v. 21, no. 25, December 15, 1994. p. 2833-2836.
- OP-316. Ali Gharbi*, R. C. Peralta* and K. M. Waddell. Modelling for potentiometric surface management of multilayer aquifer systems. International Summer Meeting - American Society of Agricultural Engineers, in *American Society of Agricultural Engineers, 1990 international summer meeting*. 1990, June 1990 variously paginated.
- OP-317. Jacob Gibbs, T. E. Imbrigiotta, J. H. Ficken, J. F. Pankow* and M. E. Rosen*. Effects of sample isolation and handling on the recovery of purgeable organic compounds. *Ground Water Monitoring & Remediation*. v. 14, no. 2, 1994. p. 142-152.
- OP-318. T. H. Giordano* and Y. K. Kharaka. Organic ligand distribution and speciation in sedimentary basin brines, diagenetic fluids and related ore solutions. *Geological Society Special Publications*, in *Geofluids; origin, migration and evolution of fluids in sedimentary basins*. (John Parnell, editor). 78, 1994. p. 175-202.
- OP-319. G. H. Girty*, R. E. Hanson*, M. S. Girty*, R. A. Schweickert*, D. S. Harwood, A. S. Yoshinobu*, K. A. Bryan*, J. E. Skinner* and C. A. Hill*. CALIFORNIA. Timing of emplacement of the Haypress Creek and Emigrant Gap plutons; implications for the timing and controls of Jurassic orogenesis, northern Sierra Nevada, California. Special Paper - Geological Society of America, in *Jurassic magmatism and tectonics*

- of the North American Cordillera. (D. M. Miller, editor and others). 299, 1995. p. 191-202.
- OP-320. M. T. Gladwin*, R. L. Gwyther*, R. H. Hart* and K. S. Breckenridge. CALIFORNIA. Measurements of the strain field associated with episodic creep events on the San Andreas Fault at San Juan Bautista, California. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 3, March 10, 1994. p. 4559-4565.
- OP-321. J. D. Gleason*, C. F. Miller, J. L. Wooden* and V. C. Bennett*. CALIFORNIA. Petrogenesis of the highly potassic 1.42 Ga Barrel Spring Pluton, southeastern California, with implications for mid-Proterozoic magma genesis in the Southwestern USA. *Contributions to Mineralogy and Petrology*. v. 118, no. 2, November 1994. p. 182-197.
- OP-322. B. F. Goff*, G. C. Bent and G. E. Hart*. Influence of rainfall intensity on the interrill erodibility of two rangeland soils. *Transactions of the ASAE*. v. 37, no. 5, October 1994. p. 1445-1448.
- OP-323. Peter Goldstein* and B. A. Chouet. HAWAII. Array measurements and modeling sources of shallow volcanic tremors at Kilauea Volcano, Hawaii. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 2, February 10, 1994. p. 2637-2652.
- OP-324. J. S. Gombert. Seismic networks; the basics of why, how, and what we learn from them. *Monografias - Instituto Geográfico Nacional*. 11, 1995. p. 9-62.
- OP-325. J. S. Gombert, P. A. Bodin*, W. Z. Savage and M. E. Jackson*. COLORADO. Landslide faults and tectonic faults, analogs?; the Slumgullion earthflow, Colorado. *Geology (Boulder)*. v. 23, no. 1, January 1995. p. 41-44.
- OP-326. M. F. Goodchild*, B. O. Parks* and L. T. Steyaert (editors). *Environmental modeling with GIS*. New York, NY: Oxford University Press, 1993. 488 p.
- OP-327. L. C. Gordon. How do we improve earth science education? Perspective 2, Problems and solutions in earth science education; a geologist-as-resource-person's perspective. *GSA Today*. v. 2, no. 4, April 1992. p. 75-76.
- OP-329. L. P. Gough, T. M. Yanosky, F. E. Lichte and L. S. Balistrieri. COLORADO. Preliminary interpretation of spatial and temporal trends in the chemistry of tree rings downstream from the Summitville Mine. *Special Publication - Colorado Geological Survey, in Proceedings; Summitville forum '95*. (H. H. Posey, editor and others). Report no. 38, 1995. p. 236-243.
- OP-329. L. P. Gough, T. M. Yanosky, F. E. Lichte and L. S. Balistrieri. COLORADO. Preliminary interpretation of spatial and temporal trends in the chemistry of tree rings downstream from the Summitville Mine. *Special Publication - Colorado Geological Survey, in Proceedings; Summitville forum '95*. (H. H. Posey, editor and others). Report no. 38, 1995. p. 236-243.
- OP-330. Arthur Grantz, S. D. May and P. E. Hart. ALASKA. Geology of Arctic continental margin of Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 17-48.
- OP-331. V. J. Grauch, R. C. Jachens and R. J. Blakely. NEVADA. Evidence for a basement feature related to the Cortez disseminated gold trend and implications for regional exploration in Nevada. *Economic Geology and the Bulletin of the Society of Economic Geologists*. v. 90, no. 1, February 1995. p. 203-207.
- OP-332. J. E. Gray. Exploration geochemistry. *Geotimes*. v. 40, no. 2, February 1995. p. 32-33.
- OP-333. J. E. Gray and M. F. Coolbaugh*. COLORADO. Geology and geochemistry of Summitville, Colorado; an epithermal acid sulfate deposit in a volcanic dome. *Economic Geology and the Bulletin of the Society of Economic Geologists, in A special issue on volcanic centers as targets for mineral exploration*. (W. E. Elston, editor and others). v. 89, no. 8, December 1994. p. 1906-1923.
- OP-334. J. E. Gray, M. F. Coolbaugh*, G. S. Plumlee and W. W. Atkinson*. COLORADO. Environmental geology of the Summitville Mine, Colorado. *Economic Geology and the Bulletin of the Society of Economic Geologists, in A special issue on volcanic centers as targets for mineral exploration*. (W. E. Elston, editor and others). v. 89, no. 8, December 1994. p. 2006-2015.
- OP-335. J. R. Gray and G. G. Fisk. ARIZONA, NEW MEXICO. Monitoring radionuclide and suspended-sediment transport in the Little Colorado River basin, Arizona and New Mexico, USA. *IAHS-AISH Publication, in Erosion and sediment transport monitoring programmes in river basins*. (Jim Bogen and others). 210, 1992. p. 505-516.
- OP-336. H. G. Greene and Jean-Yves Collot*. Ridge-arc collision; timing and deformation determined by Leg 134 drilling, central New Hebrides island arc. *Proceedings of the Ocean Drilling Program, Scientific Results, in Proceedings of the Ocean Drilling Program, scientific results; Vanuatu, covering Leg 134 of the cruises of the drilling vessel JOIDES Resolution, Port of Townsville, Queensland, Australia, to Suva, Republic of Fiji, sites 827-833, 11 October-17 December 1990*. (H. G. Greene and others). 134, October 1994. p. 609-621.
- OP-337. H. G. Greene, Jean-Yves Collot*, M. A. Fisher and A. J. Crawford*. Neogene tectonic evolution of the New Hebrides island arc; a review incorporating ODP drilling results. *Proceedings of the Ocean Drilling Program, Scientific Results, in Proceedings of the Ocean Drilling Program, scientific results; Vanuatu, covering Leg 134 of the cruises of the drilling vessel JOIDES Resolution, Port of Townsville, Queensland, Australia, to Suva, Republic of Fiji, sites 827-833, 11 October-17 December 1990*. (H. G. Greene and others). 134, October 1994. p. 19-46.
- OP-338. H. G. Greene, Jean-Yves Collot*, L. B. Stokking*, Kazumi Akimoto*, M. V. Ask*, P. E. Baker*, Louis Briquieu*, T. J. Chabernaud*, Massimo Coltorti*, M. A. Fisher, M. R. Collins*, Toshiaki Hasenaka*, M. A. Hobart*, Anton Krammer*, J. N. Leonard*, J. B. Martin*, J. I. Rodriguez*, Stefan Menger*, Martin Meschede*, Bernard Pelletier*, R. C. Perembo*, T. M. Quinn*, R. P. Reid*, W. R. Riedel*, Pierrick Roperch*, T. S. Staerker*, F. W. Taylor*, Xixi Zhao* and C. O. Fox*. *Proceedings of the Ocean Drilling Program, scientific results; Vanuatu, covering Leg 134 of the cruises of the drilling vessel JOIDES Resolution, Port of Townsville, Queensland, Australia, to Suva, Republic of Fiji, sites 827-833, 11 October-17*

- December 1990. Proceedings of the Ocean Drilling Program, Scientific Results. 134, October 1994. 665 p.
- OP-339. C. W. Greve, J. A. Kelmelis, R. G. Fegeas, S. C. Gupta and N. M. Mouat. Investigating U.S. Geological Survey needs for the management of temporal GIS data. *Photogrammetric Engineering and Remote Sensing*. v. 59, no. 10, October 1993. p. 1503-1507.
- OP-340. D. J. Grimes, W. H. Ficklin, A. L. Meier and J. B. McHugh. NEVADA. Anomalous gold, antimony, arsenic, and tungsten in ground water and alluvium around disseminated gold deposits along the Getchell Trend, Humboldt County, Nevada. *Journal of Geochemical Exploration*. v. 52, no. 3, February 1995. p. 351-371.
- OP-341. Andrew Griscom, R. C. Jachens, P. F. Halvorson and R. J. Blakely. CALIFORNIA. Regional geophysical setting of gold deposits in the Clear Lake region, California. Guidebook Series, in *Active geothermal systems and gold-mercury deposits in the Sonoma-Clear Lake volcanic fields, California*. (J. J. Rytuba, editor). 16, October 1993. p. 289-311.
- OP-342. Andrew Griscom and P. E. Sauer. ALASKA. Aeromagnetic maps of Annette Island, Alaska, in *Special symposium 1993 on Economic mineral resources of the Annette Islands Reserve, Alaska*. (S. A. Manydeeds, chairperson). Spokane, WA: Northwest Mining Association, 1993. p. 33-42.
- OP-343. B. F. Grossling. Medium term perspectives of the world's oil market, in *The world's present energy situation and perspectives*. (Margarita Serrano Z., editor and others). Pemex, 1988. p. 23-26.
- OP-344. A. E. Grosz. GEORGIA. Mineralogy and heavy-mineral resource potential of surficial sediments on the Atlantic continental shelf offshore of Georgia. Project Report - Georgia Geological Survey. Report no. 19, 1993. 31 p.
- OP-345. A. P. Gubanov*, R. B. Blodgett and V. N. Lytochkin*. Early Devonian (Pragian) gastropods from Kyrgyzstan (central Asia). *Journal of Paleontology*. v. 69, no. 3, May 1995. p. 431-440.
- OP-346. M. E. Gurtz. Design considerations for biological components of the National Water-Quality Assessment (NAWQA) Program, in *Biological monitoring of aquatic systems*. (S. L. Loeb, editor and others). Boca Raton, FL: Lewis Publishers, 1993. p. 323-354.
- OP-347. J. S. Haase*, Egill Hauksson*, Hiroo Kanamori* and J. J. Mori. CALIFORNIA. Global Positioning System resurvey of Southern California seismic network stations. *Bulletin of the Seismological Society of America*. v. 85, no. 1, February 1995. p. 361-374.
- OP-348. B. R. Hacker*, M. M. Donato, C. G. Barnes*, M. O. McWilliams* and W. G. Ernst*. Timescales of orogeny; Jurassic construction of the Klamath Mountains. *Tectonics*. v. 14, no. 3, June 1995. p. 677-703.
- OP-349. P. J. Haeussler, D. C. Bradley, R. J. Goldfarb, L. W. Snee and C. D. Taylor. ALASKA. Link between ridge subduction and gold mineralization in Southern Alaska. *Geology* (Boulder). v. 23, no. 11, November 1995. p. 995-998.
- OP-350. J. T. Hagstrum. ARIZONA. Remagnetization of Jurassic volcanic rocks in the Santa Rita and Patagonia Mountains, Arizona; implications for North American apparent polar wander. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 8, August 10, 1994. p. 15,103-15,113.
- OP-351. J. T. Hagstrum and D. E. Champion. HAWAII. Paleomagnetic correlation of late Quaternary lava flows in the lower East Rift Zone of Kilauea Volcano, Hawaii. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 11, November 10, 1994. p. 21,679-21,690.
- OP-352. J. T. Hagstrum, P. W. Lipman and R. B. Moore. ARIZONA. Late Cretaceous paleomagnetism of the Tombstone District and vicinity; evidence for a rotational domain boundary in southeastern Arizona. *Tectonics*. v. 13, no. 5, October 1994. p. 1295-1308.
- OP-353. J. T. Hagstrum, P. W. Lipman and D. A. Sawyer. ARIZONA. Paleomagnetism, stratigraphy, and petrology of the Upper Cretaceous Roskrige Volcanics at Bell Mountain, Southeast Arizona. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 8, August 10, 1994. p. 15,097-15,102.
- OP-354. D. W. Hall and D. W. Risser. PENNSYLVANIA. Effects of agricultural nutrient management on nitrogen fate and transport in Lancaster County, Pennsylvania. *Water Resources Bulletin*. v. 29, no. 1, February 1993. p. 55-76.
- OP-355. R. D. Hall* and R. R. Shroba. WYOMING. Soil evidence for a glaciation intermediate between the Bull Lake and Pinedale glaciations at Fremont Lake, Wind River Range, Wyoming, U.S.A. *Arctic and Alpine Research*. v. 27, no. 1, February 1995. p. 89-98.
- OP-356. P. A. Hamilton, A. H. Welch, S. C. Christenson and W. M. Alley. Uses and limitations of existing ground-water-quality data, in *Regional ground-water quality*. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 613-622.
- OP-357. T. D. Hamilton. ALASKA. Late Cenozoic glaciation of Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in the collection *The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 813-844.
- OP-358. T. C. Hanks and A. C. Johnston*. Common features of the excitation and propagation of strong ground motion for North American earthquakes. *Bulletin of the Seismological Society of America*. v. 82, no. 1, February 1992. p. 1-23.
- OP-359. D. S. Hansen. SOUTH DAKOTA. Major aquifers in Codington and Grant counties, South Dakota. Information Pamphlet - South Dakota Geological Survey. Report no. 47, 1994. 16 p.
- OP-360. V. L. Hansen*, D. H. Oliver*, Cynthia Dusel-Bacon, S. T. Johnston* and Philippe Erdmer*. Hot-side-up aureole in Southwest Yukon and limits on terrane assembly of the northern Canadian Cordillera; discussion and reply. *Geology* (Boulder). v. 23, no. 12, December 1995. p. 1151-1152.
- OP-361. W. P. Harbert*, J. W. Hillhouse and T. L. Vallier. OREGON. Paleomagnetism of the Permian Willamette Terrane; implications for terrane migration and orogeny. *Journal of Geo-*

- physical Research, B, Solid Earth and Planets. v. 100, no. 7, July 10, 1995. p. 12,573-12,588.
- OP-362. R. B. Hargraves*, K. S. Kellogg, P. S. Fiske* and S. B. Hougen*. MONTANA. Allochthonous impact-shocked rocks and superimposed deformations at the Beaverhead site in Southwest Montana. Special Paper - Geological Society of America, in *Large meteorite impacts and planetary evolution*. (B. O. Dressler, editor and others). 293, 1994. p. 225-235.
- OP-363. S. S. Harlan, J. W. Geissman*, C. D. Henry* and T. C. Onstott*. TEXAS. Paleomagnetism and $^{40}\text{Ar}/^{39}\text{Ar}$ geochronology of gabbro sills at Mariscal Mountain Anticline, southern Big Bend National Park, Texas; implications for the timing of Laramide tectonism and vertical axis rotations in the southern Cordilleran orogenic belt. *Tectonics*. v. 14, no. 2, April 1995. p. 307-321.
- OP-364. S. S. Harlan, L. W. Snee, J. W. Geissman* and A. J. Brearley*. WYOMING, COLORADO. Paleomagnetism of the middle Proterozoic Laramie anorthosite complex and Sherman Granite, southern Laramie Range, Wyoming and Colorado. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 9, September 10, 1994. p. 17,997-18,020.
- OP-365. S. C. Harmsen. NEVADA. The Little Skull Mountain, Nevada, earthquake of 29 June 1992; aftershock focal mechanisms and tectonic stress field implications. *Bulletin of the Seismological Society of America*. v. 84, no. 5, October 1994. p. 1484-1505.
- OP-366. E. L. Harp and R. W. Jibson. Seismic instrumentation of landslides; building a better model of dynamic landslide behavior. *Bulletin of the Seismological Society of America*. v. 85, no. 1, February 1995. p. 93-99.
- OP-367. E. L. Harp and T. L. Youd*. Landslides. Earthquake Spectra, in *Hokkaido-Nansei-Oki earthquake and tsunami of July 12, 1993; reconnaissance report*. (R. M. Chung, editor). 11, Suppl. A, April 1995. p. 41-48.
- OP-368. C. D. Harrington*, J. W. Whitney, R. I. Dorn*, P. R. Bierman* and A. R. Gillespie*. Evidence suggesting that methods of rock-varnish cation-ratio dating are neither comparable nor consistently reliable; discussions and reply. *Quaternary Research* (New York). v. 43, no. 2, March 1995. p. 268-276.
- OP-369. A. G. Harris, C. B. Rexroad*, R. T. Lierman* and R. A. Askin*. INDIANA. Evaluation of a CAI anomaly, Putnam County, central Indiana, U.S.A.; possibility of a mississippi valley-type hydrothermal system. CFS. Courier Forschungsinstitut Senckenberg, in *1st international Senckenberg conference and 5th European conodont symposium (ECOS V); Contribution IV, Papers on conodonts and Ordovician to Triassic conodont stratigraphy*. (Willi Ziegler, editor). 118, 1990. p. 253-266.
- OP-370. A. G. Harris, D. J. Weary and J. E. Repetski. TENNESSEE. Conodont distribution in uppermost Ordovician through Lower Devonian rocks, du Pont geohydrological survey well, near Waverly, Humphreys County, Tennessee. *Studies in Geology* (Knoxville), in *Upper Silurian-Lower Devonian biotas and paleoenvironments of the western Tennessee shelf*. (T. W. Broadhead, editor and others). 25, April 1995. p. 23-27.
- OP-371. R. A. Harris, R. W. Simpson and P. A. Reasenberg. CALIFORNIA. Influence of static stress changes on earthquake locations in Southern California. *Nature* (London). v. 375, no. 6528, May 18, 1995. p. 221-224.
- OP-372. J. B. Hartung*, M. J. Kunk and R. R. Anderson*. IOWA. Geology, geophysics, and geochronology of the Manson impact structure. Special Paper - Geological Society of America, in *Global catastrophes in Earth history; an interdisciplinary conference on impacts, volcanism, and mass mortality*. (V. L. Sharpton, editor and others). 247, 1990. p. 207-221.
- OP-373. S. H. Hartzell, D. L. Carver and K. W. King. CALIFORNIA. Initial investigation of site and topographic effects at Robinwood Ridge, California. *Bulletin of the Seismological Society of America*. v. 84, no. 5, October 1994. p. 1336-1349.
- OP-374. S. H. Hartzell, C. J. Langer and Carlos Mendoza. Rupture histories of eastern North American earthquakes. *Bulletin of the Seismological Society of America*. v. 85, no. 6, December 1994. p. 1703-1724.
- OP-375. S. H. Hartzell and Liu Pengcheng*. Determination of earthquake source parameters using a hybrid global search algorithm. *Bulletin of the Seismological Society of America*. v. 85, no. 2, April 1995. p. 516-524.
- OP-376. J. W. Harvey and W. K. Nuttle*. Fluxes of water and solute in a coastal wetland sediment; 2, Effect of macropores on solute exchange with surface water. *Journal of Hydrology*. v. 164, no. 1-4, January 1995. p. 109-125.
- OP-377. R. W. Harvey and E. J. Bouwer*. Limits on quantitative descriptions of biocolloid mobility in contaminated ground water, in *Manipulation of groundwater colloids for environmental restoration*. (J. F. McCarthy, editor and others). Boca Raton, FL: Lewis Publishers, 1993. p. 57-64.
- OP-378. H. T. Haselton, Jr., G. L. Cygan and D. M. Jenkins*. Experimental study of muscovite stability in pure H_2O and 1 molal KCl-HCl solutions. *Geochimica et Cosmochimica Acta*. v. 59, no. 3, February 1995. p. 429-442.
- OP-379. S. T. Hasiotis* and R. F. Dubiel. NEW MEXICO. Crayfish burrows and their paleohydrological significance; Upper Triassic Chinle Formation, Fort Wingate, New Mexico. *Bulletin of the New Mexico Museum of Natural History and Science, in The nonmarine Triassic*. (S. G. Lucas, editor and others). 3, October 1993. p. G24-G26.
- OP-380. S. T. Hasiotis* and R. F. Dubiel. ARIZONA. Continental trace fossils of the Upper Triassic Chinle Formation, Petrified Forest National Park, Arizona. *Bulletin of the New Mexico Museum of Natural History and Science, in The nonmarine Triassic*. (S. G. Lucas, editor and others). 3, October 1993. p. 175-178.
- OP-381. S. T. Hasiotis* and R. F. Dubiel. ARIZONA. Trace fossil assemblages in Chinle Formation alluvial deposits at the Tepees, Petrified Forest National Park, Arizona. *Bulletin of the New Mexico Museum of Natural History and Science, in The nonmarine Triassic*. (S. G. Lucas, editor and others). 3, October 1993. p. G42-G43.
- OP-382. S. T. Hasiotis* and R. F. Dubiel. Ichnofossil tiering in Triassic alluvial Paleosols; implications for Pangean continental rocks and paleoclimate. *Memoir - Canadian Society of Petroleum*

- Geologists, *in* Pangea; global environments and resources. (A. F. Embry, editor and others). 17, December 1994. p. 311-317.
- OP-383. Egill Hauksson*, L. M. Jones and L. K. Hutton*. CALIFORNIA. The 1994 Northridge earthquake sequence in California; seismological and tectonic aspects. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 7, July 10, 1995. p. 12,335-12,355.
- OP-384. L. E. Hay, W. A. Battaglin, R. S. Parker and G. H. Leavesley. COLORADO. Modelling the effects of climate change on water resources in the Gunnison River basin, Colorado, *in* Environmental modeling with GIS. (M. F. Goodchild, editor and others). New York, NY: Oxford University Press, 1993. p. 173-181.
- OP-385. D. O. Hayba and C. M. Bethke*. CALIFORNIA. Timing and velocity of petroleum migration in the Los Angeles Basin. *Journal of Geology*. v. 103, no. 1, January 1995. p. 33-49.
- OP-386. J. T. Haynes*, W. G. Melson* and M. J. Kunk. ALABAMA. Composition of biotite phenocrysts in Ordovician tephra casts doubt on the proposed trans-Atlantic correlation of the Millbrig K-bentonite (United States) and the Kinnekulle K-bentonite (Sweden). *Geology (Boulder)*. v. 23, no. 9, September 1995. p. 847-850.
- OP-387. J. L. Hayob*, S. R. Bohlen and E. J. Essene*. Experimental investigation and application of the equilibrium rutile+orthopyroxene = quartz+ilmenite. *Contributions to Mineralogy and Petrology*. v. 115, no. 1, October 1993. p. 18-35.
- OP-388. R. W. Healy and T. F. Russell*. Solution of the advection dispersion equation by a finite-volume Eulerian-Lagrangian local adjoint method. *Proceedings of the International Conference on Computational Methods in Water Resources, in* Numerical methods in water resources. (T. F. Russell, editor and others). 9, Vol. 1, 1992. p. 33-39.
- OP-389. T. H. Heaton, J. F. Hall*, D. J. Wald and M. J. Halling*. Response of high-rise and base-isolated buildings to a hypothetical Mw 7.0 blind thrust earthquake. *Science*. v. 267, no. 5195, January 13, 1995. p. 206-211.
- OP-390. Roger Hekinian*, Peter Stoffers*, Dietrich Akermand*, Nicolas Binard, J. M. Francheteau*, C. W. Devey* and Dieter Garbe-Schönberg*. Magmatic evolution of the Easter Microplate-Crough Seamount region (South East Pacific). *Marine Geophysical Researches*. v. 17, no. 4, August 1995. p. 375-397.
- OP-391. C. C. Heliker. WASHINGTON. Inclusions in Mount St. Helens dacite erupted from 1980 through 1983. *Journal of Volcanology and Geothermal Research, in* Models of magmatic processes and volcanic eruptions. (Yoshiaki Ida, editor and others). v. 66, no. 1-4, July 1995. p. 115-135.
- OP-392. M. A. Hellweg, Dieter Siedl*, K. S. Brotopuspito*, Wolfgang Brüstle*, Fadel Abdulrahman*, Imam Suyanto*, B. E. Nurcahya*, A. L. Brodscholl*, Adi Susilo*, Johannes Schweitzer* and Horst Rademacher*. Team investigates activity at Mt. Semeru, Java, volcano. *Eos, Transactions, American Geophysical Union*. v. 75, no. 28, July 12, 1994. p. 313-315, 317.
- OP-393. M. A. Hellweg, Paul Spudich, J. B. Fletcher and L. M. Baker. CALIFORNIA. Stability of coda Q in the region of Parkfield, California; view from the U.S. Geological Survey Parkfield dense seismograph array. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 2, February 10, 1995. p. 2089-2102.
- OP-394. D. C. Helm. Horizontal aquifer movement in a Theis-Thiem confined system. *Water Resources Research*. v. 30, no. 4, April 1994. p. 953-964.
- OP-395. Eileen Hemphill-Haley. WASHINGTON. Diatom evidence for earthquake-induced subsidence and tsunami 300 yr ago in southern coastal Washington. *Geological Society of America Bulletin*. v. 107, no. 3, March 1995. p. 367-378.
- OP-396. Arnaud Héquett*, Marc Desrosiers* and P. W. Barnes. Sea ice scouring on the inner shelf of the southeastern Canadian Beaufort Sea. *Marine Geology*. v. 128, no. 3-4, 1995. p. 201-219.
- OP-397. Emilio Herrero-Bervera*, C. E. Helsley*, A. M. Sarna-Wojcicki, K. R. Lajoie, C. E. Meyer, M. O. McWilliams*, R. M. Negrini*, B. D. Turrin, J. M. Donnelly-Nolan and J. C. Liddicoat*. Age and correlation of a paleomagnetic episode in the Western United States by $^{40}\text{Ar}/^{39}\text{Ar}$ dating and tephrochronology; the Jamaica, Blake, or a new polarity episode?. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 12, December 10, 1994. p. 24,091-24,103.
- OP-398. J. R. Herring and F. T. Manheim. GEORGIA. Chemistry of the TACTS cores. Project Report - Georgia Geologic Survey, *in* Geology, stratigraphic relationships, and chemical composition of phosphatic drill cores (TACTS boreholes) from the continental shelf off Georgia. (F. T. Manheim, editor). Report no. 17, 1992. p. 101-122.
- OP-399. J. R. Herring, F. T. Manheim, K. M. Farrell*, P. F. Huddleston* and B. H. Bretz. GEORGIA. Size analysis, visual estimation of phosphate and other minerals, and preliminary estimation of recoverable phosphate in size fractions of sediment samples from drillholes GAT-90, Tybee Island and GAS-90-2, Skidaway Island, Georgia. Project Report - Georgia Geologic Survey. Report no. 16, 1992. 36 p.
- OP-400. A. V. Heyl* and D. B. Stewart. Memorial to Edwin T. McKnight, 1902-1992. *Memorials - Geological Society of America*. 25, 1995. p. 1-3.
- OP-401. S. H. Hickman and B. J. Evans*. Kinetics of pressure solution at halite-silica interfaces and intergranular clay films. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 7, July 10, 1995. p. 13,113-13,132.
- OP-402. S. H. Hickman, R. H. Sibson* and R. L. Bruhn*. Introduction to special section; Mechanical involvement of fluids in faulting. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 7, July 10, 1995. p. 12,831-12,840.
- OP-403. J. F. Hicks*, J. D. Obradovich and Lisa Tauxe*. WYOMING. A new calibration point for the Late Cretaceous time scale; the $^{40}\text{Ar}/^{39}\text{Ar}$ isotopic age of the C33r/C33n geomagnetic reversal from the Judith River Formation (Upper Cretaceous), Elk Basin, Wyoming, USA. *Journal of Geology*. v. 103, no. 3, May 1995. p. 243-256.

- OP-404. T. G. Hildenbrand. Task group plans upgrade of the U.S. magnetic-anomaly database. *Eos, Transactions, American Geophysical Union*. v. 76, no. 14, April 4, 1995. p. 137-140.
- OP-405. T. G. Hildenbrand, E. S. Schweig, R. D. Catchings, V. E. Langenheim, W. D. Mooney, T. L. Pratt* and W. D. Stanley. Crustal geophysics gives insight into New Madrid seismic zone. *Eos, Transactions, American Geophysical Union*. v. 76, no. 7, February 14, 1995. p. 65, 68.
- OP-406. D. P. Hill, M. J. Johnston, J. O. Langbein and R. G. Bilham*. CALIFORNIA. Response of Long Valley Caldera to the $M_w = 7.3$ Landers, California, earthquake. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 7, July 10, 1995. p. 12,985-13,005.
- OP-407. D. P. Hill and Wayne Thatcher. An energy constraint for frictional slip on misoriented faults. *Bulletin of the Seismological Society of America*. v. 82, no. 2, April 1992. p. 883-897.
- OP-408. J. W. Hillhouse and R. S. Coe*. ALASKA. Paleomagnetic data from Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in the collection *The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 797-811.
- OP-409. G. R. Himmelberg, D. A. Brew and A. B. Ford. ALASKA. Low-grade, M_1 metamorphism of the Douglas Island Volcanics, western metamorphic belt near Juneau, Alaska. Special Paper - Geological Society of America, in *Low-grade metamorphism of mafic rocks*. (Peter Schiffman, editor and others). 296, 1995. p. 51-66.
- OP-410. K. C. Hinaman. Use of a geographic information system to assemble input-data sets for a finite-difference model of ground-water flow. *Water Resources Bulletin*. v. 29, no. 3, June 1993. p. 401-405.
- OP-411. R. D. Hoare* and B. A. Skipp. OHIO. Calcareous microfossils from the Upper Mississippian (Chesterian) Maxville Limestone, southeastern Ohio. *Journal of Paleontology*. v. 69, no. 4, July 1995. p. 617-624.
- OP-412. C. A. Hodges. Mineral resources, environmental issues, and land use. *Science*. v. 268, no. 5215, June 2, 1995. p. 1305-1312.
- OP-413. H. S. Holbrook*, G. M. Pardy*, R. E. Sheridan*, Lynn Glover, III*, Manik Talwani*, J. I. Ewing* and D. R. Hutchinson. Seismic structure of the U.S. Mid-Atlantic continental margin. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 9, September 10, 1994. p. 17,871-17,891.
- OP-414. F. D. Holland* and John Pojeta, Jr. Memorial to Kenneth Edward Caster, 1908-1992. *Memorials - Geological Society of America*. 25, 1995. p. 15-17.
- OP-415. V. F. Hollister* and M. L. Silberman. CALIFORNIA. Geology of epithermal silver-gold bulk-mining targets, Bodie District, Mono County, California. *Nonrenewable Resources*. v. 4, no. 2, 1995. p. 129-137.
- OP-416. T. M. Holm, W. C. Draeger and R. R. Risty*. Availability of Earth observations data from the U.S. Geological Survey's EROS data center. *Proceedings of the Annual William T. Pecora Memorial Symposium on Remote Sensing*, in Pecora 12 symposium; Land information from space-based systems. 12, August 1993. p. 273-277.
- OP-417. T. R. Holtz, Jr. The arctometatarsalian pes, an unusual structure of the metatarsus of Cretaceous Theropoda (Dinosauria: Saurischia). *Journal of Vertebrate Paleontology*. v. 14, no. 4, February 15, 1995. p. 480-519.
- OP-418. T. R. Holtz, Jr. The phylogenetic position of the Tyrannosauridae; implications for theropod systematics. *Journal of Paleontology*. v. 68, no. 5, September 1994. p. 1100-1117.
- OP-419. T. L. Holzer. CALIFORNIA. Loma Prieta damage largely attributed to enhanced ground shaking. *Oregon Geology*. v. 56, no. 5, September 1994. p. 111-113.
- OP-420. T. L. Holzer. The 1995 Hanshin-Awaji (Kobe), Japan, earthquake. *GSA Today*. v. 5, no. 8, August 1995. p. 153-156, 165, 167.
- OP-421. M. F. Horan, R. J. Walker*, V. A. Fedorenko* and G. K. Czamanske. Osmium and neodymium isotopic constraints on the temporal and spatial evolution of Siberian flood basalt sources. *Geochimica et Cosmochimica Acta*. v. 59, no. 24, December 1995. p. 5159-5168.
- OP-422. A. J. Horowitz. Scale as a factor in designing sampling programs for determination of annual trace element fluxes. IAHS-AISH Publication, in *Effects of scale on interpretation and management of sediment and water quality*. (W. R. Osterkamp, editor). 226, 1995. p. 293-301.
- OP-423. A. J. Horowitz, K. A. Elrick, Paul von Guerard, N. O. Young, G. R. Buell and T. L. Miller. The use of automatically collected point samples to estimate suspended sediment and associated trace element concentrations for determining annual mass transport. IAHS-AISH Publication, in *Erosion and sediment transport monitoring programmes in river basins*. (Jim Bogen and others). 210, 1992. p. 209-218.
- OP-424. R. J. Horton. ALASKA. Airborne geophysical surveys of the Annette Islands Reserve, in *Special symposium 1993 on Economic mineral resources of the Annette Islands Reserve, Alaska*. (S. A. Manydeeds, chairperson). Spokane, WA: Northwest Mining Association, 1993. p. 27-32.
- OP-425. R. J. Horton. ALASKA. Airborne electromagnetic surveys on the Annette Islands Reserve, in *Special symposium 1993 on Economic mineral resources of the Annette Islands Reserve, Alaska*. (S. A. Manydeeds, chairperson). Spokane, WA: Northwest Mining Association, 1993. p. 43-50.
- OP-426. R. J. Horton, S. M. Karl, C. D. Taylor, Andrew Griscom, K. R. Bond and R. M. Senterfit. ALASKA. Mineral resource assessment of the Annette Islands Reserve, Southeast Alaska, in *Special symposium 1993 on Economic mineral resources of the Annette Islands Reserve, Alaska*. (S. A. Manydeeds, chairperson). Spokane, WA: Northwest Mining Association, 1993. p. 83-131.
- OP-427. R. J. Horton and R. M. Senterfit. ALASKA. Site-specific geophysical surveys on the Annette Islands Reserve, in *Special symposium 1993 on Economic mineral resources of the Annette Islands Reserve, Alaska*. (S. A. Manydeeds, chairperson). Spokane, WA: Northwest Mining Association, 1993. p. 57-72.

- OP-428. W. J. Horton and J. E. Gair. NORTH CAROLINA, SOUTH CAROLINA. Geology and mineral-resource potential of the Charlotte 1° × 2° Quadrangle, North Carolina-South Carolina, *in* Exploration for metallic resources in the Southeast. (G. O. Allard, convener and others). Athens, GA: University of Georgia, 1982. p. 56-61.
- OP-429. S. E. Hough. CALIFORNIA. Earthquakes in the Los Angeles metropolitan region; a possible fractal distribution of rupture size. *Science*. v. 267, no. 5195, January 13, 1995. p. 211-213.
- OP-430. S. E. Hough, C. M. Dietel, G. N. Glassmoyer and E. D. Sembera. CALIFORNIA. On the variability of aftershock ground motions in the San Fernando Valley. *Geophysical Research Letters*. v. 22, no. 6, March 15, 1995. p. 727-730.
- OP-431. B. F. Houghton*, C. J. Wilson*, M. O. McWilliams*, M. A. Lanphere, S. D. Weaver*, R. M. Briggs* and M. S. Pringle. Chronology and dynamics of a large silicic magmatic system; central Taupo volcanic zone, New Zealand. *Geology* (Boulder). v. 23, no. 1, January 1995. p. 13-16.
- OP-432. K. A. Howard, K. J. McCaffrey*, J. L. Wooden, D. A. Foster* and S. E. Shaw*. CALIFORNIA. Jurassic thrusting of Precambrian basement over Paleozoic cover in the Clipper Mountains, southeastern California. Special Paper - Geological Society of America, *in* Jurassic magmatism and tectonics of the North American Cordillera. (D. M. Miller, editor and others). 299, 1995. p. 375-392.
- OP-433. D. G. Howell, F. E. Cole, Michael Fanelli and Katryn Wiese. Natural gas. Earth (Waukesha, Wis.). v. 2, no. 5, September 1993. p. 52-59.
- OP-434. J. S. Huebner and R. G. Dillenburg. Impedance spectra of hot, dry silicate minerals and rock; qualitative interpretation of spectra. *American Mineralogist*. v. 80, no. 1-2, February 1995. p. 46-64.
- OP-435. T. G. Huntington. Carbon sequestration in an aggrading forest ecosystem in the Southeastern USA. *Soil Science Society of America Journal*. v. 59, no. 5, October 1995. p. 1459-1467.
- OP-436. D. R. Hutchinson, C. F. Lewis* and G. E. Hund. Regional stratigraphic framework of surficial sediments and bedrock beneath Lake Ontario. *Géographie Physique et Quaternaire*, *in* Neotectonics of the Great Lakes area. (J. L. Wallach, editor and others). v. 47, no. 3, 1993. p. 337-352.
- OP-437. M. E. Ikehara. CALIFORNIA. Global Positioning System surveying to monitor land subsidence in Sacramento Valley, California, USA. *Hydrological Sciences Journal = Journal des Sciences Hydrologiques*. v. 39, no. 5, October 1994. p. 417-429.
- OP-438. R. P. Ilchuk. NEVADA. $^{40}\text{Ar}/^{39}\text{Ar}$, K/Ar, and fission track geochronology of sediment-hosted disseminated gold deposits at Post-Betze, Carlin Trend, northeastern Nevada; discussion. *Economic Geology and the Bulletin of the Society of Economic Geologists*. v. 90, no. 1, February 1995. p. 208-210.
- OP-439. S. E. Ingebritsen and D. O. Hayba. Fluid flow and heat transport near the critical point of H₂O. *Geophysical Research Letters*. v. 21, no. 20, October 1, 1994. p. 2199-2202.
- OP-440. S. E. Ishman and E. W. Domack*. Oceanographic controls on benthic foraminifers from the Bellingshausen margin of the Antarctic Peninsula. *Marine Micropaleontology*. v. 24, no. 2, December 1994. p. 119-155.
- OP-441. R. M. Iverson. HAWAII. Can magma-injection and groundwater forces cause massive landslides on Hawaiian volcanoes?. *Journal of Volcanology and Geothermal Research*, *in* Models of magmatic processes and volcanic eruptions. (Yoshiaki Ida, editor and others). v. 66, no. 1-4, July 1995. p. 295-308.
- OP-442. H. M. Iyer. Modeling structure related to volcanism using seismic tomography, *in* Volcanism; Radhakrishna volume. (K. V. Subbarao, editor). New Delhi: Wiley Eastern, 1994. p. 77-105.
- OP-443. G. A. Izett and J. D. Obradovich. $^{40}\text{Ar}/^{39}\text{Ar}$ age constraints for the Jaramillo Normal Subchron and the Matuyama-Brunhes geomagnetic boundary. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 2, February 10, 1994. p. 2925-2934.
- OP-444. R. C. Jachens, Andrew Griscom and C. W. Roberts. CALIFORNIA. Regional extent of Great Valley basement west of the Great Valley, California; implications for extensive tectonic wedging in the California Coast Ranges. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 7, July 10, 1995. p. 12,769-12,790.
- OP-445. H. R. Jackson*, Arthur Grantz, I. D. Reid*, S. D. May and P. E. Hart. Observations of anomalous oceanic crust in the Canada Basin, Arctic Ocean. *Earth and Planetary Science Letters*. v. 134, no. 1-2, August 1995. p. 99-106.
- OP-446. R. W. Jacobel* and S. M. Hodge. Radar internal layers from the Greenland summit. *Geophysical Research Letters*. v. 22, no. 5, March 1, 1995. p. 587-590.
- OP-447. R. B. Jacobson. MISSOURI. Spatial controls on patterns of land-use induced stream disturbance at the drainage-basin scale; an example from gravel-bed streams of the Ozark Plateaus, Missouri. *Geophysical Monograph*, *in* Natural and anthropogenic influences in fluvial geomorphology; the Wolman Volume. (J. E. Costa, editor and others). 89, 1995. p. 219-239.
- OP-448. M. L. Jagucki, C. D. Finton*, A. E. Springer* and E. S. Bair*. OHIO. Characterization of hydrology and water quality at the Ohio Management Systems Evaluation Area, *in* Proceedings of the Ohio buried valley aquifer management systems evaluation area colloquium. (N. L. Watermeier, editor). Columbus, OH: Ohio State University College of Agriculture, 1993. p. 13-16.
- OP-449. Matthias Jakob*, D. H. Clark*, A. R. Gillespie* and M. M. Clark. CALIFORNIA. Debris-covered glaciers in the Sierra Nevada, California, and their implications for snowline reconstruction; discussion and reply. *Quaternary Research* (New York). v. 42, no. 3, November 1994. p. 356-362.
- OP-450. M. C. Jensen*, J. C. Rota* and E. E. Foord. NEVADA. The Gold Quarry Mine; Carlin-trend, Eureka County, Nevada. *The Mineralogical Record*. v. 26, no. 5, October 1995. p. 449-469.
- OP-451. R. W. Jibson* and D. K. Keefer. Analyzing the origin of landslides in the New Madrid seismic zone. *Annual Meeting -*

- Association of Engineering Geologists, in *Proceedings of the 35th annual meeting of the Association of Engineering Geologists*. (M. L. Stout, editor). 35, 1992. p. 521-528.
- OP-452. R. W. Jibson, J. K. Odum and J. G. Staude. ILLINOIS. Rates and processes of bluff recession along the Lake Michigan shoreline in Illinois. *Journal of Great Lakes Research*, in *The southern Lake Michigan coastal erosion study*. (D. W. Folger, editor and others). v. 20, no. 1, 1994. p. 135-152.
- OP-453. B. E. John* and K. A. Howard. Rapid extension recorded by cooling-age patterns and brittle deformation, Naxos, Greece. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 6, June 10, 1995. p. 9969-9979.
- OP-454. D. A. John. NEVADA. Tilted middle Tertiary ash-flow calderas and subjacent granitic plutons, southern Stillwater Range, Nevada; cross sections of an Oligocene igneous center. *Geological Society of America Bulletin*. v. 107, no. 2, February 1995. p. 180-200.
- OP-455. P. R. Johnson and I. C. Stewart*. Magnetically inferred basement structure in central Saudi Arabia. *Tectonophysics*. v. 245, no. 1-2, May 1995. p. 37-52.
- OP-456. R. C. Johnson, R. M. Flores, R. J. Szmajter and T. M. Finn. WYOMING. A preliminary study of coal-forming environments during deposition of the Paleocene Fort Union Formation, Wind River basin, Wyoming. *Public Information Circular - Geological Survey of Wyoming*, in *Organics and the Rockies*; field guide. (R. M. Flores, editor and others). Report no. 33, 1994. p. 69-81.
- OP-457. M. J. Johnston, D. P. Hill, A. T. Linde, J. O. Langbein* and R. G. Bilham*. CALIFORNIA. Transient deformation during triggered seismicity from the 28 June 1992 $M_w = 7.3$ Landers earthquake at Long Valley volcanic caldera, California. *Bulletin of the Seismological Society of America*. v. 85, no. 3, June 1995. p. 787-795.
- OP-458. A. D. Jolly, R. A. Page and J. A. Power. ALASKA. Seismicity and stress in the vicinity of Mount Spurr Volcano, south central Alaska. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 8, August 10, 1994. p. 15,305-15,318.
- OP-459. J. W. Jones. A temporal comparison of forest cover using digital earth science data and visualization techniques. *Proceedings of the Annual William T. Pecora Memorial Symposium on Remote Sensing*, in *Pecora 12 symposium*; Land information from space-based systems. 12, August 1993. p. 301-309.
- OP-460. L. E. Jones* and S. E. Hough. CALIFORNIA. Analysis of broadband records from the 28 June 1992 Big Bear earthquake; evidence of a multiple-event source. *Bulletin of the Seismological Society of America*. v. 85, no. 3, June 1995. p. 688-704.
- OP-461. L. F. Jones*, S. E. Hough and D. V. Helmberger*. CALIFORNIA. Rupture process of the June 28, 1992 Big Bear earthquake. *Geophysical Research Letters*. v. 20, no. 18, September 15, 1993. p. 1907-1910.
- OP-462. L. M. Jones, W. D. Stuart, Egill Hauksson* and Hiroo Kanamori*. CALIFORNIA. Anomalous seismicity in the San Gabriel Valley, 1987-1991. *Annual Meeting - Association of Engineering Geologists*, in *Proceedings of the 35th annual meeting of the Association of Engineering Geologists*. (M. L. Stout, editor). 35, 1992. p. 655-658.
- OP-463. Meridee Jones-Cecil. OKLAHOMA. Structural controls of Holocene reactivation of the Meers Fault, southwestern Oklahoma, from magnetic studies. *Geological Society of America Bulletin*. v. 107, no. 1, January 1995. p. 98-112.
- OP-464. B. R. Julian. Volcanic tremor; nonlinear excitation by fluid flow. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 6, June 10, 1994. p. 11,859-11,878.
- OP-465. S. J. Kalkhoff and D. A. Eash. IOWA. Suspended sediment and stream discharge in Bloody Run and Sny Magill watersheds; water year 1992. *Technical Information Series - Iowa Dept. of Natural Resources. Geological Survey Bureau*, in *Sny Magill Watershed Monitoring Project; baseline data*. (L. S. Seigley, editor). Report no. 32, December 1994. p. 73-89.
- OP-466. A. R. Kampf* and E. E. Foord. ARIZONA. Artroite, $PbAlF_3(OH)_2$, a new mineral from the Grand Reef Mine, Graham County, Arizona; description and crystal structure. *American Mineralogist*. v. 80, no. 1-2, February 1995. p. 179-183.
- OP-467. Hiroo Kanamori*, J. J. Mori and D. G. Harkrider*. Excitation of atmospheric oscillations by volcanic eruptions. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 11, November 10, 1994. p. 21,947-21,961.
- OP-468. E. R. Kanasevich*, M. J. Buriannyk*, R. M. Ellis*, R. M. Clowes*, D. J. White*, T. Côté*, D. A. Forsyth*, J. H. Luetgert and G. D. Spence*. Crustal velocity structure of the Omineca Belt, southeastern Canadian Cordillera. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 2, February 10, 1994. p. 2653-2670.
- OP-469. J. S. Kargel. A possible enstatite meteorite; Earth connection and potassium in Earth's core. *Meteoritics*. v. 30, no. 1, January 1995. p. 5-7.
- OP-470. J. S. Kargel, R. L. Kirk, Bruce Fegley, Jr.* and A. H. Treiman*. Carbonate-sulfate volcanism on Venus?. *Icarus*. v. 112, no. 1, November 1994. p. 219-252.
- OP-471. S. M. Karl. ALASKA. The geology of Annette Island, in *Special symposium 1993 on Economic mineral resources of the Annette Islands Reserve, Alaska*. (S. A. Manydeeds, chairperson). Spokane, WA: Northwest Mining Association, 1993. p. 21-26.
- OP-472. B. G. Katz, T. M. Lee, L. N. Plummer and Eurybiades Busenberg. FLORIDA. Chemical evolution of groundwater near a sinkhole lake, northern Florida; 1, Flow patterns, age of groundwater, and influence of lake water leakage. *Water Resources Research*. v. 31, no. 6, June 1995. p. 1549-1564.
- OP-473. B. G. Katz, L. N. Plummer, Eurybiades Busenberg, K. M. Revesz, B. F. Jones and T. M. Lee. FLORIDA. Chemical evolution of groundwater near a sinkhole lake, northern Florida; 2, Chemical patterns, mass transfer modeling, and rates of mass transfer reactions. *Water Resources Research*. v. 31, no. 6, June 1995. p. 1565-1584.
- OP-474. J. P. Kauahikaua, S. C. Margrter, J. P. Lockwood and C. C. Heliker. HAWAII. GIS applications for volcanic hazard assessment in Hawaii, in *Workshop on Geographic information*

- systems in assessing natural hazards. (Paola Reichenbach, editor and others). Perugia: Univ. Foreigners, 1993. p. 108-111.
- OP-475. D. K. Keefer. The susceptibility of rock slopes to earthquake-induced failure. Annual Meeting - Association of Engineering Geologists, in Proceedings of the 35th annual meeting of the Association of Engineering Geologists. (M. L. Stout, editor). 35, 1992. p. 529-538.
- OP-476. C. W. Keighin. WYOMING. Pre-field trip route from Jackson to Riverton. Public Information Circular - Geological Survey of Wyoming, in Organics and the Rockies; field guide. (R. M. Flores, editor and others). Report no. 33, 1994. p. 31-37.
- OP-477. C. W. Keighin and R. M. Flores. WYOMING. Characteristics of oil-saturated fluvial channel sandstone reservoirs, Paleocene upper Fort Union Formation, south-central Wind River basin, Wyoming. Public Information Circular - Geological Survey of Wyoming, in Organics and the Rockies; field guide. (R. M. Flores, editor and others). Report no. 33, 1994. p. 99-108.
- OP-478. G. R. Keller*, U. Enderle*, Karl Fuchs*, F. Lorenz*, O. Novak*, Claus Prodehl*, James Mechie*, C. S. Birt*, M. A. Khan*, P. K. Maguire*, G. F. Byrne*, A. W. Jacob*, E. Imana*, D. Roberts*, S. M. Simiyu*, J. H. Luetgert, W. D. Mooney, Hans Thybo*, D. J. Gajewski*, J. Herwanger*, R. Veas*, A. E. Mussett*, E. W. Dindi*, S. J. Gaciri*, I. O. Nyambok*, J. P. Patel*, R. Stangl*, H. Macharia*, J. Mukinya*, J. D. Obel*, William Okoth* and Don Riaroh*. Group takes a fresh look at the lithosphere underneath southern Kenya. Eos, Transactions, American Geophysical Union. v. 76, no. 8, February 21, 1995. p. 73, 81-82.
- OP-479. J. S. Kelley and W. P. Brosge ALASKA. Geologic framework of a transect of the central Brooks Range; regional relations and an alternative to the Endicott Mountains Allochthon. AAPG Bulletin. v. 79, no. 8, August 1995. p. 1087-1116.
- OP-480. K. S. Kellogg, C. J. Schmidt* and S. W. Young*. MONTANA. Basement and cover-rock deformation during Laramide contraction in the northern Madison Range (Montana) and its influence on Cenozoic basin formation. AAPG Bulletin. v. 79, no. 8, August 1995. p. 1117-1137.
- OP-481. W. J. Kennedy* and W. A. Cobban. DELAWARE. Upper Campanian ammonites from the Mount Laurel Sand at Biggs Farm, Delaware. Journal of Paleontology. v. 68, no. 6, November 1994. p. 1285-1305.
- OP-482. B. L. Kennett*, E. R. Engdahl and R. P. Buland. Constraints on seismic velocities in the Earth from traveltimes. Geophysical Journal International. v. 122, no. 1, July 1995. p. 108-124.
- OP-483. L. P. Keszthelyi. Measurements of the cooling at the base of pahoehoe flows. Geophysical Research Letters. v. 22, no. 16, August 15, 1995. p. 2195-2198.
- OP-484. H. H. Kieffer, B. M. Jakosky* and C. W. Snyder*. The planet Mars; from antiquity to the present, in Mars. (H. H. Kieffer, editor and others), in the collection Space science series. (Tom Gehrels, editor). Tucson, AZ: University of Arizona Press, 1992. p. 1-33.
- OP-485. H. H. Kieffer, B. M. Jakosky*, C. W. Snyder* and M. S. Matthews* (editors). Mars, in the collection Space science series. (Tom Gehrels, editor). Tucson, AZ: University of Arizona Press, 1992. 1498 p.
- OP-486. H. H. Kieffer and A. P. Zent*. Quasi-periodic climate change on Mars, in Mars. (H. H. Kieffer, editor and others), in the collection Space science series. (Tom Gehrels, editor). Tucson, AZ: University of Arizona Press, 1992. p. 1180-1218.
- OP-487. B. A. Kimball, R. E. Broshears, K. E. Bencala and D. M. McKnight. Coupling of hydrologic transport and chemical reactions in a stream affected by acid mine drainage. Environmental Science & Technology, ES & T. v. 28, no. 12, November 1994. p. 2065-2073.
- OP-488. B. A. Kimball, E. C. Callender and E. V. Axtmann. COLORADO. Effects of colloids on metal transport in a river receiving acid mine drainage, upper Arkansas River, Colorado, U.S.A. Applied Geochemistry. v. 10, no. 3, May 1995. p. 285-306.
- OP-489. Chi-Yu King. Earthquake mechanism and predictability shown by a laboratory fault. Pure and Applied Geophysics. v. 143, no. 1-3, 1994. p. 457-482.
- OP-490. Chi-Yu King, Naoji Koizumi* and Yuichi Kitagawa*. Hydrogeochemical anomalies and the 1995 Kobe earthquake. Science. v. 269, no. 5520, July 7, 1995. p. 38-39.
- OP-491. Chi-Yu King, Zhang Wei* and Bi-Shia King. CALIFORNIA. Radon anomalies on three kinds of faults in California. Pure and Applied Geophysics. v. 141, no. 1, 1993. p. 111-124.
- OP-492. G. C. King*, D. H. Oppenheimer and Falk Amelung*. Block versus continuum deformation in the Western United States. Earth and Planetary Science Letters. v. 128, no. 3-4, December 1994. p. 55-64.
- OP-493. T. V. King, R. N. Clark, C. M. Ager and G. A. Swayze. COLORADO. Remote mineral mapping using AVIRIS data at Summitville, Colorado and the adjacent San Juan Mountains. Special Publication - Colorado Geological Survey, in Proceedings; Summitville forum '95. (H. H. Posey, editor and others). Report no. 38, 1995. p. 59-63 and 369-370.
- OP-494. S. H. Kirby, E. A. Okal* and E. R. Engdahl. The 9 June 94 Bolivian deep earthquake; an exceptional event in an extraordinary subduction zone. Geophysical Research Letters, in June 9, 1994 Mw = 8.3 deep Bolivian earthquake. (T. C. Wallace, prefacer). v. 22, no. 16, August 15, 1995. p. 2233-2236.
- OP-495. D. A. Kirtland, L. J. Gaydos, K. C. Clarke*, Lee De Cola, William Acevedo and Cindy Bell*. CALIFORNIA. An analysis of human-induced land transformations in the San Francisco Bay/Sacramento area. World Resource Review. v. 6, no. 2, June 1994. p. 206-217.
- OP-496. L. G. Kodosky* and T. E. Keith. ALASKA. Further insights into the geochemical evolution of fumarolic alteration, Valley of Ten Thousand Smokes, Alaska. Journal of Volcanology and Geothermal Research. v. 65, no. 3-4, May 1995. p. 181-190.
- OP-497. D. W. Kolpin and D. A. Goolsby. A regional monitoring network to investigate the occurrence of agricultural chemicals in near-surface aquifers of the Midcontinental USA. IAHS-AISH Publication, in Groundwater quality; remediation and protection

- (GQ'95); proceedings. (Karel Kovar, editor and others). 225, 1995. p. 13-20.
- OP-498. S. C. Komor. MINNESOTA. Geochemistry and hydrology of a calcareous fen within the Savage Fen wetlands complex, Minnesota, U.S.A. *Geochimica et Cosmochimica Acta*. v. 58, no. 16, August 1994. p. 3353-3367.
- OP-499. S. C. Komor. Chemistry and petrography of calcite in the KTB pilot borehole, Bavarian Oberpfalz, Germany. *Chemical Geology*. v. 124, no. 3-4, August 15, 1995. p. 199-216.
- OP-500. M. P. Koopmans*, J. S. Sinninghe Damsté*, M. D. Lewan and J. W. De Leeuw*. Thermal stability of thiophene biomarkers as studied by hydrous pyrolysis. Organic Geochemistry, in *Origin and significance of the organic matter in evaporites; II, From modern to ancient; a research project performed by the European Network of Organic Geochemical Laboratories (ENOG)*. (Detlev Leythaeuser, editor and others). v. 23, no. 6, June 1995. p. 583-596.
- OP-501. R. M. Kosanke and A. T. Cross*. Leonard Richard Wilson (1906-); palynologist, paleobotanist, and geologist. Memoir - Geological Society of America, in *Historical perspective of early twentieth century Carboniferous paleobotany in North America*. (P. C. Lyons, editor and others). 185, 1995. p. 237-244.
- OP-502. R. A. Koski. Marine geology; the making of metal deposits. *Nature (London)*. v. 377, no. 6551, October 26, 1995. p. 679-680.
- OP-503. R. A. Koski, I. R. Jonasson*, D. C. Kadko*, V. K. Smith and F. L. Wong. Composition, growth mechanisms, and temporal relations by hydrothermal sulfide-sulfate-silica chimneys at the northern Cleft Segment, Juan de Fuca Ridge. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 3, March 10, 1994. p. 4813-4832.
- OP-504. Carl Koteff and W. L. Newell. Memorial to Albert J. Froelich, 1929-1993. *Memorials - Geological Society of America*. 25, 1995. p. 117-119.
- OP-505. A. N. Kover and J. W. Schoonmaker, Jr. The U.S. Geological Survey side-looking airborne radar data base; an aid to the interpretation of space images. Proceedings of the Annual William T. Pecora Memorial Symposium on Remote Sensing, in *Pecora 12 symposium; Land information from space-based systems*. 12, August 1993. p. 523-524.
- OP-506. B. J. Kowallis*, E. H. Christiansen*, A. L. Deino, M. J. Kunk* and L. M. Heaman*. Age of the Cenomanian-Turonian boundary in the Western Interior of the U.S. *Bulletin of Liaison and Informations, IGCP Project 196, Calibration of the Phanerozoic Time Scale*. 11, January 31, 1993. p. 25.
- OP-507. B. J. Kowallis*, E. H. Christiansen*, A. L. Deino*, M. J. Kunk and L. M. Heaman*. Age of the Cenomanian-Turonian boundary in the Western Interior of the United States. *Cretaceous Research*. v. 16, no. 1, February 1995. p. 109-129.
- OP-508. D. P. Krabbenhoft, J. M. Benoit*, C. L. Babiarz*, J. P. Hurley* and A. W. Andren*. WISCONSIN. Mercury cycling in the Allequash Creek watershed, northern Wisconsin. Water, Air and Soil Pollution, in *Mercury as a global pollutant*. (D. B. Porcella, editor and others). v. 80, no. 1-4, February 1995. p. 425-433.
- OP-509. M. L. Krumme*, R. L. Smith, Jörg Egestorff*, S. M. Thiem*, J. M. Tiedje*, K. N. Timmis* and D. F. Dwyer*. Behavior of pollutant-degrading microorganisms in aquifers; predictions for genetically engineered organisms. *Environmental Science & Technology*, ES & T. v. 28, no. 6, June 1994. p. 1134-1138.
- OP-510. M. J. Kunk and C. L. Rice. High-precision $^{40}\text{Ar}/^{39}\text{Ar}$ age spectrum dating of sanidine from the Middle Pennsylvanian fire clay tonstein of the Appalachian Basin. Special Paper - Geological Society of America, in *Elements of Pennsylvanian stratigraphy, central Appalachian Basin*. (C. L. Rice, editor). 294, 1994. p. 105-113.
- OP-511. J. S. Kuwabara and J. E. Baker* (editors). Trace contaminants and nutrients in estuaries. *Estuaries*. v. 16, no. 3A, September 1993. p. 383-573.
- OP-512. J. S. Kuwabara and G. W. Luther, III*. CALIFORNIA. Dissolved sulfides in the oxic water column of San Francisco Bay, California. *Estuaries*, in *Trace contaminants and nutrients in estuaries*. (J. S. Kuwabara, editor and others). v. 16, no. 3A, September 1993. p. 567-573.
- OP-513. K. A. Kvenvolden, J. B. Rapp, F. D. Hostettler and R. J. Rosenbauer. CALIFORNIA. Laboratory simulation of hydrothermal petroleum formation from sediment in Escanaba Trough, offshore from Northern California. *Organic Geochemistry*. v. 22, no. 6, December 1994. p. 935-945.
- OP-514. A. H. Lachenbruch, J. H. Sass, G. D. Clow and R. J. Weldon*. CALIFORNIA. Heat flow at Cajon Pass, California, revisited. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 2, February 10, 1995. p. 2005-2012.
- OP-515. A. H. Lachenbruch, J. H. Sass and Paul Morgan*. Thermal regime of the southern Basin and Range Province; 2, Implications of heat flow for regional extension and metamorphic core complexes. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 11, November 10, 1994. p. 22,121-22,133.
- OP-516. D. D. Lambert*, R. J. Walker*, J. W. Morgan, S. B. Shirey*, R. W. Carlson, M. L. Zientek*, B. R. Lipin*, M. S. Koski* and R. L. Cooper*. MONTANA. Re-Os and Sm-Nd isotope geochemistry of the Stillwater Complex, Montana; implications for the petrogenesis of the J-M Reef. *Journal of Petrology*. v. 35, no. 6, December 1994. p. 1717-1753.
- OP-517. E. R. Landa. Physician/chemist/geologist; Charles Thomas Jackson's life of conflict and controversy. *Journal of Geological Education*. v. 43, no. 1, January 1995. p. 20-25.
- OP-518. E. R. Landa and J. R. Gray. US Geological Survey research on the environmental fate of uranium mining and milling wastes. *Environmental Geology*. v. 26, no. 1, July 1995. p. 19-31.
- OP-519. M. N. Landers, J. S. Jones* and R. E. Trent*. Brief summary of National Bridge Scour Data Base. Hydraulic Engineering: Proceedings of the National Conference on Hydraulic Engineering, in *Hydraulic engineering '94*. (G. V. Cotroneo, editor and others). 1994, 1994. p. 41-45.
- OP-520. W. M. Landing*, W. C. Burnett*, W. B. Lyons* and W. H. Orem. PALAU. Nutrient cycling and the

- biogeochemistry of manganese, iron, and zinc in Jellyfish Lake, Palau. *Limnology and Oceanography*. v. 36, no. 3, May 1991. p. 515-525.
- OP-521. L. J. Lane*, M. H. Nichols*, M. Hernandez*, C. Manetsch* and W. R. Osterkamp. Variability in discharge, stream power, and particle-size distributions in ephemeral-stream channel systems. IAHS-AISH Publication, in *Variability in stream erosion and sediment transport*. (L. J. Olive, editor and others). 224, 1994. p. 335-342.
- OP-522. J. O. Langbein, Daniel Dzurisin, G. A. Marshall, R. S. Stein and J. B. Rundle*. CALIFORNIA. Shallow and peripheral volcanic sources of inflation revealed by modeling two-color geodimeter and leveling data from Long Valley Caldera, California, 1988-1992. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 7, July 10, 1995. p. 12,487-12,495.
- OP-523. M. A. Lanphere and B. M. Gamble. Memorial to Bruce Loring Reed, 1934-1993. *Memorials - Geological Society of America*. 25, 1995. p. 125-128.
- OP-524. Miklos Lantos* and D. P. Elston. Low- to high-amplitude oscillations and secular variation in a 1.2 km late Miocene inclination record. *Physics of the Earth and Planetary Interiors*. v. 90, no. 1-2, July 1995. p. 37-53.
- OP-525. C. F. Larsen. Beach ridges as monitors of isostatic uplift in the Upper Great Lakes. *Journal of Great Lakes Research*, in *The southern Lake Michigan coastal erosion study*. (D. W. Folger, editor and others). v. 20, no. 1, 1994. p. 108-134.
- OP-526. P. B. Larson*, C. G. Cunningham and C. W. Naeser. COLORADO. Large-scale alteration effects in the Rico paleothermal anomaly, Southwest Colorado. *Economic Geology and the Bulletin of the Society of Economic Geologists*, in *A special issue on volcanic centers as targets for mineral exploration*. (W. E. Elston, editor and others). v. 89, no. 8, December 1994. p. 1769-1779.
- OP-527. W. M. Last*, J. T. Teller* and R. M. Forester. Paleohydrology and paleochemistry of Lake Manitoba, Canada; the isotope and ostracode records. *Journal of Paleolimnology*, in *Paleolimnology of arid regions*. (A. R. Chivas, editor). v. 12, no. 3, December 1994. p. 269-282.
- OP-528. B. E. Law. The relationship between coal rank and cleat spacing; implications for the prediction of permeability in coal. *Proceedings - International Coalbed Methane Symposium*, in *Proceedings of the 1993 international Coalbed methane symposium*. 1993, May 1993. p. 435-441.
- OP-529. G. B. Lawrence, M. B. David* and W. C. Shortle*. A new mechanism for calcium loss in forest-floor soils. *Nature (London)*. v. 378, no. 6553, November 9, 1995. p. 162-165.
- OP-530. P. J. Lee* and D. A. Singer. CALIFORNIA. Using PETRIMES to estimate mercury deposits in California. *Nonrenewable Resources*. v. 3, no. 3, 1994. p. 190-199.
- OP-531. J. L. Legler*, E. R. Brooks* and J. S. Lull. CALIFORNIA. Tamarack Tuff; a Devonian submarine pyroclastic flow deposit in the northern Sierra Nevada. *California Geology*. v. 44, no. 6, June 1991. p. 130-137.
- OP-532. W. S. Leith. Sakhalin earthquake renews concerns about seismic safety in the former Soviet Union. *Eos, Transactions, American Geophysical Union*. v. 76, no. 26, June 27, 1995. p. 257-258.
- OP-533. R. M. Lent, G. J. Wiche and T. J. Williams-Sether. NORTH DAKOTA. Effects of flooding on surface water quantity and quality in the Devils Lake basin, North Dakota, 1993, in *North Dakota water quality symposium; proceedings*. (B. D. Seelig, chairperson). Fargo, ND: N.D. Water Resour. Res. Inst. 1994. p. 234-245.
- OP-534. B. F. Leonard. Memorial to Raymond C. Becker, 1906-1993. *Memorials - Geological Society of America*. 25, 1995. p. 95-97.
- OP-535. J. S. Leventhal. Carbon-sulfur plots to show diagenetic and epigenetic sulfidation in sediments. *Geochimica et Cosmochimica Acta*. v. 59, no. 6, March 1995. p. 1207-1211.
- OP-536. J. S. Leventhal and A. H. Hofstra. NEVADA. Characterization of carbon in sediment-hosted disseminated gold deposits, north central Nevada, in *Gold '90; proceedings of the symposium*. (D. M. Hausen, editor and others). Littleton, CO: Society for Mining, Metallurgy, and Exploration, 1990. p. 365-368.
- OP-537. M. D. Lewan. Assessing natural oil expulsion from source rocks by laboratory pyrolysis. *AAPG Memoir*, in *The petroleum system; from source to trap*. (L. B. Magoon, III, editor and others). 60, 1994. p. 201-210.
- OP-538. M. E. Lewis. COLORADO. Simulated effects of water exchanges of dissolved-solids concentrations in the upper Arkansas River basin, Colorado. *American Water Resources Association Technical Publication Series TPS*, in *Symposium on Responses to changing multiple-use demands; new directions for water resources planning and management*. (M. J. Sale, editor and others). 94-2, April 1994. p. 29-32.
- OP-539. Yong-Gang Li*, Keiiti Aki*, D. D. Adams*, Akiko Hasemi* and W. H. Lee. CALIFORNIA. Seismic guided wave trapped in the fault zone of the Landers, California, earthquake of 1992. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 6, June 10, 1994. p. 11,705-11,722.
- OP-540. B. H. Lidz and D. F. McNeill*. Deep-sea biostratigraphy of prograding platform margins (Neogene, Bahamas); key evidence linked to depositional rhythm. *Marine Micropaleontology*. v. 25, no. 2-3, June 1995. p. 87-125.
- OP-541. D. L. Light. Moonsat; an orbital imaging system for mapping the Moon. *Photogrammetric Engineering and Remote Sensing*. v. 60, no. 12, December 1994. p. 1421-1429.
- OP-542. P. G. Lillis. CALIFORNIA. Soda Lake-Painted Rock(!) petroleum system in the Cuyama Basin, California, U.S.A. *AAPG Memoir*, in *The petroleum system; from source to trap*. (L. B. Magoon, III, editor and others). 60, 1994. p. 437-451.
- OP-543. R. H. Lindemann* and E. L. Yochelson. Redescription of *Styliolina* (incertae sedis); *Styliolina fissurella* (Hall) and the type species *S. nucleata* (Karpinsky). *Bulletin - New York State Museum* (1976), in *Studies in stratigraphy and paleontology in honor of Donald W. Fisher*. (Ed Landing, editor). 481, 1994. p. 149-160.

- OP-544. Chi-Hai Ling. Criteria for incipient motion of spherical sediment particles. *Journal of Hydraulic Engineering*. v. 121, no. 6, June 1995. p. 472-478.
- OP-545. H. F. Lins. Modeling watersheds. WSTB Newsletter (Water Science and Technology Board, National Research Council). v. 12, no. 1, February 1995. p. 1-3.
- OP-546. P. W. Lipman, D. A. Sawyer and Ken Hon. COLORADO. Part 2; Field guide to depositional and structural features of ash-flow tuffs of the central caldera cluster, Oligocene-Miocene San Juan volcanic field, Colorado, *in* Large ignimbrites and caldera-forming eruptions. (Stephen Self, leader and others). IAVCEI Working Group on Explosive volcanism and its products, 1989. p. 2.1-2.58.
- OP-547. J. H. List and J. H. Terwindt* (prefacers). Large-scale coastal behavior. *Marine Geology*. v. 126, no. 1-4, 1995. p. 1-329.
- OP-548. J. H. List and J. H. Terwindt*. Introduction; large-scale coastal behavior. *Marine Geology*, *in* Large-scale coastal behavior. (J. H. List, prefacer and others). v. 126, no. 1-4, 1995. p. 1-3.
- OP-549. Liu Pengcheng*, S. H. Hartzell and W. J. Stephenson. Non-linear multiparameter inversion using a hybrid global search algorithm; applications in reflection seismology. *Geophysical Journal International*. v. 122, no. 3, September 1995. p. 991-1000.
- OP-550. Hsi-Ping Liu. Application of bandlimited anelastic models to wave propagation in highly attenuative media. *Bulletin of the Seismological Society of America*. v. 85, no. 5, October 1995. p. 1359-1372.
- OP-551. D. A. Lockner and J. D. Byerlee. Dilatancy in hydraulically isolated faults and the suppression of instability. *Geophysical Research Letters*. v. 21, no. 22, November 1, 1994. p. 2353-2356.
- OP-552. D. A. Lockner and B. J. Evans*. Densification of quartz powder and reduction of conductivity at 700°C. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 7, July 10, 1995. p. 13,081-13,092.
- OP-553. Millington Lockwood. National developments in bathymetric mapping. *Proceedings - Gulf of Mexico Information Transfer Meeting*, *in* Proceedings; Thirteenth Gulf of Mexico information transfer meeting. Report no. 13, December 1993. p. 466-470.
- OP-554. P. J. Loferski, R. J. Arculus* and G. K. Czamanske. MONTANA. Rare earth element evidence for the petrogenesis of the banded series of the Stillwater Complex, Montana, and its anorthositic. *Journal of Petrology*. v. 35, no. 6, December 1994. p. 1623-1649.
- OP-555. P. J. Loferski and R. A. Ayuso. MAINE. Petrography and mineral chemistry of the composite Deboullie Pluton, northern Maine, U.S.A.; implications for the genesis of Cu-Mo mineralization. *Chemical Geology*. v. 123, no. 1-4, June 20, 1995. p. 89-105.
- OP-556. T. R. Loveland and D. O. Ohlen*. Experimental AVHRR land data sets for environmental monitoring and modeling, *in* Environmental modeling with GIS. (M. F. Goodchild, editor and others). New York, NY: Oxford University Press, 1993. p. 379-385.
- OP-557. T. G. Lovering and J. A. Hedall. COLORADO. The use of sagebrush (*Artemisia*) as a biogeochemical indicator of base-metal deposits in Precambrian rocks of west-central Colorado. *Journal of Geochemical Exploration*. v. 18, no. 3, October 1983. p. 205-230.
- OP-558. D. R. Lovley, F. H. Chapelle and J. C. Woodward. Use of dissolved H₂ concentrations to determine distribution of microbially catalyzed redox reactions in anoxic groundwater. *Environmental Science & Technology*, ES & T. v. 28, no. 7, July 1994. p. 1205-1210.
- OP-559. B. K. Lucchitta, A. S. McEwen, G. D. Clow, P. E. Geissler*, R. B. Singer*, R. A. Schultz* and W. W. Squyres*. The canyon system on Mars, *in* Mars. (H. H. Kieffer, editor and others), *in the collection* Space science series. (Tom Gehrels, editor). Tucson, AZ: University of Arizona Press, 1992. p. 453-492.
- OP-560. B. K. Lucchitta, Franz Tessensohn* and J. A. Bowell. Superposed aeromagnetic, geologic, and Landsat-image maps of the GANOVEX IV expedition area of North Victoria Land, Antarctica. *Geologisches Jahrbuch. Reihe E: Geophysik*, *in* German Antarctic North Victoria Land Expedition 1984/85; GANOVEX IV. (Detlef Damaske, editor and others). 38, 1989. p. 515-522.
- OP-561. R. S. Lunetta* and J. A. Sturdevant. The North American landscape characterization Landsat Pathfinder Project. *Proceedings of the Annual William T. Pecora Memorial Symposium on Remote Sensing*, *in* Pecora 12 symposium; Land information from space-based systems. 12, August 1993. p. 363-371.
- OP-562. R. S. Lunetta* and J. A. Sturdevant. The North American landscape characterization; twenty years of land cover change. *ACSM/ASPRS Annual Convention & Exposition Technical Papers*, *in* 1994 ASPRS/ACSM annual convention and exposition; technical papers; Volume two, ACSM. (J. G. Lyon, editor). 1994, Vol. 2, 1994. p. 309-317.
- OP-563. P. C. Lyons and E. D. Morey*. David White (1862-1935); American paleobotanist and geologist. *Memoir - Geological Society of America*, *in* Historical perspective of early twentieth century Carboniferous paleobotany in North America. (P. C. Lyons, editor and others). 185, 1995. p. 135-148.
- OP-564. P. C. Lyons, E. D. Morey* and R. H. Wagner* (editors). Historical perspective of early twentieth century Carboniferous paleobotany in North America. *Memoir - Geological Society of America*. 185, 1995. 404 p.
- OP-565. P. C. Lyons, W. H. Orem, Maria Mastalerz*, E. L. Zodrow*, Angelika Vieth-Redemann* and R. M. Bustin*. ¹³C NMR, micro-FTIR and fluorescence spectra, and pyrolysis-gas chromatograms of coalified foliage of late Carboniferous medullosan seed ferns, Nova Scotia, Canada; Implications for coalification and chemotaxonomy. *International Journal of Coal Geology*. v. 27, no. 2-4, March 1995. p. 227-248.
- OP-566. P. C. Lyons and Marlies Teichmüller*. Reinhardt Thiesen (1867-1938); pioneering coal petrologist and stratigraphic palynologist. *Memoir - Geological Society of America*, *in* Historical perspective of early twentieth century Carboniferous paleobot-

- any in North America. (P. C. Lyons, editor and others). 185, 1995. p. 149-161.
- OP-567. P. C. Lyons and R. H. Wagner*. The Stephanian of North America; early 1900s controversies and problems. Memoir - Geological Society of America, *in* Historical perspective of early twentieth century Carboniferous paleobotany in North America. (P. C. Lyons, editor and others). 185, 1995. p. 293-314.
- OP-568. P. C. Lyons and E. L. Zodrow*. Early to mid-twentieth century floral zonation schemes of the Pennsylvanian (Late Carboniferous) of North America and correlations with the Late Carboniferous of Europe. Memoir - Geological Society of America, *in* Historical perspective of early twentieth century Carboniferous paleobotany in North America. (P. C. Lyons, editor and others). 185, 1995. p. 277-292.
- OP-569. J. W. M'Gonigle, G. B. Dalrymple and C. W. Holmes*. WYOMING. Single-crystal $^{40}\text{Ar}/^{39}\text{Ar}$ ages for rocks in the lower part of the Frontier Formation (Upper Cretaceous), Southwest Wyoming. The Mountain Geologist. v. 32, no. 2, April 1995. p. 47-53.
- OP-570. C. G. MacDonald, J. K. McGregor, C. A. Edwards and I. L. Hopkins. Application of paper preservation techniques by the U.S. Geological Survey field record and photographic libraries. Proceedings - Geoscience Information Society. 23, 1992. p. 125-126.
- OP-571. I. P. Madin*, G. R. Priest*, M. A. Mabey*, S. D. Malone*, T. S. Yelin and Dan Meier*. OREGON. March 25, 1993, Scotts Mills earthquake; western Oregon's wake-up call. Oregon Geology. v. 55, no. 3, May 1993. p. 51-57.
- OP-572. R. F. Madole. COLORADO. Spatial and temporal patterns of late Quaternary eolian deposition, eastern Colorado, U.S.A. Quaternary Science Reviews. v. 14, no. 2, 1995. p. 155-177.
- OP-573. R. F. Madole, R. L. Schuster and A. M. Sarna-Wojcicki. WASHINGTON. Ribbon Cliff landslide, Washington, and the earthquake of 14 December 1872. Bulletin of the Seismological Society of America. v. 85, no. 4, August 1995. p. 986-1002.
- OP-574. L. B. Magoon, III. ALASKA. Tuxedni-Hemlock(!) petroleum system in Cook Inlet, Alaska, U.S.A. AAPG Memoir, *in* The petroleum system; from source to trap. (L. B. Magoon, III, editor and others). 60, 1994. p. 359-370.
- OP-575. L. B. Magoon, III. The play that complements the petroleum system; a new exploration equation. Oil and Gas Journal. v. 93, no. 40, October 2, 1995. p. 85-87.
- OP-576. L. B. Magoon, III. ALASKA. Petroleum resources in Alaska, *in* The geology of Alaska. (George Plafker, editor and others), *in the collection* The geology of North America. Boulder, CO: Geological Society of America. G-1, 1994. p. 905-936.
- OP-577. L. B. Magoon, III and W. G. Dow* (editors). The petroleum system; from source to trap. AAPG Memoir. 60, 1994. 655 p.
- OP-578. L. B. Magoon, III and W. G. Dow*. The petroleum system. AAPG Memoir, *in* The petroleum system; from source to trap. (L. B. Magoon, III, editor and others). 60, 1994. p. 3-24.
- OP-579. L. B. Magoon, III and R. M. Sánchez*. Beyond the petroleum system. AAPG Bulletin. v. 79, no. 12, December 1995. p. 1731-1736.
- OP-580. L. B. Magoon, III and Z. C. Valin. Overview of petroleum system case studies. AAPG Memoir, *in* The petroleum system; from source to trap. (L. B. Magoon, III, editor and others). 60, 1994. p. 329-338.
- OP-581. R. L. Malcolm. Concentration and composition of dissolved organic carbon in soils, streams, and groundwaters, *in* Organic substances in soil and water; natural constituents and their influence on contaminant behaviour. (A. J. Beck, editor and others). Cambridge: Royal Society of Chemistry, 1993. p. 19-30.
- OP-582. S. H. Mamay*, S. R. Ash* and P. C. Lyons. Charles Brian Read (1907-1979); American paleobotanist and geologist. Memoir - Geological Society of America, *in* Historical perspective of early twentieth century Carboniferous paleobotany in North America. (P. C. Lyons, editor and others). 185, 1995. p. 225-236.
- OP-583. F. T. Manheim (editor). GEORGIA. Geology, stratigraphic relationships, and chemical composition of phosphatic drill cores (TACTS boreholes) from the continental shelf off Georgia. Project Report - Georgia Geologic Survey. Report no. 17, 1992. 199 p.
- OP-584. F. T. Manheim and J. R. Herring. GEORGIA. Texture, origin, and significance of phosphorite pellets. Project Report - Georgia Geologic Survey, *in* Geology, stratigraphic relationships, and chemical composition of phosphatic drill cores (TACTS boreholes) from the continental shelf off Georgia. (F. T. Manheim, editor). Report no. 17, 1992. p. 81-100.
- OP-585. F. T. Manheim and J. R. Herring. GEORGIA. Location and core background data. Project Report - Georgia Geologic Survey, *in* Geology, stratigraphic relationships, and chemical composition of phosphatic drill cores (TACTS boreholes) from the continental shelf off Georgia. (F. T. Manheim, editor). Report no. 17, 1992. p. 4-24.
- OP-586. F. T. Manheim, P. F. Huddleston* and J. L. Da Silva. GEORGIA. Lithostratigraphy and phosphorite pellet concentration of TACTS cores A-H, and AMCOR drillhole 6002. Project Report - Georgia Geologic Survey, *in* Geology, stratigraphic relationships, and chemical composition of phosphatic drill cores (TACTS boreholes) from the continental shelf off Georgia. (F. T. Manheim, editor). Report no. 17, 1992. p. 25-80.
- OP-587. Lucia Margheriti, L. G. Wennerberg and John Boatwright. CALIFORNIA. A comparison of coda and S-wave spectral ratios as estimates of site response in the southern San Francisco Bay area. Bulletin of the Seismological Society of America. v. 85, no. 6, December 1994. p. 1815-1830.
- OP-588. R. K. Mark and S. D. Ellen. Statistical and simulation models for mapping, *in* Workshop on Geographic information systems in assessing natural hazards. (Paola Reichenbach, editor and others). Perugia: Univ. Foreigners, 1993. p. 66-70.
- OP-589. M. S. Marlow, A. K. Cooper and M. A. Fisher. ALASKA. Geology of the eastern Bering Sea continental shelf, *in* The geology of Alaska. (George Plafker, editor and others), *in the collection* The geology of North America. Boulder, CO: Geological Society of America. G-1, 1994. p. 271-284.

- OP-590. C. J. Marone* and M. L. Blanpied (editors). Faulting, friction, and earthquake mechanics; Part 1. Pure and Applied Geophysics. v. 142, no. 3-4, 1994. 808 p.
- OP-591. C. J. Marone*, J. E. Vidale and W. L. Ellsworth. Fault healing inferred from time dependent variations in source properties of repeating earthquakes. *Geophysical Research Letters*. v. 22, no. 22, November 15, 1995. p. 3095-3098.
- OP-592. Atsunao Marui* and J. M. Wilkinson. CALIFORNIA. Evaluation of 1994 Northridge quake by Japanese Shindo scale. *Chishitsu News*. v. 1994, no. 2, February 1994. p. 57-62.
- OP-593. C. D. Masters, E. D. Attanasi and D. H. Root. World resources of conventional natural gas. Report of Investigations - Texas, University, Bureau of Economic Geology, in *Impacts of technology on the global gas resource base; proceedings of the Global gas resources workshop*. (C. L. Ruthven, editor). 223, 1994. p. 1-17.
- OP-594. E. A. Mathez*, A. G. Duba*, C. L. Peach*, A. J. Léger*, T. J. Shankland* and George Plafker. ALASKA. Electrical conductivity and carbon in metamorphic rocks of the Yukon-Tanana Terrane, Alaska. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 6, June 10, 1995. p. 10,187-10,196.
- OP-595. J. R. Matzko, D. J. Percious, Jack Rachlin and D. R. Marples*. Observations on the geology and geohydrology of the Chernobyl' nuclear accident site, Ukraine. *International Geology Review*. v. 36, no. 2, February 1994. p. 203-211.
- OP-596. E. K. Maughan. MONTANA. Stratigraphic and structural summary for central Montana, in *Energy and mineral resources of central Montana*. (L. D. Hunter, editor). Billings, MT: Montana Geological Society, 1993. p. 2-20.
- OP-597. E. K. Maughan. Phosphoria Formation (Permian) and its resource significance in the Western Interior, U.S.A. *Memoir - Canadian Society of Petroleum Geologists, in Pangea; global environments and resources*. (A. F. Embry, editor and others). 17, December 1994. p. 479-495.
- OP-598. Helmut Mayer*, D. C. Bradley and W. S. Kidd*. Flexural extension of the upper continental crust in collisional foredeeps; discussion and reply. *Geological Society of America Bulletin*. v. 107, no. 4, April 1995. p. 499-501.
- OP-599. P. J. McCabe. Tectonic controls on coal accumulation. *Bulletin de la Société Géologique de France, Huitième Série, in Coal; formation, occurrence and related properties; symposium*. (Philippe Bertrand, editor). v. 162, no. 2, 1991. p. 277-282.
- OP-600. R. B. McCammon. PROSPECTOR II; towards a knowledge base for mineral deposits. *Mathematical Geology, in Expert systems and artificial intelligence in the applied geosciences; 26th international geological congress*. (Roussos Dimitrakopoulos, editor and others). v. 26, no. 8, November 1994. p. 917-936.
- OP-601. R. B. McCammon, W. I. Finch, J. O. Kork and N. J. Bridges*. An integrated data-directed numerical method for estimating the undiscovered mineral endowment in a region. *Nonrenewable Resources*. v. 3, no. 2, 1994. p. 109-122.
- OP-602. T. A. McConnaughey. Calcification, photosynthesis, and global carbon cycles. *Bulletin de la Institut Océanographique, in Past and present biomineralization processes; considerations about the carbonate cycle*. (François Doumenge, editor and others). 13, 1994. p. 137-161.
- OP-603. P. A. McCrory. CALIFORNIA. Evolution of a trench-slope basin within the Cascadia subduction margin; the Neogene Humboldt Basin, California. *Sedimentology*. v. 42, no. 2, April 1995. p. 223-247.
- OP-604. Kristin McDougall. Age of the Fishcreekian transgression. *Palaaios*. v. 10, no. 3, June 1995. p. 199-220.
- OP-605. A. S. McEwen, M. S. Robinson, E. M. Eliason, P. G. Lucey*, T. C. Duxbury* and P. D. Spudis*. Clementine observations of the Aristarchus region of the Moon. *Science*. v. 266, no. 5192, December 16, 1994. p. 1858-1862.
- OP-606. A. F. McGarr. Some comparisons between mining-induced and laboratory earthquakes. Pure and Applied Geophysics, in *Faulting, friction, and earthquake mechanics; Part 1*. (C. J. Marone, editor and others). v. 142, no. 3-4, 1994. p. 467-489.
- OP-607. R. M. McKay*, L. S. Seigley*, J. J. Wellman, Thomas Munson* and W. M. Furnish*. IOWA. Selected aspects of Lower Ordovician and Upper Cambrian geology in Allamakee and northern Clayton counties. *Field Trip Guidebook - Geological Society of Iowa*. 57, 1993. 61 p.
- OP-608. P. B. McMahon, J. A. Tindall, J. A. Collins, K. J. Lull and J. R. Nuttle*. Hydrologic and geochemical effects on oxygen uptake in bottom sediments of an effluent-dominated river. *Water Resources Research*. v. 31, no. 10, October 1995. p. 2561-2569.
- OP-609. S. R. McNutt. ALASKA. Seismological aspects of the 1992 eruption of Mt. Spurr Volcano, Alaska. *WOVO News*. 1, 1993. p. 11-12.
- OP-610. B. F. McPherson and R. L. Miller. FLORIDA. Causes of light attenuation in Tampa Bay and Charlotte Harbor, southwestern Florida. *Water Resources Bulletin*. v. 30, no. 1, February 1994. p. 43-53.
- OP-611. G. P. Meeker. Constraints on formation processes of two coarse-grained calcium-aluminum-rich inclusion; a study of mantles, islands and cores. *Meteoritics*. v. 30, no. 1, January 1995. p. 71-84.
- OP-612. M. F. Meier*, S. C. Lundstrom*, D. B. Stone*, Barclay Kamb*, Hermann Engelhardt*, N. F. Humphrey*, W. W. Dunlap*, M. A. Fahnestock*, R. M. Krimmel and R. A. Walters. Mechanical and hydrologic basis for the rapid motion of a large tidewater glacier; 1, Observations. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 8, August 10, 1994. p. 15,219-15,229.
- OP-613. Carlos Mendoza. Finite-fault analysis of the 1979 March 14 Petatlan, Mexico, earthquake using teleseismic P waveforms. *Geophysical Journal International*. v. 121, no. 3, June 1995. p. 675-683.
- OP-614. M. E. Meremonte, J. S. Gombert and Edward Cranswick. NEVADA. Constraints on the 29 June 1992 Little Skull Mountain, Nevada, earthquake sequence provided by robust hypocenter estimates. *Bulletin of the Seismological Society of America*. v. 85, no. 4, August 1995. p. 1039-1049.

- OP-615. M. L. Merritt. A rewetting approximation for a simulator of flow in a surficial aquifer overlain by seasonally inundated wetlands. *Ground Water*. v. 32, no. 2, April 1994. p. 286-292.
- OP-616. D. W. Metge, M. H. Brooks, R. L. Smith and R. W. Harvey. MASSACHUSETTS. Effects of treated-sewage contamination upon bacterial energy charge, adenine nucleotides, and DNA content in a sandy aquifer on Cape Cod. *Applied and Environmental Microbiology*. v. 59, no. 7, July 1993. p. 2304-2310.
- OP-617. R. L. Michel and T. F. Kraemer. NEW YORK. Use of isotopic data to estimate water residence times of the Finger Lakes, New York. *Journal of Hydrology*. v. 164, no. 1-4, January 1995. p. 1-18.
- OP-618. D. M. Miller and C. J. Busby* (editors). Jurassic magmatism and tectonics of the North American Cordillera. Special Paper - Geological Society of America. 299, 1995. 425 p.
- OP-619. D. M. Miller and T. D. Hoisch*. NEVADA, UTAH. Jurassic tectonics of northeastern Nevada and northwestern Utah from the perspective of barometric studies. Special Paper - Geological Society of America, in *Jurassic magmatism and tectonics of the North American Cordillera*. (D. M. Miller, editor and others). 299, 1995. p. 267-294.
- OP-620. K. C. Miller* and W. D. Mooney. CALIFORNIA. Crustal structure and composition of the southern Foothills metamorphic belt, Sierra Nevada, California, from seismic data. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 4, April 10, 1995. p. 6865-6880.
- OP-621. K. G. Miller*, Marie-Pierre Aubry*, J. V. Browning*, David Bukry, L. D. Burckle*, M. D. Feigenson*, Matthew Goss*, David Gwynn*, D. V. Kent*, Chengjie Liu*, Lloyd Mullikin*, D. G. Queen, P. J. Sugarman*, M. C. Van Fossen* and E. M. Maddox*. NEW JERSEY. Proceedings of the Ocean Drilling Program; initial reports; New Jersey coastal plain; covering onshore boreholes as part of the New Jersey Sea-level Transect; Island Beach and Atlantic City sites, March-August 1993. Proceedings of the Ocean Drilling Program, Part A: Initial Reports. 150X, November 1994. 59 p.
- OP-622. K. G. Miller*, J. V. Browning*, Chengjie Liu*, P. J. Sugarman*, D. V. Kent*, M. C. Van Fossen*, D. G. Queen, Matthew Goss*, David Gwynn*, Lloyd Mullikin*, M. D. Feigenson*, Marie-Pierre Aubry* and L. D. Burckle*. NEW JERSEY. Atlantic City site report. Proceedings of the Ocean Drilling Program, Part A: Initial Reports, in *Proceedings of the Ocean Drilling Program; initial reports; New Jersey coastal plain; covering onshore boreholes as part of the New Jersey Sea-level Transect; Island Beach and Atlantic City sites, March-August 1993*. (K. G. Miller and others). 150X, November 1994. p. 35-55.
- OP-623. K. G. Miller*, P. J. Sugarman*, M. C. Van Fossen*, Chengjie Liu*, J. V. Browning*, D. G. Queen, Marie-Pierre Aubry*, L. D. Burckle*, Matthew Goss* and David Bukry. NEW JERSEY. Island Beach site report. Proceedings of the Ocean Drilling Program, Part A: Initial Reports, in *Proceedings of the Ocean Drilling Program; initial reports; New Jersey coastal plain; covering onshore boreholes as part of the New Jersey Sea-level Transect; Island Beach and Atlantic City sites, March-*
- August 1993. (K. G. Miller and others). 150X, November 1994. p. 5-33.
- OP-624. L. J. Miller*, R. J. Goldfarb, L. W. Snee, C. A. Gent and R. A. Kirkham*. ALASKA. Structural geology, age, and mechanisms of gold vein formation at the Kensington and Jualin deposits, Berners Bay District, Southeast Alaska. *Economic Geology and the Bulletin of the Society of Economic Geologists*. v. 90, no. 2, April 1995. p. 343-368.
- OP-625. R. J. Miller and C. T. Wrucke. CALIFORNIA. Age, chemistry, and geologic implications of Tertiary volcanic rocks in the Last Chance Range and part of the Saline Range, northern Death Valley region, California. *Isochron/West*. 62, May 1995. p. 30-36.
- OP-626. T. P. Miller. ALASKA. Pre-Cenozoic plutonic rocks in mainland Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 535-554.
- OP-627. T. P. Miller. ALASKA. Geothermal resources of Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 979-987.
- OP-628. T. P. Miller and D. H. Richter. ALASKA. Quaternary volcanism in the Alaska Peninsula and Wrangell Mountains, Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 759-779.
- OP-629. M. S. Mills and E. M. Thurman. Reduction of nonpoint source contamination of surface water and groundwater by starch encapsulation of herbicides. *Environmental Science & Technology*, ES & T. v. 28, no. 1, January 1994. p. 73-79.
- OP-630. M. S. Mills and E. M. Thurman. Preferential dealkylation reactions of s-triazine herbicides in the unsaturated zone. *Environmental Science & Technology*, ES & T. v. 28, no. 4, April 1994. p. 600-605.
- OP-631. S. A. Minor. NEVADA. Superposed local and regional paleostresses; fault-slip analysis of Neogene extensional faulting near coeval caldera complexes, Yucca Flat, Nevada. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 6, June 10, 1995. p. 10,507-10,528.
- OP-632. E. J. Moll-Stalcup. ALASKA. Latest Cretaceous and Cenozoic magmatism in mainland Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 589-619.
- OP-633. E. J. Moll-Stalcup, D. A. Brew and T. L. Vallier. ALASKA. Latest Cretaceous and Cenozoic magmatic rocks of Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. 1 sheet.
- OP-634. B. F. Molnia. WYOMING, MONTANA. Effects of potential geothermal development on the thermal features of Yellowstone National Park; Part 1, Perspective 1, Introduction. *GSA Today*. v. 4, no. 12, December 1994. p. 291, 296.

- OP-635. B. F. Molnia. *Glaciology. Geotimes.* v. 40, no. 2, February 1995. p. 19.
- OP-636. W. D. Mooney. Seismology; continental roots go with the flow. *Nature (London).* v. 375, no. 6526, May 4, 1995. p. 15.
- OP-637. D. E. Moore and D. A. Lockner. The role of microcracking in shear-fracture propagation in granite. *Journal of Structural Geology.* v. 17, no. 1, January 1995. p. 95-114.
- OP-638. I. D. Moore*, A. K. Turner*, J. P. Wilson*, S. K. Jenson and L. E. Band*. GIS and land-surface-subsurface process modeling, in *Environmental modeling with GIS.* (M. F. Goodchild, editor and others). New York, NY: Oxford University Press, 1993. p. 196-230.
- OP-639. J. G. Moore, W. B. Bryan*, M. H. Beeson and W. R. Normark. HAWAII. Giant blocks in the South Kona Landslide, Hawaii. *Geology (Boulder).* v. 23, no. 2, February 1995. p. 125-128.
- OP-640. J. G. Moore, S. P. Jakobsson* and Josef Holmjar*. Subsidence of Surtsey volcano, 1967-1991. *Bulletin of Volcanology.* v. 55, no. 1-2, December 1992. p. 17-24.
- OP-641. T. E. Moore, W. K. Wallace*, K. J. Bird, S. M. Karl, C. G. Mull* and J. T. Dillon*. ALASKA. Geology of Northern Alaska, in *The geology of Alaska.* (George Plafker, editor and others), in *the collection The geology of North America.* Boulder, CO: Geological Society of America. G-1, 1994. p. 49-140.
- OP-642. T. E. Moore, W. K. Wallace*, C. G. Mull*, S. M. Karl and K. J. Bird. ALASKA. Generalized geologic map and sections for Northern Alaska, in *The geology of Alaska.* (George Plafker, editor and others), in *the collection The geology of North America.* Boulder, CO: Geological Society of America. G-1, 1994. 1 sheet.
- OP-643. M. S. Moran*, W. P. Kustas*, Alain Vidal*, D. I. Stannard and J. H. Blanford*. Use of ground-based remotely sensed data for surface energy balance calculations during Monsoon'90. *International Geoscience and Remote Sensing Symposium.* 11, 1991. p. 33-37.
- OP-644. E. D. Morey* and P. C. Lyons. Correspondence and plant-fossil exchanges between William C. Darrah and European paleobotanists (1932-1951). *Memoir - Geological Society of America,* in *Historical perspective of early twentieth century Carboniferous paleobotany in North America.* (P. C. Lyons, editor and others). 185, 1995. p. 35-58.
- OP-645. E. D. Morey* and P. C. Lyons. William Culp Darrah (1909-1989); a portrait. *Memoir - Geological Society of America,* in *Historical perspective of early twentieth century Carboniferous paleobotany in North America.* (P. C. Lyons, editor and others). 185, 1995. p. 1-22.
- OP-646. E. D. Morey* and P. C. Lyons. Adolf Carl Noé (1873-1939); pioneer in North American coal-ball studies. *Memoir - Geological Society of America,* in *Historical perspective of early twentieth century Carboniferous paleobotany in North America.* (P. C. Lyons, editor and others). 185, 1995. p. 175-181.
- OP-647. J. W. Morgan, M. F. Horn, R. J. Walker* and J. N. Grossman. Rhenium-osmium concentration and isotope systematics in group IIAB iron meteorites. *Geochimica et Cosmochimica Acta.* v. 59, no. 11, June 1995. p. 2331-2344.
- OP-648. J. W. Morgan and J. H. Jones*. Fractional crystallization of iron meteorites; constant versus changing partition coefficients; discussion and reply. *Meteoritics.* v. 30, no. 3, May 1995. p. 352-356.
- OP-649. J. J. Mori, D. J. Wald and R. L. Wesson. CALIFORNIA. Overlapping fault planes of the 1971 San Fernando and 1994 Northridge, California earthquakes. *Geophysical Research Letters.* v. 22, no. 9, May 1, 1995. p. 1033-1036.
- OP-650. C. A. Morrow and D. A. Lockner. Permeability differences between surface-derived and deep drillhole core samples. *Geophysical Research Letters.* v. 21, no. 19, September 15, 1994. p. 2151-2154.
- OP-651. C. A. Morrow, D. A. Lockner, S. H. Hickman, M. S. Rusanov* and T. Röckel*. Effects of lithology and depth on the permeability of core samples from the Kola and KTB drillholes. *Journal of Geophysical Research, B, Solid Earth and Planets.* v. 99, no. 4, April 10, 1995. p. 7263-7274.
- OP-652. M. J. Mottl*, E. E. Davis*, A. T. Fisher*, P. A. Baker*, Keir Becker*, Maria Boni*, J. J. Boulègue*, C. A. Brunner*, R. C. Duckworth*, J. M. Franklin*, W. D. Goodfellow*, H. M. Gröschel-Becker*, Masataka Kinoshita*, B. A. Konyukhov*, Ulrike Körner*, S. G. Krasnov*, M. G. Langseth*, Shaozhi Mao*, Vesna Marchig*, Katsumi Marumo*, Hirokuni Oda*, C. A. Rigsby*, B. R. Simoneit*, D. S. Stakes*, H. W. Villinger*, C. G. Wheat*, J. K. Whelan*, R. A. Zierenberg, N. K. McQuiston* and L. H. Dearmont*. Scientific results; Middle Valley, Juan de Fuca Ridge; covering Leg 139 of the cruises of the drilling vessel JOIDES Resolution, San Diego, California, to Victoria, British Columbia, Canada, sites 855-858, 4 July-11 September, 1991. *Proceedings of the Ocean Drilling Program, Scientific Results.* 139, October 1994. 772 p.
- OP-653. D. K. Mueller (editor). Basin planning and management; water quantity and quality. *Information Series - Colorado Water Resources Research Institute.* Report no. 73, March 1993. 12 p.
- OP-654. R. J. Mueller, Meei-You Lee, M. J. Johnston, R. D. Borchardt, G. N. Glassmoyer and S. A. Silverman. Near real-time monitoring of seismic events and status of portable digital recorders using satellite telemetry. *Bulletin of the Seismological Society of America.* v. 85, no. 2, April 1995. p. 640-645.
- OP-655. L. J. Muffler. Tectonic and hydrologic control of the nature and distribution of geothermal resources. *Quarterly Bulletin - Oregon Institute of Technology. Geo-Heat Center.* v. 15, no. 2, November 1993. p. 1-10.
- OP-656. D. R. Muhs and V. T. Holliday*. Evidence of active dune sand on the Great Plains in the 19th century from accounts of early explorers. *Quaternary Research (New York).* v. 43, no. 2, March 1995. p. 198-208.
- OP-657. D. L. Naftz and L. E. Spangler. UTAH. Salinity increases in the Navajo Aquifer in southeastern Utah. *Water Resources Bulletin (Urbana).* v. 30, no. 6, December 1994. p. 1119-1135.
- OP-658. R. J. Naiman*, J. J. Magnuson*, D. M. McKnight, J. A. Stanford* and J. R. Karr*. Freshwater ecosystems and their

- management; a national initiative. *Science*. v. 270, no. 5236, October 27, 1995. p. 584-585.
- OP-659. R. M. Negrini*, D. B. Erbes*, A. P. Roberts*, K. L. Verosub*, A. M. Sarna-Wojcicki and C. E. Meyer. Repeating waveform initiated by a 180-190 ka geomagnetic excursion in western North America; implications for field behavior during polarity transitions and subsequent secular variation. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 12, December 10, 1994. p. 24,105-24,119.
- OP-660. A. R. Nelson. OREGON. Great subduction-zone earthquakes in the Pacific Northwest? Differentiating coseismic from nontectonic tidal marsh deposits along the Oregon coast. *Annual Meeting - Association of Engineering Geologists, in Proceedings of the 35th annual meeting of the Association of Engineering Geologists*. (M. L. Stout, editor). 35, 1992. p. 284-290.
- OP-661. A. R. Nelson, B. F. Atwater, P. T. Bobrowsky*, Lee-Ann Bradley, J. J. Clague*, G. A. Carver*, M. E. Darienzo*, W. C. Grant, H. W. Krueger*, R. J. Sparks*, T. W. Stafford, Jr.* and Minze Stuiver*. Radiocarbon evidence for extensive plate-boundary rupture about 300 years ago at the Cascadia subduction zone. *Nature (London)*. v. 378, no. 6555, November 23, 1995. p. 371-374.
- OP-662. C. H. Nelson and P. J. Lamothe. Heavy metal anomalies in the Tinto and Odiel river and estuary system, Spain. *Estuaries, in Trace contaminants and nutrients in estuaries*. (J. S. Kuwabara, editor and others). v. 16, no. 3A, September 1993. p. 496-511.
- OP-663. G. C. Nelson*, J. J. Rytuba, R. J. McLaughlin and R. M. Tosdal. CALIFORNIA. Gold and mercury deposits in the Sulphur Creek mining district, California. *Guidebook Series, in Active geothermal systems and gold-mercury deposits in the Sonoma-Clear Lake volcanic fields, California*. (J. J. Rytuba, editor). 16, October 1993. p. 262-269.
- OP-664. P. H. Nelson and D. A. Johnston*. ARIZONA. Geophysical and geochemical logs from a copper oxide deposit, Santa Cruz Project, Casa Grande, Arizona. *Geophysics*. v. 59, no. 12, December 1994. p. 1827-1838.
- OP-665. C. E. Neuzil. Abnormal pressures as hydrodynamic phenomena. *American Journal of Science*. v. 295, no. 6, June 1995. p. 742-786.
- OP-666. D. J. Nichols. WYOMING. Palynostratigraphic correlation of Paleocene rocks in the Wind River, Bighorn, and Powder River basins, Wyoming. *Public Information Circular - Geological Survey of Wyoming, in Organics and the Rockies; field guide*. (R. M. Flores, editor and others). Report no. 33, 1994. p. 17-29.
- OP-667. D. J. Nichols and J. L. Brown. WYOMING. The K-T Boundary at Sussex, Wyoming; evidence for a major extinction event at the end of the age of dinosaurs. *Guidebook - Wyoming Geological Association, in The dinosaurs of Wyoming*. (G. E. Nelson, editor). 44, June 1994. p. 85-100.
- OP-668. D. J. Nichols and R. F. Fleming*. Plant microfossil record of the terminal Cretaceous event in the Western United States and Canada. *Special Paper - Geological Society of America, in Global catastrophes in Earth history; an interdisciplinary conference on impacts, volcanism, and mass mortality*. (V. L. Sharpton, editor and others). 247, 1990. p. 445-455.
- OP-669. J. E. Nielson and K. K. Beratan*. CALIFORNIA, ARIZONA. Stratigraphic and structural synthesis of a Miocene extensional terrane, Southeast California and west-central Arizona. *Geological Society of America Bulletin*. v. 107, no. 2, February 1995. p. 241-252.
- OP-670. W. J. Nokleberg, D. A. Brew, D. J. Grybeck, W. E. Yeend, T. K. Bundtzen*, M. S. Robinson*, T. E. Smith*, H. C. Berg*, G. L. Andersen*, E. R. Chipp*, D. R. Gaard*, P. J. Burton*, John Dunbier*, D. A. Scherkenbach*, J. Y. Foley*, Gregory Thurow*, J. D. Warner*, C. J. Freeman*, B. M. Gamble, S. W. Nelson, J. M. Schmidt, C. C. Hawley*, M. W. Hitzman*, B. K. Jones*, I. M. Lange*, C. D. Maars*, C. C. Puchner*, C. I. Steefel*, W. D. Menzie, P. A. Metz*, J. S. Modene*, J. T. Plahuta*, L. E. Young*, C. R. Nauman*, S. R. Newkirk*, R. J. Newberry*, R. K. Rogers*, C. M. Rubin*, R. C. Swainbank*, P. R. Smith* and J. E. Stephens*. ALASKA. Metallogeny and major mineral deposits of Alaska, *in The geology of Alaska*. (George Plafker, editor and others), *in the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 855-903.
- OP-671. W. J. Nokleberg, T. K. Bundtzen*, H. C. Berg*, D. A. Brew, D. J. Grybeck, M. S. Robinson*, T. E. Smith* and W. E. Yeend. ALASKA. Metallogenic map of significant metalliferous lode deposits and placer districts in Alaska, *in The geology of Alaska*. (George Plafker, editor and others), *in the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. 1 sheet.
- OP-672. W. J. Nokleberg, George Plafker and F. H. Wilson. ALASKA. Geology of south-central Alaska, *in The geology of Alaska*. (George Plafker, editor and others), *in the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 311-366.
- OP-673. D. K. Nordstrom and J. L. Munoz*. *Geochemical thermodynamics*. Cambridge, MA: Blackwell Scientific Publications, 1994. 493 p.
- OP-674. R. D. Norris. WASHINGTON. Seismicity of rockfalls and avalanches at three Cascade Range volcanoes; implications for seismic detection of hazardous mass movements. *Bulletin of the Seismological Society of America*. v. 85, no. 6, December 1994. p. 1925-1939.
- OP-675. L. H. Nowell and E. A. Resek*. National standards and guidelines for pesticides in water, sediment, and aquatic organisms; application to water-quality assessments. *Reviews of Environmental Contamination and Toxicology*. 140, 1994. p. 1-164.
- OP-676. S. D. Nozette*, P. Rustan*, L. P. Pleasance*, D. M. Horan*, P. Regeon*, E. M. Shoemaker, P. D. Spudis*, C. H. Acton*, D. N. Baker*, J. E. Blamont*, B. J. Buratti*, M. P. Corson*, M. E. Davies*, T. C. Duxbury*, E. M. Eliason, B. M. Jakosky*, J. F. Kordas*, I. T. Lewis*, C. L. Lichtenberg*, P. G. Lucey*, Erick Malaret*, M. A. Massie*, J. H. Resnick*, C. J. Rollins*, H. S. Park*, A. S. McEwen, R. E. Priest*, C. M. Pieters*, R. A. Reisse*, M. S. Robinson, R. A. Simpson*, D. E. Smith*, T. C. Sorenson*, R. W. Vorder Bruegge* and M. T. Zuber*. The Clementine mission to the Moon; scientific overview. *Science*. v. 266, no. 5192, December 16, 1994. p. 1835-1839.

- OP-677. V. F. Nuccio and T. M. Finn. WYOMING. Structural and thermal history of the Paleocene Fort Union Formation, central and eastern Wind River basin, with emphasis on petroleum potential of the Waltman Shale Member. Public Information Circular - Geological Survey of Wyoming, in *Organics and the Rockies; field guide*. (R. M. Flores, editor and others). Report no. 33, 1994. p. 53-68.
- OP-678. W. K. Nuttle* and J. W. Harvey. Fluxes of water and solute in a coastal wetland sediment; 1, The contribution of regional groundwater discharge. *Journal of Hydrology*. v. 164, no. 1-4, January 1995. p. 89-107.
- OP-679. J. E. O'Connor, R. B. Waitt, Gerardo Benito*, D. I. Cordero* and S. F. Burns*. WASHINGTON, OREGON. Beyond the Channeled Scabland; a field trip to Missoula flood features in the Columbia, Yakima, and Walla Walla valleys of Washington and Oregon; Part 1. *Oregon Geology*. v. 57, no. 3, May 1995. p. 51-60.
- OP-680. J. E. O'Connor, R. B. Waitt, D. A. Johnston*, Gerardo Benito*, D. I. Cordero* and S. F. Burns*. WASHINGTON, OREGON. Beyond the Channeled Scabland; a field trip to Missoula flood features in the Columbia, Yakima, and Walla Walla valleys of Washington and Oregon, Part 2; Field trip, day one. *Oregon Geology*. v. 57, no. 4, July 1995. p. 75-86.
- OP-681. C. G. O'Hara. MISSISSIPPI. The creation and use of spatial data layers to evaluate the susceptibility of ground water in Mississippi to contamination from surface and shallow sources. *Proceedings - Mississippi Water Resources Conference, in Proceedings of the Twenty-fifth Mississippi water resources conference*. (B. J. Daniel, editor). 25, 1995. p. 200-207.
- OP-682. K. A. Oberg and R. B. Jacobson. ILLINOIS. The Miller City levee break and incipient meander cutoff. *Hydraulic Engineering: Proceedings of the National Conference on Hydraulic Engineering, in Hydraulic engineering '94*. (G. V. Cotroneo, editor and others). 1994, 1994. p. 623-627.
- OP-683. R. N. Oldale, H. J. Knebel and M. H. Bothner. MASSACHUSETTS. Submerged and eroded drumlins off northeastern Massachusetts. *Geomorphology*. v. 9, no. 4, June 1994. p. 301-309.
- OP-684. W. A. Oliver, Jr. Extinctions and migrations of Devonian rugose corals in the eastern Americas realm. *Lethaia*. v. 23, no. 2, 1990. p. 167-178.
- OP-685. W. A. Oliver, Jr. and W. S. Hecht. NEW YORK. Well-preserved favositid corals in the Oriskany Sandstone (Lower Devonian) of New York. *Bulletin - New York State Museum* (1976), in *Studies in stratigraphy and paleontology in honor of Donald W. Fisher*. (Ed Landing, editor). 481, 1994. p. 265-287.
- OP-686. W. A. Oliver, Jr. and J. E. Sorauf*. NEW YORK, OHIO. Branching *Heliophyllum* (Devonian rugose corals) from New York and Ohio. *Journal of Paleontology*. v. 68, no. 6, November 1994. p. 1183-1201.
- OP-687. H. W. Olsen, A. T. Willden*, N. J. Kiusalaas*, K. R. Nelson* and E. P. Poeter*. Volume-controlled hydrologic property measurements in triaxial systems. ASTM Special Technical Publication = American Society for Testing and Materials Special Technical Publication, in *Hydraulic conductivity and waste contaminant transport in soil*. (D. E. Daniel, editor and others). 1142, August 1994. p. 482-504.
- OP-688. L. D. Olsen*, A. J. Roman-Mas, C. P. Weisskopf* and S. J. Klaine*. TENNESSEE. Fate and transport of agrichemicals in the soil profile; a comparison of conventional and no-till techniques in the Beaver Creek watershed, West Tennessee. American Water Resources Association Technical Publication Series TPS, in *Symposium on Responses to changing multiple-use demands; new directions for water resources planning and management*. (M. J. Sale, editor and others). 94-2, April 1994. p. 267-268.
- OP-689. W. H. Orem, W. C. Burnett*, W. M. Landing*, W. B. Lyons* and W. J. Showers*. PALAU. Jellyfish Lake, Palau; early diagenesis of organic matter in sediments of an anoxic marine lake. *Limnology and Oceanography*. v. 36, no. 3, May 1991. p. 526-543.
- OP-690. R. S. Oremland, C. W. Culbertson* and M. R. Winfrey*. Methylmercury decomposition in sediments and bacterial cultures; involvement of methanogens and sulfate reducers in oxidative demethylation. *Applied and Environmental Microbiology*. v. 57, no. 1, January 1991. p. 130-137.
- OP-691. R. F. Ortiz, Paul von Guerard and Katherine Walton-Day. COLORADO. Effect of a localized rainstorm on the water quality of the Alamosa River upstream from Terrace Reservoir, south-central Colorado, August 9-10, 1993. Special Publication - Colorado Geological Survey, in *Proceedings; Summitville forum '95*. (H. H. Posey, editor and others). Report no. 38, 1995. p. 178-182.
- OP-692. W. R. Osterkamp (editor). Effects of scale on interpretation and management of sediment and water quality. IAHS-AISH Publication. 226, 1995. 301 p.
- OP-693. W. R. Osterkamp, T. J. Day* and R. S. Parker. A sediment monitoring program for North America. IAHS-AISH Publication, in *Erosion and sediment transport monitoring programmes in river basins*. (Jim Bogen and others). 210, 1992. p. 391-396.
- OP-694. W. R. Osterkamp and W. W. Emmett. The Vigil Network; long-term monitoring to assess landscape changes. IAHS-AISH Publication, in *Erosion and sediment transport monitoring programmes in river basins*. (Jim Bogen and others). 210, 1992. p. 397-404.
- OP-695. J. K. Otton. UTAH. Western frontal fault of the Canyon Range; is it the breakaway zone of the Sevier Desert detachment?. *Geology (Boulder)*. v. 23, no. 6, June 1995. p. 547-550.
- OP-696. Susan Owen*, Paul Segali*, J. T. Freymueller*, Asta Miklius, R. P. Denlinger, Thora Arnadottir*, M. K. Sako and Roland Bürgmann*. HAWAII. Rapid deformation of the south flank of Kilauea Volcano, Hawaii. *Science*. v. 267, no. 5202, March 3, 1995. p. 1328-1332.
- OP-697. R. A. Page, George Plafker and Hans Pulpan*. ALASKA. Block rotation in East-Central Alaska; a framework for evaluating earthquake potential?. *Geology (Boulder)*. v. 23, no. 7, July 1995. p. 629-632.
- OP-698. F. L. Paillet. High-resolution flow logging in observation boreholes during hydraulic testing of fractured-rock aquifers. *Transactions of the SPWLA Annual Logging Symposium, in*

- Transactions of the SPWLA thirty-second annual logging symposium. 32, June 1991. p. L1-L23.
- OP-699. F. L. Paillet, C. H. Cheng* and J. A. Meredith*. New applications in the inversion of acoustic full waveform logs; relating mode excitation to lithology. Transactions of the SPWLA Annual Logging Symposium, *in* Transactions of the SPWLA twenty-seventh annual logging symposium. 27, June 1986. p. VV1-VV25.
- OP-700. F. L. Paillet and Russell Duncanson*. Comparison of drilling reports and detailed geophysical analysis of ground-water production in bedrock wells. *Ground Water*. v. 32, no. 2, April 1994. p. 200-206.
- OP-701. J. G. Palacas, R. M. Flores, C. W. Keighin and D. E. Anders. WYOMING. Origin of oil in oil-saturated sandstones in the upper part of the Fort Union Formation (Paleocene), Castle Gardens and Signor Ridge areas, Wind River basin, Wyoming. Public Information Circular - Geological Survey of Wyoming, *in* Organics and the Rockies; field guide. (R. M. Flores, editor and others). Report no. 33, 1994. p. 83-97.
- OP-702. C. A. Palmer, M. R. Krasnow, R. B. Finkelman and W. M. d'Angelo. An evaluation of leaching to determine modes of occurrence of selected toxic elements in coal. *The Journal of Coal Quality*. v. 12, no. 4, December 1993. p. 135-141.
- OP-703. Ernian Pan*, Bernard Amadei* and W. Z. Savage. Gravitational and tectonic stresses in anisotropic rock with irregular topography. *International Journal of Rock Mechanics and Mining Sciences & Geomechanics Abstracts*. v. 32, no. 3, April 1995. p. 201-214.
- OP-704. J. K. Park*, K. L. Buchan* and S. S. Harlan. A proposed giant radiating dyke swarm fragmented by the separation of Laurentia and Australia based on paleomagnetism of ca. 780 Ma mafic intrusions in western North America. *Earth and Planetary Science Letters*. v. 132, no. 1-4, May 1995. p. 129-139.
- OP-705. S. K. Park*, D. M. Pendergraft*, W. J. Stephenson, K. M. Shedlock and T. C. Lee*. CALIFORNIA. Delineation of intrabasin structure in a dilational jog of the San Jacinto fault zone, Southern California. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 1, January 10, 1995. p. 691-702.
- OP-706. R. S. Parker and W. R. Osterkamp. Identifying trends in sediment discharge from alterations in upstream land use. IAHS-AISH Publication, *in* Effects of scale on interpretation and management of sediment and water quality. (W. R. Osterkamp, editor). 226, 1995. p. 207-213.
- OP-707. D. L. Parkhurst and L. N. Plummer. Geochemical models, *in* Regional ground-water quality. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 199-225.
- OP-708. T. E. Parsons, N. I. Christensen* and H. G. Wilshire. CALIFORNIA. Velocities of southern Basin and Range xenoliths; insights on the nature of lower crustal reflectivity and composition. *Geology (Boulder)*. v. 23, no. 2, February 1995. p. 129-132.
- OP-709. T. E. Parsons and Jill McCarthy. The active southwest margin of the Colorado Plateau; uplift of mantle origin. *Geological Society of America Bulletin*. v. 107, no. 2, February 1995. p. 139-147.
- OP-710. W. W. Patton, Jr., S. E. Box and D. J. Grybeck. ALASKA. Ophiolites and other mafic-ultramafic complexes in Alaska, *in* The geology of Alaska. (George Plafker, editor and others), *in the collection* The geology of North America. Boulder, CO: Geological Society of America. G-1, 1994. p. 671-686.
- OP-711. W. W. Patton, Jr., S. E. Box, E. J. Moll-Stalcup and T. P. Miller. ALASKA. Geology of West-Central Alaska, *in* The geology of Alaska. (George Plafker, editor and others), *in the collection* The geology of North America. Boulder, CO: Geological Society of America. G-1, 1994. p. 241-269.
- OP-712. L. D. Pellerin and G. W. Hohmann*. A parametric study of the vertical electric source. *Geophysics*. v. 60, no. 1, February 1995. p. 43-52.
- OP-713. W. H. Pelton*, W. R. Sill* and B. D. Smith. Interpretation of complex resistivity and dielectric data; Part 1. *Geophysical Transactions = Geofizikai Közlemények = Geofizicheskii Byulleten'*. v. 29, no. 4, December 1983. p. 297-330.
- OP-714. Gilles Peltzer*, K. W. Hudnut and K. L. Feigl*. CALIFORNIA. Analysis of coseismic surface displacement gradients using radar interferometry; new insights into the Landers earthquake. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 11, November 10, 1994. p. 21,971-21,981.
- OP-715. W. E. Pereira and F. D. Hostettler. Nonpoint source contamination of the Mississippi River and its tributaries by herbicides. *Environmental Science & Technology, ES & T*. v. 27, no. 8, August 1993. p. 1542-1552.
- OP-716. M. E. Perkins*, W. P. Nash*, F. H. Brown* and R. J. Fleck. IDAHO. Fallout tuffs of Trapper Creek, Idaho; a record of Miocene explosive volcanism in the Snake River plain volcanic province. *Geological Society of America Bulletin*. v. 107, no. 12, December 1995. p. 1484-1506.
- OP-717. C. A. Perry. Comparison of a solar-luminosity model with paleoclimatic data. TER-QUA Symposium Series - Institute for Tertiary-Quaternary Studies, *in* TER-QUA symposium series. (Wakefield Dort, Jr., editor). 2, 1994. p. 25-37.
- OP-718. E. U. Petersen*, J. F. Slack and T. W. Offield (editors). VERMONT, NEW YORK. Selected mineral deposits of Vermont and the Adirondack Mountains, New York; I, Mineral deposits of the Adirondack Mountains; II, Besshi-type massive sulfide deposits of the Vermont copper belt. *Guidebook Series*. 17, October 1993. 146 p.
- OP-719. E. J. Phillips, D. R. Lovley and E. E. Roden. Composition of non-microbially reducible Fe(III) in aquatic sediments. *Applied and Environmental Microbiology*. v. 59, no. 8, August 1993. p. 2727-2729.
- OP-720. W. J. Pickthorn. CALIFORNIA. Relation of hot-spring gold mineralization to silica-carbonate mercury mineralization in the Coast Ranges, California. *Guidebook Series, in* Active geothermal systems and gold-mercury deposits in the Sonoma-Clear Lake volcanic fields, California. (J. J. Rytuba, editor). 16, October 1993. p. 77-89.
- OP-721. T. C. Pierson. Flow characteristics of large eruption-triggered debris flows at snow-clad volcanoes; constraints for debris-flow models. *Journal of Volcanology and Geothermal Research, in* Models of magmatic processes and volcanic eruptions.

- (Yoshiaki Ida, editor and others). v. 66, no. 1-4, July 1995. p. 283-294.
- OP-722. D. Z. Piper and C. M. Isaacs. Minor elements in Quaternary sediment from the Sea of Japan; a record of surface-water productivity and intermediate-water redox conditions. *Geological Society of America Bulletin*. v. 107, no. 1, January 1995. p. 54-67.
- OP-723. George Plafker and H. C. Berg*. ALASKA. Introduction, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 1-16.
- OP-724. George Plafker and H. C. Berg* (editors). ALASKA. The geology of Alaska, in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. 1055 p.
- OP-725. George Plafker and H. C. Berg*. ALASKA. Overview of the geology and tectonic evolution of Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 989-1021.
- OP-726. George Plafker, L. M. Gilpin* and J. C. Lahr. ALASKA. Neotectonic map of Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. 1 sheet.
- OP-727. George Plafker, J. C. Moore* and G. R. Winkler. ALASKA. Geology of the Southern Alaska margin, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 389-449.
- OP-728. G. S. Plumlee. COLORADO. Fluid chemistry evolution and mineral deposition in the main-stage Creede epithermal system. *Economic Geology and the Bulletin of the Society of Economic Geologists*, in *A special issue on volcanic centers as targets for mineral exploration*. (W. E. Elston, editor and others). v. 89, no. 8, December 1994. p. 1860-1882.
- OP-729. G. S. Plumlee, M. B. Goldhaber and E. L. Rowan. ILLINOIS, KENTUCKY. The potential role of magmatic gases in the genesis of Illinois-Kentucky fluorspar deposits; implications from chemical reaction path modeling. *Economic Geology and the Bulletin of the Society of Economic Geologists*. v. 90, no. 5, August 1995. p. 999-1011.
- OP-730. G. S. Plumlee, J. E. Gray, M. M. Roeber, Jr.*, M. F. Coolbaugh*, M. J. Flohr and C. G. Whitney. COLORADO. The importance of geology in understanding and remediating environmental problems at Summitville. *Special Publication - Colorado Geological Survey, in Proceedings; Summitville forum '95*. (H. H. Posey, editor and others). Report no. 38, 1995. p. 13-22.
- OP-731. G. S. Plumlee, D. L. Leach, A. H. Hofstra, G. P. Landis, E. L. Rowan and J. G. Viets. Chemical reaction path modeling of ore deposition in mississippi valley-type Pb-Zn deposits of the Ozark region, U.S. Midcontinent; reply. *Economic Geology and the Bulletin of the Society of Economic Geologists*. v. 90, no. 5, August 1995. p. 1346-1349.
- OP-732. G. S. Plumlee, K. S. Smith, W. H. Ficklin, E. L. Mosier, M. R. Montour, P. H. Briggs and A. L. Meier. COLORADO. Geochemical processes controlling acid-drainage generation and cyanide degradation at Summitville. *Special Publication - Colorado Geological Survey, in Proceedings; Summitville forum '95*. (H. H. Posey, editor and others). Report no. 38, 1995. p. 23-34.
- OP-733. G. S. Plumlee and P. H. Whitehouse-Veaux. COLORADO. Mineralogy, paragenesis, and mineral zoning of the Bulldog Mountain vein system, Creede District, Colorado. *Economic Geology and the Bulletin of the Society of Economic Geologists*, in *A special issue on volcanic centers as targets for mineral exploration*. (W. E. Elston, editor and others). v. 89, no. 8, December 1994. p. 1883-1905.
- OP-734. L. N. Plummer, R. L. Michel, E. M. Thurman and P. D. Glynn. Environmental tracers for age dating young ground water, in *Regional ground-water quality*. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 255-294.
- OP-735. C. W. Poag and Marie-Pierre Aubry*. Upper Eocene impactites of the U.S. East Coast; depositional origins, biostratigraphic framework, and correlation. *Palaos*. v. 10, no. 1, February 1995. p. 16-43.
- OP-736. C. W. Poag and J. A. Commeau. VIRGINIA, MARYLAND. Paleocene to middle Miocene planktic foraminifera of the southwestern Salisbury Embayment, Virginia and Maryland; biostratigraphy, allostratigraphy, and sequence stratigraphy. *Journal of Foraminiferal Research*. v. 25, no. 2, April 1995. p. 134-155.
- OP-737. D. J. Ponti and K. R. Lajoie. CALIFORNIA. Chronostratigraphic implications for tectonic deformation of Palos Verdes and Signal Hills, Los Angeles Basin, California. *Annual Meeting - Association of Engineering Geologists, in Proceedings of the 35th annual meeting of the Association of Engineering Geologists*. (M. L. Stout, editor). 35, 1992. p. 617-620.
- OP-738. Peter Popenoe. GEORGIA. Maps and cross sections depicting the shallow seismic stratigraphy of the continental shelf and slope off Georgia from interpretation of high-resolution seismic-reflection data. *Project Report - Georgia Geologic Survey*. Report no. 15, 1992. 35 p.
- OP-739. Peter Popenoe, P. F. Huddleston* and V. J. Henry*. GEORGIA. Regional summary of the geology of the Miocene of Georgia and observations from the seismic reflection profiles and the TACTS cores. *Project Report - Georgia Geologic Survey, in Geology, stratigraphic relationships, and chemical composition of phosphatic drill cores (TACTS boreholes) from the continental shelf off Georgia*. (F. T. Manheim, editor). Report no. 17, 1992. p. 123-144.
- OP-740. L. Y. Popov*, R. B. Blodgett and A. V. Anderson*. ALASKA. First occurrence of the genus *Bicarinata* (Brachiopoda, Inarticulata) from the Middle Devonian in North America (Alaska). *Journal of Paleontology*. v. 68, no. 6, November 1994. p. 1214-1218.
- OP-741. L. J. Poppe, J. A. Commeau and Gretchen Luepke. PUERTO RICO. Silt fraction heavy-mineral distributions in a lateritic environment; the rivers and insular shelf of north-central

- Puerto Rico. *Sedimentary Geology*. v. 95, no. 3-4, March 1995. p. 251-268.
- OP-742. L. J. Poppe, Peter Popenoe, C. W. Poag and B. A. Swift. Stratigraphic and palaeoenvironmental summary of the South-east Georgia embayment; a correlation of exploratory wells. *Marine and Petroleum Geology*. v. 12, no. 6, 1995. p. 677-690.
- OP-743. K. W. Porter*, T. S. Dyman and R. G. Tysdal. MONTANA. Sequence boundaries and other surfaces in Lower and lower Upper Cretaceous rocks of central and Southwest Montana; a preliminary report, *in* Energy and mineral resources of central Montana. (L. D. Hunter, editor). Billings, MT: Montana Geological Society, 1993. p. 45-59.
- OP-744. C. J. Potter, R. F. Dubiel, L. W. Snee and S. C. Good*. UTAH, NEVADA. Eocene extension of early Eocene lacustrine strata in a complexly deformed Sevier-Laramide hinterland, Northwest Utah and Northeast Nevada. *Geology (Boulder)*. v. 23, no. 2, February 1995. p. 181-184.
- OP-745. T. P. Poulton*, R. L. Detterman, R. L. Hall*, D. L. Jones*, J. A. Peterson*, P. Smith*, D. G. Taylor*, H. W. Tipper* and G. E. Westermann*. Western Canada and United States. World and Regional Geology, *in* The Jurassic of the Circum-Pacific. (G. E. Westermann, editor). 3, 1992. p. 29-92.
- OP-746. R. B. Powers. WYOMING. Glasscock Hollow, *in* Wyoming oil and gas fields symposium; Greater Green River basin and overthrust belt. Casper, WY: Wyoming Geological Association, 1992. p. 156-157.
- OP-747. S. E. Prensky. WYOMING. Geologic implications of large-scale trends in well-log response, northern Green River basin, Wyoming. Transactions of the SPWLA Annual Logging Symposium, *in* Transactions of the SPWLA twenty-seventh annual logging symposium. 27, June 1986. p. EEE1-EEE24.
- OP-748. D. F. Pribnow* and J. H. Sass. Determination of thermal conductivity for deep boreholes. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 6, June 10, 1995. p. 9981-9994.
- OP-749. L. C. Price and Martin Schoell*. NORTH DAKOTA. Constraints on the origins of hydrocarbon gas from compositions of gases at their site of origin. *Nature (London)*. v. 378, no. 6555, November 23, 1995. p. 368-371.
- OP-750. A. A. Pucci, Jr.* and D. A. Pope. NEW JERSEY. Simulated effects of development on regional ground-water/surface-water interactions in the northern coastal plain of New Jersey. *Journal of Hydrology*. v. 167, no. 1-4, May 1995. p. 241-262.
- OP-751. A. A. Pucci, Jr., D. A. Pope and J. A. Gronberg. NEW JERSEY. Hydrogeology, simulation of regional ground-water flow, and saltwater intrusion, Potomac-Raritan-Magothy aquifer system, northern coastal plain of New Jersey. Report - New Jersey Geological Survey. Report no. 36, 1994. 209 p.
- OP-752. R. S. Punongbayan*, Jimmy Sincioco and C. G. Newhall*. Pinatubo Volcano Observatory. WOVN News. 1, 1993. p. 9-10.
- OP-753. J. E. Quick and R. T. Gregory*. Significance of melt-wall rock reaction; a comparative anatomy of three ophiolites. *Journal of Geology*. v. 103, no. 2, March 1995. p. 187-198.
- OP-754. J. E. Quick, Silvano Sinigoi* and Adriano Mayer*. Emplacement dynamics of a large mafic intrusion in the lower crust, Ivrea-Verbano Zone, northern Italy. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 11, November 10, 1994. p. 21,559-21,573.
- OP-755. J. E. Quick, Silvano Sinigoi* and Adriano Mayer*. Emplacement of mantle peridotite in the lower continental crust, Ivrea-Verbano Zone, Northwest Italy. *Geology (Boulder)*. v. 23, no. 8, August 1995. p. 739-742.
- OP-756. P. S. Rao* and W. M. Alley. Pesticides, *in* Regional ground-water quality. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 345-382.
- OP-757. V. J. Realmuto*, Ken Hon, A. B. Kahle*, E. A. Abbott* and D. C. Pieri*. HAWAII. Multispectral thermal infrared mapping of the 1 October 1988 Kupaianaha flow field, Kilauea Volcano, Hawaii. *Bulletin of Volcanology*. v. 55, no. 1-2, December 1992. p. 33-44.
- OP-758. R. A. Rebich, J. D. Schreiber* and J. W. Pote*. MISSISSIPPI, LOUISIANA. Deterministic assessment of agricultural nonpoint source pollution in Mississippi Delta Management Systems Evaluation Areas (MSEAs). Proceedings - Mississippi Water Resources Conference, *in* Proceedings of the Twenty-fifth Mississippi water resources conference. (B. J. Daniel, editor). 25, 1995. p. 16-23.
- OP-759. Ze'ev Reches* and D. A. Lockner. Nucleation and growth of faults in brittle rocks. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 9, September 10, 1994. p. 18,159-18,174.
- OP-760. M. M. Reddy and H. C. Claassen. Specific surface area of a crushed welded tuff before and after aqueous dissolution. *Applied Geochemistry*. v. 9, no. 2, March 1994. p. 223-233.
- OP-761. M. C. Reheis, J. C. Goodmacher*, J. W. Harden, L. D. McFadden*, T. K. Rockwell*, R. R. Shroba, J. M. Sowers* and E. M. Taylor. NEVADA, CALIFORNIA. Quaternary soils and dust deposition in southern Nevada and California. *Geological Society of America Bulletin*. v. 107, no. 9, September 1995. p. 1003-1022.
- OP-762. T. E. Reilly. Analysis of ground-water systems in freshwater-saltwater environments, *in* Regional ground-water quality. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 443-470.
- OP-763. Justin Revenaugh* and S. A. Sipkin. Mantle discontinuity structure beneath China. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 11, November 10, 1994. p. 21,911-21,927.
- OP-764. C. L. Rice. Introduction. Special Paper - Geological Society of America, *in* Elements of Pennsylvanian stratigraphy, central Appalachian Basin. (C. L. Rice, editor). 294, 1994. p. 1-5.
- OP-765. C. L. Rice (editor). Elements of Pennsylvanian stratigraphy, central Appalachian Basin. Special Paper - Geological Society of America. 294, 1994. 155 p.
- OP-766. C. L. Rice, H. E. Belkin, T. W. Henry, R. E. Zartman and M. J. Kunk. The Pennsylvanian fire clay tonstein of the Appalachian Basin; its distribution, biostratigraphy, and mineralogy. Special Paper - Geological Society of America, *in* Elements

- of Pennsylvanian stratigraphy, central Appalachian Basin. (C. L. Rice, editor). 294, 1994. p. 87-104.
- OP-767. C. L. Rice, J. K. Hielt* and E. D. Koozmin. Glossary of Pennsylvanian stratigraphic names, central Appalachian Basin. Special Paper - Geological Society of America, *in* Elements of Pennsylvanian stratigraphy, central Appalachian Basin. (C. L. Rice, editor). 294, 1994. p. 115-155.
- OP-768. C. L. Rice, R. M. Kosanke and T. W. Henry. KENTUCKY, OHIO, WEST VIRGINIA. Revision of nomenclature and correlations of some Middle Pennsylvanian units in the northwestern part of the Appalachian Basin, Kentucky, Ohio, and West Virginia. Special Paper - Geological Society of America, *in* Elements of Pennsylvanian stratigraphy, central Appalachian Basin. (C. L. Rice, editor). 294, 1994. p. 7-26.
- OP-769. D. D. Rice. Controls of coalbed gas composition. Proceedings - International Coalbed Methane Symposium, *in* Proceedings of the 1993 international Coalbed methane symposium. 1993, May 1993. p. 577-588.
- OP-770. D. D. Rice and Machiej Kotarba*. Origin of Upper Carboniferous coalbed gases, Lower and Upper Silesian coal beds, Poland. Proceedings - International Coalbed Methane Symposium, *in* Proceedings of the 1993 international Coalbed methane symposium. 1993, May 1993. p. 649-658.
- OP-771. K. C. Rice and O. P. Bricker. MARYLAND. Seasonal cycles of dissolved constituents in streamwater in two forested catchments in the mid-Atlantic region of the eastern USA. Journal of Hydrology. v. 170, no. 1-4, August 1995. p. 137-158.
- OP-772. D. H. Richter, S. J. Preece*, R. G. McGimsey and J. A. Westgate*. ALASKA. Mount Churchill, Alaska; source of the late Holocene White River Ash. Canadian Journal of Earth Sciences = Journal Canadien des Sciences de la Terre. v. 32, no. 6, June 1995. p. 741-748.
- OP-773. L. R. Riciputi*, C. M. Johnson*, D. A. Sawyer and P. W. Lipman. COLORADO. Crustal and magmatic evolution in a large multicyclic caldera complex; isotopic evidence from the central San Juan volcanic field. Journal of Volcanology and Geothermal Research, *in* Scientific drilling and caldera processes. (J. N. Gardner, editor and others). v. 67, no. 1-3, August 1995. p. 1-28.
- OP-774. J. R. Riehle. ALASKA. Heterogeneity, correlatives, and proposed stratigraphic nomenclature of Hayes tephra set H, Alaska. Quaternary Research (New York). v. 41, no. 3, May 1994. p. 285-288.
- OP-775. A. C. Riggs, W. J. Carr*, P. T. Kolesar* and R. J. Hoffman. NEVADA. Tectonic speleogenesis of Devils Hole, Nevada, and implications for hydrogeology and the development of long, continuous paleoenvironmental records. Quaternary Research (New York). v. 42, no. 3, November 1994. p. 241-254.
- OP-776. C. A. Rigsby*, R. A. Zierenberg and P. A. Baker*. Sedimentary and diagenetic structures and textures in turbiditic and hemiturbiditic strata as revealed by whole-core X-radiography, Middle Valley, northern Juan de Fuca Ridge. Proceedings of the Ocean Drilling Program, Scientific Results, *in* Scientific results; Middle Valley, Juan de Fuca Ridge; covering Leg 139 of the cruises of the drilling vessel JOIDES Resolution, San Diego, California, to Victoria, British Columbia, Canada, sites 855-858, 4 July-11 September, 1991. (M. J. Mottl and others). 139, October 1994. p. 105-111.
- OP-777. M. R. Risch. INDIANA. A summary of government-agency data on the occurrence of pesticides in Indiana ground water. Proceedings of the ... National Conference on Pesticides, *in* New directions in pesticide research, development, management, and policy; proceedings of the Fourth national conference on pesticides. (D. L. Weigmann, editor). 4, 1994. p. 142-155.
- OP-778. A. C. Roberts*, J. T. Szymanski*, R. C. Erd, A. J. Criddle* and Maurizio Bonardi*. CALIFORNIA. Deanesmithite, $\text{Hg}^{1+}_2\text{Hg}^{2+}_3\text{Cr}^{6+}\text{O}_5\text{S}_2$, a new mineral species from the Clear Creek Claim, San Benito County, California. The Canadian Mineralogist. 31, Part 4, 1993. p. 787-793.
- OP-779. B. Roberts*, Jeremy Hall*, G. M. Quinlan*, J. A. Wright*, J. H. Luetgert, S. S. Hughes, T. Côté* and C. P. Spencer*. LE91; preparations, field operations and data description for the land recordings of the 1991 Lithoprobe East seismic refraction experiment. Lithoprobe Report. Report no. 22, February 1992. 66 p.
- OP-780. S. B. Roberts and R. W. Stanton. WYOMING. Stratigraphy and depositional setting of thick coal beds in the Grass Creek coal mine, southwestern Bighorn Basin, Wyoming. Public Information Circular - Geological Survey of Wyoming, *in* Organics and the Rockies; field guide. (R. M. Flores, editor and others). Report no. 33, 1994. p. 125-138.
- OP-781. R. A. Robie, J. S. Huebner and B. S. Hemingway. Heat capacities and thermodynamic properties of braunite ($\text{Mn}_7\text{SiO}_{12}$) and rhodonite (MnSiO_3). American Mineralogist. v. 80, no. 5-6, June 1995. p. 560-575.
- OP-782. Peter Robinson*, N. M. Ratcliffe and J. C. Hepburn*. MASSACHUSETTS. A new tectonic-stratigraphic transect across the New England Caledonides of Massachusetts. Contribution - Geology Department, University of Massachusetts, *in* Field trip guidebook for the northeastern United States. (J. T. Cheney, editor and others). 67, Vol. 1, 1993. p. C.1-C.47.
- OP-783. E. A. Roeloffs and J. O. Langbein. CALIFORNIA. The earthquake prediction experiment at Parkfield, California. Reviews of Geophysics. v. 32, no. 3, August 1994. p. 315-336.
- OP-784. S. M. Roeske*, Cynthia Dusel-Bacon, J. N. Aleinikoff, L. W. Snee and M. A. Lanphere. ALASKA. Metamorphic and structural history of continental crust at a Mesozoic collisional margin, the Ruby Terrane, central Alaska. Journal of Metamorphic Geology, *in* Special issue on Cordilleran high-pressure metamorphic terranes. (B. E. Patrick, editor and others). v. 13, no. 1, January 1995. p. 25-40.
- OP-785. B. W. Rogers and Charmaine Leggé CALIFORNIA. Mercer Caverns; history, exploration, and geology of a gold country classic, Calaveras County. California Geology. v. 48, no. 3, June 1995. p. 63-71.
- OP-786. J. A. Rogers and C. D. Stephens. SSAM; real-time seismic spectral amplitude measurement on a PC and its application to volcano monitoring. Bulletin of the Seismological Society of America. v. 85, no. 2, April 1995. p. 632-639.

- OP-787. S. A. Rojstaczer* and S. J. Deverel. Time dependence in atmospheric carbon inputs from drainage of organic soils. *Geophysical Research Letters*. v. 20, no. 13, July 9, 1993. p. 1383-1386.
- OP-788. S. A. Rojstaczer* and S. J. Deverel. CALIFORNIA. Land subsidence in drained Histosols and highly organic mineral soils of California. *Soil Science Society of America Journal*. v. 59, no. 4, August 1995. p. 1162-1167.
- OP-789. S. A. Rojstaczer*, S. C. Wolf and R. L. Michel. CALIFORNIA. Permeability enhancement in the shallow crust as a cause of earthquake-induced hydrological changes. *Nature (London)*. v. 373, no. 6511, January 19, 1995. p. 237-239.
- OP-790. T. P. Rose*, R. E. Criss*, A. J. Mughannam* and M. A. Clynne. CALIFORNIA. Oxygen isotope evidence for hydrothermal alteration within a Quaternary stratovolcano, Lassen Volcanic National Park, California. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 11, November 10, 1994. p. 21,621-21,633.
- OP-791. Malcolm Ross, R. P. Nolan*, A. M. Langer* and W. C. Cooper*. Health effects of mineral dusts other than asbestos. *Reviews in Mineralogy*. 28, 1993. p. 361-407.
- OP-792. E. L. Rowan and M. B. Goldhaber. Duration of mineralization and fluid-flow history of the Upper Mississippi Valley zinc-lead district. *Geology (Boulder)*. v. 23, no. 7, July 1995. p. 609-612.
- OP-793. L. C. Rowan and T. L. Bowers. NEVADA, CALIFORNIA. Analysis of linear features mapped in Landsat thematic mapper and side-looking airborne radar images of the Reno 1° by 2° Quadrangle, Nevada and California; implications for mineral resource studies. *Photogrammetric Engineering and Remote Sensing*. v. 61, no. 6, June 1995. p. 749-759.
- OP-794. L. C. Rowan, F. G. Poole and M. J. Pawlewicz. The use of visible and near-infrared reflectance spectra for estimating organic matter thermal maturity. *AAPG Bulletin*. v. 79, no. 10, October 1995. p. 1464-1480.
- OP-795. D. M. Rubin and R. R. McDonald. Nonperiodic eddy pulsations. *Water Resources Research*. v. 31, no. 6, June 1995. p. 1595-1605.
- OP-796. Jacob Rubin. Solute transport with multisegment, equilibrium-controlled, classical reactions; problem solvability and feed forward method's applicability for complex segments of at most binary participants. *Water Resources Research*. v. 28, no. 6, June 1992. p. 1681-1702.
- OP-797. J. F. Russell, C. W. Snyder* and H. H. Kieffer. Appendix; Origin and use of Martian nomenclature, in *Mars*. (H. H. Kieffer, editor and others), in the collection *Space science series*. (Tom Gehrels, editor). Tucson, AZ: University of Arizona Press, 1992. p. 1305-1314.
- OP-798. A. T. Rutledge and C. C. Daniel, III. Testing an automated method to estimate ground-water recharge from streamflow records. *Ground Water*. v. 32, no. 2, April 1994. p. 180-189.
- OP-799. J. J. Rytuba. Evolution of volcanic and tectonic features in caldera settings and their importance in localization of ore deposits. *Economic Geology and the Bulletin of the Society of Economic Geologists*, in A special issue on volcanic centers as targets for mineral exploration. (W. E. Elston, editor and others). v. 89, no. 8, December 1994. p. 1687-1696.
- OP-800. J. J. Rytuba (editor). CALIFORNIA. Active geothermal systems and gold-mercury deposits in the Sonoma-Clear Lake volcanic fields, California. *Guidebook Series*. 16, October 1993. 361 p.
- OP-801. J. J. Rytuba. CALIFORNIA. Epithermal precious-metal and mercury deposits in the Sonoma and Clear Lake volcanic fields, California. *Guidebook Series*, in *Active geothermal systems and gold-mercury deposits in the Sonoma-Clear Lake volcanic fields, California*. (J. J. Rytuba, editor). 16, October 1993. p. 38-51.
- OP-802. J. J. Rytuba, J. M. Donnelly-Nolan and R. J. McLaughlin. CALIFORNIA. Day three; Hot springs and deposits of mercury and gold in the Clear Lake volcanic field; road log. *Guidebook Series*, in *Active geothermal systems and gold-mercury deposits in the Sonoma-Clear Lake volcanic fields, California*. (J. J. Rytuba, editor). 16, October 1993. p. 270-288.
- OP-803. J. J. Rytuba, J. M. Donnelly-Nolan and R. J. McLaughlin. CALIFORNIA. Day two; The Geysers geothermal area and mercury deposits in the Clear Lake volcanic field; road log. *Guidebook Series*, in *Active geothermal systems and gold-mercury deposits in the Sonoma-Clear Lake volcanic fields, California*. (J. J. Rytuba, editor). 16, October 1993. p. 153-170.
- OP-804. J. J. Rytuba, D. A. Enderlin*, J. M. Donnelly-Nolan and R. J. McLaughlin. CALIFORNIA. Day Four; McLaughlin gold and Knoxville mercury deposits; road log. *Guidebook Series*, in *Active geothermal systems and gold-mercury deposits in the Sonoma-Clear Lake volcanic fields, California*. (J. J. Rytuba, editor). 16, October 1993. p. 350-361.
- OP-805. J. J. Rytuba, D. A. Enderlin* and R. J. McLaughlin. CALIFORNIA. Day one; The Sonoma volcanic field and associated gold and mercury deposits; road log. *Guidebook Series*, in *Active geothermal systems and gold-mercury deposits in the Sonoma-Clear Lake volcanic fields, California*. (J. J. Rytuba, editor). 16, October 1993. p. 117-123.
- OP-806. L. A. Sacks, J. S. Herman* and S. J. Kauffman*. FLORIDA. Controls on high sulfate concentrations in the upper Floridan Aquifer in Southwest Florida. *Water Resources Research*. v. 31, no. 10, October 1995. p. 2541-2551.
- OP-807. M. J. Sagers* and J. R. Matzko. The oil resources of Azerbaijan; survey and current developments. *International Geology Review*. v. 35, no. 12, December 1993. p. 1093-1103.
- OP-808. S. K. Sando. NORTH DAKOTA. Nutrient budget for Devils Lake, North Dakota, in *Proceedings; North Dakota water quality symposium*. Fargo, ND: North Dakota State University Extension Service, 1992. p. 152-166.
- OP-809. W. J. Sando. Global Mississippian coral zonation. *CFS. Courier Forschungsinstitut Senckenberg*, in *Intercontinental correlation and division of the Carboniferous System; contributions from the Carboniferous Subcommission meeting*. (P. L. Brenkle, editor and others). 130, 1990. p. 179-187.
- OP-810. W. E. Sanford, L. F. Konikow, G. L. Rowe* and S. L. Brantley*. Groundwater transport of crater-lake brine at Poás

- Volcano, Costa Rica. *Journal of Volcanology and Geothermal Research*. v. 64, no. 3-4, March 1995. p. 269-293.
- OP-811. W. E. Sanford*, T. S. Steenhuis*, J. Y. Parlange*, J. M. Surface and J. H. Peverly*. Hydraulic conductivity of gravel and sand as substrates in rock-reed filters. *Ecological Engineering*. v. 4, no. 4, June 1995. p. 321-336.
- OP-812. W. E. Sanford and W. W. Wood. TEXAS. Paleohydrologic record from lake brine on the Southern High Plains, Texas. *Geology (Boulder)*. v. 23, no. 3, March 1995. p. 229-232.
- OP-813. J. H. Sass. Mining the Earth's heat in the Basin and Range. *Bulletin - Geothermal Resources Council*. v. 24, no. 4, April 1995. p. 125-129.
- OP-814. J. H. Sass, A. H. Lachenbruch, S. P. Galanis, Jr., Paul Morgan*, S. S. Priest, T. H. Moses, Jr. and R. J. Munroe. ARIZONA, CALIFORNIA, NEVADA. Thermal regime of the southern Basin and Range Province; 1, Heat flow data from Arizona and the Mojave Desert of California and Nevada. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 11, November 10, 1994. p. 22,093-22,119.
- OP-815. J. M. Sauber*, George Plafker and J. M. Gipson*. Geodetic measurements used to estimate ice transfer during Bering glacier surge. *Eos, Transactions, American Geophysical Union*. v. 76, no. 29, July 18, 1995. p. 289, 290.
- OP-816. J. C. Savage. CALIFORNIA. Principal component analysis of interseismic deformation in Southern California. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 7, July 10, 1995. p. 12,691-12,701.
- OP-817. J. C. Savage. Geodetic measurements of crustal motions. Reports of the Department of Geodetic Science and Surveying, in *The changing world of geodetic science*. (U. A. Uotila, editor). 250, 1977. p. 99-118.
- OP-818. J. C. Savage and W. K. Gross. CALIFORNIA. Revised dislocation model of the 1986 Chalfant Valley earthquake, eastern California. *Bulletin of the Seismological Society of America*. v. 85, no. 2, April 1995. p. 629-631.
- OP-819. J. C. Savage and Michael Lisowski. CALIFORNIA. Geodetic monitoring of the southern San Andreas Fault, California, 1980-1991. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 5, May 10, 1995. p. 8185-8192.
- OP-820. J. C. Savage and Michael Lisowski. CALIFORNIA. Changes in long-term extension rates associated with the Morgan Hill and Loma Prieta earthquakes in California. *Geophysical Research Letters*. v. 22, no. 7, April 1, 1995. p. 759-762.
- OP-821. J. C. Savage and Michael Lisowski. CALIFORNIA. Interseismic deformation along the San Andreas Fault in Southern California. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 7, July 10, 1995. p. 12,703-12,717.
- OP-822. J. C. Savage and Michael Lisowski. CALIFORNIA. Strain accumulation in Owens Valley, California, 1974 to 1988. *Bulletin of the Seismological Society of America*. v. 85, no. 1, February 1995. p. 151-158.
- OP-823. J. C. Savage, Michael Lisowski, W. K. Gross, N. E. King and J. L. Svarc. NEVADA. Strain accumulation near Yucca Mountain, Nevada, 1983-1993. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 9, September 10, 1994. p. 18,103-18,107.
- OP-824. J. C. Savage, Michael Lisowski, N. E. King and W. K. Gross. Strain accumulation along the Laguna Salada Fault, Baja California, Mexico. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 9, September 10, 1994. p. 18,109-18,116.
- OP-825. J. C. Savage, Michael Lisowski and J. L. Svarc. CALIFORNIA. Postseismic deformation following the 1989 ($M = 7.1$) Loma Prieta, California, earthquake. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 7, July 10, 1994. p. 13,757-13,765.
- OP-826. N. M. Savage* and R. B. Blodgett. ALASKA. A new species of the conodont *Amydrotaxis* from the Early Devonian of Southwestern Alaska. Professional Report - Alaska. Division of Geological & Geophysical Surveys. Report no. 117, 1995. p. 69-73.
- OP-827. M. G. Sawlan. Magmatic evolution of the Gulf of California rift. AAPG Memoir, in *The Gulf and Peninsular Province of the Californias*. (J. P. Dauphin, editor and others). 47, 1991. p. 301-369.
- OP-828. C. J. Schenk and J. W. Schmoker. MISSISSIPPI. Role of halite in the evolution of sandstone porosity, Upper Jurassic Norphlet Formation, Mississippi salt basin. *Transactions - Gulf Coast Association of Geological Societies, in Gulf Coast Association of Geological Societies; transactions of the 43rd annual convention*. (N. C. Rosen, editor and others). 43, October 1993. p. 357-362.
- OP-829. J. C. Schmidt* and D. M. Rubin. Regulated streamflow, fine-grained deposits, and effective discharge in canyons with abundant debris fans. *Geophysical Monograph, in Natural and anthropogenic influences in fluvial geomorphology; the Wolman Volume*. (J. E. Costa, editor and others). 89, 1995. p. 177-195.
- OP-830. J. W. Schmoker. Volumetric calculation of hydrocarbons generated. AAPG Memoir, in *The petroleum system; from source to trap*. (L. B. Magoon, III, editor and others). 60, 1994. p. 323-326.
- OP-831. S. P. Schottler*, S. J. Eisenreich* and P. D. Capel. Atrazine, alachlor, and cyanazine in a large agricultural river system. *Environmental Science & Technology, ES & T*. v. 28, no. 6, June 1994. p. 1079-1089.
- OP-832. P. F. Schuster, M. M. Reddy and S. I. Sherwood*. Effects of acid rain and sulfur dioxide on marble dissolution. Dalhem Workshop Reports. *Environmental Sciences Research Report, in Durability and change; the science, responsibility, and cost of sustaining cultural heritage*. (W. E. Krumbein, editor and others). 15, 1994. p. 173-190.
- OP-833. R. L. Schuster. Recent advances in slope stabilization. *Proceedings of the International Symposium on Landslides = Comptes Rendus du Symposium International sur les Glissements de Terrain, in Landslides—Glissements de terrain*. (D. H. Bell, editor). 6, Vol. 3, 1995. p. 1715-1745.

- OP-834. D. W. Schwartzman*, John Evans, Harold Okrend* and Soe Aung*. Microbial weathering and Gaia, *in* Scientists on Gaia. (S. H. Schneider, editor and others). Cambridge, MA: Massachusetts Institute of Technology, 1991. p. 320-329.
- OP-835. D. R. Scott*, D. A. Lockner, J. D. Byerlee and C. G. Sammis*. CALIFORNIA. Triaxial testing of Lopez Fault gouge at 150 MPa mean effective stress. Pure and Applied Geophysics, *in* Faulting, friction, and earthquake mechanics; Part 1. (C. J. Marone, editor and others). v. 142, no. 3-4, 1994. p. 749-775.
- OP-836. R. B. Scott, D. M. Unruh, L. W. Snee, A. E. Harding, L. D. Nealey, H. R. Blank, Jr., J. R. Budahn and H. H. Mehnert. NEVADA. Relation of peralkaline magmatism to heterogeneous extension during the middle Miocene, southeastern Nevada. Journal of Geophysical Research, B, Solid Earth and Planets. v. 100, no. 6, June 10, 1995. p. 10,381-10,401.
- OP-837. D. R. Sechrist and B. O. Wilen*. MARYLAND. Wetlands evaluation; a geographic information system analysis of multi-agency wetlands data for Wicomico County, Maryland. ACSM/ASPRS Annual Convention & Exposition Technical Papers, *in* ACSM/ASPRS annual convention & exposition; technical papers; Volume 2, ASPRS. 1995, Vol. 2, 1995. p. 348-363.
- OP-838. Kenneth Segerstrom. Excursiones A-10 y C-13; geología entre México, D. F. y Huachinango, Pue.; campos petroleros de Poza Rica, Ver. y la Nueva Faja de Oro, Ver [Excursions A-10 and C-13; geology between Mexico, D. F. and Huachinango, Puebla; petroleum fields of Poza Rica, Veracruz and the Nueva Faja de Oro, Veracruz]. Boletín de la Asociación Mexicana de Geólogos Petroleros. v. 9, no. 7-8, August 1957. p. 459-566.
- OP-839. L. S. Seigley* and J. J. Wellman. IOWA. Stop 8; Sny Magill Watershed nonpoint source pollution monitoring project; an EPA Section 319 national monitoring program project. Field Trip Guidebook - Geological Society of Iowa, *in* Selected aspects of Lower Ordovician and Upper Cambrian geology in Allamakee and northern Clayton counties. (R. M. McKay and others). 57, 1993. p. 47-54.
- OP-840. Stephen Self* and P. W. Lipman (leaders). Large ignimbrites and caldera-forming eruptions. IAVCEI Working Group on Explosive volcanism and its products, 1989. 128 p.
- OP-841. R. M. Senterfit. ALASKA. Audio-magnetotelluric (AMT) studies of the Annette Islands Reserve, *in* Special symposium 1993 on Economic mineral resources of the Annette Islands Reserve, Alaska. (S. A. Manydeeds, chairperson). Spokane, WA: Northwest Mining Association, 1993. p. 51-56.
- OP-842. W. C. Shanks, III. Mid-ocean ridges; rebirth of a seafloor vent. Nature (London). v. 375, no. 6526, May 4, 1995. p. 18-19.
- OP-843. M. M. Sharma*, G. J. Wasserburg*, D. A. Papanastassiou*, J. E. Quick, E. V. Sharkov* and E. E. Laz'ko*. High $^{143}\text{Nd}/^{144}\text{Nd}$ in extremely depleted mantle rocks. Earth and Planetary Science Letters. v. 135, no. 1-4, October 1995. p. 101-114.
- OP-844. D. R. Shawe, C. W. Naeser, R. F. Marvin and H. H. Mehnert. NEVADA. New radiometric ages of igneous and mineralized rocks, southern Toiyama Range, Nye County, Nevada. Isochron/West. 50, December 1987. p. 3-7.
- OP-845. R. J. Shedlock, P. A. Hamilton, J. M. Denver and P. J. Phillips. DELAWARE, MARYLAND, VIRGINIA. Multiscale approach to regional ground-water-quality assessment of the Delmarva Peninsula, *in* Regional ground-water quality. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 563-588.
- OP-846. M. G. Sherlock. Mineral-resource information; a customer-oriented approach. Nonrenewable Resources. v. 3, no. 2, 1994. p. 85-90.
- OP-847. C. R. Sherwood*, Bradford Butman, D. A. Cacchione, D. E. Drake, T. F. Gross*, R. W. Sternberg*, P. L. Wiberg* and A. J. Williams, III*. CALIFORNIA. Sediment-transport events on the Northern California continental shelf during the 1990-91 STRESS experiment. Continental Shelf Research, *in* Sediment transport events on shelves and slopes; STRESS. (J. H. Trowbridge, editor and others). v. 14, no. 10-11, September 1994. p. 1063-1099.
- OP-848. G. L. Shideler. MARYLAND. Sedimentological indicators of paleoenvironments and siliciclastic stratigraphic sequences in some Miocene deposits of the Calvert Cliffs, southern Maryland. Southeastern Geology. v. 34, no. 4, December 1994. p. 163-184.
- OP-849. Hiroshi Shinohara*, Kohei Kazahaya* and J. B. Lowenstern. Volatile transport in a convecting magma column; implications for porphyry Mo mineralization. Geology (Boulder). v. 23, no. 12, December 1995. p. 1091-1094.
- OP-850. E. M. Shoemaker (prefacer). The collision of Comet Shoemaker-Levy 9 with Jupiter. Geophysical Research Letters. v. 22, no. 12, June 15, 1995. p. 1555-1636.
- OP-851. E. M. Shoemaker, P. J. Hassig* and D. J. Roddy. Numerical simulations of the Shoemaker-Levy 9 impact plumes and clouds; a progress report. Geophysical Research Letters. v. 22, no. 13, July 1, 1995. p. 1825-1828.
- OP-852. E. M. Shoemaker, M. S. Robinson and E. M. Eliason. The South Pole region of the Moon as seen by Clementine. Science. v. 266, no. 5192, December 16, 1994. p. 1851-1854.
- OP-853. E. M. Shoemaker, R. F. Wolfe and C. S. Shoemaker. Asteroid and comet flux in the neighborhood of Earth. Special Paper - Geological Society of America, *in* Global catastrophes in Earth history; an interdisciplinary conference on impacts, volcanism, and mass mortality. (V. L. Sharpton, editor and others). 247, 1990. p. 155-170.
- OP-854. G. W. Shurr*, F. D. Wosick* and D. D. Rice. MONTANA. Regional pressure patterns as evidence for fractured reservoirs in the Bowdoin and Phillips sandstones on Bowdoin Dome, Montana, *in* Energy and mineral resources of central Montana. (L. D. Hunter, editor). Billings, MT: Montana Geological Society, 1993. p. 117-127.
- OP-855. G. B. Sidder and P. K. Sims (compilers). Industrial minerals; today and tomorrow; the raw materials to build the Upper Midwest; workshop proceedings. Report of Investigations - Minnesota Geological Survey. Report no. 42, 1993. 160 p.
- OP-856. A. C. Sigleo* and D. J. Schultz. MARYLAND, VIRGINIA. Amino acid composition of suspended particles, sediment-trap material, and benthic sediment in the Potomac Estuary.

- Estuaries, in Trace contaminants and nutrients in estuaries. (J. S. Kuwabara, editor and others). v. 16, no. 3A, September 1993. p. 405-415.
- OP-857. N. J. Silberling, D. L. Jones*, J. W. Monger*, P. J. Coney*, H. C. Berg* and George Plafker. ALASKA. Lithotectonic terrane map of Alaska and adjacent part of Canada, in The geology of Alaska. (George Plafker, editor and others), in the collection The geology of North America. Boulder, CO: Geological Society of America. G-1, 1994. 1 sheet.
- OP-858. Andrew Simon. Width adjustment; relative dominance in unstable alluvial streams. Hydraulic Engineering: Proceedings of the National Conference on Hydraulic Engineering, in Hydraulic engineering '94. (G. V. Cotroneo, editor and others). 1994, 1994. p. 974-978.
- OP-859. Andrew Simon and J. H. Hardison, III. WASHINGTON. Critical and supercritical flows in two unstable, mountain rivers, Toutle River system, Washington. Hydraulic Engineering: Proceedings of the National Conference on Hydraulic Engineering, in Hydraulic engineering '94. (G. V. Cotroneo, editor and others). 1994, 1994. p. 742-746.
- OP-860. J. D. Sims and C. D. Garvin. CALIFORNIA. Recurrent liquefaction induced by the 1989 Loma Prieta earthquake and 1990 and 1991 and 1991 aftershocks; implications for paleoseismicity studies. Bulletin of the Seismological Society of America. v. 85, no. 1, February 1995. p. 51-65.
- OP-861. K. W. Sims*, D. J. DePaolo*, M. T. Murrell*, W. S. Baldrige*, S. J. Goldstein* and D. A. Clague. HAWAII. Mechanisms of magma generation beneath Hawaii and mid-ocean ridges; uranium/thorium and samarium/neodymium isotopic evidence. Science. v. 267, no. 5197, January 27, 1995. p. 508-512.
- OP-862. P. K. Sims. MINNESOTA. History of discovery of copper-nickel deposits in the Duluth Complex, Northeast Minnesota, in Porphyry copper, molybdenum, and gold deposits, volcanogenic deposits (massive sulfides), and deposits in layered rock. (V. F. Hollister, editor), in the collection Case histories of mineral discoveries. Littleton, CO: Society for Mining, Metallurgy and Exploration. 3, 1991. p. 197-199.
- OP-863. D. A. Singer. World class base and precious metal deposits; a quantitative analysis. Economic Geology and the Bulletin of the Society of Economic Geologists. v. 90, no. 1, February 1995. p. 88-104.
- OP-864. D. A. Singer. Conditional estimates of the number of podiform chromite deposits. Nonrenewable Resources. v. 3, no. 3, 1994. p. 200-204.
- OP-865. Silvano Sinigoi*, J. E. Quick, D. E. Clemens-Knott*, Adriano Mayer*, Gabriella Demarchi*, Maurizio Mazzucchelli*, Luisa Negrini* and Giorgio Rivalenti*. Chemical evolution of a large mafic intrusion in the lower crust, Ivrea-Verbano Zone, northern Italy. Journal of Geophysical Research, B, Solid Earth and Planets. v. 99, no. 11, November 10, 1994. p. 21,575-21,590.
- OP-866. Silvano Sinigoi*, J. E. Quick, Adriano Mayer* and Gabriella Demarchi*. Density-controlled assimilation of underplated crust, Ivrea-Verbano Zone, Italy. Earth and Planetary Science Letters. v. 129, no. 1-4, January 1995. p. 183-191.
- OP-867. S. A. Sipkin and A. L. Lerner-Lam*. Pulse-shape distortion introduced by broadband deconvolution. Bulletin of the Seismological Society of America. v. 82, no. 1, February 1992. p. 238-258.
- OP-868. S. A. Sipkin and Justin Revenaugh*. Regional variation of attenuation and travel time in China from analysis of multiple-ScS phases. Journal of Geophysical Research, B, Solid Earth and Planets. v. 99, no. 2, February 10, 1994. p. 2687-2699.
- OP-869. J. F. Slack and T. W. Offield. Roadlog for field trip to the Vermont copper belt. Guidebook Series, in Selected mineral deposits of Vermont and the Adirondack Mountains, New York; I, Mineral deposits of the Adirondack Mountains; II, Besshi-type massive sulfide deposits of the Vermont copper belt. (E. U. Petersen, editor and others). 17, October 1993. p. 1-31.
- OP-870. J. F. Slack, T. W. Offield, W. C. Shanks, III and L. G. Woodruff. VERMONT. Besshi-type massive sulfide deposits of the Vermont copper belt. Guidebook Series, in Selected mineral deposits of Vermont and the Adirondack Mountains, New York; I, Mineral deposits of the Adirondack Mountains; II, Besshi-type massive sulfide deposits of the Vermont copper belt. (E. U. Petersen, editor and others). 17, October 1993. p. 32-73.
- OP-871. J. F. Slack and B. P. Stevens*. Clastic metasediments of the early Proterozoic Broken Hill Group, New South Wales, Australia; geochemistry, provenance, and metallogenic significance. Geochimica et Cosmochimica Acta. v. 58, no. 17, September 1994. p. 3633-3652.
- OP-872. N. H. Sleep* and M. L. Blanpied. Ductile creep and compaction; a mechanism for transiently increasing fluid pressure in mostly sealed fault zones. Pure and Applied Geophysics. v. 143, no. 1-3, 1994. p. 9-40.
- OP-873. R. A. Sloto. PENNSYLVANIA. Geology, hydrology, and ground-water quality of Chester County, Pennsylvania. Water-Resources Report (West Chester, Pa.). Report no. 2, 1994. 127 p.
- OP-874. E. R. Slucher* and C. L. Rice. OHIO. Key rock units and distribution of marine and brackish water strata in the Pottsville Group, northeastern Ohio. Special Paper - Geological Society of America, in Elements of Pennsylvanian stratigraphy, central Appalachian Basin. (C. L. Rice, editor). 294, 1994. p. 27-40.
- OP-875. F. A. Smith*, J. L. Betancourt and J. H. Brown*. Evolution of body size in the woodrat over the past 25,000 years of climate change. Science. v. 270, no. 5244, December 22, 1995. p. 2012-2014.
- OP-876. K. S. Smith, E. L. Mosier, M. R. Montour, G. S. Plumlee, W. H. Ficklin, P. H. Briggs and A. L. Meier. COLORADO. Yearly and seasonal variations in acidity and metal content of irrigation waters from the Alamosa River, Colorado. Special Publication - Colorado Geological Survey, in Proceedings; Summitville forum '95. (H. H. Posey, editor and others). Report no. 38, 1995. p. 293-298.
- OP-877. P. E. Smith. CALIFORNIA. San Francisco Bay test case for 3-D model verification. Hydraulic Engineering: Proceedings of the National Conference on Hydraulic Engineering, in Hydraulic engineering '94. (G. V. Cotroneo, editor and others). 1994, 1994. p. 885-889.

- OP-878. T. E. Smith*, M. S. Robinson*, F. R. Weber, C. F. Waythomas and R. R. Reifenhuth*. ALASKA. Geologic map of the upper Chena River area, eastern interior Alaska. Professional Report - Alaska. Division of Geological & Geophysical Surveys. Report no. 115, 1994. 19 p.
- OP-879. J. P. Smoot. Characteristics and formation of wave deposits. Contribution - Geology Department, University of Massachusetts, in *Field trip guidebook for the northeastern United States*. (J. T. Cheney, editor and others). 67, Vol. 1, 1993. p. 128-131.
- OP-880. L. A. Soderblom. The composition and mineralogy of the Martian surface from spectroscopic observations; 0.3 μm to 50 μm , in *Mars*. (H. H. Kieffer, editor and others), in the *collection* Space science series. (Tom Gehrels, editor). Tucson, AZ: University of Arizona Press, 1992. p. 557-593.
- OP-881. D. R. Soller and T. M. Berg*. Developing national geologic map database. *Geotimes*. v. 40, no. 6, June 1995. p. 16-18.
- OP-882. D. R. Soller and R. L. Bernknopf. Geologic information and land use decisions. *Geotimes*. v. 39, no. 4, April 1994. p. 12-14.
- OP-883. R. A. Sommerfeld*, R. C. Bales* and M. A. Mast. Spatial statistics of snowmelt flow; data from lysimeters and aerial photos. *Geophysical Research Letters*. v. 21, no. 25, December 15, 1994. p. 2821-2824.
- OP-884. M. L. Sorey, C. D. Farrar, G. A. Marshall and J. F. Howle. CALIFORNIA. Effects of geothermal development on deformation in the Long Valley Caldera, eastern California. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 7, July 10, 1995. p. 12,475-12,486.
- OP-885. M. L. Sorey, Y. K. Kharaka and W. C. Evans. WYOMING, MONTANA. Effects of potential geothermal development on the thermal features of Yellowstone National Park; Part 1, Perspective 2; The U.S. Geological Survey study. *GSA Today*. v. 4, no. 12, December 1994. p. 296-297.
- OP-886. D. L. Southwick*, Z. E. Peterman, L. W. Snee and W. R. Van Schmus*. MINNESOTA. Assorted geochronologic studies of Precambrian terranes in Minnesota; a potpourri of timely information. Report of Investigations - Minnesota Geological Survey, in *Short contributions to the geology of Minnesota*, 1994. (D. L. Southwick, editor). 43, 1994. p. 1-19.
- OP-887. J. E. Spencer*, S. M. Richard*, S. J. Reynolds*, R. J. Miller, Muhammad Shafiqullah*, W. G. Gilbert* and M. J. Grubensky*. ARIZONA. Spatial and temporal relationships between mid-Tertiary magnetism and extension in southwestern Arizona. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 6, June 10, 1995. p. 10,321-10,351.
- OP-888. C. S. Spirakis and A. V. Heyl. Interaction between thermally convecting basinal brines and organic matter in genesis of Upper Mississippi Valley zinc-lead district. *Institution of Mining and Metallurgy, Transactions, Section B: Applied Earth Science*, in *Economic geology in Europe and beyond; II*. (P. R. Simpson, editor). 104, April 1995. p. 37-45.
- OP-889. Paul Spudich, L. K. Steck*, M. A. Hellweg, J. B. Fletcher and L. M. Baker. CALIFORNIA. Transient stresses at Parkfield, California, produced by the M 7.4 Landers earthquake of June 28, 1992; observations from the UPSAR dense seismograph array. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 1, January 10, 1995. p. 675-690.
- OP-890. W. D. Stanley and R. J. Blakely. CALIFORNIA. The Geysers-Clear Lake geothermal area, California; an updated geophysical perspective of heat sources. *Geothermics*. v. 24, no. 2, April 1995. p. 187-221.
- OP-891. R. S. Stein. CALIFORNIA. Northridge earthquake; which fault and what next?. *Nature (London)*. v. 373, no. 6513, February 2, 1995. p. 388-389.
- OP-892. R. S. Stein. Earthquakes; characteristic or haphazard?. *Nature (London)*. v. 378, no. 6556, November 30, 1995. p. 443-444.
- OP-893. R. S. Stein and W. L. Ellsworth. CALIFORNIA. Earthquakes; from California to Kobe. *Nature (London)*. v. 373, no. 6513, February 2, 1995. p. 388.
- OP-894. N. A. Steinberg and R. S. Oremland. Dissimilatory selenate reduction potentials in a diversity of sediment types. *Applied and Environmental Microbiology*. v. 56, no. 11, November 1990. p. 3550-3557.
- OP-895. K. C. Stewart and D. M. McKown. Sagebrush as a sampling medium for gold exploration in the Great Basin; evaluation from a greenhouse study. *Journal of Geochemical Exploration*. v. 54, no. 1, May 1995. p. 19-26.
- OP-896. L. T. Steyaert, T. R. Loveland, J. F. Brown* and B. C. Reed. Integration of environmental simulation models with satellite remote sensing and geographic information systems technologies; case studies. *Proceedings of the Annual William T. Pecora Memorial Symposium on Remote Sensing*, in *Pecora 12 symposium; Land information from space-based systems*. 12, August 1993. p. 407-417.
- OP-897. K. G. Stollenwerk. Modeling the effects of variable groundwater chemistry on adsorption of molybdate. *Water Resources Research*. v. 31, no. 2, February 1995. p. 347-358.
- OP-898. M. Z. Stout*, J. W. Nicholls* and M. A. Kuntz. IDAHO. Petrological and mineralogical variations in 2500-2000 yr B.P. lava flows, Craters of the Moon lava field, Idaho. *Journal of Petrology*. v. 35, no. 6, December 1994. p. 1681-1715.
- OP-899. M. L. Strobel and P. J. Gerla*. NORTH DAKOTA. Effects of saline ground-water discharge on water quality of the Red River of the North, northeastern North Dakota, in *Proceedings; North Dakota water quality symposium*. Fargo, ND: North Dakota State University Extension Service, 1992. p. 60-82.
- OP-900. M. L. Strobel, J. B. Kelley, S. T. Carlson and H. A. Salender. NORTH DAKOTA. Flowing wells in northeastern North Dakota and their possible effect on water quality in the Red River of the North Basin, in *North Dakota water quality symposium; proceedings*. (B. D. Seelig, chairperson). Fargo, ND: N.D. Water Resour. Res. Inst. 1994. p. 246-255.
- OP-901. E. W. Strom and W. T. Oakley. MISSISSIPPI. Overview of the hydrogeology and analysis of ground water withdrawal in the Mendenhall-D'Lo area, Simpson County, Mississippi. *Proceedings - Mississippi Water Resources Conference*, in *Proceed-*

- ings of the Twenty-fifth Mississippi water resources conference. (B. J. Daniel, editor). 25, 1995. p. 47-56.
- OP-902. N. C. Sturchio*, K. L. Pierce, M. T. Murrell* and M. L. Sorey. WYOMING, MONTANA. Uranium-series ages of travertines and timing of the last glaciation in the northern Yellowstone area, Wyoming-Montana. *Quaternary Research* (New York). v. 41, no. 3, May 1994. p. 265-277.
- OP-903. P. J. Sugarman*, K. G. Miller*, David Bukry and M. D. Feigenson*. NEW JERSEY. Uppermost Campanian-Maestrichtian strontium isotopic, biostratigraphic, and sequence stratigraphic framework of the New Jersey coastal plain. *Geological Society of America Bulletin*. v. 107, no. 1, January 1995. p. 19-37.
- OP-904. P. J. Sugarman* and J. P. Owens (compilers). NEW JERSEY. Geologic map of the Asbury Park Quadrangle, Monmouth and Ocean counties, New Jersey. *Geological Map Series* (New Jersey Geological Survey). Report no. GMS 94-2, 1994. 1 sheet.
- OP-905. D. M. Sutphin. The international strategic minerals inventory; keeping up with a changing world mineral situation. *Nonrenewable Resources*. v. 1, no. 3, 1992. p. 189-200.
- OP-906. E. D. Swain. Implementation and use of direct-flow connections in a coupled ground-water and surface-water model. *Ground Water*. v. 32, no. 1, February 1994. p. 139-144.
- OP-907. R. B. Symonds. Scanning electron microscope observations of sublimates from Merapi Volcano, Indonesia. *Geochemical Journal*, in Matsuo memorial issue; magmatic volatiles and volcanic discharges. (Minoru Kusakabe, prefacer and others). v. 27, no. 4-5, 1993. p. 337-350.
- OP-908. D. T. Symons*, D. F. Sangster* and D. L. Leach. A Tertiary age from paleomagnetism for mississippi valley-type zinc-lead mineralization in Upper Silesia, Poland. *Economic Geology and the Bulletin of the Society of Economic Geologists*. v. 90, no. 4, July 1995. p. 782-794.
- OP-909. B. J. Szabo, C. V. Haynes, Jr.* and T. A. Maxwell*. Ages of Quaternary pluvial episodes determined by uranium-series and radiocarbon dating of lacustrine deposits of Eastern Sahara. *Palaeogeography, Palaeoclimatology, Palaeoecology*. v. 113, no. 2-4, February 1995. p. 227-241.
- OP-910. Zoltan Szabo, D. E. Rice, Tamara Ivahnenko and E. F. Vowinkel. NEW JERSEY. Delineation of the distribution of pesticides and nitrate in an unconfined aquifer in the New Jersey coastal plain by flow-path analysis. *Proceedings of the ... National Conference on Pesticides*, in *New directions in pesticide research, development, management, and policy; proceedings of the Fourth national conference on pesticides*. (D. L. Weigmann, editor). 4, 1994. p. 100-119.
- OP-911. J. A. Szemraj. Raster profile development for the spatial data transfer standard. *Proceedings of the Annual William T. Pecora Memorial Symposium on Remote Sensing*, in *Pecora 12 symposium; Land information from space-based systems*. 12, August 1993. p. 267-272.
- OP-912. J. E. Taggart, Jr., E. E. Foord and J. E. Shigley*. Chemical composition and structural formula of manganoan sugilite from the Wessels Mine, Republic of South Africa. *Mineralogical Magazine*. v. 58, 4(393), December 1994. p. 679-681.
- OP-913. Hideshige Takada*, J. W. Farrington*, M. H. Bothner, C. G. Johnson* and B. W. Tripp*. Transport of sludge-derived organic pollutants to deep-sea sediments at Deep Water Dump Site 106. *Environmental Science & Technology*, ES & T. v. 28, no. 6, June 1994. p. 1062-1072.
- OP-914. Y. Takauchi and J. R. Evans. CALIFORNIA. Teleseismic tomography of the Loma Prieta earthquake region, California; implications for strain partitioning. *Geophysical Research Letters*. v. 22, no. 16, August 15, 1995. p. 2203-2206.
- OP-915. Hiroshi Takeda* and Malcolm Ross. Mica polytypism; identification and origin. *American Mineralogist*. v. 80, no. 7-8, August 1995. p. 715-724.
- OP-916. K. L. Tanaka, D. H. Scott and Ronald Greeley*. Global stratigraphy, in Mars. (H. H. Kieffer, editor and others), in *the collection Space science series*. (Tom Gehrels, editor). Tucson, AZ: University of Arizona Press, 1992. p. 345-382.
- OP-917. X. M. Tang*, C. H. Cheng* and F. L. Paillet. Modeling borehole Stoneley wave propagation across permeable in-situ fractures. *Transactions of the SPWLA Annual Logging Symposium*, in *Transactions of the SPWLA thirty-second annual logging symposium*. 32, June 1991. p. GG1-GG25.
- OP-918. G. G. Tappan*, Lynnette Wood* and D. G. Moore. Identifying high production, low production and degraded rangelands in Senegal with normalized difference vegetation index data. *Proceedings of the Annual William T. Pecora Memorial Symposium on Remote Sensing*, in *Pecora 12 symposium; Land information from space-based systems*. 12, August 1993. p. 176-184.
- OP-919. C. D. Taylor. ALASKA. Summary of geochemical data; Annette Islands Reserve, Southeast Alaska, in *Special symposium 1993 on Economic mineral resources of the Annette Islands Reserve, Alaska*. (S. A. Manydeeds, chairperson). Spokane, WA: Northwest Mining Association, 1993. p. 77-82.
- OP-920. R. N. Taylor*, M. S. Marlow, L. E. Johnson*, Brian Taylor*, S. H. Bloomer* and J. G. Mitchell*. Intrusive volcanic rocks in western Pacific forearcs. *Geophysical Monograph*, in *Active margins and marginal basins of the western Pacific*. (Brian Taylor, editor and others). 88, 1995. p. 31-43.
- OP-921. U. S. ten Brink and Christopher Schneider. Glacial morphology and depositional sequences of the Antarctic continental shelf. *Geology* (Boulder). v. 23, no. 7, July 1995. p. 580-584.
- OP-922. S. J. Tewalt, R. B. Finkelman and R. T. Hildebrand. NORTH DAKOTA, MONTANA. Lignite chemical characteristics and trends in the Fort Union region, North Dakota and Montana, in *Geology and utilization of Fort Union lignites*. (R. B. Finkelman, editor and others). Reston, VA: Environ. Coal Assoc. 1992. p. 97-110.
- OP-923. Wayne Thatcher. Microplate versus continuum descriptions of active tectonic deformation. *Journal of Geophysical Research*, B, Solid Earth and Planets. v. 100, no. 3, March 10, 1995. p. 3885-3894.
- OP-924. Wayne Thatcher and D. P. Hill. A simple model for the fault-generated morphology of slow-spreading mid-oceanic

- ridges. *Journal of Geophysical Research*, B, Solid Earth and Planets. v. 100, no. 1, January 10, 1995. p. 561-570.
- OP-925. P. A. Thayer* and E. I. Robbins. NORTH CAROLINA, VIRGINIA. Late Triassic rift valley lacustrine sequence in the Dan River (North Carolina)-Danville (Virginia) Basin, USA, in *Global geological record of lake basins; Volume 1*. (Elizabeth Gierlowski-Kordesch, editor and others), in the collection *World and regional geology*. Cambridge: Cambridge University Press. 4, 1994. p. 165-172.
- OP-926. W. O. Thomas, Jr. and D. A. Eash. Frequency of the 1993 floods in the upper Mississippi River basin. *Hydraulic Engineering: Proceedings of the National Conference on Hydraulic Engineering, in Hydraulic engineering '94*. (G. V. Cotroneo, editor and others). 1994, 1994. p. 16-20.
- OP-927. J. M. Thompson. CALIFORNIA. Chemical and isotopic constituents in the hot springs along Sulphur Creek, Colusa County, California. Guidebook Series, in *Active geothermal systems and gold-mercury deposits in the Sonoma-Clear Lake volcanic fields, California*. (J. J. Rytuba, editor). 16, October 1993. p. 190-206.
- OP-928. J. Thorez*, R. M. Flores and M. Caudron*. WYOMING. Clay geology, micromorphology, and geochemistry of an Eocene Paleosol in the Willwood Formation, southern Bighorn Basin, Wyoming; an overview. Public Information Circular - Geological Survey of Wyoming, in *Organics and the Rockies; field guide*. (R. M. Flores, editor and others). Report no. 33, 1994. p. 139-147.
- OP-929. R. R. Tidball, K. C. Stewart, R. B. Tripp and E. L. Mosier. COLORADO. Geochemical mapping of surficial materials in the San Luis Valley, Colorado. Special Publication - Colorado Geological Survey, in *Proceedings; Summitville forum '95*. (H. H. Posey, editor and others). Report no. 38, 1995. p. 244-262.
- OP-930. C. R. Tiedeman, P. A. Hsieh and S. B. Christian. Characterization of a high-transmissivity zone by well test analysis; steady state case. *Water Resources Research*. v. 31, no. 1, January 1995. p. 27-37.
- OP-931. A. B. Till and J. A. Dumoulin. ALASKA. Geology of Seward Peninsula and Saint Lawrence Island, in *The geology of Alaska*. (George Plafker, editor and others), in the collection *The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 141-152.
- OP-932. A. B. Till* and L. W. Snee. ALASKA. $^{40}\text{Ar}/^{39}\text{Ar}$ evidence that formation of blueschists in continental crust was synchronous with foreland fold and thrust belt deformation, western Brooks Range, Alaska. *Journal of Metamorphic Geology*, in *Special issue on Cordilleran high-pressure metamorphic terranes*. (B. E. Patrick, editor and others). v. 13, no. 1, January 1995. p. 41-60.
- OP-933. J. A. Tindall, R. L. Petrusak* and P. B. McMahon. Nitrate transport and transformation processes in unsaturated porous media. *Journal of Hydrology*. v. 169, no. 1-4, July 1995. p. 51-94.
- OP-934. J. A. Tindall and W. K. Vencill*. MISSOURI. Transport of atrazine, 2,4-D, and dicamba through preferential flowpaths in an unsaturated claypan soil near Centralia, Missouri. *Journal of Hydrology*. v. 166, no. 1-2, March 1995. p. 37-59.
- OP-935. R. W. Tinus* and D. J. Roddy. Effects of global atmospheric perturbations on forest ecosystems in the Northern Temperate Zone; predictions of seasonal depressed-temperature kill mechanisms, biomass production, and wildfire soot emissions. Special Paper - Geological Society of America, in *Global catastrophes in Earth history; an interdisciplinary conference on impacts, volcanism, and mass mortality*. (V. L. Sharpton, editor and others). 247, 1990. p. 77-86.
- OP-936. A. K. Tokarski*, W. G. Pierce, Ewa Piekarska* and W. H. Nelson. WYOMING. A sedimentary origin for the "microbreccia" associated with the Heart Mountain detachment fault. *Contributions to Geology*. v. 30, no. 2, 1994. p. 157-162.
- OP-937. Thomas Torgersen*, Stefan Drenkard*, Martin Stute*, Peter Schlosser* and A. M. Shapiro. Mantle helium in ground waters of eastern North America; time and space constraints on sources. *Geology (Boulder)*. v. 23, no. 8, August 1995. p. 675-678.
- OP-938. Noriko Torigoye-Kita, Keiji Misawa, G. B. Dalrymple and Mitsunobu Tatsumoto. Further evidence for a low U/Pb source in the Moon; U-Th-Pb, Sm-Nd, and Ar-Ar isotopic systematics of lunar meteorite Yamato-793169. *Geochimica et Cosmochimica Acta*. v. 59, no. 12, June 1995. p. 2621-2632.
- OP-939. Noriko Torigoye-Kita, Mitsunobu Tatsumoto, G. P. Meeker and Keizo Yanai*. The 4.56 Ga U-Pb age of the MET 78008 ureilite. *Geochimica et Cosmochimica Acta*. v. 59, no. 11, June 1995. p. 2319-2329.
- OP-940. R. M. Tosdal, D. A. Enderlin*, G. C. Nelson* and N. J. Lehremann*. CALIFORNIA. Overview of the McLaughlin precious metal deposit, Napa and Yolo counties, Northern California. Guidebook Series, in *Active geothermal systems and gold-mercury deposits in the Sonoma-Clear Lake volcanic fields, California*. (J. J. Rytuba, editor). 16, October 1993. p. 312-329.
- OP-941. A. M. Tréhu*, Christof Lendl*, Beate Leitner*, A. S. Meltzer*, Sean Gulick*, J. E. Holl*, A. R. Levander*, T. J. Henstock*, B. C. Beaudoin*, Nicola Godfrey*, J. A. Hole*, S. L. Klemperer, S. H. Clarke, Jr., J. H. Luetgert and W. D. Mooney*. CALIFORNIA. Pulling the rug out from under California; Seismic images of the Mendocino triple junction region. *Eos, Transactions, American Geophysical Union*. v. 76, no. 38, September 19, 1995. p. 369, 380-381.
- OP-942. Fabio Trincardi*, A. Correggiari*, M. E. Field and W. R. Normark. Turbidite deposition from multiple sources; Quaternary Paola Basin (eastern Tyrrhenian Sea). *Journal of Sedimentary Research, Section B: Stratigraphy and Global Studies*. v. 65, no. 4, November 15, 1995. p. 469-483.
- OP-943. B. M. Troutman and M. R. Karlinger. Gibb's distribution on drainage networks. *Water Resources Research*. v. 28, no. 2, February 1992. p. 563-577.
- OP-944. J. H. Trowbridge*, Bradford Butman and Richard Limeburner*. CALIFORNIA. Characteristics of the near-bottom suspended sediment field over the continental shelf off Northern California based on optical attenuation measurements during

- STRESS and SMILE. Continental Shelf Research, *in* Sediment transport events on shelves and slopes; STRESS. (J. H. Trowbridge, editor and others). v. 14, no. 10-11, September 1994. p. 1257-1272.
- OP-945. J. T. Turk, D. H. Campbell and N. E. Spahr. COLORADO. Use of chemistry and stable sulfur isotopes to determine sources of trends in sulfate of Colorado lakes. Water, Air and Soil Pollution, *in* U.S. Environmental Protection Agency's long-term monitoring project. (Avis Newell, editor). v. 67, no. 3-4, 1993. p. 415-431.
- OP-946. M. P. Tuttle* and E. S. Schweig. ARKANSAS. Archeological and pedological evidence for large prehistoric earthquakes in the New Madrid seismic zone, central United States. *Geology* (Boulder). v. 23, no. 3, March 1995. p. 253-256.
- OP-947. Roger Tyler*, S. E. Laubach*, W. A. Ambrose*, C. W. Tremain* and M. A. Grout. Coal fracture patterns in the foreland of the Cordilleran thrust belt, Western United States. *Proceedings - International Coalbed Methane Symposium, in* Proceedings of the 1993 international Coalbed methane symposium. 1993, May 1993. p. 695-704.
- OP-948. G. F. Ulmishek, V. A. Bogino*, M. B. Keller* and Z. L. Poznyakevich*. Structure, stratigraphy, and petroleum geology of the Pripyat and Dnieper-Donets basins, Byelarus and Ukraine. *AAPG Memoir, in* Interior rift basins. (S. M. Landon, editor). 59, 1994. p. 125-156.
- OP-949. M. R. Underwood*, F. L. Peterson* and C. I. Voss. Groundwater lens dynamics of atoll islands. *Water Resources Research*. v. 28, no. 11, November 1992. p. 2889-2902.
- OP-950. Gloria Vaggelli*, H. E. Belkin, Benedetto De Vivo* and Raffaello Trigila*. Silicate-melt inclusions in Recent Vesuvius lavas (A.D. 1631-1944); I. Petrography and microthermometry. *European Journal of Mineralogy, in* Proceedings of the Eleventh European symposium on Fluid inclusions research (ECROFI XI). (Benedetto De Vivo, editor and others). v. 4, no. 5, October 1992. p. 1113-1124.
- OP-951. Gabor Vakarcas*, P. R. Vail*, Gabor Tari*, George Pogacsas*, R. E. Mattick and Attila Szabo*. Third-order middle Miocene-early Pliocene depositional sequences in the prograding delta complex of the Pannonian Basin. *Tectonophysics, in* Dynamics of extensional basin formation and inversion. (Sierd Cloetingh, editor and others). v. 240, no. 1-4, December 30, 1994. p. 81-106.
- OP-952. J. W. Vallance*, Lee Siebert*, W. I. Rose*, J. R. Girón* and N. G. Banks. Edifice collapse and related hazards in Guatemala. *Journal of Volcanology and Geothermal Research, in* Models of magmatic processes and volcanic eruptions. (Yoshiaki Ida, editor and others). v. 66, no. 1-4, July 1995. p. 337-355.
- OP-953. T. L. Vallier, D. W. Scholl, M. A. Fisher, T. R. Bruns, F. H. Wilson, Roland von Huene and A. J. Stevenson. ALASKA. Geologic framework of the Aleutian Arc, Alaska, *in* The geology of Alaska. (George Plafker, editor and others), *in the collection* The geology of North America. Boulder, CO: Geological Society of America. G-1, 1994. p. 367-388.
- OP-954. Alexander van Geen and S. N. Luoma. CALIFORNIA. Trace metals (Cd, Cu, Ni, and Zn) and nutrients in coastal waters adjacent to San Francisco Bay, California. *Estuaries, in* Trace contaminants and nutrients in estuaries. (J. S. Kuwabara, editor and others). v. 16, no. 3A, September 1993. p. 559-566.
- OP-955. B. P. Van Haveren* and G. H. Leavesley. Hydrologic modeling of coal lands. 1979. 13 p. *Available from*: U.S., Bureau of Land Management, United States.
- OP-956. R. B. VanArsdale*, R. A. Williams, E. S. Schweig, K. M. Shedlock, J. K. Odum and K. W. King. ARKANSAS. The origin of Crowley's Ridge, northeastern Arkansas; erosional remnant or tectonic uplift?. *Bulletin of the Seismological Society of America*. v. 85, no. 4, August 1995. p. 963-985.
- OP-957. G. S. Vartanyan*, J. D. Bredehoeft and E. A. Roeloffs. *Gidrogeologicheskii prognoz zemletryaseniy* [Hydrogeological forecast of earthquakes]. *Priroda*. v. 1993, no. 11, November 1993. p. 57-64.
- OP-958. Lev Vernik*, S. H. Hickman, D. A. Lockner and M. S. Rusanov*. Ultrasonic velocities in cores from the Kola superdeep well and the nature of subhorizontal seismic reflections. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 12, December 10, 1994. p. 24,209-24,219.
- OP-959. P. L. Verplanck*, G. L. Farmer*, M. O. McCurry*, S. A. Mertzman* and L. W. Snee. NEW MEXICO. Isotopic evidence on the origin of compositional layering in an epizonal magma body. *Earth and Planetary Science Letters*. v. 136, no. 1-2, November 1995. p. 31-41.
- OP-960. J. E. Vidale, Xiao-Yang Ding* and S. P. Grand*. The 410-km-depth discontinuity; a sharpness estimate from near-critical reflections. *Geophysical Research Letters*. v. 22, no. 19, October 1, 1995. p. 2557-2560.
- OP-961. J. E. Vidale, S. D. Goes* and P. G. Richards*. Near-field deformation seen on distant broadband seismograms. *Geophysical Research Letters*. v. 22, no. 1, January 1, 1995. p. 1-4.
- OP-962. Luigi Vigliotti* and V. E. Langenheim. When did Sardinia stop rotating? New palaeomagnetic results. *Terra Nova*. v. 7, no. 4, 1995. p. 424-435.
- OP-963. Paul von Guerard and R. F. Ortiz. COLORADO. Effects of sampling methods on copper and iron concentrations, Alamosa River, south-central Colorado, 1993. *Special Publication - Colorado Geological Survey, in* Proceedings; Summitville forum '95. (H. H. Posey, editor and others). Report no. 38, 1995. p. 171-177.
- OP-964. Axel von Hillebrandt*, G. E. Westermann*, J. H. Callomon* and R. L. Detterman. Ammonites of the Circum-Pacific region. *World and Regional Geology, in* The Jurassic of the Circum-Pacific. (G. E. Westermann, editor). 3, 1992. p. 342-359.
- OP-965. Roland von Huene*, Dirk Klaeschen*, B. Cropp* and J. Miller. Tectonic structure across the accretionary and erosional parts of the Japan Trench margin. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 11, November 10, 1994. p. 22,349-22,361.
- OP-966. E. F. Vowinkel, R. M. Clawges and C. G. Uchir*. NEW JERSEY. Evaluation of the vulnerability of water from public supply wells in New Jersey to contamination by pesticides. *Proceedings of the ... National Conference on Pesticides, in* New directions in pesticide research, development, management, and

- policy; proceedings of the Fourth national conference on pesticides. (D. L. Weigmann, editor). 4, 1994. p. 495-510.
- OP-967. B. J. Wagner. Sampling design methods for groundwater modeling under uncertainty. *Water Resources Research*. v. 31, no. 10, October 1995. p. 2581-2591.
- OP-968. T. P. Wagner*, J. M. Donnelly-Nolan and T. L. Grove*. CALIFORNIA. Evidence of hydrous differentiation and crystal accumulation in the low-MgO, high-Al₂O₃ lake basalt from Medicine Lake volcano, California. *Contributions to Mineralogy and Petrology*. v. 121, no. 2, 1995. p. 201-216.
- OP-969. K. L. Wahl. Extrapolation of regional flood-frequency relations based on flow variability. Special Publication - Natural Hazards Research and Applications Information Center. 24, June 1991. p. 138-142.
- OP-970. K. L. Wahl. Bias in regression estimates of Manning's n. Hydraulic Engineering: Proceedings of the National Conference on Hydraulic Engineering, in *Hydraulic engineering '94*. (G. V. Cotroneo, editor and others). 1994, 1994. p. 727-731.
- OP-971. C. A. Wahrhaftig. ALASKA. Maps of physiographic divisions of Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. 1 sheet.
- OP-972. C. A. Wahrhaftig, S. B. Bartsch-Winkler and G. D. Stricker. ALASKA. Coal in Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. p. 937-978.
- OP-973. T. D. Waite*, J. A. Davis, T. E. Payne*, G. A. Waychunas* and N. Xu*. Uranium(VI) adsorption to ferrihydrite; application of a surface complexation model. *Geochimica et Cosmochimica Acta*. v. 58, no. 24, December 1994. p. 5465-5478.
- OP-974. D. J. Wald and P. G. Somerville*. Variable-slip rupture model of the great 1923 Kanto, Japan earthquake; geodetic and body-waveform analysis. *Bulletin of the Seismological Society of America*. v. 85, no. 1, February 1995. p. 159-177.
- OP-975. J. S. Walder and C. L. Driedger. WASHINGTON. Rapid geomorphic change caused by glacial outburst floods and debris flows along Tahoma Creek, Mount Rainier, Washington, U.S.A. *Arctic and Alpine Research*. v. 26, no. 4, November 1994. p. 319-327.
- OP-976. R. J. Walker*, J. W. Morgan and M. F. Horan. Osmium-187 enrichment in some plumes; evidence for core-mantle interaction?. *Science*. v. 269, no. 5225, August 11, 1995. p. 819-822.
- OP-977. M. H. Wallace and P. T. Delaney. HAWAII. Deformation of Kilauea Volcano during 1982 and 1983; a transition period. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 5, May 10, 1995. p. 8201-8219.
- OP-978. M. J. Walter*, T. W. Sisson and D. C. Presnall*. A mass proportion method for calculating melting reactions and application to melting of model upper mantle lherzolite. *Earth and Planetary Science Letters*. v. 135, no. 1-4, October 1995. p. 77-90.
- OP-979. Katherine Walton-Day, R. F. Ortiz and Paul von Guerard. COLORADO. Sources of water having low pH and elevated metal concentrations in the upper Alamosa River from the headwaters to the outlet of Terrace Reservoir, south-central Colorado, April-September, 1993. Special Publication - Colorado Geological Survey, in *Proceedings; Summitville forum '95*. (H. H. Posey, editor and others). Report no. 38, 1995. p. 160-170.
- OP-980. Wang Yurong* and I-Ming Chou. Characteristics of hydrolysis of the complex Na₂SnF₆ in hydrothermal solutions; an experimental study. *Geochemistry (English Language Edition)*. v. 6, no. 4, December 1987. p. 372-381.
- OP-981. F. F. Wang. Research on paleo-typhoons/hurricanes of the Quaternary hypsithermal periods; a basis for predicting tropical storms in the coming centuries. Proceedings of the Session of the Committee for Co-ordination of Joint Prospecting for Mineral Resources in Asian Offshore Areas (CCOP), in *Proceedings of the thirtieth annual session of the Committee for Co-ordination of Joint Prospecting for Mineral Resources in Asian Offshore Areas (CCOP); Part II, Technical report*. (J. L. Rau, editor). 30, Part II, May 1994. p. 365-379.
- OP-982. Wuncheng Wang, M. J. Liszewski, R. C. Buchmiller and K. L. Cherryholmes*. IOWA. Occurrence of active and inactive herbicide ingredients at selected sites in Iowa. *Water, Air and Soil Pollution*. v. 83, no. 1-2, July 1995. p. 21-35.
- OP-983. Wuncheng Wang and P. J. Squillace. Herbicide interchange between a stream and the adjacent alluvial aquifer. *Environmental Science & Technology, ES & T*. v. 28, no. 13, December 1994. p. 2336-2344.
- OP-984. R. B. Wanty and D. K. Nordstrom. Natural radionuclides, in *Regional ground-water quality*. (W. M. Alley, editor). New York, NY: Van Nostrand Reinhold, 1993. p. 423-442.
- OP-985. P. L. Ward. Subduction cycles under western North America during the Mesozoic and Cenozoic eras. Special Paper - Geological Society of America, in *Jurassic magmatism and tectonics of the North American Cordillera*. (D. M. Miller, editor and others). 299, 1995. p. 1-45.
- OP-986. C. F. Waythomas and R. D. Jarrett. COLORADO. Flood geomorphology of Arthurs Rock Gulch, Colorado: paleoflood history. *Geomorphology*. v. 11, no. 1, November 1994. p. 15-40.
- OP-987. H. A. Weaver*, M. F. A'Hearn*, C. Arpigny*, D. C. Boice*, P. D. Feldman*, S. M. Larson*, P. Lamy*, D. H. Levy*, B. G. Marsden*, K. J. Meech*, K. S. Noll*, J. V. Scotti*, Zdenek Sekanina*, C. S. Shoemaker*, E. M. Shoemaker, T. E. Smith*, S. A. Stern*, A. D. Storrs*, J. T. Trauger*, D. K. Yeomans* and B. Zellner*. The Hubble Space Telescope (HST) observing campaign on comet Shoemaker-Levy 9. *Science*. v. 267, no. 5202, March 3, 1995. p. 1282-1288.
- OP-988. F. H. Webb*, M. I. Bursik*, T. H. Dixon*, Frederic Farina*, G. A. Marshall and R. S. Stein. CALIFORNIA. Inflation of Long Valley Caldera from one year of continuous GPS observations. *Geophysical Research Letters*. v. 22, no. 3, February 1, 1995. p. 195-198.
- OP-989. J. D. Webster*, R. D. Congdon* and P. C. Lyons. Determining pre-eruptive compositions of late Paleozoic magma from kaolinized volcanic ashes; analysis of glass inclusions in

- quartz microphenocrysts from tonsteins. *Geochimica et Cosmochimica Acta*. v. 59, no. 4, February 1995. p. 711-720.
- OP-990. T. K. Weddle*, Carl Kotteff, W. B. Thompson*, M. J. Retelle* and C. L. Marvinney*. MASSACHUSETTS, MAINE. The late-glacial marine invasion of coastal central New England (northeastern Massachusetts; southwestern Maine); its ups and downs. Contribution - Geology Department, University of Massachusetts, in *Field trip guidebook for the northeastern United States*. (J. T. Cheney, editor and others). 67, Vol. 1, 1993. p. I.1-I.28.
- OP-991. K. J. Wenrich, G. H. Billingsley and B. A. Blackerby*. ARIZONA. Spatial migration and compositional changes of Miocene-Quaternary magmatism in the western Grand Canyon. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 100, no. 6, June 10, 1995. p. 10,417-10,440.
- OP-992. D. A. Wentz, W. J. Rose and K. E. Webster*. WISCONSIN. Long-term hydrologic and biogeochemical responses of a soft water seepage lake in north central Wisconsin. *Water Resources Research*. v. 31, no. 1, January 1995. p. 199-212.
- OP-993. R. L. Wershaw. Model for humus in soils and sediments. *Environmental Science & Technology, ES & T*. v. 27, no. 5, May 1993. p. 814-816.
- OP-994. R. L. Wheeler. Earthquakes and the cratonward limit of Iapetan faulting in eastern North America. *Geology (Boulder)*. v. 23, no. 2, February 1995. p. 105-108.
- OP-995. A. F. White and A. E. Blum. Effects of climate on chemical weathering in watersheds. *Geochimica et Cosmochimica Acta*. v. 59, no. 9, May 1995. p. 1729-1747.
- OP-996. F. C. Whitmore, Jr. Memorial to Sherman Kennerson Neuschel, 1913-1991. *Memorials - Geological Society of America*. 25, 1995. p. 151-154.
- OP-997. J. W. Whitney and D. W. O'Leary. NEVADA. Tectonic characterization of a potential high-level nuclear waste repository at Yucca Mountain, Nevada, in *Dynamic analysis and design considerations for high-level nuclear waste repositories*. (Q. A. Hossain, editor). New York, NY: American Society of Civil Engineers, 1993. p. 85-96.
- OP-998. P. L. Wiberg*, D. E. Drake and D. A. Cacchione. CALIFORNIA. Sediment resuspension and bed armoring during high bottom stress events on the Northern California inner continental shelf; measurements and predictions. *Continental Shelf Research, in Sediment transport events on shelves and slopes; STRESS*. (J. H. Trowbridge, editor and others). v. 14, no. 10-11, September 1994. p. 1191-1219.
- OP-999. F. D. Wilde. MARYLAND. Geochemistry and factors affecting ground-water quality at three storm-water-management sites in Maryland. *Report of Investigations - Maryland Geological Survey*. Report no. 59, 1994. 201 p.
- OP-1000. G. C. Wiles*, P. E. Calkin* and Austin Post. ALASKA. Glacier fluctuations in the Kenai fjords, Alaska, U.S.A.; an evaluation of controls on iceberg-calving glaciers. *Arctic and Alpine Research*. v. 27, no. 3, August 1995. p. 234-245.
- OP-1001. D. A. Willard. Palynological record from the North Atlantic region at 3 Ma; vegetational distribution during a period of global warmth. *Review of Palaeobotany and Palynology*. v. 83, no. 4, October 1994. p. 275-297.
- OP-1002. D. A. Willard, W. A. DiMichele*, D. L. Eggert*, J. C. Hower*, C. B. Rexroad* and A. C. Scott*. INDIANA. Paleocology of the Springfield Coal Member (Desmoinesian, Illinois Basin) near the Leslie Cemetery paleochannel, southwestern Indiana. *International Journal of Coal Geology*. v. 27, no. 1, January 1995. p. 59-98.
- OP-1003. M. W. Williams*, Yang Daqing*, Liu Fengjing*, J. T. Turk and J. M. Melack*. Controls on the major ion chemistry of the Urumqi River, Tian Shan, People's Republic of China. *Journal of Hydrology*. v. 172, no. 1-4, 1995. p. 209-229.
- OP-1004. R. A. Williams, E. A. Luzietti* and D. L. Carver. ARKANSAS. High-resolution seismic imaging of Quaternary faulting on the Crittenden County fault zone, New Madrid seismic zone, northeastern Arkansas. *Seismological Research Letters*. v. 66, no. 3, June 1995. p. 42-57.
- OP-1005. R. A. Williams, J. K. Odum, T. L. Pratt, K. M. Shedlock and W. J. Stephenson. Seismic surveys assess earthquake hazard in the New Madrid area. *Leading Edge (Tulsa, OK)*. v. 14, no. 1, January 1995. p. 30-34.
- OP-1006. S. D. Williams*, A. J. Roman-Mas and A. M. Fielder. TENNESSEE. Effects of land use on nitrate concentrations for the water-table aquifer in the Beaver Creek watershed, West Tennessee. *American Water Resources Association Technical Publication Series TPS, in Symposium on Responses to changing multiple-use demands; new directions for water resources planning and management*. (M. J. Sale, editor and others). 94-2, April 1994. p. 333-334.
- OP-1007. S. D. Williams*, J. L. Svarc, Michael Lisowski and W. H. Prescott. CALIFORNIA. GPS measured rates of deformation in the northern San Francisco Bay region, California, 1990-1993. *Geophysical Research Letters*. v. 21, no. 14, July 1, 1994. p. 1511-1514.
- OP-1008. F. H. Wilson, N. B. Shew and G. D. Du Bois*. ALASKA. Map and table showing isotopic age data in Alaska, in *The geology of Alaska*. (George Plafker, editor and others), in *the collection The geology of North America*. Boulder, CO: Geological Society of America. G-1, 1994. 1 sheet.
- OP-1009. K. V. Wilson, Jr. MISSISSIPPI. Bridge scour in Mississippi. *Proceedings - Mississippi Water Resources Conference, in Proceedings of the Twenty-fifth Mississippi water resources conference*. (B. J. Daniel, editor). 25, 1995. p. 247-257.
- OP-1010. R. C. Wilson and G. F. Wieczorek. CALIFORNIA. Rainfall thresholds for the initiation of debris flows at La Honda, California. *Environmental & Engineering Geoscience*. v. 1, no. 1, 1995. p. 11-27.
- OP-1011. S. A. Wilson, P. H. Briggs, J. S. Mee and D. F. Siems. Determination of thirty-two major and trace elements in three NIST soil SRMs using ICP-AES and WDXRF. *Geostandards Newsletter*. v. 18, no. 1, 1994. p. 85-89.
- OP-1012. S. L. Wing*, S. T. Hasiotis* and T. M. Brown. First ichnofossils of flank-buttressed trees (late Eocene), Fayum Depression, Egypt. *Ichnos (Chur, Switzerland)*. v. 3, no. 4, 1995. p. 281-286.

- OP-1013. M. B. Woitsekhowskaya* and J. J. Hemley. Modeling metal transport and deposition in butte-type hydrothermal systems. *Economic Geology and the Bulletin of the Society of Economic Geologists*. v. 90, no. 5, August 1995. p. 1329-1337.
- OP-1014. D. M. Wolock and G. J. McCabe, Jr. Comparison of single and multiple flow direction algorithms for computing topographic parameters in TOPMODEL. *Water Resources Research*. v. 31, no. 5, May 1995. p. 1315-1324.
- OP-1015. D. M. Wolock, G. J. McCabe, Jr., G. D. Tasker and M. E. Moss. Effects of climate change on water resources in the Delaware River basin. *Water Resources Bulletin*. v. 29, no. 3, June 1993. p. 475-486.
- OP-1016. W. W. Wood and J. L. Imes. How wet is wet? Precipitation constraints on late Quaternary climate in the southern Arabian Peninsula. *Journal of Hydrology*. v. 164, no. 1-4, January 1995. p. 263-268.
- OP-1017. W. W. Wood and W. E. Sanford. Recharge to the Ogallala; 60 years after C. V. Theis's analysis, in *Proceedings of the Playa basin symposium*. (L. V. Urban, editor and others). Lubbock, TX: Texas Tech University, 1994. p. 23-33.
- OP-1018. D. G. Woodward. Contributions to a shallow aquifer study by reprocessed seismic sections from petroleum exploration surveys, eastern Abu Dhabi, United Arab Emirates. *Journal of Applied Geophysics*, in *Geophysics and environment*. (Dominique Chapellier, editor and others). v. 31, no. 1-4, February 15, 1994. p. 271-289.
- OP-1019. D. G. Woodward. Role of playa lakes in the design of the design of the Southern High Plains National Water-Quality Assessment study, in *Proceedings of the Playa basin symposium*. (L. V. Urban, editor and others). Lubbock, TX: Texas Tech University, 1994. p. 255-264.
- OP-1020. R. L. Woodward and Peter Molnar*. Lateral heterogeneity in the upper mantle and SS-S traveltimes for SS rays reflected from the Tibetan Plateau and its surroundings. *Earth and Planetary Science Letters*. v. 135, no. 1-4, October 1995. p. 139-148.
- OP-1021. Judith Wright*, J. L. Conca*, J. E. Repetski and J. Clark*. Microgeochemistry of some Lower Ordovician cordylodans, from Jilin, China. CFS. *Courier Forschungsinstitut Senckenberg*, in 1st international Senckenberg conference and 5th European conodont symposium (ECOS V); Contribution IV, Papers on conodonts and Ordovician to Triassic conodont stratigraphy. (Willi Ziegler, editor). 118, 1990. p. 307-331.
- OP-1022. P. R. Wright and W. L. Cunningham. OHIO. Use of rotasonic drilling for field investigations of ground water at Wright-Patterson Air Force Base, Ohio. *Ground Water Management*, in *Proceedings of the Eighth national outdoor action conference and exposition; aquifer remediation/ground water monitoring/geophysical methods*. 18, 1994. p. 611-620.
- OP-1023. D. K. Yamaguchi* and R. P. Hoblitt. WASHINGTON. Tree-ring dating of pre-1980 volcanic flowage deposits at Mount St. Helens, Washington. *Geological Society of America Bulletin*. v. 107, no. 9, September 1995. p. 1077-1093.
- OP-1024. Yang Ziyuan* and L. J. Drew. On the hot-water sedimentary origin of dolomite; the Bayan Obo deposits, Inner Mongolia, China. *Dizhi Zhaokuang Luncong = Contributions to Geology and Mineral Resources Research*. v. 9, no. 1, 1994. p. 39-48.
- OP-1025. Huai-Jen Yang*, F. A. Frey*, M. O. Garcia* and D. A. Clague. HAWAII. Submarine lavas from Mauna Kea Volcano, Hawaii; implications for Hawaiian shield stage processes. *Journal of Geophysical Research, B, Solid Earth and Planets*. v. 99, no. 8, August 10, 1994. p. 15,577-15,594.
- OP-1026. C. F. You*, A. J. Spivack*, J. M. Gieskes*, R. J. Rosenbauer and J. L. Bischoff. Experimental study of boron geochemistry; implications for fluid processes in subduction zones. *Geochimica et Cosmochimica Acta*. v. 59, no. 12, June 1995. p. 2435-2442.
- OP-1027. T. L. Youd*, R. M. Chung* and E. L. Harp. Liquefaction and other geotechnical effects. *Earthquake Spectra*, in *Hokkaido-Nansei-Oki earthquake and tsunami of July 12, 1993; reconnaissance report*. (R. M. Chung, editor). 11, Suppl. A, April 1995. p. 49-93.
- OP-1028. R. E. Zartman and C. G. Cunningham. U-Th-Pb zircon dating of the 13.8-Ma dacite volcanic dome at Cerro Rico de Potosí, Bolivia. *Earth and Planetary Science Letters*. v. 133, no. 3-4, July 1995. p. 227-237.
- OP-1029. R. E. Zartman and L. M. Kwak. Precise U-Th-Pb dating of volcanogenic zircon from the tuffaceous rocks. *Bulletin of Liaison and Informations, IGCP Project 196, Calibration of the Phanerozoic Time Scale*. 11, January 31, 1993. p. 37.
- OP-1030. R. A. Zielinski. WYOMING. Tuffaceous sediments as source rocks for uranium; a case study of the White River Formation, Wyoming. *Journal of Geochemical Exploration*. v. 18, no. 3, October 1983. p. 285-306.
- OP-1031. R. A. Zielinski, S. A. Asher-Bolinder and A. L. Meier. COLORADO. Uraniferous waters of the Arkansas River valley, Colorado, U.S.A.; a function of geology and land use. *Applied Geochemistry*. v. 10, no. 2, March 1995. p. 133-144.
- OP-1032. R. A. Zierenberg. Data report; Sulfur content of sediment and sulfur isotope values of sulfide and sulfate minerals from Middle Valley. *Proceedings of the Ocean Drilling Program, Scientific Results*, in *Scientific results; Middle Valley, Juan de Fuca Ridge; covering Leg 139 of the cruises of the drilling vessel JOIDES Resolution, San Diego, California, to Victoria, British Columbia, Canada, sites 855-858, 4 July-11 September, 1991*. (M. J. Mottl and others). 139, October 1994. p. 739-748.
- OP-1033. R. A. Zierenberg, Peter Schiffman*, I. R. Jonasson*, R. M. Tosdal, W. J. Pickthorn and J. S. McClain*. Alteration of basalt hyaloclastite at the off-axis Sea Cliff hydrothermal field, Gorda Ridge. *Chemical Geology*, in *The mantle-ocean connection*. (Hubert Staudigel, editor and others). v. 126, no. 2, December 5, 1995. p. 77-99.

ABSTRACTS

Abstracts are condensed but informative summaries of presentations made at meetings of scientific and professional organizations. Typically they summarize the principal conclusions of an author's current work but contain little supporting data. Non-U.S. Geological Survey personnel who share author-

ship in abstracts with U.S. Geological Survey personnel are indicated by an asterisk (*) immediately following the name. These publications are not available from the U.S. Geological Survey.

- OP-1034. J. M. Aaron. Publishing in a digital world; the past is the key to the future [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 162.
- OP-1035. L. D. Abbott*, E. A. Silver*, R. S. Anderson*, Joseph Galewsky*, R. Smith*, J. C. Ingle, Jr.*, S. Kling*, D. W. Haig* and W. V. Sliter. Measurement of surface uplift rate during collision-induced basin inversion in northern Papua New Guinea [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 577.
- OP-1036. P. L. Abbott*, D. P. Smith*, W. V. Sliter and L. R. Saul*. Paleogeography of three Paleocene limestones, Baja California, Mexico [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 577.
- OP-1037. R. E. Abercrombie* and J. J. Mori. CALIFORNIA. The 28 June 1992, Landers earthquake; observations of the onset and their implications [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 410.
- OP-1038. R. E. Abercrombie* and J. J. Mori. Scaling of radiated energy [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 433.
- OP-1039. Joju Abraham*, Mohammed Ikramuddin*, S. E. Box and J. R. Lindsay. IDAHO. Isotopic composition of lead in sediments from the Coeur d'Alene River, Idaho; a precise tool to trace contamination [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 355.
- OP-1040. D. P. Adam. OREGON, CALIFORNIA. Correlation of Quaternary climate records from the upper Klamath Basin, Oregon and California, with the eastern Pacific marine record [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 256.
- OP-1041. J. C. Adamski and A. L. Pugh. Occurrence and distribution of agricultural chemicals in ground water of the Ozark Plateaus physiographic province; Arkansas, Kansas, Missouri, and Oklahoma [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 361.
- OP-1042. R. H. Affolter, M. E. Brownfield and J. D. Cathcart. WASHINGTON. Geochemical characterization of coals from the Skookumchuck Formation, Centralia Mine, Thurston County, Washington [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 215.
- OP-1043. D. S. Aga and E. M. Thurman. Chromatographic applications of solid-phase extraction in developing immunoassay methods for herbicides and their metabolites; an example for alachlor and alachlor-ethanesulfonic acid [abstr.], in Programs and proceedings of symposium on Agricultural nonpoint sources of contaminants; a focus on herbicides. 1993. p. 38. Available from: U.S. Environmental Protection Agency, Kansas City, KS, United States.
- OP-1044. T. S. Ahlbrandt. The U.S. Geological Survey World Energy Program [abstr.] AAPG Bulletin, in AAPG international conference and exhibition; abstracts. v. 79, no. 8, August 1995. p. 1192.
- OP-1045. J. P. Ake*, D. R. O'Connel*, U. R. Vetter* and P. S. Chang. COLORADO. Induced microseismicity associated with deep-well disposal of brine at Paradox Valley, Colorado [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 473.
- OP-1046. J. N. Aleinikoff, D. R. Muhs and Marianne Walter. Lead isotopic evidence for the origin of eolian sands on the central Great Plains; preliminary results [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 108.
- OP-1047. J. N. Aleinikoff, Marianne Walter and C. M. Fanning*. NEW HAMPSHIRE, MASSACHUSETTS. U-Pb ages of zircon, monazite, and sphene from rocks of the Massabesic gneiss complex and Berwick Formation, New Hampshire and Massachusetts [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, February 1995. p. 26.
- OP-1048. S. T. Algermissen, P. C. Thenhaus, S. L. Hanson, R. S. Punongbayan* and B. C. Bautista*. Regional ground-motion hazard in the Philippines [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 435.
- OP-1049. S. A. Alias*, S. K. Short*, L. R. Phillips and H. C. Nelson. New evidence on the timing of inundation of the Bering land bridge, based on radiocarbon ages of macrofossils [abstr.] Eos, Transactions, American Geophysical Union, in 1994 ocean sciences meeting. v. 75, no. 3, Suppl. January 18, 1994. p. 15.
- OP-1050. B. D. Allen*, R. Y. Anderson*, J. V. Gardner and W. E. Dean. Abrupt shifts in stage II climate; evidence for linkage between eastern Pacific and western North America [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 255.
- OP-1051. C. N. Alpers, T. R. Bruns, K. M. Cunningham, R. W. Fujimura*, C. Huang* and B. J. Finlayson*. CALIFORNIA. Geochemical, geophysical, and toxicological characterization of metalliferous bottom sediment from Keswick Reservoir, California [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 435.
- OP-1052. T. R. Alpha. Using HyperCard animations to visualize geologic hazards [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 44.
- OP-1053. T. R. Alpha. Using HyperCard animations to visualize geologic hazards [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 577.
- OP-1054. Falk Amelung*, G. C. King* and D. H. Oppenheimer. CALIFORNIA. Summation of seismic moment; application to

- microearthquakes in Central California [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 478.
- OP-1055. R. G. Amundson*, Yang Wang*, O. A. Chadwick*, Carol Kendall and M. J. DeNiro*. Isotopic evidence for shifts in late Quaternary precipitation patterns in mid-North America [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 511.
- OP-1056. J. L. Anderson*, G. N. Delin, R. H. Dowdy* and J. A. Lamb*. Crop system effects on ground water quality in the northern Corn Belt sand plains [abstr.] *Agronomy Abstracts*, in 1992 annual meetings; American Society of Agronomy, 84th annual meeting; Crop Science Society of America; Soil Science Society of America; Clay Minerals Society. 84, November 1992. p. 31.
- OP-1057. K. H. Anderson* and R. S. Thompson. Paleoclimatic databases for the Western United States [abstr.] Program and Abstracts - American Quaternary Association. Conference, in American Quaternary Association, 13th biennial meeting; program and abstracts. 13, June 1994. p. 60.
- OP-1058. M. P. Anderson*, M. R. Robinson*, T. M. Jiang*, G. H. Sonafrank* and P. L. Ward. ALASKA. Alaska Seismic Network database management and analysis software at the University of Alaska Geophysical Institute [abstr.] *Seismological Research Letters*, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 51.
- OP-1059. R. R. Anderson*, B. J. Witzke*, D. J. Roddy and E. M. Shoemaker. IOWA. Core drilling in the Manson impact structure provides abundant research materials and new insights into the geology of a well-preserved complex impact crater [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 337.
- OP-1060. K. Andreassen*, P. E. Hart and Arthur Grantz. Seismic modeling of a gas hydrate reflector [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. 1993. p. 370.
- OP-1061. D. J. Andrews. Modeling tectonic deformation with yielding in the upper crust [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 681.
- OP-1062. E. D. Andrews. Design of efficient streamflow regimes for maintaining fluvial resources [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 2.
- OP-1063. E. D. Andrews. Design of maintenance flows for regulated streams [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1992 fall meeting. v. 73, no. 43, Suppl. October 27, 1992. p. 239.
- OP-1064. R. J. Anima. CALIFORNIA. Records of contaminant input to San Francisco Bay; 2, Core collection and sedimentology [abstr.] *Eos, Transactions, American Geophysical Union*, in 1994 ocean sciences meeting. v. 75, no. 3, Suppl. January 18, 1994. p. 233.
- OP-1065. R. J. Anima, M. S. Marlow and P. R. Carlson. CALIFORNIA. Variations in depositional settings based on shell layers found in gravity cores from South San Francisco Bay, CA [abstr.] *AAPG Bulletin*, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 578.
- OP-1066. R. J. Anima, J. F. Tait*, G. B. Griggs* and K. M. Brown. CALIFORNIA. Nearshore morphology and sedimentation using side-scanning sonar and underwater video along the Central California coast [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 348.
- OP-1067. T. J. Armbrustmacher. COLORADO. Finitization of host rocks in the contact aureole of the carbonatite stocks at Iron Hill, Gunnison County, Colorado [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 2.
- OP-1068. T. R. Armstrong. VERMONT, NEW HAMPSHIRE. The Westminster West fault zone; a late Acadian-Alleghanian contact between the Vermont and New Hampshire sequences in southern Vermont [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, February 1995. p. 27.
- OP-1069. M. A. Arthur*, W. E. Dean, C. R. Glenn*, R. A. Jahnke* and W. C. Burnett*. Origin of authigenic carbonate and phosphate crusts on the upper continental slope of Peru [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. 1993. p. 367.
- OP-1070. M. A. Arthur*, W. E. Dean and B. B. Sageman*. Trace elements and anoxia; are there any definitive indicators of depositional conditions? [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 23.
- OP-1071. G. Asch*, K. Wylegalla*, M. A. Hellweg and Dieter Seidl*. Observations of the broadband tremor wavefield at Lascar Volcano, Chile [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 715.
- OP-1072. G. M. Ashley* and J. R. Stone. The paleoclimate record for southern New England, 15 ka to 12 ka [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, February 1995. p. 27-28.
- OP-1073. Isa Asudeh*, D. J. White*, B. Roberts*, D. A. Forsyth*, S. B. Lucas*, W. M. Kohler, M. Alvarez* and S. M. Michnick*. The Lithoprobe Trans-Hudson Orogen Transect; the seismic refraction survey of July 1993 [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 442.
- OP-1074. G. M. Atkinson* and T. C. Hanks. A high-frequency magnitude scale [abstr.] *Seismological Research Letters*, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 49.
- OP-1075. B. F. Atwater. Subduction-earthquake telltales beneath coastal lowlands [abstr.] Abstracts with Programs - Geological

- Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 239-240.
- OP-1076. B. F. Atwater and A. L. Moore*. WASHINGTON. A tsunami about 1000 years ago in Puget Sound, Washington [abstr.], in CANQUA 93; applied Quaternary research; program with abstracts and field guide. (Canadian Quaternary Association). Can. Quat. Assoc. 1993. p. A1.
- OP-1077. L. J. Bachman, P. J. Phillips and J. M. Denver. DELAWARE, MARYLAND. Quality of baseflow in non-tidal tributaries to Chesapeake Bay, Delmarva Peninsula, Delaware and Maryland [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 165.
- OP-1078. A. M. Bailey*, A. D. Cohen* and W. H. Orem. Compositional and petrographic changes during artificial coalification of three peats [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 96.
- OP-1079. J. Baker*, M. A. Menzies*, L. W. Snee and M. F. Thirlwall*. Stratigraphy, $^{40}\text{Ar}/^{39}\text{Ar}$ geochronology and geochemistry of flood volcanism in Yemen [abstr.] Mineralogical Magazine, in V. M. Goldschmidt Conference; extended abstracts. (B. Harte, editor). v. 58A, no. A-K, August 1994. p. 42-43.
- OP-1080. Y. I. Bakulin*, N. A. Shillo*, A. B. Ignatyev*, Chen Gouda*, Tan Keren*, Pen Yunbiao*, N. Murakami*, Y. Gonzawa*, K. Nishimura*, D. J. Grybeck, W. R. Greenwood and W. J. Nokleberg. Principal problems in studying the geology and metallogeny in North Pacific [abstr.], in International symposium; tectonics, energy and mineral resources of the North-West Pacific (abstracts); Volume II. (C. B. Borukayev, editor and others). Khabarovsk: Russian Far East Academy of Sciences, Institute of Tectonics and Geophysics, 1989. p. 78-79.
- OP-1081. L. S. Balistrieri, P. R. Edelmann, R. F. Ortiz, C. M. Moore, Nicole Nelson and Melinda Wright. COLORADO. Metal fluxes across the sediment-water interface in Terrace Reservoir, Colorado [abstr.] Special Publication - Colorado Geological Survey, in Proceedings; Summitville forum '95. (H. H. Posey, editor and others). Report no. 38, 1995. p. 216.
- OP-1082. L. S. Balistrieri, R. C. Severson and L. P. Gough. COLORADO. Total and partitioned metal concentrations in river and wetland sediments downstream of the Summitville Mine [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 434.
- OP-1083. C. E. Barker. NEVADA. Source rocks, thermal history and oil in the Carson Sink and Buena Vista Valley, west central Nevada [abstr.] AAPG Bulletin, in AAPG Rocky Mountain Section meeting; abstracts. v. 79, no. 6, June 1995. p. 915.
- OP-1084. C. E. Barker. NEVADA. Thermal and petroleum-generation history of the Mississippian Eleana Formation and Tertiary source rocks, Yucca Mountain area, southern Nye County, Nevada [abstr.] AAPG Bulletin, in AAPG Rocky Mountain Section meeting; abstracts. v. 79, no. 6, June 1995. p. 915.
- OP-1085. P. L. Barnes*, L. M. Pope and Andy Foster. Impact of conservation practices on agricultural nonpoint contamination [abstr.], in Programs and proceedings of symposium on Agricultural nonpoint sources of contaminants; a focus on herbicides. 1993. p. 29. Available from: U.S. Environmental Protection Agency, Kansas City, KS, United States.
- OP-1086. P. W. Barnes and Erk Reimnitz. Sediment entrainment and transport by ice; influence of climate warming with observations from the Great Lakes and the Arctic [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1992 fall meeting. v. 73, no. 43, Suppl. October 27, 1992. p. 302.
- OP-1087. J. L. Barringer, C. L. MacLeod* and R. A. Gallagher*. NEW JERSEY. Mercury in ground water in an unconfined aquifer in the New Jersey coastal plain [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 35.
- OP-1088. J. A. Barron. A Pliocene diatom dump in the Northwest Pacific [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 356.
- OP-1089. L. R. Bartek*, Janel Andersen*, Sanford Lewis*, Dev Murali* and R. J. Litwin. MARYLAND. Stratigraphic control of groundwater flow and hazardous waste dispersal in Mesozoic aquifers in the coastal plain deposits of Maryland [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 152.
- OP-1090. G. A. Barth*, M. C. Kleinrock* and R. T. Helz. HAWAII. The magma body at Kilauea Iki lava lake; potential insights into mid-ocean ridge magma chambers [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 645.
- OP-1091. M. J. Bartholomew*, S. E. Lewis*, A. P. Schultz and R. C. McDowell. VIRGINIA. Geometry and structural development of the Saltville thrust system, southwestern Virginia [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 2.
- OP-1092. P. J. Bartlein*, Bev Lipsitz* and R. S. Thompson. Modern climate data for paleoenvironmental interpretations [abstr.] Program and Abstracts - American Quaternary Association. Conference, in American Quaternary Association; 13th biennial meeting; program and abstracts. 13, 1994. p. 197.
- OP-1093. J. R. Bartolino. TEXAS. Source of nitrate nitrogen in the Seymour Aquifer, Knox County, Texas [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 156.
- OP-1094. C. A. Barton*, M. D. Zoback*, Daniel Moos*, J. H. Sass and D. S. Goldberg*. In-situ stress and permeability in fractured and faulted rock [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 625.
- OP-1095. M. D. Barton*, G. A. Ghidotti*, P. N. Holden* and J. N. Grossman. CALIFORNIA. Petrochemical characteristics of the strongly peraluminous end-member of Cretaceous magmatism in the Great Basin; the Birch Creek Pluton [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 369.

- OP-1096. P. B. Barton, P. M. Bethke, D. O. Hayba, Daniel Larsen*, R. O. Rye and T. A. Steven. COLORADO. Evolution of the hydrologic model for the Creede ore deposit in view of scientific drilling in the moat of the Creede Caldera [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 399-400.
- OP-1097. J. A. Bartow. CALIFORNIA. Gilbert-type deltas in a Miocene marine sequence, Cuyama Basin, Southern California [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 579.
- OP-1098. S. B. Bartsch-Winkler and H. R. Schmoll. ALASKA. What can reconnaissance studies of intertidal stratigraphy reveal about relative sea-level changes at convergent plate margins? Examples from upper Cook Inlet, Alaska, and Isla Chiloé, Chile [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 138.
- OP-1099. J. S. Baum. SOUTH CAROLINA, GEORGIA. Three-dimensional modeling of ground-water flow in the vicinity of the Savannah River Site, South Carolina and Georgia [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 2-3.
- OP-1100. J. S. Baum and W. F. Falls. SOUTH CAROLINA, GEORGIA. Delineation of depositional environments and observed effects on ground-water flow properties near the Savannah River Site in South Carolina and Georgia [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 36.
- OP-1101. R. L. Baum and J. K. Odum. COLORADO. Retrogressive, rotational slumping at Grand Mesa, western Colorado [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 216.
- OP-1102. M. H. Beeson, D. A. Clague and J. P. Lockwood. HAWAII. Origin of clastic deposits in the Hilo drill hole, Hawaii [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 712.
- OP-1103. J. C. Behrendt, R. W. Saltus, Detlef Damaske*, A. E. McCafferty, C. A. Finn, D. D. Blankenship* and R. E. Bell*. Aeromagnetic surveys over the Ross Sea, Ross ice shelf and West Antarctic ice sheet reveal patterns of late Cenozoic volcanic and tectonic activity in the West Antarctic rift system [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 676.
- OP-1104. E. E. Bender*, J. L. Anderson* and J. L. Wooden. Temporal variations in the chemistry of early Proterozoic plutons from the Southwestern U.S. [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 57.
- OP-1105. K. Bennett*, H. R. Wenk*, W. B. Durham*, L. A. Stern and S. H. Kirby. Rheology and preferred orientation development in Ice I with dispersed particulates and Ice II at low-temperature; application to plastic anisotropy in the icy satellites [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 388.
- OP-1106. L. V. Benson. Hydrologic and chemical responses of lakes to climate change; concepts and models [abstr.] Program and Abstracts - American Quaternary Association. Conference, in American Quaternary Association, 13th biennial meeting; program and abstracts. 13, June 1994. p. 2-4.
- OP-1107. H. M. Benz, B. A. Chouet, P. B. Dawson, J. C. Lahr, R. A. Page and J. A. Hole*. ALASKA. Three-dimensional P and S-wave velocity structure of Redoubt Volcano, Alaska [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 55.
- OP-1108. H. M. Benz, J. A. Hole* and K. P. Furlong*. CALIFORNIA. Three-dimensional crustal structure of the San Andreas fault system of Northern California [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 642.
- OP-1109. H. M. Benz and J. E. Vidale. Mantle structure determined from short-period seismic arrays in the United States and Canada [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 spring meeting. v. 74, no. 16, Suppl. May 1993. p. 217.
- OP-1110. K. K. Beratan* and J. E. Nielson. CALIFORNIA, ARIZONA. Test of "hinge" models with synextensional deposits, Whipple detachment system, California and Arizona [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 131.
- OP-1111. R. C. Berg*, D. R. Soller and C. C. Abert*. Large and small scale geologic mapping; the foundation for determining sensitivity of aquifers at various scales [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, in American Association of Petroleum Geologists 1995 annual convention. 4, 1995. p. 8.
- OP-1112. W. R. Berkas. NORTH DAKOTA. Sediment data collection in the Missouri River between Garrison Dam and Lake Oahe, North Dakota [abstr.], in Proceedings; North Dakota water quality symposium. Fargo, ND: North Dakota State University Extension Service, 1992. p. 249.
- OP-1113. W. R. Berkas. NORTH DAKOTA. Water quality trends in North Dakota; U.S. Geological Survey surface water monitoring program [abstr.], in North Dakota water quality symposium; proceedings. (B. D. Seelig, chairperson). Fargo, ND: N.D. Water Resour. Res. Inst. 1994. p. 283.
- OP-1114. M. E. Berndt*, R. R. Seal, II, W. C. Shanks, III and W. E. Seyfried, Jr*. D/H fractionation during phase separation of seawater in subseafloor hydrothermal systems; isobaric heating and adiabatic decompression [abstr.] Mineralogical Magazine, in V. M. Goldschmidt Conference; extended abstracts. (B. Harte, editor). v. 58A, no. A-K, August 1994. p. 79-80.
- OP-1115. R. L. Bernknopf, D. R. Soller and J. F. Sutter. Regional environmental risk assessment; the stochastic approach

- [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 319.
- OP-1116. G. C. Beroza* and W. L. Ellsworth. The seismic nucleation phase; evidence from near-source seismograms [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 426.
- OP-1117. J. M. Berry*, E. F. Duke* and L. W. Snee. SOUTH DAKOTA. $^{40}\text{Ar}/^{39}\text{Ar}$ thermochronology of Precambrian metamorphic rocks north of the Harney Peak Granite, Black Hills, South Dakota [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 4.
- OP-1118. P. M. Bethke, W. R. Campbell, J. B. Hulen* and T. H. Moses, Jr. COLORADO. Creede Caldera continental scientific drilling program; overview [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 398.
- OP-1119. Nicolas Binard, J. G. Moore, W. R. Normark and R. T. Holcomb. Comparison of features identified by swath-sonar mapping (GLORIA) and their 3.5 kHz echo-sounding features on the Hawaiian Ridge [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 342.
- OP-1120. E. F. Binnian and M. B. Shasby. ALASKA. Spatial patterns in Alaska's landscape derived from multi-temporal AVHRR NDVI greenness data [abstr.] Annual U.S. Landscape Ecology Symposium, in Pattern and process in landscape ecology; Eighth annual U.S. landscape ecology symposium. 8, March 1993. p. 35.
- OP-1121. K. J. Bird, D. M. Bain, J. S. Friehauf and Z. C. Valin. CALIFORNIA. A comparison of undiscovered oil and gas resource estimates, Los Padres National Forest in the Ventura Basin Province, California [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 579.
- OP-1122. K. J. Bird, F. E. Cole, D. G. Howell and L. B. Magoon, III. ALASKA. The future of oil and gas in Northern Alaska [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 579.
- OP-1123. R. J. Bisdorf. UTAH. The hydrologic structure of Tule Valley, Utah inferred from Schlumberger resistivity soundings [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 123.
- OP-1124. A. N. Bittenbinder, B. M. Bogaert, C. E. Johnson* and S. D. Malone*. Earthworm; a modular distributed processing approach to seismic network processing [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 51.
- OP-1125. A. N. Bittenbinder, C. E. Johnson* and B. M. Bogaert. Earthworm; a modular distributed processing approach to seismic network processing [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 430.
- OP-1126. W. H. Blackburn*, P. A. Davis and A. E. Bland*. MARYLAND, VIRGINIA. Geochemical characterization of rift-related basalts, south-central Appalachian Orogen, Maryland and Virginia [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 37.
- OP-1127. N. L. Blair. Improving bibliographical access to published geologic mapping by using online map indexes [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 104.
- OP-1128. R. J. Blakely, D. R. Sherrod and R. E. Wells. OREGON. Where is the margin of the Columbia Embayment beneath the Cascade Range in central Oregon? [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 145.
- OP-1129. F. V. Blanckenburg*, N. S. Belshaw*, R. K. O'Nions* and J. R. Hein. Use of $^{10}\text{Be}/^9\text{Be}$ as a water mass tracer; variations in Atlantic and Pacific seawater [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. 1993. p. 367.
- OP-1130. M. L. Blanpied and N. H. Sleep*. A model for creep, compaction and earthquake cycles on partially sealed fault zones [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 425.
- OP-1131. C. D. Blome and D. L. Eicher*. MONTANA. Radiolarian paleoceanography of the Upper Cretaceous Western Interior Seaway, southern Montana [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 159.
- OP-1132. C. D. Blome and K. M. Reed*. OREGON. Permian radiolarian faunas in the Grindstone terrane of central Oregon and their similarities to coeval Japanese faunas [abstr.] International Geological Congress, Abstracts—Congrès Géologique International, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 250.
- OP-1133. J. D. Blomquist and G. T. Fisher. Nitrogen sources and nitrate loads in major watersheds of the upper Potomac River basin [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 165.
- OP-1134. A. E. Blum. Atomic force microscopy of clays; more than pretty pictures [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 289-290.
- OP-1135. S. W. Bogue*, C. S. Grommé and J. W. Hillhouse. ALASKA. Paleomagnetism, magnetic anisotropy, and Cretaceous paleolatitudes of the Duke Island (Alaska) ultramafic complex [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 460.
- OP-1136. R. G. Bohannon and T. E. Parsons. Tectonic implications of post-30 Ma Pacific and North American plate motions [abstr.] Eos, Transactions, American Geophysical Union, in AGU

- 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 620.
- OP-1137. D. J. Bohaska*, M. D. Gottfried* and F. C. Whitmore, Jr. The cetacean fauna of the mid-Miocene Chesapeake Group [abstr.] *Journal of Vertebrate Paleontology*, in *Society of Vertebrate Paleontology, fifty-first annual meeting; abstracts of papers*. (R. J. Emry, editor and others). v. 11, no. 3, Suppl. September 30, 1991. p. 17.
- OP-1138. S. R. Bohlen, J. L. Mosenfelder*, B. R. Hacker and W. B. Hankins. Mineral reactions as drivers and recorders of crustal dynamics [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, 1994 annual meeting*. v. 26, no. 7, 1994. p. 260.
- OP-1139. J. K. Bohlke, R. B. Wanty, M. L. Tuttle, G. N. Delin and M. K. Landon. MINNESOTA. Resolving the effects of varying land use and aquifer reactions on nitrate contamination of ground-water in central Minnesota [abstr.] *Eos, Transactions, American Geophysical Union*, in *AGU 1994 spring meeting*. v. 75, no. 16, Suppl. April 19, 1994. p. 154.
- OP-1140. B. F. Bohor. Stevns Klint revisited; anatomy of a K/T boundary site in Denmark [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, 1994 annual meeting*. v. 26, no. 7, 1994. p. 335.
- OP-1141. B. F. Bohor and W. J. Betterton. Debris flow/turbidite clastic units at the KT boundary, northeastern Mexico [abstr.] *LPI Contribution*, in *Papers presented to New developments regarding the KT event and other catastrophes in Earth history*. 825, February 1994. p. 13-14.
- OP-1142. B. F. Bohor, G. B. Dalrymple, D. M. Triplehorn* and M. A. Kirschbaum. UTAH. Argon/argon dating of tonsteins from the Dakota Formation, Utah [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, 1991 annual meeting*. v. 23, no. 5, 1991. p. 85.
- OP-1143. Ornella Bonamassa* and J. E. Vidale. The influence of lateral velocity variation, topography, and attenuation for high-frequency ground motion across a 100 m array [abstr.] *Seismological Research Letters*, in *89th annual meeting of the Seismological Society of America; abstracts*. v. 65, no. 1, March 1994. p. 44.
- OP-1144. Ornella Bonamassa*, J. E. Vidale and A. Nardi*. CALIFORNIA. P- and S-wave tomography on the Santa Cruz Mountains; an attempt to explain directional resonances [abstr.] *Eos, Transactions, American Geophysical Union*, in *AGU 1993 fall meeting*. v. 74, no. 43, Suppl. October 26, 1993. p. 437.
- OP-1145. M. G. Bonilla. CALIFORNIA. Serra fault zone, San Francisco Peninsula, California [abstr.] *Eos, Transactions, American Geophysical Union*, in *AGU 1994 fall meeting*. v. 75, no. 44, Suppl. November 5, 1994. p. 681.
- OP-1146. A. A. Bookstrom, S. E. Box, Bi-Shia King, J. R. Lindsay and C. L. Smith. IDAHO. River dispersal of metals downstream from the Coeur d'Alene mining district and Bunker Hill Superfund site, Idaho; Part II, Floodplain geology and geochemistry [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, 1994 annual meeting*. v. 26, no. 7, 1994. p. 100.
- OP-1147. J. S. Booth, K. M. Fischer* and M. M. Rowe*. Methane hydrate in marine sediment; defining the characteristics of an unclassic reservoir [abstr.] *Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists*, in *American Association of Petroleum Geologists 1995 annual convention*. 4, 1995. p. 11.
- OP-1148. R. D. Borchardt. Characterization of potential geographic variations in strong ground shaking for purposes of mapping ground failure potential [abstr.] *Annual Meeting - Association of Engineering Geologists*, in *Proceedings of the 35th annual meeting of the Association of Engineering Geologists*. (M. L. Stout, editor). 35, 1992. p. 539.
- OP-1149. L. E. Borg*, M. A. Clyne and T. D. Bullen. CALIFORNIA. Influence of the subducting slab on partial melting of wedge peridotites in the generation of calc-alkaline lavas from the southernmost Cascades [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, 1994 annual meeting*. v. 26, no. 7, 1994. p. 331.
- OP-1150. P. F. Borne*, T. M. Cronin, H. J. Dowsett and B. K. Sen Gupta*. Microfaunal evidence of late Pliocene-early Pleistocene coastal oceanic upwelling in the Moin Formation, Costa Rica [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, 1994 annual meeting*. v. 26, no. 7, 1994. p. 170.
- OP-1151. T. M. Bown and J. G. Fleagle*. Biostratigraphic evolution of Deseadan-Santacrucian paleotherian marsupials (Caenolestidae), Chubut and Santa Cruz provinces, Patagonian Argentina [abstr.] *Journal of Vertebrate Paleontology*, in *Society of Vertebrate Paleontology, fifty-first annual meeting; abstracts of papers*. (R. J. Emry, editor and others). v. 11, no. 3, Suppl. September 30, 1991. p. 17.
- OP-1152. T. M. Bown, J. A. Harrell*, G. A. Comero* and S. E. Comero*. The oldest flagstone road in the world; access to Old Kingdom basalt quarries, northern Fayum Depression, Egypt [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, Rocky Mountain Section, 46th annual meeting*. v. 26, no. 6, April 1994. p. 5.
- OP-1153. T. M. Bown, S. T. Hasiotis, Florian Maldonado, E. M. Brouwers and J. G. Eaton*. UTAH. Trace fossils of ants, wasps, and bees (Hymenoptera) from the lower Tertiary Clarion Formation of southwestern Utah [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, Rocky Mountain Section, 47th annual meeting*. v. 27, no. 4, April 1995. p. 3.
- OP-1154. T. M. Bown, P. A. Holroyd and K. D. Rose*. WYOMING. Allocyclic controls of mammalian evolution and extinction; some empirical correlations from the early Eocene of Wyoming [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, Rocky Mountain Section, 47th annual meeting*. v. 27, no. 4, April 1995. p. 3.
- OP-1155. T. M. Bown, M. J. Kraus* and K. D. Rose*. Temporal holostrome reconstruction of the Willwood Formation and the reapportionment of paleopedologic, sedimentologic, and paleobiotic events in time [abstr.] *Journal of Vertebrate Paleontology*, in *Society of Vertebrate Paleontology, fifty-first annual meeting*;

- abstracts of papers. (R. J. Emry, editor and others). v. 11, no. 3, Suppl. September 30, 1991. p. 17.
- OP-1156. S. E. Box, A. A. Bookstrom, J. R. Lindsay and C. L. Smith. IDAHO. River dispersal of mine tailings downstream from Coeur d'Alene mining district and Bunker Hill Superfund site, Idaho; Part I, Geologic overview and outlook for remediation [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 506.
- OP-1157. J. P. Bradbury. CALIFORNIA. A 180,000-year paleolimnological record from Owens Lake, California [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 237.
- OP-1158. J. P. Bradbury and W. E. Dean. CALIFORNIA, OREGON. Correlation of paleoclimate records from upper Klamath Lake and from the continental margin off California and Oregon [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 255-256.
- OP-1159. J. V. Brahana and J. W. Martin*. ARKANSAS. Temporal variability in discharge and water quality from large springs in northwestern Arkansas; implications for data collection [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 286.
- OP-1160. J. V. Brahana and Dorothy Walters. Methodology development and preliminary field assessment of host-specific viruses as tracers in shallow karst aquifers [abstr.] Special Publication - Karst Waters Institute, in Breakthroughs in karst geomicrobiology and redox geochemistry; abstracts and field-trip guide. (I. D. Sasowsky, editor and others). 1, 1994. p. 2-3.
- OP-1161. T. J. Bralower*, P. D. Fullagar*, C. K. Paull*, J. G. Cargill* and W. V. Sliter. Middle Cretaceous strontium isotopic stratigraphy of deep sea sections [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 248.
- OP-1162. T. J. Bralower*, D. C. Kelly*, Isabella Premoli Silva*, W. V. Sliter, E. Thomas* and J. C. Zachos*. A tropical Paleogene reference section; ODP Site 865, Allison Guyot, biostratigraphic and stable isotopic results [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 354.
- OP-1163. S. R. Brantley. WASHINGTON. Mount Rainier; volcano hazards and emerging land-use and emergency-response plans in Pierce County and Orting, Washington [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 105.
- OP-1164. D. D. Braun*, J. B. Epstein and J. D. Inners*. PENNSYLVANIA. Surficial geologic mapping in the Pennsylvania part of the Allentown 30'x60' quadrangle; a STATEMAP project [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, February 1995. p. 31-32.
- OP-1165. K. S. Breckenridge. CALIFORNIA. An archive for intensive monitoring in Parkfield; issues and realities [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 470.
- OP-1166. J. D. Bredehoeft, J. B. Wesley* and T. D. Fouch. UTAH. Simulations of the origin of fluid pressure, fracture generation, and the movement of fluids in the Uinta Basin, Utah [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 106-107.
- OP-1167. G. N. Breit and J. L. Schlottmann. OKLAHOMA. Relation of lithologic variations in Permian rocks of the Central Oklahoma Aquifer to water quality [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 205.
- OP-1168. G. N. Breit and M. L. Tuttle. Use of trace elements to constrain a depositional model of carbonaceous rocks in the Pennsylvanian Paradox Basin [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 6.
- OP-1169. D. A. Brew. ALASKA. Metallogenic factors and metallogenic belts of Southeastern Alaska [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 27-28.
- OP-1170. O. P. Bricker. Weathering and mass-balance budgets in small catchments [abstr.] Mineralogical Magazine, in V. M. Goldschmidt Conference; extended abstracts. (B. Harte, editor). v. 58A, no. A-K, August 1994. p. 123.
- OP-1171. Julie Brigham-Grette*, L. D. Carter, Louie Marinovich, Jr., E. M. Brouwers and D. M. Hopkins*. ALASKA. Pliocene sea-level record from Arctic Alaska and possible implications for Antarctic ice volume 2.8-2.2 Ma [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 144.
- OP-1172. Julie Brigham-Grette*, D. M. Hopkins*, L. D. Carter, D. S. Kaufman* and Louie Marinovich, Jr. ALASKA. Character and climate of the last interglacial (oxygen isotope substage 5E) in the Bering Strait and Arctic Alaska as determined from nearshore marine deposits [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 514.
- OP-1173. T. M. Brocher. The growth of continents; insights from controlled source seismic profiling of continental margins [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 642.
- OP-1174. G. R. Brooks*, S. P. Leathem* and G. R. Gelfenbaum. FLORIDA. Large-scale, shore-normal bars; coastal west-central Florida [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 363.
- OP-1175. M. H. Brooks, R. L. Smith and D. R. LeBlanc. In-situ stimulation of groundwater denitrification to remediate nitrate contamination [abstr.] Eos, Transactions, American Geophysical

- Union, *in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 156-157.
- OP-1176. E. M. Brouwers, David Bukry, Louie Marincovich, Jr. and In-Chang Ryu*. OREGON. Paleocology, biostratigraphy, and depositional history of Paleocene to middle Eocene rocks of the Tyee Basin, western Oregon [abstr.] AAPG Bulletin, *in* AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 580.
- OP-1177. E. M. Brouwers, David Bukry and In-Chang Ryu*. OREGON. Paleocology and biostratigraphy of upper Paleocene-middle Eocene units of the Tyee Basin, western Oregon [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 160.
- OP-1178. J. L. Brown. UTAH. Depositional facies patterns and distribution of the Lower and Middle Triassic Moenkopi Formation, Paradox Basin, east-central Utah [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 6.
- OP-1179. J. L. Brown, R. F. Dubiel and R. J. Schiller*. UTAH. Cooperative geologic research in Canyonlands National Park, Utah [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 104.
- OP-1180. M. F. Brown. TEXAS. Environmental occurrence of pesticides in a suburban watershed; Rush Creek, Arlington, Texas, 1993-94 [abstr.], *in* Factors affecting water resources; proceedings. Fort Worth, TX: American Water Resources Association - Texas Section, December 1994. p. 40.
- OP-1181. M. E. Brownfield, R. H. Affolter and J. D. Cathcart. WASHINGTON. Element characterization of coals from the Franklin coal zone, Puget Group, John Henry No. 1 Mine, King County, Washington [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 215.
- OP-1182. M. E. Brownfield, R. H. Affolter and G. D. Stricker. WASHINGTON. High chromium content in Tertiary coals, northwestern Washington; a key to their depositional history [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 144.
- OP-1183. W. B. Bryan* and J. G. Moore. HAWAII. Geologic effects of giant tsunami waves, Lanai and Molokai, Hawaii [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 378.
- OP-1184. W. B. Bryan*, J. G. Moore and K. R. Ludwig. HAWAII. A Pleistocene chaotic breccia conglomerate, Molokai, Hawaii; a model for present-day tsunami deposits [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 344.
- OP-1185. B. H. Bryant, Ed DeWitt, J. L. Wooden and C. M. Conway. ARIZONA. The boundary between the early Proterozoic Mojave and central Arizona crustal provinces, western Arizona [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 6-7.
- OP-1186. M. R. Buchholtz-ten Brink, M. A. Allison and J. S. Schlee. NEW YORK. A sidescan-sonic survey of the upper Hudson shelf valley [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, February 1995. p. 32.
- OP-1187. M. R. Buchholtz-ten Brink, F. T. Manheim and M. H. Bothner. MASSACHUSETTS. The contaminated-sediment database; a tool for research and management in Massachusetts waters [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 203.
- OP-1188. M. R. Buchholtz-ten Brink, J. S. Schlee and M. A. Allison*. Sewage-sludge in the Hudson Shelf valley; a tracer of fine-grained sediment dynamics [abstr.] Eos, Transactions, American Geophysical Union, *in* 1994 ocean sciences meeting. v. 75, no. 3, Suppl. January 18, 1994. p. 203-204.
- OP-1189. R. C. Bucknam and G. P. Biasi*. WASHINGTON. An improved estimate of the time of a prehistoric earthquake in the Southwest Puget Sound region, Washington [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 522.
- OP-1190. R. C. Bucknam, Ding Guoyu*, Zhang Yuming* and R. S. Yeats*. International Geological Correlation Program Project 206; A worldwide comparison of the characteristics of major active faults [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, *in* 29th international geological congress; abstracts. 29, 1992. p. 40.
- OP-1191. C. G. Bufe, D. J. Varnes and S. P. Nishenko. A non-linear time- and slip-predictable model for foreshocks [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 437.
- OP-1192. C. G. Bufe, D. J. Varnes and S. P. Nishenko. Long-term seismicity patterns and pre-earthquake failure processes [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 434.
- OP-1193. R. P. Buland. The U.S. National Seismograph Network contribution to the National Seismic System [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1993 spring meeting. v. 74, no. 16, Suppl. May 1993. p. 215-216.
- OP-1194. T. D. Bullen, J. B. Shanley and S. F. Clark. VERMONT. Sr and Pb isotopes as surrogate tracers of water flowpaths in a forested catchment [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 144.
- OP-1195. T. K. Bundtzen* and M. L. Miller. ALASKA. Geology and metallogeny of Cretaceous-early Tertiary volcanic and plutonic rocks of western Alaska [abstr.], *in* International symposium; tectonics, energy and mineral resources of the North-West Pacific (abstracts); Volume II. (C. B. Borukayev, editor and others). Khabarovsk: Russian Far East Academy of Sciences, Institute of Tectonics and Geophysics, 1989. p. 80.

- OP-1196. R. C. Burruss. Crystallization of natural gas hydrates; video microscopy and mass balance constraints on nucleation and growth [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 261-262.
- OP-1197. K. W. Burton*, R. K. O'Nions* and J. R. Hein. Tracing the water mass evolution of Pb, Nd and Sr in the central Pacific Ocean; fine scale records from a ferromanganese crust [abstr.] *Eos, Transactions, American Geophysical Union*, *in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 339.
- OP-1198. K. W. Burton*, R. K. O'Nions*, D. J. Martel* and J. R. Hein. The influence of erosion and palaeogeography on sea-water neodymium during the past 20 million years [abstr.] *Mineralogical Magazine*, *in* V. M. Goldschmidt Conference; extended abstracts. (B. Harte, editor). v. 58A, no. A-K, August 1994. p. 136-137.
- OP-1199. W. C. Burton. VIRGINIA. Evidence for pre-cleavage deformation and post-cleavage intrusion in the northern Carolina slate belt, Virginia [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 39.
- OP-1200. W. C. Burton and C. S. Southworth. VIRGINIA, MARYLAND. Garnet-graphite paragneiss and other country rocks in granitic Grenvillian basement, Blue Ridge Anticlinorium, northern Virginia and Maryland [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 6.
- OP-1201. D. M. Bush*, B. R. Richmond and W. J. Neal*. PUERTO RICO. Coastal hazard mapping in the wake of Hugo; Puerto Rico [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 6.
- OP-1202. J. R. Butler* and J. W. Horton, Jr. VIRGINIA, NORTH CAROLINA. The Buggs Island granite pluton, emplacement related to right-lateral faulting in the eastern Piedmont, Virginia and North Carolina [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 39.
- OP-1203. M. L. Buursink. FLORIDA. Shallow geologic features identified in Southwest Florida ground penetrating radar surveys [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 39-40.
- OP-1204. M. L. Buursink. FLORIDA. The interpretation of borehole geophysical logs in mid- to late-Cenozoic siliciclastic and carbonate sequences in southwestern Florida; a geologic and hydrologic mapping tool [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 6.
- OP-1205. J. D. Byerlee. The change in orientation of subsidiary shears near faults containing high pore fluid pressure [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, *in* 29th international geological congress; abstracts. 29, 1992. p. 442.
- OP-1206. J. D. Byerlee. The role of water in the evolution of large strike-slip faults [abstr.] Abstracts - Geological Society of Australia, *in* Deformation processes in the Earth; from microcracks to mountain belts; field conference. 36, February 1994. p. 19.
- OP-1207. J. D. Byerlee and D. A. Lockner. The earthquake instability on faults containing water in seal-bound compartments [abstr.] *Eos, Transactions, American Geophysical Union*, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 425-426.
- OP-1208. L. J. Cabri*, G. K. Czamanske, A. C. Larocque* and P. Neumayr*. Recent studies involving microbeam methods for precious metals [abstr.], *in* Mineralogy in the service of mankind; programme and abstracts. (B. J. Griffin, editor and others). International Congress on Applied Mineralogy, 1993. p. 177-178.
- OP-1209. D. J. Cain, M. I. Hornberger, S. N. Luoma, J. N. Moore* and Sally Boggs*. MONTANA. Processes affecting metal concentrations in invertebrates in the Clark Fork River, Montana [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 5.
- OP-1210. D. L. Cain. COLORADO. Factors affecting surface-water quality in the Alamosa River basin, south-central Colorado [abstr.] Special Publication - Colorado Geological Survey, *in* Proceedings; Summitville forum '95. (H. H. Posey, editor and others). Report no. 38, 1995. p. 159.
- OP-1211. J. P. Calzia. CALIFORNIA. Petrogenesis of a middle Miocene rapakivi granite, Death Valley, California, USA [abstr.] Abstracts of the ... General Meeting of the International Mineralogical Association, *in* International Mineralogical Association, 16th general meeting; abstracts. 16, 1994. p. 62.
- OP-1212. I. H. Campbell*, R. I. Hill*, I. S. Williams*, G. K. Czamanske, V. E. Kunikov* and V. Stepanov*. Synchronism of the Siberian Traps and the Permian-Triassic boundary [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, *in* 29th international geological congress; abstracts. 29, 1992. p. 65.
- OP-1213. R. H. Campbell and R. L. Bernknopf. Forecasting the spatial distribution of landslide risk [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 145.
- OP-1214. W. R. Campbell and F. E. Gay. COLORADO. Creede drilling project; an example of core processing and sample & data archiving for continental scientific drilling projects at the U.S.G.S. Core Research Center, Denver, CO [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 401-402.
- OP-1215. M. R. Cannon. MONTANA. Geology and ground-water resources of the Blackfoot Indian Reservation, northwestern Montana [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 5.

- OP-1216. P. R. Carlson, R. J. Anima, G. M. Mann, M. S. Marlow and B. L. Ingram*. CALIFORNIA. Buried channel system of South San Francisco Bay, clues to late Holocene sedimentary processes and environmental fluctuations [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 580-581.
- OP-1217. P. R. Carlson. GLORIA side-scan imagery of the deep Bering Sea [abstr.], in International symposium; tectonics, energy and mineral resources of the North-West Pacific (abstracts); Volume II. (C. B. Borukayev, editor and others). Khabarovsk: Russian Far East Academy of Sciences, Institute of Tectonics and Geophysics, 1989. p. 62.
- OP-1218. P. R. Carlson, E. A. Cowan*, Jinkui Cai* and R. D. Powell*. ALASKA. Turbidite systems of Glacier Bay compared to Gulf of Alaska systems [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 364.
- OP-1219. P. E. Carrara and R. R. Shroba. COLORADO. Landslides in and near the Rocky Flats Plant, Jefferson County, Colorado [abstr.] Program and Abstracts - American Quaternary Association. Conference, in American Quaternary Association; 13th biennial meeting; program and abstracts. 13, 1994. p. 203.
- OP-1220. R. B. Carten, A. A. Bookstrom, P. R. Johnson and B. M. Walker. Geochemical evolution of late Proterozoic ore deposits; examples from the Saudi Arabian Shield [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 185.
- OP-1221. L. D. Carter and J. F. Whelan. ALASKA. The last interglacial along the Arctic coast of Alaska [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 236.
- OP-1222. D. L. Carver and S. H. Hartzell. CALIFORNIA. Mapping earthquake site response in Santa Cruz, California [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 447.
- OP-1223. K. V. Cashman*, J. P. Kauahikaua and J. E. Pallon. HAWAII. Vesicle structure of inflated sheet flows, Kilauea and Mauna Loa volcanoes, Hawaii [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 640-641.
- OP-1224. R. D. Catchings and W. M. Kohler. CALIFORNIA. Preliminary results from a 1993 seismic survey of the San Francisco Bay area; East Bay results [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 413-414.
- OP-1225. R. D. Catchings, W. M. Kohler, M. J. Rymer and W. H. Lee. CALIFORNIA. A search for San Francisco Bay faults using on-shore high-resolution seismic imaging along the San Mateo Bridge, Foster City, California [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 684.
- OP-1226. C. B. Cecil, T. S. Ahlbrandt and M. T. Heald*. Paleoclimatic implications for the origin of Paleozoic quartz arenites in the Appalachian Basin [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 72.
- OP-1227. C. B. Cecil and F. T. Dulong. Allogenic controls on Pennsylvanian underclay and coal beds [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 42.
- OP-1228. C. B. Cecil, N. T. Edgar and T. S. Ahlbrandt. Climate controls on cyclic sedimentation; climatostratigraphy [abstr.] Concepts in Sedimentology and Paleontology, in Tectonic and eustatic controls on sedimentary cycles. (J. M. Dennison, editor and others). 4, September 1994. p. 247.
- OP-1229. François Chabaux*, A. S. Cohen*, R. K. O'Nions* and J. R. Hein. A high-resolution record of sea water U-Th isotopes obtained from ferromanganese crusts [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 339-340.
- OP-1230. W. W. Chadwick, Jr.*, J. L. Anderson*, D. A. Clague, C. G. Fox*, M. O. Garcia*, Ken Hon, J. G. Moore and J. R. Smith*. HAWAII. New bathymetric maps of the submarine flanks of Mauna Loa and Kilauea volcanoes, Hawaii [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 641.
- OP-1231. A. T. Chalmers and Roger Fujii. CALIFORNIA. Geochemical processes affecting the solubility of selenium and arsenic in ground water, Tulare Basin, California [abstr.] Agronomy Abstracts, in 1992 annual meetings; American Society of Agronomy, 84th annual meeting; Crop Science Society of America; Soil Science Society of America; Clay Minerals Society. 84, November 1992. p. 235.
- OP-1232. K. R. Chamberlain*, B. R. Frost*, S. C. Patel*, C. E. Isachsen* and G. L. Snyder. WYOMING. New U-Pb geochronological and thermobarometric constraints on Proterozoic tectonic processes along the SE margin of the Wyoming Craton [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 59.
- OP-1233. M. G. Chapman. Uses of Mangala Valles, Mars maps; hydrologic/geologic history and future mission planning [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 265-266.
- OP-1234. J. R. Childs, P. E. Hart, Jill McCarthy and M. S. Marlow. CALIFORNIA. High-resolution seismic-reflection studies of submerged fault zones throughout the San Francisco Bay area [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 684.
- OP-1235. I-Ming Chou. Reevaluation of experimental methods for the measurement of H₂O activities in supercritical fluids [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 135.
- OP-1236. I-Ming Chou and H. T. Haselton, Jr. Lead titanate as a pressure calibrant in the diamond anvil cell [abstr.] Abstracts of the ... General Meeting of the International Mineralogical Association

- ation, in *International Mineralogical Association, 16th general meeting; abstracts*. 16, 1994. p. 74-75.
- OP-1237. I-Ming Chou, H. T. Haselton, Jr., G. L. Nord, Jr.*, A. H. Shen* and W. A. Bassett*. Barium titanate as a pressure calibrant in the diamond anvil cell [abstr.] *Eos, Transactions, American Geophysical Union, in AGU 1993 spring meeting*. v. 74, no. 16, Suppl. May 1993. p. 170.
- OP-1238. I-Ming Chou and G. L. Nord, Jr. Lead phosphate as a pressure calibrant in the hydrothermal diamond-anvil cell [abstr.] *Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting*. v. 26, no. 7, 1994. p. 291.
- OP-1239. B. A. Chouet, P. B. Dawson, Marino Martini*, G. Milana*, G. De Luca* and Roberto Scarpa*. Constraints on the sources of tremor and explosions at Stromboli Volcano, Italy, from near-field observations and small-aperture array measurements of their elastic wavefields [abstr.] *Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts*. v. 65, no. 1, March 1994. p. 57.
- OP-1240. E. J. Christian. The Government Information Locator Service [abstr.], in *Federal geographic technology conference; FGT'94; presentation abstracts and speaker's biographies*. (GIS World Education and Training Institute). Fort Collins, CO: GIS World Books, September 1994. p. 16.
- OP-1241. D. A. Clague and R. P. Denlinger. HAWAII. The M7.9 1868 earthquake; Hawaii's active landslides [abstr.] *Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting*. v. 74, no. 43, Suppl. October 26, 1993. p. 635.
- OP-1242. Germaine Clark and K. J. Franczyk. COLORADO. Environmental and diagenetic history of Pennsylvanian carbonate units of a mixed clastic and carbonate series, southeastern Paradox Basin, Colorado [abstr.] *Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting*. v. 26, no. 6, April 1994. p. 8.
- OP-1243. J. S. Clarke. GEORGIA, SOUTH CAROLINA. Conceptual models of possible stream-aquifer relations in the vicinity of the Savannah River Site, Georgia and South Carolina [abstr.] *Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting*. v. 25, no. 4, April 2, 1993. p. 8.
- OP-1244. J. S. Clarke and C. T. West. SOUTH CAROLINA, GEORGIA. Use of a geographic information system to develop hydrogeologic unit outcrop and subcrop maps in the vicinity of the Savannah River Site, South Carolina and Georgia [abstr.] *Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting*. v. 27, no. 2, April 1995. p. 44.
- OP-1245. J. S. Cline*, A. H. Hofstra, G. P. Landis, S. B. Alerton, C. A. Gent and C. J. Eastoe*. NEVADA. Stable isotope and gas compositions of ore fluids from the Getchell Mine, Nevada; evidence for contrasting ore fluids [abstr.] *Abstracts with Programs - Geological Society of America, in Geological Society of America, 1995 annual meeting*. v. 27, no. 6, 1995. p. 66-67.
- OP-1246. G. R. Cochrane, J. C. Moore* and H. J. Lee. Fault control of dewatering of sediments at the toe of the Cascadia accretionary prism from seismic velocities [abstr.] *Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting*. v. 26, no. 7, 1994. p. 457.
- OP-1247. J. A. Coe, E. P. Nelson*, A. K. Turner* and C. D. Sturdivant*. COLORADO. Application of close-range photogrammetry and GIS technology to underground fracture mapping and structural analysis, Henderson Mine, Empire, Colorado [abstr.] *Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting*. v. 26, no. 6, April 1994. p. 8.
- OP-1248. T. A. Cohn, C. L. Simmons* and W. G. Baier. Looking for trends in precipitation chemistry data from the National Atmospheric Deposition Program/National Trends Network [abstr.] *Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting*. v. 75, no. 16, Suppl. April 19, 1994. p. 160.
- OP-1249. F. E. Cole, K. J. Bird and D. G. Howell. ALASKA. Tectonic subsidence and uplift in the North Slope foreland basin, Alaska; responses to Canada Basin rifting and Brooks Range orogenesis [abstr.] *Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting*. v. 26, no. 7, 1994. p. 149.
- OP-1250. F. E. Cole, K. J. Bird, D. G. Howell, François Roure, Z. C. Valin, M. J. Pawlewicz, S. L. Robbins and Jaime Toro*. ALASKA. Deformation and foreland basin sedimentation in the north central Brooks Range, Alaska [abstr.] *AAPG Bulletin, in AAPG Pacific Section meeting; abstracts*. v. 79, no. 4, April 1995. p. 581-582.
- OP-1251. F. E. Cole, D. G. Howell and K. J. Bird. ALASKA. Geometry and timing of deformation in the north-central Brooks Range, Alaska [abstr.] *Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting*. v. 75, no. 44, Suppl. November 1, 1994. p. 646-647.
- OP-1252. J. C. Cole, J. H. Trexler, Jr.* and P. H. Cashman*. NEVADA. Reinterpretation of Mesozoic contractile structures in southern Nye County, Nevada [abstr.] *Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting*. v. 75, no. 44, Suppl. November 5, 1994. p. 686.
- OP-1253. D. L. Conrad*, G. J. Walsh and N. M. Ratcliffe. VERMONT. Developing a derivative bedrock geologic database for use with the Vermont GIS [abstr.] *Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting*. v. 27, no. 1, February 1995. p. 37.
- OP-1254. R. M. Conrey*, D. R. Sherrod and P. R. Hooper*. OREGON, WASHINGTON. Changes in basalt chemistry with intra-arc rifting, Cascade Range, Oregon and Washington, U.S.A. [abstr.] *Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting*. v. 26, no. 7, 1994. p. 332.
- OP-1255. C. M. Conway, D. P. Elston and C. T. Wrucke. SW U.S. diabase province; a 1.1-Ga intrusion event of middle Grenville and middle Keweenawan age [abstr.] *Abstracts with Programs - Geological Society of America, in Geological Society of America, South-Central Section, 27th annual meeting*. v. 25, no. 1, February 1993. p. 7.

- OP-1256. C. M. Conway, L. T. Silver*, C. T. Wrucke and D. A. Gonzales*. Progress in understanding the boundary between the Yavapai and Mazatzal provinces, Southwestern U.S.A. [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 9.
- OP-1257. F. M. Conway, A. W. Macfarlane*, C. B. Connor*, P. C. La Femina* and G. M. Reimer. Degassing at a young cinder cone; Volcan Cerro Negro [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 453.
- OP-1258. H. E. Cook, V. G. Zhemchuzhnikov*, W. G. Zempolich*, V. Y. Zhaimina*, L. V. Sergeieva*, V. M. Buvtyshkin* and D. V. Alexeev*. Devonian and Carboniferous carbonates of southern Kazakhstan; depositional analogs for co-eval giant oil and gas fields in the North Caspian Basin, western Kazakhstan [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, in American Association of Petroleum Geologists 1995 annual convention. 4, 1995. p. 18-19.
- OP-1259. P. G. Cook*, R. G. Shropshire*, D. K. Solomon*, W. E. Sanford*, Eurybiades Busenberg and L. N. Plummer. Estimating groundwater recharge using chlorofluorocarbons [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 155.
- OP-1260. R. B. Cook* and E. E. Foord. ALABAMA. Exploration geochemistry resulting in the discovery of the McAllister Sn-Ta deposit, Coosa County, Alabama [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 9.
- OP-1261. A. K. Cooper and D. W. Scholl. Structure and tectonics of the Bering Sea and Aleutian Ridge [abstr.], in International symposium: tectonics, energy and mineral resources of the North-West Pacific (abstracts); Volume II. (C. B. Borukayev, editor and others). Khabarovsk: Russian Far East Academy of Sciences, Institute of Tectonics and Geophysics, 1989. p. 63-64.
- OP-1262. T. B. Councill, E. R. Landa and D. R. Lovley. Microbial reduction of iodate [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 163.
- OP-1263. E. A. Cowan*, R. D. Powell*, P. R. Carlson and C. A. Nall*. ALASKA. Marine record of the October 8, 1986 Hubbard Glacier jokulhlaup [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 176-177.
- OP-1264. S. D. Craigg. MONTANA. Hydrogeologic conditions and land use in the Gallatin Valley near Bozeman, southwestern Montana [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 7.
- OP-1265. S. D. Craigg, K. S. Midtlyng and C. J. Harsen. MONTANA. Summary of current and recently completed hydrogeologic investigations of the U.S. Geological Survey, Water Resources Division, in Montana [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 7.
- OP-1266. Edward Cranswick, D. E. Overturf, T. Bice, S. E. Hough and I. I. Abramovich*. CALIFORNIA. Recordings of ground motion rotation in San Bernardino, California, produced by a magnitude 5 earthquake [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 39.
- OP-1267. A. E. Cromwell and E. M. Thurman. MICHIGAN. Herbicide transport and degradation in a pristine watershed; the fate of herbicides deposited by precipitation [abstr.], in Programs and proceedings of symposium on Agricultural nonpoint sources of contaminants; a focus on herbicides. 1993. p. 17. Available from: U.S. Environmental Protection Agency, Kansas City, KS, United States.
- OP-1268. T. M. Cronin, T. R. Holtz, Jr. and R. C. Whatley*. Quaternary paleoceanography of the deep Arctic Ocean based on quantitative analysis of Ostracoda [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 spring meeting. v. 74, no. 16, Suppl. May 1993. p. 175.
- OP-1269. T. M. Cronin, Noriyuki Ikeya*, Katsumi Abe*, Akihisa Kitamura*, Takahiro Kamiya*, Michiko Yajima*, Ryuichi Majima*, Sei-ichiro Matsui*, D. J. Dresser* and T. R. Holtz, Jr. Late Neogene paleoceanography of the western Pacific Ocean using marine Ostracoda [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 247.
- OP-1270. R. K. Crowder*, C. G. Mull* and K. E. Adams. ALASKA. Lowstand depositional systems related to Early Cretaceous rifting of the Arctic Alaska Plate; a new stratigraphic play on Alaska's North Slope [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 582.
- OP-1271. K. M. Cruikshank*, A. M. Johnson* and R. W. Fleming. CALIFORNIA. Characteristics of surface rupture from the 1992 Landers earthquake [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 342-343.
- OP-1272. B. L. Crysdale, Sherilyn Williams-Stroud and V. F. Nuccio. UTAH, COLORADO. Thermal and burial history reconstruction; a comparison of geothermometers using examples from the Paradox Basin, Utah and Colorado [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 9.
- OP-1273. Yulong Cui*, A. P. Roberts*, K. L. Verosub*, R. S. Thompson and C. G. Oviatt*. UTAH. A study of the Matuyama-Brunhes geomagnetic polarity transition from Sevier Lake, Utah [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 194-195.
- OP-1274. K. I. Cunningham, H. R. DuChene*, J. S. McLean and C. S. Spirakis. NEW MEXICO. Terrestrial hypogenic caves; possible analogs to subterranean Martian autotrophic ecosystems [abstr.] Special Publication - Karst Waters Institute, in

- Breakthroughs in karst geomicrobiology and redox geochemistry; abstracts and field-trip guide. (I. D. Sasowsky, editor and others). 1, 1994. p. 12-13.
- OP-1275. K. I. Cunningham, H. R. DuChene*, C. S. Spirakis and J. S. McLean. NEW MEXICO. Elemental sulfur in caves of the Guadalupe Mountains, New Mexico [abstr.] Special Publication - Karst Waters Institute, in Breakthroughs in karst geomicrobiology and redox geochemistry; abstracts and field-trip guide. (I. D. Sasowsky, editor and others). 1, 1994. p. 11-12.
- OP-1276. K. I. Cunningham, D. E. Northrup*, R. M. Pollastro, W. G. Wright and E. J. LaRock. NEW MEXICO. Bacterial and fungal habitation in Lechuguilla Cave, Carlsbad Caverns National Park, New Mexico; possible biologic origin of condensation-corrosion residues [abstr.] Special Publication - Karst Waters Institute, in Breakthroughs in karst geomicrobiology and redox geochemistry; abstracts and field-trip guide. (I. D. Sasowsky, editor and others). 1, 1994. p. 13-14.
- OP-1277. K. I. Cunningham, C. S. Spirakis and W. G. Wright. NEW MEXICO. Lechuguilla Cave; current U.S. Geological Survey investigations [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, South-Central Section, 27th annual meeting. v. 25, no. 1, February 1993. p. 7.
- OP-1278. G. L. Cygan and P. A. Candela*. Experimental determination of gold solubility in chalcopyrite buffered by the pyrrhotite-pyrite-magnetite assemblage at 600-700°C, 1.4 kbar [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 140-141.
- OP-1279. G. L. Cygan and I-Ming Chou. An examination of the wüstite-magnetite-H₂O buffer at 2 Kbar using fH₂ sensors [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 137.
- OP-1280. D. A. Cypser* and S. D. Davis. The state of corporate knowledge on injection induced earthquakes; an informal survey [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 472-473.
- OP-1281. F. A. D'Agnese, C. C. Faunt and A. K. Turner*. CALIFORNIA, NEVADA. Development of a regional potentiometric-surface map using interactive gridding and geographic information system techniques, Death Valley, California and Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 80.
- OP-1282. G. H. Davis*, J. M. Bedford*, K. N. Constenius*, J. A. Johnson*, F. Kong*, R. H. Ornelas*, M. Pecha*, E. P. Rodriguez* and L. J. Cox. ARIZONA. Deep cataclastic counterparts of neotectonic fault-rock architecture in the granite foot-wall of the Basin and Range Pirate Fault, southern Arizona [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 267-268.
- OP-1283. G. H. Davis* and P. D. Rowley. UTAH. Miocene thrusting gravity sliding, and near-surface batholithic emplacement, Marysville volcanic field, southwestern Utah [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 647.
- OP-1284. J. A. Davis, J. C. Friedly* and D. B. Kent. Effect of microscale heterogeneity on the reactive transport of chromium(VI) in a sand and gravel aquifer [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 206.
- OP-1285. P. M. Davis*, H. Liu*, M. Benthien*, J. Norris*, S. Gao*, G. S. Fuis, J. M. Murphy, T. M. Brocher, R. W. Clayton*, Katrin Hafner*, C. Contopoulos*, C. W. Scrivner*, D. A. Okaya*, T. L. Henyey*, M. C. Robertson*, H. Ekstrom*, J. Bhowmik*, J. J. Mori, A. M. Burciaga and D. D. Given. CALIFORNIA. The Los Angeles region seismic experiment; passive and active phases [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 15.
- OP-1286. S. D. Davis, P. A. Nyffenegger* and Cliff Frohlich*. TEXAS. The April 9, 1993 earthquake and other recent tremors in south-central Texas; induced by oil and gas production? [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 472.
- OP-1287. Sidney Davis*, Marie Davis*, M. W. Caffee*, R. C. Finkel*, G. H. Curtis*, T. C. Hanks, B. D. Turrin and Ivo Lucchitta. UTAH. Relations between soils and geomorphic age in the Grand Canyon, Arizona and Rainbow Plateau, Utah [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 259.
- OP-1288. W. C. Day, P. K. Sims, G. L. Snyder and A. B. Wilson. WYOMING. Hartville Uplift, southeastern Wyoming; revisited [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 10.
- OP-1289. W. E. Dean. Oxygenation in marine environments reflecting centennial to millennial changes in climate [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. 1993. p. 362-363.
- OP-1290. W. E. Dean, J. P. Bradbury and R. Y. Anderson*. A 1500-year, semi-decadal record of climate change in the north-central U.S. [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 423.
- OP-1291. R. W. Decker*, R. Y. Koyanagi, J. P. Lockwood, A. T. Okamura, P. G. Okubo and J. S. Nakata. HAWAII. Published forecasts of eruptions of Mauna Loa Volcano, Hawaii, from 1975 to 1993 [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 634.
- OP-1292. P. T. Delaney, A. E. Gartner and D. D. Pollard*. UTAH. Emplacement of 4 Ma diabase dikes into Jurassic strata of the San Rafael Swell, Utah [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 686.
- OP-1293. P. T. Delaney, J. P. Kauahikaua and W. A. Duffield. HAWAII. Thermal budget for the lower East Rift Zone of Kilauea Volcano [abstr.] Eos, Transactions, American Geophysical Union,

- in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 648.
- OP-1294. P. T. Delaney, M. H. Wallace and A. M. Rubin*. HAWAII. Origin of coincident subsidence and extension of Kilauea summit and uplift of its south flank since 1976 [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 712.
- OP-1295. C. R. Demas, E. T. Furlong and H. E. Taylor. Effects of 1993 floods on sediments in the Missouri and upper Mississippi rivers flood plains [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 181.
- OP-1296. A. Desai* and W. L. Ellsworth. CALIFORNIA. Doublet analysis of recent microseismicity surrounding the 1966 Parkfield, California, hypocenter [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 416-417.
- OP-1297. S. J. Deverel and J. L. Fio. CALIFORNIA. Selenium in the San Joaquin Valley; hydrology versus mythology [abstr.] Report - California Water Resources Center, in Are California's ground water resources sustainable? (J. J. DeVries, editor and others). Report no. 84, December 1994. p. 162. Available from: Water Resources Center Archives, Berkeley, CA, United States.
- OP-1298. J. W. Dewey and A. M. Pitt. WYOMING, MONTANA, IDAHO. Redetermination of locations and magnitudes of earthquakes in northern Yellowstone Park, Wyoming, and adjacent Montana and Idaho [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 67.
- OP-1299. S. F. Diehl and M. B. Goldhaber. MISSOURI. REE, Th, Nb, F enrichment in the New Madrid Test Well, Reelfoot Rift, Southeast Missouri; evidence of a deep carbonatite complex? [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 500.
- OP-1300. J. H. Dieterich. A review; earthquake nucleation on faults with rate- and state-dependent properties [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 410.
- OP-1301. J. H. Dieterich. Earthquake simulation with time-dependent nucleation and long-range interactions [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 433-434.
- OP-1302. L. D. Dietz, W. M. Kohler, A. N. Bittenbinder, B. M. Bogaert and Barry Hirshorn. CALIFORNIA. Larva; an implementation of Earthworm on the USGS Northern California Seismic Network [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 430.
- OP-1303. J. H. Dilles*, L. W. Snee and B. M. Laurs*. Geology, Ar-Ar age, and stable isotope geochemistry of suture-related emerald mineralization, Swat, Pakistan Himalayas [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 311.
- OP-1304. W. P. Dillon, D. F. Coleman and K. M. Scanlon. PUERTO RICO. Plate responses to the transition from subduction to strike-slip motion in the northeastern Caribbean; origin of the Puerto Rico Trench [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 475.
- OP-1305. W. P. Dillon, M. W. Lee and D. F. Coleman. Controls on distribution of gas hydrate on the Atlantic continental margin of the United States [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. 1993. p. 370.
- OP-1306. Xiao-Yang Ding*, J. E. Vidale and S. P. Grand*. Sharp "410" and slow uppermost mantle beneath Western US [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 482-483.
- OP-1307. J. E. Dixon* and D. A. Clague. HAWAII. Volatiles in alkali basalts from the North Arch volcanic field, Hawaii; degassing or mantle metasomatism? [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 718.
- OP-1308. K. E. Docherty, L. D. White and R. J. Anima. CALIFORNIA. Quantitative analysis of Holocene diatom assemblages from Suisun Bay, CA [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 583.
- OP-1309. D. A. Dodge*, G. C. Beroza* and W. L. Ellsworth. CALIFORNIA. The foreshock sequence of the 1992 Landers, California earthquake and its implications for earthquake nucleation [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 426.
- OP-1310. J. C. Dohrenwend, R. J. Miller and B. D. Stone. Patterns of erosion and deposition caused by the 1993 floods along the Missouri River; implications for flood plain management [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 75.
- OP-1311. J. C. Dohrenwend, B. D. Stone, M. Anderson*, L. Derasary*, K. A. Dohrenwend*, M. Lastrup*, R. J. Miller, T. Owens* and C. Tortorici*. MISSOURI. Flow characteristics of the 1993 Missouri River flood determined from flood plain erosion and deposition, Kansas City to St. Louis [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 180.
- OP-1312. J. F. Dolan* and D. J. Wald. Consequences of time-transgressive, oblique underthrusting of the southeastern Bahamas; localization of large thrust earthquakes and controls on large-scale forearc subsidence events [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 251.
- OP-1313. J. F. Dolan* and D. J. Wald. Strain accumulation and seismic energy release localized along collisional asperities; the 1946 and 1943 north-central Caribbean earthquakes [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 67.

- OP-1314. J. F. Dolan* and D. J. Wald. Geometry and kinematics of the plate-boundary thrust interface within the Bahamas-Greater Antilles collision as revealed by the 1943-53 north-central Caribbean earthquake sequence [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 610.
- OP-1315. M. M. Donato, P. E. Weston and C. G. Barnes*. CALIFORNIA, OREGON. Detrital clinopyroxene chemistry as a key to Middle Jurassic volcanism in the north-central Klamath Mountains [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 193-194.
- OP-1316. J. M. Dorava. ALASKA. Water generation and lahar formation from melting snow and ice during future eruptions of Crater Peak, Spurr Volcano, Alaska [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 113.
- OP-1317. A. A. Drake, Jr. Tectonic studies in the Central Appalachian Piedmont; new findings [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, February 1995. p. 41.
- OP-1318. J. I. Drever*, K. M. Murphy* and D. W. Clow. Field weathering rates versus laboratory dissolution rates; an update [abstr.] *Mineralogical Magazine*, in V. M. Goldschmidt Conference; extended abstracts. (B. Harte, editor). v. 58A, no. A-K, August 1994. p. 239-240.
- OP-1319. R. F. Dubiel. Triassic paleoclimate and the significance of red beds [abstr.] *Bulletin of the New Mexico Museum of Natural History and Science*, in The nonmarine Triassic. (S. G. Lucas, editor and others). 3, October 1993. p. 30.
- OP-1320. R. F. Dubiel and S. T. Hasiotis*. Integration of sedimentology, Paleosols, and trace fossils for paleohydrologic and paleoclimatic interpretations in a Triassic tropical alluvial system [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 502.
- OP-1321. R. F. Dubiel and S. T. Hasiotis*. Paleosols and rhizofacies as indicators of climate change and groundwater fluctuations; the Upper Triassic Chinle Fm. [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 11-12.
- OP-1322. R. F. Dubiel, S. T. Hasiotis, T. M. Demko*, C. L. May*, N. R. Riggs*, S. R. Ash* and R. J. Litwin. ARI-ZONA. Triassic paleoecosystem reconstruction via fossil, ichnofossil, isotopic, and sedimentologic evidence integrated into a complete measured section; Chinle Formation, Petrified Forest National Park, AZ [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 9.
- OP-1323. E. M. Duebendorfer*, L. S. Beard and E. I. Smith*. NEVADA. Restoration of Miocene extension in the Lake Mead area, Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 250.
- OP-1324. F. T. Dulong, C. B. Cecil and B. R. Wardlaw. Allogenes of a Middle Pennsylvanian sedimentary cycle [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 241-242.
- OP-1325. M. A. Dungan* and P. W. Lipman. COLORADO. Ash-flow tuffs of the southeast and early central San Juan volcanic field, Colorado; implications for magma accumulation and evolution in a long-lived intracontinental arc [abstr.] *International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes*, in 29th international geological congress; abstracts. 29, 1992. p. 482.
- OP-1326. W. B. Durham*, L. A. Stern and S. H. Kirby. Grain size dependent creep of ice I at low temperature; preliminary results [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 635.
- OP-1327. J. T. Dutro, Jr. Fragment tectonics and fragmented biogeographies [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 48.
- OP-1328. J. J. Dvorak, A. T. Okamura and Asta Miklius. HAWAII. Mauna Loa geodesy; variable filling of the summit reservoir and spreading of the rift zones [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 641.
- OP-1329. R. P. Dziak*, C. G. Fox*, R. W. Embley*, J. E. Lupton*, R. A. Koski, L. J. Evans* and W. W. Chadwick, Jr.*. Detection and response to a probable volcanogenic T-wave event swarm on the western Blanco transform fault zone [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 716-717.
- OP-1330. Daniel Dzurisin, S. R. Brantley and J. E. Costa. WASHINGTON. How should society prepare for the next eruption in the Cascades? [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 113.
- OP-1331. T. E. Eastler*, D. J. Percious and P. R. Fisher*. Geologic assessment of military underground facilities as effective barriers to conventional weapons attack [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 346.
- OP-1332. G. P. Eaton. Post-industrial geological education; what curriculum changes might we need at the undergraduate and graduate level? [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 154.
- OP-1333. J. E. Ebel*, R. L. Wheeler, B. S. Rhea and A. R. Lazarewicz*. Seismotectonic and infrastructure maps for assessing earthquake hazards and risks [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, February 1995. p. 41.

- OP-1334. G. P. Eberli*, D. F. McNeill*, R. N. Ginsburg*, J. A. Kenter* and B. H. Lidz. Recognition and timing of Neogene to Recent sequences, western margin Great Bahama Bank [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 92.
- OP-1335. J. O. Eckert, Jr. NORTH CAROLINA. Geo-thermometry and barometry in the southern Blue Ridge crustal section; evidence for tectonic granulites [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 13-14.
- OP-1336. Adam Edelman*, F. L. Vernon*, Craig Nicholson*, J. H. Steidl*, A. J. Martin*, G. T. Lindley*, R. J. Archuleta*, Alexis Tumarkin*, J. J. Mori, Katrin Hafner*, J. S. Scott*, Egill Hauksson*, Leon Teng*, James Chin*, M. C. Robertson* and Harold Magistrale*. CALIFORNIA. Portable instrument data set from the January 17, 1994 Northridge earthquake aftershock sequence [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 457-458.
- OP-1337. P. R. Edelmann, R. F. Ortiz, L. S. Balistrieri, M. J. Radell and C. M. Moore. COLORADO. Limnological characteristics of Terrace Reservoir, south-central Colorado, 1994 [abstr.] Special Publication - Colorado Geological Survey, in Proceedings; Summitville forum '95. (H. H. Posey, editor and others). Report no. 38, 1995. p. 218.
- OP-1338. N. T. Edgar, C. B. Cecil, M. S. Grim and John Chappell*. Allocyclic stratigraphy beneath the floor of the Gulf of Carpentaria, Northern Australia, based on high-resolution seismic survey [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 229.
- OP-1339. M. H. Edwards*, D. J. Fornari*, D. S. Scheirer*, R. M. Haymon* and W. C. Shanks, III. High-resolution bathymetric maps and photomosaics of vent fields on the EPR 9°-10°N [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 601.
- OP-1340. J. R. Eggleston and F. T. Dulong. Sedimentology and mineralogy of the Upper Pennsylvanian nonmarine limestones of the northern Appalachian Basin [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 66.
- OP-1341. W. P. Elder. A Late Cretaceous molluscan-microfossil biochronology for the West Coast, and its application to sequence stratigraphic analysis of the Great Valley Sequence [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 583.
- OP-1342. S. D. Ellen, R. K. Mark and S. H. Cannon. HAWAII. Uses of digital topography in mapping debris-flow hazard near Honolulu [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 175-176.
- OP-1343. E. Elliott*, S. B. O'Connell*, N. W. Driscoll*, J. W. Ladd*, D. C. Twichell, P. Hackett* and B. Hecker. Correlation of grain-size with side-scan sonar images from Block Island Sound; pre and post storm events [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, February 1995. p. 41-42.
- OP-1344. J. E. Elliott, A. B. Wilson, J. M. Hammarstrom, B. S. Van Gosen, R. R. Carlson, G. K. Lee and D. M. Kulik. MONTANA. Mineral resource assessment of the Crazy Mountains and Bridger, Madison, and Gallatin ranges and contiguous area, Gallatin National Forest, southwestern Montana [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 10.
- OP-1345. J. G. Elliott. COLORADO. Interaction between tributary-supplied sediments and mainstem transport in the Gunnison River downstream of Crystal Reservoir, Colorado [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1992 fall meeting. v. 73, no. 43, Suppl. October 27, 1992. p. 239.
- OP-1346. M. A. Ellis* and S. D. Davis. Earthquake doublet mechanisms are more diverse in intraplate and deep regions than along plate boundaries; an explanation [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 437-438.
- OP-1347. W. L. Ellsworth. CALIFORNIA. Initiation of the Loma Prieta, California, earthquake [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 411.
- OP-1348. W. L. Ellsworth and G. C. Beroza*. The seismic nucleation phase; implications for earthquake rupture dynamics [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 426.
- OP-1349. W. L. Ellsworth, A. T. Cole and J. E. Vidale. Characteristic earthquakes; probabilistic models and testable predictions [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 461.
- OP-1350. D. P. Elston and G. A. Clough*. TEXAS. Paleomagnetic poles from middle Proterozoic Hazel Formation, Van Horn area, West Texas; rotations of a Grenville-deformed terrane and correlations with Keweenawan events on craton [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, South-Central Section, 27th annual meeting. v. 25, no. 1, February 1993. p. 9.
- OP-1351. R. W. Embley*, J. L. Lupton*, W. W. Chadwick, Jr.*, E. T. Baker*, G. J. Massoth*, D. A. Butterfield*, R. A. Koski, I. R. Jonasson*, J. R. Delaney*, R. E. McDuff*, M. D. Lilley* and J. Holden*. Comparison of two recent eruptive sites on the Juan de Fuca Ridge; geological setting and time-series observations [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 617.
- OP-1352. E. R. Engdahl, R. P. Buland and R. D. van der Hilst*. Global teleseismic earthquake location with improved travel times and procedures for depth determination [abstr.] Seismological

- Research Letters, *in* 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 22.
- OP-1353. E. R. Engdahl, S. H. Kirby, E. A. Okal*, G. L. Choy and E. A. Bergman. High-resolution seismological characteristics of the Arica Elbow region and the June 1994 deep earthquake [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 467.
- OP-1354. Samuel Epstein* and L. D. Carter. ALASKA. The D/H ratio of hydrogen in plant remains which grew 8 to 12×10^3 years B.P. on the North Slope of Alaska [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1993 annual meeting. v. 25, no. 6, October 1993. p. 456.
- OP-1355. C. L. Erickson*, R. J. Bodnar* and R. C. Burruss. $\delta^{18}\text{O}$ analysis of calcites by Raman microprobe; effects of crystal chemistry [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 101.
- OP-1356. J. R. Evans and A. M. Pitt. Reliable automatic detection of long-period volcanic earthquakes [abstr.] *Seismological Research Letters, in* 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 56.
- OP-1357. J. R. Evans and J. R. Ritter*. CALIFORNIA. Teleseismic tomography of the crust and upper mantle beneath Medicine Lake Volcano, Northeast California [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 423.
- OP-1358. W. F. Falls and J. S. Baum. GEORGIA. Recognition of the Millers Pond Aquifer in the vicinity of Burke County, Georgia [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 52.
- OP-1359. W. F. Falls, D. C. Prowell, L. E. Edwards, N. O. Frederiksen, T. G. Gibson, L. M. Bybell and G. S. Gohn. GEORGIA. Preliminary correlation of geologic units in three coreholes along the Savannah River in Burke and Screven counties, Georgia [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 14.
- OP-1360. B. J. Fanning* and J. V. Brahana. ARKANSAS. Hydrogeologic factors affecting cavern morphology within rocks of Mississippian age in northwestern Arkansas [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, South-Central Section, 27th annual meeting. v. 25, no. 1, February 1993. p. 9-10.
- OP-1361. G. L. Farmer*, R. A. Ayuso and George Plafker. ALASKA. Derivation of Late Cretaceous-early Tertiary flysch in Southern Alaska from erosion of the northern Coast Mountains [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 149.
- OP-1362. C. C. Faunt, F. A. D'Agnese and A. K. Turner*. NEVADA. Characterization of the three-dimensional hydrogeologic framework of the Death Valley region, Nevada and California [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 81.
- OP-1363. A. D. Feig*, J. W. Geissman*, S. S. Harlan and R. S. Molina-Garza*. COLORADO. Paleomagnetism of the middle Proterozoic Pikes Peak Batholith, southern Front Range, Colorado [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 199.
- OP-1364. M. A. Fenoglio, M. J. Johnston and J. D. Byerlee. CALIFORNIA. Magnetic fields associated with changes in high pore pressure in fault zones; application to the Loma Prieta ULF emissions [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 441.
- OP-1365. M. J. Ferrari. Assessment of ground-water quality in the Great Valley carbonate subunit, Potomac River basin study unit, National Water-Quality Assessment Program [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 166.
- OP-1366. W. I. Finch. Uranium provinces in North America [abstr.] *International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in* 29th international geological congress; abstracts. 29, 1992. p. 196.
- OP-1367. J. H. Fink*, P. T. Delaney, J. G. Moore and A. F. Glazner*. Mitigating volcanic hazards through active tectonic research [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 383.
- OP-1368. R. C. Finkel*, M. W. Caffee*, G. H. Curtis*, Marie Davis*, Sidney Davis*, T. C. Hanks, B. D. Turrin and Ivo Lucchitta. Geochronology of downcutting in the Colorado River system [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 258.
- OP-1369. J. B. Finley* and D. K. Nordstrom. Evaluation of the chemical model in WATEQ4F; 1, The major ion activity coefficients; Na, K, Ca, Mg, Cl [abstr.] *Mineralogical Magazine, in* V. M. Goldschmidt Conference; extended abstracts. (B. Harte, editor). v. 58A, no. A-K, August 1994. p. 270-271.
- OP-1370. J. L. Fio and D. A. Leighton. CALIFORNIA. Geographic information system data base for geohydrologic assessments, South San Francisco Bay and Peninsula area, California [abstr.] *AAPG Bulletin, in* AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 584.
- OP-1371. M. A. Fisher, T. M. Brocher, T. R. Bruns and E. L. Geist. Deep crustal structure and hydrocarbon potential of the convergent margin near the eastern Aleutian Trench [abstr.], *in* International symposium; tectonics, energy and mineral resources of the North-West Pacific (abstracts); Volume II. (C. B. Borukayev, editor and others). Khabarovsk: Russian Far East Academy of Sciences, Institute of Tectonics and Geophysics, 1989. p. 106-107.
- OP-1372. R. S. Fiske*, D. A. Swanson and T. L. Wright. HAWAII. A model of Kilauea Volcano's rift-zone magma system [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU

- 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 646.
- OP-1373. R. F. Fleming and B. S. Pierce. COLORADO, NEW MEXICO. Paleocene coals from the Raton Formation, Colorado and New Mexico; palynological and petrographic characteristics [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 31.
- OP-1374. R. W. Fleming, A. M. Johnson* and K. M. Cruikshank*. Kinds and patterns of surface rupture associated with strike-slip faults from earthquakes and landslides [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 343.
- OP-1375. J. B. Fletcher, M. A. Hellweg, John Boatwright, Paul Spudich and L. M. Baker. CALIFORNIA. Pulse shapes and rupture mechanism of the $M_C = 4.7$ Parkfield earthquake on Nov. 14, 1993 12.25 GMT [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 34.
- OP-1376. R. M. Flores and S. Y. Johnson. WASHINGTON. Sedimentology and lithofacies of the Eocene Skookumchuck Formation in the Centralia coal mine, Southwest Washington [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 584-585.
- OP-1377. E. E. Foord, William Chirnside, F. E. Lichte and P. H. Briggs. UTAH. Pink topaz from the Thomas Range, Juab County, Utah [abstr.] The Mineralogical Record, in FM-TGMS-MSA symposium on Topaz. (Beau Gordon, chairperson and others). v. 26, no. 1, February 1995. p. 67.
- OP-1378. E. E. Foord, L. L. Jackson, J. E. Taggart, Jr., J. G. Crock and T. V. King. Topaz; environments of crystallization, crystal chemistry, and infrared spectra [abstr.] The Mineralogical Record, in FM-TGMS-MSA symposium on Topaz. (Beau Gordon, chairperson and others). v. 26, no. 1, February 1995. p. 69-71.
- OP-1379. M. P. Foose and J. M. McLelland*. NEW YORK, NEW JERSEY. Relationship of low-Ti iron oxide deposits in New York and New Jersey to other Proterozoic Fe-Cu-U-Au-REE deposits [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, February 1995. p. 44.
- OP-1380. E. R. Force. ARIZONA. Laramide structures and fabrics of the Catalina Range, SE Arizona [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 251.
- OP-1381. E. R. Force. ARIZONA. Laramide alteration of Proterozoic diabase; implications for the copper budget of a Ray-centered superdistrict, SE Arizona [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1995 annual meeting. v. 27, no. 6, 1995. p. 68.
- OP-1382. A. M. Forte*, J. X. Mitrovica* and R. L. Woodward. Seismic-geodynamic determination of the origin of excess ellipticity of the core-mantle boundary [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 663.
- OP-1383. R. N. Foster*, A. I. Beinekas*, B. D. Stone and C. F. Polloni. MASSACHUSETTS. Progress report on the surficial geologic map of Massachusetts; integration of geologic map data in a multiGIS, interactive archive [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, February 1995. p. 44-45.
- OP-1384. K. J. Franczyk and Germaine Clark. COLORADO. Mixed clastic and carbonate Pennsylvanian lithofacies distributions, southeastern Paradox Basin, Colorado; implications for eustatic and local tectonic controls [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 13.
- OP-1385. Arthur Frankel and P. C. Thenhaus. CALIFORNIA. Seismic hazard maps and prediction of time histories of strong ground motions for the San Bernardino Valley, California [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 40.
- OP-1386. N. O. Frederiksen. Diachronism and environments of deposition of upper Paleocene coal beds in southern Pakistan [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 95-96.
- OP-1387. J. T. Freymueller*, N. E. King and Paul Segall. CALIFORNIA. A slip model for the Landers and Big Bear earthquakes based on inversion of geodetic data [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 spring meeting. v. 74, no. 16, Suppl. May 1993. p. 215.
- OP-1388. C. J. Fridrich, B. M. Crowe*, M. R. Hudson, V. E. Langenheim and G. A. Thompson*. NEVADA. Structural control of basaltic volcanism in a region of oblique extension, Southwest Nevada volcanic field [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 603.
- OP-1389. J. D. Friedman. WASHINGTON, CALIFORNIA. Aerial infrared surveys in the study of geothermal and volcanic systems in the Cascade Range [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 472.
- OP-1390. J. D. Friedman and A. C. Huffman, Jr. UTAH. Laccolith complexes of southeastern Utah; tectonic control and time of emplacement, results of workshop; Part I [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 13.
- OP-1391. P. N. Froelich*, K. A. Kvenvolden and M. E. Torres*. Evidence for gas hydrate in the accretionary prism near the Chile triple junction; ODP Leg 141 [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. 1993. p. 369.
- OP-1392. Cliff Fröhlich*, K. A. Kadinsky-Cade* and S. D. Davis. A re-examination of the Bucaramanga earthquake nest [abstr.] Eos, Transactions, American Geophysical Union, in AGU

- 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 448.
- OP-1393. A. K. Fronabarger*, M. P. Katuna* and K. Conlon. SOUTH CAROLINA. Biostratigraphic and lithostratigraphic analyses of the Cooper Group (upper Eocene to upper Oligocene) within the lower coastal plain of South Carolina [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 54.
- OP-1394. G. S. Fuis, A. R. Levander*, W. J. Lutter, E. S. Wissinger*, T. E. Moore and J. S. Oldow*. ALASKA. Seismic images of the Brooks Range, Arctic Alaska, reveal crustal-scale duplexing [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 17.
- OP-1395. G. S. Fuis, W. J. Lutter, T. E. Moore, A. R. Levander* and E. S. Wissinger*. ALASKA. Interpretation of the deep structure of the Brooks Range, Arctic Alaska [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 646.
- OP-1396. C. C. Fuller, J. A. Davis, J. A. Coston and E. T. Dixon. MASSACHUSETTS. Spatial heterogeneity of geochemical properties affecting metal adsorption in a glacial outwash aquifer, Cape Cod, MA [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 206.
- OP-1397. C. C. Fuller, Alexander van Geen and M. Baskaran*. CALIFORNIA. Records of contaminant input to San Francisco Bay; 3, Sediment chronology from ^{210}Pb , ^{137}Cs , $^{239,240}\text{Pu}$, ^{234}Th activity profiles [abstr.] Eos, Transactions, American Geophysical Union, in 1994 ocean sciences meeting. v. 75, no. 3, Suppl. January 18, 1994. p. 233.
- OP-1398. B. K. Galloway*, S. L. Klemperer* and J. R. Childs. ALASKA. New seismic reflection profiles of the continental crust and Moho, Bering and Chukchi seas transect, Alaska [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 642.
- OP-1399. P. M. Ganguli*, M. J. Kunk, R. P. Wintsch*, M. J. Dorais* and P. E. Sacks. NORTH CAROLINA, VIRGINIA. High precision sanidine $^{40}\text{Ar}/^{39}\text{Ar}$ results from Mesozoic rhyolite dikes near Lake Gaston, N.C. and VA [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, February 1995. p. 45.
- OP-1400. M. O. Garcia*, A. J. Pietruszka*, J. M. Rhodes* and F. A. Trusdell. HAWAII. Petrology of lavas from the Puu Oo eruption of Kilauea Volcano; the pond stage [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 712.
- OP-1401. J. V. Gardner, W. E. Dean, Peter Dartnell and L. E. Heusser*. Changes in the California Current during the past 40 kyr and their effects on the climate of the Western U.S. [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 254.
- OP-1402. R. M. Garza and R. E. Krause. GEORGIA. Water-supply potential of the upper Floridan Aquifer in the vicinity of Savannah, Georgia [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 16.
- OP-1403. François Gauthier-Lafaye*, Philippe Holliger*, Bartholomew Nagy*, D. J. Mossman*, J. S. Leventhal and M. J. Rigali*. Role of organic matter in the Precambrian Oklo natural fission reactors, Gabon [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 198.
- OP-1404. G. E. Gehrels*, W. R. Dickinson*, G. M. Ross*, J. H. Stewart and D. G. Howell. Provenance of detrital zircons in strata of the Cordilleran miogeocline and selected outboard terranes [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 384.
- OP-1405. A. C. Gellis. PUERTO RICO. Reservoir sedimentation and sediment sources, Lago Loiza Basin, P.R. [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 387.
- OP-1406. T. M. Gerlach and M. P. Doukas. Sulfur dioxide scrubbing by water in volcanoes and implications for volcano hazards assessments based on sulfur dioxide fluxes [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 453.
- OP-1407. T. M. Gerlach and K. A. McGee. WASHINGTON. Total SO_2 emissions and pre-eruption vapor-saturated magma at Mount St. Helens, 1980-88 [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 717.
- OP-1408. J. K. Geslin. NEVADA. Internal stratigraphy of the Calico Hills Formation in the Yucca Mountain area, Southwest Nevada volcanic field [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 502.
- OP-1409. A. E. Gibbs and J. R. Hein. YAP. High trace metal concentrations in Quaternary hydrothermal stratabound manganese oxide deposits, Yap Arc, West Pacific [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 363.
- OP-1410. A. E. Gibbs and J. R. Hein. CALIFORNIA. Pal-ygorskite and Fe-Mn mineralization at a Central California margin fracture zone [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1993 annual meeting. v. 25, no. 6, October 1993. p. 442.
- OP-1411. P. C. Gibson*, D. C. Noble*, K. E. Swanson* and E. H. McKee. Interrelated magmatism, tectonism, and hydrothermal activity in the Orcopampa Ag-Au district, southern Peru [abstr.] Program with Abstracts - Geological Association of Canada; Mineralogical Association of Canada; Canadian Geophysical Union, Joint Annual Meeting, in Joint annual meeting of the

- Geological Association of Canada and the Mineralogical Association of Canada. [18], 1993. p. 35.
- OP-1412. T. G. Gibson. VIRGINIA, MARYLAND. Late Miocene deposition and environments in the Salisbury Embayment, Virginia and Maryland [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 56.
- OP-1413. Dominique Gillard*, A. M. Rubin* and P. G. Okubo. Characteristics of earthquakes accompanying dike intrusion [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 345.
- OP-1414. A. R. Gillespie*, R. M. Burke* and J. W. Harden. Timing and regional paleoclimatic significance of alluvial fan deposition, western Great Basin [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 150-151.
- OP-1415. S. R. Gillespie. Federal benefits from GIS technology [abstr.], in Federal geographic technology conference; FGT'94; presentation abstracts and speaker's biographies. (GIS World Education and Training Institute). Fort Collins, CO: GIS World Books, September 1994. p. 45.
- OP-1416. R. N. Ginsburg*, Frank Asaro*, Moses Attrep, Jr.*, J. I. Canudo*, J. H. Crockett*, Urs Krähenbühl*, B. Masters*, H. T. Millard, Jr., R. K. Olsson*, C. J. Orth*, X. Orue-Etxebarria*, L. R. Quintana* and Robert Rocchia* (compilers). Results of blind tests to resolve controversies; iridium at Gubbio; extinctions at El Kef [abstr.] LPI Contribution, in Papers presented to New developments regarding the KT event and other catastrophes in Earth history. 825, February 1994. p. 44.
- OP-1417. D. D. Given. ISIAH; information on seismic activity in a hurry [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 47.
- OP-1418. William Glen. The history of the current impact/volcanism/mass-extinction debates [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 67.
- OP-1419. William Glen. How different disciplines have responded to the Alvarez-Berkeley Group hypothesis [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 282.
- OP-1420. J. S. Gombert. Dynamic strains and the triggering of earthquakes [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 438.
- OP-1421. J. S. Gombert and S. D. Davis. CALIFORNIA. The Geysers, California geothermal field; a sensitive meter for study of remote earthquake triggering [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 56.
- OP-1422. J. S. Gombert and M. A. Ellis. Topography and tectonics of the central New Madrid seismic zone; results of numerical experiments using a three-dimensional boundary-element program [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 68.
- OP-1423. D. A. Gonzales*, G. S. Seik* and C. M. Conway. COLORADO. The Electra Lake Gabbro; timing and nature of middle Proterozoic mafic plutonism in the Needle Mountains, southwestern Colorado [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 15.
- OP-1424. D. A. Gonzales*, W. R. Van Schmus* and C. M. Conway. COLORADO. Interlayered granitoid gneiss and amphibolite of the Twilight Gneiss; an early Proterozoic intrusive complex in the western Needle Mountains, southwestern Colorado [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, South-Central Section, 27th annual meeting. v. 25, no. 1, February 1993. p. 11.
- OP-1425. S. L. Goodbred*, A. C. Hine* and R. P. Stumpf. FLORIDA. Sediment distribution patterns and the development of the marsh system rimming a shallow-water shelf embayment; Waccasassa Bay, Levy Co., FL [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 19.
- OP-1426. D. A. Goolsby and W. A. Battaglin. Occurrence and transport of pesticides in the Mississippi River basin [abstr.], in Proceedings; Watershed '93, a national conference on Watershed management. (U.S. Environmental Protection Agency). Report no. EPA 840-R-94-002, March 21, 1993. p. 827. Available from: U.S. Environmental Protection Agency, Washington, DC, United States.
- OP-1427. D. A. Goolsby, M. J. Dowgiallo*, S. D. Zaugg and W. A. Battaglin. Transport of herbicides in the Gulf Stream resulting from the 1993 Mississippi River flood [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 182.
- OP-1428. L. C. Gordon. Cooperative solutions in earth science education [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 79.
- OP-1429. J. R. Gray, R. J. Hart and B. F. Molnia. ALASKA. 1994 changes in physical and sedimentary characteristics of post-glacial Vitus Lake resulting from the surge of Bering Glacier, Alaska [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 63.
- OP-1430. R. W. Graymer, D. L. Jones* and E. E. Brabb. CALIFORNIA. Is there more Quaternary displacement on the Chabot Fault than that on the Hayward Fault? [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 585.
- OP-1431. H. G. Green*, D. L. Orange*, D. M. Mann and Gregg Gable. CALIFORNIA. Fluid constructed morphology on Smooth Ridge, Central California [abstr.] Eos, Transactions,

- American Geophysical Union, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 598.
- OP-1432. T. R. Green*, J. E. Constantz and D. L. Freyberg*. Effects of topography and soil anisotropy on focussing unsaturated groundwater recharge [abstr.] *Eos, Transactions, American Geophysical Union*, *in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 159.
- OP-1433. H. G. Greene, M. Ginzemer*, P. Mathews*, W. C. Steele, C. H. Degnan, M. R. Hamer and D. E. Sullivan*. CALIFORNIA. Mass wasting in Soquel submarine canyon, Monterey Bay, California [abstr.] *Eos, Transactions, American Geophysical Union*, *in* AGU 1992 fall meeting. v. 73, no. 43, Suppl. October 27, 1992. p. 318.
- OP-1434. H. G. Greene, M. M. Yoklavich*, J. P. Barry*, D. L. Orange*, D. E. Sullivan* and G. M. Cailliet*. CALIFORNIA. Geology and related benthic habitats of Monterey Canyon, Central California [abstr.] *Eos, Transactions, American Geophysical Union*, *in* 1994 ocean sciences meeting. v. 75, no. 3, Suppl. January 18, 1994. p. 203.
- OP-1435. P. G. Griffiths, R. H. Webb and T. S. Melis. UTAH, ARIZONA. Mineralogy of shales on the Colorado Plateau and debris-flow effects on the longitudinal profile of the Colorado River, Utah and Arizona [abstr.] *Abstracts with Programs - Geological Society of America*, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 217-218.
- OP-1436. Andrew Griscom and P. F. Halvorson. OREGON. Extent of pre-Cenozoic basement and the northern Nevada Rift in Southeast Oregon [abstr.] *Eos, Transactions, American Geophysical Union*, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 686.
- OP-1437. J. N. Grossman. The role of chondrules in nebular fractionations of volatiles and other elements [abstr.] *LPI Contribution*, *in* Papers presented to Chondrules and the protoplanetary disk. (R. H. Hewin, chairperson). 844, October 1994. p. 10-11.
- OP-1438. M. A. Grout and E. R. Verbeek. UTAH, COLORADO. Joint chronology and fold and fault events in the northern Paradox Basin, Utah and Colorado [abstr.] *Abstracts with Programs - Geological Society of America*, *in* Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 15-16.
- OP-1439. J. A. Grow, J. J. Miller*, C. G. Mull and K. J. Bird*. ALASKA. Seismic stratigraphy near the Tunalik Well, North Slope, Alaska [abstr.] *AAPG Bulletin*, *in* AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 586.
- OP-1440. J. A. Grow, C. J. Potter, J. J. Miller, Karen Lund and W. J. Perry, Jr. NEVADA. Seismic evidence for low-angle extensional faults beneath southern Railroad Valley, Nevada [abstr.] *AAPG Bulletin*, *in* AAPG Rocky Mountain Section meeting; abstracts. v. 79, no. 6, June 1995. p. 918.
- OP-1441. George Gryc. Circum-Pacific Map Project [abstr.], *in* International symposium; tectonics, energy and mineral resources of the North-West Pacific (abstracts); Volume II. (C. B. Borukayev, editor and others). Khabarovsk: Russian Far East Academy of Sciences, Institute of Tectonics and Geophysics, 1989. p. 19.
- OP-1442. George Gryc. The scope and status of the Circum-Pacific Map Project [abstr.], *in* International symposium; tectonics, energy and mineral resources of the North-West Pacific (abstracts); Volume II. (C. B. Borukayev, editor and others). Khabarovsk: Russian Far East Academy of Sciences, Institute of Tectonics and Geophysics, 1989. p. 19-20.
- OP-1443. George Gryc and Tomoyuki Moritani*. The Circum-Pacific Map Project; a productive international cooperative effort [abstr.] *International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes*, *in* 29th international geological congress; abstracts. 29, 1992. p. 37.
- OP-1444. M. C. Guffanti, R. J. Blakely, R. L. Christiansen, M. A. Clynnne, J. M. Donnelly-Nolan, L. J. Muffler and J. G. Smith. CALIFORNIA. Spatial correlation of gravity anomalies, volcanic vents, and young faulting in the Cascade Range, California, and implications for crustal stress and structure [abstr.] *Abstracts with Programs - Geological Society of America*, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 145.
- OP-1445. S. C. Gupitill. Challenges in creating multipurpose geospatial data [abstr.], *in* Federal geographic technology conference; FGT'94; presentation abstracts and speaker's biographies. (GIS World Education and Training Institute). Fort Collins, CO: GIS World Books, September 1994. p. 93.
- OP-1446. B. R. Hacker, S. R. Bohlen and S. H. Kirby. Eutectoid decomposition of albite to jadeite + quartz [abstr.] *Eos, Transactions, American Geophysical Union*, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 635.
- OP-1447. P. J. Haeussler, J. S. Davis*, S. M. Roeske* and S. M. Karl. ALASKA. Late Mesozoic and Cenozoic faulting at the leading edge of North America, Chichagof and Baranof islands, southeastern Alaska [abstr.] *Abstracts with Programs - Geological Society of America*, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 317.
- OP-1448. J. T. Hagstrum and B. L. Murchey. Paleomagnetism of Franciscan-type chert indicates depositional along the paleoequator and northward coastwise transport after accretion at tropical paleolatitudes [abstr.] *Abstracts with Programs - Geological Society of America*, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 461-462.
- OP-1449. J. T. Hagstrum and D. A. Swanson. WASHINGTON. Paleomagnetism of the Miocene intrusive suite of Kidd Creek; implications for the timing of deformation in the Cascade Arc, southern Washington [abstr.] *Eos, Transactions, American Geophysical Union*, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 198-199.
- OP-1450. J. W. Haines, G. R. Gelfenbaum and Atle Lohrmann*. Laboratory tests of a single-point acoustic doppler velocimeter (ADV) [abstr.] *Eos, Transactions, American Geophysical Union*, *in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 348.
- OP-1451. E. R. Hajic*, S. F. Obermeier, P. J. Munson*, M. D. Wian*, K. B. Tankersley* and R. C. Garniewicz*. ILLINOIS. Distribution and dating of prehistoric earthquake liquefaction in southeastern Illinois, central U.S. [abstr.] *Abstracts with Programs*

- Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 190-191.
- OP-1452. J. C. Haley*, T. S. Dyman, W. J. Perry, Jr. and J. D. Obradovich. MONTANA. The origin and significance of "pyrenean-type" syntectonic unconformities in Upper Cretaceous synorogenic sediments of southwestern Montana [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 12.
- OP-1453. Michelle Hall Wallace and P. T. Delaney. HAWAII. Rift-zone and south flank motions of Kilauea Volcano during 1982 [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 220.
- OP-1454. K. M. Haller and R. L. Dart. MONTANA. Digital map and database of Quaternary faults in Montana [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 13.
- OP-1455. R. B. Halley, H. L. Vacher*, E. A. Shinn and J. W. Haines. FLORIDA. Marine geohydrology; dynamics of subsurface sea water around Key Largo, Florida [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 411.
- OP-1456. R. M. Hamilton. International Decade for Natural Disaster Reduction [abstr.] Seismological Society of America, Eastern Section, Annual Meeting, *in* Seismological Society of America, Eastern Section, 64th annual meeting; program and abstracts. (J. R. Filson, convener and others). 64, 1992.
- OP-1457. T. D. Hamilton. ALASKA. Interglacial and interstadial deposits from the western Noatak River basin, Northwest Alaska [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 236.
- OP-1458. T. D. Hamilton, J. A. Westgate* and J. E. Begét*. ALASKA. The Old Crow Tephra; a stratigraphic marker for the last interglaciation in Alaska and the Yukon Territory? [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 62.
- OP-1459. W. R. Hammond, J. C. Lahr, C. A. Rowe* and J. P. Benoit*. ALASKA. The Salcha seismic zone near Fairbanks, Alaska [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 417-418.
- OP-1460. D. W. Hanchar and S. J. Grady. NEW YORK, CONNECTICUT, MASSACHUSETTS. Effects of urban land use on shallow ground-water quality in stratified-drift aquifers; comparison of data from the Hudson River basin, New York, and the Connecticut River basin, Connecticut and Massachusetts [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 150.
- OP-1461. P. L. Hansley. UTAH. Paragenesis of a world-class tar sand deposit in the Permian White Rim Sandstone Member of the Cutler Formation, southeastern Utah [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 16.
- OP-1462. R. E. Hanson*, G. H. Girty* and D. S. Harwood. CALIFORNIA. Middle Jurassic evolution of the northern Sierra Terrane; large-scale tilting, deformation, and syn- to post-tectonic plutonism in a rapidly evolving arc [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 385.
- OP-1463. J. W. Harden, S. E. Trumbore* and K. P. O'Neill. Dynamics of peat accumulation in response to fire near Thompson, Manitoba [abstr.] Program and Abstracts - American Quaternary Association. Conference, *in* American Quaternary Association, 13th biennial meeting; program and abstracts. 13, June 1994. p. 92.
- OP-1464. J. K. Hardie. UTAH. Dolomite-rich clastic dikes and sills intruding Campanian coals of central Utah [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 144.
- OP-1465. S. S. Harlan, H. H. Mehnert, L. W. Snee and R. G. Schmidt*. MONTANA. New $^{40}\text{Ar}/^{39}\text{Ar}$ isotopic dates from the Adel Mountain Volcanics; implications for the relationship between deformation and magmatism in the Montana Disturbed Belt, western Montana [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 136.
- OP-1466. R. A. Harnish, D. M. McKnight, J. F. Ranville and V. C. Stephens. COLORADO. Particulate, colloidal, and solution phase associations of plutonium, americium, and uranium in surface and groundwater at the Rocky Flats Plant, Colorado [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 171.
- OP-1467. E. L. Harp, R. W. Jibson, D. K. Keefer and R. C. Wilson. CALIFORNIA. Landslides triggered by the January 17, 1994, Northridge, California earthquake; implications for future hazards [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 217.
- OP-1468. C. D. Harrington* and J. W. Whitney. MONTANA. Quaternary erosion rates on hillslopes in the Yucca Mountain region, Nevada [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 118.
- OP-1469. C. D. Harrington*, J. W. Whitney, A. J. Jull* and W. Phillips*. NEVADA. Implications of surface-exposure dating of scarps along the Solitario Canyon and Windy Wash faults, Yucca Mountain, Nevada, by *in situ* produced cosmogenic ^{14}C [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 303.
- OP-1470. A. G. Harris, J. E. Repetski and J. A. Grow. NEVADA. Exploring for hydrocarbons in geothermally and hydrothermally complex areas; a southern Nevada example [abstr.] AAPG Bulletin, *in* AAPG Rocky Mountain Section meeting; abstracts. v. 79, no. 6, June 1995. p. 918-919.

- OP-1471. M. S. Harris, P. T. Gayes*, P. F. Donovan-Ealy*, D. D. Nelson*, L. L. York*, Neal Gielstra*, J. L. Kindinger*, J. G. Flocks* and D. E. Krantz*. SOUTH CAROLINA. Geologic framework influences on modern coastal morphology and processes along the South Carolina coast [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1995 annual meeting. v. 27, no. 6, 1995. p. 78.
- OP-1472. Patrick Harris*, P. D. Hays and T. T. Tieh*. TEXAS. Authigenic TiO_2 minerals in the sandstones of the Delaware Mountain Group, Permian Basin, western Texas [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 490.
- OP-1473. R. A. Harris. A new method for defining fault segment boundaries in strike-slip faults [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 28.
- OP-1474. R. A. Harris, S. M. Day*, Yong-Gang Li* and J. E. Vidale*. Numerical simulations of an earthquake spontaneously propagating in fault gouge [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 442.
- OP-1475. R. A. Harris and R. W. Simpson. CALIFORNIA. Earthquake interactions among moderate and large earthquakes in the Landers region [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 54.
- OP-1476. R. J. Hart. ARIZONA. Comparison of water-quality characteristics of Lake Powell, and the Colorado River [abstr.] International Symposium of the North American Lake Management Society, in Abstracts of presentations; 11th international symposium; Lake, reservoir, and watershed management in a changing environment. 11, 1991. p. 70.
- OP-1477. S. H. Hartzell and P. C. Liu*. CALIFORNIA. Inversion for fault rupture history using a hybrid global search algorithm; application to the Landers, California earthquake [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 52.
- OP-1478. H. T. Haselton, Jr., I-Ming Chou, A. H. Shen* and W. A. Bassett*. Behavior of ice polymorphs (I, III, V, VI) in the diamond anvil cell [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 spring meeting. v. 74, no. 16, Suppl. May 1993. p. 170.
- OP-1479. S. T. Hasiotis. Earliest known fossil evidence of burrowing crayfish and their burrows; antiquity of a sustained successful behavior [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 17.
- OP-1480. S. T. Hasiotis. Redefining freshwater-aquatic and terrestrial ecosystems through the Phanerozoic; partitioning the Scoyenia ichnofacies [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 374.
- OP-1481. S. T. Hasiotis. Paleoecological tiering in Pangaeon continental settings [abstr.] Bulletin of the New Mexico Museum of Natural History and Science, in The nonmarine Triassic. (S. G. Lucas, editor and others). 3, October 1993. p. 64.
- OP-1482. S. T. Hasiotis*, R. F. Dubiel, K. L. Conrad* and M. G. Lockley*. NEW MEXICO. Footprint evidence of North America's earliest dinosaur, Upper Triassic Chinle Formation, Fort Wingate, New Mexico [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 17.
- OP-1483. S. T. Hasiotis, R. F. Dubiel* and T. M. Demko*. Triassic hymenopterous nests; insect eusociality predates angiosperm plants [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 13.
- OP-1484. W. R. Hassibe. The National Performance Review; a reinvention laboratory at the U.S. Geological Survey; the future of information and product distribution [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 162.
- OP-1485. J. L. Hatfield*, R. C. Buchmiller, P. J. Soenksen and D. B. Jaynes*. IOWA. Influence of management practices on water quality in Walnut Creek watershed [abstr.], in Programs and proceedings of symposium on Agricultural nonpoint sources of contaminants; a focus on herbicides. 1993. p. 33. Available from: U.S. Environmental Protection Agency, Kansas City, KS, United States.
- OP-1486. Egill Hauksson*, R. W. Clayton*, Katrin Douglass*, L. K. Hutton*, Hiroo Kanamori*, J. J. Mori, T. H. Heaton and L. M. Jones. CALIFORNIA. Earthquake monitoring in Southern California [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 spring meeting. v. 74, no. 16, Suppl. May 1993. p. 216.
- OP-1487. B. R. Hawke*, C. A. Peterson*, C. R. Coombs*, P. G. Lucey*, G. A. Smith*, G. J. Taylor*, A. S. McEwen, M. S. Robinson and P. D. Spudis*. Remote sensing studies of the Aristarchus region of the Moon [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference. 26, Part 2, March 1995. p. 559-560.
- OP-1488. D. O. Hayba and P. B. Barton. COLORADO. Fluid migration in the Creede Formation, Colorado [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 398-399.
- OP-1489. J. L. Hayob*, S. R. Bohlen and E. J. Essene*. Experimental investigations of the reaction quartz+ilmenite = rutile+orthopyroxene [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 94.
- OP-1490. J. H. Healy, V. G. Kossobokov* and J. W. Dewey. The ongoing test of the M8 earthquake prediction algorithm [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 453.
- OP-1491. R. W. Healy, J. R. Gray, M. P. de Vries and P. C. Mills. ILLINOIS. Water balance for the Sheffield, Illinois low-level radioactive-waste disposal site [abstr.] Eos, Transactions,

- American Geophysical Union, *in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 163.
- OP-1492. B. C. Hearn, Jr. MONTANA. Kimberlitic indicator minerals in the Missouri Breaks and vicinity, Montana, USA [abstr.] Program with Abstracts - Geological Association of Canada; Mineralogical Association of Canada; Canadian Geophysical Union, Joint Annual Meeting, *in* Joint annual meeting of the Geological Association of Canada and the Mineralogical Association of Canada. 1993, 1993. p. 41.
- OP-1493. P. P. Hearn, Jr., A. I. Melnikov*, J. F. Sutter and V. M. Zhelinsky*. High-resolution $^{40}\text{Ar}/^{39}\text{Ar}$ age-spectrum analysis of epigenetic K-feldspar from the Chulman Basin, southeastern Siberia; a geochronometer for crustal fluids mobilized by regional tectonism [abstr.], *in* International symposium; tectonics, energy and mineral resources of the North-West Pacific (abstracts); Volume II. (C. B. Borukayev, editor and others). Khabarovsk: Russian Far East Academy of Sciences, Institute of Tectonics and Geophysics, 1989. p. 21.
- OP-1494. Suzanne Hecker. UTAH. Patterns of latest Quaternary tectonism and regional earthquake recurrence, eastern Basin and Range, Utah [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 140.
- OP-1495. J. R. Hein and R. A. Koski. Deep sea mineral deposits in the northern Pacific [abstr.], *in* International symposium; tectonics, energy and mineral resources of the North-West Pacific (abstracts); Volume II. (C. B. Borukayev, editor and others). Khabarovsk: Russian Far East Academy of Sciences, Institute of Tectonics and Geophysics, 1989. p. 87-89.
- OP-1496. C. C. Heliker, T. N. Mattox, M. T. Mangan and J. P. Kauahikaua. HAWAII. Kilauea Volcano update; eleven-year-long eruption continues [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 644.
- OP-1497. C. C. Heliker and L. C. Schuster*. HAWAII. Living with lava flows on Kilauea Volcano; past and present [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 262.
- OP-1498. M. A. Hellweg, Dieter Seidl* and K. S. Brotopuspito*. Broadband seismic waveforms from the volcano Mt. Semeru, East Java, Indonesia [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 648.
- OP-1499. M. A. Hellweg, Paul Spudich, J. B. Fletcher and L. M. Baker. CALIFORNIA. Spatial coherency at the USGS Parkfield dense seismograph array [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 440.
- OP-1500. R. T. Helz and G. A. Barth*. HAWAII. Detectability and stability of mature magma chambers; lessons from Kilauea Iki lava lake, Hawaii [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 114-115.
- OP-1501. Eileen Hemphill-Haley. Diatom biostratigraphy and paleoproductivity in the California Current between 34°N and 40°N during the past 50,000 years [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 254.
- OP-1502. J. W. Hendley, II and W. G. Siesser*. TENNESSEE. Chitinozoans in the Upper Ordovician (Caradocian) upper Ridley, Lebanon, and lower Carters limestones in central and east-central Tennessee [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 344.
- OP-1503. T. L. Henyey*, Keiiti Aki*, D. D. Jackson*, Y. Y. Kagan*, S. N. Ward*, J. B. Minster*, J. H. Dieterich, D. P. Schwartz and R. J. Weldon*. CALIFORNIA. The SCEC "Master Model"; a representation of active tectonics in Southern California [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 383.
- OP-1504. Richard Hereford, K. S. Thompson, K. J. Burke and H. C. Fairley*. ARIZONA. Age of segmented debris fans and the pools-and-rapids of the Colorado River, eastern Grand Canyon, Arizona [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 235.
- OP-1505. Emilio Herrero-Bervera*, C. E. Helsley*, A. M. Sarna-Wojcicki, K. R. Lajoie, C. E. Meyer, B. D. Turrin, J. M. Donnelly-Nolan, M. O. McWilliams*, R. M. Negrini* and J. C. Liddicoat*. Age and correlation of a paleomagnetic excursion in the Western U.S. by $^{40}\text{Ar}/^{39}\text{Ar}$ dating and tephrochronology; the Jamaica, Blake or a new polarity episode? [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 190-191.
- OP-1506. J. R. Herring, Peter Popenoe and F. T. Manheim. GEORGIA. 300 gigatons of phosphorite in middle Miocene sediments of the Georgia continental shelf; important future resources [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 23.
- OP-1507. U. C. Herzfeld*, J. J. Roush*, Kimberly Lohuis* and B. F. Molnia. ALASKA. Surge crevasse patterns, ice surface roughness and ice velocity; an attempt at quantitative analysis of 1993 and 1994 observations on Bering Glacier, Alaska [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 63.
- OP-1508. J. S. Hickman. Occurrence and transport of pesticides in the Mississippi River basin [abstr.], *in* Programs and proceedings of symposium on Agricultural nonpoint sources of contaminants; a focus on herbicides. 1993. p. 9. Available from: U.S. Environmental Protection Agency, Kansas City, KS, United States.
- OP-1509. C. J. Hickson*, J. G. Moore and L. C. Calk. Volatile loss upon subglacial emergence of volcanoes, Tuya region, BC, Canada [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 451.
- OP-1510. T. G. Hildenbrand. Rationale and operational plan to upgrade the U.S. magnetic-anomaly data base [abstr.] Eos, Trans-

- actions, American Geophysical Union, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 197.
- OP-1511. Wes Hildreth. WASHINGTON, OREGON, CALIFORNIA. Quaternary magmatism in the Cascades; some geologic perspectives [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 30.
- OP-1512. Wes Hildreth and J. E. Fierstein. WASHINGTON. Geologic map and eruptive history of Mount Adams volcanic field, Washington [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 117.
- OP-1513. Wes Hildreth and M. A. Lanphere. WASHINGTON. Potassium-argon geochronology of the Mount Adams volcanic field, Washington [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 643.
- OP-1514. D. P. Hill, M. J. Johnston, J. O. Langbein and R. G. Bilham*. CALIFORNIA. Response of Long Valley Caldera to the M7.4 Landers earthquake; tweaking a magma body? [abstr.] Seismological Research Letters, *in* 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 58.
- OP-1515. M. C. Hill, R. L. Cooley and D. W. Pollock. A controlled experiment in ground-water flow modeling; calibration and prediction [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 283.
- OP-1516. M. M. Hilmes. ARIZONA, NEVADA. Seasonal variation of suspended-sediment transport in the lower Virgin River, Arizona and Nevada [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 302.
- OP-1517. M. M. Hiza, D. W. Rankin, L. W. Snee and J. D. Obradovich. WYOMING, MONTANA. New geochronological data for the Eocene Absaroka-Gallatin volcanic province, Wyoming-Montana, USA [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 14.
- OP-1518. P. F. Hlava* and E. E. Foord. UTAH, NEW MEXICO. A re-examination of bixbyite from the Thomas Range, Juab County, Utah, and the Black Range tin district, Sierra and Catron counties, New Mexico [abstr.] New Mexico Geology, *in* Fifteenth annual New Mexico mineral symposium; abstracts. v. 17, no. 1, February 1995. p. 15.
- OP-1519. A. R. Hoch*, M. M. Reddy and J. I. Drever*. Augite dissolution experiments under pure CO₂ in flow-through reactors at room temperature; rates, stoichiometry, pH effects, and comparison to batch experiments [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 139.
- OP-1520. D. L. Hogenboom*, J. S. Kargel, T. C. Holden* and M. Buyyounouski*. The phase diagram of ammonia monohydrate; a new high-pressure polymorph [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, *in* Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference. 26, Part 2, March 1995. p. 613-614.
- OP-1521. W. S. Holbrook*, T. M. Brocher, Jill McCarthy, J. A. Hole* and U.S. ten Brink. CALIFORNIA. Crustal structure beneath the San Francisco Bay Block and Central California continental margin [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 664.
- OP-1522. R. T. Holcomb, Nuni-Lyn Anders*, P. W. Reiners* and J. C. Carracedo*. HAWAII. Magnetostratigraphy used to outline caldera structure and history of Waianae Volcano, Hawaii [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 642.
- OP-1523. R. T. Holcomb, B. K. Nelson* and Nuni-Lyn Anders*. HAWAII. Headward extent and depth of giant landslide, submarine north flank of East Molokai Volcano, Hawaii [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 114.
- OP-1524. J. A. Hole*, W. S. Holbrook*, S. L. Klemperer*, U.S. ten Brink and T. M. Brocher. CALIFORNIA. Crustal structure in the San Francisco Bay area from wide-angle seismic refraction data [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 445.
- OP-1525. J. A. Hole*, Hans Thybo*, S. L. Klemperer*, T. M. Brocher and W. S. Holbrook*. CALIFORNIA. Seismic reflection from the near-vertical San Andreas Fault [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 643.
- OP-1526. R. R. Holmes, Jr. Sediment discharges in the upper Mississippi River basin during the 1993 flood [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 181.
- OP-1527. P. A. Holroyd, T. M. Bown and K. D. Rose*. Evolutionary modes in some early Eocene mammals; a comment on gradual and punctuated evolutionary interpretations [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 18.
- OP-1528. P. A. Holroyd and Mario Gagnon*. New interpretations of mammalian faunal changes in North Africa across the Eocene-Oligocene boundary [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 171-172.
- OP-1529. T. L. Holzer and M. J. Bennett. Searching for a paleoliquefaction signature in geotechnical borings in sands [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 252-253.
- OP-1530. T. L. Holzer and M. J. Bennett. A paleoliquefaction signature in natural sand deposits? [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 452.

- OP-1531. J. G. Honey and S. T. Hasiotis*. WYOMING, COLORADO. Occurrence and distribution of crayfish burrows; Paleocene of Wyoming and Colorado; their utility in paleohydrologic interpretations of alluvial sediments [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 18.
- OP-1532. R. P. Hooper and Carol Kendall. Can we believe watershed mixing models? A comparison of isotopic and chemical tracers [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 144-145.
- OP-1533. I. L. Hopkins, C. A. Edwards, C. G. MacDonald and J. K. McGregor. Preservation and usage of geoscience imagery in the U.S. Geological Survey field records and photographic libraries, 1879 to date [abstr.] Proceedings - Geoscience Information Society. 23, 1992. p. 11.
- OP-1534. M. I. Hornberger. CALIFORNIA. Records of contaminant input to San Francisco Bay; 4, Downcore concentrations of Cr, Cu, Pb, V and Zn [abstr.] Eos, Transactions, American Geophysical Union, in 1994 ocean sciences meeting. v. 75, no. 3, Suppl. January 18, 1994. p. 234.
- OP-1535. A. J. Horowitz and K. A. Elrick. COLORADO. Sediment-trace element geochemistry of Terrace Reservoir [abstr.] Special Publication - Colorado Geological Survey, in Proceedings; Summitville forum '95. (H. H. Posey, editor and others). Report no. 38, 1995. p. 217.
- OP-1536. J. W. Horton, Jr., C. R. Berquist, Jr.*, J. D. Marr, Jr.*, R. M. Druhan*, P. E. Sacks and J. R. Butler*. VIRGINIA, NORTH CAROLINA. The Lake Gordon mylonite zone; a link between the Nutbush Creek and Hylas zones of the eastern Piedmont fault system [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 23.
- OP-1537. S. W. Hostetler, Fillipo Giorgi*, G. T. Bates* and P. J. Bartlein*. Simulation of the climate of the Western U.S. at the last glacial maximum using a regional climate model [abstr.] Program and Abstracts - American Quaternary Association. Conference, in American Quaternary Association, 13th biennial meeting; program and abstracts. 13, June 1994. p. 18-19.
- OP-1538. F. D. Hostetler, W. E. Pereira, J. B. Rapp and K. A. Kvenvolden. CALIFORNIA. Records of contaminant input to San Francisco Bay; 8, Biomarker profiles in sediment cores [abstr.] Eos, Transactions, American Geophysical Union, in 1994 ocean sciences meeting. v. 75, no. 3, Suppl. January 18, 1994. p. 234.
- OP-1539. S. E. Hough and D. S. Dreger*. Observational constraints on earthquake source scaling? [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 438.
- OP-1540. S. E. Hough and D. S. Dreger*. CALIFORNIA. Source parameters of the 4/23/92 M6.1 Joshua Tree mainshock and its aftershocks; empirical Green's function analysis of TERRASCOPE and GEOS data [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 52.
- OP-1541. S. E. Hough, J. J. Mori, E. D. Sembera, G. N. Glassmoyer, C. S. Mueller and L. G. Wennerberg. CALIFORNIA. The southern "Landers" surface rupture [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 spring meeting. v. 74, no. 16, Suppl. May 1993. p. 215.
- OP-1542. B. F. Houghton*, C. J. Wilson*, M. O. McWilliams*, M. S. Pringle and M. A. Lanphere. Caldera evolution of Taupo volcanic zone, New Zealand; a large volume silicic volcanic system [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 480.
- OP-1543. D. W. Houseknecht and C. W. Freeman*. LOUISIANA. Porosity evolution to 7.5 km (25,000 ft) depth in Miocene sandstones of southern Louisiana [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, in American Association of Petroleum Geologists 1995 annual convention. 4, 1995. p. 44.
- OP-1544. Heidi Houston*, H. M. Benz and J. E. Vidale. Deep earthquake rupture processes from broadband stacking [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 445.
- OP-1545. D. G. Howell. Northern Cordillera tectonics and the where and why of petroleum [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 21.
- OP-1546. D. G. Howell. Crustal growth, continental architecture, and the formation of giant accumulations of petroleum [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 254.
- OP-1547. D. G. Howell. The future of energy gases [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 588.
- OP-1548. J. C. Hower*, J. D. Robertson*, A. S. Wong*, C. F. Eble* and L. F. Ruppert. KENTUCKY. Arsenic and lead concentrations in the Pond Creek and Fire Clay coal beds, Eastern Kentucky coal field [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 96.
- OP-1549. P. A. Hsieh and A. M. Shapiro. NEW HAMPSHIRE. Analyzing cross-hole hydraulic tests in fractured crystalline rock; an example from the Mirror Lake site, New Hampshire [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 153.
- OP-1550. K. W. Hudnut, Yehuda Bock* and Jie Zhang*. CALIFORNIA. Compression across the Los Angeles Basin, California detected by continuous GPS measurements [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 59.
- OP-1551. A. C. Huffman, Jr. and D. J. Taylor. COLORADO, UTAH. Pennsylvanian thrust faulting along the northeastern margin of the Paradox Basin, Colorado and Utah [abstr.] Abstracts with

- Programs - Geological Society of America, *in* Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 19.
- OP-1552. M. D. Humphrey*, J. D. Istok*, A. L. Flint and L. E. Flint. An automated miniature probe for determining thermal properties of small-diameter rock and soil specimens [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 334.
- OP-1553. R. J. Hunt and D. P. Krabbenhoft. Processes affecting solutes in shallow groundwater in wetlands [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 135.
- OP-1554. T. G. Huntington, A. E. Blum and A. F. White. GEORGIA. Migration of a bromide tracer in a forest soil in the Georgia Piedmont [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 150.
- OP-1555. T. G. Huntington, H. W. Markewich, W. C. Lynn* and C. E. Johnson*. GEORGIA. Erosion, transport, and deposition of soil carbon in a headwater catchment during cotton cultivation in the Georgia Piedmont [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 301.
- OP-1556. J. E. Huntton*, R. F. Dubiel and J. A. Stanesco*. UTAH. Tectonic activity at the Permian-Triassic boundary and its influence on deposition of basal Triassic strata, Paradox Basin, southeastern Utah [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 19.
- OP-1557. J. E. Huntton*, P. L. Hansley and J. G. Palacas. UTAH. Burial history modeling of potential source rocks for the Tar Sand Triangle, southeastern Utah [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 20.
- OP-1558. D. O. Hurtubise* and C. A. Sandberg. NEVADA, UTAH. A critical revision of event stratigraphy of Middle Devonian carbonate reservoir rocks, Nevada and Utah [abstr.] AAPG Bulletin, *in* AAPG Rocky Mountain Section meeting; abstracts. v. 79, no. 6, June 1995. p. 919-920.
- OP-1559. D. R. Hutchinson, C. A. Scholz*, T. C. Moore*, M. W. Lee, S. M. Colman, K. D. Klitgord* and A. J. Golmshtok*. Seismic imaging of a gas hydrate layer in Lake Baikal, Siberia [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1993 annual meeting. v. 25, no. 6, October 1993. p. 443.
- OP-1560. C. R. Hutt. Contributions to the IRIS Global Seismograph Network by the USGS Albuquerque Seismological Laboratory [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 68.
- OP-1561. L. K. Hutton*, R. R. Geary*, Egill Hauksson*, W. R. Huston*, H. X. Qian*, E. M. Riggs*, R. L. Robb*, N. J. Scheckel*, D. S. Wells*, A. M. Burciaga, L. M. Jones, J. J. Mori, S. C. Perry and L. A. Wald. CALIFORNIA. The Landers/Big Bear Sequence; a data processing challenge [abstr.] *Seismological Research Letters, in* 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 52.
- OP-1562. A. W. Ibrahim*, R. J. Horton, M. H. Powers* and J. W. Busby*. COLORADO. Ground-water exploration using multi-disciplined geophysical methods at the Rocky Mountain Arsenal, Denver, Colorado [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 124-125.
- OP-1563. S. E. Ingebritsen and D. O. Hayba. Fluid flow and heat transport near the critical point of H₂O [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 108.
- OP-1564. S. E. Ingebritsen and M. L. Sorey. Hydrothermal systems of the Cascade Range [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 378.
- OP-1565. S. E. Ishman, H. J. Dowsett and T. M. Cronin. The impact of Northern Hemisphere middle Pliocene warming on Southern Hemisphere ice volume [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1993 spring meeting. v. 74, no. 16, Suppl. May 1993. p. 178.
- OP-1566. S. E. Ishman, L. V. Polyak* and R. Z. Poore. A benthic foraminifer record of Pleistocene deep Arctic oceanographic change; Canada Basin, western Arctic Ocean [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1993 annual meeting. v. 25, no. 6, October 1993. p. 454.
- OP-1567. J. D. Istok*, L. E. Flint, A. L. Flint and C. A. Rautman*. Physical and hydrologic properties of volcanic tuff [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 444.
- OP-1568. Tamara Ivahnenko, Zoltan Szabo and T. A. Taylor. NEW JERSEY. Effect of depth on geochemical conditions and relation to distribution of uranium and radium in ground water, lower Passaic Formation, south-central Newark Basin, New Jersey [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, February 1995. p. 57.
- OP-1569. R. M. Iverson. Lahar dynamics [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 376-377.
- OP-1570. R. M. Iverson. HAWAII. Failure and runoff of giant landslides on Hawaiian volcanoes; cases of enigmatic mechanics? [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 125.
- OP-1571. H. M. Iyer, J. R. Evans and P. B. Dawson. Interpretation of models of magma chambers derived using seismic tomography [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, *in* 29th international geological congress; abstracts. 29, 1992. p. 513.

- OP-1572. G. A. Izett* and W. A. Cobban. SOUTH DAKOTA, IOWA. Constraints on the age of impact ejecta in the Pierre Shale of eastern South Dakota derived from the Manson, Iowa, impact event [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 402.
- OP-1573. G. A. Izett, V. L. Masaitis*, E. M. Shoemaker, G. B. Dalrymple and M. B. Steiner*. Eocene age of the Kamensk buried crater of Russia [abstr.] LPI Contribution, in Papers presented to New developments regarding the KT event and other catastrophes in Earth history. 825, February 1994. p. 55-56.
- OP-1574. G. A. Izett and J. D. Obradovich. Laser-fusion $^{40}\text{Ar}/^{39}\text{Ar}$ ages of Australasian tektites [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-third lunar and planetary science conference. 23, March 1992. p. 593-594.
- OP-1575. G. A. Izett and J. D. Obradovich. CALIFORNIA, NEW MEXICO. Dating of the Matuyama-Brunhes boundary based on $^{40}\text{Ar}/^{39}\text{Ar}$ ages of the Bishop Tuff and Cerro San Luis Rhyolite [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 106.
- OP-1576. R. C. Jachens and Andrew Griscom. Structure of the Mendocino triple junction based on new aeromagnetic data [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 474.
- OP-1577. R. C. Jachens, Andrew Griscom and C. W. Roberts. CALIFORNIA. Distribution of Cenozoic deposits in the southern San Francisco Bay trough from gravity and magnetic anomalies [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 588.
- OP-1578. R. B. Jacobson, R. R. Holmes, Jr. and Basil Gomez*. Floodplain sediments deposited by the 1993 floods in the Missouri and upper Mississippi rivers [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 180.
- OP-1579. O. B. James. Siderophile elements in lunar impact melts; nature of the impactors [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference. 26, Part 2, March 1995. p. 671-672.
- OP-1580. O. B. James and J. J. McGee. Compositional variations in mare-basalt plagioclase produced by differing crystallization regimes [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-third lunar and planetary science conference. 23, March 1992. p. 603-604.
- OP-1581. S. U. Janecke*, B. F. Hammond* and L. W. Snee. IDAHO. Structure and paleogeography of an Eocene intra-arc half-graben, ID [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 16.
- OP-1582. R. D. Jarrett and C. F. Waythomas. COLORADO. Paleohydrologic investigations of Arthurs Rock Gulch, Colorado Front Range near Fort Collins, Colorado; Part II, Paleodischarge analysis [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 87.
- OP-1583. Cheryl Jaworowski* and G. J. Calderone. WYOMING. Paleomagnetic studies of Quaternary glacial and non-glacial deposits, Wind River basin, Wyoming, U.S.A. [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 125-126.
- OP-1584. A. S. Jayko. CALIFORNIA. Geomorphic response to active folding, southwestern San Francisco Peninsula [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 682.
- OP-1585. R. W. Jibson, E. L. Harp, R. A. Spiegel*, R. A. Hajjeh*, E. E. Schneider*, G. A. Marshall and R. S. Stein. CALIFORNIA. Landslides can be hazardous to your health; an outbreak of Coccidioidomycosis (valley fever) caused by landslides triggered by the 1994 Northridge, California, earthquake [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 318.
- OP-1586. A. M. Johnson*, K. M. Cruikshank* and R. W. Fleming. CALIFORNIA. Borrego Mountain, Loma Prieta, Landers, Northridge; simply earthquakes or seismostructural events? [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 343.
- OP-1587. J. R. Johnson* and L. R. Gaddis. VFLOW; a computer model for the movement of gravity flows over Venus topography [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference. 26, Part 2, March 1995. p. 683-684.
- OP-1588. K. M. Johnson and R. G. Worl. Development of regional field trip guides to enhance K-12 earth science education; it takes both earth scientists and educators [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 121.
- OP-1589. K. R. Johnson* and D. J. Nichols. Fossil plants and the Cretaceous-Tertiary boundary in the Northern Great Plains; the best terrestrial argument for an abrupt catastrophe [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 395.
- OP-1590. Kenneth Johnson*, C. G. Barnes*, F. A. Hubacher* and R. W. Kistler. OREGON. An alternative to "slab-melting"; age and origin of high-Al tonalite and trondhjemites of the Cornucopia Stock, NE Oregon [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 292.
- OP-1591. R. H. Johnson. FLORIDA. Estimating regional transmissivity of the upper Floridan Aquifer [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 25.

- OP-1592. S. Y. Johnson, C. J. Potter, J. M. Armentrout*, C. A. Finn and C. S. Weaver. WASHINGTON. The southern Whidbey Island Fault, Puget Lowland, Washington [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 188.
- OP-1593. S. Y. Johnson and W. D. Stanley. WASHINGTON. Eocene paleogeography of the Morton Anticline region, Southwest Washington [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 589.
- OP-1594. M. J. Johnsson, S. D. Ellen and M. A. McKittrick. HAWAII. Clay mineralogy of soils in the southeastern Koolau Mountains, Oahu, Hawaii; effects of varying chemical weathering intensity and impact on slope processes [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 71.
- OP-1595. M. J. Johnston. CALIFORNIA. Nucleation size of moderate earthquakes and kinematics of the San Andreas Fault in California from submicro Hz to 30 Hz strain measurements [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 470.
- OP-1596. M. J. Johnston and A. T. Linde*. CALIFORNIA. Continuous borehole strain in the San Andreas fault zone before, during and after the June 28, 1992, M_w 7.3 Landers, California, earthquake [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 53.
- OP-1597. R. H. Johnston, P. W. Bush and J. A. Miller. Use of geology and ground-water modeling to identify areas of similar hydraulic properties in the Floridan Aquifer system [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1993 annual meeting. v. 25, no. 6, October 1993. p. 441.
- OP-1598. A. D. Jolly*, J. C. Lahr*, J. A. Power*, S. D. Stihler*, P. L. Ward and S. R. McNutt*. ALASKA. Velocity models for locations of shallow seismicity along the northeastern portion of the Aleutian volcanic arc [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 423-424.
- OP-1599. D. L. Jones*, E. E. Brabb* and M. C. Blake. CALIFORNIA. Terrane accretion in a transpressive setting; a model from the California Coast Ranges [abstr.] International Geological Congress, Abstracts—Congrès Géologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 254.
- OP-1600. L. E. Jones* and S. E. Hough. CALIFORNIA. Rupture characteristics of the June 28, 1992 Big Bear event inferred from TERRASCOPE data [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 spring meeting. v. 74, no. 16, Suppl. May 1993. p. 214.
- OP-1601. L. M. Jones. CALIFORNIA. A comparison of foreshock probabilities in California and Japan [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 63.
- OP-1602. L. M. Jones and A. J. Michael. CALIFORNIA. A re-evaluation of the Parkfield alert level probabilities [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 469.
- OP-1603. B. R. Julian and G. R. Foulger*. Identifying non-double-couple earthquakes by inverting seismic-wave amplitude ratios [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 460.
- OP-1604. M. W. Kable*, R. W. Murray*, D. G. Howell and R. C. Pflaum*. ALASKA. Characterizing sources of Antler-aged Cordilleran chert-pebble conglomerates; an example from the Nation River Formation, East-Central Alaska [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 384.
- OP-1605. S. J. Kalkhoff, J. Kennedy*, U. Akena* and G. Breuer*. Effects of ore-size distribution and saturation cycles on atrazine and bromide transport through soil [abstr.], in Programs and proceedings of symposium on Agricultural nonpoint sources of contaminants; a focus on herbicides. 1993. p. 44. Available from: U.S. Environmental Protection Agency, Kansas City, KS, United States.
- OP-1606. R. J. Kamilli. ARIZONA. The Mammoth Au-Ag-base metal district, Arizona, as a detachment-fault-related deposit; evidence from fluid-inclusion studies [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 142.
- OP-1607. M. A. Kaplinski*, J. E. Hazel, Jr.*, S. S. Beus*, C. J. Bjerrum*, D. M. Rubin and R. G. Stanley. ARIZONA. Structure and evolution of the "Dead Chub Eddy" sand bar, Colorado River, Grand Canyon, Arizona [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 21.
- OP-1608. W. M. Kappel and T. M. Yanosky. NEW YORK. Dendrochronologic record of 100 years of solution brine mining within the Tully Valley in central New York [abstr.] AAPG Bulletin, in AAPG Eastern Section meeting. v. 79, no. 9, September 1995. p. 1415.
- OP-1609. J. S. Kargel and D. L. Hogenboom*. The ammonia-water system; an attempt to reconcile the Lafayette and UCLA investigations [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference. 26, Part 2, March 1995. p. 725-726.
- OP-1610. H. A. Karl, P. S. Chavez, Jr., E. Ueber*, W. Van Peeters*, H. C. Curl, Jr., J. L. Chin and N. M. Maher. Acoustic and visual remote sensing of barrels of radioactive waste; application of civilian and military technology to environmental management of the oceans [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 589.
- OP-1611. R. E. Karlin*, M. L. Holmes and S. E. Abella*. WASHINGTON. Holocene neotectonic deformation and earthquake history in sediments from Lake Washington [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 522.

- OP-1612. Michael Kashgarian*, Peter Dartnell and J. V. Gardner. CALIFORNIA. Radiocarbon ages of intermediate and deep waters on the California coastal margin since the last glacial maximum [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 255.
- OP-1613. B. G. Katz, T. D. Bullen and T. B. Coplen. FLORIDA. The use of $^{87}\text{Sr}/^{86}\text{Sr}$ and stable isotopes to trace the interaction of groundwater and lakewater in mantled karst, Florida [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 321.
- OP-1614. B. G. Katz, L. N. Plummer and Eurybiades Busenberg. FLORIDA. Use of environmental tracers to study the chemical evolution of shallow ground water in a karst area of northern Florida [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 26.
- OP-1615. Rafael Katzman*, U. S. ten Brink and Jian Lin*. 3-D modeling of pull-apart basins; implications for the tectonics of the Dead Sea Basin [abstr.] *Eos*, Transactions, American Geophysical Union, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 600.
- OP-1616. J. P. Kauahikaua, Valerie Olmsted, Lisa Sachnoff and J. E. Pallon. HAWAII. Mapping rock walls buried by lava; physical evidence for large, Hawaiian fishponds inundated by 19th century lava flows [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 262.
- OP-1617. R. E. Kayen and J. A. Egan*. CALIFORNIA. Energy characteristics of ground motion recorded at sites of historic soil liquefaction along the east side of San Francisco Bay, California, during the Loma Prieta earthquake, 17 October 1989 [abstr.] *AAPG Bulletin*, *in* AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 589-590.
- OP-1618. D. K. Keefer and M. E. Moseley*. Catastrophic effects of combined seismic landslide generation and El Niño flooding on Prehispanic and modern populations in Peru [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 342.
- OP-1619. D. K. Keefer and J. D. Rogers*. Seismic triggering of large landslides [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 126.
- OP-1620. C. W. Keighin and R. M. Flores. WYOMING. Late Cretaceous to Paleocene clastic reservoir rocks, Wind River basin, Wyoming [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 22.
- OP-1621. C. W. Keighin, R. M. Flores, Clarke Mueller* and R. C. Johnson. WYOMING. Anatomy of a gas reservoir complex; outcrop to subsurface, Wind River basin, Wyoming [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, *in* American Association of Petroleum Geologists 1995 annual convention. 4, 1995. p. 48.
- OP-1622. C. W. Keighin, R. M. Flores and W. J. Perry, Jr. Provenance tectonism and petrofacies in Paleocene sediments, northern Rocky Mountains [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 68.
- OP-1623. J. S. Kelley and W. P. Brosigé ALASKA. Paleozoic basins and shelf deposits of the central Brooks Range, possible analogs to basins under the Arctic coastal plain, Northern Alaska [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, *in* American Association of Petroleum Geologists 1995 annual convention. 4, 1995. p. 49.
- OP-1624. J. S. Kelley, C. T. Wrucke, L. S. Lane* and R. L. Foland*. ALASKA. Franklinian rocks along the Alaska-Yukon border in the northeastern Brooks Range, implications for reflection seismic imaging under the Arctic coastal plain of the Arctic National Wildlife Refuge, Alaska [abstr.] *AAPG Bulletin*, *in* AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 590.
- OP-1625. K. D. Kelley, L. W. Snee and T. B. Thompson*. COLORADO. Geology and geochronology of the Cripple Creek volcanic complex [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 22-23.
- OP-1626. K. D. Kelley and H. J. Stein. COLORADO. Lead isotope data from the Tertiary Cripple Creek gold-telluride district, Colorado; deep crustal sources for alkaline magmatism [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 140.
- OP-1627. K. S. Kellogg and D. W. Mogk*. MONTANA. The Crooked Creek Mylonite; a high-temperature zone of ductile deformation in the Archean of the northern Madison Range, southwestern Montana [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 59.
- OP-1628. K. S. Kellogg, J. M. O'Neill and D. R. Lageson*. MONTANA. Thrusting, stretching, and folding during Archean deformation of a high-grade gneiss terrane in the Spanish Peaks, northern Madison Range, southwestern Montana [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 17-18.
- OP-1629. H. M. Kelsey*, R. C. Witter*, A. R. Nelson and Eileen Hemphill-Haley. OREGON. Repeated abrupt late Holocene environmental changes in south coastal Oregon; stratigraphic evidence at Sixes River Marsh and Bradley Lake [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 524.
- OP-1630. J. P. Kempton*, R. C. Berg* and D. R. Soller. ILLINOIS. Distribution, thickness and age of an early Quaternary (pre-Illinoian) lithostratigraphic sequence in east-central Illinois

- [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1995 annual meeting. v. 27, no. 6, 1995. p. 58.
- OP-1631. Carol Kendall, T. D. Bullen and J. B. Shanley. VERMONT. Multi-isotope approach for the evaluation of the contributions of shallow and deep flowpaths as a function of catchment scale [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 144.
- OP-1632. Carol Kendall, J. A. Shanley, D. H. Campbell, D. A. Burns, S. R. Silva and C. C. Chang. Tracing sources of nitrate in snowmelt runoff using the oxygen and nitrogen isotopic composition of nitrate [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 323.
- OP-1633. Eloise Kendy and D. W. Briar. MONTANA, IDAHO. Regional aquifer-system analysis of the Northern Rocky Mountains intermontane basins of Montana and Idaho [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 18.
- OP-1634. J. F. Kerridge*, M. H. Carr, B. C. Clark*, D. J. DesMarais*, D. L. DeVincenzi*, J. D. Farmer*, J. M. Hayes*, H. Holland*, B. M. Jakosky*, G. F. Joyce*, H. P. Klein*, A. H. Knoll*, G. D. McDonald*, C. P. McKay*, M. A. Meyer*, K. H. Nealson*, E. L. Shock* and D. M. Ward*. The exobiological exploration of Mars [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference. 26, Part 2, March 1995. p. 737-738.
- OP-1635. M. W. Kerwin*, J. P. Bradbury, D. P. Adam, J. G. Rosenbaum, R. L. Reynolds and A. M. Sarna-Wojcicki. OREGON. Late-Quaternary climatic and limnological changes; evidence from diatoms, pollen, and magnetic properties, Caledonia Marsh, southern Oregon [abstr.] Program and Abstracts - American Quaternary Association. Conference, in American Quaternary Association, 13th biennial meeting; program and abstracts. 13, June 1994. p. 113.
- OP-1636. H. H. Kieffer and R. L. Wildey. Spectrophotometry of the Moon for calibration of space-borne imaging instruments [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-third lunar and planetary science conference. 23, March 1992. p. 687-688.
- OP-1637. D. Kilb, M. A. Ellis* and J. S. Gombert. CALIFORNIA. What induces the heterogeneous mechanisms of the 1989 Loma Prieta earthquake? [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 439.
- OP-1638. Chi-Yu King. Spatial radon anomalies on active faults [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 70.
- OP-1639. Chi-Yu King. Thermal stress in meteoroids by aerodynamic heating [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 641.
- OP-1640. Chi-Yu King, W. C. Evans and Wei Zhang*. CALIFORNIA. Spatial radon variations near active faults in California [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 471.
- OP-1641. N. E. King, M. H. Murray, W. H. Prescott, R. W. Clymer* and Barbara Romanowicz*. CALIFORNIA. The Bay Area Regional Deformation (BARD) permanent GPS array [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 470.
- OP-1642. S. H. Kirby, W. B. Durham* and L. A. Stern. Kinetics of phase transformations in ice [abstr.] Abstracts of the ... General Meeting of the International Mineralogical Association, in International Mineralogical Association, 16th general meeting; abstracts. 16, 1994. p. 205.
- OP-1643. S. H. Kirby, E. A. Okal*, E. R. Engdahl and K. C. Creager*. The great 9 June 94 Bolivian deep earthquake in the global context of large deep shocks and mantle phase changes [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 467.
- OP-1644. R. L. Kirk, G. G. Schaber and R. G. Strom*. New statistical results on the spatial distribution and physical properties of impact craters on Venus [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference. 26, Part 2, March 1995. p. 757-758.
- OP-1645. J. I. Kirkland*, R. M. Leckie* and W. P. Elder. COLORADO. High resolution event stratigraphic (HIRES) sampling and the establishment of a principal reference section for the Mancos Shale (Cretaceous) at Mesa Verde National Park [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 23.
- OP-1646. M. A. Kirschbaum, L. N. Roberts and P. J. McCabe. Controls on coal accumulation during the Cretaceous in North America [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 144.
- OP-1647. S. A. Kish*, M. J. Kunk and P. D. Fullagar*. NORTH CAROLINA. The timing of Paleozoic granulite-facies metamorphism in the eastern Blue Ridge of the Southern Appalachians; $^{40}\text{Ar}/^{39}\text{Ar}$ ages of hornblende from southwestern North Carolina [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 196.
- OP-1648. J. M. Klaver* and D. D. Greenlee. Developing and maintaining a geospatial data base for the upper Mississippi River basin and Missouri River basin; the SAST experience [abstr.] ACSM/ASPRS Annual Convention & Exposition Technical Papers, in ACSM/ASPRS annual convention & exposition; technical papers; Volume 2, ASPRS. 1995, Vol. 2, 1995. p. 364.
- OP-1649. F. W. Klein and P. G. Okubo*. HAWAII. Hazards from earthquakes, submarine landslides and expected levels of

- peak ground acceleration on Kilauea and Mauna Loa volcanoes, Hawaii [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 634-635.
- OP-1650. M. D. Kleinkopf. IDAHO. Aeromagnetic studies of the Idaho Batholith; regional structure and mineral trends [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 685-686.
- OP-1651. W. M. Kohler and R. D. Catchings. CALIFORNIA. A P-wave velocity model of the western San Francisco Bay area from seismic refraction measurements [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 414.
- OP-1652. D. W. Kolpin. Agricultural chemicals in near-surface unconsolidated aquifers; immediate effects of the Midwestern floods of 1993 [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 181.
- OP-1653. S. C. Komor and D. G. Emerson. MINNESOTA, NORTH DAKOTA. Atrazine and bromide movement through unsaturated sand plains at sites in Minnesota and North Dakota [abstr.], in *Proceedings; North Dakota water quality symposium*. Fargo, ND: North Dakota State University Extension Service, 1992. p. 27.
- OP-1654. L. S. Kong and P. G. Okubo. HAWAII. Seismicity at Loihi Seamount, Hawaii [abstr.] *Seismological Research Letters*, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 55.
- OP-1655. L. S. Kong, P. G. Okubo, W. C. Crawford*, J. A. Hildebrand*, M. A. Macdonald*, S. C. Webb*, F. K. Duennebie* and G. F. Moore*. HAWAII. Crustal imaging of Kilauea Volcano and Loihi Seamount [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 645.
- OP-1656. R. A. Koski, R. W. Embley*, S. L. Ross, R. P. Dziak*, R. G. Bohannon, V. K. Smith, J. A. Reid, Leda-Beth Gray and T. O. Tormanen*. Tectonism and lithologic variation along the Blanco Ridge, eastern Blanco fracture zone, NE Pacific; preliminary results from the PACNORWEST III Cruise, 1994 [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 656.
- OP-1657. V. G. Kossobokov*, J. H. Healy, J. W. Dewey and I. N. Tikhonov*. Precursory changes of seismicity before the October 4 southern Kuril Islands earthquake [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting; additional abstracts. v. 76, no. 17, Suppl. April 25, 1995. p. 305.
- OP-1658. Carl Kotteff and Richard Goldsmith. Abrupt late glacial sea-level changes along the southeastern New England coast [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 106-107.
- OP-1659. Carl Kotteff, W. B. Thompson*, Richard Goldsmith and F. D. Larsen*. Correlation of deglacial events in western and coastal New England [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 61.
- OP-1660. A. N. Kover and J. W. Schoonmaker, Jr. The U.S. Geological Survey's side-looking airborne radar acquisition program; image data, the Rocky Mountain region [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 24.
- OP-1661. A. N. Kover and J. W. Schoonmaker, Jr. The U.S. Geological Survey side-looking airborne radar (SLAR) acquisition program; image data of the south central region [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, South-Central Section, 27th annual meeting. v. 25, no. 1, February 1993. p. 35.
- OP-1662. R. C. Kozak, R. M. Batson and N. K. Isbell. Digital geologic maps of the planets [abstr.] *Abstracts of Papers Submitted to the Lunar and Planetary Science Conference*, in *Abstracts of papers submitted to the Twenty-third lunar and planetary science conference*. 23, March 1992. p. 725-726.
- OP-1663. D. P. Krabbenhoft and J. M. Benoit*. WISCONSIN. Methylmercury generation in littoral-zone porewaters of a seepage lake [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 135.
- OP-1664. R. M. Krimmel. ALASKA. Photogrammetric measurement of geometric changes of Bering Glacier during the 1993-94 surge [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 62.
- OP-1665. T. E. Krogh*, S. L. Kamo* and B. F. Bohor. COLORADO. Single shock-metamorphosed zircons from a K-T distal ejecta site, Raton Basin, Colorado; U-Pb isotopic results record 550-65.5 Ma ages [abstr.] *Program with Abstracts - Geological Association of Canada; Mineralogical Association of Canada; Canadian Geophysical Union, Joint Annual Meeting*, in Geological Association of Canada; Mineralogical Association of Canada; annual meeting; program with abstracts—Association Geologique du Canada; Association Mineralogique du Canada; reunion annuelle; programme et resumes. 1993, 1993. p. 54.
- OP-1666. J. M. Kruger*, R. A. Johnson* and B. B. Houser. ARIZONA. Late Cenozoic half-graben evolution, detachment faulting and late stage core complex uplift from reflection seismic data in the Safford Basin of SE Arizona [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 219.
- OP-1667. L. K. Kuiper. Open ocean deep convection model [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 342.
- OP-1668. D. M. Kulik. Interpreted crustal boundaries and their influence on the Uncompahgre Uplift and salt deposition and deformation in the Paradox Basin [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of Amer-

- ica, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 24.
- OP-1669. D. M. Kulik. Proterozoic crustal boundaries interpreted from regional gravity anomalies [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 25.
- OP-1670. M. J. Kunk, J. W. Horton, Jr. and J. D. Peper. VIRGINIA, NORTH CAROLINA. Preliminary $^{40}\text{Ar}/^{39}\text{Ar}$ mineral ages from the Raleigh metamorphic belt, Carolina slate belt, and Milton Belt in the South Boston, VA-NC, 30x60 minute quadrangle [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 67.
- OP-1671. M. J. Kunk and G. L. Nord, Jr. IOWA. The Manson impact structure is not a K-T boundary event [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 337-338.
- OP-1672. M. J. Kunk, B. M. Simonson* and J. P. Smoot. $^{40}\text{Ar}/^{39}\text{Ar}$ constraints on the age of K-feldspar cementation in non-marine sediments of the Newark, Gettysburg and Culpeper basins [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 62.
- OP-1673. M. A. Kuntz. IDAHO. Late Cretaceous sturm und drang in west-central Idaho; tectonic interpretations of foliation, lineation, dikes and joints in plutonic rocks of the Idaho Batholith [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 18.
- OP-1674. M. A. Kuntz, M. A. Lanphere and D. E. Champion. IDAHO. Geographic distribution of late Cenozoic basaltic volcanic rocks in the eastern Snake River plain, Idaho, and volcanic hazards implications [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 18.
- OP-1675. K. A. Kvenvolden. Subaquatic gas hydrate occurrence; models and settings [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. 1993. p. 369.
- OP-1676. K. A. Kvenvolden, T. D. Lorenson and M. D. Lilley*. ALASKA. Methane in the Beaufort Sea on the continental shelf of Alaska [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1992 fall meeting. v. 73, no. 43, Suppl. October 27, 1992. p. 309.
- OP-1677. K. A. Kvenvolden, T. D. Lorenson and A. R. Niem*. OREGON. Natural gas occurrences in the Coast Range of southern Oregon [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 36.
- OP-1678. P. C. La Femina*, F. M. Conway*, A. W. Macfarlane*, C. B. Connor*, G. M. Reimer and C. M. Lugo*. Passive degassing at Volcan Telica, Nicaragua [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 718-719.
- OP-1679. J. W. Ladd*, N. W. Driscoll*, D. C. Twichell, E. A. Schmuck, B. Hecker*, E. Elliott* and P. Hackett*. Side-scan sonar investigation of shallow-water depositional processes in and around Block Island Sound; before and after the passage of large storm systems [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 62.
- OP-1680. G. A. Lager*, G. A. Swayze, J. W. Richardson, Jr.*, F. J. Rotella* and C. K. Loong*. Neutron-scattering studies of synthetic oxonium alunite [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 418-419.
- OP-1681. D. R. Lageson*, J. M. O'Neill and K. S. Kellogg. MONTANA, WYOMING. Laramide structure of the Tepee Creek uplift and adjacent areas, Southeast Madison Range, Montana-Wyoming [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 18.
- OP-1682. J. C. Lahr, C. D. Stephens and R. A. Page. ALASKA. Possible early signs of re-organization of the Pacific-North American Plate boundary in the Gulf of Alaska [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 139.
- OP-1683. R. G. Lahusen. Real-time monitoring of lahars using ground vibrations [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 377.
- OP-1684. R. B. Lambert. TEXAS. Chemical classification of water samples from three monitor-well transects across the fresh-water/saline-water interface of the Edwards Aquifer, San Antonio region, Texas [abstr.], in Factors affecting water resources; proceedings. Fort Worth, TX: American Water Resources Association - Texas Section, December 1994. p. 107.
- OP-1685. J. E. Landmeyer and P. A. Stone*. SOUTH CAROLINA. Use of $\delta^{13}\text{C}$ in dissolved inorganic carbon to delineate recharge areas of the Floridan Aquifer system, coastal South Carolina [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 28.
- OP-1686. M. K. Landon, G. N. Delin, J. A. Lamb*, R. H. Dowdy* and J. L. Anderson*. MINNESOTA. Effects of farming systems on concentrations of nitrate in ground water at the Princeton, Minnesota Management Systems Evaluation Area (MSEA), 1991-92 [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 157-158.
- OP-1687. J. W. Lane, Jr. and F. P. Haeni. Use of borehole radar in hydrologic investigations [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 63.

- OP-1688. J. O. Langbein, F. K. Wyatt* and D. M. Hamann. Comparison of stability of geodetic monuments for deformation monitoring in earthquake prediction [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 470-471.
- OP-1689. V. E. Langenheim and T. G. Hildenbrand. ARKANSAS, ILLINOIS. Gravity and magnetic study of the Arkansas to Illinois lineament; a northeast-trending feature parallel to the Reelfoot Graben [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 580.
- OP-1690. M. A. Lanphere. COLORADO. Duration of sedimentation of the Creede Formation [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 400.
- OP-1691. Daniel Larsen*, L. J. Crossey*, G. H. Heiken*, T. C. McCormick*, J. B. Hulen*, J. S. Leventhal and P. H. Nelson. COLORADO. Stratigraphy and sedimentology of the Oligocene Creede Formation, Colorado, U.S.A. [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 398.
- OP-1692. P. D. Lea*, G. D. Buppert* and C. F. Waythomas. ALASKA. Last-glacial eolian deposits in central and Southwestern Alaska [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 512.
- OP-1693. P. P. Leahy and J. K. Stamer. KANSAS. Herbicides in the lower Kansas River basin; policy relevant findings from the U.S. Geological Survey's National Water-Quality Assessment [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 106.
- OP-1694. W. H. Lee, J. E. Vidale, Yong-Gang Li* and Keiiti Aki*. CALIFORNIA. Observations and modeling of seismic trapped waves along the fault zone of the 1992 Landers earthquake, Southern California [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 412.
- OP-1695. W. S. Leith. Current activities in military geology at the USGS [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 346.
- OP-1696. R. M. Lent and J. D. Wald. NORTH DAKOTA. Importance of bottom-sediment diffusive fluxes to chemical budget of Devils Lake, North Dakota [abstr.], in *Proceedings; North Dakota water quality symposium*. Fargo, ND: North Dakota State University Extension Service, 1992. p. 167.
- OP-1697. E. M. Leonard*, D. R. Muhs, K. R. Ludwig and J. F. Wehmiller*. Coral uranium-series ages and mollusc amino-acid ratios from uplifted marine terrace deposits, Morro de Copiapo, north-central Chile [abstr.] *Program and Abstracts - American Quaternary Association. Conference*, in American Quaternary Association; 13th biennial meeting; program and abstracts. 13, 1994. p. 223.
- OP-1698. L. A. Leonard*, A. C. Hine*, M. E. Luther* and R. P. Stumpf. FLORIDA. Sediment transport processes in a west-central Florida open marine marsh tidal creek [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 2, 1993. p. 28.
- OP-1699. S. C. Lessoff* and L. F. Konikow. On the use of single-well tracer tests to identify matrix diffusion [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 152.
- OP-1700. J. S. Leventhal. COLORADO. Carbon-sulfur-iron relationships in Creede Caldera cores show evidence of syngenetic, diagenetic and epigenetic processes [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 400-401.
- OP-1701. S. D. Lewis. CALIFORNIA. Seismic reflection profiles of folds and thrust faults, offshore San Francisco region [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 681.
- OP-1702. S. D. Lewis, B. L. Bernstein-Taylor* and S. C. Cande*. Rapid sediment accretion following ridge subduction, Chile margin triple junction [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 645.
- OP-1703. Yong-Gang Li*, Keiiti Aki*, D. D. Adams*, Akiko Hasemi* and W. H. Lee. CALIFORNIA. A low velocity, low Q fault zone along the rupture plane of the 1992 Landers earthquake inferred by trapped mode data [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1993 spring meeting. v. 74, no. 16, Suppl. May 1993. p. 215.
- OP-1704. Yong-Gang Li*, Keiiti Aki*, J. E. Vidale, W. H. Lee and C. J. Marone*. CALIFORNIA. Fine subsurface structure of Landers fault zone; segmentation and rupture process inferred from fault zone guided waves [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 343.
- OP-1705. Yong-Gang Li*, Keiiti Aki*, J. E. Vidale and P. E. Malin*. CALIFORNIA. Observations and implications of fault zone guided waves at Landers and Parkfield, California [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 469.
- OP-1706. Yong-Gang Li*, T. L. Henyey*, D. A. Okaya*, P. M. Davis*, S. M. Day* and R. G. Bohannon. CALIFORNIA. Offshore-to-onshore seismic recording in the Southern California borderlands-Peninsular Ranges [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 445.
- OP-1707. Yong-Gang Li*, M. P. Tuttle*, E. S. Schweig and M. A. Ellis*. MISSOURI. New results of paleoearthquake studies in the northern New Madrid seismic zone, Southeast Missouri [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 452.
- OP-1708. Yong-Gang Li* and J. E. Vidale. Finite-difference simulations of fault zone trapped waves [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 443.

- OP-1709. Beiyuan Liang*, Max Wyss*, Dominique Gillard*, J. S. Nakata and W. R. Tanigawa. HAWAII. Stress- and strain-tensor orientations in South and West Hawaii estimated from fault-plane solutions [abstr.] *Terra Abstracts*, in Sixth meeting of the European Union of Geosciences. v. 3, no. 1, March 1991. p. 393.
- OP-1710. J. C. Libarkin. FLORIDA. The application of downhole geophysics in cross section of Cenozoic carbonates and siliciclastics in south-central Florida [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 29.
- OP-1711. R. W. Lichty and M. R. Karlinger. Spatial trends in statistical parameters for small-basin flood frequency; a climatic perspective [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1992 fall meeting. v. 73, no. 43, Suppl. October 27, 1992. p. 242.
- OP-1712. J. J. Lienkaemper, P. L. Williams*, Pamela Taylor* and Kenneth Williams*. CALIFORNIA. New evidence large surface-rupturing earthquakes along the northern Hayward Fault [abstr.] *AAPG Bulletin*, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 591.
- OP-1713. P. G. Lillis. COLORADO. Preliminary results of the organic geochemistry of the Oligocene Creede Formation, Colorado [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 401.
- OP-1714. P. G. Lillis, J. G. Palacas and Augusta Warden. UTAH. A Precambrian-Cambrian oil play in southern Utah [abstr.] *AAPG Bulletin*, in AAPG Rocky Mountain Section meeting; abstracts. v. 79, no. 6, June 1995. p. 921.
- OP-1715. A. T. Linde*, M. J. Johnston, M. T. Gladwin* and K. S. Breckenridge. CALIFORNIA. A sequence of three slow earthquakes near San Juan Bautista and related seismicity [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 446.
- OP-1716. P. W. Lipman, M. A. Lanphere, R. L. Reynolds and J. G. Rosenbaum. COLORADO. Ash-flow sheets and calderas of the central San Juan volcanic field, Colorado; framework for the Creede scientific drilling project [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 398.
- OP-1717. P. W. Lipman and J. G. Moore. HAWAII. Recent growth(?) of Mauna Loa; lava accumulation rates at Hilo drill site [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 712.
- OP-1718. Hsi-Ping Liu. Application of band-limited anelastic models to wave propagation in highly-attenuative media [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 422.
- OP-1719. S. D. Locker*, A. C. Hine*, M. A. Toscano* and E. A. Shinn. FLORIDA. Holocene sequence stratigraphy and sea level rise, South Florida margin [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 30.
- OP-1720. A. B. Lockhart, E. T. Endo, T. L. Murray, C. D. Miller, J. W. Ewert and M. R. Couchman. The USGS/OFDA VDAP response to the Rabaul eruptions, Papua New Guinea, 1994 [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting; additional abstracts. v. 76, no. 17, Suppl. April 25, 1995. p. 302-303.
- OP-1721. D. A. Lockner, S. A. Stanchits*, J. D. Byerlee and A. V. Ponomarev*. P-wave velocity and amplitude transients due to fluid infiltration in granite [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 615.
- OP-1722. J. P. Lockwood, C. Corley*, Russ Apple* and B. M. Lockwood*. HAWAII. The contrasting impact of volcanic hazards on traditional vs modern Hawaiian societies; examples from the south rift zone of Mauna Loa Volcano [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 262.
- OP-1723. D. R. Lovley. Anaerobic oxidation of aromatic contaminants with Fe(III), sulfate, or nitrate [abstr.] *Agronomy Abstracts*, in 1992 annual meetings; American Society of Agronomy, 84th annual meeting; Crop Science Society of America; Soil Science Society of America; Clay Minerals Society. 84, November 1992. p. 47.
- OP-1724. D. R. Lovley, F. H. Chapelle and J. C. Woodward. H₂ concentrations in anoxic ground water; a non-equilibrium framework for elucidating the distribution of microbially catalyzed redox reactions [abstr.] *Special Publication - Karst Waters Institute*, in Breakthroughs in karst geomicrobiology and redox geochemistry; abstracts and field-trip guide. (I. D. Sasowsky, editor and others). 1, 1994. p. 46-47.
- OP-1725. J. B. Lowenstern. UTAH. Fluid evolution in a sub-volcanic intrusion; evidence from glass inclusions from the Pine Grove porphyry Mo system, UT [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 450.
- OP-1726. B. K. Lucchitta. Kasei Valles, Mars; (I), The water story [abstr.] *Abstracts of Papers Submitted to the Lunar and Planetary Science Conference*, in Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference. 26, Part 2, March 1995. p. 867-868.
- OP-1727. B. K. Lucchitta. Kasei Valles, Mars; (II), The ice story [abstr.] *Abstracts of Papers Submitted to the Lunar and Planetary Science Conference*, in Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference. 26, Part 2, March 1995. p. 869-870.
- OP-1728. B. K. Lucchitta and H. M. Ferguson. A Martian landslide caught in the act? [abstr.] *Abstracts of Papers Submitted to the Lunar and Planetary Science Conference*, in Abstracts of papers submitted to the Twenty-third lunar and planetary science conference. 23, March 1992. p. 815-816.
- OP-1729. B. K. Lucchitta and N. K. Isbell. Valles Marineris volumes [abstr.] *Abstracts of Papers Submitted to the Lunar and Planetary Science Conference*, in Abstracts of papers submitted to

- the Twenty-third lunar and planetary science conference. 23, March 1992. p. 817-818.
- OP-1730. Ivo Lucchitta, M. W. Caffee*, R. C. Finkel*, G. H. Curtis*, Marie Davis*, Sidney Davis*, T. C. Hanks and B. D. Turrin. ARIZONA, UTAH. Quaternary alluvial chronology in the eastern Grand Canyon-Lake Powell region, Arizona and Utah [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 258.
- OP-1731. Ivo Lucchitta, T. C. Hanks, Marie Davis, Sidney Davis and R. C. Finkel*. UTAH. Age of incision of the Rainbow Plateau, Southeast Utah [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 27.
- OP-1732. K. R. Ludwig, D. R. Muhs, R. B. Halley and E. A. Shinn. FLORIDA. Sea level records at 80,000 yr BP from tectonically stable platforms; the Florida Keys and Bermuda [abstr.] Program and Abstracts - American Quaternary Association. Conference, in American Quaternary Association; 13th biennial meeting; program and abstracts. 13, 1994. p. 225.
- OP-1733. K. R. Ludwig, D. R. Muhs, K. R. Simmons, R. B. Halley and E. A. Shinn. FLORIDA. Evidence for a sea level close to the present at 80,000 yr BP from the Florida Keys and Bermuda [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 237.
- OP-1734. W. R. Lund*, B. D. Black* and D. P. Schwartz. UTAH. Late Holocene displacement on the Provo segment of the Wasatch fault zone at Rock Canyon, Utah County, Utah [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 43rd annual meeting. v. 22, no. 6, April 1990. p. 37.
- OP-1735. S. N. Luoma and Alexander van Geen. CALIFORNIA. Records of contaminant input to San Francisco Bay; 1, History and setting [abstr.] Eos, Transactions, American Geophysical Union, in 1994 ocean sciences meeting. v. 75, no. 3, Suppl. January 18, 1994. p. 233.
- OP-1736. W. C. Luth*, I. D. MacGregor* and D. P. Russ. The U.S.A. Continental Scientific Drilling Program (CSDP) [abstr.] Program with Abstracts - Geological Association of Canada; Mineralogical Association of Canada; Canadian Geophysical Union, Joint Annual Meeting, in Geological Association of Canada; Mineralogical Association of Canada; annual meeting; program with abstracts—Association Géologique du Canada; Association Minéralogique du Canada; reunion annuelle; programme et résumés. 19, 1994. p. 69.
- OP-1737. P. C. Lyons, B. R. Haley*, R. D. Congdon, W. F. Outerbridge, H. F. Evans, Jr. and F. T. Dulong. A volcanic connection between the Pennsylvanian of the Mid-continent and Appalachian regions [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, South-Central Section, 27th annual meeting. v. 25, no. 1, February 1993. p. 37.
- OP-1738. W. D. MacDonald*, H. C. Palmer* and C. S. Grommé. Distribution anisotropy and oxide distribution patterns in ash flow tuffs [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 189.
- OP-1739. M. N. Machette. Plans for a new digital map and database of major active faults in the Caribbean and Central America [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 610.
- OP-1740. M. N. Machette and K. M. Haller. Late Quaternary faulting in the Western United States; evidence for geologically recent extension of the northern Basin and Range Province [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 398.
- OP-1741. M. N. Machette, K. M. Haller and R. L. Dart. A new digital map and database for major active faults and folds in the United States [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 304.
- OP-1742. R. F. Madole and L. S. Cummings*. COLORADO. Paleoclimatic significance of phytoliths and buried soils in deposits of late Holocene eolian sand in northeastern Colorado [abstr.] Program and Abstracts - American Quaternary Association. Conference, in American Quaternary Association; 13th biennial meeting; program and abstracts. 13, 1994. p. 228.
- OP-1743. R. F. Madole and J. A. Michael. COLORADO. Impact of Holocene climatic change on channel morphology and sediment in a small glaciated drainage basin in the Southern Rocky Mountains [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 302.
- OP-1744. P. Maechling*, Egill Hauksson*, Hiroo Kanamori*, R. W. Clayton* and T. H. Heaton. Broadband seismology in cyberspace; using frame relay telemetry for TERRAscope [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 68.
- OP-1745. M. E. Magee*, R. J. McLaughlin and D. H. Oppenheimer. Relationship of recent onshore and near-shore seismicity to the structural framework at the Mendocino triple junction [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 146.
- OP-1746. L. B. Magoon, III, P. G. Lillis, Augusta Warden, R. G. Stanley, N. H. MacKevett* and J. R. Castaño*. CALIFORNIA. Carbon isotope compositions identify four petroleum types in Northern California [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 592.
- OP-1747. S. A. Mahan and R. J. Moscati. NEVADA. Sr, O and H isotopes as tracers of regional ground-water flow through the Spring Mountains to Ash Meadows, SW Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 413.
- OP-1748. G. E. Mallard. Overview of water-quality effects of the 1993 Mississippi River basin flooding [abstr.] Eos, Transactions,

- American Geophysical Union, *in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 180.
- OP-1749. S. D. Malone*, R. P. Buland, B. W. Presgrave, W. L. Ellsworth, A. J. Michael and T. K. Ahern*. Rapid exchange of seismic data between international, national and regional networks using the Internet [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1993 spring meeting. v. 74, no. 16, Suppl. May 1993. p. 216.
- OP-1750. D. M. Mann, H. G. Greene and B. H. Robison*. CALIFORNIA. Fault deformation of the Monterey Bay region, California [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1992 fall meeting. v. 73, no. 43, Suppl. October 27, 1992. p. 318.
- OP-1751. Paul Mann*, C. S. Prentice, G. S. Burr* and L. R. Peña*. A splayed, late Quaternary trace of the North America-Caribbean strike-slip fault in northern Hispaniola and its seismotectonic implications [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 611.
- OP-1752. C. E. Manning*, S. E. Ingebritsen and D. K. Bird*. Numerical simulation of contact metamorphism in the Skaergaard magma-hydrothermal system [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 50.
- OP-1753. Lucia Margheriti, L. G. Wennerberg and John Boatwright. CALIFORNIA. Coda and S-wave spectral ratios to estimate site response in the South San Francisco Bay [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 436.
- OP-1754. S. C. Margriter, J. P. Lockwood, J. P. Kauahikaua and F. A. Trusdell. HAWAII. Applications of GIS to the study of Mauna Loa Volcano, Hawaii [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 641.
- OP-1755. L. E. Marín*, J. M. Quezada Muñeton*, V. L. Sharpton*, Graham Ryder*, B. C. Schuraytz* and G. B. Dalrymple. Age constraints on the Chicxulub impact structure; K/T or not? [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, *in* Abstracts of papers submitted to the Twenty-third lunar and planetary science conference. 23, March 1992. p. 843-844.
- OP-1756. R. H. Mariner, W. C. Evans and L. D. White. Chemical and isotopic characteristics of the sodium-chloride and sodium-calcium-chloride type thermal waters of the Cascade Range [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 363.
- OP-1757. H. W. Markewich and M. J. Pavich. Loess chronostratigraphy of the Lower Mississippi Valley, U.S.A [abstr.] Program and Abstracts - American Quaternary Association. Conference, *in* American Quaternary Association; 13th biennial meeting; program and abstracts. 13, 1994. p. 229.
- OP-1758. H. W. Markewich, D. A. Wysocki*, M. J. Pavich and P. B. Maat. Paleoclimate of the Mississippi River valley from 130 to 60 ka as inferred from the Sangamon geosol [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 515.
- OP-1759. M. S. Marlow, R. J. Anima, P. R. Carlson, P. R. Childs, P. E. Hart, P. E. Jachens, R. C. Mann and R. W. Sliker. CALIFORNIA. San Leandro Basin; a filled sedimentary basin beneath South San Francisco Bay [abstr.] AAPG Bulletin, *in* AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 592.
- OP-1760. M. S. Marlow, P. E. Hart, J. R. Childs, D. M. Mann, G. M. Mann, P. R. Carlson and R. J. Anima. CALIFORNIA. A major unconformity beneath South San Francisco Bay and the development of San Leandro Basin [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 683.
- OP-1761. C. J. Marone*, J. E. Vidale and W. L. Ellsworth. Physical interpretation of source variations in repeating earthquakes [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 435.
- OP-1762. K. M. Marsaglia*, D. J. Prior*, E. L. Rochford*, Nancy Lindsley-Griffin*, Soichi Osozawa*, K. M. Brown*, J. H. Behrmann* and S. D. Lewis. Diagenesis and deformation associated with spreading ridge subduction as recorded at ODP Site 863, south of the Chile triple junction [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 468.
- OP-1763. B. D. Marshall and S. A. Mahan. NEVADA. A model for the formation of pedogenic carbonate based on strontium isotope data from Southwest Nevada [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 118.
- OP-1764. D. A. Martin and R. F. Stallard. Comparison of the size distribution of suspended sediment in the Mississippi River during flood stage and typical flow regimes [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 181.
- OP-1765. J. P. Masterson, K. M. Hess, M. H. Kruger and J. C. Davis. MASSACHUSETTS. Three-dimensional computerized visualization of fluid-particle pathlines for simulated contaminant plumes in ground water, Massachusetts Military Reservation, Cape Cod, Massachusetts [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 79.
- OP-1766. L. G. Mastin. HAWAII. What conditions produce phreatomagmatic summit eruptions at Kilauea? A numerical model provides some clues [abstr.] *Eos, Transactions, American Geophysical Union, in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 728.
- OP-1767. L. G. Mastin. Rainfall as an agent in small eruptions and collapse events on young lava domes [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 378.
- OP-1768. T. N. Mattox, C. C. Heliker and M. T. Mangan. HAWAII. Kilauea Volcano; a 1994 update of the ongoing East Rift Zone eruption [abstr.] Abstracts with Programs - Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 378.

- ety of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 119-120.
- OP-1769. S. C. Maxwell*, R. P. Young* and Donna Eberhart-Phillips. Relationship between velocity and source parameters of natural and induced seismicity [abstr.] *Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting.* v. 75, no. 44, Suppl. November 5, 1994. p. 473.
- OP-1770. T. A. Maxwell*, C. V. Haynes, Jr.*, S. R. Stokes* and B. J. Szabo. Predictive mapping and timing of aeolian and lacustrine deposits in the Western Desert of Egypt [abstr.] *Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting.* v. 26, no. 7, 1994. p. 150.
- OP-1771. F. K. Mazdab*, L. M. Anovitz*, B. S. Hemingway and Alexandra Navrotsky*. New borate and borosilicate thermodynamic data, and an overview of boron mineral assemblages [abstr.] *Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting.* v. 26, no. 7, 1994. p. 448.
- OP-1772. B. G. McAdoo*, D. L. Orange*, P. Bowering*, J. C. Moore*, P. Teas*, H. J. Tobin*, Henry Chezar, H. J. Lee, Rick Vail, M. B. Underwood*, P. Linke* and M. B. Schluter*. OREGON. Fluid flow and submarine canyons; observations from the ALVIN and camera-tow program on the toe of the Cascadia accretionary complex, offshore Oregon [abstr.] *Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting.* v. 75, no. 16, Suppl. April 19, 1994. p. 324.
- OP-1773. Jill McCarthy, P. E. Hart, R. J. Anima, D. H. Oppenheimer and T. E. Parsons. CALIFORNIA. Seismic evidence for faulting in the western Sacramento Delta region, Pittsburg, California [abstr.] *Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting.* v. 75, no. 44, Suppl. November 5, 1994. p. 684-685.
- OP-1774. Jill McCarthy, P. E. Hart and D. H. Oppenheimer. CALIFORNIA. High angle faulting in western Sacramento Delta region, Pittsburg, California [abstr.] *AAPG Bulletin, in AAPG Pacific Section meeting; abstracts.* v. 79, no. 4, April 1995. p. 592.
- OP-1775. T. A. McConnaughey and R. G. Striegl. NEW YORK. Carbon-14 uptake by trench cap vegetation at the low-level radioactive waste disposal site near West Valley, New York [abstr.] *Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting.* v. 75, no. 16, Suppl. April 19, 1994. p. 163.
- OP-1776. P. A. McCrory. WASHINGTON. Quaternary crustal shortening along the central Cascadia subduction margin, Washington [abstr.] *Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting.* v. 26, no. 7, 1994. p. 523.
- OP-1777. P. A. McCrory. WASHINGTON. Late Quaternary thrust faulting along the Cascadia margin, Washington; implications for partitioning of strain [abstr.] *Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting.* v. 75, no. 44, Suppl. November 1, 1994. p. 622.
- OP-1778. P. A. McCrory, D. S. Wilson*, J. C. Ingle, Jr.* and R. G. Stanley. CALIFORNIA. Neogene transfer of Central California to the Pacific Plate; evidence from Santa Maria Basin, California [abstr.] *AAPG Bulletin, in AAPG Pacific Section meeting; abstracts.* v. 79, no. 4, April 1995. p. 593.
- OP-1779. J. J. McDonnell* and N. E. Peters. Rapid water table response in small catchments [abstr.] *Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting.* v. 75, no. 16, Suppl. April 19, 1994. p. 155.
- OP-1780. A. S. McEwen. Temporal variability of the surface and atmosphere of Mars; Viking Orbiter color observations [abstr.] *Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-third lunar and planetary science conference.* 23, March 1992. p. 877-878.
- OP-1781. A. S. McEwen, Tammy Becker, Annie Bennett, J. A. Howell, Kathleen Edwards, E. M. Eliason, L. R. Gaddis, C. E. Isbell, A. E. Howington-Kraus, R. L. Kirk, E. M. Lee, H. F. Morgan and M. S. Robinson. New digital images of the Moon [abstr.] *Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference.* 26, Part 2, March 1995. p. 929.
- OP-1782. A. S. McEwen, N. K. Isbell and J. C. Pearl*. Io thermophysics; new models with Voyager 1 thermal IR spectra [abstr.] *Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-third lunar and planetary science conference.* 23, March 1992. p. 881-882.
- OP-1783. A. S. McEwen, M. S. Robinson, T. C. Duxbury* and B. J. Buratti*. Global albedo variations on the Moon; Clementine 750-nm observations [abstr.] *Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference.* 26, Part 2, March 1995. p. 931-932.
- OP-1784. A. S. McEwen, M. S. Robinson, E. M. Eliason, P. G. Lucey*, B. R. Hawke* and T. C. Duxbury*. Clementine and groundbased observations of the Aristarchus region of the Moon [abstr.] *Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference.* 26, Part 2, March 1995. p. 933.
- OP-1785. A. S. McEwen and E. M. Shoemaker. Two classes of impact basins on the Moon [abstr.] *Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference.* 26, Part 2, March 1995. p. 935-936.
- OP-1786. E. R. McFarland. MARYLAND. Factors affecting nitrogen transport in ground water at two agricultural sites, Patuxent River basin, Maryland [abstr.] *Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting.* v. 75, no. 16, Suppl. April 19, 1994. p. 158.
- OP-1787. M. L. McGann. CALIFORNIA. Oscillating estuarine conditions recorded in Holocene deposits near present-day San Francisco International Airport [abstr.] *AAPG Bulletin, in AAPG Pacific Section meeting; abstracts.* v. 79, no. 4, April 1995. p. 593.

- OP-1788. A. F. McGarr. Some comparisons between mining-induced and laboratory earthquakes [abstr.] *Seismological Research Letters*, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 69.
- OP-1789. J. J. McGee and O. B. James. Mineral-chemical variations during basalt crystallization [abstr.] *Abstracts of Papers Submitted to the Lunar and Planetary Science Conference*, in *Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference*. 26, Part 2, March 1995. p. 937-938.
- OP-1790. R. G. McGimsey*, C. F. Waythomas and C. A. Neal*. ALASKA. High stand and catastrophic draining of intracaldera Surprise Lake, Aniakchak crater, Alaska [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, 1994 annual meeting*. v. 26, no. 7, 1994. p. 138.
- OP-1791. S. C. McIntyre* and A. C. Gellis. PUERTO RICO. Effects of land-use changes on reservoir sedimentation, Lake Loiza, Puerto Rico [abstr.] *International Symposium of the North American Lake Management Society*, in 13th international symposium of the North American Lake Management Society; Lake management and diversity; competing values, needs, and goals. 13, 1993 unpaginated.
- OP-1792. R. A. McKenney. Effects of vegetation on channel morphology and aquatic habitat in gravel-bed streams in the Ozark plateaus [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, 1994 annual meeting*. v. 26, no. 7, 1994. p. 235.
- OP-1793. M. A. McKibben*, R. O. Rye, C. S. Eldridge* and P. M. Bethke. COLORADO. Sulfur isotope geochemistry of the Creede Formation and implications for hydrothermal vein mineralization [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, 1994 annual meeting*. v. 26, no. 7, 1994. p. 399.
- OP-1794. J. M. McLelland* and M. P. Foose. NEW YORK. Low-Ti iron-oxide deposits, Lyon Mt. Gneiss, and the late tectonic history of the Adirondack Mts. [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, Northeastern Section, 30th annual meeting*. v. 27, no. 1, March 1995. p. 68.
- OP-1795. Gerard McMahon. The role of information in developing rational watershed management plans [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, 1995 annual meeting*. v. 27, no. 6, 1995. p. 80.
- OP-1796. P. B. McMahon, J. K. Bohlke and Bret Bruce. COLORADO. Fate of nitrate in the South Platte River alluvial aquifer, Colorado [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 158.
- OP-1797. P. B. McMahon, K. F. Dennehy and K. J. Lull. COLORADO. Effect of ground-water discharge on dissolved-oxygen concentrations in the South Platte River at low flow [abstr.] *Information Series - Colorado Water Resources Research Institute*, in *Defining ecological and sociological integrity for the South Platte River basin*. (R. C. Woodring, editor and others). 72, February 1993. p. 79.
- OP-1798. G. P. Meeker. Formation of CAIs by partial melting and accretion during heating in a gas of solar composition [abstr.] *Abstracts of Papers Submitted to the Lunar and Planetary Science Conference*, in *Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference*. 26, Part 2, March 1995. p. 947-948.
- OP-1799. R. L. Melvin and J. R. Stone. CONNECTICUT. Geohydrologic characterization of the sedimentary bedrock at the Durham Center area, Durham, Conn. [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, Northeastern Section, 30th annual meeting*. v. 27, no. 1, March 1995. p. 68.
- OP-1800. Carlos Mendoza and Eiichi Fukuyama*. Finite-fault source analysis of the 1993 Hokkaido-Nansei-Oki, Japan, earthquake [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 427.
- OP-1801. C. M. Menges, D. G. Hadley, D. S. Signor, D. V. Fitterman, F. A. Mohammed*, T. M. Bown and E. M. Brouwers. Hydrogeologic significance of electromagnetic profiles across wadis in eastern Abu Dhabi Emirate, UAE [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, 1991 annual meeting*. v. 23, no. 5, 1991. p. 123.
- OP-1802. C. M. Menges, J. W. Whitney, J. A. Coe, J. A. Oswald, J. R. Wesling*, F. H. Swan*, A. P. Thomas*, J. B. Paces and S. A. Mahan. NEVADA. Preliminary results of paleoseismic investigations of Quaternary faults on eastern Yucca Mountain, Nye County, Nevada [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 452.
- OP-1803. K. M. Menking*, H. M. Musler*, R. S. Anderson*, J. P. Fitts, J. L. Bischoff and G. I. Smith. CALIFORNIA. Sedimentary analyses of the Owens Lake core, eastern California, and their relations to climate change [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. 1993. p. 364.
- OP-1804. R. F. Mereu*, W. M. Moon*, A. E. Barnes*, M. K. Séguin*, Isa Asudeh*, D. A. Forsyth*, M. H. Salisbury*, W. M. Kohler, Peter Carroll* and J. M. Jessop*. The 1992 Lithoprobe Abitibi-Grenville seismic refraction experiment [abstr.] *Lithoprobe Report*, in *Lithoprobe; Abitibi-Grenville Project; Abitibi-Grenville Transect*. 33, 1992. p. 117-119.
- OP-1805. Y. Merrand*, Bernard Hallet*, B. F. Molnia, J. R. Gray and R. J. Hart. ALASKA. Bering Glacier; toward a sediment budget [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 63-64.
- OP-1806. Tom Meuzelaar*, P. B. Larson* and C. G. Cunningham. COLORADO. Metasomatism and isotope exchange within mineralized sedimentary rocks, Rico, CO [abstr.] *Abstracts with Programs - Geological Society of America*, in *Geological Society of America, Rocky Mountain Section, 47th annual meeting*. v. 27, no. 4, April 1995. p. 47.
- OP-1807. M. T. Meyer and E. M. Thurman. Cyanazine metabolites in surface water; the transport and degradation of labile

- herbicides [abstr.], in Programs and proceedings of symposium on Agricultural nonpoint sources of contaminants; a focus on herbicides. 1993. p. 21. Available from: U.S. Environmental Protection Agency, Kansas City, KS, United States.
- OP-1808. A. J. Michael. Do the data require fault normal compression? [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 678-679.
- OP-1809. A. J. Michael. CALIFORNIA. Public access to earthquake data from the U.S. Geological Survey's Branch of Seismology in Menlo Park, California [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 429-430.
- OP-1810. A. J. Michael. Searching seismicity for stress waves [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 447.
- OP-1811. R. C. Milici. Hydrocarbon productivity from Devonian shales of the Appalachian Basin; a synthesis [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 75.
- OP-1812. H. T. Millard, Jr., D. R. Muhs and P. B. Maat. COLORADO. Variations in the concentrations of uranium, thorium, and potassium in eolian and fluvial sand along the valley of the South Platte River, Colorado [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 109-110.
- OP-1813. A. D. Miller, B. R. Julian and G. R. Foulger*. Well constrained non-double-couple earthquakes at the Hengill geothermal area, S.W. Iceland [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 446.
- OP-1814. B. M. Miller. GEOPLAY; a knowledge-based expert system for the analysis of potential hydrocarbon plays [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, in AAPG annual convention. 1994, 1994. p. 216.
- OP-1815. B. M. Miller. A knowledge-based expert system for the geological analysis of sedimentary basins for resource assessment [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 230.
- OP-1816. C. D. Miller and L. B. Conyers*. Character of phreatomagmatic deposits which buried the Mayan village of Ceren, El Salvador [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 157.
- OP-1817. C. F. Miller*, M. T. Heizler*, Jason Unkefer*, Y. F. Lee*, J. L. Wooden and C. M. Falkner*. NEVADA. Mid-Miocene plutonism in the Eldorado Mountains, Colorado River extensional corridor, southern Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 369.
- OP-1818. C. F. Miller*, J. L. Wooden and M. E. Gerber*. CALIFORNIA. Plutonism at a tectonically evolving continent margin; Mesozoic granitoids of the eastern Mojave Desert, California, USA [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 519.
- OP-1819. J. A. Miller. Relation of geology and hydrogeology in the Southeastern United States [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 57.
- OP-1820. J. J. Miller, J. A. Grow and C. J. Potter. NEVADA. Seismic reflection studies in eastern Nevada [abstr.] SEG Annual Meeting Expanded Technical Program Abstracts with Biographies, in Society of Exploration Geophysicists, 64th annual international meeting; technical program, expanded abstracts with authors' biographies. 64, 1994. p. 806.
- OP-1821. K. C. Miller*, G. R. Keller*, J. M. Gridley*, W. D. Mooney and J. H. Luetgert. WASHINGTON. Geological insights from the 1991 wide-angle seismic reflection experiment in western Washington [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 145.
- OP-1822. T. P. Miller and V. Y. Kirianov*. ALASKA. Timing of large Holocene volcanic events in the western Aleutian Arc, Alaska [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 731.
- OP-1823. W. R. Miller, J. B. McHugh and A. L. Meier. COLORADO. Calculations of pre-mining geochemical baselines at three stream junctions for Wightman Fork and Cropsy Creek near Summitville, Colorado [abstr.] Special Publication - Colorado Geological Survey, in Proceedings; Summitville forum '95. (H. H. Posey, editor and others). Report no. 38, 1995. p. 58.
- OP-1824. P. C. Milly. A test of a simple model of the average annual water balance [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 172.
- OP-1825. J. E. Mirecki, J. A. Kingsbury and W. S. Parks. TENNESSEE. Use of geochemical methods to determine the source of ground water causing water-quality changes in a municipal well field, Memphis, Tennessee [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 76.
- OP-1826. Keiji Misawa, Mitsunobu Tatsumoto and Keizo Yanai*. U-Th-Pb, Sm-Nd, and Rb-Sr isotopic systematics of lunar meteorite Asuka-31 [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-third lunar and planetary science conference. 23, March 1992. p. 917-918.
- OP-1827. P. J. Modreski, T. J. Armbrustmacher and Wacław Ryka*. Mineralogy of magmatic and metasomatic rocks of the Elk Massif, Northeast Poland [abstr.] Program with Abstracts - Geological Association of Canada; Mineralogical Association of Canada; Canadian Geophysical Union, Joint Annual Meeting, in

- Geological Association of Canada; Mineralogical Association of Canada; annual meeting; program with abstracts—Association Géologique du Canada; Association Minéralogique du Canada; reunion annuelle; programme et résumés. 19, 1994. p. 77.
- OP-1828. P. J. Modreski and T. C. Michalski. COLORADO. Colorado topaz [abstr.] The Mineralogical Record, in FM-TGMS-MSA symposium on Topaz. (Beau Gordon, chairperson and others). v. 26, no. 1, February 1995. p. 65.
- OP-1829. Yves Moëlo*, E. Oudin* and R. A. Koski. Complex mineralogy of Sn-, Sb- and Mn-enriched sulfide ore in Gorda Ridge sediments [abstr.] Abstracts of the ... General Meeting of the International Mineralogical Association, in International Mineralogical Association, 16th general meeting; abstracts. 16, 1994. p. 281.
- OP-1830. R. H. Moench. What's become of the Piermont Allochthon? A continuing tale of multiple agonizing reappraisals [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 69-70.
- OP-1831. D. W. Mogk*, J. A. Hodgeboom*, P. A. Mueller*, D. J. Henry*, J. L. Wooden and A. P. Nutman*. MONTANA. Archean crustal evolution in the Hellroaring Plateau area, eastern Beartooth Mountains, Montana [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 232.
- OP-1832. Kathy Moley*, L. A. Dengler* and J. W. Dewey. CALIFORNIA. The pattern of ground shaking in the Sept. 1, 1994 $M_w = 7.1$ Mendocino Fault earthquake [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 440.
- OP-1833. B. F. Molnia, Austin Post and P. J. Fleisher*. ALASKA. Unusual hydrological events related to the 1993-94 surge of Bering Glacier, Alaska [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 63.
- OP-1834. B. F. Molnia, Austin Post, D. C. Trabant and R. M. Krimmel. ALASKA. The 1993-94 surge of Bering Glacier, Alaska; an overview [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 26.
- OP-1835. C. J. Montana*, J. L. Whitelaw*, G. R. Keller*, K. C. Miller*, T. R. Burdette and E. E. Criley. The Delta Force seismic experiment [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 644.
- OP-1836. J. A. Moody. Propagation and composition of the 1993 flood wave on the upper Mississippi River [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 181.
- OP-1837. W. D. Mooney. Global crustal structure [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 57-58.
- OP-1838. W. D. Mooney, J. M. Murphy, S. L. Li, Jill McCarthy and C. J. Ammon*. Seismic properties of the New Madrid fault from high resolution seismic refraction profiles [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 411-412.
- OP-1839. D. E. Moore and J. D. Byerlee. CALIFORNIA. Fault patterns in the San Andreas system; possible indicators of fluid-pressure conditions? [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 103.
- OP-1840. D. E. Moore and D. A. Lockner. Quantitative analysis of the process zone of a propagating shear fracture in granite [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 267.
- OP-1841. D. E. Moore, D. A. Lockner, R. S. Summers and J. D. Byerlee. Permeability changes in intact, fractured, and crushed granite under hydrothermal conditions [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting; additional abstracts. v. 76, no. 17, Suppl. April 25, 1995. p. 301.
- OP-1842. D. W. Moore. UTAH. Valley-fill deposits due to late Miocene to Pliocene basin-range faulting in the High Plateaus, near Panguitch, Southwest Utah [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 48.
- OP-1843. H. J. Moore. A perspective of landing-site selection [abstr.] LPI Technical Report, in Mars Pathfinder landing site workshop. (M. P. Golombek, editor). Report no. 94-04, 1994. p. 31-32.
- OP-1844. H. J. Moore. Geology of the Tempe-Mareotis region, Mars [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-sixth lunar and planetary science conference. 26, Part 2, March 1995. p. 993-994.
- OP-1845. H. J. Moore, P. M. Schenk*, J. J. Plaut* and C. M. Weitz*. An explosive eruption on Venus [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-third lunar and planetary science conference. 23, March 1992. p. 927-928.
- OP-1846. H. J. Moore, C. M. Weitz* and G. G. Schaber. Cochran and other Venesian impact craters [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in Abstracts of papers submitted to the Twenty-third lunar and planetary science conference. 23, March 1992. p. 929-930.
- OP-1847. J. G. Moore, C. J. Hickson* and L. C. Calk. Shift from tholeiitic to alkalic suites at Tuya region volcanoes, British Columbia [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 451.
- OP-1848. J. G. Moore, B. L. Ingram*, K. R. Ludwig and D. A. Clague. HAWAII. Coral ages and island subsidence, Hilo drill hole [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 711.
- OP-1849. T. E. Moore, G. S. Fuis, P. B. O'Sullivan* and J. M. Murphy*. ALASKA. Evidence of Laramide age deformation in

- the Brooks Range, Alaska [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 383.
- OP-1850. T. E. Moore, W. K. Wallace* and G. S. Fuis. ALASKA. Shingled tectonic wedges in the central Brooks Range orogen [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 646.
- OP-1851. L. A. Morgan. IDAHO. Caldera formation on the Snake River plain-Yellowstone Plateau volcanic province; clues from physical characteristics of ignimbrites [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 48.
- OP-1852. L. A. Morgan and K. L. Pierce. Silicic volcanism along the track of the Yellowstone hot spot [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Rocky Mountain Section, 43rd annual meeting. v. 22, no. 6, April 1990. p. 39.
- OP-1853. J. J. Mori and D. V. Helmberger*. CALIFORNIA. Large amplitude Moho reflections (SmS) from Landers aftershocks [abstr.] Seismological Research Letters, *in* 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 53.
- OP-1854. M. M. Morrissey and B. A. Chouet. ALASKA. Masses of magmatic volatiles estimated by different methods for the 1989 eruptive onset of Redoubt Volcano, Alaska [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 452.
- OP-1855. M. M. Morrissey* and B. A. Chouet. ALASKA. Choked-flow model for triggering and intermittency of long-period events at Redoubt Volcano 1989-90 [abstr.] Seismological Research Letters, *in* 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 56.
- OP-1856. C. A. Morrow, R. K. Kerrich*, D. A. Lockner and J. D. Byerlee. Permeability of sealed fault rocks from Yellowknife, Northwest Territories [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 637.
- OP-1857. R. J. Moscati and J. F. Whelan. NEVADA. Stable isotope compositions and formation temperatures of secondary silica mineralization from pedogenic, drill core, and hydrothermal samples near Yucca Mountain, NV [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 279.
- OP-1858. J. L. Mosenfelder*, S. R. Bohlen and W. B. Hankins. New method for making synthetic "rocks" for use in phase transformation studies, and initial results on the quartz coesite transformations [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 260.
- OP-1859. L. J. Moses*, S. P. Palmer* and S. F. Obermeier. WASHINGTON. Gravel liquefaction as an indicator of prehistoric ground shaking in western Washington [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 253.
- OP-1860. T. C. Moyer. NEVADA. Lithostratigraphy of the Prow Pass Tuff (Crater Flat Group) at Yucca Mountain, southwestern Nevada volcanic field [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 113.
- OP-1861. P. A. Mueller*, A. L. Heatherington*, A. P. Nutman*, L. P. Williams* and J. L. Wooden. Probable provenance of Precambrian zircons extracted from an Ordovician sandstone from the Suwannee Basin [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 58.
- OP-1862. P. A. Mueller*, A. L. Heatherington*, E. Weyand*, J. L. Wooden, D. W. Mogk* and A. P. Nutman*. MONTANA. Geochemical evolution of Archean crust in the northern Madison Range, Montana, evidence from U-Pb and Sm-Nd systematics [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 49.
- OP-1863. P. A. Mueller*, A. L. Heatherington*, J. L. Wooden, R. D. Shuster*, D. W. Mogk* and A. P. Nutman*. Paleoproterozoic evolution of the NW margin of the Wyoming Craton; evidence for 1.7 and 2.4 Ga terranes [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 340.
- OP-1864. R. J. Mueller, Meei-You Lee, R. D. Borchardt, M. J. Johnston, G. N. Glassmoyer, S. A. Silverman and Reese Cutler*. Using satellite telemetry for near real-time monitoring of seismic events and status of portable digital recorders [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 451.
- OP-1865. D. R. Muhs, K. R. Ludwig, R. B. Halley, E. A. Shinn and J. L. Kindinger. Extended duration of peak last-interglacial sea-level high-stand from uranium-series ages of corals and ooids from the Bahamas [abstr.] Program and Abstracts - American Quaternary Association. Conference, *in* American Quaternary Association; 13th biennial meeting; program and abstracts. 13, 1994. p. 234.
- OP-1866. D. R. Muhs, K. R. Ludwig, K. R. Simmons, R. B. Halley, E. A. Shinn and J. L. Kindinger. High sea-stand recorded on the Bahamas during 110-120 ka [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 514-515.
- OP-1867. P. K. Mukhopadhyay*, K. S. Gillis*, L. J. MacNeil*, W. D. Smith*, R. B. Finkelman and Marcel Labonte*. Comparison of elemental geochemistry and coal facies of major coal seams from the Sydney, Pictou and St. Rose coalfields, Nova Scotia [abstr.] Program with Abstracts - Geological Association of Canada; Mineralogical Association of Canada; Canadian Geophysical Union, Joint Annual Meeting. 1993, 1993. p. 74.
- OP-1868. B. S. Munger* and J. M. O'Neill. MONTANA. The geologic setting of prehistoric lithic procurement sites in the Gravelly Range of Southwest Montana [abstr.] Abstracts with Programs

- Geological Society of America, in *Geological Society of America; Rocky Mountain Section*, 47th annual meeting. v. 27, no. 4, April 1995. p. 49.
- OP-1869. S. L. Murchie*, J. W. Head*, A. S. McEwen, J. F. Mustard*, C. M. Pieters* and M. J. Belton*. Spectral properties of Orientale Basin materials from Galileo images [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in *Abstracts of papers submitted to the Twenty-third lunar and planetary science conference*. 23, March 1992. p. 947-948.
- OP-1870. Gustavo Murillo-Muneton*, J. L. Anderson* and R. M. Tosdal. A new Grenville-age granulite terrane in southern Mexico [abstr.] Abstracts with Programs - Geological Society of America, in *Geological Society of America*, 1994 annual meeting. v. 26, no. 7, 1994. p. 48.
- OP-1871. J. B. Murowchick*, R. M. Coveney, Jr.*, K. L. Shelton*, C. S. Eldridge*, R. I. Grauch and J. S. Leventhal. S, O, and C isotopy of Cambrian Ni-Mo-(Au-PGE) ores of southern China [abstr.] Program with Abstracts - Geological Association of Canada; Mineralogical Association of Canada; Canadian Geophysical Union, Joint Annual Meeting. 1993, 1993. p. 74.
- OP-1872. M. H. Murray, G. A. Marshall, Michael Lisowski and R. S. Stein. CALIFORNIA. The 1992 Cape Mendocino, California, earthquake; a source model from geodetic data [abstr.] *Seismological Research Letters*, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 30.
- OP-1873. J. F. Mustard*, J. W. Head*, S. L. Murchie*, C. M. Pieters*, M. J. Belton* and A. S. McEwen. Shickard cryptomare; interaction between Orientale ejecta and pre-basin mare from spectral mixture analysis of Galileo SSI data [abstr.] Abstracts of Papers Submitted to the Lunar and Planetary Science Conference, in *Abstracts of papers submitted to the Twenty-third lunar and planetary science conference*. 23, March 1992. p. 957-958.
- OP-1874. F. E. Mutschler* and S. D. Ludington. Large porphyry metal camps in the conterminous U.S. Cordillera; a review of reviews...or déjà vu all over again? [abstr.] Abstracts with Programs - Geological Society of America, in *Geological Society of America*, 1994 annual meeting. v. 26, no. 7, 1994. p. 21.
- OP-1875. J. K. Nakata and R. K. Mark. Make fractal landscapes and fly-through animations using USGS digital elevation models (DEM's) [abstr.] *AAPG Bulletin*, in *AAPG Pacific Section meeting*; abstracts. v. 79, no. 4, April 1995. p. 594-595.
- OP-1876. A. R. Nelson, B. F. Atwater, Lee-Ann Bradley and T. W. Stafford, Jr.*. AMS ^{14}C correlation of subsided wetland soils using rooted-herb and detrital samples in the Cascadia subduction zone [abstr.] Abstracts with Programs - Geological Society of America, in *Geological Society of America*, 1994 annual meeting. v. 26, no. 7, 1994. p. 523.
- OP-1877. C. H. Nelson, E. B. Karabanov*, S. M. Colman, Carlota Escutia* and J. H. Barber, Jr. High sedimentation rates in modern ponded turbidite basins compared to low-rates in drained basins [abstr.] Abstracts with Programs - Geological Society of America, in *Geological Society of America*, 1994 annual meeting. v. 26, no. 7, 1994. p. 70.
- OP-1878. E. P. Nelson* and M. R. Hudson. NEW MEXICO. Laramide strain patterns in a basement-cored fold inferred from magnetic susceptibility anisotropy, Fra Cristobal Range, south-central New Mexico [abstr.] Abstracts with Programs - Geological Society of America, in *Geological Society of America*, 1994 annual meeting. v. 26, no. 7, 1994. p. 183.
- OP-1879. P. H. Nelson and J. E. Kibler. COLORADO. Geophysical logs from Creede Caldera moat [abstr.] Abstracts with Programs - Geological Society of America, in *Geological Society of America*, 1994 annual meeting. v. 26, no. 7, 1994. p. 401.
- OP-1880. P. H. Nelson, J. L. Mikesell, J. E. Kibler, R. R. Anderson* and B. J. Witzke*. IOWA. Geophysical logs and lithology from Manson impact structure [abstr.] Abstracts with Programs - Geological Society of America, in *Geological Society of America*, 1994 annual meeting. v. 26, no. 7, 1994. p. 403.
- OP-1881. R. E. Nelson* and L. D. Carter. ALASKA. Pliocene marine palynology documents first appearance of lowland tundra in Northern Alaska [abstr.] Abstracts with Programs - Geological Society of America, in *Geological Society of America*, 1994 annual meeting. v. 26, no. 7, 1994. p. 142.
- OP-1882. D. I. Netoff*, B. J. Cooper* and R. R. Shroba. UTAH. Origin and development of the giant sandstone weathering pits near Cookie Jar Butte, southeastern Utah [abstr.] Abstracts with Programs - Geological Society of America, in *Geological Society of America, Rocky Mountain Section*, 46th annual meeting. v. 26, no. 6, April 1994. p. 56.
- OP-1883. D. S. Neuhauser*, B. M. Bogaert and Barbara Romanowicz*. CALIFORNIA. Data access of Northern California seismic data from the Northern California Earthquake Data Center [abstr.] *Eos, Transactions, American Geophysical Union*, in *AGU 1994 fall meeting*. v. 75, no. 44, Suppl. November 1, 1994. p. 429.
- OP-1884. C. E. Neuzil. Abnormal pressures as hydrodynamic phenomena [abstr.] Abstracts with Programs - Geological Society of America, in *Geological Society of America*, 1994 annual meeting. v. 26, no. 7, 1994. p. 107.
- OP-1885. S. G. Neuzil and C. B. Cecil. Atmospheric sulfur deposition; primary source of sulfur in freshwater peat [abstr.] Abstracts with Programs - Geological Society of America, in *Geological Society of America*, 1994 annual meeting. v. 26, no. 7, 1994. p. 96.
- OP-1886. C. G. Newhall and R. S. Punongbayan*. Comparisons between the 1991 and prehistoric eruptions of Pinatubo Volcano, Philippines [abstr.] *International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes*, in 29th international geological congress; abstracts. 29, 1992. p. 506.
- OP-1887. E. B. Newman, R. K. Mark and J. K. Nakata. Archive slides and negatives on photo CD's, then annotate and enhance [abstr.] *AAPG Bulletin*, in *AAPG Pacific Section meeting*; abstracts. v. 79, no. 4, April 1995. p. 595.
- OP-1888. D. J. Nichols. The role of palynology in paleoecological analyses of Tertiary coals [abstr.] Abstracts with Programs - Geological Society of America, in *Geological Society of America*, 1994 annual meeting. v. 26, no. 7, 1994. p. 31.

- OP-1889. D. J. Nichols. Palynological evidence on the nature of the terminal Cretaceous event in the Northern Great Plains of the U.S. [abstr.] Program with Abstracts - Geological Association of Canada; Mineralogical Association of Canada; Canadian Geophysical Union, Joint Annual Meeting. 1993, 1993. p. 76.
- OP-1890. D. J. Nichols and F. H. Wingate*. COLORADO. Palynology of Paleogene lacustrine shale at Florissant Fossil Beds National Monument, Colorado [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 56-57.
- OP-1891. W. D. Nichols. Measuring and modeling radiation and energy budgets in sparse-canopy rangelands [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1992 fall meeting. v. 73, no. 43, Suppl. October 27, 1992. p. 237.
- OP-1892. S. P. Nishenko and C. G. Bufe. Testing the seismic cycle [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 453.
- OP-1893. W. J. Nokleberg, T. K. Bundtzen* and George Plafker. ALASKA. Tectonic controls for metallogenesis of mainland Alaska [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 28.
- OP-1894. W. J. Nokleberg, Arthur Grantz, W. W. Patton, Jr., George Plafker, D. W. Scholl, R. W. Tabor, T. L. Vallier, Kazuya Fujita*, B. A. Natal'in*, L. M. Parfenov*, A. I. Khanchuk*, S. D. Sokolov*, N. V. Tsukanov*, L. M. Natapov*, J. W. Monger*, S. P. Gordey* and T. D. Feeney*. Circum-North Pacific tectono-stratigraphic terrane map [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 256.
- OP-1895. W. J. Nokleberg, R. A. Zierenberg*, L. M. Lance* and J. M. Schmidt. ALASKA. Metallogenesis of sedimentary-exhalative zinc-lead-silver deposits, northwestern Brooks Range, Alaska [abstr.], in International symposium; tectonics, energy and mineral resources of the North-West Pacific (abstracts); Volume II. (C. B. Borukayev, editor and others). Khabarovsk: Russian Far East Academy of Sciences, Institute of Tectonics and Geophysics, 1989. p. 95-97.
- OP-1896. G. L. Nord, Jr. Exsolution kinetics in pyroxenes [abstr.] Abstracts of the ... General Meeting of the International Mineralogical Association, in International Mineralogical Association, 16th general meeting; abstracts. 16, 1994. p. 303-304.
- OP-1897. D. K. Nordstrom, J. W. Ball, K. M. Cunningham, M. A. Schoonen* and Y. Xu*. WYOMING. The occurrence of thiosulfate and other sulfur species in hydrothermal waters of Yellowstone National Park [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 36.
- OP-1898. V. F. Nuccio and J. R. Hatch. ILLINOIS. Potential problems using vitrinite reflectance to calibrate thermal history models in the Illinois Basin [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, in AAPG annual convention. 1994, 1994. p. 226.
- OP-1899. M. E. O'Connell*, K. L. Prestegard*, Jeff Jarriel* and J. K. Bohlke. MARYLAND. New water contributions and nitrate concentrations in macropore and stream water during a 25 year recurrence interval storm event [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 144.
- OP-1900. J. E. O'Connor. IDAHO. Hydrology, hydraulics and sediment transport of the late Pleistocene Bonneville flood [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 87.
- OP-1901. J. E. O'Connor and J. H. Hardison, III. OREGON, WASHINGTON. Breaching of lakes impounded by Neoglacial moraines in the Cascade Range, Oregon and Washington [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 218-219.
- OP-1902. J. M. O'Neill, T. H. Leroy*, M. C. Stickney* and P. E. Carrara. MONTANA. Neotectonic evolution and historical seismicity of the upper Madison Valley and adjacent Madison and Gravelly ranges in the Cliff Lake 15' Quadrangle, Southwest Montana [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 50.
- OP-1903. J. M. O'Neill and D. A. Lopez*. IDAHO, MONTANA. The Great Falls tectonic zone; east-central Idaho and west-central Montana [abstr.] Guidebook of the Annual Tobacco Root Geological Society Field Conference, in Geology and ore deposits of the trans-Challis fault system/Great Falls tectonic zone. (F. J. Moye, editor). 15, August 1990. p. 75-76.
- OP-1904. J. M. O'Neill, J. W. Whitney and M. R. Hudson. NEVADA. Strike-slip faulting and oroclinal bending at Yucca Mountain, Nevada; evidence from photogeologic and kinematic analysis [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 119.
- OP-1905. P. B. O'Sullivan*, J. M. Murphy*, A. E. Blythe* and T. E. Moore. ALASKA. Fission track evidence indicates that the present-day Brooks Range, Alaska, is a Cenozoic, not Early Cretaceous, physiographic feature [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 646.
- OP-1906. J. D. Obradovich. An updated time scale for the Cretaceous of North America [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, in AAPG annual convention. 1994, 1994. p. 227.
- OP-1907. J. K. Odum, W. J. Stephenson, K. M. Shedlock, T. L. Pratt, D. S. Collins, B. S. Rhea and R. A. Williams. MISSOURI. Possible fault(s) associated with the February 7, 1812 earthquake-induced Mississippi River waterfalls near New Madrid, Missouri [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 471.

- OP-1908. T. W. Offield. Carolina slate belt framework; Part 1, Regional setting and internal deformation pattern [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 78.
- OP-1909. T. W. Offield. Carolina slate belt framework; Part II, Structure and gold deposits [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 78.
- OP-1910. E. A. Okal*, E. R. Engdahl, S. H. Kirby and W. C. Huang*. Deep South American earthquakes; the general context of the large 09 June 94 Bolivian shock, an extraordinary event in an extraordinary Wadati-Benioff zone [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 465.
- OP-1911. P. G. Okubo. HAWAII. Seismicity associated with the continuing eruption at Kilauea Volcano, Hawaii [abstr.] Seismological Research Letters, in 89th annual meeting of the Geological Society of America; abstracts. v. 65, no. 1, March 1994. p. 55.
- OP-1912. P. G. Okubo*, Dieter Seidl* and M. A. Hellweg. HAWAII. The broadband wavefield at the Puu Oo vent of Kilauea Volcano, Hawaii [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 714.
- OP-1913. Shigeo Okuma, A. E. McCafferty and W. D. Stanley. WYOMING. Magnetization intensity mapping in Yellowstone National Park [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 200.
- OP-1914. J. A. Olson, M. L. Zoback, R. W. Simpson and M. S. Marlow. CALIFORNIA. Deformation of the San Francisco Bay Block? [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 683.
- OP-1915. C. L. Oman, R. B. Finkelman, Nicole Halili and M. B. Goldhaber. ALABAMA. Anomalous trace element concentrations in coal from the Warrior Basin, Alabama [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 78.
- OP-1916. S. K. Omarzai*, R. S. Coe*, J. A. Barron and David Bukry. CALIFORNIA. Paleomagnetism of the Monterey Formation of California at Lion's Head, Santa Maria Basin, central coastal California [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 202.
- OP-1917. D. H. Oppenheimer, B. M. Bogaert, A. J. Michael and A. Jones*. Rapid reporting of hypocentral information via nationwide pagers [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 430.
- OP-1918. D. L. Orange*, H. G. Greene, J. P. Barry* and R. Kochevar*. CALIFORNIA. ROV investigations of cold seeps along fault zones and mud volcanoes in Monterey Bay [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 324.
- OP-1919. D. L. Orange*, B. G. McAdoo*, J. C. Moore*, H. J. Tobin*, Henry Chezar, H. J. Lee, M. E. Reid, Rick Vail and E. J. Screaton*. Headless submarine canyons and fluid flow on the toe of the Cascadia accretionary complex; all seeps are in canyons, but not all canyons have seeps, and not all seeps are alike [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 458.
- OP-1920. M. H. Ort*, C. A. Neal*, V. S. McConnell*, K. H. Wohletz*, W. A. Duffield and D. T. Lescinsky*. ALASKA. Effects of prevailing wind on the distribution of surge and fallout deposits at Ukinrek maars, Alaska [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 639.
- OP-1921. M. H. Ort*, K. H. Wohletz* and C. A. Neal. ALASKA. Complex interactions of ground water and basaltic magma during the eruption of the Ukinrek maars, Alaska [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 378.
- OP-1922. R. F. Ortiz, P. R. Edelmann, L. S. Balistrieri, C. M. Moore, Nicole Nelson and Melinda Wright. COLORADO. Transport of metals into and through Terrace Reservoir, south-central Colorado, April-September 1994 [abstr.] Special Publication - Colorado Geological Survey, in Proceedings; Summitville forum '95. (H. H. Posey, editor and others). Report no. 38, 1995. p. 191.
- OP-1923. F. L. Paillet. Integration of borehole geophysics, hydraulic tests and geologic data in site characterization at contamination sites [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 438.
- OP-1924. B. C. Panuska*, Roosmarijn Lips*, J. E. Mylroie*, J. W. Troester and D. L. Armentrout*. PUERTO RICO. A pre-Brunhes age for Cueva del Aleman, Isla de Mona, Puerto Rico [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 79.
- OP-1925. D. F. Parker*, C. D. Henry* and M. J. Kunk. TEXAS. Volcanic stratigraphy of the Barrel Springs-Wild Cherry formations, Davis Mountains, Trans-Pecos Texas [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, South-Central Section, 27th annual meeting. v. 25, no. 1, February 1993. p. 39.
- OP-1926. J. T. Parker. ARIZONA. Assessing stability of entrenched ephemeral rivers; arroyo expansion along the Santa Cruz River near Tucson, Arizona, 1936-1986 [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 77.
- OP-1927. R. S. Parker, J. M. Nelson, J. G. Elliott and W. P. Carey. COLORADO. Changes in bed mobility due to altered streamflows in cobble-bedded mountain streams in the Gunnison River basin, Colorado [abstr.] Eos, Transactions, American Geo-

- physical Union, *in* AGU 1992 fall meeting. v. 73, no. 43, Suppl. October 27, 1992. p. 239.
- OP-1928. T. E. Parsons, Jill McCarthy and P. E. Hart. CALIFORNIA. The nature of lower crustal reflectors beneath San Francisco Bay, California [abstr.] *Eos, Transactions, American Geophysical Union*, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 643.
- OP-1929. S. C. Patel*, B. R. Frost* and G. L. Snyder. WYOMING. Extensive early Proterozoic Barrovian metamorphism in the southeastern Wyoming Province, Laramie Range, Wyoming [abstr.] *Abstracts with Programs - Geological Society of America*, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 59.
- OP-1930. B. E. Patrick* and A. B. Till. ALASKA. Cordilleran high pressure metamorphism in Northern Alaska; a consequence of island arc-continent collision [abstr.] *International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes*, *in* 29th international geological congress; abstracts. 29, 1992. p. 62.
- OP-1931. E. K. Pavlenko*, J. F. Casey*, S. A. Hall*, V. M. Golod*, K. D. Klitgord, L. V. Dmitriev* and Sergei Silantiev*. Multibeam and gravity results from the Mid-Atlantic Ridge, 30°30'N-32°30'N [abstr.] *Eos, Transactions, American Geophysical Union*, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 660.
- OP-1932. M. J. Pawlewicz and C. E. Barker. An empirical determination of the minimum number of measurements to estimate the mean random vitrinite reflectance of disseminated organic matter [abstr.] *Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists*, *in* AAPG annual convention. 1994, 1994. p. 231.
- OP-1933. R. C. Pearson. MONTANA. The Humbolt Mountain Anticline near Argenta, Beaverhead County, Montana; a basement-cored foreland structure [abstr.] *Abstracts with Programs - Geological Society of America*, *in* Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 51.
- OP-1934. L. D. Pellerin, J. M. Johnston* and G. W. Hohmann*. Three-dimensional inversion of electromagnetic data [abstr.] *SEG Annual Meeting Expanded Technical Program Abstracts with Biographies*, *in* Society of Exploration Geophysicists; expanded abstracts with biographies; 1993 technical program; 63rd annual meeting and international exhibition. 63, 1993. p. 360-363.
- OP-1935. Genyong Peng*, J. F. Lewis*, B. R. Lipin, J. J. McGee, Bao Peisheng* and Wang Xibin*. Inclusions of phlogopites and their hydrates in chromite from the Hongguleleng Ophiolite in Xinjiang, NW China [abstr.] *Abstracts with Programs - Geological Society of America*, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 417.
- OP-1936. Shea Penland*, H. H. Roberts* and S. J. Williams. LOUISIANA. Subsidence and eustatic controls on the Holocene development of the Mississippi River delta plain [abstr.] *Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists*, *in* AAPG annual convention. 1994, 1994. p. 232.
- OP-1937. Shea Penland*, S. J. Williams, H. H. Roberts*, A. M. Bailey*, G. J. Kuecher*, J. N. Suhayda* and K. E. Ramsey*. LOUISIANA. Geological framework, processes, and rates of subsidence in the Mississippi River delta plain [abstr.] *AAPG Bulletin*, *in* AAPG Gulf Coast Section meeting; abstracts. v. 79, no. 10, October 1995. p. 1565-1566.
- OP-1938. Shea Penland*, L. D. Wyne*, M. R. Byrnes*, S. J. Williams, P. L. Wilkey*, D. O. Johnson* and T. A. Williams*. LOUISIANA. Deciphering the role of the oil and gas industry in Louisiana's coastal land loss crisis [abstr.] *Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists*, *in* AAPG annual convention. 1994, 1994. p. 232.
- OP-1939. B. S. Penn*, R. F. Wendlandt*, E. C. Simmons*, L. W. Snee and D. M. Unruh*. COLORADO. Geochemical evolution of the Spanish Peaks intrusive rocks of south-central Colorado [abstr.] *Abstracts with Programs - Geological Society of America*, *in* Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 58.
- OP-1940. W. E. Pereira and F. D. Hostettler. CALIFORNIA. Records of contaminant input to San Francisco Bay; 7, Anthropogenic and biogenic polycyclic aromatic hydrocarbons [abstr.] *Eos, Transactions, American Geophysical Union*, *in* 1994 ocean sciences meeting. v. 75, no. 3, Suppl. January 18, 1994. p. 234.
- OP-1941. M. R. Perfit*, M. C. Smith*, D. J. Fornari*, M. H. Edwards*, W. I. Ridley, S. J. Goldstein*, J. F. Bender* and R. M. Haymon*. Detailed petrological and geochemical studies of on- and off-axis lavas from the East Pacific Rise; 9°30'-10° N [abstr.] *Eos, Transactions, American Geophysical Union*, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 601.
- OP-1942. W. J. Perry, Jr., R. M. Flores and D. J. Nichols. Transpressional gas-prone Paleogene basins of the Northern Rocky Mountain region, a model for international exploration [abstr.] *Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists*, *in* AAPG annual convention. 1994, 1994. p. 233.
- OP-1943. W. J. Perry, Jr. and J. W. M'Gonigle. MONTANA. Neogene extensional events, northern Tendoy Mountains and adjacent Medicine Lodge Basin, Southwest Montana [abstr.] *Abstracts with Programs - Geological Society of America*, *in* Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 51-52.
- OP-1944. W. J. Perry, Jr. and J. A. Peterson. NEVADA. Pre-Oligocene structure of central Railroad Valley area and adjacent Pancake Range, Nevada western margin of the Paleogene Sheep Pass Basin [abstr.] *Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists*, *in* AAPG annual convention. 1994, 1994. p. 233.
- OP-1945. S. F. Personius. Stream incision patterns and late Quaternary uplift in the Cascadia forearc [abstr.] *Abstracts with Pro-*

- grams - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 524.
- OP-1946. Z. E. Peterman and J. N. Aleinikoff. NEVADA. Isotopic tracers of gold mineralization in Paleozoic limestones of southern Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 83-84.
- OP-1947. Z. E. Peterman, J. S. Stuckless, S. A. Mahan, E. D. Gutentag and J. S. Downey. NEVADA. Strontium isotope characterization of ground-water flow systems in southern Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 117.
- OP-1948. G. G. Phelps. ALASKA. Application of surface geophysical methods for detection of fractures and conduits in the upper Floridan Aquifer in north-central Florida [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 61.
- OP-1949. C. S. Phinney. Enhancement of molecular ion detection by variation of mass analyzer thermal energy for $C^{10}-C^{28}$ alkanes by ion trap mass spectrometry [abstr.] Abstracts - Conference on Mass Spectrometry and Allied Topics, in The 41st ASMS conference on Mass spectrometry and allied topics. (A. G. Marshall, editor). 41, 1993. p. 632a-632b.
- OP-1950. B. S. Pierce, C. F. Eble* and J. C. Hower*. KENTUCKY. Petrography and palynology of the Stockton coal bed, Kentucky [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 80-81.
- OP-1951. B. S. Pierce, E. C. Spiker, R. W. Stanton and A. L. Bates. Isotopic and petrographic evidence for the origin of pyrite in the upper Freeport Coal Bed [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 143.
- OP-1952. T. C. Pierson and J. E. Costa. Trends in sediment yield from volcanoes following explosive eruptions [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 377.
- OP-1953. C. L. Pillmore, M. G. Lockley*, R. F. Fleming and K. R. Johnson*. COLORADO, NEW MEXICO. Footprints in the rocks; new evidence from the Raton Basin that dinosaurs flourished on land until the terminal Cretaceous impact event [abstr.] LPI Contribution, in Papers presented to New developments regarding the KT event and other catastrophes in Earth history. 825, February 1994. p. 89-90.
- OP-1954. D. Z. Piper and C. M. Isaacs. Early Quaternary sediment in the Sea of Japan; minor-element record of a 41000-year cycle of water-column sulfate reduction [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. 1993. p. 366.
- OP-1955. D. Z. Piper, C. M. Isaacs and W. E. Dean. Minor-element interpretation of deposition; modern sediment and ancient shales [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 23.
- OP-1956. George Plafker. ALASKA. Phanerozoic tectonic evolution of Alaska [abstr.], in International symposium; tectonics, energy and mineral resources of the North-West Pacific (abstracts); Volume II. (C. B. Borukayev, editor and others). Khabarovsk: Russian Far East Academy of Sciences, Institute of Tectonics and Geophysics, 1989. p. 44.
- OP-1957. G. S. Plumlee, K. S. Smith, J. A. Erdman, M. J. Flohr, E. L. Mosier and M. R. Montour. COLORADO. Geologic and geochemical controls on metal mobility from the Summitville Mine and its downstream environmental effects [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 434-435.
- OP-1958. C. W. Poag. Tectonism, sea-level change, and paleoclimate; effects on Atlantic passive margin sedimentation [abstr.] Concepts in Sedimentology and Paleontology, in Tectonic and eustatic controls on sedimentary cycles. (J. M. Dennison, editor and others). 4, September 1994. p. 246.
- OP-1959. C. W. Poag, D. S. Powars and Scott Bruce*. Oceanic bolide impacts; deformation characteristics and petroleum potential [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, in AAPG annual convention. 1994, 1994. p. 236.
- OP-1960. C. W. Poag, D. S. Powars, R. B. Mixon and Scott Bruce*. Convulsive events in Atlantic Coastal Plain evolution; effects of the Chesapeake Bay bolide impact [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 152.
- OP-1961. M. H. Podwysocki and V. H. Singhroy*. A summary report on International Geological Correlations Program Project 264, Remote sensing spectral properties (IGCP-264) [abstr.] International Geological Congress, Abstracts—Congrès Géologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 39.
- OP-1962. C. F. Polloni, E. A. Schmuck, J. F. Denny, M. P. Prisloe* and I. G. Babb*. Marine geologic atlases on CD-ROM; a method of assembling, integrating, and displaying information [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 74.
- OP-1963. M. L. Pomes, D. F. Holub and E. M. Thurman. Isocratic separation of alachlor ethane sulfonic acid, alachlor ox-acetic acid, and hydroxyatrazine by reversed-phase liquid chromatography [abstr.], in Programs and proceedings of symposium on Agricultural nonpoint sources of contaminants; a focus on herbicides. 1993. p. 37. Available from: U.S. Environmental Protection Agency, Kansas City, KS, United States.
- OP-1964. D. A. Ponce, T. G. Hildenbrand, J. P. Kauahikaua* and C. H. Degnan*. HAWAII. Major features on maps of shipborne gravity, magnetic, and bathymetric data of the offshore Hawaiian Islands collected during the GLORIA Program [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 582.

- OP-1965. D. R. Pool and J. H. Eychaner. ARIZONA. Temporal-microgravity measurements of aquifer storage change and special yield along Pinal Creek, central Arizona [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 124.
- OP-1966. D. C. Pope, T. M. Brocher, Jill McCarthy, E. D. Karageorgi* and W. S. Holbrook*. Comparison of recording technology for onshore-offshore seismic profiling of continental margins; examples from BASIX [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 445.
- OP-1967. D. C. Pope*, K. P. Furlong*, T. M. Brocher and H. M. Benz. CALIFORNIA. Upper crust of the San Francisco Bay area; a tomographic study [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 74.
- OP-1968. D. C. Pope*, K. P. Furlong*, T. M. Brocher and H. M. Benz. CALIFORNIA. Upper crust of the San Francisco Bay area; a tomographic study [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 643-644.
- OP-1969. Peter Popenoe, B. A. Am Ende*, J. R. Herring and P. H. Briggs. GEORGIA. Phosphorite gravel on the continental slope off Georgia; a possible resource for the future [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 62.
- OP-1970. L. J. Poppe, C. W. Poag and B. A. Swift. Stratigraphy and paleoenvironments of the Shell 410-1 Well, U.S. North Atlantic outer continental shelf [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 75.
- OP-1971. L. J. Poppe, Peter Popenoe, C. W. Poag and B. A. Swift. Stratigraphy and paleoenvironments of the Southeast Georgia Embayment derived from exploratory wells [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 248.
- OP-1972. L. J. Poppe, D. C. Twichell, R. S. Lewis* and R. N. Zajac*. CONNECTICUT. Sidescan-sonar image and acoustic interpretation of the Long Island Sound seafloor off Hammonasset Beach State Park, Connecticut [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 74-75.
- OP-1973. D. Porcelli*, G. J. Wasserburg*, J. H. Chen*, I. G. MacIntyre* and E. A. Shinn. Comparison of sealevel-age curves for the Caribbean and West Australia [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. 1993. p. 368.
- OP-1974. K. W. Porter*, T. S. Dyman, R. G. Tysdal, W. A. Cobban and J. D. Obradovich. MONTANA. Sequence boundaries and chronostratigraphic correlation of Cretaceous rocks in southwestern and east-central Montana [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America; Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 52.
- OP-1975. C. J. Potter. WASHINGTON. Neogene shortening of the upper crust of Southwest Washington in response to oblique plate convergence [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 188.
- OP-1976. C. J. Potter, Karen Lund, L. S. Beard, J. A. Grow, J. J. Miller and Meei-You Lee. NEVADA. Extensional styles along a regional seismic reflection transect, east-central Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 131.
- OP-1977. D. S. Powars, Scott Bruce*, C. W. Poag and R. B. Mixon. VIRGINIA. Virginia's coastal plain inland salt water wedge; a geohydrologic response to the Chesapeake Bay bolide impact [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 410.
- OP-1978. J. A. Power and A. D. Jolly*. ALASKA. Seismicity at 10- to 45-km depth associated with the 1992 eruptions of Crater Peak vent, Mount Spurr, Alaska [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 715.
- OP-1979. T. L. Pratt, S. Y. Johnson, C. J. Potter and W. J. Stephenson. WASHINGTON. The Puget Lowland thrust sheet [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 187.
- OP-1980. T. L. Pratt, S. Y. Johnson, C. J. Potter and W. J. Stephenson. WASHINGTON. The Puget Lowland thrust sheet [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 621.
- OP-1981. T. L. Pratt, S. Y. Johnson, C. J. Potter and W. J. Stephenson. WASHINGTON. The Puget Lowland thrust sheet [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 31.
- OP-1982. W. R. Premo. WYOMING, COLORADO. Isotopic ages and characteristics of the early Proterozoic Green Mountain magmatic arc, SE Wyoming-N Colorado [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 58.
- OP-1983. C. S. Prentice, Paul Mann*, G. S. Burr* and L. R. Peña*. Paleoseismology of the North American-Caribbean strike-slip plate boundary in the Dominican Republic, Hispaniola [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 435.
- OP-1984. C. S. Prentice and D. J. Ponti. CALIFORNIA. The Wrights Tunnel is not an example of a broad shear zone; a re-examination of the documentation of the tunnel deformation associated with the 1906 earthquake [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 343.

- OP-1985. S. D. Preston. MARYLAND. Relations between land use and nitrogen loading in the Patuxent River basin, Maryland [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 165.
- OP-1986. D. F. Pribnow* and J. H. Sass. Determination of thermal conductivity for deep research boreholes [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 592-593.
- OP-1987. C. J. Pride*, W. E. Dean and R. C. Thunell*. Sedimentation in the Gulf of California; fluxes and accumulation rates of biogenic sediments and trace elements [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 23-24.
- OP-1988. D. C. Powell and R. A. Christopher*. Evidence for Cenozoic uplift of the Appalachian Mountains in the Southeastern United States [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 62-63.
- OP-1989. D. E. Prudic. NEVADA. Effects of temperature on water movement at the arid disposal site for low-level radioactive wastes near Beatty, Nevada [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 391.
- OP-1990. D. E. Prudic and R. G. Striegl. NEVADA. Water and carbon dioxide movement through unsaturated alluvium near an arid disposal site for low-level radioactive waste, Beatty, Nevada [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 161.
- OP-1991. J. E. Quick, Silvano Sinigoi*, Adriano Mayer* and Sylvia Zari*. Is a continental crust-mantle transition exposed in the Ivrea-Verbano Zone? [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 711.
- OP-1992. P. J. Quinterio, M. L. McGann and B. A. Carlin. Foraminiferal evidence for Quaternary paleoceanographic changes, Northeast Pacific Ocean [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 254.
- OP-1993. J. M. Rabold*, H. W. Pfefferkorn* and Christopher Wnuk. Sub-fossil standing forest in an exhumed flood plain of the Orinoco River [abstr.] *International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes*, in 29th international geological congress; abstracts. 29, 1992. p. 356.
- OP-1994. A. R. Ramelli*, C. M. dePolo*, J. W. Bell*, C. D. Henry*, J. C. Yount, S. J. Caskey*, K. D. Adams*, M. W. Stirling*, T. W. Rennie*, T. Adams*, P. Rogers*, J. R. Humphrey*, T. L. Sawyer* and W. D. Page*. NEVADA. Secondary surface fracturing associated with the Double Spring Flat earthquake of September 12, 1994 [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting; additional abstracts. v. 76, no. 17, Suppl. April 25, 1995. p. 301.
- OP-1995. D. W. Rankin. VERMONT, NEW HAMPSHIRE. The Littleton, Vermont-New Hampshire 15-minute quadrangle revisited; a progress report [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 76.
- OP-1996. T. R. Rapp. LOUISIANA. The effect of the Baton Rouge Fault on flow in the Abita Aquifer of southeastern Louisiana [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 63.
- OP-1997. N. M. Ratcliffe and T. R. Armstrong. VERMONT. Evaluation of garnet-inclusion textures from cover rocks of the Chester-Athens Dome, Vermont and their regional significance [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 76.
- OP-1998. C. A. Rautman*, A. L. Flint, M. P. Chornack and M. A. McGraw*. NEVADA. Microstratigraphic units and spatial correlation hydrologic properties in tuff, Yucca Mountain, Nevada [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 119-120.
- OP-1999. P. A. Reasenber, R. W. Simpson, R. A. Harris, R. S. Stein and G. C. King*. CALIFORNIA. Response of regional seismicity to static stress changes produced by the 1992 (M 7.3) Landers, California, earthquake [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 447.
- OP-2000. M. M. Reddy. NEVADA. Calcium carbonate formation in Pyramid Lake, Nevada [abstr.] *Special Publication - Karst Waters Institute, in Breakthroughs in karst geomicrobiology and redox geochemistry; abstracts and field-trip guide*. (I. D. Sasowsky, editor and others). 1, 1994. p. 67-68.
- OP-2001. A. F. Redkin* and J. J. Hemley. Role of silicate buffers in the fractionation of Cs and Sr between fluid and some of Al-Si minerals (illite-smectite phases and analcimes) at 250-300°C, P_{sat}-1 kbar [abstr.] *Abstracts of the ... General Meeting of the International Mineralogical Association*, in International Mineralogical Association, 16th general meeting; abstracts. 16, 1994. p. 348.
- OP-2002. J. C. Reed, Jr. A century of Precambrian studies in the U.S. [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 60.
- OP-2003. J. C. Reed, Jr. Development of the southern reaches of Laurentia [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, South-Central Section, 27th annual meeting. v. 25, no. 1, February 1993. p. 40-41.
- OP-2004. M. F. Reed and R. C. Bartholomay. IDAHO. Mineralogy and depositional sources of sedimentary interbeds beneath the Idaho National Engineering Laboratory; eastern Snake River plain, Idaho [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 60.
- OP-2005. M. C. Reheis. NEVADA, CALIFORNIA. Contribution of eolian dust to aridic soils in southern Nevada and California;

- composition, influx rate, and paleoclimate [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 87-88.
- OP-2006. M. C. Reheis and J. L. Slate*. NEVADA, CALIFORNIA. Quaternary sedimentation in Fish Lake Valley, Nevada and California; climatic control, tectonic overprint [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 239.
- OP-2007. M. E. Reid. Transient thermal pressurization in hydrothermal systems; a cause of large-scale edifice collapse at volcanoes? [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 376.
- OP-2008. J. L. Reidel* and R. A. Haugerud. WASHINGTON. Glacial rearrangement of drainage in the northern North Cascade Range, Washington [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 307.
- OP-2009. D. C. Reutter. TEXAS. Pesticides and volatile organic compounds in ground water of the Woodbine Aquifer outcrop in the urban area of Tarrant County, Texas, 1993 [abstr.], *in* Factors affecting water resources; proceedings. Fort Worth, TX: American Water Resources Association - Texas Section, December 1994. p. 39.
- OP-2010. D. L. Rewis and W. F. McCaffrey*. CALIFORNIA. Hydrogeologic evaluation of Edwards Air Force Base, California using geophysical data [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 124.
- OP-2011. J. H. Reynolds*, B. D. Idleman*, R. M. Hernández* and C. W. Naeser. Preliminary chronostratigraphic constraints on Neogene tectonic activity in the Eastern Cordillera and Santa Barbara System, Salta Province, NW Argentina [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 503.
- OP-2012. R. L. Reynolds, J. G. Rosenbaum, D. S. Sweetkind and M. A. Lanphere. COLORADO. Rock magnetism and paleomagnetism of the Creede Caldera moat fill (Oligocene Creede Formation), SW Colorado; constraints on duration of sedimentation [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 401.
- OP-2013. B. S. Rhea and R. L. Wheeler. MISSOURI. Folio of seismotectonic maps of the New Madrid area, southeastern Missouri and adjacent states [abstr.] Seismological Research Letters, *in* Seismological Society of America, Eastern Section, 65th annual meeting; abstracts. v. 64, no. 3-4, December 1993. p. 263.
- OP-2014. B. S. Rhea, R. L. Wheeler and A. C. Tarr. Work sheets for seismotectonic map of the New Madrid 2° × 2° area [abstr.] Seismological Society of America, Eastern Section, Annual Meeting, *in* Seismological Society of America, Eastern Section, 64th annual meeting; program and abstracts. (J. R. Filson, convener and others). 64, 1992.
- OP-2015. C. A. Rice, G. N. Breit and F. A. Hills. Mg, Sr, and K abundances in sulfate and water-soluble minerals from the Paradox Formation; depositional and diagenetic indicators [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 61.
- OP-2016. D. D. Rice, R. C. Pilcher* and Bai Qingzhao*. Coalbed methane resources of China [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, *in* AAPG annual convention. 1994, 1994. p. 243.
- OP-2017. R. W. Richards* and B. F. Molnia. ALASKA. Medial moraine band of the Bering Glacier, southcentral Alaska [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 77-78.
- OP-2018. D. A. Rickert. New U.S. Geological Survey protocol for measuring low levels of trace elements in water samples [abstr.], *in* North Dakota water quality symposium; proceedings. (B. D. Seelig, chairperson). Fargo, ND: N.D. Water Resour. Res. Inst. 1994. p. 24.
- OP-2019. J. L. Ridgley and M. A. Carey. ARIZONA, COLORADO, NEW MEXICO. Landmass effects on Tethyan water migration and Cenomanian foraminiferal biostratigraphy, southern Colorado Plateau, Arizona, Colorado, New Mexico [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 61.
- OP-2020. J. L. Ridgley and V. F. Nuccio. INDIANA. Mississippian St. Louis Limestone; a new source-rock play in the Illinois Basin? [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, *in* AAPG annual convention. 1994, 1994. p. 243.
- OP-2021. J. R. Riehle and C. E. Meyer. ALASKA. Reconnaissance Holocene tephrochronology of the eastern Aleutian Arc, AK [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 138.
- OP-2022. J. K. Rigby, Jr.*, G. P. Landis and R. A. Hengst*. Can an extraterrestrial impact event explain the pattern of biotic crisis near the KT boundary? [abstr.] LPI Contribution, *in* Papers presented to New developments regarding the KT event and other catastrophes in Earth history. 825, February 1994. p. 93-94.
- OP-2023. N. R. Riggs*, T. M. Demko*, R. F. Dubiel, S. T. Hasiotis, S. R. Ash* and C. L. May*. ARIZONA. Distal effects of volcanism on fluvial sedimentation, Upper Triassic Chinle Formation, Arizona [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 68.
- OP-2024. M. R. Risch. INDIANA. A summary of government agency data on the occurrence of pesticides in Indiana groundwater [abstr.], *in* New directions in pesticide research, development, management, and policy. (Virginia Water Resources Research Center and others). Blacksburg, VA: Virginia Polytechnic Institute and State University, 1993. p. 15-16.

- OP-2025. R. M. Risek*, H. B. Rollins*, F. T. Dulong and W. A. Kneller*. X-ray diffraction analyses of the Harlem and Ames coal beds (Glenshaw Formation, Upper Pennsylvanian) [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 215.
- OP-2026. P. I. Ritson*, A. R. Flegal* and M. I. Hornberger. CALIFORNIA. Records of contaminant input to San Francisco Bay; 5. Sources of lead identified by stable lead isotopes [abstr.] Eos, Transactions, American Geophysical Union, in 1994 ocean sciences meeting. v. 75, no. 3, Suppl. January 18, 1994. p. 234.
- OP-2027. A. J. Robb, III*, C. G. Maples* and S. Y. Johnson. COLORADO. Ichnoassemblage in the Maroon Formation (Middle Pennsylvanian to Lower Permian) of northwestern Colorado; evidence of the oldest yet recognized eolian ecosystem [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 43rd annual meeting. v. 22, no. 6, April 1990. p. 43.
- OP-2028. E. I. Robbins, M. R. Stanton, J. E. Tilk*, R. D. Congdon, H. T. Evans, Jr., C. D. Gullett*, M. B. Sanders*, Motoaki Sato, H. T. Schaefer* and R. R. Seal, II. MICHIGAN. Association of microbes with authigenic copper-chloride mineral films (atacamite and paratacamite) and petroleum residue at depth in the White Pine copper mine, Michigan [abstr.] Program with Abstracts - Geological Association of Canada; Mineralogical Association of Canada; Canadian Geophysical Union, Joint Annual Meeting. 19, 1994. p. 94.
- OP-2029. S. L. Robbins, Courtney Williamson and H. W. Oliver. NEVADA. Geologic implications from gravity anomaly maps of the Crescent Valley $1/2^{\circ} \times 1^{\circ}$ Quadrangle including Pine Valley, Nevada [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, in AAPG annual convention. 1994, 1994. p. 244.
- OP-2030. L. N. Roberts and M. A. Kirschbaum. Late Cretaceous paleogeography, sediment accumulation, and coal distribution, the Western Interior of middle North America [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, in AAPG annual convention. 1994, 1994. p. 244.
- OP-2031. J. W. Robinson* and P. J. McCabe. UTAH. Controls on sandbody architecture in a braided fluvial system; the Salt Wash Member of the Morrison Formation, southern Utah [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, in AAPG annual convention. 1994, 1994. p. 244-245.
- OP-2032. D. T. Rodbell. The timing of late Quaternary glaciation, Cordillera Blanca, Peru [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 61.
- OP-2033. D. J. Roddy. Geologic and geophysical research in asteroid, comet, and meteorite impact and explosion cratering; civilian and military applications in planetary space science and the cold war [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 347.
- OP-2034. D. J. Roddy, E. M. Shoemaker and R. R. Anderson*. IOWA. The Manson Impact Structure Research Program; a summary of results [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 337.
- OP-2035. R. W. Rodriguez, D. M. Bush*, C. M. Delorey, J. L. Trias, Milton Carlo, B. R. Richmond and W. C. Schwab. PUERTO RICO. Two sand budget stories three years after Hugo, Puerto Rico [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 65.
- OP-2036. E. W. Roedder*, J. F. Whelan and D. T. Vaniman*. NEVADA. Fluid inclusion crushing and homogenization studies of calcite veins from Yucca Mountain, Nevada, tuffs; environment of formation [abstr.] Abstracts of the ... General Meeting of the International Mineralogical Association, in International Mineralogical Association, 16th general meeting; abstracts. 16, 1994. p. 354-355.
- OP-2037. E. W. Roedder*, J. F. Whelan and D. T. Vaniman*. NEVADA. Fluid inclusion crushing and homogenization studies of calcite veins from Yucca Mountain, Nevada, tuffs; environment of formation [abstr.] Program and Abstracts; Biennial Pan-American Conference on Research on Fluid Inclusions, in Fifth biennial Pan-American conference on Research on fluid inclusions. (Georgina Izquierdo M., editor and others). 5, May 1994. p. 86.
- OP-2038. E. A. Roeloffs. WASHINGTON. Numerical simulation of the ground-water flow system in the Castle Lake debris dam, Mount St. Helens, Washington; implications for dam stability [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 378.
- OP-2039. E. A. Roeloffs and E. G. Quilty. CALIFORNIA. Groundwater level changes near Parkfield, California, caused by recent earthquakes [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 471.
- OP-2040. A. M. Rogers and D. M. Perkins. Peak acceleration scaling produced by isochron pulse addition and extreme sampling [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 448.
- OP-2041. A. M. Rogers and D. M. Perkins. Peak-acceleration attenuation fit using a 3-D finite-fault patch model and extreme sampling [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 41.
- OP-2042. S. A. Rojstaczer* and S. H. Hickman. Time constants & stress controls on seismically induced permeability enhancements in the shallow crust [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 107.
- OP-2043. S. A. Rojstaczer* and S. H. Hickman. CALIFORNIA. In-situ study of physical mechanisms for permeability changes associated with the 1989 Loma Prieta earthquake [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994

- spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 147-148.
- OP-2044. A. J. Roman-Mas, S. J. Klaine* and C. P. Weisskopf*. Deterministic evaluation of pesticide transport from small agricultural catchments [abstr.] American Water Resources Association Technical Publication Series TPS, in Symposium on Responses to changing multiple-use demands; new directions for water resources planning and management. (M. J. Sale, editor and others). 94-2, April 1994. p. 341.
- OP-2045. J. G. Rosenbaum, R. L. Reynolds, J. P. Bradbury, D. P. Adam, A. M. Sarna-Wojcicki and M. W. Kerwin*. OREGON. Middle and late Quaternary climate changes inferred from lacustrine sediments in southern Oregon; comparison of magnetic, diatom, and pollen records [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 256.
- OP-2046. Alwyn Ross, G. R. Foulger, B. R. Julian and J. R. Evans. CALIFORNIA. Three-dimensional compressional- and shear-wave structure at The Geysers geothermal area, California, from local-earthquake tomography [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 422-423.
- OP-2047. Malcolm Ross. CALIFORNIA. The New Idria Serpentine of California; a toxic rock? [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 320.
- OP-2048. C. E. Rostad. Transport of toxic organic compounds associated with suspended sediment in the Mississippi River; before, during and after the 1993 flood [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 181.
- OP-2049. J. P. Rousseau, William Thordarson, Jack Kume and M. A. Kurznack*. NEVADA. Thermodynamic processes of liquid and vapor movement in Rainier Mesa, G-Tunnel underground facility, Nevada Test Site, Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 120.
- OP-2050. E. L. Rowan, M. B. Goldhaber and J. R. Hatch. ILLINOIS. Regional fluid flow and thermal history of the Illinois Basin; evidence from fluid inclusions and biomarkers in the Upper Mississippi Valley zinc district [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 675.
- OP-2051. D. C. Rubie*, A. R. Hogrefe*, T. G. Sharp*, F. A. Seifert*, Seth Stein*, S. H. Kirby and C. R. Ross, II*. Kinetics of high pressure phase transitions in subducting lithosphere [abstr.] Abstracts of the ... General Meeting of the International Mineralogical Association, in International Mineralogical Association, 16th general meeting; abstracts. 16, 1994. p. 357-358.
- OP-2052. L. F. Ruppert, R. B. Finkelman, Emilija Boti*, Milan Milosavljevic*, Miodrag Kaluderovic* and Rada Kolinovic*. Significance of Ni- and Cr-rich minerals in the Kosovo Lignite, Yugoslavia [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 144.
- OP-2053. L. F. Ruppert, J. C. Hower* and C. F. Eble*. KENTUCKY. Arsenic-bearing pyrite and marcasite in the Fire Clay Coal Bed, Middle Pennsylvanian Breathitt Formation, eastern Kentucky [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 215.
- OP-2054. H. F. Ryan and A. J. Stevenson. OREGON, WASHINGTON. High resolution seismic study in the Columbia River; evidence for recent faulting in northern Oregon and southern Washington [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 622.
- OP-2055. M. P. Ryan. Neutral buoyancy theory of magma transport and storage [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 511.
- OP-2056. Trond Ryberg and Karl Fuchs*. High-frequency teleseismic Pn wave observations beneath northern Eurasia [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 72.
- OP-2057. R. T. Ryder, R. C. Burruss, J. R. Hatch, J. D. King, V. F. Nuccio, G. A. Schumacher* and A. G. Harris. OHIO. Geochemistry and thermal maturation of the Ordovician Utica Shale in the Redstone Corporation No. 3. Barth Well, Coshocton County, Ohio [abstr.] AAPG Bulletin, in AAPG Eastern Section meeting. v. 79, no. 9, September 1995. p. 1418.
- OP-2058. R. T. Ryder, J. J. Miller, J. A. Grow and N. M. Ratcliffe. PENNSYLVANIA. Interpreted reflection seismic events near the North Central Corporation Well, Newark Basin, Bucks County, Pennsylvania [abstr.] SEG Annual Meeting Expanded Technical Program Abstracts with Biographies, in Society of Exploration Geophysicists, 64th annual international meeting; technical program, expanded abstracts with authors' biographies. 64, 1994. p. 807.
- OP-2059. R. T. Ryder, J. J. Miller, J. A. Grow and N. M. Ratcliffe. PENNSYLVANIA. Interpreted reflection seismic events near the North Central Oil Corporation well, Newark Basin, Bucks County, Pennsylvania [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, in AAPG annual convention. 1994, 1994. p. 248.
- OP-2060. R. O. Rye, D. F. Finklestein* and P. M. Bethke. COLORADO. Carbonate isotope geochemistry of the Creede Formation and implications for hydrothermal vein mineralization [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 399.
- OP-2061. M. J. Rymer, C. L. Powell, II, A. M. Sarna-Wojcicki and J. A. Barron. CALIFORNIA. Late Miocene stratigraphic and paleogeographic setting of Garnet Hill in the northwestern Salton Trough, Southern California [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 596.
- OP-2062. P. E. Sacks and J. W. Horton, Jr. VIRGINIA, NORTH CAROLINA. Structural and lithologic relationships in the Raleigh metamorphic belt near Lake Gaston, Virginia and

- North Carolina [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 66.
- OP-2063. B. B. Sageman*, M. A. Arthur* and W. E. Dean. Cenomanian-Turonian paleoceanographic models for Western Interior Sea; constraints from paleoecology and geochemistry [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, in AAPG annual convention. 1994, 1994. p. 249.
- OP-2064. C. F. San Juan* and K. C. Ames. WASHINGTON. Background metal concentrations in soils of Washington State [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 102.
- OP-2065. J. H. Sass and C. F. Williams. Thermal regime of the Great Basin and its implications for hydrocarbon occurrence [abstr.] AAPG Bulletin, in AAPG Rocky Mountain Section meeting; abstracts. v. 79, no. 6, June 1995. p. 924.
- OP-2066. D. A. Sawyer, J. C. Cole, R. J. Laczniak and D. A. Trudeau. NEVADA. Hydrogeologic uncertainties in the Nevada Test Site region [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 76.
- OP-2067. B. D. Schaap and K. J. Lucey. IOWA. Water-quality characteristics of stormwater runoff in Davenport, Iowa [abstr.], in Programs and proceedings of symposium on Agricultural nonpoint sources of contaminants; a focus on herbicides. 1993. p. 36. Available from: U.S. Environmental Protection Agency, Kansas City, KS, United States.
- OP-2068. G. G. Schaber, J. F. McCauley and C. S. Breed. SRL-1; new radar images of Salsaf Oasis and vicinity, southern Egypt [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 127-128.
- OP-2069. G. G. Schaber, R. G. Strom* and D. D. Dawson*. A geologic cataclysm on Venus about 300 m.y. ago [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 173.
- OP-2070. A. B. Schill*, J. R. Muller*, D. J. Merritts*, E. C. Beutner*, C. S. Prentice and P. R. Bodin*. CALIFORNIA. The northernmost San Andreas Fault; evidence of youthful strike-slip faulting near Point Delgada, California [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1995 annual meeting. v. 27, no. 6, 1995. p. 54.
- OP-2071. J. S. Schindler, T. M. Cronin, R. E. Weems and R. B. Mixon. VIRGINIA. Late Pliocene shoreline in Virginia; implications for eustatic sea level [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 145.
- OP-2072. J. C. Schmidt*, J. L. Mayers*, M. F. Leschin* and D. M. Rubin. ARIZONA. Geomorphic mapping of post-Glen Canyon Dam fine-grained alluvial deposits of the Colorado River in Grand Canyon, Arizona [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 302.
- OP-2073. E. A. Schmuck, P. C. Valentine and N. W. Driscoll*. Examples of trawl and dredge marks from the side-scan sonar records collected from Stellwagen Bank, Georges Bank, and Block Island Sound, and their geomorphic and sedimentary significance [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 80.
- OP-2074. D. W. Scholl, A. J. Stevenson and P. E. Hart. ALASKA. Eocene formation of the Bering Sea basin linked to regional-scale tectonism of Alaska; implications for energy gas resources and the accumulation of massive hydrate deposits (VAMPs) [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 596-597.
- OP-2075. D. W. Scholl, A. J. Stevenson, Steve Mueller*, E. L. Geist, T. L. Vallier and D. C. Engebretson*. ALASKA. Regional-scale strain partitioning leading to escape tectonism and formation of offshore arc-trench systems, Alaska-Aleutian-Bering Sea region [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 110.
- OP-2076. M. A. Scholl and C. J. Janik. HAWAII. Use of stable isotopes, tritium and groundwater chemistry to interpret hydrogeology of the Kilauea Volcano area, Hawaii [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 322.
- OP-2077. M. A. Scholl and C. J. Janik. HAWAII. Stable isotopes and tritium as tracers of ground water flow in the Kilauea Volcano area, Hawaii [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 143.
- OP-2078. R. R. Schumann and L. C. Gundersen. The USGS/EPA "Radon potential of the U.S." Project; a case study in the application of geoscience information to public policy [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 68.
- OP-2079. R. L. Schuster, P. T. Pringle* and R. L. Logan*. WASHINGTON. Tectonic significance of prehistoric rock avalanches of the Olympic Mountains, Washington [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 522.
- OP-2080. W. C. Schwab, D. C. Twichell*, R. W. Rodriguez*, E. R. Thieler*, M. A. Allison* and P. T. Gayes*. Linear rippled scour depressions in the nearshore; possible indicators of cross-shelf sediment transport? [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1995 annual meeting. v. 27, no. 6, 1995. p. 77.
- OP-2081. W. C. Schwab, D. C. Twichell, W. J. Winters, H. J. Lee, W. J. McArthur, C. H. Nelson, J. L. DaSilva* and N. H. Kenyon*. Sediment mass transport mechanisms and deposition on the distal Mississippi Fan [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 342.

- OP-2082. Antje Schwalb*, S. M. Locke*, A. J. Smith* and W. E. Dean. MINNESOTA. Ostracode and stable isotope evidence of Holocene environmental changes in Minnesota lake sediments [abstr.] Program and Abstracts - American Quaternary Association. Conference, in American Quaternary Association; 13th biennial meeting; program and abstracts. 13, 1994. p. 155.
- OP-2083. D. P. Schwartz. Seismogenic faults; narrow zones of deformation in the crust [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 342.
- OP-2084. D. P. Schwartz, Koji Okumura*, Daniela Pantosti*, T. J. Powers and J. M. Fuentes*. CALIFORNIA. Paleoseismologic constraints on earthquake recurrence, San Andreas Fault, Santa Cruz Mountains, California [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 98.
- OP-2085. E. S. Schweig, M. P. Tuttle*, Yong-Gang Li*, J. A. Craven*, M. A. Ellis*, M. J. Guccione*, R. H. Lafferty* and R. F. Cande*. Evidence for recurrent strong earthquake shaking in the past 5,000 years, New Madrid region, central U.S. [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 438.
- OP-2086. D. B. Scott*, E. S. Collins*, James Duggan*, A. Jennings*, R. T. Patterson*, A. Asioli* and A. R. Nelson. Modern Pacific Coast marsh foraminiferal zonation; comparison with Atlantic Coast associations [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 531.
- OP-2087. T. M. Scott*, G. L. Wingard, S. D. Weedman and L. E. Edwards. FLORIDA. Reinterpretation of the peninsular Florida Oligocene; a multidisciplinary view [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 151.
- OP-2088. W. E. Scott, D. R. Sherrod, C. A. Gardner, J. W. Vallance*, R. I. Tilling and M. A. Lanphere. OREGON. New geologic map of Mount Hood Volcano, Oregon [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 116.
- OP-2089. E. A. Scribner, E. M. Thurman and D. A. Goolsby. Reconnaissance data for herbicides and their metabolites in surface water of the Midwestern United States; immunoassay and gas chromatography/mass spectrometry [abstr.], in Programs and proceedings of symposium on Agricultural nonpoint sources of contaminants; a focus on herbicides. 1993. p. 41. Available from: U.S. Environmental Protection Agency, Kansas City, KS, United States.
- OP-2090. R. R. Seal, II, S. H. Clark, R. A. Ayuso, N. K. Foley and K. J. Gray. SOUTH CAROLINA. Sulfur isotope geochemistry of hypogene mineralization at the Barite Hill gold deposit, S.C.; a window into and through regional metamorphism [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 82.
- OP-2091. L. C. Seekins, L. G. Wennerberg, Hsi-Ping Liu and Lucia Margheriti*. CALIFORNIA. Site amplification at five locations in San Francisco; a comparison of S-waves, codas and microtremors [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 440.
- OP-2092. D. A. Seeland. IDAHO. Paleogeographic revisions based on paleocurrent measurements in Pennsylvanian and Permian turbidites of the Wood River basin, Idaho [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 62-63.
- OP-2093. D. A. Seeland. IDAHO. Paleocurrent and provenance evidence for 100 km of original separation between the Wood River and Oquirrh basins [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 55.
- OP-2094. K. C. Seramur*, R. E. Kayen, E. A. Cowan* and R. D. Powell*. ALASKA. Lithologic and geotechnical characteristics of grounding-line sediments at Muir Glacier; implications for interpretation of seismic reflection profiles [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 474.
- OP-2095. S. M. Shakofsky and J. R. Nimmo. IDAHO. Improved laboratory and field techniques for measuring unsaturated flow at the Idaho National Engineering Laboratory [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 442.
- OP-2096. S. M. Shakofsky and J. R. Nimmo. IDAHO. Unsaturated zone properties at a radioactive-waste-disposal site at the Idaho National Engineering Laboratory [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 164.
- OP-2097. T. M. Shank*, R. A. Lutz*, D. J. Fornari*, R. M. Haymon*, M. D. Lilley*, K. L. Von Damm*, M. R. Perfit*, M. H. Edwards*, W. C. Shanks, III and Daniel Desbruyeres*. Rapid development of biological community structure and associated geochemical and geological features at hydrothermal vents at 9°-10° North, East Pacific Rise [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 601.
- OP-2098. W. C. Shanks, III and D. E. Crowe. Laser microprobe sulfur isotope study of seafloor hydrothermal chimney sulfides [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 101.
- OP-2099. K. W. Shanley* and P. J. McCabe. Allocyclic controls on deposition of continental sediments; a matter of time [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, in AAPG annual convention. 1994, 1994. p. 256-257.
- OP-2100. S. E. Sharpe*, J. F. Whelan and R. M. Forester. NEVADA. Southern Nevada land snails; a proxy for late glacial summertime precipitation patterns [abstr.] Abstracts with Pro-

- grams - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 447.
- OP-2101. S. E. Sharpe*, J. F. Whelan, R. M. Forester and M. M. Rose*. Quaternary paleoclimatology from community and stable isotope studies of terrestrial snails [abstr.] Program and Abstracts - American Quaternary Association. Conference, *in* American Quaternary Association; 13th biennial meeting; program and abstracts. 13, 1994. p. 159.
- OP-2102. D. M. Shaw*, D. W. Field*, T. M. Holm, M. D. Jennings*, J. A. Sturdevant, G. P. Thelin and L. D. Worthy*. An innovative partnership for national environment assessment [abstr.] Proceedings of the Annual William T. Pecora Memorial Symposium on Remote Sensing, *in* Pecora 12 symposium; Land information from space-based systems. 12, August 1993. p. 339.
- OP-2103. H. R. Shaw. Nonlinear dynamics and magmatic periodicity; fractal intermittency and chaotic crises [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, *in* 29th international geological congress; abstracts. 29, 1992. p. 510.
- OP-2104. S. C. Shaw* and J. D. Smith. A model for bedload transport of naturally sorted sediments by desert winds [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 149.
- OP-2105. K. L. Shelton*, M. B. Underwood* and D. G. Howell. ALASKA. Regional stable isotope variations of calcite veins from Lisburne Corridor, frontal Brooks Range, north-central Alaska; indicators of thermal maturity and hydrocarbon migration [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 647.
- OP-2106. A. H. Shen*, I-Ming Chou and W. A. Bassett*. Experimental determination of PVTX relations of fluids in the diamond-anvil cell; a critical review [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 137.
- OP-2107. Kunihiko Shimazaki*, Makoto Okamura*, Takashi Nakata*, Noboru Chida*, G. M. Mann, Hiroyuki Tsutsumi* and A. Ikeda*. CALIFORNIA. Northern extension of the Hayward Fault [abstr.] Seismological Research Letters, *in* 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 70.
- OP-2108. E. A. Shinn and R. B. Halley. Geological effects of hurricanes on coral reefs; a review of hurricanes Donna, Betsy, Hugo and Andrew [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 69-70.
- OP-2109. E. A. Shinn, R. P. Steinen*, R. F. Dill* and R. P. Major*. Lime mud layers in high energy tidal channels, a record of hurricane deposition [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 70.
- OP-2110. B. M. Shmakin*, V. Y. Zagorsky*, G. G. Afonina*, E. E. Foord and M. E. Brownfield. Alkali feldspars and micas from pegmatites in the Southwestern USA [abstr.] Abstracts of the ... General Meeting of the International Mineralogical Association, *in* International Mineralogical Association, 16th general meeting; abstracts. 16, 1994. p. 375-376.
- OP-2111. E. M. Shoemaker, K. E. Herkenhoff* and V. A. Gostin*. UTAH. Impact origin of Upheaval Dome, Utah [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 388.
- OP-2112. E. M. Shoemaker and C. S. Shoemaker*. The crash of P/Shoemaker-Levy 9 into Jupiter and its implications for comet bombardment on Earth [abstr.] LPI Contribution, *in* Papers presented to New developments regarding the KT event and other catastrophes in Earth history. 825, February 1994. p. 113-114.
- OP-2113. R. R. Shroba. COLORADO. Quaternary loess stratigraphy along the Colorado River between Glenwood Springs and Rifle, Colorado; preliminary findings [abstr.] Program and Abstracts - American Quaternary Association. Conference, *in* American Quaternary Association; 13th biennial meeting; program and abstracts. 13, 1994. p. 246.
- OP-2114. R. P. Signell, H. L. Jenter and A. F. Blumberg*. MASSACHUSETTS. Modeling the mean flow in Massachusetts Bay [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1992 fall meeting. v. 73, no. 43, Suppl. October 27, 1992. p. 298.
- OP-2115. N. J. Silberling and K. M. Nichols. A Mid-Mississippian episode of flexural loading in the Antler foreland, eastern Great Basin [abstr.] AAPG Bulletin, *in* AAPG Rocky Mountain Section meeting; abstracts. v. 79, no. 6, June 1995. p. 924-925.
- OP-2116. Andrew Simon. WASHINGTON. Channel hydraulics and energy expenditure in channel adjustment; Elk Rock Reach, North Fork Toutle River, Washington [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 88.
- OP-2117. B. M. Simonson* and J. P. Smoot. Are coarsely crystalline authigenic minerals in the mudstones of the early Mesozoic Newark Supergroup truly cements? [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 81.
- OP-2118. B. M. Simonson* and J. P. Smoot. NEW JERSEY, PENNSYLVANIA. Distribution and origin of macropore-filling cements in nonmarine mudstones, early Mesozoic Newark Basin, New Jersey and Pennsylvania [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 337.
- OP-2119. R. W. Simpson, D. A. Castillo, R. A. Harris, L. K. Hutton* and L. M. Jones. CALIFORNIA. Faults in Southern California with increased Coulomb failure load after $M_L > 5$ earthquakes are more likely to have $M_L > 5$ events in the year following [abstr.] Seismological Research Letters, *in* 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 63.
- OP-2120. R. W. Simpson, K. R. Lajoie and D. H. Oppenheimer. CALIFORNIA. Inferring blind thrusts in the San Francisco Bay region from earthquake focal mechanisms and averaged to-

- pography [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 681.
- OP-2121. P. K. Sims. Archean and early Proterozoic tectonic framework of north-central United States [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 63.
- OP-2122. T. W. Sisson and C. R. Bacon. Differentiation of silicic magmas by gas-driven filter-pressing [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 452.
- OP-2123. B. A. Skipp. IDAHO. Structural and stratigraphic setting of the southern part of the Mesozoic Pioneer thrust fault north of the Snake River plain, south-central Idaho [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 55-56.
- OP-2124. B. A. Skipp and Jennifer Carr*. IDAHO. Episodic Tertiary extension along the Copper Creek Fault in western part of Sevier orogenic belt, south-central Idaho [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 56.
- OP-2125. B. A. Skipp and P. K. Link*. IDAHO. New evidence for late Proterozoic extension in southern Beaverhead Mountains, eastern Idaho [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 43rd annual meeting. v. 22, no. 6, April 1990. p. 44.
- OP-2126. J. F. Slack. Tourmaline associations with hydrothermal ore deposits [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 449.
- OP-2127. W. V. Sliter and A. Arnaud-Vanneau*. Resolution Guyot; the oldest Pacific Island [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 354.
- OP-2128. J. A. Smeltzer*, M. D. Lewan and N. W. Hinman*. Potential ammonia evolution from Cyanobacteria; implications for the early diagenetic environment [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 734.
- OP-2129. C. L. Smith, J. R. Lindsay, S. E. Box, A. A. Bookstrom, L. S. Balistrieri and Mohammed Ikramuddin*. IDAHO. River dispersal of metals downstream from the Coeur d'Alene mining district and the Bunker Hill mill-smelter complex, Idaho; Part III, Reaction of ground water with mill tailings; contaminated sediment [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 434.
- OP-2130. J. D. Smith. ARIZONA. Development of a scientifically-based water and sediment management program for the Colorado River through the Grand Canyon [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 64.
- OP-2131. K. S. Smith and H. L. Huyck*. Distinguishing geoavailability from bioavailability of metals in mining wastes [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 34.
- OP-2132. M. C. Smith*, M. R. Perfit*, A. L. Heatherington*, I. R. Jonasson*, W. I. Ridley, R. W. Embley* and W. W. Chadwick, Jr*. Major element, trace element and isotopic constraints on the recent spatial and temporal evolution of MORB from the southern Juan de Fuca Ridge [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 600.
- OP-2133. M. Smith*, D. R. Lageson*, A. L. Heatherington* and S. S. Harlan. MONTANA. Geochronology, geochemistry and isotope systematics of the basalt of Hepburn Mesa, Yellowstone River valley, Montana [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 56.
- OP-2134. P. H. Smith*, D. T. Britt*, L. R. Doose*, R. B. Singer*, M. G. Tomasko*, L. A. Soderblom, H. U. Keller* and J. M. Knudsen*. The Imager for MESUR Pathfinder (IMP) experiment [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 383.
- OP-2135. R. B. Smith*, J. O. Byrd*, A. G. Sylvester* and D. D. Susong. Neotectonics and earthquake hazards of the Teton Fault [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 43rd annual meeting. v. 22, no. 6, April 1990. p. 45.
- OP-2136. R. L. Smith, M. H. Brooks, T. Yoshinari* and J. K. Bohlke. Assessing denitrification in nitrate-contaminated groundwater using natural gradient tracer tests [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 154.
- OP-2137. V. K. Smith and R. A. Koski. Temporal variations at high-temperature vent sites, northern Cleft segment, Juan de Fuca Ridge; 1990 to 1994 [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 600.
- OP-2138. J. P. Smoot. The evolution of fluvial drainages in the early Mesozoic Newark Supergroup rift basins; a new model for the origin of closed-basin lakes [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 82.
- OP-2139. J. P. Smoot. Tectonic controls on the sedimentary record of the early Mesozoic Newark Supergroup, eastern North America [abstr.] Concepts in Sedimentology and Paleontology, in Tectonic and eustatic controls on sedimentary cycles. (J. M. Dennison, editor and others). 4, September 1994. p. 246.
- OP-2140. J. P. Smoot and B. M. Simonson*. NEW YORK, NEW JERSEY, PENNSYLVANIA. Alkaline authigenic minerals in the early Mesozoic, Newark Basin, NY, NJ, PA; evidence

- for late fluid movement through mudstones [abstr.] Annual Meeting Abstracts - American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, in AAPG annual convention. 1994, 1994. p. 261-262.
- OP-2141. D. R. Soller, R. L. Bernknopf, J. F. Sutter and R. H. Campbell. Regional environmental risk assessment; case studies [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 319.
- OP-2142. M. L. Sorey. CALIFORNIA. Helium isotope and gas discharge variations associated with crustal unrest in Long Valley Caldera, California, 1989-1993 [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 453.
- OP-2143. R. W. Spengler and J. G. Rosenbaum. NEVADA. A low-angle breccia zone of hydrologic significance at Yucca Mountain, Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 119.
- OP-2144. Paul Spudich, L. K. Steck, M. A. Hellweg, J. B. Fletcher and L. M. Baker. CALIFORNIA. Transient stresses at Parkfield, California, produced by the M 7.4 Landers earthquake of June 28, 1992; observations from the UPSAR dense seismograph array [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 447.
- OP-2145. J. K. Stamer. KANSAS, NEBRASKA. Organonitrogen herbicides in unregulated and regulated streams in the lower Kansas River basin, Kansas and Nebraska [abstr.], in Programs and proceedings of symposium on Agricultural nonpoint sources of contaminants; a focus on herbicides. 1993. p. 6. Available from: U.S. Environmental Protection Agency, Kansas City, KS, United States.
- OP-2146. R. G. Stanley. CALIFORNIA. Historical oil wells in Los Gatos, Santa Clara County, California; implications for tectonics, resources, and the environment [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 598.
- OP-2147. S. W. Starratt. NEVADA. Freshwater diatom response to global climatic change and local tectonic influence; evidence from Neogene lacustrine deposits in west-central Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 521.
- OP-2148. S. W. Starratt and J. R. LeCompte. GEONAMES and GNULLEX; databases of the stratigraphic nomenclature of the United States [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 598-599.
- OP-2149. P. Stauffer*, B. A. Bekins and S. J. Dreiss*. Elevated fluid pressures and possible hydrofractures [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 588.
- OP-2150. W. C. Steele, H. G. Greene, C. H. Degnan, M. R. Hamer, M. Ginzemer*, P. Mathews*, D. E. Sullivan* and C. H. Ferguson*. CALIFORNIA. Computer visualizations of seafloor topography of Soquel Canyon, Monterey Bay, California [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1992 fall meeting. v. 73, no. 43, Suppl. October 27, 1992. p. 318.
- OP-2151. H. J. Stein, A. H. Hofstra, L. W. Snee, J. W. Morgan, R. J. Walker* and A. R. Dahl*. NEVADA. Preliminary Re-Os data from the carlin-type gold deposits in the Jerritt Canyon District, Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 141.
- OP-2152. R. S. Stein, Pierre Briole*, J. C. Ruegg* and Paul Tapponnier*. Contemporary, Holocene and late Pleistocene deformation of the Asal Rift, Djibouti; insights for the mechanics of slow-spreading ridges [abstr.] Terra Abstracts, in Sixth meeting of the European Union of Geosciences. v. 3, no. 1, March 1991. p. 387.
- OP-2153. R. S. Stein, T. C. Hanks, R. W. Simpson and D. A. Castillo*. CALIFORNIA. Influence of the 1952 Kern County earthquake on the Southern California seismic moment and shear strain rates [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 64.
- OP-2154. M. B. Steiner* and E. M. Shoemaker. IOWA. The Late Cretaceous Manson impact structure [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 386.
- OP-2155. M. G. Steltenpohl* and M. J. Kunk. ALABAMA, GEORGIA. Evidence for Alleghanian normal faulting along the west margin of the Pine Mountain Massif, Alabama & Georgia [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 71.
- OP-2156. M. G. Steltenpohl*, S. W. Van Winkle*, Arild Andresen*, Mona Lindstrom*, L. F. Wood and M. J. Kunk*. Tectonothermal evolution of allochthons in Ofoten-Troms, North Norwegian Caledonides; implications for poly-orogenic evolution [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 138.
- OP-2157. C. D. Stephens and B. A. Chouet. ALASKA. Evolution of the precursory long-period event swarm of the December 14, 1989 eruption of Redoubt Volcano, Alaska [abstr.] Seismological Research Letters, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 55.
- OP-2158. W. J. Stephenson and T. L. Pratt. WASHINGTON. Preliminary results from boundary-element modeling of the Puget Lowland thrust sheet, Washington [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 621.
- OP-2159. L. A. Stern, S. H. Kirby and W. B. Durham*. Textural observations of H₂O ice II nucleation and growth processes during phase transformations under hydrostatic and nonhydrostatic stress [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 635-636.
- OP-2160. A. J. Stevenson and T. R. Bruns. ALASKA. Sediment transport and fan deposition in the southern Gulf of Alaska;

- effects of transform motion recorded by deep-sea sedimentation [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 194.
- OP-2161. L. M. Stewart and S. E. Rose*. Use of environmental tritium to characterize ground water flow systems in regolith and crystalline fractured-rock hydrogeologic settings [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 71-72.
- OP-2162. R. W. Stogner, Sr. and T. H. Diehl. Evaluation of channel contribution to total suspended-sediment yield in small agricultural catchments [abstr.] American Water Resources Association Technical Publication Series TPS, *in* Symposium on Responses to changing multiple-use demands; new directions for water resources planning and management. (M. J. Sale, editor and others). 94-2, April 1994. p. 339.
- OP-2163. B. D. Stone. Progress toward higher resolution of the late Wisconsinan glaciation; sidereal chronology of the New England region, 30 to 13 ka [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 84.
- OP-2164. J. R. Stone and G. M. Ashley*. Timing and mechanisms of glacial Lake Hitchcock drainage [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 85.
- OP-2165. J. R. Stone, M. L. Digiacommo-Cohen* and R. S. Lewis*. CONNECTICUT. A presentation of the state surficial geology maps of Connecticut [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 84-85.
- OP-2166. J. D. Stoner and D. L. Lorenz. NORTH DAKOTA, SOUTH DAKOTA, MINNESOTA. Water-quality assessment strategy for the Red River of the North Basin, North Dakota, South Dakota and Minnesota [abstr.], *in* Proceedings; North Dakota water quality symposium. Fargo, ND: North Dakota State University Extension Service, 1992. p. 291.
- OP-2167. D. A. Stonestrom. Basic questions about infiltration and drainage relevant to the disposal of low level radioactive waste [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 161.
- OP-2168. M. L. Strobel, M. R. Luther* and K. L. Boespflug*. NORTH DAKOTA. Correlation of texture and thickness of Pleistocene sediments to the presence of saline soils and wetlands and to surface-water quality in the Red River of the North Basin, North Dakota [abstr.], *in* Proceedings; North Dakota water quality symposium. Fargo, ND: North Dakota State University Extension Service, 1992. p. 248.
- OP-2169. J. S. Stuckless, Z. E. Peterman, J. F. Whelan and D. R. Muhs. NEVADA. Isotopic evidence for a per descensum origin for hydrogenic veins in faults near Yucca Mountain, Nevada [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 118.
- OP-2170. Frederick Stumm. NEW YORK. Delineation of subsurface features within the Great Neck and Manhasset Neck peninsulas, Long Island, New York, through use of continuous high-resolution seismic-reflection surveys [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 85.
- OP-2171. P. J. Sugarman*, J. P. Owens, T. A. Ager, K. G. Miller* and L. A. Sirkin*. Continental pollen in marine facies; paleoclimatological interpretation of lower-middle Miocene Kirkwood sequences [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 91.
- OP-2172. Keiko Suzuki-Kamata*, Hiroki Kamata* and C. R. Bacon. OREGON. Evolution of the caldera-forming eruption at Crater Lake, Oregon, as indicated by the distribution of lithic fragments [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, *in* 29th international geological congress; abstracts. 29, 1992. p. 480.
- OP-2173. D. A. Swanson. WASHINGTON. Coeval volcanism and subsidence about 36 million years ago in the Cascade Arc, southern Washington [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 113.
- OP-2174. R. B. Symonds. A review of magmatic volatiles in high-temperature volcanic gases; compositions, origins, and oxygen fugacities [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 452.
- OP-2175. B. J. Szabo, K. R. Ludwig, D. R. Muhs and K. R. Simmons. HAWAII. Age and duration of the last-interglacial high-sea stand on Oahu, Hawaii, determined by mass-spectrometric uranium-series dating of fossil corals [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 514.
- OP-2176. Zoltan Szabo. NEW JERSEY. Radium-228 and radium-226 in sand, silty sand, and ground water in an unconfined aquifer in the New Jersey coastal plain [abstr.] Rocky Mountain Conference on Analytical Chemistry, *in* 35th Rocky Mountain conference on Analytical chemistry. 35, July 1993. p. 318.
- OP-2177. Zoltan Szabo, D. E. Rice and J. K. Bohlke. NEW JERSEY. Use of nitrogen-isotope ratios and flow-path analysis to evaluate sources of dissolved nitrate in an unconfined aquifer, New Jersey coastal plain [abstr.] Eos, Transactions, American Geophysical Union, *in* AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 157.
- OP-2178. Zoltan Szabo, D. E. Rice, Tamara Ivahnenko and E. F. Vowinkel. NEW JERSEY. Relation of travel time and persistence to the distribution of pesticides and nitrate in an unconfined aquifer in the New Jersey coastal plain [abstr.], *in* New directions in pesticide research, development, management, and policy. (Virginia Water Resources Research Center and others). Blacksburg, VA: Virginia Polytechnic Institute and State University, 1993. p. 11-12.

- OP-2179. B. E. Taggart. PUERTO RICO. Tectonic uplift of northwestern Puerto Rico constant throughout the Pleistocene and the latest Pliocene [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 299.
- OP-2180. J. F. Tait, R. J. Anima and G. B. Griggs*. CALIFORNIA. Shoreface storage and transport of littoral sediments along the Central California coast [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1992 fall meeting. v. 73, no. 43, Suppl. October 27, 1992. p. 302.
- OP-2181. Y. Takauchi and J. R. Evans. CALIFORNIA. Teleseismic tomography of the crust and upper mantle beneath the Loma Prieta earthquake region, Central California [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 423.
- OP-2182. K. L. Tanaka. "Geologic" units from remotely sensed data; the need for more explicit documentation [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 264.
- OP-2183. Mitsunobu Tatsumoto, Keiji Misawa and W. R. Premo. Pb isotopic evolution in the Moon [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 639.
- OP-2184. C. D. Taylor, R. J. Goldfarb, L. W. Snee, C. A. Gent, S. M. Karl and P. J. Haeussler. ALASKA. New age data for gold deposits and granites, Chichagof mining district, SE Alaska; evidence for a common origin [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 140.
- OP-2185. H. E. Taylor, R. C. Antweiler, T. I. Brinton, D. A. Roth and J. A. Moody. ILLINOIS. Major ions, nutrients and trace elements in the Mississippi River near Thebes, Illinois, July through September 1993 [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 181-182.
- OP-2186. C. Teague*, M. J. Johnston, A. C. Fraser-Smith*, P. R. McGill*, R. J. Mueller and W. Wiegand*. CALIFORNIA. Anomalous ULF signals at Parkfield during the period December 1993 to May 1994 [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 470.
- OP-2187. U. S. ten Brink, Rafael Katzman* and Jian Lin*. Three-dimensional models of crustal deformation associated with strike-slip faults [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 600.
- OP-2188. U. S. ten Brink and Christopher Schneider. Simulations of the stratigraphy of the Antarctic continental shelf [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 179.
- OP-2189. M. E. Tennyson. CALIFORNIA. Digital compilation of surface and subsurface geologic data across the onshore-off-shore transition in California; a new project at the U.S. Geological Survey [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 600.
- OP-2190. M. J. Terman. Mapping of natural hazards in the Circum-Pacific region [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 38.
- OP-2191. M. J. Terman. Circum-Pacific region hazards map [abstr.], in International symposium; tectonics, energy and mineral resources of the North-West Pacific (abstracts); Volume II. (C. B. Borukayev, editor and others). Khabarovsk: Russian Far East Academy of Sciences, Institute of Tectonics and Geophysics, 1989. p. 49-50.
- OP-2192. M. J. Terman. Scope and status of East Asia Map [abstr.], in International symposium; tectonics, energy and mineral resources of the North-West Pacific (abstracts); Volume II. (C. B. Borukayev, editor and others). Khabarovsk: Russian Far East Academy of Sciences, Institute of Tectonics and Geophysics, 1989. p. 48-49.
- OP-2193. M. J. Terman. Military Geology Branch (MGB) at the United States Geological Survey (USGS) from 1945 to 1972 [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 276.
- OP-2194. M. J. Terman. Military Geology Unit (MGU) at the United States Geological Survey (USGS) during World War II [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 275-276.
- OP-2195. Wayne Thatcher and P. C. England*. Thermo-mechanical modeling of ductile deformation beneath strike-slip faults [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 642.
- OP-2196. D. M. Thompson. Hydraulics and sediment transport processes in a pool-riffle Rocky Mountain stream [abstr.] Hydraulic Engineering: Proceedings of the National Conference on Hydraulic Engineering, in Hydraulic engineering '94. (G. V. Cotroneo, editor and others). 1994, 1994. p. 849.
- OP-2197. J. M. Thompson and L. D. White. WASHINGTON. Isotopic origin of thermal water along the North Fork Toutle River, Mount St. Helens National Volcanic Monument, Washington [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 221.
- OP-2198. R. S. Thompson. Late Pleistocene environmental and climatic changes in the Great Basin and southwestern deserts [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 43rd annual meeting. v. 22, no. 6, April 1990. p. 48.
- OP-2199. R. S. Thompson. Paleocological record of the Western United States [abstr.] Program and Abstracts - American Quaternary Association. Conference, in American Quaternary Association, 13th biennial meeting; program and abstracts. 13, June 1994. p. 47-48.

- OP-2200. W. B. Thompson* and Carl Kotteff. MAINE. Deglaciation sequence in western Maine; stratigraphic, geomorphic, and radiocarbon evidence [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 87.
- OP-2201. E. M. Thurman. Chemistry, degradation, and transport of triazine metabolites in surface water [abstr.], in Programs and proceedings of symposium on Agricultural nonpoint sources of contaminants; a focus on herbicides. 1993. p. 19. Available from: U.S. Environmental Protection Agency, Kansas City, KS, United States.
- OP-2202. A. B. Tihansky and J. T. Trommer. FLORIDA. Rapid ground-water movement and transport of nitrate within a karst aquifer system along the coast of west-central Florida [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 156.
- OP-2203. D. J. Topping* and J. D. Smith. UTAH, ARIZONA. Controls on hydraulic geometry in a flood-dominated, ephemeral river system; examples from the Paria River, Utah and Arizona [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 235.
- OP-2204. Thomas Torgersen*, Stefan Drenkard*, Martin Stute*, Peter Schlosser* and A. M. Shapiro. NEW HAMPSHIRE. Mantle helium in New Hampshire (USA) groundwater; time and space constraints on sources [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 88.
- OP-2205. M. E. Torresan, M. A. Hampton, M. H. Gowen, J. H. Barber, Jr. and Peter Dartnell. HAWAII. Acoustic mapping of dredge spoil deposits and disposal sites, in Mamala Bay, Oahu [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 343.
- OP-2206. M. A. Toscano*, Joyce Lundberg*, A. C. Hine* and E. A. Shinn. FLORIDA. Late oxygen isotope Stage 5 reef system, Florida Keys shelf ridge; evidence for latest last interglacial sea-level fluctuations and paleoclimate [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 515.
- OP-2207. D. C. Trabant and B. F. Molnia. ALASKA. Ice speed, ice thickness, and proglacial-lake stage and turbidity trends at the surging Bering Glacier, Alaska [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 63.
- OP-2208. R. J. Tracy*, F. S. Spear*, T. R. Armstrong and J. T. Cheney*. Application of metamorphic thermobarometry to Acadian tectonic reconstruction in central and southern New England [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 92.
- OP-2209. N. J. Trask, D. E. Prudic and P. R. Stevens. Hydrologic research programs of the U.S. Geological Survey relevant to low-level radioactive waste disposal [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 160-161.
- OP-2210. J. W. Troester and William Back. Environmental hydrogeology of the Caribbean islands and its implications for public policy [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 360-361.
- OP-2211. F. A. Trusdell. HAWAII. Lava flow hazards from Mauna Loa Volcano, Hawaii [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 635.
- OP-2212. T. E. Tullis* and W. D. Stuart. CALIFORNIA. The beginning of earthquake rupture in Parkfield models [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 410.
- OP-2213. J. T. Turk. Use of stable-sulfur isotopes to identify sources of sulfate in alpine lakes in the Rocky Mountains [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 43rd annual meeting. v. 22, no. 6, April 1990. p. 48.
- OP-2214. C. E. Turner and Robert Frodeman*. The need to bring philosophy back into geology; efforts in the U.S. Geological Survey [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 155.
- OP-2215. B. D. Turrin, W. D. Sharp*, P. R. Renne* and T. A. Becker*. HAWAII. Preliminary $^{40}\text{Ar}/^{39}\text{Ar}$ ages of the Hawaii Scientific Drilling Project core [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 708.
- OP-2216. M. P. Tuttle*, E. S. Schweig and R. H. Lafferty*. ARKANSAS. Archaeological constraints on the age of a prehistoric sand blow in northeastern Arkansas [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 438.
- OP-2217. M. P. Tuttle*, E. S. Schweig, R. H. Lafferty* and M. J. Guccione*. Archaeological dating of liquefaction features and seismic events in the New Madrid seismic zone, central United States [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 156-157.
- OP-2218. D. C. Twichell, L. J. Poppe, R. N. Zajac* and R. S. Lewis*. CONNECTICUT. Sidescan sonar survey of the Long Island Sound sea floor off Milford, Connecticut [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 88.
- OP-2219. G. F. Ulmishek. Geology and exploration potential of major petroleum basins in the former USSR [abstr.] CSPG Reservoir. v. 21, no. 3, March 1994. p. 3-4.
- OP-2220. G. F. Ulmishek and H. D. Klemme*. Depositional controls, distribution, and effectiveness of world's petroleum source rocks [abstr.], in International symposium; tectonics, energy and mineral resources of the North-West Pacific (abstracts); Volume II. (C. B. Borukayev, editor and others). Khabarovsk:

- Russian Far East Academy of Sciences, Institute of Tectonics and Geophysics, 1989. p. 118.
- OP-2221. P. V. Unnikrishna*, J. J. McDonnell* and Carol Kendall. IDAHO. Isotope tracer study of flow processes in a small semi-arid mountainous watershed [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 145.
- OP-2222. P. C. Valentine, E. A. Schmuck, W. W. Danforth, L. A. Mayer* and J. E. Hughes-Clark*. MASSACHUSETTS. Sedimentary environments and biological habitats revealed in new sidescan sonar imagery of Stellwagen Bank National Marine Sanctuary off Massachusetts [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 89.
- OP-2223. Alexander van Geen. CALIFORNIA. Records of contaminant input to San Francisco Bay; 6, Recent cadmium enrichments in the water column from Cd/Ca ratios in foraminifera [abstr.] *Eos, Transactions, American Geophysical Union*, in 1994 ocean sciences meeting. v. 75, no. 3, Suppl. January 18, 1994. p. 234.
- OP-2224. B. S. Van Gosen. MONTANA. Genesis of the Homestake Breccia Au-Ag-Cu deposits, New World District, Cooke City, Montana [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 67.
- OP-2225. B. S. Van Gosen, A. B. Wilson, J. M. Hammarstrom, R. R. Carlson, G. K. Lee, J. E. Elliott and D. M. Kulik. MONTANA. Mineral resource assessment of the Custer National Forest in the Pryor Mountains, Carbon County, south-central Montana [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 59.
- OP-2226. P. C. Van Metre. ARIZONA, NEW MEXICO. Effects of uranium-mining releases on ground-water quality in the Puerco River basin, Arizona and New Mexico [abstr.] Rocky Mountain Conference on Analytical Chemistry, in 35th Rocky Mountain conference on Analytical chemistry. 35, July 1993. p. 317.
- OP-2227. A. I. Veeger*, O. D. Hermes*, L. C. Gundersen, J. A. Cain*, J. D'Angelo* and N. A. Hamidzada*. RHODE ISLAND. Development of a geologic radon potential map for Rhode Island [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 90.
- OP-2228. Lev Vernik*, S. H. Hickman, D. A. Lockner and M. S. Rusanov*. Ultrasonic velocity in cores from the Kola super-deep well and the nature of subhorizontal seismic reflections [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 676.
- OP-2229. J. E. Vidale. Seismic imaging of the lithosphere and upper mantle [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 58.
- OP-2230. J. E. Vidale. A high-quality P profile from 8° to 16° with a nuclear source array [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 482.
- OP-2231. J. E. Vidale and H. M. Benz. New results from established regional arrays [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1993 spring meeting. v. 74, no. 16, Suppl. May 1993. p. 217.
- OP-2232. J. E. Vidale, W. L. Ellsworth, C. J. Marone* and A. T. Cole. Rupture variation with recurrence interval in eighteen cycles of a small earthquake [abstr.] *Seismological Research Letters*, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 34.
- OP-2233. J. E. Vidale and S. P. Grand*. Sounding the upper mantle with a nuclear source array [abstr.] *Seismological Research Letters*, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 20.
- OP-2234. Roland von Huene*, E. R. Flueh*, M. A. Fisher and Kevin Jones*. ALASKA. Shipboard results from the Kodiak Seis Cruise, Gulf of Alaska [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 597.
- OP-2235. C. I. Voss, Paul Taney* and S. A. Tiren*. Structural evaluation of fractured crystalline basement based on three-dimensional visualization of geologic, geophysical, geohydraulic, and geochemical data [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 78.
- OP-2236. E. F. Vowinkel, Zoltan Szabo, D. E. Rice and R. M. Clawges. NEW JERSEY. Distribution of nitrate in ground water from the Kirkwood-Cohansey aquifer system in New Jersey and its relation to land use and hydrogeology and to other water-quality constituents [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 157.
- OP-2237. R. B. Waitt. Rhythmically bedded high-energy gravel deposits reveal numerous colossal Missoula debacles through the channeled scabland [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 177-178.
- OP-2238. D. J. Wald and J. F. Dolan*. PUERTO RICO. Seismic waveform and tectonic analysis of the 1943-1953 Hispaniola-Puerto Rico earthquake sequence [abstr.] *Seismological Research Letters*, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 67.
- OP-2239. L. A. Wald and T. H. Heaton. CALIFORNIA. 20sec Rayleigh wave phase velocities from 500 stations in California; more data impedes understanding [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 483.
- OP-2240. J. S. Walder. Interaction of pyroclastic flows with snow [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 377.

- OP-2241. J. F. Walker, D. P. Krabbenhoft, Carol Kendall and T. D. Bullen. WISCONSIN. Variability of isotopic composition and major-ion chemistry in near-stream ground water and implications for evolution of streamflow chemistry in a small forested watershed [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 135-136.
- OP-2242. R. J. Walker*, J. W. Morgan and E. J. Hanski*. Deciphering the Os isotopic evolution of the mantle; a study of early Proterozoic rocks from Finland and NW Russia [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 690.
- OP-2243. A. R. Wallace. COLORADO. On the edge of a rift; observations from the northern Culebra Range, southern Colorado [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 67.
- OP-2244. A. R. Wallace, R. F. Hardyman, R. M. Tosdal, Néstor Jiménez C.*, J. L. Lizaca* and Fernando Murillo S.*. Episodic mid-late Tertiary deformation during basin sedimentation and explosive volcanism, northwestern Altiplano, Bolivia [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 132.
- OP-2245. L. G. Wallace. United States Geological Survey pre-college educational outreach [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 350.
- OP-2246. M. H. Wallace, P. T. Delaney and C. A. Williams*. HAWAII. A critical wedge model of the south flank of Kilauea Volcano [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 718.
- OP-2247. W. K. Wallace*, T. E. Moore and George Plafker. ALASKA. A multi-story duplex of thrust-truncated detachment folds, north-central Brooks Range, Alaska [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 527-528.
- OP-2248. W. K. Wallace*, T. E. Moore and George Plafker. ALASKA. Variations in structure from the Endicott Mountains allochthon to the parautochthon, north-central Brooks Range, Alaska [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 646.
- OP-2249. D. A. Walter, K. G. Stollenwerk and B. A. Rea. MASSACHUSETTS. The transport of phosphorus in a sand and gravel aquifer near Ashumet Pond, Cape Cod, Massachusetts [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 199-200.
- OP-2250. Elmira Wan, C. E. Meyer and A. M. Sarna-Wojcicki. Correlation of upper Quaternary marine and terrestrial climate records by tephra, Pacific margin, northwestern U.S. [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 255.
- OP-2251. B. Wang and S. J. Deverel. CALIFORNIA. Factors affecting carbon fluxes in the organic soils of the Sacramento-San Joaquin Delta, California [abstr.] *Agronomy Abstracts*, in 1992 annual meetings; American Society of Agronomy, 84th annual meeting; Crop Science Society of America; Soil Science Society of America; Clay Minerals Society. 84, November 1992. p. 62-63.
- OP-2252. P. L. Ward, N. B. Lahr* and M. P. Anderson*. CALIFORNIA. Database for the Northern California seismic network using SUDS and a computer-independent windowing toolkit [abstr.] *Seismological Research Letters*, in 89th annual meeting of the Seismological Society of America; abstracts. v. 65, no. 1, March 1994. p. 50.
- OP-2253. B. R. Wardlaw and R. E. Grant*. TEXAS. Detailed conodont biostratigraphy of the North American regional stratotype for the Permian (West Texas) and its international correlation [abstr.] *International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes*, in 29th international geological congress; abstracts. 29, 1992. p. 270.
- OP-2254. B. R. Wardlaw, T. M. Quinn* and T. M. Cronin. ENEWETAK. Stratigraphy, biostratigraphy and sea-level history of Miocene to Recent sediments of Enewetak Atoll, Marshall Islands [abstr.] *International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes*, in 29th international geological congress; abstracts. 29, 1992. p. 247.
- OP-2255. P. D. Warwick, R. M. Flores, E. C. Murphy* and J. D. Obradovich. NORTH DAKOTA. Parasequences in the Paleocene Ludlow and Cannonball members of the Fort Union Formation, Williston Basin, North Dakota [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, Rocky Mountain Section, 47th annual meeting. v. 27, no. 4, April 1995. p. 60.
- OP-2256. P. D. Warwick and R. W. Hook*. TEXAS. The San Pedro and Santo Tomas coals of Webb County, Texas; anomalous nonbanded coals associated with Eocene-age lignites [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 97-98.
- OP-2257. C. F. Waythomas. ALASKA. Hydrologic processes at Alaska volcanoes [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 377.
- OP-2258. C. F. Waythomas. ALASKA. New evidence for Holocene volcanic activity on northern Adak Island, Alaska [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 137-138.
- OP-2259. C. F. Waythomas and R. D. Jarrett. COLORADO. Paleohydrologic investigations in Arthurs Rock Gulch, Colorado Front Range foothills near Fort Collins, Colorado; Part I, Paleoflood history and fluvial geomorphology [abstr.] *Abstracts with Programs - Geological Society of America*, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 87.

- OP-2260. C. F. Waythomas, T. P. Miller and V. Y. Kirianov*. ALASKA. Post-glacial evolution of northern Adak Island, Alaska [abstr.] Program and Abstracts - American Quaternary Association. Conference, in American Quaternary Association; 13th biennial meeting; program and abstracts. 13, 1994. p. 179.
- OP-2261. R. H. Webb. Coarse sediment delivery and the hydraulics of bedrock rivers; implications for release rules for reservoirs [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 67-68.
- OP-2262. R. H. Webb, M. E. Moss and D. A. Pratt. Information content of paleoflood data in flood-frequency analysis [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 176.
- OP-2263. S. D. Weedman* and Lucy McCartan. FLORIDA. Diagenesis of the Oligocene-Miocene rocks of the upper Floridan and intermediate aquifer systems by meteoric and mixing-zone waters in Southwest Florida [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 76.
- OP-2264. A. H. Welch, Zoltan Szabo, D. L. Parkhurst, P. C. Van Metre and A. H. Mullin. A limitation of gross-beta activity in environmental studies of ground water [abstr.] Rocky Mountain Conference on Analytical Chemistry, in 35th Rocky Mountain conference on Analytical chemistry. 35, July 1993. p. 314.
- OP-2265. R. E. Wells. Tectonic segmentation of Cascadia [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 456.
- OP-2266. R. F. Wendlandt* and W. I. Ridley. Melting phase relations of a glassy high-MgO basalt from the Siqueiros transform domain, East Pacific Rise (EPR) [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 720.
- OP-2267. L. G. Wennerberg and R. V. Sharp. Possibly unstable steady sliding for velocity-strengthening friction models inferred from afterslip data and Omori's law [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 442.
- OP-2268. E. A. Wesolowski. NORTH DAKOTA. Collection of data to calibrate and verify a water-quality model and application of the model to determine effects of discharging treated wastewater to the Red River of the North near Fargo, North Dakota [abstr.], in Proceedings; North Dakota water quality symposium. Fargo, ND: North Dakota State University Extension Service, 1992. p. 129.
- OP-2269. E. A. Wesolowski. NORTH DAKOTA. Proposed streamflow modeling of selected reaches of the Souris River between Lake Darling and J. Clark Salyer National Wildlife Refuge [abstr.], in North Dakota water quality symposium; proceedings. (B. D. Seelig, chairperson). Fargo, ND: N.D. Water Resour. Res. Inst. 1994. p. 246.
- OP-2270. C. T. West. SOUTH CAROLINA, GEORGIA. Using a geographic information system to calibrate a groundwater flow model of the Savannah River Site, South Carolina and Georgia [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 96.
- OP-2271. R. L. Wheeler. Compressional reactivation of Iapetan extensional faults in southeastern North America [abstr.] Seismological Society of America, Eastern Section, Annual Meeting, in Seismological Society of America, Eastern Section, 64th annual meeting; program and abstracts. (J. R. Filson, convener and others). 64, 1992.
- OP-2272. R. L. Wheeler and J. E. Ebel*. Seismotectonic maps of the central United States as models for similar maps of New England [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 91.
- OP-2273. J. F. Whelan and J. S. Stuckless. NEVADA. The $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ values of epigenetic calcite within Yucca Mountain, Nevada; paleohydrologic implications [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 117.
- OP-2274. A. F. White and A. E. Blum. Effects of climate on chemical weathering rates in watersheds; a global prospective [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 353.
- OP-2275. F. C. Whitmore, Jr. Neogene Cetacea of the North Atlantic; emergence of the modern fauna [abstr.] Journal of Vertebrate Paleontology, in Society of Vertebrate Paleontology, fifty-first annual meeting; abstracts of papers. (R. J. Emry, editor and others). v. 11, no. 3, Suppl. September 30, 1991. p. 62.
- OP-2276. J. W. Whitney and D. R. Muhs. NEVADA. Quaternary movement on the Paintbrush Canyon-Stagecoach Road fault system, Yucca Mountain, Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 119.
- OP-2277. C. M. Wicks* and J. W. Troester. PUERTO RICO. Dissolution of limestone in the saline-freshwater mixing zone due to anoxic conditions; a case study; Isla de Mona, Puerto Rico [abstr.] Special Publication - Karst Waters Institute, in Breakthroughs in karst geomicrobiology and redox geochemistry; abstracts and field-trip guide. (I. D. Sasowsky, editor and others). 1, 1994. p. 75-76.
- OP-2278. S. M. Wiele and J. D. Smith. ARIZONA. Modeling of flow in the Colorado River through the Grand Canyon [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1992 fall meeting. v. 73, no. 43, Suppl. October 27, 1992. p. 238.
- OP-2279. W. G. Wilber and R. J. Gilliom*. Concepts for a national synthesis of pesticides in major river basins and aquifer systems [abstr.] Proceedings of the ... National Conference on Pesticides, in New directions in pesticide research, development, management, and policy; proceedings of the Fourth national conference on pesticides. (D. L. Weigmann, editor). 4, 1994. p. 428.
- OP-2280. W. G. Wilber and R. J. Gilliom*. Concepts for a national synthesis of pesticides in major river basins and aquifer systems [abstr.], in New directions in pesticide research, development, management, and policy. (Virginia Water Resources Re-

- search Center and others). Blacksburg, VA: Virginia Polytechnic Institute and State University, 1993. p. 43.
- OP-2281. G. C. Wiles*, Austin Post*, E. H. Muller* and B. F. Molnia. ALASKA. Tree-ring crossdating as a stratigraphic tool; examples from Bering Glacier, Alaska [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 309.
- OP-2282. D. H. Wilkison and R. D. Maley*. MISSOURI. Occurrence of herbicides in water from rural domestic wells, Northwest and Northeast Missouri, July 1991 and July 1992 [abstr.], in Programs and proceedings of symposium on Agricultural nonpoint sources of contaminants; a focus on herbicides. 1993. p. 11. Available from: U.S. Environmental Protection Agency, Kansas City, KS, United States.
- OP-2283. J. H. Williams. High-resolution delineation of saline water in sand-and-gravel aquifers by electromagnetic-induction logging [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 92.
- OP-2284. P. L. Williams*, T. V. McEvilly*, R. J. Anima, Jill McCarthy, Takashi Nakata*, Makoto Okamura* and Kunihiko Shimazaki*. CALIFORNIA. Fault activity, geometry, and recurrence behavior at the junction of the Rodgers Creek and Pinole faults, California [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 411.
- OP-2285. R. A. Williams, E. A. Luzietti* and D. L. Carver. ARKANSAS. Quaternary faulting on the Crittenden County fault zone, New Madrid seismic zone, Northeast Arkansas [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 437-438.
- OP-2286. R. A. Williams, T. L. Pratt, Edward Cranswick, D. L. Carver, D. M. Worley and W. H. Lee. CALIFORNIA. Preliminary site response in Santa Cruz, California, using controlled seismic sources [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 447.
- OP-2287. R. T. Williams* and R. D. Catchings. New Madrid seismic profile; shallow faulting and fractured bedrock [abstr.] Seismological Society of America, Eastern Section, Annual Meeting, in Seismological Society of America, Eastern Section, 64th annual meeting; program and abstracts. (J. R. Filson, convener and others). 64, 1992.
- OP-2288. Teresa Williams*, T. V. McEvilly*, Jamie Rector*, Paul Mulligan*, T. R. Burdette, R. D. Catchings, W. H. Lee, Keith Rice and Rosa Ren. CALIFORNIA. Preliminary results from a 1993 seismic survey of Cienega Valley [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 412.
- OP-2289. V. S. Williams. NEVADA. Tertiary and Quaternary alluvial history of the lower Virgin and Muddy rivers, Clark County, Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 302.
- OP-2290. Sherilyn Williams-Stroud. Solution to the paradox? Results of some chemical equilibrium and mass balance calculations applied to the Paradox Basin evaporite deposit [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 68.
- OP-2291. H. G. Wilshire, D. M. Miller and K. A. Howard. CALIFORNIA. Questions about erosional stability and vadose water movement at the Ward Valley low-level radioactive waste disposal site, southeastern California [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 161.
- OP-2292. F. H. Wilson. ALASKA. Overview of Quaternary glacial, volcanic, and tectonic interactions on the Alaska Peninsula [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 137.
- OP-2293. W. L. Wilson* and R. M. Spechler. FLORIDA. Exploration and stratigraphy of Red Snapper Sink; a submarine karst collapse on the continental shelf, Northeast Florida [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 78.
- OP-2294. J. P. Winchester, Jr.*, K. C. Creager*, Ling-Yun Chiao* and E. R. Engdahl. The relation between geometry and membrane strain for the deep South American slab [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 467.
- OP-2295. G. L. Wingard, P. J. Sugarman*, L. E. Edwards, Lucy McCartan and M. D. Feigenson*. FLORIDA. Biostratigraphy and chronostratigraphy of the area between Sarasota and Lake Okeechobee, southern Florida; an integrated approach [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 42nd annual meeting. v. 25, no. 4, April 1993. p. 78.
- OP-2296. R. P. Wintsch*, J. N. Aleinikoff and M. J. Kunk. Is Alleghanian metamorphism in eastern New England caused by loading of thrust nappes? [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 92-93.
- OP-2297. R. P. Wintsch*, M. J. Kunk, J. N. Aleinikoff and J. F. Sutter. CONNECTICUT. Revisions to the tectonic map of eastern Connecticut; detailed mapping in the Deep River area, and new data from thermochronology [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 93.
- OP-2298. R. A. Wise, R. J. Bisdorf and V. F. Labson. Airborne VLF resistivity mapping for regional hydrological studies [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 124.
- OP-2299. E. S. Wissinger*, A. R. Levander*, G. S. Fuis and W. J. Lutter. ALASKA. Crustal wedging in the Brooks Range, Alaska [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 646.

- OP-2300. E. S. Wissinger*, A. R. Levander*, Klaus Holliger*, J. S. Oldow* and G. S. Fuis. ALASKA. Crustal reflectivity in the Brooks Range, Arctic Alaska [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 415.
- OP-2301. E. S. Wissinger*, A. R. Levander*, J. S. Oldow*, G. S. Fuis and W. J. Lutter. ALASKA. Seismic images of the Brooks Range fold and thrust belt, Arctic Alaska [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 146.
- OP-2302. P. A. Witherspoon*, B. A. Faybishenko*, E. R. Landa, G. W. Page*, R. R. Parizek*, M. T. van Genuchten*, Oleh Weres*, Yasuo Onishi*, A. V. Konoplev*, O. V. Voitsekhnovitch*, Y. O. Yakovlev* and M. J. Zheleznyak*. The serious earth science problems of radionuclide contamination from the Chernobyl disaster [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 171.
- OP-2303. E. C. Witt, III and J. M. Richards. Water quality of the Des Moines, Missouri, and Mississippi rivers during the flood of 1993 [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 182.
- OP-2304. Christopher Wnuk. WEST VIRGINIA. The taphonomic history of an in situ Mesocalamites stand from the Lower Pennsylvanian Pocahontas Formation, Camp Creek, West Virginia [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 355.
- OP-2305. J. A. Wolfe. Tertiary nonmarine climates in western North America [abstr.] International Geological Congress, Abstracts—Congres Geologique Internationale, Resumes, in 29th international geological congress; abstracts. 29, 1992. p. 246.
- OP-2306. I. G. Wong*, S. K. Pezzopane, C. M. Menges, R. K. Green* and R. C. Quittmeyer*. NEVADA. Preliminary probabilistic seismic hazard analysis of Yucca Mountain, Nevada [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 452-453.
- OP-2307. I. G. Wong*, J. R. Unruh*, T. S. Yelin and J. D. Bott*. OREGON. Crustal seismicity in the Portland, Oregon region and its relationship to the Cascadia subduction zone [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 524.
- OP-2308. W. W. Wood and Ronit Nativ*. An isotopic and solute paradox? Or is there evidence for macropore flow in the Southern High Plains USA [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 390.
- OP-2309. J. L. Wooden, D. M. Miller, K. A. Howard, Ed DeWitt, K. E. Karlstrom* and A. P. Nutman*. Early Proterozoic crustal provinces in the Southwestern U.S.; what they represent and implications about continental reconstructions [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, South-Central Section, 27th annual meeting. v. 25, no. 1, February 1993. p. 46.
- OP-2310. J. L. Wooden, A. P. Nutman*, D. M. Miller, K. A. Howard, B. H. Bryant, Ed DeWitt and P. A. Mueller*. ARIZONA. SHRIMP U-Pb zircon evidence for late Archean and early Proterozoic crustal evolution in the Mojave and Arizona crustal provinces [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Rocky Mountain Section, 46th annual meeting. v. 26, no. 6, April 1994. p. 69.
- OP-2311. D. G. Woodward and C. M. Menges. Delineating aquifers in buried paleochannels using uphole velocity profiles from petroleum seismic surveys, northeastern Abu Dhabi, United Arab Emirates [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 123.
- OP-2312. R. L. Woodward and A. M. Forte*. Seismic and geodynamic constraints on large-scale vertical flow across the 670-km seismic discontinuity [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 476.
- OP-2313. R. L. Woodward, C. R. Hutt and T. L. Storm. Collection and distribution data from the IRIS/USGS stations of the Global Seismograph Network [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 431.
- OP-2314. B. E. Wright. Analysis of urban regions using AVHRR thermal infrared data [abstr.] Proceedings of the Annual William T. Pecora Memorial Symposium on Remote Sensing, in Pecora 12 symposium; Land information from space-based systems. 12, August 1993. p. 568.
- OP-2315. T. L. Wright and T. J. Takahashi. HAWAII. The Hawaiian-Emperor chain; a bibliographic database [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 120.
- OP-2316. W. G. Wright and P. B. McMahon. The effects of nitrate on the oxidation and mobilization of selenium [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 158.
- OP-2317. T. C. Wu*, A. H. Shen*, M. S. Weathers*, W. A. Bassett* and I-Ming Chou. In-situ determination of lattice parameters of calcite at high pressures and temperatures in hydrothermal diamond-anvil cell using synchrotron radiation [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 661.
- OP-2318. W. C. Wyatt*, K. G. Dean*, Cheryl Searcy*, J. C. Eichelberger* and R. G. McGimsey. Volcanic ash; comparison of ground samples to satellite observations and tracking model predictions [abstr.] *Eos, Transactions, American Geophysical Union*, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 717.
- OP-2319. D. A. Wysocki*, E. M. Rutledge*, L. B. Ward* and H. W. Markewich. Micromorphology of loess deposits and inclusive Paleosols of the middle Mississippi River valley [abstr.] Program and Abstracts - American Quaternary Association. Con-

- ference, in American Quaternary Association; 13th biennial meeting; program and abstracts. 13, 1994. p. 188.
- OP-2320. Yongxia Yan*, Wai-Ying Chung* and S. D. Davis. Aftershock characteristics and their regional variations in Taiwan [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 479.
- OP-2321. H. J. Yang*, F. A. Frey*, M. O. Garcia* and D. A. Clague. HAWAII. Submarine lavas from Mauna Kea Volcano, Hawaii; implications for Hawaiian shield-stage processes [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 642.
- OP-2322. M. Yates. Risks associated with exposure to low levels of microorganisms in water [abstr.], in North Dakota water quality symposium; proceedings. (B. D. Seelig, chairperson). Fargo, ND: N.D. Water Resour. Res. Inst. 1994. p. 26.
- OP-2323. T. Yoshinari*, R. L. Smith and M. H. Brooks. Isotopic composition of N₂O derived from denitrification using the acetylene blockage technique in nitrate contaminated groundwater [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 154.
- OP-2324. R. N. Zajac*, Edward King*, Joanna Dowgiallo*, Susan Wilson*, R. S. Lewis*, L. J. Poppe and J. Vozarik*. The use of side scan sonar and other imaging methods to assess sea floor habitats and associated benthic communities in Long Island Sound [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Northeastern Section, 30th annual meeting. v. 27, no. 1, March 1995. p. 94.
- OP-2325. George Zandt*, J. R. Evans, J. E. Vidale* and S. D. Ruppert*. CALIFORNIA. The San Francisco Bay area broadband transect; shear-wave splitting of teleseisms recorded at stations spanning the San Andreas/Hayward/Calaveras fault system [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 451.
- OP-2326. R. E. Zartman and L. M. Kwak. NEVADA. Lead isotopes in the carbonate-silica veins of Trench 14, Yucca Mountain, Nevada [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 117-118.
- OP-2327. L. M. Zelewski*, D. E. Armstrong* and D. P. Krabbenhoft. Transport of mercury in shallow ground water to streams [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, Southeastern Section, 44th annual meeting. v. 27, no. 2, April 1995. p. 99.
- OP-2328. Zhang Zhi*, Thorne Lay*, J. E. Vidale and H. M. Benz. Investigation of upper mantle discontinuities near South Pacific subduction zones by waveform stacking; precursors in pP [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 5, 1994. p. 69.
- OP-2329. D. R. Zimbelman, T. W. Sisson, C. G. Whitney and K. J. Esposito. WASHINGTON. Relationship of hydrothermal alteration to volcanic hazards at Mount Rainier, WA; preliminary results [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 114.
- OP-2330. M. D. Zirbes, S. A. Sipkin and R. L. Woodward. The "Federation" CD-ROM [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 fall meeting. v. 75, no. 44, Suppl. November 1, 1994. p. 431.
- OP-2331. M. D. Zoback* and M. L. Zoback. Intraplate crust strength; inferences from in situ stress measurements at depth, intraplate seismicity and plate-driving forces [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1994 spring meeting. v. 75, no. 16, Suppl. April 19, 1994. p. 328.
- OP-2332. M. L. Zoback and J. A. Olson. CALIFORNIA. Seismotectonics of the San Francisco Bay Block [abstr.] AAPG Bulletin, in AAPG Pacific Section meeting; abstracts. v. 79, no. 4, April 1995. p. 601.
- OP-2333. M. L. Zoback, J. A. Olson and H. M. Benz. CALIFORNIA. Faulting complexity in the 1906 San Francisco earthquake epicentral area [abstr.] Eos, Transactions, American Geophysical Union, in AGU 1993 fall meeting. v. 74, no. 43, Suppl. October 26, 1993. p. 411.
- OP-2334. M. L. Zoback, M. D. Zoback*, A. J. Crone, M. N. Machette and R. M. Richardson*. Processes and patterns of intraplate seismicity [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1994 annual meeting. v. 26, no. 7, 1994. p. 382.
- OP-2335. A. A. Zohdy and R. J. Bisdorf. CALIFORNIA. Ground-water exploration with deep resistivity soundings at Edwards AFB and vicinity, California [abstr.] Abstracts with Programs - Geological Society of America, in Geological Society of America, 1991 annual meeting. v. 23, no. 5, 1991. p. 123-124.



INDEX

This is an index of U.S. Geological Survey publications issued in 1995 and articles by U.S. Geological Survey personnel in non-U.S. Geological Survey publications that came to our attention in 1995 divided into a general index, including subjects and areas, and an author index. The index was produced from the American Geological Institute's GeoRef database, under USGS contract 14-34-93C-30133.

ABBREVIATIONS USED

A-	Antarctic Geologic Map	MR-	Mineral Investigations Resources Map
B	Bulletin	MSB	Miscellaneous and Special Books
C	Circular	OC-	Oil and Gas Investigations Chart
C-	Coal Investigations Map	OM-	Oil and Gas Investigations Map
CAT	Catalog	OF	Open-File Report
CF	Coal Map	OP	Outside Publication
CP-	Circum-Pacific Map Series	P	Professional Paper
DDS-	Digital Data Series	PB-,ADA	Report available only through the National Technical Information Service
EV	Earthquakes and Volcanoes	PDE	Preliminary Determination of Epicenters
FS	Fact Sheet	SGM	Special Geologic Map
GN	General Interest Publication	SGMI	Geologic Map Index
GP-	Geophysical Investigations Map	SM	Special Map
GQ-	Geologic Quadrangle Map	STM	State Geologic Map
HA-	Hydrologic Investigations Atlas	TWI	Techniques of Water-Resources Investigations
HUM	Hydrologic Unit Map	W	Water-Supply Paper
I-	Miscellaneous Investigations Series Map	WRI	Water-Resources Investigations Report
L-	Land Use and Land Cover Map	YR	Yearbook
MF-	Miscellaneous Field Studies Map		

Outside journals and books are not available from the U.S. Geological Survey.

SUBJECT AND GEOGRAPHIC INDEX

A

A-type granites

- C 1129
- Indian Ocean Islands C 1129
- Oklahoma C 1129
- Russian Federation, geochemistry C 1129
- Spain C 1129
- Texas C 1129
- Virginia C 1129
- Yemen, geochemistry C 1129

Aar Massif

- magmas C 1129

Abajo Mountains

- faults OP-1390

abandoned mines

- Alaska, environmental geology B 2107
- Arizona, environmental geology OF 95-0578
- Colorado, environmental geology B 2220; OF 94-0579
- environmental geology C 1108
- hydrogeology OF 94-0670
- Idaho, environmental geology OF 95-0644
- Michigan, mineralogy OP-2028
- Montana, economic geology OF 95-0229
- New Mexico, environmental geology OF 95-0528
- Washington, geochemistry OF 94-0680-A; OF 94-0680-B

abandoned wells

- Oregon, natural gas OP-1677
- Pennsylvania, energy sources OP-2059
- Washington, natural gas OP-1677

Abbott Deposit

- metal ores OP-663

Abean Orogeny *see* Hercynian Orogeny

Aberdeen Proving Ground

- environmental geology W 2399

Abita Aquifer

- ground water OP-1996

Abitibi Belt

- geochemistry C 1129
- geophysical surveys OP-1804
- gold ores OF 94-0228
- metal ores OP-2126
- petrology C 1129

ablation WRI 94-4139; OP-1901

Abo Formation OP-21

abrasion OP-1009; OP-2080; OP-2240

Abrić Romani Spain

- geochronology OP-66

Abrolhos Island

- Quaternary OP-1973

Abruzzi Italy

- Quaternary OF 94-0568

Absaroka Range *see also* Beartooth Mountains.

- geochronology OP-1517

absolute age *see also* Ar/Ar; C-14; charcoal; K/Ar; Pb/Pb; Pb/Th; Rb/Sr; Re/Os; Sm/Nd; Sr/Sr; Th/Th; Th/U; U/Pb; U/Th/Pb; uranium disequilibrium.

- OP-2002
- Alaska OP-1008
- Arizona I-2489
- Australia, inclusions C 1129
- Bermuda, Quaternary OP-1732
- Brazil, petrology C 1129
- California, Quaternary OF 94-0568
- China, Quaternary OF 94-0568
- Colorado B 2104

Commonwealth of Independent States, stratigraphy OP-1212

Cretaceous I-2474-A

Florida

- diagenesis OP-2263
- Quaternary OP-1732
- stratigraphy OP-2295

geomorphology OP-1368

Georgia, hydrogeology OP-2161

Germany, metasomatism C 1129

ground water OP-734

Hungary, stratigraphy OP-951

Japan, geochemistry C 1129

Nevada

- metal ores B 2090
- stratigraphy B 2056
- New York, metal ores OP-303
- Quaternary OP-61
- sedimentary petrology OP-1404
- Washington OF 94-0403
- Western Interior, Cretaceous B 2113

Abt Schist

- petrology C 1129

Abu Dabbab Intrusion

- magmas C 1129

Abu Dhabi

- ground water OP-1018; OP-2311
- hydrogeology OP-1801

Abukuma Mountains

- petrology C 1129

abyssal fans *see* submarine fans

abyssal hills

- ocean floors B 2022
- Pacific Ocean
- ocean floors B 2022
- oceanography B 2022

abyssolith *see* batholiths

Academy Acres Drain watershed

hydrology WRI 94-4143

Acadian Phase

Massachusetts, structural geology OP-782

New England, metamorphism OP-2208

orogeny B 2110

Vermont OP-1068

acanthite *see* silver ores

accelerator mass spectroscopy

petrology C 1129

Quaternary OP-121

accommodation zones

Montana, structural geology OP-1681

Wyoming, structural geology OP-1681

accretionary wedges

Alaska

fractures OF 94-0228

gold ores OP-349

plate tectonics OF 94-0228

Atlantic Ocean, oceanography OP-2149

California, sedimentary petrology OP-603

Chile, magmas C 1129

Oregon

ocean floors OP-123; OP-1772

tectonophysics OF 94-0228; OP-157

Pacific Ocean

natural gas OP-1391

plate tectonics OP-965; OP-2234

tectonophysics OP-1702

plate tectonics OP-1173

Vanuatu, plate tectonics OP-162; OP-336

Washington, structural geology OP-1777

accumulation, petroleum *see* petroleum accumulation

acetic acid

Colorado, geochemistry OF 95-0049; OF 95-0056

acetylene

pollution OP-2323

Acheron Fosse OP-35

achondrites *see* chladnites; lunar meteorites; ureilite

acid mine drainage

Alaska, environmental geology C 1108

Arizona, pollution OF 94-0508

California

geochemistry WRI 93-4122

pollution WRI 94-0404; OP-1051

Colorado

environmental geology B 2220; OF 95-0023; OP-334

pollution OP-34; OP-92; OP-329; OP-487;

OP-488; OP-493; OP-691; OP-730; OP-

732; OP-963; OP-979; OP-1081; OP-

1082; OP-1210; OP-1337; OP-1535;

OP-1823; OP-1922; OP-1957

environmental geology OP-9

Nevada, geochemistry WRI 93-4122

Pennsylvania, hydrology WRI 94-4056

pollution C 1108

Washington, environmental geology OF 95-0230

acid rain

Alaska, pollution OF 95-0566

Hawaii, hydrogeology WRI 95-4001

hydrogeology C 1108

New England, soils OP-529

New York, geochemistry OP-832

Rocky Mountains, environmental geology C 1108

acid sulfate

Colorado

environmental geology OP-334

metal ores OP-333

Peru, metal ores OP-202

Acidalia Planitia I-2411; I-2412; I-2413; I-2417;

I-2418; I-2419; I-2421

acoustic methods *see* acoustical methods

acoustic surveys *see* acoustical surveys

acoustical logging

Arizona, metal ores OP-664

geophysical surveys OP-699

Nevada, structural geology OP-1820

New Mexico, ground water OF 95-0360

Pennsylvania, energy sources OP-2058

Russian Federation, tectonophysics OP-2228

Wyoming, sedimentary petrology OP-456

acoustical methods *see also* echo sounding; GLORIA.

OF 93-0722; OF 94-0568; OF 94-0598; OF 94-0639; OP-1450

oceanography OP-1972

acoustical properties

California, oceanography OF 95-0533

acoustical surveys *see also* GLORIA.

Atlantic Ocean

ocean floors OP-2073; OP-2324

oceanography OP-1679

California

deformation OP-1774

geophysical surveys OF 94-0568

oceanography OP-2180

Quaternary OP-1216

waste disposal OP-1610

Connecticut

geophysical surveys OP-2218

oceanography OP-1972

Great Lakes, lacustrine features OF 95-0224

Hawaii

geophysical surveys OF 95-0017

pollution OP-2205

Idaho, hydrology WRI 94-4119

Massachusetts, oceanography OP-2222

New York, pollution OP-1186

Ohio

geomorphology OF 95-0224

geophysical surveys OF 95-0252

Pacific Ocean, ocean floors B 2022

Puerto Rico, sedimentary petrology OP-2080

South Carolina, geomorphology OP-1471

United States, sedimentary petrology OP-2080

Washington, Quaternary OF 94-0568

acritarch flora

California, Miocene OF 95-0265

Acropora palmata

Puerto Rico, oceanography OP-2108

ACRUP

geophysical surveys OF 94-0293

actinides *see* americium; plutonium; thorium; uranium

Actinocyclus

Miocene P 1543 A-B

paleobotany P 1543 A-B

Quaternary OP-1308

actinolite

Chile, iron ores OP-87

Greenland, petrology OP-1752

Montana OP-287

Sweden, iron ores OP-87

actinolite facies

Alaska, petrology OP-409

Canada, petrology OP-409

action, frost *see* frost action

active faults

OP-1094; OP-1190

Alaska

OF 94-0568

Quaternary B 2107

seismology OP-697

Argentina, Quaternary OF 94-0568

Arkansas

OP-2285

seismology MF-2279

Australia

Quaternary OF 94-0568

tectonophysics OP-2334

Bahamas, plate tectonics OP-1314

Basin and Range Province

OP-1741

Quaternary OF 94-0568

British Columbia, Quaternary OF 94-0568

California

OF 94-0228; OF 94-0568; OF 95-0597;

OP-107; OP-432; OP-1234; OP-1584; OP-

1701; OP-1839; OP-2070

earthquakes EV; OF 94-0568; OF 95-0022;

OP-429; OP-491; OP-892; OP-1638

energy sources OP-2146

engineering geology OF 94-0228; FS 0132-

95; OP-389; OP-891

geologic hazards C 1130; OF 93-0684;

OF 95-0479; OP-419

geophysical surveys OF 94-0568; OF 94-

0692; OP-1525

plate tectonics OF 94-0568

Quaternary B 1982; OF 94-0568

rock mechanics OF 94-0228

seismicity OP-1116; OP-1309

seismology OF 94-0228; OF 94-0568;

OF 95-0038; OP-203; OP-371; OP-783;

OP-893; OP-1640

tectonophysics OP-2334

Canada, tectonophysics OP-2334

Caribbean region, seismology OP-1739

China

earthquakes OP-1638

Quaternary OF 94-0568

Colorado OP-325

crust OF 94-0228

Djibouti, tectonophysics OP-2152

Dominican Republic

plate tectonics OP-1751

Quaternary OF 94-0568

Ecuador, engineering geology OF 94-0568

Finland, Quaternary OF 94-0568

Great Basin, Quaternary OF 94-0568

Greece, Quaternary OF 94-0568

Hawaii, geologic hazards OP-696

Idaho, Quaternary OF 94-0568

India, tectonophysics OP-2334

Iran, geologic hazards OF 94-0568

Israel, Quaternary OF 94-0568

Italy

OF 94-0568

earthquakes OP-892

Quaternary OF 94-0568

seismology OF 94-0568

Japan

earthquakes OP-1800

ocean floors OF 94-0568

plate tectonics OF 94-0568

Quaternary OF 94-0568

seismology OP-893

- Middle East, tectonophysics OP-923
Missouri, seismology MF-2279
Nevada
 earthquakes OP-1994
 environmental geology OF 93-0477
 Quaternary OF 94-0568; I-2501
New Zealand, Quaternary OF 94-0568
Oklahoma
 Quaternary OP-463
 tectonophysics OP-2334
Oregon
 geophysical surveys OP-72
 seismology OP-203
Philippine Islands, Quaternary OF 94-0568
Puerto Rico, Quaternary OF 94-0568
Quaternary OF 94-0568
Quebec, Quaternary OF 94-0568
rock mechanics OF 94-0228
Scotland, Quaternary OF 94-0568
seismology OP-1348
Sweden, Quaternary OF 94-0568
Tennessee, Quaternary OF 94-0568
Turkey
 earthquakes OF 94-0568
 Quaternary OF 94-0568
United States, seismology OF 94-0568
Utah, Quaternary OF 94-0568
Washington, geophysical surveys OP-72
- active margins**
Alaska, plate tectonics OP-1894
California, petrology C 1129
Mexico, petrology C 1129
natural gas OP-1675
- active tectonics *see* neotectonics
actual age (absolute age) *see* absolute age
- Adak Island**
 geomorphology OF 95-0128
 Quaternary OP-2258; OP-2260
- adakite**
Alaska, magmas C 1129
Antarctica, magmas C 1129
Japan, magmas C 1129
Mexico, magmas C 1129
Russian Federation, magmas C 1129
- Adam Seamount**
 geochemistry OP-197
- Adamello Massif**
 petrology C 1129
- Adams Rib Recreation Area**
 pollution C 1122
- adaptive radiation**
 angiosperms OP-1483
 China, Vertebrata OP-418
 Mongolia, Vertebrata OP-418
- Addams Crater** OP-1846
- Adel Mountain Volcanics**
 geochronology OP-1465
- Adelaide mining district**
 metal ores OF 94-0668
- Adelle Coast**
 tectonophysics OP-245
- Adirondack Mountains**
 fluid inclusions OP-1794
 geochemistry B 2106; OP-832
 metal ores OP-290; OP-1379
 mineral resources OP-718
- Admiral Group**
 ground water OP-1167
- adularia**
California, metal ores OP-415
Peru, metal ores OP-1411
- Advanced Very-High Resolution Radiometry *see* AVHRR
- Aegean Islands *see* Greek Aegean Islands
- aeolianite *see* eolianite
- aeromagnetic maps**
Alaska, metal ores OP-342
Antarctica, geophysical surveys OP-560
California, geophysical surveys OF 94-0444;
 OF 94-0599; OF 94-0613
Idaho, mineral resources B 2064-A-R
Nevada OP-213
Oklahoma, geophysical surveys GP-0998-A
- aerosols**
 sedimentary petrology OP-1885
- Afars and Issas Territory *see* Djibouti
- AFC model**
 magmas C 1129
- Afognak Island**
 fractures OF 94-0228
- Afognak Quadrangle**
 stratigraphy MF-2021-G
- Africa** *see also* Central Africa; East Africa; Madagascar; North Africa; Sahara; Southern Africa; West Africa.
 geophysical surveys
 Red Sea Hills OP-2068
 West African Shield OP-2068
 mineralogy, Kalahari Desert OP-781
 tectonophysics, Kaapvaal Craton OP-636
 Vertebrata OP-418
- African Plate**
 Djibouti, tectonophysics OP-2152
- aftershocks**
Alaska, seismicity OP-93
Armenia, engineering geology OP-265
Bolivia
 mantle OP-1643
 plate tectonics OP-252
 seismicity OP-1910
 seismology OP-1353
California
 crust OP-649
 earthquakes OF 94-0710; OP-383; OP-430;
 OP-1375; OP-1539; OP-1595; OP-1753;
 OP-2091
 elastic waves OP-461; OP-1694
 microearthquakes OP-1054
 Mohorovicic discontinuity OP-1853
 rock mechanics OF 94-0228
 seismic sources OP-2286
 seismicity OP-301; OP-462; OP-1561; OP-1745; OP-2120
 seismology; OF 94-0221; OF 95-0484; OP-203; OP-373; OP-460; OP-587; OP-860; OP-893; OP-1037; OP-1222; OP-1336; OP-1540; OP-1541; OP-1600; OP-1808; OP-1810; OP-1872
Caribbean region, earthquakes OP-1313
Greater Antilles, earthquakes OP-1313
Japan
 earthquakes OP-1800
 seismology OF 94-0221; OP-893
Nevada
 earthquakes OP-12; OP-365
 seismology OP-614
Oregon, seismology OP-203
 seismicity OP-1298
 seismology OF 94-0228; OP-1300
Taiwan, earthquakes OP-2320
Ag *see* silver
- aggradation**
Alaska, Quaternary OP-2281
Arizona
 geomorphology W 2429
 Quaternary OF 95-0591; OP-1730
 sedimentation OP-2023
 weathering OP-1504
engineering geology OP-1569
geomorphology OP-1368
Georgia, environmental geology OP-435
Nevada
 fluvial features OP-2289
 geomorphology OF 94-0670
Oregon, Quaternary OP-1945
Utah, Quaternary OP-1730
Wyoming, weathering OP-928
- aggregate** *see also* sands.
B 2111; C 1108
Alaska OF 95-0582
Montana OP-2225
- Agnotozoic *see* Proterozoic
- agricultural chemicals *see* agrochemicals
- agricultural waste**
 environmental geology OP-675; OP-1160
 Gulf of Mexico, environmental geology OP-715
- Agrigan**
 geologic hazards OF 91-0320
- agrochemicals** *see also* alachlor; aldicarb; atrazine; DDT; herbicides; insecticides; pesticides; triazines.
California, pollution OP-1297
Colorado, ground water WRI 94-4037
Florida, hydrogeology WRI 94-4162
hydrogeology WRI 95-4031
Iowa, hydrogeology OF 94-0711-W
Minnesota, hydrogeology WRI 94-4207
Mississippi Valley, pollution YR
Nebraska, petrology WRI 94-4057
New Mexico, pollution OP-1019
Pennsylvania, environmental geology OP-354
Tennessee, pollution OF 95-0156
Texas, pollution OP-1019
Wisconsin
 hydrology OF 95-0163
 pollution OF 95-0163
- airborne methods *see* AVHRR
- Airborne Visible-Infrared Imaging Spectrometer *see* AVIRIS
- AIRSAR**
 volcanic features OP-305
- Akutan**
 geologic hazards OF 95-0083
 Quaternary OF 95-0061-A; OF 95-0061-B
- Al *see* aluminum
- Al-26**
Arizona, Quaternary OP-1287
geomorphology OP-1368
Utah
 Quaternary OP-1287
 stratigraphy OP-1731
- Al-Amar Suture**
 petrology C 1129
- Alabama** *see also* Appalachian Basin; Black Warrior Basin; Piedmont; Smackover Formation.
 energy sources C 1108
 faults OP-2271
 geologic hazards YR
 ground water
 Dallas County Alabama WRI 94-4074
 Greene County Alabama WRI 94-4074

- Hale County Alabama WRI 94-4074
 Marengo County Alabama WRI 94-4074
 Perry County Alabama WRI 94-4074
 Pickens County Alabama WRI 94-4074
 Sumter County Alabama WRI 94-4074
 Wilcox County Alabama WRI 94-4074
 hydrogeology P 1410-C
 hydrology WRI 93-4186
 maps, Russell County Alabama I-2174
 metal ores, Coosa County Alabama OP-1260
 sedimentary petrology, Warrior coal field OP-1915
 stratigraphy, Etowah County Alabama OP-386
 structural geology OP-1988
- alachlor**
 geochemistry OP-1043; OP-1963
 Gulf of Mexico, environmental geology OP-715
 Iowa, pollution OP-982; OP-983
 Kansas, pollution W 2419
 Michigan, pollution OF 95-0163
 Minnesota, environmental geology OP-831
 Nebraska, pollution W 2419
 Wisconsin, pollution OF 95-0163
- Alai Range**
 Invertebrata OP-345
- Alalik Glacier**
 Quaternary OP-1000
- Alamagan**
 geologic hazards OF 91-0320
- Alamo Lake Quadrangle**
 maps I-2489
- Alamosa River**
 environmental geology B 2220; OF 95-0023; OF 95-0043
 geochemistry OF 95-0250
 hydrology OF 95-0071
 pollution OF 95-0087; OP-34; OP-92; OP-253; OP-329; OP-493; OP-691; OP-732; OP-876; OP-929; OP-963; OP-979; OP-1081; OP-1082; OP-1210; OP-1957
- Alaska** *see also* Arctic Coastal Plain; Coast Mountains; Coast plutonic complex; Cook Inlet; Denali Fault; Gubik Formation; Kingak Shale; Naknek Formation; Norton Basin; Old Crow Tephra; Orca Group; Prince of Wales Island; Shublik Formation; Tintina Fault; Torok Formation; Tyonek Formation; Valdez Group; Yukon River; Yukon-Tanana Terrane.
 areal geology
 B 2107; OF 95-0247; OP-330; OP-471; OP-723; OP-724
 Alaska Range OP-201; OP-296; OP-672
 Brooks Range OP-217; OP-711
 Chugach Mountains OP-672
 De Long Mountains OP-641
 Endicott Mountains OP-641
 Nixon Fork Terrane OP-711
 Seward Peninsula OP-931
 Talkeetna Mountains OP-672
 Wrangell Mountains OP-672
 Yakutat Terrane OP-725
 base metals, Prince William Sound B 2107
 bibliography B 2107; OF 94-0675-A; OF 94-0675-B; OF 94-0675-C
 coal
 C 1108
 Seward Peninsula OP-972
 Conodonts OP-826
 crust, Aleutian Islands OP-2075
 deformation
 Brooks Range OP-1250; OP-1849
- Endicott Mountains OP-479
 Devonian, Brooks Range B 2107
 earthquakes
 OP-1058
 Aleutian Islands OP-1191
 Redoubt EV; OP-1107
 elastic waves
 B 2139
 Redoubt OP-786
 energy sources
 DDS-0030; C 1108
 Alaska Peninsula OP-574
 Brooks Range OP-1270
 National Petroleum Reserve Alaska C 1108; OP-1270
 Prudhoe Bay Field C 1108; OP-1270; OP-1545
 Trans-Alaska Pipeline C 1108
 Yakutat Terrane OP-576
 engineering geology
 C 1121; WRI 94-4073
 Redoubt OP-1683
 environmental geology
 YR; B 2107; C 1108; OF 95-0173; OF 95-0176; OF 95-0177; OF 95-0180; OF 95-0342; OF 95-0343; OF 95-0345; OF 95-0346; OF 95-0348; OP-1120
 Alaska Peninsula OF 95-0179
 West-Central Alaska OF 94-0481; OF 94-0525; OF 94-0627; OF 95-0347
 Wrangell Mountains OF 95-0344
 Eocene OF 94-0653
 faults OF 94-0228
 folds OF 94-0568
 frost action, Prudhoe Bay OP-161
 geochemistry
 P 1564; B 2107; B 2117; B 2139; OP-1676
 Fairbanks Alaska B 2107
 Juneau Alaska B 2107
 Katmai National Park OF 95-0047
 Novarupta OF 95-0047
 Redoubt OF 95-0055
 Seward Peninsula OP-23
 Valley of Ten Thousand Smokes OF 95-0047
 West-Central Alaska B 2107
 Wrangell Mountains OF 95-0222
 Yukon-Koyukuk Basin B 2107
 geochronology
 OP-1008
 Brooks Range OP-1905
 geologic hazards
 B 2107; B 2139
 Aleutian Islands OF 95-0083; OP-2257
 Redoubt OF 95-0083; OP-1316; OP-2257; OP-2318
 West-Central Alaska OF 95-0175
 geomorphology
 WRI 94-4165; OP-264
 Adak Island OF 95-0128
 Alaska Range OF 94-0512
 Talkeetna Mountains B 2107
 Wrangell Mountains B 2072
 geophysical surveys B 2139; OP-10; OP-42; OP-86; OP-841
 geothermal energy, Wrangell Mountains OP-627
 glacial geology B 2139
 gold ores
 B 2107
 Aleutian Islands OP-349
 Brooks Range B 2107
 Chugach Mountains OP-349; OP-2184
- Kenai Peninsula OP-349
 ground water C 1108
 hydrogeology
 C 1112; OF 94-0713-W
 Anchorage Alaska OF 94-0712-W; OF 95-0171
 Barrow Alaska OF 94-0367
 Fairbanks Alaska OF 95-0172
 hydrology YR; B 2139; C 1123; OF 94-0467; OF 95-0338; OF 95-0418; OP-127; OP-1429; OP-1833
 impact statements
 OF 94-0482
 Anchorage Alaska OF 95-0174
 Invertebrata
 P 1544; OP-740
 West-Central Alaska OP-51; OP-76
 Jurassic OP-745
 magmas
 Aleutian Islands C 1129
 Brooks Range OP-626
 Chugach Mountains OP-626
 Nixon Fork Terrane OP-626
 Seward Peninsula OP-626
 maps
 B 2107; OF 95-0215; OP-642; OP-971
 Alaska Peninsula I-2272
 Aleutian Islands I-2272
 Yukon-Tanana Upland OP-878
 metal ores
 OP-99; OP-342; OP-424; OP-425; OP-426; OP-427; OP-671; OP-919; OP-1195
 Alaska Range OP-1893
 Aleutian Islands OP-1893
 Brooks Range OP-670; OP-1893; OP-1895
 Chichagof Island OP-1169
 Chugach Mountains B 2084
 Prince William Sound OP-1893
 Prince William Terrane B 2084; OP-1893
 Seward Peninsula OP-1893
 Talkeetna Mountains OP-1893
 Wrangell Mountains OP-1893
 metamorphic rocks
 OP-230; OP-1930
 Juneau Alaska C 1129
 metamorphism
 OP-784
 Juneau Alaska B 2107
 Prince William Terrane OP-39
 mineral resources
 C 1117; OF 95-0509; OF 95-0537; OF 95-0623; OF 95-0625; OF 95-0626; OF 95-0627; MF 2058-D; I-2225-A; I-2225-B; I-2225-C; I-2225-D
 Prince William Sound OF 94-0272
 West-Central Alaska OF 94-0277-A; OF 94-0277-B
 Miocene P 1543 A-B
 Mohorovicic discontinuity
 OP-1398
 Endicott Mountains OP-2301
 natural gas
 C 1108; C 1118; OP-17
 Aleutian Islands OP-2074
 Prudhoe Bay OP-1122
 neotectonics OP-726
 non-metal deposits OF 95-0582
 oceanography OF 95-0070
 paleobotany P 1543 A-B
 paleomagnetism
 OP-1135; OP-1881
 Chugach Mountains OP-727
 Yakutat Terrane OP-727

- paleontology OF 94-0215
 palynomorphs, Katmai OP-184
 petroleum, Brooks Range OP-2105
 petrology
 B 2139; C 1129; OP-40; OP-633
 Alaska Range OP-632
 Aleutian Islands OP-1822
 Brooks Range OP-229; OP-710
 Juneau Alaska OP-409
 Seward Peninsula OP-229
 Talkeetna Mountains OP-632
 plate tectonics
 OP-1894; OP-1956
 Aleutian Islands OF 94-0228
 Prince William Sound OP-1682
 Yakutat Terrane OP-1682
 Pliocene
 OF 94-0281; OF 94-0588; OF 95-0217-A;
 OF 95-0217-B
 Barrow Alaska OP-1171
 pollution
 OF 95-0566
 Nome Alaska OF 95-0178
 Prince William Sound C 1108
 Seward Peninsula OF 95-0178
 Proterozoic
 Arctic National Wildlife Refuge OP-1624
 Brooks Range OP-1624
 West-Central Alaska B 2107
 Quaternary
 B 2107; B 2139; OF 94-0568; OF 94-0614;
 OF 95-0520; OP-612; OP-772; OP-774; OP-
 1172; OP-1221; OP-1406; OP-1664; OP-
 1692; OP-1834; OP-1920; OP-2207;
 OP-2281
 Adak Island OP-2258; OP-2260
 Alaska Peninsula B 2107; OP-628; OP-
 1511; OP-1790; OP-2292
 Aleutian Islands OF 94-0568; OP-2021
 Brooks Range OP-1457
 Chugach Mountains OP-1507; OP-1805;
 OP-2017
 Katmai OP-2021
 Katmai National Park OF 95-0271; OP-
 2292
 Kenai Peninsula OP-1000
 Kodiak Island OF 94-0568; OP-2021
 Makushin OF 95-0271
 Redoubt OF 95-0061-A; OF 95-0061-B;
 OP-1854
 Turnagain Arm OP-1098
 Valley of Ten Thousand Smokes OP-2292
 Wrangell Mountains OP-628
 Yakutat Bay OP-1263
 sedimentary petrology
 OP-2080; OP-2094
 Brooks Range OP-1604
 sedimentation OP-2160
 sediments OP-1086
 seismicity
 OP-609; OP-1978
 Aleutian Islands OP-93
 seismology
 B 2139; OF 95-0257-A; OF 95-0257-B;
 OF 95-0257-C; OP-458
 Aleutian Islands OP-1598
 Fairbanks Alaska OP-1459
 Katmai OP-1598
 Redoubt OP-1598; OP-1855; OP-2157
 stratigraphy
 B 2110; B 2135; OP-1736
 Alaska Peninsula MF-2021-G
 Alaska Range OP-357
 Brooks Range P 1545; OP-357; OP-1439;
 OP-1623
 National Petroleum Reserve Alaska OP-
 1439
 Seward Peninsula OP-357
 Wrangell Mountains OP-357
 structural geology
 OF 94-0714; OP-857
 Brooks Range OP-304; OP-932; OP-1249;
 OP-1251; OP-1394; OP-1395
 Chichagof Island OP-1447
 Chugach Mountains OP-1447
 Endicott Mountains OP-2247
 tectonics
 OF 94-0194
 Brooks Range B 2107; OP-2299
 Endicott Mountains OP-1850; OP-2248
 tectonophysics
 OF 95-0238; OP-985
 Aleutian Islands OP-953
 Brooks Range OP-2300
 Chugach Mountains OP-408
 Prince William Terrane OP-408
 Trilobita OP-1
 uranium ores, Susitna River basin B 2098
 volcanic features B 2139
 volcanism, Valley of Ten Thousand Smokes
 OP-496
Alaska earthquake 1964
 OP-1075
 Alaska
 plate tectonics OP-1682
 Quaternary OF 94-0568; OP-1098
 Chile, Quaternary OP-1098
 Alaska Mineral Resource Assessment Program *see*
 AMRAP
Alaska Peninsula
 energy sources OP-574
 environmental geology OF 95-0179
 maps I-2272
 Quaternary B 2107; OP-628; OP-1511; OP-
 1790; OP-2292
 stratigraphy MF-2021-G
Alaska Plate
 energy sources OP-1270
 geothermal energy OP-627
Alaska Range
 areal geology OP-201; OP-296; OP-672
 geomorphology OF 94-0512
 metal ores OP-1893
 petrology OP-632
 stratigraphy OP-357
Alaska Seismic Network
 earthquakes OP-1058
Alaska Volcano Observatory
 geologic hazards OF 95-0083
 Quaternary B 2139; OF 95-0271
 Alay Range *see* Alai Range
 Alba Patera OP-33; OP-35
Albany Georgia
 hydrology WRI 94-4158
 Albatross Cordillera *see* East Pacific Rise
 albedo B 2129; OP-142; OP-486; OP-797; OP-
 880; OP-1636; OP-1780; OP-1783
Albee Formation
 Silurian OP-1995
Albemarle Sound
 continental margin I-1987-D
 hydrogeology OF 95-0164
 hydrology OF 95-0136
Alberta *see also* Western Interior Seaway.
 geochemistry C 1129
 magmas C 1129
 sedimentary petrology, Peace River Arch OP-
 1404
 structural geology B 1904-T
Albian
 Alaska OP-641; OP-1249; OP-1251
 Pacific Ocean OP-2127
Albion Mountains
 orogeny OP-619
albite
 OF 94-0576; OP-79
 Colorado
 geochemistry OP-1318
 metal ores OP-1626
 sedimentary petrology B 1808-P
 Egypt, magmas C 1129
 geophysics OP-1446
 magmas C 1129
 New Mexico, sedimentary petrology B 1808-P
 South Dakota, geochemistry C 1129
albitization
 thermal waters OP-1756
 Albuquerque *see* Albuquerque New Mexico
Albuquerque Basin
 ground water WRI 94-4251; OF 94-0349;
 OF 95-0360
Albuquerque New Mexico
 environmental geology OF 94-0547
 geomorphology WRI 94-4205
 hydrology WRI 94-4071; WRI 94-4143
Albuquerque Seismological Laboratory
 seismicity OP-1560
Alcalde Shale
 stratigraphy OP-1341
Alcedo Volcano
 magmas OP-309
 alcohols *see* methanol
aldicarb
 Tennessee, pollution OF 95-0156
Aleutian Islands *see also* Adak Island; Unalaska
 Island.
 crust OP-2075
 earthquakes OP-1191
 geologic hazards OF 95-0083; OP-2257
 gold ores OP-349
 magmas C 1129
 maps I-2272
 metal ores OP-1893
 natural gas OP-2074
 petrology OP-1822
 plate tectonics OF 94-0228
 Quaternary OF 94-0568; OP-2021
 seismicity OP-93
 seismology OP-1598
 tectonophysics OP-953
Aleutian Islands earthquake 1957
 seismicity OP-93
Aleutian Ridge
 ocean floors OP-1217
 tectonophysics OP-1261
Aleutian Trench
 natural gas OP-1371
 plate tectonics OP-2234
 sedimentary petrology OP-1218
 Aleutians *see* Aleutian Islands
 Alexander Archipelago *see* Chichagof Island
Alexander Terrane
 metal ores OP-1169

- metamorphic rocks OF 94-0268
paleomagnetism OP-1135
petrology OP-409
sedimentary petrology OP-1404
tectonophysics OP-408
- Alexandria Virginia**
conservation OF 94-0592
- alfalfa**
Colorado
environmental geology OF 94-0580; OF 95-0043
pollution OP-253
- Alfisols**
Idaho OP-119
Washington OP-119
- Alfordville Quadrangle**
coal OF 94-0298
- Alfred Quadrangle**
Quaternary OP-990
- algae**
calcareous algae, Ohio OP-411
Cyanophyta, Wyoming OP-2128
diatoms, Alaska P 1543 A-B
environmental geology OP-834
nannofossils
Atlantic Coastal Plain OP-903
Atlantic Ocean OP-1161
California OP-1036
Delaware OF 95-0478
geochemistry OP-602
geochronology OP-1572
Indian Ocean OP-1161
Maryland OF 94-0708
Mexico OP-1036
New Jersey P 1554; OP-622; OP-623; OP-735
oceanography OF 94-0669-A; OF 94-0669-B
Oregon OP-1176
Quaternary OP-61
stratigraphy OP-96
Virginia OF 94-0217; OP-735
New Mexico, Proterozoic OP-21
Nitzschia, California OP-1308
Tasmanites, petroleum OP-1811
- algal flora**
Arctic region, stratigraphy B 2110
California, Quaternary OF 95-0034
coccoliths
California OF 94-0678; OP-1341
Oregon OP-1177
- diatom flora**
Alaska P 1543 A-B; OF 94-0568; OP-2074
Antarctic Ocean OF 94-0588
California B 1995-J,K; OF 95-0034; OP-1157; OP-1158; OP-1308; OP-2061
Idaho B 2105; OP-2147
Maryland OF 94-0683
Minnesota OF 94-0578; OP-1290
Nevada OF 95-0084; OP-2147
New Jersey OP-622; OP-623
oceanography OF 94-0669-A; OF 94-0669-B
Oregon OF 94-0568; OP-1158; OP-1629; OP-1635; OP-2045
Pacific Coast OP-1401
Pacific Ocean OP-1088; OP-1501
Peru OP-200
Russian Federation OP-94; OP-165
Texas OF 95-0103
Utah OF 95-0001
Washington OP-395
- environmental geology OF 94-0490
Kazakhstan, energy sources OP-1258
nannofossils
Atlantic Coastal Plain OP-903
Atlantic Ocean OP-1161
California OP-1036
Delaware OF 95-0478
geochemistry OP-602
geochronology OP-1572
Indian Ocean OP-1161
Maryland OF 94-0708
Mexico OP-1036
New Jersey P 1554; OP-622; OP-623; OP-735
oceanography OF 94-0669-A; OF 94-0669-B
Oregon OP-1176
Quaternary OP-61
stratigraphy OP-96
Virginia OF 94-0217; OP-735
- algal mats**
Wyoming, geochemistry OP-2128
- Algyo Formation**
natural gas OP-155
- aliphatic hydrocarbons** *see also* alkanes; alkenes; alkynes.
Iowa, pollution OP-982
New Mexico, mineralogy OP-1275
sedimentary petrology OP-1078
- alkali basalts** *see also* basanite.
California, geochemistry OP-197; OP-260
Mexico, geochemistry OP-197
Oregon, geochemistry OF 95-0040
- alkali feldspar** *see also* adularia; anorthoclase; K-feldspar; microcline; orthoclase; sanidine.
geochemistry C 1129
phase equilibria OP-83
- Alkali Flat**
ground water OP-2066
- alkali gabbros** *see* leucitite; olivine nephelinite
- alkali granites**
New Mexico, geochemistry OP-959
- alkali metals** *see* cesium; lithium; potassium; rubidium; sodium
- alkaline basalt** *see* alkali basalts
- alkaline earth metals** *see* barium; beryllium; calcium; magnesium; radium; strontium
- alkanes** *see also* butane; ethane; methane; n-alkanes; phytane; pristane; propane.
California, petroleum OP-513
geochemistry OP-1949
Ohio, energy sources OP-2057
- alkenes** *see* ethylene
- alkynes** *see* acetylene
- Alleghanian** *see* Allegheny Group
- Alleghany Orogeny**
Alabama, structural geology OP-2155
Florida, Devonian OP-1971
Georgia
Devonian OP-1971
structural geology OP-2155
New England, tectonics OP-2296
New York, metal ores OP-303
North Carolina
geochemistry C 1129
Paleozoic OP-1670
Vermont, Silurian OP-1068
Virginia
Paleozoic OP-1670
stratigraphy OF 94-0573
structural geology OP-2062
- Allegheny Group** OP-768
Allegheny Orogeny *see* Alleghany Orogeny
- Allegheny River basin**
hydrology FS 0137-95
- Allen Hollow Shale Member**
geochronology OP-569
- Allende Meteorite**
phase equilibria OP-611
- Allentown Quadrangle**
geomorphology OF 93-0723
maps OP-1164
- Allequash Creek watershed**
pollution OP-508
- Alligator Back Formation**
magmas OP-1126
- Allison Guyot**
stratigraphy OP-1162
- allostratigraphy**
Atlantic Coastal Plain, sedimentary petrology B 2110
Australia OP-1338
Maryland OP-736
Papua New Guinea OP-1338
Virginia OP-736
- alluvial deposits** *see* alluvium
- alluvial fans**
Basin and Range Province, Quaternary OP-1414
California
non-metal deposits OF 95-0535
Quaternary OF 94-0568; OP-2006
sedimentary petrology OP-159
waste disposal OP-2291
China, Quaternary OF 94-0568
Colorado, pollution OP-929
Great Basin, Quaternary OP-1414
hydrology OP-829
Idaho, Quaternary OF 94-0568
Israel, Quaternary OF 94-0568
Kentucky, petroleum OF 94-0298
Nevada, Quaternary B 2056; OP-2006
Pennsylvanian OP-1228
stratigraphy OP-2139
Wyoming, energy sources OP-1621
- alluvial plains**
Louisiana
OF 94-0275
ecology OF 94-0275
Mississippi Valley P 1538-R
- alluvium**
Arizona
geomorphology OP-1926; OP-2072
hydrogeology OP-1965
Quaternary OF 95-0057
stratigraphy OP-381
California
Quaternary OF 94-0568
seismology OP-2084
waste disposal OP-2291
Colorado
fluvial features OP-1743
ground water WRI 94-4118; WRI 94-4129; OP-1562
Dominican Republic, Quaternary OF 94-0568
environmental geology OP-1619
Georgia
pedogenesis B 1589-E
soils OP-1555
Idaho, Quaternary P 1525
Louisiana, engineering geology OF 94-0275
Mississippi, hydrogeology WRI 94-4172

- Montana, environmental geology C 1108
- Nevada
environmental geology OF 93-0477; OF 94-0451
fluvial features OP-2289
geomorphology OF 94-0670
gold ores OP-340
ground water OF 92-0657
Quaternary B 2056
- New Mexico, stratigraphy OP-382
- Oklahoma
hydrogeology OF 94-0504
pollution OP-143
- Oman
ground water OP-2311
hydrogeology OP-1801
- Tennessee
fluvial features OP-208
ground water WRI 95-4011
- United Arab Emirates
ground water OP-2311
hydrogeology OP-1801
- Utah, Quaternary B 2056
- alluvium aquifers**
- Alaska
environmental geology OF 95-0180; OF 95-0343
hydrogeology OF 94-0712-W
- Arizona, hydrogeology P 1406-A
- Arkansas, ground water OF 93-0374
- California, hydrogeology OF 94-0357
- Colorado
ground water WRI 94-4118; WRI 94-4129; WRI 94-4238
hydrogeology YR; WRI 94-4111
pollution OP-1796
- Connecticut, pollution OP-1460
- Iowa
ground water WRI 94-4244
hydrogeology WRI 94-4211
pollution OP-983
- Kentucky, ground water WRI 94-4099
- Louisiana, ground water WRI 94-4228
- Massachusetts, pollution OP-1460
- Midwest, pollution OP-1652
- Mississippi
ground water WRI 95-4013; WRI 95-4127
hydrogeology WRI 94-4172
pollution OP-681
- Nevada
ground water OF 94-0031
waste disposal OP-1990
- New York, ground water WRI 91-4138
- Oklahoma, hydrogeology OF 94-0504
- Pennsylvania, hydrogeology OF 92-0635
- Puerto Rico, hydrogeology WRI 91-4183
- Tennessee, ground water WRI 94-4212
- Almagosa River**
hydrology WRI 93-4116
- almandine**
New York, geochemistry B 2106
- Almeria Spain**
gold ores OF 95-0221
- Alpine Fault**
Quaternary OF 94-0568
- Alpine Orogeny**
Alps, magmas C 1129
Europe
geochemistry OF 94-0228
structural geology OP-598
Italy, petrology C 1129
Poland, lead-zinc deposits OP-908
- Spain, magmas C 1129
- Alps**
earthquakes, Dinaric Alps PDE
geochemistry
OF 94-0228
Cima d'Asta C 1129
magmas, Dinaric Alps C 1129
petrology, Adamello Massif C 1129
- Altamont Field**
energy sources OP-1166
- Altiplano**
lava B 2119
maps OF 95-0494
structural geology OP-2244
- Altun Fault**
Quaternary OF 94-0568
- Alum Cave**
environmental geology OF 95-0477
- alum rock *see* alunite
- aluminosilicates**
Alaska, geochemistry B 2139
geochemistry C 1129
- aluminum**
Al-26
Arizona OP-1287
geomorphology OP-1368
Utah OP-1287; OP-1731
Alaska, sedimentary petrology OP-1604
California
geochemistry OF 95-0034
pollution OP-1051
Colorado, pollution OP-691; OP-1535; OP-1823
Delaware, pollution OP-1077
geochemistry C 1129
Maryland, pollution OP-1077
Minnesota, Quaternary OP-1290
New England, soils OP-529
New York, hydrology OF 94-0368
Oregon, petrology OP-1590
Washington, pollution OP-2064
Western Interior, stratigraphy OP-2063
- alunite**
OF 94-0688; OP-1680
California, structural geology OP-1430
Colorado, geophysical surveys OP-67
Idaho, non-metal deposits P 1525
metal ores B 2081
Spain
gold ores OF 95-0221
metal ores OP-22
- Am** *see* americium
- Amapa Brazil**
marine geology OP-117
- Amargosa Desert**
environmental geology OF 95-0155
ground water OF 95-0158
hydrogeology WRI 94-4124
hydrology OF 94-0489; OP-1989
- amargosite** *see* bentonite
- AmasSeds**
marine geology OP-117
- Amawk Fault**
deformation OP-479
- Amazon River**
marine geology OP-117
- Amazonian** OP-35; OP-559; OP-916; OP-1233
- amber mica** *see* phlogopite
- AMCOR**
Georgia, oceanography OP-586
- American Flag Formation**
copper ores OP-291
- American Samoa *see* Samoa
- americium**
Colorado, pollution OP-1466
- Americus Quadrangle**
maps I-2174
- Ames Limestone**
sedimentary petrology OP-2025
- Amethyst vein system**
metal ores OP-728
- amino acids**
Alaska, Quaternary OP-1172
Chile, Quaternary OP-1697
geochemistry OF 95-0041
Illinois, Quaternary OP-1630
Iowa, Quaternary OP-1630
Maryland, geochemistry OP-856
Virginia, geochemistry OP-856
- ammonia compound**
Appalachians, pollution OP-1365
Great Lakes region, hydrology WRI 95-4005
hydrogeology WRI 94-4061; WRI 95-4031; OF 95-0141
Massachusetts, environmental geology OF 95-0290
phase equilibria OP-1520; OP-1609
Texas, hydrology WRI 94-4213
Wyoming, geochemistry OP-2128
- ammonium ion**
Appalachians, hydrology OP-1632
Colorado, geochemistry OF 95-0056
New Jersey, ground water OP-1568
pollution OP-2323
Rocky Mountains, hydrology OP-1632
- Ammonoidea** *see* Baculites; Goniatitida
- ammonoids**
California, stratigraphy OP-1341
Canada, Jurassic OP-745
Colorado, stratigraphy OP-507
Delaware, stratigraphy OP-481
geochronology OP-1572
Pacific Ocean, Jurassic OP-964
United States, Jurassic OP-745
Utah, stratigraphy OP-507
Western Interior, Cretaceous P 1561
Wyoming, paleomagnetism OP-403
- Ammonoosuc Volcanics**
OP-1995
structural geology OP-782
- amphibole group** *see also* clinoamphibole; orthoamphibole.
Alaska, geochemistry B 2139
Brazil
geochemistry C 1129
inclusions C 1129
petrology C 1129
Germany, metasomatism C 1129
Virginia
geochemistry C 1129
magmas P 1529
- amphibolite** *see* amphibolites
- amphibolite facies**
Alaska
metamorphic rocks OP-1930
petrology OP-231
Colorado GQ-1764
Nevada, orogeny OP-619
Norway, structural geology OP-2156
Utah, orogeny OP-619

amphibolites

- C 1129
- Alaska
 - B 2107; OP-229
 - gold ores OP-2184
- California OP-1149
- Colorado OP-1423; OP-1424
- geochemistry C 1129
- Germany, geophysical surveys OP-651
- metal ores OP-870
- Mexico OP-1870
- Montana, crust OP-1831
- Russian Federation, geophysical surveys OP-651
- tectonophysics OP-141
- Virginia
 - C 1129
 - structural geology OP-1317
- amplification, wave *see* wave amplification
- amplitude-versus-offset analysis *see* AVO methods
- AMRAP**
 - Alaska
 - metal ores B 2084
 - mineral resources C 1117; OF 94-0277-A; OF 94-0277-B; OF 95-0509
- Amydrotaxis**
 - Conodonta OP-826
- Anacacho Limestone**
 - stratigraphy OF 94-0551
- Anadyr Basin**
 - continental shelf OP-589
- Anakeesta Formation**
 - environmental geology OF 95-0477
- analbite** OF 94-0576
- analcime**
 - OF 94-0576
 - geochemistry OP-2001
 - Oregon, sedimentary petrology B 2108
- analogues, modern *see* modern analogs
- analogues, natural *see* natural analogs
- anastomosing streams *see* braided streams
- Anatahan**
 - geologic hazards OF 91-0320
- anatexis**
 - Australia, magmas C 1129
 - Finland, geochemistry C 1129
 - geochemistry C 1129
 - India, geochemistry C 1129
 - Italy, petrology C 1129
 - magmas C 1129
 - North Carolina, geochemistry C 1129
 - Pakistan, geochemistry C 1129
 - petrology C 1129
- Anchorage Alaska**
 - hydrogeology OF 94-0712-W; OF 95-0171
 - impact statements OF 95-0174
- Anchorage Quadrangle**
 - base metals B 2107
 - Quaternary B 2107
- Anchorage region *see* Anchorage Alaska
- Andalusia Spain *see* Almeria Spain; Huelva Spain; Serrania de Ronda
- andalusite**
 - California, petrology C 1129
- Anderson-Dietz coal bed**
 - pollution OP-185
 - sedimentation OP-282
- Andes** *see also* Altiplano; Bolivia; Peru.
 - geochemistry C 1129

magmas, Patagonian Andes C 1129
 metal ores, Eastern Cordillera OP-1028
 orogeny, Eastern Cordillera OP-2011
 Quaternary OP-1511

andesites

- Alaska
 - OP-632
 - geochemistry B 2139
- Andes, Quaternary OP-1511
- California
 - OP-1315
 - geochemistry OP-790
- Caribbean region, metal ores B 2057
- Colorado, geophysical surveys OP-67
- Lesser Antilles, metal ores B 2057
- Nevada
 - geochemistry B 1988-K
 - gold ores OP-2151
- New Mexico, geochemistry B 2081
- Oregon
 - OP-1315
 - geochemistry OF 94-0261; OP-29
 - geologic hazards OP-2088
- Utah, geochemistry B 1988-K
- Washington
 - OP-1512
 - Holocene OP-1513
- Andreanof Islands earthquake 1986**
 - Alaska OP-93
- anelastic materials**
 - elastic waves OP-1718
- Angayucham Terrane**
 - areal geology OP-641; OP-711
- angiosperms**
 - OP-1483
 - Antarctica, stratigraphy OP-2305
 - Artemisia
 - Colorado OP-557
 - Oregon OP-1635
 - Colorado
 - Paleogene OP-1890
 - sedimentary petrology OP-1373
 - Gramineae, Louisiana OF 94-0275
 - New Mexico, sedimentary petrology OP-1373
 - Nothofagus
 - Antarctic Ocean OF 94-0588
 - Antarctica OF 94-0588
 - Salix, Pacific Ocean OP-1354
 - Tertiary OP-1888
- Anglesey Wales**
 - geochemistry C 1129
- angular unconformities**
 - California, deformation OP-1774
 - Illinois, faults OF 94-0298
 - Kentucky, faults OF 94-0298
 - Montana, tectonics OP-1452
- anhydrite**
 - geochemistry OP-2015
 - Indiana, energy sources OP-2020
 - Montana, stratigraphy B 2112
 - North Dakota, stratigraphy B 2112
 - Pacific Ocean, geochemistry OP-2098
 - Philippine Islands, petrology C 1129
 - thermal waters OP-1756
- Aniakchak**
 - Quaternary B 2107; OP-1790; OP-2021; OP-2292
- Anisak Moraine**
 - Quaternary OP-1457
- ankaramite**
 - Russian Federation, geochemistry OP-421

Anmatjira Range

- magmas C 1129
- Ann Mag Field**
 - energy sources OF 94-0228
- Anna Maria Island**
 - shore features OP-1174
- Annette Islands Reserve**
 - areal geology OP-471
 - geophysical surveys OP-86; OP-841
 - metal ores OP-99; OP-342; OP-424; OP-425; OP-426; OP-427; OP-919
- ANNIE**
 - hydrology WRI 95-4085
- annual growth rings *see* tree rings
- annual report**
 - hydrology OF 94-0353; OF 95-0308
- Anoka sand plain**
 - ground water WRI 94-4149; OF 94-0337
- anorthite**
 - magmas C 1129
- anorthoclase**
 - Colorado, geochemistry OP-760
- anorthosite**
 - OP-605; OP-1784; OP-2183
 - California OP-46
 - Montana, geochemistry OP-554
 - Wyoming, stratigraphy OP-364
- Antarctic Continent *see* Antarctica
- Antarctic Crustal Profile**
 - geophysical surveys OF 94-0293
- Antarctic ice sheet**
 - neotectonics OP-1103
 - Pliocene OF 94-0588; OP-1171
 - Quaternary OP-54; OP-173; OP-246; OP-2188
- Antarctic Ocean** *see also* ODP Site 693; ODP Site 695; ODP Site 745.
 - continental shelf OP-921
 - geophysical surveys, Ross Sea OF 94-0293; OP-156
 - Pliocene
 - OF 94-0588
 - Ross Sea OF 94-0588
 - Quaternary
 - OP-173; OP-246
 - Bellingshausen Sea OP-440
 - Bransfield Strait OP-440
- Antarctic Peninsula**
 - magmas C 1129
 - Quaternary OP-440
- Antarctic Plate**
 - Pacific Ocean, tectonophysics OP-1702
- Antarctica**
 - areal geology OF 95-0247
 - continental shelf OP-921
 - geochemistry OF 95-0222
 - geophysical surveys
 - OP-156
 - Transantarctic Mountains OF 94-0293; OF 95-0225
 - Victoria Land OP-560
 - hydrology, Victoria Land OF 94-0545
 - magmas, Antarctic Peninsula C 1129
 - neotectonics
 - Antarctic ice sheet OP-1103
 - Marie Byrd Land OP-1103
 - Ross Ice Shelf OP-1103
 - Victoria Land OP-1103
 - Pliocene
 - OF 94-0588
 - Antarctic ice sheet OF 94-0588; OP-1171
 - Beardmore Glacier OF 94-0588

- Dry Valley Drilling Project OF 94-0588
 Transantarctic Mountains OF 94-0588
 Victoria Land OF 94-0588
- Quaternary**
 P 1386-B; OP-214
 Antarctic ice sheet OP-54; OP-173; OP-246; OP-2188
 Antarctic Peninsula OP-440
 Marguerite Bay OP-440
 Ross Ice Shelf OP-54
 Victoria Land P 1386-B
 Wilkes Land OP-246
- stratigraphy**
 OF 94-0588; OP-2305
 Transantarctic Mountains OF 94-0588
- tectonophysics**
 OP-55; OP-2003
 Adelie Coast OP-245
 Wilkes Land OP-245
- Antelope Valley**
 engineering geology WRI 94-4184
 environmental geology WRI 94-4208
- Anthozoa see Zoantharia**
- anthracite**
 China OP-2016
 Washington OP-1182
- anticlines**
 Alaska
 OP-479; OP-2247
 energy sources OP-65; OP-574
 California
 petrology C 1129
 pollution OP-2047
 China, Quaternary OF 94-0568
 Dominican Republic, Quaternary OF 94-0568
 Idaho, metal ores B 2064-A-R
 Indiana P 1538-O
 Montana OP-1933
 Pacific Ocean, tectonophysics OP-1919
 Pennsylvania, energy sources OP-2058; OP-2059
 Tennessee, Quaternary OF 94-0568
 Texas OP-363
 Virginia OP-1091
 Washington OP-1979; OP-1981
 Wyoming
 energy sources OF 94-0670; OP-1621
 sedimentary petrology OP-780
- anticlinoria**
 Alaska OP-304
 Illinois, sedimentary petrology OF 94-0298
- antiform folds**
 California, pollution OP-2047
 Nevada, petrology OP-1817
- antigorite**
 Washington, sedimentary petrology OP-1182
- Antilles see Greater Antilles; Lesser Antilles**
- antimony**
 Alaska, geochemistry B 2107
 Idaho, pollution OP-1146; OP-2129
 Nevada, gold ores OP-340
 Washington, pollution OP-1146
- antimony ores**
 Idaho P 1525; OF 94-0690
- Antioquia Colombia**
 geochemistry OF 94-0623-A; OF 94-0623-B; OF 94-0623-C
- Antler Orogeny**
 Alaska, sedimentary petrology OP-1604
 Basin and Range Province, structural geology OP-2115
- Great Basin, structural geology OP-2115
 Idaho, mineral resources B 2064-A-R
 Nevada, geochemistry OP-794
- Antler Peak Quadrangle**
 areal geology OP-213
- Antofagasta Chile**
 stratigraphy OF 95-0226
- ANTOSTRAT**
 Quaternary OP-173
- Antrim Shale**
 areal geology OP-295
- anvil cells**
 geochemistry OP-2106
 geophysics OF 94-0703; OP-1478; OP-2317
 phase equilibria OP-139; OP-1236; OP-1238
- ANWR see Arctic National Wildlife Refuge**
- Aoba Basin**
 oceanography OP-338
 plate tectonics OP-337
 stratigraphy OP-275
- Apalachicola River**
 hydrology OF 95-0167
- apatite**
 Alaska
 deformation OP-1849
 geochronology OP-1905
 California
 geochemistry P 1566
 Quaternary OF 94-0568
 Chile, iron ores OP-87
 China, Conodonts OP-1021
 Colorado
 metal ores B 2109
 molybdenum ores OP-526
 stratigraphy OP-507
 Maine, metal ores OP-555
 Sweden, iron ores OP-87
 Utah, stratigraphy OP-507
- apatite ores see phosphate deposits**
- Apennines**
 earthquakes OP-892
 Quaternary OF 94-0568
 structural geology OF 94-0568
- aplite**
 California C 1129; OP-1095; OP-1211
 China C 1129
 Egypt, geophysical surveys OP-2068
- Apopka-Beaumont Canal**
 hydrology WRI 93-4103
- Appalachian Basin**
 energy sources OP-2057
 geochronology OP-510
 orogeny B 2110
 Pennsylvanian B 2110; OP-764; OP-765; OP-767; OP-1228
 petroleum OP-1811
 petrology OP-989
 sedimentary petrology OP-1226; OP-1340; OP-2025
 sedimentation OF 95-0240
 stratigraphy OP-766; OP-768
- Appalachian Mountains see Appalachians**
- Appalachian Phase**
 Atlantic Coastal Plain OP-1960
- Appalachian Plateau**
 ground water WRI 94-4189
 hydrogeology OP-1819
 hydrology FS 0137-95; FS 94-0019
- Appalachian structure see Appalachian Phase**
- Appalachians see also Canada.**
 areal geology
 Blue Ridge Province OP-63
 Piedmont OP-63
 coal C 1108; OF 95-0572
 environmental geology, Piedmont OP-435
 faults C 1129; OF 94-0298
 geochemistry
 P 1565-A; C 1129
 Blue Ridge Province C 1129
 Carolina slate belt C 1129
 geomorphology, Blue Ridge Province OP-196
 gold ores, Carolina slate belt OP-1909
 ground water
 Appalachian Plateau WRI 94-4189
 Piedmont OF 94-0372; OF 94-0373; OP-410
 Valley and Ridge Province WRI 94-4189
 hydrogeology
 OP-771
 Appalachian Plateau OP-1819
 Blue Ridge Province FS 94-0010; OP-2161
 Piedmont OF 94-0507; OF 95-0113; FS 94-0010; OP-1819; OP-2161
 Valley and Ridge Province OP-1819
 hydrology
 Appalachian Plateau FS 0137-95; FS 94-0019
 Blue Ridge Province FS 94-0019
 Catskill Mountains OF 94-0368; OP-1632
 Piedmont WRI 94-4042; OF 94-0379; OF 94-0385; OF 94-0509; OF 95-0136; OP-120; OP-1554
 Valley and Ridge Province FS 94-0019
 impact statements OF 95-0589
 magmas
 OP-1126
 Piedmont P 1529
 maps, Piedmont OF 94-0629; OF 95-0004
 metal ores
 Blue Ridge Province OP-306
 Shawangunk Mountains OP-303
 mineral resources
 I-2364-J
 Blue Ridge Mountains OP-428
 Paleozoic
 Carolina slate belt OP-1670
 Piedmont OP-1670
 pedogenesis, Piedmont B 1589-E
 Pennsylvanian OP-1737
 petrology
 C 1129
 Blue Ridge Mountains OP-1200
 Blue Ridge Province C 1129; OP-1647
 pollution
 Great Appalachian Valley OP-1365
 Piedmont W 2435; WRI 92-4088; OP-999; OP-1985
 Proterozoic
 Blue Ridge Mountains OP-3
 Blue Ridge Province B 2060
 sedimentary petrology OP-528
 sedimentation B 2110
 soils, Piedmont OP-1555
 stratigraphy
 B 2135; OP-685; OP-1324
 Great Appalachian Valley OF 94-0573
 Piedmont OP-766
 structural geology
 OF 94-0682; OP-1988
 Blue Ridge Province OP-1335
 Carolina slate belt OP-1199; OP-1908

- Piedmont OP-1202; OP-1317; OP-1536; OP-2155
waste disposal, Great Appalachian Valley OP-1133
- apparent polar wandering**
tectonophysics OP-985
Wyoming, stratigraphy OP-364
- Apple Creek Formation**
Proterozoic P 1525
- AppleTalk B 2103**
- APROB**
seismology OF 94-0221
- Aptian**
OP-96
Alaska OP-725; OP-1249; OP-1251
- Apure Guarico Plain**
maps MF-2247
- aquamarine**
Idaho, non-metal deposits P 1525
- Aquia Aquifer**
ground water OF 94-0390; OF 94-0394
- Aquia Formation** OF 94-0708; OF 95-0478
- aquifer vulnerability**
Colorado
ground water WRI 92-4143
pollution OP-487
Florida, ground water W 2409
Illinois, pollution OP-1111
Iowa, pollution OP-982
Massachusetts, pollution OP-509
Mississippi
ground water WRI 94-4088
pollution OP-681
Pennsylvania, ground water WRI 87-4136
pollution OP-377
Tennessee, pollution OP-1006
Virginia, ground water OF 94-0301
Washington, hydrogeology WRI 92-4109
- aquifers** *see also* alluvium aquifers; aquitards; artesian waters; confined aquifers; recharge; shallow aquifers; surficial aquifers; water resources.
- Alaska
environmental geology OF 95-0177
hydrogeology OF 95-0171
impact statements OF 95-0174
Quaternary OP-1921
Appalachians, hydrogeology OP-1819
Arizona, pollution OF 94-0508
Arkansas, ground water WRI 93-4134
Atlantic Coastal Plain
hydrogeology OP-1819
stratigraphy OP-1960
- California
engineering geology WRI 94-4184
environmental geology OP-2141
ground water OF 94-0531; OP-2335
hydrogeology WRI 94-4124; OF 93-0033
pollution OP-1297
Caribbean region, ground water WRI 93-4162
- Colorado
ground water OP-1562
metal ores OP-1488
Connecticut, ground water OP-1799
Delaware, pollution OP-1077
environmental geology C 1108; OP-2280
- Florida
diagenesis OP-2263
environmental geology OP-2202
- ground water WRI 93-4158; WRI 93-4224; WRI 94-4010; OF 94-0495; OF 94-0528; OF 94-0529; OF 95-0115; OF 95-0277; OF 95-0303; OP-615; OP-1948
hydrogeology WRI 92-4159; WRI 93-4171
pollution OP-806
stratigraphy OF 95-0003
geochemistry OP-1284
geophysical surveys OF 94-0676; FS 0121-95
- Georgia
environmental geology OP-1099
ground water OF 94-0520; OP-151; OP-1100; OP-1243; OP-1358
hydrogeology OP-2270
Great Plains, ground water YR; WRI 94-4157
ground water C 1108; WRI 95-4033; OF 94-0465; OP-698; OP-906; OP-967; OP-1167; OP-1699; OP-2283
Gulf Coastal Plain, ground water WRI 93-4020
hydrogeology W 2220; WRI 94-4022; OF 94-0531
- Idaho
ground water WRI 94-4053; WRI 94-4257; OP-44; OP-1633
hydrogeology OF 94-0503
Illinois, pollution WRI 94-4034
Indiana, ground water WRI 94-4195; OF 94-0298
Italy, geochemistry OP-227
Kansas, pollution OF 94-0497
Kentucky, ground water WRI 94-4189
Lesser Antilles, ground water WRI 93-4162
Louisiana, ground water WRI 94-4202
- Maryland
environmental geology W 2399
ground water OF 94-0390; OF 94-0391; OF 94-0392; OF 94-0393; OF 94-0394; OF 94-0395
pollution OP-1077
- Massachusetts
OF 94-0384
environmental geology OP-2136
geochemistry OF 94-0384; OP-1396
ground water WRI 94-4156; OF 94-0384; FS 94-0017
hydrogeology WRI 94-4256
pollution OP-36; OP-616; OP-1765
waste disposal OP-2249
- metal ores B 1989-G
- Midwest
ground water OF 93-0663
hydrogeology OF 94-0473
- Minnesota
ground water OF 93-0435
hydrogeology WRI 94-4146; WRI 94-4163
- Mississippi, ground water WRI 94-4219; WRI 94-4223
- Mississippi Valley, ground water WRI 93-4020
- Montana
energy sources OP-634
ground water OF 94-0536; OP-1265; OP-1633
- Nebraska, hydrogeology WRI 94-4095; WRI 95-4014
- Nevada
geochemistry OP-2169
hydrogeology WRI 94-4079; WRI 94-4124; WRI 95-4119; OF 93-0033; OP-1947
petroleum OP-2065
Quaternary FS 94-0007
- New England, ground water P 1415-A; OF 94-0343
- New Hampshire
ground water OF 95-0281; FS 95-0002; OP-1549
hydrogeology WRI 92-4013
- New Jersey
environmental geology WRI 92-4134
ground water WRI 90-4095; WRI 92-4152; WRI 94-4113; OP-751
hydrogeology OP-750
pollution WRI 92-4144; OP-1087; OP-2176; OP-2177; OP-2178; OP-2236
- New Mexico
ground water WRI 94-4251; OF 95-0360
hydrogeology WRI 94-4125; OF 95-0111
mineralogy OP-1275
- New York
ground water YR; WRI 93-4029
Quaternary WRI 90-4168
- North Carolina, ground water WRI 94-4186
- Ohio, hydrogeology WRI 94-4105; OF 95-0357; OP-448
- Oklahoma, ground water OF 94-0387
- Oman, ground water OP-2311
- Ontario, ground water OP-170
- Oregon
ground water WRI 89-4179
petrology OP-38
- Pennsylvania
ground water WRI 94-4109; OF 93-0659
pollution WRI 92-4088
pollution OP-95; OP-132; OP-317; OP-1041; OP-1923
Rhode Island, hydrogeology OF 95-0305
- Rocky Mountains, ground water OF 95-0143
- South Carolina
environmental geology OP-1099
ground water WRI 94-4012; OF 95-0507; OP-1100; OP-1243; OP-1358
hydrogeology OP-2270
- South Dakota
ground water OF 94-0320; OF 95-0153
hydrogeology OF 94-0319
- Tennessee
ground water OP-1825
pollution OF 95-0156
- Texas
environmental geology WRI 93-4233
ground water WRI 93-4100; WRI 93-4126; WRI 94-4039; WRI 94-4117; WRI 95-4038; OF 94-0345; OF 94-0346; OF 94-0387; OF 95-0182; OF 95-0183
hydrogeology WRI 93-4190; WRI 94-4036; OF 95-0111; FS 0090-95
pollution OP-2009
Quaternary OP-812
United Arab Emirates, ground water OP-2311
- Utah
hydrogeology WRI 95-4025; OF 95-0104; OF 95-0340; OP-1123
petroleum B 2000-J
Virginia, ground water OF 94-0370; OF 94-0372; OF 94-0373
- Washington
ground water WRI 89-4179; WRI 94-4236
hydrogeology WRI 94-4082
- Wisconsin, ground water OF 95-0163
- Wyoming
energy sources OP-634
hydrogeology WRI 94-4095
- aquitards**
Colorado, ground water WRI 94-4238
Great Plains, ground water P 1402-F
Illinois, pollution OP-1111

- Minnesota, ground water WRI 94-4204
Tennessee, hydrogeology WRI 93-4207
Virginia, ground water W 2401
- Ar see argon**
- Ar-40/Ar-39**
Alaska, petrology OP-229
California, energy sources OP-193
Colorado
 geochemistry OP-1939
 Oligocene OP-1625
Far East, petrology OP-1574
Hawaii, Pliocene OP-2215
Idaho, structural geology OP-1581
Italy, geochemistry OP-27
Mexico, stratigraphy OP-1755
Minnesota, Precambrian OP-886
Montana
 geochemistry OP-2133
 geochronology OP-1517
New Mexico, geochemistry OP-959
New York, metal ores OP-303
petrology OP-938
Russian Federation, geochronology OP-194
South Dakota, Proterozoic OP-1117
Texas, Oligocene OP-1925
Utah, faults OP-1390
Wyoming, geochronology OP-1517
- Ar/Ar**
Alabama, structural geology OP-2155
Alaska
 gold ores OP-349; OP-624; OP-2184
 metamorphism OP-784
 Pliocene OF 95-0217-A; OF 95-0217-B
 structural geology OP-932; OP-1447
Argentina, orogeny OP-2011
Arizona
 magmas OP-887
 Quaternary OP-1287
California
 geochemistry OP-197
 geochronology OF 94-0587
 magmas C 1129
 Quaternary OP-397; OP-1505; OP-1575
 structural geology OF 94-0568; OP-348
Canada, structural geology OP-1863
Colorado
 geochemistry OP-1939
 Oligocene OP-1625; OP-1691
 petrology OP-1716
 sedimentation OP-1690
 stratigraphy OP-507; OP-2012
Europe, geochronology OP-510
Far East, petrology OP-1574
geochronology OP-1572; OP-1672
Georgia, structural geology OP-2155
Greece, structural geology OP-453
Gulf Coastal Plain, stratigraphy OP-1906
Hawaii, Pliocene OP-2215
Idaho
 geochemistry OP-716
 geochronology C 1129
 metal ores B 2081
Indonesia, geochronology OP-443
Iowa
 geomorphology OP-2034
 stratigraphy OP-372; OP-1671
Italy, geochemistry OP-27
Kenya, geochemistry C 1129
Mexico
 geochemistry OP-197
 geochronology OF 94-0587
 stratigraphy OP-1755
- Montana
 geochronology C 1129; OP-1465; OP-1517
 structural geology OP-1863
Nebraska, maps I-2496
Nevada
 Eocene OP-105
 geochemistry B 1988-K; B 2056; C 1129
 gold ores OP-20; OP-438; OP-2151
 petrology OP-836
 structural geology OP-744
New Mexico
 geochronology OP-443
 Quaternary OP-1575
New Zealand
 petrology OP-1542
 Quaternary OP-431
North Carolina
 Mesozoic OP-1399
 Paleozoic OP-1670
 petrology OP-1647
Norway, structural geology OP-158; OP-2156
Oregon
 geochemistry OF 95-0040
 petrology OP-1590
 Quaternary OP-397; OP-1505
 structural geology OP-348
Pakistan, gems OP-1303
petrology OP-938
Russian Federation
 Eocene OP-1573
 geochemistry OP-50
 geochronology OP-194; OP-1493
Saudi Arabia, petrology C 1129
South Dakota, Proterozoic OP-1117
Spain
 gold ores OF 95-0221
 magmas C 1129
 metal ores OP-22
Texas
 Oligocene OF 94-0227; OP-1925
 tectonics OP-363
Utah
 Eocene OP-105
 faults OP-1390
 geochemistry B 1988-K
 geochronology OP-1142
 Quaternary OP-1287
 stratigraphy OP-507
 structural geology OP-744
Virginia
 magmas P 1529
 Mesozoic OP-1399
 Paleozoic OP-1670
Western Interior
 geochronology OP-506
 stratigraphy OP-1906
Wyoming
 geochronology OP-569; OP-1517
 paleomagnetism OP-403
 stratigraphy OP-364
Yemen, geochemistry OP-1079
Yukon Territory, Pliocene OF 95-0217-A; OF 95-0217-B
- Arabian Desert *see* Eastern Desert
- Arabian Peninsula** *see also* Oman; Saudi Arabia;
United Arab Emirates; Yemen.
metal ores, Arabian Shield OP-1220
petrology, Arabian Shield C 1129
structural geology, Arabian Shield OP-455
- Arabian Plate**
Djibouti, tectonophysics OP-2152
- Arabian Shield**
metal ores OP-1220
petrology C 1129
structural geology OP-455
- Arafura Sea**
stratigraphy OP-1338
- aragonite**
Bahamas, Quaternary OP-1865; OP-1866
Bermuda, Quaternary OP-1732; OP-1733
California, geomorphology OP-785
Florida, Quaternary OP-1732; OP-1733
- Arapahoe Aquifer**
ground water WRI 94-4238
- Arapien Shale**
maps I-2462
structural geology P 1528
- Araster Fault**
structural geology OP-1380
- Arava Valley**
Quaternary OF 94-0568
- Arbuckle Field**
energy sources OP-1746
- Arbuckle-Simpson Aquifer**
hydrogeology WRI 93-4230
- ARC/INFO**
B 2103
areal geology OP-2189
geomorphology YR; OP-235
hydrology B 2103
maps OF 95-0025; OF 95-0493; OF 95-0494;
 OF 95-0588
petrology OP-1512
structural geology OP-1741
- Arcadia Formation**
diagenesis OP-2263
stratigraphy OF 95-0003
- Arcadia Quadrangle**
maps OF 95-0261
stratigraphy OP-2295
- Archaean** *see* Archean
- archaeological sites**
Alaska, Quaternary OP-2021
Arizona, Quaternary OF 95-0591
Arkansas, Quaternary OP-2216
earthquakes OP-2085
El Salvador, Quaternary OP-1816
Hawaii, geologic hazards OP-1497
Israel, Quaternary OF 94-0568
Montana, Quaternary OP-1868
Spain, geochronology OP-66
Virginia, conservation OF 94-0592
- archaeology** *see also* artifacts.
Arizona, weathering OP-1504
Arkansas, Quaternary OP-946
Egypt
 geophysical surveys OP-2068
 Quaternary OP-1152
Greece, Quaternary OF 94-0568
Hawaii, geologic hazards OP-1722
Peru, Quaternary OP-1618
seismology OP-2217
- Archean** *see also* Kaapvaal Craton.
OP-228; OP-1668
Alaska C 1129
Arizona OP-2310
Brazil OP-198
California OP-2310
Canada B 1904-T; C 1129; OP-1863
Colorado Plateau OP-1669
J-M Reef OP-516
Japan C 1129

- Manitoba OP-1073
 Mexico C 1129
 Minnesota B 1904-U
 Montana OP-480; OP-1492; OP-1627; OP-1628; OP-1831; OP-1862; OP-1863; OP-1933
 Northwest Territories C 1129
 Poland OP-1827
 Rocky Mountains OP-1232
 Russian Federation C 1129
 Saskatchewan OP-1073
 United States B 1904-T
 Wisconsin OP-2121
 Wyoming OP-280; OP-1288; OP-1929
- archeology *see* archaeology
- arches**
 Mississippi Valley, seismology P 1538-N
 Montana, structural geology OP-480
 Ohio, hydrogeology WRI 94-4105
 Wyoming
 deformation OP-283
 faults OP-476
- Arches National Park**
 conservation OF 94-0670
 environmental geology OF 94-0560
- Archosauria *see* Ornithischia; Saurischia
- arcs, island *see* island arcs
- Arctic Coastal Plain**
 geomorphology OP-101
 Quaternary B 2107; OP-124; OP-604
- Arctic National Wildlife Refuge**
 Proterozoic OP-1624
- Arctic Ocean**
 areal geology, Chukchi Sea OP-330
 energy sources
 Canada Basin OP-1270
 Chukchi Sea OP-65; OP-1270
 geochemistry, Beaufort Sea OP-1676
 Mohorovicic discontinuity, Chukchi Sea OP-1398
 natural gas
 Barents Sea OP-2219
 Beaufort Sea OP-17; OP-1060
 oceanography, Beaufort Sea OF 95-0070; OP-396
 paleomagnetism, Canada Basin OF 94-0588
 plate tectonics OP-1894
 Quaternary
 OP-1268
 Beaufort Sea OP-1221
 Canada Basin OP-1566
 Chukchi Sea OP-1049
 Mendeleyev Ridge OP-1566
 Norwegian Sea OP-1001
 sediments OP-1086
 stratigraphy OF 94-0588
 structural geology, Canada Basin OP-1249
 tectonophysics, Canada Basin OP-445
- Arctic region** *see also* Greenland.
 areal geology OF 95-0247
 geomorphology, Arctic Coastal Plain OP-101
 Pliocene OF 94-0588
 Quaternary, Arctic Coastal Plain B 2107; OP-124; OP-604
 stratigraphy B 2110; OF 94-0588
 structural geology OP-304; OP-1395
 tectonophysics OP-2300
- Arctic Sea *see* Arctic Ocean
- Ardara Pluton**
 inclusions C 1129
- arduinite *see* mordenite
- areal geology *see* bibliography; guidebook; maps
- arendalite *see* epidote
- arenites *see* aromatic hydrocarbons
- arenite *see also* quartz arenite.
 Montana OP-1622
 Wyoming OP-1622
- Arequipa Peru**
 metal ores OP-1411
- Argentina**
 energy sources OF 94-0559
 faults C 1129
 geochemistry
 C 1129
 Pampean Mountains C 1129
 magmas, Pampean Mountains C 1129
 orogeny, Salta Argentina OP-2011
 petrology
 C 1129
 Pampean Mountains C 1129
 Santa Cruz Argentina C 1129
 Quaternary, Pampean Mountains OF 94-0568
 Vertebrata
 Chubut Argentina OP-1151
 Santa Cruz Argentina OP-1151
- argillite**
 Alaska
 OP-1361
 Proterozoic OP-1624
 British Columbia OP-1361
 California
 B 1995-HJ
 petrology OP-1315
 Florida, Devonian OP-1971
 Georgia, Devonian OP-1971
 Idaho, base metals P 1525
 Oregon, petrology OP-1315
 Yukon Territory, Proterozoic OP-1624
- argillization**
 Colorado, geophysical surveys OP-67
- argon**
 Ar-40/Ar-39
 Alaska OP-229
 California OP-193
 Colorado OP-1625; OP-1939
 Far East OP-1574
 Hawaii OP-2215
 Idaho OP-1581
 Italy OP-27
 Mexico OP-1755
 Minnesota OP-886
 Montana OP-1517; OP-2133
 New Mexico OP-959
 New York OP-303
 petrology OP-938
 Russian Federation OP-194
 South Dakota OP-1117
 Texas OP-1925
 Utah OP-1390
 Wyoming OP-1517
 thermal waters OP-1756
 Yemen, geochemistry OP-1079
- argon-argon *see* Ar/Ar
- Arguello Microplate**
 stratigraphy B 1995-J,K
- Argyll Suite**
 structural geology C 1129
- Arica Elbow**
 seismology OP-1353
- Aridisols**
 Pennsylvanian OP-1228
- Ariege France *see* Querigut Massif
- Arikaree Aquifer**
 petrology WRI 94-4057
- Arikaree Group**
 geochemistry OP-1046
- Aristarchus** OP-605; OP-1487; OP-1784
- Arizona** *see also* Black Mesa Basin; Bright Angel Shale; Chinle Formation; Chuar Group; Colorado River; Grand Canyon; Lake Powell; Mancos Shale; Mohave Mountains; Paradox Basin; Rio Puerco; Salt River; San Juan Basin; Santa Cruz River; Shinarump Member; Tapeats Sandstone.
 areal geology, Mohave County Arizona B 2056
 coal C 1108
 copper ores
 OP-1381
 Pinal County Arizona OP-291
 Cretaceous P 1561
 energy sources
 C 1108
 Apache County Arizona B 2000-H
 environmental geology
 YR; OF 95-0578
 Apache County Arizona WRI 94-4192
 Coconino County Arizona C 1108
 Mohave County Arizona C 1108
 Navajo County Arizona WRI 94-4192
 fluorides, Graham County Arizona OP-466
 geochemistry, Cochise County Arizona B 2021-E
 geochronology OP-2310
 geologic hazards
 Globe Arizona OF 95-0617
 Pinal County Arizona OF 95-0617
 Tonto Basin OF 95-0617
 geomorphology
 Coconino County Arizona OF 94-0563; OF 94-0564; OF 94-0594; OF 94-0597; OF 95-0529
 Mohave County Arizona OF 94-0563; OF 94-0597
 Tucson Arizona W 2429
 geophysical surveys
 DDS-0031; GP-1012; OF 95-0032; OP-1835
 Cochise County Arizona OF 95-0032; OF 95-0076
 Mohave County Arizona OF 94-0676
 Pima County Arizona OF 95-0032
 Santa Cruz County Arizona OF 95-0032
 ground water OF 94-0476
 hydrogeology
 OP-521
 Apache County Arizona OF 94-0356
 Cochise County Arizona P 1406-A
 Coconino County Arizona WRI 95-4010; OF 94-0356
 Gila County Arizona P 1406-A
 Graham County Arizona P 1406-A
 La Paz County Arizona P 1406-A
 Maricopa County Arizona P 1406-A; OF 95-0546
 Mohave County Arizona P 1406-A
 Navajo County Arizona OF 94-0356; FS 94-0016
 Pima County Arizona P 1406-A; OF 95-0546; FS 94-0016
 Pinal County Arizona P 1406-A; OF 95-0546; FS 94-0016
 Pinal Creek basin OP-1965
 Santa Cruz County Arizona P 1406-A

- Tucson Arizona WRI 94-4114; WRI 95-4062
Yavapai County Arizona P 1406-A; FS 94-0016
Yuma County Arizona P 1406-A
hydrology
YR
Coconino County Arizona OF 94-0485; OF 94-0531; FS 0120-95
Graham County Arizona WRI 95-4083
Greenlee County Arizona WRI 95-4083
Maricopa County Arizona WRI 94-4240; WRI 95-4053; WRI 95-4083
Mohave County Arizona WRI 94-4159; OP-1516
Phoenix Arizona WRI 95-4059
Pinal County Arizona WRI 95-4083; OF 95-0122
Pinal Creek basin WRI 95-4053
Yuma County Arizona WRI 95-4083
ichnofossils
Apache County Arizona OP-380
Navajo County Arizona OP-380
isostasy OP-1666
magmas OP-887
maps
Cochise County Arizona OF 95-0202; MF-2292; I-2450
Graham County Arizona OF 95-0202
Greenlee County Arizona OF 94-0670; OF 95-0263
La Paz County Arizona I-2489
Maricopa County Arizona I-2017
Mohave County Arizona OF 92-0326; OF 94-0290; OF 94-0554; OF 94-0634; OF 95-0048; OF 95-0086; OF 95-0559; OF 95-0560; I-2396; I-2489
Pima County Arizona I-2017
Pinal County Arizona OF 95-0202; I-2017
Yavapai County Arizona I-2489
Yuma County Arizona I-2454
metal ores
OP-1606; OP-1874
Coconino County Arizona OF 94-0670
Gila County Arizona B 2138
La Paz County Arizona B 2138
Maricopa County Arizona B 2138
Pinal County Arizona OP-664
Yavapai County Arizona B 2138
Miocene
La Paz County Arizona OP-669
Mohave County Arizona OP-669
neotectonics
Coconino County Arizona OP-709
Mohave County Arizona OP-709
Yavapai County Arizona OP-709
non-metal deposits
Coconino County Arizona OF 95-0031
Yavapai County Arizona OF 95-0031
petrology
C 1129; OP-1185
Mohave County Arizona OP-991
plate tectonics OP-1256
pollution
Globe Arizona OF 94-0508; OP-257
Phoenix Arizona WRI 95-4074
Pinal Creek basin OF 94-0508
Quaternary
Coconino County Arizona OF 95-0057; OF 95-0591
Mohave County Arizona OF 95-0591
stratigraphy
B 2110; OP-353; OP-1324
Apache County Arizona OP-224; OP-381
Cochise County Arizona B 2110
Navajo County Arizona OP-381
Petrified Forest National Park OP-223; OP-1320; OP-1322
Santa Rita Mountains OP-350
structural geology
OP-1380
Tucson Arizona OP-1282
tectonophysics
OP-515; OP-814; OP-1669
Tombstone Arizona OP-352
uranium ores
Coconino County Arizona OF 94-0566
Yavapai County Arizona OF 94-0566
Arkansas *see also* Arkoma Basin; Boone Formation; Davis Formation; Loveland Loess; Mississippi Embayment; Mississippi River; New Madrid region; Ouachita Mountains; Ozark Mountains; Reelfoot Rift.
deformation, Crittenden County Arkansas P 1538-J
earthquakes
OF 94-0670
Crittenden County Arkansas OP-1005
economic geology C 1124
energy sources C 1108
geochemistry, Saline County Arkansas OF 94-0450
geophysical surveys
OP-1661
Mississippi County Arkansas MF-2296
ground water WRI 93-4134; OF 93-0374; OF 94-0531
hydrogeology
Benton County Arkansas OF 94-0706-W
Carroll County Arkansas OF 94-0537
hydrology
OF 94-0363
Benton County Arkansas OF 94-0364
Crawford County Arkansas OF 94-0364
Pulaski County Arkansas WRI 94-4216
Scott County Arkansas OF 94-0364
Sebastian County Arkansas OF 94-0364
Washington County Arkansas OF 94-0364
lead-zinc deposits, Mississippi County Arkansas B 1989-F
maps
Baxter County Arkansas OF 94-0430
Boone County Arkansas OF 94-0430
Carroll County Arkansas OF 94-0430
Madison County Arkansas OF 94-0430
Marion County Arkansas OF 94-0430
neotectonics, Crittenden County Arkansas OP-2285
non-metal deposits B 2111
Pennsylvanian, Conway County Arkansas OP-1737
pollution OP-32
Quaternary
OP-2216
Mississippi County Arkansas P 1538-H; OF 94-0568; OP-946
seismology, Crittenden County Arkansas OP-1004
springs OP-1159
structural geology OP-956
Arkansas River
hydrology WRI 94-4054
pollution OP-422; OP-488; OP-538
Arkansas River Basin Compact
hydrology OF 94-0364
Arkansas River valley
hydrogeology WRI 94-4051; OF 94-0331; OF 95-0536
hydrology WRI 94-4097; OF 94-0364; OF 94-0412
pollution OF 94-0670; OP-1031
Arkoma Basin
structural geology OP-598
arkose
California, stratigraphy OP-1036
Mexico, stratigraphy OP-1036
New Mexico, Proterozoic OP-21
Washington, petrology OP-2173
Arlington Quadrangle
maps OF 94-0262; OF 95-0483-A; OF 95-0483-B
Arlington Texas
ecology OP-1180
Armenia *see also* Lesser Caucasus; Spitak earthquake 1988.
energy sources YR
Armenia earthquake 1988 *see* Spitak earthquake 1988
armored mud balls
California, continental shelf OP-998
Arnett Member
stratigraphy B 2135
Arnold Air Force Base
hydrogeology WRI 93-4207
aromatic hydrocarbons *see also* benzene; biomarkers; polycyclic aromatic hydrocarbons; toluene.
California, energy sources OP-1746
Gabon, bitumens OP-1403
pollution OP-1723
Arrow Canyon NW Quadrangle
maps OF 95-0035
Arrow Canyon Range
stratigraphy OP-1324
arroyos
Arizona OP-1926
Nevada, structural geology OP-2276
New Mexico, hydrology WRI 94-4143
arsenic
Alaska, geochemistry B 2107
British Columbia, hydrology OF 94-0315
California
ground water WRI 95-4048; OF 94-0334; OP-1231
hydrogeology OF 93-0033
Colorado
hydrology OF 94-0412
pollution OP-488; OP-1082; OP-1535; OP-1957
ground water OP-1167
Idaho
environmental geology WRI 93-4156
pollution OP-1146; OP-2129
Kentucky
geochemistry OP-2053
sedimentary petrology OP-1548
Maryland, environmental geology W 2399
Nevada
gold ores OP-340
hydrogeology OF 93-0033
Oregon, environmental geology WRI 93-4156
Rocky Mountains, pollution OF 94-0670
South Carolina, pollution WRI 94-4209
Washington
hydrology OF 94-0315
pollution OP-1146

- Wisconsin, hydrology OF 95-0163
Arsia Mons I-2428
Artemis Chasma OP-1845
Artemisia
 Colorado, base metals OP-557
 Oregon, Quaternary OP-1635
artesian waters
 Australia, diagenesis OP-665
 Florida, ground water OF 94-0457
 Mississippi Valley, seismology P 1538-N
 New York, ground water OP-1608
 Puerto Rico, ground water OF 93-0465; OF 93-0466
 United States, diagenesis OP-665
Arthropoda *see also* Mandibulata; Trilobitomorpha.
 Crustacea, Utah OP-1479
 Malacostraca, New Mexico OP-379
arthropods *see also* crustaceans; insects; trilobites.
 California, Miocene OF 95-0489
 crustaceans
 Colorado OP-1531
 Wyoming OP-1531
Arthurs Rock Gulch
 fluvial features OP-2259
 geomorphology OP-986
 Quaternary OP-1582
Articulata *see* Rhynchonellida; Spiriferida
artifacts *see also* archaeological sites.
 California
 geomorphology OP-785
 Quaternary OF 94-0568
 Mississippi Valley, Quaternary OF 94-0568
 Missouri, Quaternary OP-1707
 New Mexico, geomorphology WRI 94-4205
 Sahara, Quaternary OP-909
artificial intelligence OF 95-0651
artificial recharge
 Arizona, hydrogeology WRI 94-4114
 Massachusetts, pollution OP-1175
 Nevada, ground water WRI 94-4126
 South Dakota, hydrogeology OF 95-0313
 Texas, ground water WRI 94-4092; OF 94-0329
 Utah, pollution OP-657
artroelite
 Arizona, fluorides OP-466
Arundel Formation
 pollution OP-1089
Arunta Block
 magmas C 1129
As *see* arsenic
Asal Rift
 tectonophysics OP-2152
asbestos
 California, pollution OP-2047
 geologic hazards OP-791
Asbury Park Quadrangle
 maps OP-904
ash
 Alaska
 mineral resources OF 94-0277-A; OF 94-0277-B
 Quaternary OP-1920
 Europe, weathering OP-2052
 Montana, pollution OP-185
 Rocky Mountains, pollution OF 94-0670
 Washington
 geochemistry OF 94-0670
 sedimentary petrology OP-1042; OP-1181; OP-1182
ash clouds
 Alaska, geophysical surveys B 2139
ash falls
 Alaska
 petrology B 2139
 Quaternary B 2139
 Idaho, geochemistry OP-716
 Yukon Territory, petrology B 2139
ash flows
 Alaska, geochemistry OF 95-0047
 Colorado, magmas OP-1325
Ash Meadows
 geochemistry OP-2169
 ground water OP-2066
 hydrogeology OP-1747; OP-1947
Ash Mountain
 petrology OP-1509; OP-1847
ash-flow tuff
 Alaska, Quaternary OP-1921
 Arizona, stratigraphy OP-353
 Bolivia
 B 2119
 metal ores OP-188
 Colorado
 OP-546
 geophysical surveys OP-1118
 metal ores OP-728
 Idaho, geochemistry OP-716
 Montana, geochronology OP-1517
 Nevada
 geochemistry P 1559; B 1988-K; B 2056
 ground water OP-1567
 metal ores B 2090
 Miocene B 2056
 stratigraphy B 2056; OP-1860
 structural geology B 2056; OP-454; OP-2143
 Tertiary OF 95-0545
 New Mexico, geochemistry B 2081
 paleomagnetism OP-1738
 Spain, metal ores OP-22
 Texas, Oligocene OF 94-0227
 Utah
 economic geology OP-189
 geochemistry B 1988-K; B 2056
 Miocene B 2056
 Washington OP-2173
 Wyoming, geochronology OP-1517
Ashe Formation
 magmas OP-1126
 metal ores OP-306
Ashigara Plain
 plate tectonics OF 94-0568
Ashland Quadrangle
 maps OF 94-0655; OF 94-0657
Ashley Formation
 stratigraphy OP-1393
Ashtabula Till
 geomorphology OF 95-0224
ashtonite *see* mordenite
Ashuanipi Complex
 geochemistry C 1129
Ashumet Pond
 waste disposal OP-2249
Asia *see also* Arabian Peninsula; Central Asia; Far East; Himalayas; Indian Peninsula; Kyrgyzstan; Middle East.
 coal, Indus River OF 94-0595; OF 94-0596-A
 continental shelf, Anadyr Basin OP-589
 earthquakes
 Kuril Islands OP-1657
 Sakhalin Russian Federation OP-532
 energy sources, Karatau Range OP-169; OP-1258
 environmental geology, Russian Far East CP-0043
 gems, Kohistan OP-1303
 geochemistry
 Lake Baikal OP-1559
 Main Boundary Fault C 1129
 Maymecha-Kotuy OP-50
 Norilsk region OP-50; OP-421
 Selenga River valley OP-1559
 Siberia OP-50; OP-421; OP-1559
 Transbaikalia C 1129
 geochronology
 Norilsk Russian Federation OP-194
 Siberia OP-194
 Yakutia region OP-1493
 geophysical surveys, Lake Baikal OF 94-0263
 hydrology
 Lake Baikal OF 94-0445
 Siberia OF 94-0445
 Tien Shan OP-1003
 intrusions, Karakoram C 1129
 Invertebrata, Alai Range OP-345
 magmas, Komandorski Islands C 1129
 mineral resources OP-2192
 natural gas
 Sakhalin Russian Federation OP-2219
 Siberia OP-593
 Siberian Lowland OP-2219
 petroleum
 Lena Basin OP-153
 Siberia OP-153
 Tunguska Basin OP-153
 Quaternary
 Lake Baikal OP-94; OP-165
 Tien Shan OF 94-0568
 Tolbachik OP-1257
 sedimentary petrology
 Lake Baikal OP-1877
 Selenga River valley OP-1877
 stratigraphy, Siberia OP-1212
 structural geology
 Potwar Plateau B 2126
 Russian Far East OF 94-0714
 Asia Minor *see* Turkey
ASPAR
 seismology OF 94-0221
asphalt
Aspy Terrane
 geochemistry C 1129
associations
 B 2129; OP-797
 Midwest, petroleum OF 94-0298
Astarte
 Alaska, Quaternary OP-1221
asteroids
 B 2129; OP-57; OP-134; OP-853
 geomorphology OP-2033
 stratigraphy OP-84; OP-935
asthenosphere
 California, metal ores OP-801
 tectonophysics OP-985
Astoria Fan
 sedimentary petrology OP-1877
Asuka-31 Meteorite OP-1826
Atacama Chile
 geochemistry C 1129

Atacama Desert

Quaternary B 2110

atacamite

Michigan OP-2028

Atbay *see* Red Sea Hills**Atchafalaya Bay**

geomorphology OF 94-0275

oceanography OF 94-0275

waterways OF 94-0275

Atchafalaya River

waterways OF 94-0275

Atera Fault

Quaternary OF 94-0568

Atkinson Formation

Devonian OP-1971

Atlanta Georgia

soils OP-1555

Atlanta mining district

metal ores OP-799

Atlantic City New Jersey

Miocene OP-622

Atlantic Coastal Plain *see also* Chesapeake Bay;

Delaware; Florida; Georgia; Maryland; Mid-dendorf Formation; New Jersey; New York; North Carolina; Salisbury Embayment; South Carolina; Virginia.

continental shelf OP-2293

ecology OF 95-0007

engineering geology WRI 94-4164

environmental geology W 2399; C 1108; OF 94-0116; FS 0134-95; OP-837; OP-1099

geologic hazards WRI 94-4188

ground water W 2401; WRI 90-4095; WRI 92-4111; WRI 92-4152; WRI 92-4174; WRI 94-4010; WRI 94-4012; WRI 94-4076; WRI 94-4113; WRI 94-4167; WRI 94-4170; WRI 94-4186; OF 94-0390; OF 94-0391; OF 94-0392; OF 94-0393; OF 94-0394; OF 94-0395; OF 94-0457; OF 94-0520; OP-151; OP-376; OP-751; OP-1358; OP-1455

hydrogeology WRI 94-4128; OF 94-0507; OF 95-0164; OP-678; OP-750; OP-1819

hydrology WRI 91-4141; WRI 93-4130; WRI 94-4225; WRI 94-4226; WRI 95-4111; OF 94-0454; OF 94-0511

maps OF 95-0253; OF 95-0254

Miocene, Central Atlantic Coastal Plain OP-622

oceanography

MF-2268

Central Atlantic Coastal Plain OP-621

phosphate deposits OP-399

pollution WRI 92-4144; OP-910; OP-1089; OP-1985

Quaternary OF 94-0568; FS 0117-95; OP-2086

sedimentary petrology B 2110; OP-848

stratigraphy

P 1554; OP-903

Central Atlantic Coastal Plain OP-623; OP-1412; OP-1958

structural geology OP-1988

Vertebrata OP-2275

Atlantic Intracoastal Waterway

hydrology WRI 95-4111

Atlantic Margin Coring Project *see* AMCOR**Atlantic Ocean *see also* Gulf Stream; North Atlantic.**

Cenozoic OP-738; OP-1198

continental margin I-1987-D

continental shelf

OP-584; OP-2293

Georges Bank basin OP-1970

Cretaceous

Falkland Plateau OP-1161

Goban Spur OP-1161

earthquakes OP-1313

environmental geology

OF 94-0649; OP-662; OP-913

Straits of Florida OP-1427

Eocene OP-735

geochemistry

OP-244; OP-398; OP-1129

Long Island Sound OF 94-0620

geophysical surveys, Long Island Sound OP-2218

heat flow OF 95-0262

heavy mineral deposits OP-344

marine geology, West Atlantic OP-117

metal ores, TAG hydrothermal field OP-502

Miocene OP-739

natural gas C 1108; OP-1305

ocean circulation

YR

Gulf of Maine OP-2114

ocean floors

Block Island Sound OP-2073

Georges Bank OP-2073

Long Island Sound OP-2324

oceanography

B 2079; MF-2268; MF-2280; OP-585; OP-586; OP-621; OP-1188

Barbados Ridge OP-2149

Block Island Sound OP-1679

Gulf of Maine OF 94-0672; OP-2222

Long Island Sound OF 95-0556; I-2456; OP-1972

phosphate deposits OP-399; OP-583; OP-1506; OP-1969

plate tectonics

Barracuda Ridge OP-1312

Puerto Rico Trench OP-1304

Pliocene OF 94-0588; OP-218

Quaternary

OP-683; OP-1566; OP-1719

Blake Plateau OP-1866

Exuma Sound OP-1866

Labrador Sea OP-1001

Long Island Sound OP-2165

Mid-Atlantic Ridge OP-233

Puerto Rico Trench OF 94-0568

sea-floor spreading

Atlantis fracture zone OP-1931

Hayes fracture zone OP-1931

Mid-Atlantic Ridge OP-1931

sedimentary petrology

B 2110

Block Island Sound OP-1343

Georges Bank OF 95-0044

Great Bahama Bank OP-2109

stratigraphy

OF 94-0588; OP-903

Great Bahama Bank OP-540; OP-1334

structural geology OP-1959

tectonophysics OP-413

Vertebrata OP-2275

Atlantic Ocean Islands *see* Bermuda**Atlantic region**

stratigraphy OP-386

structural geology OF 94-0682

Atlantic-type margins *see* passive margins**Atlantis fracture zone**

sea-floor spreading OP-1931

atmosphere *see also* atmospheric precipitation; greenhouse effect; paleoatmosphere; sulfur dioxide.

OP-484; OP-485; OP-1780; OP-2134

Alaska

geochemistry B 2107

geophysical surveys B 2139

Arizona, hydrology OF 95-0122

California, environmental geology OP-261

Colorado, engineering geology EV

ecology C 1108

energy sources OP-433

environmental geology C 1108

geochemistry OP-602

Hawaii, hydrogeology WRI 95-4001

hydrogeology C 1108

Indonesia, Quaternary OP-467

Louisiana, environmental geology OF 94-0275

Mexico, Quaternary OP-467

Minnesota, ecology C 1108

Nevada, hydrogeology OF 94-0491

New York, waste disposal OP-1775

Ontario, ground water OP-170

Philippine Islands, Quaternary OP-467

pollution YR; OF 94-0506

soils OP-787

stratigraphy OP-935

Washington

geologic hazards OF 95-0085

Quaternary OP-467

Wisconsin, ecology C 1108

atmospheric precipitation *see also* rain.

Alaska

environmental geology OF 95-0342; OF 95-0343; OF 95-0344; OF 95-0345; OF 95-0346; OF 95-0347; OF 95-0348

geologic hazards OP-1316; OP-2257

geomorphology OP-101

hydrogeology OF 94-0367; OF 94-0713-W; OF 95-0172

Quaternary OP-124; OP-612

volcanic features B 2139

Appalachians, hydrology FS 94-0019; OP-1632

Arizona, hydrology OP-1516

Basin and Range Province, Quaternary OP-2101

China, hydrology OP-1003

Colorado

geochemistry OP-146

hydrology WRI 94-4194; OF 95-0139

geochemistry OP-1248

geologic hazards OP-2240

Georgia

hydrogeology OP-2161

hydrology OP-120

Great Basin, Quaternary OP-2101

ground water OP-1432

Gulf of California, sedimentation OP-1987

Hawaii

clay mineralogy OP-1594

hydrogeology OF 94-0586; OP-2076

Idaho, hydrogeology OP-2221

Illinois, waste disposal OP-1491

Iowa, hydrology OP-312

Mariana Islands, hydrology WRI 93-4116

Marshall Islands, stratigraphy OP-2254

Maryland, hydrology OP-1899

Massachusetts, hydrology WRI 94-4084; WRI 94-4224

- Micronesia
hydrology WRI 93-4116
stratigraphy OP-2254
- Midwest, hydrology OP-1824
- Nevada
hydrogeology WRI 95-4052; OF 94-0456
hydrology OF 94-0317; OP-1516
- New Mexico
ground water OP-2308
hydrology WRI 93-4113
- Oklahoma, hydrology OP-312
- Oregon
hydrogeology WRI 92-4010
hydrology WRI 93-4181
- Rocky Mountains
environmental geology YR
hydrology OP-1632
- South Carolina, hydrogeology OF 94-0487
- South Dakota, hydrogeology OF 95-0313
stratigraphy OP-1319; OP-2274
- Texas, ground water OP-2308
- Utah, hydrogeology WRI 95-4072
- Vermont
hydrogeology OP-1631
hydrology OF 94-0475
- Washington
hydrogeology WRI 92-4010
hydrology WRI 94-4139
- Wisconsin, hydrogeology OP-992
- Atoka Formation** OP-510; OP-766
- atolls**
ground water OP-949
- atomic absorption**
geochemistry WRI 93-4122
- atomic force microscopy**
mineralogy OP-1134
- Atotsugawa Fault**
Quaternary OF 94-0568
- atrazine**
environmental geology OP-131
geochemistry OP-1963
Indiana, pollution OP-2024
- Iowa
ground water WRI 94-4244
pollution OP-982; OP-983; OP-1605
- Kansas
pollution W 2419; OF 94-0670; OP-1693;
OP-2145
soils OF 94-0670
- Michigan
environmental geology OF 94-0670
pollution OF 95-0163; OP-1267
- Midwest, pollution OP-2089; OP-2201
- Minnesota
environmental geology OP-831
ground water WRI 94-4149
pollution OP-1653; OP-1686
- Missouri, pollution OP-934
- Nebraska, pollution W 2419; OP-2145
- North Dakota, pollution OP-1653
pollution YR; OP-629; OP-1041; OP-1426
- Texas, pollution OP-2009
- Wisconsin
environmental geology OF 95-0163
pollution OF 95-0163
- attapulgitite** *see* palygorskite
- attenuation**
Alaska
engineering geology OP-1683
seismology OP-1855
- California
earthquakes OP-393
- geophysical surveys OP-2046
- Mohorovicic discontinuity OP-1853
- seismic sources OP-1038
- seismology OP-62; OP-539; OP-1143; OP-1224; OP-1385
- China, mantle OP-868
- Colorado, pollution OP-1823
- elastic waves OP-1718
- faults OP-240
- Nevada
seismology OF 94-0618
structural geology OP-1440
- Philippine Islands, engineering geology OP-1683
- Russian Federation, geochemistry OP-1559
- seismicity OP-1298
- seismology OF 91-0635; OP-24; OP-550; OP-2041
- Au** *see* gold
- aubrite** *see* chladnite
- audiomagnetotelluric methods**
Wyoming OF 95-0239
- augen gneiss**
Montana OP-1627
- Auger spectroscopy**
geochemistry OP-1011
- augite**
Colorado, geochemistry OP-760
geochemistry OP-1519
- Augustine**
geochemistry OF 95-0055
geologic hazards OP-2257
Quaternary OF 95-0061-A; OF 95-0061-B
seismology OP-1598
- aulacogens**
Oklahoma, petrology C 1129
- Auld Lang Syne Group**
sedimentary petrology OP-1404
- Aurignacian**
Spain OP-66
- Austin Texas**
pollution OF 94-0302
- Australasia** *see also* Australia; New Zealand; Papua New Guinea.
environmental geology CP-0043
- Australia** *see also* New South Wales Australia; Northern Territory Australia; Queensland Australia; Tasmania Australia; Victoria Australia; Western Australia.
deformation, Lachlan fold belt OF 94-0228
diagenesis, Great Artesian Basin OP-665
economic geology OP-905
geochemistry, Lachlan fold belt C 1129
inclusions, Lachlan fold belt C 1129
magmas
Lachlan fold belt C 1129
New England Batholith C 1129
metal ores
OP-2126
Lachlan fold belt C 1129
petrology
OP-1574
Lachlan fold belt C 1129
Quaternary OF 94-0568
stratigraphy, Carpentaria Basin OP-1338
tectonophysics OP-704; OP-2334
- australite**
Far East, petrology OP-1574
- Austria**
inclusions, Upper Austria C 1129
metal ores OP-2126
- structural geology OP-598
- autoionization *see* Auger spectroscopy
- automatic cartography *see* digital cartography
- autoregression** OF 95-0123
- Aux Vases Sandstone**
energy sources OF 94-0298
petroleum OF 94-0298
- avalanches**
environmental geology OP-1619
- Guatemala, geologic hazards OP-952
- Japan, geologic hazards OP-2007
- Washington
dams OP-2038
faults OP-2079
geologic hazards OP-674; OP-2329
hydrogeology OP-2116
- Avalon Plate**
structural geology OP-782
- Avalon Terrane**
geochronology OP-1047
tectonics OP-2296
- Avalonian Orogeny**
Wales, geochemistry C 1129
- Aves Island**
hydrogeology WRI 93-4219
- AVHRR**
Alaska
environmental geology OP-1120
geophysical surveys B 2139
ecology OP-556; OP-896
geophysical surveys OP-2314
Senegal, environmental geology OP-918
- aviation facilities**
Alaska
environmental geology OF 94-0481; OF 94-0525; OF 94-0526; OF 94-0527; OF 95-0173; OF 95-0176; OF 95-0177; OF 95-0179; OF 95-0180; OF 95-0342; OF 95-0343; OF 95-0344; OF 95-0345; OF 95-0346; OF 95-0347; OF 95-0348
geologic hazards OF 95-0175
hydrogeology OF 94-0367; OF 94-0712-W; OF 94-0713-W
impact statements OF 94-0482; OF 95-0174
pollution OF 95-0178
- aviation safety**
Alaska
geologic hazards B 2139
geophysical surveys B 2139
Canada, geologic hazards B 2139
environmental geology GP-1011
- AVIRIS**
Colorado
ecology OP-150
pollution OP-493
- AVO methods**
Alaska, natural gas OP-17
Arctic Ocean, natural gas OP-1060
- Avon Montana**
non-metal deposits I-2446
- Avon Park Formation**
ground water WRI 94-4010
- AVS**
maps OF 95-0593
pollution OP-1765
- awards YR**
- axial-plane structures**
Virginia, structural geology OP-1199
- axinite** OP-1771

Azerbaijan

- areal geology OP-154
- petroleum OP-807

Aztec Wash Pluton

- geochemistry C 1129
- magmas OP-258
- petrology OP-1817

B**B see boron****B-11/B-10**

- California, geochemistry OP-927
- Canadian Shield, metal ores OP-2126
- geochemistry OP-1026
- Great Britain, metal ores OP-2126
- metal ores OP-870
- Pacific Ocean, geochemistry B 2022

Ba see barium**Bachelor Caldera**

- petrology OP-546

back-arc basins

- Alaska, energy sources OP-574
- California
 - lava OP-1149
 - structural geology OP-1599
- China, mantle OP-868
- Colorado Plateau, stratigraphy OP-222; OP-1321
- Oregon, magmas OP-41
- Vanuatu, plate tectonics OP-337

backscattering

- California, volcanic features OP-305
- Ohio
 - geomorphology OF 95-0224
 - geophysical surveys OF 95-0252

bacteria

- Arkansas, springs OP-1159
- California, environmental geology OP-894
- Colorado, geochemistry OP-1713
- environmental geology OP-690; OP-834; OP-1262
- geochemistry OP-602
- Great Lakes region, hydrology WRI 95-4005
- Idaho, gold ores OF 95-0495
- Iowa, pollution OP-839
- Kansas
 - hydrology WRI 94-4077
 - pollution W 2352-B
- Massachusetts, pollution OP-509; OP-616
- metal ores OP-104
- Michigan, mineralogy OP-2028
- Nebraska
 - hydrology WRI 94-4077
 - pollution W 2352-B
- Nevada, environmental geology OP-894
- New Mexico
 - sedimentary petrology OP-1274
 - sedimentation OP-1276
 - solution features OP-190
- Pacific Ocean, sea water OP-842
- pollution C 1108; OP-377; OP-1724
- Texas, ground water OF 94-0329
- Wyoming, geochemistry OP-2128

Baculites

- California, stratigraphy OP-1341

badlands

- Wyoming OP-279; OP-280

Badlands Wilderness Study Area

- mineral resources OF 95-0006

Bahama Bank

- earthquakes OP-1313

Bahama Platform see Blake Plateau**Bahamas see also Exuma Sound.**

- plate tectonics OP-1312; OP-1314
- Quaternary OP-1865
- sedimentary petrology OP-2109
- stratigraphy OP-540

Bahia Brazil

- petrology C 1129

Baikal (Lake) see Lake Baikal**Baird Group**

- Invertebrata OP-51

Baird Inlet Quadrangle

- environmental geology OF 95-0173

Baja California

- geochemistry OP-197
- geochronology OF 94-0587
- magmas C 1129
- petrology C 1129; OP-827
- structural geology OP-824
- tectonophysics OP-82; OP-1448

Baja California Norte Mexico see also Cerro Prieto.

- stratigraphy OP-1036

Baja California Sur Mexico

- Ostracoda OP-122

Bajocian

- California OP-1462

Bakken Formation

- energy sources OP-749

balance-beam manometers

- Colorado, hydrology OF 94-0363
- hydrology OF 94-0363
- Iowa, hydrology OF 94-0363
- Michigan, hydrology OF 94-0363
- Puerto Rico, hydrology OF 94-0363

balanced cross sections

- Alaska, Mohorovicic discontinuity OP-2301

Balcones fault zone

- ground water WRI 95-4030
- hydrogeology FS 94-0048

Baldwin Hills

- Quaternary OF 94-0568

Ball Brook Fault

- ground water OP-1799

ballistics

- Alaska, petrology B 2139

Balls Bluff Siltstone

- geochronology OP-1672

balls, coal see coal balls**Balmuccia Italy**

- structural analysis OP-755

Baltic region see Estonia**Baltic Shield**

- geochemistry C 1129
- magmas C 1129
- petrology OP-1827

Baltimore Gneiss

- structural geology OP-1317

Baltimore Maryland

- pollution OP-1089

Baluchistan Pakistan

- structural geology OF 94-0670

Bandeller Tuff

- geochemistry B 2081

banks

- geomorphology OP-1792
- Massachusetts, oceanography OP-2222

Banner Formation

- Quaternary OP-1630

Banning Fault

- Pliocene OP-2061

Bara Formation

- sedimentary petrology OP-1386

Baranof Fan

- sedimentation OP-2160

Baranof Island

- metal ores OP-1169
- structural geology OP-1447

Barbados

- plate tectonics OP-1312

Barbados Ridge

- oceanography OP-2149

Barcelona Spain

- geochronology OP-66

BARCO

- areal geology B 2056

Barents Sea

- natural gas OP-2219

barite

- Alaska, stratigraphy OP-1439
- Colorado, metal ores OP-1793
- South Carolina, gold ores OP-2090

barite deposits

- Idaho P 1525; B 2064-A-R
- Pacific Ocean, geochemistry B 2022

Barite Hill Deposit

- gold ores OP-2090

barium

- geophysics OP-1237
- New Mexico, uranium ores B 2063
- South Carolina, pollution WRI 94-4209
- Western Interior, stratigraphy OP-2063

barium titanate

- geophysics OP-1237

Barlow Limestone

- sedimentary petrology OF 94-0298

Barnwell Quadrangle

- maps OF 94-0673

barometry, geologic see geologic barometry**Barracuda Ridge**

- plate tectonics OP-1312

Barranca Group

- sedimentary petrology OP-1404

Barre Granite

- engineering geology OP-650

Barrel Spring Pluton

- magmas OP-321

Barrel Springs Formation

- Oligocene OP-1925

Barremian

- OP-96
- Alaska OP-1249; OP-1251

barrier islands

- Florida, shore features OP-1174
- Louisiana
 - oceanography I-2150-B
 - shore features OP-1937
- New York, ground water WRI 92-4171
- Texas, energy sources OP-220

barrier reefs

- Marshall Islands, stratigraphy OP-2254
- Micronesia, stratigraphy OP-2254

Barrow Alaska

- hydrogeology OF 94-0367
- Pliocene OP-1171

Barrow Arch

- energy sources OP-65

bars *see also* point bars.

Arizona

- fluvial features OP-1607
- geomorphology OF 94-0594; OF 94-0597
- hydrogeology WRI 95-4010
- hydrology OF 94-0485; FS 0120-95
- Colorado, fluvial features OP-2259
- Columbia Plateau, Quaternary OP-2237
- Florida, shore features OP-1174
- hydrology OP-829
- Ohio, geomorphology OF 95-0224
- Oregon, Quaternary OP-680
- Washington, Quaternary OP-680

Barstow California

- maps OF 94-0681

Barton Mine

- geochemistry B 2106

basalt *see* basalts

basalt flows

Idaho

- ground water OP-44
- volcanism OP-1674

Utah, faults OP-1842

basaltic domes *see* shield volcanoes

basalts *see also* alkali basalts; ankaramite; flood basalts; lava; mid-ocean ridge basalts; ocean-island basalts; olivine basalt; shoshonite; tholeiite; tholeiitic basalt.

- OP-880; OP-1580; OP-1789

Alaska

- OP-39; OP-632; OP-711
- paleomagnetism OP-727

Arizona C 1129; OP-991

California

- OF 95-0585; OP-1315
- geochronology OF 94-0587; OP-625

Colorado

- geochemistry OP-1939
- geologic hazards OP-1101

East Pacific Ocean Islands OP-309

Egypt, Quaternary OP-1152

Galapagos Islands OP-309

geochemistry OP-978

Germany, geophysical surveys OP-651

Greenland OP-1752

ground water HA-0730-H

Hawaii

- OP-47; OP-234; OP-1090; OP-1223
- hydrogeology OP-2076
- Pliocene OP-2215
- Quaternary OP-1616

Italy C 1129

Maryland OP-1126

Mexico, geochronology OF 94-0587

Minnesota, mineral resources OF 94-0447

Montana, geochemistry OP-2133

Nevada

- gold ores OP-2151
- structural geology OP-1440
- New Mexico, geochemistry B 2081
- Northwest Territories, faults OP-1856
- ocean floors B 2022

Oregon

- OP-38; OP-1315
- economic geology B 1741-H
- folds OP-1128
- Quaternary OP-680
- stratigraphy OP-1176; OP-1177

Pacific Ocean

- OP-920
- oceanography OP-503

Russian Federation, geophysical surveys OP-651

Virginia

- OP-1126
- tectonophysics OP-413

Washington

- C 1129
- Quaternary OP-680
- sedimentary petrology B 2085-C

basanite

Hawaii OP-1307

base metals *see also* copper ores; lead ores; zinc ores.

- Alaska B 2107
- Colorado OP-284; OP-557; OP-728; OP-1626
- Idaho P 1525; B 2064-A-R; B 2081
- Italy OP-199

base-level peneplain *see* peneplains

basement tectonics

- Indiana OF 94-0298
- Manitoba OP-1073
- Montana OF 94-0670; OP-1628
- Saskatchewan OP-1073

Bashkirian

Kazakhstan OP-1258

BASIC OF 94-0697-A; OF 94-0697-B

basin analysis

- petroleum OP-1814

Basin and Range Province *see also* Arizona; Great Basin; Nevada; New Mexico; Sevier Desert; Utah; Whipple Mountains; Yucca Mountain.

- areal geology B 2056
- energy sources OP-813
- environmental geology OP-2209
- faults OP-631
- hydrogeology P 1406-A; FS 94-0016
- magma C 1129
- maps I-2462
- metal ores B 2090; OF 94-0691
- mineral resources B 2064-A-R
- neotectonics B 2056; OF 94-0568
- petrology C 1129; OP-708; OP-836
- Quaternary B 2056; OF 94-0568
- structural geology P 1528; B 2056; OF 94-0568; OF 95-0506; OP-480; OP-1282; OP-1741; OP-1820; OP-1976
- tectonics OP-363
- tectonophysics OP-352

basin management

- Missouri, environmental geology OP-447
- North Carolina, pollution W 2435
- Oregon
 - hydrogeology WRI 92-4010
 - hydrology WRI 93-4181
- pollution OP-692
- Washington, hydrogeology WRI 92-4010

basin range structure

- Nevada
 - metal ores B 2090
 - structural geology OP-1820
- New Mexico, structural geology OF 95-0506

basins *see also* back-arc basins; fore-arc basins; foreland basins; intermontane basins; pull-apart basins.

I-2397; OP-852

Alaska

- continental shelf OP-589
- metal ores OP-1169
- plate tectonics OP-1894
- stratigraphy B 2110

Antarctic Ocean, geophysical surveys OP-156

Appalachians, Pennsylvanian OP-1737

Arizona

- copper ores OP-1381
- geophysical surveys OF 95-0076
- hydrogeology P 1406-A
- petrology OP-1185
- stratigraphy B 2110

Arkansas, Quaternary B 2110

Australia, diagenesis OP-665

Basin and Range Province, geophysical surveys GP-1012

Bering Sea, tectonophysics OP-1261

Bolivia, structural geology OP-2244

Brazil, metal ores OP-198

California

- earthquakes OP-430; OP-1266
- energy sources OF 95-0530; OP-385; OP-2146
- geochemistry P 1566
- geomorphology OF 94-0105
- geophysical surveys OF 95-0016; OP-1759
- Neogene B 1995-J,K
- neotectonics OP-1760
- petroleum B 2120
- sedimentary petrology B 1995-H,I; OP-159; OP-603

stratigraphy B 1995-J,K

waste disposal OP-2291

Canada, metal ores OP-1169

Chile, Quaternary B 2110

Colorado

- sedimentary petrology B 1808-P
- stratigraphy B 2110

Commonwealth of Independent States, petroleum B 2110

Cretaceous I-2474-A

diagenesis OF 94-0298

energy sources B 2000-H; B 2137; OF 94-0298

geophysical surveys OP-1898

Great Lakes

- lacustrine features OF 95-0224
- stratigraphy OP-436

Hungary, stratigraphy OP-951

Idaho, Permian OP-2093

Indiana, petroleum B 2094-D

Kentucky, petroleum OF 94-0298

Louisiana, energy sources OF 94-0228

metal ores OP-318

Mississippi, diagenesis OP-828

Mississippi Valley, economic geology B 2094-C

Montana

- Cretaceous OP-743
- energy sources OP-281
- stratigraphy OP-596
- structural geology OP-480
- tectonics OP-1452

natural gas OP-578

Nevada

- geochemistry B 1988-K
- geomorphology OF 94-0105

New Mexico

- pollution OP-1019
- sedimentary petrology B 1808-P

Ohio, hydrogeology WRI 94-4105

Oklahoma, Quaternary B 2110

Oregon

- geophysical surveys OP-72
- ground water OF 94-0505
- natural gas OF 95-0093

orogeny B 2110

Papua New Guinea, tectonophysics OP-1035

Pennsylvania, sedimentation B 2110

- petroleum OF 94-0298; OP-1814; OP-1815
- Rocky Mountains**
pollution OF 94-0670
structural geology OP-1232
- Russian Federation**
continental shelf OP-589
geochronology OP-1493
natural gas OP-2219
sedimentary petrology OP-1877
- sedimentary petrology OF 94-0298**
- soil mechanics OP-168**
- South Dakota, sedimentary petrology B 1917-S**
- stratigraphy OP-2099**
- Texas**
energy sources OF 94-0228
pollution OP-1019
- United States, diagenesis OP-665**
- Utah**
geochemistry B 1988-K
stratigraphy B 2110
- Virginia, stratigraphy B 2135; OF 94-0573**
- Washington**
Eocene B 2085-A
geophysical surveys OP-72
ground water OF 94-0505
sedimentary petrology B 2085-C; OP-1182
- Western Interior, Pennsylvanian B 2110**
- Wyoming**
energy sources OF 94-0670; OP-281; OP-677
sedimentary petrology OP-780
sedimentation OF 94-0670
- Basins and Arches region**
ground water OF 93-0663
hydrogeology WRI 94-4105; OF 94-0473
- basins, drainage *see* drainage basins**
- BASIX**
geophysical surveys OP-1928; OP-1966
tectonophysics OP-1524
- BASS**
geophysical surveys OF 93-0722
- Bateque Formation**
Ostracoda OP-122
- batholiths**
C 1129
- Alaska**
geochemistry OP-23
gold ores OP-624
- Alberta C 1129**
- Appalachians, geochemistry C 1129**
- Argentina**
C 1129
faults C 1129
- Arizona C 1129**
- Australia C 1129**
- Austria C 1129**
- Baltic region C 1129**
- Brazil, geochronology C 1129**
- British Columbia C 1129**
- California**
C 1129; OP-1211
energy sources OP-193
faults C 1129
- Chile C 1129**
- Colorado**
C 1129
stratigraphy OP-1363
- France, geochemistry C 1129**
- geochemistry C 1129**
- Idaho**
P 1525
metal ores OF 94-0690
- mineral resources B 2064-A-R**
- Iran C 1129**
- Italy, geochemistry C 1129**
- Japan OP-270**
- Maine, geochemistry C 1129**
- Mexico C 1129; OP-1870**
- mineralogy OP-2110**
- Mississippi Valley, structural geology P 1538-E**
- Mohorovicic discontinuity C 1129**
- New Mexico C 1129**
- New South Wales Australia C 1129**
- New Zealand, geochemistry C 1129**
- Scandinavia C 1129**
- Spain**
C 1129
metal ores OP-799
tectonophysics OP-985
- United States, metal ores OP-799**
- Utah, tectonics OP-1283**
- Vermont, geochemistry C 1129**
- Victoria Australia, geochemistry C 1129**
- Virginia**
geochemistry C 1129
Proterozoic B 2060
- Washington C 1129**
- Bathonian**
California OP-1462
- bathymetric maps**
Idaho, hydrology WRI 94-4119
- Baton Rouge Fault**
ground water OP-1996
- Battle Mountain High**
gold ores OP-331
petroleum OP-2065
- Bavaria Germany *see also* Fichtelgebirge; Upper Palatinate.**
engineering geology OP-650
geophysical surveys OP-651; OP-748
- Baxter Lake Quadrangle**
Quaternary OP-990
- Baxter Shale**
stratigraphy B 2113
- Bay Area Seismic Imaging eXperiment**
geophysical surveys OP-1928
- Bayan Obo China**
polymetallic ores OP-1024
- Bayfield Quadrangle**
geomorphology OF 95-0266
- Bayhorse mining district**
sedimentary petrology P 1525
- bayous**
Louisiana
environmental geology OF 94-0275
waterways OF 94-0275
- bays**
Louisiana, geomorphology OF 94-0275
- Be *see* beryllium**
- Be-9/Be-10 *see* Be-10/Be-9**
- Be-10**
Arizona, Quaternary OP-1287
geomorphology OP-1368
Mississippi Valley, Quaternary OP-1757; OP-1758
- Puerto Rico, geomorphology OP-106**
- Utah**
Quaternary OP-1287
stratigraphy OP-1731
- Be-10/Be-9**
Atlantic Ocean, geochemistry OP-1129
Pacific Ocean, geochemistry OP-1129
- beach erosion *see* littoral erosion**
- beach profiles**
South Carolina, geomorphology OP-1471
- beach ridges**
Atlantic Coastal Plain, Quaternary FS 0117-95
Great Lakes, Quaternary OP-525
- beaches**
Alaska, pollution C 1108
California, geochemistry OF 95-0015
geomorphology OP-2035
Illinois, hydrogeology OP-164
Indiana, hydrogeology OP-164
- Bear River fault zone**
seismicity OP-1745
- Bear Trap Creek Quadrangle**
maps GQ-1757
- Bear Wallow Fault**
structural geology OP-1380
- Beardmore Glacier**
Pliocene OF 94-0588
- Bearpaw Mountain Nevada**
maps I-2536
- Bearpaw Mountains Montana**
non-metal deposits OP-1492
- Beartooth Mountains**
areal geology OP-280
crust OP-1831
sedimentary petrology OP-1622
- Beatty Nevada**
environmental geology OP-2209
hydrology OF 94-0489; OP-1989
waste disposal OP-1990
- Beaucoup Formation**
areal geology OP-641
- Beaufort Aquifer**
ground water WRI 94-4186
- Beaufort Sea**
geochemistry OP-1676
natural gas OP-17; OP-1060
oceanography OF 95-0070; OP-396
Quaternary OP-1221
- Beaver Creek**
environmental geology OF 95-0156
hydrology OF 95-0156
pollution OF 95-0156
- Beaver Creek watershed**
hydrology OP-2162
pollution OF 95-0312; OF 95-0329; OP-688; OP-1006; OP-2044
- Beaver Dam Wash**
geophysical surveys OF 94-0676
- Beaverhead Formation**
stratigraphy B 2113
tectonics OP-1452
- Beaverhead Mountains**
crystalline rocks OP-362
faults OP-2125
- Becker, Raymond C. OP-534**
- bed forms *see* bedforms**
- bed-load *see* bedload**
- bedded volcano *see* stratovolcanoes**
- bedding**
Alaska, Quaternary OP-1098
Chile, Quaternary OP-1098
Utah OP-1464
- bedding plane irregularities *see* dune structures; fossil ice wedges; ripple marks; sand waves; scour marks; striations**
- bedforms**
Atlantic Ocean, oceanography OP-1679

- California, oceanography OP-116
 Egypt, sedimentary petrology OP-1770
 Great Lakes, stratigraphy OP-436
 Hawaii, Quaternary OP-1183
 hydrogeology OP-795
- bedload**
 Alaska
 engineering geology WRI 94-4073
 hydrology OP-127
 Arizona, hydrology FS 0120-95; OP-2203
 Colorado, hydrology OP-1927
 geomorphology OP-1792
 hydrology OP-18
 Idaho
 hydrology OF 94-0109
 pollution OP-1156
 Illinois
 geologic hazards OP-2048
 hydrogeology OP-164
 Indiana, hydrogeology OP-164
 Midwest, hydrology WRI 93-4204
 Mississippi Valley
 geologic hazards OP-1526; OP-1578
 hydrology OF 94-0474
 Missouri, environmental geology OP-447
 New York, hydrology OF 93-0161
 Ohio, geomorphology OF 95-0224
 Puerto Rico, sedimentary petrology OP-310
 sedimentary petrology OP-2104
 Utah, hydrology OP-2203
 Washington
 geochemistry WRI 94-4047
 hydrology OF 94-0109
 waterways OP-544
- Beech Creek Limestone Member**
 sedimentary petrology OF 94-0298
- Beekmantown Group** OF 94-0573
- Bega Batholith**
 geochemistry C 1129
 magmas C 1129
- Belarus** *see* Dnieper River; Pripyet Basin
- Belau**
 geochemistry OP-520; OP-689
- Belize**
 stratigraphy OP-1150
- Bell Mountain**
 stratigraphy OP-353
- Bell, Henry, III** OP-112
- Belle Fourche Shale** OP-1131; OP-1974
- Belledonne Massif**
 magmas C 1129
- Belleville Dam**
 hydrology OF 95-0184
- Bellingshausen Sea**
 Quaternary OP-440
- Belmont Pluton**
 geochronology OP-844
- Belorussia** *see* Belarus
- Belt Supergroup**
 structural geology OP-1863
- belts, fold *see* fold belts
- belts, greenstone *see* greenstone belts
- belts, mobile *see* mobile belts
- Beluga Formation**
 energy sources OP-576
 uranium ores B 2098
- Belvidere Illinois**
 ground water OF 94-0515
- Bemidji Minnesota**
 environmental geology OP-558
- Ben Seamount**
 geochemistry OP-197
- bench marks**
 California, geophysical surveys OF 94-0693;
 OF 95-0237
 Florida, geomorphology OF 95-0216
 Oregon, geophysical surveys OF 95-0099
- Bendeleben Mountains**
 areal geology OP-931
- Benioff zone**
 Bolivia
 mantle OP-1643
 seismicity OP-494; OP-1910
 Canada, tectonophysics OP-2265
 United States, tectonophysics OP-2265
- Benthic Acoustic Stress Sensor**
 geophysical surveys OF 93-0722
- Benton Arkansas**
 geochemistry OF 94-0450
- bentonite**
 Colorado, stratigraphy OP-507
 geochronology OP-1572
 Gulf Coastal Plain, stratigraphy OP-1906
 Utah
 geochronology OP-1142
 stratigraphy OP-507
 Western Interior
 geochronology OP-506
 stratigraphy OP-1906
 Wyoming, geochronology OP-569
- benzene**
 Massachusetts, pollution OP-36
- Beppu Japan**
 ocean floors OF 94-0568
 Quaternary OF 94-0568
- Berenguela Formation**
 structural geology OP-2244
- berg crystal *see* quartz crystal
- Bering Glacier**
 hydrology OP-1429; OP-1833
 Quaternary OP-1507; OP-1664; OP-1805; OP-1834; OP-2017; OP-2207; OP-2281
- Bering land bridge *see* Beringia
- Bering Sea** *see also* Aleutian Islands.
 areal geology, Bristol Bay OP-201
 continental shelf
 Bristol Bay OP-589
 Navarin Basin OP-589
 metamorphism, Bristol Bay OP-39
 Mohorovicic discontinuity OP-1398
 ocean floors, Bowers Ridge OP-1217
 plate tectonics OP-1894
 Quaternary OP-815; OP-1049
 sedimentary petrology, Bristol Bay OP-2080
 tectonophysics, Bowers Ridge OP-1261
- Bering Strait**
 Quaternary OP-1172
- Beringia**
 Arctic Ocean, Quaternary OP-1049
 Bering Sea, Quaternary OP-1049
- Bermont Formation**
 stratigraphy OP-2295
- Bermuda**
 Quaternary OP-1732; OP-1733
- Berners Bay mining district**
 gold ores OP-624
- Berrocal Fault**
 energy sources OP-2146
- Bertrand, Paul**
 paleobotany OP-644
- Berwick Formation** OP-1047
- Berwind Colorado**
 stratigraphy OF 94-0670; OP-1953
- beryl**
 Idaho P 1525
 Utah OP-288
- beryllium**
 Be-10
 Arizona OP-1287
 geomorphology OP-1368
 Mississippi Valley OP-1757; OP-1758
 Puerto Rico OP-106
 Utah OP-1287; OP-1731
 Be-10/Be-9
 Atlantic Ocean OP-1129
 Pacific Ocean OP-1129
 Rocky Mountains, pollution OF 94-0670
 Washington, pollution OP-2064
- Bethel Alaska**
 environmental geology OF 95-0173
- Betic Cordillera** *see also* Serrania de Ronda.
 metal ores OP-22
- Betsie Shale Member**
 stratigraphy OP-69
- Bettles Field**
 environmental geology OF 95-0343
- Betze Deposit**
 gold ores OP-536
- bibliography** *see also* biography.
 CAT; OP-484; OP-1127; OP-1240
- Alaska**
 B 2107; OF 94-0675-A; OF 94-0675-B;
 OF 94-0675-C
 structural geology OF 94-0714
 tectonics OF 94-0194
 Antarctica, Quaternary P 1386-B
- Appalachians**
 coal OF 95-0572
 structural geology OF 94-0682
- Arizona, metal ores B 2138
- Atlantic region, structural geology OF 94-0682
- British Columbia, structural geology OF 94-0714
- California
 OF 95-0558
 economic geology OF 94-0712
 sedimentary petrology B 1995-H,I
 stratigraphy OF 94-0630
- coal C 1108
- Colorado**
 hydrogeology OF 94-0331
 metal ores B 2109
 energy sources OF 94-0556
 Florida, hydrology OF 95-0185
 geochemistry OF 95-0041
 geologic hazards OF 94-0663
 geomorphology OF 95-0046
 geophysical surveys OF 94-0652-A; OF 94-0652-B; OF 94-0652-C; OF 95-0064-A;
 OF 95-0064-B; OF 95-0064-C; OF 95-0077
 geophysics B 2131
 Georgia, hydrogeology OF 94-0307
 Greenland, geophysical surveys P 1386-C
 Hawaii, Quaternary OP-2315
 hydrogeology OF 94-0493
 hydrology OF 95-0379
 Idaho, economic geology P 1525
 igneous rocks OF 94-0624-A; OF 94-0624-B
 Invertebrata OF 95-0260
 Japan, structural geology OF 94-0714
 Kansas
 hydrogeology OF 95-0120

- hydrology W 2352-B
 Massachusetts, environmental geology OF 94-0649
 Midwest, hydrogeology OF 94-0473
 mineral resources OF 95-0045
 mineralogy B 2140
 Mississippi, hydrogeology FS 94-0075
 Missouri, hydrogeology OF 94-0538
 Montana, stratigraphy B 2112
 natural gas OP-135
 Nebraska, hydrology W 2352-B; OF 94-0496
 Nevada, economic geology OF 94-0712
 New York, stratigraphy B 2086
 North Dakota, stratigraphy B 2112
 Ontario, stratigraphy B 2086
 Oregon
 OF 95-0558
 hydrogeology OF 95-0285
 petroleum OF 95-0246
 pollution OF 94-0506
 Puerto Rico, hydrogeology OF 93-0629
 Russian Federation, structural geology OF 94-0714
 sedimentary petrology OF 95-0065-A; OF 95-0065-B
 South Carolina, geologic hazards OF 94-0663
 Tennessee, hydrogeology OF 94-0354
 Utah, hydrogeology OF 94-0309
 Washington
 OF 94-0403
 geologic hazards OF 94-0663
- bicarbonate ion**
 Delaware, pollution OP-1077
 Maryland
 hydrology FS 0136-95
 pollution OP-1077
 Texas, ground water WRI 93-4126
- Bicarinatina**
 Invertebrata OP-740
- Big Bear earthquake 1992**
 California OP-460; OP-461; OP-1387; OP-1561; OP-1600
- Big Belt Mountains**
 maps MF-2291
- Big Bend National Park**
 tectonics OP-363
- Big Blue River**
 ecology W 2352-B
 geomorphology W 2352-B
 hydrology W 2352-B
 pollution W 2352-B; W 2419
- Big Cypress National Preserve**
 environmental geology C 1108
 geomorphology OP-1203
- Big Delta Alaska**
 environmental geology OF 95-0180
- Big Delta Quadrangle**
 mineral resources OF 95-0627
- Big Dirty Coal Bed**
 sedimentary petrology OP-1042
- Big Horn Basin** *see* Bighorn Basin
- Big John Caldera**
 economic geology OP-189
- Big Lue Mountains Quadrangle**
 maps OF 94-0670; OF 95-0263
- Big River Dolostone**
 Proterozoic B 2107
- Big Sheep Mountain Quadrangle**
 maps OF 93-0529
- Big Sioux River**
 hydrogeology WRI 93-4195
- Big Soda Lake**
 environmental geology OP-894
- Big Soos Creek basin**
 geochemistry WRI 94-4047
- Big Timber Stock**
 geochemistry OF 95-0098
- Bigbendian**
 paleomagnetism OP-1881
 Pliocene OP-1171
- Bigfork Montana**
 non-metal deposits I-2446
- Bighorn Basin**
 areal geology OP-280
 Cretaceous C-0146
 deformation OP-283
 Mammalia OP-1527
 Paleocene OP-666
 paleomagnetism OP-403
 sedimentary petrology OP-780; OP-1622
 stratigraphy OP-1155
 weathering OP-928
- Bimidji Quadrangle**
 mineral resources OF 94-0447
- Bingle Bingle Point**
 petrology C 1129
- BinHex B 2103**
- biocenoses**
 Arizona, stratigraphy OP-381
- biochemical sedimentation**
 California, Quaternary OF 95-0034
 North Dakota, hydrology WRI 94-4171
 Oregon, Quaternary OF 95-0034
 pollution C 1108
- bioclastic sedimentation**
 California, Quaternary OF 95-0034
 Japan Sea, Quaternary OP-722
 Oregon, Quaternary OF 95-0034
 Pacific Ocean, Quaternary B 2022
 Russian Federation, Quaternary OP-165
- biocoenoses** *see* biocenoses
- biodegradation** WRI 94-4127; OF 94-0275; OP-131; OP-487; OP-509; OP-690; OP-719; OP-894; OP-993; OP-1175; OP-1262
- biodiversity**
 Arizona, ichnofossils OP-380
 Midwest, ecology OF 95-0163
 Pacific Ocean, sea water OP-842
 Pennsylvania, environmental geology WRI 94-4060
- biogenic structures** *see also* algal structures; banks; bioherms; bioturbation; lebensspuren.
 stratigraphy OP-225
- biogeochemical methods**
 base metals OP-557
 gold ores OP-895
 hydrogeology OF 95-0569
 metal ores B 2064-A-R
 mineral resources OF 94-0277-A; OF 94-0277-B
 pyrite ores B 2081
- biogeography** *see also* adaptive radiation; continental drift.
 Alaska
 stratigraphy P 1545
 Trilobita OP-1
 Antarctic Ocean, Pliocene OF 94-0588
 Antarctica, Pliocene OF 94-0588
 Egypt, ichnofossils OP-1012
 Idaho, Quaternary B 2105
 Japan, stratigraphy OP-1269
 New York, stratigraphy OP-685
- Ohio, stratigraphy OP-411
 Pacific Ocean, Jurassic OP-964
 plate tectonics OP-1327
 Russian Federation, Pliocene OF 94-0588
 stratigraphy OP-809
- biography**
 OP-112; OP-504; OP-517; OP-523; OP-534; OP-996
 economic geology OP-111; OP-400
 Iceland, Quaternary OF 95-0500
 Invertebrata OP-414
 paleobotany OP-182; OP-501; OP-563; OP-566; OP-582; OP-645; OP-646
 Uruguay, ichnofossils OP-311
- bioherms** *see also* mud mounds.
 Denmark, stratigraphy OP-1140
- biologic evolution** *see also* adaptive radiation; cladistics; natural selection; punctuated equilibria.
 China, Conodonts OP-1021
 Invertebrata OF 95-0260
 New Jersey, stratigraphy P 1554
 New York, stratigraphy OP-685
 Utah, Vertebrata OP-145
 Wyoming, Mammalia OP-1154
- biological degradation** *see* biodegradation
- biological diversity** *see* biodiversity
- biological zones** *see* biozones
- biomarkers**
 Alaska, energy sources OP-65; OP-574
 California
 natural gas OP-542
 pollution OP-1538
 Colorado, geochemistry OP-1713
 Illinois, heat flow OP-2050
 Indiana, energy sources OP-2020
 Italy, geochemistry OP-500
 Mississippi Valley, zinc ores OF 94-0298
 natural gas OF 95-0207
 Ohio, energy sources OP-2057
 Wisconsin, lead-zinc deposits OP-792
 Wyoming, energy sources OP-701
- biometry**
 Kyrgyzstan, Invertebrata OP-345
 Vertebrata OP-417
- biomicrite**
 stratigraphy OP-1558
- biomineralization** OP-602
- biopelite** *see* black shale
- bioremediation**
 environmental geology C 1108
 Florida, hydrogeology WRI 94-4162
 Massachusetts, pollution OP-509; OP-616
 pollution OP-95; OP-377
- biosparrodite**
 California, stratigraphy OP-1036
 Mexico, stratigraphy OP-1036
- biostratigraphy** *see also* algal flora; ammonoids; arthropods; biozones; bivalves; brachiopods; chitinozoans; coccoliths; conodonts; corals; crinoids; diatom flora; dinoflagellates; dinosaurs; echinoids; foraminifers; fusulinids; gastropods; graptolites; insects; invertebrates; mammals; miospores; mollusks; nannofossils; ostracods; paleoecology; palynomorphs; plants; radiolarians; rodents; trilobites.
 B 2110; I-2474-A
 Arizona OP-381
 Basin and Range Province, structural geology OP-2115

- Colorado
I-2555; OP-2027
sedimentation OP-1646
Europe, geochronology OP-510
Florida OP-1204
Georgia OP-1359
Great Basin, structural geology OP-2115
Gulf Coastal Plain OP-1906
Iowa, geomorphology OP-2034
Ohio OP-411
Papua New Guinea, tectonophysics OP-1035
Vanuatu, oceanography OP-338
West Virginia, paleobotany OP-2304
Western Interior B 2113; OP-1906; OP-2030
Wyoming
deformation OP-283
sedimentation OP-1646
- biostromes**
Kazakhstan, energy sources OP-1258
- biotite**
Alabama, stratigraphy OP-386
Alaska
gold ores OP-2184
metamorphism B 2107
Pliocene OF 95-0217-A; OF 95-0217-B
structural geology OP-1447
Alps, magmas C 1129
Brazil, geochemistry C 1129
California, petrology OP-45; OP-1211
Colorado, sedimentation OP-1690
faults OF 94-0228
Japan
geochemistry C 1129
Neogene C 1129
petrology C 1129
Maine, metal ores OP-555
Montana, geochronology OP-1465; OP-1517
North Carolina, Paleozoic OP-1670
Sweden, stratigraphy OP-386
Utah, geochronology OP-1142
Virginia, Paleozoic OP-1670
Wyoming, geochronology OP-569; OP-1517
Yukon Territory, Pliocene OF 95-0217-A; OF 95-0217-B
- biotite granite**
C 1129
Finland C 1129
Nevada C 1129
Spain C 1129
Virginia, geochemistry C 1129
- biotite schist**
Colorado GQ-1764
- bioturbation** *see also* burrows.
OP-1340
Bahamas OP-2109
California, pollution OP-1064
Colorado Plateau, stratigraphy OP-1321
New Mexico, Quaternary OP-1050
Washington, Eocene OP-1593
Wyoming OP-928
- biozones**
Alaska, Quaternary OP-604
Atlantic Coastal Plain, stratigraphy OP-903
Bahamas, stratigraphy OP-540
California, Miocene B 1995-J,K
Canada, Jurassic OP-745
China, stratigraphy OP-2253
Colorado, stratigraphy OP-507
Delaware
Paleocene OF 95-0478
stratigraphy OP-481
Iran, stratigraphy OP-2253
Japan, Permian OP-1132
Louisiana, Paleocene OF 95-0208
Marshall Islands, stratigraphy OP-2254
Maryland, stratigraphy OF 94-0683; OF 94-0708; OP-736
Micronesia, stratigraphy OP-2254
Mississippi, Paleocene OF 95-0208
New Jersey, Eocene OP-735
Oregon, Permian OP-1132
Pacific Ocean, Jurassic OP-964
Pakistan, stratigraphy OP-2253
paleobotany OP-568
Peru, stratigraphy OP-200
South Carolina, stratigraphy OP-1393
stratigraphy OP-96; OP-768; OP-809
Texas, stratigraphy OP-2253
United States, Jurassic OP-745
Utah, stratigraphy B 2115-B; OP-507
Virginia
Eocene OP-735
stratigraphy OF 94-0217; OP-736
Western Interior, Cretaceous P 1561
Wyoming
Mammalia OP-1154
Paleocene OP-666
- Birch Creek Pluton**
magmas C 1129; OP-1095
- Bird Island *see* Aves Island
- birds**
Arizona, environmental geology C 1108
California
environmental geology C 1108
ground water OF 94-0334
Oklahoma, ecology OF 94-0324
- Biscayne Aquifer**
geomorphology OP-1203
ground water OP-615
- Bishop Tuff**
Quaternary OP-1575; OP-2006
- Bismarck Archipelago *see* Rabaul Caldera
- bismuth ores**
Peru OP-202
- bitter spar *see* dolomite
- Bitterroot Range** *see also* Beaverhead Mountains.
geochronology C 1129
- bitumens**
OP-537
Arizona OP-1714
Gabon OP-1403
gilsonite
Colorado OP-297
Utah OP-297
Indiana OP-2020
Nevada OP-1084
Ohio OP-2057
Utah OP-1714
- bituminous coal**
Illinois, geochemistry OF 94-0555
Washington OP-1181
Western Interior, Pennsylvanian B 2110
- bituminous sands *see* oil sands
- bituminous shale *see* black shale
- bivalves**
California
environmental geology C 1108; OF 95-0299
Pliocene OP-2061
stratigraphy OP-1341
Colorado, stratigraphy OP-507
Florida, continental shelf OP-1425
Great Lakes, Quaternary OP-163
Great Lakes region, Quaternary OP-163
Pacific Ocean, Quaternary B 2022
Utah, stratigraphy OP-507
Washington
hydrology OF 94-0308
sedimentary petrology OP-1376
Western Interior, geochronology OP-506
Wisconsin, environmental geology OF 95-0163
- Bivalvia** *see also* Astartida; Ostrea.
ecology FS 94-0014
- bixbyite**
New Mexico OP-1518
Utah OP-1518
- Black Belt of Alabama**
ground water WRI 94-4074
- Black Butte mining district**
metal ores OF 94-0666
- Black Creek Aquifer**
pollution OP-132
- Black Creek Formation** OP-1359; OP-1971
- Black Dragon Member**
tectonics OP-1556
- Black Forest**
magmas C 1129
- Black Forest Bed**
sedimentation OP-2023
- Black Hills**
copper ores OP-291
Cretaceous I-2474-A
energy sources OP-1942
geochemistry C 1129
hydrogeology OF 94-0319
magmas C 1129
metal ores OF 95-0066-A; OF 95-0066-B; I-2445
Proterozoic OP-1117
sedimentary petrology B 1917-S; OP-1622
tectonophysics OP-1975
- black lead *see* graphite
- Black Mesa Basin**
stratigraphy OP-2019
- Black Range**
mineralogy OP-1518
- Black Rapids Glacier**
geomorphology OF 94-0512
- Black Rock core**
stratigraphy OF 95-0001
- Black Rock Desert**
Permian OP-78
- black sands**
Idaho, non-metal deposits P 1525
- Black Sea**
geochemistry OP-535
Quaternary OP-1289
- black shale**
Basin and Range Province, structural geology OP-2115
California, geochemistry OP-1955
China, metal ores OP-1871
Colorado, stratigraphy B 2110
geochemistry B 2110
Great Basin, structural geology OP-2115
Idaho
P 1525
metal ores B 2064-A-R
Nebraska B 2110
Ohio, energy sources OP-2057
petroleum OP-1811
Utah
B 2110

- stratigraphy B 2000-L; B 2110
Wyoming B 2110
- black smokers**
Pacific Ocean, sea water OP-842
- Black Squirrel Creek basin**
ground water WRI 94-4238
- Black Swamp Arkansas**
ground water OF 94-0531
- Black Warrior Basin**
geochemistry C 1108
hydrogeology WRI 90-4112
sedimentary petrology OP-1915
- Blackburn Field**
geophysical surveys OF 94-0670
- Blackfeet Indian Reservation**
ground water OP-1215
- Blackhawk Formation**
sedimentary petrology OP-1464
- Blackleaf Formation B 2113; OP-1974**
- Blaine Aquifer**
ground water OF 94-0387
- Blake Event**
Quaternary OP-397; OP-1505
- Blake Plateau**
Quaternary OP-1866
- Blancan**
Idaho B 2105
- Blanco fracture zone**
metal ores OP-801
seismology OP-1329
tectonophysics OP-1656
- Blarney Creek Fault**
deformation OP-479
- blind thrust faults**
California
earthquakes YR; OP-892
engineering geology OP-389
geologic hazards OF 94-0259
Italy, earthquakes OP-892
- Bliss Sandstone**
structural geology OP-1878
- bloating shale see shale**
- block clay see melange**
- block faults see block structures**
- Block Island Sound**
ocean floors OP-2073
oceanography OP-1679
sedimentary petrology OP-1343
- block structures**
Alaska
deformation OP-479
seismology OP-697
Arizona, deformation OP-15
Basin and Range Province, structural geology OP-2115
Belarus, structural geology OP-948
California
energy sources OP-385
faults OP-492
seismology OF 95-0038
structural geology OP-1584; OP-1914
Canada, tectonophysics OP-2265
China, Quaternary OF 94-0568
Commonwealth of Independent States, magmas C 1129
Great Basin, structural geology OP-2115
Hawaii, Quaternary OP-639
Idaho, geophysical surveys P 1525
Minnesota, geochemistry B 1904-U
Mississippi Valley, geomorphology P 1538-R
- Montana
natural gas OP-854
structural geology OP-480
- Nevada
deformation OP-15
faults OP-492
structural geology B 2056; OP-454; OP-1440; OP-1469; OP-1904; OP-1944
- New Mexico, structural geology OP-1878
- Saudi Arabia, structural geology OP-455
- Tennessee, seismology OP-1907
- Ukraine, structural geology OP-948
- United States, tectonophysics OP-2265
- Wyoming, faults OP-476
- Yukon Territory, tectonics OP-360
- Bloody Bluff fault zone**
structural geology OP-782
- Bloody Run watershed**
hydrology OP-465
- Bloomsburg Formation OF 94-0573**
- blue algae see Cyanophyta**
- blue lead see galena**
- Blue Mountains**
folds OP-1128
metal ores OF 94-0677
- Blue Ridge Mountains**
mineral resources OP-428
petrology OP-1200
Proterozoic OP-3
- Blue Ridge Province**
areal geology OP-63
geochemistry C 1129
geomorphology OP-196
hydrogeology FS 94-0010; OP-2161
hydrology FS 94-0019
metal ores OP-306
petrology C 1129; OP-1647
Proterozoic B 2060
structural geology OP-1335
- blue-green algae see Cyanophyta**
- Bluemont Quadrangle**
Proterozoic OP-3
- blueschist**
Alaska
OP-39; OP-784
structural geology OP-932
California, structural geology OP-1599
- blueschist facies**
Alaska, structural geology OP-932
- bluffs**
Alaska, Quaternary OP-1457
Illinois
geomorphology OP-452
hydrogeology OP-164
lacustrine features OP-286
Indiana, hydrogeology OP-164
Ohio
geomorphology OF 95-0224
shore features OF 95-0224
- Blytheville Arch**
seismology P 1538-N; OP-405
- Blytheville Arkansas**
Quaternary OP-946
- Bobcat Gulch Deposit**
metal ores B 2081
- Boca Raton Canal**
hydrogeology WRI 94-4128
- Bodega Head Quadrangle**
engineering geology OF 94-0568
- Bodie mining district**
metal ores OP-415
- body waves see also P-waves; Pn-waves; S-waves; ScS-waves; SKS-waves.**
California OP-375
Hawaii OP-323
Japan OP-974
- Boggs Member**
stratigraphy OP-768
- Bogoslof**
geologic hazards OF 95-0083
Quaternary OF 95-0061-A; OF 95-0061-B
- Bohemia**
geochemistry C 1129
- Bohemian Massif**
geochemistry C 1129
inclusions C 1129
metasomatism C 1129
- Bolse Idaho**
ground water WRI 94-4116
- Bole Spring**
hydrogeology OP-1747
- Bolivar Venezuela**
maps MF-2246; MF-2247
- Bolivia see also Altiplano; Eastern Cordillera.**
energy sources OF 94-0559
mantle OP-1643
metal ores OP-188
petrology C 1129
plate tectonics OP-180; OP-252
seismicity
OP-1910; OP-2294
La Paz Bolivia OP-494
seismology OP-961; OP-1353
- Bolivia earthquake 1994**
mantle OP-1643
plate tectonics OP-180; OP-252
seismicity OP-494; OP-1910; OP-2294
seismology OP-961; OP-1353
- Bolivina**
Arctic Ocean, Quaternary OP-1566
- bolsons**
Texas, ground water WRI 94-4092; OF 94-0329
- Bond albedo see albedo**
- Bondholder mining district**
metal ores OP-284
- bonding**
OP-880
Arizona, fluorides OP-466
mineralogy OP-79
petrology OP-1196
pollution OP-137
- Bonin Islands**
mantle OP-1109
- Bonneterre Formation**
metal ores B 1989-G
- Bonneville Salt Flats**
hydrogeology OF 95-0104
- Book Cliffs**
sedimentary petrology OP-1464
- Boomerang Volcano**
geomorphology B 2072
- Boone Formation**
solution features OP-1360
- Boone River**
hydrology OP-312
- Bootheel Lineament**
seismology MF-2279

Borah Peak earthquake 1983

- Idaho, Quaternary OF 94-0568
- Italy OF 94-0568
- United States OF 94-0568
- Washington OP-1859

borates *see* fluoborite

Borborema

- inclusions C 1129

Border Gneiss

- petrology OP-1200

Border Ranges Fault

- gold ores OP-2184
- paleomagnetism OP-727

borderland, continental *see* continental borderland

borehole breakouts

- Australia, tectonophysics OP-2334
- California, tectonophysics OP-2334
- Canada, tectonophysics OP-2334
- India, tectonophysics OP-2334
- Oklahoma, tectonophysics OP-2334

boron

- B-11/B-10
 - California OP-927
 - Canadian Shield OP-2126
 - geochemistry OP-1026
 - Great Britain OP-2126
 - metal ores OP-870
 - Pacific Ocean B 2022
- California
 - economic geology OP-216
 - ground water WRI 95-4048
 - metal ores OP-720
- Hawaii, hydrogeology OP-2076
- Idaho, environmental geology WRI 93-4156
- Massachusetts, geochemistry OF 94-0384
- mineralogy OP-1771
- Oregon, environmental geology WRI 93-4156

borosilicates OP-1771

Borrego Mountain earthquake 1968

- California OP-1586

Boston Basin

- structural geology OP-782

Boston Massachusetts

- environmental geology OP-1187
- oceanography MF-2280
- Quaternary OP-683; OP-1658

Boston Peak

- uranium ores OF 95-0242

botany, paleo- *see* paleobotany

bottom currents

- Illinois, hydrogeology OP-90

bottom features *see also* abyssal hills; furrows; hydrothermal vents; mid-ocean ridges; submarine canyons; submarine volcanoes.

- Antarctic Ocean, continental shelf OP-921
- Atlantic Ocean, ocean floors OP-2073
- California

- oceanography OP-1066
- structural geology OP-1234
- Connecticut, oceanography OP-1972
- Hawaii, Quaternary OP-639; OP-2246
- hydrogeology OP-795

Illinois

- OP-295
- hydrogeology OP-90

- Massachusetts, oceanography OF 94-0672
- Northwest Territories, oceanography OP-396

bottom load *see* bedload

boudinage

- Arizona, petrology C 1129
- Italy, petrology C 1129

New Mexico, petrology C 1129

Bougainville Seamount

- plate tectonics OP-336; OP-337

Bouguer anomalies

- Antarctica, tectonophysics OP-55
- Arizona, geophysical surveys OF 95-0076
- California, structural geology OP-2107
- Colorado Plateau, tectonophysics OP-1669
- geophysical surveys DDS-0031
- Idaho

- geophysical surveys P 1525
- mineral resources B 2064-A-R
- Maine, geophysical surveys OP-85

Mississippi Valley

- geophysical surveys P 1538-L
- structural geology P 1538-E

Nevada

- geophysical surveys OF 94-0670; OP-2029
- gold ores OP-331
- New Mexico, structural geology OF 95-0506
- Spain, metal ores OP-22

Boulder Colorado

- hydrogeology WRI 94-4111

Boulder Creek Granodiorite

- maps GQ-1764

Boulder Mountains

- metal ores B 2064-A-R

boulders

- Basin and Range Province, Quaternary OP-1414
- California, pollution OP-2047
- Colorado
 - fluvial features OP-2259
 - geomorphology OP-986
 - hydrology OP-1345
- Great Basin, Quaternary OP-1414
- Hawaii, Quaternary OP-1183
- Idaho, Quaternary OP-1900
- Peru, Quaternary OP-2032

boundaries, stratigraphic *see* stratigraphic boundary

boundary stones

- Virginia, conservation OF 94-0592

boundstone

- Kazakhstan, energy sources OP-1258

Bow Ridge Fault

- environmental geology OF 93-0477
- geochemistry OP-2326
- geophysical surveys OF 93-0540-A; OF 93-0540-B
- Quaternary OF 94-0568

Bowdoin Sandstone

- natural gas OP-854

Bowers Ridge

- ocean floors OP-1217
- tectonophysics OP-1261

Bowers subduction zone

- crust OP-2075
- natural gas OP-2074

Bowie Seamount

- sedimentation OP-2160

Boy Scout Camp Granodiorite

- maps I-2233

Bozeman Montana

- environmental geology OP-1264

Br *see* bromine

brabantite

- mineralogy B 2140

Brachiopoda

- Cyrtospirifer, Alaska B 2107

Inarticulata, Alaska OP-740

Rhynchonellida, Alaska OP-51

Rhynchonellidae, Alaska B 2107

Spiriferida, Alaska OP-76

brachiopods

Alaska

- OP-711
- Devonian B 2107
- Invertebrata OP-76
- paleontology OF 94-0215
- Appalachians, stratigraphy OP-766
- Kazakhstan, energy sources OP-1258
- New Mexico, Proterozoic OP-21
- stratigraphy OP-1558

Bradley Lake

- Quaternary OF 94-0568; OP-1629

Bradley River

- hydrology OF 95-0338

braided streams

- Colorado, fluvial features OP-1743
- Idaho, pollution OP-1156

BRANCH

- hydrology WRI 95-4111

Branch of Coal Geology

- sedimentary petrology OF 95-0065-A; OF 95-0065-B

Branch of Pacific Marine Geology

- geochemistry OF 95-0041

Branch of Petroleum Geology

- petroleum OF 95-0246

Brannon Bridge Limestone Member

- stratigraphy OP-1324

Bransfield Strait

- Quaternary OP-440

Brasiliano Orogeny

- geochemistry C 1129
- geochronology C 1129
- inclusions C 1129

braunite

- Africa OP-781
- New Mexico OP-1518
- Utah OP-1518

Brazil

- energy sources OF 94-0559
- geochemistry C 1129
- geochronology, Rio Grande do Norte Brazil C 1129
- inclusions
 - Borborema C 1129
 - Paraiba Brazil C 1129
 - Rio Grande do Norte Brazil C 1129
- marine geology
 - Amapa Brazil OP-117
 - Para Brazil OP-117
- metal ores OP-198; OP-2126
- petrology
 - Bahia Brazil C 1129
 - Paraiba Brazil C 1129
 - Pernambuco Brazil C 1129
 - Sergipe Brazil C 1129

Brazil Formation

- coal OF 94-0298
- stratigraphy OF 94-0298

breakouts *see* borehole breakouts

Breathitt Formation

- B 2135; OP-768
- geochemistry OP-2053
- sedimentary petrology OP-1548

breccia *see also* volcanic breccia.

- Arizona, structural geology OP-1282
- Arkansas, geochemistry OF 94-0450

- Atlantic Coastal Plain, stratigraphy OP-1960
 British Columbia, petrology OP-1509; OP-1847
 California
 metal ores OP-804
 petrology OP-1315
 Colorado
 geophysical surveys OP-1879
 metal ores OP-333; OP-1488; OP-1626
 petrology OP-546
 stratigraphy OP-2012
 geochronology OP-1572
 Hawaii OP-1184
 Idaho
 crystalline rocks OP-362
 fluorspar P 1525
 metal ores B 2064-A-R
 Iowa
 geomorphology OP-16; OP-1059
 geophysical surveys OP-1880
 stratigraphy OP-2154
 Micronesia, manganese ores OP-1409
 Minnesota, mineral resources OF 94-0447
 Missouri, petrology OP-1299
 Montana
 crystalline rocks OP-362
 metal ores OP-2224
 structural geology OP-480
 Nevada, structural geology OP-454; OP-1469; OP-2143
 New Jersey, structural geology OP-1959
 Oregon, petrology OP-1315
 Peru, metal ores OP-202
 Poland, lead-zinc deposits OP-908
 Spain, metal ores OP-22
 stratigraphy OP-1558
 Utah, tectonics OP-1283
 Virginia, ground water OP-1977
- breccia pipes**
 Arizona
 metal ores OF 94-0670
 uranium ores OF 94-0566
 Bolivia, metal ores OP-188
 Montana, metal ores OF 94-0670
 Utah, metal ores OF 94-0417
- Breitenbush Hot Springs**
 petrology OP-38
- Brentwood Field**
 energy sources OP-1746
- Bridge Creek Limestone Member** OP-1131
- Bridger Range**
 maps OF 95-0011-A; OF 95-0011-B
 mineral resources OP-1344
 orogeny OF 94-0670
 structural geology OP-480
- bridges**
 Alaska
 engineering geology WRI 94-4073
 geomorphology WRI 94-4165
 Atlantic Coastal Plain, engineering geology WRI 94-4164
 California, seismology OP-1617
 Colorado, engineering geology OF 95-0296
 engineering geology OP-519
 Iowa, highways OP-272
 Japan, engineering geology OP-1027
 Mississippi
 engineering geology OP-1009
 waterways WRI 94-4241
 Missouri
 hydrology WRI 94-4200
 waterways OF 94-0544
- New Mexico, engineering geology WRI 95-4050
 New York, engineering geology OP-113
 Tennessee, waterways WRI 94-4229
- Bright Angel Shale**
 energy sources OP-1714
- brightness**
 OP-880; OP-1783
 Quaternary OP-717
 Wyoming, hydrology OP-883
- Brightseat Formation**
 ground water OF 94-0370
 stratigraphy OF 94-0708
- brines** *see also* salt water; salt-water intrusion.
 OF 94-0298; OP-318
 Arizona OP-1606
 Colorado
 B 2116; OP-728; OP-1096
 environmental geology OP-1045
 Costa Rica, geochemistry OP-810
 engineering geology OF 94-0228
 Europe, geochemistry OF 94-0228
 geochemistry C 1129; OP-1114; OP-2015
 ground water C 1108
 Illinois OP-729
 Kentucky OP-729
 Mexico, hydrogeology OF 95-0514
 Mississippi, environmental geology C 1108
 Mississippi Valley B 2094-B; B 2094-C; OP-888
 Montana, environmental geology C 1108
 New Mexico
 B 2063
 mineralogy OP-1275
 New York, ground water OP-1608
 sedimentary petrology OP-2290
 Spain OP-22
 structural geology OP-401
 Texas, Quaternary OP-812
 Utah
 hydrogeology OF 95-0104
 pollution OP-657
- bristlecone pine**
 Rocky Mountains, Quaternary OF 95-0063
- Bristol Bay**
 areal geology OP-201
 continental shelf OP-589
 metamorphism OP-39
 sedimentary petrology OP-2080
- Bristol Vermont**
 ground water WRI 94-4108
- British Columbia** *see also* Canadian Cordillera;
 Coast Mountains; Coast plutonic complex; Columbia River; Equity Mine; Skagit Valley; Sullivan Mine; Wrangellia.
 faults, Vancouver Island OP-248
 geologic hazards OF 94-0568
 Jurassic OP-745
 mantle OP-960
 metal ores OP-1874
 petrology C 1129; OP-1509; OP-1847
 Quaternary
 OF 95-0034
 Fraser River delta OP-2086
 Vancouver Island OF 94-0568
 structural geology OF 94-0714
 tectonophysics
 OP-985
 Vancouver Island OP-2265
- British Guiana *see* Guyana
 British Honduras *see* Belize
- brittle deformation**
 OP-759
 Colorado
 OP-325
 intrusions OP-1423
 Japan, crust OF 94-0228
 Louisiana, natural gas OP-1543
 Montana, crust OF 94-0228
 Nevada OP-1440
 North Carolina OP-1536
 Peru, metal ores OP-202
 Virginia OP-1536
 Western Australia, gold ores OF 94-0228
- Broken Hill**
 metal ores OP-2126
 petrology OP-871
- Brokeoff Volcano**
 geochemistry OP-790
- bromide ion**
 Georgia, hydrology OP-1554
 Iowa, pollution OP-1605
 Maryland, pollution OP-1786
 Minnesota, pollution OP-1653
 Mississippi Valley, pollution OF 94-0336
 North Dakota, pollution OP-1653
 Tennessee, pollution OP-688; OP-1006
 Utah, pollution OP-657
- bromine**
 thermal waters OP-1756
- bromine deposits**
 New Mexico B 2063
- Bronson Hill Anticlinorium**
 structural geology OP-782
- Brookhaven Field**
 environmental geology C 1108
- Brookian Sequence**
 areal geology OP-330
- Brooks Range** *see also* De Long Mountains; Endicott Mountains.
 areal geology OP-217; OP-711
 deformation OP-1250; OP-1849
 Devonian B 2107
 energy sources OP-1270
 geochronology OP-1905
 gold ores B 2107
 magmas OP-626
 metal ores OP-670; OP-1893; OP-1895
 petroleum OP-2105
 petrology OP-229; OP-710
 Proterozoic OP-1624
 Quaternary OP-1457
 sedimentary petrology OP-1604
 stratigraphy P 1545; OP-357; OP-1439; OP-1623
 structural geology OP-304; OP-932; OP-1249; OP-1251; OP-1394; OP-1395
 tectonics B 2107; OP-2299
 tectonophysics OP-2300
- Brothers fault zone**
 structural geology OP-1436
- brown mica** *see* phlogopite
- Brule Formation**
 geochemistry OF 94-0292
- Brunhes Epoch**
 Arctic Ocean OP-1566
 California OP-397; OP-1575
 Far East OP-1574
 Indonesia OP-443
 New Mexico OP-443; OP-1575
 Oregon OP-397; OP-659
 Puerto Rico OP-1924

Utah OP-1273
Wyoming OP-1583
Bruno Peak Quadrangle
maps MF-2292
Brunswick Georgia
ground water OF 94-0520
Brushy Basin Shale Member
sedimentary petrology B 1808-P
Vertebrata OP-145
Brushy Mountain Fault
structural analysis OP-1091
Bryce Canyon National Park
hydrology OP-2203
bryophytes
Sphagnum
Alaska OP-184
Manitoba OP-1463
Utah OP-184
bryozoans
Alaska, paleontology OF 94-0215
Bucaramanga earthquakes OP-1392
Buck Lake Oregon
Quaternary OF 95-0034; OP-1040; OP-2045
Buckingham Pennsylvania
ground water OF 93-0417
Buckskin Mountains
Miocene OP-669
Buena Vista Valley
energy sources OP-1083
Buggs Island Pluton
structural geology OP-1202; OP-1536; OP-2062
building stone
Alaska, pollution OF 95-0566
Idaho P 1525
New York, geochemistry OP-832
Virginia, conservation OF 94-0592
Bulimina
Arctic Ocean, Quaternary OP-1566
Buliminacea *see* Bolivinitidae
Bull Lake Glaciation
Colorado GQ-1764
Idaho OF 94-0568
Wyoming OP-355
Bull Mountain Basin
pollution OF 94-0670
Bulldog Mountain Mine
metal ores OP-728; OP-733
Bullfrog Member
OF 95-0102
structural geology OP-2143
Bullfrog Mine
geochemistry OP-1857
Bullion Canyon Volcanics
economic geology OP-189
Bunker Field
energy sources OP-1746
Bunker Hill Mine
pollution OP-1146; OP-1156; OP-2129
burial diagenesis
Alabama, petroleum OF 94-0670
Colorado
OP-1272
petroleum OF 94-0670
Louisiana, natural gas OP-1543
Utah OP-1272
Wyoming
OF 94-0670
energy sources OF 94-0670

buried channels
New York, ground water WRI 93-4029
Oman, ground water OP-2311
United Arab Emirates, ground water OP-2311
buried valleys
New York, geomorphology OP-2170
Burlington Limestone
metal ores B 1989-G
Burns Formation
metal ores OF 94-0291
burrows
Arizona, ichnofossils OP-380
Colorado, Paleocene OP-1531
Colorado Plateau, stratigraphy OP-1481
Maryland, stratigraphy OP-736
New Mexico
ichnofossils OP-379
stratigraphy OP-382
Utah, Invertebrata OP-1479
Virginia, stratigraphy OP-736
Washington, sedimentary petrology OP-1376
Wyoming, Paleocene OP-1531
Bushnell Rock Member
stratigraphy OP-1176
butane
energy sources YR
Butte Valley
hydrology OF 93-0068
Quaternary OF 94-0593; OF 94-0641; OP-1040
butte-type
metal ores OP-1013
Buttonwood Sound
ground water OP-1455
Byelorussia *see* Belarus
Byron Illinois
pollution WRI 94-4034

C

C *see* carbon
C-12/C-13 *see* C-13/C-12
C-13
Marshall Islands, stratigraphy OP-2254
Micronesia, stratigraphy OP-2254
New Zealand, energy sources OP-207
C-13/C-12
Alaska
energy sources OP-65; OP-574
petroleum OP-2105
pollution C 1108
Basin and Range Province, hydrology OP-1106
California
energy sources OP-1746
geochemistry OF 95-0034; OP-244
natural gas OP-542
pollution OP-2251
China, metal ores OP-1871
Colorado
energy sources OP-297
metal ores OP-2060
energy sources B 2000-H; OP-769
Florida
ground water OP-473
hydrogeology OP-1613
geochemistry C 1108; OF 95-0206; OP-175
Germany, geochemistry OP-499
Great Basin, hydrology OP-1106
Idaho, hydrogeology OF 94-0503
Michigan, mineralogy OP-2028

Micronesia, geochemistry OP-689
Minnesota
geochemistry OP-498
Quaternary OP-2082
Nevada
geochemistry OP-2169
gold ores OP-1245
ground water OP-2273
Quaternary FS 94-0007
sedimentary petrology OP-59
Nicaragua, geochemistry OP-1678
Northwest Territories, geochemistry OP-192
Oregon, natural gas OP-1677
pollution OP-174
soils OP-787
South Carolina, ground water OP-1685
Spain, geochemistry OP-118
stratigraphy OP-96
Texas, Quaternary OP-812
Utah, energy sources OP-297
Vermont, hydrogeology OP-1631
Washington, natural gas OP-1677
Western Interior, stratigraphy OP-2063
Wyoming
energy sources OP-701
Quaternary OP-11; OP-1055
C-14
Alaska, Quaternary OF 94-0568; OP-124; OP-1098; OP-2258; OP-2260; OP-2281
Antarctica, Quaternary OP-214
Arctic Ocean, Quaternary OP-1049
Arizona
Quaternary OF 95-0057; OP-1287
weathering OP-1504
Arkansas, Quaternary P 1538-H
Basin and Range Province, tectonophysics OP-64
Bering Sea, Quaternary OP-1049
California
geophysical surveys OF 94-0568
pollution OP-2251
Quaternary OF 94-0568; OP-1040; OP-1158; OP-1612; OP-1992; OP-2006
seismology OP-2084
Chile, Quaternary OP-1098
Colorado
fluvial features OP-1743
geomorphology OP-986
Djibouti, tectonophysics OP-2152
Dominican Republic, Quaternary OF 94-0568
El Salvador, Quaternary OP-1816
geologic hazards OF 94-0663
Great Basin, tectonophysics OP-64
Great Lakes
Quaternary OP-163; OP-525
stratigraphy OP-436
Great Lakes region, Quaternary OP-163
Hawaii
petrology OP-234
Quaternary OP-351
Italy, Quaternary OF 94-0568
Japan, Quaternary OF 94-0568
Louisiana, engineering geology OF 94-0275
Maine, Quaternary OP-2200
Manitoba, Quaternary OP-1463
Missouri, Quaternary P 1538-H; OP-1707
Montana, Quaternary OP-121
Nevada
Quaternary OP-2006
sedimentary petrology OP-59
structural geology OP-1469
New England, Quaternary OP-1658; OP-2163

- New York, waste disposal OP-1775
 New Zealand, Quaternary OF 94-0568
 Oregon, Quaternary OF 94-0568; OP-1040; OP-1158; OP-1876
 Pacific Coast, Quaternary OP-661; OP-1401
 Peru, Quaternary OP-2032
 Quaternary OF 94-0568; OP-717
 Sahara, Quaternary OP-909
 South Carolina
 ground water OP-1685
 Quaternary OF 94-0568
 Spain, geochronology OP-66
 Tennessee, Quaternary OF 94-0568
 Texas, Quaternary OP-812
 United Arab Emirates, Quaternary OP-1016
 Utah, Quaternary OF 94-0568; OP-1287
 Washington
 earthquakes OP-1189
 faults OP-2079
 geologic hazards P 1547
 Quaternary OF 94-0568; OP-205; OP-1876
 seismology OP-573
- Ca** *see* calcium
- Cabeza de Araya Batholith**
 magmas C 1129
- cableways**
 hydrology TWI 03-A21
- Cabo de Gata volcanic field**
 metal ores OP-22
- Cacapon River**
 waste disposal OP-1133
- Caceres Spain**
 magmas C 1129
- Cache La Poudre River**
 Proterozoic OP-1982
- Cachoeirinha-Salgueiro fold belt**
 petrology C 1129
- cadmium**
 Alaska, geochemistry B 2107
 British Columbia, hydrology OF 94-0315
 California
 geochemistry OP-954; OP-1955
 pollution OP-1051; OP-2223
 Colorado
 hydrology OF 94-0412
 pollution OP-488
 Idaho, pollution OP-1146; OP-2129
 Maryland, environmental geology W 2399
 New Mexico, metal ores OF 94-0691
 Rocky Mountains, pollution OF 94-0670
 Washington
 hydrology OF 94-0315
 pollution OP-1146; OP-2064
- Cadomian Orogeny**
 Germany
 geochemistry C 1129
 metasomatism C 1129
- Caenolestidae**
 Vertebrata OP-1151
- caesium** *see* cesium
- Cainozoic** *see* Cenozoic
- Cajon Pass**
 engineering geology OP-650
 stratigraphy OP-1736
 tectonophysics OP-514
- Calabasas Quadrangle**
 maps OF 95-0051
- Calabria Italy** *see also* Sila Massif.
 metal ores OP-199
 Quaternary OF 94-0568
- Calaveras Fault**
 earthquakes OP-491; OP-2232
 faults OP-1577
 Quaternary OF 94-0568
 seismicity OP-2120
 seismology OP-591; OP-820; OP-825; OP-1224; OP-1349; OP-1761; OP-2325
 structural geology OP-1839
 tectonophysics OP-2181
- Calaveras Formation**
 geomorphology OP-785
- calc-sinter** *see* travertine
- calc-tufa** *see* tufa
- calcarenite**
 Pennsylvania OF 95-0240
 West Virginia OF 95-0240
- calcareous algae**
 Ohio, stratigraphy OP-411
- calcareous clay** *see* marl
- calcareous nannofossils** *see* nannofossils
- calcareous sinter** *see* travertine
- Calcareous soils**
 Nevada, pedogenesis OP-1763
- calcareous tufa** *see* tufa
- calcrete** *see* calcrete
- calcite** *see also* calcium carbonate; travertine.
 Alaska, petroleum OP-2105
 Colorado, metal ores OP-2060
 Florida
 diagenesis OP-2263
 hydrogeology OP-1613
 geophysics OP-2317
 Germany, geochemistry OP-499
 Nevada
 OP-2036
 fluid inclusions OP-2037
 geochemistry OP-1857; OP-2169
 ground water OP-2273
 Quaternary FS 94-0007
 New Mexico, sedimentary petrology OP-1274
 Pacific Ocean, geochemistry B 2022
 South Carolina, ground water OP-1685
 Spain, geochemistry OP-118
 thermal waters OP-1756
 Utah OP-288
- calcium**
 Atlantic Ocean
 Quaternary OP-233
 stratigraphy OF 94-0588
 California, pollution OP-2223
 China
 Conodonts OP-1021
 hydrology OP-1003
 geochemistry OP-1369
 Massachusetts
 geochemistry OF 94-0384
 pollution OP-897
 New England, soils OP-529
 Utah, mineralogy OP-288
 Virginia, Pliocene OP-2071
- calcium carbonate**
 California
 geochemistry OF 95-0527
 pedogenesis OP-2005
 Quaternary OF 95-0034
 Gulf of California, sedimentation OP-1987
 Italy, geochemistry OP-227
 mineralogy OP-1355
 Minnesota, Quaternary OF 94-0578
 Nevada
 environmental geology OF 93-0477
 pedogenesis OP-1763; OP-2005
 sedimentary petrology OP-2000
 structural geology OP-2276
 Oregon, Quaternary OF 95-0034
 Pacific Coast, Quaternary OP-1401
 United Arab Emirates, Quaternary OP-1016
 Western Interior, stratigraphy OP-2063
 Wyoming, Quaternary OP-355
- calcium chloride**
 thermal waters OP-1756
- calcium-aluminum inclusions** OP-611; OP-1798
- calcrete**
 Nevada
 geochemistry OP-2326
 pedogenesis OP-1763
- Caldera Pajonales Complex**
 geochemistry C 1129
- calderas** *see also* craters.
 Alaska
 petrology OP-1822
 Quaternary B 2107; OP-2021; OP-2292
 Arizona, geochemistry B 2021-E
 Bolivia, metal ores OP-188
 California
 environmental geology OP-261
 geophysical surveys OP-522
 Quaternary OF 94-0633; OP-988
 seismology OF 94-0228; OP-1514
 Colorado
 magmas OP-1325
 metal ores OF 94-0291; OF 95-0079; OP-333
 Oligocene OP-1691
 petrology OP-546; OP-773; OP-840; OP-1716
 stratigraphy OP-2012
 Hawaii
 paleomagnetism OP-1522
 Quaternary OP-977; OP-1328; OP-1496
 Iceland, geophysical surveys OP-1389
 Idaho
 faults OP-1650
 petrology OP-1851
 silver ores P 1525
 Mariana Islands, geologic hazards OF 91-0320
 Micronesia, geologic hazards OF 91-0320
 Nevada
 faults OP-631
 geochemistry P 1559; B 2056
 geophysical surveys OF 94-0670; OP-2029
 Miocene B 2056
 stratigraphy OP-1860
 structural geology OP-454
 New Mexico
 geochemistry B 2081
 petrology OP-840
 New Zealand
 petrology OP-1542
 Quaternary OP-431
 Oregon, structural geology OP-1436
 Pacific Ocean, ocean floors OP-1339
 plate tectonics OP-1256
 seismicity OP-1298
 Spain, metal ores OP-22; OP-799
 tectonophysics OP-985
 United States
 geophysical surveys OP-1389
 metal ores OP-799
 Utah
 geochemistry B 2056
 Miocene B 2056
 Wyoming, geophysical surveys OP-1913

Caledonia Marsh

Quaternary OF 95-0034; OP-1040; OP-1635; OP-2045

Caledonian Orogeny

Germany, geochemistry C 1129
Scotland, structural geology C 1129

Caledonides

faults C 1129
structural geology OP-158; OP-2156

Calf Creek Spring

hydrogeology OF 95-0340

caliche

Atlantic Ocean, stratigraphy OP-1334

Calico Hills Formation

environmental geology OF 94-0451
Miocene OP-1408
stratigraphy OF 94-0460; OF 95-0102

Caliente Caldera

geochemistry B 2056
Miocene B 2056

Callente Quadrangle

areal geology B 2056

Callente Range

natural gas OP-542
sedimentary petrology OP-1097

California *see also* Bishop Tuff; California Current; Cascade Range; Clear Lake; Coast Ranges; Colorado River; Franciscan Complex; Great Basin; Great Valley Sequence; Loma Prieta earthquake 1989; Medicine Lake; Monterey Formation; Peninsular Ranges; Sacramento River; Sacramento Valley; San Andreas Fault; San Francisco Peninsula; San Joaquin River; Santa Barbara Basin; Santa Cruz Mountains; Santa Lucia Range; Sespe Formation; Shoo Fly Complex; Sierra Nevada; White Mountains.

areal geology

Channel Islands OP-2189
Contra Costa County California OF 94-0622
Fresno County California OF 94-0650
San Francisco Bay region OF 94-0622
Santa Maria Basin OP-2189
Santa Monica Mountains OP-2189
Santa Ynez Mountains OP-2189
Tulare County California OF 94-0650

bibliography

Del Norte County California OF 95-0558
Humboldt County California OF 95-0558
Siskiyou County California OF 95-0558

chromite ores OP-864**clay mineralogy**

Santa Barbara County California B 1995-H,I
Santa Maria Basin B 1995-H,I
Ventura County California B 1995-H,I

continental shelf OP-847; OP-944; OP-998**crust**

OP-2239
Alameda County California OF 94-0552
Los Angeles California OP-649
San Benito County California OF 94-0552
San Fernando Valley OP-649
San Francisco Bay region OP-1967
Santa Clara County California OF 94-0552
Transverse Ranges OP-649

deformation

Hayward Fault OP-2332
Humboldt County California OP-107
Mendocino County California OP-107
San Francisco Bay OP-2332
San Francisco Bay region OP-1774
San Francisco California OP-2332

earthquakes

OF 92-0284; OF 95-0022; OF 95-0204;
OF 94-0647; OP-892; OP-1302; OP-1486;
OP-1503; OP-1539; OP-1638; OP-1708;
OP-2119
Calaveras Fault OP-491; OP-2232
Hayward Fault OP-1641; OP-1712
Los Angeles Basin OF 94-0568
Los Angeles California YR; EV; OF 95-0092; OF 95-0213; OP-429; OP-430; OP-592
Los Angeles County California EV; OF 94-0568

Mojave Desert OF 94-0710
Monterey Bay OP-1529; OP-1530
Parkfield California OP-393; OP-1375; OP-1499

San Bernardino California OP-1266
San Bernardino County California OF 94-0710

San Fernando Valley OP-383; OP-430
San Francisco Bay OP-1753
San Francisco Bay region OP-1641; OP-1712

San Francisco California OF 94-0706; OP-2091

The Geysers OP-1603

Transverse Ranges OP-383

ecology

Sacramento California OP-495
San Francisco Bay region OP-495

economic geology

Lake County California OP-216
Lassen County California OF 94-0712
Modoc County California OF 94-0712
Sonoma County California OF 95-0030; OP-216; OP-803

The Geysers OF 95-0030; OP-216; OP-803

elastic waves

OP-1694
Mojave Desert OP-212; OP-461
San Bernardino County California OP-212; OP-461

energy sources

C 1108
Kings County California OF 95-0054
Lake County California OP-890
Los Angeles Basin OP-385
Los Angeles County California OP-385
Point Sal OF 95-0530
Santa Clara County California OP-2146
Santa Maria Basin OF 95-0530
Sonoma County California OP-193; OP-890
The Geysers OP-193; OP-890

engineering geology

C 1121; OF 94-0662; OP-389
Cajon Pass OP-650
Kern County California WRI 94-4184
Long Valley Caldera OP-1367
Los Angeles California FS 0096-95; FS 0132-95; OP-891; OP-1467
Los Angeles County California WRI 94-4184
Mojave Desert WRI 94-4184
Pacoima Dam OP-1467
San Fernando Valley OP-1585
San Francisco Bay OF 94-0709
San Francisco Bay region OF 94-0568; OP-366
San Francisco County California OF 94-0709
San Gabriel Mountains OP-1467; OP-1585
San Joaquin Valley OP-788

San Mateo County California OP-1010
Santa Monica Mountains OP-1467
Simi Valley California OP-1585
Sonoma County California OF 94-0568

environmental geology

YR; C 1108; OP-756; OP-2141
Alameda County California YR
Contra Costa County California YR
Kern County California C 1108; WRI 94-4208
Long Valley Caldera OP-261
Los Angeles County California WRI 94-4208

Marin County California YR
Mojave Desert C 1108; WRI 94-4208
Mono Lake OP-894

Palo Alto California OF 95-0299
Sacramento County California YR
San Bernardino County California C 1108
San Francisco Bay YR; C 1108; OF 95-0291; OF 95-0299; OP-894

San Francisco County California YR
San Jose California OF 95-0299
San Mateo County California YR
Santa Barbara County California C 1108
Santa Clara County California YR
Solano County California YR
Sonoma County California YR

faults

OP-835
Calaveras Fault OP-1577
Palo Alto California OP-1577
San Francisco Bay OP-1225; OP-1577
San Francisco Bay region OP-492
San Juan Bautista California OP-320
San Mateo County California OP-1225
Sierra Nevada Batholith C 1129
White Wolf Fault OF 94-0228

fractures

Los Angeles County California OF 94-0228
San Gabriel Fault OF 94-0228
Transverse Ranges OF 94-0228

geochemistry

OF 95-0034; OF 95-0527; OP-197
Alameda County California OP-954
Alpine County California WRI 93-4122
Cima volcanic field OP-260
Colusa County California OP-927
Contra Costa County California OP-954
Del Norte County California OF 95-0227-A; OF 95-0227-B
Humboldt County California OF 95-0227-A; OF 95-0227-B
Lassen Volcanic National Park OP-790
Mojave Desert OP-260
Old Woman Mountains C 1129
San Francisco Bay OP-512; OP-954
San Francisco Bay region OF 95-0015
San Francisco County California OF 95-0015; OP-954
San Mateo County California OF 95-0015; OP-954
Santa Barbara County California P 1566
Santa Clara County California OP-954
Santa Maria Basin P 1566
Sierra Nevada Batholith OP-160
Siskiyou County California OF 95-0227-A; OF 95-0227-B
Trinity Complex OP-753
Trinity County California OF 95-0227-A; OF 95-0227-B
Ventura Basin P 1566
Ventura County California P 1566

geochronology

OF 94-0587
 Death Valley OP-625
 Inyo County California OP-625
 Mojave Desert OP-2310

geologic hazards

OF 95-0480
 Alameda County California OF 94-0259;
 FS 0112-95
 Contra Costa County California C 1130;
 OF 94-0259; FS 0112-95; FS 94-0049
 Los Angeles County California OF 95-0062
 Marin County California OF 94-0259;
 FS 0112-95
 Napa County California C 1130; OF 94-
 0259
 Sacramento County California OF 94-0259;
 FS 94-0049
 San Fernando Valley OF 95-0062
 San Francisco Bay region C 1130; OF 93-
 0684; OF 94-0259; OF 95-0479;
 FS 0112-95; FS 94-0049
 San Francisco County California C 1130;
 OF 93-0684; OF 94-0259; FS 0112-95
 San Joaquin County California OF 94-0259
 San Mateo County California C 1130;
 OF 93-0684; OF 94-0259; FS 0112-95;
 OP-588
 Santa Clara County California C 1130;
 OF 93-0684; OF 94-0259; FS 0112-95
 Santa Cruz County California C 1130;
 OF 93-0684; FS 0112-95
 Solano County California OF 94-0259;
 FS 94-0049
 Sonoma County California C 1130; OF 94-
 0259
 Yolo County California OF 94-0494

geomorphology

Alpine County California OF 94-0105
 Calaveras County California OP-785
 Death Valley OP-775
 El Dorado County California OF 94-0105
 Placer County California OF 94-0105

geophysical surveys

DDS-0031; OF 94-0285; OF 94-0286;
 OF 94-0287; OF 94-0698; GP-1012; OP-
 1835
 Alameda County California OF 94-0613;
 OF 94-0639; OF 94-0692
 Butte County California OF 95-0275
 Cape Mendocino OF 94-0444
 Contra Costa County California OF 94-
 0568; OF 94-0613; OF 94-0692
 Glenn County California OF 95-0275
 Hayward Fault OF 94-0692
 Hollister California OP-817
 Humboldt County California OF 95-0275
 Kern County California OF 95-0016
 Lake County California OF 95-0275
 Lassen Peak OF 95-0237; OP-1389; OP-
 1564
 Long Valley Caldera FS 0079-95; OP-522
 Los Angeles California OF 95-0228; OP-
 1285
 Los Angeles County California OF 95-0016
 Marin County California OF 94-0568
 Medicine Lake Highland OF 94-0693
 Mendocino County California OF 94-0444;
 OF 95-0275
 Mojave Desert OP-1285
 Napa County California OF 94-0568
 Orange County California OF 94-0599
 Parkfield California OP-817

Riverside County California OF 94-0599
 San Bernardino County California OF 94-
 0590; OF 95-0016
 San Diego County California OF 94-0599
 San Francisco Bay OF 94-0568; OF 94-
 0639; OP-1759; OP-1928; OP-1966
 San Francisco Bay region OF 94-0613;
 OF 94-0692; OP-1525; OP-1966; OP-
 1968
 San Francisco California OF 94-0706; OP-
 1966
 San Gabriel Mountains OP-1285
 San Joaquin County California OF 94-0613
 San Mateo County California OF 94-0639
 Santa Clara County California OF 94-0639
 Shasta County California OF 95-0275
 Siskiyou County California OP-136
 Sonoma County California OF 94-0568
 Stanislaus County California OF 94-0613
 The Geysers OP-2046
 Trinity County California OF 95-0275

geothermal energy

Lassen County California WRI 94-4180-A
 Lassen Volcanic National Park WRI 94-
 4180-A
 Long Valley Caldera OP-884
 Plumas County California WRI 94-4180-A
 Shasta County California WRI 94-4180-A
 Sonoma County California OP-299
 Tehama County California WRI 94-4180-A
 The Geysers OP-299

gold ores

Calaveras County California OF 94-0640-
 A; OF 94-0640-B
 Sonoma County California OP-341
 The Geysers OP-341

ground water

C 1108; OP-356
 Alameda County California WRI 94-4151;
 OP-1370
 Death Valley OF 95-0158; OP-1362; OP-
 2066
 Fresno County California OF 94-0045;
 OF 94-0072
 Inyo County California WRI 93-4003;
 OF 95-0158; OF 95-0160
 Kern County California WRI 93-4003;
 WRI 95-4048; OF 94-0334; OF 94-
 0531; OP-2010; OP-2335
 Kings County California WRI 95-4048;
 OF 94-0334
 Los Angeles County California OF 94-0531
 Mariposa County California OP-700
 Merced County California OF 94-0072
 Riverside County California WRI 94-4127
 San Bernardino County California WRI 93-
 4003; WRI 94-4127; OF 94-0531
 San Francisco Bay WRI 94-4151; OP-1370
 San Joaquin Valley WRI 95-4048; OF 94-
 0045; OF 94-0072; OP-226
 San Mateo County California WRI 94-4151
 Santa Clara County California WRI 94-
 4151; OP-1370
 Tulare County California WRI 95-4048;
 OF 94-0334; OP-1231
 Yolo County California OF 94-0531

heavy mineral deposits, Cape Mendocino

OF 95-0587

hydrogeology

OF 94-0363; OF 95-0150; FS 0149-95
 Alameda County California OF 94-0357
 Alpine County California OF 93-0033
 Butte County California FS 94-0029

Colusa County California FS 94-0029
 Death Valley OP-1281
 Glenn County California FS 94-0029
 Mojave Desert WRI 94-4124
 Palo Alto California OP-2298
 Sacramento County California FS 94-0029
 San Francisco Bay region OF 94-0357
 San Mateo County California OF 94-0357
 Santa Clara County California OF 94-0357
 Shasta County California FS 94-0029
 Sutter County California FS 94-0029
 Tehama County California FS 94-0029
 Yolo County California FS 94-0029

hydrology

Alameda County California OF 94-0471
 Butte County California OF 93-0068
 Colusa County California OF 93-0068
 Contra Costa County California OF 94-0471
 Death Valley OF 94-0305
 El Dorado County California OF 95-0316
 Glenn County California OF 93-0068
 Inyo County California OF 94-0305
 Marin County California OF 94-0471
 Mono County California FS 0115-95
 Nevada County California OF 95-0316
 Placer County California OF 95-0316
 San Bernardino County California OF 94-
 0305
 San Francisco Bay OF 94-0470; OF 94-
 0471; OF 94-0543; OF 95-0327
 San Francisco County California OF 94-
 0471
 San Mateo County California OF 94-0471;
 OF 95-0327
 Santa Clara County California OF 94-0471
 Solano County California OF 94-0470;
 OF 94-0471
 Sutter County California OF 93-0068

inclusions

Fresno County California C 1129
 Madera County California C 1129
 Sierra Nevada Batholith C 1129

intrusions, San Gabriel Mountains

OP-46
 Jurassic OP-745

lava, Lassen Peak

OP-1149

magmas

Inyo County California C 1129
 Mojave Desert OP-313; OP-321
 Mono County California C 1129
 Old Woman Mountains OP-313
 Siskiyou County California OP-129

maps

Alameda County California OF 95-0597
 Barstow California OF 94-0681
 Cima volcanic field OF 92-0179; OF 92-
 0181; OF 92-0182; OF 92-0183
 Colusa County California I-2362
 Contra Costa County California OF 95-0597
 Death Valley OF 94-0318
 Del Norte County California I-2148
 Hayward Fault OF 95-0597
 Humboldt County California I-2148
 Inyo County California OF 94-0318; I-2295
 Kern County California OF 95-0511; I-2295
 Lake County California I-2362
 Los Angeles California OF 95-0051
 Los Angeles County California OF 95-0088;
 OF 95-0089; OF 95-0090; OF 95-0091;
 OF 95-0503; OF 95-0504; OF 95-0511
 Mojave Desert OF 94-0681
 Mono County California OF 94-0318; I-
 2464
 Nevada County California I-2341

- Placer County California I-2341
 Riverside County California OF 88-0753;
 OF 88-0754
 San Bernardino County California OF 95-
 0598
 San Diego County California OF 95-0522
 San Francisco Bay region OF 95-0597
 Santa Barbara County California OF 95-
 0025
 Santa Clara County California B 2107;
 OF 95-0597
 Shasta County California I-2148
 Siskiyou County California I-2148
 Tehama County California I-2148
 Trinity County California I-2148
 Trona California OF 94-0318
 Tulare County California I-2295
 Ventura County California OF 95-0088;
 OF 95-0089; OF 95-0502; OF 95-0503;
 OF 95-0504; OF 95-0511
 mercury ores OP-530
 metal ores
 C 1129; OP-804
 Colusa County California OP-663
 Lake County California OP-800
 Mono County California OP-415
 Napa County California OP-800; OP-940
 Santa Rosa California OP-805
 Sonoma County California OP-800
 The Geysers OP-720; OP-800
 Yolo County California OP-940
 microearthquakes
 OP-1054
 Kern County California OP-2153
 Transverse Ranges OP-2153
 mineral resources
 OP-793
 Death Valley OF 93-0698
 Inyo County California OF 93-0698
 Mojave Desert OF 95-0013
 San Bernardino County California OF 93-
 0698; OF 95-0013
 mineralogy, San Diego County California OP-
 2110
 Miocene
 Riverside County California OF 95-0489
 Santa Barbara County California B 1995-
 J,K; OF 95-0265
 Santa Maria Basin B 1995-J,K
 Whipple Mountains OP-669
 Mohorovicic discontinuity, Mojave Desert OP-
 1853
 natural gas
 Caliente Range OP-542
 Cuyama Basin OP-542
 Ventura Basin OP-1121
 Neogene
 San Luis Obispo County California B 1995-
 J,K
 Santa Barbara County California B 1995-
 J,K
 Santa Maria Basin B 1995-J,K
 neotectonics
 OF 94-0568
 San Francisco Bay OP-1760
 non-metal deposits
 Los Angeles County California OF 95-0039;
 OF 95-0535
 Orange County California OF 95-0535
 Riverside County California OF 95-0039;
 OF 95-0535
 San Bernardino County California OF 95-
 0039; OF 95-0535
 San Gabriel Mountains OF 95-0039; OF 95-
 0535
 San Jacinto Mountains OF 95-0039; OF 95-
 0535
 ocean floors, Monterey Bay OP-1433; OP-2150
 oceanography
 B 2022; OF 95-0533; OP-116; OP-1066;
 OP-1434
 Alameda County California OF 95-0326
 Monterey Bay OP-1918; OP-2180
 San Francisco Bay OF 95-0326
 San Gregorio Fault OP-1918
 San Mateo County California OF 95-0326
 oxides, San Benito County California OP-778
 paleomagnetism
 Santa Barbara County California OP-1916
 Santa Maria Basin OP-1916
 pedogenesis OP-2005
 petroleum
 B 2120; OP-513; OP-1280
 San Luis Obispo County California OF 95-
 0014
 Santa Barbara County California OF 95-
 0014
 Santa Maria Basin OF 95-0014
 petrology
 C 1129; I-2473
 Cima volcanic field OF 95-0585; OP-708
 Death Valley OP-1211; OP-1255
 Inyo Mountains C 1129
 Los Angeles County California OP-45
 Mojave Desert OP-1818
 Rattlesnake Creek Terrane OP-1315
 San Diego County California C 1129
 San Gabriel Mountains OP-45
 plate tectonics
 OP-941
 Cape Mendocino OP-1576
 Humboldt County California OF 94-0568
 San Gregorio Fault OP-1431
 Pliocene
 Banning Fault OP-2061
 Salton Trough OP-2061
 San Gabriel Fault OP-2061
 pollution
 Calaveras County California WRI 94-4040
 Coalinga California OP-2047
 Fresno California WRI 93-4140
 Fresno County California OF 95-0286
 Madera County California OF 95-0286
 Merced County California OF 95-0165
 Sacramento California OF 95-0110
 San Francisco Bay OP-215; OP-1064; OP-
 1397; OP-1534; OP-1538; OP-1735; OP-
 1940; OP-2026; OP-2223
 San Joaquin County California OF 95-0165;
 OF 95-0286
 San Joaquin Valley OF 95-0286; OP-132;
 OP-1297
 Stanislaus County California OF 95-0110;
 OF 95-0165; OF 95-0286
 Quaternary
 OF 94-0568; OF 95-0034; OP-1158; OP-
 1612; OP-1992; OP-2086
 Alameda County California OF 94-0568
 Calaveras Fault OF 94-0568
 Contra Costa County California OF 94-0568
 Death Valley OF 95-0037; OP-1803
 Garlock Fault OF 94-0568
 Hayward Fault OF 94-0568
 Hosgri Fault OF 94-0568
 Humboldt County California OP-661
 Imperial County California OP-761
 Imperial Fault OF 94-0568
 Inyo County California B 1982; OF 95-
 0034; OF 95-0037; OP-1157; OP-1505
 Kern County California OF 94-0568; OP-
 761
 Lassen Peak OP-1511
 Long Valley Caldera OF 94-0633; OP-988;
 OP-2142
 Los Angeles Basin OF 94-0568; OP-737
 Los Angeles County California OF 94-0568
 Marin County California OF 94-0568
 Mono Craters OP-2250
 Mono Lake OP-397; OP-1505
 Napa County California OF 94-0568
 Orange County California OF 94-0568
 Palos Verdes Hills OP-737
 Riverside County California OP-761
 San Bernardino County California OF 94-
 0568; OP-761
 San Diego County California OF 94-0568;
 OP-761
 San Francisco Bay OF 94-0568; OP-1216;
 OP-1308
 San Francisco Bay region OF 94-0568; OP-
 1787
 San Francisco California OP-1787
 San Gabriel Fault OF 94-0568
 San Gregorio Fault OF 94-0568
 San Luis Obispo County California OF 94-
 0568
 Santa Barbara County California OF 94-
 0568
 Santa Clara County California OF 94-0568
 Santa Cruz County California OF 94-0568
 Siskiyou County California OF 94-0593;
 OF 94-0641; OF 94-0651; OF 95-0034;
 OP-1505
 Sur fault zone OF 94-0568
 Tehachapi Mountains OF 94-0568
 Transverse Ranges OF 94-0568
 Ventura Basin OF 94-0568
 Ventura County California OF 94-0568
 rock mechanics
 Los Angeles County California OF 94-0228
 San Gabriel Fault OF 94-0228
 sedimentary petrology
 Caliente Range OP-1097
 Cuyama Basin OP-1097
 Humboldt County California OP-603
 Santa Barbara County California B 1995-H,I
 Santa Maria Basin B 1995-H,I
 Transverse Ranges OP-159
 Ventura County California B 1995-H,I; OP-
 159
 sedimentation, Fresno County California
 OF 94-0577
 sediments, San Francisco Bay OP-1065
 seismic sources, San Bernardino County Cali-
 fornia OP-1038
 seismicity
 OP-1165; OP-1356; OP-1561
 Alameda County California OP-301
 Calaveras Fault OP-2120
 Hayward Fault OP-2120
 Humboldt County California OP-1832
 Long Valley Caldera OP-255; OP-406; OP-
 457
 Monterey County California OP-1602
 Parkfield California OP-654; OP-889; OP-
 2144
 San Bernardino County California OP-1309;
 OP-1420; OP-1999
 San Francisco California OP-654

- San Gabriel Mountains OP-462
The Geysers OP-2120
- seismology
OF 91-0592; OF 95-0269; OP-25; OP-203;
OP-239; OP-347; OP-371; OP-375; OP-
539; OP-714; OP-1037; OP-1271; OP-1473;
OP-1540; OP-1601; OP-1809; OP-1810;
OP-1872; OP-1883; OP-2252
Alameda County California OF 95-0038;
OP-914
Calaveras Fault OP-591; OP-820; OP-825;
OP-1224; OP-1349; OP-1761; OP-2325
Contra Costa County California OF 95-0038
Coyote Creek Fault OP-1617
Garlock Fault OF 94-0568
Hayward Fault OF 95-0038; OP-820; OP-
893; OP-1224; OP-2325
Inyo County California OP-818
Long Valley Caldera OF 94-0228; OP-249;
OP-1514
Los Angeles Basin OP-1336; OP-1550
Los Angeles California OP-893
Los Angeles County California OF 94-0221;
OF 95-0042; OF 95-0484; OP-249; OP-
819
Marin County California OF 95-0038
Mojave Desert OP-1541
Orange County California OF 95-0484
Parkfield California OP-277; OP-1296; OP-
1349; OP-1688; OP-2212
Riverside County California OF 95-0042
San Bernardino California OP-1600
San Bernardino County California OF 94-
0228; OF 94-0568; OF 95-0042; OP-
460; OP-1385; OP-1387; OP-1474;
OP-1541; OP-1703; OP-1704
San Fernando Valley OP-1336
San Francisco Bay OP-91; OP-587; OP-
1224; OP-1617; OP-2284
San Francisco Bay region OF 95-0038
San Francisco California OP-587; OP-2333
San Francisco County California OF 95-
0038
San Gregorio Fault OP-914
San Juan Bautista California OP-1715
San Luis Obispo County California OP-819
San Mateo County California OF 95-0038;
OF 95-0095; OP-914
Santa Clara County California OF 95-0038;
OF 95-0095; OP-914
Santa Cruz County California OF 95-0038
Sonoma County California OP-254
The Geysers OP-254; OP-1421
Ventura County California OF 95-0484;
OP-819
- soil mechanics
Alameda County California OF 94-0699
San Francisco Bay region OF 94-0699
- stratigraphy
Cajon Pass OP-1736
Inyo Mountains OP-1736
La Jolla California OF 94-0678
Monterey County California B 1995-J,K
Salton Sea OP-1736
San Joaquin Valley OP-1341
San Luis Obispo County California B 1995-
J,K
Santa Barbara County California B 1995-
J,K; B 1995-L
Santa Maria Basin B 1995-J,K; B 1995-L
Transverse Ranges B 1995-J,K; OP-1036
- structural geology
Amador County California OP-1007
Calaveras County California OP-1007
Calaveras Fault OP-1839
Contra Costa County California OP-1007;
OP-1773
Death Valley OP-1110
El Dorado County California OP-1007
Hayward Fault OP-1234; OP-1430; OP-
1839; OP-1914; OP-2107
Inyo County California OP-822
Marin County California OP-1007
Mojave Desert OP-432; OP-1110
Mono County California OP-822
Monterey Bay OP-1701; OP-1750
Napa County California OP-1007
Salton Trough OP-824
San Bernardino County California OF 94-
0568; OP-705
San Francisco Bay OP-1773; OP-1914
San Francisco Bay region OP-1007; OP-
1234; OP-1701; OP-1773; OP-1914
San Gregorio Fault OP-1701
Siskiyou County California OP-348
Solano County California OP-1007
Sonoma County California OP-1007
Whipple Mountains OP-1110
- tectonophysics
OP-515; OP-985; OP-2265
Cajon Pass OP-514
Calaveras Fault OP-2181
Death Valley Fault OP-814
Hayward Fault OP-1524
Lassen Volcanic National Park OP-1444
Mojave Desert OP-814
Mount Shasta OP-1444
Salton Trough OP-814
San Francisco Bay OP-1521; OP-1651
San Francisco Bay region OP-1524
Santa Maria Basin OP-1778
Siskiyou County California OP-1357
Transverse Ranges OP-1778
thermal waters, Lassen Peak OP-1756
volcanic features, Pissgah Crater OP-305
volcanism
Plumas County California OP-531
Sierra County California OP-531
waste disposal
OP-2291
San Francisco California OP-1610
waterways, San Francisco Bay OP-877
- California Current**
California
pollution OP-1735
Quaternary OF 95-0034
Oregon, Quaternary OF 95-0034
Pacific Coast, Quaternary OP-1401
Pacific Ocean, Quaternary OP-1501
- California Division of Oil and Gas**
petroleum OF 95-0014
- caliper logging**
Massachusetts, geophysical surveys WRI 94-
4185
New Mexico, ground water OF 95-0360
Pennsylvania, ground water WRI 94-4109
- Callisto Satellite** OP-850
- CALNET**
geophysical surveys OP-1966
- Caloosahatchee Formation**
stratigraphy OP-2295
- Calvert City Kentucky**
ground water WRI 94-4239
- Calvert Cliffs**
sedimentary petrology OP-848
- Calvert Formation**
OF 94-0683
ground water WRI 92-4111
sedimentary petrology OP-848
Vertebrata OP-1137; OP-2275
- Calymenidae**
Trilobita OP-1
- Camanche Reservoir**
pollution WRI 94-4040
- Camas Valley Member**
stratigraphy OP-1176
- Cambaridae**
Invertebrata OP-1479
- Camborygma**
ichnofossils OP-379; OP-380
- Cambrian** *see also* Hoosac Formation.
OP-1226; OP-1404
Alaska P 1545; OP-39; OP-217
Appalachians OF 94-0298
Argentina C 1129
Bonnetterre Formation, metal ores B 1989-G
Bright Angel Shale, energy sources OP-1714
China OP-1871
Colorado OP-1665
Conococheague Formation OF 94-0573
Flathead Sandstone, structural geology OP-
1933
Idaho OP-362
Illinois OF 94-0298
Iowa OP-607
Kentucky OF 94-0298
Lamotte Sandstone, lead-zinc deposits B 1989-
F
Maryland OP-1126
Massachusetts OP-782
Mississippi Valley OF 94-0298
Montana OP-362
Mount Simon Sandstone, diagenesis OF 94-
0298
New Jersey OF 95-0557
New Mexico OP-1878
Norway OP-2156
Oklahoma C 1129
Pennsylvania WRI 92-4088
Russian Federation OP-153
Tapeats Sandstone, energy sources OP-1714
Virginia OP-1126
Yukon Territory OP-217
- Camden New Jersey**
ground water WRI 92-4152
- Camden Quadrangle**
hydrology
OF 94-0499; OF 94-0500
- Cameroon**
hydrology, Lake Nyos OP-256
- Campanas Complex**
geochemistry C 1129
- Campania Italy** *see* Monte Somma; Vesuvius
- Campania-Lucania earthquake** 1980 *see* Irpinia
earthquake 1980
- Campanian**
Alaska OP-725
Atlantic Coastal Plain OP-903
California OP-1341
Colorado OF 94-0670
Delaware OP-481
Texas OF 94-0551
Utah B 2115-A; B 2115-B; OF 94-0670; OP-
1464
Wyoming OP-403

Camptosaurus

Vertebrata OP-145

Canada *see also* Eastern Canada; Great Plains; Western Canada; Western Interior Seaway.

economic geology OP-905

faults, Canadian Cordillera OP-248

geochronology OP-308

Invertebrata OP-684

mantle OP-1109

metal ores, Stikinia Terrane OP-1169

Mohorovicic discontinuity, Canadian Cordillera OP-109

neotectonics OP-994

paleomagnetism, Canadian Cordillera OP-1135

petrology

C 1129

Gander Zone C 1129

Stikinia Terrane OP-409

Quaternary, Canadian Cordillera OF 94-0568

seismic sources, Ungava OP-374

seismology OP-606

stratigraphy OP-668

structural geology, Canadian Cordillera OP-1863

tectonics

Canadian Cordillera OP-360

Stikinia Terrane OP-360

tectonophysics

Canadian Cordillera OP-468

Mackenzie Mountains OP-704

Ungava OP-2334

Canada Basin

energy sources OP-1270

paleomagnetism OF 94-0588

Quaternary OP-1566

structural geology OP-1249

tectonophysics OP-445

Canadian Cordillera

faults OP-248

Mohorovicic discontinuity OP-109

paleomagnetism OP-1135

Quaternary OF 94-0568

structural geology OP-1863

tectonics OP-360

tectonophysics OP-468

Canadian Shield

geochemistry

OF 94-0228

Abitibi Belt C 1129

Quetico Belt C 1129

Slave Province C 1129

Superior Province B 1904-U

geophysical surveys

Abitibi Belt OP-1804

Grenville Province OP-1804

gold ores, Abitibi Belt OF 94-0228

magmas, Slave Province C 1129

metal ores, Abitibi Belt OP-2126

petrology

Abitibi Belt C 1129

Grenville Province OP-1255

phase equilibria, Grenville Province OP-1489

plate tectonics, Superior Province OP-2121

Precambrian, Wawa Belt OP-886

sedimentary petrology OP-1861

structural geology, Superior Province B 1904-T

canals

Colorado, hydrogeology WRI 94-4051

Florida

hydrogeology WRI 94-4128

hydrology WRI 93-4103

North Carolina, hydrology WRI 94-4226

Cane Springs Southeast Quadrangle

maps OF 95-0048

Cannonball Member

stratigraphy OP-2255

Canoga Park Quadrangle

maps OF 95-0090

Canon City Colorado

mineralogy OP-2110

Canyon Range

structural geology OP-695

Canyonlands National Park

areal geology OP-1179

Invertebrata OP-1479

petroleum B 2000-J

canyons

OP-559

Arizona

geomorphology OP-2072

hydrogeology OP-2262

hydrology OP-2203

hydrology OP-829

Utah

hydrology OP-2203

stratigraphy OP-1731

Cape Blanco

Quaternary OP-1629

Cape Breton Island

geochemistry C 1129; OP-1867

sedimentary petrology OP-565

Cape Cod

OF 94-0384

continental margin I-1987-D

environmental geology OF 95-0290; OP-1187;

OP-2136

geochemistry OF 94-0384; OP-1396

ground water WRI 94-4156; OF 94-0316;

OF 94-0384

hydrology WRI 94-4224

oceanography OF 94-0672

pollution OP-36; OP-37; OP-509; OP-616; OP-

897; OP-1175; OP-1765

sedimentary petrology OP-2080

waste disposal OP-2249

Cape Cod Aquifer

ground water WRI 94-4156

pollution OP-509

Cape Fear Formation

Devonian OP-1971

Paleocene OP-1359

Cape Fear River basin

hydrology OF 94-0379

Cape Girardeau Missouri

geologic hazards OP-1764

Cape Mendocino

geophysical surveys OF 94-0444

heavy mineral deposits OF 95-0587

plate tectonics OP-1576

Cape Mendocino earthquakes 1992

California

OP-1745; OP-1832; OP-1872

plate tectonics OF 94-0568

Cape York Peninsula

areal geology OP-31

Capital Mountain

geomorphology B 2072

Quaternary OP-628

Caprock Field

energy sources B 2063

capture *see* stream capture**Caradocian**

Tennessee OP-1502

carbargilite *see* coal**carbon**

Alaska, geophysics OP-594

C-13

Marshall Islands OP-2254

Micronesia OP-2254

New Zealand OP-207

C-13/C-12

Alaska C 1108; OP-65; OP-574; OP-2105

Basin and Range Province OP-1106

California OF 95-0034; OP-244; OP-542;

OP-1746; OP-2251

China OP-1871

Colorado OP-297; OP-2060

energy sources B 2000-H; OP-769

Florida OP-473; OP-1613

geochemistry C 1108; OF 95-0206; OP-175

Germany OP-499

Great Basin OP-1106

Idaho OF 94-0503

Michigan OP-2028

Micronesia OP-689

Minnesota OP-498; OP-2082

Nevada FS 94-0007; OP-59; OP-1245; OP-

2169; OP-2273

Nicaragua OP-1678

Northwest Territories OP-192

Oregon OP-1677

pollution OP-174

soils OP-787

South Carolina OP-1685

Spain OP-118

stratigraphy OP-96

Texas OP-812

Utah OP-297

Vermont OP-1631

Washington OP-1677

Western Interior OP-2063

Wyoming OP-11; OP-701; OP-1055

C-14

Alaska OF 94-0568; OP-124; OP-1098; OP-

2258; OP-2260; OP-2281

Antarctica OP-214

Arctic Ocean OP-1049

Arizona OF 95-0057; OP-1287; OP-1504

Arkansas P 1538-H

Basin and Range Province OP-64

Bering Sea OP-1049

California OF 94-0568; OP-1040; OP-1158;

OP-1612; OP-1992; OP-2006; OP-2084;

OP-2251

Chile OP-1098

Colorado OP-986; OP-1743

Djibouti OP-2152

Dominican Republic OF 94-0568

El Salvador OP-1816

geologic hazards OF 94-0663

Great Basin OP-64

Great Lakes OP-163; OP-436; OP-525

Great Lakes region OP-163

Hawaii OP-234; OP-351

Italy OF 94-0568

Japan OF 94-0568

Louisiana OF 94-0275

Maine OP-2200

Manitoba OP-1463

Missouri P 1538-H; OP-1707

Montana OP-121

Nevada OP-59; OP-1469; OP-2006

New England OP-1658; OP-2163

- New York OP-1775
 New Zealand OF 94-0568
 Oregon OF 94-0568; OP-1040; OP-1158; OP-1876
 Pacific Coast OP-661; OP-1401
 Peru OP-2032
 Quaternary OF 94-0568; OP-717
 Sahara OP-909
 South Carolina OF 94-0568; OP-1685
 Spain OP-66
 Tennessee OF 94-0568
 Texas OP-812
 United Arab Emirates OP-1016
 Utah OF 94-0568; OP-1287
 Washington P 1547; OF 94-0568; OP-205; OP-573; OP-1189; OP-1876; OP-2079
- California**
 geologic hazards FS 94-0049
 hydrology OF 94-0470
 Quaternary OF 95-0034
 Colorado, geochemistry OP-1700
 ecology C 1108
 geochemistry C 1129; OP-602
Georgia
 environmental geology OP-435
 soils OP-1555
 ground water OP-1553
 Kansas, hydrology W 2352-B
 Minnesota, ecology C 1108
 Mississippi Valley, hydrology OF 95-0149
 Nebraska, hydrology W 2352-B
Nevada
 energy sources OP-1084
 gold ores OP-536
 Oregon, Quaternary OF 95-0034
 Texas, sedimentary petrology OP-2256
 Utah, sedimentary petrology B 2110
 Wisconsin, ecology C 1108
- carbon dioxide** *see also* carbon monoxide; greenhouse effect.
 OP-486
Alaska
 geochemistry B 2139; OF 95-0055; OF 95-0222
 gold ores OP-624; OP-2184
 Arizona, energy sources OP-1714
California
 environmental geology OP-261
 geologic hazards FS 94-0049
 pollution OP-2251
 Cameroon, hydrology OP-256
 Central America, Quaternary OP-1257
Colorado
 economic geology OF 94-0289
 geochemistry OF 94-0295
 metal ores OP-1096; OP-2060
 Commonwealth of Independent States, Quaternary OP-1257
 ecology C 1108
 energy sources YR; B 2000-H; OP-769
 environmental geology OP-690
 Florida, ground water OP-473
 geochemistry C 1129; OP-602; OP-1235; OP-1519
 geophysical surveys OP-561
 Georgia, environmental geology OP-435
 Greenland, geochemistry OF 95-0222
 Hawaii, petrology OP-1307
 Hungary, natural gas OP-155
 Idaho, stratigraphy OP-2147
 Illinois, non-metal deposits OP-729
 Kentucky, non-metal deposits OP-729
- Minnesota, geochemistry** OP-498
Nevada
 geothermal energy OF 95-0080
 gold ores OP-1245
 mineralogy OP-2036
 stratigraphy OP-2147
 waste disposal OP-1990
 New Mexico, energy sources B 2063
New York
 hydrology OP-1015
 waste disposal OP-1775
 Nicaragua, geochemistry OP-1678
 Pacific Ocean, Quaternary OP-1354
 Pennsylvania, hydrology OP-1015
 soils OP-787
 stratigraphy OP-2274
Utah
 energy sources OP-1714
 molybdenum ores OP-1725
 Washington, geochemistry OP-315; OP-1407
- carbon monoxide**
 energy sources OP-1547
 Quaternary OP-2174
 carbon-13 *see* C-13
 carbon-14 *see* C-14
 carbonaceous chondrites *see* Allende Meteorite
 carbonaceous shale *see* black shale
Carbonado Formation
 Eocene OP-1593
carbonate compensation depth
 stratigraphy OP-96
carbonate ion
 California, metal ores OP-720
 China, hydrology OP-1003
 thermal waters OP-1756
- carbonate platforms**
 Bahamas, stratigraphy OP-540
 Bermuda, Quaternary OP-1732
 Caribbean region, stratigraphy OP-1150
 Florida, Quaternary OP-1732; OP-2206
 Kazakhstan, energy sources OP-169; OP-1258
 Lesser Antilles, stratigraphy OP-1150
 Puerto Rico, plate tectonics OP-1304
 stratigraphy OP-1558
- carbonate rocks** *see also* boundstone; calcite; calcrete; caliche; chalk; dolomite; dolostone; grainstone; limestone; travertine; wackestone.
 OF 94-0298
 Alabama, petroleum OF 94-0670
Alaska
 energy sources OP-65
 Proterozoic B 2107
 stratigraphy OP-1623
 Appalachians, pollution OP-1365
 Arctic region, stratigraphy B 2110
 Arizona, stratigraphy B 2110
 Arkansas, springs OP-1159
California
 ground water OP-1362; OP-2066
 non-metal deposits OF 95-0039
Colorado
 geochemistry OP-1168
 petroleum OF 94-0670
 stratigraphy B 2110; OP-1384
 environmental geology OP-1160
Florida
 OP-1710
 Cenozoic OP-1204
 hydrogeology WRI 93-4171; OP-1591
 ground water OP-1597
 Hungary, natural gas OP-155
- Idaho**
 P 1525
 fluorspar P 1525
 geochemistry OF 95-0270
 metal ores B 2064-A-R
- Illinois**
 OF 94-0298
 energy sources OF 94-0298
- Indiana**
 energy sources OP-2020
 lead-zinc deposits OP-369
 petroleum B 2094-D
 metal ores B 1989-G
 Midwest, ground water OF 93-0663
 Montana, stratigraphy B 2112
- Nevada**
 OP-59
 energy sources OF 94-0670
 geochemistry OP-794
 ground water OP-1362; OP-2066
 petroleum OP-2065
 North Dakota, stratigraphy B 2112
- Pennsylvania**
 ground water OF 93-0659
 hydrogeology OF 95-0113
 Puerto Rico, ground water OF 93-0465; OF 93-0466
- Utah**
 B 2110
 geochemistry OP-1168
 stratigraphy B 2110
 West Virginia, hydrogeology WRI 93-4073
 Wisconsin, lead-zinc deposits OP-792
 Wyoming, geochemistry OF 95-0270
- carbonate sediments** *see also* carbonate platforms.
 California OP-1918
 Puerto Rico OP-2080
 United States OP-2080
- carbonates** *see also* aragonite; calcite; calcium carbonate; dolomite; trona.
 OP-470; OP-880
California
 geochemistry P 1566
 metal ores OP-720
 Colorado, pollution OP-1466
 environmental geology C 1108
 geochemistry OP-1170
 Georgia, heavy mineral deposits OP-344
 Great Plains, ground water P 1402-F
 lead-zinc deposits OF 94-0298
 Marshall Islands, stratigraphy OP-2254
 Micronesia, stratigraphy OP-2254
Montana
 Quaternary OP-902
 stratigraphy OP-596
Nevada
 geochemistry OP-2326
 hydrogeology OP-1947
 Oregon, ocean floors OP-123
 Peru, continental slope OP-1069
 sedimentary petrology OP-2117
 Utah, stratigraphy OP-1731
 Wyoming, Quaternary OP-11; OP-902
- carbonatites**
 Arkansas, geochemistry OF 94-0450
 Colorado OP-1067
 Missouri
 OP-1299
 economic geology OF 94-0670

Carboniferous *see also* Hercynian Orogeny; Mississippian; Pennsylvanian.

- B 2110; OP-181; OP-182; OP-564; OP-568
 Alabama OP-2155
 Alaska B 2110; OP-740
 Bashkirian, Kazakhstan OP-1258
 Chilliwack Group, geophysical surveys OP-1821
 Diamond Peak Formation, sedimentary petrology B 1988-1
 Dinantian, Arctic region B 2110
 Ely Limestone, energy sources OF 94-0670
 Georgia OP-2155
 Kazakhstan OP-169
 Middle Carboniferous, Arctic region B 2110
 Namurian B 2110
 New South Wales Australia C 1129
 Nova Scotia OP-565
 Poland OP-770
 Stephanian B 2110; OP-567
 Tourmaisan
 B 2110; OP-809
 Kazakhstan OP-1258
 Russian Federation OP-152
 United Kingdom B 2110
 Viséan
 B 2110; OP-809
 Kazakhstan OP-1258
 Westphalian
 B 2110
 Appalachians OP-766
 Kentucky OP-1548

carbonization *see* coalificationcarboxylic acids *see* oxalic acid**Carey Dolostone**

economic geology B 2064-A-R

Carlaco Basin

geochemistry OP-1955
 Quaternary OP-1289

Caribbean earthquakes OP-1313**Caribbean Plate**

Atlantic Ocean, plate tectonics OP-1312
 Bahamas, plate tectonics OP-1314
 Caribbean region, earthquakes OP-1313
 Dominican Republic
 plate tectonics OP-1751; OP-1983
 Quaternary OF 94-0568
 Greater Antilles, earthquakes OP-1313
 Puerto Rico
 earthquakes OP-2238
 plate tectonics OP-1304
 West Indies, plate tectonics OP-1312

Caribbean region *see also* West Indies.

environmental geology OP-2210
 seismology OP-1739

Caribbean Sea

geochemistry, Cariaco Basin OP-1955
 marine geology OF 95-0224
 plate tectonics OP-1304
 Quaternary
 OP-1973
 Cariaco Basin OP-1289

Carlile Shale

geochemistry OF 95-0209

Carlin Mine

geochemistry OP-535
 gold ores OP-20; OP-438

Carlota Copper Project
 geologic hazards OF 95-0617**Carlsbad California**

Quaternary OF 94-0568

stratigraphy OF 94-0678

Carlsbad Caverns

environmental geology C 1108
 mineralogy OP-1275
 sedimentary petrology OP-1274
 sedimentation OP-1276
 solution features OP-190

Carmel Canyon

structural geology OP-1750

Carnian

Nevada OP-78

Carnosauria

China OP-418
 Mongolia OP-418

Carollina Rise

heat flow OF 95-0262

Carollina slate belt

geochemistry C 1129
 gold ores OP-1909
 Paleozoic OP-1670
 structural geology OP-1199; OP-1908

Caroline Islands *see also* Belau.

manganese ores OP-1409

Carp Lake

Quaternary OF 95-0034

Carpathians *see also* Transylvanian Alps.

petrology C 1129
 stratigraphy OP-524

Carpentaria Basin

stratigraphy OP-1338

Carpenter Ridge Tuff

metal ores OP-284
 petrology OP-546

Carrieton mining district

metal ores B 2064-A-R

Carrizo Plain

Quaternary OF 94-0568

Carroll Glacier

sedimentary petrology OP-1218

Carson Desert

energy sources OP-1083
 ground water OF 94-0031

Carson Valley

ground water WRI 94-4126
 hydrogeology OF 93-0033; OF 93-0356

carst *see* karst**Carters Limestone**

stratigraphy OP-1502

Cartesian coordinates OF 92-0372-A; OF 92-0372-B

cartography *see also* digital cartography; geodesy.

YR; P 1453; P 1525; B 2056; B 2107; OF 94-0670; OF 94-0675-A; OF 94-0675-B; OF 94-0675-C; OF 95-0201; OF 95-0519; OP-63; OP-541; OP-676; OP-723; OP-881; OP-916; OP-996; OP-1164; OP-1253; OP-1383; OP-1783; OP-2002; OP-2182; OP-2189
 Cenozoic OP-738
 crust OP-1967
 earthquakes OF 94-0298
 ecology OF 94-0275; OF 95-0163; OP-150
 economic geology C 1124
 energy sources OF 94-0298
 engineering geology OF 94-0298; OP-1148; OP-1333
 environmental geology C 1108; OF 94-0443; OF 94-0627; OF 95-0652; OP-882; OP-2227
 geochemistry B 2021-E

geologic hazards YR; OF 95-0479; OP-474; OP-588; OP-1201; OP-1342; OP-2190; OP-2191

geomorphology OF 94-0275; OF 94-0512; OF 95-0224; OP-2072

geophysical surveys YR; OF 94-0670; OF 95-0077; OF 95-0518; OP-67; OP-416; OP-459; OP-1389; OP-1660; OP-1913

gold ores OP-1909

ground water OP-1100; OP-1244; OP-1687; OP-1948

Holocene OP-1513

hydrology OP-883; OP-1998

marine geology OF 95-0224

metal ores OP-333; OP-862

mineral resources C 1117; OP-2192

natural gas OP-854

neotectonics OP-1145

ocean floors OP-123; OP-553; OP-1119; OP-1230; OP-1339

oceanography B 2079

Oligocene OP-1691

petrology OP-2173

plate tectonics OP-1441; OP-1442; OP-1443; OP-1894

Pliocene OF 94-0281; OP-218

pollution OP-929; OP-1111; OP-1923; OP-2205

Quaternary OF 94-0568; OP-173; OP-1507; OP-1616; OP-1630; OP-1754; OP-2165

sedimentary petrology OP-1770; OP-2080

seismology OP-1222; OP-1352; OP-1385; OP-1739; OP-2013; OP-2014

Silurian OP-1068; OP-1995

stratigraphy OP-353; OP-357; OP-874; OP-2297

structural geology OF 94-0682; OP-1247; OP-1440; OP-1689; OP-1701; OP-1830; OP-1988; OP-2272

tectonics OP-444; OP-1850

tectonophysics OP-1669

Carysfort Reef

Quaternary OP-2206

Casa Diablo

geothermal energy OP-884
 Quaternary OP-988

Casa Grande Arizona

metal ores OP-664

Cascade Head Basalt

geochemistry OF 95-0040

Cascade Range *see also* Mount Hood; Mount Rainier; Mount Saint Helens; Mount Shasta; Newberry Volcano.

bibliography OF 94-0403

environmental geology OF 95-0230; OF 95-0498

Eocene OP-1593

faults C 1129

folds OP-1128

geochemistry OF 94-0261; OP-29

geologic hazards OF 94-0585; OP-1330; OP-1901

geophysical surveys OP-1564; OP-1821

Holocene OP-1513

hydrology WRI 94-4139

lava OP-1149

magmas C 1129

maps OF 94-0591; OF 95-0219

metal ores OF 94-0666

petrology OP-968

pollution OP-2064

Quaternary OF 95-0033; OP-2008; OP-2045

- sedimentary petrology OP-1182
structural geology OP-1436
tectonics OP-1449
tectonophysics OP-70; OP-442; OP-1357; OP-2307
- Cascades Volcano Observatory**
geologic hazards OF 94-0585
- Cascadia Basin**
ocean floors OP-123; OP-1772
sedimentary petrology OP-1877
tectonophysics OP-157
- Cascadia subduction zone**
crust OP-1776
earthquakes OP-26
engineering geology OP-1859
faults OP-2079
geologic hazards OF 94-0568; OF 94-0589
geophysical surveys OP-72
plate tectonics OF 94-0568
Quaternary OF 94-0568; OP-395; OP-661; OP-1629; OP-1876; OP-1945
sedimentary petrology OP-603
seismology OP-1075; OP-1872
structural geology OP-1777
tectonophysics OP-1246; OP-1919; OP-2265; OP-2307
- Caseyville Formation**
diagenesis OF 94-0298
- Casper Arch**
energy sources OP-1942
- Casper Mountain**
sedimentary petrology OP-1622
- Caspian Basin**
energy sources OP-169; OP-1258
natural gas OP-2219
- Cassidulina**
Arctic Ocean, Quaternary OP-1566
- Castaneda Hills**
structural geology OP-1110
- Caster, Kenneth Edward**
Invertebrata OP-414
- Castle Gardens Wyoming**
energy sources OP-477; OP-701
- Castle Hayne Aquifer**
ground water WRI 94-4186
- Castle Lake Washington**
dams OP-2038
- Castle Mountain Fault**
Quaternary B 2107
- cataclasls**
Alaska, structural geology OP-1447
Arizona, structural geology OP-1282
California, faults OP-835
New Mexico, structural geology OP-1878
Utah, structural geology OP-695
- cataclasites**
California
rock mechanics OF 94-0228
structural geology OF 94-0568
structural geology OF 94-0228
Wyoming, sedimentary petrology OP-936
- catagenesis**
Italy, geochemistry OP-500
- Catahoula Aquifer**
ground water WRI 94-4219
- Catahoula Formation**
ground water WRI 95-4013; OP-901
- Catalina Basin**
geophysical surveys OF 95-0228
- Catalina Granite**
structural geology OP-1282
- catalogs**
P 1453; B 2129; CAT; OF 94-0299; OF 95-0561; OP-484
- Alaska**
OF 94-0675-A; OF 94-0675-B; OF 94-0675-C
earthquakes EV
geochemistry OF 95-0055
geochronology OP-1008
hydrology OF 94-0467
paleontology OF 94-0215
Quaternary OF 95-0520
seismicity OP-93
- Antarctica, Quaternary P 1386-B**
- Appalachians, structural geology OF 94-0682**
- Arizona, geochemistry B 2021-E**
- Arkansas, hydrology WRI 94-4216**
- Atlantic region, structural geology OF 94-0682**
- California**
earthquakes EV; OF 95-0204
geophysical surveys OF 94-0693
oceanography OF 95-0533
petroleum OF 95-0014
seismology OF 95-0038
- Caribbean region, ground water OF 91-0503**
- Colorado**
engineering geology EV
geochronology B 2104
earthquakes PDE; OF 93-0600-D; OF 93-0610-A; OF 93-0610-B; OF 93-0611-A; OF 93-0611-B; OF 93-0612-A; OF 93-0612-B; OF 94-0600-A; OF 94-0600-B; OF 94-0600-C; OF 94-0601-A; OF 94-0601-B; OF 94-0602-A; OF 94-0602-B; OF 94-0603-A; OF 94-0603-B; OF 94-0604-A; OF 94-0604-B; OF 94-0605-A; OF 94-0605-B; OF 94-0606-A; OF 94-0606-B; OF 94-0607-A; OF 94-0607-B; OF 94-0608-A; OF 94-0608-B; OF 94-0609-A; OF 94-0609-B
- East Pacific Ocean Islands, engineering geology C 1121**
- energy sources OF 94-0298**
- geochemistry DDS-0014; OF 94-0351**
- geochronology DDS-0014**
- geophysics B 2131**
- Georgia, oceanography OP-585**
- ground water OF 94-0465**
- Hawaii, lava OF 95-0496**
- hydrology OF 95-0379**
- Idaho, economic geology P 1525**
- Illinois**
economic geology OF 94-0298
geochemistry OF 94-0555
- Italy, earthquakes PDE**
- Japan, earthquakes EV**
- Lesser Antilles, ground water OF 91-0503**
- mineralogy B 2140**
- Montana, economic geology OF 95-0229**
- New Hampshire**
ground water OF 94-0398
hydrogeology WRI 92-4013
- New Jersey, stratigraphy OF 95-0557**
- New Mexico**
environmental geology OF 95-0528
mineral resources B 2063
- New York**
ground water WRI 91-4138
Quaternary WRI 90-4168
- ocean floors OP-1962**
- oceanography OF 94-0669-A; OF 94-0669-B**
- Oregon, earthquakes EV**
- Pennsylvanian OF 94-0298**
- Polynesia, engineering geology C 1121**
- sedimentary rocks OF 94-0582**
- South Dakota**
ground water OF 95-0153
metal ores OF 95-0066-A; OF 95-0066-B
- Washington**
OF 94-0403
hydrogeology WRI 92-4109; WRI 94-4082
- Wyoming, metal ores OF 95-0066-A; OF 95-0066-B**
- Catalonia Spain see Barcelona Spain**
- Catalonian Coastal Ranges**
magmas C 1129
- catalysis OP-1724**
- catastrophic advance see glacier surges**
- Catawba River basin**
hydrology OF 94-0509
- catchments see drainage basins**
- cathodoluminescence OP-1067; OP-1355; OP-1827**
- cation exchange capacity OF 95-0056; OP-529; OP-1335**
- cation-ratio dating**
geochronology OP-368
- Catoctin Formation**
OP-3
geochemistry C 1129
magmas OP-1126
- Catoctin Mountain**
hydrogeology OP-771
hydrology FS 0136-95
- Catskill Mountains**
hydrology OF 94-0368; OP-1632
- Caucasus see Greater Caucasus; Lesser Caucasus**
- Cave Springs Quadrangle**
maps OF 95-0086
- Cavendish Quadrangle**
maps OF 95-0203-A; OF 95-0203-B
- caverns**
Arkansas, solution features OP-1360
California, geomorphology OP-785
Florida, ground water OP-1948
New Mexico, environmental geology C 1108
- caves see also speleothems.**
Missouri, hydrogeology WRI 93-4154
New Mexico
sedimentary petrology OP-1274
solution features OP-190; OP-1277
Puerto Rico
sedimentary petrology OP-2277
stratigraphy OP-1924
- Cayugan see Tonoloway Limestone**
- Cd see cadmium**
- CD-ROM**
OP-1240; OP-1533
- Alaska**
coal C 1108
energy sources DDS-0030; C 1108
hydrology OF 95-0418
natural gas C 1108
- Atlantic Ocean, marine geology OF 95-0224**
- Basin and Range Province**
Quaternary OF 95-0078
structural geology OP-1741
- coal OF 94-0298**
- Colorado, geophysical surveys OP-1214**
- earthquakes OP-2330**

- geochemistry DDS-0014
geochronology DDS-0014
geophysical surveys DDS-0031; OF 94-0598
Great Basin, Quaternary OF 95-0078
Hawaii, Quaternary DDS-0024
hydrology OF 94-0388
Massachusetts, maps OP-1383
New Mexico, economic geology DDS-0017
ocean floors OP-1962
petroleum OP-110
stratigraphy OP-2148
- Ce** *see* cerium
- Cechy Republic** *see* Czech Republic
- Cedar City Quadrangle**
areal geology B 2056
- Cedar Mountain earthquake 1932**
Quaternary OF 94-0568
- Cedar Rapids Iowa**
hydrogeology WRI 94-4211
pollution OP-983
- Cedar River**
hydrogeology WRI 94-4211; OF 94-0711-W
- celestine**
geochemistry OP-2015
- cement**
Chile, tectonophysics OP-1762
Louisiana, natural gas OP-1543
Nevada
ground water OP-2273
pedogenesis OP-1763
New Jersey, diagenesis OP-2118
Pennsylvania, diagenesis OP-2118
sedimentary petrology OP-2117
Texas, diagenesis OP-1472
- cement materials**
California OF 95-0039
- Cenomanian**
Colorado OP-507
Colorado Plateau OP-2019
Montana OP-1131
Utah OP-507
Western Interior OP-506; OP-2030; OP-2063
Wyoming OP-569
- Cenozoic** *see also* Quaternary; Tertiary.
C 1109; OF 95-0260; OP-985
Alabama OP-1988
Alaska OF 94-0714; I-2272; OP-23; OP-100;
OP-632; OP-633; OP-1394; OP-1447; OP-
1905; OP-2301
Antarctic Ocean OP-173; OP-1103
Antarctica C 1129
Arizona OP-1666
Atlantic Coastal Plain B 2110; OP-1958
Atlantic Ocean OP-1198; OP-1970
Aurignacian, Spain OP-66
Australia C 1129
Basin and Range Province OP-515
Blancan, Idaho B 2105
British Columbia OF 94-0714
California B 1995-H,I; I-2464; OP-82; OP-260;
OP-1577
Florida OP-1204; OP-1710
Georgia OF 94-0673; OP-583; OP-738
Glenns Ferry Formation, Quaternary B 2105
Idaho OF 94-0568
Japan OF 94-0714
Kansas OF 95-0256
Matuyama Epoch
Alaska OP-1881
Arctic Ocean OF 94-0588; OP-1566
California OP-1575
- Far East OP-1574
Idaho OF 94-0686
Indonesia OP-443
New Mexico OP-443; OP-1575
Utah OP-1273
Wyoming OP-1583
Mexico OP-82; OP-838
Mississippi Valley P 1538-R
Nevada OF 95-0248; I-2464; OP-1947; OP-
1976
Pacific Ocean OP-247; OP-1198
Pakistan B 2126
Russian Federation OF 94-0714
Santa Fe Group
faults OP-2243
ground water WRI 94-4251
South Carolina OF 94-0673
Tennessee OP-1988
Washington GQ-1681
Wyoming OP-1913
- centers, color *see* color centers
centers, spreading *see* spreading centers
Central Africa *see* Gabon
Central Alps *see* Rhaetian Alps
Central America *see* Belize; Caribbean region;
Costa Rica; El Salvador; Guatemala; Nicaragua
Central Asia *see* Kazakhstan
Central Atlantic Coastal Plain
Miocene OP-622
oceanography OP-621
stratigraphy OP-623; OP-1412; OP-1958
Central City Colorado
economic geology OF 94-0289
metal ores OP-1626
Central Europe *see* Austria; Black Forest; Bohem-
ian Massif; Czech Republic; Erzgebirge; Ger-
many; Hungary; Poland; Silesia; Switzerland
central granite *see* batholiths
Central Massif
magmas C 1129
Central Oklahoma Aquifer
ground water OP-1167
pollution OP-143
Central Rocky Mountains
Proterozoic OP-1982
Centralia Mine
sedimentary petrology OP-1042; OP-1376
Centralia Missouri
hydrogeology OF 94-0705-W
pollution OP-933; OP-934
Centralia Washington
engineering geology OP-1859
hydrology OP-178
Cephalopoda *see* Tetrabranchiata
cephalopods *see* ammonoids
CERCLA *see* Superfund
Ceren archaeological site
Quaternary OP-1816
cerium
Alaska, sedimentary petrology OP-1604
Gulf of California, sedimentation OP-1987
metal ores B 2097
mineralogy B 2140
New Mexico, uranium ores B 2063
Cerke Formation
structural geology OP-2244
Cerro Negro Volcano
Quaternary OP-1257
Cerro Prieto
hydrogeology OF 95-0514
- sedimentary petrology OP-1932
Cerro Quemado
geologic hazards OP-952
Cerro Rico de Potosi Deposit
metal ores OP-1028
Cerro San Luis Rhyolite
Quaternary OP-1575
Cerro Toledo Rhyolite
geochemistry B 2081
CESE YR
cesium
Cs-137
California OP-1397; OP-1538; OP-1940
Commonwealth of Independent States OP-
2302
Europe OP-2302
Idaho OF 94-0503
Puerto Rico OP-1405
Ukraine OP-595
geochemistry OP-2001
Cetacea
Atlantic Coastal Plain OP-2275
Maryland OP-1137
Virginia OP-1137
chabazite
Oregon, sedimentary petrology B 2108
Chabot Fault
structural geology OP-1430
Chain of Lakes
hydrology WRI 95-4102
chain silicates *see* amphibole group; pyroxene
group; rhodonite
Chainman Shale
energy sources OF 94-0670; OP-1557
structural geology OP-1252; OP-1944
chalcedony
Nevada, geochemistry OP-1857
Utah, neotectonics B 2056
chalcoppyrite *see also* copper ores.
geochemistry OP-1278
Pacific Ocean, geochemistry OP-2098
Chalfant Valley earthquake 1986
California OP-818
chalk
Alaska, energy sources DDS-0030
Denmark, stratigraphy OP-1140
Chalk Creek Member
geochronology OP-569
Challis Quadrangle
areal geology P 1525
barite deposits P 1525
base metals P 1525
economic geology P 1525
faults P 1525
fluorspar P 1525
gems P 1525
geochemistry P 1525; B 2117
geophysical surveys P 1525
gold ores P 1525
graphite deposits P 1525
manganese ores P 1525
mercury ores P 1525
metal ores P 1525; B 2064-A-R
molybdenum ores P 1525
non-metal deposits P 1525
petrology P 1525
polymetallic ores P 1525; B 2064-A-R
Proterozoic P 1525
Quaternary P 1525
sedimentary petrology P 1525
silver ores P 1525

- tungsten ores P 1525
uranium ores P 1525
vanadium ores P 1525
- Challis Volcanics**
structural geology OP-1581
- Chama Basin**
stratigraphy OP-2019
- chambers, magma *see* magma chambers
- Champawat Granites**
geochemistry C 1129
- Champlain Valley**
hydrology B 2103
pollution OF 94-0472
structural geology OP-598
- Chandalar Lake Quadrangle**
environmental geology OF 95-0348
- Chandeleur Islands**
geomorphology OF 94-0275
- Chandlers Run**
hydrology OF 94-0500
- channel geometry**
Alaska, geomorphology WRI 94-4165
Mississippi Valley, geologic hazards OP-1526
Tennessee, fluvial features OP-208
- Channel Islands**
areal geology OP-2189
- channel order *see* stream order
- channeled scablands**
Columbia Plateau, Quaternary OP-2237
Oregon, Quaternary OP-679; OP-680
Washington, Quaternary OP-679; OP-680
- channelization**
Missouri, environmental geology OP-447
Tennessee, hydrology OP-2162
- channels** *see also* braided streams; streamflow; waterways.
I-2402; OP-33; OP-470; OP-916; OP-1233; OP-1726
- Arizona
geomorphology OP-1926
hydrology FS 0120-95; OP-2203
Quaternary OF 95-0591
weathering OP-1504
- California
heavy mineral deposits OF 95-0587
Quaternary OF 94-0568
- China, Quaternary OF 94-0568
- Colorado, sedimentary petrology OF 94-0670
geomorphology OP-177; OP-1792
- Great Lakes, stratigraphy OP-436
hydrogeology OP-795
- Illinois, geomorphology OP-682
- Louisiana, geomorphology OF 94-0275
- Minnesota, hydrology OF 94-0488; OF 95-0333
- Mississippi Valley, geomorphology P 1538-R
- Missouri, environmental geology OF 94-0333
- Oregon, Quaternary OP-679
- South Dakota, sedimentary petrology B 1917-S
- Tennessee
environmental geology OF 95-0156
hydrology OF 95-0156
Quaternary OF 94-0568
- Utah
hydrology OP-2203
sedimentary petrology OF 94-0670
- Washington
geologic hazards YR
Quaternary OP-679
- chaos**
California, earthquakes OP-892
- Italy, earthquakes OP-892
tectonophysics OP-176
- characteristic remanent magnetization**
Alaska, paleomagnetism OP-1135
California, paleomagnetism OP-1916
Canada, paleomagnetism OP-1135
Washington, tectonics OP-1449
Wyoming, Quaternary OP-1583
- charcoal**
California
Quaternary OF 94-0568
seismology OP-2084
Dominican Republic, Quaternary OF 94-0568
Missouri, Quaternary OP-1707
South Carolina, Quaternary OF 94-0568
Spain, geochronology OP-66
Utah, Quaternary OF 94-0568
- Charles Formation** B 2112
- Charleston earthquake 1886**
Australia, tectonophysics OP-2334
California, tectonophysics OP-2334
Canada, tectonophysics OP-2334
India, tectonophysics OP-2334
Oklahoma, tectonophysics OP-2334
- Charleston Sandstone**
stratigraphy OP-768
- Charlestown Pennsylvania**
ground water OF 93-0659
- Charlotte Belt**
structural geology OP-1908
- Charlotte Harbor**
ecology OP-610
- Charlotte Quadrangle**
mineral resources OP-428
- chartology *see* cartography
- Chase Group**
ground water OP-1167
- Chatham Strait**
gold ores OP-624
sedimentation OP-2160
- Chattanooga Shale**
hydrogeology WRI 93-4207
- Chaveroo Field**
energy sources B 2063
- checkerboard method**
California, petroleum B 2120
- Cheeneetnuk Limestone**
Invertebrata OP-51; OP-76
- Chehalis River valley**
engineering geology OP-1859
geologic hazards OF 94-0589
- Chekiang China *see* Zhejiang China
- chelan-type**
Italy, petrology C 1129
Washington, petrology C 1129
- Chelmsford Granite**
engineering geology OP-650
- Chemard Lake Lignite Lentil**
Paleocene OF 95-0208
- Chemehuevi Mountains**
Miocene OP-669
structural geology OF 94-0568
- chemical analysis** *see also* atomic absorption; Auger spectroscopy; chromatography; electron probe; emission spectroscopy; inductively coupled plasma methods; mass spectroscopy; neutron activation analysis; Raman spectroscopy; synchrotron radiation; X-ray analysis.
environmental geology OP-2227
- geochemistry P 1566; C 1129; OF 94-0351; OF 94-0362; OF 94-0369; OF 94-0384; OF 94-0458; OF 94-0670; OF 94-0671; OF 95-0117; OF 95-0140; OF 95-0222; OF 95-0486; OP-1043
- gold ores OF 95-0221; OF 95-0495; OP-149
- ground water WRI 95-4105; OF 94-0670
- hydrogeology OF 95-0141; OP-2327
- hydrology WRI 94-4141; OF 93-0628; OF 94-0471; OF 94-0539
- metal ores OF 94-0668; OP-1208
- mineralogy OF 94-0575
- natural gas OF 95-0207
- pollution OF 94-0302; OP-37; OP-1267
- soils OF 94-0670
- chemical logging *see* geochemical logging
- chemical waste**
Nevada, hydrology OF 94-0489
- chemical weathering**
Colorado, geochemistry OP-1318
geochemistry OP-995
Hawaii OP-1594
Maryland, hydrogeology OP-771
mineralogy OP-79
New York, geochemistry OP-832
Oregon, Quaternary OP-2045
Puerto Rico OP-741
stratigraphy OP-2274
- chemically precipitated rocks** *see also* chert; evaporites; ferricrete; phosphate rocks; siliceous sinter; tufa.
New Mexico, mineralogy OP-1275
Pacific Ocean, geochemistry OF 94-0015; OF 95-0505
- chemostratigraphy**
Alabama OP-386
Atlantic Coastal Plain OP-903
Florida OF 95-0003
Idaho, geochemistry OP-716
Italy OP-1416
Kenya, geochemistry C 1129
Nevada
geochemistry P 1559; B 2056
Tertiary OF 95-0545
Quaternary OP-61
Sweden OP-386
Tunisia OP-1416
- chemosynthesis**
Pacific Ocean, sea water OP-842
- Chena River**
maps OP-878
- chenier plains**
Louisiana OF 94-0275
- cheralite**
mineralogy B 2140
- Chernobyl nuclear accident**
Commonwealth of Independent States, environmental geology OP-2302
Europe, environmental geology OP-2302
Ukraine, pollution OP-595
- Cherokee Group**
pollution OP-2282
- Cherry Creek basin**
hydrology WRI 94-4230; OF 94-0363
- Cherry Hill Deposit**
economic geology OP-802
metal ores OP-663; OP-801
- Cherry Point North Carolina**
ground water WRI 94-4186
- chert** *see also* jasperoid.
Alaska

- metal ores OP-1895
metamorphism OP-39
Proterozoic OP-1624
Arizona, Quaternary OP-1287
California
 geochemistry P 1566
 structural geology OP-1430
 tectonophysics OP-1448
Idaho, geochemistry OF 95-0270
Mexico, tectonophysics OP-1448
Montana, Quaternary OP-1868
Pennsylvania, metal ores OP-1895
stratigraphy OP-768
Texas, ground water WRI 94-4117
Utah, Quaternary OP-1287
Wyoming, geochemistry OF 95-0270
Yukon Territory, Proterozoic OP-1624
- Chesapeake Bay**
Eocene OP-735
geochemistry OP-856
ground water OP-1977
hydrology WRI 94-4067
pollution OP-999; OP-1077
stratigraphy OP-1960
structural geology OP-1959
Vertebrata OP-1137
- Chesapeake Group *see* Eastover Formation
- Chester Series *see* Chesterian
- Chester-Athens Dome**
structural geology OP-1997
- Chesterian** *see also* Aux Vases Sandstone; Beech Creek Limestone Member; Cypress Sandstone; Golconda Formation.
Illinois OF 94-0298
Montana B 2112
North Dakota B 2112
Ohio OP-411
- Chewelah Quadrangle**
geomorphology I-2472
- Cheyenne Belt**
metamorphic rocks OP-1929
Proterozoic OP-1982
structural geology OP-1232; OP-1668
- Chiapas Mexico *see* El Chichon
- Chicago Illinois**
areal geology OP-295
hydrology WRI 93-4188
lacustrine features OP-286
- Chichagof Island**
metal ores OP-1169
structural geology OP-1447
- Chichagof mining district**
gold ores OP-2184
- Chickahominy Formation**
Eocene OP-735
ground water OP-1977
- Chickahominy River basin**
hydrology WRI 94-4225
- Chickies Quartzite**
pollution WRI 92-4088
- Chico Formation**
geochemistry OP-927
- Chicopee River basin**
hydrology WRI 94-4003
- Chicot Aquifer**
ground water WRI 94-4202; WRI 95-4038;
OF 94-0345; OF 95-0182; OF 95-0183
- Chicxulub Crater**
stratigraphy OP-1755
- Chile** *see also* Chile earthquake 1960; Patagonian Andes.
elastic waves OP-1071
energy sources OF 94-0559
geochemistry, Atacama Chile C 1129
iron ores OP-87
metal ores OP-2126
Quaternary
 OP-1697; OP-2086
 Atacama Desert B 2110
stratigraphy, Antofagasta Chile OF 95-0226
tectonophysics OP-1762; OP-2328
- Chile earthquake 1960**
Alaska, Quaternary OP-1098
Chile, Quaternary OP-1098
- Chile Margin Triple Junction**
Chile, tectonophysics OP-1762
Pacific Ocean
 natural gas OP-1391
 tectonophysics OP-56
- Chile Ridge**
tectonophysics OP-1702; OP-1762
- Chile Trench *see* Peru-Chile Trench
- Chillito Deposit**
copper ores OP-1381
- CHILLER**
metal ores OP-728
non-metal deposits OP-729
- Chilliwack Group**
geophysical surveys OP-1821
- Chilson Member**
sedimentary petrology B 1917-S
- Chimney Rock Unit**
stratigraphy B 2110
- chinnneys**
Pacific Ocean, ocean floors OP-2137
- China** *see also* Fujian China; Gansu China; Guangxi China; Guizhou China; Hunan China; Inner Mongolia China; Jiangxi China; Jilin China; Ningxia China; Xinjiang China; Xizang China; Zhejiang China.
earthquakes OP-1638
environmental geology CP-0043
lignite OP-2016
mantle
 OP-763; OP-868
 Qinghai-Xizang Plateau OP-1020
petrology OP-1574
Quaternary
 OF 94-0568
 Kunlun Mountains OF 94-0568
 Qinghai-Xizang Plateau P 1549; OF 94-0568
seismology OF 95-0562
stratigraphy OP-2253
- China Lake**
ground water WRI 93-4003
- Chinle Formation** *see also* Petrified Forest Member; Shinarump Member.
OP-223; OP-224; OP-382; OP-1320; OP-1321; OP-1322; OP-1481
ichnofossils OP-1482
Invertebrata OP-1479
metal ores B 2063
sedimentary petrology OP-1404
- Chippewa River basin**
geologic hazards OP-1836
hydrology OF 94-0488
- Chiricahua Mountains**
geochemistry B 2021-E
- Chitina Valley**
geologic hazards B 2107
- chitinozoans**
Tennessee, stratigraphy OP-1502
- chladnite**
petrology OP-469
- chloride ion**
Alabama, ground water WRI 94-4074
California, metal ores OP-720
Caribbean region, ground water WRI 93-4162
Florida
 ground water WRI 92-4174; WRI 94-4010
 pollution OP-806
geochemistry C 1129
ground water C 1108
Hawaii, hydrogeology WRI 95-4001
Lesser Antilles, ground water WRI 93-4162
Massachusetts, geochemistry OF 94-0384
Minnesota, pollution OP-1686
New Mexico, ground water WRI 94-4078
Pennsylvania, ground water WRI 93-4109
Texas
 ground water WRI 93-4126
 Quaternary OP-812
Utah, pollution OP-657
Virginia, ground water W 2401; OP-376
Washington, waste disposal OF 94-0514
- chlorides *see* atacamite; halite; paratacamite
- chlorinated hydrocarbons** *see also* DDT; PCBs; trichloroethylene.
Appalachians, pollution OP-1365
British Columbia, hydrology OF 94-0315
California, pollution OF 95-0286
Colorado, hydrology WRI 94-4041
Connecticut, pollution OP-1460
environmental geology C 1108; OP-581
Florida, ground water OP-472; OP-1614
ground water OF 94-0670; OP-734
Gulf of Mexico, environmental geology OP-715
hydrology OF 94-0710-W
Kansas, pollution W 2419
Louisiana, hydrology WRI 92-4181
Maryland
 environmental geology W 2399
 pollution OP-1786
Massachusetts, pollution OP-36; OP-1460
Michigan, pollution OF 95-0163
Minnesota, environmental geology OP-831
Mississippi Valley, pollution OF 94-0036;
 OF 94-0336; OF 94-0376
Missouri
 hydrology OF 93-0495
 pollution OF 94-0332
Nebraska, pollution W 2419
New Jersey
 environmental geology WRI 92-4122; OP-913
 ground water WRI 94-4113
Ontario, ground water OP-170
South Carolina
 geophysical surveys OF 95-0518
 ground water OF 95-0507
Tennessee, ground water WRI 94-4212; OP-1259
Texas
 ecology OP-1180
 ground water WRI 94-4092
Utah, hydrology WRI 94-4041
Washington, hydrology OF 94-0315
Wisconsin
 environmental geology OF 95-0163

- pollution OF 95-0163
- chlorine**
 Alaska, hydrology B 2139
 Atlantic Coastal Plain, stratigraphy OP-1960
 California, economic geology OP-216
 Cl-36
 California OP-2006
 Nevada OP-2006
 Washington OF 94-0514
 geochemistry C 1129; OP-1114; OP-1369
 Hawaii, hydrogeology WRI 95-4001
 hydrogeology OP-1532
 Massachusetts, geochemistry OF 94-0384
 Mississippi Valley
 environmental geology OP-1748
 pollution OF 94-0036
 pollution OP-762
 thermal waters OP-1756
 Virginia, ground water OP-1977
 Washington, hydrogeology OP-2197
- chlorite**
 California, clay mineralogy B 1995-H,I
 Colorado, molybdenum ores OP-526
 faults OF 94-0228
 Greenland, petrology OP-1752
 Pacific Ocean, geochemistry B 2022
 Washington, sedimentary petrology OP-1182
- chloropal** *see* nonttronite
- chlorophenothane** *see* DDT
- chlorophyll**
 Colorado, ecology OP-150
 Florida, ecology OP-610
- Chlorophyta** *see* Tasmanites
- Choco Colombia**
 geochemistry OF 94-0623-A; OF 94-0623-B;
 OF 94-0623-C
- Chocolate Mountains**
 Pliocene OP-2061
- chondrites** *see also* carbonaceous chondrites; enstatite chondrites.
 OP-1579
- chondrules**
 petrology OP-1437
- Chopawamsic Formation**
 magmas P 1529
- Choptank Formation**
 Vertebrata OP-1137; OP-2275
- Chordata** *see* Vertebrata
- chorology** *see* biogeography
- Chouteau Limestone**
 metal ores B 1989-G
- Chowan River**
 hydrology OF 95-0136
- Christmas Deposit**
 copper ores OP-1381
- chromatography** *see* gas chromatography; liquid chromatography
- chromite**
 China, magmas OP-1935
 Europe, weathering OP-2052
 Washington, sedimentary petrology OP-1182
- chromite ores**
 Alaska B 2084; OP-1893
 California OP-864
 Oregon OP-864
- chromitite**
 Montana, geochronology OP-516
- chromium** *see also* chromite.
 California, geochemistry OF 95-0015; OP-1955
- Colorado
 geochemistry OP-1168
 hydrology WRI 94-4041
 pollution C 1122; OP-1082
 geochemistry OP-1284
 ground water OP-1167
 Gulf of California, sedimentation OP-1987
 pollution OP-13
 Rocky Mountains, pollution OF 94-0670
 South Carolina, pollution WRI 94-4209
 Utah
 geochemistry OP-1168
 hydrology WRI 94-4041
 Washington, sedimentary petrology OP-108
 Wisconsin
 environmental geology OF 95-0163
 hydrology OF 95-0163
- chromium ores** *see* chromite ores
- chrysotile**
 California, pollution OP-2047
 Washington, sedimentary petrology OP-1182
- Chuar Group**
 energy sources OP-1557; OP-1714
 petroleum B 2000-J
- Chubut Argentina**
 Vertebrata OP-1151
- Chuckanut Formation**
 sedimentary petrology OP-108; OP-1182
- Chugach Mountains**
 areal geology OP-672
 gold ores OP-349; OP-2184
 magmas OP-626
 metal ores B 2084
 paleomagnetism OP-727
 Quaternary OP-1507; OP-1805; OP-2017
 structural geology OP-1447
 tectonophysics OP-408
- Chugach National Forest**
 mineral resources OF 94-0272
- Chugoku**
 petrology C 1129
- Chuitna River basin**
 sedimentary petrology B 2107
- Chukchi Sea**
 areal geology OP-330
 energy sources OP-65; OP-1270
 Mohorovicic discontinuity OP-1398
 Quaternary OP-1049
- Chulman Basin**
 geochronology OP-1493
- Church Rock mining district**
 hydrogeology OP-335
- Churchill Valley**
 hydrogeology OF 93-0356
- Churubusco Quadrangle**
 hydrology B 2103
- Cienega Valley**
 faults OP-2288
- Ciervo Hills**
 sedimentation OF 94-0577
- Ciervo Shale**
 stratigraphy OP-1341
- Cima d'Asta**
 geochemistry C 1129
- Cima volcanic field**
 geochemistry OP-260
 maps OF 92-0179; OF 92-0181; OF 92-0182;
 OF 92-0183
 petrology OF 95-0585; OP-708
- Cimarron River**
 hydrogeology OF 94-0504
- cinder cones**
 Central America, Quaternary OP-1257
 Commonwealth of Independent States, Quaternary OP-1257
 Hawaii, Quaternary OP-1768
- cinnabar**
 Idaho, mercury ores P 1525
- Circle mining district**
 areal geology OP-296
 gold ores B 2107
- Circle Quadrangle**
 gold ores B 2107
 maps OF 88-0607; OF 88-0608; OF 88-0609;
 OF 88-0610; OF 88-0611; OF 88-0612;
 OF 88-0613; OF 88-0614; OF 88-0615;
 OF 88-0617; OF 88-0618; OF 88-0619;
 OF 88-0620; OF 88-0621; OF 88-0624;
 OF 88-0625; OF 88-0626; OF 88-0627;
 OF 88-0635
 mineral resources OF 95-0626
- Circum-Pacific Belt** *see* Circum-Pacific region
- Circum-Pacific Map Project**
 geologic hazards OP-2191
 plate tectonics OP-1441; OP-1442
- Circum-Pacific region**
 environmental geology CP-0043
 geologic hazards OP-2190; OP-2191
 Jurassic OP-964
 plate tectonics OP-1441; OP-1442; OP-1443;
 OP-1894
 structural geology OF 94-0714
- cirques**
 Colorado, fluvial features OP-1743
- Cisco Grove Quadrangle**
 maps I-2341
- cistern rock** *see* laccoliths
- Cltronelle Formation**
 ground water WRI 95-4013
- Ciudad Bolivar Quadrangle**
 maps MF-2246
- Ciudad Piar Quadrangle**
 maps MF-2246
- Cl** *see* chlorine
- Cl-36**
 California, Quaternary OP-2006
 Nevada, Quaternary OP-2006
 Washington, waste disposal OF 94-0514
- Clackamas River**
 geophysical surveys OP-1564
- cladistics**
 China, Vertebrata OP-418
 Mongolia, Vertebrata OP-418
 Vertebrata OP-417
- Clalborne Group** *see also* Cockfield Formation;
 Cook Mountain Formation.
 sedimentary petrology OP-2256
- Claim Canyon caldera complex**
 ground water OP-2066
- clarain**
 Kentucky
 geochemistry OP-2053
 sedimentary petrology OP-1950
- Claremont Shale**
 structural geology OP-1430
- Clarendon Granite**
 Ordovician B 2060
- Clark Fork**
 geochemistry OP-1209

Clark's Fork Basin

hydrology OF 94-0375

Clarksville South Quadrangle

maps OF 94-0629

Claron Formation

ichnofossils OP-1153

clastic dikes

Arkansas, Quaternary OP-946

Illinois, seismology OP-1451

Indiana, seismology OP-1451

Utah OP-1464

Washington

engineering geology OP-1859

geologic hazards OF 94-0589

clastic rocks *see also* arenite; argillite; arkose; bentonite; black shale; breccia; claystone; conglomerate; diamictite; diatomaceous earth; eolianite; flysch; graywacke; marl; megabreccia; microbreccia; mudstone; novaculite; orthoquartzite; porcellanite; red beds; sandstone; sapolite; shale; siliciclastics; siltstone; tonstein; turbidite; volcanoclastics.

Alaska

OP-201

stratigraphy OP-1623

California

OP-159

ground water OP-1362

Colorado, stratigraphy OP-1384

Illinois OF 94-0298

Massachusetts, structural geology OP-782

Montana OP-282

Nevada, ground water OP-1362

Oregon, ocean floors OP-123

Pakistan, coal B 2096; OF 94-0274

Washington B 2085-C

Wyoming OP-780; OP-1620

clastic sediments *see also* alluvium; boulders; clay; cobbles; colluvium; diamicton; dust; erratics; gravel; loess; mud; ooze; outwash; pebbles; sand; silt; till.

Alaska, environmental geology OF 95-0177

Arkansas, Quaternary P 1538-H

Atlantic Coastal Plain, stratigraphy OP-903

California

geochemistry OF 95-0015

non-metal deposits OF 95-0535

Quaternary OF 94-0593

Connecticut

geophysical surveys OP-2218

pollution OP-1460

Georgia, heavy mineral deposits OP-344

Great Lakes, lacustrine features OF 95-0224

Hawaii OP-1102

Illinois

frost action OP-43

pollution OP-1111

Indiana, frost action OP-43

Iowa, geomorphology OP-2034

Massachusetts

hydrogeology WRI 94-4256

pollution OP-1460

Minnesota, ground water WRI 94-4204

Missouri, Quaternary P 1538-H

New Hampshire

ground water OF 95-0281; OF 95-0363

hydrogeology WRI 92-4013; WRI 92-4154

non-metal deposits OP-75

Ohio, ground water WRI 94-4131

Oregon, Quaternary OF 94-0568

South Carolina, hydrology OF 95-0186

Utah, Quaternary OF 94-0568

clastic wedges

Oregon, ocean floors OP-123

clathrates

petrology OP-1196

clay

Arizona, Quaternary OP-1287

Atlantic Ocean OP-2149

California

earthquakes OP-1529

geologic hazards OP-437

ground water OP-2335

hydrogeology OP-2298

seismology OP-1688

Colorado

geophysical surveys OP-67

ground water OP-1562

environmental geology OP-1619

Great Lakes, stratigraphy OP-436

Idaho, environmental geology OP-2096

Illinois, Quaternary OP-1630

Iowa, Quaternary OP-1630

Maryland, pollution OP-1089

Midwest, hydrology WRI 93-4204

Mississippi Valley

geologic hazards OP-1578

hydrology WRI 94-4191

New Mexico, ground water WRI 93-4192

New York, waste disposal OP-1775

South Carolina, ground water OF 95-0507

Utah, Quaternary OP-1273; OP-1287

Virginia, ground water OP-1977

Washington, geologic hazards P 1547

Wyoming

OP-928; OP-1620

Quaternary OP-355

clay (soil) *see* Clay soils**clay liners** *see* disposal barriers**clay mineralogy** *see also* crystal structure; paragenesis.

Alaska, uranium ores B 2098

Arctic Ocean, stratigraphy OF 94-0588

California

B 1995-H.I

geochemistry P 1566

pedogenesis OP-2005

Quaternary OP-761

Hawaii OP-1594

Idaho OF 94-0374

Nevada

pedogenesis OP-2005

Quaternary OP-761

Pacific Ocean, geochemistry B 2022

South Carolina, geophysical surveys OF 95-0518

Utah B 2110

clay minerals *see also* illite; kaolinite; montmorillonite; nontronite; palygorskite; smectite.

OP-880

California, Quaternary OP-1803

Colorado, pollution OP-1466; OP-2316

engineering geology OF 94-0228

faults OF 94-0228

Wyoming, sedimentary structures OP-1620

Clay soils

Missouri

hydrogeology OF 94-0705-W

pollution OP-934

claystone

Colorado, geologic hazards OP-1101

Clean Air Act

environmental geology C 1108

pollution OP-186; OP-702

Clear Creek Mine

oxides OP-778

Clear Lake

economic geology OP-216

energy sources OP-890; OP-1746

gold ores OP-341

Clear Lake volcanic field

economic geology OP-216; OP-802; OP-803

geochemistry OP-927

geothermal energy OP-299

gold ores OP-341

maps I-2362

metal ores OP-800; OP-801; OP-940

Clearwater River

hydrology OF 94-0109

cleavage *see also* axial-plane structures.

Alaska, Proterozoic OP-1624

Appalachians

gold ores OP-1909

structural geology OP-1908

California

metamorphism OP-319

structural geology OP-1462

metal ores OP-870

Virginia, structural analysis OP-1091

Yukon Territory, Proterozoic OP-1624

cleavage folds

Virginia OP-1199

Cleft Segment

geochemistry OF 94-0015; OF 95-0505

ocean floors OP-2137

oceanography OP-503

Clementine Program OP-605; OP-676; OP-852; OP-1487; OP-1781; OP-1783; OP-1784; OP-1785

Cliff Lake Quadrangle

neotectonics OP-1902

cliff of displacement *see* fault scarps**cliffs**

Massachusetts, Quaternary OP-683

Clifton Creek Quadrangle

maps MF-2278

climatology, paleo- *see* paleoclimatology**climatostratigraphy**

Pennsylvanian OP-1228

Climax Colorado

pollution OP-488

climax-type

Colorado, molybdenum ores OP-849

Utah, molybdenum ores OP-849

clinoamphibole *see* actinolite; hornblende**clinoptilolite**

Colorado, geochemistry OF 95-0049; OF 95-0056

Oregon, sedimentary petrology B 2108

clinopyroxene *see also* augite; fassaite; jadeite.

OP-434; OP-880

Alaska, geochemistry B 2139

California, petrology OP-1315

Greenland, petrology OP-1752

Hawaii, geochemistry OF 91-0596

Italy, fluid inclusions OP-950

Oregon, petrology OP-1315

clinopyroxenite

Alaska, geochemistry P 1564

mineralogy OP-434

Clinton Group B 2086**Clinton-Newbury Fault**

stratigraphy OP-2297

Clipper Mountains

- magmas OP-313
- structural geology OP-432
- closed mines *see* abandoned mines
- Cloudburst Fault**
 - metal ores OP-1606
- Cloudburst Formation**
 - copper ores OP-291
- clouds**
 - Alaska, geologic hazards OP-2318
- Clough Formation**
 - structural geology OP-782
- Clover Hollow Mountain Syncline**
 - structural analysis OP-1091
- Clover Mountains Quadrangle**
 - areal geology B 2056
- CMTR Project**
 - Quaternary OF 95-0034
- CO *see* carbon monoxide
- Co *see* cobalt
- Co-60**
 - Idaho, hydrogeology OF 94-0503
- CO₂ *see* carbon dioxide
- Coachella Fonglomerate**
 - Pliocene OP-2061
- coal** *see also* coal assessment; coal balls; coal deposit maps; coal fields; coalbed methane; lignite; longwall mining; macerals.
 - C 1108; OF 94-0298; OF 94-0631; OF 95-0065-A; OF 95-0065-B; OP-599; OP-1044; OP-1547
 - Alabama OP-1915
 - Alaska
 - DDS-0030; C 1108; OP-296; OP-972
 - environmental geology C 1108
 - anthracite
 - China OP-2016
 - Washington OP-1182
 - Appalachians
 - C 1108
 - stratigraphy OP-1324
 - bituminous coal
 - Illinois OF 94-0555
 - Washington OP-1181
 - Western Interior B 2110
 - Colorado
 - OF 94-0670; OP-1373; OP-1646
 - geochemistry OF 94-0295
 - environmental geology C 1108
 - Europe, geochronology OP-510
 - Florida, Devonian OP-1971
 - geochemistry C 1108
 - Georgia, Devonian OP-1971
 - Idaho B 2064-A-R
 - Illinois
 - OF 94-0298
 - heat flow OP-2050
 - pollution OP-702
 - Indiana
 - OP-2020
 - engineering geology OF 94-0298
 - Kentucky
 - OP-1548; OP-1950
 - geochemistry OP-2053
 - Maryland, pollution OP-702
 - Montana
 - OP-278; OP-281; OP-282
 - pollution OP-185
 - Nevada OP-1083
 - New Mexico
 - OP-1373

- environmental geology C 1108
- New Zealand OP-207
- Nova Scotia OP-565
- Pakistan OP-1386
- paleobotany OP-182; OP-566
- Pennsylvania B 2110; OP-1951
- Pennsylvanian OF 94-0298; OP-1228
- Poland, geochemistry C 1108
- pollution OP-186
- Rocky Mountains, pollution OF 94-0670
- stratigraphy OP-768
- subbituminous coal, Washington OP-1042; OP-1182
- Tertiary OP-1888
- United States, geochemistry C 1108
- Utah
 - B 2115-A; OF 94-0670; OP-1464
 - stratigraphy B 2115-B
- Virginia FS 0046-95
- Washington
 - OP-108; OP-1376
 - Eocene OP-1593
 - geochemistry OF 94-0670
- West Virginia, stratigraphy OP-69
- Western Interior
 - Cretaceous P 1561
 - stratigraphy OF 94-0670; OP-1324; OP-2030
- Wyoming
 - OF 94-0670; OP-278; OP-279; OP-281; OP-456; OP-780; OP-1646
 - Paleocene OP-666
- coal assessment**
 - C 1108
 - Alaska, sedimentary petrology B 2107
 - Appalachians C 1108
 - energy sources C 1108
 - Indiana OF 94-0298
 - Pakistan
 - OF 94-0274; OF 94-0595; OF 94-0596-A; OF 94-0596-B; OF 94-0596-C; OF 94-0596-D
 - lignite OF 94-0557
- coal balls**
 - paleobotany OP-646
- coal deposit maps**
 - South America OF 95-0235
 - Wyoming, Cretaceous C-0146
- coal fields** *see also* Sydney coal field.
 - Kentucky
 - ground water WRI 94-4189
 - sedimentary petrology OF 94-0298
 - New Mexico, energy sources B 2063
 - Pakistan
 - B 2096; OF 94-0595
 - geochemistry OF 93-0591
- coal mines**
 - Appalachians, impact statements OF 95-0589
 - Colorado, hydrology WRI 92-4187
 - environmental geology OP-955
 - Montana
 - energy sources OP-278
 - pollution OP-185
 - Washington, geochemistry OF 94-0670
 - Wyoming
 - OP-280
 - Cretaceous C-0146
 - energy sources OP-278
 - sedimentary petrology OP-780
- coal quality**
 - C 1108
 - Alaska C 1108

- Appalachians C 1108
- environmental geology C 1108
- New Mexico, environmental geology C 1108
- Pakistan, geochemistry OF 93-0591
- Coal Resource Exploration and Assessment Program**
 - coal OF 94-0595; OF 94-0596-A; OF 94-0596-B; OF 94-0596-C; OF 94-0596-D
- coalbed methane**
 - C 1108; OF 94-0642; OF 95-0075-A; OP-769
- Appalachians
 - OF 95-0572
 - sedimentary petrology OP-528
- China OP-2016
- Colorado OP-947
- Poland OP-770
- Rocky Mountains
 - OP-1942
 - sedimentary petrology OP-528
- coalfields *see* coal fields
- coalification**
 - sedimentary petrology OP-1078; OP-1885
- Coalinga California**
 - pollution OP-2047
- Coalinga earthquake 1983**
 - California OP-1808
- Coalition for Earth Science Education YR**
- COALQUAL**
 - coal C 1108; OF 94-0298
- COALREAP**
 - coal OF 94-0274; OF 94-0595; OF 94-0596-A; OF 94-0596-B; OF 94-0596-C; OF 94-0596-D
 - lignite OF 94-0557
- Coast Mountains**
 - gold ores OP-624
 - metamorphic rocks C 1129
 - petrology OP-100
 - sedimentary petrology OP-1404
- Coast Mountains Complex**
 - stratigraphy B 2135
- Coast plutonic complex**
 - faults OP-248
 - geochemistry B 2107
 - metamorphic rocks OF 94-0268
 - metamorphism B 2107
 - sedimentary petrology OP-1361
 - stratigraphy B 2135
- Coast Range Fault**
 - tectonics OP-444
- Coast Range Ophiolite**
 - faults OP-1577
 - gold ores OP-341
 - metal ores OP-663; OP-940
 - structural geology OP-1430
- Coast Ranges**
 - bibliography OF 95-0558
 - earthquakes OP-1144
 - economic geology OP-216
 - geochemistry OF 95-0040; OF 95-0227-A; OF 95-0227-B
 - hydrology WRI 93-4181
 - lava OP-1254
 - metal ores OP-720; OP-940
 - natural gas OF 95-0093; OP-542; OP-1677
 - neotectonics OP-1980
 - non-metal deposits OF 95-0039
 - pollution OP-2047
 - Quaternary OP-1945
 - sedimentary petrology OP-1097
 - stratigraphy B 1995-J,K; OP-1036

- structural geology OP-348; OP-1592; OP-1599;
OP-1773; OP-1979
tectonophysics OP-1975
- coastal dunes**
Indiana, hydrogeology OF 92-0139
coastal features *see* shore features
- Coastal Ocean Dynamics Experiment**
continental shelf OP-847
- coastal plains**
Alaska, Pliocene OP-1171
Atlantic Coastal Plain, hydrogeology P 1410-C
Florida, geomorphology OF 95-0216
Greenland, Pliocene OP-1171
Gulf Coastal Plain, hydrogeology P 1410-C
Louisiana
geomorphology OF 94-0275
oceanography I-2150-B
New Jersey
ground water WRI 92-4152; WRI 94-4113
hydrogeology OP-750
pollution OP-2178
New Zealand, Quaternary OF 94-0568
North Carolina
ground water WRI 94-4186
hydrogeology FS 94-0010
South Carolina, hydrogeology FS 94-0010
Virginia, ground water W 2401
- coastal sedimentation**
OP-547; OP-548
Brazil OP-117
California B 1995-H,I
Connecticut OF 95-0556
Louisiana
I-2150-B
geomorphology OF 94-0275
Quaternary OF 94-0275
Ohio
frost action OF 95-0224
geomorphology OF 95-0224
- coastlines *see also* barrier islands; beach profiles; beaches; bluffs; chenier plains; embayments; emergent coastlines; littoral erosion; marine terraces; raised beaches.**
Basin and Range Province, tectonophysics OP-64
California, oceanography OP-1066; OP-2180
Florida OF 95-0216
Great Basin, tectonophysics OP-64
Illinois, hydrogeology OP-90
Indiana, hydrogeology OF 92-0139
Louisiana
OF 94-0275
conservation OF 94-0275
ecology OF 94-0275
engineering geology OF 94-0275
environmental geology OF 94-0275
Massachusetts, ocean circulation YR
Michigan OF 95-0224
Middle East, plate tectonics OF 94-0568
Ohio
OF 95-0224
environmental geology OF 95-0224
- cobalt**
Co-60, Idaho OF 94-0503
Colorado, pollution OP-1082
Gulf of California, sedimentation OP-1987
Japan, geochemistry C 1129
Rocky Mountains, pollution OF 94-0670
- cobalt ores**
Idaho P 1525; OP-167
- cobbles**
Alaska, Quaternary OP-1457
- Arizona
OP-2023
geomorphology OP-2072
Idaho, Quaternary OP-1900
- Coccidioidomycosis**
engineering geology OP-1585
- coccoliths**
California, stratigraphy OF 94-0678; OP-1341
Oregon, stratigraphy OP-1177
- Cochran Crater** OP-1846
- Cockfield Aquifer**
ground water WRI 93-4134
- Cockfield Formation**
ground water WRI 95-4011
- Coconino National Forest**
non-metal deposits OF 95-0031
uranium ores OF 94-0566
- coda waves**
California OP-62; OP-393; OP-587; OP-1753;
OP-2091; OP-2144
- Cody Shale *see also* Belle Fourche Shale.**
B 2113
sedimentary petrology OP-780
- Coedana Granite**
geochemistry C 1129
- coefficient of permeability *see* hydraulic conductivity
- coefficients, partition *see* partition coefficients
- Coelenterata**
Acropora palmata, Puerto Rico OP-2108
Favosites, New York OP-685
Montastrea annularis
Bermuda OP-1733
Florida OP-1733
Rugosa
New York OP-686
Ohio OP-686
South America OP-684
Scleractinia, Puerto Rico OP-2179
- coelenterates *see* corals
- coesite**
OF 95-0255
petrology OP-1858
- Coeur d'Alene District *see* Coeur d'Alene mining district
- Coeur d'Alene Lake**
hydrology WRI 94-4119
- Coeur d'Alene mining district**
pollution OP-1039; OP-1146; OP-1156; OP-2129
- Coeur d'Alene River**
pollution OP-1039; OP-1156; OP-2129
- COGEOINFO** OF 94-0299
- Cohansey Aquifer**
pollution OP-2177; OP-2236
- Coker Aquifer**
ground water WRI 94-4074; WRI 94-4223
- Colangul Batholith**
faults C 1129
- Colchester Coal Member**
stratigraphy OP-1324
- Cold Bay Quadrangle**
environmental geology OF 95-0179
- collapse structures**
Arizona, uranium ores OF 94-0566
California, geomorphology OP-775
Hawaii
paleomagnetism OP-1522
Quaternary OP-1496
Nevada, geomorphology OP-775
- Oregon, petrology OP-2172
Utah, metal ores OF 94-0417
- college-level education** OP-1332
- Collet Top Quadrangle**
sedimentation B 2115-A
stratigraphy B 2115-B
- colloquia *see* symposia
- Colloymal fault zone**
geophysical surveys OP-2046
- colluvium**
California
Quaternary OF 94-0568
seismology OP-2084
China, Quaternary OF 94-0568
Colorado, geomorphology OP-986
geomorphology OP-1368
Georgia, soils OP-1555
Nevada
environmental geology OF 94-0451
ground water OF 92-0657
structural geology OP-1469; OP-1904
weathering OP-1468
- Colma Formation**
neotectonics OP-1145
- Colombia**
earthquakes OP-1392
geochemistry, Antioquia Colombia OF 94-0623-A; OF 94-0623-B; OF 94-0623-C
Invertebrata OP-77; OP-684
- Colombourg Pluton**
petrology C 1129
- Colon Archipelago *see* Galapagos Islands
- color alteration index**
Colorado, geochemistry OP-1806
Indiana, lead-zinc deposits OP-369
Nevada, petroleum OP-1470
New Jersey, stratigraphy OF 95-0557
- color centers**
Utah, mineralogy OP-1377
- Colorado *see also* Arikaree Group; Arkansas River; Arkansas River valley; Chinle Formation; Colorado River; Dakota Formation; Denver Basin; Entrada Sandstone; Fort Union Formation; Front Range; Green River Formation; Greenhorn Limestone; Hermosa Formation; High Plains Aquifer; J Sandstone; Mancos Shale; Ogallala Aquifer; Ogallala Formation; Paradox Basin; Paradox Member; Raton Basin; Raton Formation; Rio Grande Rift; Rio Grande Valley; San Juan Basin; San Juan Mountains; San Juan River; San Luis Valley; Sangre de Cristo Mountains; Santa Fe Group; South Platte River; Spanish Peaks; Uncompahgre Uplift; White River Group.**
base metals OP-557
coal
C 1108
Piceance Creek basin OP-947
Cretaceous P 1561
ecology, Rio Grande County Colorado OP-150
economic geology, Gilpin County Colorado OF 94-0289
energy sources
C 1108
Archuleta County Colorado C 1108
La Plata County Colorado C 1108
Mahogany Zone OP-297
Montezuma County Colorado B 2000-H; C 1108
Piceance Creek basin OP-297
San Miguel County Colorado B 2000-H

engineering geology EV; OF 95-0296

environmental geology

YR; C 1108; OF 94-0579

Archuleta County Colorado B 2220

Bent County Colorado I-2469

Cheyenne County Colorado I-2469

Conejos County Colorado B 2220; C 1108;
OF 95-0043

Crowley County Colorado I-2469

Delta County Colorado OF 94-0580

Garfield County Colorado OF 95-0508

Hinsdale County Colorado OP-945

Kiowa County Colorado I-2469

Lincoln County Colorado I-2469

Mineral County Colorado B 2220; C 1108

Montrose County Colorado OF 94-0580;
OP-1045

Otero County Colorado I-2469

Prowers County Colorado I-2469

Rio Grande County Colorado B 2220;
C 1108; OF 95-0023

Routt County Colorado OP-945

Saguache County Colorado C 1108

fluvial features, Rocky Mountain National Park
OP-1743

geochemistry

OF 95-0049; OF 95-0056; OP-146; OP-
1318

Archuleta County Colorado OF 95-0250

Conejos County Colorado OF 95-0250

Creede Colorado OP-760

Creede mining district OP-535; OP-1700;
OP-1713

Denver Colorado OP-1812

Dolores County Colorado OP-1806

La Plata County Colorado OF 94-0295

Mineral County Colorado OF 95-0250

Rio Grande County Colorado OF 95-0250

Saguache County Colorado OF 95-0250

geochronology

Colorado Springs Colorado OP-1572

Delta County Colorado B 2104

Eagle County Colorado B 2104

Garfield County Colorado B 2104

Gunnison County Colorado B 2104

Lake County Colorado B 2104

Mesa County Colorado B 2104

Park County Colorado B 2104

Pitkin County Colorado B 2104

Rio Blanco County Colorado B 2104

Summit County Colorado B 2104

geologic hazards, Park County Colorado MF-
2295

geomorphology

OP-572

Creede Colorado I-2504

Jefferson County Colorado OP-1219

La Plata County Colorado OF 95-0266

Larimer County Colorado OP-986

Ouray County Colorado OF 95-0024

San Juan County Colorado OF 95-0024

San Miguel County Colorado OF 95-0024

geophysical surveys

DDS-0031

Creede mining district OP-1118; OP-1214;
OP-1879

Rio Grande County Colorado OP-67

San Juan volcanic field OP-1118

ground water

OF 94-0383

Adams County Colorado WRI 92-4143

Arapahoe County Colorado WRI 92-4143

Colorado Springs Colorado WRI 94-4118;
WRI 94-4129

Denver Colorado WRI 92-4143; OP-1562

Douglas County Colorado WRI 92-4143

El Paso County Colorado WRI 94-4238

Jefferson County Colorado WRI 92-4143

Rocky Mountain Arsenal OP-1562

Weld County Colorado WRI 94-4037

hydrogeology

OP-2196

Baca County Colorado OF 94-0331

Bent County Colorado WRI 94-4051;
OF 94-0331

Boulder Colorado WRI 94-4111

Crowley County Colorado OF 94-0331

El Paso County Colorado OF 94-0331

Fremont County Colorado OF 94-0331

Huerfano County Colorado OF 94-0331

Kiowa County Colorado OF 94-0331

Las Animas County Colorado OF 94-0331

Lincoln County Colorado OF 94-0331

Otero County Colorado OF 94-0331

Prowers County Colorado OF 94-0331

Pueblo County Colorado OF 94-0331;
OF 95-0536

Routt County Colorado OF 94-0363

Saguache County Colorado OF 95-0569

hydrology

OF 94-0363; OF 95-0379; OP-1345; OP-
1632; OP-1927

Adams County Colorado FS 0153-95

Arapahoe County Colorado OF 94-0363;
FS 0153-95

Chaffee County Colorado WRI 94-4054;
OF 94-0412

Colorado Springs Colorado WRI 94-4194

Custer County Colorado OF 94-0412

Delta County Colorado OP-384

Denver Colorado OF 94-0363

Denver County Colorado FS 0153-95

Dolores County Colorado WRI 94-4041

Douglas County Colorado OF 94-0363;
FS 0153-95

El Paso County Colorado OF 94-0412

Fremont County Colorado WRI 94-4054;
OF 94-0412

Garfield County Colorado OF 95-0139

Leadville mining district OF 94-0412

Logan County Colorado FS 0153-95

Mesa County Colorado OP-384

Montezuma County Colorado WRI 94-4041

Montrose County Colorado OP-384

Morgan County Colorado FS 0153-95

Park County Colorado OF 94-0412

Pueblo Colorado OF 94-0412

Pueblo County Colorado WRI 94-4054;
WRI 94-4097

Rio Blanco County Colorado OF 95-0139

Rio Grande County Colorado OF 95-0071

Routt County Colorado WRI 92-4187;
OF 95-0139

Sedgwick County Colorado FS 0153-95

Teller County Colorado OF 94-0412

Weld County Colorado FS 0153-95

Yampa River OF 95-0139

intrusions

Gunnison County Colorado OP-1067

Needle Mountains OP-1423; OP-1424

magmas, San Juan volcanic field OP-1325

maps

Costilla County Colorado MF-2282

Garfield County Colorado OF 94-0696;
OF 95-0052

Grand County Colorado GQ-1763; GQ-
1764

Gunnison County Colorado OF 95-0232

Huerfano County Colorado MF-2282; MF-
2283

Jackson County Colorado I-2452

Routt County Colorado I-2452

metal ores

C 1129

Colorado mineral belt B 2109

Creede mining district OP-284; OP-728;
OP-733; OP-1096; OP-1488; OP-1793;
OP-2060

Cripple Creek Colorado OP-1626

Custer County Colorado B 2116

Fremont County Colorado B 2116

Gunnison County Colorado OF 95-0097

Hinsdale County Colorado OF 95-0079

Leadville mining district B 2109

Saguache County Colorado B 2116; OF 95-
0097

San Juan volcanic field OP-284; OP-333;
OP-728

Silverton Caldera OF 94-0291

mineralogy

Canon City Colorado OP-2110

Douglas County Colorado OP-1828

Fremont County Colorado OP-1828

Gunnison County Colorado OP-1828

Jefferson County Colorado OP-1828

Mount Antero OP-1828

Park County Colorado OP-1828

Pikes Peak Batholith OP-1828

Teller County Colorado OP-1828

molybdenum ores, Clear Creek County Colo-
rado OP-849

natural gas OF 94-0022-A

Oligocene

Creede mining district OP-1691

Cripple Creek Colorado OP-1625

Paleogene OP-1890

petroleum OP-1280

petrology

Creede mining district OP-546; OP-1716

San Juan volcanic field OP-773; OP-1716

plate tectonics OP-1256

pollution

OF 94-0670; OF 95-0026; OP-1466; OP-
2316

Alamosa County Colorado OP-253; OP-876

Bent County Colorado OF 94-0670

Climax Colorado OP-488

Conejos County Colorado OF 95-0087

Crowley County Colorado OF 94-0670

Eagle County Colorado C 1122

Leadville Colorado OP-487; OP-488

Otero County Colorado OF 94-0670

Prowers County Colorado OF 94-0670

Pueblo County Colorado OF 94-0670

Rio Grande County Colorado OP-34; OP-
92; OP-329; OP-493; OP-691; OP-730;

OP-732; OP-876; OP-929; OP-963; OP-
979; OP-1081; OP-1210; OP-1337; OP-
1535; OP-1823; OP-1922

Saint Kevin Gulch OP-487

Weld County Colorado OP-204

Proterozoic

Cache La Poudre River OP-1982

La Plata County Colorado OF 94-0437

Needle Mountains OF 94-0437

San Juan County Colorado OF 94-0437

Quaternary

OP-1742

- Rifle Colorado OP-2113
 sedimentary petrology
 Archuleta County Colorado B 1808-P
 Garfield County Colorado OF 94-0670
 La Plata County Colorado B 1808-P
 Mesa County Colorado B 1808-P; OF 94-0670
 Montrose County Colorado B 1808-P
 San Miguel County Colorado B 1808-P
 sedimentation
 OP-1646
 Creede mining district OP-1690
 La Plata County Colorado OF 94-0437
 San Juan County Colorado OF 94-0437
 soils
 Adams County Colorado OF 94-0648
 Arapahoe County Colorado OF 94-0648
 Boulder County Colorado OF 94-0648
 Denver Colorado OF 94-0648
 Front Range urban corridor OF 94-0648
 Jefferson County Colorado OF 94-0648
 stratigraphy
 B 2110; OP-507
 Creede mining district OP-1736; OP-2012
 Dolores County Colorado B 2110; OC-0144
 La Plata County Colorado B 2110; I-2555
 Las Animas County Colorado OF 94-0670; OP-1953
 Mesa County Colorado B 2113
 Montezuma County Colorado B 2110; OC-0144; OC-0145; OP-1645
 Ouray County Colorado OF 94-0583
 Pikes Peak Batholith OP-1363
 Pitkin County Colorado OP-2027
 San Miguel County Colorado OC-0144
 Teller County Colorado OP-1363
 structural geology
 Clear Creek County Colorado OP-1247
 Hinsdale County Colorado OP-325
 tectonophysics, Colorado mineral belt OP-1669
 uranium ores
 OF 95-0571
 Larimer County Colorado OF 95-0242
Colorado mineral belt
 metal ores B 2109
 tectonophysics OP-1669
Colorado Plateau *see also* Colorado; New Mexico; Utah.
 areal geology B 2056; OP-1179
 environmental geology WRI 94-4192
 faults OP-1390
 hydrogeology OF 94-0356
 ichnofossils OP-379; OP-380
 maps I-2462
 metal ores OF 94-0417
 neotectonics OP-709
 petrology OP-991
 Quaternary B 2056; OP-875
 sedimentary petrology B 1808-P
 stratigraphy OP-223; OP-224; OP-1320; OP-1321; OP-1322; OP-1481; OP-1645
 structural geology P 1528; OF 95-0491
Colorado River
 ecology OP-2130
 environmental geology C 1108; OP-1045
 fluvial features OP-1607
 geomorphology OF 94-0594; OF 94-0597; OP-1368; OP-2072
 ground water OP-221
 hydrogeology WRI 95-4010; OP-795; OP-2261
 hydrology OF 94-0531; FS 0120-95; FS 94-0074; OP-829; OP-2203; OP-2278
 petrology OP-1817
 pollution OP-1476
 Quaternary OF 95-0057; OF 95-0591; OP-1287; OP-1730; OP-2113
 stratigraphy OP-1731
 structural geology OP-1110
 weathering OP-1504
Colorado River basin
 environmental geology WRI 94-4192
 fluvial features OP-2289
 hydrogeology WRI 94-4036
 hydrology WRI 94-4210
Colorado Springs Colorado
 geochronology OP-1572
 ground water WRI 94-4118; WRI 94-4129
 hydrology WRI 94-4194
coloring books OF 94-0352
Columbia Aquifer
 ground water W 2401; WRI 92-4111
 Columbia Basin *see* Columbia River basin
Columbia Embayment
 folds OP-1128
Columbia Glacier
 base metals B 2107
 Quaternary OP-612
Columbia Missouri
 hydrogeology OF 95-0109
Columbia Plateau
 ground water WRI 89-4179
 hydrology WRI 94-4215
 petrology OP-2173
 Quaternary OP-2237
 structural geology OP-1436
Columbia River
 environmental geology OF 95-0195
 hydrology WRI 94-4215; OF 94-0315
 lava OP-1254
 Quaternary OP-679
 structural geology OP-2054
Columbia River Basalt Group
 OP-2147
 Quaternary OP-680
Columbia River basin
 geologic hazards OF 94-0589
 Quaternary OF 95-0034; OP-680
 Columbia River plateau *see* Columbia Plateau
Columbiana Member
 stratigraphy OP-768; OP-1324
columbite *see also* niobium ores; tantalum ores.
 Idaho, non-metal deposits P 1525
 columbium *see* niobium
Colville Basin
 energy sources OP-65
 tectonics B 2107
Colville Group
 coal OP-972
Colville River
 Pliocene OP-1171
Colvillian
 paleomagnetism OP-1881
 Pliocene OP-1171
 Comanchean *see* Fredericksburg Group; Georgetown Formation; Trinity Group
comendite
 Kenya, geochemistry C 1129
comets
 YR; OP-850; OP-853; OP-987; OP-2112
 geomorphology OP-2033
 stratigraphy OP-935
 Commander Islands *see* Komandorski Islands
 common mica *see* muscovite
 common salt *see* halite
Commonwealth of Independent States *see also* Armenia; Belarus; Dnieper River; Dnieper-Donets Basin; Kazakhstan; Kyrgyzstan; Pripet Basin; Russian Federation; Ukraine; Urals; West Siberia.
 petroleum B 2110
 stratigraphy B 2110; OP-1212
 compact-disc read-only memory *see* CD-ROM
 composite volcano *see* stratovolcanoes
 Comprehensive Environmental Response, Compensation and Liability Act *see* Superfund
compression tectonics *see also* transpression.
 Alabama OP-1988
 Alaska
 OP-1249
 gold ores OP-624
 metamorphism OP-784
 petrology OP-231
 plate tectonics OP-1682
 seismology OP-697
 Arizona
 OP-1380
 petrology C 1129
 Bolivia
 OP-2244
 seismicity OP-2294
 California
 OP-1839; OP-2332
 ground water OP-1362
 Montana, crust OP-1831
 Nevada, ground water OP-1362
 New Mexico, petrology C 1129
 Tennessee OP-1988
 Washington
 crust OP-1776
 magmas C 1129
 Wyoming OP-283
 compressional waves *see* P-waves
compressive strength
 structural geology OP-637
computer animation
 B 2103
 geologic hazards OP-1053
 geomorphology YR; OP-1875
 sea-floor spreading OF 95-0573
 Trilobita OF 94-0667-A; OF 94-0667-B
computer applications B 2103
computer coding OF 94-0501
 computer files *see* digital data
computer languages *see also* BASIC.
 OF 94-0501; OF 95-0588
 Georgia, hydrogeology OP-2270
 hydrology WRI 94-4168; WRI 95-4085
 Massachusetts
 hydrology WRI 94-4100
 ocean circulation YR
 seismology OF 95-0258
 South Carolina, hydrogeology OP-2270
 waterways OF 95-0137
computer networks YR; B 2103
computer programs *see also* BASIC; expert systems.
 B 2103; OF 92-0372-A; OF 92-0372-B; OF 92-0538; OF 94-0501; OF 95-0588; OF 95-0593; OP-206; OP-266; OP-1127; OP-1587; OP-1887
 Alaska
 earthquakes OP-1058
 seismology OF 95-0257-A; OF 95-0257-B; OF 95-0257-C

- Basin and Range Province, structural geology OP-1741
- California**
 earthquakes OP-1302
 geophysical surveys OP-1966
 natural gas OP-1121
 seismicity OP-255
 seismology OF 94-0221; OP-277; OP-2252
- Colorado**
 ground water WRI 92-4143
 metal ores OP-728
 earthquakes OP-1124
 environmental geology OP-183
- Florida**
 geomorphology OP-1203
 ground water WRI 94-4076; WRI 94-4167
 geochemistry DDS-0014
 geochronology DDS-0014
 geologic hazards OP-1213
 geomorphology OP-235; OP-1875
 geophysical surveys DDS-0031; OF 95-0077; OP-911
 geophysics OF 94-0703
 ground water WRI 95-4012; OF 94-0463; OF 94-0464; OF 94-0468; OF 95-0288; OP-171; OP-906
 Gulf Coastal Plain, ground water WRI 93-4020
 Hawaii, Quaternary OP-2315
 hydrogeology OP-798
 hydrology WRI 94-4115; WRI 95-4085; OF 94-0360; OF 94-0459
 Illinois, non-metal deposits OP-729
 Japan, seismology OF 94-0221
 Kentucky, non-metal deposits OP-729
 Massachusetts, hydrology WRI 94-4100
 Mississippi Valley, ground water WRI 93-4020
 New Mexico
 economic geology DDS-0017
 metal ores B 2063
 oceanography OF 94-0669-A; OF 94-0669-B
 seismology OF 95-0258; OP-1417; OP-1917
 Sweden, waste disposal OP-2235
 Vermont OP-1253
 waterways OF 95-0137
- Concord Aquifer**
 hydrogeology WRI 94-4256
- Concord Fault**
 Quaternary OF 94-0568
- Concord Quadrangle**
 maps OF 94-0410
- Concord River basin**
 hydrogeology WRI 94-4256
- Concrete Quadrangle**
 maps OF 95-0523
- concretions**
 Colorado OP-1646
 Wyoming OP-1646
- condensation** OP-1276
- Condor Canyon Formation**
 geochemistry B 2056
 Miocene B 2056
 stratigraphy B 2056
- cone penetration tests**
 California, earthquakes OP-1529; OP-1530
 Louisiana, engineering geology OF 94-0275
- Conejos Formation**
 petrology OP-546
- cones, cinder** *see* cinder cones
- cones, shatter** *see* shatter cones
- Conestoga River basin**
 environmental geology OP-354
- conferences *see* symposia
- confined aquifers** *see also* aquitards.
 California, ground water OP-2066
 Florida, hydrogeology OP-1591; OP-1613
 ground water WRI 95-4012; OP-930; OP-1597
 hydrogeology OP-394
 Indiana, hydrogeology OF 92-0139
 Mississippi, hydrogeology WRI 94-4172
 Nebraska, petrology WRI 94-4057
 Nevada, ground water OP-2066; OP-2273
 New Mexico, ground water WRI 93-4192
 South Dakota, ground water OP-359
 Utah, ground water OP-316
 Virginia, ground water WRI 92-4111; OP-1977
- Congaree Formation**
 Paleocene OP-1359
- conglomerate**
 OP-879
- Alaska**
 OP-1604
 Quaternary OP-1921
 structural geology OP-1447
- Arizona** OP-2023
- Bahamas, Quaternary** OP-1866
- Basin and Range Province, structural geology**
 OP-2115
- Bolivia, structural geology** OP-2244
- California**
 B 1995-H,I
 metal ores OP-805
 petrology OP-1315
- China, stratigraphy** OP-2253
- Colorado**
 OF 94-0437
 metal ores OF 94-0291
- Great Basin, structural geology** OP-2115
- ground water** OP-1167
- Hawaii**
 OP-1184
 Quaternary OP-1183
- Idaho, stratigraphy** B 2113
- Iran, stratigraphy** OP-2253
- Montana**
 OP-1622
 neotectonics OP-1943
 stratigraphy B 2113
- Nevada, structural geology** OP-1944
- New Mexico, Proterozoic** OP-21
- Oregon**
 petrology OP-1315
 stratigraphy OP-1177
- Pakistan, stratigraphy** OP-2253
- Poland, lead-zinc deposits** OP-908
- Rocky Mountains, metal ores** OP-1366
- stratigraphy** OP-2139
- Texas, stratigraphy** OP-2253
- Utah**
 faults OP-1842
 structural geology OP-695
 Washington, petrology OP-2173
- Wyoming**
 OP-1622
 energy sources OP-1621
- Coniferales** *see* Pinaceae
- conifers**
 Florida, ecology OF 95-0007
 Georgia, hydrology OP-120
 New England, soils OP-529
 Rocky Mountains, Quaternary OF 95-0063
- conjugate faults**
 California
 crust OP-649
- elastic waves OP-461
- Hawaii, crust** OP-1709
- connate waters**
 California
 economic geology OP-216
 geochemistry OP-927
 Gulf Coastal Plain, ground water C 1108
- Connecticut** *see also* Connecticut Valley.
 continental margin I-1987-D
 earthquakes OF 94-0643
 geochemistry OF 94-0620
 geophysical surveys, New Haven County Connecticut OP-2218
 ground water
 P 1415-A
 Middlesex County Connecticut OP-1799
 Tolland County Connecticut WRI 94-4255
- oceanography**
 Middlesex County Connecticut OF 95-0556
 New Haven County Connecticut OF 95-0556; OP-1972
- Quaternary** OP-2165
- stratigraphy**
 Honey Hill Fault OP-2297
 Middlesex County Connecticut OP-2297
- Connecticut Valley**
 hydrogeology WRI 92-4013
 metal ores OP-869; OP-870
 pollution OP-1460
 Quaternary OP-1072; OP-2164
- Conococheague Formation** OF 94-0573
- conodont alteration index** *see* color alteration index
- Conodonts**
 Alaska OP-826
 China OP-1021
- conodonts** *see also* color alteration index.
 Alaska
 OP-641
 Devonian B 2107
 paleontology OF 94-0215
 stratigraphy P 1545
- China, stratigraphy** OP-2253
- Iran, stratigraphy** OP-2253
- Kentucky, stratigraphy** B 2135
- Pakistan, stratigraphy** OP-2253
- Pennsylvania, sedimentation** OF 95-0240
- Pennsylvanian** B 2110
- stratigraphy** OP-768
- Tennessee, stratigraphy** OP-370
- Texas, stratigraphy** OP-2253
- Washington** OF 94-0403
- West Virginia, sedimentation** OF 95-0240
- Conrad discontinuity**
 Mohorovicic discontinuity C 1129
- conservation** *see also* wetlands.
 C 1108; OP-545; OP-570; OP-1085
- Alaska** OF 94-0627
- Nebraska, petrology** WRI 94-4057
- New Mexico, geomorphology** WRI 94-4205
- Puerto Rico** OP-1791
- Utah** OF 94-0670
- Virginia** OF 94-0592
- construction materials** *see also* aggregate; gravel deposits; limestone deposits; ornamental materials; perlite; sands.
 B 2111
 building stone
 Alaska OF 95-0566
 Idaho P 1525
 New York OP-832

- Virginia OF 94-0592
 cement materials, California OF 95-0039
 crushed stone, Alaska OF 95-0582
 environmental geology OP-811
 Illinois B 2111
 Kentucky B 2111
- contact metamorphism**
 C 1129
 Argentina C 1129
 California
 C 1129; OP-46
 metal ores C 1129
 Colorado, metal ores C 1129
 Greenland OP-1752
 Idaho, metal ores B 2064-A-R
 Mexico, metal ores C 1129
 Nevada, energy sources OP-1083
 Spain C 1129
 Virginia P 1529
 Washington, sedimentary petrology B 2085-C
 Yukon Territory, tectonics OP-360
- containment liners *see* disposal barriers
 contamination, magma *see* magma contamination
 contemporaneous faults *see* growth faults
 Conterminous United States Mineral Assessment Program *see* CUSMAP
- continental borderland**
 California
 geochronology OF 94-0587
 geophysical surveys OF 95-0228
 Mohorovicic discontinuity OP-1706
 Mexico, geochronology OF 94-0587
- continental displacement *see* continental drift
- continental divide**
 Montana, Quaternary OP-121
- continental drift** *see also* Gondwana; Iapetus; Laurentia; Pangaea.
 C 1109
- continental dunes**
 Great Plains, Quaternary OP-656
 Nebraska, sedimentary petrology B 2110
 Wyoming, sedimentary petrology B 2110
- continental margin** *see also* active margins; continental margin sedimentation; continental slope; passive margins; submarine canyons.
 Alabama, structural geology OP-1988
- Alaska
 OP-330
 natural gas OP-17
- Antarctic Ocean
 geophysical surveys OP-156
 Pliocene OF 94-0588
 Quaternary OP-440
- Atlantic Ocean
 I-1987-D
 natural gas C 1108; OP-1305
- California
 B 2022; OF 95-0533; OP-1410
 geochemistry OF 95-0034; OP-197
 geophysical surveys OF 94-0599; OP-1966
 heavy mineral deposits OF 95-0587
 petrology OP-1818
 plate tectonics OF 94-0568; OP-941
 Quaternary OF 94-0568; OF 95-0034; OP-1158
 tectonophysics OP-82; OP-1521
- Chile, geochemistry C 1129
 Japan, petrology C 1129
 Mexico
 geochemistry OP-197
 petrology OP-827
- tectonophysics OP-82
 Montana, Cretaceous OP-743
 New Zealand, magmas C 1129
- Oregon
 geophysical surveys OP-72
 Quaternary OP-1158
 tectonophysics OF 94-0228
- Pacific Coast, Quaternary OP-1401
- Pacific Ocean
 natural gas OP-1371
 plate tectonics OP-2234
- petrology C 1129
 plate tectonics OP-1173
 Tennessee, structural geology OP-1988
- Washington
 geophysical surveys OP-72
 structural geology OP-1592; OP-1979; OP-1981
- Yemen, geochemistry C 1129
- continental margin sedimentation**
 Alaska
 I-2272
 stratigraphy P 1545
 Atlantic Coastal Plain B 2110
- California
 OP-603
 Quaternary OF 95-0034
- Oregon, Quaternary OF 95-0034
- continental migration *see* continental drift
- Continental Offshore Stratigraphic Test**
 Georgia, stratigraphy OP-742
- continental platform *see* continental shelf
- continental rise**
 New Jersey
 Miocene OP-622
 oceanography OP-621
- Continental Scientific Drilling Program**
 Colorado
 geophysical surveys OP-1118; OP-1214
 Oligocene OP-1691
- East Pacific Ocean Islands, stratigraphy OP-1736
- New Jersey, diagenesis OP-2118
 Pennsylvania, diagenesis OP-2118
 Polynesia, stratigraphy OP-1736
- continental seas *see* epicontinental seas
- continental shelf** *see also* continental borderland; ocean currents; reefs; submarine canyons.
- Alaska
 OF 95-0070; OP-589
 energy sources C 1108
 geochemistry OP-1676
 Invertebrata P 1544
- Antarctic Ocean
 OP-921
 Quaternary OP-246
- Antarctica, Quaternary OP-2188
 Atlantic Ocean OP-1679; OP-1970
 Bering Sea, tectonophysics OP-1261
- California
 OP-116; OP-847; OP-944; OP-998; OP-1066; OP-2189
 geochemistry OF 95-0527
 seismology OP-203
 structural geology OP-1701
- China, stratigraphy OP-2253
 Connecticut OF 95-0556
 Florida OP-1425; OP-2293
- Georgia
 OP-584; OP-585
 Cenozoic OP-738
 geochemistry OP-398
- heavy mineral deposits OP-344
 Miocene OP-739
 phosphate deposits OP-399; OP-583; OP-1506
- Iran, stratigraphy OP-2253
- Massachusetts
 OF 94-0672; MF-2280
 environmental geology OF 94-0649
 sedimentary petrology OF 95-0044
- New Jersey, structural geology OP-1959
 New York, pollution OP-1186
 Northwest Territories OP-396
 Oregon, seismology OP-203
 Pacific Coast, Quaternary OP-2250
 Pakistan, stratigraphy OP-2253
 Russian Federation OP-589
 South Carolina, geomorphology OP-1471
 Texas, stratigraphy OP-2253
 Washington, crust OP-1776
- continental slope** *see also* continental margin sedimentation; continental rise.
 California, geochemistry OF 95-0527
 Florida, Quaternary OP-1719
- Georgia
 Cenozoic OP-738
 Miocene OP-739
 phosphate deposits OP-1969
- Japan, stratigraphy OP-1269
 New Jersey, Eocene OP-735
 Pacific Coast, Quaternary OP-2250
- Peru
 OP-1069
 stratigraphy OP-200
- Virginia, Eocene OP-735
 Washington, crust OP-1776
- continental terrace *see* continental shelf
- Contoocook River basin**
 hydrogeology WRI 92-4154
- contour maps**
 Arizona
 geomorphology OF 95-0529
 geophysical surveys OF 95-0076
- California, non-metal deposits OF 95-0535
 Florida, ground water OF 95-0115
 Maine, geophysical surveys OP-85
 Nebraska, structural geology OF 95-0330
 New Hampshire, hydrogeology WRI 92-4013
 New Mexico, structural geology OF 95-0506
 Ohio, ground water WRI 94-4131
 Pennsylvania, ground water OF 93-0417; OF 93-0659
 Utah, hydrogeology WRI 93-4219
 Venezuela, hydrogeology WRI 93-4219
- Cook Inlet**
 energy sources OP-574; OP-576
 geologic hazards OF 95-0083; OP-1316; OP-2257
 geophysical surveys B 2139
 impact statements OF 95-0174
 Quaternary OP-628; OP-1098
 uranium ores B 2098
- Cook Mountain Formation**
 ground water WRI 95-4011
- Cooke City Montana**
 metal ores OF 94-0670; OP-2224
- Cookie Jar Butte**
 sedimentary petrology OP-1882
- Cooper Group**
 stratigraphy OP-1393
- Cooperative Research and Development Agreements** YR

Coos Bay

natural gas OF 95-0093; OP-1677
Quaternary OP-1876

Coosawhatchie Formation

phosphate deposits OP-399

Cooskie shear zone

seismicity OP-1745

copper *see also* chalcopyrite; heavy metals.

Alaska, geochemistry B 2107
British Columbia, hydrology OF 94-0315
California

geochemistry OP-954; OP-1955
pollution OP-1051

Colorado

environmental geology OF 95-0043
hydrology OF 94-0412
pollution OP-488; OP-963; OP-1082; OP-1535; OP-1823; OP-1957

Gulf of California, sedimentation OP-1987

metal ores OP-1013

New Mexico

metal ores OF 94-0691
uranium ores B 2063

Pacific Ocean, ocean floors OP-2137

Washington

hydrology OF 94-0315
pollution OP-2064

Copper Basin

economic geology B 2064-A-R
metal ores B 2064-A-R
structural geology OP-2123

copper chloride

Michigan, mineralogy OP-2028

Copper Creek Fault

structural geology OP-2124

copper minerals

Arizona, metal ores OP-664
Michigan, mineralogy OP-2028

Copper Mountain

geochemistry C 1129
sedimentation OP-1690

copper ores *see also* porphyry copper.

B 2081; OP-863; OP-870; OP-1013
Alaska B 2084; OP-296

Arizona

B 2138; OP-1381; OP-1606
geologic hazards OF 95-0617

Canadian Shield OP-2126

Colorado

B 2116; OP-333; OP-733
geophysical surveys OP-1118

Great Britain OP-2126

Idaho P 1525; B 2064-A-R; OF 94-0690

Mexico OF 94-0685

Minnesota OP-862

Montana OF 94-0670; OP-2224

Nevada OF 94-0668

New Jersey OP-290; OP-1379

New York OP-290; OP-303; OP-1379

Peru OP-202

Spain OP-22

Utah OF 94-0417

copper pyrites *see* chalcopyrite

Copper River basin

engineering geology WRI 94-4073
geomorphology WRI 94-4165
geophysical surveys OP-10
Quaternary OF 94-0568

coquina

California, Quaternary OF 94-0568

coral reefs *see* reefs

corals

Alaska, paleontology OF 94-0215

Arctic region, stratigraphy B 2110

Bahamas, Quaternary OP-1865; OP-1866

Bermuda, Quaternary OP-1732; OP-1733

Chile, Quaternary OP-1697

Florida, Quaternary OP-1732; OP-1733; OP-2206

geochemistry OP-602

Hawaii, Quaternary OP-1183; OP-1848; OP-2175

Montana, stratigraphy B 2112

New York, stratigraphy OP-685

North Dakota, stratigraphy B 2112

Papua New Guinea, Quaternary OF 94-0568

Puerto Rico

neotectonics OP-2179

oceanography OP-2108

South America, Invertebrata OP-684

stratigraphy OP-809

stromatoporoids

Kazakhstan OP-1258

stratigraphy OP-1558

Western Australia, Quaternary OP-1973

cordierite

Alaska, geochemistry B 2139

Argentina, magmas C 1129

Colorado GQ-1764

geochemistry C 1129

Wyoming, metamorphic rocks OP-1929

Cordillera Betica *see* Betic Cordillera

Cordillera Blanca

Quaternary OP-2032

Cordillera Marianica *see* Betic Cordillera

Cordillera Oriental *see* Eastern Cordillera

Cordilleran Orogeny

Argentina, petrology C 1129

California

petrology C 1129

tectonophysics OP-82

Chile, magmas C 1129

Mexico

petrology C 1129

tectonophysics OP-82

Cordova Quadrangle

environmental geology OF 95-0176

Quaternary OF 94-0568

Cordylodus

Conodonta OP-1021

core *see also* core-mantle boundary; dynamos;
magnetohydrodynamics.

OP-60

petrology OP-469

core complexes *see* metamorphic core complexes

Core Research Center

geophysical surveys OP-1214

sedimentary rocks OF 94-0582

core-mantle boundary

OP-293; OP-482; OP-1382; OP-2231

Finland, Proterozoic OP-2242

geochemistry OP-976

Russian Federation, Proterozoic OP-2242

tectonophysics C 1109

Cornucopia Stock

petrology OP-1590

Cornwall England

metal ores OP-2126

Cornwallis Cave Aquifer

ground water WRI 92-4111

Corral Canyon Sequence

stratigraphy OP-350

Correlation of Marine and Terrestrial Records Project

oceanography OF 94-0669-A; OF 94-0669-B
Quaternary OF 95-0034

Corsica

geochemistry C 1129

magmas C 1129

Cortez Deposit

gold ores OP-331

Cortez Mountains

orogeny OP-619

Corwin Springs

energy sources OP-302; OP-634; OP-885

cosismic processes

Alaska, Quaternary OF 94-0568

California

crust OF 94-0228

engineering geology OF 94-0228

geologic hazards OF 95-0062

hydrogeology OP-789; OP-2043

Quaternary OF 94-0568

seismology OF 95-0042; OP-714

deformation OP-2083

Greece, Quaternary OF 94-0568

Idaho, Quaternary OF 94-0568

Japan

crust OF 94-0228

earthquakes OP-490; OP-1800

plate tectonics OF 94-0568

Quaternary OF 94-0568

Middle East, plate tectonics OF 94-0568

Montana, crust OF 94-0228

Nevada

Quaternary OF 94-0568

seismicity OP-823

New Zealand, Quaternary OF 94-0568

Pacific Coast, Quaternary OF 94-0568

Papua New Guinea, Quaternary OF 94-0568

structural geology OP-402

Washington

Quaternary OP-395

structural geology OP-2158

cosmic-ray tracks *see* particle tracks

cosmochemistry

petrology OP-1437

cosmolites *see* meteorites

COSPEC

geochemistry OP-315; OP-1407

Quaternary OP-1406

Costa Rica

geochemistry, Poas OP-810

Quaternary, Irazu OP-1952

stratigraphy OP-1150

Cottonwood Grove Fault

faults P 1538-I

Cottonwood Lake

hydrology OF 94-0546

Cottonwood River basin

hydrology OF 95-0333

Council Grove Group

ground water OP-1167

Covington Aquifer

ground water OP-1996

Cow Bayou Formation

Paleocene OF 95-0208

Cow Branch Formation

Triassic OP-925

Cow Cove Quadrangle

maps OF 92-0179

- Coyote Creek Fault**
seismology OP-1617
- Coyote Hills**
faults OP-1577
geophysical surveys OP-1759
seismology OP-587
- Coyote Wash**
environmental geology OF 92-0458
- Cr *see* chromium
- CRADA YR**
- Craig Quadrangle**
maps OF 95-0215
- Cranston Quadrangle**
maps GQ-1212
- Crater Flat Tuff** *see also* Bullfrog Member.
OF 94-0460; OP-1860
volcanism OP-1388
- Crater Lake**
geochemistry OP-29
lava OP-1254
petrology OP-2172
Quaternary OP-2250
sedimentary petrology OP-1877
- crater lakes**
Alaska
hydrology B 2139
Quaternary B 2107
Cameroon, hydrology OP-256
- Crater Peak**
elastic waves B 2139
geochemistry B 2139
geologic hazards B 2139; OP-1316
geophysical surveys B 2139
glacial geology B 2139
hydrology B 2139
petrology B 2139
Quaternary B 2139; OF 94-0614; OP-1406
seismology B 2139
volcanic features B 2139
- craters** *see also* maars.
OF 95-0561; OP-58; OP-134; OP-605; OP-916;
OP-1783; OP-1784
Alaska, Quaternary OP-1790
California, Quaternary OP-2142
geomorphology OP-2033
heat flow OP-439
Italy, seismology OP-1239
Nevada, hydrogeology OF 94-0491
Oregon, petrology OP-2172
plate tectonics SM
Russian Federation, Eocene OP-1573
Washington, geologic hazards OP-2329
- Craters of the Moon**
lava OP-898
maps OF 94-0659
- crayfish**
Colorado, Paleocene OP-1531
New Mexico, ichnofossils OP-379
Wyoming, Paleocene OP-1531
- Crazy Mountains**
geochemistry OF 95-0098
maps OF 95-0011-A; OF 95-0011-B
mineral resources OP-1344
- Creede Colorado**
geochemistry OP-760
geomorphology I-2504
- Creede mining district**
geochemistry OP-535; OP-1700; OP-1713
geophysical surveys OP-1118; OP-1214; OP-1879
- metal ores OP-284; OP-728; OP-733; OP-1096;
OP-1488; OP-1793; OP-2060
- Oligocene OP-1691
petrology OP-546; OP-1716
sedimentation OP-1690
stratigraphy OP-1736; OP-2012
- Crescent Formation**
faults OP-2079
neotectonics OP-1980
structural geology OP-1592; OP-1979
tectonophysics OP-1975
- Crescent Valley Quadrangle**
geophysical surveys OF 94-0670; OP-2029
- Crestwood Quadrangle**
maps GQ-1342
- Cretaceous** *see also* Coast plutonic complex;
Franciscan Complex; Great Valley Sequence;
Laramide Orogeny.
C 1108; C 1129; I-2474-A; OP-417; OP-2110
Alabama OP 94-0670; OP-1988
Alaska P 1564; B 2107; OP-201; OP-229; OP-296;
OP-409; OP-624; OP-626; OP-632; OP-633;
OP-672; OP-711; OP-727; OP-932; OP-1135;
OP-1169; OP-1195; OP-1439; OP-1447; OP-1623;
OP-1905; OP-2184
- Albian
Alaska OP-641; OP-1249; OP-1251
Pacific Ocean OP-2127
- Aptian
OP-96
Alaska OP-725; OP-1249; OP-1251
Argentina C 1129
Arizona OP-353
Atlantic Coastal Plain B 2110; OP-1960
Atlantic Ocean OP-1161
Barremian
OP-96
Alaska OP-1249; OP-1251
Belle Fourche Shale OP-1131; OP-1974
Black Creek Formation OP-1359; OP-1971
Blackhawk Formation, sedimentary petrology
OP-1464
Blackleaf Formation B 2113; OP-1974
Bridge Creek Limestone Member OP-1131
California C 1129; OP-45; OP-160; OP-1095;
OP-1955
- Campanian
Alaska OP-725
Atlantic Coastal Plain OP-903
California OP-1341
Colorado OF 94-0670
Delaware OP-481
Texas OF 94-0551
Utah B 2115-A; B 2115-B; OF 94-0670;
OP-1464
Wyoming OP-403
Canada OP-409; OP-1135; OP-1169
Caribbean region B 2057
Carlisle Shale, geochemistry OF 95-0209
- Cenomanian
Colorado OP-507
Colorado Plateau OP-2019
Montana OP-1131
Utah OP-507
Western Interior OP-506; OP-2030; OP-2063
Wyoming OP-569
- Chile C 1129
China OP-418
Cody Shale
B 2113
- sedimentary petrology OP-780
Colorado B 2104; OF 94-0670; OP-297
Colville Group, coal OP-972
Dakota Formation OF 94-0583; OF 94-0670;
OP-1142; OP-2019; OP-2030
Egypt OP-1770
Ferron Sandstone Member, palynomorphs OP-184
Frontier Formation
B 2113; OP-569; OP-1974
tectonics OP-1452
Fruitland Formation, geochemistry OF 94-0295
Georgetown Formation, ground water WRI 95-4030
Georgia OF 94-0673; OP-742
Greenhorn Limestone
OP-1974; OP-2019; OP-2063
geochemistry OF 95-0209
Gulf Coastal Plain OP-1906
Gulfian
Florida OP-1971
Georgia OP-1971
Hell Creek Formation OP-1589
Idaho P 1525; B 2064-A-R; B 2081; C 1129;
OP-1650; OP-1673
Indian Ocean OP-1161
Iowa OP-2154
Japan C 1129; OP-270
Judith River Formation OP-403
K-T boundary
OP-84; OP-1418; OP-2022; OP-2112
Canada OP-668
Colorado OF 94-0670; OP-1665; OP-1953
Denmark OP-1140
East Pacific Ocean Islands OP-1736
Great Plains OP-1589; OP-1889
Iowa OP-16; OP-372
Italy OP-1416
Mexico OP-1141; OP-1755
New Mexico OF 94-0670; OP-1953
Polynesia OP-1736
Tunisia OP-1416
United States OP-668
Wyoming OP-667
Kodiak Formation, fractures OF 94-0228
Kootenay Formation, ground water OP-1215
Lakota Formation
OP-1974
sedimentary petrology B 1917-S
Lance Formation
OP-667; OP-2030
sedimentary petrology OP-456; OP-780
sedimentary structures OP-1620
Lesser Antilles B 2057
Maestrichtian
Atlantic Coastal Plain OP-903
California OP-1341
Colorado OP-1646
Western Interior OP-2030
Wyoming OP-1646
Mancos Shale
B 2113; OP-1645; OP-2019
engineering geology OP-1435
Marshalltown Formation OP-903
Maryland OP-1089
Mesaverde Group
energy sources OF 94-0670
sedimentary petrology OP-780
sedimentary structures OP-1620
sedimentation OF 94-0670
Middendorf Formation OP-1359; OP-1971
Mississippi WRI 94-4223
Mississippi Valley P 1538-N

- Mongolia OP-418
 Montana C 1129; MF-2291; OP-743
 Muddy Sandstone OP-1974
 Nanushuk Group, coal OP-972
 Navesink Formation OP-903
 Neocomian, Alaska OP-1270
 Nevada OP-20; OP-438
 New Jersey OP-623
 Niobrara Formation
 B 2113; OP-1974
 geochemistry OF 95-0209
 North Dakota OP-899
 Oregon OP-1590
 Pacific Ocean OP-247; OP-1119
 Pakistan B 2635
 Peedee Formation OP-1971
 Pierre Shale
 OP-1671
 geomorphology OP-2034
 maps I-2433-B
 Point Loma Formation OF 94-0678
 Russian Federation OP-1493
 Santonian, Western Interior B 2113
 Sharon Springs Member OP-1572
 South Carolina OF 94-0673
 Straight Cliffs Formation
 B 2115-B
 sedimentation B 2115-A
 Tennessee OP-1988
 Texas OP-812
 Torok Formation, geochemistry OF 95-0236
 Trinity Group, ground water WRI 93-4126
 Turonian
 Colorado OP-507
 Montana OP-1131
 Utah B 2115-A; B 2115-B; OP-507
 Western Interior OP-506; OP-2063
 Wyoming OP-569
 Two Medicine Formation, ground water OP-1215
 Utah OP-297
 Valdez Group
 metamorphism OP-39
 sedimentary petrology OP-1361
 Virginia OP-1977
 Washington C 1129; OP-1821
 Western Interior P 1561; B 2113; OP-1906
 Wyoming C-0146; OP-701
 Cretaceous-Tertiary boundary *see* K-T boundary
 crevasses
 Louisiana, waterways OF 94-0275
 Cricetidae *see* Neotoma
 crinoids
 Kazakhstan, energy sources OP-1258
 Western Interior, stratigraphy B 2113
 Cripple Creek Colorado
 metal ores OP-1626
 Oligocene OP-1625
 Crooked Creek Mylonite
 metamorphism OP-1627
 Crooks Canyon Granodiorite
 petrology C 1129
 Cropsy Creek basin
 hydrology OF 95-0071
 pollution OP-1823
 cross sections *see* balanced cross sections
 cross-bedding
 OP-879
 Alaska, Quaternary OP-604
 California, stratigraphy OP-1036
 Colorado
 OF 94-0670
 Paleocene OP-1531
 Idaho OP-2092
 Kazakhstan, energy sources OP-1258
 Mexico, stratigraphy OP-1036
 Pennsylvania OF 95-0240
 South Dakota B 1917-S
 Utah OF 94-0670
 Washington OP-1376
 West Virginia OF 95-0240
 Wyoming
 oil and gas fields OF 94-0670
 Paleocene OP-1531
 Crossmore Complex
 geochemistry C 1129
 Crough Seamount
 petrology OP-390
 Crow Creek Member
 geochronology OP-1572
 Crowders Creek South Carolina
 hydrology OF 94-0385
 Croweburg Coal Member
 stratigraphy OP-1324
 Crowley's Ridge
 pedogenesis OP-2319
 structural geology OP-956
 crude oil
 Alaska, pollution
 C 1108
 crushed stone
 Alaska OF 95-0582
 crust *see also* asthenosphere; crustal shortening;
 crustal thickening; geothermal gradient; heat
 flow; isostasy; mobile belts; shields.
 OF 94-0228; OP-35; OP-142; OP-228; OP-559;
 OP-880; OP-1510; OP-1837; OP-1838; OP-
 2309
 Alaska
 OP-2075; OP-2300
 deformation OP-1849
 structural geology OP-1394
 Antarctic Ocean, geophysical surveys OF 94-
 0293
 Antarctica
 OP-55; OP-2003
 Pliocene OF 94-0588
 Appalachians, geochemistry C 1129
 Arizona
 geochronology OP-2310
 petrology OP-1185
 Australia
 diagenesis OP-665
 petrology C 1129
 Baltic region, magmas C 1129
 British Columbia
 faults OP-248
 petrology C 1129
 California
 OF 94-0228; OF 94-0552; OP-371; OP-
 649; OP-914; OP-1357; OP-1521; OP-1524;
 OP-1550; OP-1967; OP-2181; OP-2239
 earthquakes OP-1503
 engineering geology OF 94-0228
 faults OP-1108
 geochronology OP-2310
 geophysical surveys OF 95-0275; OP-817;
 OP-1525; OP-1968
 hydrogeology OP-789
 pollution OP-2047
 Quaternary OP-2142
 structural geology OF 94-0228; OP-1462;
 OP-1773
 Carpathians, petrology C 1129
 Chile, magmas C 1129
 China, geochemistry C 1129
 Colorado, petrology C 1129; OP-773
 deformation OP-2187
 faults OP-73
 Finland
 geochemistry C 1129
 Proterozoic OP-2242
 geochemistry C 1129
 geophysical surveys OF 94-0228; OP-71
 Germany
 OP-2331
 geochemistry OP-499
 ground water OP-1884
 Hawaii OP-1709
 Hong Kong, geochemistry C 1129
 Italy, petrology OP-1991
 Japan
 OF 94-0228; OP-2307
 petrology C 1129
 lower crust
 C 1129
 Alaska OP-1395; OP-2299
 Australia OP-2334
 Austria C 1129
 Basin and Range Province OP-1835
 California OF 95-0585; OP-620; OP-708;
 OP-1928; OP-2195; OP-2334
 Canada OP-2334
 Colorado Plateau OP-1835
 geophysics OP-552
 Germany C 1129
 Hawaii OP-1655
 India OP-2334
 Italy C 1129; OP-754; OP-755; OP-865;
 OP-866
 magmas C 1129
 Oklahoma OP-2334
 Oregon OP-1590
 petrology OP-1138
 structural geology OF 94-0228
 Virginia OP-413
 magmas C 1129; OP-2122
 Manitoba, structural geology OP-1073
 Marshall Islands, stratigraphy OP-1229
 Micronesia, stratigraphy OP-1229
 middle crust
 Alaska OP-2301
 Arizona C 1129
 California OP-1444; OP-2042
 New Mexico C 1129
 Northern Territory Australia C 1129
 Oregon OP-1444
 Queensland Australia C 1129
 structural geology OP-401
 Washington C 1129
 Middle East, deformation OP-1615
 Missouri OP-405
 Montana
 OF 94-0228; OP-1831
 Archean OP-1862
 Nevada OP-2230
 New Zealand, geochemistry C 1129
 Newfoundland
 geophysical surveys OP-779
 petrology C 1129
 North Carolina, structural geology OP-1335
 oceanic crust
 OP-985; OP-1173; OP-1256
 Antarctica OP-245

- Arctic Ocean OP-445
 Bering Sea OP-1261
 California B 2022; OP-82; OP-197; OP-1778
 Commonwealth of Independent States C 1129
 East Pacific Ocean Islands OP-309
 Galapagos Islands OP-309
 geochemistry OP-976; OP-1114
 Hawaii OP-861
 Mexico OP-82; OP-197
 Oregon OP-1128
 Pacific Ocean B 2022; OP-247
 Virginia OP-413
 Pacific Ocean
 petrology OP-920
 stratigraphy OP-1197
 petrology C 1129
 Russian Federation
 geochemistry C 1129
 geochronology OP-1493
 geophysical surveys OP-958
 Proterozoic OP-2242
 Saskatchewan, structural geology OP-1073
 Scandinavia, magmas C 1129
 South America OP-2003
 Spain, geochemistry C 1129
 structural geology C 1129; OP-402; OP-1061
 United States
 OP-2307
 diagenesis OP-665
 Utah, neotectonics OP-1494
 Washington, petrology OP-1512
 Yukon Territory, tectonics OP-360
Crustacea *see also* Malacostraca; Ostracoda.
 Utah OP-1479
crustaceans *see also* ostracods.
 Colorado, Paleocene OP-1531
 Wyoming, Paleocene OP-1531
crustal shortening *see also* transpression.
 Alaska
 deformation OP-479
 Mohorovicic discontinuity OP-2301
 structural geology OP-2247
 California
 seismology OP-1808
 structural geology OP-1584
 Colorado, salt tectonics OP-1551
 Montana, structural geology OP-480
 Nevada
 deformation OP-1323
 orogeny OP-619
 New Mexico, structural geology OP-1878
 Utah
 orogeny OP-619
 salt tectonics OP-1551
 Victoria Australia, deformation OF 94-0228
 Washington
 OP-1776
 structural geology OP-1777
 tectonophysics OP-1975
 Wyoming, deformation OP-283
crustal thickening
 Alaska, structural geology OP-2247
 Arizona, structural geology OP-1380
 Basin and Range Province, metal ores OP-1874
 California, structural geology OP-432
 Great Basin, metal ores OP-1874
 Nevada, orogeny OP-619
 New England, tectonics OP-2296
 Utah, orogeny OP-619
 Wyoming, metamorphic rocks OP-1929
crustal thinning
 Antarctic Ocean, neotectonics OP-1103
 Kenya, tectonophysics OP-478
 cryptoexplosion features *see* shatter cones
crystal chemistry *see also* bonding; crystal growth; crystal zoning.
 OP-1789
 California, petrology OP-1315
 geophysics OP-2317
 Germany, geochemistry C 1129; OP-499
 Maine, metal ores OP-555
 mineralogy B 2140; OP-1355; OP-1378; OP-1771
 North Carolina, Mesozoic OP-1399
 Oregon, petrology OP-1315
 Pacific Ocean, sulfides OP-1829
 South Africa, ring silicates OP-912
 Utah, mineral inventory OP-289
 Virginia
 geochemistry C 1129
 Mesozoic OP-1399
crystal dislocations OP-1671
crystal form
 Bolivia, metal ores OP-1028
 mineralogy C 1129; OP-1378
 Montana, geochronology B 2113
 Utah, mineralogy OP-288
crystal fractionation
 Alaska, geochemistry P 1564
 Australia, magmas C 1129
 California
 magmas C 1129; OP-1095
 petrology OP-45; OP-1211
 East Pacific Ocean Islands
 magmas OP-309
 petrology OP-390
 Galapagos Islands, magmas OP-309
 Hawaii, magmas OP-307
 Iran, magmas C 1129
 Oregon, geochemistry OF 94-0261
 Pacific Ocean, geochemistry B 2022
 petrology C 1129
crystal growth *see also* crystal dislocations; crystal form.
 Alps, magmas C 1129
 Arkansas, lead-zinc deposits B 1989-F
 geophysics OP-1237; OP-2159
 magmas C 1129
 mineralogy OF 94-0575; OF 94-0576; OP-79; OP-2110
 Missouri, lead-zinc deposits B 1989-F
 Nevada
 environmental geology OF 93-0477
 sedimentary petrology OP-2000
 New Mexico, mineralogy OP-1518
 petrology OP-1196
 phase equilibria OP-1238
 Utah, mineralogy OP-1518
Crystal Mountain Mine
 mineralogy OP-287
crystal structure *see also* bonding; crystal chemistry; crystal growth.
 California, oxides OP-778
 Colorado, metal ores OP-98
 mineralogy OP-434; OP-1134
 Montana, mineralogy OP-287
 New Mexico, mineralogy OP-1275
crystal zoning
 petrology OP-1798
 Utah, mineralogy OP-1377
 crystal, quartz *see* quartz crystal
 crystalline limestone *see* marbles
crystalline rocks
 Alaska
 OP-724
 structural geology OP-1447
 Appalachians, hydrogeology OP-1819
 Atlantic Coastal Plain
 hydrogeology OP-1819
 stratigraphy OP-1960
 California, engineering geology OP-650
 Egypt, geophysical surveys OP-2068
 fractures OP-1094
 Georgia, hydrogeology OP-2161
 Germany, engineering geology OP-650
 Idaho OP-362
 Iowa
 geomorphology OP-1059
 geophysical surveys OP-1880
 Mexico OP-1870
 Montana OP-362
 Nevada
 geochemistry OP-2326
 geophysical surveys OF 93-0397-A; OF 93-0397-B
 New Hampshire, ground water OP-1549
 pollution OP-1923
 Russian Federation, engineering geology OP-650
 Sweden, waste disposal OP-2235
 Utah, geophysical surveys OF 93-0397-A; OF 93-0397-B
 Vermont, engineering geology OP-650
 crystalline structure *see* crystal structure
 Cs *see* cesium
Cs-137
 California, pollution OP-1397; OP-1538; OP-1940
 Commonwealth of Independent States, environmental geology OP-2302
 Europe, environmental geology OP-2302
 Idaho, hydrogeology OF 94-0503
 Puerto Rico, environmental geology OP-1405
 Ukraine, pollution OP-595
 CSDP *see* Continental Scientific Drilling Program
 Cu *see* copper
Cuba
 plate tectonics OP-1312
 cube spar *see* anhydrite
Cuchara Quadrangle
 maps MF-2283
Cuchillo Negro Creek
 engineering geology WRI 95-4050
Cueva del Aleman Puerto Rico
 stratigraphy OP-1924
Culebra Range
 faults OP-2243
Culpeper Basin
 geochronology OP-1672
 structural geology OP-1317
culverts
 New Jersey, hydrology OF 93-0662
 waterways OF 95-0137
Cumberland Maryland
 geomorphology OP-196
Cumberland thrust sheet
 geochronology OP-510
current directions
 Idaho, sedimentary petrology OP-2092
current meters
 geophysical surveys OF 93-0722

currents *see* bottom currents; fluvial currents;
ocean currents; turbidity currents

curricula

OP-238; OP-327; OP-1332; OP-1428
industrial minerals B 2111

CUSMAP

Idaho

areal geology P 1525
barite deposits P 1525
base metals P 1525
economic geology P 1525; B 2064-A-R
faults P 1525
fluorspar P 1525
gems P 1525
geochemistry P 1525
geophysical surveys P 1525
gold ores P 1525
graphite deposits P 1525
manganese ores P 1525
mercury ores P 1525
metal ores P 1525; B 2064-A-R
mineral resources B 2064-A-R
molybdenum ores P 1525
non-metal deposits P 1525
petrology P 1525
polymetallic ores P 1525; B 2064-A-R
Proterozoic P 1525
Quaternary P 1525
sedimentary petrology P 1525
silver ores P 1525
tungsten ores P 1525
uranium ores P 1525
vanadium ores P 1525

Custer National Forest

economic geology OP-2225

Cutler Formation

OF 94-0583
energy sources OP-1461; OP-1557
petroleum B 2000-J

Cuyama Basin

natural gas OP-542
sedimentary petrology OP-1097

cyanides

Colorado, pollution OP-732
geochemistry OF 95-0206
Illinois, pollution WRI 94-4034

Cyanophyta

Wyoming, geochemistry OP-2128

Cyclades *see* Naxos

cyclodlene

ground water OF 94-0670

cyclosilicates *see* ring silicates

cyclostratigraphy

B 2110
Arizona
B 2110

cyclothems

Arizona, stratigraphy B 2110
Kansas, petroleum B 2110
Pennsylvanian B 2110; OP-1228
Western Interior, stratigraphy OP-2063

Cypress Sandstone

energy sources OF 94-0298
petroleum OF 94-0298

Cyprus *see* Troodos Ophiolite

Cyrtosprifer

Alaska, Devonian B 2107

Cytheruridae

Invertebrata P 1544

Czech Republic *see also* Bohemia. geochemistry C 1108

Czeczott, Hanna

paleobotany OP-644

D

d'Entrecasteaux Ridge

Vanuatu, plate tectonics OP-162; OP-336; OP-337

D'Lo Mississippi

ground water WRI 95-4013

D-J Basin *see* Denver Basin

D/H

Alaska

base metals B 2107
gold ores OP-624; OP-2184
hydrology B 2139

Brazil, petrology C 1129

California

economic geology OP-216
geochemistry OP-927
ground water WRI 95-4048
magmas OP-1095
metal ores OP-720; OP-801

Canadian Shield, metal ores OP-2126

Colorado

geophysical surveys OP-1118
metal ores OP-1096; OP-2060

Florida

ground water OP-1614
hydrogeology OP-1613
geochemistry C 1129; OP-1114
Great Britain, metal ores OP-2126

Hawaii

ground water OP-2077
hydrogeology OP-2076
Idaho, hydrogeology WRI 94-4247
Italy, geochemistry OP-227
Montana, energy sources OP-302

Nevada

gold ores OP-1245
hydrogeology OP-1747
New Mexico, ground water WRI 94-4078
Northwest Territories, geochemistry OP-192
Oregon, natural gas OP-1677

Pacific Ocean

geochemistry B 2022
Quaternary OP-1354
Peru, metal ores OP-202

Spain

gold ores OF 95-0221
metal ores OP-22

Washington

hydrogeology OP-2197
natural gas OP-1677

Wisconsin, hydrogeology OP-2241

Wyoming, energy sources OP-302

dacites

Alaska C 1129

Andes, Quaternary OP-1511
Bolivia, structural geology OP-2244
British Columbia C 1129
Colorado

C 1129
geophysical surveys OP-1118

Japan C 1129

Mexico C 1129

Oregon, geochemistry OP-29

Philippine Islands C 1129

Russian Federation C 1129

Washington

OP-391

Holocene OP-1513

dacitic composition

Alaska, petrology B 2139
Nevada, geochemistry P 1559
Peru, metal ores OP-202
Washington, geochemistry OP-315

Dacryoconarida

New York OP-543

Dactyl Satellite OP-57; OP-134

Dahlgren Virginia

ground water OF 94-0301

Dakota Formation OF 94-0583; OF 94-0670; OP-1142; OP-2019; OP-2030

Dakotas Quadrangle

maps I-1420 (NL-14)

Dalecarlia Intrusive Suite

Ordovician B 2060

Damkohler number *see* Reynolds number

damping *see* attenuation

dams

OP-1310

Alaska, hydrology OF 95-0338

Arizona

ecology OP-2130
environmental geology C 1108
geomorphology OF 94-0594
Quaternary OF 95-0591

California FS 0096-95

Colorado, fluvial features OP-1743

Gulf Coastal Plain P 1538-M

hydrogeology OP-2261

hydrology OP-829

Louisiana, ground water WRI 94-4228

Mississippi Valley P 1538-M

North Dakota, hydrology WRI 95-4087

Oregon, hydrology OP-178

Puerto Rico, hydrology OF 94-0363

Washington

OP-2038

hydrology OP-178

Dan Creek

Pliocene OF 95-0217-A; OF 95-0217-B

Dan River basin

Triassic OP-925

Dan River Group

Triassic OP-925

danburite OP-1771

Danubian

geochemistry C 1129

Danville Vermont

hydrology OF 94-0475

Danville Virginia

Triassic OP-925

Daqingshan

Quaternary OF 94-0568

Darb Zubaydah Ophiolite

geochemistry OP-753

Darrah, William Culp

paleobotany OP-644; OP-645

Dartford Washington

guidebook OF 94-0636

data bases *see also* digital data; geographic information systems; information systems.

OF 94-0299; OF 94-0406; OF 95-0561; OP-1127; OP-1644

Alaska

earthquakes OP-1058
environmental geology YR; OF 94-0627
folds OF 94-0568
tectonophysics OF 95-0238

- Arizona, hydrogeology OP-335
 Arkansas, hydrology WRI 94-4216
 California
 OF 94-0622; OF 95-0051
 earthquakes OP-1302; OP-1486; OP-1503
 hydrogeology OF 94-0357
 pollution OP-1534
 seismicity OP-1561
 seismology OP-1809; OP-1883; OP-2252
 Caribbean region, seismology OP-1739
 Colorado
 geochronology B 2104
 stratigraphy OP-1645
 earthquakes OP-1124; OP-1193; OP-1749
 ecology OP-556
 energy sources OF 94-0298
 engineering geology OP-519
 environmental geology C 1108; OP-545
 geochemistry B 2117; OF 94-0351
 geomorphology OP-694
 geophysical surveys OF 95-0077; OP-404; OP-416; OP-505; OP-911; OP-1961; OP-2102
 Hawaii, Quaternary OP-2315
 Idaho, ground water OP-1633
 Indiana, pollution OP-777
 Massachusetts, environmental geology OP-1187
 metal ores OP-1013
 Mexico, environmental geology YR
 Mississippi Valley, earthquakes OF 94-0670
 Missouri, waterways OF 94-0544
 Montana
 ground water OP-1633
 structural geology OP-1454
 natural gas C 1108
 Nebraska, hydrogeology WRI 94-4095
 neotectonics OP-1190
 Nevada OF 95-0567
 New Jersey, stratigraphy OF 95-0557
 New Mexico
 ground water OF 95-0360
 hydrogeology OP-335
 uranium ores B 2063
 ocean floors OP-1962
 oceanography OF 94-0669-A
 Oregon
 environmental geology OF 95-0652
 geophysical surveys OP-459
 pollution OP-693
 Quaternary OP-1057
 sedimentary petrology OF 95-0065-A; OF 95-0065-B
 sedimentary rocks OF 94-0582
 South Dakota, metal ores OF 95-0066-A; OF 95-0066-B
 stratigraphy OP-809; OP-2148
 tectonophysics OP-1510
 Texas, ground water WRI 93-4126
 United States, environmental geology YR
 Washington, environmental geology OF 95-0652
 Wyoming
 hydrogeology WRI 94-4095
 metal ores OF 95-0066-A; OF 95-0066-B
data processing
 parallel processing, Massachusetts YR
 databases *see* data bases
 dating, fission-track *see* fission-track dating
datolite OP-1771
Davenport Iowa
 hydrology WRI 94-4130
 pollution OP-2067
Davis Formation
 metal ores B 1989-G
Davis Mountains
 Oligocene OF 94-0227; OP-1925
Davis well field
 ground water WRI 94-4212
Dawson Aquifer
 ground water WRI 94-4238
Dawson Yukon Territory
 Pliocene OF 95-0217-A; OF 95-0217-B
Dayton Valley
 hydrogeology OF 93-0356
DDT
 Idaho, environmental geology WRI 95-4006
 Louisiana, pollution OP-758
 Mississippi, pollution OP-758
 Texas, pollution OF 94-0302
 Wyoming, environmental geology WRI 95-4006
De Long Mountains
 areal geology OP-641
Dead Chub Eddy sand bar
 fluvial features OP-1607
Dead Sea Rift
 deformation OP-1615
 Quaternary OF 94-0568
Deadman Spring Quadrangle
 maps OF 94-0283; OF 95-0094
dealkylation
 pollution OP-630
deanesmithite
 California, oxides OP-778
Death Valley
 geochronology OP-625
 geomorphology OP-775
 ground water OF 95-0158; OP-1362; OP-2066
 hydrogeology OP-1281
 hydrology OF 94-0305
 maps OF 94-0318
 mineral resources OF 93-0698
 petrology OP-1211; OP-1255
 Quaternary OF 95-0037; OP-1803
 structural geology OP-1110
Death Valley Fault
 tectonophysics OP-814
Deboullie Pluton
 metal ores OP-555
debris cones
 hydrology OP-829
debris flows
 OP-721; OP-1368
 Alaska
 B 2107
 engineering geology OP-1683
 geologic hazards B 2139
 Quaternary OP-1921
 Arizona
 OP-1504
 engineering geology OP-1435
 Quaternary OF 95-0057
 Basin and Range Province, Quaternary OP-1414
 California
 engineering geology OP-1010
 geologic hazards FS 0112-95; OP-588
 Quaternary OP-449
 soil mechanics OF 94-0699
 Colorado, environmental geology OF 95-0508
 engineering geology OP-1569
 geologic hazards OF 94-0585; OP-2240
 Great Basin, Quaternary OP-1414
 Hawaii, geologic hazards OP-588; OP-1342
 hydrogeology OP-2261
 Idaho B 2107
 Mexico, sedimentary petrology OP-1141
 Nevada
 OP-1468
 structural geology OP-1469
 Oregon, geologic hazards OP-1901; OP-2088
 Pacific Ocean, sedimentary petrology OP-1218
 Peru, stratigraphy OP-200
 Philippine Islands, engineering geology OP-1683
 Utah
 engineering geology OP-1435
 stratigraphy OP-1731
 Washington
 engineering geology OP-19
 environmental geology OF 95-0498; HA-0729
 geologic hazards YR; P 1547; OP-1163; OP-1901
 hydrogeology OP-2116
 Quaternary OP-975
 structural geology OP-1611
 Wyoming, energy sources OP-1621
 Decapoda *see* Malacostraca
 decay, radioactive *see* radioactive decay
Deccan Plateau
 tectonophysics OP-442
decollement
 Alaska
 deformation OP-479; OP-1849
 Mohorovicic discontinuity OP-2301
 structural geology OP-304; OP-1251; OP-1394; OP-2247
 Atlantic Ocean, oceanography OP-2149
 California, structural geology OP-1599
 Canada, tectonophysics OP-468
 Hawaii
 crust OP-1709
 Quaternary OP-2246
 Nevada, structural geology OP-1976
 Oregon, tectonophysics OP-157
 Pacific Ocean, tectonophysics OP-1246
 Utah
 neotectonics B 2056
 structural geology OP-695
 Washington
 neotectonics OP-1980
 structural geology OP-1979; OP-1981; OP-2158
 tectonophysics OP-1975
decompression
 geochemistry OP-1114
 structural geology C 1129
 Wyoming, metamorphic rocks OP-1929
Decorah Shale
 ground water OF 95-0163
 metal ores B 1989-G
decoupling
 Cyprus, structural geology OP-2
 Utah, neotectonics B 2056
Deep Creek Range
 geophysical surveys OF 93-0397-A; OF 93-0397-B
 deep earthquakes *see* deep-focus earthquakes
Deep River Connecticut
 stratigraphy OP-2297
Deep Run Shale Member
 Invertebrata OP-686

Deep Sea Drilling Project *see also* IPOD; Leg 1; Leg 5; Leg 26; Leg 28; Leg 36.
stratigraphy OF 94-0588; OP-96

deep seismic sounding
New Mexico, structural geology OF 95-0506

Deep Water Dump Site 106
environmental geology OP-913

deep-focus earthquakes
OP-1544
Bolivia
OP-494; OP-961; OP-1353; OP-1643; OP-1910; OP-2294
plate tectonics OP-180; OP-252
China, mantle OP-868
Nicaragua OP-961

deep-sea fans *see* submarine fans

deep-sea sedimentation
B 2022
Pacific Ocean B 2022

deforestation
Colorado, environmental geology OF 95-0508
Italy, earthquakes PDE

deformation *see also* axial-plane structures; cataclasis; cleavage; compression tectonics; compressive strength; decollement; elastic waves; extension tectonics; folds; foliation; fractures; geodesy; isoclinal folds; kink-band structures; lineation; melange; petrofabrics; shatter cones.
OF 94-0228; OP-35; OP-401; OP-402; OP-1061; OP-1105; OP-1689; OP-2083; OP-2187

Alaska
OP-932; OP-1250
crust OP-2075
geophysics OP-594
natural gas OP-2074
paleomagnetism OP-1135
petrology OP-100; OP-409

Arizona
hydrogeology WRI 95-4010
petrology OP-1185
stratigraphy OP-224

Arkansas P 1538-J
Armenia, seismology OP-957
Atlantic Ocean, plate tectonics OP-1312
Basin and Range Province, tectonophysics OP-64

Belarus OP-948
brittle deformation
OP-759

Colorado OP-325; OP-1423
Japan OF 94-0228
Louisiana OP-1543
Montana OF 94-0228
Nevada OP-1440
North Carolina OP-1536
Peru OP-202
Virginia OP-1536
Western Australia OF 94-0228

California
OP-107; OP-348; OP-1750; OP-1773; OP-1774; OP-1914
earthquakes OP-1595; OP-1641
engineering geology OF 94-0228
geologic hazards OF 95-0062
geothermal energy OP-884
ground water OP-2010
magmas C 1129; OP-1095
metal ores OP-940
Quaternary OP-737
rock mechanics OF 94-0228
seismicity OP-457

seismology OF 94-0228; OP-957; OP-1271; OP-1715

Canada
paleomagnetism OP-1135
petrology OP-409
Chile, tectonophysics OP-1762
China, magmas OP-1935
Colorado, geologic hazards OP-1101
Colorado Plateau, tectonophysics OP-1669
Cyprus OP-2
diagenesis OF 94-0228
earthquakes OP-53
engineering geology OF 94-0228; OP-687
geochemistry C 1129
geophysics OP-551; OP-2159
Great Basin, tectonophysics OP-64
Hawaii

geologic hazards OF 95-0008
Quaternary OP-977
hydrogeology OP-394
Idaho, metal ores B 2064-A-R
Ireland, inclusions C 1129
magmas C 1129
Mariana Islands, geologic hazards OF 91-0320
Micronesia, geologic hazards OF 91-0320
Middle East OP-1615
Montana
OP-1628; OP-1933
sedimentary petrology OP-1622

Nevada
OF 95-0002; OP-744
seismicity OP-823
New Jersey OP-1959
New Mexico, stratigraphy OP-224
North Carolina, petrology OP-1647
Oregon OP-348
plastic deformation
California OP-531
Louisiana OP-1543
Quebec, gold ores OF 94-0228
rock mechanics OF 94-0228; OP-703
Rocky Mountains, energy sources OP-1942
Scotland, geochemistry C 1129
Tennessee, seismology OP-1907
Ukraine OP-948
Utah OP-744; OP-1179
Vermont, Silurian OP-1068
Victoria Australia OF 94-0228
Virginia OP-63
Washington OP-1611; OP-1777
West Indies, plate tectonics OP-1312
Wyoming, sedimentary petrology OP-1622

degasification
China, lignite OP-2016

deglaciation
Alaska, Quaternary OP-1098; OP-2260; OP-2281
Antarctic Ocean
Pliocene OF 94-0588
Quaternary OP-54
Atlantic Ocean, Pliocene OF 94-0588
Basin and Range Province, Quaternary OP-1414
British Columbia, Quaternary OP-2008
Chile, Quaternary OP-1098
Finland, Quaternary OF 94-0568
Great Basin, Quaternary OP-1414
Maine, Quaternary OP-990; OP-2200
Massachusetts, Quaternary OP-990
Montana, Quaternary OP-121
New England, Quaternary OP-1658; OP-1659; OP-2164

Oregon, geologic hazards OP-1901
Pacific Coast, Quaternary OP-1401
Pacific Ocean, Pliocene OF 94-0588
Peru, Quaternary OP-2032
Scotland, Quaternary OF 94-0568
Sweden, Quaternary OF 94-0568
Washington
geologic hazards OP-1901
Quaternary OP-205; OP-2008

Delcke Bentonite Bed
stratigraphy OP-386

Dekkan Plateau *see* Deccan Plateau

Delamar Lake Tuff
geochemistry B 2056
Miocene B 2056
stratigraphy B 2056

Delamar Mountains
Quaternary B 2056
structural geology B 2056

delamination
Basin and Range Province, tectonophysics OP-515

Delaware *see also* Delaware River basin; Delmarva Peninsula.
continental margin I-1987-D
engineering geology, Kent County Delaware WRI 94-4164
geologic hazards, New Castle County Delaware WRI 94-4188
natural gas C 1108
Paleocene, Kent County Delaware OF 95-0478
pollution OP-707
stratigraphy, New Castle County Delaware OP-481

Delaware Mountain Group
diagenesis OP-1472

Delaware River
hydrology OF 93-0662

Delaware River basin
hydrology WRI 93-4160; OF 95-0308; OP-1015
pollution OP-1693

Delmarva Peninsula
ground water W 2401; OP-356; OP-376; OP-845; OP-1977
hydrogeology OP-678
pollution OP-1077

DeLong Mountains *see* De Long Mountains

Delphinidae
Vertebrata OP-2275

Delta Force seismic experiment
geophysical surveys OP-1835

delta plains
Louisiana
ecology OF 94-0275
geomorphology OF 94-0275
oceanography I-2150-B

deltic sedimentation
Alaska, Quaternary OF 94-0568
Brazil OP-117
Hungary, stratigraphy OP-951
Montana, stratigraphy OP-596

deltas *see also* Gilbert-type deltas.
California
environmental geology YR
geologic hazards FS 94-0049
Louisiana
ecology OF 94-0275
engineering geology OF 94-0275
environmental geology OF 94-0275
geomorphology OF 94-0275

- Quaternary OP-1936
 shore features OP-1937
 waterways OF 94-0275
 Maine, Quaternary OP-990
 Massachusetts, Quaternary OP-990
 Oregon, Quaternary OP-680
 Washington, Quaternary OP-680
Demarcation Point Quadrangle
 Invertebrata OP-740
demethylation
 environmental geology OP-690
Denali Fault
 areal geology OP-672
 magmas OP-626
 seismology OP-697
 tectonics B 2107
Denali National Park
 maps B 2107
 tectonics B 2107
Denay Limestone
 Invertebrata OP-77
 dendrochronology *see* tree rings
Denmark
 stratigraphy
 Stevns Klint OP-1140
 Zealand OP-1140
density logging
 California, energy sources OF 95-0054
 Indiana, ground water OF 94-0298
 Pennsylvania, energy sources OP-2058
 Wyoming, sedimentary petrology OP-456
denudation
 Puerto Rico, geomorphology OP-106
 Washington, Quaternary OP-975
Denver Aquifer
 ground water WRI 94-4238
 pollution OP-204
Denver Basin
 diagenesis OP-665
 petroleum OF 94-0670
Denver Colorado
 geochemistry OP-1812
 ground water WRI 92-4143; OP-1562
 hydrology OF 94-0363
 soils OF 94-0648
Denver Formation
 ground water OP-1562
 Denver Julesburg Basin *see* Denver Basin
 Denver region *see* Denver Colorado
 deoxyribonucleic acid *see* DNA
 depositional fault *see* growth faults
depressions
 Ohio, geomorphology OF 95-0224
 Pennsylvania, hydrogeology OF 95-0113
 depth of compensation *see* carbonate compensation depth
Des Moines Lobe
 Iowa, pollution OP-982
Des Moines River
 environmental geology OP-2303
 Des Moines Series *see* Des Moinesian
Des Plaines River
 hydrology WRI 94-4094; OF 91-0175
Deschutes River
 Quaternary OP-679; OP-680
Deseadan
 Vertebrata OP-1151
Desert Mountain Granite
 magmas C 1129
desert pavement
 Arizona, Quaternary OP-1287
 Utah, Quaternary OP-1287
Desert Valley
 hydrogeology WRI 95-4119
 desert varnish *see* rock varnish
Desert Winds Project
 Quaternary OF 95-0078
desertification
 Basin and Range Province, Quaternary OF 95-0078
 Great Basin, Quaternary OF 95-0078
deserts
 Arizona, hydrology WRI 95-4059
 Basin and Range Province, Quaternary OP-2198
 California, hydrogeology WRI 94-4124
 Great Basin, Quaternary OP-2198
 Nevada
 hydrogeology WRI 94-4124
 hydrology OF 94-0489
 Quaternary OP-2199
 sedimentary petrology OP-2104
 United Arab Emirates, ground water YR
Design Analysis H-300 transducer
 ground water OF 94-0531
 hydrology OF 94-0531
 desmine *see* stilbite
Desmoinesian *see also* Cherokee Group.
 Appalachians OP-1324
 Arizona B 2110
 Illinois OF 94-0298
 Indiana OF 94-0298; OP-1002
 Kentucky OP-1002; OP-1548
 Nebraska B 2110
 Western Interior OP-1324
 Wyoming B 2110
 desoxyribonucleic acid *see* DNA
 detachment *see* decollement
detachment faults
 Alaska OP-2248
 Arizona
 OP-1110; OP-1666
 copper ores OP-291
 metal ores OP-1606
 Miocene OP-669
 California
 OP-1110
 economic geology OP-216
 Miocene OP-669
 Greece OP-453
 Nevada OP-1323; OP-1440
 Peru, stratigraphy OP-200
 Utah B 2056; OP-1494
detention ponds
 Florida, hydrology WRI 94-4217
 detrital fan *see* alluvial fans
detrital sedimentation
 Alaska, uranium ores B 2098
 Canada, geochronology OP-308
 Nebraska B 2110
 United States, geochronology OP-308
 Washington
 Eocene B 2085-A
 Quaternary OF 94-0568
 Wyoming B 2110
Detroit River Group
 areal geology OP-295
Detroit Seamount
 Pliocene OP-1088
deuterium *see also* D/H.
 Colorado, geochemistry OP-146
 Florida, ground water W 2409; OP-472
 hydrogeology OP-1532
 Maryland, hydrology OP-1899
 mineralogy OP-1680
 Minnesota, environmental geology OP-558
 New Mexico, ground water OP-2308
 New York, hydrology OP-617
 pollution OP-174
 South Carolina, environmental geology OP-558
 Texas, ground water OP-2308
Devils Hole
 geomorphology OP-775
 Quaternary OF 95-0037; OP-1157
Devils Lake
 hydrology WRI 94-4171; WRI 95-4102;
 OF 95-0123
 pollution OP-533; OP-808; OP-1696
Devils Mountain Fault
 structural geology OP-1592
Devils Throat Quadrangle
 maps OF 91-0132
 devolatilization (degasification) *see* degasification
Devonian *see also* Waits River Formation.
 OP-870; OP-1226; OP-1404; OP-1811
 Acadian Phase
 Massachusetts OP-782
 New England OP-2208
 orogeny B 2110
 Vermont OP-1068
 Alaska P 1545; B 2107; OP-39; OP-217; OP-330; OP-711; OP-931; OP-1623
 Barre Granite, engineering geology OP-650
 California OP-531
 Canada C 1129
 Chelmsford Granite, engineering geology OP-650
 Detroit River Group, areal geology OP-295
 Eifelien
 Alaska OP-51; OP-76; OP-740
 Colombia OP-77
 Nevada OP-77
 Emsian, Alaska OP-826
 Famennian, Kazakhstan OP-1258
 Florida OP-1971
 Frasnian
 Kazakhstan OP-1258
 Russian Federation OP-152
 Georgia OP-1971
 Gile Mountain Formation OP-1068
 Guilmette Formation
 OP-1558
 energy sources OF 94-0670
 structural geology B 2056; OP-1944
 Idaho B 2064-A-R
 Kanayut Conglomerate
 deformation OP-479; OP-1250
 sedimentary petrology OP-1604
 structural geology OP-2247
 Kazakhstan OP-169
 Littleton Formation OP-1068
 Ludlowville Formation
 Invertebrata OP-686
 paleontology OP-543
 Maine C 1129
 Midwest OF 93-0663
 Moscow Formation, Invertebrata OP-686
 Nevada OP-1252
 New Albany Shale
 economic geology B 2094-C

- energy sources B 2137; OF 94-0298; OP-2020
 geophysical surveys OP-1898
 New Jersey OF 95-0557
 Newfoundland C 1129
 Norway OP-158; OP-2156
 Ohio Shale, geomorphology OF 95-0224
 Oriskany Sandstone OP-685
 Pragian
 Kyrgyzstan OP-345
 New York OP-685
 South America OP-684
 Tennessee OP-370
 Traverse Group, areal geology OP-295
 Vermont C 1129; OP-1997
 Victoria Australia C 1129; OF 94-0228
 Yukon Territory OP-217
- dextral faults** *see* right-lateral faults
- diabase**
 Arizona, copper ores OP-1381
 California OP-1255
 East Pacific Ocean Islands OP-390
 Gabon, bitumens OP-1403
 New Jersey, geochemistry P 1565-A
 Russian Federation, geochemistry OP-843
 Utah, tectonics OP-1292
- Diablo Range**
 deformation OP-1774
 sedimentation OF 94-0577
 structural geology OP-1773
- diachronism**
 Montana, stratigraphy B 2112
 North Dakota, stratigraphy B 2112
 Pakistan, sedimentary petrology OP-1386
- diagenesis** *see also* dolomitization; sedimentary structures; weathering.
 OF 94-0228; OF 94-0298
 Alaska, uranium ores B 2098
 Arkansas, lead-zinc deposits B 1989-F
 Atlantic Ocean, stratigraphy OP-1334
 Australia OP-665
 burial diagenesis
 Alabama OF 94-0670
 Colorado OF 94-0670; OP-1272
 Louisiana OP-1543
 Utah OP-1272
 Wyoming OF 94-0670
 California
 energy sources OP-385
 geochemistry OP-244
 Quaternary OP-1803
 Chile, tectonophysics OP-1762
 China
 Conodonts OP-1021
 metal ores OP-1871
 Colorado
 B 1808-P; OP-1242
 geochemistry OP-535
 metal ores B 2116; OP-1096; OP-1793; OP-2060
 Florida
 OP-2263
 stratigraphy OP-2295
 geochemistry OP-2015
 geochronology OP-1672
 Illinois, petroleum OF 94-0298
 Italy, geochemistry OP-500
 Kazakhstan, energy sources OP-169
 Louisiana, engineering geology OF 94-0275
 metal ores B 2110; OP-318
 Micronesia, geochemistry OP-689
 Mississippi OP-828
- Mississippi Valley, economic geology B 2094-C
 Missouri, lead-zinc deposits B 1989-F
 Montana, stratigraphy OP-1131
 Nevada
 B 1988-I
 geochemistry OP-535
 New Jersey OP-2118
 New Mexico B 1808-P
 New York, geochemistry B 2106
 Oman, hydrogeology OP-1801
 Oregon
 B 2108
 ocean floors OP-123
 tectonophysics OP-157
 Pennsylvania OP-2118
 Peru, continental slope OP-1069
 petroleum OF 94-0298
 stratigraphy OP-225; OP-1319
 structural geology OP-401
 syngensis
 California C 1129
 Colorado C 1129; OP-1700
 Idaho P 1525; B 2064-A-R
 Mexico C 1129
 Texas
 OP-1472
 ground water WRI 94-4039; WRI 95-4030
 United Arab Emirates, hydrogeology OP-1801
 United States OP-665
 Utah
 B 2110
 energy sources OP-1461
 Quaternary OP-1273
 Vanuatu, oceanography OP-338
 Washington B 2085-C
 Western Interior, stratigraphy OP-2063
 Wyoming
 geochemistry OP-2128
 oil and gas fields OF 94-0670
- diagonal-slip faults** *see* oblique-slip faults
- diamicite**
 Iowa, geomorphology OP-16
 Wyoming, energy sources OP-1621
- diamicton**
 Alaska, Quaternary OP-1457
 Antarctic Ocean, Quaternary OP-246
 Illinois, Quaternary OP-1630
 Iowa, Quaternary OP-1630
 New York, Quaternary WRI 90-4168
 Oregon, geologic hazards OP-2088
- diamond anvil cells** *see* anvil cells
- Diamond G Butte Quadrangle**
 maps OF 88-0607; OF 88-0635
- Diamond Peak Formation**
 sedimentary petrology B 1988-I
- Diamond Range Sequence**
 structural geology OP-2115
- Diamond Valley**
 ground water OF 95-0107
- diamonds**
 Montana OP-1492
 South Africa OP-74
- diaphoresis** *see* retrograde metamorphism
- diapiric fold** *see* diapirs
- diapirism**
 magmas C 1129
 structural geology C 1129
- diapirs**
 Alaska OP-330
 Pacific Ocean, petrology OP-2266
- Diapsida** *see* Archosauria
- diatom flora**
 Alaska
 Miocene P 1543 A-B
 natural gas OP-2074
 Quaternary OF 94-0568
 Antarctic Ocean, Pliocene OF 94-0588
 California
 Miocene B 1995-J,K
 Pliocene OP-2061
 Quaternary OF 95-0034; OP-1157; OP-1158; OP-1308
 Idaho
 Quaternary B 2105
 stratigraphy OP-2147
 Maryland, stratigraphy OF 94-0683
 Minnesota, Quaternary OF 94-0578; OP-1290
 Nevada
 non-metal deposits OF 95-0084
 stratigraphy OP-2147
 New Jersey
 Miocene OP-622
 stratigraphy OP-623
 oceanography OF 94-0669-A; OF 94-0669-B
 Oregon, Quaternary OF 94-0568; OP-1158; OP-1629; OP-1635; OP-2045
 Pacific Coast, Quaternary OP-1401
 Pacific Ocean
 Pliocene OP-1088
 Quaternary OP-1501
 Peru, stratigraphy OP-200
 Russian Federation, Quaternary OP-94; OP-165
 Texas, hydrology OF 95-0103
 Utah, stratigraphy OF 95-0001
 Washington, Quaternary OP-395
- diatomaceous earth**
 California, Miocene B 1995-J,K
 Idaho, stratigraphy OP-2147
 Nevada, stratigraphy OP-2147
- diatomite**
 Nevada OF 95-0084
 Oregon B 1741-H
- diatoms** *see also* Nitzschia.
 Alaska P 1543 A-B
- diatremes**
 Montana, non-metal deposits OP-1492
- dicamba**
 Missouri, pollution OP-934
- dicophane** *see* DDT
- Dicotyledoneae** *see* Artemisia; Nothofagus; Salix
- diffusion** C 1129; OF 94-0228; OP-678; OP-812; OP-1070; OP-1147; OP-1196; OP-1246; OP-1284; OP-1671; OP-1699
- Digdig Fault**
 Quaternary OF 94-0568
- digital cartography**
 OF 92-0372-A; OF 92-0372-B; OF 94-0318; OF 94-0359; OF 94-0622; OF 94-0685; OF 95-0011-A; OF 95-0011-B; OF 95-0025; OF 95-0051; OF 95-0088; OF 95-0089; OF 95-0090; OF 95-0091; OF 95-0232; OF 95-0261; OF 95-0493; OF 95-0494; OF 95-0502; OF 95-0503; OF 95-0504; OF 95-0511; OF 95-0525; OF 95-0526; OF 95-0567; OF 95-0588; OF 95-0593; OF 95-0597; OF 94-0654-A; OF 94-0654-B; OF 95-0203-A; OF 95-0203-B; OF 95-0483-A; OF 95-0483-B; OP-266; OP-339; OP-1233; OP-1648; OP-1662
 coal OF 95-0235
 earthquakes OF 95-0213

- engineering geology OF 94-0662; OF 95-0072
 environmental geology OF 94-0615
 folds OF 94-0568
 geologic hazards OF 95-0574
 geomorphology OF 94-0105; OF 94-0626;
 OF 95-0266
 geophysical surveys OF 95-0252
 ground water WRI 94-4116; WRI 95-4048
 hydrogeology WRI 95-4095
 hydrology B 2103; OF 95-0316
 impact statements OF 95-0589
 mineral resources OF 95-0248
 petrology OP-1512
 plate tectonics SM
 pollution OF 95-0026
 seismology OF 95-0257-A; OF 95-0257-B;
 OF 95-0257-C
 structural geology OF 95-0330; OP-1454; OP-
 1741
 tectonophysics OF 95-0238
- digital data**
 OF 92-0372-B; OF 94-0697-B; OF 95-0526;
 OF 95-0588; OP-1415; OP-1445
- Alaska**
 OF 94-0675-B; OF 94-0675-C
 energy sources DDS-0030
 geomorphology OF 94-0512
 hydrology OF 95-0418
 mineral resources OF 95-0623; OF 95-
 0625; OF 95-0626; OF 95-0627
 Pliocene OF 94-0281; OF 95-0217-B
- Arizona**
 environmental geology OF 95-0578
 hydrogeology OF 95-0546
- Basin and Range Province, Quaternary OF 95-
 0078**
- Bolivia OF 95-0494**
- California**
 OF 95-0025; OF 95-0088; OF 95-0089;
 OF 95-0090; OF 95-0091; OF 95-0597
 geochemistry OF 95-0227-B
 gold ores OF 94-0640-B
 hydrology OF 94-0305; OF 95-0327
 oceanography OF 95-0326
 petrology OF 95-0585
 coal OF 94-0298
 Colombia, geochemistry OF 94-0623-C
- Colorado**
 OF 95-0232
 environmental geology OF 94-0579
 natural gas OF 94-0022-A
 geochemistry DDS-0014
 geochronology DDS-0014
 geomorphology OP-235
 geophysical surveys DDS-0031; OF 94-0598;
 OF 95-0058; OF 95-0064-B; OF 95-0064-
 C; OF 95-0516; OP-561
 Great Basin, Quaternary OF 95-0078
 ground water OF 94-0463; OF 94-0465
 Guyana, geophysical surveys OF 95-0590
 Hawaii, Quaternary DDS-0024
 hydrology WRI 94-4002; OF 94-0388
 Idaho, environmental geology OF 95-0644
 Illinois, ground water OF 94-0515
 Kansas, natural gas OF 94-0022-G
 mineral resources OF 95-0045
 Missouri, geologic hazards OF 95-0241;
 OF 95-0574
- Montana**
 OF 95-0011-B
 natural gas OF 94-0022-C
- Nebraska**
 natural gas OF 94-0022-F
 structural geology OF 95-0330
- Nevada**
 geophysical surveys OF 93-0397-B
 hydrology OF 94-0305
 metal ores OF 94-0270-B; OF 94-0668
- New Mexico**
 economic geology DDS-0017
 environmental geology OF 95-0528
 natural gas OF 94-0022-J
- North Dakota, natural gas OF 94-0022-D**
- oceanography OF 94-0669-B**
- Oklahoma**
 ground water OF 94-0387
 natural gas OF 94-0022-H
- Oregon**
 geochemistry OF 95-0227-B
 mineral resources OF 95-0006
- South America, coal OF 95-0235**
- South Dakota, natural gas OF 94-0022-E**
- Texas, ground water OF 94-0387**
- Utah**
 geophysical surveys OF 93-0397-B
 metal ores OF 94-0270-B
 natural gas OF 94-0022-I
- Venezuela OF 95-0493**
- Vermont OF 94-0654-B; OF 95-0203-B;
 OF 95-0483-B**
- Washington, geochemistry OF 94-0680-B**
- Wyoming, natural gas OF 94-0022-B**
- Yukon Territory, Pliocene OF 95-0217-B**
- digital terrain models**
 B 2103; OP-195
 California, structural geology OP-1584
 geomorphology OF 94-0626; OP-235; OP-
 1875
 geophysical surveys OP-242
 Hawaii, geologic hazards OP-1342
 Mississippi, pollution OP-681
- digitization**
 B 2103; C 1108; OF 94-0697-A; OF 94-0697-
 B; OP-1034; OP-1887
 geomorphology YR
 New Mexico, ground water OF 95-0360
 New York, hydrology B 2103
 ocean circulation OF 94-0363
- dike swarms**
 Alaska, petrology OP-100
 Australia, tectonophysics OP-704
 California, magmas C 1129; OP-313; OP-1095
 Canada, tectonophysics OP-704
 France, magmas C 1129
 Gabon, bitumens OP-1403
 Idaho, structural geology OP-1903
 Montana, structural geology OP-1903
 Pennsylvania, Proterozoic OP-3
 petrology C 1129
 Switzerland, magmas C 1129
- Utah**
 structural geology OF 95-0491
 tectonics OP-1292
- Virginia**
 Proterozoic OP-3
 structural geology OP-1199
- dikes see also ring dikes; sheeted dikes.**
 C 1129; OP-2055
- Arizona**
 OP-991
 copper ores OP-291
- Australia C 1129**
- Bolivia, metal ores OP-188**
- British Columbia C 1129**
- California**
 OP-1211; OP-1255
 geophysical surveys OP-522
 seismicity OP-406
 structural geology OP-1462
- Canada C 1129**
- China C 1129**
- Colorado**
 C 1129
 geochemistry OP-1939
 Oligocene OP-1625
 East Pacific Ocean Islands OP-128
- Egypt**
 C 1129
 geophysical surveys OP-2068
- Finland, geochemistry C 1129**
- Galapagos Islands OP-128**
- Greece, geochemistry C 1129**
- Hawaii**
 OP-307; OP-1293; OP-1372
 earthquakes OP-1413
 hydrogeology OP-2076
 Quaternary OP-977; OP-1453
 seismology OP-1911
- Idaho**
 neotectonics OF 94-0568
 structural geology OP-1673
- Japan, engineering geology OP-1027**
- Montana**
 geochronology OP-1465
 non-metal deposits OP-1492
- Nevada**
 geochemistry B 2056
 gold ores OP-2151
 New Jersey, geochemistry P 1565-A
 North Carolina, Mesozoic OP-1399
- Oregon**
 OP-41; OP-1590
 structural geology OP-1436
- Pacific Ocean OP-920**
- Peru, metal ores OP-202**
- South Dakota**
 C 1129
 geochemistry C 1129
- Spain C 1129**
- structural geology C 1129**
- Texas**
 C 1129
 structural geology C 1129
- Victoria Australia, geochemistry C 1129**
- Virginia**
 C 1129
 Mesozoic OP-1399
 Proterozoic B 2060
- Washington**
 geologic hazards OP-2329
 tectonics OP-1449
- Wyoming OP-1929**
- dilatational wave see P-waves**
- Dillingham Alaska**
 impact statements OF 94-0482
- Dinantian see also Tournaian; Viséan.**
 Arctic region B 2110
- Dinaric Alps**
 earthquakes PDE
 magmas C 1129
- Dingess Limestone Bed**
 stratigraphy OP-69
- Dinkey Creek Pluton**
 inclusions C 1129
- dinoflagellates**
 Alaska OP-641

- California, Miocene OF 95-0265
 Florida, stratigraphy OF 95-0003; OP-2295
 Pakistan, sedimentary petrology OP-1386
 Utah, stratigraphy B 2115-B
- Dinosaur National Monument**
 Vertebrata OP-145
- dinosaurs** *see also* Ornithischia; Saurischia.
 Colorado, stratigraphy OF 94-0670; OP-1953
 New Mexico
 OP-1482
 stratigraphy OF 94-0670; OP-1953
 stratigraphy OP-2022
 Wyoming, stratigraphy OP-667
- diorites** *see also* ferrodiorite; monzodiorite; quartz diorites; tonalite; trondhjemite.
 Alaska, gold ores OP-2184
 Arabian Peninsula, metal ores OP-1220
 Montana, geochronology OP-1465
 New Zealand, geochemistry C 1129
 Romania, geochemistry C 1129
 Spain C 1129
- dip-slip faults**
 California
 seismology OP-1637
 tectonophysics OP-1778
 Indiana OF 94-0298
 Kentucky OF 94-0298
 Nevada OP-2276
- dipyrite** *see* pyrrhotite
- directions, current** *see* current directions
- disconformities** *see* erosional unconformities
- Discovery expedition**
 Quaternary OF 95-0500
- Disenchantment Bay**
 Quaternary OP-1263
- displacement theory** *see* continental drift
- disposal barriers**
 engineering geology OP-687
 environmental geology OP-811
 Maryland, environmental geology W 2399
- disposal, waste** *see* waste disposal
- Distributed Spatial Data Library** YR
- distribution coefficients** *see* partition coefficients
- District of Columbia** *see also* Potomac River basin.
 maps GQ-1748
- Disturbed Belt**
 geochronology OP-1465
 ground water OP-1215
- Dix, Emily**
 paleobotany OP-644
- Dixie mining district**
 metal ores B 2081
- Dixie Valley**
 geothermal energy OF 95-0080; OF 95-0485
 hydrogeology WRI 95-4052
 Quaternary OF 94-0568
- Dixie Valley Fault**
 faults OF 94-0228
 fractures OF 94-0228
- Dixon Entrance**
 maps OF 95-0215
 sedimentation OP-2160
- Djibouti** *see* Asal Rift
- DNA**
 Massachusetts, pollution OP-616
- Dnieper River**
 environmental geology OP-2302
- Dnieper-Donets Basin**
 structural geology OP-948
- Dobbins Shale Member**
 stratigraphy OP-1341
- Dockum Group** *see* Chinle Formation
- Doda Fault**
 geochemistry C 1129
- dolerite** *see* diabase
- Dolet Hills Formation**
 Paleocene OF 95-0208
- Dollarhide Formation**
 metal ores B 2064-A-R
 mineral resources B 2064-A-R
- Dolly Varden Mountains**
 orogeny OP-619
- dolomite**
 OF 94-0575
 Florida, diagenesis OP-2263
 Spain, geochemistry OP-118
 Utah
 energy sources OP-1461
 sedimentary petrology OP-1464
- Dolomites** *see* Cima d'Asta
- dolomite** *see* dolostone
- dolomitization**
 Florida, stratigraphy OP-2087
 Georgia, stratigraphy OP-2087
 lead-zinc deposits OF 94-0298
 Poland, lead-zinc deposits OP-908
 Puerto Rico, sedimentary petrology OP-2277
 sedimentary petrology OP-2290
 stratigraphy OP-1558
- Dolores Formation**
 stratigraphy OF 94-0583
- Dolores Project**
 hydrology WRI 94-4041
- Dolores River**
 stratigraphy OC-0144
- dolostone** *see also* dolomitization.
 California
 geochemistry P 1566
 geomorphology OP-785
 paleomagnetism OP-1916
 China, polymetallic ores OP-1024
 Colorado OP-1242
 Missouri, petrology OP-1299
- dolostone deposits**
 California OF 95-0039
 environmental geology C 1108
- domes**
 Bolivia, lava B 2119
 California
 geophysical surveys OP-522
 geothermal energy OP-884
 petrology C 1129
 Quaternary OP-2142
 Iceland, geophysical surveys OP-1389
 Illinois P 1538-Q
 Kentucky P 1538-Q
 Massachusetts OP-782
 Montana, stratigraphy OP-596
 Oregon, geologic hazards OP-2088
 Spain
 metal ores OP-22; OP-799
 petrology C 1129
 United States
 geophysical surveys OP-1389
 metal ores OP-799
- Dominica**
 plate tectonics OP-1983
- Dominican Republic**
 plate tectonics OP-1751; OP-1983
 Quaternary OF 94-0568
- Donegal Ireland** *see* Ardara Pluton
- Doonerak Alaska**
 deformation OP-479
 Mohorovicic discontinuity OP-2301
- Doppler methods** OP-1450
- Doty Fault**
 engineering geology OP-1859
- Double Lakes Texas**
 Quaternary OP-812
- Double Spring Flat earthquake 1994**
 earthquakes OP-1994
- double-bubbler systems**
 Wisconsin, hydrology OF 94-0363
- Douglas Island Volcanics**
 petrology OP-409
- Dover Delaware**
 Paleocene OF 95-0478
- Dover East Quadrangle**
 Quaternary OP-990
- Dover New Hampshire**
 ground water OP-698
- DR3M**
 hydrology WRI 94-4143
- drainage basins** *see also* basin management; valleys.
 Alaska
 environmental geology OF 95-0342
 sedimentary petrology B 2107
 Appalachians, hydrology FS 0137-95; FS 94-0019
 Arizona
 engineering geology OP-1435
 environmental geology WRI 94-4192
 geologic hazards OF 95-0617
 hydrogeology WRI 94-4114; WRI 95-4062;
 OF 94-0356; FS 94-0016
 hydrology WRI 95-4053; WRI 95-4083
 Arkansas
 hydrogeology OF 94-0537; OF 94-0706-W
 hydrology OF 94-0364
 Quaternary P 1538-H
 Australia, stratigraphy OP-1338
 California
 crust OF 94-0228
 ground water WRI 94-4127
 hydrogeology FS 94-0029; OP-789
 hydrology OF 95-0316; FS 0115-95
 seismology OP-2042
 Canada, hydrogeology FS 94-0056
 Caribbean region, environmental geology OP-2210
 Colorado
 geochemistry OF 95-0250; OP-1318
 hydrogeology OF 94-0331; OF 94-0363
 hydrology OF 94-0412; OF 95-0071;
 FS 0153-95
 environmental geology OP-955
 Florida, hydrology WRI 94-4217
 geochemistry OP-1170
 geomorphology OP-235; OP-1368
 geophysical surveys OF 94-0676
 Georgia
 geologic hazards WRI 95-4017
 hydrology WRI 94-4158
 soils OP-1555
 Great Lakes region, hydrology WRI 95-4005;
 WRI 95-4021
 Great Plains
 hydrogeology WRI 93-4231
 hydrology C 1120-H; OF 95-0162
 ground water OP-1014; OP-1779

- hydrogeology WRI 90-4112; WRI 93-4098
hydrology YR; WRI 93-4160; OF 91-0175;
OF 95-0308; OF 95-0379; OP-1711
- Idaho**
hydrogeology WRI 94-4221; OP-2221
hydrology WRI 93-4229
- Illinois**, hydrology WRI 94-4094; FS 94-0018
- Indiana**, hydrology WRI 91-4051; WRI 94-4066
- Iowa**, hydrogeology OF 94-0711-W; FS 94-0031
- Kansas**
ecology W 2352-B
geomorphology W 2352-B
hydrology W 2352-B; WRI 94-4077;
WRI 94-4187; OF 94-0365
pollution W 2352-B; W 2419; OP-2145
- Kentucky**, hydrology WRI 94-4029; WRI 94-4134; WRI 94-4227
- Louisiana**, hydrology WRI 92-4181
- Maryland**
ground water WRI 94-4170
hydrogeology OF 94-0507; OP-771
hydrology OP-1899
- Massachusetts**
hydrogeology WRI 94-4256
hydrology W 2418; WRI 94-4003; WRI 94-4155
- Michigan**
hydrogeology OF 95-0163
pollution OF 95-0163
- Midwest**, pollution OF 94-0396
mineralogy OP-79
- Minnesota**, hydrology WRI 93-4200; OF 93-0046; OF 93-0047; OF 94-0488; OF 95-0283; OF 95-0333
- Mississippi Valley**
environmental geology C 1120-G
hydrogeology FS 94-0047
hydrology C 1120-H
pollution OF 94-0376
- Missouri**, Quaternary P 1538-H
- Montana**, hydrology WRI 95-4022; OF 94-0375
- Nebraska**
ecology W 2352-B
geomorphology W 2352-B
hydrogeology WRI 94-4095
hydrology W 2352-B; WRI 94-4077;
WRI 94-4187; OF 94-0365; OF 94-0496
pollution W 2352-B; W 2419; OP-2145
- Nevada**
hydrogeology WRI 94-4222; WRI 94-4233;
OF 94-0456
hydrology WRI 94-4210; OF 95-0316;
FS 0115-95
metal ores OF 94-0270-A; OF 94-0270-B
- New England**, hydrogeology FS 94-0027
- New Hampshire**
ground water FS 0138-95
hydrogeology WRI 92-4013; WRI 92-4154;
WRI 93-4096
- New Jersey**
hydrology OF 93-0662
pollution WRI 93-4101; OP-114
- New Mexico**
environmental geology WRI 94-4192
hydrogeology WRI 93-4163; WRI 94-4072;
WRI 94-4125; OF 94-0356; OF 94-0377
hydrology WRI 95-4083
- New York**, hydrology OF 94-0090; OF 94-0368
- North Carolina**
hydrogeology FS 94-0010
hydrology OF 94-0379; OF 94-0509;
OF 95-0136
- North Dakota**
hydrology WRI 93-4200; WRI 94-4171;
WRI 95-4102; OF 95-0123; OF 95-0283
pollution OP-1696
- Ohio**, hydrology W 2432
- Oklahoma**, hydrology OF 94-0364
- Oregon**
ground water WRI 89-4179
hydrogeology OF 95-0285
hydrology OF 95-0373
Quaternary OP-2045
- Papua New Guinea**, stratigraphy OP-1338
- Pennsylvania**, environmental geology WRI 94-4060
pollution OP-1426; OP-1508
- Puerto Rico**, geomorphology OP-106
- Rhode Island**, hydrogeology OF 95-0305
- South Carolina**, hydrogeology FS 94-0010
- South Dakota**, hydrology OF 93-0046
- Tennessee**
fluvial features OP-208
pollution OF 95-0156
- Texas**
hydrogeology WRI 94-4036; FS 0090-95
hydrology WRI 94-4218; FS 94-0073
pollution FS 0088-95
- United States**, hydrogeology FS 94-0056
- Utah**
engineering geology OP-1435
metal ores OF 94-0270-A; OF 94-0270-B
- Vermont**, hydrogeology OP-1194; OP-1631
- Virginia**, hydrology WRI 94-4042; WRI 94-4225; OF 95-0136
- Washington**
geochemistry WRI 94-4047
ground water WRI 89-4179
hydrology OF 94-0308
Quaternary OP-975
- Wisconsin**
environmental geology OF 95-0163
hydrogeology WRI 94-4101; OF 95-0163
hydrology WRI 94-4094; OF 95-0163
pollution OF 95-0163; OP-508
reclamation OF 95-0163
- Wyoming**
geochemistry OP-269
hydrogeology WRI 94-4095; WRI 94-4221
hydrology WRI 93-4229
- drainage patterns**
British Columbia, Quaternary OP-2008
- California**
Quaternary OF 94-0568
structural geology OP-1584
waste disposal OP-2291
- Mississippi Valley**, geomorphology P 1538-R
- Montana**
hydrogeology OP-943
sedimentary petrology OP-1622
- Puerto Rico**, Quaternary OF 94-0568
- Washington**, Quaternary OP-2008
- Wyoming**, sedimentary petrology OP-1622
- drainflow**
California, ground water OF 94-0072
- drape folds**
California, Quaternary OF 94-0568
- DRASTIC**
Colorado, ground water WRI 92-4143
Florida, ground water W 2409
- dravite**
OP-1771
Canadian Shield, metal ores OP-2126
Great Britain, metal ores OP-2126
- Dreissena polymorpha**
ecology FS 94-0014
environmental geology OF 95-0163
- Drenchwater Creek Deposit**
metal ores OP-1895
- Dripping Springs Mountains**
copper ores OP-1381
- Droharhynchia**
Invertebrata OP-51
- dropstone *see* argillite
- Druck PDCR 930U**
geophysical surveys OF 94-0531
- drumilns**
Massachusetts, Quaternary OP-683
- dry delta *see* alluvial fans
- dry deposition**
Georgia, hydrology OP-120
- Dry Lake valley**
Quaternary I-2501
- Dry Valley Drilling Project**
Pliocene OF 94-0588
- dry valleys**
Antarctica, Quaternary P 1386-B
- dry wells**
Oregon, hydrogeology WRI 92-4010
Washington, hydrogeology WRI 92-4010
- Dryden Lake valley**
Quaternary WRI 90-4168
- DSDL YR**
- DSDP *see* Deep Sea Drilling Project**
- DSDP Site 35**
oceanography B 2022
- DSDP Site 258**
Cretaceous OP-1161
- DSDP Site 274**
Pliocene OF 94-0588
- DSDP Site 327**
Cretaceous OP-1161
- DSDP Site 398**
Cretaceous OP-1161
- DSDP Site 502**
Pliocene OF 94-0588
- DSDP Site 511**
Cretaceous OP-1161
- DSDP Site 525**
stratigraphy OP-903
- DSDP Site 533**
heat flow OF 95-0262
- DSDP Site 545**
Cretaceous OP-1161
- DSDP Site 547**
Cretaceous OP-1161
- DSDP Site 551**
Cretaceous OP-1161
- DSDP Site 572**
Pliocene OF 94-0588
- DSDP Site 607**
Quaternary OP-233
- DSDP Site 612**
Eocene OP-735
- DSS *see* deep seismic sounding**
- Du Page River**
hydrology WRI 94-4094
- Duck Creek basin**
environmental geology OF 95-0163

- reclamation OF 95-0163
 - Dugger Formation**
 - coal OF 94-0298
 - Duke hot springs**
 - energy sources OP-302; OP-885
 - Duke Island ultramafic complex**
 - paleomagnetism OP-1135
 - Dulac Quadrangle**
 - geomorphology OF 94-0275
 - Duluth Complex**
 - geophysical surveys OP-404
 - metal ores OP-862
 - Dumbarton Bridge**
 - oceanography OF 95-0326
 - dumortierite** OP-1771
 - Duncan Peak Quadrangle**
 - maps I-2341
 - dune rock *see* eolianite
 - dune structures**
 - Arizona, fluvial features OP-1607
 - Nebraska B 2110
 - Wyoming B 2110
 - dunes** *see also* coastal dunes; continental dunes; eolian features; sand sheets.
 - Alaska, Quaternary B 2107
 - Illinois, hydrogeology OP-164
 - Indiana, hydrogeology OP-164
 - Oman, ground water OP-2311
 - United Arab Emirates, ground water OP-2311
 - dunite**
 - Alaska, geochemistry P 1564
 - Russian Federation, geochemistry OP-843
 - durain**
 - Kentucky, sedimentary petrology OP-1950
 - Durham Connecticut**
 - ground water OP-1799
 - Dushanzi fault zone**
 - Quaternary OF 94-0568
 - dust**
 - OP-1844; OP-1885; OP-2134
 - California
 - engineering geology OP-1585
 - pedogenesis OP-2005
 - Quaternary OP-761
 - geologic hazards OP-791
 - Minnesota, Quaternary OP-1290
 - Nevada
 - pedogenesis OP-2005
 - Quaternary OP-761
 - dust storms** OP-486
 - Dutch East Indies** *see* Indonesia
 - Dutch Slough Field**
 - energy sources OP-1746
 - DVDP** *see* Dry Valley Drilling Project
 - dykes** *see* dikes
 - dynamos**
 - tectonophysics OP-176
- E**
- Eagle Bluffs Wildlife Area**
 - hydrogeology OF 95-0109
 - Eagle Mountain Pluton**
 - geochemistry C 1129
 - Eagle Quadrangle**
 - gold ores B 2107
 - Eagle Springs Field**
 - energy sources OF 94-0670
 - structural geology OP-1944

- Eagle Valley**
 - hydrogeology OF 93-0033
- Earn Group**
 - sedimentary petrology OP-1604
- earth flows *see* earthflows
- Earth Observing System**
 - geomorphology OF 94-0626
- Earth Science Corps YR**
- Earth Vision**
 - oil and gas fields OF 94-0670
 - pollution OF 94-0670
- Earth waves *see* elastic waves
- earth, diatomaceous *see* diatomaceous earth
- earthflows**
 - Colorado, structural geology OP-325
- earthquake prediction** *see also* precursors.
 - Alaska
 - earthquakes OP-1191
 - Quaternary OF 94-0568
 - seismology B 2139; OP-697
 - Arkansas
 - deformation P 1538-J
 - Quaternary P 1538-H; OP-946
 - seismology OP-1004
 - Australia, Quaternary OF 94-0568
 - British Columbia, geologic hazards OF 94-0568
 - California
 - earthquakes OF 92-0284; OF 94-0568; OP-491; OP-892; OP-1302; OP-1499; OP-1595; OP-1641
 - elastic waves OP-2186
 - engineering geology OF 94-0568
 - Quaternary OF 94-0568
 - seismic sources OP-1038
 - seismicity OP-1165; OP-1356; OP-1602
 - seismology OF 95-0038; OP-371; OP-783; OP-819; OP-1224; OP-1296; OP-1349; OP-1364; OP-1640; OP-1688
 - structural geology OP-705
 - China, Quaternary OF 94-0568
 - crust OF 94-0228
 - earthquakes OF 94-0228; OF 94-0571; OP-89; OP-489; OP-1125; OP-1301; OP-1490; OP-2313; OP-2330
 - Ecuador, engineering geology OF 94-0568
 - engineering geology OF 95-0028
 - geologic hazards OF 94-0663; OF 95-0067
 - Greece, Quaternary OF 94-0568
 - Gulf Coastal Plain, engineering geology P 1538-M
 - Idaho, Quaternary OF 94-0568
 - Iran, geologic hazards OF 94-0568
 - Italy, earthquakes OP-892
 - Japan
 - engineering geology OP-81
 - Quaternary OF 94-0568
 - Mississippi Valley
 - engineering geology P 1538-M
 - geophysical surveys P 1538-L
 - seismology P 1538-N
 - structural geology P 1538-E
 - Missouri
 - geophysical surveys P 1538-P
 - Quaternary P 1538-H
 - Nevada, Quaternary OF 94-0568
 - New England, earthquakes OF 94-0643
 - Oregon, earthquakes OP-571
 - Quebec, seismology OP-88
 - seismology OP-209; OP-1892; OP-1917
 - South Carolina, geologic hazards OF 94-0663
 - Turkey
 - earthquakes OF 94-0568
 - Quaternary OF 94-0568
 - United States, geologic hazards OF 94-0568
 - Washington, geologic hazards OF 94-0663
- earthquake sea wave *see* tsunamis
- earthquakes** *see also* aftershocks; elastic waves; epicenters; focal mechanism; foreshocks; foundations; geologic hazards; GEOS; ground motion; isoseismic maps; magnitude-frequency ratio; main shocks; New Madrid region; paleoseismicity; Q; rock mechanics; seismic energy; seismic gaps; seismic intensity; seismic moment; seismic quiescence; seismic response; seismic sources; seismic zoning; slope stability; surface waves; tsunamis.
 - OP-53; OP-1124; OP-1193; OP-1744; OP-1749
 - Alaska OP-1058; OP-1107; OP-1598
 - Alaska earthquake 1964
 - OP-1075
 - Alaska OF 94-0568; OP-1098; OP-1682
 - Chile OP-1098
 - Andreanof Islands earthquake 1986, Alaska OP-93
 - Big Bear earthquake 1992, California OP-460; OP-461; OP-1387; OP-1561; OP-1600
 - Borah Peak earthquake 1983
 - Idaho OF 94-0568
 - Italy OF 94-0568
 - United States OF 94-0568
 - Washington OP-1859
 - Borrego Mountain earthquake 1968, California OP-1586
 - California
 - OP-277; OP-1638; OP-1712; OP-1715; OP-1809; OP-1883; OP-2284; OP-2325
 - geophysical surveys OP-2046
 - neotectonics OP-1145
 - plate tectonics OP-1576
 - Quaternary B 1982
 - structural geology OF 94-0228; OP-822; OP-872; OP-1773; OP-1914; OP-2107
 - tectonophysics OP-1444
 - Canada, faults OP-2271
 - Cape Mendocino earthquakes 1992, California OF 94-0568; OP-1745; OP-1832; OP-1872
 - Chalfant Valley earthquake 1986, California OP-818
 - Charleston earthquake 1886
 - Australia OP-2334
 - California OP-2334
 - Canada OP-2334
 - India OP-2334
 - Oklahoma OP-2334
 - Chile earthquake 1960
 - Alaska OP-1098
 - Chile OP-1098
 - China
 - OP-1638
 - mantle OP-1020
 - Coalinga earthquake 1983, California OP-1808
 - core OP-2231
 - deep-focus earthquakes
 - OP-1544
 - Bolivia OP-180; OP-252; OP-494; OP-961; OP-1353; OP-1643; OP-1910; OP-2294
 - China OP-868
 - Nicaragua OP-961
 - fractures OF 94-0228
 - geophysics OP-551
 - Great Lakes, stratigraphy OP-436
 - Hawaii
 - OP-232; OP-1413; OP-1654

- geomorphology OP-1570
 Quaternary OP-977; OP-1453; OP-2315
 Hebgen Lake earthquake 1959
 OP-1298
 Japan OF 94-0228
 Montana OF 94-0228
 induced earthquakes
 OF 94-0228; OP-1788
 California OP-1280; OP-1769
 Canada OP-606
 Colorado OP-1045; OP-1280
 South Africa OP-606
 Texas OP-1286
 Irpinia earthquake 1980
 Italy OF 94-0568
 United States OF 94-0568
 Japan
 Quaternary OF 94-0568
 tectonophysics OP-2307
 Kanto earthquake 1923, Japan OF 94-0568;
 OP-974
 Landers earthquake 1992
 OP-1477
 California OF 94-0228; OF 94-0568;
 OF 94-0590; OF 95-0042; OP-212; OP-
 375; OP-406; OP-457; OP-460; OP-539;
 OP-714; OP-889; OP-1037; OP-1038;
 OP-1116; OP-1271; OP-1309; OP-1374;
 OP-1387; OP-1420; OP-1421; OP-1473;
 OP-1474; OP-1475; OP-1514; OP-1541;
 OP-1561; OP-1586; OP-1596; OP-1600;
 OP-1640; OP-1694; OP-1703; OP-1704;
 OP-1705; OP-1853; OP-1999; OP-2144
 Italy OF 94-0568
 United States OF 94-0568
 Loma Prieta earthquake 1989
 California OF 94-0221; OF 94-0228;
 OF 94-0552; OF 94-0568; OF 95-0095;
 FS 0132-95; OP-62; OP-91; OP-262;
 OP-301; OP-320; OP-373; OP-419; OP-
 587; OP-591; OP-789; OP-820; OP-825;
 OP-860; OP-893; OP-914; OP-1116; OP-
 1143; OP-1222; OP-1347; OP-1364; OP-
 1374; OP-1475; OP-1586; OP-1617;
 OP-1637; OP-1808; OP-2042; OP-2043;
 OP-2084; OP-2120; OP-2181; OP-2286
 Japan OF 94-0221; OP-893
 Mexico OP-613
 microearthquakes
 California OF 94-0228; OF 95-0038; OP-
 254; OP-620; OP-1054; OP-1347; OP-
 1421; OP-2153
 Hawaii OP-1911
 Miramichi earthquake 1982, Canada OP-374
 Morgan Hill earthquake 1984, California OP-
 591; OP-820; OP-1761
 Nahanni earthquake 1985, Canada OP-374
 Nevada OP-1994
 New Madrid earthquakes 1811-1812
 OP-2217
 Arkansas P 1538-H
 Australia OP-2334
 California OP-2334
 Canada OP-2334
 Illinois OP-1451
 India OP-2334
 Indiana OP-1451
 Mississippi Valley OF 94-0568
 Missouri P 1538-H
 Oklahoma OP-2334
 Tennessee OP-1907
 Oceania, mantle OP-1109
 Oregon
 Quaternary OP-1876
 tectonophysics OP-660; OP-1444
 Pacific Ocean, tectonophysics OP-1656
 Parkfield earthquake 1966, California OP-783;
 OP-1705; OP-1769
 Parkfield earthquakes, California OF 94-0228;
 OP-249; OP-1165; OP-1602; OP-2039; OP-
 2186
 Puerto Rico
 OP-2238
 plate tectonics OP-1304
 Saguenay earthquake 1988
 Canada OP-374
 Quebec OP-88
 San Fernando earthquake 1971, California
 FS 0096-95; OP-649
 San Francisco earthquake 1906, California
 OF 94-0568; OP-1475; OP-1617; OP-1984;
 OP-2070; OP-2084; OP-2333
 shallow-focus earthquakes
 Alaska OP-697; OP-2157
 Australia OF 94-0568
 Hawaii OP-1709; OP-1911
 Texas OP-1286
 Spitak earthquake 1988
 Armenia OP-140; OP-265; OP-957
 California OP-957
 structural geology OP-1689
 United States
 faults OP-2271
 tectonophysics OP-2307
 volcanic earthquakes
 OP-464
 Alaska B 2139; OP-786; OP-1978
 California OP-255; OP-654; OP-1356; OP-
 2142
 Chile OP-1071
 Hawaii DDS-0024; OP-323; OP-696; OP-
 1241; OP-1649; OP-1911
 Indonesia OP-1498
 Japan OP-2007
 Mariana Islands OF 94-0705
 Micronesia OF 94-0705
 Papua New Guinea OP-1720
 Rocky Mountains OF 95-0059
 Washington
 crust OP-1776
 neotectonics OP-1980
 Quaternary OP-1876
 structural geology OP-1611; OP-1981
 Western U.S., Quaternary OP-2086
 Whittier Narrows earthquake 1987, California
 OP-462
Earthworm
 earthquakes OP-1124; OP-1125; OP-1302
East Africa *see* Djibouti; Kenya
East Antarctic Seismic Traverse
 geophysical surveys OF 95-0225
East Asia Map Project
 mineral resources OP-2192
East Canyon Ridge Quadrangle
 maps OF 94-0591
East Mediterranean *see* Black Sea
East Pacific *see* East Pacific Rise; Northeast Pa-
 cific; Peru-Chile Trench; Southeast Pacific
East Pacific Ocean Islands *see also* Galapagos
 Islands; Hawaii.
 petrology, Easter Island OP-390
East Pacific Rise
 geochemistry OP-2098
 lava OP-1941
 metal ores OP-502
 ocean floors OP-1339; OP-2097
 petrology OP-827; OP-2266
 sea water OP-842
East Pittston Quadrangle
 Quaternary OP-990
East Poplar Field
 environmental geology C 1108
East Rift Zone
 hydrogeology OF 95-0532
 lava OF 95-0496
 magmas OP-1293
 Quaternary DDS-0024; OP-351
East River watershed
 hydrology OF 95-0163
 pollution OF 95-0163
East Whiteland Pennsylvania
 ground water OF 93-0659
 East-Central Alaska *see* Fairbanks Alaska
EAST93
 geophysical surveys OF 95-0225
Easter Island
 petrology OP-390
 Easter Island Cordillera *see* East Pacific Rise
Easter Microplate
 petrology OP-390
 Eastern Alps *see* Dinaric Alps; Dolomites
Eastern Boundary Current
 Quaternary OF 95-0034
 Eastern Canada *see* Gander Zone; Maritime Prov-
 inces; Newfoundland; Ontario; Quebec
Eastern Cordillera
 metal ores OP-1028
 orogeny OP-2011
Eastern Desert
 magmas C 1129
Eastern Kentucky coal field
 sedimentary petrology OP-1548
 Eastern Panhandle, West Virginia *see* West Vir-
 ginia Panhandle
Eastern Piedmont fault system
 structural geology OP-1536
Eastern Sea OP-1869; OP-1873
Eastern Shore
 ground water W 2401
Eastover Formation
 ground water WRI 92-4111
 sedimentary petrology OP-848
 Vertebrata OP-1137; OP-2275
 Eburean Orogeny *see* Pan-African Orogeny
echinoderms
 Alaska, paleontology OF 94-0215
 crinoids
 Kazakhstan OP-1258
 Western Interior B 2113
 echinoids
 California OF 95-0489
 Virginia OP-2071
echinoids
 California, Miocene OF 95-0489
 Virginia, Pliocene OP-2071
echo sounding
 Atlantic Ocean, oceanography B 2079
 California, engineering geology FS 0132-95
 Pacific Ocean
 ocean floors OP-1119
 oceanography B 2079
eclogite OP-1138
eclogite facies
 North Carolina, structural geology OP-1335

ecology *see also* biodiversity; continental shelf; deltas; estuaries; greenhouse effect; impact statements; lakes; wetlands.

C 1108; OF 94-0378; OF 94-0490; FS 94-0014; OP-131; OP-236; OP-346; OP-556; OP-658; OP-896

Alaska B 2107; C 1108; OF 94-0627; OF 95-0179

Arizona

OF 95-0202; OP-2130

hydrology FS 0120-95

Atlantic Ocean, ocean floors OP-2324

British Columbia, hydrology OF 94-0315

California

C 1108; OF 95-0291; OF 95-0299; OP-261; OP-495

ground water OF 94-0334

hydrogeology FS 94-0029

oceanography B 2022

Colorado

B 2220; OP-150

hydrogeology WRI 94-4111

hydrology WRI 94-4041; WRI 94-4097

Florida

FS 0134-95; OP-610

hydrology WRI 93-4103; OF 95-0167

geochemistry OF 94-0362

Georgia, hydrology OP-120

Greenland, Quaternary C 1108

Gulf Coastal Plain, ground water C 1108

hydrogeology OF 95-0163

hydrology OF 94-0710-W; OF 95-0379; FS 0116-95

Idaho

WRI 93-4156; WRI 95-4006

hydrology OF 94-0109

Illinois, hydrology WRI 94-4094

industrial minerals B 2111

Invertebrata OF 95-0260

Kansas

W 2352-B

hydrology W 2352-B

Michigan OF 94-0670

Minnesota WRI 95-4047

Montana, hydrology OF 94-0375

Nebraska

W 2352-B; FS 0154-95

hydrology W 2352-B

New England, hydrogeology FS 94-0027

New Mexico

C 1108

hydrogeology OF 94-0702-W

New York, hydrology OF 94-0368

North Dakota WRI 95-4047

Oklahoma OF 94-0324

Oregon

WRI 93-4156

hydrogeology OF 95-0285

Pacific Ocean

ocean floors OP-2097

Quaternary B 2022

Rocky Mountains, hydrogeology OP-1062

Tennessee OF 95-0156

Texas

OP-1180

hydrogeology OF 94-0702-W; FS 94-0048

hydrology OF 95-0103

Utah, hydrology WRI 94-4041

Washington

OF 95-0195

hydrology OF 94-0109; OF 94-0308; OF 94-0315

Wisconsin

OF 95-0163; OP-1663

hydrogeology WRI 94-4101; OF 95-0163

hydrology WRI 94-4094; OF 95-0163

Wyoming WRI 95-4006

ECOM-sl

ocean circulation YR

economic geology *see* aggregate; antimony ores; asphalt; barite deposits; base metals; beryl; bismuth ores; bitumens; brines; bromine deposits; building stone; cement materials; chromite ores; coal; cobalt ores; construction materials; copper ores; diamonds; diatomite; dolomite deposits; energy sources; feldspar deposits; fluorspar; gems; geothermal energy; granite deposits; graphite deposits; gravel deposits; gypsum deposits; heavy mineral deposits; helium gas; hematite; industrial minerals; iodine deposits; iron ores; lead ores; lead-zinc deposits; lignite; limestone deposits; manganese ores; marble deposits; mercury ores; metal ores; mica deposits; mineral resources; molybdenum ores; monazite deposits; natural gas; nickel ores; niobium ores; nonmetal deposits; oil and gas fields; oil sands; oil shale; ornamental materials; peat; pegmatite; perlite; petroleum; phosphate deposits; platinum ores; polymetallic ores; potash; pyrite ores; quartz crystal; rare earth deposits; salt; sands; sandstone deposits; shale; silver ores; sodium carbonate; strategic minerals; strontium ores; sulfur deposits; tantalum ores; thorium ores; tin ores; titanium ores; trona; tungsten ores; uranium ores; vanadium ores; water resources; zeolite deposits; zinc ores

economic geology maps

Alaska

metal ores OP-671

mineral resources MF-2058-D; I-2225-A; I-2225-B; I-2225-C; I-2225-D

Arizona, non-metal deposits OF 95-0031

Atlantic Coastal Plain, oceanography MF-2268

California, non-metal deposits OF 95-0039; OF 95-0535

Idaho P 1525

metal ores B 1989-G

Montana, non-metal deposits I-2446

Nevada

metal ores OF 94-0270-A

mineral resources OF 95-0248

New Hampshire, non-metal deposits OF 94-0201

New Mexico B 2063

South Dakota, metal ores I-2445

Utah, metal ores OF 94-0270-A

Washington, mineral resources I-2364-A

Wyoming, metal ores I-2445

ecoulement *see* gravity sliding

Ecuador

energy sources OF 94-0559

engineering geology OF 94-0568

Edentata

California, geomorphology OP-785

Edgar Fault

structural geology OP-1380

Edinburg Formation

stratigraphy B 2135

education *see also* curricula; educational resources; elementary school; high school; teacher education.

YR; OP-2214

geologic hazards OP-1052

educational resources *see also* elementary school; high school.

Alaska, pollution OF 95-0566

sea-floor spreading OF 95-0573

Trilobita OF 94-0667-A; OF 94-0667-B

Edwards Air Force Base

ground water OF 94-0531; OP-2010; OP-2335

Edwards Aquifer

environmental geology WRI 93-4233

ground water WRI 93-4039; WRI 93-4100;

WRI 93-4126; WRI 94-4039; WRI 94-

4117; WRI 95-4030

hydrogeology FS 94-0048; OP-1684

Quaternary OP-812

Edwards, Wilfred N.

paleobotany OP-644

Eel River

sedimentary petrology OP-603

Eemian

OP-981

Greenland C 1108

Egan Range

structural geology OP-1976

eggstone *see* oolite

Egypt *see also* Red Sea Hills.

ichnofossils, Fayum Depression OP-1012

magmas, Eastern Desert C 1129

Quaternary, Fayum Depression OP-1152

sedimentary petrology OP-1770

stratigraphy, Fayum Depression OP-1528

Elifelian

Alaska OP-51; OP-76; OP-740

Colombia OP-77

Nevada OP-77

eklogite facies *see* eclogite facies

El Chichon

Quaternary OP-467

El Kef Tunisia

stratigraphy OP-1416

El Nino

Great Lakes, Quaternary OP-292

Peru, Quaternary OP-1618

El Paso Texas

ground water WRI 94-4092; OF 94-0329

El Salvador

Quaternary, San Salvador El Salvador OP-1816

elastic constants *see* Young's modulus

elastic waves *see also* attenuation; body waves; explosions; foreshocks; mantle; Mohorovicic discontinuity; seismic sources; surface waves; wave amplification.

OP-324; OP-358; OP-1348; OP-1352; OP-1864

Alaska

B 2139; OP-786

natural gas OP-17

Quaternary OP-1263

Arkansas, structural geology OP-956

Bolivia

OP-1353

plate tectonics OP-252

California

OF 91-0592; OP-25; OP-91; OP-239; OP-

347; OP-461; OP-1336; OP-1688; OP-1694;

OP-1810; OP-2186; OP-2333

crust OP-1967

geophysical surveys OF 94-0706; OP-136;

OP-1968

petrology OP-708

Chile OP-1071

Colorado, geophysical surveys OP-1879

geophysical surveys OP-1695

- Hawaii OP-1649; OP-1912
Hungary, stratigraphy OP-524
Illinois, structural geology OP-956
Indonesia OP-1498
Pacific Ocean
 OP-1329
 tectonophysics OP-247
Pennsylvania, energy sources OP-2059
tectonophysics OP-141
- Elba**
 geochemistry C 1129
- Elbert Formation**
 stratigraphy OF 94-0583
- Elbow Canyon Quadrangle**
 maps OF 95-0560
- Elbrook Formation**
 stratigraphy OF 94-0573
- Eldorado Mountains**
 geochemistry C 1129
 magmas OP-258
 petrology OP-1817
- Eldridge-Wilde well field**
 ground water OF 94-0531
- Eleana Formation**
 energy sources OP-1084
 structural geology OP-1252
- Electra Lake Gabbro**
 intrusions OP-1423
- electrical field**
 California
 rock mechanics OF 94-0228
 seismology OP-262
- electrical logging**
 California, ground water OP-700
 Florida
 Cenozoic OP-1204
 sedimentary petrology OP-1710
 Illinois
 energy sources OF 94-0298
 sedimentary petrology OF 94-0298
 Indiana, ground water OF 94-0298
 Massachusetts, geophysical surveys WRI 94-4185
 New Mexico, ground water OF 95-0360
 South Carolina, ground water OF 95-0507
 Texas, ground water OF 94-0329
- electrical methods**
 OF 94-0228; OF 95-0544; FS 0121-95; OP-712; OP-713
 engineering geology WRI 94-4164
 faults OP-240
 ground water P 1415-A
- electrical properties**
 Alaska, geophysics OP-594
 California, hydrogeology OP-2298
 Colorado, geophysical surveys OP-1214; OP-1879
 Connecticut, ground water OP-1799
 Florida, ground water OP-1948
 ground water OP-1687
- electrical sounding**
 geophysical surveys OF 94-0676
 New Mexico, hydrogeology WRI 94-4125
 Wyoming, geophysical surveys OF 95-0239
- electrical surveys**
 California
 ground water OP-2010
 waste disposal OP-2291
 Colorado
 geophysical surveys OP-67
 petrology OP-1716
- Germany, geophysical surveys OP-651
Mississippi, environmental geology C 1108
Russian Federation, geophysical surveys OP-651
Utah, hydrogeology OP-1123
- electrokinetic effects**
 California
 rock mechanics OF 94-0228
 seismology OP-262
- electromagnetic logging**
 ground water OP-2283
- electromagnetic methods**
 OF 94-0228; FS 0121-95; OP-1934
 ground water P 1415-A
- electromagnetic surveys**
 Alaska, metal ores OP-424; OP-425; OP-427
 Florida
 ground water OP-1948
 marine geology WRI 94-4081
 geophysical surveys OP-1661
 Greenland, Quaternary OP-446
 Hawaii, magmas OP-47; OP-1090
 Minnesota, metal ores OP-862
 Mississippi, environmental geology C 1108
 Oman, hydrogeology OP-1801
 Rocky Mountains, geophysical surveys OP-1660
 United Arab Emirates, hydrogeology OP-1801
- electron microscopy *see* scanning electron microscopy; transmission electron microscopy
- electron probe**
 California, geochemistry OP-790
 geochemistry OP-130
- electronic publishing**
 OP-1034
 Alaska, hydrology YR
- elementary school**
 OF 94-0352; OP-1588; OP-2245
 California, earthquakes OF 95-0022
 industrial minerals B 2111
 Washington OF 94-0636
- Elevenmile Canyon Caldera**
 structural geology OP-454
- Elgin Deposit**
 metal ores OP-663
- ELISA**
 environmental geology OF 94-0670
 geochemistry OP-1043
 ground water OF 94-0670
 pollution OF 94-0670; OP-1267; OP-2089
 soils OF 94-0670
- Elizabeth Deposit**
 metal ores OP-870
- Elk Basin Quadrangle**
 paleomagnetism OP-403
- Elk Lake**
 Quaternary OF 94-0578; OP-1290
- Elk Massif**
 petrology OP-1827
- Elk Rock Reach**
 hydrogeology OP-2116
- Elkhorn Mountains**
 sedimentary petrology OP-1622
- Ella Dolomite**
 sedimentary petrology P 1525
- Ellenton Formation**
 Paleocene OP-1359
- Ellenville Deposit**
 metal ores OP-303
- Ellesmerian Orogeny**
 Alaska
 OP-1624
 areal geology OP-330; OP-641
 energy sources OP-65; OP-576
 Yukon Territory OP-1624
- Ellisville Pluton**
 magmas P 1529
- Ellsworth Shale**
 areal geology OP-295
- Elm Lick coal seam**
 sedimentary petrology OF 94-0298
- Elmore Ranch earthquake 1987**
 seismology OP-1475
- Ely Deposit**
 metal ores OP-870
- Ely Limestone**
 energy sources OF 94-0670
- Elysian Park Fault**
 engineering geology OP-891
- Elysium I-2397; OP-35; OP-916**
- embankments**
 engineering geology OP-833
 Louisiana, waterways OF 94-0275
- embayments**
 California, Quaternary OF 94-0568
 Florida
 continental shelf OP-1425
 marine geology WRI 94-4081
- embryos**
 Utah, Vertebrata OP-145
- emerald**
 Pakistan, gems OP-1303
- emergent coastlines**
 Marshall Islands, stratigraphy OP-2254
 Micronesia, stratigraphy OP-2254
- Emerson Fault**
 Quaternary OF 94-0568
 seismology OF 94-0568; OP-375
- Emery coal field**
 palynomorphs OP-184
- Emery Uplift**
 tectonics OP-1556
- Emigrant Gap Pluton**
 metamorphism OP-319
 structural geology OP-1462
- emission spectroscopy** *see also* inductively coupled plasma methods.
 geochemistry OP-130
- Emperor Seamounts**
 Quaternary OP-2315
- Empire Colorado**
 structural geology OP-1247
- Empire Deposit**
 metal ores OP-663
- employment YR**
- Emporia Virginia**
 geophysical surveys OF 94-0253
 Pliocene OP-2071
- Emsian**
 Alaska OP-826
- en echelon faults** *see also* pull-apart basins.
 California OP-705
 North Carolina OP-1202
 Virginia OP-1202
- enargite** *see* copper ores
- ENAS**
 seismology OF 94-0221

Encampment River Granodiorite

Proterozoic OP-1982

encroachment (ground water) *see* salt-water intrusion**encrustations**

New Mexico, sedimentation OP-1276

Endicott Group

B 2107

coal OP-972

Endicott Mountains

areal geology OP-641

deformation OP-479

Mohorovicic discontinuity OP-2301

structural geology OP-2247

tectonics OP-1850; OP-2248

endogene processes

Arizona, metal ores OP-1606

Colorado, metal ores OP-733

metal ores OP-870

South Carolina, gold ores OP-2090

Spain, metal ores OP-22

Endopterygota *see* Hymenoptera**Energy Field**

energy sources OF 94-0298

energy sources *see also* coal; coalbed methane; geothermal energy; natural gas; oil sands; oil shale; petroleum; tight sands.

C 1108; OF 94-0298; OP-412

Atlantic Coastal Plain, oceanography MF-2268

California, environmental geology C 1108

Commonwealth of Independent States YR conservation C 1108

Europe YR

Gulf Coastal Plain, ground water C 1108

New Mexico B 2063

Ontario, environmental geology C 1108

Pacific Ocean, plate tectonics OP-1443

Pennsylvania, environmental geology C 1108

Rocky Mountains, environmental geology YR; C 1108

waste disposal C 1108

Enewetak Atoll

stratigraphy OP-2254

engineering geology *see* dams; earthquakes; explosions; geologic hazards; highways; land subsidence; nuclear facilities; permafrost; reservoirs; rock mechanics; soil mechanics; tunnels; underground installations; waste disposal; waterwaysengineering geology maps *see also* geotechnical maps.

Puerto Rico OF 95-0072

engineering, petroleum *see* petroleum engineering**England**

metal ores, Cornwall England OP-2126

Englewood Quadrangle

maps OF 94-0655

English Channel Islands

magmas C 1129

enhanced recovery *see also* secondary recovery.

California, seismology OP-254

Enigma Ridge

crystalline rocks OP-362

Eniwetok Atoll *see* Enewetak Atollenstatite achondrites *see* chladnite**enstatite chondrites**

petrology OP-469

Entisols

Idaho OP-119

Washington OP-119

Entrada Sandstone

OF 94-0583

metal ores OP-98

sedimentary petrology OP-1882

environmental geology *see* conservation; ecology; geologic hazards; impact statements; pollution; reclamation; waste disposal**environmental geology maps**

Appalachians, impact statements OF 95-0589

Environmental Sensitivity Index

environmental geology C 1108

enzyme-linked immunosorbent assays

ground water OF 94-0670

Kansas

pollution OF 94-0670

soils OF 94-0670

Michigan, environmental geology OF 94-0670

Eocene *see also* Challis Volcanics; Sheep Pass Formation.

Alaska OF 94-0653; OP-725; OP-2074; OP-2184

Antarctica OP-2305

Aquia Formation OF 94-0708; OF 95-0478

Atlantic Coastal Plain OP-1960

California B 1995-H,I; OF 94-0577; OP-1036; OP-1955

Chuckanut Formation, sedimentary petrology OP-108; OP-1182

Claiborne Group, sedimentary petrology OP-2256

Cockfield Formation, ground water WRI 95-4011

Colorado OP-526

Cook Mountain Formation, ground water WRI 95-4011

Crescent Formation

faults OP-2079

neotectonics OP-1980

structural geology OP-1592; OP-1979

tectonophysics OP-1975

Egypt OP-1012; OP-1528

Georgia OP-1358

Green River Formation

energy sources OP-297

geologic hazards OP-1101

non-metal deposits OF 95-0476

Idaho P 1525; B 2081; OP-1650; OP-2124

Mexico OP-122; OP-1036

Montana OF 95-0098; OP-1492; OP-2224

Nanjemoy Formation OF 94-0217; OF 94-0708; OF 95-0478

Nevada B 1988-K; B 2081; OP-105; OP-744

New Jersey P 1554; OP-735; OP-1959

Ocala Group

continental shelf OP-2293

ground water WRI 94-4010

Oregon OF 95-0040; OP-1176; OP-1177

Pacific Ocean OP-1162

Piney Point Formation OF 94-0217; OF 94-0708

Russian Federation OP-1573

Santee Limestone OP-1359

South Carolina OP-1358; OP-1393

Tennessee P 1538-I

Tepee Trail Formation OP-1517

Texas OP-363

Tyee Formation, natural gas OF 95-0093

Umpqua Formation, natural gas OF 95-0093

Utah B 1988-K; OP-105; OP-744; OP-1390

Virginia OP-735; OP-1977

Wapiti Formation, sedimentary petrology OP-936

Washington B 2085-A; OF 94-0670; OP-1042; OP-1181; OP-1376; OP-1593

Willwood Formation

OP-1155

areal geology OP-280

Mammalia OP-1154; OP-1527

sedimentary petrology OP-780

weathering OP-928

Wind River Formation, energy sources C 1108; OP-1621

Eocene *see* Paleogene**Eolia Quadrangle**

maps MF-2277

colian features *see also* coastal dunes; continental dunes; desert pavement; deserts; sand sheets.

Alaska, Quaternary OP-124

stratigraphy OP-1319

colianite

Pennsylvania OF 95-0240

West Virginia OF 95-0240

epeiric seas *see* epicontinental seasepeirophoresis theory *see* continental drift**ephemeral lakes**

New Mexico, ground water OP-2308

Texas

ground water OP-2308

Quaternary OP-812

EPIC

hydrology OF 95-0163

epicenters

Alaska

earthquakes EV

Quaternary OP-1098

seismology OP-697; OP-1459

Arkansas, deformation P 1538-J

California

earthquakes OF 95-0204; OP-592; OP-2119

elastic waves OP-1694

engineering geology OP-1467; OP-1585

geologic hazards OP-419

seismology OP-203; OP-371; OP-460; OP-818; OP-1541; OP-2333

Chile, Quaternary OP-1098

earthquakes PDE; OF 93-0600-D; OF 93-0610-A; OF 93-0610-B; OF 93-0611-A; OF 93-0611-B; OF 93-0612-A; OF 93-0612-B; OF 94-0600-A; OF 94-0600-B; OF 94-0600-C; OF 94-0601-A; OF 94-0601-B; OF 94-0602-A; OF 94-0602-B; OF 94-0603-A; OF 94-0603-B; OF 94-0604-A; OF 94-0604-B; OF 94-0605-A; OF 94-0605-B; OF 94-0606-A; OF 94-0606-B; OF 94-0607-A; OF 94-0607-B; OF 94-0608-A; OF 94-0608-B; OF 94-0609-A; OF 94-0609-B

East Pacific Ocean Islands, engineering geology C 1121

Hawaii, seismology OP-1241

Illinois, seismology OP-1451

Indiana

earthquakes OF 94-0298

seismology OP-1451

Italy, earthquakes PDE

Japan, earthquakes EV; OP-1800

Mississippi Valley, seismology OP-2013

Missouri, earthquakes OF 94-0298

Nevada, seismology OP-614

Oregon

earthquakes EV

seismology OP-203

Pacific Ocean, seismology OP-1329

plate tectonics SM

- Polynesia, engineering geology C 1121
seismology OP-324; OP-1917
Texas, petroleum OP-1286
Turkey, Quaternary OF 94-0568
Washington, seismology OP-573
- epicontinental seas**
Montana, stratigraphy B 2112; OP-596
North Dakota, stratigraphy B 2112
- epidote**
Alaska, petrology OP-229
Alps, magmas C 1129
Argentina, geochemistry C 1129
Brazil, geochemistry C 1129
British Columbia, petrology C 1129
Colorado, petrology C 1129
faults OF 94-0228
- epigene processes**
Colorado
 geochemistry OP-535; OP-1700
 metal ores OP-98
 Oligocene OP-1691
Idaho
 metal ores B 2064-A-R
 polymetallic ores B 2064-A-R
Missouri, petrology OP-1299
Nevada, geochemistry OP-535
- Epirus Greece**
Quaternary OF 94-0568
- epithermal processes**
Alaska, metal ores OP-1195; OP-1893
California
 economic geology OP-216
 metal ores OP-415; OP-663; OP-720; OP-801; OP-940
Colorado
 geochemistry OP-1713
 geophysical surveys OP-1118
 metal ores OP-333; OP-728; OP-733; OP-1096; OP-1793
Idaho
 faults P 1525
 gold ores P 1525
 metal ores B 2064-A-R
New York, metal ores OP-303
Spain, metal ores OP-22
- epizonal metamorphism**
New Mexico, geochemistry OP-959
- Equisetales**
West Virginia OP-2304
- Equity Mine**
metal ores OP-2126
- Equus Beds Aquifer**
pollution OF 94-0497
- erionite**
Oregon, sedimentary petrology B 2108
- EROS**
geophysical surveys OP-416
- erosion** *see also* abrasion; erosion features; erosion rates; geologic hazards; glacial erosion; landslides; littoral erosion; planation; rills; shorelines; slope stability; trenching; valleys; waterways; weathering.
OP-559; OP-2069; OP-2182
- Alaska
 energy sources OP-1270
 Quaternary OP-1457; OP-1805
 sedimentary petrology OP-1361
- Arizona
 fluvial features OP-1607
 hydrogeology WRI 95-4010; OP-521
 hydrology OF 94-0485
- Quaternary OF 95-0591; OP-1730
- Atlantic Coastal Plain, engineering geology WRI 94-4164
- Atlantic Ocean
 Cenozoic OP-1198
 oceanography OP-1679
 stratigraphy OP-1334
- British Columbia
 Quaternary OP-2008
 sedimentary petrology OP-1361
- California
 deformation OP-1774
 geochemistry OP-1955
 pollution OP-2047
 Quaternary OP-1216
 structural geology OP-1750
 waste disposal OP-2291
- Colorado, pollution OP-92
- Costa Rica, Quaternary OP-1952
- engineering geology OP-519
- environmental geology C 1108; OP-1085
- Florida, Quaternary OP-1719
- geomorphology OP-1368; OP-1792; OP-2035
- Georgia, soils OP-1555
- Great Lakes, geomorphology OP-285
- Great Lakes region, geomorphology OP-285
- ground water OP-1167
- Guatemala, Quaternary OP-1952
- hydrogeology OP-2261
- Idaho, pollution OP-1156
- Illinois, Quaternary OP-1630
- Indonesia, Quaternary OP-1952
- Iowa
 highways OP-272
 Quaternary OP-1630
- Italy, earthquakes PDE
- Japan, Quaternary OP-1952
- Louisiana
 conservation OF 94-0275
 ecology OF 94-0275
 geomorphology OF 94-0275
 shore features OF 94-0275; OP-1937
- Maryland, stratigraphy OP-736
- Montana
 non-metal deposits OP-1492
 stratigraphy OP-596
- Nevada
 fluvial features OP-2289
 orogeny OP-619
 structural geology OP-1469
- New Mexico, geomorphology WRI 94-4205
- New York, engineering geology OP-113
- Northwest Territories, oceanography OP-396
- Ohio
 frost action OF 95-0224
 geomorphology OF 95-0224
 shore features OF 95-0224
- Pacific Ocean
 Cenozoic OP-1198
 plate tectonics OP-965
 tectonophysics OP-56
- Pakistan, sedimentary petrology OP-1386
- Papua New Guinea, Quaternary OP-1952
- Peru, stratigraphy OP-200
- Philippine Islands, Quaternary OP-1952
- plate tectonics OP-1256
- pollution OP-692
- Puerto Rico, environmental geology OP-1405
- sedimentary petrology OP-879; OP-2104
- stratigraphy OP-1319; OP-2099
- Tennessee
 hydrology OF 95-0156; OP-2162
 pollution OF 95-0312
- Utah
 conservation OF 94-0670
 orogeny OP-619
 Quaternary OP-1730
 stratigraphy OP-1731
- Virginia, stratigraphy OP-736
- Washington
 dams OP-2038
 Quaternary OP-1952; OP-2008
 sedimentary petrology OP-1182
- Wisconsin, hydrology OF 95-0163
- Wyoming, Quaternary OP-355
- erosion features** *see also* arroyos; badlands; bluffs; cliffs; erosion surfaces; gullies; pediments; peneplains; rills.
Colorado, fluvial features OP-2259
Idaho, Quaternary OP-1900
Oman, hydrogeology OP-1801
Oregon, Quaternary OP-680
Senegal, environmental geology OP-918
Tennessee, fluvial features OP-208
United Arab Emirates, hydrogeology OP-1801
Washington, Quaternary OP-680
- erosion rates**
California, tectonophysics OP-514
Egypt, sedimentary petrology OP-1770
Georgia, pedogenesis B 1589-E
Illinois, geomorphology OP-452
Louisiana, geomorphology OF 94-0275
soils OP-322
- erosion surfaces**
China, Quaternary OF 94-0568
Montana, Cretaceous OP-743
- erosional features** *see* erosion features
- erosional unconformities**
California
 geophysical surveys OP-1759
 sedimentary petrology B 1995-H,I
Oregon, Quaternary OP-680
Washington, Quaternary OP-680
- erratics**
Oregon, Quaternary OP-680
Washington, Quaternary OP-680
- eruptions** *see also* explosive eruptions; plinian-type eruptions; pyroclastics; strombolian-type eruptions; volcanic earthquakes; volcanic risk; volcanoes.
OP-470
- Alaska
 engineering geology OP-1683
 palyonorms OP-184
 seismology OP-2157
- Andes, Quaternary OP-1511
- Antarctic Ocean, Quaternary OP-54
- California, volcanism OP-531
- Central America, Quaternary OP-1257
- Colorado
 Oligocene OP-1625
 petrology OP-840
- Commonwealth of Independent States
 Quaternary OP-1257
 stratigraphy OP-1212
- East Pacific Ocean Islands
 magmas OP-309
 stratigraphy OP-1736
- Galapagos Islands, magmas OP-309
- Hawaii
 geologic hazards OP-1497; OP-1722
 Quaternary OP-1328; OP-1453
- Indonesia, Quaternary OP-392
- Montana, geochemistry OP-2133
- Nevada

- Eocene OP-105
 geochronology B 2081
 petrology OP-836
 New Mexico, petrology OP-840
 New Zealand, petrology OP-1542
 Oregon
 lava OP-1254
 petrology OP-2172
 Pacific Ocean
 lava OP-1351; OP-1941; OP-2132
 ocean floors OP-2097
 oceanography OP-503
 sea water OP-842
 Philippine Islands
 engineering geology OP-1683
 Quaternary OP-1886
 Polynesia, stratigraphy OP-1736
 Utah
 Eocene OP-105
 neotectonics OP-1494
 palynomorphs OP-184
 Washington
 Holocene OP-1513
 lava OP-1254
 petrology OP-1512
 eruptive rocks *see* volcanic rocks
Erzgebirge
 geochemistry C 1129
 metasomatism C 1129
 petrology C 1129
Erzincan Turkey
 earthquakes OF 94-0568
 Quaternary OF 94-0568
Escanaba Trough
 geochemistry B 2022
 heat flow B 2022
 ocean floors B 2022
 oceanography B 2022; OF 94-0711
 petroleum OP-513
 Quaternary B 2022
 sea-floor spreading B 2022
 sulfides OP-1829
 escarpments *see* scarps
Escherichia coli
 hydrology WRI 94-4077
eskers
 Maine, Quaternary OP-990
 Massachusetts, Quaternary OP-990
 Montana, non-metal deposits I-2446
Estancia Basin
 hydrogeology WRI 93-4163
Estonia *see* Baltic Shield
estuaries *see also* estuarine sedimentation; waterways.
 California
 OF 95-0326
 environmental geology YR
 geochemistry OP-512; OP-954
 geophysical surveys OF 94-0568
 hydrology OF 94-0470; OF 94-0471; OF 95-0327
 pollution OP-1534
 Delaware, pollution OP-1077
 environmental geology OP-511
 Louisiana OF 94-0275
 Maryland, pollution OP-1077
 New Jersey, hydrology WRI 91-4141
 North Carolina, hydrology OF 94-0454; OF 94-0511
 Spain, environmental geology OP-662
estuarine sedimentation
 California, hydrology OF 94-0543
 Florida WRI 94-4081
 Washington, Quaternary OP-205
Ethai *see* Red Sea Hills
ethane
 Colorado, energy sources OP-297
 energy sources YR
 Northwest Territories, geochemistry OP-192
 Utah, energy sources OP-297
ethylene
 pollution OP-138
ethylene glycol
 pollution OP-138
Etiwuk Group
 deformation OP-1250
Eu *see* europium
eugeosynclines
 Massachusetts, structural geology OP-782
 Nevada, gold ores OP-2151
Eurasia
 petrology C 1129
 seismicity OP-2056
Eurasian Plate
 Japan
 plate tectonics OF 94-0568
 Quaternary OF 94-0568
 Pakistan, structural geology B 2126; OF 94-0670
 Philippine Islands, geologic hazards OP-1048
Eureka Mine
 metal ores OP-870
Eureka Peak Fault
 seismology OP-1541
Eureka Tuff
 metal ores OF 94-0291
Europe *see also* Alps; Armenia; Baltic region; Belarus; Carpathians; Central Europe; Pyrenees; Southern Europe; Ukraine; Western Europe.
 areal geology, Greater Caucasus OP-154
 earthquakes, Dinaric Alps PDE
 engineering geology
 Kola Peninsula OP-650
 Kola Russian Federation OP-650
 environmental geology, Dnieper River OP-2302
 geochemistry
 Baltic Shield C 1129
 Bohemia C 1129
 Bohemian Massif C 1129
 Czech Republic C 1108
 Erzgebirge C 1129
 Greek Macedonia C 1129
 Iberian Peninsula C 1129
 Kola Peninsula C 1129
 Lusatia C 1129
 Variscides C 1129
 geochronology OP-510
 geophysical surveys
 Kola Peninsula OP-958
 Kola Russian Federation OP-651
 inclusions
 Bohemian Massif C 1129
 Variscides C 1129
 lead-zinc deposits, Silesia OP-908
magmas
 Baltic Shield C 1129
 Black Forest C 1129
 Dinaric Alps C 1129
 Fennoscandia C 1129
 Serbia C 1129
 Variscides C 1129
 metasomatism
 Bohemian Massif C 1129
 Erzgebirge C 1129
 Lusatia C 1129
 Variscides C 1129
 natural gas
 Pannonian Basin OP-155
 Timan-Pechora region OP-2219
 paleobotany OP-644
 petroleum, Timan-Pechora region OP-152
 petrology
 Baltic Shield OP-1827
 Erzgebirge C 1129
 Variscides C 1129
 Proterozoic, Pechenga OP-2242
 Quaternary
 Fennoscandia OF 94-0568
 Salonika Greece OF 94-0568
 seismology, Lesser Caucasus OP-140
 stratigraphy
 OP-766
 Pannonian Basin OP-524; OP-951
 structural geology
 Dnieper-Donets Basin OP-948
 Pripet Basin OP-948
 tectonophysics, Kola Peninsula OP-2228
 weathering, Serbia OP-2052
European Plate *see* Eurasian Plate
europium
 Japan, geochemistry C 1129
 Virginia, petrology C 1129
eustacy
 Alaska
 Pliocene OP-1171
 Quaternary OP-1221
 Antarctica, Pliocene OF 94-0588
 Atlantic Coastal Plain, sedimentary petrology B 2110
 California, sedimentary petrology B 1995-H.I
 Colorado, stratigraphy OP-1384
 Florida, Devonian OP-1971
 Georgia, Devonian OP-1971
 Greenland, Pliocene OP-1171
 Louisiana, Quaternary OP-1936
 Marshall Islands, stratigraphy OP-2254
 Micronesia, stratigraphy OP-2254
 New England, Quaternary OP-1658; OP-1659
 New Jersey, stratigraphy OP-2171
 Pennsylvania, sedimentation B 2110
 Pennsylvanian B 2110; OP-1228
 Puerto Rico, neotectonics OP-2179
 stratigraphy OP-809; OP-2099
 Virginia, Pliocene OP-2071
 Western Interior
 Cretaceous P 1561
 stratigraphy OP-2030; OP-2063
Eutaw Aquifer
 ground water WRI 94-4074; WRI 94-4223
Eutheria *see* Cetacea; Edentata; Primates;
Rodentia
euxenite
 Idaho, non-metal deposits P 1525
Evangeline Aquifer
 ground water WRI 95-4038; OF 94-0345;
 OF 95-0182; OF 95-0183
evaporites *see also* anhydrite; gypsum; halite; potash; salt.
 OP-2140; OP-2290
 Colorado
 geologic hazards MF-2295
 stratigraphy B 2110

- Florida, Devonian OP-1971
 Georgia, Devonian OP-1971
 Indiana, petroleum B 2094-D
 Kansas OF 95-0256
 stratigraphy OP-225; OP-1319
 Texas, ground water WRI 95-4030
 Utah
 B 2110; OP-1179
 stratigraphy B 2110
- Everglades**
 ecology OF 95-0007
 environmental geology C 1108; FS 0134-95
- Evington Group**
 magmas OP-1126
- excavations**
 Arkansas, Quaternary P 1538-H
 California, seismicity OP-1769
 Missouri, Quaternary P 1538-H
- exhalative processes**
 Alaska, metal ores OP-1893; OP-1895
 Caribbean region, metal ores B 2057
 Idaho, metal ores B 2064-A-R
 Lesser Antilles, metal ores B 2057
 metal ores B 2110
 Pennsylvania, metal ores OP-1895
- exhumation**
 Alaska, gold ores OP-624
 Idaho, mineral resources B 2064-A-R
 Italy, petrology C 1129
- Exile Hill Nevada**
 environmental geology OF 93-0477
- exinite** *see also* sporinite.
 sedimentary petrology OP-1078
 Texas, sedimentary petrology OP-2256
- Exmore Breccia**
 Eocene OP-735
- Exmouth Plateau**
 Cretaceous OP-1161
- exobiology** OP-485; OP-1634
- exogenous inclusions *see* xenoliths
- exotic terranes**
 Alaska, geophysical surveys OP-10
- expert systems** *see also* PROSPECTOR.
 hydrology WRI 94-4168
 petroleum B 2118; OP-1814; OP-1815
- explosions**
 California
 OP-2252
 ground water OP-2066
 geomorphology OP-2033
 Nevada, ground water OP-2066
 nuclear explosions
 OP-2056
 Canada OP-960
 China OF 95-0562
 geophysical surveys OP-1695
 Nevada OF 94-0491; OF 94-0618; OP-2230; OP-2233
 United States OP-960
- explosive eruptions** *see also* phreatomagmatism;
 plinian-type eruptions.
 OP-1845
- Alaska
 geochemistry B 2139
 petrology B 2139
 Quaternary OP-1920; OP-1921; OP-2021
 Bolivia, structural geology OP-2244
 Colorado, petrology OP-546
 Costa Rica, Quaternary OP-1952
 Guatemala, Quaternary OP-1952
 Hawaii, Quaternary OP-1768
- Idaho, geochemistry OP-716
- Indonesia
 elastic waves OP-1498
 Quaternary OP-1952
- Italy, seismology OP-1239
- Japan, Quaternary OP-1952
- Nicaragua, geochemistry OP-1678
- Papua New Guinea, Quaternary OP-1952
- Philippine Islands, Quaternary OP-1952
- Washington
 geochemistry OP-315; OP-1407
 Quaternary OP-1023; OP-1952
- Yukon Territory, petrology B 2139
- exposure age**
 geochronology OP-368
- extension faults**
 Basin and Range Province OP-2115
 California, metal ores OP-801
 Great Basin OP-2115
 Japan, crust OF 94-0228
 Montana, crust OF 94-0228
- Nevada
 OP-744; OP-1440; OP-1944
 energy sources OF 94-0670
- Utah OP-744
- extension tectonics**
 OP-1844
- Alaska, gold ores OP-624
- Andes, Quaternary OP-1511
- Arizona
 OP-15; OP-1110; OP-1666
 copper ores OP-291
 magmas OP-887
 petrology OP-991
- Basin and Range Province
 metal ores OP-1874
 tectonophysics OP-515; OP-814
- California
 OF 94-0568; OP-822; OP-824; OP-1110;
 OP-1462; OP-2107; OP-2332
 ground water OP-1362
 magmas OP-313
 natural gas OP-542
 Quaternary OP-1040; OP-2142
 sedimentary petrology OP-159
 seismology OP-820
- Canada
 OP-2271
 tectonophysics OP-2265
- Europe, geochemistry OF 94-0228
- Great Basin, metal ores OP-1874
- Greece OP-453
- Idaho
 OP-1581; OP-2124; OP-2125
 mineral resources B 2064-A-R
- Italy, petrology OP-754
- Mexico OP-824
- Montana OP-480; OP-1943
- Nevada
 OP-15; OP-619; OP-631; OP-1323; OP-1740; OP-1976
 Eocene OP-105
 gold ores OP-20; OP-438; OP-2151
 ground water OP-1362
 magmas OP-258
 petrology OP-836; OP-1817
 volcanism OP-1388
- New Mexico OP-1878
- Norway OP-158
- Oregon, Quaternary OP-1040
- tectonophysics OP-985
- United States
 OP-2271
 tectonophysics OP-2265
- Utah
 B 2056; OP-619; OP-1494; OP-1740
 Eocene OP-105
- Extremadura Spain *see* Caceres Spain
- Exuma Sound**
 Quaternary OP-1866
- Exxon Valdez**
 pollution C 1108
- F**
- F** *see* fluorine
- facies *see* actinolite facies; amphibolite facies;
 blueschist facies; eclogite facies; granulite facies;
 greenschist facies; prehnite-pumpellyite facies
- facilities, nuclear *see* nuclear facilities
- faecal pellets *see* fecal pellets
- Fairbanks Alaska**
 geochemistry B 2107
 hydrogeology OF 95-0172
 seismology OP-1459
- Fairplay Colorado**
 geologic hazards MF-2295
- Fairview Peak**
 Quaternary OF 94-0568
- Fairweather Fault**
 sedimentation OP-2160
- Fairweather-Baranof Belt**
 petrology OP-100
- Falkland Plateau**
 Cretaceous OP-1161
- Fall Creek Indiana**
 hydrology WRI 94-4066
- Falls Church Virginia**
 conservation OF 94-0592
 Ordovician B 2060
- Famatinian Orogeny**
 geochemistry C 1129
 magmas C 1129
 petrology C 1129
- Famennian**
 Kazakhstan OP-1258
- Far East** *see also* China; Hong Kong; Indonesia;
 Japan; Laos; Mongolia; Philippine Islands; Taiwan;
 Vietnam.
 plate tectonics OP-1894
- Farallon Islands**
 Quaternary OF 95-0034
 waste disposal OP-1610
- Farallon Plate**
 Alaska, gold ores OP-2184
 California, tectonophysics OP-82; OP-1448
 Mexico
 petrology OP-827
 tectonophysics OP-82; OP-1448
 tectonophysics OP-1136
- Farallones Gulf**
 geochemistry OF 95-0527
- Farewell Alaska**
 areal geology OP-201
 geologic hazards OF 95-0175
- Fargo North Dakota**
 environmental geology OP-2268
 hydrology WRI 94-4058

Farrier Quadrangle

maps OF 94-0625

farside OP-676**FASPU**

natural gas OP-1121

fassaite

phase equilibria OP-611

Father Pluton

geochemistry C 1129

fathometersAtlantic Coastal Plain, engineering geology
WRI 94-4164fault blocks *see* block structures**fault scarps**

Australia, Quaternary OF 94-0568

California

neotectonics OP-2070

Quaternary OF 94-0568; OP-2006

seismology OP-2084

China, Quaternary OF 94-0568

Dominican Republic, Quaternary OF 94-0568

Greece, Quaternary OF 94-0568

Hawaii, Quaternary OP-2246

Idaho

neotectonics OF 94-0568

Quaternary OF 94-0568

Israel, Quaternary OF 94-0568

Italy

Quaternary OF 94-0568

structural geology OF 94-0568

Japan, Quaternary OF 94-0568

Nevada

Quaternary OP-2006

structural geology OP-1469; OP-1904

Oklahoma, Quaternary OP-463

seismology OP-2135

Sweden, Quaternary OF 94-0568

Tennessee, Quaternary OF 94-0568

Utah

Quaternary OF 94-0568

structural geology OP-1734

Wyoming, faults OP-476

fault valves

Quebec, gold ores OF 94-0228

seismology OF 94-0228

Victoria Australia, deformation OF 94-0228

fault zones *see also* rift zones.

Arkansas, seismology MF-2279

Atlantic Ocean, oceanography B 2079

British Columbia, faults OP-248

California

deformation OP-2332

earthquakes OP-1708

elastic waves OP-212

faults OP-1108

geophysical surveys OP-2046

Mohorovicic discontinuity OP-1706

neotectonics OP-1145

oceanography OP-1918

Quaternary B 1982

rock mechanics OF 94-0228

seismicity OP-1420; OP-1999

seismology OF 95-0038; OP-262; OP-460;

OP-539; OP-818; OP-1130; OP-1271;

OP-1364; OP-1596; OP-1637; OP-1640;

OP-1703; OP-1704; OP-1705; OP-1984;

OP-2084; OP-2325

structural geology OP-705; OP-872; OP-

1234; OP-1701; OP-1773; OP-1914

tectonophysics OP-1444

engineering geology OF 95-0028; OP-1841

faults OP-73; OP-240

geophysical surveys OF 94-0228

geophysics OP-552

Illinois, faults OF 94-0298

Kentucky, faults OF 94-0298

Missouri, seismology MF-2279

Nevada, geochemistry OP-2326

North Carolina

mineral resources OP-428

structural geology OP-1202

Oregon

structural geology OP-2054

tectonophysics OP-1444

Pacific Ocean

oceanography B 2079

tectonophysics OP-1246

seismology OP-209

South Carolina, mineral resources OP-428

Spain, metal ores OP-799

structural geology OF 94-0228; OP-401; OP-

402; OP-1840

tectonics OP-1206

United States, metal ores OP-799

Utah, faults OP-1390

Vermont, Silurian OP-1068

Virginia

OP-63

structural analysis OP-1091

structural geology OP-1202

Wales, geochemistry C 1129

Washington, structural geology OP-2054

Wyoming, structural geology OF 94-0228

faulting *see* faults**Faultless Site**

environmental geology OF 95-0284

faults *see also* block structures; breccia; decollement; deformation; earthquakes; fault scarps; fault zones; folds; foliation; fractures; geologic hazards; gouge; grabens; half grabens; lineaments; seismic moment; shear zones; thrust sheets; wall rocks.

OF 94-0228; OP-210; OP-407; OP-759

active faults

OP-1094; OP-1190

Alaska B 2107; OF 94-0568; OP-697

Argentina OF 94-0568

Arkansas MF-2279; OP-2285

Australia OF 94-0568; OP-2334

Bahamas OP-1314

Basin and Range Province OF 94-0568; OP-

1741

British Columbia OF 94-0568

California B 1982; C 1130; EV; OF 93-

0684; OF 94-0228; OF 94-0568; OF 94-

0692; OF 95-0022; OF 95-0038;

OF 95-0479; OF 95-0597; FS 0132-95;

OP-107; OP-203; OP-371; OP-389; OP-

419; OP-429; OP-432; OP-491; OP-783;

OP-891; OP-892; OP-893; OP-1116; OP-

1234; OP-1309; OP-1525; OP-1584; OP-

1638; OP-1640; OP-1701; OP-1839;

OP-2070; OP-2146; OP-2334

Canada OP-2334

Caribbean region OP-1739

China OF 94-0568; OP-1638

Colorado OP-325

crust OF 94-0228

Djibouti OP-2152

Dominican Republic OF 94-0568; OP-1751

Ecuador OF 94-0568

Finland OF 94-0568

Great Basin OF 94-0568

Greece OF 94-0568

Hawaii OP-696

Idaho OF 94-0568

India OP-2334

Iran OF 94-0568

Israel OF 94-0568

Italy OF 94-0568; OP-892

Japan OF 94-0568; OP-893; OP-1800

Middle East OP-923

Missouri MF-2279

Nevada OF 93-0477; OF 94-0568; I-2501;

OP-1994

New Zealand OF 94-0568

Oklahoma OP-463; OP-2334

Oregon OP-72; OP-203

Philippine Islands OF 94-0568

Puerto Rico OF 94-0568

Quaternary OF 94-0568

Quebec OF 94-0568

rock mechanics OF 94-0228

Scotland OF 94-0568

seismology OP-1348

Sweden OF 94-0568

Tennessee OF 94-0568

Turkey OF 94-0568

United States OF 94-0568

Utah OF 94-0568

Washington OP-72

Alaska

OP-672

energy sources OP-574

Quaternary OP-628; OP-1921

tectonophysics OP-408

Arizona

copper ores OP-1381

engineering geology OP-1435

Arkansas OP-956

Bolivia, seismology OP-961

California

OP-320; OP-1007; OP-1205; OP-1225; OP-

1430; OP-1577; OP-2288

elastic waves OP-1694

geochemistry OP-790

geomorphology OP-775

geophysical surveys OF 94-0590; OP-817

hydrogeology OP-2298

oceanography OP-1434

plate tectonics OP-1431

sedimentary petrology B 1995-H.I

seismicity OP-462

seismology OF 94-0228; OP-591; OP-714;

OP-820; OP-1387; OP-1541; OP-1600;

OP-1617; OP-1761; OP-2333

stratigraphy OP-1036

Colorado

OP-2243

hydrogeology OF 95-0569

pollution OP-730

stratigraphy OP-1384

conjugate faults

California OP-461; OP-649

Hawaii OP-1709

detachment faults

Alaska OP-2248

Arizona OP-291; OP-669; OP-1110; OP-

1606; OP-1666

California OP-216; OP-669; OP-1110

Greece OP-453

Nevada OP-1323; OP-1440

Peru OP-200

Utah B 2056; OP-1494

dip-slip faults

California OP-1637; OP-1778

Indiana OF 94-0298

- Kentucky OF 94-0298
 Nevada OP-2276
 en echelon faults
 California OP-705
 North Carolina OP-1202
 Virginia OP-1202
 extension faults
 Basin and Range Province OP-2115
 California OP-801
 Great Basin OP-2115
 Japan OF 94-0228
 Montana OF 94-0228
 Nevada OF 94-0670; OP-744; OP-1440;
 OP-1944
 Utah OP-744
 geophysics OP-2267
 growth faults, Nevada OP-454
 Hawaii, magmas OP-1372
 high-angle faults
 Alaska OP-479; OP-1169; OP-1447; OP-
 2292
 California OP-216; OP-1774
 Canada OP-1169
 Idaho B 2064-A-R
 Nevada OP-1904; OP-2143
 Victoria Australia OF 94-0228
 Idaho
 P 1525; OP-2125
 metal ores B 2064-A-R
 Illinois OP-956
 Iowa, geomorphology OP-2034
 left-lateral faults
 California OF 94-0568; OP-818; OP-1586;
 OP-1839
 China OF 94-0568
 Greece OF 94-0568
 Nevada OP-1323; OP-1904; OP-2276
 Philippine Islands OP-1048
 Puerto Rico OP-1304
 tectonophysics OP-985
 listric faults
 Arizona OP-1666
 California OP-824
 Mexico OP-824
 Nevada OF 94-0670
 Utah OP-2111
 Louisiana, energy sources OF 94-0228
 low-angle faults
 Alaska OP-1682
 California OF 94-0568; OP-216
 Hawaii OP-696; OP-1453
 Nevada B 2056; OP-1440; OP-1976
 Utah B 2056; OP-695; OP-1494
 Mexico, stratigraphy OP-1036
 Mississippi Valley, lead-zinc deposits OF 94-
 0298
 Montana
 OP-1454
 sedimentation OP-282
 Nevada
 OP-631
 geomorphology OP-775
 gold ores OP-1245
 petrology OP-1817
 waste disposal OP-997
 New Hampshire OP-1830
 Nicaragua, seismology OP-961
 normal faults
 OF 94-0228; OP-1422
 Alabama OP-2155
 Alaska OP-2292
 Arizona OP-669; OP-1282
 California B 1982; OF 94-0568; OP-669;
 OP-940; OP-1444; OP-1808; OP-2042;
 OP-2120; OP-2332
 Canada OP-994
 Chile OP-1762
 China OF 94-0568
 Colorado OP-1045
 Cyprus OP-2
 Europe OP-598
 Georgia OP-2155
 Greece OP-453
 Idaho B 2064-A-R; OF 94-0568; OP-362;
 OP-1581
 Indiana P 1538-O
 Israel OF 94-0568
 Italy OF 94-0568
 Mississippi Valley P 1538-N
 Missouri P 1538-P
 Montana OP-362; OP-480; OP-1943
 Nevada B 2056; B 2090; OF 94-0228;
 OF 94-0568; OF 94-0670; OP-12; OP-
 20; OP-438; OP-744; OP-1323; OP-
 1820; OP-1904; OP-1944; OP-1976;
 OP-1994; OP-2143
 Oregon OP-1444
 Pacific Ocean OP-56; OP-1033
 Peru OP-1411
 Spain OP-799
 tectonophysics OP-924
 United States OP-799; OP-994
 Utah OP-695; OP-744
 oblique-slip faults
 Chile OP-1762
 Indiana OF 94-0298
 Japan OP-2307
 Nevada OP-2276
 Oregon OP-1128
 United States OP-2307
 ocean floors B 2022
 Ohio, stratigraphy OP-874
 Oregon
 ocean floors OP-123
 petrology OP-2172
 overthrust faults
 Alaska OP-1250
 California OP-542
 Pacific Ocean, ocean floors B 2022
 Pennsylvania, energy sources OP-2058; OP-
 2059
 reverse faults
 OP-1422
 Alabama OP-1988
 Alaska I-2272
 Arkansas P 1538-J
 Basin and Range Province OP-1741
 California OF 94-0568; OP-319; OP-663;
 OP-914; OP-2120
 Canada OP-2265
 Chile OP-1762
 China OF 94-0568
 Ecuador OF 94-0568
 Missouri P 1538-P
 Oregon OP-72
 Pakistan OF 94-0670
 Tennessee OF 94-0568; OP-1988
 United States OP-2265
 Victoria Australia OF 94-0228
 Washington OP-72; OP-1975
 right-lateral faults
 Alaska OP-1447
 California B 1982; OF 94-0568; OP-107;
 OP-212; OP-818; OP-822; OP-824; OP-
 825; OP-1839; OP-2332
 Canada C 1129
 China OF 94-0568
 Ecuador OF 94-0568
 Japan OF 94-0568
 Mexico OP-824
 Nevada OF 94-0568
 New Zealand OF 94-0568
 North Carolina OP-1202
 Russian Federation OP-532
 tectonophysics OP-985
 Virginia OP-1202
 Washington OP-1592; OP-1979
 rock mechanics OF 94-0228
 Russian Federation
 geochemistry OP-1559
 geophysical surveys OP-958
 seismology OP-1477
 strike-slip faults
 OP-1206; OP-2083; OP-2187
 Alaska B 2107; OP-589; OP-626; OP-697;
 OP-727; OP-1398; OP-2074; OP-2075;
 OP-2184
 Arizona OP-15; OP-352
 California B 1982; OF 93-0684; OF 94-
 0228; OF 94-0568; OF 95-0038; OP-82;
 OP-107; OP-159; OP-203; OP-620; OP-
 801; OP-872; OP-893; OP-914; OP-940;
 OP-1130; OP-1207; OP-1271; OP-1374;
 OP-1473; OP-1525; OP-1599; OP-1601;
 OP-1773; OP-1774; OP-2070; OP-2084;
 OP-2120; OP-2144; OP-2153; OP-2195;
 OP-2332
 Canada C 1129
 Canadian Shield C 1129
 Chile C 1129
 China OF 94-0568
 Colorado OP-325
 Dominican Republic OF 94-0568; OP-1751;
 OP-1983
 earthquakes OF 94-0228
 Hawaii OP-1709
 Idaho OP-2124
 Japan OF 94-0568; OP-893; OP-1601
 Mexico OP-82
 Mississippi Valley P 1538-N; B 2094-C
 Nevada B 2081; OP-15; OP-619; OP-1323;
 OP-1388; OP-1904
 New Zealand OF 94-0568
 Oregon OP-72; OP-203; OP-1945
 Pacific Ocean OP-1246
 Pakistan OF 94-0670
 Puerto Rico OP-1304
 Russian Federation OP-532; OP-589
 seismic sources OP-1788
 tectonophysics OP-985
 Turkey OF 94-0568
 Utah OP-619
 Washington OP-72; OP-1592; OP-1979;
 OP-1981
 Tennessee P 1538-I
 Texas
 energy sources OF 94-0228
 ground water WRI 95-4030
 thrust faults
 B 2110; OF 94-0228; OP-1061
 Alaska OF 94-0228; OP-217; OP-1849; OP-
 1850; OP-2248; OP-2292; OP-2299
 Appalachians OP-1908; OP-1909
 Bahamas OP-1314
 California YR; OF 94-0259; OF 94-0568;
 OP-313; OP-383; OP-389; OP-432; OP-

- 444; OP-649; OP-801; OP-891; OP-892;
OP-940; OP-1145; OP-1599; OP-1759;
OP-2146
Canada OP-1863
Europe OP-510
Hawaii OP-1453
Idaho B 2064-A-R; OP-2123
Italy OP-892
Massachusetts OP-782
metal ores OP-870
Montana OF 94-0670; OP-1465; OP-1622;
OP-1628; OP-1863
Nevada B 2056; OF 94-0670; OP-1252
New England OP-2296
New Zealand OF 94-0568
North Carolina OP-1647
Northern Territory Australia C 1129
Norway OP-158
Oregon OF 94-0228; OP-157; OP-1945
Pacific Ocean OP-1246; OP-1919
Queensland Australia C 1129
Rocky Mountains OP-1232
Utah B 2000-J; OP-1283
Washington OF 94-0403; OP-1592; OP-
1821
Wyoming OF 94-0228; OP-1622; OP-1929
Yukon Territory OP-217
- transcurrent faults**
Arizona OP-1380
Basin and Range Province OP-1874
Great Basin OP-1874
petrology C 1129
Saudi Arabia C 1129
- transform faults**
Alaska OP-1682; OP-2160
Atlantic Ocean OP-1931
Bolivia OP-180; OP-1643
California B 1995-J,K
East Pacific Ocean Islands OP-390
Iceland OP-298
Pacific Ocean OP-1329
- transverse faults**, New Mexico OP-1878
- underthrust faults**
Atlantic Ocean OP-1312
Japan OP-1800
Puerto Rico OF 94-0568
West Indies OP-1312
United Kingdom C 1129
- Utah**
OP-1842
engineering geology OP-1435
hydrogeology OP-1123
Quaternary B 2056
- Washington**
C 1129; GQ-1681
Eocene OP-1593
- Favosites**
New York, stratigraphy OP-685
- Fayum Depression**
ichnofossils OP-1012
Quaternary OP-1152
stratigraphy OP-1528
- Fe** *see* iron
- features**, bottom *see* bottom features
features, eolian *see* eolian features
features, erosion *see* erosion features
features, fluvial *see* fluvial features
features, glacial *see* glacial features
features, impact *see* impact features
features, lacustrine *see* lacustrine features
features, periglacial *see* periglacial features
- features**, shore *see* shore features
features, solution *see* solution features
features, volcanic *see* volcanic features
- fecal pellets**
Gulf of California, sedimentation OP-1987
- Federal District**
conservation OF 94-0592
- feed-forward method**
ground water OP-796
- feeding ground** *see* drainage basins
- feldspar deposits**
Idaho P 1525
- feldspar group** *see also* alkali feldspar; plagioclase.
California, energy sources OP-193
Georgia, heavy mineral deposits OP-344
- felsic composition**
California, geochemistry OP-160
geochemistry C 1129
Norway, structural geology OP-2156
Victoria Australia, petrology C 1129
- felsite**
California
energy sources OP-193
geothermal energy OP-299
Virginia, Proterozoic B 2060
- fertilization**
Poland OP-1827
- Fennoscandia**
magmas C 1129
Quaternary OF 94-0568
Fennoscandian Shield *see* Baltic Shield
- Fernandina**
petrology OP-128
- ferns**
Colorado, sedimentary petrology OP-1373
New Mexico, sedimentary petrology OP-1373
Nova Scotia, sedimentary petrology OP-565
- ferricrete**
Colorado, pollution OP-730
- ferrihydrate**
Colorado, pollution OP-487
geochemistry OP-973
- Ferris Dunes**
sedimentary petrology B 2110
- Ferris Formation**
energy sources OP-1942
- ferrodiorite**
Minnesota, Precambrian OP-886
- Ferron Sandstone Member**
palynomorphs OP-184
- ferrospinel** *see* hercynite
- fibrolite** *see* sillimanite
- Fichtelgebirge**
geochemistry C 1129
magmas C 1129
petrology C 1129
- field crops**
Texas, environmental geology WRI 93-4233
- field trips** *see also* guidebook.
OF 94-0352
Alaska, pollution OF 95-0566
Montana, energy sources OP-278
Oregon, Quaternary OP-679; OP-680
Washington, Quaternary OP-679; OP-680
Wyoming
OP-279; OP-280
energy sources OP-278
faults OP-476
- field**, electrical *see* electrical field
- field**, magnetic *see* magnetic field
- fields**, coal *see* coal fields
- fields**, geothermal *see* geothermal fields
- fields**, oil and gas *see* oil and gas fields
- Fillmore Quadrangle**
maps OF 95-0502
- Finger Lakes**
environmental geology OF 94-0615
hydrology OP-617
- Finland** *see also* Baltic Shield; Fennoscandia.
geochemistry
C 1129
Tampere Finland C 1129
petrology C 1129
Proterozoic OP-2242
- fiord** *see* fjords
- fire clay** *see* fireclay
- Fire Clay Coal Bed**
geochemistry OP-2053
sedimentary petrology OP-1548
- Fire Island**
impact statements OF 95-0174
- fireclay**
Appalachians, stratigraphy OP-766
Europe, geochronology OP-510
- fires**
California, Quaternary OP-2006
Colorado
environmental geology OF 95-0508
fluvial features OP-1743
Idaho, soils OP-119
Manitoba, Quaternary OP-1463
Nevada, Quaternary OP-2006
stratigraphy OP-935
Washington, soils OP-119
- firn**
Alaska, geochemistry OF 95-0222
Greenland, geochemistry OF 95-0222
Washington, hydrology WRI 94-4139
- Fischer, Richard Phillip**
economic geology OP-111
- fish**
Alaska
environmental geology B 2107; C 1108;
OF 94-0627
hydrology OF 95-0338
Arizona, environmental geology C 1108
California, environmental geology C 1108
Colorado, hydrology WRI 94-4041
environmental geology OF 94-0490
Florida, hydrology OF 95-0167
hydrology OF 94-0710-W; OF 95-0379
- Idaho**
environmental geology WRI 93-4156;
WRI 95-4006
hydrology OF 94-0109
- Illinois**, hydrology WRI 94-4094
- Kansas**, ecology W 2352-B
- Minnesota**, environmental geology WRI 95-4047
- Nebraska**, ecology W 2352-B; FS 0154-95
- North Dakota**
environmental geology WRI 95-4047
pollution OP-102
- Oregon**, environmental geology WRI 93-4156
- Pennsylvania**, hydrology WRI 94-4056
- Utah**, hydrology WRI 94-4041
- Washington**
environmental geology OF 95-0195
hydrology OF 94-0109; OF 94-0308
Wisconsin, hydrology WRI 94-4094

- Wyoming, environmental geology WRI 95-4006
- Fish Canyon Tuff**
petrology OP-546
- Fish Clay**
stratigraphy OP-1140
- Fish Creek Reservoir**
hydrogeology OF 94-0363
- Fish Lake Valley**
Quaternary OP-2006
- Fishcreekian**
paleomagnetism OP-1881
Pliocene OP-1171
Quaternary OP-604
- Fisher Quartz Latite**
sedimentation OP-1690
stratigraphy OP-2012
- Fishers Island Sound**
oceanography I-2456
- Fishtrap Lake**
ground water WRI 94-4189
- fission tracks**
Colorado, molybdenum ores OP-526
- fission-track dating**
Alaska
deformation OP-1849
geochronology OP-1905
Argentina, orogeny OP-2011
Arizona OF 95-0263
California
Quaternary OF 94-0568
structural geology OF 94-0568
Colorado
geochronology B 2104
metal ores B 2109
stratigraphy OP-507
geochronology DDS-0014
Japan, Neogene C 1129
Nevada
geochronology OP-844
gold ores OP-20; OP-438
New Mexico OF 95-0263
Utah
faults OP-1390
stratigraphy OP-507
Washington OF 94-0403
Western Interior, geochronology OP-506
- fjords**
Alaska, Quaternary OP-1000
Pacific Ocean, sedimentary petrology OP-1218
- Flag Point Alaska**
engineering geology WRI 94-4073
- flagstone**
Egypt, Quaternary OP-1152
Idaho, non-metal deposits P 1525
- flaser bedding**
Washington OP-1376
- Flathead Sandstone**
structural geology OP-1933
- Fleming Formation**
ground water WRI 95-4038
- Fletcher Park shear zone**
maps I-2233
- flexure**
Arizona, metal ores OP-1606
Basin and Range Province, structural geology OP-2115
Europe, structural geology OP-598
Great Basin, structural geology OP-2115
Illinois, faults OF 94-0298
Kentucky, faults OF 94-0298
Virginia, Pliocene OP-2071
flexure faults *see* growth faults
- Flint Seamount**
geochemistry OP-197
- Flints Pond Aquifer**
ground water OF 95-0363
- flokite** *see* mordenite
- flood basalts**
Antarctic Ocean, neotectonics OP-1103
Hawaii, tectonophysics OP-442
Idaho, stratigraphy OP-2147
India, tectonophysics OP-442
Nevada, stratigraphy OP-2147
New Mexico, tectonophysics OP-442
Russian Federation, geochemistry OP-50; OP-421
Yemen, geochemistry OP-1079
- flood plains** *see* floodplains
- flood tuff** *see* ignimbrite
- flood waves**
Mississippi Valley, hydrology C 1120-F
- floodplains**
Alaska
environmental geology OF 94-0481; OF 94-0527
hydrogeology OF 95-0172
Arizona
OP-1926
hydrology WRI 95-4059
China, Quaternary P 1549
Colorado, Quaternary OP-2113
Delaware, geologic hazards WRI 94-4188
engineering geology OP-1310
Florida, hydrology OF 95-0167
Idaho, pollution OP-1146
Mississippi Valley
geologic hazards OP-1295; OP-1526; OP-1578; OP-1836
hydrology YR; C 1120-F
Missouri
environmental geology OP-447
hydrogeology OP-1311
Nevada, Quaternary B 2056
South America, Quaternary OP-1993
Washington, pollution OP-1146
- floods** *see also* jokulhlaups; paleofloods; waterways.
OP-1233
Alaska
environmental geology OF 95-0173; OF 95-0179
geologic hazards OP-2257
Arizona
fluvial features OP-1607
geomorphology OP-2072
hydrogeology OP-2262
hydrology FS 0120-95; OP-2203
California, geologic hazards FS 94-0049
Colorado
fluvial features OP-1743
hydrology WRI 94-4054
East Pacific Ocean Islands, engineering geology OP-1367
engineering geology OP-1569
Florida, environmental geology OF 94-0116
geologic hazards YR; OP-926; OP-969; OP-1456; OP-2240
Great Plains, geologic hazards YR
Hawaii, hydrology WRI 94-4052
hydrogeology OF 94-0493
hydrology WRI 94-4002; WRI 94-4148; OF 94-0360; OP-829; OP-1711
- Idaho**
environmental geology OP-2096
ground water OP-2095
pollution OP-1156
- Illinois**
geologic hazards OP-2048
geomorphology OP-682
- Indiana, hydrology WRI 91-4051**
- Iowa, highways OP-272**
- Kansas**
hydrogeology FS 0085-95
hydrology OF 94-0531
- Midwest**
environmental geology OP-2303
pollution OP-1652
- Mississippi Valley, environmental geology C 1120-G; OP-1748**
- Missouri**
geologic hazards OP-1764
hydrogeology OF 94-0538
- Montana, hydrology WRI 94-4230**
- North Carolina, environmental geology OP-1427**
- North Dakota, pollution OP-533**
- Oregon**
geologic hazards OP-1901
hydrology OP-178
- Polynesia, engineering geology OP-1367**
- Puerto Rico**
hydrogeology OF 93-0629
hydrology OF 94-0363
- Texas, hydrology FS 94-0073**
- Utah**
geomorphology OF 95-0515
hydrology OP-2203
- Washington**
environmental geology HA-0729
geologic hazards YR; OP-1901
hydrology OP-178
- Florida** *see also* Hawthorn Formation; Saint Johns River basin; Suwannee Limestone.
Cenozoic, Sarasota County Florida OP-1204
continental shelf
Levy County Florida OP-1425
Saint Johns County Florida OP-2293
Devonian OP-1971
diagenesis
De Soto County Florida OP-2263
Hardee County Florida OP-2263
Manatee County Florida OP-2263
Sarasota County Florida OP-2263
ecology
Dade County Florida OF 95-0007
Everglades OF 95-0007
Tampa Bay OP-610
environmental geology
OP-2202
Collier County Florida C 1108; OF 94-0116
Dade County Florida C 1108; OF 94-0116
Everglades C 1108; FS 0134-95
Hendry County Florida C 1108
Monroe County Florida C 1108; OF 94-0116
geologic hazards YR
geomorphology
Biscayne Aquifer OP-1203
Citrus County Florida OF 95-0216
Collier County Florida OP-1203
Dixie County Florida OF 95-0216
Levy County Florida OF 95-0216

Wakulla County Florida OF 95-0216
 ground water
 OF 94-0081; OF 94-0528; OP-1614
 Biscayne Aquifer OP-615
 Broward County Florida WRI 94-4010;
 WRI 94-4076; WRI 94-4167
 Charlotte County Florida OF 94-0529
 Citrus County Florida W 2409
 Clay County Florida WRI 92-4174
 Collier County Florida WRI 94-4010
 Dade County Florida WRI 94-4010; OF 94-
 0457; OP-615
 De Soto County Florida W 2409; WRI 93-
 4158; OF 94-0529
 Duval County Florida WRI 92-4174
 Escambia County Florida WRI 93-4224
 Hardee County Florida W 2409; WRI 93-
 4158; OF 94-0529
 Hernando County Florida W 2409
 Highlands County Florida OF 94-0529
 Hillsborough County Florida W 2409;
 OF 94-0529
 Key Largo OP-1455
 Lee County Florida OF 94-0529
 Manatee County Florida W 2409; OF 94-
 0529
 Marion County Florida OP-472; OP-473;
 OP-1948
 Monroe County Florida WRI 94-4010
 Nassau County Florida WRI 92-4174
 Pasco County Florida W 2409
 Pinellas County Florida W 2409; OF 94-
 0529; OF 94-0531
 Polk County Florida OF 93-0026; OF 94-
 0529
 Saint Johns County Florida WRI 92-4174
 Santa Rosa County Florida WRI 93-4224
 Sarasota County Florida W 2409; OF 94-
 0529
 Southwest Florida Water Management Dis-
 trict W 2409; OF 95-0277; OF 95-0303
 Sumter County Florida W 2409
 hydrogeology
 OP-1591; OP-1613
 Hillsborough County Florida WRI 93-4171
 Lafayette County Florida WRI 94-4162
 Marion County Florida WRI 92-4159
 Palm Beach County Florida WRI 94-4128
 Suwannee County Florida WRI 94-4162
 hydrology
 OF 95-0185
 Alachua County Florida OF 94-0709-W
 Apalachicola River OF 95-0167
 Calhoun County Florida OF 95-0167
 Columbia County Florida OF 94-0709-W
 Dixie County Florida OF 94-0709-W
 Duval County Florida WRI 93-4130
 Franklin County Florida OF 95-0167
 Gadsden County Florida OF 95-0167
 Gilchrist County Florida OF 94-0709-W
 Gulf County Florida OF 95-0167
 Hamilton County Florida OF 94-0709-W
 Jackson County Florida OF 95-0167
 Lafayette County Florida OF 94-0709-W
 Lake County Florida WRI 93-4103
 Levy County Florida OF 94-0709-W
 Liberty County Florida OF 95-0167
 Madison County Florida OF 94-0709-W
 Pinellas County Florida WRI 94-4217
 Suwannee County Florida OF 94-0709-W
 Taylor County Florida OF 94-0709-W
 maps
 De Soto County Florida OF 95-0261

Sarasota County Florida OF 95-0261
 marine geology
 Hillsborough County Florida WRI 94-4081
 Pinellas County Florida WRI 94-4081
 Tampa Bay WRI 94-4081
 pollution
 Sarasota County Florida OP-806
 Seminole County Florida OP-933
 Quaternary
 Florida Keys OP-1719; OP-1732; OP-1733
 Key Largo OP-2206
 Sarasota County Florida OP-1001
 sedimentary petrology
 OP-1710
 Alachua County Florida OP-1861
 sedimentation OP-1698
 shore features OP-1174
 stratigraphy
 Lake Okeechobee OP-2295
 Sarasota County Florida OF 95-0003; OP-
 2295
Florida Bay
 environmental geology FS 0134-95
Florida Keys *see also* Key Largo.
 Quaternary OP-1719; OP-1732; OP-1733
Florida Reef Tract
 ground water OP-1455
 Florida Straits *see* Straits of Florida
Floridan Aquifer *see also* Ocala Group.
 diagenesis OP-2263
 environmental geology OP-2202
 ground water W 2409; WRI 92-4174; WRI 93-
 4158; WRI 93-4224; WRI 94-4012; OF 93-
 0026; OF 94-0081; OF 94-0457;
 OF 94-0495; OF 94-0520; OF 94-0528;
 OF 94-0531; OF 95-0115; OF 95-0277;
 OF 95-0302; OF 95-0303; OP-472; OP-473;
 OP-1402; OP-1597; OP-1614; OP-1685;
 OP-1948
 hydrogeology P 1410-C; WRI 92-4159;
 WRI 93-4171; OF 94-0350; OP-1591; OP-
 1613; OP-1819
 hydrology WRI 93-4130
 pollution OP-132; OP-806
Florin, Rudolf
 paleobotany OP-644
Florissant Fossil Beds National Monument
 Paleogene OP-1890
 flowstone *see* speleothems
fluid inclusions *see also* carbon dioxide; geologic
 thermometry; paleosalinity.
 Alaska, metal ores OP-1195
 Arizona, metal ores OP-1606
 Bolivia, metal ores OP-188
 California, metal ores OP-720; OP-801
 faults OF 94-0228
 geochemistry OP-2106
 Italy
 OP-950
 metal ores OP-199
 Montana, crust OP-1831
 Nevada
 OP-2037
 geochemistry OP-1857
 New Mexico, mineralogy OP-1275
 New York
 OP-1794
 metal ores OP-303
 structural geology OF 94-0228
 fluids, ore-forming *see* ore-forming fluids
fluoborite OP-1771

fluoride ion
 New Mexico, environmental geology OF 94-
 0547
 West Virginia, ground water OF 92-0140
fluorides *see also* fluoborite; topaz.
 Arizona OP-466
fluorine *see also* fluoride ion.
 metal ores OF 94-0298
 Missouri
 economic geology OF 94-0670
 petrology OP-1299
fluorspar
 OF 94-0298
 Idaho P 1525
 Illinois OP-729
 Kentucky OP-729
 Missouri OF 94-0670
 Montana, mineralogy OP-287
Fluorspar area fault complex
 faults P 1538-Q
fluvial currents
 Mississippi, engineering geology OP-1009
fluvial features *see also* alluvial fans; alluvial
 plains; arroyos; bars; braided streams; buried
 channels; canyons; channel geometry; channels;
 drainage patterns; eskers; floodplains; meanders;
 outwash plains; point bars; rapids; rivers; stream
 order; streams; terraces; valleys; waterfalls.
 OP-2138
 Oman, hydrogeology OP-1801
 Oregon, hydrology OP-178
 United Arab Emirates, hydrogeology OP-1801
 Washington, hydrology OP-178
fluvial sedimentation *see also* fluviolacustrine
 sedimentation; glaciofluvial sedimentation.
 Alaska, engineering geology WRI 94-4073
 Arizona
 geomorphology OF 94-0594; OF 94-0597
 hydrogeology OP-2262
 hydrology WRI 95-4059; FS 0120-95
 Quaternary OF 95-0591
 Atlantic Coastal Plain, engineering geology
 WRI 94-4164
 California, structural geology OP-1584
 fluvial features OP-2138
 hydrology OF 94-0459
 Illinois, hydrology WRI 94-4190
 Indiana, hydrology WRI 94-4190
 Kansas, hydrology W 2352-B; WRI 94-4187
 Mississippi Valley
 geologic hazards OP-1526; OP-1578
 hydrology OF 94-0474
 Missouri
 geologic hazards OP-1764
 hydrogeology OF 94-0538; OP-1311
 Montana, stratigraphy OP-596
 Nebraska, hydrology W 2352-B; WRI 94-4187
 Nevada, geomorphology OF 94-0670
 New Mexico, engineering geology WRI 95-
 4050
 New York, hydrology OF 93-0161
 Puerto Rico OP-310
 South Dakota B 1917-S
 Tennessee, hydrology OF 95-0156
 Virginia, hydrology WRI 94-4225
 Wyoming
 OP-456; OP-780; OP-928
 energy sources OP-477; OP-701
 fluvial transport *see* stream transport
fluviolacustrine sedimentation
 Idaho, hydrology OF 94-0109
 Washington, hydrology OF 94-0109

fly ash *see* ash

Fly Limestone

structural geology OP-1944

flysch

Alaska

OP-672; OP-1361
gold ores OP-2184
paleomagnetism OP-727
British Columbia OP-1361

focal mechanism

Alaska

plate tectonics OP-1682
seismology OP-458; OP-697
Arkansas, neotectonics OP-2285
Armenia, seismology OP-140
Atlantic Ocean, plate tectonics OP-1312
Australia, tectonophysics OP-2334
Bahamas, plate tectonics OP-1314
Bolivia

plate tectonics OP-180; OP-252
seismology OP-961

California

crust OP-649
deformation OP-1774; OP-2332
earthquakes EV; OF 95-0204; OP-383; OP-1708; OP-2119
elastic waves OP-212
seismicity OP-457; OP-1116; OP-1420; OP-1745; OP-2120
seismology; OF 94-0228; OP-203; OP-262; OP-375; OP-460; OP-1037; OP-1347; OP-1387; OP-1421; OP-1474; OP-1475; OP-1514; OP-1637; OP-1808; OP-2212; OP-2333
tectonophysics OP-2334

Canada

seismology OP-606
tectonophysics OP-2334
Caribbean region, seismology OP-1739
Colombia, earthquakes OP-1392
earthquakes OF 94-0228; OP-489; OP-590; OP-1301; OP-1346
Germany, tectonophysics OP-2331
Hawaii, crust OP-1709
India, tectonophysics OP-2334
Mississippi Valley, seismology OP-2013
Nevada

earthquakes OP-365
seismology OP-614
Nicaragua, seismology OP-961
Oklahoma, tectonophysics OP-2334

Oregon

geophysical surveys OP-72
seismology OP-203
Philippine Islands, geologic hazards OP-1048
Puerto Rico, Quaternary OF 94-0568
seismology OF 94-0228; OP-24; OP-209; OP-1192; OP-1300; OP-1348
South Africa, seismology OP-606
Washington, geophysical surveys OP-72
West Indies, plate tectonics OP-1312

focused current logging *see* Laterolog

fold and thrust belts

Alaska

deformation OP-479; OP-1250
geochronology OP-1905
Mohorovicic discontinuity OP-2301
structural geology OP-304; OP-932; OP-1251; OP-1394

California

natural gas OP-542
structural geology OP-1701

Minnesota, geochemistry B 1904-U
Nevada, structural geology OP-1944
Pakistan, structural geology B 2126; OF 94-0670

Wyoming, structural geology OP-1288

fold axes

Alaska

deformation OP-1849
tectonics OP-2248
Argentina, geochemistry C 1129

Brazil

geochemistry C 1129
petrology C 1129
California, structural geology OP-1599

folids *see also* basins; cleavage; diapirs; domes; foliation; fractures.

Alaska

OF 94-0568; OP-217
Quaternary OP-2017; OP-2292
tectonophysics OP-2300

anticlines

Alaska OP-65; OP-479; OP-574; OP-2247
California C 1129; OP-2047
China OF 94-0568
Dominican Republic OF 94-0568
Idaho B 2064-A-R
Indiana P 1538-O
Montana OP-1933
Pacific Ocean OP-1919
Pennsylvania OP-2058; OP-2059
Tennessee OF 94-0568
Texas OP-363
Virginia OP-1091
Washington OP-1979; OP-1981
Wyoming OF 94-0670; OP-780; OP-1621

anticlinoria

Alaska OP-304
Illinois OF 94-0298

antiform folds

California OP-2047
Nevada OP-1817
Arkansas, earthquakes OP-1005
Basin and Range Province OP-1741
California
OP-1584; OP-1701; OP-2189
metal ores OP-801

Canada

B 1904-T
tectonophysics OP-2265
cleavage folds, Virginia OP-1199
Colorado OP-1438
drape folds, California OF 94-0568
Idaho

metal ores B 2064-A-R
mineral resources B 2064-A-R

isoclinal folds

Massachusetts OP-782
metal ores OP-870
monoclines
California OP-1462
Nevada OP-1976
Utah OP-1179

Montana

OP-1681
geochronology OP-1465
Nevada OP-1252; OP-1944
New Mexico B 2063
Oregon OP-1128
overtuned folds
Alaska OP-2247
New Mexico OP-1878

plunging folds

Alaska OP-1135
Canada OP-1135
Wyoming OP-1621

recumbent folds

Massachusetts OP-782
Utah OP-1464

sheath folds, Arizona OP-1380

synclines

Alaska OP-1624; OP-2247
California OP-2047
Indiana P 1538-O
Montana OP-480
Virginia OP-1091
Yukon Territory OP-1624

synclinoria

B 2110
Pakistan OF 94-0670
synform folds, Texas C 1129
United States
B 1904-T
tectonophysics OP-2265

Utah OP-1438

Vermont OP-1997

Washington

OP-1592
crust OP-1776
Wyoming OP-1288; OP-1681
Yukon Territory OP-217

foliation *see also* axial-plane structures; cleavage.

Alaska OP-1447

Arizona

OP-1282
petrology C 1129
California, petrology C 1129
Canada, petrology C 1129
Canadian Shield, geochemistry C 1129
Egypt, geophysical surveys OP-2068
Idaho

OP-1673
mineral resources B 2064-A-R
Indian Ocean Islands, inclusions C 1129
Italy, petrology C 1129
Japan, petrology C 1129
magmas C 1129
Massachusetts OP-782
Montana

OP-480
metamorphism OP-1627
New Mexico, petrology C 1129
North Carolina OP-1536
schistosity, Vermont OP-1997
Texas C 1129
Victoria Australia, geochemistry C 1129
Virginia OP-1536; OP-2062

Folly Beach South Carolina

geomorphology OP-1471
sedimentary petrology OP-2080

Foothills Fault

metamorphism OP-319
Quaternary OF 94-0568

Foothills metamorphic belt

tectonophysics OP-620

foraminifera

Bolivia, Arctic Ocean OP-1566
Bulimina, Arctic Ocean OP-1566
Cassidulina, Arctic Ocean OP-1566
Globigerina bulloides, Atlantic Ocean OF 94-0588
Haplophragmoides
Arctic Ocean OP-1566
Western U.S. OP-2086
Neogloboquadrina pachyderma

- Atlantic Ocean OF 94-0588
Pacific Ocean B 2022
Ohio, stratigraphy OP-411
Triticites, Arizona B 2110
Trochammina, Western U.S. OP-2086
- foraminifers**
Alaska
OP-641
paleomagnetism OP-727
Quaternary OP-604
Antarctic Ocean
Pliocene OF 94-0588
Quaternary OP-440
Antarctica, Quaternary OP-214
Arctic Ocean
Quaternary OP-1566
stratigraphy OF 94-0588
Arctic region, stratigraphy B 2110
Atlantic Coastal Plain
Quaternary FS 0117-95
stratigraphy OP-903; OP-1412
Atlantic Ocean
Cretaceous OP-1161
Pliocene OF 94-0588
Quaternary OP-233
Bahamas, stratigraphy OP-540
California
pollution OP-2223
Quaternary OF 95-0034; OP-1612; OP-1787; OP-1992
stratigraphy B 1995-L; OP-1036; OP-1341
Caribbean region, stratigraphy OP-1150
Chile, stratigraphy OF 95-0226
Colorado Plateau, stratigraphy OP-2019
Florida, stratigraphy OP-2295
fusulinids
Arizona B 2110
stratigraphy OP-768
geochemistry OP-602
Georgia, continental shelf OP-584
Indian Ocean, Cretaceous OP-1161
Italy, stratigraphy OP-1416
Lesser Antilles, stratigraphy OP-1150
Maryland, stratigraphy OF 94-0708; OP-736
Mexico, stratigraphy OP-1036
Mississippi, Quaternary OF 94-0702
Montana, stratigraphy B 2112
New Jersey
Eocene OP-735
Miocene OP-622
stratigraphy OP-623
New Mexico, Proterozoic OP-21
North Dakota, stratigraphy B 2112
oceanography OF 94-0669-A; OF 94-0669-B
Pacific Coast, Quaternary OP-1401
Pacific Ocean
Pliocene OF 94-0588
Quaternary B 2022
stratigraphy OP-1162
Pliocene OP-1565
Quaternary OP-61
South Carolina, stratigraphy OP-1393
stratigraphy OP-96
Tunisia, stratigraphy OP-1416
Virginia
Eocene OP-735
Pliocene OP-2071
stratigraphy OF 94-0217; OP-736
Washington
OF 94-0403
Quaternary OP-205
Western U.S., Quaternary OP-2086
- fore-arc basins**
Alaska
energy sources OP-574; OP-1545
plate tectonics OF 94-0228
Atlantic Ocean, plate tectonics OP-1312
California, tectonics OP-444
Canada, tectonophysics OP-2265
Europe, structural geology OP-598
Oregon
geochemistry OF 95-0040
natural gas OP-1677
stratigraphy OP-1176; OP-1177
Pacific Ocean, tectonophysics OP-1919
United States, tectonophysics OP-2265
Wales, geochemistry C 1129
Washington
geophysical surveys OP-1821
natural gas OP-1677
West Indies, plate tectonics OP-1312
- foreland basins**
Alaska
deformation OP-1250
energy sources OP-65; OP-1545
stratigraphy OP-1623
structural geology OP-1249
tectonics B 2107
China, stratigraphy OP-2253
Iran, stratigraphy OP-2253
Nevada, geochemistry OP-794
Pakistan
stratigraphy OP-2253
structural geology B 2126
Rocky Mountains, energy sources OP-1942
sedimentary petrology OP-599
Texas, stratigraphy OP-2253
Western Interior
Cretaceous P 1561
stratigraphy OF 94-0670; OP-2030
Wyoming, Paleocene OP-666
- foreshocks** *see also* main shocks.
California
earthquakes OP-1375
elastic waves OP-212
seismicity OP-1116; OP-1309
seismology OF 95-0484; OP-818; OP-893; OP-1037; OP-1347; OP-1601
Japan, seismology OP-893; OP-1601
Quebec, seismology OP-88
- form, crystal** *see* crystal form
- formation evaluation**
California, petroleum OF 95-0014
formation waters *see* connate waters
Formosa *see* Taiwan
- Fort Berthold Indian Reservation**
hydrogeology OF 95-0304
- Fort Collins Colorado**
fluvial features OP-2259
Quaternary OP-1582
- Fort Jackson South Carolina**
pollution OF 94-0486
- Fort Lyon Canal**
hydrogeology WRI 94-4051
- Fort Mitchell Quadrangle**
maps OF 95-0004
- Fort Morgan dune field**
geochemistry OP-1046
- Fort Peck Indian Reservation**
environmental geology C 1108
- Fort Ross California**
Quaternary OF 94-0568
- Fort Thompson Formation**
stratigraphy OP-2295
- Fort Union Formation** *see also* Ludlow Member; Tongue River Member; Tullock Member.
areal geology OP-279; OP-280
Cretaceous C-0146
deformation OP-283
energy sources C 1108; OP-278; OP-477; OP-677; OP-701; OP-1621; OP-1942
geochemistry OP-922
lignite OP-268
Paleocene OP-666; OP-1531
sedimentary petrology OP-456; OP-780; OP-1622
sedimentary structures OP-1620
stratigraphy OP-1589
- Fort Wingate**
ichnofossils OP-379
stratigraphy OP-224
- Fort Wingate New Mexico**
ichnofossils OP-1482
- Fort Worth Basin**
stratigraphy OP-1324
- Fort Yukon Alaska**
environmental geology OF 94-0526
- Fortymile mining district**
areal geology OP-296
gold ores B 2107
- Fortymile Wash**
hydrology OF 94-0317
Miocene OP-1408
- Fossa Magna**
Neogene C 1129
- fossil ice wedges**
New England, Quaternary OP-1072
- fossil localities**
Alaska, Miocene P 1543 A-B
Colorado, stratigraphy OF 94-0670
Idaho, Quaternary B 2105
New Mexico, stratigraphy OF 94-0670
- fossil record**
Europe, paleobotany OP-644
- fossil soils** *see* Paleosols
- Foster City California**
faults OP-1225
- foundations** *see also* bridges; highways; seismic response.
California
engineering geology OP-788
environmental geology OP-2141
Ecuador, engineering geology OF 94-0568
- Fountain Creek valley**
ground water WRI 94-4118; WRI 94-4129
- Fountain Vent**
geochemistry OF 94-0015
oceanography OP-503
- Four Corners**
energy sources B 2000-H
sedimentary petrology B 1808-P; OP-2290
stratigraphy B 2110; OP-223
- Fourier analysis**
elastic waves B 2139; OP-786
mineralogy OP-915
- Fourleague Bay**
oceanography OF 94-0275
waterways OF 94-0275
- Fourmile Gneiss**
structural geology OP-782
- Fox Mountain Formation**
stratigraphy OP-1558

- Fox permafrost tunnel**
 geochemistry B 2107
- Fox River basin**
 ground water OF 95-0163
 hydrogeology OF 95-0163
 hydrology WRI 94-4094; OF 91-0175; OF 95-0163
 pollution OF 95-0163
- FoxPro**
 structural geology OP-1741
- Fra Cristobal Range**
 structural geology OP-1878
- fractal applications** OP-49
- fractional crystallization**
 Australia, magmas C 1129
 Basin and Range Province, metal ores OP-1874
 Bolivia, petrology C 1129
 British Columbia, petrology OP-1847
 California, petrology OP-45; OP-968
 Canadian Shield, geochemistry C 1129
 Colorado
 geochemistry OP-1939
 petrology OP-773
 Great Basin, metal ores OP-1874
 Hawaii, magmas OP-147
 Italy, geochemistry OP-865
 magmas C 1129; OP-648
 Maryland, magmas OP-1126
 Montana, geochemistry OP-554
 Nevada, geochemistry B 2056
 New Mexico, geochemistry B 2081
 Oregon
 geochemistry OF 95-0040
 magmas OP-41
 petrology C 1129
 Romania, geochemistry C 1129
 Russian Federation, geochemistry C 1129
 Texas, magmas C 1129
 Utah, geochemistry B 2056
 Virginia, magmas OP-1126
 Washington, magmas C 1129
- fractionation** C 1129; OP-129; OP-174; OP-861; OP-1437; OP-1793; OP-1857
- fracture zones**
 California, oceanography OP-1410
 Nevada, structural geology OP-2143
 Pacific Ocean, tectonophysics OP-1656
 Sweden, waste disposal OP-2235
- fractures** *see also* brittle deformation; foliation; shear zones.
 OF 94-0228; OP-48; OP-637; OP-1094; OP-1840; OP-2069; OP-2287
 Arizona, metal ores OP-664
 Arkansas, springs OP-1159
 Australia, tectonophysics OP-2334
 Bolivia OP-2244
 California
 OF 94-0228
 earthquakes OP-491; OP-1638
 engineering geology OP-1467
 hydrogeology OP-2043
 rock mechanics OF 94-0228
 seismicity OP-1769
 seismology OP-254; OP-262; OP-1374; OP-1984; OP-2042
 tectonophysics OP-2334
 Canada, tectonophysics OP-2334
 Central America, Quaternary OP-1257
 China, earthquakes OP-1638
 Colorado
 OP-1247
 coal OP-947
 geochemistry OP-1713
 geophysical surveys OP-1118
 metal ores OP-333
 Commonwealth of Independent States, Quaternary OP-1257
 environmental geology OP-1619
 Florida, ground water OP-1948
 Georgia, hydrogeology OP-2161
 ground water OP-698; OP-930; OP-1687
 Iceland, geophysical surveys OP-1389
 India, tectonophysics OP-2334
 Indonesia, Quaternary OP-1767
 joints
 Alaska OP-2258
 Appalachians OP-1819
 Atlantic Coastal Plain OP-1819
 Colorado OP-1101; OP-1438
 Idaho OP-1673
 Nevada OF 95-0002
 New Mexico C 1108
 Utah OF 95-0491; OP-1292; OP-1438
 Kentucky, ground water WRI 94-4189
 magmas OP-2055
 Massachusetts, geophysical surveys WRI 94-4185
 Minnesota, hydrogeology WRI 94-4146
 Mississippi Valley, seismology P 1538-N
 Nevada
 OF 94-0228; OP-1904; OP-2276
 engineering geology OF 93-0269
 geochemistry OP-2169
 ground water OP-2273
 hydrogeology OP-1947
 pedogenesis OP-1763
 New Hampshire, ground water FS 0138-95; OP-1549
 New Jersey, ground water OP-1568
 New Mexico, mineralogy OP-1275
 Oklahoma, tectonophysics OP-2334
 petroleum OP-917; OP-1811
 pollution OP-1923
 United States, geophysical surveys OP-1389
 Utah
 energy sources OP-1166
 mineralogy OP-288
 Washington
 geologic hazards OP-2329
 Quaternary OP-1767
 Wisconsin, lead-zinc deposits OP-792
- fragments**
 Oregon, petrology OP-2172
- framework silicates** *see* danburite; feldspar group; leucite; nepheline group; scapolite group; silica minerals; zeolite group
- Fran Ridge**
 deformation OF 95-0002
 structural geology OP-2276
- France** *see also* Corsica.
 geochemistry
 C 1129
 Vosges Mountains C 1129
 magmas
 Belledonne Massif C 1129
 Central Massif C 1129
 Vosges Mountains C 1129
 petrology
 French Pyrenees C 1129
 Querigut Massif C 1129
- Franciscan Complex**
 clay mineralogy B 1995-H.I
 deformation OP-2332
- economic geology OF 95-0030; OP-216; OP-802
 energy sources OP-193; OP-2146
 faults OP-1577
 geothermal energy OP-299
 gold ores OP-341
 metal ores OP-720; OP-805
 Quaternary OP-1216
 structural geology OP-1430
 tectonics OP-444
 tectonophysics OP-1448
- francolite**
 Georgia, phosphate deposits OP-1969
- Franconia-Ironton-Galesville Aquifer**
 ground water OF 93-0435
- Franklin Bluffs Alaska**
 Eocene OF 94-0653
- Franklin coal zone**
 sedimentary petrology OP-1181
- Franklin Crater** OP-1846
- Franklin D. Roosevelt Lake**
 environmental geology OF 95-0195
 hydrology OF 94-0315
- Franklin Formation**
 sedimentary petrology OP-1181
- Franklin Mountains**
 magmas C 1129
- Franklin-Sylvania mining district**
 petrology OP-1647
- Franklinian**
 Proterozoic OP-1624
- Franquet Stock**
 petrology C 1129
- Fraser British Columbia**
 metamorphic rocks OF 94-0268
- Fraser Glaciation**
 Quaternary OP-205
- Fraser River delta**
 Quaternary OP-2086
- Fraser River Fault**
 faults OP-248
- Frasnian**
 Kazakhstan OP-1258
 Russian Federation OP-152
- Freedom Oklahoma**
 hydrogeology OF 94-0504
- Freeport Formation**
 sedimentary petrology OP-1951
- freeze-thaw action *see* frost action
- Fremont Lake**
 Quaternary OP-355
- French Pyrenees**
 petrology C 1129
 French Somaliland *see* Djibouti
- Frenchman Flat**
 ground water OP-2066
 hydrogeology OP-1947
- Fresno California**
 pollution WRI 93-4140
- Friendly Islands** *see* Tonga
- Frio Formation**
 energy sources OP-220
- Froelich, Albert J.** OP-504
- Froman Ferry fauna**
 Quaternary B 2105
- Front Range**
 energy sources OP-1942
 fluvial features OP-2259
 geochemistry OP-1046

maps GQ-1764
 petrology C 1129
 Quaternary OP-1582
 stratigraphy OP-1363
 uranium ores OF 95-0242

Front Range urban corridor
 soils OF 94-0648

Frontier Formation
 B 2113; OP-569; OP-1974
 tectonics OP-1452

frost action
 Alaska OP-161
 California, Quaternary OP-449
 Illinois OP-43
 Indiana OP-43
 Ohio OF 95-0224

Fruitland Formation
 geochemistry OF 94-0295

Frying Pan Spring
 geochemistry OP-1897

Fucino earthquakes
 Quaternary OF 94-0568

Fuego
 geologic hazards OP-952

fuel resources maps *see* petroleum maps

Fujian China
 geochemistry C 1129

Fukushima Japan
 geologic hazards OP-2007

fumaroles *see also* solfataras; sublimates.
 Alaska
 geochemistry OF 95-0047
 Quaternary OF 95-0271
 volcanism OP-496
 California
 geophysical surveys OP-1564
 Quaternary OP-2142
 Central America, Quaternary OP-1257
 Commonwealth of Independent States, Quaternary OP-1257
 Hawaii, geochemistry OP-314
 Nicaragua, geochemistry OP-1678
 Oregon, geophysical surveys OP-1564
 Washington, geologic hazards OP-2329

functional morphology
 Vertebrata OP-417

fungi
 New Mexico
 sedimentation OP-1276
 solution features OP-190

Furnace Creek
 Quaternary OF 95-0037

furrows
 Great Lakes, stratigraphy OP-436

Fuson Member
 sedimentary petrology B 1917-S

Fusulinidae *see* Trilobites

fusulinids
 Arizona, stratigraphy B 2110
 stratigraphy OP-768

Fusulinina *see* Fusulinidae

futures market
 Alaska, natural gas C 1108
 economic geology OP-905

fjord *see* fjords

G

G-Tunnel underground facility
 ground water OP-2049

Ga *see* gallium

gabbros *see also* alkali gabbros; anorthosite; norite.
 OP-1138; OP-1826
 Alaska, geochemistry P 1564; OP-23
 Antarctica C 1129
 Arizona C 1129
 Australia C 1129
 California OP-313; OP-708
 Caribbean region, metal ores B 2057
 Chile, geochemistry C 1129
 Colorado, Proterozoic OF 94-0437
 Cyprus, structural geology OP-2
 France, geochemistry C 1129
 Greenland OP-1752
 Italy, geochemistry C 1129
 Japan C 1129
 Lesser Antilles, metal ores B 2057
 Montana, geochemistry OF 95-0098
 Poland OP-1827
 Russian Federation, geochemistry OP-843
 tectonophysics OP-141
 Texas, tectonics OP-363

Gabon
 bitumens, Oklo OP-1403

Gala
 environmental geology OP-834

Galapagos Islands
 magmas OP-309
 petrology OP-128

galena
 Colorado, metal ores OP-1626

Galena Alaska
 environmental geology OF 94-0525

Galena Canyon Quadrangle
 maps OF 94-0664

Galena Dolomite
 ground water OF 95-0163
 metal ores B 1989-G
 petroleum OF 94-0298

galenite *see* galena

Galicia Spain *see* Lugo Spain; Pontevedra Spain

Galileo Program OP-57; OP-58; OP-134; OP-1869; OP-1873

Gallardo Creek California
 Quaternary OF 94-0568

Gallardo Pluton
 geochemistry C 1129

Galluro Mountains
 maps OF 95-0202

Gallatin National Forest
 maps OF 95-0011-A; OF 95-0011-B
 mineral resources OP-1344

Gallatin Range
 geochronology OP-1517
 maps OF 95-0011-A; OF 95-0011-B
 mineral resources OP-1344

Gallatin Valley
 environmental geology OP-1264
 ground water WRI 95-4034; OF 94-0536

gallium
 Gulf of California, sedimentation OP-1987

Galunggung
 Quaternary OP-1952

Galveston Texas
 ground water OF 94-0346; OF 95-0182

gamma-ray methods
 DDS-0031
 Florida
 Cenozoic OP-1204
 sedimentary petrology OP-1710
 New Mexico, mineral resources B 2063
 Wyoming, sedimentary petrology OP-456

Gander Zone
 petrology C 1129

GANOVEX
 geophysical surveys OP-156; OP-560
 tectonophysics OP-55

Gansevoort Quadrangle
 ground water WRI 93-4029

Gansu China
 Quaternary OF 94-0568

Ganymede Satellite OP-850

gap analysis
 Midwest, ecology OF 95-0163

Garber Sandstone
 ground water OP-1167

Garberville Fault
 seismicity OP-1745

Garden Creek Phyllite
 sedimentary petrology P 1525

Gardiners Aquifer
 ground water WRI 92-4171

Gardner River
 energy sources OP-302; OP-885

Garibaldi volcanic belt
 Quaternary OP-1511

Garlock Fault
 Quaternary OF 94-0568
 seismology OF 94-0568

garnerite
 Europe, weathering OP-2052

garnet amphibolite
 Alaska, metamorphism B 2107

garnet group *see also* almandine; pyrope; spessartine.
 Alaska
 geophysics OP-594
 metamorphism B 2107
 Colorado GQ-1764
 geochemistry C 1129
 Hawaii, geochemistry OF 91-0596
 Maryland, petrology OP-1200
 Vermont, structural geology OP-1997
 Virginia, petrology OP-1200
 Wyoming, metamorphic rocks OP-1929

Garnet Hill
 Miocene OF 95-0489
 Pliocene OP-2061

garnet pyroxenite
 Hawaii, geochemistry OF 91-0596

Garnet Range Formation
 structural geology OP-1933

Garrison Dam
 hydrology WRI 93-4200; WRI 95-4087
 pollution OP-1112

Garrison Quadrangle
 maps OF 95-0010

gas chromatography
 energy sources OP-701
 geochemistry OF 94-0362; OF 95-0140;
 OF 95-0181
 gold ores OF 95-0495
 hydrogeology OF 94-0708-W
 hydrology OF 94-0710-W

- pollution OF 94-0302; OF 94-0486; OF 95-0371; OP-37; OP-2089
- gas fields, oil and *see* oil and gas fields
- gas hydrates**
- Alaska
- geochemistry OP-1676
- natural gas OP-17; OP-2074
- oceanography OF 95-0070
- Arctic Ocean, natural gas OP-1060
- Atlantic Coastal Plain, oceanography MF-2268
- Atlantic Ocean
- heat flow OF 95-0262
- natural gas C 1108; OP-1305
- energy sources OF 94-0642; OP-1147; OP-1547
- geochemistry OF 95-0041
- natural gas OP-1675
- Northwest Territories, geochemistry OP-192
- Pacific Ocean, natural gas OP-1391
- petrology OP-1196
- Quaternary OF 94-0694
- Russian Federation, geochemistry OP-1559
- gasoline**
- California, pollution OP-2026
- pollution FS 0114-95
- Washington, pollution WRI 92-4017
- gasparite**
- mineralogy B 2140
- Gastropoda** *see also* Turritellidae.
- Kyrgyzstan OP-345
- gastropods**
- Alaska OP-711
- Arizona, stratigraphy OP-223
- Basin and Range Province, Quaternary OP-2101
- California
- Pliocene OP-2061
- stratigraphy OP-1341
- China, Quaternary P 1549
- Great Basin, Quaternary OP-2101
- Mississippi Valley, Quaternary OP-1758
- Nevada, Quaternary OP-2100
- Pacific Ocean, Quaternary B 2022
- stratigraphy OP-1558
- Washington, sedimentary petrology OP-1376
- Gauss Epoch**
- Alaska OP-1881
- Arctic Ocean OF 94-0588
- Gaviotas Quadrangle**
- Miocene OF 95-0265
- gazetteers** B 2129
- GCIP**
- hydrology OF 94-0388
- gedrite**
- Wyoming, metamorphic rocks OP-1929
- Geesaman Fault**
- structural geology OP-1380
- gems** *see also* aquamarine; beryl; diamonds; emerald; topaz.
- Idaho P 1525
- general circulation models**
- Alaska
- geomorphology OP-101
- Quaternary OP-124
- Commonwealth of Independent States, petroleum B 2110
- Pliocene OF 94-0588
- Quaternary OP-1537; OP-2199
- General Earthquake Observation System *see* GEOS
- Geneva Quadrangle**
- ground water WRI 87-4136
- geochronology *see* archaeology
- geoavailability**
- environmental geology OP-2131
- geobarometry *see* geologic barometry
- geobotanical methods** *see also* biogeochemical methods.
- mineral resources OF 95-0006
- geochemical anomalies**
- Alabama, sedimentary petrology OP-1915
- Alaska
- gold ores B 2107
- metal ores B 2084
- Arizona, metal ores OF 94-0670
- California, gold ores OF 94-0640-A; OF 94-0640-B
- Colorado
- hydrogeology OF 95-0569
- metal ores B 2116
- Idaho, geochemistry P 1525
- Japan, earthquakes OP-490
- metal ores B 2097
- Nevada, gold ores OP-340
- Spain, environmental geology OP-662
- geochemical controls**
- Arizona, metal ores B 2138
- Arkansas, lead-zinc deposits B 1989-F
- Colorado, metal ores B 2116
- geochemistry C 1129
- Great Plains, ground water P 1402-F
- Idaho, gold ores OF 95-0495
- lead-zinc deposits OF 94-0298
- Maine, metal ores OP-555
- metal ores B 2081; OF 94-0298
- Missouri, lead-zinc deposits B 1989-F
- New Mexico, mineral resources B 2063
- petroleum OF 94-0298
- geochemical cycle**
- OP-259
- ecology C 1108
- Florida, pollution OP-933
- geochemistry C 1108; C 1129
- Georgia, environmental geology OP-435
- Minnesota, ecology C 1108
- Missouri, pollution OP-933
- North Dakota, hydrology WRI 94-4171
- Pacific Ocean, sea water OP-842
- Poland, geochemistry C 1108
- sedimentary petrology OP-1885
- soils OP-787
- United States, geochemistry C 1108
- Wisconsin
- ecology C 1108
- environmental geology OP-1663
- geochemical exploration *see* geochemical methods
- geochemical logging**
- Arizona, metal ores OP-664
- geochemical maps**
- Alaska
- metal ores B 2084
- mineral resources I-2225-B; I-2225-C; I-2225-D
- California, ground water WRI 93-4003
- metal ores B 2097
- New Mexico
- economic geology B 2063
- ground water WRI 94-4078
- Washington, hydrogeology WRI 92-4109
- geochemical methods** *see also* biogeochemical methods; chemical analysis; geobotanical methods.
- economic geology B 1738-E; B 1741-H; B 2064-A-R; OF 94-0289; OF 95-0030; OF 95-0229
- geochemistry P 1525; B 2107; OF 94-0450; OF 94-0623-A; OF 94-0623-B; OF 94-0623-C; OF 94-0680-A; OF 94-0680-B
- geothermal energy OF 95-0080
- gold ores B 2107; OF 94-0282; OF 94-0640-A; OF 94-0640-B; OP-340; OP-536
- metal ores B 2057; B 2064-A-R; B 2084; B 2097; B 2116; OF 94-0270-A; OF 94-0270-B; OF 94-0666; OF 94-0670; OF 94-0691; OF 95-0079; OF 95-0097; OP-104; OP-148; OP-199; OP-1260
- mineral resources B 2064-A-R; C 1117; OF 93-0698; OF 95-0013; OF 95-0509; OF 95-0623; OF 95-0625; OF 95-0626; I-2225-B; I-2225-C; I-2225-D; OP-332
- uranium ores B 2063; B 2098
- geochemistry**
- lithogeochemistry**
- B 2110; C 1129; OF 94-0298
- Alaska P 1564; B 2107; B 2139; OF 95-0236; OP-772
- Alberta C 1129
- Antarctica C 1129
- Appalachians C 1129
- Argentina C 1129
- Arizona B 2021-E; C 1129
- Arkansas OF 94-0450
- Australia C 1129
- Bolivia B 2119
- Brazil C 1129
- California P 1566; C 1129; OF 95-0034; OF 95-0227-A; OF 95-0227-B; OP-45; OP-197
- Canada C 1129
- Canadian Shield C 1129
- Carpathians C 1129
- Chile C 1129
- Egypt C 1129
- Finland C 1129
- France C 1129
- Germany C 1129
- Greece C 1129
- Idaho B 2064-A-R; OP-716
- India C 1129
- Indian Ocean Islands C 1129
- Iran C 1129
- Italy C 1129
- Japan C 1129
- Kenya C 1129
- Maine C 1129
- Mexico OP-197
- Minnesota OF 94-0578
- Montana OF 95-0098
- Nebraska OF 94-0292
- Nevada P 1559; B 1988-K; B 2056; C 1129; OF 95-0545; OP-454
- New Jersey P 1565-A
- New South Wales Australia C 1129
- North Carolina C 1129
- Northwest Territories C 1129
- Nova Scotia OP-1867
- Oklahoma C 1129
- Oregon OF 94-0261; OF 95-0040; OF 95-0227-A; OF 95-0227-B
- petrology C 1129
- Romania C 1129

- Russian Federation C 1129; OP-50
 Scotland C 1129
 South Dakota C 1129
 Spain C 1129; OP-118
 Texas C 1129
 Utah B 1988-K; B 2056; C 1129
 Vermont C 1129
 Victoria Australia C 1129
 Virginia P 1529; C 1129
 Wales C 1129
 Wyoming I-2233
 Yemen C 1129
 Yukon Territory OP-772
- geochronology** *see also* absolute age; Archean; Cambrian; Carboniferous; cation-ratio dating; Cenozoic; Cretaceous; Devonian; Eocene; exposure age; fission-track dating; Holocene; Jurassic; Mesozoic; Miocene; Mississippian; Neogene; Oligocene; Ordovician; Paleocene; Paleogene; Paleozoic; Pennsylvanian; Permian; Phanerozoic; Pleistocene; Pliocene; Precambrian; Proterozoic; Quaternary; racemization; Silurian; Tertiary; tree rings; Triassic.
 geochemistry DDS-0014
- geodesy** *see also* geodetic coordinates; geodetic networks; Global Positioning System; very long baseline interferometry.
 OP-195
 Australia, tectonophysics OP-2334
 California
 earthquakes YR; OP-1503
 geophysical surveys OF 94-0693; OP-522
 Quaternary OF 94-0568
 seismicity OP-406
 seismology OP-818; OP-1349
 structural geology OP-816
 tectonophysics OP-2334
 Canada, tectonophysics OP-2265; OP-2334
 Colorado, structural geology OP-325
 Djibouti, tectonophysics OP-2152
 geophysical surveys OP-166; OP-219
 Great Lakes, geophysical surveys OF 94-0698
 Hawaii
 geophysical surveys OF 94-0567
 Quaternary OP-1328; OP-1453
 Iceland, Quaternary OP-640
 India, tectonophysics OP-2334
 Israel, Quaternary OF 94-0568
 Middle East, tectonophysics OP-923
 Oklahoma, tectonophysics OP-2334
 Oregon
 geophysical surveys OF 95-0099
 Quaternary OP-1945
 United States, tectonophysics OP-2265
 Washington
 crust OP-1776
 geologic hazards OP-1330
- geodetic coordinates**
 OF 92-0372-A; OF 92-0372-B
 Basin and Range Province, geophysical surveys OF 94-0285; OF 94-0287
 Bering Sea, Quaternary OP-815
 California
 seismology OP-819; OP-825
 structural geology OP-822
 Japan, seismology OP-974
- geodetic networks**
 Basin and Range Province, geophysical surveys OF 94-0285; OF 94-0286; OF 94-0287
 California
 geophysical surveys OF 95-0237; OP-817
 seismology OP-819; OP-820; OP-1688
- structural geology OP-821
 geodynamo *see* dynamos
- geographic information systems**
 B 2103; C 1108; OF 94-0405; OP-266; OP-339; OP-541; OP-1415; OP-1445; OP-1648
 Arkansas, pollution OP-32
 Atlantic Ocean, ocean floors OP-2324
 Basin and Range Province, structural geology OP-1741
 California
 engineering geology OF 94-0662
 geologic hazards OF 95-0480; OP-588
 ground water WRI 94-4151; OP-1362; OP-1370
 hydrogeology OP-1281
 soil mechanics OF 94-0699
- Colorado
 energy sources C 1108
 hydrology OP-384
 structural geology OP-1247
 ecology OP-896
 engineering geology OP-1333
 environmental geology WRI 94-4250
 geologic hazards OP-1115; OP-1213
 geomorphology YR; OP-235; OP-326; OP-638
- Georgia
 ground water OP-1244
 hydrogeology OP-2270
- Hawaii
 geologic hazards OP-474; OP-588; OP-1342
 Quaternary OP-1754
 hydrology OP-14
 Illinois, economic geology OF 94-0298
 Indiana, coal OF 94-0298
- Maryland
 environmental geology OP-837
 ground water OP-410
- Massachusetts
 OP-1383
 ground water WRI 94-4156
 hydrology W 2418
- Mississippi, pollution OP-681
 Missouri, hydrogeology WRI 93-4154
- Nevada
 ground water OP-1362
 hydrogeology OP-1281
 New Jersey, pollution OP-114
 New Mexico, energy sources C 1108
 New York, hydrology B 2103
 Oregon, ground water WRI 89-4179
- Pennsylvania
 ground water OF 95-0193
 hydrogeology OF 95-0113
 pollution WRI 94-4176
- South Carolina
 ground water OP-1244
 hydrogeology OP-2270
- Tennessee OF 94-0359
 Utah OP-1179
 Vermont OP-1253
 Washington, ground water WRI 89-4179
- Wisconsin
 ecology OF 95-0163
 environmental geology OF 95-0163
 hydrogeology OF 95-0163
- geologic barometry**
 Alaska
 metamorphism B 2107
 petrology OP-409
 Alps, magmas C 1129
 California, structural geology OP-432
 Canada, petrology OP-409
- Mexico, phase equilibria OP-387; OP-1489
- Nevada
 orogeny OP-619
 phase equilibria C 1129
 North Carolina, structural geology OP-1335
 Ontario, phase equilibria OP-387; OP-1489
 phase equilibria C 1129
 Utah, orogeny OP-619
 Virginia, petrology C 1129
- geologic chronology** *see* geochronology
- geologic hazards** *see also* avalanches; fires; floods; geologic hazards maps; ground motion; hurricanes; impact statements; land subsidence; landslides; liquefaction; liquefaction potential; mudflows; paleoseismicity; reservoirs; seismic risk; sinkholes; slope stability; tsunamis; volcanic earthquakes; volcanic risk; volcanoes.
 YR; OF 95-0028; OP-791; OP-1052; OP-1053; OP-1115; OP-1333; OP-2078
- Alaska
 C 1108; OF 95-0175; OF 95-0176
 faults OF 94-0228
 geochemistry B 2107
 geomorphology OF 94-0512
 seismology OP-697
 Arizona WRI 94-4192
- Arkansas
 deformation P 1538-J
 earthquakes OP-1005
 Basin and Range Province
 Quaternary OF 95-0037; OF 95-0078
 structural geology OP-1741
 British Columbia OF 94-0568
- California
 OF 93-0684; OF 95-0479; OF 95-0480; OP-588; OP-891; OP-2189
 earthquakes YR; OF 92-0284; OF 95-0092; OF 94-0647; OP-429; OP-1486; OP-2119
 geophysical surveys OF 94-0639; OP-522; OP-1285
 petroleum OP-1280
 Quaternary OF 94-0568
 seismicity OP-1165
 seismology OF 94-0221; OF 95-0042; OF 95-0484; OP-893; OP-1336; OP-1349; OP-1550; OP-1601
 Cameroon, hydrology OP-256
 Colorado, petroleum OP-1280
 Dominican Republic, plate tectonics OP-1751
 earthquakes OF 93-0610-A; OF 93-0610-B; OF 93-0611-A; OF 93-0611-B; OF 93-0612-A; OF 93-0612-B; OF 94-0601-A; OF 94-0601-B; OF 94-0602-A; OF 94-0602-B; OF 94-0603-A; OF 94-0603-B; OF 94-0604-A; OF 94-0604-B; OF 94-0605-A; OF 94-0605-B; OF 94-0606-A; OF 94-0606-B; OF 94-0607-A; OF 94-0607-B; OF 94-0608-A; OF 94-0608-B; OF 94-0609-A; OF 94-0609-B
 geophysical surveys OP-404; OP-505
 Great Basin, Quaternary OF 95-0037; OF 95-0078
 Greenland, glacial geology P 1386-C
- Hawaii
 OP-588; OP-1342; OP-1497; OP-1722
 Quaternary OP-1616
 Idaho, volcanism OP-1674
 Illinois, faults P 1538-Q
- Japan
 earthquakes OP-490
 seismology OF 94-0221; OP-893; OP-1601

- Kentucky, faults P 1538-Q
Louisiana OF 94-0275
Mississippi Valley
 earthquakes OF 94-0670
 geophysical surveys P 1538-L
 structural geology P 1538-E
Missouri
 geophysical surveys P 1538-P
 seismology I-2521
Nevada
 OF 93-0269; OF 93-0477; OF 95-0155;
 OF 95-0284
 deformation OF 95-0002
 earthquakes OF 94-0647
 geophysical surveys OF 93-0540-A; OF 93-
 0540-B; OF 93-0586-A; OF 93-0586-B
 ground water OF 93-0098; OF 94-0303;
 OF 94-0531
 hydrology OF 94-0317
 Quaternary OF 94-0568
 stratigraphy OF 94-0342
New England, earthquakes OF 94-0643
New Mexico WRI 94-4192; OF 95-0314
Ohio, geomorphology OF 95-0224
Oklahoma, Quaternary OP-463
Rhode Island OP-2227
Russian Federation, earthquakes OP-532; OP-
 1657
 seismology OF 95-0060; OP-1417
Tennessee OF 95-0477
United States OF 94-0568
- geologic hazards maps**
California
 earthquakes OF 95-0213; OP-1503
 Quaternary B 1982
 seismology OF 95-0095
 soil mechanics OF 94-0699
China, environmental geology CP-0043
Colorado
 environmental geology OF 95-0508
 pollution OF 95-0026
 environmental geology GP-1011
Florida, environmental geology OF 94-0116
New York, environmental geology OF 94-0615
Russian Federation, environmental geology
 CP-0043
Washington, environmental geology OF 95-
 0498; HA-0729
- geologic mapping**
OP-881
Alaska OF 94-0675-A; OF 94-0675-B; OF 94-
 0675-C
California OF 94-0318
- geologic maps**
OF 95-0525; OF 95-0526; OF 95-0588; GQ-
 1748; I-2397; I-2402; I-2433-B; SGM; OP-881;
 OP-1127; OP-1233; OP-1662
Alabama I-2174
Alaska
 OF 95-0215; I-2272; OP-642; OP-724; OP-
 878
 metal ores B 2084
 metamorphic rocks OP-230
 petrology OP-40; OP-633
Antarctica, geophysical surveys OP-560
Arizona OF 92-0326; OF 94-0290; OF 94-
 0554; OF 94-0634; OF 95-0048; OF 95-
 0086; OF 95-0202; OF 95-0263;
 OF 95-0559; OF 95-0560; MF-2292; I-
 2017; I-2396; I-2450; I-2454; I-2489
Arkansas OF 94-0430
Bolivia OF 95-0494
- California
 OF 88-0753; OF 88-0754; OF 92-0179;
 OF 92-0181; OF 92-0182; OF 92-0183;
 OF 94-0681; OF 95-0025; OF 95-0088;
 OF 95-0089; OF 95-0090; OF 95-0091;
 OF 95-0502; OF 95-0503; OF 95-0504;
 OF 95-0511; OF 95-0522; OF 95-0597;
 OF 95-0598; I-2148; I-2295; I-2341; I-2362;
 I-2464
 ground water WRI 95-4048
 non-metal deposits OF 95-0039; OF 95-
 0535
 Quaternary B 1982
 soil mechanics OF 94-0699
Canada
 I-1420 (NM-15)
 structural geology B 1904-T
Colorado
 OF 94-0696; OF 95-0052; OF 95-0232;
 GQ-1763; GQ-1764; MF-2282; MF-2283;
 I-2452
 geochronology B 2104
 Proterozoic OF 94-0437
Florida OF 95-0261
Georgia OF 94-0673; I-2174
Great Plains I-1420 (NL-14)
Hawaii OF 89-0284
Idaho
 OF 94-0659; MF-2278; OP-263
 economic geology P 1525
 metal ores B 2064-A-R
 mineral resources B 2064-A-R
 polymetallic ores B 2064-A-R
Kansas OF 94-0655; OF 94-0656; OF 94-0657;
 OF 94-0658; I-2498
Kentucky GQ-0351; GQ-1212; GQ-1342
Maryland, hydrogeology OP-211
Mexico OF 94-0685
Missouri
 OF 94-0430; MF-2277
 hydrogeology WRI 93-4154
Montana OF 88-0607; OF 88-0608; OF 88-
 0609; OF 88-0610; OF 88-0611; OF 88-
 0612; OF 88-0613; OF 88-0614;
 OF 88-0615; OF 88-0617; OF 88-0618;
 OF 88-0619; OF 88-0620; OF 88-0621;
 OF 88-0624; OF 88-0625; OF 88-0626;
 OF 88-0627; OF 88-0635; OF 93-0521;
 OF 93-0529; OF 95-0011-A; OF 95-0011-
 B; GQ-1757; MF-2281; MF-2289; MF-
 2290; MF-2291
Nebraska I-2496
Nevada
 OF 91-0132; OF 92-0326; OF 93-0716;
 OF 94-0175; OF 94-0283; OF 94-0625;
 OF 94-0664; OF 94-0687; OF 95-0010;
 OF 95-0035; OF 95-0094; OF 95-0567;
 GQ-1756; GQ-1758; GQ-1759; MF-2257;
 I-2464; I-2536; OP-213
 metal ores B 2090
 non-metal deposits OF 95-0084
New Hampshire OF 94-0410
New Jersey OF 95-0253; OF 95-0254; OP-904
New Mexico
 OF 95-0263; I-2399
 economic geology B 2063
 ground water WRI 94-4178
North Carolina OF 94-0629
Ordovician B 2060
Oregon OF 95-0219; I-2148; I-2455; OP-263
Pennsylvania
 ground water WRI 94-4109
 hydrogeology OF 94-0381; OP-873
- Puerto Rico I-2387
South Carolina OF 94-0673
United States
 I-1420 (NM-15)
 structural geology B 1904-T
Utah
 OF 95-0009; OF 95-0010; GQ-1722; GQ-
 1759; I-2210; I-2462
 metal ores OF 94-0417
Venezuela OF 95-0493; MF-2246; MF-2247
Vermont
 OF 94-0225-A; OF 94-0225-B; OF 94-
 0262; OF 94-0410; OF 94-0654-A; OF 94-
 0654-B; OF 95-0203-A; OF 95-0203-B;
 OF 95-0483-A; OF 95-0483-B
 Proterozoic B 2060
 stratigraphy B 2060
Virginia
 OF 94-0629; OF 95-0004; GQ-1755
 magmas P 1529
 Proterozoic B 2060
Washington
 OF 94-0403; OF 94-0591; OF 95-0523;
 GQ-1681; I-2460
 petrology OP-1512
Wyoming
 I-0711; I-2210; I-2233; I-2452
 hydrogeology WRI 95-4095
- geologic thermometry** *see also* geologic barome-
 try; P-T-t paths; S-34/S-32.
California
 geochemistry OP-927
 magmas OP-313
Colorado
 molybdenum ores OP-526
 sedimentary petrology B 1808-P; OP-1272
Connecticut, stratigraphy OP-2297
Greenland
 petrology OP-1752
 Quaternary OP-187
Illinois, heat flow OP-2050
Italy, geochemistry OP-227
Mexico, petrology OP-1870
Mississippi Valley, zinc ores OF 94-0298
New Mexico, sedimentary petrology B 1808-P
North Carolina
 Mesozoic OP-1399
 Paleozoic OP-1670
Oregon, petrology OP-38
South Dakota, geochemistry C 1129
thermal waters OP-1756
Utah
 hydrogeology WRI 93-4219
 sedimentary petrology OP-1272
Venezuela, hydrogeology WRI 93-4219
Virginia
 Mesozoic OP-1399
 Paleozoic OP-1670
Wisconsin, lead-zinc deposits OP-792
Wyoming, sedimentation OF 94-0670
- geological barometry** *see* geologic barometry
Geological Long-Range Inclined ASDIC *see*
 GLORIA
geological microbiology *see* geomicrobiology
geological oceanography *see* marine geology
GeoMedia 2 YR
geomicrobiology
 environmental geology OP-690; OP-1160
 New Mexico, sedimentary petrology OP-1274
geomorphic geology *see* geomorphology

geomorphologic controls

Mississippi Valley, economic geology B 2094-C

geomorphologic effects

California, geomorphology OP-775
Mississippi Valley, economic geology B 2094-C

Nevada, geomorphology OP-775

geomorphologic maps *see also* surficial geology maps.

Arizona OF 95-0529
California, geomorphology OF 94-0105
Colorado, geomorphology OF 95-0024; I-2504
Nevada, geomorphology OF 94-0105
Washington, volcanic features I-2359

geomorphology *see also* alluvial fans; bars; bluffs; canyons; cartography; channels; depressions; digital terrain models; drainage basins; drainage patterns; eolian features; erosion; fluvial features; frost action; geodesy; glacial geology; gullies; impact features; lacustrine features; lakes; mass movements; meteor craters; mud volcanoes; quantitative geomorphology; relief; scarps; sea-level changes; shore features; shorelines; solution features; streams; valleys; volcanic features; weathering.

OP-694
Appalachians OP-196
Argentina, Quaternary OF 94-0568
California

geologic hazards OF 93-0684
hydrogeology OP-2298
Greece, Quaternary OF 94-0568
Italy, structural geology OF 94-0568
Queensland Australia OP-31
seismology OP-2217

GEONAMES

stratigraphy OP-2148

geophysical logging *see* well-logging**geophysical maps**

Alaska, tectonophysics OF 95-0238

geophysical methods *see also* well-logging.

OF 95-0058; OF 95-0077; OP-133
acoustical methods
OF 93-0722; OF 94-0568; OF 94-0598;
OF 94-0639; OP-1450
oceanography OP-1972

AVHRR

Alaska B 2139; OP-1120
ecology OP-556; OP-896
geophysical surveys OP-2314
Senegal OP-918

AVIRIS, Colorado OP-150; OP-493

electrical methods

OF 94-0228; OF 95-0544; FS 0121-95;
OP-712; OP-713
engineering geology WRI 94-4164
faults OP-240
ground water P 1415-A

electromagnetic methods

OF 94-0228; FS 0121-95; OP-1934

ground water P 1415-A

geomorphology OP-2033**gravity methods** OP-71**infrared methods**

FS 0079-95; OP-1389
non-metal deposits B 2081

magnetic methods OP-71**magnetotelluric methods**

OF 94-0228
faults OP-240
structural geology OF 94-0228

seismic methods

OF 94-0228; OF 95-0516
engineering geology OP-1683
ground water P 1415-A
magmas OP-1571
mantle OP-294
tectonophysics OP-442; OP-1837; OP-2229

geophysical profiles *see* seismic profiles**geophysical survey maps** *see also* gravity survey maps.

Hawaii, geophysical surveys OF 95-0017
New Mexico
economic geology B 2063
hydrogeology WRI 94-4125

geophysical surveys *see also* acoustical surveys; Bouguer anomalies; electrical surveys; electromagnetic surveys; Global Positioning System; gravity surveys; heat flow; infrared surveys; magnetic anomalies; magnetic surveys; magnetotelluric surveys; radioactivity surveys; remote sensing; seismic surveys; Shuttle Imaging Radar; well-logging.**Alaska**

metal ores OP-426
mineral resources C 1117
Germany, magmas C 1129
Hawaii, Quaternary OP-757
Mariana Islands, geologic hazards OF 94-0705
Micronesia, geologic hazards OF 94-0705
New Hampshire, ground water OF 95-0363
Pacific Ocean, oceanography B 2022
Pakistan, coal OF 94-0596-A; OF 94-0596-B;
OF 94-0596-C; OF 94-0596-D
Spain, magmas C 1129

GEOPLAY

petroleum B 2118; OP-1814; OP-1815

Geoprobe

oceanography OP-116

Georges Bank

ocean floors OP-2073
sedimentary petrology OF 95-0044

Georges Bank basin

continental shelf OP-1970

Georgetown Formation

ground water WRI 95-4030

Georgia *see also* Blue Ridge Province; Hawthorn Formation; Middendorf Formation; Ocoee Supergroup; Piedmont; Suwannee Limestone.

Cenozoic OP-738
continental shelf OP-584
environmental geology, Chatham County Georgia OP-1099

geochemistry OP-398

geologic hazards YR; WRI 95-4017

ground water

OF 95-0302; OP-1100; OP-1244
Brantley County Georgia OF 94-0520
Brunswick Georgia OF 94-0520
Burke County Georgia OP-151; OP-1243;
OP-1358

Camden County Georgia OF 94-0520

Chatham County Georgia OP-1402

Glynn County Georgia OP-1402

McIntosh County Georgia OF 94-0520

Wayne County Georgia OF 94-0520

heavy mineral deposits OP-344**hydrogeology**

P 1410-C; OF 94-0307; OP-2270
Berrien County Georgia OF 94-0350
Brooks County Georgia OF 94-0350
Cook County Georgia OF 94-0350
Echols County Georgia OF 94-0350

Lanier County Georgia OF 94-0350

Lowndes County Georgia OF 94-0350

hydrology

Dougherty County Georgia WRI 94-4158
Rockdale County Georgia OP-120

maps

Burke County Georgia OF 94-0673
Chattahoochee County Georgia I-2174
Columbia County Georgia I-2174
Macon County Georgia I-2174
Marion County Georgia I-2174
Richmond County Georgia OF 94-0673
Schley County Georgia I-2174
Stewart County Georgia I-2174
Sumter County Georgia I-2174
Taylor County Georgia I-2174
Webster County Georgia I-2174

metal ores B 2097

mineral resources OF 95-0045

Miocene OP-739

oceanography OP-585; OP-586

orogeny B 2110

Paleocene

Burke County Georgia OP-1359
Screven County Georgia OP-1359

pedogenesis

Harris County Georgia B 1589-E
Meriwether County Georgia B 1589-E
Pike County Georgia B 1589-E
Upson County Georgia B 1589-E

phosphate deposits

OP-583; OP-1506; OP-1969
Chatham County Georgia OP-399

pollution OP-132

soils, Atlanta Georgia OP-1555

stratigraphy OP-742**GEOS****California**

seismicity OP-654
seismology OP-1540
seismology OF 95-0258; OP-1864

geosynclines *see also* eugeosynclines; miogeosynclines.

Pacific Ocean, metal ores OP-1080

geotechnical maps

Hawaii, geologic hazards OF 95-0008

geotectonic maps

California, tectonophysics OP-82
Mexico, tectonophysics OP-82

geotectonics *see* tectonics**geothermal energy** *see also* brines; geothermal fields; hot springs; thermal waters.

OP-655
Basin and Range Province OP-813
California OF 94-0712; OP-299; OP-803; OP-884

Hawaii, environmental geology OF 94-0553

Minnesota, ground water OF 93-0435

Nevada OF 94-0712; OF 95-0080; OF 95-0485

geothermal fields *see also* Cerro Prieto; The Geysers.**Iceland**

seismology OP-1813
tectonophysics OP-298

Montana, energy sources OP-302; OP-634; OP-885

Pacific Ocean, geochemistry OP-1033

Wyoming, energy sources OP-302; OP-634; OP-885

geothermal gradient

OP-259

Atlantic Ocean, heat flow OF 95-0262

- California, tectonophysics OP-514
 Colorado
 geochemistry OP-1700
 molybdenum ores OP-526
 geothermal energy OP-655
 Greenland, petrology OP-1752
 Iowa, stratigraphy OP-1671
 Montana, energy sources OP-634
 Nevada
 energy sources OP-1083
 geochemistry OP-1857
 ground water OP-2273
 petroleum OP-2065
 Utah, energy sources OP-1166
 Washington, sedimentary petrology B 2085-C
 Wyoming, energy sources OP-634
 geothermal surveys *see* heat flow
 geothermometry *see* geologic thermometry
 German Continental Deep Drilling Program *see* KTB
 Germany
 economic geology OP-905
 engineering geology, Bavaria Germany OP-650
 geochemistry
 Fichtelgebirge C 1129
 Saxony-Thuringia C 1129
 Upper Palatinate OP-499
 geophysical surveys, Bavaria Germany OP-651; OP-748
 magmas, Fichtelgebirge C 1129
 metasomatism, Saxony-Thuringia C 1129
 petrology, Fichtelgebirge C 1129
 tectonophysics OP-2331
 Getchell Mine
 gold ores OF 94-0282; OP-340; OP-1245
 Gettysburg Basin
 geochronology OP-1672
 GEWEX
 hydrology OF 94-0388
 geysers
 California, economic geology OF 95-0030
 Geysers, The *see* The Geysers
 Ghost Rocks Formation
 metamorphism OP-39
 paleomagnetism OP-727
 Giant Crater lava field
 magmas OP-129
 Giants Range Granite
 geochemistry B 1904-U
 Gifu Japan *see* Atera Fault
 Gila River
 hydrogeology WRI 94-4125
 hydrology WRI 95-4083
 Gilbert-type deltas
 California, sedimentary petrology OP-1097
 Gile Mountain Formation OP-1068
 glisonite
 Colorado OP-297
 Utah OP-297
 Gippsland Australia
 geochemistry C 1129
 GISP2
 geochemistry OF 95-0222
 geophysical surveys OF 94-0254
 Quaternary C 1108; OP-187
 Giumri Armenia
 engineering geology OP-265
 glacial erosion
 Antarctic Ocean
 continental shelf OP-921
 Quaternary OP-54
 Antarctica, Quaternary OP-2188
 Washington, Quaternary OP-975
 glacial extent
 Alaska, stratigraphy OF 94-0588
 glacial features *see* buried valleys; cirques; drumlins; erratics; eskers; fjords; glacial lakes; glaciers; ice; kames; outwash plains
 glacial geology *see also* ablation; boulders; drainage patterns; drumlins; eskers; frost action; glacial erosion; glacial geology maps; glacial lakes; glacial rebound; glaciated terrains; glaciation; glacier surges; glaciers; ice caps; ice movement; ice sheets; ice shelves; ice streams; ice-marginal features; isostasy; isostatic rebound; jokulhlaups; moraines; outwash; periglacial features; permafrost; rock glaciers; solifluction; till.
 Antarctic Ocean, Quaternary OP-173
 glacial geology maps
 Greenland P 1386-C
 glacial lakes
 Alaska, Quaternary OP-1457
 British Columbia, Quaternary OP-2008
 Great Lakes, Quaternary OP-525
 New England, Quaternary OP-1072; OP-2164
 Washington, Quaternary OP-2008
 glacial land forms *see* glacial features
 glacial maximum, last *see* last glacial maximum
 glacial outwash *see* outwash
 glacial quiescence
 Alaska, geomorphology OF 94-0512
 glacial rebound
 New England, Quaternary OP-2164
 glacial recession *see* deglaciation
 glacial sedimentation *see also* glaciofluvial sedimentation; glaciolacustrine sedimentation;
 glaciomarine sedimentation.
 Antarctic Ocean OP-173
 Antarctica, Quaternary OP-2188
 Great Lakes, stratigraphy OP-436
 glaciated terrains
 Alaska, environmental geology OF 95-0177
 Connecticut, ground water WRI 94-4255
 Finland, Quaternary OF 94-0568
 Great Plains, Quaternary I-1970-D
 Idaho, Quaternary OF 94-0568
 Massachusetts, environmental geology OF 95-0290
 Michigan, geomorphology OF 95-0224
 Minnesota
 ground water WRI 94-4149
 metal ores OP-148
 Missouri, hydrogeology OF 94-0705-W
 Montana, environmental geology C 1108
 New England, ground water P 1415-A
 New Hampshire
 ground water OF 95-0281; OF 95-0363
 hydrogeology WRI 92-4013; WRI 92-4154
 pollution OF 95-0142
 New York
 environmental geology OF 94-0615
 ground water WRI 92-4171; WRI 93-4004;
 WRI 93-4029
 Quaternary WRI 90-4168
 Ohio
 geomorphology OF 95-0224
 ground water WRI 94-4131
 Pennsylvania
 ground water WRI 93-4109
 hydrogeology OF 92-0635
 Peru, Quaternary OP-2032
 Scotland, Quaternary OF 94-0568
 South Dakota, hydrogeology OF 95-0313
 Sweden, Quaternary OF 94-0568
 Vermont, ground water WRI 94-4108
 glaciation *see also* deglaciation; erosion; glacial features; glacial rebound; glaciers; ice movement; ice sheets; ice shelves; last glacial maximum.
 OP-1727
 Alaska
 OP-296
 Quaternary OP-1458; OP-1692; OP-2258;
 OP-2292
 Antarctica, Pliocene OF 94-0588
 Colorado, stratigraphy OP-1384
 Idaho, Quaternary P 1525
 New England, Quaternary OP-2163
 Pacific region, geologic hazards OP-2190
 Pennsylvania OP-1164
 Quaternary OP-717
 Wyoming, faults OP-476
 Yukon Territory, Quaternary OP-1458
 Glacier Bay
 metal ores OP-1169
 petrology OP-100
 sedimentary petrology OP-1218; OP-2094
 glacier outburst floods *see* jokulhlaups
 Glacier Peak
 Quaternary OP-1511; OP-2250
 Glacier Peak Ash
 Quaternary OF 95-0034
 Glacier Peak Deposit
 metal ores OP-1874
 glacier surges
 Alaska
 geomorphology OF 94-0512
 hydrology OP-1429; OP-1833
 Quaternary OP-612; OP-1507; OP-1664;
 OP-1834; OP-2207; OP-2281
 Bering Sea, Quaternary OP-815
 glaciers *see also* ablation; deglaciation; firm; glacial erosion; ice; ice caps; ice movement; ice sheets; ice streams; icebergs; jokulhlaups; moraines; rock glaciers.
 Alaska
 Pliocene OF 94-0281
 Quaternary OP-1000; OP-1805
 sedimentary petrology OP-2094
 stratigraphy OP-357
 Atlantic Coastal Plain, Quaternary FS 0117-95
 Colorado, fluvial features OP-1743
 geomorphology FS 94-0009
 Quaternary OP-635
 glaciofluvial sedimentation
 Montana, non-metal deposits I-2446
 New Hampshire, hydrogeology WRI 92-4013
 glaciolacustrine sedimentation
 Michigan, geomorphology OF 95-0224
 Ohio, geomorphology OF 95-0224
 glaciology *see* glacial geology
 glaciomarine sedimentation
 Alaska, stratigraphy OF 94-0588
 Antarctic Ocean
 OP-921
 Quaternary OP-246
 Antarctica, Pliocene OF 94-0588
 Arctic Ocean, paleomagnetism OF 94-0588
 Maine, Quaternary OP-990
 Massachusetts
 OF 94-0672
 Quaternary OP-990

- Washington, Quaternary OP-205
- Glasford Formation**
Quaternary OP-1630
- glass *see* glasses
- glass, volcanic *see* volcanic glass
- Glasscock Hollow Field**
energy sources OP-746
- Glasscock Sand**
energy sources OP-220
- glasses** *see also* obsidian; palagonite; perlite; volcanic glass.
Alaska, Quaternary OP-2021
Bolivia C 1129
Hawaii
OP-147; OP-1307
geochemistry OF 94-0684
Pacific Coast, Quaternary OP-2250
- glassy feldspar *see* sanidine
- Glen Canyon Dam**
ecology OP-2130
environmental geology C 1108
geomorphology OF 94-0594; OP-2072
hydrology OP-2278
pollution OP-1476
Quaternary OF 95-0591
- Glen Canyon Group** *see also* Navajo Sandstone.
tectonics OP-1292
- Glenarm Series**
structural geology OP-1317
- Glenns Ferry Formation**
Quaternary B 2105
- Glenshaw Formation**
sedimentary petrology OP-2025
- Glenwood Shale**
metal ores B 1989-G
- Glenwood Springs Colorado**
environmental geology OF 95-0508
Quaternary OP-2113
- gliding (tectonics) *see* gravity sliding
- global change** *see also* global warming.
Alaska, geomorphology OP-101
Atlantic Coastal Plain, Quaternary FS 0117-95
Basin and Range Province, Quaternary OF 95-0078
geomorphology OF 94-0626; FS 94-0009
Great Basin, Quaternary OF 95-0078
Nevada, Quaternary FS 94-0007
stratigraphy OP-935
Washington
geochemistry OP-315
geologic hazards OF 95-0085
- global circulation models *see* general circulation models
- Global Positioning System**
Alaska, maps B 2107
Basin and Range Province, geophysical surveys OF 94-0285; OF 94-0286; OF 94-0287
California
earthquakes EV; OP-1641
engineering geology WRI 94-4184
geologic hazards OP-437
geophysical surveys OF 95-0237
maps B 2107
Quaternary OP-988
seismology OP-203; OP-347; OP-1387; OP-1550; OP-1872
structural geology OP-1007
East Pacific Ocean Islands, engineering geology OP-1367
Florida, geomorphology OF 95-0216
Hawaii
earthquakes OP-232
geologic hazards OP-696
geophysical surveys OF 94-0288
Nevada, seismicity OP-823
Oregon, seismology OP-203
Polynesia, engineering geology OP-1367
tectonophysics C 1109
- Global Seismograph Network**
earthquakes OP-2313
seismicity OP-1560
- global warming** *see also* greenhouse effect.
Alaska
geochemistry B 2107
Quaternary OP-124
sediments OP-1086
Antarctic Ocean, Pliocene OF 94-0588
New York, hydrology OP-1015
Pennsylvania, hydrology OP-1015
Pliocene OP-1565
Quaternary OP-981
- Globe Arizona**
geologic hazards OF 95-0617
pollution OF 94-0508; OP-257
- Globigerina bulloides**
Atlantic Ocean, Pliocene OF 94-0588
- Globigerinacea** *see* Neoglobobadrina pachyderma
- Globigerinidae** *see* Globigerina
- GLORIA**
Alaska, sedimentation OP-2160
Atlantic Ocean, oceanography B 2079
Bering Sea
ocean floors OP-1217
tectonophysics OP-1261
Gulf of Mexico, oceanography OP-2081
Hawaii
geomorphology OP-1570
ocean floors OP-1964
Oregon, ocean floors OP-123
Pacific Ocean
ocean floors OP-1119
oceanography B 2079
- glossaries**
Alaska, geomorphology B 2072
hydrology TWI 03-A21
mineralogy OP-276
New Hampshire, hydrogeology WRI 92-4013
Pennsylvanian OP-767
- glowing avalanche *see* ash flows
- gneisses** *see also* augen gneiss; granite gneiss; orthogneiss; paragneiss; tonalite gneiss.
Alaska
OP-296
geochemistry B 2107
Antarctica C 1129
California OP-46
Canada, structural geology B 1904-T
Colorado
OP-1423; OP-1424
uranium ores OF 95-0242
Egypt, geophysical surveys OP-2068
Germany, geophysical surveys OP-748
Idaho OP-362
India C 1129
Japan C 1129
Massachusetts
geochronology OP-1047
structural geology OP-782
Montana
OP-362
crust OP-1831
- structural geology OP-480
New Hampshire, geochronology OP-1047
Newfoundland C 1129
Pakistan, geochemistry C 1129
Poland OP-1827
Scotland, geochemistry C 1129
tectonophysics OP-141
United States, structural geology B 1904-T
Vermont
Proterozoic B 2060
stratigraphy B 2060
- GNULEX**
stratigraphy OP-2148
- Goban Spur**
Cretaceous OP-1161
- goethite**
geochemistry OP-719
- Golconda Allocthon**
sedimentary petrology OP-1404
- Golconda Formation**
structural geology OP-1944
- gold**
Alaska B 2107
geochemistry OP-1278
Idaho OF 95-0495
Nevada
OP-340
geochemistry OF 94-0670
New Mexico
metal ores OF 94-0691
uranium ores B 2063
Wyoming, geochemistry OP-300
- Gold Acres Deposit**
gold ores OP-331; OP-536
- Gold Bar Deposit**
gold ores OP-331
- Gold Butte Fault**
deformation OP-1323
- gold ores**
B 2081; OP-104; OP-149; OP-863
Alaska
B 2084; B 2107; OP-296; OP-349; OP-624; OP-1195; OP-1893; OP-2184
geochemistry B 2107
Appalachians OP-1909
Arabian Peninsula OP-1220
Arizona B 2138; OP-1606
Basin and Range Province OP-1874
California OF 94-0640-A; OF 94-0640-B; OF 95-0030; OP-216; OP-341; OP-415; OP-663; OP-720; OP-800; OP-801; OP-802; OP-804; OP-805; OP-940
Canadian Shield OP-2126
China OP-1871
Colorado
OP-284; OP-333; OP-1096; OP-1626
environmental geology B 2220; OP-334
geochemistry OP-535
geophysical surveys OP-1118
pollution OP-730; OP-1957
geochemistry OP-130
Great Basin OP-1874
Great Britain OP-2126
Idaho
P 1525; B 2064-A-R; B 2081; OF 94-0690; OF 95-0495
faults P 1525
Quaternary P 1525
Minnesota OP-148
Montana OF 94-0670; OP-2224

- Nevada
B 2081; B 2090; OF 94-0282; OF 94-0668;
OP-20; OP-331; OP-340; OP-438; OP-536;
OP-895; OP-1245; OP-1946; OP-2151
geochemistry OF 94-0670; OP-535
geochronology OP-844
geophysical surveys OF 94-0670; OP-2029
New Jersey OP-290; OP-1379
New York OP-290; OP-1379
Oregon B 1738-E; B 1741-H; OF 94-0677
Peru OP-202; OP-1411
Quebec OF 94-0228
Queensland Australia C 1129
South Carolina OP-2090
Spain OF 95-0221; OP-22; OP-799
Tasmania Australia C 1129
United States OP-799
Venezuela, environmental geology YR
Western Australia OF 94-0228
- Gold Quarry Mine**
mineral inventory OP-450
- Gold Spring Arizona**
Quaternary OF 95-0078
- Golden Gate Range Tuff**
Tertiary OF 95-0545
- Goldhammer Pluton**
structural geology OP-432
- Goliad Sand**
ground water WRI 95-4038
- Gondwana**
Antarctica
magmas C 1129
stratigraphy OF 94-0588
Commonwealth of Independent States, petro-
leum B 2110
Florida
Devonian OP-1971
sedimentary petrology OP-1861
Georgia, Devonian OP-1971
New Zealand, magmas C 1129
petrology C 1129
stratigraphy B 2110
- Goniatites**
Appalachians, stratigraphy OP-766
- goniometry**
geochemistry OP-130
- Goodnews Terrane**
areal geology OP-201
- Gorda Rise**
earthquakes OP-26
geochemistry B 2022; OP-861; OP-1033
geophysical surveys OF 95-0275
heavy mineral deposits OF 95-0587
oceanography B 2022; OF 94-0711
petroleum OP-513
plate tectonics OP-1576
sea-floor spreading B 2022
seismicity OP-1745
sulfides OP-1829
- Gordii Dorsum** I-2422; I-2425
- Gordo Aquifer**
ground water WRI 94-4074; WRI 94-4223
- Goshute Indian Reservation**
geophysical surveys OF 93-0397-A; OF 93-
0397-B; OF 94-0296
metal ores OF 94-0270-A; OF 94-0270-B
- gossan**
Minnesota, metal ores OP-862
- Goteborg Sweden**
magmas C 1129
- Gothan, Walther**
paleobotany OP-644
- Gothenburg** *see* Goteborg Sweden
- gothite** *see* goethite
- Gotlandian** *see* Silurian
- gouge**
Alaska, structural geology OP-1447
California
earthquakes OP-491
engineering geology OF 94-0228
faults OP-835
seismology OP-1207; OP-1474; OP-1808
earthquakes OP-53
engineering geology OF 94-0228; OP-1841
geophysics OP-551; OP-552
rock mechanics OF 94-0228
structural geology OF 94-0228; OP-401
Utah, neotectonics B 2056
Wyoming, structural geology OF 94-0228
- Gouldsboro Granite**
petrology C 1129
- government agencies** *see also* public policy; sur-
vey organizations.
OP-1240; OP-1415; OP-1445
Alaska, energy sources C 1108
Arizona OF 95-0202
California, petroleum OF 95-0014
Colorado
energy sources C 1108
environmental geology C 1108
conservation C 1108
earthquakes OP-1193; OP-1749
environmental geology C 1108
geochemistry OF 95-0486
geophysical surveys OP-2102
Iowa, pollution OP-839
NASA OF 95-0561; OP-541
New Mexico
energy sources C 1108
environmental geology OF 94-0269
NOAA, ocean circulation OF 94-0363
Oak Ridge National Laboratory, Tennessee OP-
1259
Tennessee, pollution OF 95-0156
U. S. Bureau of Mines
Appalachians C 1108
environmental geology C 1108
Virginia, ground water OF 94-0301
Wyoming
energy sources C 1108
environmental geology C 1108
- Government Information Locator Service** OP-
1240
- GPRMODV2**
geophysical surveys OF 95-0058
- GPS tracking** *see* Global Positioning System
- grabens** *see also* half grabens.
I-2402; OP-35; OP-852; OP-1844
Appalachians, faults OF 94-0298
California
Quaternary OF 94-0568
structural geology OP-705; OP-822
Idaho, geophysical surveys P 1525
Indiana, structural geology P 1538-O; OF 94-
0298
Israel, Quaternary OF 94-0568
Kentucky
faults OF 94-0298
natural gas OF 94-0298
petroleum OF 94-0298
structural geology OF 94-0298
- Mississippi Valley
faults OF 94-0298
structural geology P 1538-E
- Missouri**
geophysical surveys P 1538-P
seismology OP-405
sedimentary petrology OF 94-0298
Spain, metal ores OP-799
structural geology OP-1689
Tennessee, Quaternary OF 94-0568
United States, metal ores OP-799
- graded bedding**
California OP-1097
Colorado
geophysical surveys OP-1879
Oligocene OP-1691
- graduate-level education**
OP-1332
geochemistry OP-673
geophysical surveys OP-71
- Graham Ranch California**
ground water OP-2335
- grainstone**
Basin and Range Province, structural geology
OP-2115
Great Basin, structural geology OP-2115
Illinois, petroleum OF 94-0298
Kentucky, natural gas OF 94-0298
- gramenite** *see* nontronite
- Gramineae**
Louisiana, ecology OF 94-0275
- Gramplan Highlands**
structural geology C 1129
- Granada Hills California**
geologic hazards OF 95-0062
- Granby Quadrangle**
maps GQ-1763
- Grand Canyon**
ecology OP-2130
engineering geology OP-1435
fluvial features OP-1607
geomorphology OF 94-0563; OF 94-0564;
OF 94-0594; OF 94-0597; OF 95-0529; OP-
1368; OP-2072
hydrogeology WRI 95-4010; OP-2261
hydrology OF 94-0485; OF 94-0531; FS 0120-
95; OP-2278
petrology OP-991; OP-1255
Quaternary OF 95-0037; OF 95-0057; OF 95-
0591; OP-1287; OP-1730
weathering OP-1504
- Grand Coulee**
Quaternary OP-2237
- Grand Mesa**
geologic hazards OP-1101
- Grand Portage Indian Reservation**
ground water WRI 94-4199
- Grand Prize Formation**
sedimentary petrology P 1525
- Grand Reef Mine**
fluorides OP-466
- Grand Teton National Park**
faults OP-476
- Grande River** *see* Rio Grande
- granite** *see* granites
- granite deposits**
Idaho P 1525
- granite gneiss**
Finland, geochemistry C 1129
North Carolina, structural geology OP-1536

- Virginia, structural geology OP-1536
- Granite Mountains**
deformation OP-283
energy sources OP-1942
sedimentary petrology OP-1622
- Granite Park**
geomorphology OF 94-0563
Quaternary OF 95-0591
- granite porphyry**
Romania, geochemistry C 1129
- Granite Spring Quadrangle**
maps OF 92-0183
- granites** *see also* A-type granites; alkali granites; aplite; biotite granite; felsite; granite porphyry; granodiorites; I-type granites; leucogranite; microgranite; monzogranite; muscovite granite; pegmatite; quartz monzonite; rapakivi; S-type granites; two-mica granite.
C 1129; OP-83
- Alaska
C 1129; OP-100; OP-296; OP-931
gold ores OP-2184
paleomagnetism OP-727
- Alberta
C 1129
geochemistry C 1129
- Antarctica C 1129
- Argentina, geochemistry C 1129
- Arizona
C 1129
structural geology OP-1282
- Australia C 1129
- Baltic region C 1129
- Brazil, geochemistry C 1129
- California
C 1129; OP-45; OP-1818
fractures OF 94-0228
ground water OP-700; OP-2335
metal ores C 1129
- Canada
seismology OP-606
stratigraphy B 2135
- Canadian Shield, metal ores OP-2126
- China, geochemistry C 1129
- Colorado
OP-1067; OP-1424
metal ores C 1129; OP-1626
Proterozoic OF 94-0437
- Commonwealth of Independent States C 1129
- copper ores C 1129
- earthquakes OP-53
- engineering geology OF 95-0028; OP-1841
- faults OP-73; OP-759
- France
C 1129
geochemistry C 1129
- geochemistry C 1129
- geophysics OP-551
- Germany
C 1129
geochemistry C 1129
- Great Britain, metal ores OP-2126
- Hong Kong, geochemistry C 1129
- Idaho
faults OP-1650
geochronology C 1129
metal ores B 2064-A-R
non-metal deposits P 1525
uranium ores P 1525
- Italy C 1129
- Japan
C 1129
geochemistry C 1129
- Labrador, geochemistry C 1129
- Maine
C 1129
geochemistry C 1129
- Massachusetts
geophysical surveys WRI 94-4185
structural geology OP-782
- Mexico
C 1129
metal ores C 1129
- mineralogy C 1129
- Minnesota, geochemistry B 1904-U
- Mississippi Valley
lead-zinc deposits OF 94-0298
metal ores OP-888
- Montana
crust OP-1831
geochronology C 1129
- Nevada, structural geology OP-454
- New Mexico
C 1129
geochemistry B 2081
- Newfoundland
C 1129
geochemistry C 1129
- North Carolina
geochemistry C 1129
structural geology OP-1202
- Norway, structural geology OP-2156
- Poland OP-1827
- rock mechanics OF 94-0228
- Russian Federation, geochemistry C 1129
- Scandinavia C 1129
- Scotland C 1129
- seismic sources OP-1788
- seismology OP-1721
- South Africa, seismology OP-606
- South Dakota, Proterozoic OP-1117
- Spain C 1129
structural geology OP-637; OP-1840
- Sweden, environmental geology YR
- Texas, structural geology C 1129
- United States, stratigraphy B 2135
- Vermont, geochemistry C 1129
- Virginia
geochemistry C 1129
structural geology OP-1202
- Wales, geochemistry C 1129
- Washington C 1129; GQ-1681
- granitic gneiss *see* granite gneiss
- granodiorites**
C 1129
Alaska, geochemistry B 2107
Arabian Peninsula, metal ores OP-1220
- Argentina
C 1129
geochemistry C 1129
- Arizona
C 1129
tectonophysics OP-352
- Austria C 1129
- Brazil
C 1129
geochemistry C 1129
- British Columbia C 1129
- California
OP-313
energy sources OP-193
geochemistry C 1129
rock mechanics OF 94-0228
- Canada
C 1129
geochemistry C 1129
- Canadian Shield, geochemistry C 1129
- Chile
C 1129
geochemistry C 1129
- Colorado
C 1129; GQ-1764
fluvial features OP-2259
- Egypt, geophysical surveys OP-2068
- Finland, geochemistry C 1129
- France C 1129
geochemistry C 1129
- Germany
C 1129
geochemistry C 1129
geophysical surveys OP-651
- Greece, geochemistry C 1129
- Italy
C 1129
geochemistry C 1129; OP-27
- Japan
C 1129
Neogene C 1129
- Maine, metal ores OP-555
- Nevada
C 1129
geochemistry C 1129
gold ores OP-2151
- Romania, geochemistry C 1129
- Russian Federation, geophysical surveys OP-651
- Spain C 1129
- Switzerland C 1129
- Victoria Australia
C 1129
geochemistry C 1129
- Wyoming I-2233
- Grant Canyon Field**
structural geology OP-1440; OP-1820
- Grant Line Arroyo watershed**
hydrology WRI 94-4143
- Grant Range**
structural geology OP-1440; OP-1976
- Grants mineral belt**
hydrogeology OP-335
- granulite facies**
Alaska, metamorphic rocks OP-1930
California, intrusions OP-46
India, metamorphism C 1129
Japan, petrology C 1129
Mexico, phase equilibria OP-387; OP-1489
- Montana
crust OP-1831
metamorphism OP-1627
- New Zealand, magmas C 1129
- North Carolina
petrology OP-1647
structural geology OP-1335
- Norway, structural geology OP-2156
- Ontario, phase equilibria OP-387; OP-1489
- granulites *see* kinzigite; leptite
- graphite**
Gabon, bitumens OP-1403
Maryland, petrology OP-1200
Virginia, petrology OP-1200
- graphite deposits**
Idaho P 1525
- graptolites**
Alaska, paleontology OF 94-0215
Idaho, polymetallic ores B 2064-A-R

Grass Creek Mine

- areal geology OP-280
- Cretaceous C-0146
- sedimentary petrology OP-780

Grass Lake California

- Quaternary OF 94-0651

Gratiot Quadrangle

- stratigraphy OP-411

grauwacke *see* graywacke

gravel

- Alaska
 - hydrology OP-127
 - Quaternary OP-1457
- Arizona
 - geomorphology OP-2072
 - hydrology OP-2203
- California
 - ground water OP-2335
 - structural geology OP-1430
- Colorado, ground water OP-1562
- Columbia Plateau, Quaternary OP-2237
- environmental geology OP-811
- geochemistry OP-1284
- geologic hazards OP-2240
- geomorphology OP-1792
- Georgia, phosphate deposits OP-1969
- ground water OP-2283
- hydrogeology OP-970
- hydrology OP-18; OP-1063
- Illinois, Quaternary OP-1630
- Iowa, Quaternary OP-1630
- Massachusetts, waste disposal OP-2249
- Missouri, environmental geology OP-447
- Nevada
 - fluvial features OP-2289
 - geomorphology OF 94-0670
- New England, ground water P 1415-A
- Ohio, geomorphology OF 95-0224
- Oman
 - ground water OP-2311
 - hydrogeology OP-1801
- United Arab Emirates
 - ground water OP-2311
 - hydrogeology OP-1801
- Utah, hydrology OP-2203
- Virginia, ground water OP-1977
- Washington, engineering geology OP-1859

gravel deposits *see also* aggregate.

- Arizona OF 95-0031
- California OF 95-0535
- Idaho P 1525
- Montana I-2446
- New Hampshire OF 94-0201
- Oregon B 1738-E

Gravelly Range

- neotectonics OP-1902
- Quaternary OP-1868

Gravina-Nutzotin Belt

- metamorphism OP-39

gravitational differentiation *see* crystal fractionation

gravity anomalies *see* Bouguer anomalies

gravity faults *see* normal faults

gravity gliding *see* gravity sliding

gravity logging

- California, energy sources OF 95-0054
- Nevada, ground water OF 92-0657

gravity methods OP-71**gravity sliding**

- New Hampshire, structural geology OP-1830
- Quaternary OF 94-0568

Utah, tectonics OP-1283

gravity survey maps

- Alaska, geophysical surveys OP-42
- Arizona, geophysical surveys OF 95-0076
- Basin and Range Province, geophysical surveys GP-1012
- California, geophysical surveys OF 95-0016
- Idaho, mineral resources B 2064-A-R
- Maine, geophysical surveys OP-85
- Mississippi Valley, geophysical surveys P 1538-L
- Nevada, geophysical surveys OP-2029
- OP-2002

gravity surveys

- Alaska
 - deformation OP-1250
 - geophysical surveys OP-86
- Antarctica, tectonophysics OP-55
- Arizona, hydrogeology OP-1965
- Atlantic Ocean, sea-floor spreading OP-1931
- California
 - faults OP-1577
 - geophysical surveys OP-1759
 - gold ores OP-341
 - ground water OP-2010
- Colorado, ground water OP-1562
- Colorado Plateau, tectonophysics OP-1669
- geophysical surveys DDS-0031
- Hawaii, ocean floors OP-1964
- Idaho, geophysical surveys P 1525
- Iowa, stratigraphy OP-372
- Kentucky, faults OF 94-0298
- Mississippi Valley, structural geology P 1538-E
- Nevada, geophysical surveys OF 93-0397-A; OF 93-0397-B; OF 93-0540-A; OF 93-0540-B; OF 93-0586-A; OF 93-0586-B; OF 94-0670
- New Mexico, mineral resources B 2063
- North Dakota, hydrogeology OF 95-0304
- Oregon
 - economic geology B 1738-E; B 1741-H
 - structural geology OP-1436
 - tectonophysics OP-70
- structural geology OP-1668; OP-1689
- Utah, geophysical surveys OF 93-0397-A; OF 93-0397-B

gravity tectonics *see* gravity sliding

Grayback Pluton

- magma OP-41

Grays Harbor

- crust OP-1776
- Quaternary OF 94-0568
- tectonophysics OP-1975

graywacke

- Alaska
 - OP-711; OP-1361
 - structural geology OP-1447
- British Columbia OP-1361
- New South Wales Australia, magma C 1129

Great Appalachian Valley

- pollution OP-1365
- stratigraphy OF 94-0573
- waste disposal OP-1133

Great Artesian Basin

- diagenesis OP-665

Great Bahama Bank

- sedimentary petrology OP-2109
- stratigraphy OP-540; OP-1334

Great Basin *see also* Battle Mountain High; Chainman Shale.

- deformation OP-1323
- geochemistry P 1559; B 1988-K
- gold ores OP-895; OP-1946
- hydrogeology WRI 95-4052
- hydrology WRI 94-4210; FS 0115-95; OP-1106
- magma C 1129; OP-1095
- maps OF 94-0687; OF 95-0010
- metal ores OP-1874
- orogeny OP-619
- phase equilibria C 1129
- Quaternary B 2056; OF 94-0568; OF 95-0037; OF 95-0078; FS 94-0007; OP-875; OP-1040; OP-1414; OP-2006; OP-2101; OP-2198
- stratigraphy OF 95-0001; OP-2147; OP-2305
- structural geology OP-744; OP-1469; OP-2115
- tectonophysics OP-64

Great Britain *see* Caledonides; England; Scotland; Wales

Great Egg Harbor River

- hydrology WRI 91-4141

Great Falls tectonic zone

- structural geology OP-1903

Great Lakes

- areal geology, Lake Michigan OP-295
 - ecology, Lake Erie I-2451
 - environmental geology
 - C 1108
 - Lake Erie OF 95-0224
 - Lake Michigan OF 95-0163
 - frost action
 - Lake Erie OF 95-0224
 - Lake Michigan OP-43
 - geomorphology
 - Lake Erie OF 95-0224
 - Lake Michigan OP-285; OP-452
 - geophysical surveys
 - Lake Erie OF 95-0252
 - Lake Michigan OF 94-0698
 - hydrogeology
 - Lake Erie FS 94-0056
 - Lake Michigan OF 92-0139; OF 95-0163; OP-90; OP-164
 - hydrology
 - Lake Michigan OF 95-0163
 - Lake Ontario WRI 92-4052
 - lacustrine features
 - Lake Erie OF 95-0224
 - Lake Michigan I-2429; OP-286
 - marine geology, Lake Michigan OF 95-0224
 - pollution, Lake Michigan OF 95-0163
 - Quaternary
 - OP-525
 - Lake Michigan OP-163; OP-292
 - Lake Ontario OF 94-0568
 - sediments, Lake Michigan OP-1086
 - shore features, Lake Erie OF 95-0224
 - stratigraphy, Lake Ontario OP-436
- Great Lakes region** *see also* Illinois; Indiana; Lake Saint Clair; Lake Superior region; Michigan; Minnesota; New York; Ohio; Ontario; Pennsylvania; Wisconsin.
- areal geology OP-295
 - geologic hazards B 2139
 - geomorphology OF 95-0224; OP-285
 - ground water WRI 94-4199; OF 95-0163
 - hydrology WRI 93-4188; WRI 94-4094; WRI 94-4190; WRI 95-4005; WRI 95-4023; OF 94-0113

- lacustrine features OP-286
Quaternary OP-163
reclamation OF 95-0163
- Great Neck New York**
geomorphology OP-2170
- Great Plains** *see also* Colorado; High Plains Aquifer; Kansas; Madison Aquifer; Montana; Nebraska; New Mexico; North Dakota; Oklahoma; Platte River basin; Saskatchewan; South Dakota; Texas; Wyoming; Yellowstone River.
areal geology OF 95-0256
environmental geology I-2469
geologic hazards YR; B 2139
ground water OF 95-0153
hydrogeology WRI 93-4195; OF 94-0331; OF 95-0304; OF 95-0313; FS 94-0048; OP-1017
hydrology WRI 94-4058; WRI 94-4171; WRI 95-4102; OF 94-0546; OF 95-0123; OF 95-0283
maps OF 88-0607; OF 88-0608; OF 88-0609; OF 88-0610; OF 88-0611; OF 88-0612; OF 88-0613; OF 88-0614; OF 88-0615; OF 88-0617; OF 88-0618; OF 88-0619; OF 88-0620; OF 88-0621; OF 88-0624; OF 88-0625; OF 88-0626; OF 88-0627; OF 88-0635; I-2498
pollution W 2419
Quaternary OP-527; OP-656; OP-812
- Great Salt Lake**
hydrogeology WRI 93-4028
- Great Selima Sand Sheet**
Quaternary OP-909
- Great Smoky Mountains**
environmental geology OF 95-0477
- Great Valley Sequence**
OP-1341
clay mineralogy B 1995-H,I
economic geology OP-216; OP-802
faults OP-1577
geochemistry OP-927
geothermal energy OP-299
gold ores OP-341
metal ores OP-663; OP-720; OP-801; OP-805; OP-940
tectonics OP-444
- Greater Antilles** *see also* Cuba; Hispaniola; Puerto Rico.
earthquakes, Hispaniola OP-1313; OP-2238
plate tectonics
OP-1314
Hispaniola OP-1304; OP-1312
- Greater Caucasus**
areal geology OP-154
- Greece**
geochemistry, Greek Macedonia C 1129
plate tectonics OF 94-0568
Quaternary
OF 94-0568
Epirus Greece OF 94-0568
Salonika Greece OF 94-0568
structural geology, Naxos OP-453
- Greek Aegean Islands** *see* Cyclades
- Greek Macedonia** *see also* Salonika Greece.
geochemistry C 1129
- Greeley dune field**
geochemistry OP-1046
- Green Bay**
environmental geology OF 95-0163
ground water OF 95-0163
hydrology OF 95-0163
- Green Mountains**
Proterozoic B 2060; OP-1982
stratigraphy B 2060
- Green Ridge Fault**
uranium ores OF 95-0242
- Green River**
coal OP-947
hydrology OP-829
- Green River basin**
energy sources OP-746
non-metal deposits OF 95-0476
stratigraphy OP-747
- Green River coal field**
geochemistry OF 94-0670
sedimentary petrology OP-1181
- Green River Formation**
energy sources OP-297
geologic hazards OP-1101
non-metal deposits OF 95-0476
- Green tuff region**
Neogene C 1129
- Greenhorn Limestone**
OP-1974; OP-2019; OP-2063
geochemistry OF 95-0209
- Greenhorn Range**
structural geology OP-480
- greenhouse effect**
OP-259
ecology C 1108
environmental geology C 1108
geochemistry C 1108
Poland, geochemistry C 1108
pollution C 1108
United States, geochemistry C 1108
- Greenland**
geochemistry OF 95-0222
geophysical surveys P 1386-C; OF 94-0254
glacial geology, Greenland ice sheet P 1386-C
petrology, Skaergaard Intrusion OP-1752
Pliocene, Greenland ice sheet OP-1171
Quaternary
C 1108
Greenland ice sheet OP-446
- Greenland ice sheet**
glacial geology P 1386-C
Pliocene OP-1171
Quaternary OP-446
- Greenland Ice Sheet Project**
geochemistry OF 95-0222
geophysical surveys OF 94-0254
Quaternary C 1108; OP-187
- Greenland Ice-core Project**
Quaternary C 1108
- greenschist**
Alaska
OP-39; OP-217; OP-229
paleomagnetism OP-727
Yukon Territory OP-217
- greenschist facies**
Alaska
geophysics OP-594
petrology OP-409
stratigraphy P 1545
structural geology OP-1447
California, petrology OP-1315
Canada, petrology OP-409
Colorado, Proterozoic OP-1982
Greenland, petrology OP-1752
Oregon, petrology OP-1315; OP-1590
South Carolina, gold ores OP-2090
Virginia, magmas P 1529
- Wyoming, Proterozoic OP-1982
- greenstone**
Alaska OP-39
Arabian Peninsula, metal ores OP-1220
Colorado, Proterozoic OF 94-0437
- greenstone belts**
Canada, structural geology B 1904-T
Quebec, gold ores OF 94-0228
United States, structural geology B 1904-T
Wyoming I-2233
- greisen**
Canadian Shield, metal ores OP-2126
Great Britain, metal ores OP-2126
mineralogy OP-1378
- Grenville Orogeny** *see* Grenvillian Orogeny
- Grenville Province**
geophysical surveys OP-1804
petrology OP-1255
phase equilibria OP-1489
- Grenvillian Orogeny**
Appalachians
OP-766
geochemistry C 1129
Maryland, petrology OP-1200
Mexico, petrology OP-1870
New Jersey, metal ores OP-290; OP-1379
New York, metal ores OP-290; OP-1379
Texas
magmas C 1129
paleomagnetism OP-1350
Virginia, petrology C 1129; OP-1200
- greywacke** *see* graywacke
- Griffin Coulee Quadrangle**
maps MF-2289
- GRIP**
Quaternary C 1108
- ground motion** *see also* strong motion; surface waves.
Alaska
engineering geology OP-1683
seismology OF 95-0257-A; OF 95-0257-B; OF 95-0257-C
Armenia, engineering geology OP-265
Bolivia, seismology OP-961
California
earthquakes EV; OF 95-0022; OP-430; OP-1144
engineering geology OF 94-0662; OP-366; OP-1467; OP-1585
geologic hazards OP-419
Mohorovicic discontinuity OP-1853
seismic sources OP-2286
seismicity OP-1832
seismology OF 95-0095; OP-25; OP-373; OP-860; OP-1143; OP-1596; OP-1617; OP-2252
Colorado, structural geology OP-325
earthquakes OP-1074
engineering geology OP-1148
environmental geology C 1108
geologic hazards OF 94-0663; OP-1213
Hawaii
elastic waves OP-1649
geophysical surveys OF 94-0288; OF 94-0567
Japan
earthquakes OP-1800
geologic hazards OP-420
seismology OP-974
Nevada, structural geology OP-2276
Nicaragua, seismology OP-961

- Philippine Islands
 engineering geology OP-1683
 geologic hazards OP-1048
- Quebec, seismology OP-88
- Rhode Island, seismology OP-274
 seismology OP-24; OP-464; OP-2041
- South Carolina, geologic hazards OF 94-0663
- Washington
 engineering geology OP-1859
 geologic hazards OF 94-0663
- ground probing radar *see* ground-penetrating radar
- ground truth**
 Atlantic Ocean, stratigraphy OP-1334
 Western Interior, Cretaceous P 1561
- ground water** *see also* alluvium aquifers; aquifer vulnerability; aquifers; aquitards; artesian waters; artificial recharge; basin management; confined aquifers; connate waters; hot springs; hydrologic cycle; hydrothermal alteration; infiltration; leaky aquifers; lysimeters; MODFLOW; recharge; salt water; salt-water intrusion; shallow aquifers; springs; thermal waters; tracers; waste disposal; water resources; water rights; wellhead protection.
 C 1108; WRI 90-4112; WRI 93-4098; WRI 94-4061; WRI 95-4031; WRI 95-4105; OF 94-0531; OF 94-0670; OF 94-0708-W; OF 95-0141; OF 95-0163; OP-30; OP-171; OP-388; OP-796; OP-1014; OP-1515; OP-1687; OP-1779; OP-1884
- Alaska
 OF 94-0713-W
 environmental geology OF 94-0481; OF 94-0526; OF 94-0527; OF 95-0173; OF 95-0176; OF 95-0179; OF 95-0344; OF 95-0345; OF 95-0346; OF 95-0347; OF 95-0348
 geologic hazards OF 95-0175
 impact statements OF 94-0482
 pollution OF 95-0178
- Appalachians, pollution OP-1365
- Arizona
 WRI 95-4010; OF 94-0476; FS 94-0016
 stratigraphy OP-1320
- Arkansas OF 94-0531
- California
 WRI 94-4151; OF 94-0045; OF 94-0363; OF 94-0531; OF 95-0150; OP-1231; OP-1362; OP-2043; OP-2298
 energy sources OP-385
 engineering geology OP-650
 environmental geology WRI 94-4208
 geologic hazards OF 94-0494; OP-437
 pollution WRI 94-4040
- Canada OP-937
- Caribbean region OF 91-0503
- China, seismology OF 95-0562
- Colorado
 WRI 94-4037; WRI 94-4051; OP-221; OP-1797
 environmental geology B 2220
 metal ores OP-98; OP-728
 pollution OF 94-0670; OP-204; OP-730; OP-732; OP-1466; OP-2316
- Colorado Plateau, stratigraphy OP-1321; OP-1481
- Connecticut WRI 94-4255
- Costa Rica, geochemistry OP-810
- ecology OP-346
- El Salvador, Quaternary OP-1816
- environmental geology C 1108; OP-581; OP-955; OP-1619
- Europe, geochemistry OF 94-0228
- Florida
 WRI 94-4076; WRI 94-4167; OF 94-0081; OF 94-0531; OP-1455
 Cenozoic OP-1204
 geomorphology OP-1203
 geochemistry OF 94-0362; OF 95-0181
 Germany, engineering geology OP-650
 Great Plains WRI 93-4231
- Hawaii
 WRI 93-4180; OP-2077
 geomorphology OP-1570
 Quaternary OP-441
- Idaho
 WRI 94-4135; WRI 94-4221
 pollution OP-2129
- Illinois OF 93-0141; OF 94-0515
- Indiana, pollution OP-2024
- Iowa
 OF 94-0711-W; FS 94-0031
 pollution OP-839; OP-1485
- Japan, earthquakes OP-490
- Lesser Antilles OF 91-0503
- Maryland
 WRI 93-4225; WRI 94-4170; OF 94-0507; OP-191; OP-410; OP-771
 pollution OP-1985
- Massachusetts
 OF 95-0188
 geophysical surveys WRI 94-4185
- Mexico, environmental geology YR
- Michigan OF 95-0163
- Midwest, pollution OP-1056
- Minnesota
 OF 94-0337; OF 94-0478
 geochemistry OP-498
- Mississippi Valley
 FS 94-0047
 environmental geology OP-1748
- Missouri
 OF 94-0705-W; OF 95-0109
 pollution OF 94-0332; OP-2282
- Montana
 environmental geology OP-1264
 natural gas OP-854
- Nebraska, pollution OP-204
- Nevada
 OF 95-0107; OP-1362; OP-2049
 geochemistry OF 94-0670
 gold ores OP-340
- New England WRI 94-4252
- New Hampshire
 OF 94-0398; FS 0138-95
 pollution OF 95-0142
 tectonophysics OP-2204
- New Jersey OP-1568
- New Mexico
 WRI 93-4163; OF 94-0349
 ichnofossils OP-379
 sedimentation OP-1276
 solution features OP-190
 uranium ores B 2063
- New York WRI 93-4004
- Ohio
 WRI 95-4037
 pollution OF 95-0371
- Oklahoma, pollution OP-143
- Oregon OF 95-0285
- Pennsylvania
 OF 93-0417; OF 94-0381; OF 95-0193; OP-873
 sedimentary petrology OP-1951
- Phanerozoic OP-1480
- pollution OP-6; OP-97; OP-629; OP-1724; OP-2323
- Portugal, pyrite ores B 2081
- Rhode Island WRI 94-4138; OF 95-0188; OF 95-0355
- Russian Federation, engineering geology OP-650
- soils OP-787
- South Carolina, pollution WRI 94-4209; OF 94-0486
- stratigraphy OP-1319
- Tennessee
 WRI 95-4011; OF 94-0483; OF 95-0278
 environmental geology OF 95-0477
 pollution OF 95-0156
- Texas
 ecology OP-1180
 pollution OP-1093
- United States
 OP-937
 environmental geology YR
- Vermont, engineering geology OP-650
- Washington
 OF 94-0108
 pollution WRI 92-4017; WRI 94-4030
- West Virginia OF 92-0140
- Wisconsin
 WRI 94-4101; OF 95-0163; OP-2327
 environmental geology OF 95-0163
 pollution OF 95-0163; OP-508
- Wyoming
 WRI 94-4135; WRI 94-4221; OF 94-0466
 geophysical surveys OF 95-0239
- ground, patterned *see* patterned ground
- ground-penetrating radar**
 Alaska, geomorphology WRI 94-4165
- Florida
 geomorphology OP-1203
 ground water OP-1948
 geophysical surveys OF 95-0058
- New Hampshire
 ground water OF 95-0363
 pollution OF 95-0142
- ground-water replenishment *see* recharge
- groundwater *see* ground water
- growth faults**
 Nevada OP-454
- GSAS**
 seismology OF 94-0221
- GSMAP** OF 92-0372-A; OF 92-0372-B
- GSPCS** OF 92-0372-A; OF 92-0372-B
- GSPCT** OF 92-0372-A; OF 92-0372-B
- GSPDC** OF 92-0372-A; OF 92-0372-B
- GSPPROB** OF 92-0372-A; OF 92-0372-B
- GSPSRT** OF 92-0372-A; OF 92-0372-B
- GSPTD** OF 92-0372-A; OF 92-0372-B
- GSPUV** OF 92-0372-A; OF 92-0372-B
- GSPV85** OF 92-0372-A; OF 92-0372-B
- GSPXY** OF 92-0372-A; OF 92-0372-B
- Guadalupe Mountains**
 mineralogy OP-1275
 solution features OP-190
 stratigraphy OP-2253
- Guadalupian** *see also* Delaware Mountain Group.
 China OP-2253
 Idaho OP-361
 Iran OP-2253
 Oregon OP-361
 Pakistan OP-2253
 Texas OP-2253

Guam

hydrology WRI 93-4116

Guangxi China

petrology C 1129

Guanica Puerto Rico

maps I-2387

guard log *see* Laterolog**Guarico Venezuela**

maps MF-2247

Guatemala

geologic hazards, Pacaya OP-952

Quaternary OP-1952

Gubbio Italy

stratigraphy OP-1416

Gubik Formation

OF 94-0588

areal geology OP-641

Guemes Island

ground water WRI 94-4236

Guerrero Mexico

seismology OP-613

Guiana Massif *see* Guyana Shield**guidebook**

OP-1588

Alaska

geomorphology B 2072

metamorphic rocks OF 94-0268

Appalachians, geomorphology OP-196

British Columbia, metamorphic rocks OF 94-0268

California

OF 94-0650

economic geology OP-216; OP-802; OP-803

energy sources OP-193

geochemistry OP-927

geophysical surveys OF 95-0237

geothermal energy OP-299

gold ores OP-341

metal ores OP-663; OP-720; OP-800; OP-801; OP-804; OP-805; OP-940

Colorado

petrology OP-546; OP-840

Proterozoic OF 94-0437

Iowa, stratigraphy OP-607

Maine, Quaternary OP-990

Massachusetts

Quaternary OP-990

structural geology OP-782

metal ores OP-870

Mexico OP-838

Montana, energy sources OP-281

New Mexico, petrology OP-840

New York, mineral resources OP-718

sedimentary petrology OP-879

Vermont

metal ores OP-869

mineral resources OP-718

Virginia, stratigraphy OF 94-0573

Washington OF 94-0636

Wyoming, energy sources OP-281

guided waves

California, seismology OP-1704

guides, ore *see* ore guides**Guilmette Formation**

OP-1558

energy sources OF 94-0670

structural geology B 2056; OP-1944

Guizhou China

metal ores OP-1871

Gulf Coastal Plain *see also* Alabama;

Atchafalaya Bay; Florida; Louisiana; Mississippi; Mississippi Sound; Southwest Florida Water Management District.

conservation OF 94-0275

continental shelf OP-1425

diagenesis OP-665; OP-828

ecology OF 94-0275

energy sources C 1108; OP-220

engineering geology P 1538-M; OF 94-0275

environmental geology C 1108; OF 94-0116; OF 94-0275; FS 0134-95

geomorphology OF 94-0275; OF 95-0216; OP-1203

ground water WRI 93-4020; WRI 93-4158;

WRI 93-4224; WRI 94-4074; WRI 94-

4202; WRI 94-4219; WRI 95-4013;

WRI 95-4038; OF 94-0345; OF 94-0346;

OF 94-0529; OF 94-0531; OF 95-0182;

OF 95-0183; OP-901; OP-1996

hydrogeology WRI 92-4159; WRI 93-4171;

FS 94-0048

hydrology WRI 92-4181; WRI 94-4217;

OF 95-0167; FS 0118-95; FS 94-0073

maps OF 95-0261

marine geology WRI 94-4081

oceanography I-2150-B

Quaternary OF 94-0702; OP-1936

shore features OP-1937

stratigraphy OP-1906

waterways OF 94-0275

Gulf Islands National Seashore

Quaternary OF 94-0558

Gulf of Alaska *see also* Fairweather Fault.

coal OP-972

crust OP-2075

energy sources OP-576

Invertebrata P 1544

petrology B 2139

plate tectonics OP-1682; OP-2234

Quaternary OF 94-0568; OP-1805

sedimentary petrology OP-1218

Gulf of Aqaba

Quaternary OF 94-0568

Gulf of California

petrology OP-827

Quaternary OP-1055

sedimentation OP-1987

tectonophysics OP-82

Gulf of Elat *see* Gulf of Aqaba**Gulf of Maine**

ocean circulation OP-2114

oceanography OF 94-0672; OP-2222

Gulf of Mexico *see also* Atchafalaya Bay;

Chicxulub Crater.

continental shelf OP-1425

energy sources C 1108; OF 94-0228

environmental geology

OF 94-0275; OP-715

Florida Bay FS 0134-95

marine geology OF 95-0224

ocean floors OP-553

oceanography

I-2150-B

Mississippi Fan OP-2081

Quaternary OF 94-0702; OP-1055

sedimentary petrology, Mississippi Fan OP-1877

sedimentation OP-1698

Gulf of the Farallones

geochemistry OF 95-0527

Gulf Stream

Florida, Devonian OP-1971

Georgia, Devonian OP-1971

North Carolina, environmental geology OP-1427

Gulfian

Florida OP-1971

Georgia OP-1971

Gulkana Quadrangle

mineral resources OF 95-0509

gullies

Alaska, geomorphology OP-101

New Mexico, geomorphology WRI 94-4205

Gunnison Colorado

metal ores OF 95-0097

Gunnison Hills

stratigraphy OP-1324

tectonophysics OP-352

Gunnison River basin

environmental geology OF 94-0580

hydrology OP-384; OP-1345; OP-1927

pollution OP-2316

gusher *see* geysers**Guthrie Oklahoma**

hydrogeology OF 94-0504

Guyana

geophysical surveys OF 95-0590

Guyana Shield

environmental geology YR

maps OF 95-0493

guyots *see* seamounts**Gwillim Creek shear zone**

tectonophysics OP-468

gymnosperm flora

conifers

Florida OF 95-0007

Georgia OP-120

New England OP-529

Rocky Mountains OF 95-0063

gymnosperms

Colorado, Paleogene OP-1890

Neuropteris, Nova Scotia OP-565

Pinus, Oregon OP-1635

Tertiary OP-1888

gypsum *see also* chemically precipitated rocks.

Florida, pollution OP-806

Indiana, energy sources OP-2020

gypsum deposits

California, geochronology OP-625

gyttja

Oregon, Quaternary OF 94-0568

HH *see* hydrogenH-2 *see* deuteriumH-3 *see* tritium**hafnium**

geochemistry C 1129

Hf-177/Hf-176, Alaska OP-23

metal ores B 2097

Hagerman Idaho

hydrogeology WRI 94-4247; OF 94-0503

Hailey Quadrangle

economic geology B 2064-A-R

metal ores B 2064-A-R

mineral resources B 2064-A-R

polymetallic ores B 2064-A-R

Haines Alaska

metamorphic rocks OF 94-0268

half grabens

Arizona, isostasy OP-1666
 Idaho, structural geology OP-1581
 Illinois, faults P 1538-Q
 Kentucky, faults P 1538-Q
 Middle East, deformation OP-1615
 Montana, structural geology OP-480
 North Carolina, Triassic OP-925
 stratigraphy OP-2139
 Virginia, Triassic OP-925

halides *see also* chlorides; fluorides.

Caribbean region, metal ores B 2057
 Lesser Antilles, metal ores B 2057
 Mississippi Valley, pollution OF 94-0036;
 OF 94-0336

halite

Colorado, sedimentary petrology OP-1272
 engineering geology OF 94-0228
 geochemistry OP-2015
 Great Plains, ground water P 1402-F
 Mississippi, diagenesis OP-828
 structural geology OP-401
 Utah, sedimentary petrology OP-1272

Halle, Thore G.

paleobotany OP-644

halmyrolysis OP-1033**halogenide** *see* halides**halogens** *see* bromine; chlorine; fluorine**halokinesis** *see* salt tectonics**Hamblin Bay Fault**

deformation OP-15; OP-1323

Hameenlinna Finland

geochemistry C 1129

Hamilton Group *see* Ludlowville Formation; Moscow Formation**Hammonasset Beach State Park**

oceanography OF 95-0556; OP-1972

Hancock Summit Tuff

Tertiary OF 95-0545

Hanford Reservation

soils OP-119
 waste disposal OF 94-0514

Hangu Formation

coal B 2096

Hanna Basin

energy sources OP-1942
 pollution OF 94-0670

Hanna Formation OP-1531**Hanshin earthquake 1995**

geologic hazards OP-420

Hanson Creek Formation

gold ores OP-2151

Haplophragmoides

Arctic Ocean, Quaternary OP-1566
 Western U.S., Quaternary OP-2086

Harding Pegmatite

mineralogy OP-2110

Hare Bay

petrology C 1129

Harford Valley

Quaternary WRI 90-4168

Harkless Formation

petrology C 1129

Harlem Clay

sedimentary petrology OP-2025

Harleyville Formation

stratigraphy OP-1393

harmonic analysis *see* Fourier analysis**Harmony Formation**

sedimentary petrology OP-1404

Harmony Hills Tuff

geochemistry B 2056
 Miocene B 2056
 stratigraphy B 2056

Harney Lake

sedimentary petrology B 2108

Harney Peak Granite

geochemistry C 1129
 magmas C 1129
 Proterozoic OP-1117

Harrison Bay Quadrangle

tectonics B 2107

Harrison Quadrangle

maps OF 94-0430

Hartville Uplift

sedimentary petrology OP-1622
 stratigraphy OP-1324
 structural geology OP-1288

harzburgite

Russian Federation, geochemistry OP-843

Hassayampa River

hydrology WRI 95-4059

Hat Creek Fault

tectonophysics OP-1444

Hat Knoll Quadrangle

maps OF 94-0554

Hatch Rock Quadrangle

maps GQ-1722

Hathaway Formation

Pliocene OP-2061

Hatillo Puerto Rico

ground water OF 93-0465

Hattiesburg Clay

ground water WRI 95-4013

Hattiesburg Mississippi

ground water WRI 94-4219

Hawaii

clay mineralogy, Koolau Range OP-1594
 crust OP-1709

earthquakes

OP-1413
 Kilauea OP-232

elastic waves

Kilauea OP-1649
 Mauna Loa OP-1649

engineering geology

C 1121; OF 94-0638
 Kilauea OP-1367

environmental geology

Kilauea OF 94-0553
 Mauna Kea OF 94-0553
 Mauna Loa OF 94-0553

geochemistry

OP-861
 Honolulu County Hawaii OF 91-0596
 Kilauea OF 94-0684; OP-314
 Mauna Kea OP-2321

geologic hazards

Hawaii County Hawaii OP-2211
 Honolulu Hawaii OF 95-0008; OF 95-0218;
 OP-588; OP-1342
 Kilauea OF 94-0713; OP-474; OP-696; OP-1497

Mauna Loa OP-474; OP-1722; OP-2211

Molokai OP-1523

Puu Oo OF 94-0713

geomorphology OP-1570**geophysical surveys**

Honolulu Hawaii OF 95-0017

Kilauea OF 94-0288; OF 94-0567; OP-1655

Mauna Loa OF 94-0288

Puu Oo OF 94-0567

ground water, Kilauea OP-2077

hydrogeology

C 1112

Hilo Hawaii OP-2076

Kauai WRI 93-4180

Kauai County Hawaii WRI 93-4180

Kilauea WRI 95-4001; OF 94-0586; OF 95-0532; OP-2076

hydrology, Oahu WRI 94-4052

lava

Hilo Hawaii OP-1717

Kilauea OF 95-0496; OP-1717

Mauna Kea OP-1717

Mauna Loa OP-1717

Puu Oo OF 95-0496

magmas

Kilauea OP-47; OP-147; OP-307; OP-1090;
 OP-1293; OP-1372

Puu Oo OP-307

maps

Hualalai OF 89-0284

Mauna Kea OF 89-0284

Mauna Loa OF 89-0284

ocean floors

OP-1964

Kilauea OP-1230

Mauna Loa OP-1230

paleomagnetism, Waianae OP-1522**petrology**

OP-1307

Kilauea OP-234; OP-483; OP-1223; OP-1400; OP-1500; OP-1766

Mauna Kea OP-1025

Mauna Loa OP-1223

Puu Oo OP-483; OP-1400

Pliocene OP-2215**pollution, Honolulu Hawaii** OP-2205**Quaternary**

OP-441; OP-1616; OP-2315

Hawaii County Hawaii OP-1291; OP-1328; OP-1754

Hilo Hawaii OP-1848

Kilauea DDS-0024; OP-351; OP-757; OP-977; OP-1294; OP-1453; OP-1496; OP-1768; OP-2246

Kona OP-639

Mauna Loa OP-639; OP-1291; OP-1328; OP-1754

Molokai OP-1183

Oahu OP-2175

Puu Oo OP-1768

sedimentary petrology

Hilo Hawaii OP-1102

Kilauea OP-1102

Maui County Hawaii OP-1184

Molokai OP-1184

seismic sources

Kilauea OP-323

Puu Oo OP-323

seismology

OP-1654

Hawaii County Hawaii OP-1241

Kilauea OP-1911; OP-1912

Mauna Loa OP-1241

Puu Oo OP-1912

stratigraphy, Mauna Loa OP-1736**tectonophysics** OP-442**Hawaii Geothermal Project**

environmental geology OF 94-0553

Hawaii Island *see* Hilo Hawaii; Hualalai; Kilauea; Kona; Mauna Kea; Puu Oo

Hawaii Ridge *see* Hawaiian Ridge

Hawaii Scientific Drilling Program
Pliocene OP-2215

Hawaii Volcanoes National Park
Quaternary OP-1768

Hawaiian Arch *see* Hawaiian Ridge

Hawaiian earthquake 1868
elastic waves OP-1649
seismology OP-1241

Hawaiian earthquake 1975
elastic waves OP-1649

Hawaiian Islands *see* Hawaii

Hawaiian Ridge
ocean floors OP-1119

Hawaiian Volcano Observatory
Quaternary DDS-0024

Hawley Formation
structural geology OP-782

Hawthorn Aquifer
ground water OF 95-0303

Hawthorn Formation *see also* Floridan Aquifer;
Peace River Formation.
OP-2087
continental shelf OP-2293

Hayes Ash
Quaternary OP-774

Hayes fracture zone
sea-floor spreading OP-1931

Hayfork Terrane
petrology OP-1315

Haypress Creek Pluton
metamorphism OP-319
structural geology OP-1462

Hayward Fault
deformation OP-2332
earthquakes OP-1641; OP-1712
geophysical surveys OF 94-0692
maps OF 95-0597
Quaternary OF 94-0568
seismicity OP-2120
seismology OF 95-0038; OP-820; OP-893; OP-1224; OP-2325
structural geology OP-1234; OP-1430; OP-1839; OP-1914; OP-2107
tectonophysics OP-1524

hazardous waste
California, pollution OP-1297
Maryland, pollution OP-1089
New Mexico, hydrogeology OF 94-0377
pollution OP-97
South Carolina, ground water WRI 93-4185

hazards, geologic *see* geologic hazards

Hazel Formation
paleomagnetism OP-1350

Hazen Quadrangle
ground water WRI 87-4136

He *see* helium

He-4/He-3
California, Quaternary OP-2142
Montana, energy sources OP-302
New Hampshire, tectonophysics OP-2204
Russian Federation, geochemistry OP-50
Wyoming
energy sources OP-302
geochemistry OP-300

Healy Quadrangle
mineral resources MF-2058-D

Hearne Province
non-metal deposits OP-1492

Heart Mountain Fault
sedimentary petrology OP-936

heat flow *see also* Battle Mountain High; fumaroles; geothermal energy; geothermal gradient; hot springs; radioactivity; temperature logging; thermal waters.

OP-439; OP-1782
Alaska, geomorphology OP-264

Arizona
magmas OP-887
neotectonics OP-709

Australia OP-2334

Basin and Range Province OP-515; OP-814

California
OP-2195; OP-2334
energy sources OP-193; OP-385
seismology OP-1808

Canada OP-468; OP-2334

Colorado
geochemistry OP-1713
geophysical surveys OP-1118
petrology OP-546

earthquakes OF 94-0228
energy sources OP-1147
geophysical surveys OP-1563; OP-1986
geophysics OP-1552
Germany, geophysical surveys OP-748
Hawaii

magmas OP-1293
petrology OP-483

Iceland OP-298

Illinois OP-2050

India OP-2334

Nevada, ground water OP-1567

ocean floors B 2022

Oklahoma OP-2334

Oregon OP-70

Pacific Ocean B 2022

Wyoming, energy sources OF 94-0670

heavy metals

Alaska, environmental geology B 2107
California, pollution OP-1534
Colorado

environmental geology B 2220
geochemistry OF 95-0049; OF 95-0056
pollution OF 95-0087

metal ores OP-104

pollution OP-422

Spain, environmental geology OP-662

Wisconsin, hydrology OF 95-0163

heavy mineral deposits *see also* monazite deposits.

B 2097

California OF 95-0587

Georgia OP-344

Idaho

P 1525

Quaternary P 1525

heavy minerals

Alaska

gold ores B 2107

mineral resources OF 95-0509; OF 95-0623; OF 95-0625; OF 95-0627; I-2225-D

California, geochemistry OF 95-0015

Idaho

geochemistry P 1525

metal ores B 2064-A-R

Montana, non-metal deposits OP-1492

Nevada, metal ores OF 94-0270-A; OF 94-0270-B

Pacific Ocean, oceanography B 2022

Puerto Rico OP-741

Utah, metal ores OF 94-0270-A; OF 94-0270-B

Washington

Eocene B 2085-A
geochemistry OF 94-0680-A; OF 94-0680-B

heavy oil

energy sources
Utah, petroleum B 2000-J

Hebgen Lake earthquake 1959
OP-1298

Japan OF 94-0228

Montana OF 94-0228

Heitz School Quadrangle
maps OF 88-0608

Helan Shan
Quaternary OF 94-0568

Heliophyllum
Invertebrata OP-686

helium

Canada, ground water OP-937
Central America, Quaternary OP-1257
Colorado, economic geology OF 94-0289
Commonwealth of Independent States, Quaternary OP-1257

He-4/He-3

California OP-2142
Montana OP-302
New Hampshire OP-2204
Russian Federation OP-50
Wyoming OP-300; OP-302

Nevada, geothermal energy OF 95-0080

New Mexico, environmental geology C 1108

Nicaragua, geochemistry OP-1678

United States, ground water OP-937

helium gas

New Mexico B 2063

Hell Creek Formation OP-1589

Hell's Canyon *see* Snake River canyon

Hellroaring Plateau
crust OP-1831

hematite

geochemistry OP-719

Hemlock Conglomerate
energy sources OP-574

Henderson Mine

molybdenum ores OP-849
structural geology OP-1247

Hengill Iceland

earthquakes OP-1603
seismology OP-1813
tectonophysics OP-298

Henry Mountains

faults OP-1390

Henson Formation

metal ores OF 94-0291

Hepburn Mesa

geochemistry OP-2133

herbicides *see also* alachlor; triazines.

Appalachians, pollution OP-1365

Connecticut, pollution OP-1460

Iowa, pollution OP-1485

Kansas, pollution W 2352-B

Louisiana, pollution OP-758

Massachusetts, pollution OP-1460

Midwest, pollution OP-497; OP-1056; OP-1652; OP-1807

Minnesota, ground water OF 94-0337

- Mississippi, pollution OP-758
 Mississippi Valley
 environmental geology C 1120-G; OP-1748
 pollution OF 94-0376
 Missouri, pollution OF 94-0332; OP-2282
 Nebraska, pollution W 2352-B
 North Carolina, environmental geology OP-1427
 pollution WRI 94-4176; OP-1508
- Hercynian Orogeny**
 Appalachians, stratigraphy OP-766
 Austria, inclusions C 1129
 Carpathians, petrology C 1129
 China, lignite OP-2016
 France
 geochemistry C 1129
 magmas C 1129
 petrology C 1129
 Germany
 geochemistry C 1129
 metasomatism C 1129
 petrology C 1129
 Italy, geochemistry C 1129; OP-27
 Spain
 geochemistry C 1129
 magmas C 1129
 petrology C 1129
 Switzerland, magmas C 1129
- Hercynides *see* Variscides
hercynite
 Alberta, magmas C 1129
- Hermit Shale**
 engineering geology OP-1435
- Hermosa Formation** *see also* Honaker Trail Formation; Paradox Member.
 OF 94-0583; I-2555; OP-1384
 sedimentary petrology B 2110
- Herrin Coal Member**
 geophysical surveys OP-1898
- hervidero *see* mud volcanoes
- Hesperian** OP-35; OP-559; OP-916; OP-1233
- heterochrony *see* diachronism
- Hexacorallia *see* Scleractinia
- hexanes**
 Pacific Ocean, geochemistry B 2022
 pollution OP-137
- Hf** *see* hafnium
- Hf-177/Hf-176**
 Alaska, geochemistry OP-23
- Hg** *see* mercury
- Hiatella**
 Quaternary OP-1172
- Hicks Dome**
 faults P 1538-Q
 non-metal deposits OP-729
 petrology OP-1299
- Hidaka metamorphic belt**
 petrology C 1129
- High Energy Laser Test Facility**
 ground water WRI 93-4192
- High Plains *see* Great Plains
- High Plains Aquifer**
 ground water YR; WRI 94-4157
 hydrogeology WRI 95-4014; OF 94-0702-W; FS 0085-95
 pollution OP-204; OP-1019
- High Plains Ground-Water Demonstration Program**
 hydrogeology OF 95-0313
- high school** *see also* elementary school.
 California, geologic hazards OF 95-0479
- high-angle faults**
 Alaska
 OP-479; OP-1447
 metal ores OP-1169
 Quaternary OP-2292
 California
 OP-1774
 economic geology OP-216
 Canada, metal ores OP-1169
 Idaho
 metal ores B 2064-A-R
 polymetallic ores B 2064-A-R
 Nevada OP-1904; OP-2143
 Victoria Australia OF 94-0228
- high-grade metamorphism**
 Alaska OP-931; OP-1930
 Italy OP-866
 Montana, crust OP-1831
 North Carolina, structural geology OP-1335
- high-velocity zones**
 Hawaii, tectonophysics OP-442
 India, tectonophysics OP-442
 New Mexico, tectonophysics OP-442
- Highland region Scotland *see* Sutherland Scotland
- Highland Rim**
 hydrogeology WRI 93-4207
- highways** *see also* bridges.
 Appalachians, impact statements OF 95-0589
 Egypt, Quaternary OP-1152
 Gulf Coastal Plain P 1538-M
 Mississippi Valley P 1538-M
 non-metal deposits B 2111
- Hiko Tuff**
 geochemistry B 2056
 Miocene B 2056
 stratigraphy B 2056
 structural geology B 2056
- Hilgard Fault**
 structural geology OP-480
- Hill model**
 fractures OF 94-0228
- Hillgrove Formation**
 magmas C 1129
- Hillsboro Canal**
 hydrogeology WRI 94-4128
- Hillsborough Bay**
 marine geology WRI 94-4081
- Hilo Hawaii**
 hydrogeology OP-2076
 lava OP-1717
 Quaternary OP-1848
 sedimentary petrology OP-1102
- Hilton Head Island**
 ground water WRI 94-4012; OP-1402
- Himalaya Mountains *see* Himalayas
- Himalayan Orogeny**
 China, lignite OP-2016
 Pakistan, structural geology B 2126
- Himalayas**
 gems OP-1303
 geochemistry
 C 1129
 Kumaun Himalayas C 1129
 Lesser Himalayas C 1129
 intrusions C 1129
 stratigraphy OP-2147
- Hinchinbrook Island**
 environmental geology OF 95-0176
- Hispaniola** *see also* Dominican Republic.
 earthquakes OP-1313; OP-2238
 plate tectonics OP-1304; OP-1312
- Histosols**
 California, engineering geology OP-788
- Hodson mining district**
 gold ores OF 94-0640-A; OF 94-0640-B
- Hohonu Batholith**
 petrology C 1129
- Hokkaido** *see also* Hidaka metamorphic belt;
 Okushiri Island; Usu.
 Quaternary OP-2086
- Hokkaido-Nansei-Oki earthquake 1993**
 earthquakes OP-1800
 engineering geology OP-367; OP-1027
- Holden Mine**
 environmental geology OF 95-0230
 geochemistry OF 94-0680-A; OF 94-0680-B
- Holderman Mountain**
 metal ores OF 94-0666
- Holgate Glacier**
 Quaternary OP-1000
- Holita Basin**
 areal geology OP-201
 Trilobita OP-1
- Hollis New Hampshire**
 ground water OF 95-0363
- Hollister California**
 geophysical surveys OP-817
- Hollister Fault**
 structural geology OP-2062
- Hollywood Fault**
 earthquakes OF 94-0568
- Holocene**
 OF 94-0568; OP-61; OP-1070; OP-1075; OP-1092; OP-1368; OP-2035; OP-2085; OP-2099; OP-2199
 Alaska B 2107; B 2139; OF 94-0568; OF 95-0222; OF 95-0520; OP-725; OP-772; OP-774; OP-1098; OP-1790; OP-1822; OP-1920; OP-2021; OP-2258; OP-2260; OP-2281
 Antarctic Ocean OP-440
 Arizona OF 95-0057; OP-1287; OP-1504
 Arkansas P 1538-H; B 2110; OP-946
 Atlantic Ocean OP-1334
 Basin and Range Province OP-1414
 Black Sea OP-1289
 British Columbia OF 94-0568
 California OF 94-0568; OF 94-0639; OF 95-0034; OP-107; OP-203; OP-216; OP-320; OP-495; OP-761; OP-822; OP-892; OP-1216; OP-1308; OP-1444; OP-1787; OP-2005; OP-2084; OP-2107; OP-2284; OP-2291; OP-2332
 Canada I-2451
 Caribbean Sea OP-1289
 Chile B 2110; OP-1098
 China OF 94-0568
 Colorado OP-572; OP-986; OP-1742; OP-1743
 Djibouti OP-2152
 Dominican Republic OF 94-0568
 Ecuador OF 94-0568
 El Salvador OP-1816
 Far East OP-1574
 Finland OF 94-0568
 Florida OF 95-0216; OP-1001; OP-1719
 Georgia OP-2161
 Great Basin OP-1414
 Great Lakes OP-163; OP-436; OP-525
 Great Lakes region OP-163

- Great Plains OP-656
 Greece OF 94-0568
 Greenland OF 95-0222; OP-187
 Hawaii DDS-0024; OP-234; OP-351; OP-977;
 OP-1291; OP-1294; OP-1328; OP-1400;
 OP-1496; OP-1717; OP-1848; OP-2211
 Iceland OF 95-0500; OP-1001
 Idaho OF 94-0659; OP-898
 Illinois OP-164; OP-1451
 Indiana OF 94-0298; OP-164; OP-1451
 Israel OF 94-0568
 Italy OF 94-0568; OP-892
 Japan OF 94-0568
 Louisiana OF 94-0275; I-2150-B; OP-1936;
 OP-1937
 Manitoba OP-527; OP-1463
 Middle East OF 94-0568
 Minnesota OF 94-0578; OP-1290; OP-2082
 Mississippi Valley OF 94-0568; OP-1578
 Missouri P 1538-H; OF 94-0298; OF 94-0333;
 OP-1707
 Nebraska B 2110
 Neoglacial
 Antarctica OP-214
 Oregon OP-1901
 Washington OP-1901
 Nevada OF 92-0458; OF 94-0568; OP-761;
 OP-1469; OP-2005; OP-2289
 New Zealand OF 94-0568
 Oklahoma B 2110; OP-463
 Oregon OF 94-0568; OP-203; OP-1444; OP-
 1629; OP-1876; OP-1945; OP-2172
 Pacific Coast OF 95-0034; OP-661
 Pacific Ocean B 2022; OP-1218; OP-1354; OP-
 1941
 Philippine Islands OF 94-0568; OP-1886
 Quebec OF 94-0568
 Rocky Mountains OF 95-0063
 Russian Federation OP-94; OP-1877
 Scotland OF 94-0568
 South Carolina OP-1471
 Sweden OF 94-0568
 Tennessee OF 94-0568
 Texas OF 95-0103
 Turkey OF 94-0568
 United States OF 94-0568; I-2451
 Utah OF 94-0568; OP-1287; OP-1734
 Virginia OP-1001
 Washington P 1547; OF 94-0568; OF 94-0589;
 OP-395; OP-975; OP-1023; OP-1076; OP-
 1163; OP-1189; OP-1512; OP-1513; OP-
 1611; OP-1876; OP-2079
 Wyoming B 2110
 Yukon Territory B 2139; OP-772
- Holt Mountain Quadrangle**
 metal ores OF 94-0691
- Holy Cross mining district**
 metal ores B 2081
- Homer Alaska**
 hydrology OF 95-0338
- Homestake Mine**
 metal ores OF 94-0670; OP-2224
- homestake-type**
 metal ores OP-863
- Homestead Valley earthquake 1979**
 earthquakes OF 94-0710
- Homestead Valley Fault**
 seismology OP-375; OP-714; OP-1477
- Honaker Trail Formation**
 B 2000-L
 diagenesis OP-1242
- Honey Hill Fault**
 stratigraphy OP-2297
- Honeydew earthquake 1991**
 seismicity OP-1745
- Hong Kong**
 geochemistry C 1129
- Hongguleleng Ophiolite**
 magmas OP-1935
- Honolulu Hawaii**
 geologic hazards OF 95-0008; OF 95-0218;
 OP-588; OP-1342
 geophysical surveys OF 95-0017
 pollution OP-2205
- Honshu see also** Abukuma Mountains;
 Atotsugawa Fault; Chugoku; Fossa Magna;
 Fukushima Japan; Gifu Japan; Hyogo Japan;
 Itoigawa-Shizuoka tectonic line; Kanto earth-
 quake 1923; Ryoke Belt; Sagami Bay; Shimane
 Japan; Suruga Bay; Tohoku; Tokai Japan.
 crust OF 94-0228
 engineering geology OP-81
 seismology OP-893
- Hood Canal**
 earthquakes OP-1189
- Hoodoo Quartzite**
 metal ores P 1525
 Proterozoic P 1525
- Hoosac Formation**
 stratigraphy B 2060
- hopanes**
 California, natural gas OP-542
 Colorado, geochemistry OP-1713
 Wisconsin, lead-zinc deposits OP-792
- Hopi Indian Reservation**
 hydrogeology OF 94-0356
- Horn Island**
 Quaternary OF 94-0558; OF 94-0702
- hornblende**
 Alaska
 metamorphism B 2107
 Pliocene OF 95-0217-A; OF 95-0217-B
 structural geology OP-1447
 Argentina, orogeny OP-2011
 California, petrology OP-45; OP-1211
 Idaho, geochronology C 1129
 Mexico, petrology OP-1870
 Minnesota, Precambrian OP-886
 Montana, geochronology C 1129; OP-1465
 North Carolina
 Paleozoic OP-1670
 petrology OP-1647
 Norway, structural geology OP-158; OP-2156
 petrology C 1129
 Virginia, Paleozoic OP-1670
 Yukon Territory, Pliocene OF 95-0217-A;
 OF 95-0217-B
- hornblende**
 Alaska, geochemistry P 1564
- hornfels**
 California, geothermal energy OP-299
- hornstone see** chert
- Horquilla Limestone**
 stratigraphy B 2110
- Horse Canyon Deposit**
 gold ores OP-536
- Horse Spring Formation**
 deformation OP-1323
- Horsethief Sandstone**
 ground water OP-1215
- Hosgri Fault**
 Quaternary OF 94-0568
- Hoss Seamount**
 geochemistry OP-197
- Hot Creek valley**
 environmental geology OF 95-0284
- hot spots**
 OP-1782
 Basin and Range Province, metal ores OP-1874
 Canada, ground water OP-937
 East Pacific Ocean Islands
 petrology OP-390
 stratigraphy OP-1736
 Great Basin, metal ores OP-1874
 Hawaii, tectonophysics OP-442
 India, tectonophysics OP-442
 New Hampshire, tectonophysics OP-2204
 New Mexico, tectonophysics OP-442
 Polynesia, stratigraphy OP-1736
 Quaternary OP-2174
 Rocky Mountains, geologic hazards OF 95-
 0059
 tectonophysics OP-2229
 United States, ground water OP-937
 volcanism OP-1852
- hot springs**
 Alaska, geothermal energy OP-627
 California
 economic geology OP-802
 geochemistry OP-927
 geophysical surveys FS 0079-95; OP-1564
 geothermal energy WRI 94-4180-A
 metal ores OP-663; OP-720; OP-801; OP-
 940
 Quaternary OP-988; OP-2142
 Colorado OF 95-0569
 Mariana Islands, geologic hazards OF 91-0320
 Mexico, geophysical surveys FS 0079-95
 Micronesia, geologic hazards OF 91-0320
 Montana, energy sources OP-302; OP-634; OP-
 885
 Oregon
 geophysical surveys OP-1564
 petrology OP-38
 Washington
 OP-2197
 geophysical surveys FS 0079-95
 Wyoming
 energy sources OP-302; OP-634; OP-885
 geochemistry OP-1897; OP-2128
- Hotazel Formation**
 mineralogy OP-781
- House Creek Fault**
 structural geology OP-1438
- House Creek Field**
 oil and gas fields OF 94-0670
- Houston Alaska**
 Quaternary B 2107
- Houston Texas**
 ground water OF 94-0345; OF 94-0346; OF 95-
 0182
- Hovey Lake Fault**
 structural geology P 1538-O
- Howard Pass Quadrangle**
 gold ores B 2107
- HSPEXP**
 hydrology WRI 94-4168
- HSFP**
 hydrology WRI 93-4160
- HUA Program**
 pollution OF 95-0156

- Hualalai**
maps OF 89-0284
- Hualapai Indian Reservation**
geomorphology OF 94-0563
- Huayna Porco Stock**
metal ores OP-188
- Hubbard Brook Experimental Forest**
ground water FS 0138-95
- Hubbard Glacier**
Quaternary OP-1263
- Hubbard Space Telescope** OP-987
- Huckleberry Ridge Tuff**
neotectonics OP-1902
- Hudson Shelf**
oceanography OP-1188
- Hudson Valley**
hydrology OF 94-0090
pollution OP-1186; OP-1460
- Hudson, Henry**
Quaternary OF 95-0500
- Hudsonian Orogeny** *see also* Wyoming Province.
Manitoba, structural geology OP-1073
Saskatchewan, structural geology OP-1073
- Hue Shale**
geochemistry OF 95-0236
- Hueco Bolson**
ground water WRI 94-4092; OF 94-0329
- Huelva Spain** *see* Rio Tinto Spain
- Huichica Formation**
metal ores OP-805
- Huiznopala Gneiss**
petrology OP-1870
- human resources** YR
- human waste**
Kansas, pollution W 2352-B
Nebraska, pollution W 2352-B
- Humboldt Basin**
sedimentary petrology OP-603
- Humboldt Range**
orogeny OP-619
- Humboldt River valley**
hydrogeology WRI 94-4222; WRI 94-4233
Quaternary OP-2086
- Humboldtianum Basin** OP-58
- Humbolt Mountain Anticline**
structural geology OP-1933
- humification**
pedogenesis OP-993
- huminite**
sedimentary petrology OP-1078
- hummocky cross-stratification**
Colorado OF 94-0670
Utah OF 94-0670
- humus**
Colorado, pollution OP-1466
pedogenesis OP-993
- Hunan China**
metal ores OP-1871
- Hungary** *see also* Pannonian Basin.
natural gas, Szolnok Hungary OP-155
- Hungry Hollow Formation**
Quaternary OP-1630
- Hunsaker Creek Formation**
tectonophysics OP-361
- Hunt Fork Shale**
deformation OP-479; OP-1250
structural geology OP-2247
- Hunton Group**
petroleum OF 94-0298
- Huon Peninsula**
Quaternary OF 94-0568
- Huron South Dakota**
hydrogeology OF 95-0313
- Hurricane Andrew**
environmental geology OF 94-0116
oceanography OP-2108
sedimentary petrology OP-2109
- Hurricane Betsy**
oceanography OP-2108
- Hurricane Donna**
oceanography OP-2108
- Hurricane Hugo**
geomorphology OP-2035
Puerto Rico
geologic hazards OP-1201
oceanography OP-2108
sedimentary petrology OP-310
- hurricanes**
Bahamas OP-2109
Florida, environmental geology OF 94-0116
Quaternary OP-981
- huttonite**
mineralogy B 2140
- hyaloclastite**
British Columbia OP-1509
Pacific Ocean, geochemistry OP-1033
- hydrates** *see also* gas hydrates.
China, magmas OP-1935
- hydrates, gas** *see* gas hydrates
- hydraulic conductivity** *see also* slug tests.
California
crust OF 94-0228
hydrogeology OP-2043
seismology OP-2039
Colorado, ground water WRI 92-4143;
WRI 94-4238
engineering geology OP-687
environmental geology OP-811
Florida
ground water WRI 92-4174; OF 94-0457;
OP-472; OP-615
hydrogeology WRI 93-4171
fractures OP-1094
Georgia, ground water OP-1100
ground water OP-967; OP-1432; OP-1515
Gulf Coastal Plain, ground water WRI 93-4020
hydrogeology W 2220
Idaho
environmental geology OP-2096
ground water WRI 94-4257; OP-2095
Illinois, pollution WRI 94-4034; OP-1111
Kentucky, ground water WRI 94-4189
Louisiana, ground water OP-1996
Massachusetts
geochemistry OP-1396
geophysical surveys WRI 94-4185
ground water OF 94-0384
hydrogeology WRI 94-4256
Minnesota
ground water WRI 94-4149; WRI 94-4204;
OF 93-0435
hydrogeology WRI 94-4163
Mississippi Valley
ground water WRI 93-4020
seismology P 1538-N
Missouri, pollution OP-934
Nebraska, hydrogeology WRI 95-4014
Nevada
fractures OF 94-0228
hydrogeology WRI 94-4079; WRI 95-4119
- New Hampshire
ground water OF 95-0281; OF 95-0363; OP-1549
hydrogeology WRI 92-4154
pollution OF 95-0142
- New Mexico, ground water WRI 93-4192;
WRI 94-4251
- North Dakota, environmental geology OP-2168
- Ohio
ground water WRI 94-4231
hydrogeology WRI 94-4105; OP-448
- Oregon, ground water OF 94-0505
soil mechanics OP-168
- South Carolina, ground water OP-1100
structural geology OF 94-0228
- Tennessee, ground water OP-1259
- Texas, ground water WRI 93-4039
- Utah
hydrogeology WRI 95-4072
petroleum B 2000-J
Virginia, hydrogeology OP-678
- Washington
dams OP-2038
ground water WRI 92-4098; OF 94-0505
- hydraulic fracturing**
Atlantic Ocean, oceanography OP-2149
Minnesota, ground water WRI 94-4199
Northwest Territories, faults OP-1856
- hydraulics** *see also* waterways.
Arizona
hydrology OP-2203
weathering OP-1504
Mississippi, engineering geology OP-1009
New York, engineering geology OP-113
North Carolina, hydrology OF 94-0454; OF 94-0511
oceanography OF 94-0584
Sweden, waste disposal OP-2235
Utah, hydrology OP-2203
- hydrocarbons** *see also* aliphatic hydrocarbons;
aromatic hydrocarbons; hopanes; saturated hydrocarbons; steranes; triterpanes.
Idaho, gold ores OF 95-0495
Minnesota, ground water WRI 94-4204
natural gas OF 95-0207
New Mexico, environmental geology OF 94-0547
pollution C 1108; OP-95; OP-1724
South Carolina, pollution OF 94-0486
- hydrofluoric acid**
geochemistry OF 95-0510
Illinois, non-metal deposits OP-729
Kentucky, non-metal deposits OP-729
Quaternary OP-2174
- hydrogen** *see also* deuterium; tritium.
Appalachians, hydrology OP-1632
California, natural gas OP-542
Colorado, energy sources OP-297
D/H
Alaska B 2107; B 2139; OP-624; OP-2184
Brazil C 1129
California WRI 95-4048; OP-216; OP-720;
OP-801; OP-927; OP-1095
Canadian Shield OP-2126
Colorado OP-1096; OP-1118; OP-2060
Florida OP-1613; OP-1614
geochemistry C 1129; OP-1114
Great Britain OP-2126
Hawaii OP-2076; OP-2077
Idaho WRI 94-4247
Italy OP-227
Montana OP-302

- Nevada OP-1245; OP-1747
 New Mexico WRI 94-4078
 Northwest Territories OP-192
 Oregon OP-1677
 Pacific Ocean B 2022; OP-1354
 Peru OP-202
 Spain OF 95-0221; OP-22
 Washington OP-1677; OP-2197
 Wisconsin OP-2241
 Wyoming OP-302
- energy sources** YR
geochemistry C 1129; OP-1279
geophysical surveys OP-1898
Indiana, energy sources OP-2020
Nevada
 energy sources OP-1083; OP-1084
 geochemistry OP-794
New England, soils OP-529
petroleum OP-830
pollution OP-132; OP-1724
Quaternary OP-2174
Rocky Mountains, hydrology OP-1632
Texas, sedimentary petrology OP-2256
Utah, energy sources OP-297
Western Interior, stratigraphy OP-2063
- hydrogen fluoride** *see* hydrofluoric acid
- hydrogeologic maps**
Arizona, ground water OF 94-0476
Arkansas, ground water WRI 93-4134; OF 93-0374
Atlantic Coastal Plain, hydrogeology P 1410-C
California
 ground water WRI 93-4003
 hydrogeology OP-1281
Colorado, ground water WRI 92-4143; WRI 94-4118; WRI 94-4129
Florida
 ground water WRI 92-4174; OF 94-0081; OF 94-0495; OF 94-0528; OF 94-0529; OF 95-0115; OF 95-0277; OF 95-0303
 hydrogeology WRI 92-4159
 ground water HA-0730-H
Gulf Coastal Plain, hydrogeology P 1410-C
hydrogeology WRI 94-4061
Idaho
 ground water WRI 94-4116
 hydrogeology P 1408-C
Indiana, ground water WRI 94-4195
Louisiana, ground water WRI 94-4202
Maryland
 ground water OF 94-0390; OF 94-0391; OF 94-0392; OF 94-0393; OF 94-0394; OF 94-0395; OP-191
 hydrogeology OP-211
Massachusetts, ground water WRI 94-4156; OF 95-0188
Midwest, ground water OF 93-0663; HA-0730-K
Mississippi, hydrogeology WRI 94-4172
Montana, ground water WRI 95-4034
Nevada
 ground water WRI 94-4126; OF 95-0107
 hydrogeology WRI 95-4119; OP-1281
New Hampshire, hydrogeology WRI 92-4013; WRI 92-4154
New Jersey, ground water OP-751
New Mexico
 ground water WRI 94-4251
 hydrogeology WRI 93-4163; WRI 94-4125
New York
 ground water WRI 91-4138; WRI 93-4004; WRI 93-4029
- Quaternary** WRI 90-4168
Ohio, ground water WRI 94-4131
Oklahoma, hydrogeology WRI 93-4230
Oregon
 ground water OF 94-0505
 hydrogeology P 1408-C
Pennsylvania
 ground water WRI 93-4109; OF 93-0417; OF 93-0659
 hydrogeology OF 95-0119
Puerto Rico, ground water OF 93-0499
Rhode Island
 ground water OF 95-0188; OF 95-0355
 hydrogeology OF 95-0305
South Carolina, ground water WRI 93-4185
Texas
 ground water WRI 93-4039; WRI 93-4126; WRI 94-4117; WRI 95-4030; OF 94-0345; OF 94-0346; OF 95-0182; OF 95-0183
 hydrogeology WRI 93-4190; WRI 94-4036
Utah, ground water WRI 93-4221
Virginia, ground water OF 94-0370; OF 94-0372; OF 94-0373
Washington
 ground water WRI 92-4098; OF 94-0505
 hydrogeology WRI 92-4109; WRI 94-4082
Wisconsin, hydrogeology WRI 93-4053
- hydrogeology** *see* ground water; hydrology; springs; thermal waters
- hydrographic maps**
Nevada
 ground water OF 95-0107
 hydrogeology WRI 94-4233
- hydrologic cycle**
OP-33
Alaska, hydrogeology OF 94-0367
Atlantic Coastal Plain, hydrogeology P 1410-C
Florida, ground water OF 93-0026
Gulf Coastal Plain, hydrogeology P 1410-C
hydrogeology OP-643
hydrology OF 94-0388; OP-14
Illinois, pollution WRI 94-4034
Louisiana, ground water WRI 94-4085
Minnesota, hydrogeology WRI 94-4062
Nevada, hydrogeology WRI 95-4052
Pliocene OF 94-0588
pollution OP-692
- Hydrologic Instrumentation Facility**
hydrology OF 94-0353; OF 94-0363
- hydrologic maps**
Alabama, hydrology WRI 93-4186
California
 ground water WRI 93-4003
 hydrology OF 95-0316
Great Plains, hydrology OF 95-0162
hydrogeology WRI 93-4098; WRI 94-4061
hydrology WRI 94-4148; WRI 94-4159
Idaho, hydrogeology P 1408-C
Kentucky, hydrology WRI 94-4134
Louisiana, hydrology WRI 92-4181
Minnesota, hydrology WRI 93-4200; OF 93-0046; OF 93-0047; OF 94-0488; OF 95-0333
Nevada
 ground water OF 95-0107
 hydrogeology WRI 94-4233
 hydrology OF 95-0316
New Mexico, hydrogeology WRI 94-4125
North Dakota, hydrology WRI 93-4200
Oregon, hydrogeology P 1408-C
South Dakota, hydrology OF 93-0046
- Texas, hydrology** WRI 94-4213; WRI 95-4019
Washington, hydrogeology WRI 92-4109
- Hydrologic Unit Area Program**
pollution OF 95-0156
- hydrological methods**
geochemistry OF 94-0670
ground water OP-930
metal ores OF 95-0079; OF 95-0097
pyrite ores B 2081
- hydrology** *see also* atmosphere; atmospheric precipitation; basin management; channel geometry; floods; glaciers; hydrologic cycle; hydrologic maps; ice; infiltration; karst hydrology; lakes; limnology; lysimeters; representative basins; reservoirs; rills; rivers; springs; tracers; water resources; waterways.
 YR; W 2220; WRI 90-4112; WRI 93-4160; WRI 93-4208; WRI 94-4022; WRI 94-4115; WRI 94-4168; WRI 95-4031; WRI 95-4085; OF 91-0175; OF 94-0352; OF 94-0353; OF 94-0363; OF 94-0382; OF 94-0455; OF 94-0459; OF 94-0531; OF 94-0539; OF 94-0708-W; OF 94-0710-W; OF 95-0141; OF 95-0163; OF 95-0379; FS 0116-95; FS 94-0015; FS 94-0074; OP-273; OP-706; OP-1795
- Alaska**
 YR; C 1112; C 1123; OF 94-0712-W; OF 95-0171; OF 95-0338; OF 95-0418
environmental geology B 2107; OF 94-0481; OF 94-0525; OF 94-0526; OF 94-0527; OF 95-0177; OF 95-0180
geochemistry B 2107
geologic hazards B 2139
impact statements OF 94-0482; OF 95-0174
pollution OF 95-0566
- Appalachians**
 FS 0137-95
waste disposal OP-1133
- Arizona**
 WRI 94-4114; WRI 94-4240; WRI 95-4062; WRI 95-4083; OF 94-0485; OF 94-0531; FS 94-0016; OP-1965; OP-2278
engineering geology OP-1435
environmental geology WRI 94-4192
pollution WRI 95-4074; OF 94-0508; OP-257
- Arkansas** WRI 94-4216; OF 94-0363; OF 94-0364
- Atlantic Coastal Plain, engineering geology**
WRI 94-4164
- California**
 WRI 94-4124; OF 94-0305; OF 94-0357; OF 94-0363; OF 94-0470; OF 94-0471; OF 94-0543; OF 95-0150; OF 95-0327; OP-2043; OP-2298
earthquakes OP-1712
pollution WRI 93-4140; OF 95-0110; OF 95-0165
Quaternary OP-1157
- Colorado**
 YR; WRI 92-4187; WRI 94-4041; WRI 94-4051; WRI 94-4111; OF 94-0363; OF 95-0071; FS 0153-95; OP-1927
environmental geology B 2220; OF 95-0023; OF 95-0043
fluvial features OP-2259
geochemistry OF 95-0049; OF 95-0056; OF 95-0250
pollution C 1122; OF 94-0670; OP-691; OP-730; OP-732; OP-979; OP-1081; OP-1823
Quaternary OP-1582

- Costa Rica, Quaternary OP-1952
ecology FS 94-0014; OP-896
environmental geology C 1108; WRI 94-4250;
OF 94-0378; OF 94-0490; OP-658; OP-955
- Florida
WRI 94-4128; WRI 94-4217
environmental geology C 1108
marine geology WRI 94-4081
geochemistry OF 94-0362; OF 94-0458;
OF 95-0117; OF 95-0181; OP-175
geomorphology OP-235; OP-638; OP-1792
Georgia OP-2270
geothermal energy OP-655
Great Lakes region WRI 93-4188; WRI 95-
4005; WRI 95-4021
Great Plains WRI 93-4231
Guatemala, Quaternary OP-1952
Hawaii C 1112; WRI 93-4180
- Idaho
WRI 93-4229; WRI 94-4215; WRI 94-
4221; FS 94-0026
environmental geology WRI 95-4006
Quaternary OP-1900
Illinois WRI 94-4094; WRI 94-4141; WRI 95-
4023; OF 94-0113; FS 94-0018
Indiana WRI 94-4066; OF 92-0139; OF 94-
0061
Indonesia, Quaternary OP-1952
- Iowa
WRI 94-4130; WRI 94-4211; OF 94-0363;
OF 94-0711-W; FS 94-0031; OP-465
pollution OP-2067
- Japan, Quaternary OP-1952
- Kansas
W 2352-B; WRI 94-4077; WRI 94-4187;
OF 94-0365
ecology W 2352-B
pollution W 2352-B; OP-2145
Kentucky WRI 94-4029; WRI 94-4065;
WRI 94-4227; OF 94-0363
- Maryland
WRI 93-4225; OF 94-0507; FS 0136-95;
OP-771
environmental geology W 2399
- Massachusetts W 2418; WRI 94-4100;
WRI 94-4155; WRI 94-4256; FS 0139-95
- Mexico, environmental geology YR
- Michigan
OF 94-0363; OF 95-0163
environmental geology OF 94-0670
pollution OF 95-0163
- Midwest
WRI 93-4204; OF 94-0473
pollution OF 94-0396; OP-2089
- Minnesota
WRI 94-4058; WRI 94-4163; WRI 94-
4207; OF 94-0478; OF 95-0283
environmental geology WRI 95-4047
- Mississippi Valley
WRI 94-4191; OF 93-0628; OF 93-0657;
OF 95-0149; FS 94-0047
pollution YR; OF 94-0036; OF 94-0336;
OF 94-0376
- Missouri OF 93-0495; OF 94-0705-W; OF 95-
0109
- Montana
WRI 95-4022; OF 94-0363; OF 94-0375
energy sources OP-302; OP-885
environmental geology C 1108
- Nebraska
W 2352-B; WRI 94-4077; WRI 94-4095;
WRI 94-4187; WRI 95-4014; OF 94-0365;
OF 94-0496
ecology W 2352-B; FS 0154-95
pollution W 2352-B; OP-2145
- Nevada
WRI 94-4124; WRI 94-4210; WRI 95-
4119; OF 94-0305; OF 94-0489; OP-1989;
OP-1998
environmental geology OP-2209
geochemistry OP-2169; OP-2326
New England WRI 94-4252
New Hampshire WRI 92-4154
- New Jersey
WRI 91-4141; OP-750
pollution WRI 93-4101
- New Mexico
WRI 93-4163; WRI 94-4072; WRI 94-
4143; WRI 95-4083; OF 94-0377; OF 94-
0702-W; OF 95-0111
environmental geology WRI 94-4192
geomorphology WRI 94-4205
- New York
B 2103; OF 94-0090
geochemistry OP-832
North Carolina WRI 94-4067; OF 94-0454;
OF 94-0511; OF 95-0136; FS 94-0010
- North Dakota
WRI 94-4058; OF 95-0283
environmental geology WRI 95-4047
oceanography OF 94-0584
Ohio WRI 94-4105; WRI 95-4037; OF 95-
0129; OF 95-0184; OF 95-0357; OP-448
Oklahoma OF 94-0364; OF 94-0504
Oman OP-1801
Ontario, environmental geology C 1108
Oregon OF 94-0363; OF 95-0373
Papua New Guinea, Quaternary OP-1952
- Pennsylvania
WRI 94-4056; OF 92-0635; OF 94-0381;
OP-873
environmental geology C 1108; WRI 94-
4060
Philippine Islands, Quaternary OP-1952
pollution C 1108; OF 94-0399; OP-1508
- Puerto Rico
WRI 91-4183
geomorphology OP-106
Rhode Island OF 95-0305
South Carolina OF 94-0385; FS 94-0010; OP-
2270
- Tennessee
OF 94-0068; OF 95-0156; OF 95-0278;
OF 95-0372
environmental geology OF 95-0156
pollution OF 95-0156; OF 95-0312; OF 95-
0329; OP-1006
- Texas
WRI 93-4190; WRI 94-4218; OF 94-0702-
W; OF 95-0103; OF 95-0111
pollution FS 0088-95
United Arab Emirates OP-1801
United States, environmental geology YR
- Utah
WRI 94-4041; OF 95-0104
engineering geology OP-1435
- Vermont OP-1194
- Virginia WRI 94-4042; WRI 94-4067;
WRI 94-4225; OF 95-0136; FS 0046-95
- Washington
WRI 94-4215; OF 94-0108; OF 94-0308;
OP-859
dams OP-2038
environmental geology OF 95-0230
geochemistry WRI 94-4047
geologic hazards P 1547
- Quaternary OP-1952
West Virginia OF 95-0129; OF 95-0184
- Wisconsin
WRI 94-4094; OF 94-0363; OF 95-0163;
OP-2241; OP-2327
ecology OF 95-0163
environmental geology OF 95-0163
pollution OF 95-0163; OP-508
reclamation OF 95-0163
- Wyoming
WRI 93-4229; WRI 94-4095; WRI 94-
4221
energy sources OP-302; OP-885
environmental geology WRI 95-4006;
OF 95-0121
- HydroNet-300 transducer**
ground water OF 94-0531
- hydrostratigraphy**
California, ground water OP-1362
Idaho, ground water OP-44
Nevada, ground water OP-1362
- HYDROTHERM**
geologic hazards OP-2007
geophysical surveys OP-1563
heat flow OP-439
- hydrothermal alteration** *see also* ore-forming
fluids; thermal waters.
Alabama, sedimentary petrology OP-1915
- Alaska
OP-496
geochemistry OF 95-0047
metal ores OP-670
- Australia C 1129
- Bolivia B 2119
- California
C 1129; I-2473
geochemistry OP-790
Colorado, pollution OP-92
East Pacific Ocean Islands OP-390
faults OF 94-0228
Idaho, metal ores B 2064-A-R
Japan, geologic hazards OP-2007
Minnesota, mineral resources OF 94-0447
Missouri, economic geology OF 94-0670
- Nevada
I-2473
energy sources OP-1084
geochemistry OP-1857
structural geology OP-454
New York OP-1794
Northwest Territories, faults OP-1856
- Pacific Ocean
geochemistry B 2022; OP-1033
oceanography B 2022
- Pakistan, gems OP-1303
- Russian Federation, geophysical surveys OP-
958
- Washington
GQ-1681
geologic hazards OP-2329
- Wyoming, geophysical surveys OP-1913
- hydrothermal chimneys *see* hydrothermal vents
- hydrothermal processes** *see also* epithermal pro-
cesses; hot springs; igneous processes; ore-form-
ing fluids.
Atlantic Ocean, metal ores OP-502
Bolivia, metal ores OP-1028
California, petroleum OP-513
Canadian Shield, metal ores OP-2126
China, polymetallic ores OP-1024
Colorado
environmental geology OP-334

- Oligocene OP-1625
Great Britain, metal ores OP-2126
Idaho
 metal ores B 2064-A-R
 non-metal deposits P 1525
 silver ores P 1525
 tungsten ores P 1525
 uranium ores P 1525
Indiana, lead-zinc deposits OP-369
 metal ores B 2110; OP-1013
Mississippi Valley, metal ores OP-888
Nevada
 gold ores OP-20; OP-438
 metal ores B 2090
New Jersey, metal ores OP-290
New Mexico, geochemistry B 2081
New York, metal ores OP-290
Pacific Ocean
 metal ores OP-502
 ocean floors B 2022
 oceanography B 2022
 polymetallic ores OP-1495
Quebec, gold ores OF 94-0228
South Carolina, gold ores OP-2090
Spain
 gold ores OF 95-0221
 metal ores OP-799
United States, metal ores OP-799
Utah, faults OP-1390
hydrothermal vents *see also* black smokers.
 Atlantic Ocean, metal ores OP-502
 California, oceanography B 2022
 Hawaii, seismology OP-1654
 Iceland, Quaternary OP-640
 ocean floors B 2022
 Oregon, ocean floors OP-1772
 Pacific Ocean
 geochemistry B 2022; OF 94-0015; OF 95-0505; OP-2098
 lava OP-2132
 metal ores OP-502
 ocean floors B 2022; OP-1339; OP-2097; OP-2137
 oceanography B 2022; OP-503
 plate tectonics OP-2234
 Quaternary B 2022
hydroxides *see* oxyhydroxides
Hylas mylonite zone
 structural geology OP-1536
Hymenoptera
 angiosperms OP-1483
 Utah OP-1153
Hyogo Japan
 earthquakes OP-490
hypabyssal rocks
 Bolivia B 2119
HyperCard
 geologic hazards OP-1052
 oceanography OF 94-0669-A; OF 94-0669-B
hypergene processes *see* supergene processes
hypermedia
 YR
 geologic hazards OP-1053
hypogene processes *see* endogene processes
hypothermal processes
 Idaho, metal ores B 2064-A-R
- I**
- I-129**
 environmental geology OP-1262
 Idaho, ground water WRI 94-4053
I-type granites
 C 1129
 Alps C 1129
 Australia C 1129
 Austria C 1129
 Chile C 1129
 France, geochemistry C 1129
 Italy, geochemistry C 1129
 Japan C 1129
 New Zealand C 1129
 Queensland Australia, metal ores C 1129
 Tasmania Australia, metal ores C 1129
Iapetus
 Canada
 faults OP-2271
 neotectonics OP-994
 New Jersey, geochemistry P 1565-A
 Pennsylvania, Proterozoic OP-3
 United States
 faults OP-2271
 neotectonics OP-994
 Virginia, Proterozoic OP-3
Iapah Pluton
 geophysical surveys OF 93-0397-A; OF 93-0397-B
Iberia *see* Iberian Peninsula
Iberian Mountains
 geochemistry C 1129
Iberian Peninsula *see also* Portugal; Spain.
 geochemistry C 1129
Iberian pyrite belt
 pyrite ores B 2081
ice *see also* oxides.
 OP-880; OP-1105; OP-1727
 Alaska
 frost action OP-161
 geologic hazards OP-1316
 geomorphology OP-264
 hydrology OP-1833
 Quaternary OP-1507; OP-2017; OP-2207
 sediments OP-1086
 Bering Sea, Quaternary OP-815
 geophysics OP-1326; OP-1478; OP-2159
 Great Lakes, stratigraphy OP-436
 Illinois, frost action OP-43
 Indiana, frost action OP-43
 Ohio, frost action OF 95-0224
 Pliocene OP-1565
 Washington, Quaternary OP-975
ice caps
 Alaska, geologic hazards OP-2257
ice cores
 California, Quaternary OP-449
 Greenland, Quaternary C 1108; OP-187; OP-446
ice mantle *see* ice sheets
ice movement *see also* glacier surges; ice streams.
 Antarctic Ocean
 continental shelf OP-921
 Pliocene OF 94-0588
 Antarctica
 Pliocene OF 94-0588
 Quaternary P 1386-B
 Greenland, Quaternary OP-446
 Massachusetts, oceanography OF 94-0672
 Montana, Quaternary OP-902
 Washington, hydrology WRI 94-4139
 Wyoming, Quaternary OP-902
ice rafting
 Alaska, sediments OP-1086
 Arctic Ocean, paleomagnetism OF 94-0588
 Atlantic Ocean, Pliocene OF 94-0588
 Illinois, frost action OP-43
 Indiana, frost action OP-43
ice sheets
 Alaska, stratigraphy OF 94-0588
 Antarctic Ocean
 Pliocene OF 94-0588
 Quaternary OP-54; OP-246
 Antarctica
 Pliocene OF 94-0588
 Quaternary P 1386-B; OP-2188
 stratigraphy OP-2305
 Arctic Ocean, paleomagnetism OF 94-0588
 Atlantic Coastal Plain, stratigraphy OP-1958
 Atlantic Ocean, Pliocene OP-218
 British Columbia, Quaternary OP-2008
 Greenland
 glacial geology P 1386-C
 Quaternary OP-446
 Pacific Ocean, Pliocene OP-218
 Washington, Quaternary OP-2008
ice shelves
 Alaska, Quaternary OP-1457
ice streams
 Antarctic Ocean, Quaternary OP-246
 Antarctica, Quaternary P 1386-B
ice wedges
 Alaska
 geomorphology OP-101
 Quaternary OP-124
ice wedges, fossil *see* fossil ice wedges
ice-marginal features
 Maine, Quaternary OP-2200
 New England, Quaternary OP-2163
ice-rafting *see* ice rafting
ice-wedge pseudomorph *see* fossil ice wedges
icebergs
 Alaska, hydrology OP-1429
Iceland
 earthquakes OP-1603
 geophysical surveys OP-1389
 Quaternary
 OF 95-0500; OP-1001
 Surtsey OP-640
 seismology OP-1813
 tectonophysics OP-298
ichnofacies
 Arizona, stratigraphy OP-381
 Colorado Plateau, stratigraphy OP-1481
 Phanerozoic OP-1480
ichnofossils *see also* burrows; tracks.
 angiosperms OP-1483
 Arizona, stratigraphy OP-381; OP-1320; OP-1322
 Colorado, stratigraphy OP-2027
 Egypt OP-1012
 Indiana, stratigraphy OF 94-0298
 Pacific Ocean, sedimentary petrology OP-776
 Phanerozoic OP-1480
 Uruguay OP-311
 Utah OP-1153
Icy Bay
 plate tectonics OP-1682
icy satellites OP-1105
Ida Asteroid OP-57; OP-134

Idaho *see also* Beaverhead Mountains; Borah Peak earthquake 1983; Challis Volcanics; Idaho Batholith; Lake Bonneville; Snake River; Snake River basin; Snake River canyon; Wasatch fault zone; Wood River Formation; Yellowstone National Park.

areal geology

Boise County Idaho P 1525
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Valley County Idaho P 1525

barite deposits

Boise County Idaho P 1525
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Valley County Idaho P 1525

base metals

Boise County Idaho P 1525
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Valley County Idaho P 1525

cobalt ores

Lemhi County Idaho OP-167
Lemhi Range OP-167

economic geology

Blaine County Idaho B 2064-A-R
Boise County Idaho P 1525
Custer County Idaho P 1525; B 2064-A-R
Lemhi County Idaho P 1525
Valley County Idaho P 1525

environmental geology

OF 95-0644; OP-2096
Ada County Idaho WRI 93-4156
Canyon County Idaho WRI 93-4156
Owyhee County Idaho WRI 93-4156
Valley County Idaho OF 94-0443

faults

Boise County Idaho P 1525
Clark County Idaho OP-2125
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Valley County Idaho P 1525

fluorspar

Boise County Idaho P 1525
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Valley County Idaho P 1525

gems

Boise County Idaho P 1525
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Valley County Idaho P 1525

geochemistry

B 2117
Bear Lake County Idaho OF 95-0270
Boise County Idaho P 1525
Cassia County Idaho OF 95-0270; OP-716
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Snake River plain OP-716
Valley County Idaho P 1525

geochronology, Lemhi County Idaho C 1129

geologic hazards, Fremont County Idaho OF 95-0059

geomorphology

Bonner County Idaho I-2472
Caribou County Idaho B 2107

geophysical surveys

DDS-0031
Boise County Idaho P 1525
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Valley County Idaho P 1525

gold ores

Boise County Idaho P 1525
Custer County Idaho P 1525
Elmore County Idaho OF 95-0495
Lemhi County Idaho P 1525
Owyhee County Idaho OF 95-0495
Valley County Idaho P 1525

graphite deposits

Boise County Idaho P 1525
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Valley County Idaho P 1525

ground water

HA-0730-H; OP-1633; OP-2095
Bingham County Idaho WRI 94-4053;
WRI 94-4257
Blaine County Idaho WRI 94-4257
Boise Idaho WRI 94-4116
Bonneville County Idaho WRI 94-4257
Butte County Idaho WRI 94-4053; WRI 94-4257
Cassia County Idaho WRI 94-4257
Clark County Idaho WRI 94-4257
Elmore County Idaho WRI 94-4257
Fremont County Idaho WRI 94-4257
Gooding County Idaho WRI 94-4257
Jefferson County Idaho WRI 94-4053;
WRI 94-4257
Jerome County Idaho WRI 94-4257
Lincoln County Idaho WRI 94-4257
Minidoka County Idaho WRI 94-4257
Power County Idaho WRI 94-4257
Snake River plain WRI 94-4053; WRI 94-4257; OP-44
Twin Falls County Idaho WRI 94-4257

hydrogeology

Blaine County Idaho OF 94-0503
Butte County Idaho OF 94-0503
Gooding County Idaho WRI 94-4247;
OF 94-0503
Jerome County Idaho WRI 94-4247; OF 94-0503
Lincoln County Idaho OF 94-0503
Minidoka County Idaho OF 94-0503
Owyhee County Idaho OP-2221
Snake River plain P 1408-C; OF 94-0503
Twin Falls County Idaho WRI 94-4247

hydrology

FS 94-0026
Benewah County Idaho WRI 94-4215
Kootenai County Idaho WRI 94-4119
Latah County Idaho WRI 94-4215
Nez Perce County Idaho OF 94-0109

lava

Blaine County Idaho OP-898
Craters of the Moon OP-898

manganese ores

Boise County Idaho P 1525
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Valley County Idaho P 1525

maps

Bannock County Idaho MF-2278
Blaine County Idaho OF 94-0659
Butte County Idaho OF 94-0659
Camas County Idaho OF 94-0659
Craters of the Moon OF 94-0659
Gooding County Idaho OF 94-0659
Lincoln County Idaho OF 94-0659
Minidoka County Idaho OF 94-0659
Owyhee County Idaho OP-263
Power County Idaho OF 94-0659; MF-2278
Snake River plain MF-2278

mercury ores

Boise County Idaho P 1525
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Valley County Idaho P 1525

metal ores

B 2097; OP-2126
Blaine County Idaho B 2064-A-R
Boise County Idaho P 1525; B 2064-A-R;
OF 94-0690
Butte County Idaho B 2064-A-R
Camas County Idaho B 2064-A-R
Custer County Idaho P 1525; B 2064-A-R
Elmore County Idaho B 2064-A-R
Gooding County Idaho B 2064-A-R
Idaho County Idaho B 2081; OF 94-0690
Lemhi County Idaho P 1525; B 2064-A-R;
B 2081
Lincoln County Idaho B 2064-A-R
Mackay Idaho B 2064-A-R
Minidoka County Idaho B 2064-A-R
Snake River plain OP-799
Valley County Idaho P 1525; B 2064-A-R;
OF 94-0690

mineral resources

Blaine County Idaho B 2064-A-R
Boise County Idaho B 2064-A-R
Butte County Idaho B 2064-A-R
Camas County Idaho B 2064-A-R
Custer County Idaho B 2064-A-R
Elmore County Idaho B 2064-A-R
Gooding County Idaho B 2064-A-R
Lincoln County Idaho B 2064-A-R
Minidoka County Idaho B 2064-A-R

molybdenum ores

Boise County Idaho P 1525
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Valley County Idaho P 1525

neotectonics

Butte County Idaho OF 94-0568
Snake River plain OF 94-0568

non-metal deposits

Boise County Idaho P 1525
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Valley County Idaho P 1525

petrology

Boise County Idaho P 1525
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Snake River plain OP-1851
Valley County Idaho P 1525

pollution

Bunker Hill Mine OP-1146; OP-1156; OP-2129
Coeur d'Alene River OP-1039; OP-1156;
OP-2129

polymetallic ores

Blaine County Idaho B 2064-A-R
Boise County Idaho P 1525
Camas County Idaho B 2064-A-R
Custer County Idaho P 1525; B 2064-A-R
Lemhi County Idaho P 1525
Valley County Idaho P 1525

Proterozoic

Boise County Idaho P 1525
Custer County Idaho P 1525
Lemhi County Idaho P 1525
Valley County Idaho P 1525

Quaternary

Ada County Idaho B 2105
Boise County Idaho P 1525

- Butte County Idaho OF 94-0568; OF 94-0686
 Canyon County Idaho B 2105
 Custer County Idaho P 1525
 Elmore County Idaho B 2105
 Jefferson County Idaho OF 94-0686
 Lemhi County Idaho P 1525
 Lost River Fault OF 94-0568
 Owyhee County Idaho B 2105
 Snake River plain B 2105; OF 94-0686
 Valley County Idaho P 1525
- sedimentary petrology**
 Bingham County Idaho OF 94-0374
 Boise County Idaho P 1525
 Butte County Idaho OF 94-0374
 Custer County Idaho P 1525
 Jefferson County Idaho OF 94-0374
 Lemhi County Idaho P 1525
 Snake River plain OF 94-0374
 Valley County Idaho P 1525
- silver ores**
 Boise County Idaho P 1525
 Custer County Idaho P 1525
 Lemhi County Idaho P 1525
 Valley County Idaho P 1525
- soils, Kootenai County Idaho OP-119**
- stratigraphy**
 Clark County Idaho B 2113
 Snake River plain OP-2147
- structural geology**
 OP-1903
 Snake River plain OP-2123; OP-2124
- tungsten ores**
 Boise County Idaho P 1525
 Custer County Idaho P 1525
 Lemhi County Idaho P 1525
 Valley County Idaho P 1525
- uranium ores**
 Boise County Idaho P 1525
 Custer County Idaho P 1525
 Lemhi County Idaho P 1525
 Valley County Idaho P 1525
- vanadium ores**
 Boise County Idaho P 1525
 Custer County Idaho P 1525
 Lemhi County Idaho P 1525
 Valley County Idaho P 1525
- volcanism**
 I-2291-C
 Snake River plain OP-1674
- Idaho Batholith**
 faults OP-1650
 geochronology C 1129
 metal ores B 2064-A-R; OF 94-0690; OP-1874
 mineral resources B 2064-A-R
 petrology P 1525
 structural geology OP-1673; OP-1863
- Idaho Chemical Processing Plant**
 ground water OP-44
- Idaho Falls Quadrangle**
 metal ores B 2064-A-R
 mineral resources B 2064-A-R
- Idaho Group**
 metal ores B 2064-A-R
- Idaho National Engineering Laboratory**
 environmental geology OP-2096
 ground water WRI 94-4053; OP-44; OP-2095
 hydrogeology OF 94-0503
 Quaternary OF 94-0686
 sedimentary petrology OF 94-0374
- Ides Cove New York**
 hydrology WRI 92-4052
- Iditarod Alaska**
 environmental geology B 2107
 metal ores OP-1195
- Idono Complex**
 areal geology OP-725
 magmas OP-626
- Igla Intrusion**
 magmas C 1129
- igneous processes**
 Alaska, metal ores B 2084
 California, metal ores C 1129
 Chile, iron ores OP-87
 Colorado
 metal ores B 2109; C 1129; OP-1626
 molybdenum ores OP-849
 copper ores C 1129
 Idaho, metal ores B 2064-A-R
 Illinois, non-metal deposits OP-729
 Kentucky, non-metal deposits OP-729
 Maine, metal ores OP-555
 metal ores B 2081
 Mexico, metal ores C 1129
 Nevada, metal ores B 2081
 Peru, metal ores OP-202; OP-1411
 petrology OP-939
 Queensland Australia, metal ores C 1129
 Sweden, iron ores OP-87
 Tasmania Australia, metal ores C 1129
 Utah
 economic geology OP-189
 molybdenum ores OP-849
- igneous rocks *see also* dike swarms; dikes; intrusions; plutonic rocks; plutons; stocks.**
 OF 94-0624-A; OF 94-0624-B; OP-618
- A-type granites**
 C 1129
 Indian Ocean Islands C 1129
 Oklahoma C 1129
 Russian Federation C 1129
 Spain C 1129
 Texas C 1129
 Virginia C 1129
 Yemen C 1129
- Alaska**
 OP-201
 sedimentary petrology OP-1361
 structural geology OF 94-0714
- alkali basalts**
 California OP-197; OP-260
 Mexico OP-197
 Oregon OF 95-0040
- alkali granites, New Mexico OP-959**
- andesites**
 Alaska B 2139; OP-632
 Andes OP-1511
 California OP-790; OP-1315
 Caribbean region B 2057
 Colorado OP-67
 Lesser Antilles B 2057
 Nevada B 1988-K; OP-2151
 New Mexico B 2081
 Oregon OF 94-0261; OP-29; OP-1315; OP-2088
 Utah B 1988-K
 Washington OP-1512; OP-1513
- ankaramite, Russian Federation OP-421**
- anorthosite**
 OP-605; OP-1784; OP-2183
 California OP-46
 Montana OP-554
 Wyoming OP-364
- aplite**
- California C 1129; OP-1095; OP-1211
 China C 1129
 Egypt OP-2068
- ash-flow tuff**
 Alaska OP-1921
 Arizona OP-353
 Bolivia B 2119; OP-188
 Colorado OP-546; OP-728; OP-1118
 Idaho OP-716
 Montana OP-1517
 Nevada P 1559; B 1988-K; B 2056; B 2090;
 OF 95-0545; OP-454; OP-1567; OP-1860; OP-2143
 New Mexico B 2081
 paleomagnetism OP-1738
 Spain OP-22
 Texas OF 94-0227
 Utah B 1988-K; B 2056; OP-189
 Washington OP-2173
 Wyoming OP-1517
- basalts**
 OP-880; OP-1580; OP-1789
 Alaska OP-39; OP-632; OP-711; OP-727
 Arizona C 1129; OP-991
 California OF 94-0587; OF 95-0585; OP-625; OP-1315
 Colorado OP-1101; OP-1939
 East Pacific Ocean Islands OP-309
 Egypt OP-1152
 Galapagos Islands OP-309
 geochemistry OP-978
 Germany OP-651
 Greenland OP-1752
 ground water HA-0730-H
 Hawaii OP-47; OP-234; OP-1090; OP-1223; OP-1616; OP-2076; OP-2215
 Italy C 1129
 Maryland OP-1126
 Mexico OF 94-0587
 Minnesota OF 94-0447
 Montana OP-2133
 Nevada OP-1440; OP-2151
 New Mexico B 2081
 Northwest Territories OP-1856
 ocean floors B 2022
 Oregon B 1741-H; OP-38; OP-680; OP-1128; OP-1176; OP-1177; OP-1315
 Pacific Ocean OP-503; OP-920
 Russian Federation OP-651
 Virginia OP-413; OP-1126
 Washington B 2085-C; C 1129; OP-680
- basanite, Hawaii OP-1307**
- Basin and Range Province B 2056**
- biotite granite**
 C 1129
 Finland C 1129
 Nevada C 1129
 Spain C 1129
 Virginia C 1129
- British Columbia**
 sedimentary petrology OP-1361
 structural geology OF 94-0714
- carbonatites**
 Arkansas OF 94-0450
 Colorado OP-1067
 Missouri OF 94-0670; OP-1299
- chromitite, Montana OP-516**
- clinopyroxenite**
 Alaska P 1564
 mineralogy OP-434
- Colorado**
 OF 95-0232
 geochemistry OP-1806

Colorado Plateau B 2056
comendite, Kenya C 1129
dacites

Alaska C 1129
Andes OP-1511
Bolivia OP-2244
British Columbia C 1129
Colorado C 1129; OP-1118
Japan C 1129
Mexico C 1129
Oregon OP-29
Philippine Islands C 1129
Russian Federation C 1129
Washington OP-391; OP-1513

diabase

Arizona OP-1381
California OP-1255
East Pacific Ocean Islands OP-390
Gabon OP-1403
New Jersey P 1565-A
Russian Federation OP-843
Utah OP-1292

diorites

Alaska OP-2184
Arabian Peninsula OP-1220
Montana OP-1465
New Zealand C 1129
Romania C 1129
Spain C 1129

dunite

Alaska P 1564
Russian Federation OP-843

felsite

California OP-193; OP-299
Virginia B 2060

ferrodiorite, Minnesota OP-886

flood basalts

Antarctic Ocean OP-1103
Hawaii OP-442
Idaho OP-2147
India OP-442
Nevada OP-2147
New Mexico OP-442
Russian Federation OP-50; OP-421
Yemen OP-1079

gabbros

OP-1138; OP-1826
Alaska P 1564; OP-23
Antarctica C 1129
Arizona C 1129
Australia C 1129
California OP-313; OP-708
Caribbean region B 2057
Chile C 1129
Colorado OF 94-0437
Cyprus OP-2
France C 1129
Greenland OP-1752
Italy C 1129
Japan C 1129
Lesser Antilles B 2057
Montana OF 95-0098
Poland OP-1827
Russian Federation OP-843
tectonophysics OP-141
Texas OP-363

garnet pyroxenite, Hawaii OF 91-0596

glasses

Alaska OP-2021
Bolivia C 1129
Hawaii OF 94-0684; OP-147; OP-1307
Pacific Coast OP-2250

granite porphyry, Romania C 1129

granites

C 1129; OP-83
Alaska C 1129; OP-100; OP-296; OP-727;
OP-931; OP-2184
Alberta C 1129
Antarctica C 1129
Argentina C 1129
Arizona C 1129; OP-1282
Australia C 1129
Baltic region C 1129
Brazil C 1129
California C 1129; OF 94-0228; OP-45; OP-
700; OP-1818; OP-2335
Canada B 2135; OP-606
Canadian Shield OP-2126
China C 1129
Colorado C 1129; OF 94-0437; OP-1067;
OP-1424; OP-1626
Commonwealth of Independent States
C 1129
copper ores C 1129
earthquakes OP-53
engineering geology OF 95-0028; OP-1841
faults OP-73; OP-759
France C 1129
geochemistry C 1129
geophysics OP-551
Germany C 1129
Great Britain OP-2126
Hong Kong C 1129
Idaho P 1525; B 2064-A-R; C 1129; OP-
1650

Italy C 1129
Japan C 1129
Labrador C 1129
Maine C 1129
Massachusetts WRI 94-4185; OP-782
Mexico C 1129
mineralogy C 1129
Minnesota B 1904-U
Mississippi Valley OF 94-0298; OP-888
Montana C 1129; OP-1831
Nevada OP-454
New Mexico B 2081; C 1129
Newfoundland C 1129
North Carolina C 1129; OP-1202
Norway OP-2156
Poland OP-1827
rock mechanics OF 94-0228
Russian Federation C 1129
Scandinavia C 1129
Scotland C 1129
seismic sources OP-1788
seismology OP-1721
South Africa OP-606
South Dakota OP-1117
Spain C 1129
structural geology OP-637; OP-1840
Sweden YR
Texas C 1129
United States B 2135
Vermont C 1129
Virginia C 1129; OP-1202
Wales C 1129
Washington C 1129; GQ-1681

granodiorites

C 1129
Alaska B 2107
Arabian Peninsula OP-1220
Argentina C 1129
Arizona C 1129; OP-352
Austria C 1129
Brazil C 1129

British Columbia C 1129

California C 1129; OF 94-0228; OP-193;
OP-313

Canada C 1129
Canadian Shield C 1129
Chile C 1129
Colorado C 1129; GQ-1764; OP-2259
Egypt OP-2068
Finland C 1129
France C 1129
geochemistry C 1129
Germany C 1129; OP-651
Greece C 1129
Italy C 1129; OP-27
Japan C 1129
Maine OP-555
Nevada C 1129; OP-2151
Romania C 1129
Russian Federation OP-651
Spain C 1129
Switzerland C 1129
Victoria Australia C 1129
Wyoming I-2233

harzburgite, Russian Federation OP-843

hornblende, Alaska P 1564

hyaloclastite

British Columbia OP-1509
Pacific Ocean OP-1033

hypabyssal rocks, Bolivia B 2119

I-type granites

C 1129
Alps C 1129
Australia C 1129
Austria C 1129
Chile C 1129
France C 1129
Italy C 1129
Japan C 1129
New Zealand C 1129
Queensland Australia C 1129
Tasmania Australia C 1129

ignimbrite

Bolivia OP-2244
Colorado OP-840
Idaho OP-1851
Italy OP-962
New Mexico OP-840
New Zealand OP-431
Utah OP-1390

Japan, structural geology OF 94-0714

keratophyre, California OP-1430

lamprophyres

Arkansas OF 94-0450
Colorado OP-1625; OP-1939
France C 1129
Switzerland C 1129

latite, Colorado OF 94-0291; OP-526

leucite, Hawaii OP-1307

leucogranite

Argentina C 1129
California C 1129
Carpathians C 1129
Chile C 1129
Himalayas C 1129
India C 1129
Iran C 1129
Maine C 1129
Nevada C 1129; OP-1817
Oklahoma C 1129
Pakistan C 1129
South Dakota C 1129
Spain C 1129
Virginia C 1129

- lherzolite
 California OP-1149
 geochemistry OP-978
 meimechite, Russian Federation OP-421
 microgranite
 C 1129
 Australia C 1129
 Brazil C 1129
 California C 1129
 Chile C 1129
 Victoria Australia C 1129
 Micronesia, manganese ores OP-1409
 mid-ocean ridge basalts
 Arizona OP-1104
 California OP-260; OP-1149
 East Pacific Ocean Islands OP-390
 geochemistry OP-976
 Hawaii OP-861
 Mexico OP-827
 Pacific Ocean B 2022; OF 94-0015; OP-1941; OP-2132; OP-2266
 mineralogy B 2140
 monzodiorite
 Alaska B 2107
 Canada C 1129
 Indian Ocean Islands C 1129
 Montana OF 95-0098
 Nevada OP-1817
 monzogranite
 Argentina C 1129
 California C 1129
 France C 1129
 Iran C 1129
 Italy C 1129
 New Zealand C 1129
 Ordovician B 2060
 Utah C 1129
 monzonites
 Alaska B 2107
 Argentina C 1129
 Brazil C 1129
 Colorado OP-1626
 France C 1129
 Switzerland C 1129
 muscovite granite, Pakistan OP-1303
 norite
 Alaska OP-672
 Washington OP-391
 North Carolina, mineral resources OP-428
 obsidian, Montana OP-1868
 ocean-island basalts, geochemistry OP-976
 olivine basalt, Washington OP-1512
 olivine nephelinite, Russian Federation OP-50
 palagonite OP-880
 pantellerite, Italy OP-227
 peridotites
 California OP-753
 Europe OP-2052
 Italy OP-755; OP-1991
 Montana OP-1492
 Oman OP-753
 Saudi Arabia OP-753
 Spain C 1129
 perlite, Oregon B 1738-E
 phonolites, Colorado OP-1625; OP-1626
 picrite
 Hawaii OP-1372
 Russian Federation OP-421
 plutonic rocks
 OP-125
 Alaska OF 94-0268; OP-633; OP-1195
 British Columbia OF 94-0268
 California OP-319
 Colorado OP-1363
 Idaho P 1525; OP-1673
 Japan OP-270
 Montana MF-2291
 Nevada OF 93-0397-A; OF 93-0397-B
 Oregon OP-41
 Utah OF 93-0397-A; OF 93-0397-B
 Washington OP-2329
 porphyry
 Alaska OP-296; OP-670
 Arizona OP-291
 Basin and Range Province OP-1874
 Colorado OP-333
 Great Basin OP-1874
 New Mexico B 2063
 pumice
 Alaska OP-772
 California OP-397; OP-531; OP-1505
 Nevada OP-1860
 Oregon OP-397; OP-1505
 Washington OP-391
 Yukon Territory OP-772
 pyroclastics
 Alaska B 2139; OF 95-0217-A; OF 95-0217-B; OP-1316; OP-1458; OP-1822; OP-2021; OP-2257; OP-2258; OP-2260
 California OP-2006
 El Salvador OP-1816
 engineering geology OP-1569
 Guatemala OP-952
 Hawaii OF 95-0496
 Indonesia OP-1767
 Nevada OP-2006
 Oregon OP-2045; OP-2088
 Pacific Coast OP-2250
 Washington OP-1767
 Yemen OP-1079
 Yukon Territory OF 95-0217-A; OF 95-0217-B; OP-1458
 pyroxenite, California OP-708
 quartz diorites
 Alaska B 2107
 Arizona OP-352
 Germany C 1129
 Italy C 1129
 Japan C 1129
 quartz monzonite
 Brazil C 1129
 Minnesota OP-886
 quartz syenite
 Indian Ocean Islands C 1129
 Russian Federation C 1129
 rapakivi
 California OP-1211
 Finland C 1129
 Nevada C 1129
 rhyolite tuff, Nevada P 1559; B 2056; OP-454
 rhyolites
 Andes OP-1511
 Arizona OP-352
 Bolivia C 1129
 California OP-625
 Caribbean region B 2057
 Colorado OP-1096; OP-1118; OP-1247
 East Pacific Ocean Islands OP-309
 Galapagos Islands OP-309
 geochemistry C 1129
 Idaho P 1525; B 2081
 Lesser Antilles B 2057
 mineralogy OP-1378
 Minnesota OP-886
 Nevada B 1988-K; B 2056; B 2090; OP-1817
 New Mexico B 2081; I-2399
 North Carolina OP-1399
 Utah B 1988-K; OP-1725
 Virginia B 2060; C 1129; OP-1399
 Wyoming OP-1913
 Yemen OP-1079
 Russian Federation, structural geology OF 94-0714
 S-type granites
 Argentina C 1129
 Australia C 1129
 Finland C 1129
 geochemistry C 1129
 India C 1129
 Iran C 1129
 Japan C 1129
 New South Wales Australia C 1129
 Northwest Territories C 1129
 Queensland Australia C 1129
 Tasmania Australia C 1129
 scoria, Arizona OP-991
 shonkinite
 Montana OP-1465
 Utah OF 95-0491
 shoshonite, Brazil C 1129
 South Carolina, mineral resources OP-428
 stratigraphy OP-2139
 syenites
 California OP-321
 Maine OP-555
 New Mexico OP-959
 Poland OP-1827
 Virginia B 2060; C 1129
 Wyoming OP-364
 tholeiite, Hawaii OP-1307; OP-2321
 tholeiitic basalt
 California OP-197
 Hawaii OP-1025
 Mexico OP-197
 Oregon OF 95-0040
 tonalite
 C 1129
 Alaska B 2107; C 1129; OP-100
 Argentina C 1129
 Australia C 1129
 Brazil C 1129
 California C 1129; OP-45
 Canada C 1129
 Canadian Shield C 1129
 Carpathians C 1129
 Chile C 1129
 geochemistry C 1129
 Germany C 1129
 Greece C 1129
 Italy C 1129
 Japan C 1129
 Mexico C 1129
 Nevada C 1129
 Ordovician B 2060
 Oregon OP-1590
 Russian Federation C 1129
 Spain C 1129
 Virginia C 1129
 trachyandesites
 California OF 94-0633
 Colorado OP-1625; OP-1626
 trondhjemite
 Alaska C 1129
 Iran C 1129
 Japan C 1129
 Mexico C 1129
 Montana OP-1831
 Ordovician B 2060

- Oregon OP-1590
Russian Federation C 1129
- tuff**
Alaska OP-774
Argentina OP-2011
Arizona MF-2292
British Columbia OP-1509
California OP-531; OP-625; OP-805; OP-2066
Colorado B 1808-P; OF 94-0291; OP-1691; OP-1716; OP-1879; OP-2012
geochronology OP-1029
Idaho P 1525
Indonesia OP-443
Italy OP-962
Nevada P 1559; B 2056; OF 92-0657; OF 93-0269; OF 94-0342; OF 94-0451; OF 94-0618; OF 95-0002; OF 95-0545; OP-1388; OP-1468; OP-1567; OP-1998; OP-2036; OP-2037; OP-2066; OP-2273
New Mexico B 1808-P; B 2081; OP-443
Oregon B 1741-H
Peru OP-202; OP-1411
Texas OP-1925
Utah B 2056
Wyoming OP-569; OP-1583
- two-mica granite**
California C 1129
Finland C 1129
Nevada C 1129
Ordovician B 2060
- ultramafics**
Alaska OP-296; OP-672; OP-1135
California OP-864
Canada OP-1135
Oregon OP-864
- vitrophyre**
Idaho OP-716
Pacific Ocean OP-2266
- volcanic glass**
Alaska B 2139; OP-774
California OF 94-0587
East Pacific Ocean Islands OP-390
Hawaii OP-639; OP-1102
Idaho OP-716
Mexico OF 94-0587
Pacific Coast OF 95-0034
Pacific Ocean B 2022
- volcanic rocks**
OP-1487
Alaska OP-40; OP-100; OP-408; OP-627; OP-1169; OP-1195
Antarctica OP-55; OP-245
Arizona B 2021-E; OF 94-0670; OF 95-0263; OP-350; OP-669
California OF 94-0640-A; OF 94-0640-B; I-2362; OP-319; OP-669; OP-1362
Canada OP-1169
Canadian Shield OP-2126
Colorado OF 94-0583
Great Britain OP-2126
Idaho P 1525
Nevada OF 95-0248; OP-619; OP-1362; OP-1470; OP-1944; OP-2326
New Mexico OF 94-0670; OF 95-0263
Oregon OF 95-0219
Pacific Ocean OP-1080
Spain OF 95-0221
Utah OP-619; OP-1842
Victoria Australia C 1129
Washington OP-1821
Wyoming OP-280; OP-1288
- websterite, Russian Federation** OP-843
- welded tuff
Colorado OP-760
Nevada B 2081; OP-1860; OP-2143
- ignimbrite**
Bolivia, structural geology OP-2244
Colorado OP-840
Idaho OP-1851
Italy, paleomagnetism OP-962
New Mexico OP-840
New Zealand, Quaternary OP-431
Utah, faults OP-1390
- Illamna**
environmental geology OF 95-0346
geochemistry OF 95-0055
geologic hazards OF 95-0083
Quaternary OF 95-0271
- Illinoian**
Mississippi Valley OP-1757
Wyoming OP-355
- Illinois** *see also* Aux Vases Sandstone; Burlington Limestone; Caseyville Formation; Chesterian; Chouteau Limestone; Cypress Sandstone; Decorah Shale; Galena Dolomite; Glasford Formation; Glenwood Shale; Illinois Basin; Illinois River; Illinois State Geological Survey; Lake Michigan; Loveland Loess; Maquoketa Formation; Michigan Basin; Mississippi Embayment; Mississippi River; Mount Simon Sandstone; New Madrid region; Ohio River; Saint Louis Limestone; Saint Peter Sandstone; Sainte Genevieve Limestone; Upper Mississippi Valley; Warsaw Formation.
areal geology, Chicago Illinois OP-295
economic geology C 1124
energy sources
C 1108
Jefferson County Illinois OF 94-0298
environmental geology, Kane County Illinois B 2111
- faults**
Hardin County Illinois P 1538-Q
Pope County Illinois P 1538-Q
- geochemistry**
Fayette County Illinois OF 94-0555
Franklin County Illinois OF 94-0555
Fulton County Illinois OF 94-0555
Jefferson County Illinois OF 94-0555
Knox County Illinois OF 94-0555
Macoupin County Illinois OF 94-0555
Montgomery County Illinois OF 94-0555
Peoria County Illinois OF 94-0555
Perry County Illinois OF 94-0555
Randolph County Illinois OF 94-0555
geomorphology, Alexander County Illinois OP-682
geophysical surveys, Wayne County Illinois OP-1898
ground water
OF 93-0141; OF 93-0663; HA-0730-K
Boone County Illinois OF 94-0515
hydrogeology OF 94-0473
hydrology
WRI 94-4141
Chicago Illinois WRI 93-4188
Cook County Illinois WRI 95-4005
De Kalb County Illinois WRI 94-4094
Du Page County Illinois WRI 94-4094; WRI 95-4005
Iroquois County Illinois WRI 95-4005
Kane County Illinois WRI 94-4094
Kankakee County Illinois WRI 94-4190; WRI 95-4005
- Kendall County Illinois WRI 94-4094; WRI 95-4005
La Salle County Illinois WRI 94-4094
Lake County Illinois WRI 94-4094; WRI 95-4005; WRI 95-4023; OF 94-0113
Logan County Illinois FS 94-0018
Mason County Illinois FS 94-0018
McHenry County Illinois WRI 94-4094
Menard County Illinois FS 94-0018
Sangamon County Illinois FS 94-0018
Tazewell County Illinois FS 94-0018
Will County Illinois WRI 94-4094; WRI 95-4005
- impact statements**
Franklin County Illinois OF 95-0589
Saline County Illinois OF 95-0589
- lacustrine features, Chicago** Illinois OP-286
- non-metal deposits**
B 2111; OP-729
Champaign County Illinois B 2111
McLean County Illinois B 2111
Woodford County Illinois B 2111
- pollution**
OF 94-0396; OP-497; OP-702; OP-1508
Ogle County Illinois WRI 94-4034
Will County Illinois OP-1111
- sedimentary petrology, Lawrence County** Illinois OF 94-0298
- seismology, Sangamon River** OP-1451
- structural geology** OP-956; OP-1689
- waste disposal, Bureau County** Illinois OP-1491
- Illinois Basin** *see also* Aux Vases Sandstone.
coal C 1108; OF 94-0298
diagenesis OF 94-0298
economic geology B 2094-C; OF 94-0298
energy sources B 2137; OF 94-0298; OP-2020
faults OF 94-0298
geochemistry OF 94-0298
geophysical surveys OP-1898
ground water OF 94-0298
heat flow OP-2050
lead-zinc deposits OF 94-0298
metal ores OF 94-0298
Pennsylvanian OF 94-0298
petroleum B 2094-D; OF 94-0298
sedimentary petrology OF 94-0298; OP-1002
sedimentation OF 94-0298
structural geology P 1538-O; OF 94-0298
zinc ores OF 94-0298
- Illinois Beach State Park**
hydrogeology OP-90
- Illinois Environmental Protection Agency**
hydrology WRI 94-4141
- Illinois River**
geologic hazards OP-1836
hydrology YR; WRI 94-4094; WRI 95-4005; WRI 95-4021; OF 91-0175; OF 93-0657; FS 94-0018
- Illinois State Geological Survey**
Illinois, economic geology OF 94-0298
- Illinoisan** *see* Illinoian
- illite**
OP-241; OP-1134
California, clay mineralogy B 1995-H,I
Colorado, metal ores OP-98
geochemistry OP-2001
pollution OP-138
Spain, gold ores OF 95-0221
Washington, sedimentary petrology B 2085-C

ilmenite

Idaho, non-metal deposits P 1525
 metal ores B 2097
 Mexico, phase equilibria OP-387; OP-1489
 Ontario, phase equilibria OP-387; OP-1489

image analysis

OP-33; OP-142; OP-541; OP-559; OP-1487;
 OP-1726; OP-1783
 California, ocean floors OP-1433
 geomorphology OP-235

imbricate tectonics

Alaska OP-479; OP-1251
 Japan, plate tectonics OF 94-0568
 Montana OP-480
 New Mexico OP-1878
 Vanuatu, plate tectonics OP-162

Imbrium Basin *see* Sea of Rains

Imdr Regio OP-1845**Imikpuk Lake**

hydrogeology OF 94-0367

immunoassays

geochemistry OP-1043
 ground water OF 94-0670
 Kansas

pollution OF 94-0670
 soils OF 94-0670

Michigan

environmental geology OF 94-0670
 pollution OP-1267

Midwest, pollution OP-2089

impact craters *see also* meteor craters.

OF 95-0561; OP-33; OP-58; OP-676; OP-916;
 OP-1487; OP-1587; OP-1644; OP-1846; OP-
 2033; OP-2069

Alaska, petrology B 2139
 Atlantic Coastal Plain, stratigraphy OP-1960
 Iowa OP-16; OP-1059; OP-2034
 Mexico, stratigraphy OP-1755
 New Jersey, Eocene OP-735
 plate tectonics SM
 Virginia
 Eocene OP-735
 ground water OP-1977

impact features *see also* Manson impact structure; shatter cones.

OP-1785
 Colorado, petrology OP-1665
 New Jersey, structural geology OP-1959
 Utah, structural geology OP-2111

impact glass

Russian Federation, Eocene OP-1573

impact statements

C 1108; OP-955
 Alaska
 OF 94-0481; OF 94-0482; OF 94-0525;
 OF 94-0526; OF 94-0527; OF 95-0174
 energy sources C 1108
 hydrology OF 95-0338
 Appalachians
 OF 95-0589
 coal C 1108
 Arizona
 C 1108
 geologic hazards OF 95-0617
 Quaternary OF 95-0591
 California
 C 1108
 energy sources C 1108
 coal C 1108
 Colorado
 OF 94-0580; OF 95-0043

geochemistry OF 95-0250
 energy sources C 1108
 Georgia, hydrology WRI 94-4158
 Gulf Coastal Plain, engineering geology
 P 1538-M

Hawaii OF 94-0553

Louisiana

energy sources C 1108
 geomorphology OF 94-0275
 ground water WRI 94-4228

Maryland W 2399

Minnesota, hydrology WRI 93-4200

Mississippi Valley

engineering geology P 1538-M
 hydrology YR

Montana, hydrology WRI 94-4230

Nevada, hydrogeology WRI 94-4222; WRI 94-
 4233; WRI 95-4119

New Mexico C 1108

North Dakota, hydrology WRI 93-4200

Ontario C 1108

Pakistan, geochemistry OF 93-0591

Pennsylvania

C 1108
 hydrology WRI 94-4056

Rocky Mountains YR; C 1108

Tennessee, fluvial features OP-208

Utah, hydrogeology WRI 95-4025

Venezuela YR

Wisconsin OF 95-0163

impactite

New Jersey, Eocene OP-735
 Virginia, Eocene OP-735

Imperial Fault

Quaternary OF 94-0568

Imperial Formation

Miocene OF 95-0489
 Pliocene OP-2061

Imperial Valley

earthquakes OP-1529; OP-1530
 Quaternary OF 94-0568

Inarticulata

Alaska OP-740

incarbonization *see* coalification

inclination, magnetic *see* magnetic inclination

inclusions *see also* fluid inclusions.

C 1129; OP-989

Arizona C 1129

Australia C 1129

Austria C 1129

Bolivia C 1129

Brazil C 1129

calcium-aluminum inclusions OP-611; OP-
 1798

California C 1129

France C 1129

Germany C 1129

Greece, geochemistry C 1129

Indian Ocean Islands C 1129

Ireland C 1129

Italy

C 1129

geochemistry C 1129

Japan C 1129

Maine C 1129

mineral inclusions

OP-1138

China OP-1935

Pacific Ocean OP-1829

Washington OP-391

Utah, molybdenum ores OP-1725

Vermont, structural geology OP-1997

Victoria Australia, geochemistry C 1129

Virginia, geochemistry C 1129

Washington, geochemistry OP-315; OP-1407
 xenoliths

OP-611

Alaska B 2139; OP-632

Alberta C 1129

Argentina C 1129

California OF 95-0585; OP-531; OP-708

Canadian Shield C 1129

India C 1129

Japan C 1129

Mexico OP-1489

Montana OP-1492

New Jersey P 1565-A

Ontario OP-1489

Spain C 1129

incoalation *see* coalification

Incorporated Research Institutions for Seismology
 network *see* IRIS network

increment *see* recharge

incrustations *see* encrustations

Independence Missouri

hydrology OF 93-0495

index maps

Alaska, structural geology OF 94-0714

British Columbia, structural geology OF 94-
 0714

hydrogeology WRI 93-4098

Japan, structural geology OF 94-0714

Massachusetts, ground water WRI 94-4156

Russian Federation, structural geology OF 94-
 0714

**India *see also* Lesser Himalayas; Main Boundary
 Fault.**

metamorphism, Kerala India C 1129

tectonophysics

OP-2334

Deccan Plateau OP-442

Indian Creek Deposit

metal ores B 2081

Indian Meadows Formation

energy sources C 1108; OP-1621

Indian Ocean *see also* Red Sea.

Cretaceous

Exmouth Plateau OP-1161

Naturaliste Plateau OP-1161

stratigraphy OP-1338

Indian Ocean Islands *see* Madagascar

Indian Peak Caldera

metal ores OP-799

Indian Peninsula *see* India; Kohistan; Pakistan;
 Potwar Plateau

Indian Plate

Pakistan

gems OP-1303

structural geology OF 94-0670

**Indian reservations *see also* Navajo Indian Res-
 ervation.**

Arizona

geomorphology OF 94-0563

maps I-2017

Colorado

energy sources C 1108

geochemistry OF 94-0295

energy sources C 1108

Minnesota

ground water WRI 94-4199

mineral resources OF 94-0447

Montana

environmental geology C 1108

- ground water OP-1215
- Nevada
geophysical surveys OF 93-0397-A; OF 93-0397-B; OF 94-0296
metal ores OF 94-0270-A; OF 94-0270-B
- New Mexico, energy sources C 1108
- North Dakota, hydrogeology OF 95-0304
- Utah
geophysical surveys OF 93-0397-A; OF 93-0397-B; OF 94-0296
metal ores OF 94-0270-A; OF 94-0270-B
- Wisconsin
hydrogeology WRI 93-4053
reclamation OF 95-0163
- Wyoming
areal geology OP-279
energy sources C 1108
environmental geology OF 95-0121
- Indian Spring Quadrangle**
maps OF 92-0181
- Indian Wells Valley**
ground water WRI 93-4003
- Indiana** *see also* Aux Vases Sandstone; Cypress Sandstone; Illinois Basin; Lake Michigan; Mansfield Formation; Michigan Basin; Middle Run Formation; Mount Simon Sandstone; New Albany Shale; New Madrid region; Ohio River; Saint Louis Limestone; Saint Peter Sandstone; Staunton Formation; Warsaw Formation.
coal, Daviess County Indiana OF 94-0298
ecology I-2451
energy sources C 1108
engineering geology OF 94-0298
ground water
OF 93-0663; HA-0730-K
Lawrence County Indiana WRI 94-4195
Orange County Indiana WRI 94-4195
hydrogeology
OF 94-0473; FS 94-0056
Lake County Indiana OF 92-0139
Porter County Indiana OF 92-0139
hydrology
WRI 91-4051; WRI 95-4021; OF 91-0175; OF 94-0061
Hamilton County Indiana WRI 94-4066
Jasper County Indiana WRI 93-4188; WRI 95-4005
Lake County Indiana WRI 93-4188; WRI 94-4190; WRI 95-4005
Laporte County Indiana WRI 93-4188; WRI 95-4005
Madison County Indiana WRI 94-4066
Marion County Indiana WRI 94-4066
Newton County Indiana WRI 93-4188; WRI 94-4190; WRI 95-4005
Porter County Indiana WRI 93-4188; WRI 95-4005
Starke County Indiana WRI 93-4188
lead-zinc deposits
OF 94-0298
Putnam County Indiana OP-369
petroleum
Crawford County Indiana B 2094-D
Martin County Indiana B 2094-D
pollution OP-497; OP-777; OP-2024
seismology OP-1451
stratigraphy MF-2284
structural geology
OF 94-0298
Posey County Indiana P 1538-O
- Indiana Coal Mine Information System**
engineering geology OF 94-0298
- Indiana Dunes National Lakeshore**
hydrogeology OF 92-0139
- Indiana Shoals**
lacustrine features I-2429
- Indianapolis Indiana**
hydrology WRI 94-4066
- Indo-Australian Plate**
New Zealand, Quaternary OF 94-0568
Pakistan, structural geology B 2126
- Indo-Sinian Orogeny *see* Indosinian Orogeny
- indochinite**
Far East, petrology OP-1574
- Indonesia**
elastic waves, Java OP-1498
geochemistry, Merapi OP-907
geochronology, Sumatra OP-443
Quaternary
OP-1952
Java OP-392
Krakatoa OP-467
Merapi OP-1767
tectonophysics, Java OP-2328
- Indosinian Orogeny**
China, lignite OP-2016
- induced earthquakes**
OF 94-0228; OP-1788
- California
OP-1769
petroleum OP-1280
Canada OP-606
Colorado
environmental geology OP-1045
petroleum OP-1280
South Africa OP-606
Texas, petroleum OP-1286
- inductively coupled plasma methods**
Alaska, geochemistry OF 95-0236
California, geochemistry WRI 93-4122; OF 95-0034
geochemistry OF 94-0298; OP-1011
Mexico, hydrogeology OF 95-0514
Nebraska, geochemistry OF 94-0292
Nevada, geochemistry B 2056; WRI 93-4122
New York, geochemistry B 2106
Utah, geochemistry B 2056
Washington, geochemistry OF 94-0680-A
- Indus River**
coal OF 94-0595; OF 94-0596-A
- industrial ash *see* ash
- industrial minerals** *see also* zeolite deposits.
B 2081; B 2111
Idaho P 1525
Illinois
B 2111
environmental geology B 2111
Kentucky B 2111
Midwest OP-855
New Mexico B 2063
- industrial waste** *see also* chemical waste; waste water.
Appalachians, waste disposal OP-1133
environmental geology C 1108
Georgia, environmental geology OP-1099
Massachusetts, environmental geology OP-1187
Minnesota, ground water WRI 94-4204
South Carolina, environmental geology OP-1099
Spain, environmental geology OP-662
inert gases *see* noble gases
- infiltration**
environmental geology OP-811
hydrogeology OP-394
Idaho, ground water OP-2095
Indonesia, Quaternary OP-1767
Maryland, pollution OP-999
Minnesota, environmental geology OP-831
Nevada, ground water WRI 94-4126
Virginia
ground water OP-376
hydrogeology OP-678
Washington, Quaternary OP-1767
- information systems** *see also* geographic information systems.
OP-68; OP-881; OP-1240; OP-1484
- Alaska
coal C 1108
energy sources C 1108
natural gas C 1108
Atlantic Ocean, marine geology OF 95-0224
earthquakes OP-2313; OP-2330
ground water OF 94-0531
Gulf of Mexico, ocean floors OP-553
- Indiana
engineering geology OF 94-0298
hydrology OF 94-0061
mineral resources OP-846
seismology OP-1917
- infrared methods** *see also* AVHRR; AVIRIS.
FS 0079-95; OP-1389
non-metal deposits B 2081
- infrared surveys**
Alaska
environmental geology OP-1120
geophysical surveys B 2139
California, geophysical surveys FS 0079-95
Colorado
ecology OP-150
pollution OP-493
Mexico, geophysical surveys FS 0079-95
Senegal, environmental geology OP-918
Washington, geophysical surveys FS 0079-95
- Inland Sea**
ocean floors OF 94-0568
Quaternary OF 94-0568
- inland seas *see* epicontinental seas
- Inner Mongolia China**
polymetallic ores, Bayan Obo China OP-1024
Quaternary OF 94-0568
Vertebrata OP-418
- inner transition elements *see* rare earths
- Innoko Alaska**
areal geology OP-711
metal ores OP-1195
- inorganic acids *see* hydrofluoric acid
- insect nests**
angiosperms OP-1483
- Insecta**
Hymenoptera
angiosperms OP-1483
Utah OP-1153
- insecticides** *see also* DDT.
ground water OF 94-0670
Kansas, pollution W 2419
Nebraska, pollution W 2419
West Virginia, hydrogeology WRI 93-4073
- insects**
Alaska, Quaternary OP-1457
angiosperms OP-1483
Antarctica, Pliocene OF 94-0588
Arizona, ichnofossils OP-380

- Idaho, environmental geology WRI 93-4156
 Minnesota, environmental geology WRI 95-4047
 Montana, geochemistry OP-1209
 North Dakota, environmental geology WRI 95-4047
 Oregon, environmental geology WRI 93-4156
 Washington, hydrology OF 94-0308
 Wisconsin, environmental geology OF 95-0163
 installations, submarine *see* submarine installations
 installations, underground *see* underground installations
- Insular Belt**
 faults OP-248
 paleomagnetism OP-1135
- Intermontane basins**
 Alaska, energy sources OP-1545
 California, ground water OP-1362
 Idaho, ground water OP-1633
 Montana
 ground water OP-1633
 sedimentary petrology OP-1622
 Nevada, ground water OP-1362
 Rocky Mountains
 ground water OF 95-0143
 uranium ores OF 95-0571
 Western Interior, stratigraphy OF 94-0670; OP-2030
 Wyoming
 deformation OP-283
 Quaternary OP-11
 sedimentary petrology OP-1622
 weathering OP-928
- Intermontane Belt**
 faults OP-248
- International Astronomical Union** B 2129; OP-797
- International Decade for Natural Disaster Reduction**
 geologic hazards OP-1456
- International Falls Quadrangle**
 metal ores OP-148
 mineral resources OF 94-0447
- Internet**
 YR
 earthquakes OP-1749; OP-2330
 seismology OP-1809; OP-1883
- Intertidal sedimentation**
 Colorado OP-1242
 Louisiana, geomorphology OF 94-0275
 Washington, Quaternary OP-205
- Intracoastal Waterway**
 hydrology WRI 95-4111
- intrusion (ground water) *see* salt-water intrusion
- intrusions *see also* contact metamorphism; dike swarms; domes; wall rocks.**
 C 1129
 Alaska
 C 1129
 seismology OP-1855
 Arizona
 C 1129; OP-1185
 tectonophysics OP-352
 Arkansas, geochemistry OF 94-0450
 batholiths
 C 1129
 Alaska OP-23; OP-624
 Alberta C 1129
 Appalachians C 1129
 Argentina C 1129
 Arizona C 1129
 Australia C 1129
 Austria C 1129
 Baltic region C 1129
 Brazil C 1129
 British Columbia C 1129
 California C 1129; OP-193; OP-1211
 Chile C 1129
 Colorado C 1129; OP-1363
 France C 1129
 geochemistry C 1129
 Idaho P 1525; B 2064-A-R; OF 94-0690
 Iran C 1129
 Italy C 1129
 Japan OP-270
 Maine C 1129
 Mexico C 1129; OP-1870
 mineralogy OP-2110
 Mississippi Valley P 1538-E
 Mohorovicic discontinuity C 1129
 New Mexico C 1129
 New South Wales Australia C 1129
 New Zealand C 1129
 Scandinavia C 1129
 Spain C 1129; OP-799
 tectonophysics OP-985
 United States OP-799
 Utah OP-1283
 Vermont C 1129
 Victoria Australia C 1129
 Virginia B 2060; C 1129
 Washington C 1129
 breccia pipes
 Arizona OF 94-0566; OF 94-0670
 Bolivia OP-188
 Montana OF 94-0670
 Utah OF 94-0417
 California
 OP-1818
 energy sources OP-890
 tectonophysics OP-620
 Canada, stratigraphy B 2135
 Canadian Shield, geochemistry C 1129
 Colorado
 OP-546; OP-1067; OP-1423; OP-1424
 geochronology B 2104
 molybdenum ores OP-526; OP-849
 pollution OP-92
 Proterozoic OF 94-0437
 Colorado Plateau, tectonophysics OP-1669
 diatremes, Montana OP-1492
 dikes
 C 1129; OP-2055
 Arizona OP-291; OP-991
 Australia C 1129
 Bolivia OP-188
 British Columbia C 1129
 California OP-406; OP-522; OP-1211; OP-1255; OP-1462
 Canada C 1129
 China C 1129
 Colorado C 1129; OP-1625; OP-1939
 East Pacific Ocean Islands OP-128
 Egypt C 1129; OP-2068
 Finland C 1129
 Galapagos Islands OP-128
 Greece C 1129
 Hawaii OP-307; OP-977; OP-1293; OP-1372; OP-1413; OP-1453; OP-1911; OP-2076
 Idaho OF 94-0568; OP-1673
 Japan OP-1027
 Montana OP-1465; OP-1492
 Nevada B 2056; OP-2151
 New Jersey P 1565-A
 North Carolina OP-1399
 Oregon OP-41; OP-1436; OP-1590
 Pacific Ocean OP-920
 Peru OP-202
 South Dakota C 1129
 Spain C 1129
 structural geology C 1129
 Texas C 1129
 Victoria Australia C 1129
 Virginia B 2060; C 1129; OP-1399
 Washington OP-1449; OP-2329
 Wyoming OP-1929
 France C 1129
 geochemistry C 1129
 geothermal energy OP-655
 Hawaii
 OP-1500
 earthquakes OP-232
 seismology OP-1654
 Himalayas C 1129
 Iceland, tectonophysics OP-298
 Idaho
 metal ores P 1525
 uranium ores P 1525
 India, geochemistry C 1129
 Italy
 C 1129; OP-754; OP-866
 geochemistry OP-865
 structural analysis OP-755
 laccoliths
 New Mexico B 2063
 ocean floors B 2022
 Utah OP-1283; OP-1390
 layered intrusions
 Alaska P 1564
 China C 1129
 Colorado OP-1982
 Indian Ocean Islands C 1129
 Maine C 1129
 New Mexico OP-959
 Wyoming OP-1982
 North Carolina, geochemistry C 1129
 Norway, structural geology OP-2156
 Oregon OP-38
 plate tectonics OP-1256
 plugs
 Iceland OP-1389
 Montana OP-1492
 United States OP-1389
 plutons
 C 1129
 Alaska B 2107; C 1129; OP-23; OP-40; OP-100; OP-229; OP-296; OP-409; OP-471; OP-626; OP-632; OP-672; OP-711; OP-784; OP-1169; OP-2184
 Alps C 1129
 Andes OP-1511
 Appalachians OP-766
 Argentina C 1129
 Arizona C 1129; OP-15; OP-350; OP-1104; OP-1380
 Australia C 1129
 Austria C 1129
 Basin and Range Province OP-1874
 Brazil C 1129
 California C 1129; OP-45; OP-160; OP-319; OP-432; OP-1095; OP-1462
 Canada C 1129; OP-409; OP-1169
 Chile C 1129
 Finland C 1129
 Germany C 1129

- Great Basin OP-1874
 Greece C 1129
 Idaho C 1129
 Ireland C 1129
 Italy C 1129
 Japan C 1129
 Maine C 1129; OP-555
 Massachusetts OP-782
 Mexico C 1129
 Minnesota B 1904-U; OP-886
 Mohorovicic discontinuity C 1129
 Montana C 1129
 Nevada C 1129; OF 93-0397-A; OF 93-0397-B; OP-15; OP-258; OP-454; OP-619; OP-844; OP-1817; OP-2151
 New Mexico C 1129
 New South Wales Australia C 1129
 New Zealand C 1129
 Newfoundland C 1129
 Oregon OP-41; OP-1436
 Romania C 1129
 Saudi Arabia C 1129
 Scotland C 1129
 Spain C 1129
 United Kingdom C 1129
 United States C 1129
 Utah C 1129; OF 93-0397-A; OF 93-0397-B; OP-619
 Vermont C 1129
 Victoria Australia C 1129
 Virginia P 1529; C 1129
 Washington C 1129; GQ-1681; OP-391
 Wyoming OP-364
 Yukon Territory OP-360
 ring dikes, Nevada OP-454
 Russian Federation, geochronology OP-194
 sheeted dikes, Cyprus OP-2
 sills
 Alaska P 1564
 Arizona OP-1381
 Hawaii OP-1090
 Pacific Ocean OP-920
 South Dakota C 1129
 Texas C 1129; OP-363
 Utah OP-1464
 Washington B 2085-C; OP-1449
 South Africa, diamonds OP-74
 Spain, geochemistry C 1129
 stocks
 Bolivia OP-188
 Canada C 1129
 Chile C 1129
 Colorado B 2109; OP-1626
 Egypt C 1129; OP-2068
 Germany C 1129
 Montana OF 94-0670; OF 95-0098; OP-2224
 Nevada B 2056; C 1129
 New Mexico B 2063
 Oregon OP-1590
 Spain OP-799
 United States OP-799
 Utah B 2056
 United States, stratigraphy B 2135
 Utah, molybdenum ores OP-849; OP-1725
 Virginia
 OP-63
 tectonophysics OP-413
 Washington C 1129
 Wyoming I-2233; OP-280
 Yemen, geochemistry C 1129
 intrusive mountain *see* batholiths
 Invertebrata *see* Arthropoda; Brachiopoda; Coelenterata; Mollusca; Protista; worms
 invertebrates *see also* arthropods; brachiopods; bryozoans; corals; echinoderms; foraminifers; graptolites; mollusks; radiolarians; sponges.
 Arizona, stratigraphy OP-1320
 British Columbia, hydrology OF 94-0315
 California, environmental geology OF 95-0291
 environmental geology OF 94-0490
 hydrology OF 95-0379
 Kansas, ecology W 2352-B
 Nebraska, ecology W 2352-B
 Pennsylvania
 environmental geology WRI 94-4060
 hydrology WRI 94-4056
 Tennessee, environmental geology OF 95-0156
 Texas, hydrology OF 95-0103
 Washington, hydrology OF 94-0315
 Wisconsin
 ecology OF 95-0163
 hydrogeology OF 95-0163
 Inyo Mountains
 petrology C 1129
 stratigraphy OP-1736
 Io Satellite OP-1782
 iodates
 environmental geology OP-1262
 iodine
 I-129
 environmental geology OP-1262
 Idaho WRI 94-4053
 iodine deposits
 New Mexico B 2063
 ionium *see* Th-230
 Iowa *see also* Burlington Limestone; Davis Formation; Decorah Shale; Galena Dolomite; Glenwood Shale; Maquoketa Formation; Mississippi River; Missouri River; Platte River; Upper Mississippi Valley; Warsaw Formation.
 economic geology C 1124
 geochronology, Manson impact structure OP-1572
 geomorphology, Manson impact structure OP-16; OP-1059; OP-2034
 geophysical surveys, Manson impact structure OP-1880
 ground water, Story County Iowa WRI 94-4244
 highways, Louisa County Iowa OP-272
 hydrogeology
 FS 94-0031
 Cedar County Iowa OF 94-0711-W
 Johnson County Iowa OF 94-0711-W
 Linn County Iowa WRI 94-4211; OF 94-0711-W
 Muscatine County Iowa OF 94-0711-W
 hydrology
 OF 94-0363; OP-312
 Clayton County Iowa OP-465
 Davenport Iowa WRI 94-4130
 non-metal deposits B 2111
 Pennsylvanian B 2110
 pollution
 OF 94-0396; OP-497; OP-1508; OP-1605
 Clayton County Iowa OP-839
 Davenport Iowa OP-2067
 Linn County Iowa OP-983
 Polk County Iowa OP-1485
 Story County Iowa OP-982; OP-1485
 Quaternary OP-1630
 stratigraphy
 Allamakee County Iowa OP-607
 Clayton County Iowa OP-607
 Manson impact structure OP-372; OP-1671; OP-1736; OP-2154
 Iowa Geological Survey
 geomorphology OP-16
 Iowa River
 highways OP-272
 iozite *see* wuestite
 IPOD *see* Leg 47; Leg 68; Leg 71; Leg 74; Leg 76; Leg 79; Leg 80; Leg 85; Leg 94; Leg 95
 Ir *see* iridium
 Iran
 areal geology, Azerbaijan OP-154
 geologic hazards, Teheran Iran OF 94-0568
 magmas C 1129
 petroleum, Azerbaijan OP-807
 stratigraphy OP-2253
 Irazu
 Quaternary OP-1952
 Ireland
 inclusions, Ardara Pluton C 1129
 iridium
 Denmark, stratigraphy OP-1140
 Great Plains, stratigraphy OP-1589
 Italy, stratigraphy OP-1416
 stratigraphy OP-84
 Tunisia, stratigraphy OP-1416
 Wyoming, stratigraphy OP-667
 IRIS network
 California, seismology OP-2325
 earthquakes OP-2313; OP-2330
 seismicity OP-1560
 Wyoming, oil and gas fields OF 94-0670
 Irish Flats NE Quadrangle
 maps I-2498
 iron
 Alaska
 geochemistry B 2107
 sedimentary petrology OP-1604
 Atlantic Ocean, Cenozoic OP-1198
 California
 oceanography OP-1410
 pollution OP-1051
 Colorado
 geochemistry OP-1700
 pollution OP-488; OP-493; OP-691; OP-963; OP-1082; OP-1535; OP-1823; OP-1957
 geochemistry C 1129; OP-126
 Italy, geochemistry C 1129
 Japan, geochemistry C 1129
 Massachusetts, geochemistry OF 94-0384
 metal ores OP-1013
 Micronesia, geochemistry OP-520
 Minnesota, Quaternary OP-1290
 Nevada, geochemistry OP-794
 New Jersey, ground water OP-1568
 New Mexico, sedimentation OP-1276
 North Carolina, structural geology OP-1335
 Pacific Ocean, Cenozoic OP-1198
 pollution C 1108; OP-132
 Utah
 mineral inventory OP-289
 sedimentary petrology B 2110
 Washington, pollution OP-2064
 Western Interior, stratigraphy OP-2063
 Iron Hill Complex
 intrusions OP-1067
 maps OF 95-0232
 iron meteorites
 magmas OP-648
 petrology OP-647

iron ores

- Alaska B 2084
- Chile OP-87
- New Jersey OP-290; OP-1379
- New York OP-290; OP-1379
- Sweden OP-87

iron oxides

- OP-880
- Colorado, pollution OP-92; OP-1466
- geochemistry OP-719; OP-1279
- New Jersey, metal ores OP-290; OP-1379
- New York
 - fluid inclusions OP-1794
 - metal ores OP-290; OP-1379
 - paleomagnetism OP-1738

iron spinel *see* hercynite**Iroquois Bay**

- hydrology WRI 92-4052

Iroquois River

- hydrology OF 91-0175

Irpinia earthquake 1980

- Italy
 - OF 94-0568
 - Quaternary OF 94-0568
 - United States OF 94-0568

irrotational wave *see* P-waves**irruption (intrusion) *see* intrusions****Irvingtonian**

- Idaho B 2105

Isabela Island

- magma OP-309

Isabela Puerto Rico

- ground water OF 93-0465

Isabella Crater OP-1846**ISATAH**

- seismology OP-1417

Isla Chiloe

- Quaternary OP-1098

Isla de Mona

- sedimentary petrology OP-2277

island arcs *see also* back-arc basins.

- Alaska
 - I-2272; OP-672
 - metal ores OP-1893; OP-1895
 - metamorphic rocks OP-1930
 - natural gas OP-2074
 - petrology OP-1822
 - plate tectonics OP-1894
 - Quaternary OF 94-0568
 - seismicity OP-93
 - seismology OP-1598
 - tectonophysics OP-953
- Arizona
 - geochemistry OP-1104
 - petrology C 1129
- California
 - geochemistry OP-753
 - petrology OP-1315
- Colorado, Proterozoic OP-1982
- geochemistry OP-1026
- Japan, plate tectonics OF 94-0568
- Oman, geochemistry OP-753
- Oregon, petrology OP-1315; OP-1590
- Pacific Ocean, petrology OP-920
- Pennsylvania, metal ores OP-1895
- Rocky Mountains, structural geology OP-1232
- Saudi Arabia, geochemistry OP-753
- Vanuatu, plate tectonics OP-162; OP-336
- Wyoming
 - Proterozoic OP-1982
 - structural geology OP-1288

Island Beach New Jersey

- stratigraphy OP-623

island-arc areas *see* island arcs**Isle Royale National Park**

- environmental geology OF 94-0670
- pollution OP-1267

isoclinal folds

- Massachusetts OP-782
- metal ores OP-870

isopach maps

- energy sources B 2000-H
- Western Interior, Cretaceous P 1561

isoprenoids

- California, petroleum OP-513
- Colorado, geochemistry OP-1713
- Pacific Ocean, geochemistry B 2022

isoseismic maps

- California, earthquakes OF 95-0092
- Gulf Coastal Plain, engineering geology P 1538-M
- Mississippi Valley, engineering geology P 1538-M

isostasy *see also* isostatic compensation; isostatic rebound.

- Alaska, geophysical surveys OP-42
- Arizona OP-1110
- Atlantic Coastal Plain, stratigraphy OP-1960
- Basin and Range Province
 - OP-64
 - geophysical surveys GP-1012
- California
 - OP-1110
 - geophysical surveys OF 95-0016
- Colorado Plateau OP-1669
- Finland, Quaternary OF 94-0568
- geophysical surveys DDS-0031
- Great Basin OP-64
- Nevada, gold ores OP-331
- Papua New Guinea OP-1035
- Scotland, Quaternary OF 94-0568
- Spain, metal ores OP-799
- Sweden, Quaternary OF 94-0568
- United States, metal ores OP-799

isostatic compensation

- Alaska, tectonophysics OF 95-0238

isostatic rebound *see also* glacial rebound.

- Alaska, Quaternary OP-2292
- Arizona, isostasy OP-1666
- Great Lakes, Quaternary OP-525
- Virginia, Pliocene OP-2071
- Washington, Quaternary OP-205

isothermal remanent magnetization

- Arizona, copper ores OP-291
- Poland, lead-zinc deposits OP-908

isotopes *see also* fractionation; lead; potassium; radioactive decay; radioactive isotopes; radioactivity; radium; radon; stable isotopes; sulfur; thorium; uranium.

- OP-2002
- Al-26
 - Arizona OP-1287
 - geomorphology OP-1368
 - Utah OP-1287; OP-1731
- Alaska, geochronology OP-1008
- Andes, Quaternary OP-1511
- Ar-40/Ar-39
 - Alaska OP-229
 - California OP-193
 - Colorado OP-1625; OP-1939
 - Far East OP-1574
 - Hawaii OP-2215

Idaho OP-1581

- Italy OP-27
- Mexico OP-1755
- Minnesota OP-886
- Montana OP-1517; OP-2133
- New Mexico OP-959
- New York OP-303
- petrology OP-938
- Russian Federation OP-194
- South Dakota OP-1117
- Texas OP-1925
- Utah OP-1390
- Wyoming OP-1517

Arizona

- I-2489
- stratigraphy OP-1322

Australia, petrology C 1129**B-11/B-10**

- California OP-927
- Canadian Shield OP-2126
- geochemistry OP-1026
- Great Britain OP-2126
- metal ores OP-870
- Pacific Ocean B 2022

Be-10

- Arizona OP-1287
- geomorphology OP-1368
- Mississippi Valley OP-1757; OP-1758
- Puerto Rico OP-106
- Utah OP-1287; OP-1731

Be-10/Be-9

- Atlantic Ocean OP-1129
- Pacific Ocean OP-1129

C-13

- Marshall Islands OP-2254
- Micronesia OP-2254
- New Zealand OP-207

C-13/C-12

- Alaska C 1108; OP-65; OP-574; OP-2105
- Basin and Range Province OP-1106
- California OF 95-0034; OP-244; OP-542; OP-1746; OP-2251
- China OP-1871
- Colorado OP-297; OP-2060
- energy sources B 2000-H; OP-769
- Florida OP-473; OP-1613
- geochemistry C 1108; OF 95-0206; OP-175
- Germany OP-499
- Great Basin OP-1106
- Idaho OF 94-0503
- Michigan OP-2028
- Micronesia OP-689
- Minnesota OP-498; OP-2082
- Nevada FS 94-0007; OP-59; OP-1245; OP-2169; OP-2273
- Nicaragua OP-1678
- Northwest Territories OP-192
- Oregon OP-1677
- pollution OP-174
- soils OP-787
- South Carolina OP-1685
- Spain OP-118
- stratigraphy OP-96
- Texas OP-812
- Utah OP-297
- Vermont OP-1631
- Washington OP-1677
- Western Interior OP-2063
- Wyoming OP-11; OP-701; OP-1055

C-14

- Alaska OF 94-0568; OP-124; OP-1098; OP-2258; OP-2260; OP-2281
- Antarctica OP-214

- Arctic Ocean OP-1049
 Arizona OF 95-0057; OP-1287; OP-1504
 Arkansas P 1538-H
 Basin and Range Province OP-64
 Bering Sea OP-1049
 California OF 94-0568; OP-1040; OP-1158;
 OP-1612; OP-1992; OP-2006; OP-2084;
 OP-2251
 Chile OP-1098
 Colorado OP-986; OP-1743
 Djibouti OP-2152
 Dominican Republic OF 94-0568
 El Salvador OP-1816
 geologic hazards OF 94-0663
 Great Basin OP-64
 Great Lakes OP-163; OP-436; OP-525
 Great Lakes region OP-163
 Hawaii OP-234; OP-351
 Italy OF 94-0568
 Japan OF 94-0568
 Louisiana OF 94-0275
 Maine OP-2200
 Manitoba OP-1463
 Missouri P 1538-H; OP-1707
 Montana OP-121
 Nevada OP-59; OP-1469; OP-2006
 New England OP-1658; OP-2163
 New York OP-1775
 New Zealand OF 94-0568
 Oregon OF 94-0568; OP-1040; OP-1158;
 OP-1876
 Pacific Coast OP-661; OP-1401
 Peru OP-2032
 Quaternary OF 94-0568; OP-717
 Sahara OP-909
 South Carolina OF 94-0568; OP-1685
 Spain OP-66
 Tennessee OF 94-0568
 Texas OP-812
 United Arab Emirates OP-1016
 Utah OF 94-0568; OP-1287
 Washington P 1547; OF 94-0568; OP-205;
 OP-573; OP-1189; OP-1876; OP-2079
 California, pollution WRI 93-4140
 Canada, geochemistry C 1129
 Cl-36
 California OP-2006
 Nevada OP-2006
 Washington OF 94-0514
 Co-60, Idaho OF 94-0503
 Commonwealth of Independent States, stratig-
 raphy OP-1212
 Cs-137
 California OP-1397; OP-1538; OP-1940
 Commonwealth of Independent States OP-
 2302
 Europe OP-2302
 Idaho OF 94-0503
 Puerto Rico OP-1405
 Ukraine OP-595
 D/H
 Alaska B 2107; B 2139; OP-624; OP-2184
 Brazil C 1129
 California WRI 95-4048; OP-216; OP-720;
 OP-801; OP-927; OP-1095
 Canadian Shield OP-2126
 Colorado OP-1096; OP-1118; OP-2060
 Florida OP-1613; OP-1614
 geochemistry C 1129; OP-1114
 Great Britain OP-2126
 Hawaii OP-2076; OP-2077
 Idaho WRI 94-4247
 Italy OP-227
 Montana OP-302
 Nevada OP-1245; OP-1747
 New Mexico WRI 94-4078
 Northwest Territories OP-192
 Oregon OP-1677
 Pacific Ocean B 2022; OP-1354
 Peru OP-202
 Spain OF 95-0221; OP-22
 Washington OP-1677; OP-2197
 Wisconsin OP-2241
 Wyoming OP-302
 Europe, geochemistry OF 94-0228
 France, geochemistry C 1129
 geochemistry DDS-0014; C 1129; OP-976
 He-4/He-3
 California OP-2142
 Montana OP-302
 New Hampshire OP-2204
 Russian Federation OP-50
 Wyoming OP-300; OP-302
 Hf-177/Hf-176, Alaska OP-23
 I-129
 environmental geology OP-1262
 Idaho WRI 94-4053
 Italy, geochemistry C 1129
 K-40, Atlantic Coastal Plain OP-2264
 Kr-85, ground water OP-734
 Montana, pollution OP-185
 N-15, Florida OP-2202
 N-15/N-14
 Appalachians OP-1632
 Colorado OF 95-0536; OP-1796
 geochemistry OF 95-0206
 Idaho OF 94-0503
 Maryland OP-1899
 Minnesota OP-1139
 Missouri OF 94-0705-W
 New Jersey OP-2177; OP-2236
 pollution OP-174; OP-2323
 Rocky Mountains OP-1632
 thermal waters OP-1756
 Nd-144/Nd-143
 Alaska OP-23; OP-626; OP-632; OP-1361
 Alberta C 1129
 Antarctica C 1129
 Argentina C 1129
 Arizona OP-991
 Baltic region C 1129
 Brazil C 1129
 British Columbia OP-1361
 California C 1129; OP-197; OP-321
 Chile C 1129
 China C 1129
 Colorado OP-773
 Finland C 1129
 France C 1129
 Germany C 1129
 Hawaii OP-861; OP-1523; OP-2321
 Hong Kong C 1129
 Italy C 1129
 magmas C 1129
 Maine C 1129
 Mexico OP-197
 Minnesota B 1904-U
 Montana OP-2133
 Nevada B 2056; C 1129
 New Zealand C 1129
 North Carolina C 1129
 Pacific Ocean OP-2132
 petrology C 1129; OP-939
 Russian Federation OP-421; OP-843
 Scandinavia C 1129
 South Dakota C 1129
 Spain C 1129
 Texas C 1129
 Utah B 2056
 Vermont C 1129
 Victoria Australia C 1129
 Yemen C 1129; OP-1079
 Nevada
 hydrology OF 94-0489
 structural geology OP-2143
 O-18
 Alaska OP-1221
 Central America OP-1257
 Colorado OP-146
 Commonwealth of Independent States OP-
 1257
 Florida OP-472
 Great Lakes OP-163
 Great Lakes region OP-163
 hydrogeology OP-1532
 Marshall Islands OP-2254
 Micronesia OP-2254
 Nevada OP-2100
 New Mexico OP-2308
 Quaternary OP-717
 Texas OP-2308
 Virginia OP-2071
 O-18/O-16
 Alaska B 2107; B 2139; OP-624; OP-1221;
 OP-2105; OP-2184
 Appalachians OP-1632
 Argentina C 1129
 Atlantic Ocean OF 94-0588
 Bahamas OP-1866
 Basin and Range Province OP-1106; OP-
 2101
 Brazil C 1129
 California C 1129; WRI 95-4048; OP-45;
 OP-216; OP-260; OP-720; OP-790; OP-
 801; OP-1095; OP-2006
 Canadian Shield OP-2126
 China OP-1871
 Colorado OP-1096; OP-1118; OP-1793;
 OP-1806; OP-2060
 Egypt OP-1528
 Florida W 2409; OP-1613; OP-1614
 France C 1129
 geochemistry C 1129; OP-175
 Germany C 1129; OP-499
 Great Basin OP-1106; OP-2101
 Great Britain OP-2126
 Great Lakes OP-292
 Greenland C 1108
 ground water C 1108
 Hawaii OP-2076; OP-2077
 Idaho WRI 94-4247; OF 94-0503; OP-2221
 Italy OP-27; OP-865
 Maine C 1129
 Manitoba OP-527
 metal ores OP-870
 Mexico C 1129
 Micronesia OP-689
 mineralogy OP-1355
 Minnesota OP-498; OP-2082
 Montana OP-302
 Nevada FS 94-0007; OP-1245; OP-1747;
 OP-1857; OP-2006; OP-2169; OP-2273
 New England OP-1658; OP-1659
 New Jersey OP-2171
 New Mexico WRI 94-4078
 New York OP-617
 Nicaragua OP-1678
 Oregon OP-29

- Pacific Ocean B 2022; OF 94-0588; OP-1033; OP-1162
 Pakistan C 1129; OP-1303
 Peru OP-202
 Pliocene OP-1565
 pollution OP-174; OP-2323
 Puerto Rico OP-2179
 Quaternary OP-61
 Rocky Mountains OP-1632
 Russian Federation C 1129
 South Dakota C 1129
 Spain OP-22; OP-118
 Utah OP-657
 Vermont C 1129; OP-1631
 Washington OP-2197
 Wisconsin OP-2241
 Wyoming OP-11; OP-302; OP-1055
- Os-187/Os-186
 Finland OP-2242
 Nevada OP-2151
 Russian Federation OP-2242
- Pb-206/Pb-204
 OP-1826
 Alaska OP-23; OP-1361
 Antarctica C 1129
 British Columbia OP-1361
 California C 1129; OP-160; OP-197; OP-313; OP-1095
 Colorado OF 94-0412; OF 95-0250; OP-284; OP-773; OP-1626
 Idaho B 2064-A-R; OP-1039
 Italy OP-27
 Kenya C 1129
 Maine C 1129
 Mexico OP-197
 Mississippi Valley B 2094-B
 Montana OP-2133
 Nevada C 1129; OP-2326
 New Mexico B 2081
 Oregon OP-29
 Pacific Ocean OP-1033; OP-1197
 petrology OP-938; OP-939
 Utah OP-189
 Vanuatu OP-337
 Vermont OP-1194
 Yemen C 1129; OP-1079
- Pb-207/Pb-204
 OP-1826
 Alaska OP-23; OP-1361
 Antarctica C 1129
 British Columbia OP-1361
 California C 1129; OP-197; OP-313; OP-1095; OP-1818
 Chile C 1129
 Colorado OF 95-0250; OP-284; OP-1626
 Idaho B 2064-A-R; OP-1039
 Italy OP-27
 Maine C 1129
 Mexico OP-197
 Mississippi Valley B 2094-B
 Nevada C 1129
 New Mexico B 2081
 Pacific Ocean OP-1033
 petrology OP-938
 Texas C 1129
 Utah OP-189
 Vermont C 1129
 Yemen C 1129
- Pb-207/Pb-206
 California OP-160; OP-321
 Idaho OP-1039
 Montana OP-2133
 petrology OP-939
- Pb-208
 California OP-2026
 Missouri OP-1299
- Pb-208/Pb-204
 Alaska OP-23; OP-1361
 Antarctica C 1129
 British Columbia OP-1361
 California C 1129; OP-197; OP-313; OP-1095
 Colorado OF 94-0412; OF 95-0250; OP-284; OP-1626
 Idaho B 2064-A-R; OP-1039
 Italy C 1129; OP-27
 Maine C 1129
 metal ores OF 94-0298
 Mexico OP-197
 Mississippi Valley B 2094-B
 Montana OP-2133
 Nevada C 1129; OP-836; OP-2326
 New Mexico B 2081
 Pacific Ocean OP-1033
 petrology OP-938; OP-939
 Yemen C 1129
- Pb-208/Pb-206
 California OP-160
 Idaho OP-1039
- Pb-210
 California OP-1397; OP-1538; OP-1940
 Gulf of California OP-1987
 Pacific Ocean OP-503
 petrology OP-647
 Pu-239, California OP-1397
- Ra-226
 environmental geology OP-518
 New Jersey WRI 92-4144; OP-2176
- Ra-228, Atlantic Coastal Plain OP-2264
 Ra-228/Ra-226, Pennsylvania WRI 92-4088
- Rb-87/Sr-86, Russian Federation OP-843
- Rn-222
 New Jersey WRI 92-4144
 Nicaragua OP-1678
 Pennsylvania WRI 92-4088
 pollution OP-984
- S-34/S-32
 Alaska B 2107; OP-624
 Arabian Peninsula OP-1220
 China OP-1003; OP-1871
 Colorado OP-945; OP-1793
 Florida OP-473
 Idaho B 2064-A-R; OF 94-0503
 metal ores OP-870
 Nevada OP-1245
 Pacific Ocean B 2022; OP-1032; OP-1033; OP-2098
 Pennsylvania OP-1951
 Rocky Mountains OP-2213
 South Carolina OP-2090
 Spain OF 95-0221; OP-22
 Utah B 2110
 Western Interior OP-2063
 Wyoming OP-269
- Sm-147/Nd-144
 California OP-321
 Hawaii OP-861
 petrology OP-939
 Russian Federation OP-421; OP-843
- Sr-87/Sr-86
 Alaska OP-23; OP-626; OP-632; OP-1361
 Antarctica C 1129
 Arabian Peninsula OP-1220
 Arctic Ocean OF 94-0588
 Argentina C 1129
 Atlantic Coastal Plain OP-903
- Atlantic Ocean OP-1161; OP-1198
 Brazil C 1129
 British Columbia OP-1361
 California C 1129; OP-45; OP-197; OP-260; OP-313; OP-1095; OP-1149
 Chile C 1129
 China C 1129
 Colorado OP-98; OP-773
 Egypt C 1129
 Florida OF 95-0003; OP-1613; OP-2087; OP-2263; OP-2295
 France C 1129
 geochemistry C 1129; OF 94-0298
 Georgia OP-2087
 Germany C 1129
 Hawaii OP-861; OP-1025; OP-2321
 Hong Kong C 1129
 Indian Ocean OP-1161
 Italy C 1129; OP-865
 Japan C 1129
 magmas C 1129
 Maine C 1129
 Marshall Islands OP-2254
 Mexico OP-197
 Micronesia OP-2254
 Montana OP-2133
 Nevada B 2056; C 1129; OP-258; OP-1747; OP-1763; OP-1946; OP-1947; OP-2169
 New Jersey OP-622; OP-623
 New Mexico OP-959
 New South Wales Australia C 1129
 New Zealand C 1129
 North Carolina C 1129
 Oklahoma C 1129
 Oregon OP-29
 Pacific Ocean OP-1198; OP-2132
 petrology C 1129
 pollution OP-174
 Queensland Australia C 1129
 Russian Federation OP-50
 Spain C 1129; OF 95-0221
 Tasmania Australia C 1129
 Texas C 1129
 Utah B 2056; OP-189
 Vanuatu OP-337
 Vermont C 1129; OP-1194; OP-1631
 Victoria Australia C 1129
 Virginia P 1529
 Wisconsin OP-2241
 Yemen C 1129; OP-1079
- Sr-90
 Commonwealth of Independent States OP-2302
 Europe OP-2302
 Idaho OF 94-0503
- Th-230, environmental geology OP-518
- Th-232
 Florida OP-1204
 pollution OP-984
- Th-232/Th-230
 geochemistry OP-126
 Marshall Islands OP-1229
 Micronesia OP-1229
 Nevada OP-59
 Sahara OP-909
 Spain OP-66
- Th-234, California OP-1397
 U-234/Th-230, Sahara OP-909
- U-238
 Atlantic Coastal Plain OP-2264
 environmental geology OP-518
 Florida OP-1204
 pollution OP-984

- thermal waters OP-1756
 U-238/Pb-204
 OP-1826; OP-2183
 petrology OP-939
 U-238/Pb-206
 California OP-160; OP-321
 petrology OP-938
 Western Interior OP-506
 U-238/Th-230, Hawaii OP-861
 U-238/U-234
 Basin and Range Province OF 95-0037
 Bermuda OP-1732; OP-1733
 Florida OP-1732; OP-1733
 geochemistry OP-126
 Great Basin OF 95-0037
 Marshall Islands OP-1229
 Micronesia OP-1229
 Nevada OP-59
 Sahara OP-909
 Spain OP-66
 Israel *see* Dead Sea Rift
 Italy *see also* Apennines; Irpinia earthquake 1980.
 earthquakes PDE
 fluid inclusions
 Monte Somma OP-950
 Vesuvius OP-950
 geochemistry
 OP-500
 Cima d'Asta C 1129
 Ivrea-Verbano Zone OP-865
 Pantelleria OP-227
 Peloritani Mountains OP-27
 Sardinia Italy C 1129
 Sila Massif OP-27
 intrusions, Ivrea-Verbano Zone OP-866
 metal ores
 OP-2126
 Calabria Italy OP-199
 paleomagnetism, Sardinia Italy OP-962
 petrology
 Adamello Massif C 1129
 Ivrea-Verbano Zone C 1129; OP-754; OP-1991
 Piemonte Italy C 1129
 Quaternary
 Abruzzi Italy OF 94-0568
 Calabria Italy OF 94-0568
 seismology, Stromboli OP-1239
 stratigraphy, Gubbio Italy OP-1416
 structural analysis
 Ivrea-Verbano Zone OP-755
 Piemonte Italy OP-755
 Itasca State Park
 Quaternary OF 94-0578
 Itoigawa-Shizuoka tectonic line
 Quaternary OF 94-0568
 Ivanpah Orogeny
 geochemistry OP-1104
 Irishak Formation
 areal geology OP-641
 Ivrea-Verbano Zone
 geochemistry OP-865
 intrusions OP-866
 petrology C 1129; OP-754; OP-1991
 structural analysis OP-755
 Izanagi Plate
 plate tectonics OP-271
 Izembek National Wildlife Refuge
 environmental geology OF 95-0179
 Izu-Bonin Arc
 petrology OP-920
 plate tectonics OF 94-0568
 J
J Sandstone
 petroleum OF 94-0670
J-M Reef OP-516
Jackass Flats
 ground water OF 95-0158
Jackass Lakes Pluton
 geochemistry C 1129
 inclusions C 1129
 petrology C 1129
Jackson Hole
 faults OP-476
 geophysical surveys OF 95-0239
Jackson, Charles Thomas OP-517
Jadeite
 OF 94-0576; OF 95-0255
 geophysics OP-1446
Jamaica Event
 Quaternary OP-397; OP-1505
James River
 hydrogeology OF 95-0313
 hydrology WRI 94-4042
Japan *see also* Kuroshio.
 crust, Honshu OF 94-0228
 earthquakes
 Hyogo Japan OP-490
 Okushiri Island OP-1800
 Unzen EV
 engineering geology
 Honshu OP-81
 Oki Islands OP-367; OP-1027
 Okushiri Island OP-367; OP-1027
 Ryukyu Islands OP-367; OP-1027
 geochemistry, Ryoke Belt C 1129
 geologic hazards
 OP-420
 Fukushima Japan OP-2007
 magmas C 1129
 Neogene
 Fossa Magna C 1129
 Green tuff region C 1129
 ocean floors
 Beppu Japan OF 94-0568
 Inland Sea OF 94-0568
 Permian OP-1132
 petrology
 Abukuma Mountains C 1129
 Chugoku C 1129
 Hidaka metamorphic belt C 1129
 Tohoku OP-270
 plate tectonics
 Sagami Bay OF 94-0568
 Suruga Bay OF 94-0568
 Tohoku OP-271
 Quaternary
 Atera Fault OF 94-0568
 Atotsugawa Fault OF 94-0568
 Beppu Japan OF 94-0568
 Hokkaido OP-2086
 Inland Sea OF 94-0568
 Itoigawa-Shizuoka tectonic line OF 94-0568
 Median Tectonic Line OF 94-0568
 Okushiri Island OF 94-0568
 Sakura-jima OP-1952
 Usu OP-1952
 seismology
 OF 94-0221; OP-1601
 Honshu OP-893
 structural geology OF 94-0714
 tectonophysics, Tokai Japan OP-2307
Japan Sea *see also* Kuroshio; ODP Site 798.
 earthquakes OP-1800
 plate tectonics OP-271
Japan Trench
 plate tectonics OP-965
Jaramillo Event
 Indonesia OP-443
 New Mexico OP-443
Jasper Aquifer
 ground water WRI 95-4038
jasperoid
 Idaho, metal ores B 2064-A-R
Java *see also* Merapi.
 elastic waves OP-1498
 Quaternary OP-392
 tectonophysics OP-2328
Jellyfish Lake
 geochemistry OP-520; OP-689
Jemez Mountains *see* Valle Grande Mountains
Jerritt Canyon Deposit
 geochemistry OP-535
 gold ores OP-536; OP-2151
Jhimpir Pakistan
 coal OF 94-0596-C
Jiangxi China
 metal ores OP-1871
Jicarilla Apache Indian Reservation
 energy sources C 1108
Jilin China
 Conodonta OP-1021
Joana Limestone
 structural geology OP-2115
Job Canyon Caldera
 structural geology OP-454
John Henry Mine
 geochemistry OF 94-0670
 sedimentary petrology OP-1181
John Kerr Reservoir
 maps OF 94-0629
Johnson Coulee East Quadrangle
 maps OF 88-0610
Johnson Mountain
 maps I-2233
Johnson Reservoir Quadrangle
 maps OF 88-0609; OF 88-0611; OF 88-0613
Johnson Valley Fault
 seismicity OP-1309
 seismology OP-375; OP-714; OP-1477
Joints
 Alaska, Quaternary OP-2258
 Appalachians, hydrogeology OP-1819
 Atlantic Coastal Plain, hydrogeology OP-1819
 Colorado
 OP-1438
 geologic hazards OP-1101
 Idaho OP-1673
 Nevada OF 95-0002
 New Mexico, environmental geology C 1108
 Utah OF 95-0491; OP-1292; OP-1438
jokulhlaups
 Alaska
 engineering geology OP-1683
 glacial geology B 2139
 Quaternary OP-1263
 Columbia Plateau, Quaternary OP-2237
 Philippine Islands, engineering geology OP-1683
 Washington, Quaternary OP-975

Jones Beach Island
ground water WRI 92-4171

Jongmans, W. J.
paleobotany OP-644

Josephine Mountain Intrusion
petrology OP-45

Joshua Tree earthquake 1992
seismicity OP-1561
seismology OP-1540

Joulter's Cays
sedimentary petrology OP-2109

Juab Valley
hydrogeology OF 95-0101

Jualin Deposit
gold ores OP-624

Juan de Fuca Plate
California, geophysical surveys OF 95-0275
Japan, tectonophysics OP-2307
Oregon, Quaternary OP-1945
Pacific Coast, earthquakes OP-26
United States, tectonophysics OP-2307
Washington
crust OP-1776
structural geology OP-1777
tectonophysics OP-1975

Juan de Fuca Ridge
geochemistry OF 94-0015; OF 95-0505; OP-861; OP-1032
lava OP-1351; OP-2132
ocean floors OP-2137
oceanography OF-52; OP-503; OP-652
sedimentary petrology OP-776

Juana Diaz Puerto Rico
hydrogeology WRI 91-4183

Judith River Formation OP-403

Jug Lake
ecology OF 94-0275

Julcani mining district
metal ores OP-202

Junction Creek Sandstone
stratigraphy OC-0144; OC-0145

Juneau Alaska
geochemistry B 2107
metamorphic rocks C 1129
metamorphism B 2107
petrology OP-409

Juneau gold belt
gold ores OP-624

Jupiter *see also* Callisto Satellite; Ganymede Satellite; Io Satellite; Voyager I; Voyager Program.
YR; B 2129; OP-851; OP-987; OP-2112

Jurassic *see also* Franciscan Complex; Glen Canyon Group; Navajo Sandstone; Nevadan Orogeny; Passaic Formation.
OP-618; OP-1319; OP-2139
Alaska OP-217; OP-229; OP-409; OP-574; OP-589; OP-626; OP-710; OP-725; OP-784; OP-1623; OP-1849

Arapien Shale
maps I-2462
structural geology P 1528

Argentina C 1129

Arizona OP-350

Atlantic Coastal Plain B 2110

Bajocian, California OP-1462

Bathonian, California OP-1462

Brushy Basin Shale Member
sedimentary petrology B 1808-P

Vertebrata OP-145

California C 1129; OF 95-0227-A; OF 95-0227-B; I-2148; OP-313; OP-432; OP-1315

Canada OP-409; OP-745

Chile C 1129

China C 1129

Coast Range Ophiolite
faults OP-1577
gold ores OP-341
metal ores OP-663; OP-940
structural geology OP-1430

Commonwealth of Independent States B 2110

Entrada Sandstone
OF 94-0583
metal ores OP-98
sedimentary petrology OP-1882

Iran OP-154

Kimmeridgian, California OP-319

Kingak Shale
OP-1439
energy sources OP-65
geochemistry OF 95-0236

Mexico OP-838

Morrison Formation
OC-0144
Quaternary OP-1868

Naknek Formation, Quaternary OP-1921

Nevada C 1129; OP-20; OP-438; OP-619

Norphlet Formation, diagenesis OP-828

Nugget Sandstone, energy sources OP-746

Oregon OF 95-0227-A; OF 95-0227-B; I-2148; OP-41; OP-1315

Pacific Ocean OP-964

Portland Formation, ground water OP-1799

Russian Federation OP-589; OP-1493

Salt Wash Sandstone Member
OF 94-0583
sedimentary petrology OP-2031

San Rafael Group
OC-0144; OC-0145
structural geology OF 95-0491

Smackover Formation, petroleum OF 94-0670

Talkeetna Formation
areal geology OP-672
metamorphism OP-39

Tithonian, Utah OP-145

United States OP-745

Utah OP-619

Washington OP-1821

Yukon Territory OP-217; OP-360

K

K *see* potassium

K-40
Atlantic Coastal Plain, pollution OP-2264

K-bentonite
Alabama, stratigraphy OP-386
Sweden, stratigraphy OP-386

K-feldspar
OP-79; OP-2110

Arkansas, lead-zinc deposits B 1989-F

Austria, inclusions C 1129

Colorado
geochemistry OP-1046
metal ores OP-1626

engineering geology OP-1841

faults OF 94-0228

geochronology OP-1672

Missouri, lead-zinc deposits B 1989-F

Nebraska, geochemistry OP-1046

New Mexico, geochemistry B 2081

Oregon, sedimentary petrology B 2108

petrology OP-125

Russian Federation, geochronology OP-1493

K-T boundary

OP-84; OP-1418; OP-2022; OP-2112

Canada OP-668

Colorado OF 94-0670; OP-1665; OP-1953

Denmark OP-1140

East Pacific Ocean Islands OP-1736

Great Plains OP-1589; OP-1889

Iowa OP-16; OP-372

Italy OP-1416

Mexico OP-1141; OP-1755

New Mexico OF 94-0670; OP-1953

Polynesia OP-1736

Tunisia OP-1416

United States OP-668

Wyoming OP-667

K/Ar

Alaska
petrology OP-229; OP-632
structural geology OP-1447

Arizona
maps OF 95-0263
petrology OP-991
stratigraphy OP-350

Bolivia, metal ores OP-188

California
geochronology OP-625
magmas C 1129
petrology OP-45; OP-1211
Pliocene OP-2061
Quaternary OP-1575
structural geology OP-432

Caribbean region, metal ores B 2057

Colorado, metal ores B 2109

Florida, Quaternary OP-1001

geochronology DDS-0014

Iceland, Quaternary OP-1001

Idaho
maps OF 94-0659
Quaternary OF 94-0686
volcanism OP-1674

Japan
Neogene C 1129
petrology C 1129

Lesser Antilles, metal ores B 2057

Mexico, petrology OP-1870

Montana, geochronology OP-1465

Nevada
Eocene OP-105
geochemistry B 2056
geochronology B 2081; OP-844
gold ores OP-20; OP-438

New Mexico
maps OF 95-0263
Quaternary OP-1575

Oregon
geochemistry OF 95-0040
maps OF 95-0219
stratigraphy OP-1176

Pacific Ocean, petrology OP-920

Spain
gold ores OF 95-0221
magmas C 1129
metal ores OP-22

Utah
Eocene OP-105
structural geology OF 95-0491

Virginia, Quaternary OP-1001

Washington, Holocene OP-1513

K/T boundary *see* K-T boundary

Kaapvaal Craton
tectonophysics OP-636

Kagoshima Japan *see* Sakura-jima

Kalbab Formation

energy sources OP-1557
tectonics OP-1556

Kalbab National Forest

metal ores OF 94-0670

Kainer Formation

ground water WRI 94-4117; WRI 95-4030

Kaiparowits Plateau

sedimentation B 2115-A
stratigraphy B 2115-B

Kalahari Desert

mineralogy OP-781

Kalapana earthquake 1975

Quaternary OP-1453

kalium *see* potassium

Kamchatka Peninsula *see* Komandorski Islands;
Tolbachik

Kamchatka subduction zone

crust OP-2075

Kamensk Crater

Eocene OP-1573

kames

Montana, non-metal deposits I-2446
Pennsylvania, ground water WRI 93-4109

Kamoamoa Hawaii

petrology OP-483
Quaternary OP-1768

Kanab Quadrangle

areal geology B 2056

Kanaga

geologic hazards OP-2257
Quaternary OF 95-0271

Kanawha Formation OP-69; OP-768

Kanawha River

hydrology FS 94-0019

Kanayut Conglomerate

deformation OP-479; OP-1250
sedimentary petrology OP-1604
structural geology OP-2247

Kane Springs Wash Caldera

geochemistry B 2056
petrology OP-836

Kankakee River

hydrology WRI 94-4190; OF 91-0175

Kansas *see also* High Plains Aquifer; Ogallala
Aquifer.

areal geology, Clark County Kansas OF 95-
0256

ecology, Kansas River valley W 2352-B

economic geology C 1124

energy sources C 1108

environmental geology

OP-1160

Greeley County Kansas I-2469

Hamilton County Kansas I-2469

Wallace County Kansas I-2469

geochemistry, Greeley County Kansas OF 95-
0209

geomorphology, Kansas River valley W 2352-
B

geophysical surveys OP-1661

ground water, Johnson County Kansas WRI 94-
4166

hydrogeology WRI 94-4022; OF 94-0670;
OF 95-0120

hydrology

C 1120-H; FS 0116-95; FS 94-0015

Geary County Kansas OF 94-0531

Kansas River OF 94-0531

Kansas River valley W 2352-B; WRI 94-
4077; WRI 94-4187; OF 94-0365

Riley County Kansas OF 94-0531

maps

Clark County Kansas OF 94-0655; OF 94-
0656; OF 94-0657; OF 94-0658

Meade County Kansas I-2498

natural gas OF 94-0022-G

non-metal deposits B 2111

Pennsylvanian B 2110

petroleum B 2110

pollution

OF 94-0396; OP-1041

Harvey County Kansas OF 94-0497

Jefferson County Kansas OF 94-0670

Kansas River OP-1693

Kansas River valley W 2352-B; OP-2145

Marshall County Kansas W 2419

Pottawatomie County Kansas W 2419

Tuttle Creek Dam W 2419

Washington County Kansas W 2419

soils, Harvey County Kansas OF 94-0670

stratigraphy OP-1324

Kansas Geological Survey

hydrogeology OF 95-0120

Kansas River

hydrology OF 94-0531

pollution OP-1693

Kansas River valley

ecology W 2352-B

geomorphology W 2352-B

hydrology W 2352-B; WRI 94-4077; WRI 94-
4187; OF 94-0365

pollution W 2352-B; OP-2145

Kansu China *see* Gansu China

Kanto earthquake 1923

Japan

OP-974

plate tectonics OF 94-0568

kaolinisation *see* kaolinization

kaolinite

Appalachians, stratigraphy OP-766

pollution OP-138

Washington, sedimentary petrology OP-1182

kaolinization OP-989

Kara-Tau (Range) *see* Karatau Range

Karakavak Formation

Invertebrata OP-345

Karakoram

intrusions C 1129

Karatau Range

energy sources OP-169; OP-1258

Karen Creek Sandstone

areal geology OP-641

Karin Ridge

Cenozoic OP-1198

stratigraphy OP-1197

karst *see also* karst hydrology; paleokarst; sink-
holes.

Atlantic Ocean, stratigraphy OP-1334

China, seismology OF 95-0562

Florida

continental shelf OP-2293

ground water OP-1614

hydrogeology OP-1613

Italy, earthquakes PDE

New Mexico B 2063

karst hydrology

environmental geology OP-1160

Florida

environmental geology OP-2202

ground water OF 93-0026; OP-472

hydrogeology WRI 92-4159

Georgia, hydrogeology OF 94-0350

hydrogeology OF 94-0670; FS 0151-95

Indiana, ground water WRI 94-4195

Minnesota, hydrogeology WRI 94-4146

Missouri, hydrogeology WRI 93-4154

Pennsylvania, hydrogeology OF 95-0113

pollution OP-7; OP-8

Texas, ground water WRI 95-4030

West Virginia, hydrogeology WRI 93-4073

karst topography *see* karst

karstification

stratigraphy OP-1558

Kasel Vallis OP-1726; OP-1727

katagenesis *see* catagenesis

katathernal processes *see* hypothermal processes

Kateel River Quadrangle

geochemistry B 2107

Katmai

palynomorphs OP-184

Quaternary OP-2021

seismology OP-1598

Katmai National Park

geochemistry OF 95-0047

Quaternary OF 95-0271; OP-2292

Kauai

hydrogeology WRI 93-4180

Kavala Pluton

geochemistry C 1129

Kayak Shale

structural geology OP-2247

Kazakhstan

energy sources

YR

Karatau Range OP-169; OP-1258

Kelcho-Kinki earthquake 1596

Quaternary OF 94-0568

Kekiktuk Conglomerate

deformation OP-479

Kelp Bay Group

structural geology OP-1447

Kenai Fjords National Park

geochemistry B 2107

Kenai Group

uranium ores B 2098

Kenai Peninsula

gold ores OP-349

Quaternary OP-1000

Kennicott Deposit

metal ores OP-1893

Kensington Deposit

gold ores OP-624

Kentucky *see also* Allegheny Group; Appala-
chian Basin; Breathitt Formation; Burlington
Limestone; Cypress Sandstone; Illinois Basin;
Kanawha Formation; Mississippi Embayment;
Mississippi River; New Albany Shale; New Ma-
drid region; Ohio River; Pottsville Group; Saint
Louis Limestone; Saint Peter Sandstone;
Tradewater Formation; Warsaw Formation.

coal C 1108; OF 95-0572

diagenesis, Rough Creek fault zone OF 94-0298

economic geology C 1124

energy sources C 1108

faults

Caldwell County Kentucky P 1538-Q

Crittenden County Kentucky P 1538-Q

Rough Creek fault zone P 1538-Q; OF 94-
0298

- geochemistry, Leslie County Kentucky OP-2053
ground water
HA-0730-K
Louisville Kentucky WRI 94-4099
Marshall County Kentucky WRI 94-4239
Pike County Kentucky WRI 94-4189
hydrology
OF 94-0363
Kentucky River basin WRI 94-4029;
WRI 94-4134; WRI 94-4227
Louisville Kentucky WRI 94-4065
lead-zinc deposits OF 94-0298
maps
GQ-1212; GQ-1342
Barren County Kentucky GQ-0351
Hart County Kentucky GQ-0351
natural gas
McLean County Kentucky OF 94-0298
Rough Creek fault zone OF 94-0298
non-metal deposits B 2111; OP-729
Pennsylvanian OP-1737
petroleum, Rough Creek fault zone OF 94-0298
sedimentary petrology
Martin County Kentucky OP-1548; OP-1950
Pike County Kentucky OP-1548; OP-1950
Rough Creek fault zone OF 94-0298
stratigraphy
B 2135
Morgan County Kentucky B 2135
Perry County Kentucky B 2135
structural geology, Rough Creek fault zone
OF 94-0298
Kentucky River basin
hydrology WRI 94-4029; WRI 94-4134;
WRI 94-4227
Kenya
geochemistry, Kenya Rift valley C 1129
tectonophysics OP-478
Kenya Rift International Seismic Project *see*
KRISP
Kenya Rift valley
geochemistry C 1129
kerabitumen *see* kerogen
Kerala India
metamorphism C 1129
keratophyre
California, structural geology OP-1430
kerogen
Colorado, energy sources OP-297
Gabon, bitumens OP-1403
Italy, geochemistry OP-500
Micronesia, geochemistry OP-689
Nevada, geochemistry OP-794
New Zealand, energy sources OP-207
petroleum OP-830
Utah, energy sources OP-297
Wyoming, energy sources OP-677
Keswick Reservoir
pollution OP-1051
Ketchikan Quadrangle
maps OF 95-0215
Kettleman North Dome Field
energy sources OF 95-0054
Kevin Member
stratigraphy B 2113
Keweenaw
California OP-1255
Iowa OP-1059; OP-1880
Texas OP-1350
Keweenaw Rift
structural geology B 1904-T
Key Largo
ground water OP-1455
Quaternary OP-2206
Key West
Quaternary OP-1733; OP-2206
Keyhole Canyon Pluton
geochemistry C 1129
petrology OP-1817
KGRAs
geothermal energy WRI 94-4180-A; OF 95-0080; OF 95-0485
Khaz Formation
structural geology OP-1447
khondalite
India C 1129
Khoros B 2103
Khuchaynik Dolostone
Proterozoic B 2107
Kibbey Formation
stratigraphy B 2112
Kickapoo Fault
seismology OP-714
Kidazgeni Glacier
geologic hazards OP-1316
glacial geology B 2139
Kidd Creek
metal ores OP-2126
tectonics OP-1449
Kigluak Group
areal geology OP-931
Kilauea
earthquakes OP-232
elastic waves OP-1649
engineering geology OP-1367
environmental geology OF 94-0553
geochemistry OF 94-0684; OP-314
geologic hazards OF 94-0713; OP-474; OP-696; OP-1497
geophysical surveys OF 94-0288; OF 94-0567; OP-1655
ground water OP-2077
hydrogeology WRI 95-4001; OF 94-0586; OF 95-0532; OP-2076
lava OF 95-0496; OP-1717
magmas OP-47; OP-147; OP-307; OP-1090; OP-1293; OP-1372
ocean floors OP-1230
petrology OP-234; OP-483; OP-1223; OP-1400; OP-1500; OP-1766
Quaternary DDS-0024; OP-351; OP-757; OP-977; OP-1294; OP-1453; OP-1496; OP-1768; OP-2246
sedimentary petrology OP-1102
seismic sources OP-323
seismology OP-1911; OP-1912
Kilbuck Terrane
areal geology OP-201; OP-725
magmas OP-626
Kilgore Flint Member
stratigraphy OP-768
Killbuck Creek valley
ground water WRI 94-4131
Killik River Quadrangle
Devonian B 2107
mineral resources C 1117; I-2225-A; I-2225-B; I-2225-C; I-2225-D
Killington Peak Quadrangle
maps OF 94-0225-A; OF 94-0225-B
Proterozoic B 2060
stratigraphy B 2060
kimberlite *see* diamonds
Kimmeridgian
California OP-319
King Field
energy sources OF 94-0298
Kingak Shale
OP-1439
energy sources OP-65
geochemistry OF 95-0236
Kingman California
maps OF 94-0318
Kings Canyon National Park
areal geology OF 94-0650
Kings Mountain
mineral resources OP-428
Kingshall Aquifer
ground water OF 94-0531
Kingston Arch
structural geology OP-1979
kink-band structures
California
Quaternary OF 94-0568
seismology OP-1586
Kinnekule Bentonite Bed
stratigraphy OP-386
kinzigite
Italy
OP-866; OP-1991
structural analysis OP-755
Klous Spring Quadrangle
maps OF 95-0010
Kirby Hill Fault
deformation OP-1774
structural geology OP-1773
Kirgizia *see* Kyrgyzstan
Kirin, China *see* Jilin China
Kirker Fault
deformation OP-1774
structural geology OP-1773
Kirkwood Formation
OP-2171
pollution OP-910
Kirkwood-Cohansey Aquifer
ground water WRI 90-4095
pollution WRI 92-4144; OP-910; OP-1087; OP-2176; OP-2177; OP-2236
Kirtland Air Force Base
environmental geology OF 94-0547
Kirtomy Migmatite Suite
geochemistry C 1129
Kiruna Sweden
iron ores OP-87
Kita-Izu Fault
Quaternary OF 94-0568
Kitakami island arc
petrology OP-270
plate tectonics OP-271
Kittanning Formation OP-1324
Klamath Falls Oregon
Quaternary OF 95-0034
tectonophysics OP-1444
Klamath Lake
hydrogeology OF 95-0285
Quaternary OF 95-0034; OP-1158
Klamath Mountains
bibliography OF 95-0558
folds OP-1128

- geochemistry OF 95-0227-A; OF 95-0227-B
 magmas OP-41
 maps I-2148
 natural gas OF 95-0093; OP-1677
 Permian OP-78
 petrology OP-1315
 structural geology OP-348
- Klamath River basin**
 Quaternary OP-1040
- klippen**
 Nevada, energy sources OF 94-0670
- Klondike**
 Pliocene OF 95-0217-A; OF 95-0217-B
- Klondike Highway**
 metamorphic rocks OF 94-0268
- Knightsen Field**
 energy sources OP-1746
- knowledge-based systems *see* expert systems
- known geothermal resources areas**
 California, geothermal energy WRI 94-4180-A
 Nevada, geothermal energy OF 95-0080
- Knox Group**
 sedimentary petrology OF 94-0298
- Knoxville Formation**
 metal ores OP-940
- Knoxville mining district**
 metal ores OP-720; OP-804; OP-940
- Kobe earthquake 1995**
 earthquakes OP-490
 engineering geology OP-81
 geologic hazards OP-420
 seismology OP-893
- Kobuk-South Fork Fault**
 deformation OP-1849
- Kodiak Formation**
 fractures OF 94-0228
 Quaternary OF 94-0568; OP-2021
- Kodiak Seamount**
 sedimentation OP-2160
- Kofa Mountains**
 maps I-2454
- Kohistan**
 gems OP-1303
- Kokomo Mine**
 economic geology OF 94-0289
- Kola Peninsula**
 engineering geology OP-650
 geochemistry C 1129
 geophysical surveys OP-958
 tectonophysics OP-2228
- Kola Russian Federation**
 engineering geology OP-650
 geophysical surveys OP-651
- Komandorski Islands**
 magmas C 1129
- Kona**
 Quaternary OP-639
- Kontinentales Tiefbohrprogramm der Bundesrepublik Deutschland *see* KTB
- Koolau Range**
 clay mineralogy OP-1594
- Kootenay Formation**
 ground water OP-1215
- Kosovo Serbia**
 weathering OP-2052
- Koyukuk Alaska**
 areal geology OP-711
 geochemistry B 2107
- Koyukuk Basin *see* Yukon-Koyukuk Basin
- Kozu-Matsuda Fault**
 plate tectonics OF 94-0568
- Kr-85**
 ground water OP-734
- Krakatoa**
 Quaternary OP-467
- Krasnoyarsk Russian Federation *see* Taymyr
- Dolgan-Nenets Russian Federation
- Krausel, Richard**
 paleobotany OP-644
- Kreyenhagen Formation**
 geochemistry OP-1955
 sedimentation OF 94-0577
- kriging**
 environmental geology OP-5
- KRISP**
 Kenya, tectonophysics OP-478
- Krusny Hory Mountains *see* Erzgebirge
- krypton**
 Kr-85, ground water OP-734
- KTB**
 California, engineering geology OP-650
 Germany
 engineering geology OP-650
 geochemistry OP-499
 geophysical surveys OP-651; OP-748
 Russian Federation
 engineering geology OP-650
 geophysical surveys OP-651
 Vermont, engineering geology OP-650
- Kula Plate**
 Alaska
 crust OP-2075
 gold ores OP-2184
 metal ores OP-1893
 natural gas OP-2074
 California, tectonophysics OP-1448
 Mexico, tectonophysics OP-1448
- Kula-Farallon Ridge**
 gold ores OP-2184
- Kulthieth Formation**
 coal OP-972
- Kumaun Himalayas**
 geochemistry C 1129
- Kunlun Mountains**
 Quaternary OF 94-0568
- Kupaianaha**
 geologic hazards OF 94-0713
 geophysical surveys OF 94-0567
 lava OF 95-0496
 Quaternary OP-757
- Kuparuk Formation**
 stratigraphy OP-1439
- Kuparuk River Field**
 energy sources OP-1270
- Kupreanof**
 Quaternary OF 95-0271
- Kuril Islands**
 earthquakes OP-1657
- Kuril Islands earthquake 1994**
 earthquakes OP-1657
- Kurils *see* Kuril Islands
- Kuroshio**
 Japan, stratigraphy OP-1269
- Kusaihu-Maqu Fault**
 Quaternary OF 94-0568
- Kuskokwim Mountains**
 areal geology OP-201; OP-672
 metal ores OP-1893
 petrology OP-632
- stratigraphy OP-357
- Kuskokwim River**
 environmental geology B 2107; OF 95-0173
- Kwagunt Arizona**
 geomorphology OF 95-0529
- Kwangsi Chuang *see* Guangxi China
- Kwanto earthquake 1923 *see* Kanto earthquake 1923
- Kweichow China *see* Guizhou China
- kyanite**
 Wyoming, metamorphic rocks OP-1929
- Kyle Hot Springs**
 energy sources OP-1083
- Kyrgyzstan** *see also* Alai Range.
 energy sources YR
- Kyushu *see* Kagoshima Japan; Nagasaki Japan; Oita Japan

L

- L waves *see* surface waves
- La *see* lanthanum
- La Jolla California**
 stratigraphy OF 94-0678
- La Jolla Fan**
 sedimentary petrology OP-1877
- La Paz Bolivia**
 seismicity OP-494
- La Sal Mountains**
 faults OP-1390
- La Salle Anticlinorium**
 sedimentary petrology OF 94-0298
- Labrador**
 geochemistry C 1129
- Labrador Sea**
 Quaternary OP-1001
- labradorite**
 Colorado, geochemistry OP-760
- Lac qui Parle River basin**
 hydrology OF 93-0046
- laccoliths**
 New Mexico B 2063
 ocean floors B 2022
 Utah
 faults OP-1390
 tectonics OP-1283
- Lachlan fold belt**
 deformation OF 94-0228
 geochemistry C 1129
 inclusions C 1129
 magmas C 1129
 metal ores C 1129
 petrology C 1129
- lacustrine features** *see also* lakes; playas; shoals; wetlands.
 I-2397
 Great Lakes OP-285
 Great Lakes region OP-285
 Illinois OP-286
- lacustrine sedimentation** *see also* fluvio-lacustrine sedimentation; glaciolacustrine sedimentation.
 Colorado, Paleogene OP-1890
 Great Lakes
 lacustrine features OF 95-0224
 stratigraphy OP-436
 Hungary, stratigraphy OP-951
 Israel, Quaternary OF 94-0568
 North Carolina, hydrology WRI 94-4123

- Ohio, geomorphology OF 95-0224
 Russian Federation, Quaternary OP-165
 South Carolina, hydrology OF 95-0186
 Washington, Quaternary OF 94-0568
 Wyoming OP-456
- Lafayette College**
 phase equilibria OP-1609
- Lago della Vacca Suite**
 petrology C 1129
- Lago Loiza Basin**
 environmental geology OP-1405
 sedimentary petrology OP-310
- Laguna Salada Fault**
 structural geology OP-824
- lahars**
- Alaska
 B 2139
 engineering geology OP-1683
 geologic hazards B 2139; OP-1316; OP-2257
 Quaternary OP-2258
 California, petrology OP-1315
 engineering geology OP-1569
 geologic hazards OF 95-0231
 Japan, geologic hazards OP-2007
 Oregon, petrology OP-1315
 Philippine Islands, engineering geology OP-1683
 Utah, economic geology OP-189
 Washington
 engineering geology OP-19
 geologic hazards P 1547
 petrology OP-2173
 Quaternary OP-1023
- Lahore Pluton**
 magmas P 1529
- Lajilla Mexico**
 sedimentary petrology OP-1141
- Lake Apopka**
 hydrology WRI 93-4103
- Lake Baikal**
 geochemistry OP-1559
 geophysical surveys OF 94-0263
 hydrology OF 94-0445
 Quaternary OP-94; OP-165
 sedimentary petrology OP-1877
- Lake Barco**
 ground water OP-472; OP-473; OP-1614
 hydrogeology OP-1613
- Lake Barre**
 geomorphology OF 94-0275
 shore features OF 94-0275
- Lake Beauclair**
 hydrology WRI 93-4103
- Lake Bonneville**
 Basin and Range Province, tectonophysics OP-64
 Columbia Plateau, Quaternary OP-2237
 Great Basin, tectonophysics OP-64
 Idaho, Quaternary OP-1900
- Lake Champlain**
 pollution OF 94-0472
- Lake Chelan**
 seismology OP-573
- Lake City Caldera**
 metal ores OF 95-0079
- Lake Coeur d'Alene**
 pollution OP-1039; OP-1146; OP-2129
- Lake Columbia**
 Quaternary OP-2237
- Lake Creek mining district**
 metal ores B 2064-A-R
- Lake Danville**
 Triassic OP-925
- Lake Erie**
 ecology I-2451
 environmental geology OF 95-0224
 frost action OF 95-0224
 geomorphology OF 95-0224
 geophysical surveys OF 95-0252
 hydrogeology FS 94-0056
 lacustrine features OF 95-0224
 shore features OF 95-0224
- Lake Erie Coastal Erosion Study**
 geomorphology OF 95-0224
- Lake Fryxell**
 hydrology OF 94-0545
- Lake Gaston**
 hydrology WRI 94-4140
 Mesozoic OP-1399
 structural geology OP-2062
- Lake Gordon mylonite zone**
 structural geology OP-1202; OP-1536
- Lake Hitchcock**
 Quaternary OP-1072; OP-2164
- Lake Katherine**
 hydrology OF 95-0186
- Lake Lahontan**
 sedimentary petrology OP-59
- Lake Lucerne Florida**
 ground water OF 93-0026
- Lake Manitoba**
 Quaternary OP-527
- Lake Mead**
 deformation OP-1323
 fluvial features OP-2289
- Lake Mead Fault**
 deformation OP-15
- Lake Michle**
 hydrology WRI 94-4123
- Lake Michigan**
 areal geology OP-295
 environmental geology OF 95-0163
 frost action OP-43
 geomorphology OP-285; OP-452
 geophysical surveys OF 94-0698
 hydrogeology OF 92-0139; OF 95-0163; OP-90; OP-164
 hydrology OF 95-0163
 lacustrine features I-2429; OP-286
 marine geology OF 95-0224
 pollution OF 95-0163
 Quaternary OP-163; OP-292
 sediments OP-1086
- Lake Michigan Basin** *see* Michigan Basin
- Lake Michigan Formation**
 areal geology OP-295
- Lake Missoula**
 Quaternary OP-679; OP-680; OP-2237
- Lake Nyos**
 hydrology OP-256
- Lake Oahe**
 hydrology WRI 95-4087
 pollution OP-1112
- Lake of the Woods**
 mineral resources OF 94-0447
- Lake of the Woods Quadrangle**
 maps I-1420 (NM-15)
- Lake Okeechobee**
 stratigraphy OP-2295
- Lake Ontario**
 hydrology WRI 92-4052
 Quaternary OF 94-0568
 stratigraphy OP-436
- Lake Owens Complex**
 Proterozoic OP-1982
- Lake Owyhee volcanic field**
 metal ores OP-799
- Lake Ponchartrain**
 energy sources C 1108
- Lake Pontchartrain**
 hydrology FS 0118-95
- Lake Powell**
 geomorphology OP-1368
 pollution OP-1476
 Quaternary OP-1730
- Lake Roosevelt**
 environmental geology OF 95-0195
- Lake Saint Clair**
 ecology I-2451
 hydrogeology FS 94-0056
- Lake Superior region**
 geochemistry B 1904-U
- Lake T'oo'dichl'**
 sedimentary petrology B 1808-P
- Lake Tahoe**
 geomorphology OF 94-0105
 hydrogeology WRI 94-4079
 hydrology OF 95-0316
- Lake Washington**
 faults OP-2079
 Quaternary OF 94-0568; OP-1076
 structural geology OP-1611
- Lake Winnebago**
 pollution OF 95-0163
- lakes** *see also* crater lakes; glacial lakes; limnology; salt lakes.
- Alaska
 environmental geology OF 95-0346
 geomorphology OP-101
 Quaternary OP-1263
- Basin and Range Province
 hydrology OP-1106
 Quaternary OP-2198
 tectonophysics OP-64
- California
 geomorphology OF 94-0105
 hydrogeology OP-1281
 Quaternary OF 94-0568
- Canada, ecology I-2451
- Colorado, environmental geology OP-945
- Djibouti, tectonophysics OP-2152
- Florida
 ground water OP-472; OP-473
 hydrogeology OP-1613
 fluvial features OP-2138
- Great Basin
 hydrology OP-1106
 Quaternary OP-2198
 tectonophysics OP-64
- Great Plains, hydrology OF 95-0162
- Israel, Quaternary OF 94-0568
- Minnesota, hydrology OF 93-0046; OF 93-0047; OF 94-0488
- Nevada
 geomorphology OF 94-0105
 hydrogeology OP-1281
- Ohio
 environmental geology OF 95-0224
 geomorphology OF 95-0224
- Oregon

- geologic hazards OP-1901
 Quaternary OP-1635
 Puerto Rico, environmental geology OP-1791
 Russian Federation, geophysical surveys OF 94-0263
 South Dakota, hydrology OF 93-0046
 United States, ecology I-2451
 Washington, geologic hazards OP-1901
 Wisconsin, hydrogeology OP-992
- Laketown Dolomite**
 structural geology B 2056
- Lakhra Formation**
 sedimentary petrology OP-1386
- Lakhra Pakistan**
 coal OF 94-0595; OF 94-0596-B
- Lakota Formation**
 OP-1974
 sedimentary petrology B 1917-S
- Lallemand Fjord**
 Quaternary OP-214
- Lamar Quadrangle**
 environmental geology I-2469
 pollution OP-1031
- Lamarck Granodiorite**
 geochemistry OP-160
- Lambert Creek basin**
 hydrogeology WRI 94-4062
- Lambertville New Jersey**
 hydrology OF 93-0662
- laminations**
 OP-1340
 Alaska
 OP-2094
 Quaternary OP-1457
 California
 Quaternary OP-1158
 seismology OP-860
 Colorado, Oligocene OP-1691
 Great Lakes, stratigraphy OP-436
 Idaho, Permian OP-2093
 Indiana, energy sources OP-2020
 New Mexico, Quaternary OP-1050
 Oregon, Quaternary OP-1158
 Pacific Ocean
 OP-1218
 Quaternary OP-1501
 South Dakota B 1917-S
 Washington, Eocene OP-1593
- Lamotte Sandstone**
 lead-zinc deposits B 1989-F
- Lamotte-Mount Simon Aquifer**
 metal ores B 1989-G
- lamprophyres**
 Arkansas, geochemistry OF 94-0450
 Colorado
 geochemistry OP-1939
 Oligocene OP-1625
 France C 1129
 Switzerland C 1129
- Lanal**
 Quaternary OP-1183
- Lance Formation**
 OP-667; OP-2030
 sedimentary petrology OP-456; OP-780
 sedimentary structures OP-1620
- land canyons** *see* canyons
- land cover**
 Alaska, environmental geology YR; OF 94-0627
 environmental geology OF 95-0651
 geophysical surveys OP-562
- Oregon, environmental geology OF 95-0652
 Virginia, hydrology WRI 94-4225
 Washington, environmental geology OF 95-0652
 Wisconsin, environmental geology OF 95-0163
- land reclamation** *see* reclamation
- land subsidence**
 California
 WRI 94-4184; OP-788
 geologic hazards OF 94-0494; FS 94-0049; OP-437
 geomorphology OP-785
 ground water OP-1370; OP-2010
 Colorado, geologic hazards MF-2295
 Florida, continental shelf OP-2293
 Louisiana OF 94-0275
 New York, ground water YR; OP-1608
 Texas, ground water OF 94-0345; OF 94-0346; OF 95-0182; OF 95-0183
 Utah, hydrogeology WRI 95-4025
- land use** *see also* basin management; conservation; deforestation; geologic hazards; impact statements; land use maps; reclamation; strip mining; waste disposal.
 Alaska
 environmental geology YR; OF 95-0177; OF 95-0180
 hydrogeology OF 94-0712-W; OF 94-0713-W; OF 95-0171; OF 95-0172
 pollution OF 95-0178
 Appalachians, pollution OP-1365
 Arizona
 environmental geology OF 95-0578
 hydrogeology FS 94-0016; OP-521
 Arkansas, springs OP-1159
 California
 ecology OP-495
 environmental geology WRI 94-4208
 ground water WRI 94-4127; WRI 94-4151; OF 94-0045
 hydrogeology FS 94-0029
 pollution OF 95-0286
 coal C 1108
 Colorado
 environmental geology C 1108
 ground water WRI 92-4143; OP-221
 hydrology FS 0153-95
 pollution OP-1031
 Connecticut, pollution OP-1460
 ecology OP-896
 economic geology OP-412
 energy sources C 1108
 environmental geology WRI 94-4250; OF 95-0234; OF 95-0651
 Florida
 ecology OF 95-0007
 environmental geology FS 0134-95
 ground water WRI 94-4167
 pollution OP-933
 geomorphology OP-177
 Georgia, environmental geology OP-435
 Great Plains
 ground water WRI 94-4157
 hydrogeology WRI 93-4231
 hydrogeology WRI 94-4022
 hydrology FS 94-0015; OP-706
 Idaho
 environmental geology WRI 93-4156; OF 95-0644
 hydrogeology WRI 94-4221
 Illinois, environmental geology B 2111
 Iowa, pollution OP-1485
- Kansas, hydrology WRI 94-4187
 Kentucky, ground water WRI 94-4189
 Maryland
 ground water WRI 94-4170
 hydrogeology OF 94-0507
 pollution OP-1985
 Massachusetts, pollution OP-1460
 Mexico, environmental geology YR
 Minnesota
 ground water WRI 94-4149
 pollution OP-1139
 Mississippi, pollution OP-681
 Mississippi Valley, hydrogeology FS 94-0047
 Missouri
 environmental geology OF 94-0333
 hydrogeology OF 94-0705-W
 pollution OF 94-0332; OP-933
 Montana, environmental geology OP-1264
 Nebraska
 hydrogeology WRI 94-4095
 hydrology WRI 94-4187
 Nevada
 ground water OF 95-0107
 hydrology WRI 94-4210
 New Jersey
 hydrogeology OP-750
 pollution OP-2177; OP-2236
 New Mexico, environmental geology OF 94-0269; OF 95-0528
 New York, ground water WRI 93-4029
 North Carolina, hydrology WRI 94-4140
 Oklahoma, ground water OP-144
 Oregon
 environmental geology WRI 93-4156; OF 95-0652
 geophysical surveys OP-459
 hydrogeology OF 95-0285
 hydrology OF 95-0373
 Pennsylvania, environmental geology WRI 94-4060
 pollution WRI 94-4176; OF 94-0399; OP-1041
 Puerto Rico
 environmental geology OP-1405
 hydrogeology WRI 91-4183
 Senegal, environmental geology OP-918
 South Carolina, hydrology OF 94-0385; OF 95-0186
 Tennessee
 hydrology OF 94-0068
 pollution OF 95-0312; OF 95-0329
 Texas
 environmental geology WRI 93-4233
 pollution OP-1093
 United States, environmental geology YR
 Utah, environmental geology OF 94-0560
 Vermont, hydrogeology OP-1631
 Virginia
 FS 0046-95
 environmental geology OP-882
 hydrology WRI 94-4140; WRI 94-4225
 Washington, environmental geology OF 95-0652
 Wisconsin
 environmental geology OF 95-0163
 hydrology OF 95-0163
 pollution OF 95-0163
 Wyoming
 environmental geology C 1108
 hydrogeology WRI 94-4095; WRI 94-4221
- land use maps**
 Louisiana, hydrology WRI 92-4181
 Montana, ground water WRI 95-4034

- Nevada, hydrogeology WRI 94-4233
- Landers California**
earthquakes OP-491
- Landers earthquake 1992**
OP-1477
- California**
OF 94-0228; OF 94-0568; OF 95-0042; OP-212; OP-375; OP-406; OP-457; OP-460; OP-539; OP-714; OP-889; OP-1037; OP-1038; OP-1116; OP-1271; OP-1309; OP-1374; OP-1387; OP-1420; OP-1421; OP-1473; OP-1474; OP-1475; OP-1514; OP-1541; OP-1561; OP-1586; OP-1596; OP-1600; OP-1640; OP-1694; OP-1703; OP-1704; OP-1705; OP-1853; OP-1999; OP-2144
geophysical surveys OF 94-0590
Italy OF 94-0568
United States OF 94-0568
- landfills** *see also* disposal barriers.
California, environmental geology OP-2141
environmental geology OP-183
Kansas, ground water WRI 94-4166
Minnesota, environmental geology OP-558
South Carolina
environmental geology OP-558
ground water WRI 93-4185
Vermont, ground water WRI 94-4108
- landslides** *see also* avalanches; mudflows; rockslides.
OP-1728; OP-1729
- Alaska**
B 2107
geologic hazards B 2107
Atlantic Ocean, oceanography B 2079
- California**
deformation OP-107
earthquakes EV; OF 95-0213
engineering geology OP-366; OP-1585
environmental geology OP-2141
geologic hazards C 1130; FS 0112-95
neotectonics OP-2070
plate tectonics OP-1431
seismology OP-1143; OP-1374
soil mechanics OF 94-0699
- Colorado**
OP-1219; OP-1743
engineering geology EV
geologic hazards OP-1101
structural geology OP-325
earthquakes OP-451; OP-475
geologic hazards OF 94-0663; OF 95-0231; OP-1213; OP-1456
- Hawaii**
OP-1570
clay mineralogy OP-1594
geologic hazards OF 95-0008; OF 95-0218; OP-1523
Quaternary OP-441; OP-639; OP-1496
seismology OP-1241
- Idaho** B 2107
- Illinois** OP-452
- Iowa** OP-2034
- New York**, environmental geology OF 94-0615
- Pacific Ocean**
geologic hazards OP-2191
oceanography B 2079
- Peru**, Quaternary OP-1618
- Puerto Rico**, geologic hazards OP-1201
- Sweden**, Quaternary OF 94-0568
- Washington**
environmental geology OF 95-0498
- seismology OP-573
structural geology OP-1611
- lanthanoids *see* rare earths
- lanthanum**
Alaska, sedimentary petrology OP-1604
Gulf of California, sedimentation OP-1987
metal ores B 2097
- Laos**
petrology OP-1574
- lapilli**
Alaska, Quaternary OP-774; OP-1920
California, Quaternary OP-397
Oregon, Quaternary OP-397
- Laramide Orogeny**
Alaska, deformation OP-1849
Arizona
copper ores OP-291; OP-1381
structural geology OP-1380
tectonophysics OP-352
Basin and Range Province, metal ores OP-1874
Colorado
metal ores B 2109
molybdenum ores OP-526
Proterozoic OP-1982
Great Basin, metal ores OP-1874
Montana
orogeny OF 94-0670
sedimentary petrology OP-1622
stratigraphy OP-596
structural geology OP-480; OP-1681
Nevada, structural geology OP-744
New Mexico, structural geology OP-1878
Rocky Mountains
energy sources OP-1942
uranium ores OF 95-0571
Texas, tectonics OP-363
Utah, structural geology OP-744
Washington, tectonophysics OP-1975
Western Interior, stratigraphy OP-2030
Wyoming
areal geology OP-280
deformation OP-283
faults OP-476
Proterozoic OP-1982
sedimentary petrology OP-1622
structural geology OP-1681
- Laramie anorthosite complex** OP-364
- Laramie Mountains**
maps I-2233
metamorphic rocks OP-1929
sedimentary petrology OP-1622
stratigraphy OP-364
structural geology OP-1232; OP-1288
- Laramie River valley**
uranium ores OF 95-0242
- Laramie-Fox Hills Aquifer**
ground water WRI 94-4238
- LARSE**
geophysical surveys OF 95-0228
- Larva**
earthquakes OP-1302
- Las Vegas Nevada**
engineering geology OP-1367
- Las Vegas Valley**
deformation OP-1323
hydrogeology WRI 94-4124
- Las Vegas Wash**
hydrology WRI 94-4210
- Lascar**
elastic waves OP-1071
- Lassen Peak**
geophysical surveys OF 95-0237; OP-1389; OP-1564
lava OP-1149
Quaternary OP-1511
thermal waters OP-1756
- Lassen Volcanic National Park**
geochemistry OP-790
geothermal energy WRI 94-4180-A
tectonophysics OP-1444
- Last Chance Range**
geochronology OP-625
- last glacial maximum**
Alaska, Quaternary OP-2281
Antarctic Ocean, Quaternary OP-246
California, Quaternary OP-1612
New Mexico, Quaternary OP-1050
Quaternary OP-875; OP-1537; OP-2199
- lateral faults** *see* left-lateral faults; right-lateral faults
- lateral logging** *see* Laterolog
- laterites**
Europe, weathering OP-2052
- Laterolog**
Arizona, metal ores OP-664
- Lathrop Wells Nevada**
waste disposal OP-997
- Latir Lakes**
hydrology WRI 93-4113
- latite**
Colorado
metal ores OF 94-0291
molybdenum ores OP-526
- latitude, paleo-** *see* paleolatitude
- Lau Basin**
petrology OP-920
- laughing gas** *see* nitrous oxide
- laumontite**
faults OF 94-0228
- Laurel Mills Granite**
geochemistry C 1129
- Laurel Mississippi**
ground water WRI 94-4219
- Laurentia**
Antarctica, tectonophysics OP-2003
areal geology OP-2002
Australia, tectonophysics OP-704
Canada, tectonophysics OP-704
Massachusetts, structural geology OP-782
Pennsylvania, Proterozoic OP-3
South America, tectonophysics OP-2003
Virginia, Proterozoic OP-3
- Laurentian Plateau** *see* Canadian Shield
- Laurentide ice sheet**
Alaska, Quaternary OP-1692
Maine, Quaternary OP-990
Massachusetts
oceanography OF 94-0672
Quaternary OP-683; OP-990
New England, Quaternary OP-1658
- Laurussia**
stratigraphy B 2110
- Lausitz** *see* Lusatia
- lava**
OP-58; OP-2069
Alaska
geologic hazards OP-2257
Quaternary OP-772; OP-1921; OP-2258
Andes, Quaternary OP-1511
Bolivia B 2119

- British Columbia OP-1509; OP-1847
- California**
 OP-968; OP-1149
 geochemistry OP-197
 Quaternary OF 94-0633
- Colorado**
 OP-546; OP-773; OP-1716
 metal ores OF 94-0291; OP-284
 sedimentation OP-1690
- East Pacific Ocean Islands** OP-390
- Hawaii**
 OF 95-0496; OP-1025; OP-1400; OP-1717;
 OP-1766
 geochemistry OF 94-0684; OP-861; OP-
 2321
 geologic hazards OP-1523
 Quaternary OP-639; OP-1183; OP-1768
 seismology OP-1911
- Idaho**
 OF 94-0659; OP-898
 Quaternary OF 94-0686
- Mexico, geochemistry** OP-197
- Nevada**
 environmental geology OF 95-0155
 geochemistry B 2056
 metal ores B 2090
 Miocene OP-1408
 stratigraphy B 2056
- Oregon**
 OP-1254
 geochemistry OF 94-0261; OF 95-0040
- Pacific Ocean**
 OP-1351; OP-1941; OP-2132; OP-2266
 geochemistry B 2022
 ocean floors OP-1339; OP-2137
- pahoehoe**
 California OP-305
 Hawaii OP-483; OP-757; OP-1496; OP-
 1616
- Russian Federation, geochronology** OP-194
- Texas, Oligocene** OF 94-0227
- Washington** OP-391; OP-1254; OP-1512
- Wyoming, geophysical surveys** OP-1913
- Yukon Territory, Quaternary** OP-772
- Lava Creek mining district**
 metal ores B 2064-A-R
- Lava Creek Tuff**
 Quaternary OP-1583
- lava domes** *see* shield volcanoes
- lava lakes**
Hawaii
 geochemistry OF 94-0684
 magmas OP-47; OP-1090
 petrology OP-1500
- lava tubes**
Hawaii
 geologic hazards OP-1497
 petrology OP-1223
 Quaternary OP-757; OP-1768
- Lavaca River**
 hydrology FS 94-0073
- Lawler Peak Granite**
 petrology C 1129
- Lawrence Field**
 energy sources OF 94-0298
- Lawson Creek Formation**
 Proterozoic P 1525
- Lawson Limestone**
 Devonian OP-1971
- Lawton Oklahoma**
 geophysical surveys GP-0998-A
- layered intrusions**
 Alaska, geochemistry P 1564
 China C 1129
 Colorado, Proterozoic OP-1982
 Indian Ocean Islands C 1129
 Maine C 1129
 New Mexico, geochemistry OP-959
 Wyoming, Proterozoic OP-1982
- Leach Canyon Formation**
 Miocene B 2056
 stratigraphy B 2056
- lead** *see also* heavy metals.
 Alaska, base metals B 2107
 Alberta, geochemistry C 1129
 Argentina, geochemistry C 1129
 British Columbia, hydrology OF 94-0315
 Colorado
 geochemistry OP-1046
 metal ores B 2116
 pollution OP-488; OP-1082; OP-1535
 Gabon, bitumens OP-1403
 geochemistry OF 95-0486
 Idaho, pollution OP-1146; OP-2129
 Kentucky, sedimentary petrology OP-1548
 Massachusetts, geochemistry OP-1396
 metal ores OP-1013
 Nebraska, geochemistry OP-1046
 Nevada, gold ores OP-1946
 New Mexico, metal ores OF 94-0691
 Oregon, folds OP-1128
 Pb-206/Pb-204
 OP-1826
 Alaska OP-23; OP-1361
 Antarctica C 1129
 British Columbia OP-1361
 California C 1129; OP-160; OP-197; OP-
 313; OP-1095
 Colorado OF 94-0412; OF 95-0250; OP-
 284; OP-773; OP-1626
 Idaho B 2064-A-R; OP-1039
 Italy OP-27
 Kenya C 1129
 Maine C 1129
 Mexico OP-197
 Mississippi Valley B 2094-B
 Montana OP-2133
 Nevada C 1129; OP-2326
 New Mexico B 2081
 Oregon OP-29
 Pacific Ocean OP-1033; OP-1197
 petrology OP-938; OP-939
 Utah OP-189
 Vanuatu OP-337
 Vermont OP-1194
 Yemen C 1129; OP-1079
 Pb-207/Pb-204
 OP-1826
 Alaska OP-23; OP-1361
 Antarctica C 1129
 British Columbia OP-1361
 California C 1129; OP-197; OP-313; OP-
 1095; OP-1818
 Chile C 1129
 Colorado OF 95-0250; OP-284; OP-1626
 Idaho B 2064-A-R; OP-1039
 Italy OP-27
 Maine C 1129
 Mexico OP-197
 Mississippi Valley B 2094-B
 Nevada C 1129
 New Mexico B 2081
 Pacific Ocean OP-1033
 petrology OP-938
 Texas C 1129
 Utah OP-189
 Vermont C 1129
 Yemen C 1129
 Pb-207/Pb-206
 California OP-160; OP-321
 Idaho OP-1039
 Montana OP-2133
 petrology OP-939
 Pb-208
 California OP-2026
 Missouri OP-1299
 Pb-208/Pb-204
 Alaska OP-23; OP-1361
 Antarctica C 1129
 British Columbia OP-1361
 California C 1129; OP-197; OP-313; OP-
 1095
 Colorado OF 94-0412; OF 95-0250; OP-
 284; OP-1626
 Idaho B 2064-A-R; OP-1039
 Italy C 1129; OP-27
 Maine C 1129
 metal ores OF 94-0298
 Mexico OP-197
 Mississippi Valley B 2094-B
 Montana OP-2133
 Nevada C 1129; OP-836; OP-2326
 New Mexico B 2081
 Pacific Ocean OP-1033
 petrology OP-938; OP-939
 Yemen C 1129
 Pb-208/Pb-206
 California OP-160
 Idaho OP-1039
 Pb-210
 California OP-1397; OP-1538; OP-1940
 Gulf of California OP-1987
 Pacific Ocean OP-503
 phase equilibria OP-1236
 Rocky Mountains, pollution OF 94-0670
 South Carolina, pollution WRI 94-4209
 South Dakota, magmas C 1129
 Spain, gold ores OF 95-0221
 U-238/Pb-204
 OP-1826; OP-2183
 petrology OP-939
 U-238/Pb-206
 California OP-160; OP-321
 petrology OP-938
 Western Interior OP-506
 Washington
 hydrology OF 94-0315
 pollution OP-1146; OP-2064
 Wisconsin, environmental geology OF 95-0163
- lead glance** *see* galena
- lead ores** *see also* lead-zinc deposits; mississippi valley-type.
 OP-1013
 Alaska OP-1893
 Arizona B 2138; OP-1606
 Bolivia OP-188
 California, pollution OP-2026
 Canadian Shield OP-2126
 Caribbean region B 2057
 Colorado
 OP-733; OP-1096
 geophysical surveys OP-1118
 Great Britain OP-2126
 Idaho
 P 1525; B 2064-A-R

- pollution OP-1156
 Lesser Antilles B 2057
 Peru OP-202
 Spain OP-22
- lead paint**
 geochemistry OF 95-0486
- lead phosphate**
 phase equilibria OP-1238
- lead titanate**
 phase equilibria OP-1236
- lead-lead *see* Pb/Pb
- lead-zinc deposits** *see also* mississippi valley-type.
 Alaska OP-1895
 diagenesis OF 94-0298
 Idaho B 2064-A-R; OF 94-0690
 Mississippi Valley OF 94-0298; OP-888
 New York OP-303
 Pennsylvania OP-1895
 Wisconsin OP-792
- Leadbelt Idaho**
 metal ores B 2064-A-R
- Leadville Colorado**
 pollution OP-487; OP-488
- Leadville Formation**
 OF 94-0583
 energy sources B 2000-H
 environmental geology OP-1045
- Leadville mining district**
 hydrology OF 94-0412
 metal ores B 2109
- Leadville Quadrangle**
 geochronology B 2104
- leaking underground storage tanks**
 pollution FS 0114-95
 South Carolina, pollution OF 94-0486
 Washington, pollution WRI 92-4017; WRI 94-4030
- leaky aquifers**
 New Mexico, ground water WRI 93-4192
- Lebanon**
 plate tectonics OF 94-0568
- Lebanon Limestone**
 stratigraphy OP-1502
- lebensspuren** *see also* burrows.
 Alaska, Proterozoic OP-1624
 stratigraphy OP-1319
 Yukon Territory, Proterozoic OP-1624
- Lechuguilla Cave**
 environmental geology C 1108
 mineralogy OP-1275
 sedimentation OP-1276
 solution features OP-190; OP-1277
- Leclercq, Suzanne S.**
 paleobotany OP-644
- Ledyard Member**
 paleontology OP-543
- Lee Dalton Formation**
 structural geology OP-782
- Lees Ferry Arizona**
 geomorphology OP-1368; OP-2072
 hydrology OP-2203
- left-lateral faults**
 California
 OP-1839
 Quaternary OF 94-0568
 seismology OP-818; OP-1586
 China, Quaternary OF 94-0568
 Greece, Quaternary OF 94-0568
 Nevada OP-1323; OP-1904; OP-2276
- Philippine Islands, geologic hazards OP-1048
 Puerto Rico, plate tectonics OP-1304
 tectonophysics OP-985
- Leg 1**
 Pliocene OF 94-0588
- Leg 5 *see* DSDP Site 35
- Leg 26 *see* DSDP Site 258
- Leg 28 *see* DSDP Site 274
- Leg 36 *see* DSDP Site 327
- Leg 47 *see* DSDP Site 398
- Leg 68 *see* DSDP Site 502
- Leg 71 *see* DSDP Site 511
- Leg 74 *see* DSDP Site 525
- Leg 76 *see* DSDP Site 533
- Leg 79 *see* DSDP Site 545; DSDP Site 547
- Leg 80 *see* DSDP Site 551
- Leg 85 *see* DSDP Site 572
- Leg 94 *see* DSDP Site 607
- Leg 95 *see* DSDP Site 612
- Leg 100 *see* ODP Site 625
- Leg 103 *see* ODP Site 641
- Leg 104 *see* ODP Site 642
- Leg 105 *see* ODP Site 646
- Leg 110**
 oceanography OP-2149
- Leg 113 *see* ODP Site 693; ODP Site 695
- Leg 114 *see* ODP Site 704
- Leg 119 *see* ODP Site 742; ODP Site 745
- Leg 122 *see* ODP Site 763
- Leg 126**
 petrology OP-920
- Leg 128 *see* ODP Site 798
- Leg 130 *see* ODP Site 806; ODP Site 807
- Leg 134** *see also* ODP Site 832; ODP Site 833.
 oceanography OP-338
 plate tectonics OP-162; OP-336; OP-337
- Leg 138 *see* ODP Site 846
- Leg 139**
 geochemistry OP-1032
 oceanography OP-52; OP-652
 sedimentary petrology OP-776
- Leg 141 *see also* ODP Site 859; ODP Site 860;
 ODP Site 861; ODP Site 863.
 tectonophysics OP-56
- Leg 143 *see* ODP Site 865; ODP Site 866
- Leg 145**
 Pliocene OP-1088
- Leg 146**
 tectonophysics OP-1246
- Leg 150**
 Miocene OP-622
- lehm *see* loess
- Lehman Caves Quadrangle**
 maps GQ-1758
- Leipsic River**
 engineering geology WRI 94-4164
- Lemhi Fault**
 Quaternary OF 94-0568
- Lemhi Range**
 cobalt ores OP-167
- Lena Basin**
 petroleum OP-153
- Leo Formation**
 sedimentary petrology B 2110
- Leonardian**
 Idaho OP-361
 Oregon OP-361
- leptite**
 India C 1129
- Leslie Cemetery Indiana**
 sedimentary petrology OP-1002
- Lesser Antilles** *see also* Barbados; Trinidad and Tobago.
 ground water, Saint Croix WRI 93-4162;
 OF 91-0503; OF 94-0531
 hydrogeology, U. S. Virgin Islands OF 93-0629
 metal ores, U. S. Virgin Islands B 2057
 plate tectonics
 OF 94-0228
 Dominica OP-1983
 Virgin Islands OP-1304
- Lesser Caucasus**
 seismology OP-140
- Lesser Himalayas**
 geochemistry C 1129
- leucite**
 Italy, fluid inclusions OP-950
- leucitite**
 Hawaii OP-1307
- leucogranite**
 Argentina C 1129
 California, geochemistry C 1129
 Carpathians C 1129
 Chile C 1129
 Himalayas C 1129
 India C 1129
 Iran C 1129
 Maine C 1129
 Nevada
 OP-1817
 geochemistry C 1129
 Oklahoma C 1129
 Pakistan, geochemistry C 1129
 South Dakota, geochemistry C 1129
 Spain
 C 1129
 geochemistry C 1129
 Virginia, geochemistry C 1129
- Leviathan Mine**
 geochemistry WRI 93-4122
- Lewis and Clark Lane**
 stratigraphy OP-596
- lexicons** B 2129
- Lexington Quadrangle**
 maps OF 94-0656
- Leyden Creek California**
 Quaternary OF 94-0568
- Lg-waves**
 Utah OP-103
- lierzollite**
 California OP-1149
 geochemistry OP-978
- Li *see* lithium
- libraries** YR; OP-570; OP-1533
- lichenometry**
 geologic hazards OF 94-0663
 New Zealand, Quaternary OF 94-0568
 Quaternary OF 94-0568
- life assemblage *see* biocenoses
- life origin *see* exobiology
- ligands**
 Arizona, fluorides OP-466
 metal ores OP-318
- lightning**
 Alaska, Quaternary B 2139
- lightweight aggregate *see* aggregate

- lignin**
sedimentary petrology OP-1078
- lignite**
Canada OP-268
China OP-2016
Europe OP-2052
Louisiana, Paleocene OF 95-0208
Mississippi, Paleocene OF 95-0208
Montana, geochemistry OP-922
North Dakota, geochemistry OP-922
Pakistan OF 94-0557
South Dakota OP-267
Texas OP-2256
United States OP-268
Washington OP-1042
- Lik Creek Deposit**
metal ores OP-1895
- Lima Peaks**
geochronology B 2113
stratigraphy B 2113
- limestone** *see also* biomicrite; calcarenite; coquina; dolomitization; micrite; oolitic limestone. OP-1340
Alaska
OP-217
Proterozoic OP-1624
stratigraphy OP-1439
Appalachians, stratigraphy OP-1324
Arizona OP-2023
California
geochemistry P 1566
stratigraphy OP-1036
Colorado
OP-1242; OP-1272
metal ores OP-1096
Cretaceous I-2474-A
Egypt OP-1770
energy sources B 2000-H
Florida
Devonian OP-1971
ground water OP-1455; OP-1948
geochemistry OF 94-0298; OP-602
Georgia, Devonian OP-1971
Illinois, petroleum OF 94-0298
Indiana, petroleum OF 94-0298
Iran OP-154
Kansas, ground water WRI 94-4166
Massachusetts OF 95-0044
Mexico, stratigraphy OP-1036
Missouri, petrology OP-1299
Montana, stratigraphy OP-1131
Nevada
geochemistry OP-2326
gold ores OP-1946
hydrogeology OP-1947
New Mexico
OP-1274
Proterozoic OP-21
Pacific Ocean, ocean floors OP-2127
Papua New Guinea, tectonophysics OP-1035
Pennsylvanian OP-1228
petroleum OF 94-0298
Puerto Rico
ground water OF 93-0499
neotectonics OP-2179
plate tectonics OP-1304
stratigraphy OP-768
Texas, ground water WRI 94-4117; WRI 95-4030
Utah OP-1272
Virginia, stratigraphy B 2135
Western Interior, stratigraphy OP-1324
- Yukon Territory
OP-217
Proterozoic OP-1624
- limestone deposits**
California OF 95-0039
environmental geology C 1108
Montana OP-2225
- limnology** *see also* paleolimnology.
Alaska
geochemistry B 2107
hydrogeology OF 94-0367
hydrology B 2139; OP-1429
Antarctica, hydrology OF 94-0545
Arizona, hydrology WRI 95-4053
British Columbia, hydrology OF 94-0315
California, hydrology FS 0115-95
Cameroon, hydrology OP-256
Canada, pollution OF 94-0472
Colorado, hydrology WRI 94-4097; OF 94-0412
Florida
ground water OF 93-0026
hydrology WRI 93-4103; OF 94-0709-W
hydrogeology C 1108
hydrology OF 94-0363
Idaho, hydrology WRI 94-4119; OF 94-0109
Iowa, pollution OP-1605
Kansas, pollution W 2419
Louisiana, hydrology FS 0118-95
Minnesota
ecology C 1108
hydrogeology WRI 94-4062
pollution OF 95-0116
Nebraska, pollution W 2419
Nevada, hydrology FS 0115-95
New England, hydrogeology FS 94-0027
New Mexico, hydrology WRI 93-4113
New York, hydrology WRI 92-4052; OP-617
North Carolina, hydrology WRI 94-4123; WRI 94-4140; OF 94-0509
North Dakota, hydrology WRI 94-4171; WRI 95-4102; OF 94-0546; OF 95-0123
Ohio, geophysical surveys OF 95-0252
Oklahoma, ecology OF 94-0324
Oregon, hydrogeology OF 95-0285
Rocky Mountains, environmental geology YR; C 1108
Russian Federation, hydrology OF 94-0445
South Carolina, hydrology OF 95-0186
Texas, pollution OF 94-0302
United States, pollution OF 94-0472
Virginia, hydrology WRI 94-4140
Washington
environmental geology OF 95-0195
hydrology OF 94-0109; OF 94-0315
Quaternary OF 94-0568
Wisconsin
ecology C 1108
environmental geology OF 95-0163; OP-1663
hydrogeology WRI 94-4101
- Lincoln Point Utah**
hydrogeology WRI 93-4219
- Lindsay Quadrangle**
maps OF 88-0614; OF 88-0615
- Lindsey Slough Field**
energy sources OP-1746
- line defects** *see* crystal dislocations
- lineaments** *see also* fault zones.
Alaska
OP-201
metal ores OP-1169
- Arkansas, springs OP-1159
California, geologic hazards OF 93-0684
Canada, metal ores OP-1169
geophysical surveys OP-505
Idaho, geophysical surveys P 1525
Kentucky, faults OF 94-0298
Mississippi Valley, structural geology P 1538-E
Montana
natural gas OP-854
stratigraphy OP-596
structural geology OP-1689
- lineation** *see also* folds; foliation; fractures; slickensides.
California, Quaternary OF 94-0568
Rocky Mountains OP-1232
- liners** *see* disposal barriers
- Linton Formation**
coal OF 94-0298
- Lions Head California**
geochemistry P 1566
paleomagnetism OP-1916
stratigraphy B 1995-L
- Lipari Islands** *see* Stromboli
- liptinite** *see* exinite
- liquefaction** *see also* liquefaction potential.
Alaska, Quaternary OP-1098
Arkansas, Quaternary P 1538-H; OP-946
Australia, tectonophysics OP-2334
California
earthquakes OP-1529; OP-1530
engineering geology OF 94-0709
geologic hazards OF 95-0062; OP-419
seismology OP-860; OP-1514; OP-1617
tectonophysics OP-2334
Canada, tectonophysics OP-2334
Chile, Quaternary OP-1098
Ecuador, engineering geology OF 94-0568
engineering geology OP-1148
environmental geology OP-1619
geologic hazards OF 94-0663
Illinois, seismology OP-1451
India, tectonophysics OP-2334
Indiana, seismology OP-1451
Japan
engineering geology OP-1027
Quaternary OF 94-0568
Mississippi Valley, Quaternary OF 94-0568
Missouri, Quaternary P 1538-H; OP-1707
Oklahoma, tectonophysics OP-2334
Pacific Coast, earthquakes OP-26
Quaternary OF 94-0568
seismology OP-1075; OP-2217
South Carolina
geologic hazards OF 94-0663
Quaternary OF 94-0568
Washington
engineering geology OP-1859
geologic hazards OF 94-0589; OF 94-0663
structural geology OP-1592
- liquefaction potential**
California, engineering geology OF 94-0568
- liquid chromatography**
geochemistry OP-1963
- liquid inclusions** *see* fluid inclusions
- Lisan Formation**
Quaternary OF 94-0568
- Lisbon Falls South Quadrangle**
Quaternary OP-990
- Lisbon Field**
energy sources B 2000-H

Lisburne Group *see also* Kanayut Conglomerate;
Kayak Shale.
areal geology OP-641
petroleum OP-2105

listric faults

Arizona OP-1666
California OP-824
Mexico OP-824
Nevada, energy sources OF 94-0670
Utah OP-2111

lithium

Gulf of California, sedimentation OP-1987
Montana, energy sources OP-302
New Mexico, uranium ores B 2063
South Dakota, geochemistry C 1129
Wyoming, energy sources OP-302

lithogeochemistry *see also* fluid inclusions; meta-
somatism; sedimentary rocks.
B 2110; C 1129; OF 94-0298

Alaska

P 1564; B 2107; B 2139; OF 95-0236
Quaternary OP-772

Alberta C 1129

Antarctica, magmas C 1129

Appalachians C 1129

Argentina

C 1129
petrology C 1129

Arizona

B 2021-E
petrology C 1129

Arkansas OF 94-0450

Australia

magmas C 1129
petrology C 1129

Bolivia, lava B 2119

Brazil

C 1129
petrology C 1129

California

P 1566; C 1129; OF 95-0034; OF 95-0227-
A; OF 95-0227-B; OP-197
petrology OP-45

Canada C 1129

Canadian Shield C 1129

Carpathians, petrology C 1129

Chile

C 1129
magmas C 1129

Egypt, magmas C 1129

Finland C 1129

France

C 1129
petrology C 1129

Germany C 1129

Greece C 1129

Idaho

OP-716
economic geology B 2064-A-R

India

C 1129
metamorphism C 1129

Indian Ocean Islands, inclusions C 1129

Iran, magmas C 1129

Italy C 1129

Japan C 1129

Kenya C 1129

Maine

C 1129
petrology C 1129

Mexico OP-197

Minnesota, Quaternary OF 94-0578

Montana OF 95-0098

Nebraska OF 94-0292

Nevada

P 1559; B 1988-K; B 2056; C 1129

structural geology OP-454

Tertiary OF 95-0545

New Jersey P 1565-A

New South Wales Australia, magmas C 1129

North Carolina C 1129

Northwest Territories, magmas C 1129

Nova Scotia OP-1867

Oklahoma, petrology C 1129

Oregon OF 94-0261; OF 95-0040; OF 95-
0227-A; OF 95-0227-B

petrology C 1129

Romania C 1129

Russian Federation C 1129; OP-50

Scotland C 1129

South Dakota C 1129

Spain

C 1129; OP-118

magmas C 1129

Texas, magmas C 1129

Utah

B 1988-K; B 2056

magmas C 1129

Vermont C 1129

Victoria Australia C 1129

Virginia

C 1129

magmas P 1529

petrology C 1129

Wales C 1129

Wyoming I-2233

Yemen C 1129

Yukon Territory, Quaternary OP-772

lithologic traps *see* stratigraphic traps

Lithoprobe

British Columbia

faults OP-248

Mohorovicic discontinuity OP-109

Canadian Shield, geophysical surveys OP-1804

Manitoba, structural geology OP-1073

Newfoundland, geophysical surveys OP-779

Saskatchewan, structural geology OP-1073

lithostratigraphy

B 2060; B 2110; B 2135; I-2474-A; OP-96

Alaska

B 2107; OP-201; OP-711; OP-931

palynomorphs OP-184

petrology B 2139

Quaternary OF 94-0568

sedimentary petrology B 2107

tectonics B 2107

uranium ores B 2098

Antarctic Ocean, continental shelf OP-921

Appalachians OP-1324

Arctic region B 2110

Arizona B 2110; OP-223; OP-224; OP-669

Atlantic Coastal Plain OP-903; OP-1412

Atlantic Ocean, continental shelf OP-1970

California

B 1995-J,K; OP-669

non-metal deposits OF 95-0039

sedimentary petrology OP-603

Canada, structural geology B 1904-T

Colorado

OF 94-0437; OF 94-0583; I-2555; OC-
0144; OC-0145; OP-1691

magmas OP-1325

Quaternary OP-2113

Colorado Plateau OP-222

Connecticut

OP-2297

geophysical surveys OP-2218

Florida

OF 95-0003; OP-1204

continental shelf OP-2293

diagenesis OP-2263

Quaternary OP-1719

sedimentary petrology OP-1710

Georgia

OP-742; OP-1359

oceanography OP-586

phosphate deposits OP-583

Idaho

P 1525

ground water OP-44

metal ores B 2064-A-R

polymetallic ores B 2064-A-R

Illinois

faults OF 94-0298

Quaternary OP-1630

Indiana, petroleum B 2094-D

Iowa, Quaternary OP-1630

Kansas OF 95-0256

Kazakhstan, energy sources OP-169

Kentucky

B 2135

faults OF 94-0298

natural gas OF 94-0298

Maryland, sedimentary petrology OP-848

metal ores OP-870

Mexico OP-838

Mississippi, Quaternary OF 94-0558

Montana B 2112

Nevada

B 2056; OF 94-0342; OF 94-0460; OF 95-
0102; OP-1860

environmental geology OF 94-0451

Eocene OP-105

geochemistry P 1559; B 2056

Quaternary B 2056

sedimentary petrology B 1988-I

structural geology B 2056

New Hampshire

OP-1995

structural geology OP-1830

New Jersey OP-622; OP-623

New Mexico B 2063; OP-224; OP-379

New York

B 2086

ground water WRI 93-4029

Quaternary WRI 90-4168

North Carolina OP-925

North Dakota B 2112

Ontario B 2086

Pacific Ocean, ocean floors OP-2127

Philippine Islands, Quaternary OP-1886

Rocky Mountains, uranium ores OF 95-0571

South America, energy sources OF 94-0559

South Carolina OP-1393

Spain, geochemistry OP-118

Tennessee, ground water WRI 95-4011

Texas

OP-1925

ground water WRI 93-4126; WRI 94-4039;

WRI 94-4117; WRI 95-4030; WRI 95-
4038

United States, structural geology B 1904-T

Utah

B 2056; B 2115-B

Eocene OP-105

palynomorphs OP-184

sedimentation B 2115-A

- Vanuatu
 OP-275
 plate tectonics OP-162
 Vermont B 2060; OP-1068; OP-1995
 Virginia B 2060; B 2135; OF 94-0217; OF 94-0573; OP-63; OP-925; OP-2071
 Washington
 B 2085-A
 ground water WRI 92-4098
 Western Interior B 2113; OP-1324; OP-2063
 Wyoming
 C-0146
 deformation OP-283
 Quaternary OP-355
 Yukon Territory, petrology B 2139
- Little Blue River**
 ecology W 2352-B
 geomorphology W 2352-B
 hydrology W 2352-B
 pollution W 2352-B
- Little Clayhole Valley Quadrangle**
 maps OF 94-0290
- Little Colorado River basin**
 environmental geology WRI 94-4192
 hydrogeology OF 94-0356; OP-335
 hydrology FS 0120-95
- Little Dome Anticline**
 energy sources OP-1621
- Little Ice Age *see* Neoglacial
- Little Joe Seamount**
 geochemistry OP-197
- Little Pine Fault**
 fractures OF 94-0228
- Little Plute Mountains**
 maps OF 95-0598
- Little Rock Arkansas**
 hydrology WRI 94-4216
- Little Salt Lake Fault**
 Quaternary B 2056
- Little Skull Mountain earthquake 1992**
 earthquakes OP-12; OP-365
 seismicity OP-823
 seismology OP-614
- Little Spokane River**
 guidebook OF 94-0636
- Littlefield Quadrangle**
 areal geology B 2056
 hydrology OP-1516
 maps OF 95-0559
- Littleton Formation** OP-1068
- Littleton Quadrangle**
 maps OF 94-0410
 Silurian OP-1995
- littoral drift**
 California, oceanography OP-1066
- littoral erosion**
 Alaska, sediments OP-1086
 Illinois, frost action OP-43
 Indiana, frost action OP-43
- Lituolacea *see* Trochammina
- Lituolidae *see* Haplophragmoides
- Livengood Quadrangle**
 paleontology OF 94-0215
- Llandoverian**
 Alaska OP-1
- Llano Uplift**
 structural geology C 1129
- loam**
 OP-322
 Missouri, pollution OP-934
- location maps *see* site location maps
- Lockatong Formation**
 OP-1672
 diagenesis OP-2118
 energy sources OP-2058; OP-2059
 sedimentary petrology OP-2140
- Lockport Formation** B 2086
- loess**
 Alaska, Quaternary OP-1692
 Appalachians, stratigraphy OP-1324
 China
 Quaternary P 1549
 seismology OF 95-0562
 Colorado
 geomorphology OP-572
 Quaternary OP-2113
 stratigraphy OP-2027
 Idaho, Quaternary OF 94-0568
 Mississippi Valley
 pedogenesis OP-2319
 Quaternary OP-1757
 Tennessee, ground water WRI 95-4011
 Western Interior, stratigraphy OP-1324
- Logan Quadrangle**
 maps I-2210
 logging, acoustical *see* acoustical logging
 logging, caliper *see* caliper logging
 logging, electrical *see* electrical logging
 logging, electromagnetic *see* electromagnetic logging
- Lolhi Seamount**
 geophysical surveys OP-1655
 seismology OP-1654
- Loiza Puerto Rico**
 environmental geology OP-1405; OP-1791
 hydrology OF 94-0363
 sedimentary petrology OP-310
- Loma Prieta earthquake 1989**
 California
 OF 94-0221; OF 94-0228; OF 94-0552;
 OF 95-0095; FS 0132-95; OP-62; OP-91;
 OP-262; OP-301; OP-373; OP-419; OP-587;
 OP-591; OP-820; OP-825; OP-860;
 OP-893; OP-914; OP-1116; OP-1143; OP-1222;
 OP-1347; OP-1364; OP-1374; OP-1475;
 OP-1586; OP-1617; OP-1637; OP-1808;
 OP-2042; OP-2084; OP-2120; OP-2286
 faults OP-320
 hydrogeology OP-789; OP-2043
 Quaternary OF 94-0568
 tectonophysics OP-2181
 Japan OF 94-0221; OP-893
 Lombardy Italy *see* Adamello Massif
- Lomililk Seamount**
 stratigraphy OP-1229
- Lomilla Caldera**
 metal ores OP-22
- lomontite *see* laumontite
- Lone Formation**
 Proterozoic B 2107
- Long Island**
 geomorphology OP-2170
 ground water WRI 92-4171
 pollution OP-115
- Long Island Sound**
 geochemistry OF 94-0620
 geophysical surveys OP-2218
 ocean floors OP-2324
 oceanography OF 95-0556; I-2456; OP-1972
 Quaternary OP-2165
- Long Valley**
 Quaternary OP-1505
 stratigraphy OP-1736
- Long Valley Caldera**
 engineering geology OP-1367
 environmental geology OP-261
 geophysical surveys FS 0079-95; OP-522
 geothermal energy OP-884
 Quaternary OF 94-0633; OP-988; OP-2142
 seismicity OP-255; OP-406; OP-457
 seismology OF 94-0228; OP-249; OP-1514
- long-wall mining *see* longwall mining
- longitudinal wave *see* P-waves
- Longmire Washington**
 pollution WRI 94-4030
- longshore drift *see* littoral drift
- longwall mining**
 Appalachians, impact statements OF 95-0589
- Lopez Fault**
 faults OP-835
- Los Altos California**
 maps B 2107
- Los Angeles Basin**
 earthquakes OF 94-0568
 energy sources OP-385
 Quaternary OF 94-0568; OP-737
 seismology OP-1336; OP-1550
- Los Angeles California**
 crust OP-649
 earthquakes YR; EV; OF 95-0092; OF 95-0213;
 OF 95-0429; OP-430; OP-592
 engineering geology FS 0096-95; FS 0132-95;
 OP-891; OP-1467
 geophysical surveys OF 95-0228; OP-1285
 maps OF 95-0051
 seismology OP-893
- Los Angeles Dam**
 engineering geology FS 0096-95
- Los Gatos California**
 energy sources OP-2146
 faults OP-1577
 seismology OF 95-0095
- Los Padres National Forest**
 natural gas OP-1121
- Los Pinos Formation**
 faults OP-2243
- Los Tamales Deposit**
 maps OF 94-0685
- Lospe Formation**
 energy sources OF 95-0530
- Lost River basin**
 ground water WRI 94-4195
- Lost River Fault**
 Quaternary OF 94-0568
- Louisiana *see also* Mississippi River, Mississippi Valley.**
 conservation
 Cameron Parish Louisiana OF 94-0275
 Iberia Parish Louisiana OF 94-0275
 Lafourche Parish Louisiana OF 94-0275
 Orleans Parish Louisiana OF 94-0275
 Plaquemines Parish Louisiana OF 94-0275
 Saint Bernard Parish Louisiana OF 94-0275
 Saint Mary Parish Louisiana OF 94-0275
 Terrebonne Parish Louisiana OF 94-0275
 Vermilion Parish Louisiana OF 94-0275
 ecology
 Cameron Parish Louisiana OF 94-0275
 Iberia Parish Louisiana OF 94-0275
 Jefferson Parish Louisiana OF 94-0275

Lafourche Parish Louisiana OF 94-0275
 Orleans Parish Louisiana OF 94-0275
 Plaquemines Parish Louisiana OF 94-0275
 Saint Bernard Parish Louisiana OF 94-0275
 Saint Mary Parish Louisiana OF 94-0275
 Terrebonne Parish Louisiana OF 94-0275
 Vermilion Parish Louisiana OF 94-0275

energy sources

OF 94-0228

New Orleans Louisiana C 1108

engineering geology

OP-1938

Assumption Parish Louisiana OF 94-0275

Iberia Parish Louisiana OF 94-0275

Lafourche Parish Louisiana OF 94-0275

Mississippi Delta OF 94-0275

Orleans Parish Louisiana OF 94-0275

Plaquemines Parish Louisiana OF 94-0275

Saint Bernard Parish Louisiana OF 94-0275

Saint Charles Parish Louisiana OF 94-0275

Saint James Parish Louisiana OF 94-0275

Saint Mary Parish Louisiana OF 94-0275

Terrebonne Parish Louisiana OF 94-0275

environmental geology

Cameron Parish Louisiana OF 94-0275

Iberia Parish Louisiana OF 94-0275

Lafourche Parish Louisiana OF 94-0275

Mississippi Delta OF 94-0275

Orleans Parish Louisiana OF 94-0275

Plaquemines Parish Louisiana OF 94-0275

Saint Bernard Parish Louisiana OF 94-0275

Saint Mary Parish Louisiana OF 94-0275

Terrebonne Parish Louisiana OF 94-0275

Vermilion Parish Louisiana OF 94-0275

geomorphology

Atchafalaya Bay OF 94-0275

Cameron Parish Louisiana OF 94-0275

Iberia Parish Louisiana OF 94-0275

Lafourche Parish Louisiana OF 94-0275

Mississippi Delta OF 94-0275

Orleans Parish Louisiana OF 94-0275

Plaquemines Parish Louisiana OF 94-0275

Saint Bernard Parish Louisiana OF 94-0275

Saint Mary Parish Louisiana OF 94-0275

Terrebonne Parish Louisiana OF 94-0275

Vermilion Parish Louisiana OF 94-0275

ground water

WRI 94-4085

Grant Parish Louisiana WRI 94-4228

Jefferson Parish Louisiana OP-1996

Livingston Parish Louisiana WRI 94-4202

Rapides Parish Louisiana WRI 94-4228

Saint Helena Parish Louisiana WRI 94-4202

Saint Tammany Parish Louisiana WRI 94-4202

Tangipahoa Parish Louisiana WRI 94-4202;
 OP-1996

Washington Parish Louisiana WRI 94-4202

hydrology

Acadia Parish Louisiana WRI 92-4181

Cameron Parish Louisiana WRI 92-4181

Evangeline Parish Louisiana WRI 92-4181

Jefferson Davis Parish Louisiana WRI 92-4181

Jefferson Parish Louisiana FS 0118-95

Lake Pontchartrain FS 0118-95

Livingston Parish Louisiana FS 0118-95

Orleans Parish Louisiana FS 0118-95

Plaquemines Parish Louisiana FS 0118-95

Saint Bernard Parish Louisiana FS 0118-95

Saint Charles Parish Louisiana FS 0118-95

Saint John the Baptist Parish Louisiana
 FS 0118-95

Saint Tammany Parish Louisiana FS 0118-95

Tangipahoa Parish Louisiana FS 0118-95

Vermilion Parish Louisiana WRI 92-4181

natural gas OP-1543

oceanography

Atchafalaya Bay OF 94-0275

Jefferson Parish Louisiana I-2150-B

Lafourche Parish Louisiana OF 94-0275; I-2150-B

Mississippi Delta I-2150-B

Plaquemines Parish Louisiana I-2150-B

Saint Mary Parish Louisiana OF 94-0275

Terrebonne Parish Louisiana OF 94-0275;
 I-2150-B

Paleocene, De Soto Parish Louisiana OF 95-0208

pollution, Mississippi Delta OP-758

Quaternary

OF 94-0275

Mississippi Delta OP-1936

shore features

Iberia Parish Louisiana OF 94-0275

Mississippi Delta OP-1937

Terrebonne Parish Louisiana OF 94-0275

waterways

Atchafalaya Bay OF 94-0275

Atchafalaya River OF 94-0275

Iberia Parish Louisiana OF 94-0275

Jefferson Parish Louisiana OF 94-0275

Plaquemines Parish Louisiana OF 94-0275

Saint Mary Parish Louisiana OF 94-0275

Terrebonne Parish Louisiana OF 94-0275

Louisville Kentucky

ground water WRI 94-4099

hydrology WRI 94-4065

Love waves

California OP-889; OP-1703; OP-2144

Loveland Loess

pedogenesis OP-2319

Quaternary OP-1758

low-angle faults

Alaska, plate tectonics OP-1682

California

OF 94-0568

economic geology OP-216

Hawaii

geologic hazards OP-696

Quaternary OP-1453

Nevada B 2056; OP-1440; OP-1976

Utah B 2056; OP-695; OP-1494

low-grade metamorphism

Alaska OP-409

Canada OP-409

Victoria Australia, deformation OF 94-0228

Lowellville Limestone Member

stratigraphy OP-874

Lower Carboniferous *see* Dinantian

Lower Cretaceous *see* Albian; Aptian; Barremian;

Blackleaf Formation; Fredericksburg Group;

Georgetown Formation; Kootenay Formation;

Lakota Formation; Muddy Sandstone; Neocomian;

Torok Formation; Trinity Group

lower crust

C 1129

Alaska

structural geology OP-1395

tectonics OP-2299

Australia OP-2334

Austria, inclusions C 1129

Basin and Range Province, geophysical surveys
 OP-1835

California

OP-620; OP-2195; OP-2334

geophysical surveys OP-1928

petrology OF 95-0585; OP-708

Canada OP-2334

Colorado Plateau, geophysical surveys OP-1835

geophysics OP-552

Germany, metasomatism C 1129

Hawaii, geophysical surveys OP-1655

India OP-2334

Italy

geochemistry OP-865

intrusions OP-866

petrology C 1129; OP-754

structural analysis OP-755

magma C 1129

Oklahoma OP-2334

Oregon, petrology OP-1590

petrology OP-1138

structural geology OF 94-0228

Virginia OP-413

Lower Devonian *see* Emsian; Littleton Formation;

Oriskany Sandstone; Pragian

lower Eocene *see* Aquia Formation; Willwood

Formation; Wind River Formation

Lower Granite Reservoir

hydrology OF 94-0109

Lower Jurassic *see* Nugget Sandstone; Portland

Formation; Talkeetna Formation

lower mantle *see also* core-mantle boundary.

Bolivia OP-180; OP-252; OP-494

Lower Mississippi Valley

Quaternary OP-1757

shore features OP-1937

Lower Mississippian *see* Chouteau Limestone;

Joana Limestone; Kayak Shale; Kekiktuk Conglomerate; Osagian

lower Neogene *see* Miocene

Lower Ordovician *see* Beekmantown Group; Prairie du Chien Group

lower Paleocene *see* K-T boundary; Puercan

lower Paleozoic *see* Ashe Formation; Berwick Formation; Chopawamsic Formation; Glenasm Series

Lower Pennsylvanian *see* Caseyville Formation; Morrowan; Pocahontas Formation

Lower Permian *see* Abo Formation; Leonardian; Wolfcampian

lower Pleistocene *see* Jaramillo Event

lower Precambrian *see* Archean

lower Proterozoic *see* Svecofennian; Willyama Complex

Lower San Fernando Dam

engineering geology FS 0096-95

Lower Silesia

energy sources OP-770

Lower Silurian *see* Clough Formation; Llandoveryan; Medina Formation

Lower Waterford Quadrangle

maps OF 94-0410

Loxahatchee Wildlife Refuge

environmental geology C 1108

Loyalhanna Limestone

sedimentation OF 95-0240

Lu *see* lutetium

Ludlow Member OP-2255

Ludlow Quadrangle

stratigraphy B 2060

Ludlowville Formation

Invertebrata OP-686
paleontology OP-543

Lugo Spain

geochemistry C 1129

LULC

environmental geology OF 95-0652

luminance *see* brightness

lunar highlands OP-1487

lunar laser ranging OP-676

lunar mantle OP-2183

lunar meteorites

OP-1826
petrology OP-938

lunar soils OP-58; OP-1869

lunar South Pole OP-852

Lund Formation

Tertiary OF 95-0545

Lunenburg Quadrangle

maps OF 95-0004

Luquillo Puerto Rico

geomorphology OP-106

Lusatia

geochemistry C 1129
metasomatism C 1129

LUST *see* leaking underground storage tanks

lutetium

geochemistry C 1129

Luzon *see also* Mount Pinatubo.

geologic hazards OP-1048

petrology OP-1574

Quaternary OF 94-0568

Lycopsida

Kentucky, sedimentary petrology OP-1950
Pennsylvanian B 2110

Lycospora

sedimentary petrology OP-1950
stratigraphy B 2000-L

Lynchburg Formation

metal ores OP-306

Lyngen Peninsula

structural geology OP-2156

Lyon Mountain Gneiss

fluid inclusions OP-1794

lysimeters

Appalachians, hydrology OP-1632
Georgia, hydrology OP-1554
Iowa, pollution OP-982
Missouri, pollution OP-934
Rocky Mountains, hydrology OP-1632
Wyoming, hydrology OP-883

M

M-discontinuity *see* Mohorovicic discontinuity

maars

OP-852
Alaska, Quaternary OP-1920; OP-1921
Central America, Quaternary OP-1257
Commonwealth of Independent States, Quaternary OP-1257

Maastrichtian *see* Maestrichtian

macaluba *see* mud volcanoes

Macauley Glaciation

Quaternary OP-1458

Macedonia *see* Greek Macedonia

macerals *see also* clarain; durain; exinite; huminite; vitrain; vitrinite.

Alaska, palynomorphs OP-184

Indiana, sedimentary petrology OP-1002

Kentucky, sedimentary petrology OP-1002

Utah, palynomorphs OP-184

machine-readable data *see* digital data

Mackay Idaho

metal ores B 2064-A-R

Mackenzie Delta

geochemistry OP-192

Mackenzie District Northwest Territories *see* Yellowknife Northwest Territories

Mackenzie Mountains

tectonophysics OP-704

Mackenzie River delta *see* Mackenzie Delta

Macoma balthica

environmental geology OF 95-0299

MACPUMP

ground water WRI 95-4012

Mad River

hydrogeology WRI 95-4037

Madagascar

inclusions C 1129

Madden Anticline

energy sources OF 94-0670

Madera Formation OP-21**Madison Aquifer**

ground water P 1402-F

Madison Group *see also* Charles Formation; Mission Canyon Limestone.

economic geology OP-2225

Madison Range

Archean OP-1862

deformation OP-1628

maps OF 95-0011-A; OF 95-0011-B

metamorphism OP-1627

mineral resources OP-1344

neotectonics OP-1902

sedimentary petrology OP-1622

structural geology OP-480; OP-1681

madrepores *see* Scleractinia

Madrid Basin

geochemistry OP-118

Madrone Springs Fault

faults OP-1577

Maestrichtian

Atlantic Coastal Plain OP-903

California OP-1341

Colorado OP-1646

Western Interior OP-2030

Wyoming OP-1646

mafic magmas

Italy

OP-866

geochemistry C 1129

Magelk

geologic hazards OF 95-0083

Maggie Creek basin

hydrogeology WRI 94-4222

magma *see* magmas

magma chambers

Alaska

earthquakes OP-1107

Quaternary OP-1854

Bolivia

metal ores OP-188

petrology C 1129

British Columbia, petrology C 1129; OP-1847

California

energy sources OP-890

Quaternary OP-2142

Colorado

magmas OP-1325

molybdenum ores OP-849

petrology C 1129

East Pacific Ocean Islands, magmas OP-309

Galapagos Islands, magmas OP-309

geochemistry C 1129

Hawaii

magmas OP-47; OP-307; OP-1090

petrology OP-1500

Quaternary OP-1328

tectonophysics OP-442

India, tectonophysics OP-442

Italy, petrology OP-754

magmas C 1129; OP-1571

Maine

magmas C 1129

petrology C 1129

Mohorovicic discontinuity C 1129

New Mexico

geochemistry B 2081

tectonophysics OP-442

petrology C 1129

Spain, metal ores OP-799

United States, metal ores OP-799

Utah, molybdenum ores OP-849

Washington, magmas C 1129

magma contamination

Arizona, petrology OP-991

California

geochemistry C 1129

petrology OP-45

Finland, Proterozoic OP-2242

Italy

geochemistry OP-865

intrusions OP-866

Russian Federation, Proterozoic OP-2242

magma reservoir *see* magma chambers

magmas *see also* crystal fractionation; fractional crystallization; magma chambers; magmatic differentiation; volcanology.

C 1129; OP-989; OP-1789; OP-1826; OP-2055; OP-2122

Alabama, stratigraphy OP-386

Alaska

C 1129; OP-100; OP-201; OP-626; OP-632; OP-725

geochemistry B 2139; OP-23

paleomagnetism OP-727

seismology OP-1855

tectonophysics OP-953

Alberta

C 1129

geochemistry C 1129

Andes, Quaternary OP-1511

Antarctica

C 1129

tectonophysics OP-55

Appalachians, geochemistry C 1129

Argentina

C 1129

faults C 1129

geochemistry C 1129

Arizona

C 1129; OP-887; OP-1185

deformation OP-15

Australia C 1129

Baltic region C 1129

Brazil

C 1129

geochemistry C 1129

California

OP-129; OP-313; OP-321; OP-1818

- environmental geology OP-261
 faults C 1129
 geochemistry OP-160; OP-260; OP-753
 geophysical surveys OP-522
 metal ores C 1129; OP-801
 seismicity OP-406; OP-457
 seismology OP-1514
 structural geology OP-348
 tectonophysics OP-620
 Canada, ground water OP-937
 Chile
 C 1129
 geochemistry C 1129
 China OP-1935
 Colorado, metal ores C 1129
 Commonwealth of Independent States C 1129
 East Pacific Ocean Islands
 OP-128
 stratigraphy OP-1736
 Egypt C 1129
 El Salvador, Quaternary OP-1816
 Finland, geochemistry C 1129
 France
 C 1129
 geochemistry C 1129
 Galapagos Islands OP-128
 geochemistry C 1129; OP-1026
 geophysical surveys OP-1563
 Germany C 1129
 Greenland OP-1752
 Hawaii
 OP-234; OP-1025; OP-1293; OP-1307; OP-1372; OP-1400; OP-1766
 earthquakes OP-232
 geochemistry OP-861; OP-2321
 hydrogeology OP-2076
 Quaternary OP-441; OP-1453
 seismology OP-1654
 Idaho
 OP-1851
 geochemistry OP-716
 geochronology C 1129
 Illinois, non-metal deposits OP-729
 India, geochemistry C 1129
 Italy
 C 1129
 geochemistry C 1129; OP-27
 Japan
 C 1129
 geochemistry C 1129
 Kentucky, non-metal deposits OP-729
 mafic magmas, Italy C 1129; OP-866
 Maine, geochemistry C 1129
 Mexico
 C 1129; OP-827
 metal ores C 1129
 mineralogy C 1129; OP-2110
 Montana
 geochronology C 1129
 metal ores OP-2224
 non-metal deposits OP-1492
 Nevada
 OP-258; OP-836
 deformation OP-15
 Eocene OP-105
 faults OP-631
 geochemistry C 1129
 orogeny OP-619
 New Hampshire, tectonophysics OP-2204
 New Jersey, geochemistry P 1565-A
 New South Wales Australia C 1129
 New Zealand
 C 1129
 geochemistry C 1129
 Quaternary OP-431
 Newfoundland C 1129
 North Carolina
 geochemistry C 1129
 Mesozoic OP-1399
 Northern Territory Australia C 1129
 Northwest Territories C 1129
 Oman, geochemistry OP-753
 Oregon
 OP-1590
 structural geology OP-348
 Peru, metal ores OP-202
 Polynesia, stratigraphy OP-1736
 Queensland Australia
 C 1129
 metal ores C 1129
 Russian Federation
 C 1129
 geochemistry OP-421
 Saudi Arabia, geochemistry OP-753
 Scandinavia C 1129
 Scotland
 C 1129
 geochemistry C 1129
 seismology OP-464
 South Dakota
 C 1129
 geochemistry C 1129
 Spain
 C 1129
 geochemistry C 1129
 structural geology C 1129
 Sweden, stratigraphy OP-386
 Switzerland C 1129
 Tasmania Australia, metal ores C 1129
 tectonophysics OP-924
 United States, ground water OP-937
 Utah
 C 1129
 Eocene OP-105
 faults OP-1390
 molybdenum ores OP-1725
 neotectonics OP-1494
 orogeny OP-619
 tectonics OP-1292
 Vermont, geochemistry C 1129
 Virginia
 P 1529; C 1129
 geochemistry C 1129
 Mesozoic OP-1399
 Wales, geochemistry C 1129
 Washington
 C 1129; OP-1512
 geochemistry OP-315; OP-1407
 Yemen, geochemistry C 1129
magmatic differentiation *see also* fractional crystallization.
 Alaska P 1564
 Alps, magmas C 1129
 China, petrology C 1129
 East Pacific Ocean Islands, magmas OP-309
 France, geochemistry C 1129
 Galapagos Islands, magmas OP-309
 Germany
 geochemistry C 1129
 petrology C 1129
 Hawaii, magmas OP-307
 Italy, petrology C 1129
 Labrador, geochemistry C 1129
 magmas C 1129
 Maine
 magmas C 1129
 petrology C 1129
 New Mexico, geochemistry OP-959
 Newfoundland, geochemistry C 1129
 Oregon, geochemistry OF 94-0261
 Pacific Ocean, geochemistry B 2022
 petrology C 1129
 Russian Federation, geochemistry C 1129
 Washington, Holocene OP-1513
magnesian spar *see* dolomite
magnesium
 Atlantic Ocean
 Quaternary OP-233
 stratigraphy OF 94-0588
 geochemistry C 1129; OP-1369; OP-2015
 Hawaii, hydrogeology OP-2076
 hydrogeology OP-1532
 Japan, geochemistry C 1129
 Massachusetts
 geochemistry OF 94-0384
 pollution OP-897
 Nevada, sedimentary petrology OP-2000
 North Carolina, structural geology OP-1335
 Pacific Ocean, geochemistry B 2022
 Virginia, Pliocene OP-2071
 Wyoming, environmental geology OF 95-0121
magnetic anomalies
 Alaska, metal ores OP-427
 Antarctic Ocean
 neotectonics OP-1103
 Quaternary OP-54
 Antarctica
 geophysical surveys OP-560
 tectonophysics OP-55
 California
 deformation OP-2332
 faults OP-1577
 geologic hazards OF 95-0479
 geophysical surveys OF 94-0599; OF 94-0613
 gold ores OP-341
 plate tectonics OP-1576
 geophysical surveys DDS-0031; OP-404; OP-712
 Guyana, geophysical surveys OF 95-0590
 Idaho
 crystalline rocks OP-362
 faults OP-1650
 geophysical surveys P 1525
 mineral resources B 2064-A-R
 Mississippi Valley, structural geology P 1538-E
 Montana
 crystalline rocks OP-362
 non-metal deposits OP-1492
 Nevada, geophysical surveys OF 93-0397-A; OF 93-0397-B; OF 93-0540-A; OF 93-0540-B; OF 93-0586-A; OF 93-0586-B
 New Mexico, mineral resources B 2063
 Oklahoma, Quaternary OP-463
 Oregon
 geophysical surveys OP-72
 structural geology OP-1436
 Pacific Ocean, sea-floor spreading B 2022
 Pakistan, structural geology B 2126
 Saudi Arabia, structural geology OP-455
 Spain, metal ores OP-22
 tectonophysics C 1109; OP-1510
 Utah, geophysical surveys OF 93-0397-A; OF 93-0397-B
 Washington, geophysical surveys OP-72
 Wyoming, geophysical surveys OP-1913

magnetic declination

- Arizona, copper ores OP-291
- Colorado, stratigraphy OP-1363
- Poland, lead-zinc deposits OP-908
- Washington, tectonics OP-1449

magnetic excursions

- California, Quaternary OP-1505
- Oregon, Quaternary OP-1505

magnetic field *see also* dynamos; magnetic anomalies; magnetic inclination; magnetic intensity; magnetohydrodynamics; pole positions.

- California
 - elastic waves OP-2186
 - rock mechanics OF 94-0228
 - seismology OP-1364
- Great Lakes, geophysical surveys OF 94-0698
- Oregon, Quaternary OP-659

magnetic inclination

- Alaska, paleomagnetism OP-1135
- Arizona, copper ores OP-291
- Canada, paleomagnetism OP-1135
- Colorado, stratigraphy OP-1363
- Hungary, stratigraphy OP-524
- Poland, lead-zinc deposits OP-908
- Washington, tectonics OP-1449

magnetic intensity

- Arizona
 - geophysical surveys OF 95-0032
 - tectonophysics OP-352
- California, Quaternary OF 94-0633
- Utah, Quaternary OP-1273
- Wyoming, geophysical surveys OF 95-0032; OP-1913

magnetic iron ore *see* magnetite**magnetic methods** *see also* magnetic anomalies; magnetometers.

OP-71

magnetic minerals

- geophysical surveys OP-404
- Nevada, metal ores OF 94-0270-A; OF 94-0270-B
- Oregon, Quaternary OP-1635
- paleomagnetism OP-1738
- Utah, metal ores OF 94-0270-A; OF 94-0270-B

magnetic properties *see also* magnetic susceptibility; remanent magnetization.

- California
 - Quaternary OP-1158
 - rock mechanics OF 94-0228
- Colorado, geophysical surveys OP-1879
- Oregon, Quaternary OP-1158; OP-1635; OP-2045

magnetic surveys *see also* aeromagnetic maps; magnetic anomalies; magnetic survey maps; magnetometers.

- OP-2002
- California, tectonics OP-444
- Colorado
 - ground water OP-1562
 - metal ores OF 94-0291
- Hawaii
 - ocean floors OP-1964
 - Quaternary OP-1616
- Iowa, stratigraphy OP-372
- Japan, petrology OP-270
- Kentucky, faults OF 94-0298
- Minnesota, metal ores OP-862
- Mississippi, environmental geology C 1108
- Oregon
 - economic geology B 1738-E; B 1741-H
 - Quaternary OP-2045
- structural geology OP-1668; OP-1689

magnetic susceptibility

- Alaska, sedimentary petrology OP-2094
- Arctic Ocean, paleomagnetism OF 94-0588
- California
 - oceanography OF 95-0533
 - Quaternary OF 95-0034
- Colorado
 - geophysical surveys OP-1214
 - metal ores OF 94-0291
 - stratigraphy OP-2012
- Germany, magmas C 1129
- Great Lakes, Quaternary OP-292
- Idaho, faults OP-1650
- Indian Ocean Islands, inclusions C 1129
- Italy, paleomagnetism OP-962
- Nevada, geophysical surveys OF 93-0397-A; OF 93-0397-B
- New Mexico
 - mineral resources B 2063
 - structural geology OP-1878
- Oklahoma, Quaternary OP-463
- Oregon, Quaternary OF 95-0034
- Pacific Ocean, oceanography B 2022
- paleomagnetism OP-1738
- Spain, magmas C 1129
- Utah
 - geophysical surveys OF 93-0397-A; OF 93-0397-B
 - stratigraphy OF 95-0001
- Washington, Quaternary OF 94-0568

magnetism, paleo- *see* paleomagnetism**magnetite** *see also* iron ores.

- California, geochemistry OF 95-0015
- Colorado, stratigraphy OP-1363
- geochemistry OP-1278; OP-1279
- Hungary, stratigraphy OP-524
- Idaho, non-metal deposits P 1525
- Nevada, metal ores OF 94-0270-A; OF 94-0270-B
- Utah, metal ores OF 94-0270-A; OF 94-0270-B
- Washington, sedimentary petrology OP-1182

magnetization *see* remanent magnetization**magnetohydrodynamics**

- California, seismology OP-262
- tectonophysics C 1109

magnetometers

- Arizona, geophysical surveys OF 95-0032
- Wyoming, geophysical surveys OF 95-0032

magnetostatigraphy

- Alaska B 2110
- Arctic Ocean, paleomagnetism OF 94-0588
- Atlantic Coastal Plain OP-903
- California, paleomagnetism OP-1916
- Hawaii, paleomagnetism OP-1522
- Hungary OP-524; OP-951
- Puerto Rico OP-1924
- Quaternary OP-61
- United Kingdom B 2110
- Utah OF 95-0001
- Wyoming, Quaternary OP-1583

magnetotelluric methods

- OF 94-0228
- faults OP-240
- structural geology OF 94-0228

magnetotelluric surveys *see also* aeromagnetotelluric methods.

- Alaska, geophysical surveys OP-841
- Missouri, seismology OP-405
- Nevada, geophysical surveys OF 94-0296
- Utah, geophysical surveys OF 94-0296
- Washington, Eocene OP-1593

magnitude-frequency ratio

- California, earthquakes OP-1603
- Iceland, earthquakes OP-1603

Magothy Aquifer

- ground water WRI 92-4171; OF 94-0391; OF 94-0395

Mahia Peninsula

- Quaternary OF 94-0568

Mahogany Mountain Quadrangle

- maps OP-263

Mahogany Zone

- energy sources OP-297

Mahomet Sand Member

- Quaternary OP-1630

Maimecha-Kotui *see* Maymecha-Kotuy**Main Boundary Fault**

- geochemistry C 1129

main shocks

- Alaska, earthquakes OP-1191
- Bolivia
 - mantle OP-1643
 - plate tectonics OP-252
 - seismology OP-1353
- California
 - earthquakes OP-383; OP-1539
 - microearthquakes OP-1054
 - seismicity OP-1602
 - seismology OP-1336; OP-1540
- Taiwan, earthquakes OP-2320

Maine *see also* Presumpscot Formation.

- earthquakes OF 94-0643
- geochemistry
 - C 1129
 - Cumberland County Maine C 1129
 - Sagadahoc County Maine C 1129
- geophysical surveys OP-85
- ground water P 1415-A; OP-937
- magmas C 1129
- metal ores, Aroostook County Maine OP-555
- petrology
 - Oxford County Maine C 1129
 - Washington County Maine C 1129
- Quaternary OP-1658; OP-2200
- soils OP-529

Makushin

- Quaternary OF 95-0271

Malacostraca

- New Mexico OP-379

Malagasy Republic *see* Madagascar**Malheur River-Bluebucket Creek Wilderness Study Area**

- economic geology B 1741-H

Mamala Bay

- geophysical surveys OF 95-0017
- pollution OP-2205

Mammalia

- Cetacea
 - Atlantic Coastal Plain OP-2275
 - Maryland OP-1137
 - Virginia OP-1137
- Edentata, California OP-785
- Marsupialia, Argentina OP-1151
- Neotoma, Quaternary OP-875
- Primates, Egypt OP-1528
- Wyoming OP-1154; OP-1527

mammals

- Alaska
 - paleontology OF 94-0215
 - Quaternary OP-604
- California, stratigraphy OF 94-0630
- Idaho, Quaternary B 2105

- packrats, Quaternary OP-1057
rodents
 Basin and Range Province OP-2198
 Egypt OP-1528
 Great Basin OP-2198
 Quaternary OP-875
- Mammoth Cave Quadrangle**
maps GQ-0351
- Mammoth Hot Springs**
energy sources OP-302; OP-634; OP-885
geochemistry OP-1897
- Mammoth Lakes California**
seismicity OP-654
- Mammoth Mountain**
environmental geology OP-261
Quaternary OP-2142
seismicity OP-406
- management systems evaluation areas**
 Florida, pollution OP-933
 Minnesota, ground water WRI 94-4149; OF 94-0337
 Missouri
 hydrogeology OF 94-0705-W
 pollution OP-933
 Ohio, hydrogeology OP-448
- Manas earthquake 1906**
Quaternary OF 94-0568
- Manchester Aquifer**
hydrogeology WRI 93-4207
- Mancos Shale** *see also* Ferron Sandstone Member.
 B 2113; OP-1645; OP-2019
 engineering geology OP-1435
- Mandibulata** *see* Crustacea; Insecta
- Mangala Valles** I-2402; OP-1233
- manganaxinite**
mineralogy OP-1771
- manganese**
 Atlantic Ocean, Cenozoic OP-1198
 California
 geochemistry OP-1955
 ground water OP-1231
 oceanography OP-1410
 Colorado
 environmental geology OF 95-0043
 pollution OP-487; OP-488; OP-1082
 geochemistry OP-126
 Germany, geochemistry OP-499
 Massachusetts, geochemistry OF 94-0384
 Micronesia, geochemistry OP-520
 Minnesota, Quaternary OP-1290
 New Mexico
 mineralogy OP-1518
 sedimentation OP-1276
 Pacific Ocean, Cenozoic OP-1198
 pollution C 1108
 Rocky Mountains, pollution OF 94-0670
 Utah
 mineral inventory OP-289
 mineralogy OP-1518
 Washington, pollution OP-2064
 Western Interior, stratigraphy OP-2063
- manganese ores**
 Idaho P 1525
 Micronesia OP-1409
- manganese oxides**
 Massachusetts, pollution OP-36
 New Mexico, sedimentation OP-1276
- Manhasset New York**
geomorphology OP-2170
- Manitoba** *see also* Superior Province.
 maps I-1420 (NM-15)
 Quaternary OP-527; OP-1463
 structural geology OP-1073
- Manning's coefficient**
 hydrogeology OP-970
 hydrology OF 93-0161
 waterways OP-172
- Manoa Valley**
geologic hazards OF 95-0008
- manometers**
 Colorado, hydrology OF 94-0363
 hydrology OF 94-0363
 Iowa, hydrology OF 94-0363
 Michigan, hydrology OF 94-0363
 Puerto Rico, hydrology OF 94-0363
- Mansfield Formation**
 OF 94-0298
 coal OF 94-0298
- Manson impact structure**
 geochronology OP-1572
 geomorphology OP-16; OP-1059; OP-2034
 geophysical surveys OP-1880
 stratigraphy OP-372; OP-1671; OP-1736; OP-2154
- mantle** *see also* asthenosphere; core-mantle boundary; heat flow; hot spots; isostasy; phase transitions; sea-floor spreading.
 OP-60; OP-228; OP-294; OP-1306; OP-1837; OP-2312
 Africa OP-636
 Alaska
 magmas C 1129
 structural geology OP-1395
 tectonics OP-2299
 Australia, petrology C 1129
 Basin and Range Province, geophysical surveys OP-1835
 Bolivia OP-1643
 British Columbia, faults OP-248
 California
 OP-914; OP-1357; OP-2181
 faults OP-492
 lava OP-1149
 magmas OP-321
 petrology OF 95-0585
 pollution OP-2047
 China
 OP-763; OP-868; OP-1020
 magmas OP-1935
 Colorado
 geochemistry OP-1939
 petrology OP-773
 Colorado Plateau, geophysical surveys OP-1835
 deformation OP-2187
 Far East OP-2328
 geochemistry OP-978
 Hawaii
 geochemistry OF 91-0596; OP-861
 geophysical surveys OP-1655
 Italy
 intrusions OP-866
 petrology OP-754; OP-1991
 structural analysis OP-755
 Japan, magmas C 1129
 Kenya OP-478
 lower mantle, Bolivia OP-180; OP-252; OP-494
 Mexico, magmas C 1129
 Montana, non-metal deposits OP-1492
- Nevada**
 OP-2230; OP-2233
 faults OP-492
 Northwest Territories, magmas C 1129
 Oceania OP-1109
 phase equilibria OP-611
 Polynesia OP-2328
 Russian Federation
 geochemistry C 1129; OP-843
 magmas C 1129
 Spain, geochemistry C 1129
 Victoria Australia, petrology C 1129
- mantle plumes** *see also* hot spots.
 Australia, tectonophysics OP-704
 Canada, tectonophysics OP-704
 geochemistry OP-976
 Hawaii, petrology OP-1307
 Russian Federation, geochemistry OP-50; OP-421
 Yemen, geochemistry OP-1079
- mantle-core boundary** *see* core-mantle boundary
- mantos**
 Basin and Range Province, metal ores OP-1874
 Great Basin, metal ores OP-1874
- Manzanita Deposit**
 metal ores OP-663
- map projections** P 1453; OF 95-0593
- map symbols** OF 95-0526
- Maple Valley Quadrangle**
 geomorphology MF-2297
- maps** *see also* digital cartography.
 I-2403; I-2404; I-2405; I-2406; I-2407; I-2411; I-2412; I-2413; I-2417; I-2418; I-2419; I-2421; I-2422; I-2425; I-2428; OP-2193; OP-2194
 aeromagnetic maps
 Alaska OP-342
 Antarctica OP-560
 California OF 94-0444; OF 94-0599; OF 94-0613
 Idaho B 2064-A-R
 Nevada OP-213
 Oklahoma GP-0998-A
 Alaska, geochronology OP-1008
 bathymetric maps, Idaho WRI 94-4119
 California
 OF 94-0650
 petrology I-2473
 Canada, ecology I-2451
 coal deposit maps
 South America OF 95-0235
 Wyoming C-0146
 Colorado, environmental geology I-2469
 contour maps
 Arizona OF 95-0076; OF 95-0529
 California OF 95-0535
 Florida OF 95-0115
 Maine OP-85
 Nebraska OF 95-0330
 New Hampshire WRI 92-4013
 New Mexico OF 95-0506
 Ohio WRI 94-4131
 Pennsylvania OF 93-0417; OF 93-0659
 Utah WRI 93-4219
 Venezuela WRI 93-4219
 economic geology maps
 Alaska MF-2058-D; I-2225-A; I-2225-B; I-2225-C; I-2225-D; OP-671
 Arizona OF 95-0031
 Atlantic Coastal Plain MF-2268
 California OF 95-0039; OF 95-0535
 Idaho P 1525
 metal ores B 1989-G

- Montana I-2446
 Nevada OF 94-0270-A; OF 95-0248
 New Hampshire OF 94-0201
 New Mexico B 2063
 South Dakota I-2445
 Utah OF 94-0270-A
 Washington I-2364-A
 Wyoming I-2445
 engineering geology maps, Puerto Rico OF 95-0072
 environmental geology maps, Appalachians OF 95-0589
 geochemical maps
 Alaska B 2084; I-2225-B; I-2225-C; I-2225-D
 California WRI 93-4003
 metal ores B 2097
 New Mexico B 2063; WRI 94-4078
 Washington WRI 92-4109
 geologic hazards maps
 California B 1982; OF 94-0699; OF 95-0095; OF 95-0213; OP-1503
 China CP-0043
 Colorado OF 95-0026; OF 95-0508
 environmental geology GP-1011
 Florida OF 94-0116
 New York OF 94-0615
 Russian Federation CP-0043
 Washington OF 95-0498; HA-0729
 geologic maps
 OF 95-0525; OF 95-0526; OF 95-0588; GQ-1748; I-2397; I-2402; I-2433-B; SGM; OP-881; OP-1127; OP-1233; OP-1662
 Alabama I-2174
 Alaska B 2084; OF 95-0215; I-2272; OP-40; OP-230; OP-633; OP-642; OP-724; OP-878
 Antarctica OP-560
 Arizona OF 92-0326; OF 94-0290; OF 94-0554; OF 94-0634; OF 95-0048; OF 95-0086; OF 95-0202; OF 95-0263; OF 95-0559; OF 95-0560; MF-2292; I-2017; I-2396; I-2450; I-2454; I-2489
 Arkansas OF 94-0430
 Bolivia OF 95-0494
 California B 1982; WRI 95-4048; OF 88-0753; OF 88-0754; OF 92-0179; OF 92-0181; OF 92-0182; OF 92-0183; OF 94-0681; OF 94-0699; OF 95-0025; OF 95-0039; OF 95-0088; OF 95-0089; OF 95-0090; OF 95-0091; OF 95-0502; OF 95-0503; OF 95-0504; OF 95-0511; OF 95-0522; OF 95-0535; OF 95-0597; OF 95-0598; I-2148; I-2295; I-2341; I-2362; I-2464
 Canada B 1904-T; I-1420 (NM-15)
 Colorado B 2104; OF 94-0437; OF 94-0696; OF 95-0052; OF 95-0232; GQ-1763; GQ-1764; MF-2282; MF-2283; I-2452
 Florida OF 95-0261
 Georgia OF 94-0673; I-2174
 Great Plains I-1420 (NL-14)
 Hawaii OF 89-0284
 Idaho P 1525; B 2064-A-R; OF 94-0659; MF-2278; OP-263
 Kansas OF 94-0655; OF 94-0656; OF 94-0657; OF 94-0658; I-2498
 Kentucky GQ-0351; GQ-1212; GQ-1342
 Maryland OP-211
 Mexico OF 94-0685
 Missouri WRI 93-4154; OF 94-0430; MF-2277
 Montana OF 88-0607; OF 88-0608; OF 88-0609; OF 88-0610; OF 88-0611; OF 88-0612; OF 88-0613; OF 88-0614; OF 88-0615; OF 88-0617; OF 88-0618; OF 88-0619; OF 88-0620; OF 88-0621; OF 88-0624; OF 88-0625; OF 88-0626; OF 88-0627; OF 88-0635; OF 93-0521; OF 93-0529; OF 95-0011-A; OF 95-0011-B; GQ-1757; MF-2281; MF-2289; MF-2290; MF-2291
 Nebraska I-2496
 Nevada B 2090; OF 91-0132; OF 92-0326; OF 93-0716; OF 94-0175; OF 94-0283; OF 94-0625; OF 94-0664; OF 94-0687; OF 95-0010; OF 95-0035; OF 95-0084; OF 95-0094; OF 95-0567; GQ-1756; GQ-1758; GQ-1759; MF-2257; I-2464; I-2536; OP-213
 New Hampshire OF 94-0410
 New Jersey OF 95-0253; OF 95-0254; OP-904
 New Mexico B 2063; WRI 94-4178; OF 95-0263; I-2399
 North Carolina OF 94-0629
 Ordovician B 2060
 Oregon OF 95-0219; I-2148; I-2455; OP-263
 Pennsylvania WRI 94-4109; OF 94-0381; OP-873
 Puerto Rico I-2387
 South Carolina OF 94-0673
 United States B 1904-T; I-1420 (NM-15)
 Utah OF 94-0417; OF 95-0009; OF 95-0010; GQ-1722; GQ-1759; I-2210; I-2462
 Venezuela OF 95-0493; MF-2246; MF-2247
 Vermont B 2060; OF 94-0225-A; OF 94-0225-B; OF 94-0262; OF 94-0410; OF 94-0654-A; OF 94-0654-B; OF 95-0203-A; OF 95-0203-B; OF 95-0483-A; OF 95-0483-B
 Virginia P 1529; B 2060; OF 94-0629; OF 95-0004; GQ-1755
 Washington OF 94-0403; OF 94-0591; OF 95-0523; GQ-1681; I-2460; OP-1512
 Wyoming WRI 95-4095; I-0711; I-2210; I-2233; I-2452
 geomorphologic maps
 Arizona OF 95-0529
 California OF 94-0105
 Colorado OF 95-0024; I-2504
 Nevada OF 94-0105
 Washington I-2359
 geophysical maps, Alaska OF 95-0238
 geophysical survey maps
 Hawaii OF 95-0017
 New Mexico B 2063; WRI 94-4125
 geotechnical maps, Hawaii OF 95-0008
 geotectonic maps
 California OP-82
 Mexico OP-82
 glacial geology maps, Greenland P 1386-C
 gravity survey maps
 Alaska OP-42
 Arizona OF 95-0076
 Basin and Range Province GP-1012
 California OF 95-0016
 Idaho B 2064-A-R
 Maine OP-85
 Mississippi Valley P 1538-L
 Nevada OP-2029
 Great Plains, Quaternary I-1970-D
 Hawaii, geologic hazards OF 95-0218
 hydrogeologic maps
 Arizona OF 94-0476
 Arkansas WRI 93-4134; OF 93-0374
 Atlantic Coastal Plain P 1410-C
 California WRI 93-4003; OP-1281
 Colorado WRI 92-4143; WRI 94-4118; WRI 94-4129
 Florida WRI 92-4159; WRI 92-4174; OF 94-0081; OF 94-0495; OF 94-0528; OF 94-0529; OF 95-0115; OF 95-0277; OF 95-0303
 ground water HA-0730-H
 Gulf Coastal Plain P 1410-C
 hydrogeology WRI 94-4061
 Idaho P 1408-C; WRI 94-4116
 Indiana WRI 94-4195
 Louisiana WRI 94-4202
 Maryland OF 94-0390; OF 94-0391; OF 94-0392; OF 94-0393; OF 94-0394; OF 94-0395; OP-191; OP-211
 Massachusetts WRI 94-4156; OF 95-0188
 Midwest OF 93-0663; HA-0730-K
 Mississippi WRI 94-4172
 Montana WRI 95-4034
 Nevada WRI 94-4126; WRI 95-4119; OF 95-0107; OP-1281
 New Hampshire WRI 92-4013; WRI 92-4154
 New Jersey OP-751
 New Mexico WRI 93-4163; WRI 94-4125; WRI 94-4251
 New York WRI 90-4168; WRI 91-4138; WRI 93-4004; WRI 93-4029
 Ohio WRI 94-4131
 Oklahoma WRI 93-4230
 Oregon P 1408-C; OF 94-0505
 Pennsylvania WRI 93-4109; OF 93-0417; OF 93-0659; OF 95-0119
 Puerto Rico OF 93-0499
 Rhode Island OF 95-0188; OF 95-0305; OF 95-0355
 South Carolina WRI 93-4185
 Texas WRI 93-4039; WRI 93-4126; WRI 93-4190; WRI 94-4036; WRI 94-4117; WRI 95-4030; OF 94-0345; OF 94-0346; OF 95-0182; OF 95-0183
 Utah WRI 93-4221
 Virginia OF 94-0370; OF 94-0372; OF 94-0373
 Washington WRI 92-4098; WRI 92-4109; WRI 94-4082; OF 94-0505
 Wisconsin WRI 93-4053
 hydrographic maps, Nevada WRI 94-4233; OF 95-0107
 hydrologic maps
 Alabama WRI 93-4186
 California WRI 93-4003; OF 95-0316
 Great Plains OF 95-0162
 hydrogeology WRI 93-4098; WRI 94-4061
 hydrology WRI 94-4148; WRI 94-4159
 Idaho P 1408-C
 Kentucky WRI 94-4134
 Louisiana WRI 92-4181
 Minnesota WRI 93-4200; OF 93-0046; OF 93-0047; OF 94-0488; OF 95-0333
 Nevada WRI 94-4233; OF 95-0107; OF 95-0316
 New Mexico WRI 94-4125
 North Dakota WRI 93-4200
 Oregon P 1408-C
 South Dakota OF 93-0046
 Texas WRI 94-4213; WRI 95-4019

- Washington WRI 92-4109
- index maps
- Alaska OF 94-0714
 - British Columbia OF 94-0714
 - hydrogeology WRI 93-4098
 - Japan OF 94-0714
 - Massachusetts WRI 94-4156
 - Russian Federation OF 94-0714
- isopach maps
- energy sources B 2000-H
 - Western Interior P 1561
- isoseismic maps
- California OF 95-0092
 - Gulf Coastal Plain P 1538-M
 - Mississippi Valley P 1538-M
- Kansas, environmental geology I-2469
- land use maps
- Louisiana WRI 92-4181
 - Montana WRI 95-4034
 - Nevada WRI 94-4233
- marine geology maps
- Atlantic Coastal Plain MF-2268
 - Atlantic Ocean I-1987-D; I-2456
 - Louisiana I-2150-B
 - Massachusetts MF-2280
 - Puerto Rico I-2387
- Mississippi Valley, stratigraphy MF-2284
- Nevada
- hydrogeology WRI 95-4052
 - petrology I-2473
- paleogeographic maps, Western Interior P 1561
- petroleum maps, Texas WRI 94-4036
- photogeologic maps
- Colorado MF-2295
 - Montana MF-2281; MF-2289; MF-2290
- physiographic maps
- Alaska OP-971
 - Great Lakes I-2429
- radioactivity survey maps, Virginia OF 94-0253
- seismic survey maps
- New Mexico OF 95-0506
 - Wisconsin WRI 93-4053
- seismicity maps
- California OF 95-0095; OF 94-0647
 - Nevada OF 94-0647
- seismotectonic maps, Missouri OF 95-0574; I-2521
- site location maps
- Alabama WRI 94-4074
 - Alaska OF 94-0215; OF 94-0277-A; OF 94-0277-B; OF 95-0509; MF-2021-G
 - Antarctica OF 94-0545
 - Arizona B 2021-E
 - British Columbia OF 94-0315
 - California WRI 93-4003; OF 93-0698; OF 95-0158; OF 95-0160
 - Colorado B 2104; WRI 94-4097; OF 94-0291; OF 94-0383; OF 95-0296
 - Florida WRI 92-4159
 - Hawaii OF 95-0017
 - hydrology WRI 94-4148; WRI 94-4159
 - Idaho P 1408-C; P 1525
 - Kentucky WRI 94-4134; WRI 94-4239
 - Massachusetts OF 94-0316; OF 95-0188
 - Midwest OF 93-0663
 - Minnesota WRI 93-4200; OF 93-0046; OF 93-0047; OF 95-0333
 - Montana WRI 95-4034
 - Nevada OF 94-0270-A; OF 94-0282; OF 94-0296; OF 95-0158; OF 95-0160; OF 95-0284
 - New Mexico B 2063; WRI 93-4163; WRI 94-4078; WRI 94-4125; OF 94-0695
 - New York WRI 90-4168; WRI 91-4138; WRI 93-4004; WRI 93-4029
 - North Carolina WRI 94-4140
 - North Dakota WRI 93-4200; OF 95-0304
 - Ohio WRI 94-4131
 - Oregon P 1408-C; OF 94-0261; OF 94-0505; OF 95-0006
 - Pennsylvania WRI 92-4088; OF 94-0381
 - Rhode Island OF 95-0188; OF 95-0305; OF 95-0355
 - Rocky Mountains OF 95-0143
 - South Carolina WRI 93-4185
 - South Dakota OF 93-0046; I-2445
 - Tennessee OF 94-0483
 - Texas WRI 94-4213; WRI 95-4019
 - Utah OF 94-0270-A; OF 94-0296; OF 95-0101
 - Virginia P 1529; WRI 94-4140; OF 94-0301
 - Washington WRI 92-4017; WRI 94-4082; WRI 94-4236; OF 94-0315; OF 94-0505; OF 94-0680-A
 - Wyoming I-2445
- soils maps
- California OF 94-0699
 - Mississippi WRI 94-4088
 - Missouri WRI 93-4154
- stratigraphic maps
- Alaska OF 94-0714
 - British Columbia OF 94-0714
 - Japan OF 94-0714
 - Russian Federation OF 94-0714
- structural maps
- Montana OP-596
 - Nevada OF 93-0269
- structure contour maps
- energy sources B 2000-H
 - Florida WRI 92-4174
 - Nebraska OF 95-0330
- surficial geology maps
- Alaska OF 95-0128
 - Colorado OF 95-0266
 - Idaho I-2472
 - New York WRI 90-4168; WRI 93-4029
 - Pennsylvania OF 93-0723
 - Texas WRI 94-4036
 - Washington WRI 92-4109; WRI 94-4082; WRI 94-4236; MF-2297; I-2472
- tectonic maps
- Alaska OF 94-0194; OF 94-0714; OP-726; OP-857
 - British Columbia OF 94-0714
 - California OF 93-0684
 - Japan OF 94-0714
 - Nevada I-2501
 - New England OP-2272
 - Russian Federation OF 94-0714
 - Yukon Territory OP-857
- topographic maps
- I-2397
 - Arizona OF 94-0563; OF 94-0564; OF 95-0529; OP-2072
 - Colorado OF 95-0508
 - Florida OF 94-0116
 - Indiana WRI 94-4195
 - New York WRI 93-4029
 - plate tectonics SM
 - Utah WRI 93-4219
 - Venezuela WRI 93-4219
 - United States, ecology I-2451
 - volcanism I-2291-C
- Maquoketa Formation**
- metal ores B 1989-G
- Marble Canyon**
- geomorphology OF 94-0564
- marble deposits**
- California OF 95-0039
- marbles**
- Mexico OP-1870
 - New York, geochemistry OP-832
- marcasite**
- Kentucky, geochemistry OP-2053
- mare** *see* maria
- Mare Imbrium** *see* Sea of Rains
- Mare Orientale** *see* Eastern Sea
- Mareotis Fossae** OP-1844
- margin, continental** *see* continental margin
- marginal trench** *see* trenches
- Marguerite Bay**
- Quaternary OP-440
- maria** OP-58; OP-1580; OP-1785; OP-1789; OP-1873
- Mariana Islands**
- geologic hazards OF 91-0320; OF 94-0705
 - hydrology, Guam WRI 93-4116
 - mantle OP-1109
- Mariana Trench**
- petrology OP-920
- Marianas Islands** *see* Mariana Islands
- Marias Pass Montana**
- Quaternary OP-121
- Marlas River Shale**
- stratigraphy B 2113
- Maricopa Agricultural Center**
- hydrology OF 95-0122
- Marle Byrd Land**
- neotectonics OP-1103
- Marina District**
- earthquakes OF 94-0706
- Marina District (San Francisco California)** *see* San Francisco California
- marine geology** *see also* bottom features; continental rise; continental shelf; continental slope; marine geology maps; ocean circulation; Ocean Drilling Program; ocean floors; submarine canyons.
- OF 94-0584; OP-547; OP-548
 - Atlantic Ocean OF 95-0224
 - Brazil OP-117
 - California
 - OF 95-0533
 - geochemistry OP-244
 - Florida WRI 94-4081
 - geochemistry OF 95-0041
 - geophysical surveys OF 93-0722; OF 94-0598
 - Vanuatu OP-338
- marine geology maps**
- Atlantic Coastal Plain, oceanography MF-2268
 - Atlantic Ocean
 - continental margin I-1987-D
 - oceanography I-2456 - Louisiana, oceanography I-2150-B
 - Massachusetts, oceanography MF-2280
 - Puerto Rico I-2387
- marine installations**
- submarine installations, Hawaii OF 94-0638
- Marine Organic Geochemistry Program**
- geochemistry OF 95-0041
- marine sedimentation** *see also* glaciomarine sedimentation; marine transport.
- Arkansas, Quaternary B 2110

- Bahamas OP-2109
 California
 OP-1918
 geochemistry OF 95-0527
 Quaternary OF 95-0034
 structural geology OP-1584
 Chile, Quaternary B 2110
 Colorado, stratigraphy OP-1645
 Florida, Quaternary OP-1719
 Japan
 OF 94-0568
 Quaternary OF 94-0568
 Montana, stratigraphy OP-596
 New York, Invertebrata OP-686
 Ohio, Invertebrata OP-686
 Oklahoma, Quaternary B 2110
 Oregon, Quaternary OF 95-0034
- marine sediments**
 B 2022; OF 94-0669-A; OF 94-0669-B
 Alaska
 OF 95-0070
 Invertebrata P 1544
 plate tectonics OF 94-0228
 Antarctic Ocean
 OP-921
 Pliocene OF 94-0588
 Quaternary OP-246
 Arctic Ocean
 paleomagnetism OF 94-0588
 Quaternary OP-1049
 stratigraphy OF 94-0588
 Arkansas, Quaternary B 2110
 Atlantic Coastal Plain B 2110; MF-2268
 Atlantic Ocean
 I-1987-D; I-2456; OP-2073; OP-2149
 heat flow OF 95-0262
 natural gas C 1108
 Pliocene OF 94-0588
 stratigraphy OF 94-0588
 Bering Sea, Quaternary OP-1049
 Brazil OP-117
 British Columbia
 geologic hazards OF 94-0568
 Quaternary OF 95-0034
 California
 B 2022; OF 95-0533; OP-116; OP-944;
 OP-1918; OP-2180
 geochemistry OF 95-0015; OF 95-0034;
 OF 95-0527
 geophysical surveys OF 94-0568
 heavy mineral deposits OF 95-0587
 pollution OP-215; OP-2047
 Quaternary OF 95-0034
 Chile, Quaternary B 2110
 Connecticut
 OF 95-0556
 geochemistry OF 94-0620
 energy sources OP-1147
 geochemistry OF 95-0041
 Georgia
 OP-584; OP-586
 geochemistry OP-398
 heavy mineral deposits OP-344
 Miocene OP-739
 phosphate deposits OP-399
 Gulf of California OP-1987
 Hawaii, engineering geology OF 94-0638
 Japan, Quaternary OF 94-0568
 Japan Sea, Quaternary OP-722; OP-1954
 Louisiana, energy sources OF 94-0228
 Massachusetts, environmental geology OF 94-0649
- New Jersey OP-1188
 New York, geochemistry OF 94-0620
 Oklahoma, Quaternary B 2110
 Oregon
 OP-1772
 Quaternary OF 95-0034
 tectonophysics OF 94-0228; OP-157
 Pacific Coast, Quaternary OF 95-0034
 Pacific Ocean
 B 2022; OF 94-0711
 geochemistry B 2022
 polymetallic ores OP-1495
 Quaternary B 2022; OF 95-0034
 sulfides OP-1829
 tectonophysics OP-1702
 Peru OP-1069
 Puerto Rico OP-2080
 Quaternary OP-61
 Texas, energy sources OF 94-0228
 Tyrrhenian Sea, Quaternary OP-942
 United States
 OP-2080
 geologic hazards OF 94-0568
 Quaternary OF 95-0034
 Washington, Quaternary OP-205
- marine terraces**
 Atlantic Coastal Plain, Quaternary FS 0117-95
 California
 engineering geology OF 94-0568
 Quaternary OF 94-0568
 Chile, Quaternary OP-1697
 New Zealand, Quaternary OF 94-0568
 Oregon, Quaternary OP-1945
 Papua New Guinea, Quaternary OF 94-0568
 Puerto Rico, neotectonics OP-2179
 Washington, geologic hazards OF 94-0589
- marine transport**
 California
 continental shelf OP-847; OP-944; OP-998
 oceanography OP-116
 marine geology OP-547
 Massachusetts, environmental geology OF 94-0649
- Mariner 9** OP-916
Mariposa California
 maps OF 94-0318
Mariscal Mountain Anticline
 tectonics OP-363
 Maritime Provinces *see* New Brunswick; Nova Scotia
Mark Twain National Forest
 hydrogeology OF 95-0106
MARK-3
 metal ores B 2063
Markagunt Plateau
 neotectonics B 2056
 tectonics OP-1283
- marl**
 Colorado, geologic hazards OP-1101
 Montana, stratigraphy OP-1131
 Nevada, energy sources OP-1083
 Papua New Guinea, tectonophysics OP-1035
Marl Mountains Quadrangle
 maps OF 92-0182
Marlboro Clay
 stratigraphy OF 94-0217; OF 94-0708
Marlife Shale
 stratigraphy OP-1341
 marlstone *see* marl
Maroon Formation OP-2027
- Mars**
 B 2129; I-2403; I-2404; I-2405; I-2406; I-2407;
 I-2411; I-2412; I-2413; I-2417; I-2418; I-2419;
 I-2421; I-2422; I-2425; OP-142; OP-195; OP-
 259; OP-484; OP-485; OP-486; OP-797; OP-
 880; OP-1634; OP-1662; OP-1780; OP-1843;
 OP-1844; OP-2134
 Alba Patera OP-33; OP-35
 Arsia Mons I-2428
 Elysium I-2397; OP-35; OP-916
 Kasei Vallis OP-1726; OP-1727
 Mangala Valles I-2402; OP-1233
 New Mexico, sedimentary petrology OP-1274
 Olympus Mons OP-35; OP-916
 Tharsis OP-559; OP-916
 Tharsis Montes OP-35
 Valles Marineris OP-35; OP-559; OP-916; OP-
 1728; OP-1729
- Mars Pathfinder** OP-1843
Marshall Islands
 stratigraphy
 OP-1229
 Enewetak Atoll OP-2254
Marshalltown Formation OP-903
 marshes *see* salt marshes
Marston Missouri
 geophysical surveys P 1538-P
- Marsupialia**
 Argentina OP-1151
Marsupites
 stratigraphy B 2113
Martha's Vineyard
 ground water OF 94-0316
Martinsburg Formation B 2135; OF 94-0573
- Maryland** *see also* Appalachian Basin; Calvert Formation; Catocin Formation; Chesapeake Bay; Chesapeake Group; Choptank Formation; Delmarva Peninsula; Eastover Formation; Potomac River; Saint Marys Formation; Salisbury Embayment.
 coal OF 95-0572
 continental margin I-1987-D
 engineering geology, Worcester County Maryland WRI 94-4164
 environmental geology
 Harford County Maryland W 2399
 Wicomico County Maryland OP-837
 geomorphology, Cumberland Maryland OP-196
 ground water
 Anne Arundel County Maryland WRI 94-4170; OF 94-0391; OF 94-0392; OF 94-0393; OF 94-0394; OF 94-0395; OP-191
 Calvert County Maryland WRI 94-4170; OF 94-0390; OF 94-0391; OF 94-0392; OF 94-0394; OF 94-0395; OP-191
 Charles County Maryland WRI 94-4170; OF 94-0390; OF 94-0391; OF 94-0392; OF 94-0394; OF 94-0395; OP-191
 Howard County Maryland OP-410
 Montgomery County Maryland WRI 94-4170
 Patuxent River WRI 94-4170; OP-410
 Prince Georges County Maryland WRI 94-4170; OF 94-0390; OF 94-0391; OF 94-0392; OF 94-0393; OF 94-0394; OF 94-0395; OP-191
 Saint Marys County Maryland WRI 94-4170; OF 94-0390; OF 94-0391; OF 94-0394; OP-191

- hydrogeology
WRI 93-4225
Calvert County Maryland OF 94-0507
Frederick County Maryland OP-771
Howard County Maryland OF 94-0507; OP-211
Patuxent River OF 94-0507
hydrology
OP-1899
Frederick County Maryland FS 0136-95
maps
Montgomery County Maryland GQ-1748
Prince Georges County Maryland GQ-1748
natural gas C 1108
Ordovician, Montgomery County Maryland B 2060
pollution
OP-702
Anne Arundel County Maryland OP-999
Baltimore Maryland OP-1089
Calvert County Maryland OP-999
Carroll County Maryland OP-999
Patuxent River OP-1786; OP-1985
sedimentary petrology, Calvert County Maryland OP-848
stratigraphy, Calvert County Maryland OF 94-0683; OF 94-0708
- Marys Creek basin**
hydrogeology WRI 94-4222
- Marysvale Utah**
economic geology OP-189
tectonics OP-1283
- mass extinctions**
Canada, stratigraphy OP-668
Colorado, stratigraphy OF 94-0670; OP-1953
New Mexico, stratigraphy OF 94-0670; OP-1953
stratigraphy OP-935; OP-1418; OP-1419; OP-2022
United States, stratigraphy OP-668
Wyoming, stratigraphy OP-667
- mass movements** *see also* avalanches; debris flows; earthflows; erosion; lahars; landslides; mudflows; rockslides.
OP-858
Arizona, stratigraphy OP-224
California, ocean floors OP-1433; OP-2150
Hawaii, elastic waves OP-1649
New Mexico, stratigraphy OP-224
Pacific Ocean
ocean floors OP-1119
tectonophysics OP-1919
Tyrrhenian Sea, Quaternary OP-942
- mass spectroscopy** *see also* accelerator mass spectroscopy.
geochemistry OF 95-0181; OF 95-0206; OP-1949
hydrogeology OF 94-0708-W
pollution OP-2089
- mass wasting** *see* mass movements
- Massabesic gneiss complex**
geochronology OP-1047
- Massachusetts** *see also* Ammonoosuc Volcanics; Avalon Terrane; Bronson Hill Anticlinorium; Clough Formation; Connecticut Valley; Merri-mack Synclinorium.
Cape Cod OF 94-0384
continental margin, Cape Cod I-1987-D
earthquakes OF 94-0643
environmental geology
OF 94-0649
Boston Massachusetts OP-1187
Cape Cod OF 95-0290; OP-1187; OP-2136
geochemistry, Cape Cod OF 94-0384; OP-1396
geophysical surveys, Worcester County Massachusetts WRI 94-4185
ground water
P 1415-A; OF 95-0188; FS 94-0017
Cape Cod WRI 94-4156; OF 94-0316; OF 94-0384
Dukes County Massachusetts OF 94-0316
Martha's Vineyard OF 94-0316
Nantucket County Massachusetts OF 94-0316
Nantucket Island OF 94-0316
hydrogeology
Middlesex County Massachusetts WRI 94-4256
Worcester County Massachusetts WRI 94-4256
hydrology
W 2418; WRI 94-4100; WRI 94-4155; FS 0139-95
Cape Cod WRI 94-4224
Franklin County Massachusetts WRI 94-4003; WRI 94-4084
Hampshire County Massachusetts WRI 94-4084
Worcester County Massachusetts WRI 94-4003; WRI 94-4224
maps OP-1383
ocean circulation YR; OP-2114
oceanography
OP-2222
Boston Massachusetts MF-2280
Cape Cod OF 94-0672
pollution, Cape Cod OP-36; OP-37; OP-509; OP-616; OP-897; OP-1175; OP-1765
Quaternary
OP-990
Boston Massachusetts OP-683; OP-1658
sedimentary petrology
OF 95-0044
Cape Cod OP-2080
waste disposal, Cape Cod OP-2249
- Massachusetts Bay**
environmental geology OF 94-0649; OP-1187
marine geology OF 95-0224
ocean circulation YR; OP-2114
oceanography MF-2280; OP-2222
Quaternary OP-683
- Massachusetts Military Reservation**
pollution OP-1765
waste disposal OP-2249
- Massif Central** *see* Central Massif
- massive deposits** *see also* massive sulfide deposits.
Arabian Peninsula, metal ores OP-1220
- massive sulfide deposits**
Alaska, metal ores B 2084; OP-670; OP-1169; OP-1893
Appalachians, metal ores OP-306
Arizona, metal ores B 2138
Atlantic Ocean, metal ores OP-502
Canada, metal ores OP-1169
Canadian Shield, metal ores OP-2126
Great Britain, metal ores OP-2126
metal ores OP-870
New York, mineral resources OP-718
Pacific Ocean
geochemistry B 2022
metal ores OP-502
ocean floors B 2022
oceanography B 2022
- Portugal, pyrite ores B 2081
South Carolina, gold ores OP-2090
Vermont
metal ores OP-869
mineral resources OP-718
- Matamoras Pennsylvania**
ground water WRI 93-4109
- material-balance method**
energy sources B 2137
materials (educational) *see* educational resources
- Mattole Canyon**
seismicity OP-1745
- Mattoon Field**
energy sources OF 94-0298
- Matuyama Epoch**
Alaska OP-1881
Arctic Ocean OF 94-0588; OP-1566
California OP-1575
Far East OP-1574
Idaho OF 94-0686
Indonesia OP-443
New Mexico OP-443; OP-1575
Utah OP-1273
Wyoming OP-1583
- Maughan Sequence**
structural geology OP-2115
- Maumee Bay**
geomorphology OF 95-0224
- Mauna Kea**
environmental geology OF 94-0553
geochemistry OP-2321
lava OP-1717
maps OF 89-0284
petrology OP-1025
- Mauna Loa**
elastic waves OP-1649
environmental geology OF 94-0553
geologic hazards OP-474; OP-1722; OP-2211
geophysical surveys OF 94-0288
lava OP-1717
maps OF 89-0284
ocean floors OP-1230
petrology OP-1223
Quaternary OP-639; OP-1291; OP-1328; OP-1754
seismology OP-1241
stratigraphy OP-1736
- Mauri Formation**
structural geology OP-2244
- maximum entropy analysis** OP-206
- Maxville Limestone**
stratigraphy OP-411
- Maya Terrane**
petrology OP-1870
- Mayaguez Puerto Rico**
Quaternary OF 94-0568
- Mayfield Fault**
tectonophysics OP-1444
- Maymecha-Kotuy**
geochemistry OP-50
- Maywood Formation**
stratigraphy OP-1558
- Mazama Ash**
Quaternary OF 95-0034; OP-1040; OP-2250
structural geology OP-1611
- Mazama Quadrangle**
maps OF 95-0523
- Mazatzal Province**
plate tectonics OP-1256
structural geology OP-1668

- tectonophysics OP-1669
- McAllister Deposit**
metal ores OP-1260
- McArthur Fault**
tectonophysics OP-1444
- McArthur River Field**
energy sources OP-574
- McCallum Creek**
Pliocene OF 95-0217-A; OF 95-0217-B
- McCarthy Quadrangle**
geologic hazards B 2107
mineral resources OF 95-0623
- McCarty Park Quadrangle**
maps MF-2282
- McCoy Pluton**
phase equilibria C 1129
- McDermitt Caldera**
metal ores OP-799
- McElmo Colorado**
energy sources B 2000-H
stratigraphy OC-0145
- McGowan Creek Formation**
metal ores B 2064-A-R
- McGrath Gneiss**
geochemistry B 1904-U
- McGrath Quadrangle**
geologic hazards OF 95-0175
Invertebrata OP-51; OP-76
Proterozoic B 2107
- McKinley Terrane**
areal geology OP-672
- McKnight, Edwin T.**
economic geology OP-400
- McLaughlin Mine**
gold ores OP-341
metal ores OP-720; OP-801; OP-804; OP-940
- McNairy-Nacatoch Aquifer**
seismology P 1538-N
- Meadow Valley Mountains**
geochemistry B 2056
structural geology B 2056
- meanders**
OP-470; OP-1792
Arizona W 2429; OP-1926
engineering geology OP-1310
Illinois OP-682
Louisiana, waterways OF 94-0275
Tennessee, Quaternary OF 94-0568
- mechanical erosion** *see* abrasion
- Mechanicville Quadrangle**
ground water WRI 93-4029
- Mechum River Formation**
petrology C 1129
- Medfra Quadrangle**
mineral resources OF 94-0277-A; OF 94-0277-B
- Median Tectonic Line**
Quaternary OF 94-0568
- Medicine Bow Mountains**
geochemistry OP-269
- Medicine Lake**
geophysical surveys OP-136
magmas OP-129
petrology OP-968
tectonophysics OP-1357; OP-1444
- Medicine Lake Highland**
geophysical surveys OF 94-0693
- Medicine Lake Volcano** *see* Medicine Lake
- Medicine Lodge Basin**
neotectonics OP-1943
- Medina Formation** B 2086
- Mediterranean region** *see also* Greece; Italy.
structural geology, Naxos OP-453
- Mediterranean Sea** *see also* East Mediterranean;
West Mediterranean.
plate tectonics OF 94-0568
sedimentary petrology, Valencia Trough OP-1877
- Meers Fault**
Quaternary OP-463
- Meeteetse Formation**
sedimentary petrology OP-780
sedimentary structures OP-1620
- meetings *see* symposia
- megabreccia**
Kazakhstan, energy sources OP-1258
- melmechite**
Russian Federation, geochemistry OP-421
- Mejillones Peninsula**
stratigraphy OF 95-0226
- Melandco Sandstone**
sedimentary petrology B 1988-I
- Melanesia *see* Vanuatu
- melange**
Alaska, paleomagnetism OP-727
California
petrology OP-1315
structural geology OP-1599
Japan, Permian OP-1132
Oregon
natural gas OP-1677
Permian OP-1132
petrology OP-1315
Pakistan, gems OP-1303
Virginia, structural geology OP-1317
Washington, natural gas OP-1677
- melillite**
petrology OP-1798
- Memnonia Fossae** I-2402
- Memphis Tennessee**
ground water WRI 94-4212; WRI 95-4011;
OP-1825
- menaccanite *see* ilmenite
- Mendeleev Ridge**
Quaternary OP-1566
- Mendenhall Mississippi**
ground water WRI 95-4013
- Mendocino (Cape)** *see* Cape Mendocino
- Mendocino Channel**
heavy mineral deposits OF 95-0587
- Mendocino Fault earthquake 1994**
seismology OP-203
- Mendocino fracture zone**
geophysical surveys OF 95-0275
metal ores OP-801
plate tectonics OF 94-0568; OP-941; OP-1576
seismicity OP-1745; OP-1832
- Menominee Indian Reservation**
hydrogeology WRI 93-4053
- Meramecian** *see also* Saint Louis Limestone;
Sainte Genevieve Limestone; Warsaw Formation.
Alaska OP-641
Basin and Range Province OP-2115
Great Basin OP-2115
Montana B 2112
North Dakota B 2112
- Merapi**
geochemistry OP-907
Quaternary OP-1767
- Merced Formation**
neotectonics OP-1145
seismology OP-2333
- Mercer Caverns**
geomorphology OP-785
- Mercer Limestone Member**
stratigraphy OP-874
- mercury**
Alaska, environmental geology B 2107
British Columbia, hydrology OF 94-0315
Central America, Quaternary OP-1257
Colorado
hydrology WRI 94-4041
pollution OP-1535
Commonwealth of Independent States, Quaternary OP-1257
environmental geology OP-690
Florida, environmental geology FS 0134-95
geochemistry OF 94-0369; OF 95-0117
Idaho
environmental geology WRI 93-4156
pollution OP-1146
Maryland, environmental geology W 2399
New Jersey, pollution OP-1087
Nicaragua, geochemistry OP-1678
Oregon, environmental geology WRI 93-4156
Rocky Mountains, pollution OF 94-0670
South Carolina, pollution WRI 94-4209
Utah, hydrology WRI 94-4041
Venezuela, environmental geology YR
Washington
environmental geology OF 95-0195
hydrology OF 94-0315
pollution OP-1146; OP-2064
Wisconsin
environmental geology OP-1663
hydrogeology OP-2327
pollution OP-508
- mercury ores**
California
OP-216; OP-530; OP-663; OP-720; OP-800; OP-801; OP-802; OP-803; OP-804; OP-805; OP-940; OP-2146
geochronology OP-625
Idaho P 1525
Spain OP-799
United States OP-799
- Mercury Planet** B 2129; OP-1662
- Mercury Valley**
ground water OF 95-0158
hydrogeology OP-1747
Quaternary OF 95-0037
- mercury-type manometers**
Iowa, hydrology OF 94-0363
Michigan, hydrology OF 94-0363
- Mermentau River basin**
hydrology WRI 92-4181
- Merriam Anticline**
energy sources OP-1621
- Merriamites**
Invertebrata OP-77
- Merrill Field Airport**
hydrogeology OF 95-0171
- Merrimack Synclinorium**
stratigraphy OP-2297
structural geology OP-782
- Mesa Verde National Park**
stratigraphy OP-1645

Mesaverde Group

energy sources OF 94-0670
sedimentary petrology OP-780
sedimentary structures OP-1620
sedimentation OF 94-0670

Meshik Formation

maps I-2272

Mesilla Basin

hydrogeology OF 95-0111

mesothermal processes**Alaska**

geochemistry B 2107
gold ores OP-624; OP-2184
metal ores B 2084

California, metal ores OP-720

Idaho, metal ores B 2064-A-R

Quebec, gold ores OF 94-0228

Mesozoic *see also* Cretaceous; Jurassic; Triassic.

OF 95-0260; OP-985

Alaska OF 94-0215; OF 94-0714; MF-2021-G;
I-2272; OP-23; OP-231; OP-471; OP-1394;
OP-2301

Antarctica C 1129

Atlantic Coastal Plain OP-1958

Atlantic Ocean OP-1970

British Columbia OF 94-0714

California B 1995-H,I; C 1129; OP-1818; OP-2047

China C 1129

Franciscan Complex

clay mineralogy B 1995-H,I

deformation OP-2332

economic geology OF 95-0030; OP-216;
OP-802

energy sources OP-193; OP-2146

faults OP-1577

geothermal energy OP-299

gold ores OP-341

metal ores OP-720; OP-805

Quaternary OP-1216

structural geology OP-1430

tectonics OP-444

tectonophysics OP-1448

Glen Canyon Group, tectonics OP-1292

Great Plains P 1402-F

Great Valley Sequence

OP-1341

clay mineralogy B 1995-H,I

economic geology OP-216; OP-802

faults OP-1577

geochemistry OP-927

geothermal energy OP-299

gold ores OP-341

metal ores OP-663; OP-720; OP-801; OP-805; OP-940

tectonics OP-444

Hong Kong C 1129

Idaho OP-2123

Indosinian Orogeny, China OP-2016

Japan OF 94-0714; OP-271

Kansas OF 95-0256

Mexico C 1129

Navajo Sandstone

OP-1731

structural geology OF 95-0491

Nevada OP-1252; OP-2151

Nevadan Orogeny

California OP-319; OP-348; OP-620; OP-1462

Oregon OP-348

New Mexico B 2063

New York OP-303

New Zealand C 1129

Newark Supergroup

OP-2139

fluvial features OP-2138

sedimentary petrology OP-2117

North Carolina OP-1399

Passaic Formation

OP-1672

diagenesis OP-2118

energy sources OP-2058; OP-2059

ground water OP-1568

sedimentary petrology OP-2140

Peru OP-202

Russian Federation OF 94-0714

Ukraine OP-595

upper Mesozoic, Alaska OP-100; OP-1447

Virginia OP-1399

Yanshanian, China OP-2016

Mesquite Nevada

fluvial features OP-2289

Quaternary B 2056

Messinian

Italy OP-500

MESUR OP-2134**meta-andesite**

California OP-531

meta-limestone *see* metalimestone

meta-ophiolite *see* ophiolite

metabasalt

Virginia OP-63

metabentonite

Alabama, stratigraphy OP-386

Sweden, stratigraphy OP-386

metabolites

geochemistry OF 95-0181; OP-1043; OP-1963

Midwest, pollution OF 94-0396; OP-1807; OP-2089; OP-2201

Mississippi Valley, environmental geology
C 1120-G

pollution OP-630

metadacite

Bolivia, metal ores OP-1028

metagranite

Japan C 1129

Newfoundland C 1129

Virginia P 1529

metigneous rocks *see also* meta-andesite;
metabasalt; metadacite; metarhyolite; serpentinite.

Italy C 1129

Maryland OP-1200

Nevada, structural geology OP-454

Virginia OP-1200

metal ores *see also* antimony ores; base metals;
bismuth ores; chromite ores; cobalt ores; copper
ores; gold ores; iron ores; lead ores; lead-zinc
deposits; manganese ores; mercury ores;
metallogenic epochs; metallogenic provinces;
metallurgy; molybdenum ores; nickel ores; ni-
obium ores; ore guides; platinum ores; poly-
metallic ores; precious metals; pyrite ores; rare
earth deposits; silver ores; strontium ores; tanta-
lum ores; thorium ores; tin ores; titanium ores;
tungsten ores; uranium ores; vanadium ores; zinc
ores.

B 2110; OP-318

Alaska

OP-342; OP-424; OP-425; OP-426; OP-427; OP-919

geochemistry B 2107

Appalachians OP-306

Arizona OF 94-0670

Brazil OP-198

Colorado

B 2109; OF 94-0291; OF 95-0079; OF 95-0097; OP-1488; OP-1793; OP-2060

geochronology B 2104

pollution OF 95-0026

diagenesis OF 94-0298

geochemistry C 1129

geophysical surveys FS 0121-95

Idaho

P 1525; B 2064-A-R

geochemistry P 1525

geophysical surveys P 1525

petrology P 1525

Proterozoic P 1525

sedimentary petrology P 1525

New Mexico B 2063; OF 94-0691

Oregon OF 94-0666

South Dakota OF 95-0066-A; OF 95-0066-B;
I-2445

Vermont OP-869

Washington, geochemistry OF 94-0680-A;
OF 94-0680-B

Wyoming OF 95-0066-A; OF 95-0066-B; I-2445

metalimestone

Alaska, stratigraphy P 1545

metallic meteorites *see* iron meteorites

metallic minerals *see* metal ores

metallogenesis *see* metallurgy

metallogenic epochs

California, metal ores C 1129

Colorado, metal ores C 1129

Idaho, metal ores B 2081

Mexico, metal ores C 1129

metallogenic provinces

Alaska, metal ores OP-1169; OP-1893

Canada, metal ores OP-1169

Caribbean region, metal ores B 2057

Lesser Antilles, metal ores B 2057

Queensland Australia, metal ores C 1129

Rocky Mountains

metal ores OP-1366

uranium ores OF 95-0571

Tasmania Australia, metal ores C 1129

metallurgy *see also* metallogenic epochs.

Alaska OP-99; OP-670; OP-671; OP-1195; OP-1895

Arizona, metal ores B 2138

Atlantic Ocean, metal ores OP-502

Basin and Range Province, metal ores OP-1874

Great Basin, metal ores OP-1874

New Jersey, metal ores OP-290; OP-1379

New South Wales Australia, petrology OP-871

New York, metal ores OP-290; OP-1379

Pacific Ocean

geochemistry B 2022

metal ores OP-502; OP-1080

ocean floors B 2022

oceanography B 2022

Pennsylvania, metal ores OP-1895

Queensland Australia, metal ores C 1129

Tasmania Australia, metal ores C 1129

metals *see also* actinides; alkali metals; alkaline earth metals; aluminum; antimony; arsenic; base metals; cadmium; chromium; cobalt; copper; gallium; gold; hafnium; iron; isotopes; lead; manganese; mercury; molybdenum; nickel; ni-

- bium; platinum group; rare earths; rhenium; silver; tantalum; tin; titanium; trace metals; tungsten; vanadium; zinc; zirconium.
- Arizona**
 hydrology WRI 95-4053
 metal ores OP-664
 pollution OF 94-0508
 California, pollution WRI 94-4040
- Colorado**
 environmental geology OF 95-0023
 pollution OF 95-0026; OF 95-0087; OP-34; OP-92; OP-253; OP-329; OP-876; OP-979; OP-1081; OP-1210; OP-1337; OP-1922
 environmental geology OP-2131
 geochemistry C 1129
 gold ores OP-149
 Idaho, pollution OP-1156
 Iowa, pollution OP-2067
 Kansas, hydrology W 2352-B
 Massachusetts, environmental geology OP-1187
 Montana, geochemistry OP-1209
 Nebraska, hydrology W 2352-B
 New Jersey, ground water WRI 90-4095
 New York, hydrology OF 94-0090
 platinum group, China OP-1871
 precious metals
 Arizona B 2138
 California OP-801; OP-940
 Caribbean region B 2057
 Idaho P 1525; B 2064-A-R; B 2081; OF 94-0690
 Lesser Antilles B 2057
 metal ores OP-104; OP-863; OP-1208
 Nevada OF 94-0270-A; OF 94-0270-B; OF 94-0296
 Peru OP-1411
 Spain OP-799
 United States OP-799
 Utah OF 94-0270-A; OF 94-0270-B; OF 94-0296
 Washington, geochemistry WRI 94-4047
- metaluminous composition**
 Argentina
 geochemistry C 1129
 petrology C 1129
 Brazil, geochemistry C 1129
 Canadian Shield, geochemistry C 1129
 Greece, geochemistry C 1129
 Indian Ocean Islands, inclusions C 1129
 Poland, petrology OP-1827
- metamorphic core complexes**
 Arizona, structural geology OP-1380
 Basin and Range Province, tectonophysics OP-515
 Europe, geochemistry OF 94-0228
 Greece, structural geology OP-453
 Idaho, geochronology C 1129
 Montana, geochronology C 1129
 tectonophysics OP-985
- metamorphic processes**
 California, metal ores C 1129
 Colorado, metal ores C 1129
 Mexico, metal ores C 1129
- metamorphic rocks** *see also* actinolite facies; amphibolite facies; crystalline rocks; granulite facies; greenschist facies; metasomatic rocks; paragenesis; prehnite-pumpellyite facies.
- Alaska
 C 1129; OF 94-0268; OP-230; OP-711
 metal ores OP-1169
- sedimentary petrology OP-1361
 amphibolites
 C 1129
 Alaska B 2107; OP-229; OP-2184
 California OP-1149
 Colorado OP-1423; OP-1424
 geochemistry C 1129
 Germany OP-651
 metal ores OP-870
 Mexico OP-1870
 Montana OP-1831
 Russian Federation OP-651
 tectonophysics OP-141
 Virginia C 1129; OP-1317
- Appalachians, structural geology OP-1908
 Arizona OP-1185
 augen gneiss, Montana OP-1627
 biotite schist, Colorado GQ-1764
 blueschist
 Alaska OP-39; OP-784; OP-932
 California OP-1599
- British Columbia
 OF 94-0268
 sedimentary petrology OP-1361
 California, fractures OF 94-0228
- Canada
 metal ores OP-1169
 stratigraphy B 2135
- cataclasites
 California OF 94-0228; OF 94-0568
 structural geology OF 94-0228
 Wyoming OP-936
- Colorado, Proterozoic OF 94-0437
 eclogite OP-1138
 Germany, geochemistry OP-499
- gneisses
 Alaska B 2107; OP-296
 Antarctica C 1129
 California OP-46
 Canada B 1904-T
 Colorado OF 95-0242; OP-1423; OP-1424
 Egypt OP-2068
 Germany OP-748
 Idaho OP-362
 India C 1129
 Japan C 1129
 Massachusetts OP-782; OP-1047
 Montana OP-362; OP-480; OP-1831
 New Hampshire OP-1047
 Newfoundland C 1129
 Pakistan C 1129
 Poland OP-1827
 Scotland C 1129
 tectonophysics OP-141
 United States B 1904-T
 Vermont B 2060
- granite gneiss
 Finland C 1129
 North Carolina OP-1536
 Virginia OP-1536
- greenschist
 Alaska OP-39; OP-217; OP-229; OP-727
 Yukon Territory OP-217
- greenstone
 Alaska OP-39
 Arabian Peninsula OP-1220
 Colorado OF 94-0437
 hornfels, California OP-299
 Idaho, metal ores P 1525
 khondalite, India C 1129
 kinzigite, Italy OP-755; OP-866; OP-1991
 leptyte, India C 1129
 marbles
- Mexico OP-1870
 New York OP-832
 meta-andesite, California OP-531
 metabasalt, Virginia OP-63
 metadacite, Bolivia OP-1028
 metagranite
 Japan C 1129
 Newfoundland C 1129
 Virginia P 1529
- metaigneous rocks
 Italy C 1129
 Maryland OP-1200
 Nevada OP-454
 Virginia OP-1200
- metalimestone, Alaska P 1545
 metapelite, Argentina C 1129
 metaplutonic rocks
 California C 1129
 Newfoundland C 1129
 Virginia P 1529
- metarhyolite
 Pennsylvania OP-3
 Virginia OP-3
- metasedimentary rocks
 Alaska B 2107; OP-641
 Alberta C 1129
 Appalachians OP-306
 Brazil C 1129
 California OF 95-0030; OF 95-0227-A; OF 95-0227-B
 geochemistry OP-1026
 Georgia B 1589-E
 Idaho P 1525
 metal ores OP-870
 Minnesota B 1904-U
 New South Wales Australia OP-871
 Oregon OF 95-0227-A; OF 95-0227-B
 Tennessee OF 95-0477
 Vermont B 2060
 Virginia C 1129
- metavolcanic rocks
 Bolivia B 2119; OP-1028
 California OF 95-0227-A; OF 95-0227-B
 Colorado OF 94-0437
 France C 1129
 Italy C 1129
 metal ores OP-870
 Minnesota B 1904-U
 North Carolina OP-1647
 Oregon OF 95-0227-A; OF 95-0227-B
 Pennsylvania OP-3
 Virginia OP-3
- migmatites
 C 1129
 Alaska B 2107
 Colorado GQ-1764
 France C 1129
 geochemistry C 1129
 India C 1129
 Italy C 1129
 Japan C 1129
 Labrador C 1129
 Maine C 1129
 Newfoundland C 1129
 Northern Territory Australia C 1129
 Pakistan C 1129
 Queensland Australia C 1129
 Russian Federation C 1129
 Saudi Arabia C 1129
 Scotland C 1129
- mineralogy B 2140
 Minnesota, mineral resources OF 94-0447
 mylonites

- Europe OF 94-0228
Idaho C 1129
Montana C 1129; OP-1627
North Carolina OP-1202
Rocky Mountains OP-1232
structural geology OF 94-0228
Virginia OP-63; OP-1202
Wyoming OP-1288
- New Jersey, metal ores OP-290
New York, metal ores OP-290
North Carolina, mineral resources OP-428
Norway, structural geology OP-158
- orthogneiss
New Zealand C 1129
North Carolina OP-1647
Spain C 1129
- paragneiss
Italy OP-866; OP-1991
Maryland OP-1200
Mexico OP-1870
Virginia OP-1200
- phyllites, Tennessee OF 95-0477
pseudotachylite
Idaho OP-362
Montana OP-362
- quartzites
Georgia B 1589-E
Idaho P 1525
Mexico OP-1870
Montana OP-1831
Pennsylvania WRI 92-4088
Vermont B 2060
- Saudi Arabia, structural geology OP-455
- schists
Alaska B 2107; OP-594
Montana OP-1831
Northwest Territories OP-1856
Rocky Mountains OP-1232
Saudi Arabia C 1129
South Dakota C 1129
tectonophysics OP-985
Vermont B 2060
Virginia OP-2062
- serpentine
California OP-1599
Europe OP-2052
Micronesia OP-1409
Pakistan OP-1303
Washington OP-1182
- slates
Alaska OF 94-0228
California OF 94-0640-A; OF 94-0640-B
- South Carolina, mineral resources OP-428
South Dakota, Proterozoic OP-1117
Spain C 1129
tonalite gneiss, Minnesota OP-886
United States, stratigraphy B 2135
Vermont, Silurian OP-1068
Virginia, structural geology OP-1199
Wyoming OP-280; OP-1929
- metamorphism**
Alaska
B 2107; OP-39; OP-100; OP-231; OP-296;
OP-641; OP-672; OP-711; OP-784
coal OP-972
deformation OP-1849
paleomagnetism OP-727
structural geology OP-932
Arizona OP-1185
California
OP-319
structural geology OP-348
- Canada, stratigraphy B 2135
China C 1129
Colorado Plateau, tectonophysics OP-1669
- contact metamorphism
C 1129
Argentina C 1129
California C 1129; OP-46
Colorado C 1129
Greenland OP-1752
Idaho B 2064-A-R
Mexico C 1129
Nevada OP-1083
Spain C 1129
Virginia P 1529
Washington B 2085-C
Yukon Territory OP-360
- epizonal metamorphism, New Mexico OP-959
Finland, geochemistry C 1129
Florida, Devonian OP-1971
Georgia, Devonian OP-1971
- high-grade metamorphism
Alaska OP-931; OP-1930
Italy OP-866
Montana OP-1831
North Carolina OP-1335
- Hungary, natural gas OP-155
India C 1129
- low-grade metamorphism
Alaska OP-409
Canada OP-409
Victoria Australia OF 94-0228
- Massachusetts
geochronology OP-1047
structural geology OP-782
- Micronesia, manganese ores OP-1409
Minnesota, mineral resources OF 94-0447
- Montana
OP-1627
deformation OP-1628
- Nevada
geochronology OP-844
orogeny OP-619
- New England
OP-2208
tectonics OP-2296
- New Hampshire, geochronology OP-1047
Newfoundland C 1129
Norway, structural geology OP-158
Oregon, structural geology OP-348
Pakistan, gems OP-1303
- polymetamorphism
Argentina C 1129
Idaho B 2064-A-R
- prograde metamorphism
Greece OP-453
metal ores OP-870
North Carolina OP-1647
- regional metamorphism
OP-83
Alaska OP-229; OP-1893
metal ores OP-870
Rocky Mountains OP-1232
South Carolina OP-2090
Spain C 1129
Wyoming OP-1929
- retrograde metamorphism
Colorado GQ-1764
Wyoming OP-1929
- Rocky Mountains, ground water OF 95-0143
- shock metamorphism
Colorado OP-1665
Denmark OP-1140
geochronology OP-1572
- Idaho OP-362
Iowa OP-1059; OP-1671; OP-2034
Montana OP-362
stratigraphy OP-84
Utah OP-2111
- structural geology OP-1668
thermal metamorphism
Nevada OP-1083
New Jersey OF 95-0557
South Dakota OP-1117
- United States, stratigraphy B 2135
Utah, orogeny OP-619
Vermont, Silurian OP-1068
Virginia, structural geology OP-1199; OP-2062
Wyoming, structural geology OP-1288
- metapelite**
Argentina C 1129
- metaplutonic rocks**
California C 1129
Newfoundland C 1129
Virginia P 1529
- metarhyolite**
Pennsylvania, Proterozoic OP-3
Virginia, Proterozoic OP-3
- metasedimentary rocks** *see also* khondalite;
metabentonite; metalimestone; metapelite;
paragneiss.
Alaska
OP-641
base metals B 2107
Alberta C 1129
Appalachians, metal ores OP-306
Brazil C 1129
California
economic geology OF 95-0030
geochemistry OF 95-0227-A; OF 95-0227-B
geochemistry OP-1026
Georgia, pedogenesis B 1589-E
Idaho
graphite deposits P 1525
uranium ores P 1525
metal ores OP-870
Minnesota, geochemistry B 1904-U
New South Wales Australia OP-871
Oregon, geochemistry OF 95-0227-A; OF 95-0227-B
Tennessee, environmental geology OF 95-0477
Vermont
Proterozoic B 2060
stratigraphy B 2060
Virginia C 1129
- metasomatic rocks**
California I-2473
- greisen
Canadian Shield OP-2126
Great Britain OP-2126
mineralogy OP-1378
- Nevada I-2473
Poland OP-1827
- serpentine
California OP-1599
Europe OP-2052
Micronesia OP-1409
Pakistan OP-1303
Washington OP-1182
- skarn
Alaska OP-1893
Basin and Range Province OP-1874
Canadian Shield OP-2126
Great Basin OP-1874
Great Britain OP-2126

- Idaho P 1525; B 2064-A-R
metal ores OP-863
- metasomatism**
albitization, thermal waters OP-1756
argillization, Colorado OP-67
Colorado, geochemistry OP-1806
finitization, Poland OP-1827
Germany C 1129
Hawaii
 OP-1307
 geochemistry OF 91-0596
hydrothermal alteration
 Alabama OP-1915
 Alaska OF 95-0047; OP-496; OP-670
 Australia C 1129
 Bolivia B 2119
 California C 1129; I-2473; OP-790
 Colorado OP-92
 East Pacific Ocean Islands OP-390
 faults OF 94-0228
 Idaho B 2064-A-R
 Japan OP-2007
 Minnesota OF 94-0447
 Missouri OF 94-0670
 Nevada I-2473; OP-454; OP-1084; OP-1857
 New York OP-1794
 Northwest Territories OP-1856
 Pacific Ocean B 2022; OP-1033
 Pakistan OP-1303
 Russian Federation OP-958
 Washington GQ-1681; OP-2329
 Wyoming OP-1913
kaolinization OP-989
Montana, metal ores OP-2224
propylitization
 Colorado OP-526
 Montana OP-1831
Russian Federation, geochronology OP-1493
Spain, geochemistry C 1129
taumalination, Nevada OP-844
wall-rock alteration
 C 1129
 Colorado OP-733
 Spain OP-22
zeolitization
 Idaho P 1525
 Oregon B 2108
- metasomatites** *see* metasomatic rocks
Metatheria *see* Marsupialia
- metavolcanic rocks**
Bolivia
 B 2119
 metal ores OP-1028
California, geochemistry OF 95-0227-A;
 OF 95-0227-B
Colorado, Proterozoic OF 94-0437
France, geochemistry C 1129
Italy, geochemistry C 1129
metal ores OP-870
Minnesota, geochemistry B 1904-U
North Carolina OP-1647
Oregon, geochemistry OF 95-0227-A; OF 95-
 0227-B
Pennsylvania, Proterozoic OP-3
Virginia, Proterozoic OP-3
- Metedeconk River**
hydrology WRI 91-4141
- meteor craters**
OP-853; OP-1729; OP-2112
Iowa, stratigraphy OP-372
meteoric iron *see* iron meteorites
- meteorites** *see also* chondrules.
Allende Meteorite, phase equilibria OP-611
Atlantic Coastal Plain, stratigraphy OP-1960
chladnite, petrology OP-469
chondrites OP-1579
enstatite chondrites, petrology OP-469
geochemistry OP-130
geomorphology OP-2033
iron meteorites
 magmas OP-648
 petrology OP-647
lunar meteorites
 OP-1826
 petrology OP-938
petrology OP-1798
stratigraphy OP-1418
ureilite, petrology OP-939
Wyoming, stratigraphy OP-667
Yamato Meteorites, petrology OP-938
- meteoroids**
petrology OP-1639
- methane**
Alaska
 geochemistry B 2107; OP-1676
 gold ores OP-2184
 natural gas OP-2074
 oceanography OF 95-0070
Atlantic Ocean, natural gas C 1108; OP-1305
California, pollution OP-2251
Colorado
 energy sources OP-297
 geochemistry OF 94-0295
ecology C 1108
energy sources YR; OP-433; OP-1147; OP-
 1547
environmental geology C 1108; OP-690
Florida, ground water OP-473; OP-1614
geophysical surveys OP-561
Minnesota, ecology C 1108
Mississippi Valley, pollution OF 94-0336
natural gas OP-1675
New York, waste disposal OP-1775
North Dakota, energy sources OP-749
Northwest Territories, geochemistry OP-192
Oregon, natural gas OF 95-0093; OP-1677
petroleum OP-830
petrology OP-1196
Poland, geochemistry C 1108
pollution OP-132
United States, geochemistry C 1108
Utah, energy sources OP-297
Washington, natural gas OP-1677
Wisconsin, ecology C 1108
- methanol**
pollution OP-137
- methoxychlor** *see* DDT
- methyl tert-butyl ether**
pollution FS 0114-95
- methylmercury**
environmental geology OP-690
Wisconsin, environmental geology OP-1663
- metolachlor**
Gulf of Mexico, environmental geology OP-
 715
Kansas, pollution W 2419
Michigan, pollution OF 95-0163
Nebraska, pollution W 2419
Wisconsin, pollution OF 95-0163
- Metzger Marsh**
environmental geology OF 95-0224
- Mexico** *see also* Chicxulub Crater; Yucatan Pen-
insula.
Cretaceous P 1561
environmental geology YR
geochemistry, Baja California OP-197
geochronology, Baja California OF 94-0587
geophysical surveys FS 0079-95
guidebook
 Puebla Mexico OP-838
 Veracruz Mexico OP-838
hydrogeology, Cerro Prieto OF 95-0514
magmas, Baja California C 1129
maps, Sonora Mexico OF 94-0685
metal ores C 1129; OP-1874
Ostracoda, Baja California Sur Mexico OP-122
petrology
 Baja California C 1129; OP-827
 Oaxaca Mexico OP-1870
 Sierra Madre Occidental OP-827
phase equilibria OP-387; OP-1489
Quaternary
 El Chichon OP-467
 Paricutin OP-1257
sedimentary petrology
 Cerro Prieto OP-1932
 Sonora Mexico OP-1404
 Tamaulipas Mexico OP-1141
seismology, Guerrero Mexico OP-613
stratigraphy
 OP-2030
 Baja California Norte Mexico OP-1036
structural geology, Baja California OP-824
tectonophysics
 OP-985
 Baja California OP-82; OP-1448
- Meyer Desert Formation**
Pliocene OF 94-0588
- meymechite** *see* meimechite
- MFI**
ground water OF 94-0468
- Mg** *see* magnesium
- Miami River valley**
hydrogeology OF 95-0357
- Miami Wash**
pollution OF 94-0508
- miarolytic cavities**
Idaho, non-metal deposits
 P 1525
- mica deposits**
Idaho P 1525
- mica group** *see also* biotite; muscovite; phlogo-
pate; sericite.
OP-915; OP-2110
Alaska, gold ores OP-349
Bolivia, petrology C 1129
- Michigan** *see also* Lake Erie; Lake Michigan;
Lake Saint Clair; Michigan Basin; Saint Clair
River.
environmental geology, Isle Royale National
 Park OF 94-0670
geomorphology, Lenawee County Michigan
 OF 95-0224
ground water
 OF 93-0663
 Calhoun County Michigan OP-698
hydrogeology OF 94-0473
hydrology OF 94-0363
mineralogy, White Pine Mine OP-2028
pollution
 OP-497
 Isle Royale National Park OP-1267

- Michigan Upper Peninsula OF 95-0163
- Michigan Basin**
energy sources OF 94-0298
petroleum OF 94-0298
- Michigan Upper Peninsula**
pollution OF 95-0163
- Michoacan Mexico** *see* Paricutin
- micrite**
Colorado, metal ores OP-2060
Idaho, base metals P 1525
- microbiology, geological** *see* geomicrobiology
- microbreccia**
Wyoming OP-936
- microcline**
OF 94-0576
Idaho, non-metal deposits P 1525
Iowa, stratigraphy OP-1671
- microearthquakes**
California
OF 94-0228; OF 95-0038; OP-254; OP-1054; OP-1347; OP-1421; OP-2153
tectonophysics OP-620
Hawaii OP-1911
- microfossils** *see* algae; algal flora; Conodonta; conodonts; foraminifers; Ostracoda; ostracods; palynomorphs; Protista; radiolarians
- microgranite**
C 1129
Australia C 1129
Brazil C 1129
California C 1129
Chile, geochemistry C 1129
Victoria Australia, geochemistry C 1129
- Micronesia** *see also* Mariana Islands; Marshall Islands.
geochemistry, Belau OP-520; OP-689
manganese ores, Caroline Islands OP-1409
- micropetrological unit** *see* macerals
- micropore, electron** *see* electron probe
- microscopy, electron** *see* electron microscopy
- microseismicity** *see* seismicity
- Mid-Atlantic Ridge** *see also* TAG hydrothermal field.
Quaternary OP-233
sea-floor spreading OP-1931
- Mid-Continent** *see* Midcontinent
- Mid-continent Rift** *see* Keweenaw Rift
- mid-ocean ridge basalts**
Arizona, geochemistry OP-1104
California
OP-1149
geochemistry OP-260
East Pacific Ocean Islands OP-390
geochemistry OP-976
Hawaii, geochemistry OP-861
Mexico OP-827
Pacific Ocean
OP-1941; OP-2132; OP-2266
geochemistry B 2022; OF 94-0015
- mid-ocean ridges** *see also* black smokers; East Pacific Rise; Juan de Fuca Ridge.
Arctic Ocean
paleomagnetism OF 94-0588
tectonophysics OP-445
California, oceanography B 2022
geochemistry OP-1114
Hawaii, magmas OP-47; OP-1090
Pacific Ocean
geochemistry OP-1033
oceanography OF 94-0711
- sea-floor spreading B 2022
tectonophysics OP-56; OP-1656
tectonophysics OP-924
Vanuatu, plate tectonics OP-162; OP-336
- Midcontinent** *see also* Arkansas; Illinois; Indiana; Iowa; Kansas; Kentucky; Minnesota; Missouri; Montana; Nebraska; North Dakota; Ohio; Oklahoma; South Dakota; Tennessee; Wisconsin; Wyoming.
geochemistry OF 94-0450; OP-1955
geochronology OP-510
industrial minerals B 2111
lead-zinc deposits B 1989-F; OP-731
non-metal deposits B 2111
pedogenesis OP-2319
Pennsylvanian OP-1228
stratigraphy B 2110; OP-766
- Midcontinent Rift System** *see* Keweenaw Rift
- Midcontinent Strategic and Critical Minerals Project**
economic geology C 1124
- Middendorf Formation** OP-1359; OP-1971
- middens**
Basin and Range Province, Quaternary OP-2198
Great Basin, Quaternary OP-2198
Quaternary OP-875; OP-1057
- Middle Cambrian** *see* Bright Angel Shale; Flathead Sandstone
- Middle Carboniferous**
Arctic region B 2110
- middle crust**
Alaska OP-2301
Arizona, petrology C 1129
California OP-1444; OP-2042
New Mexico, petrology C 1129
Northern Territory Australia, magmas C 1129
Oregon OP-1444
Queensland Australia, magmas C 1129
structural geology OP-401
Washington, magmas C 1129
- Middle Devonian** *see* Detroit River Group; Eifelian; Hamilton Group; Ludlowville Formation; Moscow Formation
- Middle East** *see also* Cyprus; Iran; Israel; Lebanon; Syria; Turkey.
YR
deformation, Dead Sea Rift OP-1615
natural gas OP-593
Quaternary, Dead Sea Rift OF 94-0568
tectonophysics OP-923
- Middle East Peace Initiative** YR
- middle Eocene** *see* Claiborne Group; Cockfield Formation; Cook Mountain Formation; Santee Limestone; Tyee Formation
- Middle Ground Shoal Field**
energy sources OP-574
- Middle Grove Quadrangle**
ground water WRI 93-4029
- Middle Jurassic** *see* Bajocian; Bathonian
- middle Miocene** *see* Calvert Formation; Choptank Formation; Kirkwood Formation; Serravalian
- Middle Mississippian**
Basin and Range Province OP-2115
Great Basin OP-2115
- Middle Ordovician** *see* Ammonoosuc Volcanics; Decorah Shale; Galena Dolomite; Glenwood Shale; Millbrig Bentonite Bed; Platteville Formation; Saint Peter Sandstone; Simpson Group; Stones River Group; Trentonian
- Middle Pennsylvanian** *see* Allegheny Group; Atokan; Breathitt Formation; Desmoinesian; Dugger Formation; Hermosa Formation; Kanawha Formation; Paradox Member; Petersburg Formation; Staunton Formation; Tradewater Formation
- middle Proterozoic** *see* Belt Supergroup; Revett Quartzite
- middle Quaternary**
Oregon OP-2045
- Middle Run Formation**
structural geology OF 94-0298
- Middle Silurian** *see* Clinton Group; Niagaran; Roberts Mountains Formation
- middle Tertiary** *see* Soda Lake Shale Member
- Middle Triassic** *see* Muschelkalk
- Middle West (United States)** *see* Midwest
- Middleton Island**
sedimentary petrology OP-1218
- midoceanic ridges** *see* mid-ocean ridges
- Midway Field**
energy sources OP-220
- Midway Valley**
geophysical surveys OF 93-0540-A; OF 93-0540-B
structural geology OP-2276
- Midwest** *see also* Mississippi Valley.
ecology OF 95-0163
environmental geology C 1120-G; OP-1427; OP-2303
geologic hazards YR; B 2139; OF 94-0663; OP-1526; OP-1764; OP-1836; OP-2048
ground water OF 93-0663; HA-0730-K
hydrogeology WRI 94-4105; OF 94-0473; OP-1311
hydrology YR; C 1120-F; C 1120-H; WRI 93-4204; OP-1824
industrial minerals OP-855
petroleum OF 94-0298
pollution OF 94-0396; OP-497; OP-1056; OP-1652; OP-1807; OP-2089; OP-2185; OP-2201
Quaternary OP-1290
stratigraphy OP-411
- metamictes**
C 1129
Alaska, geochemistry B 2107
Colorado GQ-1764
France, geochemistry C 1129
geochemistry C 1129
India C 1129
Italy C 1129
Japan C 1129
Labrador, geochemistry C 1129
Maine C 1129
Newfoundland, geochemistry C 1129
Northern Territory Australia C 1129
Pakistan, geochemistry C 1129
Queensland Australia C 1129
Russian Federation, geochemistry C 1129
Saudi Arabia C 1129
Scotland, geochemistry C 1129
- migration (seismic)** *see* seismic migration
- Milankovitch theory**
East Pacific Ocean Islands, stratigraphy OP-1736
Minnesota, Quaternary OF 94-0578
Nevada, Quaternary FS 94-0007
Polynesia, stratigraphy OP-1736
Russian Federation, Quaternary OP-165
stratigraphy B 2110

Miles Pond Quadrangle

maps OF 94-0410

Milford Connecticut

geophysical surveys OP-2218

Milford Pennsylvania

ground water WRI 93-4109

Milford Utah

hydrogeology WRI 95-4072

Milford-Souhegan Aquifer

ground water OF 95-0281

military geology

OP-1331; OP-2193; OP-2194

Alaska, hydrogeology OF 94-0367

California OF 94-0681

geomorphology OP-2033

geophysical surveys OP-1695

Maryland, environmental geology W 2399

New Jersey, environmental geology WRI 92-4122; WRI 92-4134

New Mexico

environmental geology OF 94-0547

ground water WRI 93-4192

North Carolina, ground water WRI 94-4186

Ohio, ground water WRI 94-4231; WRI 94-4243

South Carolina, pollution WRI 94-4209

Tennessee

ground water WRI 95-4011

hydrogeology WRI 93-4207

Texas, ground water WRI 95-4038

Milk River basin

hydrology WRI 95-4022

Mill Canyon Stock

phase equilibria C 1129

Mill Creek watershed

ground water OF 95-0193

hydrogeology OF 95-0113

Millbrig Bentonite Bed OP-386**Mille Lacs Group**

geochemistry B 1904-U

Miller City Illinois

geomorphology OP-682

Miller Creek Utah

hydrogeology WRI 95-4025

Millers Pond Aquifer

ground water OP-151; OP-1358

Milligen Formation

economic geology B 2064-A-R

metal ores B 2064-A-R

polymetallic ores B 2064-A-R

Millington Tennessee

ground water WRI 95-4011

Million Dollar Bridge

engineering geology WRI 94-4073

Millville Massachusetts

geophysical surveys WRI 94-4185

Milton Belt

Paleozoic OP-1670

structural geology OP-1908

Milwaukee River basin

environmental geology OF 95-0163

hydrogeology OF 95-0163; OP-2327

Mimbral Mexico

sedimentary petrology OP-1141

MIME B 2103**Minchumina Terrane**

areal geology OP-201; OP-711

Mindego Hill Quadrangle

geologic hazards OF 93-0684

mine dewatering

Nevada, hydrogeology WRI 95-4119

mine drainage

Colorado, pollution OF 95-0026

Mine Mountain Fault

structural geology OP-1252

mineral assessment *see also* biogeochemical methods; CUSMAP; geobotanical methods; geochemical anomalies; geochemical methods; geophysical surveys; glaciated terrains; gossan; hydrological methods; ore guides; pathfinders; PROSPECTOR; remote sensing; stream sediments; well-logging.

Alaska

base metals B 2107

gold ores B 2107

metal ores OP-99; OP-342; OP-424; OP-425; OP-427; OP-919

mineral resources OF 94-0272; OF 95-0537; I-2225-A

Arizona

non-metal deposits OF 95-0031

uranium ores OF 94-0566

Brazil, metal ores OP-198

California

economic geology OF 94-0712

heavy mineral deposits OF 95-0587

Colorado

metal ores OF 94-0291; OP-728

uranium ores OF 95-0242

conservation C 1108

economic geology OP-111; OP-250; OP-251; OP-400

geophysical surveys OF 95-0544; FS 0121-95; OP-712

Georgia, phosphate deposits OP-1506

Illinois, non-metal deposits B 2111

mineral resources OF 95-0045; OF 95-0082

Missouri, economic geology OF 94-0670

Montana

metal ores OF 94-0670; OP-2224

mineral resources OP-1344

Nevada

economic geology OF 94-0712

geophysical surveys OF 94-0296; OF 94-0670

gold ores OP-331; OP-1946

metal ores B 2090

non-metal deposits OF 95-0084

New Mexico

economic geology DDS-0017; B 2063

metal ores B 2063

mineral resources B 2063

structural geology OF 95-0506

Oregon, metal ores OF 94-0677

Utah

geophysical surveys OF 94-0296

metal ores OF 94-0417

Washington, mineral resources I-2364-A

mineral chemistry *see* crystal chemistry

mineral deposits, genesis *see also* endogene processes; epigene processes; epithermal processes; exhalative processes; geochemical controls; geomorphologic controls; hydrothermal processes; hypothermal processes; igneous processes; mantos; massive deposits; mesothermal processes; metallogenic epochs; metallogenic provinces; metallogeny; metamorphic processes; metasomatism; mississippi valley-type; ore-forming fluids; paragenesis; placers; podiform deposits; porphyry copper; porphyry molybde-

num; quartz veins; sandstone-type; stockwork deposits; supergene processes; syngensis; wall-rock alteration; weathering.

Alaska, gold ores OP-349

Bolivia

lava B 2119

metal ores OP-188

Brazil, metal ores OP-198

California, metal ores OP-800

Colorado

geochronology B 2104

uranium ores OF 95-0242

economic geology OP-250

Idaho

barite deposits P 1525

base metals P 1525

fluorspar P 1525

gold ores P 1525

mercury ores P 1525

metal ores P 1525; B 2064-A-R

Illinois, heat flow OP-2050

Mississippi Valley, zinc ores OF 94-0298

Montana, non-metal deposits I-2446

Western Interior, economic geology OP-597

Wyoming, geochemistry OP-300

mineral economics

non-metal deposits B 2111

Mineral Hot Springs KGRA

hydrogeology OF 95-0569

mineral inclusions

OP-1138

China OP-1935

Pacific Ocean, sulfides OP-1829

Washington OP-391

mineral inventory

economic geology OP-905

Nevada OP-450

Oregon, petrology OP-38

Utah OP-289

mineral localities

Nevada, mineral inventory OP-450

Mineral Resource Surveys Program

mineral resources OF 95-0537

mineral resources *see also* mineral deposits, genesis; strategic minerals.

B 2081; OF 94-0298; OF 95-0045; OF 95-0082; OP-332; OP-412; OP-600; OP-846; OP-2192

Alaska C 1117; OF 94-0272; OF 94-0277-A; OF 94-0277-B; OF 95-0509; OF 95-0537; OF 95-0623; OF 95-0625; OF 95-0626; OF 95-0627; MF-2058-D; I-2225-A; I-2225-B; I-2225-C; I-2225-D; OP-724

Arizona I-2489

California OF 93-0698; OF 94-0712; OF 95-0013; OP-793

Colombia, geochemistry OF 94-0623-A; OF 94-0623-B; OF 94-0623-C

conservation C 1108

Idaho P 1525; B 2064-A-R

igneous rocks OF 94-0624-A; OF 94-0624-B

Mexico, environmental geology YR

Minnesota OF 94-0447

Montana OP-1344; OP-2225

Nevada OF 94-0712; OF 95-0084; OF 95-0248; OP-213; OP-793

New Mexico

DDS-0017; B 2063; OF 95-0314; OP-601

structural geology OF 95-0506

New York OP-718

North Carolina OP-428

Oregon B 1738-E; B 1741-H; OF 95-0006

- Pacific Ocean, plate tectonics OP-1441; OP-1442; OP-1443
 South Carolina OP-428
 United States, environmental geology YR
 Vermont OP-718
 Virginia FS 0046-95
 Washington I-2364-A
 West Virginia I-2364-J
 Wyoming I-2233
- mineral sequence *see* paragenesis
 mineral soap *see* bentonite
- mineral-water interface**
 Florida, hydrogeology OP-1613
 geochemistry OP-1519
 mineralogy OP-79
- mineralogy *see* aluminosilicates; carbonates; fluorides; halides; hydrates; iodates; mineral inventory; molybdates; nitrates; organic compounds; oxides; phosphates; ring silicates; selenates; sheet silicates; silicates; sulfates; sulfides; tellurides
- mines *see* coal mines
- mining *see* solution mining; surface mining; underground mining
- mining geology** *see also* abandoned mines; open-pit mining; surface mining; underground mining.
 Appalachians, coal C 1108
 Arizona
 hydrogeology OP-335
 pollution OP-2226
 California, metal ores OP-415
 Canada, seismology OP-606
 Colorado, pollution OP-979
 environmental geology OP-518
 Idaho, pollution OP-1146
 Illinois, coal OF 94-0298
 Indiana, engineering geology OF 94-0298
 industrial minerals B 2111
 New Mexico
 economic geology DDS-0017
 hydrogeology OP-335
 metal ores B 2063
 pollution OP-2226
 Oregon, metal ores OF 94-0677
 pollution OP-186
 South Africa, seismology OP-606
 Washington, pollution OP-1146
 Wyoming, non-metal deposits OF 95-0476
- mining, open-pit *see* open-pit mining
- Minneapolis Minnesota**
 hydrogeology WRI 94-4163; OF 94-0478
- Minnesota** *see also* Elk Lake; Mississippi River; Penokean Orogeny; Red River; Red River valley; Superior Province; Upper Mississippi Valley.
 Cretaceous I-2474-A
 ecology C 1108
 economic geology C 1124
 environmental geology
 OP-558
 Minnesota River valley OP-831
 geochemistry
 Aitkin County Minnesota B 1904-U
 Crow Wing County Minnesota B 1904-U
 Hennepin County Minnesota OP-498
 Kanabec County Minnesota B 1904-U
 Kandiyohi County Minnesota B 1904-U
 Mille Lacs County Minnesota B 1904-U
 Minnesota River valley OP-498
 Morrison County Minnesota B 1904-U
 Stevens County Minnesota B 1904-U
 Swift County Minnesota B 1904-U
 geophysical surveys, Duluth Complex OP-404
 ground water
 Cook County Minnesota WRI 94-4199
 Hennepin County Minnesota WRI 94-4204
 Saint Paul Minnesota OF 93-0435
 Sherburne County Minnesota WRI 94-4149;
 OF 94-0337
 hydrogeology
 OF 94-0338
 Aitkin County Minnesota OF 94-0478
 Anoka County Minnesota OF 94-0478
 Benton County Minnesota OF 94-0478
 Crow Wing County Minnesota OF 94-0478
 Dakota County Minnesota WRI 94-4207
 Fillmore County Minnesota WRI 94-4146
 Houston County Minnesota WRI 94-4146
 Itasca County Minnesota OF 94-0478
 Minneapolis Minnesota WRI 94-4163;
 OF 94-0478
 Minnesota River valley WRI 94-4163
 Morrison County Minnesota OF 94-0478
 Olmsted County Minnesota WRI 94-4146
 Ramsey County Minnesota WRI 94-4062
 Saint Paul Minnesota WRI 94-4163; OF 94-0478
 Sherburne County Minnesota OF 94-0478
 Stearns County Minnesota OF 94-0478
 Wabasha County Minnesota WRI 94-4146
 Winona County Minnesota WRI 94-4146
 Wright County Minnesota OF 94-0478
 hydrology
 Brown County Minnesota OF 95-0333
 Chippewa County Minnesota OF 93-0046;
 OF 94-0488
 Clay County Minnesota WRI 94-4058;
 OF 95-0283
 Douglas County Minnesota OF 93-0047;
 OF 94-0488
 Grant County Minnesota OF 93-0047;
 OF 94-0488
 Kandiyohi County Minnesota OF 94-0488
 Kittson County Minnesota OF 95-0283
 Lac qui Parle County Minnesota OF 93-0046
 Lincoln County Minnesota OF 93-0046
 Lyon County Minnesota OF 93-0046;
 OF 95-0333
 Marshall County Minnesota OF 95-0283
 Minnesota River valley OF 95-0162
 Murray County Minnesota OF 95-0333
 Norman County Minnesota OF 95-0283
 Otter Tail County Minnesota OF 93-0047;
 OF 94-0488
 Polk County Minnesota OF 95-0283
 Pope County Minnesota OF 94-0488
 Redwood County Minnesota OF 95-0333
 Stevens County Minnesota OF 93-0047;
 OF 94-0488
 Swift County Minnesota OF 93-0047;
 OF 94-0488
 Yellow Medicine County Minnesota OF 93-0046
- maps
 I-1420 (NL-14)
 Beltrami County Minnesota I-1420 (NM-15)
 Cook County Minnesota I-1420 (NM-15)
 Koochiching County Minnesota I-1420 (NM-15)
 Lake of the Woods County Minnesota I-1420 (NM-15)
 Marshall County Minnesota I-1420 (NM-15)
- Pennington County Minnesota I-1420 (NM-15)
 Roseau County Minnesota I-1420 (NM-15)
 Saint Louis County Minnesota I-1420 (NM-15)
- metal ores
 OP-148
 Duluth Complex OP-862
- mineral resources
 Beltrami County Minnesota OF 94-0447
 Clearwater County Minnesota OF 94-0447
 Koochiching County Minnesota OF 94-0447
 Roseau County Minnesota OF 94-0447
- pollution
 OP-497; OP-1508
 Mille Lacs County Minnesota OP-1139; OP-1686
 Otter Tail County Minnesota OF 95-0116
 Sherburne County Minnesota OP-1653
 Precambrian, Vermilion Range OP-886
- Quaternary
 OP-2082
 Clearwater County Minnesota OF 94-0578
- Minnesota MSEA**
 pollution OP-1686
- Minnesota River**
 geologic hazards OP-1836
- Minnesota River valley**
 environmental geology OP-831
 geochemistry OP-498
 hydrogeology WRI 94-4163
 hydrology OF 95-0162
- Minnewaste Limestone Member**
 sedimentary petrology B 1917-S
- minor planets *see* asteroids
- Minturn Formation**
 geologic hazards MF-2295
 metal ores B 2116
- Miocene** *see also* Catahoula Formation; Imperial Formation; Muddy Creek Formation; Rincon Formation; Soda Lake Shale Member; Tamiami Formation.
 Alaska P 1543 A-B; B 2107; OP-953; OP-2160
 Antarctica OF 94-0588; OP-2305
 Arikaree Group, geochemistry OP-1046
 Arizona OP-15; OP-669; OP-991
 Atlantic Coastal Plain OP-1960
 Atlantic Ocean OP-1334
 Bahamas OP-540
 Bolivia OP-188; OP-1028
 Bullfrog Member
 OF 95-0102
 structural geology OP-2143
 California B 1995-H,I; B 1995-J,K; OF 95-0530; OP-625; OP-669; OP-1211; OP-1430; OP-2047
 Calvert Formation
 OF 94-0683
 ground water WRI 92-4111
 sedimentary petrology OP-848
 Vertebrata OP-1137; OP-2275
 Choptank Formation, Vertebrata OP-1137; OP-2275
 Colombia OP-77
 Colorado OP-526; OP-546
 Columbia River Basalt Group
 OP-2147
 Quaternary OP-680
 Crater Flat Tuff
 OF 94-0460; OP-1860
 volcanism OP-1388

- Eastover Formation**
 ground water WRI 92-4111
 sedimentary petrology OP-848
 Vertebrata OP-1137; OP-2275
- Egypt** OP-1770
Finland C 1129
Fleming Formation, ground water WRI 95-4038
Georgia OP-399; OP-586; OP-739
Greece OP-453
Hawthorn Formation
 OP-2087
 continental shelf OP-2293
Hungary OP-524; OP-951
Idaho B 2064-A-R; OP-716
Italy OP-962
Kirkwood Formation
 OP-2171
 pollution OP-910
Louisiana OP-1543
Maryland OP-736
Messinian, Italy OP-500
Modelo Formation OP-2061
Monterey Formation
 B 1995-J,K; B 1995-L; OP-1916
 energy sources OP-2146
 geochemistry P 1566; OP-1955
 natural gas OP-542
Nevada P 1559; B 2056; B 2081; C 1129;
 OP 95-0084; OP-15; OP-77; OP-836; OP-1323; OP-1408; OP-1817; OP-2029
New Jersey OP-622; OP-623
Oregon B 1738-E; B 2108; OP-38; OP-1254
Paintbrush Tuff
 engineering geology OF 93-0269
 environmental geology OF 94-0451
Peru OP-200; OP-1411
Puerto Rico OP-2277
Saint Marys Formation
 OP-1412
 ground water WRI 92-4111
 Vertebrata OP-2275
Serravallian, Georgia OP-1506; OP-1969
Spain OP-22; OP-118
Topopah Spring Member
 OF 94-0342; OF 95-0102
 deformation OF 95-0002
Utah B 2056; OP-189; OP-695; OP-1283; OP-1390; OP-1842
Virginia OP-736
Washington OP-1254; OP-1449; OP-2173
Yorktown Formation
 OP-2071
 Quaternary OP-1001
 Vertebrata OP-2275
- miogeosynclines**
 Canada, geochronology OP-308
 Nevada, gold ores OP-2151
 sedimentary petrology OP-1404
 United States, geochronology OP-308
- miospores**
 OP-243
 Alaska, Quaternary OP-604
 Atlantic Ocean, Pliocene OP-218
 California
 Miocene OF 95-0265
 Quaternary OF 95-0034
Idaho, Quaternary B 2105
Indiana, sedimentary petrology OP-1002
Kentucky, sedimentary petrology OP-1002
Louisiana, Paleocene OF 95-0208
Mississippi, Paleocene OF 95-0208
- Oregon**, Quaternary OF 95-0034
Pacific Ocean
 Pliocene OP-218
 Quaternary OF 95-0034
Utah, stratigraphy B 2000-L; B 2115-B
Washington, Quaternary OF 95-0034
- Miramichi earthquake 1982**
 Canada OP-374
- Mirror Creek Glaciation**
 Quaternary OP-1458
- Mirror Lake**
 ground water FS 0138-95; OP-937; OP-1549
 mirrorstone *see* muscovite
 miscellaneous minerals *see* mineral inventory
- Misheguk Mountain**
 petrology OP-710
- Mission Canyon Limestone** B 2112
- Mission Hills California**
 geologic hazards OF 95-0062
- Mississippi** *see also* Loveland Loess; Mississippi Embayment; Mississippi River.
 diagenesis, Wayne County Mississippi OP-828
 engineering geology OP-1009
 environmental geology, Lincoln County Mississippi C 1108
 ground water
 C 1108; WRI 94-4088; WRI 94-4223
 Bolivar County Mississippi WRI 95-4127
 Coahoma County Mississippi WRI 95-4127
 Covington County Mississippi WRI 94-4219
 Hattiesburg Mississippi WRI 94-4219
 Humphreys County Mississippi WRI 95-4127
 Jasper County Mississippi WRI 94-4219
 Jones County Mississippi WRI 94-4219
 Lamar County Mississippi WRI 94-4219
 Leflore County Mississippi WRI 95-4127
 Simpson County Mississippi WRI 95-4013; OP-901
 Smith County Mississippi WRI 94-4219
 Sunflower County Mississippi WRI 95-4127
 Washington County Mississippi WRI 95-4127
 hydrogeology
 P 1410-C; OF 94-0452; FS 94-0060; FS 94-0075
 Bolivar County Mississippi WRI 94-4172
 Coahoma County Mississippi WRI 94-4172
 Humphreys County Mississippi WRI 94-4172
 Leflore County Mississippi WRI 94-4172
 Quitman County Mississippi WRI 94-4172
 Sharkey County Mississippi WRI 94-4172
 Sunflower County Mississippi WRI 94-4172
 Tallahatchie County Mississippi WRI 94-4172
 Tunica County Mississippi WRI 94-4172
 Washington County Mississippi WRI 94-4172
 Paleocene, Kemper County Mississippi OF 95-0208
 pollution
 OP-681
 Sunflower County Mississippi OP-758
 Quaternary, Jackson County Mississippi OF 94-0558; OF 94-0702
 waterways WRI 94-4241
- Mississippi Delta**
 engineering geology OF 94-0275
 environmental geology OF 94-0275
 geomorphology OF 94-0275
 oceanography I-2150-B
 pollution OP-758
 Quaternary OP-1936
 shore features OP-1937
- Mississippi Embayment**
 geophysical surveys P 1538-L; P 1538-P
 hydrogeology FS 94-0047
 petroleum OF 94-0298
 seismology OP-405
 stratigraphy MF-2284
 structural geology P 1538-E
- Mississippi Fan**
 oceanography OP-2081
 sedimentary petrology OP-1877
- Mississippi River**
 ecology OF 94-0275
 engineering geology OF 94-0275
 environmental geology OF 95-0163; OP-715; OP-1427; OP-1748; OP-2303
 geologic hazards OP-1526; OP-1578; OP-1764; OP-1836; OP-2048
 geomorphology P 1538-R; OP-682
 ground water WRI 95-4127
 hydrogeology WRI 94-4163; OF 94-0478; OF 94-0493
 hydrology C 1120-F; WRI 93-4204; WRI 94-4130; WRI 94-4191; OF 93-0628; OF 93-0657; OF 94-0474; OF 95-0149
 pollution YR; OF 94-0036; OF 94-0336; OF 94-0376; OP-758; OP-1652; OP-2185
 Quaternary OF 94-0568; OP-1936
 seismology OP-1907; OP-2014
 shore features OP-1937
 waterways OF 94-0275
- Mississippi River Aquifer**
 hydrogeology WRI 94-4172
- Mississippi River delta *see* Mississippi Delta
 Mississippi River valley *see* Mississippi Valley
- Mississippi Sound**
 Quaternary OF 94-0558
- Mississippi Valley** *see also* Arkansas; Illinois; Iowa; Kentucky; Minnesota; Mississippi; Mississippi Embayment; Mississippi River; Missouri; Reelfoot Rift; Tennessee; Wisconsin.
 economic geology, Upper Mississippi Valley B 2094-C
 engineering geology P 1538-M
 environmental geology, Upper Mississippi Valley C 1120-G
 geologic hazards
 OF 95-0574; OP-1295
 Upper Mississippi Valley OP-1526; OP-1836
 geophysical surveys MF-2296
 ground water WRI 93-4020
 heat flow, Upper Mississippi Valley OP-2050
 hydrogeology
 WRI 94-4146
 Upper Mississippi Valley OF 94-0478
 hydrology, Upper Mississippi Valley YR; C 1120-F; C 1120-H
 lead-zinc deposits, Upper Mississippi Valley OF 94-0298; OP-792
 maps MF-2277
 metal ores, Upper Mississippi Valley B 2094-B; OP-888
 pedogenesis OP-2319

- Quaternary
OF 94-0568; OP-946
Lower Mississippi Valley OP-1757
seismology
I-2521
Upper Mississippi Valley OP-2014
shore features, Lower Mississippi Valley OP-1937
stratigraphy, Upper Mississippi Valley MF-2284
zinc ores, Upper Mississippi Valley OF 94-0298
- mississippi valley-type**
Arkansas, lead-zinc deposits B 1989-F
Colorado, geochemistry OP-535
diagenesis OF 94-0298
Indiana, lead-zinc deposits OP-369
lead-zinc deposits OF 94-0298; OP-731
metal ores B 1989-G; OF 94-0298; OP-863
Mississippi Valley
economic geology B 2094-C
metal ores B 2094-B
- Missouri
lead-zinc deposits B 1989-F
petrology OP-1299
Nevada, geochemistry OP-535
Poland, lead-zinc deposits OP-908
- Mississippian**
OP-1226; OP-1898
Alaska OP-39; OP-931; OP-1623; OP-1895
Aux Vases Sandstone
energy sources OF 94-0298
petroleum OF 94-0298
Beech Creek Limestone Member, sedimentary petrology OF 94-0298
Boone Formation, solution features OP-1360
Burlington Limestone, metal ores B 1989-G
Chainman Shale
energy sources OF 94-0670; OP-1557
structural geology OP-1252; OP-1944
Charles Formation B 2112
Chesterian
Illinois OF 94-0298
Montana B 2112
North Dakota B 2112
Ohio OP-411
Chouteau Limestone, metal ores B 1989-G
Colorado OP-1272
Cypress Sandstone
energy sources OF 94-0298
petroleum OF 94-0298
Golconda Formation, structural geology OP-1944
Idaho B 2064-A-R
Indiana OF 94-0298; OP-369
Joana Limestone, structural geology OP-2115
Kayak Shale, structural geology OP-2247
Kekikutuk Conglomerate, deformation OP-479
Kentucky OF 94-0298
Leadville Formation
OF 94-0583
energy sources B 2000-H
environmental geology OP-1045
Madison Group, economic geology OP-2225
Meramecian
Alaska OP-641
Basin and Range Province OP-2115
Great Basin OP-2115
Montana B 2112
North Dakota B 2112
Middle Mississippian
Basin and Range Province OP-2115
- Great Basin OP-2115
Mission Canyon Limestone B 2112
Montana OP-596
Nevada B 1988-I; OP-1084
Osagian
Montana B 2112
North Dakota B 2112
Pennsylvania OF 95-0240; OP-1895
Saint Louis Limestone
energy sources OP-2020
geochemistry OF 94-0298
petroleum B 2094-D; OF 94-0298
Sainte Genevieve Limestone, petroleum OF 94-0298
Serpukhovian
OP-809
Kazakhstan OP-1258
Utah OP-1272
Warsaw Formation
metal ores B 1989-G
petroleum OF 94-0298
West Virginia OF 95-0240
- Missouri** *see also* Bonnetterre Formation; Burlington Limestone; Chouteau Limestone; Davis Formation; Decorah Shale; Maquoketa Formation; Mississippi Embayment; Mississippi River; Missouri River; Missouri River valley; New Madrid region; Ozark Mountains; Platte River; Reelfoot Rift; Upper Mississippi Valley; Warsaw Formation.
earthquakes OF 94-0670
economic geology C 1124
geochemistry B 2117
geologic hazards
Cape Girardeau County Missouri OP-1764
New Madrid County Missouri OF 95-0574
geophysical surveys, New Madrid County Missouri P 1538-P
hydrogeology
OF 94-0538
Boone County Missouri OF 94-0705-W
Columbia Missouri OF 95-0109
Greene County Missouri WRI 93-4154
Oregon County Missouri OF 95-0106
Shannon County Missouri OF 95-0106
hydrology
WRI 94-4200
Jackson County Missouri OF 93-0495
lead-zinc deposits
Carter County Missouri B 1989-F
Dunklin County Missouri B 1989-F
Maries County Missouri B 1989-F
Pemiscot County Missouri B 1989-F
Phelps County Missouri B 1989-F
Pulaski County Missouri B 1989-F
Reynolds County Missouri B 1989-F
Ripley County Missouri B 1989-F
Viburnum Trend B 1989-F
Washington County Missouri B 1989-F
- maps**
Barry County Missouri OF 94-0430
Christian County Missouri OF 94-0430
Douglas County Missouri OF 94-0430
Lincoln County Missouri MF-2277
Ozark County Missouri OF 94-0430
Pike County Missouri MF-2277
Stone County Missouri OF 94-0430
Taney County Missouri OF 94-0430
non-metal deposits B 2111
Pennsylvanian B 2110
pollution
OP-497; OP-1508
- Audrain County Missouri OF 94-0332; OP-2282
Boone County Missouri OP-933; OP-934
Caldwell County Missouri OF 94-0332; OP-2282
Clark County Missouri OF 94-0332; OP-2282
Clinton County Missouri OF 94-0332; OP-2282
Daviess County Missouri OF 94-0332; OP-2282
Gentry County Missouri OF 94-0332; OP-2282
Lewis County Missouri OF 94-0332; OP-2282
Monroe County Missouri OF 94-0332; OP-2282
Nodaway County Missouri OF 94-0332; OP-2282
Scotland County Missouri OF 94-0332; OP-2282
Shelby County Missouri OF 94-0332; OP-2282
- Quaternary**
Dunklin County Missouri P 1538-H
New Madrid County Missouri OF 94-0568
Pemiscot County Missouri P 1538-H; OF 94-0568
- seismology**
Butler County Missouri I-2521
Carter County Missouri I-2521
Dunklin County Missouri I-2521
Mississippi County Missouri I-2521
New Madrid County Missouri I-2521
Pemiscot County Missouri I-2521
Ripley County Missouri I-2521
Stoddard County Missouri I-2521
waterways OF 94-0544
- Missouri Breaks**
non-metal deposits OP-1492
- Missouri MSEA**
hydrogeology OF 94-0705-W
pollution OP-933
- Missouri River**
engineering geology OP-1310
environmental geology OP-1748; OP-2303
geologic hazards YR; OP-1836
hydrogeology WRI 93-4195
hydrology YR; WRI 95-4087; OF 93-0657
pollution OF 94-0036; OP-1112; OP-1426; OP-1652
- Missouri River basin**
OP-1648
non-metal deposits OP-1492
- Missouri River Basin Earth Resources Mapping Group**
geologic hazards YR
- Missouri River valley**
geologic hazards OP-1295; OP-1578
hydrogeology OP-1311
- Missourian** *see also* Plattsburg Limestone; Wyandotte Limestone.
Arizona B 2110
- Mitsuhashi Intrusion**
geochemistry C 1129
- mixtite** *see* diamictite
- Mn** *see* manganese
- Mo** *see* molybdenum
- Moapa Valley**
Quaternary B 2056

mobile belts

- Canada, geochemistry C 1129
- Commonwealth of Independent States, magmas C 1129

MOC

- hydrology WRI 94-4115

Modelo Formation OP-2061**modern analogs**

- Alaska, palynomorphs OP-184
- Arizona, stratigraphy OP-224
- Bahamas, sedimentary petrology OP-2109
- Caribbean region, stratigraphy OP-1150
- Colorado Plateau, stratigraphy OP-1481
- Lesser Antilles, stratigraphy OP-1150
- New England, Quaternary OP-1072
- New Mexico, stratigraphy OP-224
- Quaternary OP-1092
- Utah, palynomorphs OP-184

MODFLOW

- Georgia, hydrogeology OP-2270
- ground water OF 94-0463; OF 94-0464; OF 94-0468; OF 95-0288; OP-906
- Kentucky, ground water WRI 94-4239
- Massachusetts, pollution OP-1765
- Mississippi, ground water WRI 94-4223
- New England, ground water OF 94-0343
- Ohio, ground water WRI 94-4243
- South Carolina, hydrogeology OP-2270
- Utah, ground water OP-316

MODPATH

- ground water WRI 94-4167; OF 94-0464
- hydrogeology WRI 93-4171
- pollution OP-1765

Moenkopi Formation

- energy sources OP-1557
- sedimentary petrology OP-1178
- tectonics OP-1556

Mogollon Quadrangle

- metal ores OF 94-0691

Mogul Fault

- structural geology OP-1380

Mohave Desert *see* Mojave Desert**Mohave Mountains**

- geochemistry OP-1104
- structural geology OP-1110

Mohawk Valley

- structural geology OP-598

Mohorovicic discontinuity

- C 1129; OP-1306

Alaska

- OP-1398; OP-2301
- structural geology OP-1395
- tectonics OP-2299

Antarctica OP-55; OP-245

- Basin and Range Province, geophysical surveys OP-1835

British Columbia

- OP-109
- faults OP-248

California

- OP-1524; OP-1706; OP-1853; OP-2181; OP-2325
- geophysical surveys OF 94-0590
- petrology OP-1818

Canada OP-468

- Colorado Plateau, geophysical surveys OP-1835

Hawaii, geophysical surveys OP-1655**Italy**, petrology OP-1991**Nevada** OP-2230**Virginia** OP-413

- Washington, geophysical surveys OP-1821

Moin Formation

- stratigraphy OP-1150

Mojave Desert

- earthquakes OF 94-0710
- elastic waves OP-212; OP-461
- engineering geology WRI 94-4184
- environmental geology C 1108; WRI 94-4208
- geochemistry OP-260
- geochronology OP-2310
- geophysical surveys OP-1285
- hydrogeology WRI 94-4124
- magmas OP-313; OP-321
- maps OF 94-0681
- mineral resources OF 95-0013
- Mohorovicic discontinuity OP-1853
- petrology OP-1818
- seismology OP-1541
- structural geology OP-432; OP-1110
- tectonophysics OP-814

Mojave Mountains *see* Mohave Mountains**Mojave Province**

- petrology OP-1185
- structural geology OP-1863

Molas Formation

- stratigraphy OF 94-0583
- molecular fossils *see* biomarkers

Mollisols

- Idaho OP-119
- Washington OP-119

Mollusca

- Astara, Alaska OP-1221
- Baculites, California OP-1341
- Bivalvia, ecology FS 94-0014
- Gastropoda, Kyrgyzstan OP-345
- Goniatites, Appalachians OP-766
- Nautiloidea OF 94-0667-A; OF 94-0667-B
- Ostrea, California OP-1065
- Turritella
 - California OP-1036
 - Colombia OP-77
 - Mexico OP-1036
 - Nevada OP-77

mollusks

- Alaska, Quaternary OP-604; OP-1172; OP-1221

ammonoids

- California OP-1341
- Canada OP-745
- Colorado OP-507
- Delaware OP-481
- geochronology OP-1572
- Pacific Ocean OP-964
- United States OP-745
- Utah OP-507
- Western Interior P 1561
- Wyoming OP-403

Atlantic Coastal Plain, stratigraphy OP-903**bivalves**

- California C 1108; OF 95-0299; OP-1341; OP-2061
- Colorado OP-507
- Florida OP-1425
- Great Lakes OP-163
- Great Lakes region OP-163
- Pacific Ocean B 2022
- Utah OP-507
- Washington OF 94-0308; OP-1376
- Western Interior OP-506
- Wisconsin OF 95-0163
- California, Miocene OF 95-0489
- Florida

- diagenesis OP-2263

- stratigraphy OF 95-0003; OP-2087; OP-2295

gastropods

- Alaska OP-711
- Arizona OP-223
- Basin and Range Province OP-2101
- California OP-1341; OP-2061
- China P 1549
- Great Basin OP-2101
- Mississippi Valley OP-1758
- Nevada OP-2100
- Pacific Ocean B 2022
- stratigraphy OP-1558
- Washington OP-1376
- Georgia, stratigraphy OP-2087
- hydrology OF 94-0710-W
- Idaho, environmental geology WRI 95-4006
- Minnesota, environmental geology WRI 95-4047
- Nevada, structural geology OP-744
- New Mexico, Proterozoic OP-21
- New Zealand, Quaternary OF 94-0568
- North Dakota, environmental geology WRI 95-4047
- Oregon, stratigraphy OP-1176
- Texas, stratigraphy OF 94-0551
- Utah, structural geology OP-744
- Virginia, Pliocene OP-2071
- Washington, Quaternary OP-205
- Wyoming, environmental geology WRI 95-4006

Molokai

- geologic hazards OP-1523
- Quaternary OP-1183
- sedimentary petrology OP-1184

molybdates

- Massachusetts, pollution OP-897

molybdenite

- Mexico OF 94-0685

molybdenite porphyry *see* porphyry molybdenum**molybdenum**

- California
 - geochemistry OP-1955
 - ground water WRI 95-4048
- Colorado
 - metal ores B 2116
 - pollution C 1122
 - geochemistry OP-1070
- Gulf of California, sedimentation OP-1987
- New Mexico, uranium ores B 2063

molybdenum ores *see also* porphyry molybdenum.**Alaska**

- OP-296
- geochemistry OP-23
- Arizona OP-1606
- Canadian Shield OP-2126
- China OP-1871
- Colorado
 - OP-526
 - structural geology OP-1247
- Great Britain OP-2126
- Idaho P 1525; B 2064-A-R
- Italy OP-199
- Mexico OF 94-0685
- New Mexico, geochemistry B 2081

Momence Illinois

- hydrology WRI 94-4190

Mona Island

- stratigraphy OP-1924

Monashee Complex
tectonophysics OP-468

monazite

Germany, geochemistry C 1129
Maine, geochemistry C 1129
Massachusetts, geochronology OP-1047
metal ores B 2097
New Hampshire, geochronology OP-1047
New Zealand, magmas C 1129
South Dakota, geochemistry C 1129

monazite deposits

Idaho P 1525

Mongolia

Vertebrata OP-418

Monitor Butte Member

stratigraphy OP-224

Mono Craters

Quaternary OP-2250

Mono Lake

environmental geology OP-894
Quaternary OP-397; OP-1505

Monocacy River

waste disposal OP-1133

monoclines

California OP-1462
Nevada OP-1976
Utah OP-1179

Monocotyledoneae *see* Gramineae

Monolith Vent

geochemistry OF 94-0015
oceanography OP-503

Monongahela River basin

hydrology FS 0137-95

Monotony Tuff

stratigraphy B 2056

Monroe Fault

Silurian OP-1995

Monroe Peak Caldera

economic geology OP-189

Monson Gneiss

structural geology OP-782

monsoons

Arizona, Quaternary OP-1730
stratigraphy OP-1319
Utah, Quaternary OP-1730

Montana *see also* Absaroka Range; Beartooth Mountains; Beaverhead Formation; Bighorn Basin; Blackleaf Formation; Charles Formation; Clark Fork; Disturbed Belt; Fort Union Formation; Frontier Formation; Gallatin Range; Greenhorn Limestone; Hebgen Lake earthquake 1959; Hell Creek Formation; Kootenay Formation; Lakota Formation; Madison Aquifer; Madison Group; Madison Range; Mazama Ash; Mission Canyon Limestone; Missouri River basin; Muddy Sandstone; Niobrara Formation; Powder River basin; Stillwater Complex; Sweetgrass Arch; Tongue River Member; Two Medicine Formation; Western Interior Seaway; Williston Basin; Wyoming Province; Yellowstone National Park.

coal C 1108

Cretaceous I-2474-A; OP-743

crust, Gallatin County Montana OF 94-0228

crystalline rocks, Tendoy Range OP-362

economic geology
OF 95-0229

Carbon County Montana OP-2225

energy sources

C 1108; OP-281

Park County Montana OP-302; OP-634; OP-885

environmental geology

YR; C 1108

Gallatin County Montana OP-1264

Roosevelt County Montana C 1108

geochemistry

Park County Montana OP-2133

Sweet Grass County Montana OF 95-0098

geochronology

Beaverhead County Montana B 2113

Deer Lodge County Montana B 2113

Mineral County Montana C 1129

Powell County Montana B 2113

Ravalli County Montana C 1129

Silver Bow County Montana B 2113

Stillwater County Montana OP-516

geologic hazards, Gallatin County Montana
OF 95-0059

geophysical surveys DDS-0031

ground water

OP-1265; OP-1633

Gallatin County Montana WRI 95-4034;
OF 94-0536

hydrogeology OF 95-0194; OP-943

hydrology

Blaine County Montana WRI 95-4022

Deer Lodge County Montana OF 94-0375

Flathead County Montana OF 94-0363

Granite County Montana OF 94-0375

Hill County Montana WRI 95-4022

Missoula County Montana OF 94-0375

Phillips County Montana WRI 95-4022

Powell County Montana OF 94-0375

Prairie County Montana WRI 94-4230

Silver Bow County Montana OF 94-0375

Valley County Montana WRI 95-4022

maps

Big Belt Mountains MF-2291

Bridger Range OF 95-0011-A; OF 95-0011-B

Broadwater County Montana MF-2291

Dawson County Montana OF 88-0609;

OF 88-0611; OF 88-0612; OF 88-0613;

OF 88-0614; OF 88-0615; OF 88-0617;

OF 88-0620; OF 88-0625; OF 88-0626;

OF 88-0635

Gallatin County Montana OF 95-0011-A;
OF 95-0011-B

Madison County Montana OF 95-0011-A;
OF 95-0011-B; GQ-1757

McCone County Montana OF 88-0607;

OF 88-0608; OF 88-0610; OF 88-0618;

OF 88-0621; OF 88-0624; OF 88-0626;

OF 88-0627; OF 88-0635; OF 93-0521

Meagher County Montana OF 95-0011-A;
OF 95-0011-B; MF-2291

Park County Montana OF 95-0011-A;
OF 95-0011-B

Prairie County Montana OF 88-0607;
OF 88-0608; OF 88-0617; OF 88-0619;

OF 88-0624; OF 88-0635; OF 93-0521;
OF 93-0529

Rosebud County Montana MF-2281; MF-2289; MF-2290

metal ores

B 2097; OP-2126

Park County Montana OF 94-0670; OP-2224

mineral resources, Bridger Range OP-1344

mineralogy, Ravalli County Montana OP-287

natural gas OF 94-0022-C; OP-854

neotectonics

Gravelly Range OP-1902

Tendoy Range OP-1943

non-metal deposits

Flathead County Montana I-2446

Lake County Montana I-2446

Lewis and Clark County Montana I-2446

Missoula County Montana I-2446

Powell County Montana I-2446

orogeny

Bridger Range OF 94-0670

Gallatin County Montana OF 94-0670

Meagher County Montana OF 94-0670

petrology C 1129

pollution, Big Horn County Montana OP-185

Quaternary

I-1970-D

Flathead County Montana OP-121

Glacier County Montana OP-121

Gravelly Range OP-1868

Park County Montana OP-902

stratigraphy

OP-1889

Beaverhead County Montana B 2113

Big Horn County Montana B 2113

Liberty County Montana B 2113

Toole County Montana B 2113

structural geology

OP-1454; OP-1903

Beaverhead County Montana OP-1933

Bridger Range OP-480

Tobacco Root Mountains OP-480; OP-1863

volcanism I-2291-C

Montana Mountain Quadrangle

geologic hazards OF 93-0684

Montastrea annularis

Bermuda, Quaternary OP-1733

Florida, Quaternary OP-1733

Monte Croce

geochemistry C 1129

Monte Somma

fluid inclusions OP-950

Monte Vista Fault

engineering geology FS 0132-95

Monteregian Hills

ground water OP-937

Monterey Bay

earthquakes OP-1529; OP-1530

ocean floors OP-1433; OP-2150

oceanography OP-1918; OP-2180

structural geology OP-1701; OP-1750

Monterey Canyon

oceanography OP-1434

Monterey Formation

B 1995-J,K; B 1995-L; OP-1916

energy sources OP-2146

geochemistry P 1566; OP-1955

natural gas OP-542

Monterey Gorge *see* Monterey Canyon

Monterey Microplate

stratigraphy B 1995-J,K

tectonophysics OP-1778

Monterey Trough *see* Monterey Canyon

Monticello Box New Mexico

hydrogeology WRI 94-4125

montmorillonite

Colorado, pollution OP-493

monzodiorite

Alaska, geochemistry B 2107

Canada C 1129

Indian Ocean Islands C 1129

Montana, geochemistry OF 95-0098

- Nevada OP-1817
- monzogranite**
 Argentina C 1129
 California, geochemistry C 1129
 France, geochemistry C 1129
 Iran C 1129
 Italy, geochemistry C 1129
 New Zealand, geochemistry C 1129
 Ordovician B 2060
 Utah C 1129
- monzonites**
 Alaska, geochemistry B 2107
 Argentina C 1129
 Brazil C 1129
 Colorado, metal ores OP-1626
 France C 1129
 Switzerland C 1129
- Moon** *see also* farside; lunar mantle; maria.
 B 2129; OP-541; OP-852; OP-1579; OP-1636;
 OP-1662; OP-1781; OP-1783
 Aristarchus OP-605; OP-1487; OP-1784
 Eastern Sea OP-1869; OP-1873
 Ocean of Storms OP-1487; OP-1785
 Sea of Rains OP-58
- Moonsat** OP-541
- Moore House Member**
 ground water WRI 92-4111
- Moore-Sams Field**
 energy sources OF 94-0228
- morainal plains *see* outwash plains
- moraines**
 Alaska
 hydrogeology OF 94-0713-W
 Quaternary OP-1457; OP-2017; OP-2292
 Antarctica, Quaternary OP-2188
 Indiana, hydrogeology OF 92-0139
 Maine, Quaternary OP-990
 Massachusetts, Quaternary OP-990
 New York, Quaternary WRI 90-4168
 Ohio, geomorphology OF 95-0224
 Oregon, geologic hazards OP-1901
 Peru, Quaternary OP-2032
 Washington, geologic hazards OP-1901
 Wyoming, Quaternary OP-355
- MORB** *see* mid-ocean ridge basalts
- mordenite**
 Oregon, sedimentary petrology B 2108
- morencite *see* nontronite
- Moretown Formation**
 structural geology OP-782
- Morgan Hill earthquake 1984**
 California OP-591; OP-820; OP-1761
- Morganza Field**
 energy sources OF 94-0228
- Moriah Knoll Quadrangle**
 maps OF 94-0634
- Mormon Mesa**
 fluvial features OP-2289
- Morococala volcanic field**
 petrology C 1129
- morphology *see* functional morphology
- Morrison Formation** *see also* Brushy Basin Shale
 Member; Salt Wash Sandstone Member.
 OC-0144
 Quaternary OP-1868
- Morro de Coplapo**
 Quaternary OP-1697
- Morro fracture zone**
 oceanography OP-1410
- Morrowan**
 Indiana OF 94-0298
 Kentucky OP-1548
- Morton Anticline**
 Eocene OP-1593
- Morton mining district**
 sedimentary petrology OP-1042
- moscovite *see* muscovite
- Moscow Formation**
 Invertebrata OP-686
- mother lode-type**
 California, gold ores OF 94-0640-A; OF 94-0640-B
- motion, ground *see* ground motion
- motion, strong *see* strong motion
- Mount Adams**
 geologic hazards OP-674
 Holocene OP-1513
 lava OP-1254
 maps I-2460
 petrology OP-1512; OP-2173
 Quaternary OP-1511
- Mount Antero**
 mineralogy OP-1828
- Mount Bachelor**
 geochemistry OF 94-0261
- Mount Baker**
 environmental geology OF 95-0498
 geophysical surveys OP-1389
- Mount Baker Quadrangle**
 bibliography OF 94-0403
- Mount Barcroft Quadrangle**
 maps I-2464
- Mount Blackburn**
 geomorphology B 2072
 Quaternary OP-628
- Mount Borah earthquake, 1983 *see* Borah Peak earthquake 1983
- Mount Churchill**
 Quaternary OP-628; OP-772
- Mount Dutton Formation**
 economic geology OP-189
- Mount Givens Pluton**
 inclusions C 1129
- Mount Hayes Quadrangle**
 environmental geology OF 95-0180
 geomorphology OF 94-0512
 Pliocene OF 95-0217-A; OF 95-0217-B
- Mount Helen Quadrangle**
 maps OF 94-0655
- Mount Holly Quadrangle**
 Proterozoic B 2060
 stratigraphy B 2060
- Mount Holly Springs Quadrangle**
 Proterozoic OP-3
- Mount Hood**
 earthquakes EV
 engineering geology OP-1367
 geologic hazards OP-2088
 geophysical surveys OP-459; OP-1389
 lava OP-1254
- Mount Jefferson**
 geophysical surveys OP-1564
 lava OP-1254
- Mount Jefferson Wilderness Area**
 geologic hazards OP-1901
- Mount Jesus Quadrangle**
 maps OF 94-0656
- Mount Katmai Quadrangle**
 stratigraphy MF-2021-G
- Mount Laguna Quadrangle**
 maps OF 95-0522
- Mount Lassen *see* Lassen Peak
- Mount Laurel Formation**
 stratigraphy OP-481; OP-903
- Mount Mazama**
 geochemistry OP-29
 Quaternary OP-1511
- Mount McKinley Quadrangle**
 tectonics B 2107
- Mount Pinatubo**
 engineering geology OP-1683
 petrology C 1129
 Quaternary OP-467; OP-752; OP-1886; OP-1952
- Mount Rainier**
 engineering geology OP-1367
 environmental geology HA-0729
 geologic hazards YR; P 1547; OP-674; OP-1163; OP-2329
 Quaternary OP-975; OP-1511
- Mount Rainier National Park**
 petrology OP-2173
 pollution WRI 94-4030
- Mount Redoubt *see* Redoubt
- Mount Rogers Formation**
 Proterozoic OP-3
- Mount Saint Helens**
 dams OP-2038
 engineering geology OP-19; OP-1367
 geochemistry OP-315; OP-1407
 geologic hazards OF 95-0085; OP-674
 geophysical surveys FS 0079-95; OP-1389
 hydrogeology OP-2116; OP-2197
 hydrology OP-859
 petrology OP-391
 pollution OP-1146
 Quaternary OP-467; OP-1023; OP-1511; OP-1767; OP-1952
 thermal waters OP-1756
 volcanic features I-2359
- Mount Scott Granite**
 petrology C 1129
- Mount Semeru**
 elastic waves OP-1498
 Quaternary OP-392
- Mount Shasta**
 tectonophysics OP-1444
- Mount Simon Sandstone**
 diagenesis OF 94-0298
- Mount Spurr**
 elastic waves B 2139
 geochemistry B 2139; OF 95-0055
 geologic hazards B 2139; OF 95-0083; OP-1316; OP-2318
 geophysical surveys B 2139
 glacial geology B 2139
 hydrology B 2139
 petrology B 2139
 Quaternary B 2139; OF 94-0614; OF 95-0061-A; OF 95-0061-B; OP-1406
 seismicity OP-609; OP-1978
 seismology B 2139; OP-458; OP-1598
 volcanic features B 2139
- Mount Stuart Batholith**
 magmas C 1129
- Mount Wrightson Formation**
 stratigraphy OP-350
- Mount Zirkel Wilderness Area**
 environmental geology OP-945

mountain crystal *see* quartz crystal
movements, mass *see* mass movements

moving-coil seismographs
seismology OF 91-0635

MRSP
mineral resources OF 95-0537

MSEAs
ground water WRI 94-4149; OF 94-0337
hydrogeology OF 94-0705-W
pollution OP-933

Mt. Lassen *see* Lassen Peak

Mt. Redoubt *see* Redoubt

MTBE
pollution FS 0114-95

MTM 00142 Quadrangle I-2422

MTM 05142 Quadrangle I-2425

MTM 20182 Quadrangle I-2403

MTM 20187 Quadrangle I-2404

MTM 20192 Quadrangle I-2405

MTM 20197 Quadrangle I-2406

MTM 20202 Quadrangle I-2407

MTM 40002 Quadrangle I-2418

MTM 40007 Quadrangle I-2421

MTM 40012 Quadrangle I-2419

MTM 45002 Quadrangle I-2413

MTM 45022 Quadrangle I-2417

MTM 45352 Quadrangle I-2411

MTM 45357 Quadrangle I-2412

MTM-10117 Quadrangle I-2428

MTM-15147 Quadrangle I-2402

mud

Alaska OP-2094

Bahamas OP-2109

Brazil OP-117

California

earthquakes OP-1753

geophysical surveys OF 94-0639

Quaternary OP-1308; OP-1787

Missouri, hydrogeology OP-1311

mud balls, armored *see* armored mud balls

mud banks

Florida, ground water OP-1455

mud flats

California, environmental geology OF 95-0299

sedimentary petrology OP-2140

mud flows *see* mudflows

mud mounds

petroleum OF 94-0298

mud volcanoes

Alaska B 2072

California, oceanography OP-1918

mudbanks *see* mud banks

Muddy Brook Connecticut

ground water WRI 94-4255

Muddy Creek Formation

fluvial features OP-2289

Muddy J Formation *see* J Sandstone

Muddy Ridge Field

energy sources C 1108; OP-1621

Muddy River

fluvial features OP-2289

geomorphology OF 94-0670

hydrology WRI 94-4210

Muddy Sandstone OP-1974

mudflats *see* mud flats

mudflows

East Pacific Ocean Islands, engineering geology OP-1367

Polynesia, engineering geology OP-1367
mudmounds *see* mud mounds

mudstone

OP-2117; OP-2140

Alaska OP-711

Arizona OP-2023

California

OP-603; OP-1097

energy sources OF 95-0530

geochemistry P 1566

Miocene B 1995-J,K

oceanography OP-1410

paleomagnetism OP-1916

fluvial features OP-2138

geochemistry OP-1070

ground water OP-1167

Idaho, geochemistry OF 95-0270

Mexico OP-1932

Montana, stratigraphy OP-596

Nevada

energy sources OP-1083

geochemistry OP-794

New Jersey

OP-2118

ground water OP-1568

Oregon, stratigraphy OP-1177

Pennsylvania OP-2118

stratigraphy OP-1558

Utah OP-2031

Washington

OP-1376

Eocene OP-1593

Wyoming

OP-456

energy sources OP-1621

geochemistry OF 95-0270

MudView#PL#PL

geophysical surveys OF 94-0598

Muir Glacier

sedimentary petrology OP-2094

Mukluk Channel

sedimentation OP-2160

Muldoon Canyon Quadrangle

economic geology B 2064-A-R

Muleshoe Arizona

maps OF 95-0202

Muleshoe Nevada

structural geology OP-1976

Mullen Creek-Nash Fork shear zone

Proterozoic OP-1982

Muller Ice shelf

Quaternary OP-214

Murmansk Russian Federation *see* Kola Russian Federation; Pechenga

Muschelkalk

Poland OP-908

Musci *see* Sphagnum

muscovite

OF 94-0576; OP-378

Alaska, structural geology OP-932

Colorado GQ-1764

faults OF 94-0228

Idaho, metal ores B 2081

Norway, structural geology OP-158

muscovite granite

Pakistan, gems OP-1303

Muslim Bagh Pakistan

structural geology OF 94-0670

Mussel Rock California

geologic hazards OF 93-0684

stratigraphy B 1995-L

Musselshell River

non-metal deposits OP-1492

Mustang Shale

stratigraphy OP-1341

MVT *see* mississippi valley-type

MWCAP

ground water WRI 94-4012

Mygdonia Basin

Quaternary OF 94-0568

mylonites *see also* pseudotachylite.

Europe, geochemistry OF 94-0228

Idaho, geochronology C 1129

Montana

OP-1627

geochronology C 1129

North Carolina, structural geology OP-1202

Rocky Mountains, structural geology OP-1232

structural geology OF 94-0228

Virginia

OP-63

structural geology OP-1202

Wyoming, structural geology OP-1288

Myomorpha *see* Cricetidae

myrmekite

petrology OP-125

Myrtle Beach South Carolina

geomorphology OP-1471

hydrology WRI 95-4111

N

N *see* nitrogen

N-15

Florida, environmental geology OP-2202

N-15/N-14

Appalachians, hydrology OP-1632

Colorado

hydrogeology OF 95-0536

pollution OP-1796

geochemistry OF 95-0206

Idaho, hydrogeology OF 94-0503

Maryland, hydrology OP-1899

Minnesota, pollution OP-1139

Missouri, hydrogeology OF 94-0705-W

New Jersey, pollution OP-2177; OP-2236

pollution OP-174; OP-2323

Rocky Mountains, hydrology OP-1632

thermal waters OP-1756

n-alkanes

Illinois, petroleum OF 94-0298

Indiana, petroleum OF 94-0298

Pacific Ocean, geochemistry B 2022

Na *see* sodium

Na-montmorillonite *see* montmorillonite

Nabesna Quadrangle

mineral resources OF 95-0625

Naborton Formation

Paleocene OF 95-0208

NADP

hydrology WRI 93-4208

NAFTA

environmental geology YR

Nagasaki Japan *see* Unzen

Nahanni earthquake 1985

Canada OP-374

Naivasha Complex

geochemistry C 1129

Naknek Formation

Quaternary OP-1921

- Naknek Quadrangle**
stratigraphy MF-2021-G
- NAMRAP**
mineral resources OF 95-0013
- Namurian B 2110**
- Nanga Parbat**
geochemistry C 1129
- Nanjemoy Formation** OF 94-0217; OF 94-0708; OF 95-0478
- Nankai Trough**
plate tectonics OF 94-0228
Quaternary OF 94-0568
- Nankoweap Arizona**
geomorphology OF 94-0564; OF 95-0529
- nannofossils**
Atlantic Coastal Plain, stratigraphy OP-903
Atlantic Ocean, Cretaceous OP-1161
California, stratigraphy OP-1036
Delaware, Paleocene OF 95-0478
geochemistry OP-602
geochronology OP-1572
Indian Ocean, Cretaceous OP-1161
Maryland, stratigraphy OF 94-0708
Mexico, stratigraphy OP-1036
New Jersey
Eocene OP-735
Miocene OP-622
stratigraphy P 1554; OP-623
oceanography OF 94-0669-A; OF 94-0669-B
Oregon, stratigraphy OP-1176
Quaternary OP-61
stratigraphy OP-96
Virginia
Eocene OP-735
stratigraphy OF 94-0217
- Nansei-shoto** *see* Ryukyu Islands
- Nantucket Island**
ground water OF 94-0316
- Nanushuk Group**
coal OP-972
- Napa Valley**
metal ores OP-800
- nappes**
Alaska
deformation OP-479
tectonics OP-1850; OP-2248
New England, tectonics OP-2296
Norway, structural geology OP-158; OP-2156
Russian Federation, geochemistry OP-843
Washington OF 94-0403
- Narrows thrust fault**
structural analysis OP-1091
- NASA** OF 95-0561; OP-541
- Nasca Plate** *see* Nazca Plate
- Nash Fork-Mullen Creek shear zone** *see* Mullen Creek-Nash Fork shear zone
- Nashua New Hampshire**
ground water OF 94-0398
pollution OF 95-0142
- Nashville Tennessee**
hydrology OF 94-0068
- NASQAN**
hydrogeology OF 95-0141
hydrology OF 93-0628
- Nation River Formation**
sedimentary petrology OP-1604
- National Aeronautics and Space Administration** *see* NASA
- National Assessment of Oil and Gas Resources**
natural gas C 1108
- National Atmospheric Deposition Program**
hydrology WRI 93-4208
- National Bridge Scour Data Base**
engineering geology OP-519
- National Center for Atmospheric Research**
Pliocene OF 94-0588
- National Coal Resources Data System**
ecology OP-236
- National Digital Cartographic Data Base** OP-339
- National Earthquake Hazards Reduction Program**
faults OF 94-0228
- National Earthquake Information Center**
earthquakes OP-1193
- National Earthquake Prediction Evaluation Council**
earthquakes OF 94-0571
- National Geochronological Data Base**
geochronology DDS-0014
- National Geologic Mapping Program**
ecology OP-236
- National Institute for Standards and Technology**
geochemistry OF 95-0486
- National Mapping Program**
maps OF 95-0201
- National Mineral Resource Assessment Program**
mineral resources OF 95-0013
- National Oceanic and Atmospheric Administration** *see* NOAA
- National Oil and Gas Resource Assessment Project**
natural gas C 1118
- national park traffic**
environmental geology OF 95-0234
- National Performance Review** YR; OP-1484
- National Petroleum Assessment**
petroleum OF 94-0298
- National Petroleum Reserve Alaska**
energy sources C 1108; OP-1270
stratigraphy OP-1439
- national policy** *see* public policy
- National Seismic System**
earthquakes OP-1193
- National Spatial Data Infrastructure**
C 1108
areal geology OP-1179
geophysical surveys YR
- National Stream Quality Accounting Network**
hydrology OF 93-0628
- National Uranium Resource Evaluation Program** *see* NURE
- National Water Conditions**
hydrology YR
- National Water Information System**
ground water OF 94-0531
- National Water Quality Laboratory**
geochemistry OF 95-0140; OF 95-0181
hydrogeology OF 94-0708-W; OF 95-0141
hydrology OF 94-0710-W
- National Water-Quality Assessment Program** *see* NAWQA
- native elements** *see* graphite
- sodium** *see* sodium
- natural analogs**
New York, geochemistry B 2106
- natural gas** *see also* gas hydrates; methane; stratigraphic traps; structural traps; tight sands.
B 2000-H; C 1108; OF 94-0298; OF 95-0075-C; OF 95-0075-F; OF 95-0207; OP-135; OP-575; OP-578; OP-580; OP-1044; OP-1546
- Alaska**
DDS-0030; C 1108; C 1118; OP-1122; OP-1545
stratigraphy OP-1439
- Arizona** OP-1714
- California** C 1108; OF 95-0054; OP-542; OP-1121; OP-1746
- coalbed methane**
C 1108; OF 94-0642; OF 95-0075-A; OP-769
- Appalachians** OF 95-0572; OP-528
- China** OP-2016
- Colorado** OP-947
- Poland** OP-770
- Rocky Mountains** OP-528; OP-1942
- Colorado**
OF 94-0022-A
environmental geology C 1108
- Hungary** OP-155
- Indiana** OP-2020
- Kansas** OF 94-0022-G
- Kazakhstan** OP-1258
- Kentucky** OF 94-0298
- Louisiana**
C 1108; OP-1543
engineering geology OP-1938
- Middle East** OP-593
- Montana** OF 94-0022-C; OP-281; OP-854
- Nebraska** OF 94-0022-F
- Nevada** OP-1083; OP-1084
- New Mexico**
OF 94-0022-J
environmental geology C 1108
- North Dakota** OF 94-0022-D
- Oklahoma** OF 94-0022-H
- Pacific Ocean** OP-1371
- Pennsylvania** OP-2058; OP-2059
- South Dakota** OF 94-0022-E
- Utah** OF 94-0022-I; OP-1179; OP-1714
- Wyoming**
C 1108; OF 94-0022-B; OP-281; OP-477
environmental geology C 1108
- Natural Radioelement Data Base**
geochemistry DDS-0014
- natural remanent magnetization**
Arizona
copper ores OP-291
tectonophysics OP-352
Colorado, stratigraphy OP-1363
Hungary, stratigraphy OP-524
- natural selection** OP-1527
- Natural Trends Network**
hydrology WRI 93-4208
- Naturaliste Plateau**
Cretaceous OP-1161
- naturally fractured reservoirs**
Hungary, natural gas OP-155
Montana, natural gas OP-854
- Nauset Beach Massachusetts**
sedimentary petrology OP-2080
- Nautiloidea** OF 94-0667-A; OF 94-0667-B
- Navajo Aquifer**
hydrogeology OF 95-0340
pollution OP-657
- Navajo Indian Reservation**
environmental geology WRI 94-4192

- hydrogeology OF 94-0356
- Navajo Mountain**
geomorphology OP-1368
Quaternary OP-1287; OP-1730
- Navajo Sandstone**
OP-1731
structural geology OF 95-0491
- Naval Air Station Chase Field**
ground water WRI 95-4038
- Naval Air Station Memphis**
ground water WRI 95-4011
- Naval Auxiliary Landing Field Goliad**
ground water WRI 95-4038
- Naval Surface Warfare Center**
ground water OF 94-0301
- Navarin Basin**
continental shelf OP-589
- Navesink Formation** OP-903
- NAVSTAR GPS** *see* Global Positioning System
- Navy Fan**
sedimentary petrology OP-1877
- NAWQA**
Alaska, hydrogeology C 1112
- Appalachians**
hydrology FS 0137-95; FS 94-0019
pollution OP-1365
- Arizona, hydrogeology FS 94-0016
- California
hydrogeology FS 94-0029
pollution OF 95-0165; OF 95-0286
- Canada, hydrogeology FS 94-0056
- Colorado
ground water OP-221
hydrology FS 0153-95
ecology OP-236; OP-346
environmental geology WRI 94-4250; OP-2280
geochemistry OF 94-0458; OF 95-0140; OF 95-0181
- Great Lakes region, hydrology WRI 93-4188; WRI 95-4005
- Great Plains, hydrogeology WRI 93-4231
- Hawaii, hydrogeology C 1112
hydrogeology WRI 94-4022; WRI 94-4061; WRI 95-4031; OF 94-0670; OF 95-0141; OF 95-0163
- hydrology OF 91-0175; OF 94-0455; OF 95-0379; FS 0116-95; FS 94-0015
- Idaho
environmental geology WRI 95-4006
hydrogeology WRI 94-4221
hydrology WRI 93-4229; WRI 94-4215
- Illinois, hydrology FS 94-0018
- Iowa, hydrogeology FS 94-0031
- Kansas
ecology W 2352-B
geomorphology W 2352-B
hydrology W 2352-B; WRI 94-4187; OF 94-0365
pollution W 2352-B; OP-1693
- Kentucky, hydrology WRI 94-4029; WRI 94-4134; WRI 94-4227
- Michigan, hydrogeology OF 95-0163
- Minnesota
environmental geology WRI 95-4047
hydrology OF 95-0283
- Mississippi, hydrogeology OF 94-0452
- Mississippi Valley, hydrogeology FS 94-0047
- Nebraska
ecology W 2352-B; FS 0154-95
geomorphology W 2352-B
- hydrogeology WRI 94-4095
hydrology W 2352-B; WRI 94-4187; OF 94-0365
pollution W 2352-B
- Nevada
ground water OF 94-0031
hydrogeology OF 93-0356
- New England, hydrogeology FS 94-0027
- New Mexico
hydrogeology OF 94-0702-W
pollution OP-1019
- New York, hydrology OF 94-0090
- North Carolina
hydrogeology OF 95-0164; FS 94-0010
hydrology OF 95-0136
- North Dakota
environmental geology WRI 95-4047
hydrology OF 95-0283
- Oklahoma, pollution OP-143
- Oregon, hydrology OF 95-0373
pollution YR; OF 94-0506; FS 0114-95
- South Carolina, hydrogeology FS 94-0010
- Texas
hydrogeology OF 94-0702-W; FS 0090-95; FS 94-0048
hydrology WRI 94-4218
pollution FS 0088-95; OP-1019
- United States, hydrogeology FS 94-0056
- Virginia, hydrology OF 95-0136
- Washington
hydrogeology OF 94-0108
hydrology WRI 94-4215
- Wisconsin
ecology OF 95-0163
environmental geology OF 95-0163
hydrogeology OF 95-0163
hydrology OF 95-0163
- Wyoming
environmental geology WRI 95-4006
hydrogeology WRI 94-4095; WRI 94-4221
hydrology WRI 93-4229
- Naxos**
structural geology OP-453
- Nazca Plate**
- Bolivia
mantle OP-1643
plate tectonics OP-180; OP-252
seismicity OP-494; OP-1910; OP-2294
Pacific Ocean, tectonophysics OP-1702
- Nb** *see* niobium
- NCAR Genesis model**
Pliocene OF 94-0588
- NCRDS** *see* National Coal Resources Data System
- Nd** *see* neodymium
- Nd-144/Nd-143**
- Alaska
geochemistry OP-23
magmas OP-626
petrology OP-632
sedimentary petrology OP-1361
- Alberta, geochemistry C 1129
- Antarctica, magmas C 1129
- Argentina
geochemistry C 1129
magmas C 1129
petrology C 1129
- Arizona, petrology OP-991
- Baltic region, magmas C 1129
- Brazil
geochronology C 1129
petrology C 1129
- British Columbia, sedimentary petrology OP-1361
- California
geochemistry C 1129; OP-197
magmas OP-321
- Chile
geochemistry C 1129
magmas C 1129
- China, geochemistry C 1129
- Colorado, petrology OP-773
- Finland
geochemistry C 1129
petrology C 1129
- France
geochemistry C 1129
petrology C 1129
- Germany, geochemistry C 1129
- Hawaii
geochemistry OP-861; OP-2321
geologic hazards OP-1523
- Hong Kong, geochemistry C 1129
- Italy, geochemistry C 1129
magmas C 1129
- Maine, geochemistry C 1129
- Mexico, geochemistry OP-197
- Minnesota, geochemistry B 1904-U
- Montana, geochemistry OP-2133
- Nevada
geochemistry B 2056; C 1129
petrology C 1129
- New Zealand, geochemistry C 1129
- North Carolina, geochemistry C 1129
- Pacific Ocean, lava OP-2132
petrology C 1129; OP-939
- Russian Federation, geochemistry OP-421; OP-843
- Scandinavia, magmas C 1129
- South Dakota, magmas C 1129
- Spain, geochemistry C 1129
- Texas, magmas C 1129
- Utah, geochemistry B 2056
- Vermont, geochemistry C 1129
- Victoria Australia
geochemistry C 1129
petrology C 1129
- Yemen, geochemistry C 1129; OP-1079
- Nd/Sm** *see* Sm/Nd
- NDVI**
environmental geology OP-1120
- near-infrared spectra**
OP-1487
mineralogy OP-1680
- Nevada, geochemistry OP-794
- Nebraska** *see also* Missouri River; Ogallala Aquifer; Ogallala Formation; Platte River; Platte River basin; Sand Hills; South Platte River; White River Group.
ecology FS 0154-95; W 2352-B
economic geology C 1124
environmental geology C 1120-G
geochemistry
Dawes County Nebraska OF 94-0292
Scotts Bluff County Nebraska OF 94-0292
Sheridan County Nebraska OF 94-0292
Sioux County Nebraska OF 94-0292
geomorphology W 2352-B
ground water YR
hydrogeology
WRI 94-4095
Chase County Nebraska WRI 95-4014
Dundy County Nebraska WRI 95-4014
Perkins County Nebraska WRI 95-4014

hydrology W 2352-B; C 1120-H; WRI 94-4077; WRI 94-4187; OF 94-0365; OF 95-0379

maps

Morrill County Nebraska I-2496
Sioux County Nebraska I-2433-B

natural gas OF 94-0022-F

non-metal deposits B 2111

Pennsylvanian B 2110

petrology

Banner County Nebraska WRI 94-4057
Garden County Nebraska WRI 94-4057
Morrill County Nebraska WRI 94-4057
Scotts Bluff County Nebraska WRI 94-4057
Sioux County Nebraska WRI 94-4057

pollution

W 2352-B; OF 94-0396; OP-497; OP-2145
Gage County Nebraska W 2419
Jefferson County Nebraska W 2419
Lincoln County Nebraska OP-204

structural geology

Arthur County Nebraska OF 95-0330
Blaine County Nebraska OF 95-0330
Custer County Nebraska OF 95-0330
Grant County Nebraska OF 95-0330
Hooker County Nebraska OF 95-0330
Keith County Nebraska OF 95-0330
Lincoln County Nebraska OF 95-0330
Logan County Nebraska OF 95-0330
McPherson County Nebraska OF 95-0330
Thomas County Nebraska OF 95-0330

necks, volcanic *see* volcanic necks

Needle Mountains

intrusions OP-1423; OP-1424
Proterozoic OF 94-0437

Needles Range Group

stratigraphy B 2056

NEHRP

faults OF 94-0228

Nei Mongol *see* Inner Mongolia China

NEIC

earthquakes OP-1193

Nellis Air Force Base

petroleum OP-1470

Nelson Mountain Landslide

geologic hazards B 2107

Nelson New Zealand

geochemistry C 1129

Nelson Pluton

geochemistry C 1129
petrology OP-1817

Neocomian

Alaska OP-1270

neodymium *see also* Sm/Nd.

Atlantic Ocean, Cenozoic OP-1198

Colorado, pollution OP-929

Nd-144/Nd-143

Alaska OP-23; OP-626; OP-632; OP-1361
Alberta C 1129
Antarctica C 1129
Argentina C 1129
Arizona OP-991
Baltic region C 1129
Brazil C 1129
British Columbia OP-1361
California C 1129; OP-197; OP-321
Chile C 1129
China C 1129
Colorado OP-773
Finland C 1129
France C 1129

Germany C 1129

Hawaii OP-861; OP-1523; OP-2321

Hong Kong C 1129

Italy C 1129

magmas C 1129

Maine C 1129

Mexico OP-197

Minnesota B 1904-U

Montana OP-2133

Nevada B 2056; C 1129

New Zealand C 1129

North Carolina C 1129

Pacific Ocean OP-2132

petrology C 1129; OP-939

Russian Federation OP-421; OP-843

Scandinavia C 1129

South Dakota C 1129

Spain C 1129

Texas C 1129

Utah B 2056

Vermont C 1129

Victoria Australia C 1129

Yemen C 1129; OP-1079

Pacific Ocean

Cenozoic OP-1198

stratigraphy OP-1197

Sm-147/Nd-144

California OP-321

Hawaii OP-861

petrology OP-939

Russian Federation OP-421; OP-843

Neogene *see also* Miocene; Pliocene.

HA-0730-H; OP-1136; OP-1852

Argentina OF 94-0568; OP-2011

Basin and Range Province OP-814

California B 1995-J,K; OF 94-0587; OP-197;
OP-603; OP-1599; OP-1778

Colorado I-2504

East Pacific Ocean Islands OP-390

Georgia OP-398; OP-584

Japan C 1129

Marshall Islands OP-2254

Mexico OF 94-0587; OP-197

Micronesia OP-1409; OP-2254

Mississippi OF 94-0558

Montana OP-1943

Nevada OF 94-0568; OP-631

Ogallala Formation

geochemistry OP-1046

metal ores B 2063

Oregon B 1741-H

Pacific Ocean OP-920

Purissima Formation, ocean floors OP-1433

Sisquoc Formation B 1995-J,K

Spain C 1129

Tamiami Formation

OP-2295

Quaternary OP-1001

Vanuatu OP-336; OP-337

Washington OP-1975; OP-1979; OP-1980; OP-1981

Neoglacial

Antarctica OP-214

Oregon OP-1901

Washington OP-1901

Neoglobobadrina pachyderma

Atlantic Ocean, Pliocene OF 94-0588

Pacific Ocean, Quaternary B 2022

Neoproterozoic

geochemistry C 1129

metamorphism C 1129

petrology C 1129

structural geology OP-455

Neoptera *see* Endopterygota

neotectonics *see also* faults; folds; fractures; geomorphologic effects; isostasy; isostatic rebound; uplifts.

OP-1190

Alaska

OP-726

Quaternary B 2107

seismology OP-697

Antarctic Ocean OP-1103

Argentina, Quaternary OF 94-0568

Arizona

OP-1282

Miocene OP-669

Arkansas OP-2285

Atlantic Ocean, plate tectonics OP-1312

Australia, Quaternary OF 94-0568

Basin and Range Province, Quaternary OF 94-0568; OF 95-0037

Bermuda, Quaternary OP-1732

California

OF 94-0568; OP-1145; OP-1760; OP-1773;
OP-2070

crust OP-649

geologic hazards OF 93-0684; OF 94-0259

Miocene B 1995-J,K; OP-669

Pliocene OP-2061

Quaternary B 1982; OF 94-0568; OP-988

sedimentary petrology OP-603

seismicity OP-2120

seismology OF 95-0038; OP-203; OP-1586

tectonophysics OP-1444

Canada OP-994

China

Quaternary OF 94-0568

seismology OF 95-0562

Djibouti, tectonophysics OP-2152

Dominican Republic, plate tectonics OP-1751

Florida, Quaternary OP-1732

geomorphology OF 94-0568

Great Basin, Quaternary OF 94-0568; OF 95-0037

Greece, Quaternary OF 94-0568

Idaho

OF 94-0568

Quaternary OF 94-0568

Israel, Quaternary OF 94-0568

Italy, Quaternary OF 94-0568

Japan

ocean floors OF 94-0568

plate tectonics OF 94-0568

Quaternary OF 94-0568

Mississippi Valley, seismology OP-2013

Missouri

geologic hazards OF 95-0574

seismology I-2521

Montana OP-1943

Nevada

environmental geology OF 93-0477

Quaternary OF 94-0568; I-2501

New Zealand, Quaternary OF 94-0568

Oklahoma, Quaternary OP-463

Oregon

geophysical surveys OP-72

seismology OP-203

tectonophysics OP-1444

Pacific Ocean, oceanography B 2022

Puerto Rico, Quaternary OF 94-0568

seismology OP-2135

Tyrrhenian Sea, Quaternary OP-942

United States OP-994

- Utah B 2056; OP-695; OP-1494
 Washington
 OP-1980; OP-2158
 geophysical surveys OP-72
 West Indies, plate tectonics OP-1312
- Neotoma**
 Quaternary OP-875
- NEPEC**
 earthquakes OF 94-0571
- nepheline**
 Hawaii, petrology OP-1307
- Neptune B** 2129; I-2410
- NESCA**
 ocean floors B 2022
 oceanography B 2022
- Neslen Formation**
 sedimentary petrology OF 94-0670
- nesosilicates *see* andalusite; braunite; datolite; dumortierite; garnet group; kyanite; olivine group; sillimanite; staurolite; titanite; topaz; zircon
- Netherland India *see* Indonesia
- NETPATH**
 ground water WRI 94-4212; OP-1825
- network deposits *see* stockwork deposits
- Network File System** B 2103
- neural networks**
 environmental geology OF 95-0651
- Neuropteris**
 Nova Scotia, sedimentary petrology OP-565
- Neuschel, Sherman Kennerson** OP-996
- Neuse River**
 hydrology OF 94-0379; OF 94-0511; OF 95-0136
- neutron activation analysis**
 geochemistry OP-130
- Neva Strait Fault**
 structural geology OP-1447
- Nevada** *see also* Battle Mountain High; Colorado River; Death Valley; Great Basin; Hanson Creek Formation; Lake Lahontan; Roberts Mountains Formation; Virgin River valley.
- areal geology
 Clark County Nevada B 2056
 Lander County Nevada OP-213
 Lincoln County Nevada B 2056
- deformation
 Clark County Nevada OP-15
 Lake Mead Fault OP-15
 Las Vegas Valley OP-1323
 Nevada Test Site OF 95-0002
 Yucca Mountain OF 95-0002
- earthquakes
 OF 94-0647
 Carson City County Nevada OP-1994
 Nevada Test Site OP-365
 Nye County Nevada OP-365
 Reno Nevada OP-1994
 Yucca Mountain OP-12
- economic geology
 Churchill County Nevada OF 94-0712
 Humboldt County Nevada OF 94-0712
 Pershing County Nevada OF 94-0712
 Washoe County Nevada OF 94-0712
- energy sources
 OP-1083
 Nevada Test Site OP-1084
 Trap Spring Field OF 94-0670
 Yucca Mountain OP-1084
- engineering geology
 Las Vegas Nevada OP-1367
 Yucca Mountain OF 93-0269; OP-1367
- environmental geology
 OP-894
 Beatty Nevada OP-2209
 Nevada Test Site OF 92-0458; OF 93-0477; OF 94-0451; OF 95-0155
 Nye County Nevada OF 95-0155; OF 95-0284
 Rainier Mesa OF 94-0451
 Yucca Mountain OF 92-0458; OF 93-0477; OF 94-0451; OP-2306
- Eocene, Pequop Mountains OP-105
- faults
 OF 94-0228; OP-492; OP-1740
 Nye County Nevada OP-631
 Yucca Flat OP-631
 Yucca Mountain OP-1802
- fluid inclusions, Yucca Mountain OP-2037
- fluvial features, Clark County Nevada OP-2289
- fractures, Churchill County Nevada OF 94-0228
- geochemistry
 OF 94-0670; OP-794
 Carlin Mine OP-535
 Clark County Nevada C 1129
 Douglas County Nevada WRI 93-4122
 Lincoln County Nevada P 1559; B 2056
 Pequop Mountains B 1988-K
 Yucca Mountain OP-1857; OP-2169; OP-2326
- geochronology
 Elko County Nevada B 2081
 Humboldt County Nevada B 2081
 Nye County Nevada OP-844
 Toquima Range OP-844
- geomorphology
 Carson City County Nevada OF 94-0105
 Clark County Nevada OF 94-0670
 Douglas County Nevada OF 94-0105
 Nye County Nevada OP-775
 Washoe County Nevada OF 94-0105
- geophysical surveys
 DDS-0031; OF 94-0285; OF 94-0286; OF 94-0287; GP-1012; OP-1835
 Clark County Nevada OF 94-0676
 Elko County Nevada OF 94-0670
 Eureka County Nevada OF 94-0670
 Lander County Nevada OF 94-0670
 Lincoln County Nevada OF 94-0676
 Nevada Test Site OF 93-0540-A; OF 93-0540-B; OF 93-0586-A; OF 93-0586-B; OF 94-0531
 Roberts Mountains Allochthon OP-2029
 White Pine County Nevada OF 93-0397-A; OF 93-0397-B; OF 94-0296
 Yucca Mountain OF 93-0540-A; OF 93-0540-B; OF 93-0586-A; OF 93-0586-B; OF 94-0531
- geothermal energy, Churchill County Nevada
 OF 95-0080; OF 95-0485
- gold ores
 OP-536
 Carlin Mine OP-20; OP-438
 Getchell Mine OF 94-0282; OP-340; OP-1245
 Osgood Mountains OF 94-0282; OP-895
 Yucca Mountain OP-1946
- ground water
 OP-356
 Churchill County Nevada OF 94-0031
 Clark County Nevada OF 95-0160
 Douglas County Nevada WRI 94-4126
 Elko County Nevada OF 95-0107
 Esmeralda County Nevada OF 95-0160
- Eureka County Nevada OF 95-0107
 Lincoln County Nevada OF 95-0160
 Nevada Test Site OF 92-0657; OF 93-0098; OF 94-0303; OF 94-0311; OF 94-0531; OF 95-0158; OF 95-0160; OP-2049; OP-2066
 Nye County Nevada OF 94-0531; OF 95-0160
 Pahute Mesa OP-2066
 Rainier Mesa OP-2049; OP-2066
 Yucca Flat OP-2066
 Yucca Mountain OF 92-0657; OF 93-0098; OF 94-0303; OF 94-0311; OF 94-0531; OF 95-0158; OP-1567; OP-2273
- hydrogeology
 OF 95-0126; OP-1747
 Carson City County Nevada WRI 94-4079; OF 93-0033
 Churchill County Nevada WRI 94-4233; WRI 95-4052; OF 93-0356
 Clark County Nevada WRI 94-4124
 Douglas County Nevada WRI 94-4079; OF 93-0033
 Elko County Nevada WRI 94-4222; WRI 94-4233
 Eureka County Nevada WRI 94-4222; WRI 94-4233
 Humboldt County Nevada WRI 94-4233; WRI 95-4119
 Humboldt River valley WRI 94-4222; WRI 94-4233
 Lander County Nevada WRI 94-4233
 Las Vegas Valley WRI 94-4124
 Lyon County Nevada OF 93-0033; OF 93-0356
 Mineral County Nevada WRI 95-4052
 Nevada Test Site OF 94-0456; OF 94-0491
 Nye County Nevada WRI 94-4124; OF 94-0491
 Pershing County Nevada WRI 94-4233; WRI 95-4052; WRI 95-4119
 White Pine County Nevada WRI 94-4233
 Yucca Flat OF 94-0491
 Yucca Mountain OF 94-0456; OP-1947
- hydrology
 Beatty Nevada OF 94-0489; OP-1989
 Carson City County Nevada OF 95-0316
 Clark County Nevada WRI 94-4159; WRI 94-4210
 Douglas County Nevada OF 95-0316
 Esmeralda County Nevada OF 94-0305
 Lyon County Nevada FS 0115-95
 Mineral County Nevada FS 0115-95
 Nevada Test Site OF 94-0317
 Nye County Nevada OF 94-0305
 Walker River FS 0115-95
 Washoe County Nevada OF 95-0316
 Yucca Mountain OF 94-0317; OP-1998
- Invertebrata OP-77
- Jurassic OP-745
- magma OP-258
- mantle, Nevada Test Site OP-960; OP-2233
- maps
 Clark County Nevada OF 91-0132; OF 92-0326; OF 93-0716; OF 94-0625; OF 95-0035
 Elko County Nevada I-2536
 Esmeralda County Nevada I-2464
 Eureka County Nevada MF-2257
 Lander County Nevada OF 94-0664
 Lincoln County Nevada OF 94-0175; OF 94-0283; OF 94-0625; OF 95-0094; GQ-1759

- Nevada Test Site OF 95-0567
 Nye County Nevada GQ-1756
 Pahute Mesa OF 95-0567
 White Pine County Nevada OF 94-0687;
 OF 95-0010; GQ-1758
- metal ores
 OP-799
 Churchill County Nevada B 2081
 Humboldt County Nevada B 2090; OF 94-0668
 White Pine County Nevada OF 94-0270-A;
 OF 94-0270-B
- mineral inventory, Eureka County Nevada OP-450
- mineral resources
 OF 95-0248
 Washoe County Nevada OP-793
- mineralogy, Yucca Mountain OP-2036
- Miocene
 Lincoln County Nevada B 2056
 Yucca Mountain OP-1408
- non-metal deposits, Pershing County Nevada
 OF 95-0084
- orogeny, Humboldt Range OP-619
- pedogenesis
 OP-2005
 Yucca Mountain OP-1763
- Permian, Humboldt County Nevada OP-78
- petroleum
 Nevada Test Site OP-1470
 Pahute Mesa OP-2065
 Yucca Mountain OP-1470
- petrology
 C 1129
 Carson City County Nevada I-2473
 Churchill County Nevada I-2473
 Clark County Nevada C 1129
 Douglas County Nevada I-2473
 Lincoln County Nevada OP-836
 Lyon County Nevada I-2473
 Mineral County Nevada I-2473
 Storey County Nevada I-2473
 Washoe County Nevada I-2473
- phase equilibria
 Eureka County Nevada C 1129
 Lander County Nevada C 1129
- pollution OP-2264
- Quaternary
 OP-2100
 Clark County Nevada OP-761
 Esmeralda County Nevada OF 94-0568
 Humboldt River valley OP-2086
 Lincoln County Nevada B 2056; I-2501;
 OP-761
 Moapa Valley B 2056
 Nevada Test Site B 2056; OF 94-0568;
 OF 95-0037
 Nye County Nevada B 2056; OF 94-0568;
 FS 94-0007; OP-761
 Yucca Mountain OF 94-0568; OF 95-0037
- sedimentary petrology
 Elko County Nevada B 1988-I
 Eureka County Nevada B 1988-I
 Lincoln County Nevada B 1988-I
 Nye County Nevada B 1988-I
 Roberts Mountains Allochthon OP-1404
 Washoe County Nevada OP-2000
 White Pine County Nevada B 1988-I
- seismicity, Yucca Mountain OP-823
- seismology
 Nevada Test Site OF 94-0618
 Rainier Mesa OF 94-0618
 Yucca Mountain OP-614
- soils OP-1891
- stratigraphy
 OP-1558
 Arrow Canyon Range OP-1324
 Lincoln County Nevada B 2056
 Nevada Test Site OF 94-0342; OF 94-0460;
 OF 95-0102
 Yucca Mountain OF 94-0342; OF 94-0460;
 OF 95-0102; OP-1860
- structural geology
 Churchill County Nevada OP-454
 Egan Range OP-1976
 Elko County Nevada OP-744
 Grant Canyon Field OP-1440; OP-1820
 Lincoln County Nevada B 2056
 Nevada Test Site OP-1252
 Nye County Nevada OP-1252
 Trap Spring Field OP-1944
 Yucca Flat OP-1252
 Yucca Mountain OP-1469; OP-1904; OP-2143; OP-2276
- tectonophysics
 OP-814
 Nevada Test Site OP-2230
 Tertiary, Lincoln County Nevada OF 95-0545
- volcanism
 OP-1852
 Yucca Mountain OP-1388
- waste disposal
 Beatty Nevada OP-1990
 Yucca Mountain OP-997
- weathering, Yucca Mountain OP-1468
- Nevada Rift**
 structural geology OP-1436
- Nevada Test Site**
 deformation OF 95-0002
 earthquakes OP-365
 energy sources OP-1084
 environmental geology OF 92-0458; OF 93-0477; OF 94-0451; OF 95-0155
 geophysical surveys OF 93-0540-A; OF 93-0540-B; OF 93-0586-A; OF 93-0586-B; OF 94-0531
 ground water OF 92-0657; OF 93-0098; OF 94-0303; OF 94-0311; OF 94-0531; OF 95-0158; OF 95-0160; OP-2049; OP-2066
 hydrogeology OF 94-0456; OF 94-0491
 hydrology OF 94-0317
 mantle OP-960; OP-2233
 maps OF 95-0567
 petroleum OP-1470
 Quaternary B 2056; OF 94-0568; OF 95-0037
 seismology OF 94-0618
 stratigraphy OF 94-0342; OF 94-0460; OF 95-0102
 structural geology OP-1252
 tectonophysics OP-2230
- Nevadan Orogeny**
 California
 metamorphism OP-319
 structural geology OP-348; OP-1462
 tectonophysics OP-620
 Oregon, structural geology OP-348
- Neversink River basin**
 hydrology OF 94-0368
- Neves-Corvo Deposit**
 pyrite ores B 2081
- New Albany Shale**
 economic geology B 2094-C
 energy sources B 2137; OF 94-0298; OP-2020
 geophysical surveys OP-1898
- New Britain**
 geologic hazards OP-1720
- New Brunswick**
 geochemistry C 1129
- New Brunswick earthquake 1982 *see* Miramichi earthquake 1982
- New Cumberland Dam**
 hydrology OF 95-0129
- new energy sources**
 energy sources C 1108
 Minnesota, ground water OF 93-0435
- New England**
 earthquakes OF 94-0643
 geochemistry C 1129
 ground water P 1415-A; OF 94-0343; OP-937
 hydrogeology WRI 94-4252; FS 94-0027
 metamorphism OP-2208
 Quaternary OP-990; OP-1072; OP-1658; OP-1659; OP-2163; OP-2164
 soils OP-529
 structural geology OP-782; OP-2272
 tectonics OP-2296
- New England Batholith**
 magmas C 1129
- New England Orogeny**
 Queensland Australia, metal ores C 1129
 Tasmania Australia, metal ores C 1129
- New Hampshire** *see also* Ammonoosuc Volcanics; Avalon Terrane; Berwick Formation.
 earthquakes OF 94-0643
 ground water
 P 1415-A; FS 95-0002
 Carroll County New Hampshire FS 0138-95; OP-937; OP-1549
 Hillsborough County New Hampshire OF 94-0398; OF 95-0281; OF 95-0363
 Strafford County New Hampshire OP-698
- hydrogeology
 WRI 93-4096
 Cheshire County New Hampshire WRI 92-4013; WRI 92-4154
 Hillsborough County New Hampshire WRI 92-4154
 Merrimack County New Hampshire WRI 92-4154
 Sullivan County New Hampshire WRI 92-4013; WRI 92-4154
- maps, Grafton County New Hampshire OF 94-0410
- non-metal deposits OF 94-0201
- pollution, Hillsborough County New Hampshire OF 95-0142
- Quaternary OP-1658
- soils OP-529
- structural geology OP-1830
- tectonophysics OP-2204
- New Hebrides** *see* Vanuatu
- New Idrea Serpentine**
 pollution OP-2047
- New Jersey** *see also* Delaware River basin; Kirkwood Formation; Lockatong Formation; Long Valley; Newark Basin; Passaic Formation.
 continental margin I-1987-D
 earthquakes OF 94-0643
 environmental geology
 OP-913
 Picatinny Arsenal WRI 92-4122; WRI 92-4134
 Eocene OP-735
 geochemistry
 New Jersey Highlands P 1565-A

Passaic County New Jersey P 1565-A
 Sussex County New Jersey P 1565-A
 Warren County New Jersey P 1565-A

ground water

P 1415-A

Atlantic County New Jersey WRI 90-4095
 Burlington County New Jersey WRI 90-4095; WRI 92-4152; WRI 94-4113

Camden County New Jersey WRI 92-4152; WRI 94-4113

Gloucester County New Jersey WRI 92-4152; WRI 94-4113

Mercer County New Jersey WRI 94-4113

Middlesex County New Jersey OP-751

Monmouth County New Jersey OP-751

Ocean County New Jersey WRI 90-4095

Salem County New Jersey WRI 94-4113

hydrogeology

Middlesex County New Jersey OP-750

Monmouth County New Jersey OP-750

hydrology

Atlantic County New Jersey WRI 91-4141

Camden County New Jersey OF 94-0499; OF 94-0500

Cape May County New Jersey WRI 91-4141

Hunterdon County New Jersey OF 93-0662

Ocean County New Jersey WRI 91-4141

Somerset County New Jersey OF 94-0065

maps

Atlantic County New Jersey OF 95-0254

Burlington County New Jersey OF 95-0253; OF 95-0254

Camden County New Jersey OF 95-0253; OF 95-0254

Cape May County New Jersey OF 95-0254

Cumberland County New Jersey OF 95-0254

Gloucester County New Jersey OF 95-0254

Hunterdon County New Jersey OF 95-0253

Mercer County New Jersey OF 95-0253

Middlesex County New Jersey OF 95-0253

Monmouth County New Jersey OF 95-0253; OP-904

Ocean County New Jersey OF 95-0253; OF 95-0254; OP-904

Salem County New Jersey OF 95-0254

Somerset County New Jersey OF 95-0253

metal ores OP-290; OP-1379

Miocene, Atlantic County New Jersey OP-622

natural gas C 1108

oceanography OP-621; OP-1188

pollution

WRI 93-4101; OP-114; OP-966; OP-1087; OP-2176; OP-2177; OP-2178; OP-2236; OP-2264

Atlantic County New Jersey WRI 92-4144

Camden County New Jersey WRI 92-4144; OP-910

Cumberland County New Jersey WRI 92-4144

Gloucester County New Jersey WRI 92-4144

Salem County New Jersey WRI 92-4144

stratigraphy

Camden County New Jersey P 1554

Gloucester County New Jersey P 1554

Hunterdon County New Jersey OF 95-0557

Morris County New Jersey OF 95-0557

Ocean County New Jersey OP-623

Sussex County New Jersey OF 95-0557

Warren County New Jersey OF 95-0557

structural geology OP-1959

New Jersey Highlands

geochemistry P 1565-A

New Madrid earthquakes 1811-1812

OP-2217

Arkansas, Quaternary P 1538-H

Australia, tectonophysics OP-2334

California, tectonophysics OP-2334

Canada, tectonophysics OP-2334

Illinois OP-1451

India, tectonophysics OP-2334

Indiana OP-1451

Mississippi Valley, Quaternary OF 94-0568

Missouri, Quaternary P 1538-H

Oklahoma, tectonophysics OP-2334

Tennessee OP-1907

New Madrid Missouri

deformation P 1538-J

earthquakes OF 94-0298; OP-451; OP-1005; OP-2085

economic geology OF 94-0670

engineering geology P 1538-M

faults P 1538-I; P 1538-Q

geologic hazards OF 94-0663; OF 95-0241; OF 95-0574

geomorphology P 1538-R

geophysical surveys P 1538-L; P 1538-P

neotectonics OP-2285

petrology OP-1299

Quaternary OF 94-0568; OP-946; OP-1707

seismology P 1538-N; MF-2279; I-2521; OP-405; OP-1004; OP-1838; OP-2013; OP-2014

structural geology P 1538-E; P 1538-O; OP-1422; OP-2272; OP-2287

New Mexico *see also* Chinle Formation; High Plains Aquifer; Ogallala Aquifer; Raton Formation; Rio Grande Rift; Rio Grande Valley; Rio Puerco; San Juan Basin; San Juan River; Sandia Granite; Shinarump Member.

OF 95-0314

areal geology

Chaves County New Mexico B 2063

Curry County New Mexico B 2063

De Baca County New Mexico B 2063

Guadalupe County New Mexico B 2063

Lincoln County New Mexico B 2063

Quay County New Mexico B 2063

Roosevelt County New Mexico B 2063

coal C 1108

Cretaceous P 1561

economic geology

Chaves County New Mexico DDS-0017; B 2063

Curry County New Mexico DDS-0017; B 2063

De Baca County New Mexico DDS-0017; B 2063

Guadalupe County New Mexico DDS-0017; B 2063

Lincoln County New Mexico DDS-0017; B 2063

Quay County New Mexico DDS-0017; B 2063

Roosevelt County New Mexico DDS-0017; B 2063

energy sources

C 1108

Chaves County New Mexico B 2063

Curry County New Mexico B 2063

De Baca County New Mexico B 2063

Guadalupe County New Mexico B 2063

Lincoln County New Mexico B 2063

Quay County New Mexico B 2063

Rio Arriba County New Mexico C 1108

Roosevelt County New Mexico B 2063

San Juan County New Mexico B 2000-H

engineering geology, Truth or Consequences New Mexico WRI 95-4050

environmental geology

YR; C 1108; OF 94-0269; OF 95-0528

Albuquerque New Mexico OF 94-0547

Carlsbad Caverns C 1108

McKinley County New Mexico WRI 94-4192

geochemistry

OP-959

Los Alamos County New Mexico B 2081

Rio Arriba County New Mexico B 2081

Sandoval County New Mexico B 2081

Valle Grande Mountains B 2081

Valles Caldera B 2081

geochronology, Valles Caldera OP-443

geomorphology, Albuquerque New Mexico WRI 94-4205

geophysical surveys DDS-0031

ground water

OP-2308

Bernalillo County New Mexico WRI 94-4251; OF 94-0349; OF 95-0360

Cibola County New Mexico WRI 94-4178

Dona Ana County New Mexico WRI 93-4192

Los Alamos County New Mexico WRI 94-4251

Otero County New Mexico WRI 93-4192

Sandoval County New Mexico WRI 94-4251; OF 95-0360

Santa Fe County New Mexico WRI 94-4251

Santa Fe New Mexico WRI 94-4078

Socorro County New Mexico WRI 94-4251; OF 94-0349; OF 95-0360

Torrance County New Mexico OF 95-0360

Tularosa Basin WRI 93-4192

Valencia County New Mexico WRI 94-4251; OF 94-0349; OF 95-0360

hydrogeology

Catron County New Mexico WRI 94-4125

Cibola County New Mexico OF 94-0356

Dona Ana County New Mexico OF 95-0111

Grants mineral belt OP-335

McKinley County New Mexico OF 94-0356; OF 94-0377

Santa Fe County New Mexico WRI 93-4163

Santa Fe New Mexico WRI 94-4072

Sierra County New Mexico WRI 94-4125

Socorro County New Mexico WRI 94-4125

Torrance County New Mexico WRI 93-4163

hydrology

Albuquerque New Mexico WRI 94-4071; WRI 94-4143

Grant County New Mexico WRI 95-4083

Hidalgo County New Mexico WRI 95-4083

Taos County New Mexico WRI 93-4113

ichnofossils

Fort Wingate OP-379

McKinley County New Mexico OP-1482

maps

Catron County New Mexico OF 94-0670; OF 95-0263; I-2399

Grant County New Mexico OF 95-0263

Sierra County New Mexico I-2399

metal ores

Catron County New Mexico OF 94-0691

Chaves County New Mexico B 2063

- Curry County New Mexico B 2063
De Baca County New Mexico B 2063
Guadalupe County New Mexico B 2063
Lincoln County New Mexico B 2063
Quay County New Mexico B 2063
Roosevelt County New Mexico B 2063
- mineral resources**
Chaves County New Mexico B 2063
Curry County New Mexico B 2063
De Baca County New Mexico B 2063
Guadalupe County New Mexico B 2063
Lincoln County New Mexico B 2063
Quay County New Mexico B 2063
Roosevelt County New Mexico B 2063
- mineralogy**
OP-2110
Carlsbad Caverns OP-1275
Catron County New Mexico OP-1518
Sierra County New Mexico OP-1518
- natural gas** OF 94-0022-J
- petrology**, Valle Grande Mountains OP-840
- plate tectonics** OP-1256
- Proterozoic**, Zuni Mountains OP-21
- Quaternary**
OP-1050
Valle Grande Mountains OP-1575
- sedimentary petrology**
Carlsbad Caverns OP-1274
McKinley County New Mexico B 1808-P
San Juan County New Mexico B 1808-P
- sedimentation**, Carlsbad Caverns OP-1276
- solution features**
OP-1277
Carlsbad Caverns OP-190
- stratigraphy**
B 2110
Chama Basin OP-2019
Colfax County New Mexico OF 94-0670;
OP-1953
Fort Wingate OP-224
Valles Caldera OP-1736
- structural geology**
OP-1878
Dona Ana County New Mexico OF 95-0506
Grant County New Mexico OF 95-0506
Hidalgo County New Mexico OF 95-0506
Luna County New Mexico OF 95-0506
- tectonophysics**
OP-515; OP-1669
Dona Ana County New Mexico OF 94-0695
Grant County New Mexico OF 94-0695
Hidalgo County New Mexico OF 94-0695
Luna County New Mexico OF 94-0695
- uranium ores**
OF 95-0571
Chaves County New Mexico B 2063
Curry County New Mexico B 2063
De Baca County New Mexico B 2063
Guadalupe County New Mexico B 2063
Lincoln County New Mexico B 2063
Quay County New Mexico B 2063
Roosevelt County New Mexico B 2063
- New Orleans Louisiana**
energy sources C 1108
- New Providence Island**
Quaternary OP-1866
- New Quebec** *see* Ungava
- New River**
hydrology FS 94-0019
- New South Wales Australia** *see* Broken Hill; New England Batholith; Willyama Complex
- New World mining district**
metal ores OF 94-0670; OP-2224
- New York** *see also* Appalachian Basin; Appalachian Plateau; Delaware River basin; Hudson Valley; Lake Erie; Lockatong Formation; Long Island; Newark Basin; Passaic Formation.
continental margin I-1987-D
earthquakes OF 94-0643
engineering geology
Cortland County New York OP-113
Steuben County New York OP-113
environmental geology
OP-756
Finger Lakes OF 94-0615
Onondaga County New York OF 94-0615
fluid inclusions, Adirondack Mountains OP-1794
geochemistry
OF 94-0620
Adirondack Mountains B 2106; OP-832
geomorphology, Nassau County New York OP-2170
ground water
P 1415-A; OP-698; OP-1608
Chenango County New York WRI 91-4138
Livingston County New York YR
Saratoga County New York WRI 93-4029
Schuyler County New York WRI 93-4004
Suffolk County New York WRI 92-4171
- hydrology**
OF 93-0161
Catskill Mountains OF 94-0368; OP-1632
Cayuga County New York OP-617
Clinton County New York B 2103
Finger Lakes OP-617
Livingston County New York OP-617
Monroe County New York WRI 92-4052
New York City New York OP-1015
Onondaga County New York OP-617
Ontario County New York OP-617
Schuyler County New York OP-617
Seneca County New York OP-617
Sullivan County New York OF 94-0368
Tompkins County New York OP-617
Ulster County New York OF 94-0368
Yates County New York OP-617
- Invertebrata**
Erie County New York OP-686
Genesee County New York OP-686
Livingston County New York OP-686
Ontario County New York OP-686
Seneca County New York OP-686
Yates County New York OP-686
- metal ores**
Adirondack Mountains OP-290; OP-1379
Shawangunk Mountains OP-303
- mineral resources**, Adirondack Mountains OP-718
- paleontology**, Erie County New York OP-543
- pollution**
Clinton County New York OF 94-0472
Essex County New York OF 94-0472
New York City New York OP-1186
- Quaternary**
Cortland County New York WRI 90-4168
Tompkins County New York WRI 90-4168
sedimentary petrology OP-2080
soils OP-529
- stratigraphy**
Cayuga County New York OP-685
Niagara County New York B 2086
Seneca County New York OP-685
- structural geology, Mohawk Valley OP-598
waste disposal, West Valley New York OP-1775
waterways OP-172
- New York City New York**
hydrology OP-1015
pollution OP-1186
- New Zealand** *see also* Alpine Fault; North Island; South Island.
geochemistry, Nelson New Zealand C 1129
petrology, Taupo volcanic zone OP-1542
Quaternary
Taupo volcanic zone OP-431
Wairarapa OF 94-0568
Wellington New Zealand OF 94-0568
- Newark Basin**
diagenesis OP-2118
energy sources OP-2058; OP-2059
geochronology OP-1672
ground water OP-1568
sedimentary petrology OP-2140
stratigraphy OP-1736
- Newark Supergroup** *see also* Lockatong Formation; Passaic Formation; Stockton Formation.
OP-2139
fluvial features OP-2138
sedimentary petrology OP-2117
- Newberry Mountains**
petrology C 1129
- Newberry Volcano**
geophysical surveys OF 95-0099
maps I-2455
- Newfoundland** *see also* Labrador.
geochemistry C 1129
geophysical surveys OP-779
magmas C 1129
petrology C 1129
- Newhall Quadrangle**
maps OF 95-0503
- NGDB**
geochronology DDS-0014
- Ni** *see* nickel
- Niagaran** *see* Lockport Formation
- Niawitakum River valley**
Quaternary OP-395
- Nicaragua**
geochemistry OP-1678
Quaternary OP-1257
seismology OP-961
- Nicaraguan earthquake 1992**
seismology OP-961
- nickel**
California, geochemistry OP-954
Colorado
environmental geology OF 95-0043
geochemistry OP-1168
pollution OP-1082
Europe, weathering OP-2052
Gulf of California, sedimentation OP-1987
Rocky Mountains, pollution OF 94-0670
Utah, geochemistry OP-1168
Washington, pollution OP-2064
Western Interior, stratigraphy OP-2063
- nickel ores**
Alaska B 2084
China OP-1871
Minnesota OP-862
- Nigeria**
metal ores OP-2126
- Ningxia China**
Quaternary OF 94-0568

niobates *see* niobotantalates

niobium

- Gulf of California, sedimentation OP-1987
- Missouri
 - economic geology OF 94-0670
 - petrology OP-1299

niobium ores

- Idaho P 1525
- Missouri OF 94-0670

niobotantalates *see* columbite; euxenite

Niobrara Formation

- B 2113; OP-1974
- geochemistry OF 95-0209

Niskayuna Quadrangle

- ground water WRI 93-4029

Nisling Terrane

- metamorphic rocks OF 94-0268
- tectonics OP-360

NIST

- geochemistry OF 95-0486

nitrates

- California
 - ground water WRI 94-4127
 - pollution OF 95-0286
- Colorado, hydrogeology YR; OF 95-0536
- Delaware, pollution OP-707
- Florida
 - hydrogeology WRI 94-4162
 - pollution OP-933
- hydrogeology WRI 94-4061; WRI 95-4031; OF 95-0141
- Idaho
 - ground water WRI 94-4135
 - hydrology WRI 93-4229
- Illinois, pollution OP-702
- Maryland
 - ground water WRI 94-4170
 - hydrogeology OF 94-0507
 - hydrology OP-1899
 - pollution OP-702
- Midwest, pollution OP-1652
- Minnesota
 - hydrogeology WRI 94-4207
 - pollution OF 95-0116
- Mississippi Valley, environmental geology OP-1748
- Missouri
 - hydrogeology OF 94-0705-W
 - pollution OF 94-0332; OP-933
- New York, hydrology OF 94-0368
- Tennessee, pollution OF 95-0156
- Wisconsin
 - environmental geology OF 95-0163
 - pollution OF 95-0163
- Wyoming
 - ground water WRI 94-4135
 - hydrology WRI 93-4229

nitrites

- Appalachians, pollution OP-1365
- hydrogeology OF 95-0141
- Idaho, hydrology WRI 93-4229
- Missouri, pollution OF 94-0332
- Wyoming, hydrology WRI 93-4229

nitrogen

- Alaska, gold ores OP-2184
- Appalachians
 - pollution OP-1365
 - waste disposal OP-1133
- California
 - ground water WRI 94-4127
 - hydrology OF 94-0470

Colorado

- economic geology OF 94-0289
- geochemistry OF 94-0295
- ground water WRI 94-4037; WRI 94-4118

Delaware, pollution OP-1077

energy sources YR

- Florida, pollution OP-933
- Great Lakes region, hydrology WRI 95-4005
- Great Plains, hydrogeology WRI 93-4231
- hydrogeology WRI 95-4031; OF 95-0141

Idaho

- ground water WRI 94-4135
- hydrogeology WRI 94-4247
- hydrology WRI 93-4229; WRI 94-4215

Iowa

- ground water WRI 94-4244
- hydrology WRI 94-4130

Kansas, hydrology W 2352-B

Maryland

- ground water WRI 94-4170
- hydrogeology OF 94-0507
- pollution OP-1077; OP-1786; OP-1985
- Massachusetts, environmental geology OF 95-0290

Minnesota, pollution OF 95-0116

Mississippi Valley, geologic hazards OP-1295

Missouri, pollution OP-933

N-15, Florida OP-2202

N-15/N-14

- Appalachians OP-1632
- Colorado OF 95-0536; OP-1796
- geochemistry OF 95-0206
- Idaho OF 94-0503
- Maryland OP-1899
- Minnesota OP-1139
- Missouri OF 94-0705-W
- New Jersey OP-2177; OP-2236
- pollution OP-174; OP-2323
- Rocky Mountains OP-1632
- thermal waters OP-1756

Nebraska, hydrology W 2352-B

Nevada

- geothermal energy OF 95-0080
- gold ores OP-1245

New Mexico, energy sources B 2063

New York, hydrology OF 94-0368

North Carolina, pollution W 2435

North Dakota, pollution OP-179; OP-808

Pennsylvania

- environmental geology OP-354
- ground water WRI 93-4109

Tennessee, pollution OF 95-0156

Texas

- hydrology WRI 94-4213
- pollution OP-1093

Washington, hydrology WRI 94-4215

Wyoming

- ground water WRI 94-4135
- hydrology WRI 93-4229

nitrous oxide

- energy sources OP-1547
- geophysical surveys OP-561

Nitzschia

California, Quaternary OP-1308

Nix Olympia *see* Olympus Mons

Nixon Fork Terrane

- areal geology OP-711
- magmas OP-626

NOAA

- ocean circulation OF 94-0363

Noachian OP-35; OP-916; OP-1233

Noatak River basin

- Quaternary OP-1457

Noatak Sandstone

- deformation OP-479

Nobi Fault

- Quaternary OF 94-0568

noble gases *see also* argon; helium; radon.

- Western Interior, geochronology OP-506

Noctis Labyrinthus OP-559

nodules

- Arctic Ocean, stratigraphy OF 94-0588
- California OP-1410
- Pacific Ocean, polymetallic ores OP-1495

Noe, Adolf Carl

- paleobotany OP-646

Nome Alaska

- pollution OF 95-0178

Nome Group

- areal geology OP-931

Nonesuch Shale

- mineralogy OP-2028

nonmagnetic minerals

- Alaska, mineral resources MF-2058-D

nonmetal deposits

- B 2081; B 2111
- Illinois B 2111

nonpurgeable organic compounds

- Mississippi Valley, pollution OF 94-0336

nontronite

- Europe, weathering OP-2052

Noonsack Group

- geophysical surveys OP-1821

Nordland Norway *see* Ofoten

Noril'sk Russian Federation *see* Norilsk Russian Federation

Norilsk region

- geochemistry OP-50; OP-421

Norilsk Russian Federation

- geochronology OP-194

norite

- Alaska OP-672
- Washington OP-391

normal earthquake *see* shallow-focus earthquakes

normal faults

- OF 94-0228; OP-1422
- Alabama OP-2155
- Alaska, Quaternary OP-2292
- Arizona
 - OP-1282
 - Miocene OP-669
- California
 - OF 94-0568; OP-2332
 - metal ores OP-940
 - Miocene OP-669
 - Quaternary B 1982
 - seismicity OP-2120
 - seismology OP-1808; OP-2042
 - tectonophysics OP-1444

Canada OP-994

Chile, tectonophysics OP-1762

China, Quaternary OF 94-0568

Colorado, environmental geology OP-1045

Cyprus OP-2

Europe OP-598

Georgia OP-2155

Greece OP-453

Idaho

- OF 94-0568; OP-1581

- crystalline rocks OP-362

- polymetallic ores B 2064-A-R

- Quaternary OF 94-0568
 Indiana P 1538-O
 Israel, Quaternary OF 94-0568
 Italy OF 94-0568
 Mississippi Valley, seismology P 1538-N
 Missouri, geophysical surveys P 1538-P
 Montana
 OP-480; OP-1943
 crystalline rocks OP-362
 Nevada
 B 2056; OF 94-0228; OP-744; OP-1323;
 OP-1820; OP-1904; OP-1944; OP-1976;
 OP-2143
 earthquakes OP-12; OP-1994
 energy sources OF 94-0670
 gold ores OP-20; OP-438
 metal ores B 2090
 Quaternary OF 94-0568
 Oregon, tectonophysics OP-1444
 Pacific Ocean
 geochemistry OP-1033
 tectonophysics OP-56
 Peru, metal ores OP-1411
 Spain, metal ores OP-799
 tectonophysics OP-924
 United States
 OP-994
 metal ores OP-799
 Utah OP-695; OP-744
- Normalized Difference Vegetation Index**
 environmental geology OP-1120
- Norphlet Formation**
 diagenesis OP-828
- Norrbotten Sweden *see* Kiruna Sweden
- North Africa *see* Egypt; Tunisia
- North America** *see also* Appalachians; Basin and Range Province; Canada; Canadian Shield; Coast Mountains; Great Lakes; Great Lakes region; Great Plains; Mexico; Rocky Mountains; Western Interior.
 areal geology
 OP-723
 Denali Fault OP-672
 Tanana River OP-296
 Yukon River OP-217
 Yukon-Tanana Terrane OP-296
 Carboniferous B 2110
 core OP-2231
 earthquakes OP-1074
 ecology OP-556
 energy sources
 OP-1545
 Appalachian Basin OP-2057
 Michigan Basin OF 94-0298
 Williston Basin OP-749
 environmental geology
 YR
 Yukon River OF 94-0526; OF 94-0527
 faults
 Coast plutonic complex OP-248
 Intermontane Belt OP-248
 Rio Grande Rift OP-2243
 folds OF 94-0568
 geochemistry
 C 1129
 Coast plutonic complex B 2107
 Lake Superior region B 1904-U
 Saint Elias Mountains OF 95-0222
 geochronology
 Appalachian Basin OP-510
 Avalon Terrane OP-1047
 Disturbed Belt OP-1465
 geomorphology, Saint Elias Mountains B 2072
 geophysical surveys B 2139; OP-561; OP-562
 geophysics, Yukon-Tanana Terrane OP-594
 ground water
 OP-937
 Disturbed Belt OP-1215
 Hueco Bolson WRI 94-4092; OF 94-0329
 Williston Basin P 1402-F
 hydrogeology, Saint Clair River FS 94-0056
 hydrology, Champlain Valley B 2103
 igneous rocks OF 94-0624-A; OF 94-0624-B;
 OP-618
 lignite, Williston Basin OP-268
 magmas, Denali Fault OP-626
 metal ores
 Rio Grande Rift OP-1874
 Yukon-Tanana Terrane OP-1893
 metamorphic rocks, Coast plutonic complex
 OF 94-0268
 metamorphism
 Coast plutonic complex B 2107
 Yukon-Tanana Terrane OP-39
 mineral resources, Lake of the Woods OF 94-
 0447
 mineralogy, Peninsular Ranges Batholith OP-
 2110
 Missouri River basin OP-1648
 Mohorovicic discontinuity OP-109; OP-2301
 natural gas C 1108
 non-metal deposits
 Missouri River basin OP-1492
 Sweetgrass Arch OP-1492
 orogeny, Appalachian Basin B 2110
 paleobotany OP-181; OP-564; OP-567; OP-
 568; OP-646
 paleomagnetism OP-1135
 Pennsylvanian
 B 2110
 Appalachian Basin B 2110; OP-764; OP-
 765; OP-767; OP-1228
 petroleum
 Appalachian Basin OP-1811
 Michigan Basin OF 94-0298
 petrology
 Appalachian Basin OP-989
 Peninsular Ranges Batholith C 1129
 Yukon-Tanana Terrane OP-231
 plate tectonics
 OP-1327; OP-1894
 Saint Elias Mountains OP-1682
 pollution
 OP-693
 Champlain Valley OF 94-0472
 Lake Champlain OF 94-0472
 Williston Basin OF 94-0670
 Quaternary
 OF 94-0568; OP-1050; OP-1055; OP-1092
 Saint Elias Mountains OP-1805
 Skagit Valley OP-2008
 sedimentary petrology
 OP-1604
 Appalachian Basin OP-1226; OP-1340; OP-
 2025
 Coast plutonic complex OP-1361
 Williston Basin OP-1622
 sedimentation
 OP-1646; OP-2023
 Appalachian Basin OF 95-0240
 seismic sources OP-374
 seismology
 OP-24; OP-80; OP-358
 Denali Fault OP-697
 San Jacinto Fault OP-1385; OP-1474
 Tintina Fault OP-697
 stratigraphy
 B 2110; OP-350; OP-2022; OP-2139; OP-
 2253
 Appalachian Basin OP-766; OP-768
 Coast plutonic complex B 2135
 Pedregosa Basin B 2110
 Williston Basin B 2112; OP-1558; OP-2255
 structural geology
 OP-432; OP-1447; OP-1863
 Champlain Valley OP-598
 Keweenaw Rift B 1904-T
 Rio Grande Rift OP-1741
 San Jacinto Fault OP-705
 tectonics
 Avalon Terrane OP-2296
 Denali Fault B 2107
 Yukon-Tanana Terrane OP-360
 tectonophysics
 OF 95-0238; OP-60; OP-82; OP-704; OP-
 1510; OP-2003
 Omineca Belt OP-468
 Rio Grande Rift OP-442
 Vertebrata OP-418
 North American Cordillera *see* Canadian Cordil-
 lera
 North American Free Trade Agreement
 environmental geology YR
 North American Plate *see also* North America.
 Alaska
 geothermal energy OP-627
 plate tectonics OP-1682
 sedimentation OP-2160
 Bahamas, plate tectonics OP-1314
 Basin and Range Province, structural geology
 OP-1741
 California
 economic geology OP-216
 faults OP-492
 geophysical surveys OF 95-0275
 petrology C 1129
 plate tectonics OF 94-0568; OP-1431; OP-
 1576
 Quaternary OF 94-0568
 seismicity OP-1745
 stratigraphy B 1995-J,K
 structural geology OP-1007
 tectonophysics OP-1448; OP-1778
 Canada, tectonophysics OP-2265
 Dominican Republic
 plate tectonics OP-1751; OP-1983
 Quaternary OF 94-0568
 Japan, tectonophysics OP-2307
 Mexico
 petrology C 1129; OP-827
 tectonophysics OP-1448
 Nevada, faults OP-492
 Oregon, Quaternary OP-1945
 Puerto Rico
 earthquakes OP-2238
 plate tectonics OP-1304
 tectonophysics OP-1136
 United States, tectonophysics OP-2265; OP-
 2307
 Washington
 structural geology OP-1777
 tectonophysics OP-1975
- North Amethyst vein system**
 metal ores OP-284
- North Anatolian Fault**
 earthquakes OF 94-0568
 Quaternary OF 94-0568

North Arch volcanic field
petrology OP-1307

North Atlantic *see* Atlantis fracture zone; Barbados Ridge; Barracuda Ridge; Blake Plateau; Block Island Sound; Caribbean Sea; Exuma Sound; Georges Bank; Georges Bank basin; Goban Spur; Great Bahama Bank; Gulf of Maine; Gulf of Mexico; Hayes fracture zone; Labrador Sea; Long Island Sound; Puerto Rico Trench; Straits of Florida; TAG hydrothermal field

North Berwick Quadrangle
Quaternary OP-990

North Carolina *see also* Ashe Formation; Blue Ridge Mountains; Blue Ridge Province; Carolina slate belt; Dan River basin; Kings Mountain; Lynchburg Formation; New River; Ocoee Supergroup; Piedmont; Raleigh Belt; Salisbury Embayment.

continental margin I-1987-D
environmental geology OP-1427

ground water

Carteret County North Carolina WRI 94-4186

Jones County North Carolina WRI 94-4186
Pamlico County North Carolina WRI 94-4186

hydrogeology

OF 94-0522

Beaufort County North Carolina OF 95-0164

Bertie County North Carolina OF 95-0164
Camden County North Carolina OF 95-0164
Carteret County North Carolina OF 95-0164
Chowan County North Carolina OF 95-0164
Craven County North Carolina OF 95-0164
Currituck County North Carolina OF 95-0164

Dare County North Carolina OF 95-0164
Hyde County North Carolina OF 95-0164
Pamlico County North Carolina OF 95-0164
Pamlico Sound OF 95-0164
Perquimans County North Carolina OF 95-0164

Tyrrell County North Carolina OF 95-0164
Washington County North Carolina OF 95-0164

hydrology

Alamance County North Carolina OF 94-0379

Alexander County North Carolina OF 94-0509

Avery County North Carolina OF 94-0509
Beaufort County North Carolina WRI 94-4226; OF 94-0454

Burke County North Carolina OF 94-0509
Caldwell County North Carolina OF 94-0509

Catawba County North Carolina OF 94-0509
Chatham County North Carolina OF 94-0379

Craven County North Carolina OF 94-0511
Currituck County North Carolina WRI 94-4067

Durham County North Carolina WRI 94-4123; OF 94-0379

Granville County North Carolina OF 94-0379

Guilford County North Carolina OF 94-0379

Hyde County North Carolina WRI 94-4226

Johnston County North Carolina OF 94-0379

Lee County North Carolina OF 94-0379

McDowell County North Carolina OF 94-0509

Neuse River OF 94-0379; OF 94-0511; OF 95-0136

Northampton County North Carolina WRI 94-4140

Orange County North Carolina OF 94-0379

Pamlico County North Carolina WRI 94-4226

Pamlico River OF 94-0454; OF 95-0136

Randolph County North Carolina OF 94-0379

Wake County North Carolina OF 94-0379

Warren County North Carolina WRI 94-4140

maps

Granville County North Carolina OF 94-0629

Vance County North Carolina OF 94-0629
Mesozoic, Warren County North Carolina OP-1399

metal ores B 2097; OP-799

mineral resources OF 95-0045

natural gas C 1108

pollution, Guilford County North Carolina W 2435

sedimentary petrology OP-2080

North Cascades National Park

hydrology WRI 94-4139

North Central (United States) *see* Midwest

North Central Corporation Well

energy sources OP-2058

North Coast Aquifer

ground water OF 93-0499

North Coulee Quadrangle

maps OF 88-0619

North Dakota *see also* Bakken Formation; Charles Formation; Fort Union Formation; Hell Creek Formation; Ludlow Member; Madison Aquifer; Madison Group; Mission Canyon Limestone; Missouri River; Red River; Red River valley; Souris River basin; Tongue River Member; Williston Basin; Wyoming Province.

coal C 1108
environmental geology, Cass County North Dakota OP-2268

hydrogeology

OF 95-0105

Dunn County North Dakota OF 95-0304

McLean County North Dakota OF 95-0304

Mountrail County North Dakota OF 95-0304

hydrology

C 1120-H; OF 95-0162

Benson County North Dakota WRI 94-4171; WRI 95-4102; OF 95-0123

Burleigh County North Dakota WRI 95-4087

Cass County North Dakota WRI 94-4058

Emmons County North Dakota WRI 95-4087

Grand Forks County North Dakota OF 95-0283

McLean County North Dakota WRI 95-4087

Mercer County North Dakota WRI 95-4087

Morton County North Dakota WRI 95-4087

Oliver County North Dakota WRI 95-4087

Ramsey County North Dakota WRI 94-4171; WRI 95-4102; OF 95-0123

Stutsman County North Dakota OF 94-0546

Towner County North Dakota WRI 95-4102
maps I-1420 (NL-14)

natural gas OF 94-0022-D

pollution

OP-533; OP-808; OP-1113; OP-1696

Dickey County North Dakota OP-1653

Grand Forks County North Dakota OP-900

Ransom County North Dakota OP-179

Richland County North Dakota OP-179

Walsh County North Dakota OP-900

Quaternary I-1970-D

stratigraphy OP-1889

North Fiji Basin

plate tectonics OP-337

North Fork-Fall Creek Hydrologic Unit Area

hydrology OF 95-0372

North Island

petrology OP-1542

Pliocene OF 94-0588

Quaternary OF 94-0568; OP-431

North Kingsville Quadrangle

geomorphology OF 95-0224

North Kona *see* Kona

North Landing River

hydrology WRI 94-4067

North Oso Canyon Fault

Quaternary OF 94-0568

North Pacific *see* Aleutian Ridge; Aleutian Trench; Bering Sea; Northeast Pacific; Northwest Pacific

North Park Colorado

pollution OF 94-0670

North Platte Natural Resources District

petrology WRI 94-4057

North Platte Quadrangle

structural geology OF 95-0330

North Polar Sea *see* Arctic Ocean

North Pownal Quadrangle

Quaternary OP-990

North Range Group

geochemistry B 1904-U

North Slope

deformation OP-479; OP-1250

energy sources C 1108; OP-65; OP-1270; OP-1545

Eocene OF 94-0653

frost action OP-161

geochemistry OF 95-0236

geomorphology OP-101

natural gas OP-1122

Pliocene OP-1171

Quaternary OP-1354

stratigraphy OP-1439; OP-1623

structural geology OP-1249

tectonics B 2107

North Victoria Land *see* Victoria Land

North Vietnam *see* Vietnam

North-Central (United States) *see* Midwest

North-West Frontier Pakistan *see* Swat Pakistan

Northercraft Formation

Eocene OP-1593

sedimentary petrology OP-1376

Northeast Japan *see* Tohoku

Northeast Nevada volcanic field

Eocene OP-105

geochemistry B 1988-K

Northeast Pacific *see* Blanco fracture zone; Bowie Seamount; Bristol Bay; Cascadia Basin; Escanaba Trough; Gorda Rise; Gulf of Alaska; Gulf of California; Hawaiian Ridge; Juan de Fuca Ridge; Loihi Seamount; Mendocino fracture zone; Monterey Canyon; Navarin Basin; Siqueiros fracture zone

Northeastern U.S.
ground water P 1415-A

Northern Alaska *see* Arctic National Wildlife Refuge; Barrow Alaska; Brooks Range; National Petroleum Reserve Alaska; Prudhoe Bay; Prudhoe Bay Field

Northern California Seismic Network
earthquakes OP-1302
seismology OF 91-0592; OF 95-0269

Northern Escanaba Trough Study Area
ocean floors B 2022
oceanography B 2022

Northern Hemisphere
Pliocene OF 94-0281; OP-1565

Northern Peninsula, Michigan *see* Michigan Upper Peninsula

Northern Territory Australia
magmas, Arunta Block C 1129

Northridge earthquake 1994
crust OP-649
earthquakes YR; EV; OF 94-0568; OF 95-0092; OF 95-0213; OP-383; OP-430; OP-592
engineering geology FS 0132-95; OP-891; OP-1467; OP-1585
geologic hazards OF 95-0062
seismicity OP-1116; OP-2120
seismology ; OF 94-0221; OF 95-0484; OP-249; OP-893; OP-1336

Northwest Cascades thrust fault
geophysical surveys OP-1821

Northwest Pacific *see* Bowers Ridge; Emperor Seamounts; Izu-Bonin Arc; Japan Sea; Japan Trench; Mariana Trench; Nankai Trough; Okhotsk Sea

Northwest Territories *see also* Slave Province.
faults, Yellowknife Northwest Territories OP-1856
geochemistry, Mackenzie Delta OP-192
oceanography OP-396

Northwestern Glacier
Quaternary OP-1000

Northwind Ridge
paleomagnetism OF 94-0588
Quaternary OP-1566
tectonophysics OP-445

Norton Basin
continental shelf OP-589

Norway
structural geology
Lyngen Peninsula OP-2156
Ofoten OP-158; OP-2156

Norwegian Sea
Quaternary OP-1001

Nothofagus
Antarctic Ocean, Pliocene OF 94-0588
Antarctica
Pliocene OF 94-0588
stratigraphy OF 94-0588

Nova Scotia
geochemistry
Cape Breton Island C 1129; OP-1867
Pictou County Nova Scotia OP-1867

sedimentary petrology, Cape Breton Island OP-565

novaculite
engineering geology OF 95-0028

Novarupta
geochemistry OF 95-0047

Novillo Gneiss
petrology OP-1870

NPRA *see* National Petroleum Reserve Alaska

NRDB
geochemistry DDS-0014

NRM *see* natural remanent magnetization

NSDI
C 1108
geophysical surveys YR

NTN
hydrology WRI 93-4208

nuclear explosions
OP-2056
Canada, mantle OP-960
China OF 95-0562
geophysical surveys OP-1695
Nevada

OF 94-0618
hydrogeology OF 94-0491
mantle OP-2233
tectonophysics OP-2230
United States, mantle OP-960

nuclear facilities
Colorado, pollution OP-1466
Commonwealth of Independent States, environmental geology OP-2302
Europe, environmental geology OP-2302
Georgia, environmental geology OP-1099
Gulf Coastal Plain P 1538-M
Mississippi Valley P 1538-M
South Carolina, environmental geology OP-1099

nuclear waste *see* radioactive waste

Nugget Sandstone
energy sources OP-746

Nuka Bay mining district
geochemistry B 2107

NURE
Alaska, metal ores B 2084
Idaho, mineral resources B 2064-A-R
metal ores B 2097
New Mexico, uranium ores B 2063

Nushagak-Bristol Bay
Quaternary OP-1692

nutration OP-293
Nuthush Creek Fault
structural geology OP-1202; OP-1536

Nuweibi Intrusion
magmas C 1129

NWIS
ground water OF 94-0531

Nyos *see* Lake Nyos

O

O *see* oxygen

O-16/O-18 *see* O-18/O-16

O-18
Alaska, Quaternary OP-1221
Central America, Quaternary OP-1257
Colorado, geochemistry OP-146
Commonwealth of Independent States, Quaternary OP-1257

Florida, ground water OP-472
Great Lakes, Quaternary OP-163
Great Lakes region, Quaternary OP-163
hydrogeology OP-1532
Marshall Islands, stratigraphy OP-2254
Micronesia, stratigraphy OP-2254
Nevada, Quaternary OP-2100
New Mexico, ground water OP-2308
Quaternary OP-717
Texas, ground water OP-2308
Virginia, Pliocene OP-2071

O-18/O-16 *see also* geologic thermometry.

Alaska
base metals B 2107
gold ores OP-624; OP-2184
hydrology B 2139
petroleum OP-2105
Quaternary OP-1221
Appalachians, hydrology OP-1632
Argentina, geochemistry C 1129
Atlantic Ocean, Pliocene OF 94-0588
Bahamas, Quaternary OP-1866
Basin and Range Province
hydrology OP-1106
Quaternary OP-2101
Brazil
geochemistry C 1129
geochronology C 1129
California
economic geology OP-216
geochemistry OP-260; OP-790
ground water WRI 95-4048
magmas OP-1095
metal ores OP-720; OP-801
petrology C 1129; OP-45
Quaternary OP-2006
Canadian Shield, metal ores OP-2126
China, metal ores OP-1871
Colorado
geochemistry OP-1806
geophysical surveys OP-1118
metal ores OP-1096; OP-1793; OP-2060

Egypt, stratigraphy OP-1528

Florida
ground water W 2409; OP-1614
hydrogeology OP-1613

France, geochemistry C 1129
geochemistry C 1129; OP-175

Germany
geochemistry C 1129; OP-499
metasomatism C 1129

Great Basin
hydrology OP-1106
Quaternary OP-2101

Great Britain, metal ores OP-2126

Great Lakes, Quaternary OP-292

Greenland, Quaternary C 1108
ground water C 1108

Hawaii
ground water OP-2077
hydrogeology OP-2076

Idaho, hydrogeology WRI 94-4247; OF 94-0503; OP-2221

Italy, geochemistry OP-27; OP-865

Maine, geochemistry C 1129

Manitoba, Quaternary OP-527

metal ores OP-870

Mexico, petrology C 1129

Micronesia, geochemistry OP-689

mineralogy OP-1355

Minnesota
geochemistry OP-498

- Quaternary OP-2082
 Montana, energy sources OP-302
 Nevada
 geochemistry OP-1857; OP-2169
 gold ores OP-1245
 ground water OP-2273
 hydrogeology OP-1747
 Quaternary FS 94-0007; OP-2006
 New England, Quaternary OP-1658; OP-1659
 New Jersey, stratigraphy OP-2171
 New Mexico, ground water WRI 94-4078
 New York, hydrology OP-617
 Nicaragua, geochemistry OP-1678
 Oregon, geochemistry OP-29
 Pacific Ocean
 geochemistry B 2022; OP-1033
 Pliocene OF 94-0588
 stratigraphy OP-1162
 Pakistan
 gems OP-1303
 geochemistry C 1129
 Peru, metal ores OP-202
 Pliocene OP-1565
 pollution OP-174; OP-2323
 Puerto Rico, neotectonics OP-2179
 Quaternary OP-61
 Rocky Mountains, hydrology OP-1632
 Russian Federation, geochemistry C 1129
 South Dakota, geochemistry C 1129
 Spain
 geochemistry OP-118
 metal ores OP-22
 Utah, pollution OP-657
 Vermont
 geochemistry C 1129
 hydrogeology OP-1631
 Washington, hydrogeology OP-2197
 Wisconsin, hydrogeology OP-2241
 Wyoming
 energy sources OP-302
 Quaternary OP-11; OP-1055
Oahu *see also* Honolulu Hawaii; Koolau Range; Waianae.
 hydrology WRI 94-4052
 Quaternary OP-2175
Oak City Formation
 structural geology OP-695
Oak Grove Limestone Member
 stratigraphy OP-1324
Oak Ridge Fault
 engineering geology OP-891
Oak Ridge National Laboratory
 Tennessee, ground water OP-1259
Oakland California
 earthquakes OP-1712
 geophysical surveys OP-1759
 seismology OP-1617
 soil mechanics OF 94-0699
Oasis Valley
 ground water OP-2066
Oat Mountain Quadrangle
 maps OF 95-0089
Oaxaca Mexico
 petrology OP-1870
obduction
 Alaska, deformation OP-1849
 California, structural geology OP-1599
 tectonophysics OP-985
Oberpfalz *see* Upper Palatinate
oblique-slip faults
 Chile, tectonophysics OP-1762
 Indiana OF 94-0298
 Japan, tectonophysics OP-2307
 Nevada OP-2276
 Oregon OP-1128
 United States, tectonophysics OP-2307
Obryan Member
 stratigraphy OP-768
obsidian
 Montana, Quaternary OP-1868
Ocala Group
 continental shelf OP-2293
 ground water WRI 94-4010
ocean bottom seismographs
 Antarctic Ocean, geophysical surveys OF 94-0293
 Arctic Ocean, tectonophysics OP-445
 California, geophysical surveys OF 95-0228
 Virginia, tectonophysics OP-413
ocean circulation *see also* continental slope; ocean currents.
 OF 94-0363; OP-1667
 Atlantic Ocean
 Cenozoic OP-1198
 geochemistry OP-1129
 ground water OP-949
 Louisiana OF 94-0275
 Massachusetts
 YR
 environmental geology OF 94-0649
 Pacific Ocean
 Cenozoic OP-1198
 geochemistry OP-1129
ocean crust *see* oceanic crust
ocean currents
 Brazil, marine geology OP-117
 British Columbia, Quaternary OF 95-0034
 California, Quaternary OF 95-0034
 Japan, stratigraphy OP-1269
 Massachusetts, ocean circulation OP-2114
 North Carolina, environmental geology OP-1427
 Oregon, Quaternary OF 95-0034
 United States, Quaternary OF 95-0034
Ocean Drilling Program *see also* Leg 100; Leg 103; Leg 104; Leg 105; Leg 110; Leg 113; Leg 114; Leg 119; Leg 122; Leg 126; Leg 128; Leg 130; Leg 134; Leg 138; Leg 139; Leg 141; Leg 143; Leg 145; Leg 146; Leg 150.
 oceanography OP-621
 stratigraphy OF 94-0588; OP-96; OP-623
ocean floors *see also* bottom features; continental margin; continental rise; continental slope; fracture zones; mid-ocean ridges; paleo-oceanography; sea-floor spreading; seamounts; submarine canyons; submarine volcanoes; trenches.
 OP-1962
 Alaska, Quaternary OP-1263
 Antarctica, Quaternary OP-214
 Atlantic Ocean OP-1679; OP-2324
 Bering Sea OP-1217
 California
 OP-116
 structural geology OP-1701; OP-1750
 waste disposal OP-1610
 Caribbean region, earthquakes OP-1313
 Connecticut, geophysical surveys OP-2218
 Greater Antilles, earthquakes OP-1313
 Gulf of Mexico OP-553; OP-2081
 Hawaii
 elastic waves OP-1649
 pollution OP-2205
 seismology OP-1241
 Japan OF 94-0568
 Louisiana I-2150-B
 Massachusetts
 OP-2222
 Quaternary OP-683
 Oregon OP-123
 Pacific Ocean
 B 2022; OP-2137
 geochemistry OP-2098
Ocean of Storms OP-1487; OP-1785
 ocean ridges *see* mid-ocean ridges
 ocean-bottom seismometers *see* ocean bottom seismographs
 ocean-floor spreading *see* sea-floor spreading
ocean-island basalts
 geochemistry OP-976
Oceania *see also* Melanesia; Micronesia; Polynesia.
 environmental geology CP-0043
oceanic crust *see also* ophiolite complexes.
 OP-985; OP-1173; OP-1256
 Antarctica OP-245
 Arctic Ocean OP-445
 Bering Sea OP-1261
 California
 OP-82; OP-1778
 geochemistry OP-197
 oceanography B 2022
 Commonwealth of Independent States, magmas C 1129
 East Pacific Ocean Islands, magmas OP-309
 Galapagos Islands, magmas OP-309
 geochemistry OP-976; OP-1114
 Hawaii, geochemistry OP-861
 Mexico
 OP-82
 geochemistry OP-197
 Oregon, folds OP-1128
 Pacific Ocean B 2022; OP-247
 Virginia OP-413
 oceanic trench *see* trenches
Oceanica *see* Oceania
 oceanography *see* continental margin; continental shelf; continental slope; estuaries; marine geology; nodules; ocean circulation; ocean floors; reefs; sea ice; sea water; sedimentation; sediments
Oceanside Quadrangle
 geophysical surveys OF 94-0599
Oceanus Procellarum *see* Ocean of Storms
Ocoee Supergroup
 metal ores OP-306
 octahedral iron ore *see* magnetite
Octopus Hot Spring
 geochemistry OP-2128
Odell River estuary
 environmental geology OP-662
ODP *see* Ocean Drilling Program
ODP Site 625
 Pliocene OF 94-0588
ODP Site 641
 Cretaceous OP-1161
ODP Site 642
 Quaternary OP-1001
ODP Site 646
 Quaternary OP-1001
ODP Site 693
 Pliocene OF 94-0588
ODP Site 695
 Pliocene OF 94-0588

- ODP Site 704**
Pliocene OF 94-0588
- ODP Site 742**
Pliocene OF 94-0588
- ODP Site 745**
Pliocene OF 94-0588
- ODP Site 763**
Cretaceous OP-1161
- ODP Site 798**
Quaternary OP-722; OP-1954
- ODP Site 806**
Pliocene OF 94-0588
- ODP Site 807**
Pliocene OF 94-0588
- ODP Site 832**
stratigraphy OP-275
- ODP Site 833**
stratigraphy OP-275
- ODP Site 846**
Pliocene OF 94-0588
- ODP Site 859**
natural gas OP-1391
- ODP Site 860**
natural gas OP-1391
- ODP Site 861**
natural gas OP-1391
- ODP Site 863**
tectonophysics OP-1762
- ODP Site 865**
stratigraphy OP-1162
- ODP Site 866**
ocean floors OP-2127
- ODP Site 882**
Pliocene OP-1088
- ODP Site 883**
Pliocene OP-1088
- Office of Foreign Disaster Assistance**
geologic hazards OP-1720
- Office of Mineral Resources**
mineral resources B 2081; OP-846
- Ofofen**
structural geology OP-158; OP-2156
- Ogallala Aquifer**
ground water WRI 94-4157
hydrogeology OF 94-0702-W; FS 0085-95; OP-1017
petrology WRI 94-4057
Quaternary OP-812
- Ogallala Formation**
geochemistry OP-1046
metal ores B 2063
- Ogasawara Islands *see* Bonin Islands
- Ogilvie Mountains**
areal geology OP-217
- Ohanapecosh Formation**
petrology OP-2173
- Ohariu Fault**
Quaternary OF 94-0568
- Ohio** *see also* Allegheny Group; Appalachian Basin; Lake Erie; Pittsburgh Coal; Pottsville Group.
coal OF 95-0572
energy sources, Coshocton County Ohio OP-2057
environmental geology, Lucas County Ohio OF 95-0224
frost action
Lake County Ohio OF 95-0224
Lucas County Ohio OF 95-0224
geomorphology
- Ashtabula County Ohio OF 95-0224
Cuyahoga County Ohio OF 95-0224
Erie County Ohio OF 95-0224
Lake County Ohio OF 95-0224
Lorain County Ohio OF 95-0224
Lucas County Ohio OF 95-0224
Ottawa County Ohio OF 95-0224
Toledo Ohio OF 95-0224
- ground water
P 1415-A; OF 93-0663; HA-0730-K
Clark County Ohio WRI 94-4231; WRI 94-4243
Greene County Ohio WRI 94-4231; WRI 94-4243
Miami County Ohio WRI 94-4231
Montgomery County Ohio WRI 94-4231; WRI 94-4243
Wayne County Ohio WRI 94-4131
- hydrogeology
OF 94-0473
Clark County Ohio WRI 95-4037; OF 95-0357
Greene County Ohio OF 95-0357
Hardin County Ohio WRI 94-4105
Logan County Ohio WRI 94-4105; WRI 95-4037
Montgomery County Ohio WRI 95-4037; OF 95-0357
Ottawa County Ohio WRI 94-4105
Sandusky County Ohio WRI 94-4105
Scioto River basin OP-448
Seneca County Ohio WRI 94-4105
- hydrology
W 2432
Athens County Ohio OF 95-0184
Belmont County Ohio OF 95-0129
Jefferson County Ohio OF 95-0129
Meigs County Ohio OF 95-0184
Washington County Ohio OF 95-0184
- Invertebrata, Lucas County Ohio OP-686
- Pennsylvanian B 2110
- pollution
OF 94-0396; OP-497
Greene County Ohio OF 95-0371
Montgomery County Ohio OF 95-0371
- shore features
Ashtabula County Ohio OF 95-0224
Cuyahoga County Ohio OF 95-0224
Erie County Ohio OF 95-0224
Lake County Ohio OF 95-0224
Lorain County Ohio OF 95-0224
Lucas County Ohio OF 95-0224
Ottawa County Ohio OF 95-0224
- stratigraphy
Columbiana County Ohio OP-874
Mahoning County Ohio OP-874
Muskingum County Ohio OP-411
Perry County Ohio OP-411
- waste disposal
Greene County Ohio OP-1022
Montgomery County Ohio OP-1022
- Ohio Geological Survey**
geomorphology OF 95-0224
- Ohio River**
hydrology OF 93-0657; OF 95-0129; OF 95-0184
pollution OF 94-0036; OF 94-0336; OP-1426
structural geology P 1538-O
- Ohio Shale**
geomorphology OF 95-0224
- OIB *see* ocean-island basalts
- oil and gas *see* petroleum;
- oil and gas fields** *see also* natural gas; petroleum; stratigraphic traps.
Mississippi, environmental geology C 1108
Montana, environmental geology C 1108
Nevada, structural geology OP-1440
Pennsylvania, ground water WRI 87-4136
Texas, hydrogeology WRI 94-4036
Wyoming OF 94-0670
- oil sands**
C 1108; OF 94-0298
Arizona OP-1714
Colorado OP-297
Kentucky OF 94-0298
Utah OP-297; OP-1461; OP-1557; OP-1714
Wyoming OP-477; OP-701
- oil seeps**
California, energy sources C 1108; OP-1746
- oil shale**
Colorado OP-297
environmental geology C 1108
Utah OP-297
Western Interior OP-597
- oil spills**
Alaska
energy sources C 1108
environmental geology C 1108
hydrogeology OF 94-0367
pollution C 1108
California
energy sources C 1108
environmental geology C 1108
Virginia, ground water OF 94-0301
- Oita Japan *see* Beppu Japan
- Okauchee Lake**
environmental geology OF 95-0163
- Okhotsk Sea**
plate tectonics OP-1894
- Oki Islands**
engineering geology OP-367; OP-1027
- Oklahoma** *see also* Arkoma Basin; High Plains Aquifer; Ogallala Aquifer; Ouachita Mountains; Ozark Mountains.
ecology
Craig County Oklahoma OF 94-0324
Haskell County Oklahoma OF 94-0324
Latimer County Oklahoma OF 94-0324
Le Flore County Oklahoma OF 94-0324
Nowata County Oklahoma OF 94-0324
Rogers County Oklahoma OF 94-0324
Sequoyah County Oklahoma OF 94-0324
economic geology C 1124
energy sources C 1108
geophysical surveys
OP-1661
Caddo County Oklahoma GP-0998-A
Comanche County Oklahoma GP-0998-A
Grady County Oklahoma GP-0998-A
Kiowa County Oklahoma GP-0998-A
Stephens County Oklahoma GP-0998-A
Tillman County Oklahoma GP-0998-A
ground water
OP-144; OP-356
Greer County Oklahoma OF 94-0387
Hammon County Oklahoma OF 94-0387
Jackson County Oklahoma OF 94-0387
hydrogeology
Alfalfa County Oklahoma OF 94-0504
Blaine County Oklahoma OF 94-0504
Garfield County Oklahoma OF 94-0504
Kingfisher County Oklahoma OF 94-0504
Logan County Oklahoma OF 94-0504
Major County Oklahoma OF 94-0504

- Pontotoc County Oklahoma WRI 93-4230
Woods County Oklahoma OF 94-0504
- hydrology**
OP-312
Adair County Oklahoma OF 94-0364
Cherokee County Oklahoma OF 94-0364
Haskell County Oklahoma OF 94-0364
Latimer County Oklahoma OF 94-0364
Le Flore County Oklahoma OF 94-0364
Muskogee County Oklahoma OF 94-0364
Sequoyah County Oklahoma OF 94-0364
- natural gas OF 94-0022-H
non-metal deposits B 2111
petrology C 1129
pollution
OP-2264
Oklahoma County Oklahoma OP-143
- Quaternary**
Comanche County Oklahoma OP-463
Meers Fault OP-463
tectonophysics OP-2334
- Oklahoma City Oklahoma**
ground water OP-144
pollution OP-143
- Oklo**
bitumens OP-1403
- Oklpikruak Formation**
areal geology OP-641
- Okushiri Island**
earthquakes OP-1800
engineering geology OP-367; OP-1027
Quaternary OF 94-0568
- Olathe Kansas**
ground water WRI 94-4166
- Old Church Formation**
stratigraphy OF 94-0217
- Old Crow Tephra**
Quaternary OP-1458
- Old Oyster Bayou**
waterways OF 94-0275
- Old Tampa Bay**
marine geology WRI 94-4081
- Old Woman Mountains**
geochemistry C 1129
magmas OP-313
- Oldsmar Formation**
ground water WRI 94-4010
- Oligocene**
Alaska OP-953
Antarctica OP-2305
Arizona B 2021-E; MF-2292
Atlantic Coastal Plain OP-1960
Brule Formation, geochemistry OF 94-0292
California OP-2047
Colorado OP-92; OP-284; OP-1096; OP-1118;
OP-1247; OP-1488; OP-1625; OP-1626;
OP-1690; OP-1691; OP-1713; OP-1716;
OP-1793; OP-2012; OP-2060
Egypt OP-1528
Fish Canyon Tuff, petrology OP-546
Frio Formation, energy sources OP-220
Hemlock Conglomerate, energy sources OP-574
Iran OP-154
Italy OP-962
Micronesia OP-1409
Nevada P 1559; B 2056; B 2081; OP-454
New Mexico OP-959
Oregon OP-38
Pakistan OP-1303
South Carolina OP-1393
- Suwannee Limestone
OF 95-0003; OP-2087; OP-2295
diagenesis OP-2263
ground water WRI 94-4010
Texas OF 94-0227; OP-363; OP-1925
Utah B 2056; OP-189
Washington OP-2173
White River Group
geochemistry OP-1046
uranium ores OP-1030
Wiggins Formation OP-1517
- Oliver Bluffs Antarctica**
Pliocene OF 94-0588
stratigraphy OF 94-0588
- olivine**
OP-434; OP-880
China, magmas OP-1935
geophysics OP-2051
Hawaii, Pliocene OP-2215
Pacific Ocean, geochemistry B 2022
Russian Federation, geochemistry OP-50
- olivine basalt**
Washington OP-1512
- olivine group** *see also* olivine.
Italy, fluid inclusions OP-950
- olivine nephelinite**
Russian Federation, geochemistry OP-50
- Olmos Creek**
hydrology OF 95-0103
- Olson Coulee Quadrangle**
maps OF 88-0620; OF 88-0621
- olympic dam-type**
metal ores OP-863
- Olympic Mountains**
faults OP-2079
tectonophysics OP-1975
- Olympus Mons** OP-35; OP-916
- Oman** *see also* Semail Ophiolite.
ground water, Oman Mountains OP-2311
hydrogeology, Oman Mountains OP-1801
- Oman Mountains**
ground water OP-2311
hydrogeology OP-1801
- Oman Ophiolite** *see* Semail Ophiolite
- Omineca Belt**
tectonophysics OP-468
- Omori's law**
geophysics OP-2267
- Onelda Tribe of Indians**
reclamation OF 95-0163
- Ontario** *see also* Abitibi Belt; Clinton Group;
Grenville Province; Lake Erie; Lake Saint Clair;
Lockport Formation; Medina Formation; Saint
Clair River.
environmental geology C 1108
ground water OP-170
maps I-1420 (NM-15)
phase equilibria OP-387
- oolite**
Bahamas, Quaternary OP-1865; OP-1866
- oolitic limestone**
Illinois, petroleum OF 94-0298
- ooze**
Hawaii
engineering geology OF 94-0638
petrology OP-1500
Pacific Ocean, Pliocene OP-1088
- opal** *see also* opal-A; opal-CT.
California, Quaternary OF 95-0034
Idaho
gems P 1525
mercury ores P 1525
Nevada, environmental geology OF 93-0477
Oregon, Quaternary OF 95-0034
- opal-A**
Nevada, geochemistry OP-1857
- opal-CT**
Nevada, geochemistry OP-1857
Oregon, sedimentary petrology B 2108
- opaline** *see* opal
- opalite**
Idaho, mercury ores P 1525
- Opatica Belt**
geochemistry C 1129
- OPEC**
energy sources OP-343
- open-pit mining**
Arizona, geologic hazards OF 95-0617
Colorado
environmental geology OF 95-0023; OP-334
geochemistry OF 95-0250
metal ores OP-333
pollution OP-1957
Nevada, hydrogeology WRI 95-4119
- ophiolite**
Alaska
deformation OP-1849
plate tectonics OP-1894; OP-1956
Arabian Peninsula, metal ores OP-1220
California, structural geology OP-1599
China, magmas OP-1935
Finland, Proterozoic OP-2242
Oman, ground water OP-2311
Pacific Ocean, tectonophysics OP-56
Russian Federation
geochemistry OP-843
Proterozoic OP-2242
tectonophysics OP-985
United Arab Emirates, ground water OP-2311
Washington
geophysical surveys OP-1821
sedimentary petrology OP-1182
- ophiolite complexes**
Alaska, petrology OP-710
California, geochemistry OP-753
Cyprus, structural geology OP-2
Oman, geochemistry OP-753
Pakistan, structural geology OF 94-0670
Saudi Arabia, geochemistry OP-753
- optical mineralogy**
geochemistry OP-130
- Oquirrh Basin**
Permian OP-2093
sedimentary petrology OP-2092
- Oquirrh Mountains**
orogeny OP-619
- Oracle Granite**
copper ores OP-291
- Oranda Formation**
stratigraphy B 2135
- Orangeburg Scarp**
Pliocene OP-2071
- Orca Group**
metamorphism OP-39
sedimentary petrology OP-1361
- Orcopampa mining district**
metal ores OP-1411
- Orcus Patera** I-2403; I-2404; I-2405; I-2406; I-2407

Ordovician

B 2060
 Alaska P 1545; OP-39; OP-229; OP-931
 Ammonoosuc Volcanics
 OP-1995
 structural geology OP-782
 Beekmantown Group OF 94-0573
 Caradocian, Tennessee OP-1502
 China OP-1021
 Decorah Shale
 ground water OF 95-0163
 metal ores B 1989-G
 Florida OP-1861
 France C 1129
 Galena Dolomite
 ground water OF 95-0163
 metal ores B 1989-G
 petroleum OF 94-0298
 Glenwood Shale, metal ores B 1989-G
 Iowa OP-607
 Italy C 1129
 Maquoketa Formation, metal ores B 1989-G
 Martinsburg Formation B 2135; OF 94-0573
 Millbrig Bentonite Bed OP-386
 New Jersey OF 95-0557
 Norway OP-2156
 Platteville Formation, ground water OF 95-0163
 Prairie du Chien Group, hydrogeology WRI 94-4146
 Russian Federation OP-152
 Saint Peter Sandstone
 diagenesis OF 94-0298
 lead-zinc deposits OF 94-0298
 Simpson Group, hydrogeology WRI 93-4230
 Spain C 1129
 Stones River Group OP-1502
 Tennessee OP-370
 Trenton Group, petroleum OF 94-0298
 Utica Shale, energy sources OP-2057
 Valmy Formation, sedimentary petrology OP-1404
 Wisconsin OP-792
 ore exploration *see* mineral assessment
 ore guides
 Alaska, non-metal deposits OF 95-0582
 Colorado, metal ores OP-284
 Idaho
 base metals P 1525
 fluorspar P 1525
 gold ores P 1525
 mercury ores P 1525
 metal ores P 1525
 molybdenum ores P 1525
 non-metal deposits P 1525
 polymetallic ores P 1525
 tungsten ores P 1525
 uranium ores P 1525
 vanadium ores P 1525
 Montana, non-metal deposits OP-1492
 ore of sedimentation *see* placers
 ore-forming fluids
 Alaska
 base metals B 2107
 gold ores OP-624; OP-2184
 metal ores OP-1195
 Arizona, metal ores B 2138
 Arkansas, lead-zinc deposits B 1989-F
 Basin and Range Province, metal ores OP-1874
 California, metal ores OP-720
 China, metal ores OP-1871
 Colorado

geochemistry OP-1700
 geophysical surveys OP-1118
 metal ores OP-333; OP-728; OP-1096; OP-1488; OP-1626; OP-1793; OP-2060
 molybdenum ores OP-849
 copper ores C 1129
 Great Basin, metal ores OP-1874
 Illinois, non-metal deposits OP-729
 Kentucky, non-metal deposits OP-729
 lead-zinc deposits OF 94-0298
 metal ores B 1989-G; B 2081; OF 94-0298; OP-318
 Micronesia, manganese ores OP-1409
 Mississippi Valley
 economic geology B 2094-C
 lead-zinc deposits OF 94-0298
 metal ores B 2094-B
 Missouri
 lead-zinc deposits B 1989-F
 petrology OP-1299
 Montana, metal ores OF 94-0670
 Nevada, gold ores OP-1245; OP-1946; OP-2151
 Peru, metal ores OP-202; OP-1411
 tin ores OP-980
 Utah, molybdenum ores OP-849
 Western Australia, gold ores OF 94-0228
 Wisconsin, lead-zinc deposits OP-792
Oregon *see also* Blue Mountains; Cascade Range; Coast Ranges; Columbia River; Columbia River Basalt Group; Columbia River basin; Crater Lake; Deschutes River; Great Basin; Hayfork Terrane; Klamath Mountains; Lake Missoula; Mazama Ash; Mount Jefferson; Snake River.
 bibliography
 Coos County Oregon OF 95-0558
 Curry County Oregon OF 95-0558
 Josephine County Oregon OF 95-0558
 chromite ores OP-864
 earthquakes
 OP-571
 Mount Hood EV
 economic geology
 Hamey County Oregon B 1738-E; B 1741-H
 Lake County Oregon B 1738-E
 engineering geology
 C 1121
 Mount Hood OP-1367
 Portland Oregon OP-1367
 environmental geology
 Columbia County Oregon OF 95-0652
 Malheur County Oregon WRI 93-4156
 Portland Oregon OF 95-0652
 Washington County Oregon OF 95-0652
 geochemistry
 Curry County Oregon OF 95-0227-A; OF 95-0227-B
 Deschutes County Oregon OF 94-0261
 Douglas County Oregon OF 95-0227-A; OF 95-0227-B
 Josephine County Oregon OF 95-0227-A; OF 95-0227-B
 Lane County Oregon OF 94-0261; OF 95-0040
 Lincoln County Oregon OF 95-0040
 Mount Mazama OP-29
 geologic hazards, Mount Hood OP-2088
 geophysical surveys
 DDS-0031
 Clackamas County Oregon OP-459
 Mount Hood OP-459; OP-1389

Newberry Volcano OF 95-0099
 Portland Oregon OP-72; OP-404
 Willamette Valley OP-459
 ground water
 HA-0730-H
 Clackamas County Oregon OF 94-0505
 Columbia County Oregon OF 94-0505
 Multnomah County Oregon OF 94-0505
 Umatilla County Oregon WRI 89-4179
 Union County Oregon WRI 89-4179
 Wallowa County Oregon WRI 89-4179
 hydrogeology
 Clackamas County Oregon WRI 92-4010
 Columbia County Oregon WRI 92-4010
 Klamath County Oregon OF 95-0285
 Portland Oregon WRI 92-4010
 hydrology
 OF 94-0363
 Benton County Oregon WRI 93-4181; OF 95-0373
 Clackamas County Oregon OF 95-0373
 Columbia County Oregon OF 95-0373
 Coos County Oregon WRI 93-4181
 Douglas County Oregon WRI 93-4181; OP-178
 Lane County Oregon OF 95-0373
 Lincoln County Oregon WRI 93-4181
 Linn County Oregon OF 95-0373
 Marion County Oregon OF 95-0373
 Multnomah County Oregon OF 95-0373
 Polk County Oregon OF 95-0373
 Tillamook County Oregon WRI 93-4181
 Washington County Oregon OF 95-0373
 Willamette Valley OF 95-0373
 Yamhill County Oregon WRI 93-4181; OF 95-0373
 Jurassic OP-745
 lava, Mount Hood OP-1254
 magmas, Klamath County Oregon OP-41
 maps
 Clackamas County Oregon OF 95-0219
 Curry County Oregon I-2148
 Hood River County Oregon OF 95-0219
 Jackson County Oregon I-2148
 Josephine County Oregon I-2148
 Klamath County Oregon I-2455
 Lake County Oregon I-2455
 Malheur County Oregon OP-263
 Newberry Volcano I-2455
 Wasco County Oregon OF 95-0219
 metal ores
 B 2097; OP-799
 Baker County Oregon OF 94-0677
 Grant County Oregon OF 94-0677
 Lane County Oregon OF 94-0666
 mineral resources
 Crook County Oregon OF 95-0006
 Deschutes County Oregon OF 95-0006
 natural gas
 Coos Bay OF 95-0093; OP-1677
 Douglas County Oregon OF 95-0093
 ocean floors OP-123; OP-1772
 Permian OP-1132
 petrology
 Clackamas County Oregon OP-38
 Klamath County Oregon OP-2172
 Wallowa Mountains OP-1590
 Quaternary
 OF 94-0568; OF 95-0034; OP-397; OP-1158; OP-1629; OP-2086
 Clatsop County Oregon OP-661
 Coos Bay OP-1876
 Coos County Oregon OF 94-0568; OP-661

- Curry County Oregon OP-94-0568
 Deschutes County Oregon OP-1505
 Klamath County Oregon OF 95-0033;
 OF 95-0034; OP-1635
 Klamath Falls Oregon OF 95-0034
 Lake County Oregon OP-659; OP-1505
 Mount Mazama OP-1511
 Tillamook County Oregon OP-661
 sedimentary petrology, Harney County Oregon
 B 2108
 seismology OP-203
 stratigraphy OP-1176; OP-1177
 structural geology, Brothers fault zone OP-1436
 tectonophysics
 OF 94-0228; OP-157; OP-660; OP-985;
 OP-2265
 Klamath Falls Oregon OP-1444
 Portland Oregon OP-2307
 Union County Oregon OP-361
 Wallowa County Oregon OP-361
 Wallowa Mountains OP-361
 thermal waters OP-1756
 volcanism OP-1852
- ores, polymetallic *see* polymetallic ores
- Orfordville Formation**
 Silurian OP-1995
- Organ Needle Pluton**
 geochemistry OP-959
- organic acids *see* amino acids; carboxylic acids
- organic compounds**
 environmental geology OP-581
 Maryland, pollution OP-999
 Midwest, pollution OP-497
 pollution OP-317
- organic materials** *see also* bitumens; carbon; ethylene; hydrocarbons; ligands; methane; organometallics; PCBs; polycyclic aromatic hydrocarbons.
- Alaska
 energy sources OP-1270
 palynomorphs OP-184
 Quaternary OP-1457
- amino acids
 Alaska OP-1172
 Chile OP-1697
 geochemistry OF 95-0041
 Illinois OP-1630
 Iowa OP-1630
 Maryland OP-856
 Virginia OP-856
- California
 earthquakes OP-1712
 energy sources OP-2146
 engineering geology OP-788
 geochemistry OP-244
 pollution OP-215
 Quaternary OP-1787
- chlorophyll
 Colorado OP-150
 Florida OP-610
- Colorado
 geophysical surveys OP-1214
 metal ores OP-98; OP-1096
 environmental geology OP-131
 geochemistry B 2110; OF 94-0351; OF 94-0362; OF 94-0458
 geophysical surveys OP-1898
 Great Lakes, stratigraphy OP-436
 ground water WRI 95-4105
 hopanes
 California OP-542
 Colorado OP-1713
- Wisconsin OP-792
- humus
 Colorado OP-1466
 pedogenesis OP-993
- Idaho
 environmental geology WRI 93-4156
 ground water WRI 94-4135
 hydrogeology OF 94-0503
 stratigraphy OP-2147
- Illinois, geologic hazards OP-2048
- isoprenoids
 California OP-513
 Colorado OP-1713
 Pacific Ocean B 2022
- kerogen
 Colorado OP-297
 Gabon OP-1403
 Italy OP-500
 Micronesia OP-689
 Nevada OP-794
 New Zealand OP-207
 petroleum OP-830
 Utah OP-297
 Wyoming OP-677
- lignin, sedimentary petrology OP-1078
- Maryland, environmental geology W 2399
- Mexico, sedimentary petrology OP-1932
- Midwest
 environmental geology OP-2303
 hydrology WRI 93-4204
 pollution OP-1652
- Mississippi Valley
 environmental geology OP-1748
 hydrology WRI 94-4191
 metal ores OP-888
 pollution OF 94-0036; OF 94-0376
- Nevada, stratigraphy OP-2147
- North Dakota, hydrology WRI 94-4171
- Oregon, environmental geology WRI 93-4156
- oxalic acid, New York B 2106
- Pennsylvania, sedimentary petrology OP-1951
- petroleum OP-1811
- pollution OP-7; OP-137; OP-317; OP-377
- sapropel, Texas OP-2256
- seismology OP-1075
- soils OP-787
- steranes
 California OP-513
 Colorado OP-1713
 Pacific Ocean B 2022
 Wisconsin OP-792
- Tennessee, ground water OP-1259
- Texas, ground water OF 94-0329
- triterpanes
 California OP-513
 Pacific Ocean B 2022
- Utah, palynomorphs OP-184
- Washington, Eocene B 2085-A
- Western Interior, economic geology OP-597
- Wyoming
 ground water WRI 94-4135
 Quaternary OP-1055
- organic mound *see* bioherms
- organic residues *see* coal; gyttja; oil sands; oil shale; peat
- organo-metallics**
 Wisconsin, environmental geology OP-1663
- Orinoco Delta**
 stratigraphy OP-1150
- Orinoco River**
 Quaternary OP-1993
- Orinoco River delta *see* Orinoco Delta
- Oriskany Sandstone** OP-685
- Orleans Indiana**
 ground water WRI 94-4195
- ornamental materials *see* limestone deposits
- Ornithischia**
 Utah OP-145
- ORNL *see* Oak Ridge National Laboratory
- oroclines**
 Bolivia, plate tectonics OP-180
 Nevada, structural geology OP-1904
- orogeny** *see also* Acadian Phase; Alleghany Orogeny; Alpine Orogeny; Antler Orogeny; Cadomian Orogeny; Caledonian Orogeny; Cordilleran Orogeny; Grenvillian Orogeny; Hercynian Orogeny; Himalayan Orogeny; Hudsonian Orogeny; Indosinian Orogeny; Laramide Orogeny; Nevadan Orogeny; Pan-African Orogeny; Penokean Orogeny; Taconic Orogeny; transpression.
- Alaska
 OP-641; OP-932; OP-1249
 geochronology OP-1905
- Argentina OP-2011
- Arizona, petrology C 1129
- California OP-432
- Canada, geochemistry C 1129
- Indiana OF 94-0298
- Kentucky OF 94-0298
- Mexico, petrology OP-827
- Nevada OP-619
- Norway OP-2156
- plate tectonics OP-1256
- Saudi Arabia, petrology C 1129
- stratigraphy OP-2099
- Utah OP-619
- Orongo fracture zone**
 petrology OP-390
- orthoamphibole *see* gedrite
- orthoclase**
 magmas C 1129
- orthogneiss**
 New Zealand C 1129
 North Carolina OP-1647
 Spain, geochemistry C 1129
- orthopyroxene**
 OP-434
 Alaska, geochemistry B 2139
 geochemistry C 1129
 geophysics OP-2051
 Mexico, phase equilibria OP-387; OP-1489
 Ontario, phase equilibria OP-387; OP-1489
- orthoquartzite**
 Pennsylvania OF 95-0240
 rock mechanics OF 94-0228
 West Virginia OF 95-0240
- orthosilicates *see* nesosilicates; sorosilicates
- Orting Washington**
 geologic hazards OP-1163
- Ortonville Granite**
 geochemistry B 1904-U
- os *see* eskers
- Os *see* osmium
- Os-187/Os-186**
 Finland, Proterozoic OP-2242
 Nevada, gold ores OP-2151
 Russian Federation, Proterozoic OP-2242
- Os-188/Os-187**
 geochemistry OP-421; OP-976
 gold ores OP-2151
 petrology OP-647

Os-188/Re-187

geochemistry OP-421; OP-976
petrology OP-647

Os/Re see Re/Os

Osagian *see also* Burlington Limestone.
Montana B 2112
North Dakota B 2112

Osgood Mountains

gold ores OF 94-0282; OP-895

osmium

geochemistry C 1129; OP-976
Os-187/Os-186
Finland OP-2242
Nevada OP-2151
Russian Federation OP-2242
petrology OP-647
Russian Federation, geochemistry OP-421

Oso Canyon

Quaternary OF 94-0568

Oso Ridge Member

Proterozoic OP-21

Ostracoda

Japan, stratigraphy OP-1269
Mexico OP-122
Minnesota, Quaternary OP-2082
Podocopida, Alaska P 1544

ostracods

Alaska
OP-711
paleontology OF 94-0215
Quaternary OP-604
Arctic Ocean, Quaternary OP-1268
Atlantic Ocean
Quaternary OP-233
stratigraphy OF 94-0588
California, Quaternary OF 94-0641; OF 95-0034
Caribbean region, stratigraphy OP-1150
Florida, stratigraphy OP-2295
Great Lakes, Quaternary OP-292
Indiana, petroleum B 2094-D
Lesser Antilles, stratigraphy OP-1150
Manitoba, Quaternary OP-527
Oregon
Quaternary OF 95-0034
stratigraphy OP-1176; OP-1177
Pliocene OP-1565
Utah, stratigraphy OF 95-0001
Virginia, Pliocene OP-2071

Ostrea

California, sediments OP-1065

Otis Air Base

OF 94-0384
geochemistry OF 94-0384
ground water OF 94-0384

Otowi Member

geochemistry B 2081

Otselic River

engineering geology OP-113

Ottawa Sand

geophysics OP-551

Otuk Formation

energy sources OP-65

Quachita Mountains

Quaternary B 2110

Quachita-Balcones Trend *see* Balcones fault zone

Ouray Formation

stratigraphy OF 94-0583

Outer Mongolia *see* Mongolia

outer planets *see* Jupiter; Neptune; Pluto; Saturn;
Uranus

outwash

Alaska, Quaternary OP-1692
Basin and Range Province, Quaternary OP-1414
Great Basin, Quaternary OP-1414
Illinois, Quaternary OP-1630
Iowa, Quaternary OP-1630
Massachusetts, geochemistry OP-1396
New York, ground water WRI 92-4171;
WRI 93-4029
Pennsylvania, ground water WRI 93-4109
South Dakota
ground water OP-359
hydrogeology WRI 93-4195
Washington, Quaternary OP-205

outwash plains

Montana, non-metal deposits I-2446

overthrust faults

Alaska OP-1250
California, natural gas OP-542

Overton Quadrangle

areal geology B 2056

overturned folds

Alaska OP-2247
New Mexico OP-1878

overwash plain *see* outwash plains

Owens Lake

Quaternary OF 95-0034; OP-1157; OP-1803

Owens Valley

Quaternary B 1982
structural geology OP-822

Owl Creek Mountains

areal geology OP-279; OP-280
energy sources OP-1942
sedimentary petrology OP-1622

Owl Rock Member

ichnofossils OP-380
stratigraphy OP-222; OP-223

Owyhee River basin

environmental geology WRI 93-4156

Ox Valley Tuff

geochemistry B 2056
Miocene B 2056

oxalic acid

New York, geochemistry B 2106

oxides *see also* bixbyite; chromite; ferrihydrite;
goethite; hematite; hercynite; hydroxides; ilmenite;
iron oxides; magnetite; manganese oxides;
niobates; rutile; spinel; tantalates; titanium oxides;
titanomagnetite; todorokite; trevorite; uraninite;
wuestite.

OP-1642

Alaska, geochemistry OF 95-0047

Bolivia, lava B 2119

California

OP-778

geochemistry P 1566; OF 95-0527

geophysics B 2131

Pacific Ocean, geochemistry OF 95-0505

oxonium alunite

mineralogy OP-1680

oxygen

Black Sea, Quaternary OP-1289
Brazil, geochemistry C 1129
Caribbean Sea, Quaternary OP-1289
Colorado
economic geology OF 94-0289
geochemistry OF 94-0295
ground water WRI 94-4118; OP-1797

pollution OP-608; OP-1337; OP-1796; OP-2316

geochemistry C 1129; OP-1070; OP-1278

Great Lakes region, hydrology WRI 95-4005

Kansas, hydrology W 2352-B; WRI 94-4077

Maryland, pollution OP-1786

metal ores B 2081

Midwest, pollution OP-1652

Nebraska, hydrology W 2352-B; WRI 94-4077

Nevada, geothermal energy OF 95-0080

New Jersey, pollution OP-2236

New Mexico, hydrology WRI 94-4071

North Carolina, hydrology WRI 94-4226

O-18

Alaska OP-1221

Central America OP-1257

Colorado OP-146

Commonwealth of Independent States OP-1257

Florida OP-472

Great Lakes OP-163

Great Lakes region OP-163

hydrogeology OP-1532

Marshall Islands OP-2254

Micronesia OP-2254

Nevada OP-2100

New Mexico OP-2308

Quaternary OP-717

Texas OP-2308

Virginia OP-2071

O-18/O-16

Alaska B 2107; B 2139; OP-624; OP-1221;
OP-2105; OP-2184

Appalachians OP-1632

Argentina C 1129

Atlantic Ocean OF 94-0588

Bahamas OP-1866

Basin and Range Province OP-1106; OP-2101

Brazil C 1129

California C 1129; WRI 95-4048; OP-45;
OP-216; OP-260; OP-720; OP-790; OP-801;
OP-1095; OP-2006

Canadian Shield OP-2126

China OP-1871

Colorado OP-1096; OP-1118; OP-1793;
OP-1806; OP-2060

Egypt OP-1528

Florida W 2409; OP-1613; OP-1614

France C 1129

geochemistry C 1129; OP-175

Germany C 1129; OP-499

Great Basin OP-1106; OP-2101

Great Britain OP-2126

Great Lakes OP-292

Greenland C 1108

ground water C 1108

Hawaii OP-2076; OP-2077

Idaho WRI 94-4247; OF 94-0503; OP-2221

Italy OP-27; OP-865

Maine C 1129

Manitoba OP-527

metal ores OP-870

Mexico C 1129

Micronesia OP-689

mineralogy OP-1355

Minnesota OP-498; OP-2082

Montana OP-302

Nevada FS 94-0007; OP-1245; OP-1747;
OP-1857; OP-2006; OP-2169; OP-2273

New England OP-1658; OP-1659

New Jersey OP-2171

New Mexico WRI 94-4078

- New York OP-617
 Nicaragua OP-1678
 Oregon OP-29
 Pacific Ocean B 2022; OF 94-0588; OP-1033; OP-1162
 Pakistan C 1129; OP-1303
 Peru OP-202
 Pliocene OP-1565
 pollution OP-174; OP-2323
 Puerto Rico OP-2179
 Quaternary OP-61
 Rocky Mountains OP-1632
 Russian Federation C 1129
 South Dakota C 1129
 Spain OP-22; OP-118
 Utah OP-657
 Vermont C 1129; OP-1631
 Washington OP-2197
 Wisconsin OP-2241
 Wyoming OP-11; OP-302; OP-1055
 Phanerozoic OP-1480
 pollution OP-1724
 Quaternary OP-2174
 South Carolina, hydrology WRI 95-4111
 Texas
 hydrology WRI 94-4213
 sedimentary petrology OP-2256
- oxyhydroxides**
 California, oceanography OP-1410
 Idaho, pollution OP-1156
 Massachusetts, waste disposal OP-2249
- Ozark Mountains**
 environmental geology OF 94-0333; OP-447; OP-1160
 geomorphology OP-1792
 hydrogeology WRI 93-4154; WRI 94-4022; OF 94-0670
 hydrology FS 0116-95; FS 94-0015
 lead-zinc deposits B 1989-F; OP-731
 pollution OP-1041

P

- P see phosphorus*
- P-T-t paths**
 Idaho, metal ores B 2064-A-R
 New York, fluid inclusions OP-1794
 petrology OP-1138
- P-waves**
 OP-80; OP-1477; OP-1544; OP-1721; OP-1838
- Alaska**
 OP-93; OP-1107; OP-1598; OP-1978
 geophysical surveys OP-10
 sedimentary petrology OP-2094
- Antarctic Ocean, geophysical surveys OP-156**
- Armenia OP-140**
- Bolivia OP-961**
- California**
 OF 94-0552; OF 94-0706; OP-373; OP-649; OP-1116; OP-1143; OP-1144; OP-1296; OP-1375; OP-1540; OP-1603; OP-1769
 faults OP-1225
 geophysical surveys OF 94-0590; OP-2046
 oceanography OF 95-0533
 tectonophysics OP-1651
- Canada**
 OP-374
 mantle OP-960
- Colombia OP-1392**
- core OP-482; OP-2231**
- Far East, tectonophysics OP-2328**
- Hawaii**
 OP-1709
 geophysical surveys OP-1655
 petrology OP-1500
- Iceland**
 OP-1603; OP-1813
 tectonophysics OP-298
- Japan OP-1800**
- Kenya, tectonophysics OP-478**
- Mexico OP-613**
- Nevada**
 OF 94-0618
 tectonophysics OP-2230
- Nicaragua OP-961**
- Polynesia, tectonophysics OP-2328**
- Rhode Island OP-274**
- Russian Federation**
 geophysical surveys OP-958
 tectonophysics OP-2228
- South Carolina, geophysical surveys OF 95-0518**
- tectonophysics OP-60**
- United States, mantle OP-960**
- Pacaya**
 geologic hazards OP-952
- Pacific Coast *see also* California Current.**
 earthquakes OP-26
 energy sources C 1108
 geologic hazards OF 94-0568
 geophysical surveys OP-1564
 petrology OP-2172
 Quaternary OF 94-0568; OF 95-0034; OP-661; OP-2086; OP-2250
 stratigraphy OP-1341
 structural geology OF 94-0714; OP-1592
 tectonophysics OP-660; OP-1975
- Pacific Ocean *see also* California Current; Caroline Islands; East Pacific; Easter Island; North Pacific; Pacific Plate; Tonga; Vanuatu; West Pacific.**
 areal geology
 OP-2189
 Bristol Bay OP-201
 Cenozoic OP-1198
 coal, Gulf of Alaska OP-972
 continental shelf
 OP-847; OP-944; OP-998
 Bristol Bay OP-589
 Navarin Basin OP-589
 crust, Gulf of Alaska OP-2075
 earthquakes, Gorda Rise OP-26
 energy sources, Gulf of Alaska OP-576
 environmental geology
 C 1108
 Circum-Pacific region CP-0043
 geochemistry
 OF 95-0015; OF 95-0034; OF 95-0527; OP-197; OP-1129
 East Pacific Rise OP-2098
 Escanaba Trough B 2022
 Gorda Rise B 2022; OP-861; OP-1033
 Juan de Fuca Ridge OF 94-0015; OF 95-0505; OP-861; OP-1032
 geochronology OF 94-0587
 geologic hazards
 OF 94-0568; OF 94-0589
 Circum-Pacific region OP-2190; OP-2191
 geophysical surveys
 OF 94-0599; OF 95-0017; OF 95-0228; OP-1525; OP-1966
 Gorda Rise OF 95-0275

- Loihi Seamount OP-1655**
- Mendocino fracture zone OF 95-0275**
- heat flow, Escanaba Trough B 2022**
- heavy mineral deposits, Gorda Rise OF 95-0587**
- Invertebrata, Gulf of Alaska P 1544**
- Jurassic, Circum-Pacific region OP-964**
- lava**
 East Pacific Rise OP-1941
 Juan de Fuca Ridge OP-1351; OP-2132
- metal ores**
 OP-1080
 Blanco fracture zone OP-801
 East Pacific Rise OP-502
 Mendocino fracture zone OP-801
- metamorphism, Bristol Bay OP-39**
- Mohorovicic discontinuity OP-1706**
- natural gas**
 Aleutian Trench OP-1371
 Peru-Chile Trench OP-1391
- ocean floors**
 OP-1433; OP-2127; OP-2150
 Aleutian Ridge OP-1217
 Bowers Ridge OP-1217
 Cascadia Basin OP-123; OP-1772
 East Pacific Rise OP-1339; OP-2097
 Escanaba Trough B 2022
 Hawaiian Ridge OP-1119
 Juan de Fuca Ridge OP-2137
- oceanography**
 B 2079; OF 95-0533; OP-116; OP-1066
 Escanaba Trough B 2022; OF 94-0711
 Gorda Rise B 2022; OF 94-0711
 Juan de Fuca Ridge OP-52; OP-503; OP-652
 Monterey Canyon OP-1434
- petroleum**
 Escanaba Trough OP-513
 Gorda Rise OP-513
- petrology**
 East Pacific Rise OP-827; OP-2266
 Gulf of Alaska B 2139
 Izu-Bonin Arc OP-920
 Lau Basin OP-920
 Mariana Trench OP-920
 Siqueiros fracture zone OP-2266
- plate tectonics**
 Aleutian Trench OP-2234
 Circum-Pacific region OP-1441; OP-1442; OP-1443; OP-1894
 Gorda Rise OP-1576
 Gulf of Alaska OP-1682; OP-2234
 Izu-Bonin Arc OF 94-0568
 Japan Trench OP-965
 Mendocino fracture zone OF 94-0568; OP-941; OP-1576
 Nankai Trough OF 94-0228
- Pliocene OF 94-0588; OP-218; OP-1088**
- pollution OP-2047**
- polymetallic ores OP-1495**
- Quaternary**
 OF 94-0568; OF 95-0034; OP-639; OP-661; OP-1040; OP-1050; OP-1158; OP-1354; OP-1612; OP-1992
 Emperor Seamounts OP-2315
 Escanaba Trough B 2022
 Gulf of Alaska OF 94-0568; OP-1805
 Nankai Trough OF 94-0568
 Peru-Chile Trench B 2110
- sea water, East Pacific Rise OP-842**
- sea-floor spreading**
 Escanaba Trough B 2022
 Gorda Rise B 2022
- sedimentary petrology**

- Aleutian Trench OP-1218
 Bristol Bay OP-2080
 Cascadia Basin OP-1877
 Gulf of Alaska OP-1218
 Juan de Fuca Ridge OP-776
 sedimentation, Bowie Seamount OP-2160
 seismicity *see*
 Gorda Rise OP-1745
 Mendocino fracture zone OP-1745; OP-1832
 seismology
 Blanco fracture zone OP-1329
 Loihi Seamount OP-1654
 stratigraphy
 OP-200; OP-1162; OP-1197
 Arafura Sea OP-1338
 structural geology
 OP-1750
 Circum-Pacific region OF 94-0714
 sulfides
 Escanaba Trough OP-1829
 Gorda Rise OP-1829
 tectonophysics
 OF 94-0228; OP-56; OP-247; OP-1246;
 OP-1521; OP-1919
 Aleutian Ridge OP-1261
 Blanco fracture zone OP-1656
 Bowers Ridge OP-1261
 Cascadia Basin OP-157
 Chile Ridge OP-1702; OP-1762
 Peru-Chile Trench OP-1762
 waste disposal OP-1610
- Pacific Plate**
- Alaska
 paleomagnetism OP-727
 plate tectonics OP-1682
 Quaternary OP-628
 sedimentation OP-2160
 tectonophysics OP-408
 Basin and Range Province, structural geology
 OP-1741
 California
 economic geology OP-216
 faults OP-492
 geophysical surveys OF 95-0275
 Neogene B 1995-J,K
 petrology C 1129
 plate tectonics OF 94-0568; OP-1431; OP-1576
 Quaternary OF 94-0568
 seismicity OP-1745
 stratigraphy B 1995-J,K
 tectonophysics OP-82; OP-1778
 Canada, tectonophysics OP-2265
 Mexico
 petrology C 1129; OP-827
 tectonophysics OP-82
 Nevada, faults OP-492
 New Zealand, Quaternary OF 94-0568
 tectonophysics OP-1136
 United States, tectonophysics OP-2265
- Pacific region** *see also* Circum-Pacific region.
 stratigraphy OP-2147
- packrats**
 Quaternary OP-1057
- Pacolma Dam**
 engineering geology OP-1467
- PAGEIT** OF 92-0538
- Pah Canyon Tuff**
 stratigraphy OF 95-0102
- pahoehoe**
 California, volcanic features OP-305
- Hawaii
 OP-483
 Quaternary OP-757; OP-1496; OP-1616
Pahranagat Formation
 stratigraphy B 2056
 Tertiary OF 95-0545
Pahranagat Valley
 hydrogeology OP-1947
Pahute Mesa
 ground water OP-2066
 maps OF 95-0567
 petroleum OP-2065
Paicines Fault
 seismicity OP-2120
Paijenborchella
 Ostracoda OP-122
Painesville Ohio
 geomorphology OF 95-0224
Paintbrush Canyon
 geophysical surveys OF 93-0540-A; OF 93-0540-B
 Miocene OP-1408
 Quaternary OF 94-0568
 structural geology OP-2276
Paintbrush Tuff *see also* Topopah Spring Member.
 engineering geology OF 93-0269
 environmental geology OF 94-0451
Painted Hill Formation
 Pliocene OP-2061
Painted Rock Sandstone Member
 natural gas OP-542
 Paiute Mesa *see* Pahute Mesa
Pajarito Fault
 Quaternary OF 94-0568
Pakistan
 coal
 Salt Range B 2096
 Sind Pakistan OF 94-0274; OF 94-0595;
 OF 94-0596-A; OF 94-0596-B; OF 94-0596-C; OF 94-0596-D
 gems, Swat Pakistan OP-1303
 geochemistry
 C 1129
 Sind Pakistan OF 93-0591
 lignite, Sind Pakistan OF 94-0557
 sedimentary petrology, Sind Pakistan OP-1386
 stratigraphy OP-2253
 structural geology
 Baluchistan Pakistan OF 94-0670
 Punjab Pakistan B 2126
Palaeothentes
 Vertebrata OP-1151
palagonite OP-880
 Palau *see* Belau
 paleo-indian *see* paleoindian
paleo-oceanography
 OF 94-0588; OF 95-0260; OP-96; OP-1565
 Alaska OF 94-0281
 Antarctic Ocean OF 94-0588
 Antarctica OF 94-0588
 Arctic Ocean
 OF 94-0588
 Quaternary OP-1268; OP-1566
 Atlantic Coastal Plain, sedimentary petrology
 B 2110
 Atlantic Ocean
 OF 94-0588; OP-1198
 Quaternary OP-233
 Bahamas, Quaternary OP-1866
 British Columbia, Quaternary OF 95-0034
- California
 B 1995-J,K
 geochemistry P 1566
 Quaternary OF 95-0034; OP-1992
 Caribbean region OP-1150
 Chile OF 95-0226
 Florida OP-1971
 Georgia OP-1971
 Japan OP-1269
 Japan Sea, Quaternary OP-722
 Lesser Antilles OP-1150
 Marshall Islands OP-1229
 Micronesia OP-1229
 Montana OP-1131
 Oregon, Quaternary OF 94-0568; OF 95-0034
 Pacific Coast, Quaternary OP-1401
 Pacific Ocean
 OF 94-0588; OP-1197; OP-1198
 Quaternary OP-1501
 United States, Quaternary OF 95-0034
 Western Interior OP-2063
- paleoatmosphere**
 OP-2274
- Alaska
 geochemistry OF 95-0222
 Quaternary B 2107
 Appalachians OP-1324
 Colorado, metal ores OP-2060
 Greenland, geochemistry OF 95-0222
 Nevada, Quaternary FS 94-0007
 Pacific Coast, Quaternary OP-1401
 Pacific Ocean, Quaternary OP-1354
 sedimentary petrology OP-1885
 Western Interior OP-1324
 Wyoming, Quaternary OP-11
- paleobiogeography** *see* biogeography
- paleobotany** *see also* algae; angiosperms; bacteria; fungi; gymnosperms; palynomorphs; Plantae; Protista.
 OP-181; OP-182; OP-501; OP-563; OP-564;
 OP-566; OP-567; OP-568; OP-582; OP-645;
 OP-646
 Europe OP-644
- Paleocene** *see also* Fort Union Formation; Hanna Formation; Laramide Orogeny; Raton Formation; Sheep Pass Formation.
 Alaska OP-725
 Atlantic Coastal Plain OP-1960
 California OP-1036
 Colombia OP-77
 Delaware OF 95-0478
 Georgia OP-1358; OP-1359
 K-T boundary
 OP-84; OP-1418; OP-2022; OP-2112
 Canada OP-668
 Colorado OF 94-0670; OP-1665; OP-1953
 Denmark OP-1140
 East Pacific Ocean Islands OP-1736
 Great Plains OP-1589; OP-1889
 Iowa OP-16; OP-372
 Italy OP-1416
 Mexico OP-1141; OP-1755
 New Mexico OF 94-0670; OP-1953
 Polynesia OP-1736
 Tunisia OP-1416
 United States OP-668
 Wyoming OP-667
 Louisiana OF 95-0208
 Ludlow Member OP-2255
 Maryland OP-736
 Mexico OP-1036
 Mississippi OF 95-0208

- Nevada OP-77
 New Jersey P 1554
 Oregon OP-1176; OP-1177
 Pacific Ocean OP-1162
 Pakistan B 2096; OP-1386
 Puercan, Great Plains OP-1589
 South Carolina OP-1358
 Tongue River Member, pollution OP-185; OP-186
 Tullock Member OP-667
 Virginia OP-736
- paleoclimatology** *see also* C-13/C-12; general circulation models; glaciation; isotopes; last glacial maximum; Milankovitch theory; O-18/O-16.
 B 2110; OP-33; OP-225; OP-1228; OP-1319; OP-1888; OP-2099; OP-2139
- Alaska
 B 2110; OF 94-0281; OF 94-0588; OP-1881
 geochemistry OF 95-0222
 Quaternary B 2107; OP-604; OP-1172
- Antarctic Ocean OF 94-0588
 Antarctica OF 94-0588; OP-2305
 Appalachians OP-1324
 Arctic Ocean OF 94-0588
 Arctic region B 2110; OF 94-0588
- Arizona
 OP-1320
 Quaternary OP-1287
- Arkansas, Quaternary B 2110
 Atlantic Coastal Plain
 OP-1958; OP-1960
 sedimentary petrology B 2110
- Atlantic Ocean
 OF 94-0588; OP-218
 Quaternary OP-233
- Australia OP-1338
 Basin and Range Province, Quaternary OF 95-0037; OP-2198
 British Columbia, Quaternary OF 95-0034
- California
 OF 94-0630; OF 95-0265; OP-1036
 pedogenesis OP-2005
 Quaternary OF 94-0641; OF 94-0651; OF 95-0034; OP-761; OP-1040; OP-1157; OP-1158; OP-1992
- Canada OP-668
 Chile, Quaternary B 2110
 China, Quaternary P 1549
- Colorado
 fluvial features OP-2259
 sedimentary petrology OP-1373
 sedimentation OP-1646
- Colorado Plateau OP-222; OP-1321; OP-1481
 Florida, Quaternary OP-1001; OP-2206
 geochemistry B 2110
 geomorphology OP-1368
 Great Basin, Quaternary OF 95-0037; OP-2198
 Great Plains OP-1889
 Greenland, geochemistry OF 95-0222
 Iceland, Quaternary OP-1001
 Idaho OP-2147
 Israel, Quaternary OF 94-0568
 Japan OP-1269
 Marshall Islands OP-2254
 metal ores B 2110
 Mexico OP-1036
 Micronesia OP-2254
 Minnesota, Quaternary OP-1290
 Mississippi, Quaternary OF 94-0702
 Mississippi Valley, Quaternary OP-1758
 Montana B 2112
- Nebraska, sedimentary petrology B 2110
- Nevada
 OP-2147
 fluvial features OP-2289
 geomorphology OF 94-0670
 pedogenesis OP-2005
 Quaternary OP-761
- New England, Quaternary OP-1072
 New Jersey, diagenesis OP-2118
 New Mexico
 OP-382
 sedimentary petrology OP-1373
- North Dakota B 2112
 Oklahoma, Quaternary B 2110
- Oregon
 OP-1177
 Quaternary OF 95-0034; OP-1040; OP-1158; OP-1635; OP-2045
- orogeny B 2110
 Pacific Coast, Quaternary OP-2250
- Pacific Ocean
 OP-218
 Quaternary OF 95-0034; OP-1354
- Papua New Guinea OP-1338
- Pennsylvania
 diagenesis OP-2118
 sedimentation B 2110; OF 95-0240
- Peru OP-200
 Quaternary OF 95-0034; OP-981; OP-1057
- Rocky Mountains, Quaternary OF 95-0063
 Russian Federation OF 94-0588
 sedimentary petrology OP-1226; OP-1227; OP-2025
- tectonophysics C 1109
 United Arab Emirates, Quaternary OP-1016
- United Kingdom B 2110
 United States
 OP-668
 Quaternary OF 95-0034
- Utah
 OF 95-0001; OP-145; OP-1179
 Quaternary OP-1287
 sedimentary petrology OP-1178
- Virginia, Quaternary OP-1001
 Washington, Quaternary OF 95-0034
 West Virginia, sedimentation OF 95-0240
 Western Interior P 1561; OP-1324
 Western U.S., Quaternary OP-2086
- Wyoming
 OP-1527
 sedimentary petrology B 2110
 sedimentation OP-1646
 weathering OP-928
- paleoearthquakes** *see* paleoseismicity
- paleoecology** *see also* biogeography; biologic evolution; ichnofacies; middens; salt marshes.
 B 2110; OP-96; OP-1888; OP-2022
- Alaska
 P 1544; OP-1171
 paleobotany P 1543 A-B
- Antarctic Ocean OF 94-0588
 Antarctica OF 94-0588
 Arctic region B 2110
 Arizona OP-1320; OP-1322
 Atlantic Ocean OF 94-0588
 British Columbia, Quaternary OF 95-0034
- California
 OF 94-0630; OF 95-0265; OF 95-0489
 geochemistry P 1566; OF 95-0034
 Quaternary OF 94-0641; OF 95-0034; OP-1308
- Chile OF 95-0226
- China, Quaternary P 1549
 Colorado OF 94-0670; OP-1953
 geochemistry C 1108
 Great Plains OP-1889
 Greenland OP-1171
- Indiana
 OF 94-0298
 sedimentary petrology OP-1002
- Japan Sea, Quaternary OP-722
 Kentucky, sedimentary petrology OP-1002
- Maryland OF 94-0708
 Minnesota, Quaternary OF 94-0578
 Mississippi, Quaternary OF 94-0702
 Nevada, non-metal deposits OF 95-0084
 New Mexico OF 94-0670; OP-382; OP-1953
- Oregon
 OP-1176; OP-1177
 Quaternary OF 95-0034
- Pacific Ocean
 OF 94-0588; OP-1088
 Quaternary OF 95-0034
- paleobotany OP-243
 Quaternary OP-2199
- Russian Federation, Quaternary OP-165
 Texas OF 94-0551
 United States, Quaternary OF 95-0034
- Utah B 2000-L; B 2115-B; OF 95-0001
 Virginia OP-2071
 Washington, Quaternary OP-205; OP-395
 Western Interior B 2110; B 2113; OP-2063
- Wyoming OP-1155
- paleofloods**
 OP-1726
 Alaska, Quaternary OP-1457
- Arizona
 sedimentation OP-2023
 weathering OP-1504
- Colorado
 fluvial features OP-2259
 geomorphology OP-986
 Quaternary OP-1582
- Columbia Plateau, Quaternary OP-2237
 Idaho, Quaternary OP-1900
 Nevada, environmental geology OF 92-0458
 Oregon, Quaternary OP-679; OP-680
 Peru, Quaternary OP-1618
 Washington, Quaternary OP-679; OP-680
- Paleogene** *see also* Eocene; Oligocene; Paleocene.
 Antarctic Ocean OP-246
 Claron Formation, ichnofossils OP-1153
 Colorado OP-1890
 Europe OP-2052
 Ghost Rocks Formation
 metamorphism OP-39
 paleomagnetism OP-727
- Hanna Formation OP-1531
 Idaho C 1129
 Japan C 1129
 Kenai Group, uranium ores B 2098
 Montana C 1129
 Nevada OF 94-0670; OP-20; OP-438
- Orca Group
 metamorphism OP-39
 sedimentary petrology OP-1361
- Sespe Formation
 OF 94-0630
 sedimentary petrology B 1995-H,I
- Tyonek Formation
 sedimentary petrology B 2107
 uranium ores B 2098
- Washington OP-1981

paleogeographic maps

Western Interior P 1561

paleogeography *see also* basins; biogeography; continental drift; geosynclines; sea-level changes; transgression.

OP-225; OP-1319

Alaska

OP-51; OP-201; OP-217; OP-711

Quaternary OP-1692

sedimentary petrology B 2107

Arizona

OP-1320

petrology C 1129

Atlantic Ocean OP-1198

Bahamas OP-540

California

OF 95-0489; OP-1036; OP-2061

Quaternary OF 94-0568

China, Quaternary P 1549

Colorado

energy sources OP-297

metal ores B 2116

sedimentation OP-1646

Colorado Plateau OP-1321; OP-1481

Georgia OP-742

Great Plains OP-1889

Idaho, structural geology OP-1581

Mexico

OP-1036

petrology OP-827

Montana B 2112

Nevada, deformation OP-1323

New Mexico OP-382

North Dakota B 2112

Oregon OP-1176; OP-1177

Pacific Ocean OP-1198

petroleum OP-2220

Russian Federation, petroleum OP-153

Utah

energy sources OP-297

petroleum B 2000-J

tectonics OP-1556

Washington OP-1593

Western Interior, economic geology OP-597

Wyoming

deformation OP-283

sedimentation OP-1646

Yukon Territory

OP-217

tectonics OP-360

paleoindian

Arizona, Quaternary OP-1287; OP-1730

Utah, Quaternary OP-1287; OP-1730

paleokarst

California, geomorphology OP-775

Florida, hydrogeology OP-1591

Nevada, geomorphology OP-775

paleolatitude**Alaska**

OF 94-0588

paleomagnetism OP-1135

Antarctica OP-2305

California, tectonophysics OP-1448

Canada

geochronology OP-308

paleomagnetism OP-1135

Colorado, sedimentary petrology OP-1373

Mexico, tectonophysics OP-1448

New Mexico, sedimentary petrology OP-1373

United States, geochronology OP-308

paleolimnology

Basin and Range Province, hydrology OP-1106

California, Quaternary OF 94-0641; OF 95-0034; OP-1157

Colorado, metal ores OP-2060

Great Basin, hydrology OP-1106

Great Lakes, Quaternary OP-163; OP-292

Great Lakes region, Quaternary OP-163

Manitoba, Quaternary OP-527

Minnesota, Quaternary OF 94-0578; OP-1290; OP-2082

Oregon, Quaternary OF 95-0034; OP-1635

Russian Federation, Quaternary OP-94; OP-165

Texas, Quaternary OP-812

Washington, Quaternary OF 95-0034

Paleolithic *see* Aurignacian**paleomagnetism** *see also* apparent polar wandering; Brunhes Epoch; Gauss Epoch; Jaramillo Event; magnetic anomalies; magnetic declination; magnetic field; magnetic inclination; magnetic intensity; magnetic susceptibility; magnetostratigraphy; Matuyama Epoch; natural remanent magnetization; paleolatitude; polar wandering; pole positions; remanent magnetization; thermoremanent magnetization.**Alaska**

OF 94-0588; OP-724; OP-725; OP-727

Quaternary OP-604; OP-1458

tectonophysics OP-408; OP-953

Arctic Ocean OF 94-0588

Arizona, Quaternary OP-1730

Australia, tectonophysics OP-704

California

magmas OP-129

Quaternary OP-1040; OP-1505

Canada, tectonophysics OP-704; OP-2265

Colorado

geophysical surveys OP-1118

petrology OP-1716

Gulf Coastal Plain OP-1906

Hawaii, Quaternary OP-351; OP-1616

Idaho, Quaternary B 2105

Iowa

OP-2154

geomorphology OP-2034

Middle East, tectonophysics OP-923

Nevada, structural geology OP-1904

Oregon

geologic hazards OP-2088

Quaternary OP-1040; OP-1505

United States, tectonophysics OP-2265

Utah

OP-1731

Quaternary OP-1730

Vanuatu, oceanography OP-338

Western Interior OP-1906

Wyoming OP-403

Yukon Territory, Quaternary OP-1458

paleontologic record *see* fossil record**paleontology** *see* Conodonta; foraminifera; ichnofossils; Mammalia; Ostracoda; problematic fossils; Protista; Radiolaria; Trilobita; worms**paleoplacers** *see* gold ores**paleorelief**

California, structural geology OP-1584

paleosalinity**Alaska**

gold ores OP-2184

Quaternary OF 94-0568

California, Quaternary OP-1157; OP-1787

Colorado

geophysical surveys OP-1118

metal ores OP-728; OP-1488; OP-2060

sedimentary petrology B 1808-P

Illinois, non-metal deposits OP-729

Kentucky, non-metal deposits OP-729

New Mexico, sedimentary petrology B 1808-P

Peru, metal ores OP-202

Spain, metal ores OP-22

Texas, Quaternary OP-812

paleoseismicity

Alaska, Quaternary OF 94-0568

Argentina, Quaternary OF 94-0568

Arkansas

Quaternary P 1538-H; OP-946; OP-2216

seismology MF-2279

Australia, Quaternary OF 94-0568

British Columbia, Quaternary OF 94-0568

California

earthquakes OF 94-0568; OP-892; OP-1503; OP-1529

engineering geology OF 94-0568

geophysical surveys OF 94-0568

neotectonics OF 94-0568

plate tectonics OF 94-0568

Quaternary OF 94-0568

seismology OF 94-0568; OP-860; OP-2084

structural geology OF 94-0568

Caribbean region, seismology OP-1739

China, Quaternary OF 94-0568

Dominican Republic

plate tectonics OP-1983

Quaternary OF 94-0568

earthquakes OP-2085

Ecuador, engineering geology OF 94-0568

Finland, Quaternary OF 94-0568

geologic hazards OF 94-0663

Greece, Quaternary OF 94-0568

Idaho

neotectonics OF 94-0568

Quaternary OF 94-0568

Indiana, earthquakes OF 94-0298

Iran, geologic hazards OF 94-0568

Israel, Quaternary OF 94-0568

Italy

earthquakes OP-892

Quaternary OF 94-0568

seismology OF 94-0568

Japan

ocean floors OF 94-0568

plate tectonics OF 94-0568

Quaternary OF 94-0568

Middle East, plate tectonics OF 94-0568

Mississippi Valley

geomorphology P 1538-R

Quaternary OF 94-0568

Missouri

earthquakes OF 94-0298

Quaternary P 1538-H; OP-1707

seismology MF-2279

Montana, neotectonics OP-1902

Nevada

environmental geology OP-2306

faults OP-1740; OP-1802

Quaternary OF 94-0568

New Zealand, Quaternary OF 94-0568

Oregon

Quaternary OF 94-0568

structural geology OP-2054

Pacific Coast, Quaternary OF 94-0568; OP-661

Papua New Guinea, Quaternary OF 94-0568

Philippine Islands, Quaternary OF 94-0568

Puerto Rico, Quaternary OF 94-0568

Quaternary OF 94-0568

Quebec

- gold ores OF 94-0228
Quaternary OF 94-0568
Scotland, Quaternary OF 94-0568
seismology OP-2135; OP-2217
South Carolina
geologic hazards OF 94-0663
Quaternary OF 94-0568
Sweden, Quaternary OF 94-0568
Tennessee, Quaternary OF 94-0568
Turkey
earthquakes OF 94-0568
Quaternary OF 94-0568
United States, seismology OF 94-0568
Utah
faults OP-1740
neotectonics OP-1494
Quaternary OF 94-0568
structural geology OP-1734
Washington
engineering geology OP-1859
geologic hazards OF 94-0589; OF 94-0663
Quaternary OF 94-0568; OP-395; OP-1076
structural geology OP-2054
- Paleosols**
Alaska, Quaternary OP-124; OP-1457; OP-2258
Appalachians, stratigraphy OP-1324
Arizona, stratigraphy OP-381; OP-1320
Arkansas, Quaternary OP-946
Bahamas, Quaternary OP-1866
California, earthquakes OF 94-0568
Colorado, Quaternary OP-1742
Colorado Plateau, stratigraphy OP-1321
Georgia, pedogenesis B 1589-E
ground water OP-1167
Idaho, Quaternary OF 94-0568
Israel, Quaternary OF 94-0568
Mississippi Valley
pedogenesis OP-2319
Quaternary OP-1757; OP-1758
New Mexico
ichnofossils OP-379
stratigraphy OP-382
Pacific Coast, Quaternary OP-661
Pennsylvanian B 2110; OP-1228
sedimentary petrology OP-1227
Tennessee, Quaternary OF 94-0568
Utah, sedimentary petrology OP-2031
Washington
geologic hazards OF 94-0589
Quaternary OP-395
Western Interior, stratigraphy OP-1324
Wyoming
Quaternary OP-11
stratigraphy OP-1155
weathering OP-928
paleotopography *see* paleorelief
paleowinds
Alaska, Quaternary B 2107
Paleozoic *see also* Cambrian; Carboniferous; Devonian; Ordovician; Permian; Silurian.
Alaska B 2107; OF 94-0215; OP-471; OP-626; OP-672; OP-710; OP-725; OP-1447; OP-2301
Antler Orogeny
Alaska OP-1604
Basin and Range Province OP-2115
Great Basin OP-2115
Idaho B 2064-A-R
Nevada OP-794
Antrim Shale, areal geology OP-295
Appalachians OP-1819
Argentina C 1129
Arkansas B 2110; OF 94-0430
Ashe Formation
magmas OP-1126
metal ores OP-306
Atlantic Coastal Plain OP-1819
Bakken Formation, energy sources OP-749
Berwick Formation OP-1047
Brazil C 1129
Calaveras Formation, geomorphology OP-785
Caledonian Orogeny
Germany C 1129
Scotland C 1129
California OF 95-0227-A; OF 95-0227-B; I-2148; OP-432; OP-2066
Canada OP-308; OP-2271
Chattanooga Shale, hydrogeology WRI 93-4207
Chile B 2110
Chopawamsic Formation, magmas P 1529
Earn Group, sedimentary petrology OP-1604
Ellesmerian Orogeny
Alaska OP-65; OP-330; OP-576; OP-641; OP-1624
Yukon Territory OP-1624
Endicott Group
B 2107
coal OP-972
Georgia OP-742
Glenasm Series, structural geology OP-1317
Great Lakes OP-436
Great Plains P 1402-F
Hanson Creek Formation, gold ores OP-2151
Honaker Trail Formation
B 2000-L
diagenesis OP-1242
Hunton Group, petroleum OF 94-0298
Idaho P 1525; B 2064-A-R
Indiana OF 94-0298
Iowa OP-839
Italy OP-962
Knox Group, sedimentary petrology OF 94-0298
Lisburne Group
areal geology OP-641
petroleum OP-2105
Maine C 1129
Maroon Formation OP-2027
Mississippi Valley P 1538-N; MF-2284
Missouri OF 94-0430; OF 94-0670; OP-1299
Nevada OP-1747; OP-1947; OP-2029; OP-2066; OP-2326
New Mexico B 2063
North Carolina C 1129; OP-1335; OP-1647; OP-1670
Oklahoma B 2110
Oregon OF 95-0227-A; OF 95-0227-B; I-2148
Peru OP-202
Pilot Shale, structural geology OP-2115
Road River Formation OP-1624
Russian Federation C 1129
Shoo Fly Complex, structural geology OP-1462
South Carolina OP-2090
Spain C 1129
Supai Formation OP-21
Taconic Orogeny
Argentina C 1129
Europe OP-598
Massachusetts OP-782
New England OP-2208
orogeny B 2110
Virginia OP-1317
Tippicanoe Sequence OP-1971
United States OP-308; OP-2271
Virginia OP-1670
Waits River Formation, hydrogeology OP-1194
Washington OF 94-0403
Wood River Formation
OP-2093
metal ores B 2064-A-R
polymetallic ores B 2064-A-R
sedimentary petrology P 1525; OP-2092
structural geology OP-2123
Woodford Shale, energy sources OP-537
Palette Lake
environmental geology OP-1663
Palmer Peninsula *see* Antarctic Peninsula
Palo Alto California
environmental geology OF 95-0299
faults OP-1577
hydrogeology OP-2298
Palo Alto Quadrangle
geologic hazards OF 93-0684
Palos Verdes Hills
Quaternary OP-737
paludal sedimentation
Florida OP-1425
Louisiana
ecology OF 94-0275
geomorphology OF 94-0275
Quaternary OF 94-0275
waterways OF 94-0275
palygorskite
California, oceanography OP-1410
palynomorphs *see also* color alteration index; pollen.
OP-768
acritarch flora, California OF 95-0265
Alabama, structural geology OP-1988
Alaska
OP-184
Eocene OF 94-0653
Antarctic Ocean, Pliocene OF 94-0588
Antarctica
OF 94-0588
Pliocene OF 94-0588
Appalachians OP-1324
Basin and Range Province, Quaternary OP-2198
chitinozoans, Tennessee OP-1502
Colorado OF 94-0670
dinoflagellates
Alaska OP-641
California OF 95-0265
Florida OF 95-0003; OP-2295
Pakistan OP-1386
Utah B 2115-B
Florida, Quaternary OP-1001
Great Basin, Quaternary OP-2198
Great Plains OP-1589; OP-1889
Iceland, Quaternary OP-1001
Kentucky, sedimentary petrology OP-1950
Maryland, pollution OP-1089
miospores
OP-243
Alaska OP-604
Atlantic Ocean OP-218
California OF 95-0034; OF 95-0265
Idaho B 2105
Indiana OP-1002
Kentucky OP-1002
Louisiana OF 95-0208
Mississippi OF 95-0208
Oregon OF 95-0034
Pacific Ocean OF 95-0034; OP-218

- Utah B 2000-L; B 2115-B
Washington OF 95-0034
New Mexico OF 94-0670
Russian Federation, Pliocene OF 94-0588
Tennessee, structural geology OP-1988
Utah OP-184
Virginia, Quaternary OP-1001
Western Interior
OP-1324
Pennsylvanian B 2110
Wyoming
OP-279
Paleocene OP-666
- Pamlico River**
hydrology OF 94-0454; OF 95-0136
- Pamlico Sound**
hydrogeology OF 95-0164
- Pampean Mountains**
geochemistry C 1129
magmas C 1129
petrology C 1129
Quaternary OF 94-0568
- Pamunkey River**
engineering geology WRI 94-4164
- Pan-African Orogeny**
Argentina, geochemistry C 1129
Brazil
C 1129
geochemistry C 1129
inclusions C 1129
Egypt, magmas C 1129
Indian Ocean Islands, inclusions C 1129
- Panama thrust fault**
structural geology OP-1252
- Pancake Range**
energy sources OF 94-0670
structural geology OP-1944
- Pangaea**
Arizona
sedimentation OP-2023
stratigraphy OP-1320
Colorado Plateau, stratigraphy OP-1481
Commonwealth of Independent States, petroleum B 2110
New Mexico, stratigraphy OP-382
stratigraphy OP-225; OP-1319
Western Interior, economic geology OP-597
- Panguitch Quadrangle**
areal geology B 2056
maps OF 95-0009
- Pannonian Basin**
natural gas OP-155
stratigraphy OP-524; OP-951
- Panola Mountain Research Watershed**
environmental geology OP-435
hydrology OP-120; OP-1554
soils OP-1555
- Pantelleria**
geochemistry OP-227
- pantellerite**
Italy, geochemistry OP-227
- Paola Basin**
Quaternary OP-942
- paper chromatography *see* chromatography
- paper models**
sea-floor spreading OF 95-0573
Trilobita OF 94-0667-A; OF 94-0667-B
- Papoose Flat Pluton**
petrology C 1129
- Papua New Guinea**
geologic hazards
- New Britain OP-1720
Rabaul Caldera OP-1720
- Quaternary
OP-1952
Huon Peninsula OF 94-0568
stratigraphy OP-1338
tectonophysics OP-1035
- Para Brazil**
marine geology OP-117
- Paradox Basin**
areal geology OP-1179
diagenesis OP-1242
energy sources B 2000-H; OP-1557
environmental geology OP-1045
geochemistry OP-1168
petroleum B 2000-J
salt tectonics OP-1551
sedimentary petrology B 2110; OP-1178; OP-1272; OP-2290
stratigraphy B 2000-L; B 2110; OP-1384
structural geology OP-1438; OP-1668
tectonics OP-1556
- Paradox Member**
B 2000-L; B 2110
diagenesis OP-1242
geochemistry OP-2015
petroleum B 2000-J
sedimentary petrology OP-2290
- paragenesis**
OP-1789
Arizona, fluorides OP-466
Colorado, metal ores OP-284; OP-733; OP-1626
diagenesis OF 94-0298
metal ores B 2081
mineralogy OP-1378; OP-2110
Nevada, fluid inclusions OP-2037
New Jersey, diagenesis OP-2118
Pennsylvania, diagenesis OP-2118
sedimentary petrology OP-2117; OP-2140; OP-2290
Spain, metal ores OP-22
Texas, diagenesis OP-1472
Washington, sedimentary petrology B 2085-C
- paragneiss**
Italy OP-866; OP-1991
Maryland OP-1200
Mexico OP-1870
Virginia OP-1200
- Paraiba Brazil**
inclusions C 1129
petrology C 1129
- parallel processing**
Massachusetts, ocean circulation YR
- paratacamite**
Michigan OP-2028
- Parguera Puerto Rico**
maps I-2387
- Parla River**
hydrology FS 0120-95; OP-2203
- Paricutin**
Quaternary OP-1257
- Parkers Ferry Formation**
stratigraphy OP-1393
- Parkfield California**
earthquakes OP-393; OP-1375; OP-1499
geophysical surveys OP-817
seismicity OP-654; OP-889; OP-2144
seismology OP-277; OP-1296; OP-1349; OP-1688; OP-2212
- Parkfield earthquake 1966**
California OP-783; OP-1705; OP-1769
- Parkfield earthquakes**
California OP 94-0228; OP-249; OP-1165; OP-1602; OP-2039; OP-2186
- Paroscientific transducer**
ground water OF 94-0531
- particle tracks**
Ohio, ground water WRI 94-4243
- partition coefficients** C 1129; OF 91-0596; OP-648; OP-1026; OP-1278
- partridgeite *see* bixbyite
- Pascola Arch**
economic geology B 2094-C; OF 94-0670
lead-zinc deposits B 1989-F
petrology OP-1299
- Passaic Formation**
OP-1672
diagenesis OP-2118
energy sources OP-2058; OP-2059
ground water OP-1568
sedimentary petrology OP-2140
- PASSCAL** *see also* IRIS network.
California, geophysical surveys OP-1966
- passive margins**
Alaska
I-2272
structural geology OP-1249
tectonics B 2107
Antarctica, tectonophysics OP-245; OP-2003
Atlantic Coastal Plain, sedimentary petrology B 2110
Canada, neotectonics OP-994
East Pacific Ocean Islands, stratigraphy OP-1736
Georgia, stratigraphy OP-742
Kazakhstan, energy sources OP-169; OP-1258
natural gas OP-1675
plate tectonics OP-1256
Polynesia, stratigraphy OP-1736
South America, tectonophysics OP-2003
United States, neotectonics OP-994
Virginia, tectonophysics OP-413
Wisconsin, plate tectonics OP-2121
- Patagonia** *see also* Patagonian Andes.
petrology C 1129
Vertebrata OP-1151
- Patagonia Cordillera** *see* Patagonian Andes
- Patagonia Granodiorite**
stratigraphy OP-350
- Patagonian Andes**
magmas C 1129
- Patapsco Formation**
ground water OF 94-0392; OF 94-0393
pollution OP-1089
stratigraphy OF 94-0708
- patch reefs**
Bahamas, Quaternary OP-1866
- paternoster lakes**
New Mexico, hydrology WRI 93-4113
- pathfinders**
Nevada, gold ores OP-895
- patterned ground**
New England, Quaternary OP-1072
- Patuxent River**
ground water WRI 94-4170; OP-410
hydrogeology OF 94-0507
pollution OP-1786; OP-1985
- Pavillion Field**
energy sources C 1108; OP-1621

Pavlof

Quaternary OP-2292

Payette Formation

metal ores B 2064-A-R

Pb *see* leadPb-204/Pb-208 *see* Pb-208/Pb-204Pb-206 Pb-207 *see* Pb-207/Pb-206**Pb-206/Pb-204**

OP-1826

Alaska

geochemistry OP-23

sedimentary petrology OP-1361

Antarctica, magmas C 1129

British Columbia, sedimentary petrology OP-1361

California

geochemistry C 1129; OP-160; OP-197

magmas OP-313; OP-1095

Colorado

geochemistry OF 95-0250

hydrology OF 94-0412

metal ores OP-284; OP-1626

petrology OP-773

Idaho

metal ores B 2064-A-R

pollution OP-1039

Italy, geochemistry OP-27

Kenya, geochemistry C 1129

Maine, geochemistry C 1129

Mexico, geochemistry OP-197

Mississippi Valley, metal ores B 2094-B

Montana, geochemistry OP-2133

Nevada, geochemistry C 1129; OP-2326

New Mexico, geochemistry B 2081

Oregon, geochemistry OP-29

Pacific Ocean

geochemistry OP-1033

stratigraphy OP-1197

petrology OP-938; OP-939

Utah, economic geology OP-189

Vanuatu, plate tectonics OP-337

Vermont, hydrogeology OP-1194

Yemen, geochemistry C 1129; OP-1079

Pb-206/Pb-207 *see* Pb-207/Pb-206**Pb-207/Pb-204**

OP-1826

Alaska

geochemistry OP-23

sedimentary petrology OP-1361

Antarctica, magmas C 1129

British Columbia, sedimentary petrology OP-1361

California

geochemistry C 1129; OP-197

magmas OP-313; OP-1095

petrology OP-1818

Chile, geochemistry C 1129

Colorado

geochemistry OF 95-0250

metal ores OP-284; OP-1626

Idaho

metal ores B 2064-A-R

pollution OP-1039

Italy, geochemistry OP-27

Maine, geochemistry C 1129

Mexico, geochemistry OP-197

Mississippi Valley, metal ores B 2094-B

Nevada, geochemistry C 1129

New Mexico, geochemistry B 2081

Pacific Ocean, geochemistry OP-1033

petrology OP-938

Texas, magmas C 1129

Utah, economic geology OP-189

Vermont, geochemistry C 1129

Yemen, geochemistry C 1129

Pb-207/Pb-206

California

geochemistry OP-160

magmas OP-321

Idaho, pollution OP-1039

Montana, geochemistry OP-2133

petrology OP-939

Pb-208

California, pollution OP-2026

Missouri, petrology OP-1299

Pb-208/Pb-204

Alaska

geochemistry OP-23

sedimentary petrology OP-1361

Antarctica, magmas C 1129

British Columbia, sedimentary petrology OP-1361

California

geochemistry C 1129; OP-197

magmas OP-313; OP-1095

Colorado

geochemistry OF 95-0250

hydrology OF 94-0412

metal ores OP-284; OP-1626

Idaho

metal ores B 2064-A-R

pollution OP-1039

Italy, geochemistry C 1129; OP-27

Maine, geochemistry C 1129

metal ores OF 94-0298

Mexico, geochemistry OP-197

Mississippi Valley, metal ores B 2094-B

Montana, geochemistry OP-2133

Nevada

geochemistry C 1129; OP-2326

petrology OP-836

New Mexico, geochemistry B 2081

Pacific Ocean, geochemistry OP-1033

petrology OP-938; OP-939

Yemen, geochemistry C 1129

Pb-208/Pb-206

California, geochemistry OP-160

Idaho, pollution OP-1039

Pb-210

California, pollution OP-1397; OP-1538; OP-1940

Gulf of California, sedimentation OP-1987

Pacific Ocean, oceanography OP-503

Pb/Pb

Arizona, petrology OP-1185

California, magmas OP-321

Colorado, Proterozoic OP-1982

geochronology DDS-0014

Italy, geochemistry OP-27

Virginia, geochemistry C 1129

Wyoming, Proterozoic OP-1982

Pb/Th

petrology OP-939

PCBs

Canada, pollution OF 94-0472

geochemistry OF 95-0140

Idaho, environmental geology WRI 95-4006

Kansas, pollution W 2352-B

Nebraska, pollution W 2352-B

Pennsylvania, environmental geology WRI 94-4060

United States, pollution OF 94-0472

Wyoming, environmental geology WRI 95-4006

PDB

geochemistry OP-175

Pea Hill Arm of Lake Gaston

hydrology WRI 94-4140

Peace River Arch

sedimentary petrology OP-1404

Peace River Formation

stratigraphy OF 95-0003

pearlite *see* perlite**peat**

OP-1078; OP-1885; OP-2025

Alaska

palynomorphs OP-184

Quaternary OF 94-0568; OP-1098; OP-1692; OP-2258

Appalachians, stratigraphy OP-1324

California

geologic hazards FS 94-0049

pollution OP-2251

Quaternary OF 94-0568

Chile, Quaternary OP-1098

Colorado OP-1646

geochemistry C 1108

Idaho, soils OP-119

Indiana OP-1002

Kentucky OP-1002

Manitoba, Quaternary OP-1463

Minnesota, geochemistry OP-498

Pakistan OP-1386

pollution OP-137

South Carolina, Quaternary OF 94-0568

stratigraphy OP-768

Tertiary OP-1888

Utah

B 2115-A; OP-1464

palynomorphs OP-184

Washington

OP-108; OP-1182

Eocene OP-1593

soils OP-119

Western Interior, stratigraphy OP-1324; OP-2030

Wyoming OP-780; OP-928; OP-1646

pebbles

Alaska

OP-1604

Quaternary OP-1457

Atlantic Ocean, stratigraphy OP-1334

Pechenga

Proterozoic OP-2242

Pecos Slope Field

energy sources B 2063

pediments

geomorphology OP-1368

Nevada

fluvial features OP-2289

geomorphology OF 94-0670

Quaternary B 2056

Utah, stratigraphy OP-1731

pedogenesis

OP-993

Arizona

Quaternary OP-1287

stratigraphy OP-223

Basin and Range Province, Quaternary OP-1414

California

OP-2005

Quaternary OP-761

Colorado Plateau, stratigraphy OP-1321

geomorphology OP-1368

- Georgia B 1589-E
Great Basin, Quaternary OP-1414
Israel, Quaternary OF 94-0568
Mississippi Valley OP-2319
Nevada
 OP-1763; OP-2005
 environmental geology OF 93-0477
 geochemistry OP-1857; OP-2169; OP-2326
 Quaternary OP-761
Oregon, Quaternary OP-2045
sedimentary petrology OP-1227
stratigraphy OP-1319
Utah
 Quaternary OP-1287
 stratigraphy OP-1731
Wyoming, weathering OP-928
- Pedregosa Basin**
stratigraphy B 2110
- Peedee belemnite**
geochemistry OP-175
- Peedee Formation** OP-1971
- pegmatite**
C 1129
Alabama OP-1260
China C 1129
Colorado
 fluvial features OP-2259
 mineralogy OP-1828
Egypt
 C 1129
 geophysical surveys OP-2068
Finland, geochemistry C 1129
Idaho P 1525
mineralogy OP-1378; OP-2110
Montana, mineralogy OP-287
New South Wales Australia OP-871
New York OP-1794
North Carolina OP-1647
South Dakota
 C 1129
 geochemistry C 1129
- pelagic sedimentation**
Bering Sea OP-1217
British Columbia, geologic hazards OF 94-0568
United States, geologic hazards OF 94-0568
- Pelecypoda** *see* Bivalvia
pelecypods *see* bivalves
Pelew *see* Belau
- Pelham Dome**
structural geology OP-782
- Pelican Rapids Alberta**
geochemistry C 1129
magmas C 1129
- pelite** *see* shale
pelitic schist *see* slates
- Peloritani Mountains**
geochemistry OP-27
- Pelukian**
Quaternary OP-1221
- peneplains**
California, structural geology OP-1584
- penetration tests** *see* cone penetration tests
- Peninsular Ranges**
Mohorovicic discontinuity OP-1706
- Peninsular Ranges Batholith**
mineralogy OP-2110
petrology C 1129
- Peninsular Terrane**
geophysical surveys OP-10
- metal ores B 2084; OP-1893
metamorphism OP-39
tectonophysics OP-408
- Penn Mine**
pollution WRI 94-4040
- Pennsauken New Jersey**
hydrology OF 94-0499; OF 94-0500
- Pennsylvania** *see also* Appalachian Basin; Appalachian Plateau; Delaware River basin; Freeport Formation; Lake Erie; Lockatong Formation; Newark Basin; Passaic Formation; Pittsburgh Coal.
coal OF 95-0572
energy sources
 C 1108
 Bucks County Pennsylvania OP-2058; OP-2059
environmental geology
 C 1108
 Chester County Pennsylvania WRI 94-4060
 Lancaster County Pennsylvania OP-354
geomorphology
 Berks County Pennsylvania OF 93-0723
 Bucks County Pennsylvania OF 93-0723
 Carbon County Pennsylvania OF 93-0723
 Lehigh County Pennsylvania OF 93-0723
 Luzerne County Pennsylvania OF 93-0723
 Monroe County Pennsylvania OF 93-0723
 Northampton County Pennsylvania OF 93-0723
 Schuylkill County Pennsylvania OF 93-0723
ground water
 P 1415-A
 Allegheny County Pennsylvania WRI 87-4136
 Bucks County Pennsylvania WRI 94-4109; OF 93-0417
 Chester County Pennsylvania OF 93-0659; OF 95-0193
 Crawford County Pennsylvania WRI 87-4136
 Jefferson County Pennsylvania WRI 87-4136
 Lancaster County Pennsylvania OF 95-0193
 Pike County Pennsylvania WRI 93-4109
 Warren County Pennsylvania WRI 87-4136
hydrogeology
 OF 92-0635
 Bucks County Pennsylvania OF 94-0381
 Chester County Pennsylvania OF 95-0113; OP-873
 Lancaster County Pennsylvania OF 95-0113
 Montgomery County Pennsylvania OF 95-0119
hydrology
 Fayette County Pennsylvania WRI 94-4056
 Philadelphia Pennsylvania OP-1015
impact statements
 Greene County Pennsylvania OF 95-0589
 Washington County Pennsylvania OF 95-0589
maps OP-1164
metal ores OP-1895
pollution
 Berks County Pennsylvania WRI 92-4088
 Bucks County Pennsylvania WRI 92-4088
 Chester County Pennsylvania WRI 92-4088
 Lancaster County Pennsylvania WRI 92-4088
 Montgomery County Pennsylvania WRI 92-4088
- York County Pennsylvania WRI 92-4088
Proterozoic, Adams County Pennsylvania OP-3
sedimentation
 Armstrong County Pennsylvania OF 95-0240
 Cambria County Pennsylvania OF 95-0240
 Greene County Pennsylvania B 2110
 Washington County Pennsylvania B 2110
- Pennsylvanian** *see also* Maroon Formation; Wood River Formation.
B 2110; OF 94-0298; OP-764; OP-765; OP-767; OP-989; OP-1226; OP-1227; OP-1228; OP-1404; OP-2069
Alaska OP-1439
Allegheny Group OP-768
Ames Limestone, sedimentary petrology OP-2025
Appalachians OP-1737
Atoka Formation OP-510; OP-766
Breathitt Formation
 B 2135; OP-768
 geochemistry OP-2053
 sedimentary petrology OP-1548
Caseyville Formation, diagenesis OF 94-0298
Cherokee Group, pollution OP-2282
Colorado B 2110; OP-1168; OP-1272; OP-1551
Desmoinesian
 Appalachians OP-1324
 Arizona B 2110
 Illinois OF 94-0298
 Indiana OF 94-0298; OP-1002
 Kentucky OP-1002; OP-1548
 Nebraska B 2110
 Western Interior OP-1324
 Wyoming B 2110
Dugger Formation, coal OF 94-0298
Egypt OP-1770
Freeport Formation, sedimentary petrology OP-1951
Hermosa Formation
 OF 94-0583; I-2555; OP-1384
 sedimentary petrology B 2110
Herrin Coal Member, geophysical surveys OP-1898
Illinois OP-2050
Indiana OF 94-0298; OP-2020
Kanawha Formation OP-69; OP-768
Kansas B 2110
Kentucky OF 94-0298; OP-1950
Kittanning Formation OP-1324
Madera Formation OP-21
Mansfield Formation
 OF 94-0298
 coal OF 94-0298
Minturn Formation
 geologic hazards MF-2295
 metal ores B 2116
Missourian, Arizona B 2110
Morrowan
 Indiana OF 94-0298
 Kentucky OP-1548
Nevada OP-1944
New Mexico B 2063
North Carolina OP-1536
Ohio OP-2057
Paradox Member
 B 2000-L; B 2110
 diagenesis OP-1242
 geochemistry OP-2015
 petroleum B 2000-J
 sedimentary petrology OP-2290

- Pennsylvania B 2110
 Petersburg Formation, coal OF 94-0298
 Pittsburgh Coal
 impact statements OF 95-0589
 sedimentary petrology OP-1340
 Plattsburg Limestone, ground water WRI 94-4166
 Pocahontas Formation, paleobotany OP-2304
 Pottsville Group OP-874
 Springfield Coal Member, sedimentary petrology OF 94-0298; OP-1002
 Staunton Formation
 OF 94-0298
 coal OF 94-0298
 Tradewater Formation
 diagenesis OF 94-0298
 sedimentary petrology OF 94-0298
 Utah B 2110; OP-1168; OP-1272; OP-1551
 Virgilian
 Nebraska B 2110
 New Mexico OP-21
 Wyoming B 2110
 Virginia OP-1536
 Westerly Granite
 engineering geology OP-650; OP-1841
 faults OP-759
 geophysics OP-551
 structural geology OP-637; OP-1840
 Western Interior B 2110
 Wyandotte Limestone, ground water WRI 94-4166
- Penokean Orogeny**
 Canada, structural geology B 1904-T
 Minnesota, geochemistry B 1904-U
 United States, structural geology B 1904-T
 Wisconsin, plate tectonics OP-2121
- Peoples Democratic Republic of Yemen *see* Yemen
- Peoria Loess**
 pedogenesis OP-2319
- Pepperell Quadrangle**
 ground water OF 94-0398
 pollution OF 95-0142
- Pequea Creek watershed**
 ground water OF 95-0193
 hydrogeology OF 95-0113
- Pequop Mountains**
 Eocene OP-105
 geochemistry B 1988-K
- Peri-Caspian Depression *see* Caspian Basin
- peridotites** *see also* dunite; harzburgite; lherzolite.
 California, geochemistry OP-753
 Europe, weathering OP-2052
 Italy
 OP-1991
 structural analysis OP-755
 Montana, non-metal deposits OP-1492
 Oman, geochemistry OP-753
 Saudi Arabia, geochemistry OP-753
 Spain C 1129
- periglacial features *see* ice wedges; permafrost; pingos
 periglacial phenomena *see* periglacial features
- perlite**
 Oregon B 1738-E
- permafrost** *see also* frost action; ice; ice wedges.
 Alaska
 environmental geology OF 95-0346
 geochemistry B 2107
 geologic hazards OF 95-0175
 hydrogeology OF 94-0367
 Quaternary OP-1692
 Northwest Territories, geochemistry OP-192
 Quaternary OF 94-0694
 permeability coefficient *see* hydraulic conductivity
Permian *see also* Calaveras Formation; Hercynian Orogeny; Ivishak Formation; Lisburne Group; Maroon Formation; Wood River Formation.
 OF 94-0298; OP-182; OP-225; OP-1319; OP-1340; OP-1404
 Abo Formation OP-21
 Alaska OP-39
 Appalachian Phase, Atlantic Coastal Plain OP-1960
 Argentina C 1129
 Arizona OP-1435
 California C 1129
 Chase Group, ground water OP-1167
 Colorado B 2110; B 2116
 Commonwealth of Independent States B 2110; OP-1212
 Council Grove Group, ground water OP-1167
 Cutler Formation
 OF 94-0583
 energy sources OP-1461; OP-1557
 petroleum B 2000-J
 Delaware Mountain Group, diagenesis OP-1472
 Guadalupian
 China OP-2253
 Idaho OP-361
 Iran OP-2253
 Oregon OP-361
 Pakistan OP-2253
 Texas OP-2253
 Illinois OP-2050
 Italy OP-754
 Japan OP-1132
 Kaibab Formation
 energy sources OP-1557
 tectonics OP-1556
 Kansas OF 95-0256
 Leonardian
 Idaho OP-361
 Oregon OP-361
 Mississippi Valley B 2094-B
 Nevada OP-78
 New Mexico B 2063
 Oklahoma OF 94-0504
 Oregon OP-1132
 Phosphoria Formation
 economic geology OP-597
 energy sources OP-701; OP-1557
 geochemistry OF 95-0270; OP-1955
 Russian Federation OP-50; OP-152
 Toroweap Formation, energy sources OP-1557
 Utah B 2110; OP-1435
 Wellington Formation, ground water OP-1167
 Yates Formation, solution features OP-190
- Permian Basin**
 diagenesis OP-1472
- Pernambuco Brazil**
 petrology C 1129
- Perry Quadrangle**
 geomorphology OF 95-0224
- Perry Reservoir**
 pollution OF 94-0670
- Persia *see* Iran
- Person Formation**
 ground water WRI 94-4117; WRI 95-4030
- Peru** *see also* El Nino.
 continental slope OP-1069
 energy sources OF 94-0559
 metal ores
 OP-202; OP-2126
 Arequipa Peru OP-1411
 Quaternary OP-2032
 stratigraphy OP-200
 tectonophysics OP-2328
- Peru-Chile Trench**
 natural gas OP-1391
 Quaternary B 2110
 tectonophysics OP-1762
- Perugia Italy *see* Gubbio Italy
- pesticides** *see also* aldicarb; herbicides; insecticides.
 Arizona, pollution WRI 95-4074
 California
 environmental geology OP-756
 pollution OF 95-0110; OF 95-0165; OF 95-0286; OP-215
 Colorado
 hydrology WRI 94-4041
 pollution OP-204
 environmental geology OP-581; OP-675; OP-2280
 geochemistry OF 94-0362; OF 95-0140; OF 95-0181
 Great Plains, hydrogeology WRI 93-4231
 hydrogeology WRI 94-4061
 hydrology OF 94-0710-W
 Idaho
 environmental geology WRI 93-4156
 hydrology WRI 93-4229; WRI 94-4215
 Indiana, pollution OP-777
 Iowa, pollution OP-2067
 Kentucky, hydrology WRI 94-4227
 Louisiana, hydrology WRI 92-4181
 Midwest, environmental geology OP-2303
 Minnesota, hydrology OF 95-0283
 Mississippi, pollution OP-681
 Mississippi Valley, hydrology OF 93-0657
 Missouri, hydrology OF 93-0495
 Nebraska
 hydrogeology WRI 94-4095
 pollution OP-204
 New Jersey, pollution WRI 93-4101; OP-114; OP-910; OP-966; OP-2178
 New York, environmental geology OP-756
 North Carolina, pollution W 2435
 North Dakota
 hydrology OF 95-0283
 pollution OP-102
 Oklahoma, pollution OP-143
 Oregon
 environmental geology WRI 93-4156
 hydrology OF 95-0373
 Pennsylvania, environmental geology WRI 94-4060
 pollution OF 94-0506; OP-7; OP-2279
 Tennessee, pollution OF 95-0329; OP-688; OP-1006; OP-2044
 Texas
 ecology OP-1180
 hydrology WRI 94-4218
 pollution FS 0088-95
 Utah, hydrology WRI 94-4041
 Washington, hydrology WRI 94-4215
 Wisconsin, environmental geology OF 95-0163
 Wyoming
 hydrogeology WRI 94-4095
 hydrology WRI 93-4229

Petaluma Field

energy sources OP-1746

Petatlan earthquake 1979

seismology OP-613

Petersburg Alaska

environmental geology OF 95-0342

Petersburg Formation

coal OF 94-0298

Peterson Field

energy sources B 2063

Petrified Forest Member

OP-381

ichnofossils OP-379; OP-380

metal ores OP-805

sedimentation OP-2023

Petrified Forest National Park

stratigraphy OP-223; OP-1320; OP-1322

petrified moss *see* tufa

PETRIMES

mercury ores OP-530

petrofabrics *see also* preferred orientation.

Texas, structural geology C 1129

petrogeometry *see* structural analysis

Petroglyph Cliff Ignimbrite

stratigraphy B 2056

Petroglyph National Monument

geomorphology WRI 94-4205

petroleum *see also* bitumens; heavy oil; kerogen; natural gas; petroleum accumulation; petroleum assessment; petroleum engineering; secondary migration; secondary recovery; stratigraphic traps; structural traps.

C 1108; OF 94-0298; OF 94-0556; OF 95-

0246; OP-343; OP-577; OP-579; OP-1811

Alabama OF 94-0670

Australia, diagenesis OP-665

California

OF 95-0530; OP-385; OP-513; OP-1280;

OP-2189

geochemistry P 1566

Neogene B 1995-J,K

sedimentary petrology B 1995-H,I

stratigraphy B 1995-J,K

Colorado

OF 94-0670; OP-1280

sedimentary petrology OP-1272

stratigraphy OP-1645

Commonwealth of Independent States B 2110

diagenesis OF 94-0298

environmental geology C 1108

geophysical surveys OP-1898

Hungary, stratigraphy OP-951

Illinois

OF 94-0298

sedimentation OF 94-0298

Indiana

B 2094-D; OF 94-0298

structural geology OF 94-0298

Kentucky OF 94-0298

Louisiana OF 94-0228

Massachusetts, sedimentary petrology OF 95-

0044

Mexico OP-838

Michigan, mineralogy OP-2028

Midwest OF 94-0298

Mississippi Valley B 2094-C

Montana, stratigraphy B 2112

Nebraska, sedimentary petrology B 2110

Nevada

OF 94-0670; OP-2065

geophysical surveys OF 94-0670; OP-2029

sedimentary petrology B 1988-I

structural geology OP-1944

North Dakota

OP-749

stratigraphy B 2112

Pacific Ocean, geochemistry B 2022

Pakistan, structural geology B 2126

Pennsylvania, sedimentation OF 95-0240

Pennsylvanian OF 94-0298

pollution C 1108

stratigraphy OP-1558

Texas

OF 94-0228; OP-220; OP-1286

diagenesis OP-1472

United States, diagenesis OP-665

Utah

OP-1166; OP-1461

sedimentary petrology B 2110; OP-1272

West Virginia, sedimentation OF 95-0240

Western Interior OP-597

Wyoming

OP-279

sedimentary petrology B 2110

sedimentary structures OP-1620

petroleum accumulation *see also* stratigraphic

traps; structural traps.

OF 95-0075-B; OF 95-0075-E; OP-2220

Alaska

energy sources OP-1545

natural gas C 1118

California

B 2120

natural gas OP-1121

Colorado, energy sources OP-297

Florida, Devonian OP-1971

Georgia, Devonian OP-1971

Hungary, natural gas OP-155

natural gas C 1108; OF 95-0075-F; OP-575;

OP-578; OP-580

Utah, energy sources OP-297

Wyoming, energy sources OP-677

petroleum assessment *see also* natural gas; strati-

graphic traps; structural traps.

B 2118; OF 94-0298; OP-110; OP-917; OP-

1814

Alaska

OP-723; OP-2105

deformation OP-479

energy sources OP-576

California

B 2120; OF 95-0014; OF 95-0025

economic geology OF 94-0712

Colorado, coal OP-947

energy sources B 2137; C 1108; OF 95-0075-A

environmental geology OP-183

Florida, Devonian OP-1971

Georgia

Devonian OP-1971

stratigraphy OP-742

Iran OP-807

Kansas B 2110

Kazakhstan, energy sources OP-169

Kentucky OF 94-0298

Nevada

OP-1470

economic geology OF 94-0712

structural geology OP-1820

New Mexico, economic geology DDS-0017

New Zealand, energy sources OP-207

Rocky Mountains, energy sources OP-1942

Russian Federation OP-152; OP-153

stratigraphy OP-2099

Wyoming, energy sources OP-677; OP-701

petroleum engineering *see also* natural gas; sec-

ondary recovery.

OP-917; OP-1815

energy sources OP-1147

Pennsylvania, ground water WRI 87-4136

Wyoming

energy sources OP-746

oil and gas fields OF 94-0670

Petroleum Exploration and Resource Evalua-

tion System

mercury ores OP-530

petroleum maps

Texas, hydrogeology WRI 94-4036

petroleum products *see also* gasoline.

New Mexico, environmental geology OF 94-

0547

South Carolina, pollution OF 94-0486

Washington, pollution WRI 94-4030

petroleum seepage *see* oil seeps

Petroleum Technology Transfer Council

petroleum OF 94-0298

Petrolia Field

energy sources OP-1746

petrologen *see* kerogen

petrology *see* crystalline rocks; fluid inclusions; igneous rocks; inclusions; intrusions; lava; magmas; metamorphic rocks; metamorphism; metasomatism; meteor craters; phase equilibria; volcanism; volcanology

petromorphology *see* structural analysis

petrostratigraphy *see* lithostratigraphy

Petsamo *see* Pechenga

PGE *see* platinum group

Phanerozoic *see also* Paleozoic.

C 1108; OP-1480; OP-2220

Alaska OP-1895; OP-1956

Arabian Peninsula OP-1220

California C 1129

Colorado C 1129

Iowa OP-1059

Mexico C 1129

Montana OF 94-0670; OP-596

Pennsylvania OP-1895

Rocky Mountains OF 95-0571; OP-1366

South America OF 94-0559

Utah I-2462; OP-2111

phase equilibria *see also* carbon dioxide; crystal

chemistry; crystal growth; inclusions; magmas.

C 1129; OP-83; OP-139; OP-611; OP-1236;

OP-1520; OP-1609

Alaska OP-409

Canada OP-409

Colorado, metal ores B 2116

copper ores C 1129

geochemistry OP-673; OP-978; OP-1279; OP-

2106

Hawaii, geochemistry OP-314

Mexico OP-387; OP-1489; OP-1870

Mississippi Valley, metal ores OP-888

Nevada C 1129

North Carolina, structural geology OP-1335

Ontario OP-387; OP-1489

oxides OP-1642

Pacific Ocean OP-2266

Pakistan, geochemistry C 1129

Washington OP-391

phase transitions OP-960; OP-1138; OP-1237; OP-1307; OP-1326; OP-1446; OP-1478; OP-1858; OP-2051; OP-2159

- Phelan Creek Alaska**
hydrology OP-127
- Phelan Creeks California**
Quaternary OF 94-0568
- Phi Kappa Formation**
polymetallic ores B 2064-A-R
- Philadelphia Pennsylvania**
hydrology OP-1015
- Philippine Islands**
engineering geology, Mount Pinatubo OP-1683
geologic hazards, Luzon OP-1048
petrology
Luzon OP-1574
Mount Pinatubo C 1129
Quaternary
Luzon OF 94-0568
Mount Pinatubo OP-467; OP-752; OP-1886; OP-1952
- Philippine Sea Plate**
Japan
plate tectonics OF 94-0568
Quaternary OF 94-0568
Philippine Islands, geologic hazards OP-1048
- phillipinite**
Far East, petrology OP-1574
- Phillips Sandstone**
natural gas OP-854
- phillipsite**
Oregon, sedimentary petrology B 2108
- phlogopite**
China, magmas OP-1935
- Phoenix Arizona**
hydrology WRI 95-4059
pollution WRI 95-4074
- phonolites**
Colorado
metal ores OP-1626
Oligocene OP-1625
- phosphate deposits**
Georgia
OP-399; OP-583; OP-1506; OP-1969
oceanography OP-585
Missouri OF 94-0670
Western Interior OP-597
- phosphate rocks**
California, geochemistry P 1566
Georgia
continental shelf OP-584
geochemistry OP-398
oceanography OP-586
phosphate deposits OP-583
Idaho, geochemistry OF 95-0270
Wyoming, geochemistry OF 95-0270
- phosphates** *see also* apatite; francolite; monazite; rhabdophane.
Florida, sedimentary petrology OP-1710
Georgia, phosphate deposits OP-399
Pacific Ocean, geochemistry OF 95-0505
Peru, continental slope OP-1069
- Phosphoria Formation**
economic geology OP-597
energy sources OP-701; OP-1557
geochemistry OF 95-0270; OP-1955
- phosphorite** *see* phosphate rocks
- phosphorus**
China, Conodonts OP-1021
geochemistry C 1129
Great Lakes region, hydrology WRI 95-4005
Great Plains, hydrogeology WRI 93-4231
ground water OP-1553
hydrogeology WRI 94-4061; WRI 95-4031; OF 95-0141
Idaho
ground water WRI 94-4135
hydrology WRI 94-4215
Iowa, hydrology WRI 94-4130
Kansas, hydrology W 2352-B
Massachusetts
geochemistry OF 94-0384
waste disposal OP-2249
Minnesota, Quaternary OP-1290
Nebraska, hydrology W 2352-B
North Carolina, pollution W 2435
Tennessee, pollution OP-688; OP-1006
Washington, hydrology WRI 94-4215
Wisconsin
hydrogeology WRI 94-4101
hydrology OF 95-0163
pollution OF 95-0163
Wyoming, ground water WRI 94-4135
- photogeologic maps**
Colorado, geologic hazards MF-2295
Montana MF-2281; MF-2289; MF-2290
- phreatomagmatism**
British Columbia, petrology OP-1847
El Salvador, Quaternary OP-1816
Hawaii, petrology OP-1766
- phyllites**
Tennessee, environmental geology OF 95-0477
- phyllosilicates** *see* sheet silicates
- phylogeny** *see also* adaptive radiation; cladistics.
New York, stratigraphy OP-685
Utah, Vertebrata OP-145
- physiographic maps**
Alaska OP-971
Great Lakes, lacustrine features I-2429
- phytane**
California, natural gas OP-542
Colorado, geochemistry OP-1713
Indiana, energy sources OP-2020
- phytogeography** *see* biogeography
- Picatinny Arsenal**
environmental geology WRI 92-4122; WRI 92-4134
- Picayune Formation**
metal ores OF 94-0291
- Piceance Creek basin**
coal OP-947
energy sources OP-297
- Pico Fault**
engineering geology OP-891
- picrite**
Hawaii OP-1372
Russian Federation, geochemistry OP-421
- Piedmont**
areal geology OP-63
environmental geology OP-435
ground water OF 94-0372; OF 94-0373; OP-410
hydrogeology OF 94-0507; OF 95-0113; FS 94-0010; OP-1819; OP-2161
hydrology WRI 94-4042; OF 94-0379; OF 94-0385; OF 94-0509; OF 95-0136; OP-120; OP-1554
magmas P 1529
maps OF 94-0629; OF 95-0004
Paleozoic OP-1670
pedogenesis B 1589-E
pollution W 2435; WRI 92-4088; OP-999; OP-1985
soils OP-1555
stratigraphy OP-766
structural geology OP-1202; OP-1317; OP-1536; OP-2155
- Piemonte Italy**
petrology C 1129
structural analysis OP-755
- piercing fold** *see* diapirs
- Piermont Allochthon**
structural geology OP-1830
- Pierre Shale** *see also* Sharon Springs Member.
OP-1671
geomorphology OP-2034
maps I-2433-B
- piezomagnetic effects**
California
rock mechanics OF 94-0228
seismology OP-262
- pigments** *see* chlorophyll
- Pike Hill Deposit**
metal ores OP-870
- Pike Island Dam**
hydrology OF 95-0129
- Pikes Peak Batholith**
mineralogy OP-1828
stratigraphy OP-1363
- Pilot Knob Valley**
seismology OF 94-0568
- Pilot Range**
orogeny OP-619
- Pilot Shale**
structural geology OP-2115
- Pilot Valley**
hydrogeology OF 95-0104
- Pinaceae** *see* Pinus
- Pinal Creek basin**
hydrogeology OP-1965
hydrology WRI 95-4053
pollution OF 94-0508
- Pinatubo** *see* Mount Pinatubo
- Pine Grove Deposit**
molybdenum ores OP-849; OP-1725
- Pine Hill Formation**
Triassic OP-925
- Pine Mountain Window**
geochronology OP-510
pedogenesis B 1589-E
structural geology OP-2155
- Pine Valley Nevada**
geophysical surveys OF 94-0670; OP-2029
- Pinecrest Beds**
Quaternary OP-1001
- Pinedale Glaciation**
Colorado GQ-1764
Idaho OF 94-0568
Montana OP-121; OP-902
Wyoming OP-355; OP-902
- Pinewood South Carolina**
ground water WRI 93-4185
- Piney Point Formation** OF 94-0217; OF 94-0708
- pingos**
New England, Quaternary OP-1072
- Pinkerton Mesa Quadrangle**
geochemistry OF 94-0295
- Pinkerton Trail Formation**
diagenesis OP-1242
- Pinole Fault**
geophysical surveys OF 94-0568
seismology OP-2284

- Pinole Point Field**
energy sources OP-1746
- Pinon Range**
orogeny OP-619
pinquite *see* nontronite
- Pinson Deposit**
geochemistry OF 94-0670
- Pinto Mountain Fault**
seismology OP-1541
- Pinus**
Oregon, Quaternary OP-1635
- Pioneer Fault**
structural geology OP-2123
- Pioneer Mountains**
economic geology B 2064-A-R
metal ores B 2064-A-R
- Pioneer Seamount**
Quaternary OF 95-0034
- Pipe Organ Vent**
geochemistry OF 94-0015
oceanography OP-503
- Pipe Spring Pluton**
geochronology OP-844
- Piper Peak Quadrangle**
maps I-2464
pipes *see* breccia pipes
piracy *see* stream capture
- Pirate Fault**
structural geology OP-1282
- Piru Quadrangle**
maps OF 95-0511
- Pisco Formation**
stratigraphy OP-200
- Pisgah Crater**
volcanic features OP-305
- pistacite *see* epidote
- Pit of Death core**
stratigraphy OF 95-0001
- pitching folds *see* plunging folds
- Pitman Canyon**
Quaternary OF 94-0568
- Pitman Quadrangle**
stratigraphy P 1554
- pits**
Utah, sedimentary petrology OP-1882
- Pittsburg California**
deformation OP-1774
structural geology OP-1773
- Pittsburgh Coal**
impact statements OF 95-0589
sedimentary petrology OP-1340
- Pittsburgh East Quadrangle**
ground water WRI 87-4136
- Pittsburgh Fault**
structural geology OP-1234
- Pittville Fault**
tectonophysics OP-1444
- Plute Mountains**
magmas OP-313; OP-321
maps OF 95-0598
- placers** *see also* diamonds; heavy mineral deposits; monazite deposits.
Alaska
OP-296
environmental geology B 2107
gold ores B 2107
metal ores OP-670; OP-671
California, metal ores OP-663
Idaho
economic geology P 1525
gold ores P 1525; OF 95-0495
metal ores B 2110; OP-863
Rocky Mountains, metal ores OP-1366
Venezuela, environmental geology YR
- Placerville mining district**
metal ores OP-98
- plagioclase** *see also* albite; analbite; anorthite; labradorite; mymekite.
OP-1580; OP-1789
Alaska
geochemistry B 2139
metamorphism B 2107
Pliocene OF 95-0217-A; OF 95-0217-B
California
geochronology OF 94-0587
Quaternary OP-1505
Iowa, stratigraphy OP-1671
Japan, geochemistry C 1129
Mexico, geochronology OF 94-0587
Oregon, Quaternary OP-1505
Pacific Ocean, geochemistry B 2022
Yukon Territory, Pliocene OF 95-0217-A; OF 95-0217-B
- plagioclasite *see* anorthosite
- plains *see* chenier plains
- planar bedding structures *see* bedding; cross-bedding; cyclothems; flaser bedding; hummocky cross-stratification; laminations; rhythmite; sand bodies; varves
- planation**
Arizona, Quaternary OP-1287
Utah, Quaternary OP-1287
- planation surfaces *see* erosion surfaces
- planetary interiors** OP-259
- planetary rings** B 2129
- planetology** *see also* asteroids; Mars; Mercury Planet; Neptune; outer planets; Pluto; Saturn; Uranus; Venus.
OP-2182
- planets** *see also* Jupiter; Mars; Mercury Planet; Neptune; Saturn; Uranus; Venus.
OP-1105
- Plantae** *see also* bryophytes; pteridophytes; Spermatophyta; thallophytes.
South America, Quaternary OP-1993
- plants** *see also* algal flora; ferns; gymnosperm flora.
Alaska
environmental geology OF 94-0627
paleontology OF 94-0215
Quaternary OF 94-0568
Antarctica, Pliocene OF 94-0588
Arizona, stratigraphy OP-1320
Colorado
base metals OP-557
ecology OP-150
environmental geology OF 94-0580
geochemistry OP-1700
hydrogeology WRI 94-4111
pollution OP-34; OP-253; OP-329
Quaternary OP-1742
geochemistry C 1108
Great Plains, stratigraphy OP-1589; OP-1889
Kansas, ecology W 2352-B
Louisiana, ecology OF 94-0275
Micronesia, geochemistry OP-689
Midwest, pollution OP-1056
Minnesota, geochemistry OP-498
Nebraska, ecology W 2352-B
Nevada, gold ores OP-895
- Oregon, Quaternary OP-1876
Pacific Ocean, Quaternary OP-1354
Pennsylvanian B 2110
Portugal, pyrite ores B 2081
Russian Federation, Pliocene OF 94-0588
sedimentary petrology OP-1885
Tertiary OP-1888
Texas, pollution OP-1093
Washington
earthquakes OP-1189
hydrology OF 94-0308
Quaternary OP-1876
Wisconsin, hydrogeology OF 95-0163
- plaster stone *see* gypsum
- plastic deformation**
California, volcanism OP-531
Louisiana, natural gas OP-1543
- plate boundaries** *see also* plate convergence.
Alaska, sedimentation OP-2160
Arizona, tectonophysics OP-352
Atlantic Ocean, plate tectonics OP-1312
Bahamas, plate tectonics OP-1314
Basin and Range Province, structural geology OP-1741
California
economic geology OP-216
faults OP-492
Pliocene OP-2061
seismicity OP-1745
seismology OP-203
structural geology OP-1599
tectonophysics OP-1521
Chile, geochemistry C 1129
Djibouti, tectonophysics OP-2152
Dominican Republic
plate tectonics OP-1751; OP-1983
Quaternary OF 94-0568
earthquakes OP-1346
East Pacific Ocean Islands, petrology OP-390
Nevada, faults OP-492
Oregon
Quaternary OP-1629
seismology OP-203
Pacific Coast, Quaternary OP-661
Pacific region, geologic hazards OP-2190
Puerto Rico, plate tectonics OP-1304
seismology OP-1892
tectonophysics OP-985
West Indies, plate tectonics OP-1312
- plate collision**
Alaska
deformation OP-1849
magmas OP-626
metamorphic rocks OP-1930
petrology OP-409
plate tectonics OP-1682; OP-1894; OP-1956
Atlantic Ocean, plate tectonics OP-1312
Bahamas, plate tectonics OP-1314
Brazil, inclusions C 1129
California, structural geology OP-1599
Canada
petrology OP-409
structural geology B 1904-T
Caribbean region, earthquakes OP-1313
energy sources OP-1546
Europe, structural geology OP-598
Greater Antilles, earthquakes OP-1313
Papua New Guinea, tectonophysics OP-1035
plate tectonics OP-1256
Puerto Rico
earthquakes OP-2238
plate tectonics OP-1304

- Rocky Mountains, structural geology OP-1232
 Spain, geochemistry C 1129
 tectonophysics OP-985
 United States, structural geology B 1904-T
 Vanuatu, plate tectonics OP-162; OP-336; OP-337
 West Indies, plate tectonics OP-1312
 Wyoming, structural geology OP-1288
- plate convergence**
 Alaska
 energy sources OP-574
 petrology OP-100
 plate tectonics OP-1682; OP-1956
 Quaternary OP-1098
 seismology OP-697
 structural geology OP-1249; OP-1447
 tectonophysics OP-953
 Bolivia, seismology OP-1353
 California
 metal ores OP-801
 sedimentary petrology OP-603
 seismology OP-1872
 tectonophysics OP-1778
 Canada, tectonophysics OP-2265
 Chile, Quaternary OP-1098
 Japan, plate tectonics OF 94-0568
 Mexico, petrology OP-827
 Micronesia, manganese ores OP-1409
 Pacific Ocean, metal ores OP-1080
 Pakistan, structural geology OF 94-0670
 Peru, stratigraphy OP-200
 Puerto Rico, Quaternary OF 94-0568
 Quaternary OP-2174
 United States, tectonophysics OP-2265
 Wales, geochemistry C 1129
 Washington
 crust OP-1776
 structural geology OP-1979
 tectonophysics OP-1975
- plate geometry**
 Bolivia, plate tectonics OP-180
- plate margins** *see* plate boundaries
- plate rotation**
 Alaska, plate tectonics OP-1956
 Australia, tectonophysics OP-704
 Belarus, structural geology OP-948
 Bering Sea, tectonophysics OP-1261
 California, stratigraphy B 1995-J,K
 Canada, tectonophysics OP-704; OP-2265
 tectonophysics OP-985
 Ukraine, structural geology OP-948
 United States, tectonophysics OP-2265
- plate tectonics** *see also* accretionary wedges; active margins; African Plate; Antarctic Plate; apparent polar wandering; Arabian Plate; back-arc basins; Benioff zone; Caribbean Plate; Cascadia subduction zone; compression tectonics; continental drift; continental margin; crustal shortening; crustal thinning; earthquakes; Eurasian Plate; extension tectonics; Farallon Plate; fore-arc basins; geosynclines; geotectonic maps; hot spots; Indian Plate; Indo-Australian Plate; island arcs; Juan de Fuca Plate; Kula Plate; mantle plumes; melange; metamorphic core complexes; Nazca Plate; North American Plate; obduction; ophiolite complexes; oroclinal; Pacific Plate; passive margins; Philippine Sea Plate; plate boundaries; plate collision; plate convergence; plate geometry; polar wandering; rift zones; sea-floor spreading; seismotectonics; South American Plate; spreading centers; subduction; subduction zones; suture zones; terranes; transform faults; transpression; trenches; triple junctions.
 OP-2002; OP-2309
 Africa OP-636
 Alaska
 energy sources OP-1270
 geomorphology B 2072
 Arizona, petrology OP-1185
 Brazil, metal ores OP-198
 California, seismology OF 94-0228
 Canada, Jurassic OP-745
 geochemistry C 1129
 geothermal energy OP-655
 Iran OP-154
 Japan, petrology OP-270
 Massachusetts, environmental geology OP-1187
 Middle East
 OF 94-0568; OP-923
 deformation OP-1615
 New Jersey, geochemistry P 1565-A
 New Zealand, Quaternary OP-431
 Pacific Ocean OP-1441; OP-1442; OP-1443
 Russian Federation, petroleum OP-152
 United States, Jurassic OP-745
- plateau basalts** *see* flood basalts
- plateaus**
 OP-605
 Antarctica, geophysical surveys OF 95-0225
 Arizona, neotectonics OP-709
 China
 mantle OP-1020
 Quaternary P 1549; OF 94-0568
 Hawaii, Quaternary OP-2246
 hydrology FS 94-0015
 Missouri, environmental geology OF 94-0333
- platforms** *see* carbonate platforms
- platinum**
 geochemistry OP-976
- platinum group** *see also* iridium; osmium.
 China, metal ores OP-1871
- platinum ores**
 OP-104
 China OP-1871
 Russian Federation, geochronology OP-194
- Plato Crater** OP-58
- Platoro Colorado**
 environmental geology OP-334
 metal ores OP-333
 pollution OP-92
- Platte River**
 hydrology OF 93-0657
- Platte River basin**
 hydrology OF 94-0496
 petrology WRI 94-4057
- Platteville Aquifer**
 ground water WRI 94-4204
- Platteville Colorado**
 ground water WRI 94-4037
- Platteville Formation**
 ground water OF 95-0163
- Plattsburg Limestone**
 ground water WRI 94-4166
- playas**
 California
 ground water WRI 93-4003
 Quaternary OF 94-0568
 volcanic features OP-305
 Great Plains, hydrogeology OP-1017
 New Mexico
 hydrogeology OF 94-0702-W
- pollution OP-1019
- Texas
 hydrogeology OF 94-0702-W
 pollution OP-1019
- Utah
 hydrogeology OF 95-0104
 Quaternary B 2056
- Pleistocene** *see also* Santa Clara Formation.
 OP-61; OP-717; OP-2099
 Alaska OP-124; OP-357; OP-604
 Antarctic Ocean OP-54
 Arctic Ocean OP-1049; OP-1566
 Bandelier Tuff, geochemistry B 2081
 Basin and Range Province OP-64; OP-1741; OP-2198
 Bering Sea OP-1049
 Bermuda OP-1733
 Bishop Tuff, Quaternary OP-1575; OP-2006
 British Columbia OP-1847
 California OF 94-0568; OF 94-0587; OF 94-0641; OP-216; OP-341; OP-397; OP-625; OP-737; OP-785; OP-940; OP-1145; OP-1505; OP-1803
 Caribbean region OP-1150
 Chile OF 95-0226; OP-1762
 Colorado OP-572; OP-986; OP-1743
 Djibouti OP-2152
 Eemian
 OP-981
 Greenland C 1108
 El Salvador OP-1816
 Far East OP-1574
 Florida OP-1455; OP-1733; OP-2295
 Georgia OP-586
 Glasford Formation, Quaternary OP-1630
 Great Basin OP-64; OP-2198
 Gubik Formation
 OF 94-0588
 areal geology OP-641
 Hawaii OP-1183; OP-1184; OP-2175
 Idaho OF 94-0686; OP-1900
 Illinoian
 Mississippi Valley OP-1757
 Wyoming OP-355
 Illinois OP-1451
 Indiana OP-1451
 Irvingtonian, Idaho B 2105
 Israel OF 94-0568
 Japan OP-1269
 Jaramillo Event
 Indonesia OP-443
 New Mexico OP-443
 Lake Lahontan, sedimentary petrology OP-59
 Lake Missoula, Quaternary OP-679; OP-680; OP-2237
 Lesser Antilles OP-1150
 Louisiana OP-1936
 Loveland Loess
 pedogenesis OP-2319
 Quaternary OP-1758
 Manitoba OP-527
 Mexico OF 94-0587
 Montana I-2446
 Nevada OP-2276; OP-2289
 New England OP-1072
 New York WRI 90-4168
 North Dakota OP-2168
 Old Crow Tephra, Quaternary OP-1458
 Oregon OP-397; OP-659; OP-1505; OP-1945
 Pacific Coast OF 95-0034; OP-2250
 Pacific Ocean OP-1702
 Papua New Guinea OP-1035

- Peoria Loess, pedogenesis OP-2319
 Peru OP-200
 Presumpscot Formation, Quaternary OP-990
 Puerto Rico OP-1924; OP-2179
 Roxana Silt, pedogenesis OP-2319
 Russian Federation OP-1877
 Sangamonian
 California OF 94-0568
 Mississippi Valley OP-1758; OP-2319
 United Arab Emirates OP-1016
 Utah OF 95-0001
 Wedron Formation, areal geology OP-295
 Weichselian, Greenland C 1108
 Wisconsinan
 Alaska OP-1457
 California OP-761; OP-2005
 Columbia Plateau OP-2237
 Greenland OP-187
 Maine OP-990; OP-2200
 Massachusetts OP-683; OP-990
 Mississippi Valley OP-1757
 Montana OP-121
 Nevada OP-761; OP-2005
 New England OP-1658; OP-1659; OP-2163
 New Jersey OP-1188
 Washington OP-205
 Wyoming OP-355
 Wyoming OP-1583
 Younger Dryas
 Pacific Ocean OP-1354
 Peru OP-2032
- pleniglacial, last *see* last glacial maximum
plinian-type eruptions
 Alaska, Quaternary B 2139; OP-772
 Utah, molybdenum ores OP-1725
 Yukon Territory, Quaternary OP-772
- Pliocene** *see also* Imperial Formation; Ogallala Formation; Purisima Formation; Santa Clara Formation; Tamiami Formation.
 OF 94-0588; OP-61; OP-1565
 Alaska OF 94-0281; OF 94-0588; OF 95-0217-A; OF 95-0217-B; OP-604; OP-953; OP-1171
 Antarctic Ocean OF 94-0588; OP-54
 Antarctica OF 94-0588
 Arctic Ocean OF 94-0588
 Arctic region OF 94-0588
 Arizona OP-709
 Atlantic Coastal Plain FS 0117-95
 Atlantic Ocean OF 94-0588; OP-218; OP-233; OP-1334
 Bahamas OP-540
 California OF 95-0535; OP-216; OP-341; OP-385; OP-805; OP-940; OP-1584
 Caribbean region OP-1150
 Chile OF 95-0226
 Citronelle Formation, ground water WRI 95-4013
 Colorado OP-526
 Europe OP-2052
 Florida OP-2293
 Gauss Epoch
 Alaska OP-1881
 Arctic Ocean OF 94-0588
 Georgia OP-586
 Goliad Sand, ground water WRI 95-4038
 Greenland OP-1171
 Hawaii OP-2215
 Hungary OP-951
 Idaho P 1525; B 2064-A-R; OF 94-0686
 Italy OP-962
 Japan OP-1269
- Lesser Antilles OP-1150
 Mississippi OF 94-0702
 Oman OP-2311
 Oregon B 1738-E
 Pacific Ocean OF 94-0588; OP-218; OP-1088
 Papua New Guinea OP-1035
 Puerto Rico OP-1304; OP-2179
 Russian Federation OF 94-0588
 Tyrrhenian Sea OP-942
 United Arab Emirates OP-2311
 Utah OF 95-0001; OF 95-0491; OP-1292; OP-1842
 Virginia OP-2071
 Yukon Territory OF 95-0217-A; OF 95-0217-B
- pliomagmatic zone *see* eugeosynclines
PLOTSEIS
 geophysical surveys OF 95-0516
- plugs**
 Iceland, geophysical surveys OP-1389
 Montana, non-metal deposits OP-1492
 United States, geophysical surveys OP-1389
- plumes** *see also* hot spots; mantle plumes.
 OP-851
 Alaska
 geophysical surveys B 2139
 petrology B 2139
 Quaternary B 2139; OP-1263
 California, seismicity OP-457
 Colorado, geochemistry OP-1806
 Illinois, pollution WRI 94-4034
 Massachusetts
 environmental geology OF 95-0290; OP-1187
 pollution OP-509; OP-616; OP-1765
 waste disposal OP-2249
 Minnesota, ground water WRI 94-4204
 Yukon Territory, petrology B 2139
- plunging folds**
 Alaska, paleomagnetism OP-1135
 Canada, paleomagnetism OP-1135
 Wyoming, energy sources OP-1621
- Plush Ranch Formation**
 sedimentary petrology OP-159
- Pluto *see* satellites
- plutonic rocks** *see also* carbonatites; diabase; diorites; gabbros; granites; lamprophyres; syenites; ultramafics.
 OP-125
 Alaska
 OF 94-0268; OP-633
 metal ores OP-1195
 British Columbia OF 94-0268
 California OP-319
 Colorado, stratigraphy OP-1363
 Idaho
 P 1525
 structural geology OP-1673
 Japan OP-270
 Montana MF-2291
 Nevada, geophysical surveys OF 93-0397-A; OF 93-0397-B
 Oregon OP-41
 Utah, geophysical surveys OF 93-0397-A; OF 93-0397-B
 Washington, geologic hazards OP-2329
- plutonism**
 Colorado, pollution OP-1466
 Pu-239, California OP-1397
- plutons**
 C 1129
- Alaska
 C 1129; OP-40; OP-100; OP-229; OP-296; OP-409; OP-471; OP-626; OP-632; OP-672; OP-711; OP-784
 geochemistry B 2107; OP-23
 gold ores OP-2184
 metal ores OP-1169
 Alps C 1129
 Andes, Quaternary OP-1511
 Appalachians, stratigraphy OP-766
 Argentina
 C 1129
 faults C 1129
 geochemistry C 1129
 Arizona
 C 1129
 deformation OP-15
 geochemistry OP-1104
 stratigraphy OP-350
 structural geology OP-1380
 Australia C 1129
 Austria C 1129
 Basin and Range Province, metal ores OP-1874
 Brazil
 C 1129
 geochemistry C 1129
 geochronology C 1129
 California
 C 1129; OP-45; OP-319; OP-1095
 faults C 1129
 geochemistry C 1129; OP-160
 structural geology OP-432; OP-1462
 Canada
 C 1129; OP-409
 geochemistry C 1129
 metal ores OP-1169
 Chile, geochemistry C 1129
 Finland C 1129
 Germany
 C 1129
 geochemistry C 1129
 Great Basin, metal ores OP-1874
 Greece, geochemistry C 1129
 Idaho, geochronology C 1129
 Ireland C 1129
 Italy
 C 1129
 geochemistry C 1129
 Japan
 C 1129
 geochemistry C 1129
 Maine
 C 1129
 geochemistry C 1129
 metal ores OP-555
 Massachusetts, structural geology OP-782
 Mexico C 1129
 Minnesota
 geochemistry B 1904-U
 Precambrian OP-886
 Mohorovicic discontinuity C 1129
 Montana, geochronology C 1129
 Nevada
 C 1129; OP-258; OP-1817
 deformation OP-15
 geochemistry C 1129
 geochronology OP-844
 geophysical surveys OF 93-0397-A; OF 93-0397-B
 gold ores OP-2151
 orogeny OP-619
 structural geology OP-454
 New Mexico C 1129

- New South Wales Australia C 1129
 New Zealand C 1129
 Newfoundland C 1129
 Oregon
 OP-41
 structural geology OP-1436
 Romania, geochemistry C 1129
 Saudi Arabia C 1129
 Scotland
 C 1129
 structural geology C 1129
 Spain
 C 1129
 geochemistry C 1129
 United Kingdom, faults C 1129
 United States C 1129
 Utah
 C 1129
 geophysical surveys OF 93-0397-A; OF 93-0397-B
 orogeny OP-619
 Vermont, geochemistry C 1129
 Victoria Australia C 1129
 Virginia
 P 1529
 geochemistry C 1129
 Washington
 C 1129; GQ-1681; OP-391
 faults C 1129
 Wyoming, stratigraphy OP-364
 Yukon Territory, tectonics OP-360
- pluvial environment**
 United Arab Emirates, Quaternary OP-1016
- Plymouth Formation**
 stratigraphy B 2060
- Plymouth Quadrangle**
 maps OF 94-0225-A; OF 94-0225-B; OF 94-0654-A; OF 94-0654-B
 stratigraphy B 2060
- Pn-waves** OP-2056
- Poas**
 geochemistry OP-810
- Pocahontas Formation**
 paleobotany OP-2304
- Pochack Creek**
 hydrology OF 94-0499
- Poco Canyon Caldera**
 structural geology OP-454
- podiform deposits**
 Alaska, metal ores B 2084; OP-1893
 California, chromite ores OP-864
 Oregon, chromite ores OP-864
- Podocopida**
 Alaska P 1544
- Point Barrow Alaska** *see* Barrow Alaska
- point bars**
 Arizona OP-2072
- Point Delgada California**
 deformation OP-107
 neotectonics OP-2070
- Point Loma Formation** OF 94-0678
- Point of Rocks Quadrangle**
 geomorphology OP-196
 Proterozoic OP-3
- Point Sal**
 energy sources
 OF 95-0530
- Poland**
 energy sources
 Lower Silesia OP-770
 Silesian coal basin OP-770
- Upper Silesia OP-770
 geochemistry C 1108
 lead-zinc deposits, Upper Silesia OP-908
 petrology OP-1827
- polar caps** OP-484; OP-486; OP-880
- polar motion** *see* polar wandering
- Polar Research Program**
 areal geology OF 95-0247
- Polar Urals**
 geochemistry OP-843
- polar wandering** *see also* apparent polar wandering.
 Arizona, stratigraphy OP-350
- pole positions** *see also* apparent polar wandering.
 Arizona
 copper ores OP-291
 stratigraphy OP-353
 tectonophysics OP-352
 Colorado
 metal ores OF 94-0291
 stratigraphy OP-1363
 Idaho, tectonophysics OP-361
 Oklahoma, Quaternary OP-463
 Oregon, tectonophysics OP-361
 Poland, lead-zinc deposits OP-908
 Texas, paleomagnetism OP-1350
 Utah, Quaternary OP-1273
- pole shifting** *see* polar wandering
- polished surface** *see* slickensides
- pollen**
 Alaska
 paleomagnetism OP-1881
 paleontology OF 94-0215
 Quaternary OP-604; OP-1172; OP-1457
 Atlantic Ocean, Pliocene OP-218
 California, Quaternary OF 95-0034; OP-1040; OP-1158
 Canada, stratigraphy OP-668
 China, Quaternary P 1549
 Colorado
 Paleogene OP-1890
 sedimentary petrology OP-1373
 Florida, stratigraphy OP-2295
 Idaho, Quaternary B 2105
 Louisiana, Paleocene OF 95-0208
 Minnesota, Quaternary OP-2082
 Mississippi, Paleocene OF 95-0208
 New Jersey, stratigraphy OP-2171
 New Mexico, sedimentary petrology OP-1373
 Oregon, Quaternary OF 95-0034; OP-1040; OP-1158; OP-1635; OP-2045
 Pacific Coast, Quaternary OP-1401
 Pacific Ocean
 Pliocene OP-218
 Quaternary OF 95-0034
 Pakistan
 coal B 2096
 sedimentary petrology OP-1386
 paleobotany OP-243
 Quaternary OP-1057
 Tertiary OP-1888
 United States, stratigraphy OP-668
 Utah, stratigraphy B 2115-B; OF 95-0001
 Washington, Quaternary OF 95-0034
 Wyoming, stratigraphy OP-667
- Pollino Range**
 Quaternary OF 94-0568
- pollution** *see also* acid mine drainage; acid rain; agrochemicals; chemical waste; cyanides; gasoline; hazardous waste; heavy metals; impact statements; industrial waste; land use; methanol; oil spills; PCBs; petroleum products; radioactive waste; radioactivity; sulfur dioxide; trace metals; waste disposal; waste disposal sites.
 YR; C 1108; OF 94-0378; OF 94-0490; OF 94-0506; OP-4; OP-6; OP-7; OP-8; OP-13; OP-28; OP-95; OP-131; OP-132; OP-138; OP-174; OP-186; OP-317; OP-377; OP-545; OP-630; OP-692; OP-693; OP-762; OP-1085; OP-1508; OP-1723; OP-1724; OP-1923; OP-2018; OP-2166; OP-2279; OP-2322; OP-2323
- Alaska**
 coal C 1108
 geochemistry B 2107
 hydrogeology C 1112
- Arizona**
 OP-257; OP-1476; OP-2226
 hydrology WRI 94-4240; WRI 95-4053
 metal ores OF 94-0670
- Arkansas** OP-32
- Atlantic Coastal Plain**
 OP-2264
 ground water OP-356; OP-845
- California**
 YR; OF 95-0110; OF 95-0165; OF 95-0291; OP-215; OP-1064; OP-1397; OP-1538; OP-1735; OP-1940; OP-2047; OP-2223; OP-2251
 ground water OF 94-0072; OF 94-0334; OP-226; OP-2066
 hydrogeology OF 93-0033
 hydrology OF 94-0470; OF 94-0471; OF 94-0543
- Colorado**
 OF 94-0670; OF 95-0026; OP-204; OP-253; OP-538; OP-608; OP-876; OP-929; OP-1466; OP-1796; OP-2316
 hydrogeology YR; OF 95-0536
 hydrology WRI 94-4194
- Delaware** OP-707; OP-1077
- energy sources** OP-433
- Florida**
 OP-806
 ground water W 2409
 hydrogeology WRI 92-4159
 hydrology WRI 94-4217
- geochemistry** B 2117; OF 94-0362; OF 94-0458; OF 95-0181; OF 95-0486; OP-1043; OP-1949; OP-1963; OP-2001
- geophysical surveys** FS 0121-95
- Georgia**, ground water OF 94-0520
- Great Plains**, hydrogeology OP-1017
- ground water** C 1108; OF 94-0670; OP-30
- Hawaii**, hydrogeology C 1112
- hydrogeology** WRI 94-4061; OF 94-0708-W
- hydrology** WRI 94-4115; OF 94-0710-W
- Idaho**
 OP-1039; OP-1146; OP-1156; OP-2129
 ground water WRI 94-4135
 hydrology WRI 93-4229; FS 94-0026
- Illinois**
 OF-702; OP-1111; OP-2185
 geologic hazards OP-2048
 hydrology FS 94-0018
- Indiana** OP-777
- Iowa**
 OP-839; OP-983; OP-1605; OP-2067
 hydrology WRI 94-4130
- Kansas**
 W 2352-B; OF 94-0670; OP-1693; OP-2145
 hydrogeology FS 0085-95
 hydrology W 2352-B
- Kentucky**

- geochemistry OP-2053
hydrology WRI 94-4065; WRI 94-4227
- Louisiana
OP-758
hydrology WRI 92-4181; FS 0118-95
- Maryland OP-702; OP-1077; OP-1786
- Massachusetts
OF 94-0384; OP-36; OP-37; OP-509; OP-616; OP-897; OP-1175; OP-1765
geophysical surveys WRI 94-4185
hydrology WRI 94-4003; WRI 94-4224
- Michigan OF 95-0163; OP-1267
- Midwest
OF 94-0396; OP-1652; OP-1807; OP-2089; OP-2201; OP-2303
hydrology WRI 93-4204
- Minnesota
WRI 95-4047; OF 95-0116; OP-1653; OP-1686
hydrology OF 95-0283
- Mississippi
OP-758
ground water WRI 94-4088
- Mississippi Valley
OF 94-0036; OF 94-0336; OF 94-0376; OP-1748
geologic hazards OP-1295
hydrology WRI 94-4191; OF 93-0657; OF 95-0149
- Missouri
OP-934; OP-2282
hydrogeology WRI 93-4154; OF 94-0538
- Montana OP-185
- Nebraska
W 2352-B; OP-204; OP-2145
hydrology W 2352-B
- Nevada
ground water OF 94-0031; OP-2066
hydrogeology OF 93-0033
- New England, hydrogeology FS 94-0027
- New Hampshire, ground water FS 0138-95
- New Jersey
WRI 93-4101; OP-114; OP-910; OP-966; OP-1087; OP-2176
ground water WRI 90-4095; WRI 94-4113
- New Mexico
C 1108; OP-2226
hydrology WRI 93-4113
uranium ores B 2063
- New York
OP-115; OP-1186
hydrology OF 94-0090
- North Carolina
OP-1427
hydrology OF 94-0454; OF 94-0511
- North Dakota
WRI 95-4047; OP-102; OP-179; OP-533; OP-808; OP-900; OP-1112; OP-1113; OP-1653; OP-1696
hydrology OF 95-0283
- Ohio OF 95-0371
- Oklahoma OP-143
- Ontario, ground water OP-170
- Pennsylvania
ground water WRI 87-4136
hydrogeology OF 95-0113
- Poland, geochemistry C 1108
- Rhode Island OP-2227
- Rocky Mountains OF 94-0670
- Samoa, ground water WRI 94-4142
- South Carolina, ground water OF 95-0507
- South Dakota, hydrogeology OF 95-0313
- Tennessee
OF 95-0156; OF 95-0477; OP-2044
ground water WRI 94-4212; OP-1825
hydrogeology WRI 93-4207
hydrology OF 95-0372
- Texas
OF 94-0302; FS 0088-95; OP-2009
ground water WRI 94-4092
hydrogeology FS 0090-95; FS 94-0048
- Ukraine OP-595
- United States, geochemistry C 1108
- Utah
OP-657; OP-1476
ground water OP-316
- Washington
OP-1146; OP-2064
geochemistry WRI 94-4047
- West Virginia, hydrogeology WRI 93-4073
- Wisconsin OF 95-0163; OP-508; OP-1663
- Wyoming
ground water WRI 94-4135
hydrogeology WRI 95-4095
hydrology WRI 93-4229
- Polly Wright Cove Pluton**
geochemistry C 1129
polychlorobiphenyls *see* PCBs
polycyclic aromatic hydrocarbons
California, pollution OP-1940
environmental geology C 1108
New Jersey, environmental geology OP-913
- polyhalite**
geochemistry OP-2015
- polymetallic ores**
Alaska OP-1195
Bolivia, lava B 2119
China OP-1024; OP-1871
Idaho P 1525; B 2064-A-R; OF 94-0690
Montana OF 94-0670
Oregon OF 94-0677
Pacific Ocean
OP-1495
geochemistry B 2022
Queensland Australia C 1129
Rocky Mountains OP-1366
Tasmania Australia C 1129
- polymetamorphism**
Argentina C 1129
Idaho, mineral resources B 2064-A-R
- polymorphism**
geophysics OP-1478
phase equilibria OP-1520; OP-1609
Texas, diagenesis OP-1472
- Polynesia *see* Hawaii; Samoa; Tonga
- polystyrene**
geochemistry OF 94-0671
- polytypism**
mineralogy OP-915
- Pomme de Terre River basin**
hydrology OF 93-0047
- Pond Creek Coal Member**
sedimentary petrology OP-1548
- Pontevedra Spain**
geochemistry C 1129
- Pope Group**
sedimentation OF 94-0298
- Poplar River valley**
environmental geology C 1108
- popular geology** *see also* education; educational resources; mineral localities.
- YR
Alaska
- earthquakes EV
geomorphology B 2072
hydrology C 1123
Quaternary OF 95-0520
- Appalachians, hydrology FS 0137-95; FS 94-0019
- Arizona
environmental geology WRI 94-4192
hydrogeology FS 94-0016
hydrology FS 0120-95
- Atlantic Coastal Plain, Quaternary FS 0117-95
- Atlantic Ocean, oceanography B 2079
- California
earthquakes EV
engineering geology FS 0096-95; FS 0132-95
geologic hazards C 1130; FS 0112-95; FS 94-0049
geomorphology OP-785
geophysical surveys FS 0079-95
hydrogeology FS 0149-95; FS 94-0029
hydrology FS 0115-95
- Canada, hydrogeology FS 94-0056
- Colorado
engineering geology EV
environmental geology B 2220; I-2469
hydrology FS 0153-95
- energy sources OP-433
- environmental geology OF 94-0378
- Florida, environmental geology FS 0134-95
- geologic hazards OF 94-0585; OF 95-0231
- geomorphology FS 94-0009
- geophysical surveys FS 0121-95
- hydrogeology W 2220; FS 0151-95
- hydrology FS 0116-95; FS 94-0015; FS 94-0074
- Iceland, Quaternary OF 95-0500
- Idaho, hydrology FS 94-0026
- Illinois, hydrology FS 94-0018
- Iowa, hydrogeology FS 94-0031
- Japan, earthquakes EV
- Kansas
environmental geology I-2469
hydrogeology FS 0085-95
- Louisiana, hydrology FS 0118-95
- Maryland, hydrology FS 0136-95
- Massachusetts
ground water FS 94-0017
hydrology FS 0139-95
- Mexico, geophysical surveys FS 0079-95
- Mississippi Valley, hydrogeology FS 94-0047
- Nebraska, ecology FS 0154-95
- Nevada
hydrology FS 0115-95
Quaternary FS 94-0007
- New England, hydrogeology FS 94-0027
- New Hampshire, ground water FS 0138-95; FS 95-0002
- New Mexico
OF 95-0314
environmental geology WRI 94-4192
- New York, hydrology OF 94-0090
- North Carolina, hydrogeology FS 94-0010
- Oregon, earthquakes EV
- Pacific Ocean, oceanography B 2079
- pollution FS 0114-95
- Rocky Mountains, geologic hazards OF 95-0059
- South Carolina, hydrogeology FS 94-0010
- tectonophysics C 1109
- Tennessee
hydrology OF 95-0372
pollution OF 95-0312; OF 95-0329

- Texas
hydrogeology FS 0090-95; FS 94-0048
hydrology FS 94-0073
pollution FS 0088-95
United States, hydrogeology FS 94-0056
Virginia FS 0046-95
Washington
environmental geology OF 95-0498
geophysical surveys FS 0079-95
- porcellanite**
California
geochemistry P 1566
Miocene R 1995-J,K
structural geology OP-1430
Montana, geochronology B 2113
- Porco Deposit**
metal ores OP-188
- porosity traps *see* stratigraphic traps
- porphyry**
Alaska
OP-296
metal ores OP-670
Arizona, copper ores OP-291
Basin and Range Province, metal ores OP-1874
Colorado, metal ores OP-333
Great Basin, metal ores OP-1874
New Mexico
B 2063
metal ores B 2063
mineral resources B 2063
- porphyry copper**
Alaska, metal ores OP-1893
Arabian Peninsula, metal ores OP-1220
Arizona, copper ores OP-291
Basin and Range Province, metal ores OP-1874
copper ores C 1129
Great Basin, metal ores OP-1874
Maine, metal ores OP-555
Queensland Australia, metal ores C 1129
Tasmania Australia, metal ores C 1129
tectonophysics OP-985
- porphyry molybdenum**
Basin and Range Province, metal ores OP-1874
Colorado, molybdenum ores OP-849
Great Basin, metal ores OP-1874
Maine, metal ores OP-555
Queensland Australia, metal ores C 1129
Tasmania Australia, metal ores C 1129
Utah, molybdenum ores OP-849; OP-1725
- Port Moller Quadrangle**
maps I-2272
- portable instruments**
California, seismicity OP-654
- Portal Quadrangle**
maps I-2450
- Portland Basin**
lava OP-1254
- Portland Formation**
ground water OP-1799
- Portland Hills fault zone**
structural geology OP-2054
- Portland Oregon**
engineering geology OP-1367
environmental geology OF 95-0652
geophysical surveys OP-72; OP-404
hydrogeology WRI 92-4010
tectonophysics OP-2307
- Portland West Quadrangle**
Quaternary OP-990
- Portlandian *see* Tithonian
- portlandite**
phase equilibria OP-139
- Portugal**
pyrite ores B 2081
- Portuguese pyrite belt**
pyrite ores B 2081
- positions, pole *see* pole positions
- Post-Betze Deposit**
gold ores OP-20; OP-438
- Post-glacial *see* Holocene
- post-glacial rebound *see* glacial rebound
- post-tectonic processes**
Colorado GQ-1764
Finland, geochemistry C 1129
Indian Ocean Islands, inclusions C 1129
- Postglacial *see* Holocene
- PostScript** B 2103
- postsismic processes**
Japan, earthquakes OP-490
- potash**
New Mexico B 2063
- potash bentonite *see* K-bentonite
- potash feldspar *see* K-feldspar
- potash mica *see* muscovite
- potassic composition**
France, magmas C 1129
Switzerland, magmas C 1129
Texas, magmas C 1129
- potassium**
Arizona, petrology C 1129
California, petrology C 1129
Colorado, geochemistry OP-1812
Finland, geochemistry C 1129
France, geochemistry C 1129
geochemistry DDS-0014; C 1129; OP-1369; OP-2015
K-40, Atlantic Coastal Plain OP-2264
Massachusetts, geochemistry OF 94-0384; OP-1396
Mexico, petrology C 1129
mineralogy OF 94-0576
Minnesota, Quaternary OP-1290
Nevada, geochemistry C 1129
New York, metal ores OP-303
North Carolina, pollution W 2435
Oregon, structural geology OP-1436
petrology OP-469
tectonophysics OP-228
Western Interior, stratigraphy OP-2063
- potassium bentonite *see* K-bentonite
- potassium feldspar *see* K-feldspar
- potassium-argon *see* K/Ar
- potential field**
geophysical surveys OP-71
- Potomac Aquifer**
ground water OF 94-0370; OF 94-0372; OF 94-0373
- Potomac River**
geochemistry OP-719; OP-856
- Potomac River basin**
Ordovician B 2060
pollution OP-1365
waste disposal OP-1133
- Potomac-Raritan-Magothy Aquifer**
ground water WRI 94-4113; OP-751
hydrogeology OP-750
- Potosi Bolivia**
metal ores OP-1028
- pottery *see* artifacts
- Pottsville Group** *see also* Breathitt Formation.
OP-874
- Potwar Plateau**
structural geology B 2126
- Powder River basin**
areal geology OP-280
coal C 1108; OP-947
deformation OP-283
energy sources OP-278; OP-1942
environmental geology C 1108
geochemistry C 1108
maps I-2433-B
oil and gas fields OF 94-0670
Paleocene OP-666
pollution OF 94-0670; OP-185
sedimentary petrology OP-1622
sedimentation OP-282
stratigraphy OP-667
- Powderhorn Granite**
intrusions OP-1067
- Pragian**
Kyrgyzstan OP-345
New York OP-685
- Prairie du Chien Group**
hydrogeology WRI 94-4146
- Prairie du Chien Quadrangle**
pollution OP-839
- prasinite *see* greenschist
- Pre-Cambrian *see* Precambrian
- Preble Deposit**
gold ores OP-331; OP-895
- Precambrian** *see also* Archean; upper Precambrian.
OP-2002; OP-2110
Alaska OP-711
Avalonian Orogeny, Wales C 1129
Baltimore Gneiss, structural geology OP-1317
California OP-432
Catocin Formation
OP-3
geochemistry C 1129
magmas OP-1126
- Chuar Group**
energy sources OP-1557; OP-1714
petroleum B 2000-J
- Colorado OF 94-0437; OF 95-0242; I-2452; OP-557
- Florida OP-1861
- Grenvillian Orogeny**
Appalachians C 1129; OP-766
Maryland OP-1200
Mexico OP-1870
New Jersey OP-290; OP-1379
New York OP-290; OP-1379
Texas C 1129; OP-1350
Virginia C 1129; OP-1200
- Hazel Formation, paleomagnetism OP-1350
- Hudsonian Orogeny**
Manitoba OP-1073
Saskatchewan OP-1073
- Laramie anorthosite complex OP-364
- Minnesota OP-886
- Mississippi Valley MF-2284
- Montana OF 94-0670
- Nevada OP-1747; OP-1946
- New Mexico OP-1878
- New York OP-1794
- Nonesuch Shale, mineralogy OP-2028
- Penokean Orogeny
Canada B 1904-T
Minnesota B 1904-U

- United States B 1904-T
Wisconsin OP-2121
- Russian Federation OP-152
- Sandia Granite, petrology C 1129
- Stillwater Complex, geochemistry OP-554
- Twilight Gneiss, intrusions OP-1423; OP-1424
- Wilcox Formation B 2060
- Wyoming I-2452
- Yellowjacket Formation
P 1525
cobalt ores OP-167
metal ores P 1525
- Precambrian Shield** *see* Canadian Shield
- precious metals**
Arizona, metal ores B 2138
California, metal ores OP-801; OP-940
Caribbean region, metal ores B 2057
Idaho
base metals P 1525
economic geology P 1525
gold ores P 1525
metal ores P 1525; B 2064-A-R; B 2081;
OP 94-0690
Lesser Antilles, metal ores B 2057
metal ores OP-104; OP-863; OP-1208
Nevada
geophysical surveys OF 94-0296
metal ores OF 94-0270-A; OF 94-0270-B
Peru, metal ores OP-1411
Spain, metal ores OP-799
United States, metal ores OP-799
Utah
geophysical surveys OF 94-0296
metal ores OF 94-0270-A; OF 94-0270-B
- precursors**
Alaska
elastic waves B 2139
seismology OP-2157
Armenia, seismology OP-957
California
environmental geology OP-261
seismology OF 95-0484; OP-62; OP-957
Far East, tectonophysics OP-2328
Hawaii, Quaternary OP-1328
Japan, earthquakes OP-490
Papua New Guinea, geologic hazards OP-1720
Polynesia, tectonophysics OP-2328
Russian Federation, earthquakes OP-1657
seismology OF 95-0060
- predictive stratigraphic analysis**
Alaska, stratigraphy B 2110
Kansas, petroleum B 2110
stratigraphy B 2110
- preferred orientation**
California, rock mechanics OF 94-0228
structural geology OP-637; OP-1840
- prehnite**
faults OF 94-0228
- prehnite-pumpellyite facies**
Alaska, petrology OP-409
Canada, petrology OP-409
- pressure sensors**
Arizona, hydrology OF 94-0531
Arkansas, ground water OF 94-0531
California
ground water OF 94-0531
hydrogeology OF 94-0363
Caribbean region, ground water OF 94-0531
Colorado
hydrogeology OF 94-0363
hydrology OF 94-0363
Florida, ground water OF 94-0531
ground water OF 94-0531
hydrogeology OF 94-0531
hydrology OF 94-0363
Iowa, hydrology OF 94-0363
Kansas, hydrology OF 94-0531
Lesser Antilles, ground water OF 94-0531
Montana, hydrology OF 94-0363
Nevada
geophysical surveys OF 94-0531
ground water OF 94-0531
ocean circulation OF 94-0363
Oregon, hydrology OF 94-0363
Puerto Rico, hydrology OF 94-0363
Washington, hydrology OF 94-0363
- pressure wave *see* P-waves
- Presumpscot Formation**
Quaternary OP-990
- Price Quadrangle**
maps I-2462
- primary wave *see* P-waves
- Primates**
Egypt, stratigraphy OP-1528
- Prince of Wales Island**
geochemistry B 2107
- Prince Rupert Quadrangle**
maps OF 95-0215
- Prince William Sound**
base metals B 2107
metal ores OP-1893
mineral resources OF 94-0272
plate tectonics OP-1682
pollution C 1108
- Prince William Terrane**
metal ores B 2084; OP-1893
metamorphism OP-39
tectonophysics OP-408
- Princeton Minnesota**
ground water WRI 94-4149; OF 94-0337
pollution OP-1139; OP-1653; OP-1686
- Pripet Basin**
structural geology OP-948
- PRISM**
Pliocene OF 94-0281; OF 94-0588; OP-218
stratigraphy OF 94-0588; OF 95-0001; OF 95-0226
- pristane**
California, natural gas OP-542
Colorado, geochemistry OP-1713
Indiana, energy sources OP-2020
- PRMS**
hydrology WRI 93-4116; WRI 93-4181
- probe, electron *see* electron probe
- problematic fossils**
Dacryoconarida, New York OP-543
Ohio OP-411
- Proffitt Lake Quadrangle**
maps OF 94-0655
- progradation**
Alaska
energy sources OP-1270
structural geology OP-1249
Antarctic Ocean, Quaternary OP-246
Atlantic Ocean, stratigraphy OP-1334
Bahamas, stratigraphy OP-540
California
deformation OP-1774
sedimentary petrology OP-1097
geomorphology OP-1792
Hawaii, Quaternary OP-1768
Hungary
natural gas OP-155
stratigraphy OP-951
- Kazakhstan, energy sources OP-1258
Rocky Mountains, energy sources OP-1942
- prograde metamorphism**
Greece, structural geology OP-453
metal ores OP-870
North Carolina OP-1647
- Program for Array Seismic Studies of the Continental Lithosphere *see* PASSCAL
- programming languages *see* computer languages
- Project Voyager *see* Voyager Program
- propane**
energy sources YR
Northwest Territories, geochemistry OP-192
- propylitization**
Colorado, molybdenum ores OP-526
Montana, crust OP-1831
- PROSPECTOR**
mineral resources OP-600
- Proterozoic** *see also* Harney Peak Granite; Hoosac Formation; Middle Run Formation.
OP-228; OP-1256; OP-1668; OP-2309
Alaska B 2107; OP-39; OP-201; OP-217; OP-229; OP-1624
Antarctica OP-2003
Appalachians C 1129
Arabian Peninsula OP-1220
Arizona B 2138; C 1129; OP-291; OP-1104; OP-1185; OP-1381; OP-2310
Australia C 1129; OP-704
Belt Supergroup, structural geology OP-1863
Brazil C 1129; OP-198
California OF 95-0039; OP-46; OP-321; OP-1818; OP-2310
Canada B 1904-T; OP-704; OP-2271
Colorado B 2104; OF 94-0437; GQ-1764; OP-1067; OP-1363; OP-1423; OP-1424; OP-1982
Colorado Plateau OP-1669
Finland C 1129; OP-2242
Gabon OP-1403
Idaho P 1525; OP-167; OP-362; OP-2125
Illinois OF 94-0298
India C 1129
Kentucky OF 94-0298
Keweenaw
California OP-1255
Iowa OP-1059; OP-1880
Texas OP-1350
Lynchburg Formation, metal ores OP-306
Maryland OP-1126; OP-1200
Massachusetts OP-782
Mexico OP-1870
Minnesota OP-862
Montana OP-362
Nevada C 1129; OP-2326
New Jersey P 1565-A; OP-290; OP-1379
New Mexico C 1129; OP-21
New York OP-290; OP-1379
North Carolina OP-1647
Pan-African Orogeny
Argentina C 1129
Brazil C 1129
Egypt C 1129
Indian Ocean Islands C 1129
Pennsylvania OP-3
Poland OP-1827
Revett Quartzite, metal ores P 1525
Rocky Mountains OF 95-0571; OP-1232; OP-1366
Romania C 1129
Russian Federation OP-2242

- Saudi Arabia C 1129; OP-455
 South America OP-2003
 South Dakota C 1129
 Svecofennian
 Baltic region C 1129
 Finland C 1129
 Scandinavia C 1129
 Texas C 1129
 United States B 1904-T; OP-2271
 Vermont B 2060
 Virginia B 2060; C 1129; OP-3; OP-63; OP-1126; OP-1200
 Wales C 1129
 Willyama Complex, petrology OP-871
 Wisconsin OP-2121
 Wyoming I-2233; OP-364; OP-1288; OP-1929; OP-1982
 Yukon Territory OP-217; OP-1624
- Protista** *see also* foraminifera; Radiolaria.
 New Jersey
 Miocene OP-622
 stratigraphy OP-623
 Silicoflagellata OF 95-0260
 Proto-Atlantic Ocean *see* Iapetus
- Providence Pennsylvania**
 hydrogeology OF 95-0119
- Providence Rhode Island**
 seismology OP-274
- provinces, metallogenic *see* metallogenic provinces
- Provo Utah**
 structural geology OP-1734
- Prow Pass Tuff**
 stratigraphy OF 94-0460; OF 95-0102; OP-1860
 structural geology OP-2143
- Prudhoe Bay**
 frost action OP-161
 natural gas OP-1122
- Prudhoe Bay Field**
 energy sources C 1108; OP-1270; OP-1545
- Pryor Mountains**
 economic geology OP-2225
- psammite *see* sandstone
- pseudogalenite *see* sphalerite
- Pseudomonas**
 pollution OP-509
- pseudomorphism**
 Colorado
 geophysical surveys OP-1118
 metal ores OP-2060
 Oligocene OP-1691
 sedimentary petrology OP-2117; OP-2140
- pseudotachylite**
 Idaho OP-362
 Montana OP-362
- Pt *see* platinum
- Pt-190/Os-188**
 geochemistry OP-976
- pteridophytes**
 Equisetales, West Virginia OP-2304
 Lycopsida
 Kentucky OP-1950
 Pennsylvanian B 2110
- Pteridospermae *see* Neuropteris
- Pterygota *see* Neoptera
- ptilolite *see* mordenite
- PTt paths *see* P-T-t paths
- Pu *see* plutonium
- Pu'u O'o *see* Puu Oo
- Pu-239**
 California, pollution OP-1397
- public policy**
 Caribbean region, environmental geology OP-2210
 economic geology OP-412
 geologic hazards OP-2078
 pollution OP-97
- Puebla Mexico**
 guidebook OP-838
- Pueblo Colorado**
 hydrology OF 94-0412
- Pueblo Quadrangle**
 pollution OP-1031
- Pueblo Reservoir**
 hydrology WRI 94-4054; WRI 94-4097
 pollution OP-488
- Puercan**
 Great Plains OP-1589
- Puerco River *see* Rio Puerco
- Puerto Rico**
 earthquakes OP-2238
 engineering geology OF 95-0072
 environmental geology OP-1405; OP-1791
 geologic hazards OP-1201
 geomorphology OP-106
 ground water OF 93-0465; OF 93-0466; OF 93-0499
 heavy minerals OP-741
 hydrogeology WRI 91-4183; OF 93-0629
 hydrology OF 94-0363
 maps I-2387
 neotectonics OP-2179
 oceanography OP-2108
 plate tectonics OP-1304; OP-1312
 Quaternary OF 94-0568
 sedimentary petrology OP-310; OP-2080; OP-2277
 stratigraphy OP-1924
- Puerto Rico Trench**
 plate tectonics OP-1304
 Quaternary OF 94-0568
- Puget Group**
 geochemistry OF 94-0670
 sedimentary petrology OP-1181
- Puget Lowland**
 environmental geology HA-0729
 Eocene B 2085-A
 geochemistry WRI 94-4047
 geologic hazards P 1547
 ground water WRI 92-4098
 hydrogeology OF 94-0108
 neotectonics OP-1980
 pollution OP-2064
 Quaternary OF 94-0568; OP-205
 sedimentary petrology B 2085-C
 structural geology OP-1592; OP-1981; OP-2158
 tectonophysics OP-1975
- Puget Sound**
 earthquakes OP-1189
 geologic hazards OP-1163
 geophysical surveys OP-1821
 ground water WRI 94-4236
 hydrogeology OF 94-0108
 neotectonics OP-1980
 Quaternary OF 94-0568; OP-1076; OP-2008
 structural geology OP-1611; OP-1979; OP-1981; OP-2158
 tectonophysics OP-2307
- Pukerua Fault**
 Quaternary OF 94-0568
- pull apart structures *see* boudinage
- pull-apart basins**
 Alaska, energy sources OP-1545
 China, Quaternary OF 94-0568
 Idaho, stratigraphy OP-2147
 Middle East, deformation OP-1615
 Nevada
 stratigraphy OP-2147
 structural geology OP-1904
 Pacific Ocean, seismology OP-1329
- pulsating spring *see* geysers
- pumice**
 Alaska, Quaternary OP-772
 California
 OP-531
 Quaternary OP-397; OP-1505
 Nevada, stratigraphy OP-1860
 Oregon, Quaternary OP-397; OP-1505
 Washington OP-391
 Yukon Territory, Quaternary OP-772
- Puna**
 orogeny OP-2011
- Puna Hawaii**
 magmas OP-147
 petrology OP-234
- punctuated equilibria**
 Wyoming, Mammalia OP-1527
- Pungo River Aquifer**
 ground water WRI 94-4186
- Punjab Pakistan** *see also* Salt Range.
 structural geology B 2126
- Punta Gorda California**
 seismicity OP-1745
- Puntilla Lake**
 environmental geology OF 95-0177
- Purcellville Quadrangle**
 maps GQ-1755
- pure coal *see* vitrain
- Purissima Formation**
 ocean floors OP-1433
- push-pull wave *see* P-waves
- Putnam Hill Limestone Member**
 stratigraphy OP-768
- Putneys Mill Virginia**
 stratigraphy OF 94-0217
- Puu Anahulu Quadrangle**
 maps OF 89-0284
- Puu Oo**
 geologic hazards OF 94-0713
 geophysical surveys OF 94-0567
 lava OF 95-0496
 magmas OP-307
 petrology OP-483; OP-1400
 Quaternary OP-1768
 seismic sources OP-323
 seismology OP-1912
- Puyallup River valley**
 geologic hazards OP-1163; OP-2329
- Pyramld Lake**
 sedimentary petrology OP-59; OP-2000
- pyrenean-type**
 Montana, tectonics OP-1452
- Pyrenees**
 geochemistry OF 94-0228
 petrology
 French Pyrenees C 1129
 Querigut Massif C 1129
 Spanish Pyrenees C 1129

pyrite

- Alaska, stratigraphy OP-1439
- geochemistry OP-1278
- Kentucky
 - geochemistry OP-2053
 - sedimentary petrology OP-1548
- metal ores B 2081; OP-870
- Pennsylvania, sedimentary petrology OP-1951
- South Carolina, gold ores OP-2090

pyrite ores

- Portugal B 2081

pyroclastic flows

- Alaska
 - petrology B 2139
 - volcanic features B 2139
- California, volcanism OP-531
- geologic hazards OF 95-0231; OP-2240
- Nevada, stratigraphy OF 94-0460
- Philippine Islands, Quaternary OP-1886
- Washington
 - environmental geology OF 95-0498
 - Quaternary OP-1023

pyroclastic surges

- El Salvador, Quaternary OP-1816
- Washington, environmental geology OF 95-0498

pyroclastics *see also* ash falls; ash-flow tuff; hyaloclastite; ignimbrite; pumice; pyroclastic flows; rhyolite tuff; scoria; tuff; volcanic ash; volcanoclastics; welded tuff.

- Alaska
 - B 2139; OP-1822
 - geologic hazards OP-1316; OP-2257
 - Pliocene OF 95-0217-A; OF 95-0217-B
 - Quaternary OP-1458; OP-2021; OP-2258; OP-2260
- California, Quaternary OP-2006
- El Salvador, Quaternary OP-1816
- engineering geology OP-1569
- Guatemala, geologic hazards OP-952
- Hawaii OF 95-0496
- Indonesia, Quaternary OP-1767
- Nevada, Quaternary OP-2006
- Oregon
 - geologic hazards OP-2088
 - Quaternary OP-2045
- Pacific Coast, Quaternary OP-2250
- Washington, Quaternary OP-1767
- Yemen, geochemistry OP-1079
- Yukon Territory
 - Pliocene OF 95-0217-A; OF 95-0217-B
 - Quaternary OP-1458

pyrolysis *see also* Rock-Eval.

- OF 95-0495; OP-500; OP-513

pyrope

- New York, geochemistry B 2106

pyroxene group *see also* clinopyroxene; orthopyroxene.

- OP-1789; OP-1896
- Colorado, Proterozoic OF 94-0437
- Washington, sedimentary petrology OP-1182

pyroxenite

- California OP-708

pyrrhotite

- geochemistry OP-1278
- metal ores OP-870
- Pacific Ocean, geochemistry B 2022

Q**Q** *see also* Love waves.

- California
 - earthquakes OP-393
 - seismology OP-62; OP-1705
- Utah, seismology OP-103

Q waves *see* Love waves**Qinghai-Xizang Plateau**

- mantle OP-1020
- Quaternary P 1549; OF 94-0568

QMIPS

- geophysical surveys OF 94-0598

Quabbin Reservoir

- hydrology WRI 94-4003; WRI 94-4084

quadrangle mapping

- Tennessee OF 94-0359

Quall Creek Reservoir

- hydrology WRI 94-4159

Quaker Springs Quadrangle

- ground water WRI 93-4029

QUAL2E

- hydrology WRI 94-4058

quality control

- geochemistry OF 94-0362; OF 94-0458
- hydrogeology OF 95-0141
- hydrology WRI 93-4208; OF 94-0382
- Kentucky, hydrology WRI 94-4029
- Washington, hydrogeology WRI 92-4109

quantitative geomorphology

- OF 95-0046; OP-235
- Montana, hydrogeology OP-943

quartz

- Arabian Peninsula, metal ores OP-1220
- California
 - geochemistry P 1566
 - metal ores OP-415
- earthquakes OP-53
- engineering geology OP-1841
- geochemistry C 1129; OF 95-0510; OP-2106
- geophysics OP-551; OP-552; OP-1446
- Germany, geophysical surveys OP-651
- magmas C 1129
- Mexico, phase equilibria OP-387; OP-1489
- Nevada, geochemistry OP-1857
- Ontario, phase equilibria OP-387; OP-1489
- petrology OP-989; OP-1858
- Puerto Rico, geomorphology OP-106
- Russian Federation, geophysical surveys OP-651
- South Dakota, geochemistry C 1129
- Spain, gold ores OF 95-0221
- stratigraphy OP-84
- Utah
 - OP-288
 - molybdenum ores OP-1725

quartz arenite

- OP-1226
- Alaska, energy sources OP-1270

quartz crystal

- Idaho P 1525

quartz diorites

- Alaska, geochemistry B 2107
- Arizona, tectonophysics OP-352
- Germany C 1129
- Italy C 1129
- Japan, Neogene C 1129

quartz monzonite

- Brazil, geochronology C 1129
- Minnesota, Precambrian OP-886

quartz syenite

- Indian Ocean Islands C 1129
- Russian Federation, geochemistry C 1129

quartz veins

- Alaska
 - fractures OF 94-0228
 - gold ores OP-624
 - metal ores B 2084; OP-1169; OP-1893
 - structural geology OP-1447
- Canada, metal ores OP-1169
- Canadian Shield, metal ores OP-2126
- Great Britain, metal ores OP-2126
- Idaho, metal ores B 2081
- metal ores B 2081
- Pakistan, gems OP-1303
- Quebec, gold ores OF 94-0228
- Victoria Australia, deformation OF 94-0228

quartzarenite *see* quartz arenite**quartzites**

- Georgia, pedogenesis B 1589-E
- Idaho, metal ores P 1525
- Mexico OP-1870
- Montana, crust OP-1831
- Pennsylvania, pollution WRI 92-4088
- Vermont, Proterozoic B 2060

Quaternary *see also* Holocene; last glacial maximum; Pleistocene.

- OF 94-0568; OF 94-0663; OF 94-0694; OF 95-0034; OP-1057; OP-1852; OP-2135
- Alaska P 1544; B 2107; OF 94-0568; OP-296; OP-628; OP-723; OP-724; OP-953; OP-1172; OP-1221; OP-2160; OP-2292
- Andes OP-1511
- Arctic Ocean OP-1268
- Argentina OF 94-0568
- Arizona OF 95-0591; OP-709; OP-991; OP-1730
- Arkansas OP-956; OP-1004; OP-2285
- Atlantic Coastal Plain FS 0117-95
- Atlantic Ocean OF 94-0588; OP-233
- Australia OF 94-0568
- Bahamas OP-1865
- Basin and Range Province OF 94-0568; OF 95-0037; OP-814; OP-1106; OP-2101
- Bermuda OP-1732
- British Columbia OF 95-0034
- Brunhes Epoch
 - Arctic Ocean OP-1566
 - California OP-397; OP-1575
 - Far East OP-1574
 - Indonesia OP-443
 - New Mexico OP-443; OP-1575
 - Oregon OP-397; OP-659
 - Puerto Rico OP-1924
 - Utah OP-1273
 - Wyoming OP-1583
- Bull Lake Glaciation
 - Colorado GQ-1764
 - Idaho OF 94-0568
 - Wyoming OP-355
- California B 1982; OF 94-0568; OF 94-0593; OF 94-0633; OF 94-0651; OF 95-0034; OF 95-0535; I-2362; OP-129; OP-385; OP-513; OP-1157; OP-1158; OP-1430; OP-1564; OP-1584; OP-1992
- Canada I-1420 (NM-15); OP-2265
- Caribbean region OP-1739
- Chile OP-1697
- China P 1549; OF 94-0568
- Colorado OP-1046; OP-1101; OP-1219; OP-2113; OP-2259
- Connecticut OP-2165; OP-2218

- Dominican Republic OP-1751; OP-1983
 Florida OP-1732; OP-2293
 Georgia B 1589-E; OP-584
 Great Basin OF 94-0568; OF 95-0037; OP-1106; OP-2101
 Great Lakes OP-292
 Great Plains I-1970-D; I-1420 (NL-14)
 Greece OF 94-0568
 Hawaii OP-639
 Idaho P 1525; OF 94-0568; OP-1633; OP-1674
 Illinois OP-956
 Indiana OF 92-0139
 Iran OF 94-0568; OP-154
 Israel OF 94-0568
 Italy PDE; OF 94-0568; OP-962
 Japan OF 94-0568
 Japan Sea OP-722; OP-1954
 Kenya C 1129
 Marshall Islands OP-2254
 Massachusetts OF 94-0672
 Mazama Ash
 Quaternary OF 95-0034; OP-1040; OP-2250
 structural geology OP-1611
 Micronesia OP-1409; OP-2254
 middle Quaternary, Oregon OP-2045
 Mississippi OF 94-0558; OF 94-0702
 Montana OP-480; OP-1215; OP-1454; OP-1633; OP-1902
 Nebraska OP-1046
 Nevada B 2056; OF 94-0568; OF 94-0670; I-2501; FS 94-0007; OP-1468; OP-1740; OP-1802; OP-2100; OP-2306
 New York WRI 93-4029
 New Zealand OP-431; OP-1542
 Oklahoma OF 94-0504
 Oman OP-2311
 Oregon OF 94-0261; OF 95-0033; OF 95-0034; OP-29; OP-1158; OP-1254; OP-1564; OP-1635
 Pacific Coast OP-1401
 Pacific Ocean B 2022; OF 95-0034; OP-1501
 Papua New Guinea OF 94-0568
 Pinedale Glaciation
 Colorado GQ-1764
 Idaho OF 94-0568
 Montana OP-121; OP-902
 Wyoming OP-355; OP-902
 Puerto Rico OF 94-0568; OP-2108
 Russian Federation OF 94-0445; OP-165
 Sahara OP-909
 South Carolina OF 94-0663
 Texas OP-812
 Tyrrhenian Sea OP-942
 United Arab Emirates OP-2311
 United States OF 94-0568; OF 95-0034; I-1420 (NM-15); OP-2265
 Uruguay OP-311
 Utah B 2056; OP-1494; OP-1730; OP-1731; OP-1740
 Virginia WRI 92-4111
 Washington WRI 92-4098; OF 94-0663; OF 95-0034; OP-1254; OP-1776; OP-1777; OP-2329
 Western Australia OP-1973
 Wyoming OP-11; OP-1055
- Quebec** *see also* Abitibi Belt; Champlain Valley; Lake Champlain
 faults OP-2271
 gold ores, Val d'Or Quebec OF 94-0228
 ground water, Monteregian Hills OP-937
 Quaternary, Saguenay Valley OF 94-0568
 seismology, Saguenay County Quebec OP-88
- Queen Charlotte Fault**
 sedimentation OP-2160
- Queen River basin**
 hydrogeology OF 95-0305
- Queensland Australia** *see also* Lachlan fold belt.
 areal geology, Cape York Peninsula OP-31
 magmas C 1129
- Querigut Massif**
 petrology C 1129
- Quetico Belt**
 geochemistry C 1129
- Quetta Pakistan**
 structural geology OF 94-0670
- Quiburis Formation**
 copper ores OP-291
- Quichapa Group**
 Miocene B 2056
- Quick Reservoir Quadrangle**
 maps OF 88-0618
 quicksilver *see* mercury
 quiescence, seismic *see* seismic quiescence
- Quinn River Formation**
 Permian OP-78
- Quito Ecuador**
 engineering geology OF 94-0568
- R**
- R waves *see* Rayleigh waves
 Ra *see* radium
- Ra-226**
 environmental geology OP-518
 New Jersey, pollution WRI 92-4144; OP-2176
- Ra-228**
 Atlantic Coastal Plain, pollution OP-2264
- Ra-228/Ra-226**
 Pennsylvania, pollution WRI 92-4088
- Rabaul Caldera**
 geologic hazards OP-1720
- Rabbit Creek Deposit**
 geochemistry OF 94-0670
- racemization** *see also* amino acids.
 OF 94-0588
- Racer Canyon Tuff**
 Miocene B 2056
- Racine Quarry**
 environmental geology OF 95-0163
- radar methods *see* ground-penetrating radar
- radioactive decay**
 environmental geology C 1108
 Mississippi Valley, lead-zinc deposits OF 94-0298
- radioactive isotopes *see* Al-26; Ar-40/Ar-39; Be-10; Be-10/Be-9; C-14; Cl-36; Co-60; Cs-137; I-129; K-40; Kr-85; Os-187/Os-186; Pb-206/Pb-204; Pb-207/Pb-204; Pb-208/Pb-204; Pb-210; Pu-239; Ra-226; Ra-228; Ra-228/Ra-226; Rb-87/Sr-86; Rn-222; Sm-147/Nd-144; Sr-90; Th-230; Th-232; Th-232/Th-230; Th-234; tritium; U-234/Th-230; U-238; U-238/Pb-204; U-238/Pb-206; U-238/Th-230; U-238/U-234
- radioactive waste**
 Basin and Range Province, Quaternary OF 95-0037
 California
 ground water OF 95-0158; OF 95-0160
 waste disposal OP-1610; OP-2291
 environmental geology OP-518; OP-2167
- Great Basin, Quaternary OF 95-0037
- Idaho**
 environmental geology OP-2096
 ground water WRI 94-4053
 sedimentary petrology OF 94-0374
- Illinois**, waste disposal OP-1491
- Nevada**
 deformation OF 95-0002
 earthquakes OP-12; OP-365
 engineering geology OF 93-0269
 environmental geology OF 92-0458; OF 93-0477; OF 94-0451; OF 95-0155; OF 95-0284; OP-2209
 geochemistry OP-2169
 geophysical surveys OF 93-0540-A; OF 93-0540-B; OF 93-0586-A; OF 93-0586-B; OF 94-0531
 ground water OF 92-0657; OF 93-0098; OF 94-0303; OF 94-0311; OF 94-0531; OF 95-0158; OF 95-0160; OP-1567; OP-2273
 hydrogeology OF 94-0456
 hydrology OF 94-0317; OF 94-0489; OP-1989
 Miocene OP-1408
 Quaternary OF 94-0568
 stratigraphy OF 94-0342; OF 94-0460; OF 95-0102; OP-1860
 structural geology OP-1469; OP-2143
 volcanism OP-1388
 waste disposal OP-997
- New York**, waste disposal OP-1775
- Sweden**
 environmental geology YR
 waste disposal OP-2235
- Washington**, waste disposal OF 94-0514
- radioactivity** *see also* gamma-ray methods.
- Arizona**
 environmental geology WRI 94-4192
 hydrogeology OF 94-0356
- California**, tectonophysics OP-514
- Idaho**, non-metal deposits P 1525
- Indiana**, ground water OF 94-0298
- Mississippi Valley**
 economic geology B 2094-C
 lead-zinc deposits OF 94-0298
- New Jersey**, pollution WRI 92-4144
- New Mexico**
 environmental geology WRI 94-4192
 ground water OF 95-0360
 hydrogeology OF 94-0356
- Pennsylvania**
 ground water WRI 94-4109
 pollution WRI 92-4088
 pollution OP-984
 Texas, ground water OF 94-0329
- radioactivity survey maps**
 Virginia, geophysical surveys OF 94-0253
- radioactivity surveys**
 Alaska, environmental geology C 1108
 geophysical surveys DDS-0031
 Massachusetts, geophysical surveys WRI 94-4185
 metal ores B 2097
 Nevada, gold ores OF 94-0282
 New Mexico, mineral resources B 2063
 Oregon, economic geology B 1738-E; B 1741-H
 Queensland Australia OP-31
- radiocarbon dating *see* C-14
- radiography, X-ray *see* X-ray radiography

Radiolaria

Japan, Permian OP-1132
Oregon, Permian OP-1132

radiolarians

Alaska
OP-641
paleontology OF 94-0215
British Columbia, Quaternary OF 95-0034
California
stratigraphy OP-1341
tectonophysics OP-1448
Mexico, tectonophysics OP-1448
Montana, stratigraphy OP-1131
Nevada, Permian OP-78
oceanography OF 94-0669-A; OF 94-0669-B
Pacific Coast, Quaternary OP-1401
Peru, stratigraphy OP-200
United States, Quaternary OF 95-0034
Washington OF 94-0403

radium

environmental geology C 1108
Kansas, hydrology W 2352-B
Nebraska, hydrology W 2352-B
New Jersey, ground water OP-1568
Ra-226
environmental geology OP-518
New Jersey WRI 92-4144; OP-2176
Ra-228, Atlantic Coastal Plain OP-2264
Ra-228/Ra-226, Pennsylvania WRI 92-4088

radon

Alaska, environmental geology C 1108
Appalachians, pollution OP-1365
California
earthquakes OP-491; OP-1638
hydrogeology OF 93-0033
seismology OP-1640
Central America, Quaternary OP-1257
China, earthquakes OP-1638
Commonwealth of Independent States, Quaternary OP-1257
environmental geology C 1108
geologic hazards OP-2078
Japan, earthquakes OP-490
Kansas, hydrology W 2352-B
Nebraska, hydrology W 2352-B
Nevada, hydrogeology OF 93-0033
Pennsylvania, hydrogeology OF 94-0381
Rhode Island, environmental geology OP-2227
Rn-222
New Jersey WRI 92-4144
Nicaragua OP-1678
Pennsylvania WRI 92-4088
pollution OP-984

Radon transforms

California, earthquakes OP-430
tectonophysics OP-60

radon-222 *see* Rn-222

rafting, ice *see* ice rafting

Ragged Valley Shale

stratigraphy OP-1341

Raging River Formation

Eocene B 2085-A

Railroad Valley

energy sources OF 94-0670
petroleum OP-1470
stratigraphy OP-1558
structural geology OP-1440; OP-1820; OP-1944; OP-1976

rain *see* acid rain

Rainbow Plateau

geomorphology OP-1368

Quaternary OP-1287; OP-1730
stratigraphy OP-1731

Rainier Mesa

environmental geology OF 94-0451
ground water OP-2049; OP-2066
seismology OF 94-0618

raised beaches

California, Quaternary OF 94-0568

Raleigh Belt

geochemistry C 1129
Mesozoic OP-1399
Paleozoic OP-1670
structural geology OP-1908; OP-2062

Raman spectroscopy

geochemistry OP-130

range, basin *see* basin range structure

rapakivi

California OP-1211
Finland
C 1129
geochemistry C 1129
Nevada C 1129

rapids

Arizona, engineering geology OP-1435
hydrogeology OP-2261
Utah, engineering geology OP-1435

Rappahannock River

hydrology WRI 94-4042

rare earth deposits

B 2097
Alaska, geochemistry B 2107
Idaho P 1525
Missouri OF 94-0670
New Jersey OP-290; OP-1379
New York OP-290; OP-1379

rare earths *see also* cerium; europium; lanthanum; lutetium; neodymium; scandium; yttrium.

Alaska, geochemistry P 1564; B 2107
Appalachians, geochemistry C 1129
Arizona

geochemistry OP-1104

petrology C 1129

California

economic geology OF 95-0030

geochemistry OF 95-0227-A; OF 95-0227-B; OP-753

magmas OP-313

Canadian Shield, geochemistry C 1129

Carpathians, petrology C 1129

geochemistry C 1129; OP-130

Germany

geochemistry C 1129

metasomatism C 1129

Greece, geochemistry C 1129

Hawaii, geochemistry OF 91-0596

India

geochemistry C 1129

metamorphism C 1129

Indian Ocean Islands, inclusions C 1129

Maryland, magmas OP-1126

metal ores OP-870

Mexico, petrology OP-827

Missouri

economic geology OF 94-0670

petrology OP-1299

Montana

Archean OP-1862

geochemistry OP-554

mineralogy OP-287

Nevada

geochemistry B 2056

geothermal energy OF 95-0485

New Jersey

geochemistry P 1565-A

metal ores OP-1379

New York

fluid inclusions OP-1794

metal ores OP-1379

Northwest Territories, magmas C 1129

Nova Scotia, geochemistry OP-1867

Oman, geochemistry OP-753

Ordovician B 2060

Oregon

geochemistry OF 94-0261; OF 95-0227-A; OF 95-0227-B

petrology OP-1590

phase equilibria OP-611

Russian Federation, geochemistry OP-50

Saudi Arabia, geochemistry OP-753

Scotland, geochemistry C 1129

South Dakota, geochemistry C 1129

Spain

geochemistry C 1129

metal ores OP-22

Utah, mineralogy OP-288

Virginia, magmas P 1529; OP-1126

rare gases *see* noble gases

RASA

Arizona, hydrogeology P 1406-A

Atlantic Coastal Plain, hydrogeology P 1410-C

Great Plains, ground water P 1402-F

ground water OF 94-0465

Gulf Coastal Plain

ground water WRI 93-4020

hydrogeology P 1410-C

Idaho, hydrogeology P 1408-C

Midwest

ground water OF 93-0663

hydrogeology OF 94-0473

Mississippi Valley, ground water WRI 93-4020

Nevada, hydrogeology WRI 95-4052

New England, ground water P 1415-A

New Jersey, ground water WRI 92-4152

Ohio

ground water WRI 94-4131

hydrogeology WRI 94-4105

Oregon

ground water WRI 89-4179

hydrogeology P 1408-C

Rocky Mountains, ground water OF 95-0143

Texas, ground water WRI 93-4039; WRI 93-4126; WRI 94-4039

Washington, ground water WRI 89-4179

Rastenberg Granodiorite

inclusions C 1129

rate of sedimentation *see* sedimentation rates

Rathburn Deposit

metal ores OP-663

Raton Basin

coal OP-947

petrology OP-1665

stratigraphy OF 94-0670; OP-1953

Raton Formation

sedimentary petrology OP-1373

stratigraphy OP-1953

Rattlesnake Creek Terrane

petrology OP-1315

Ratto Canyon Deposit

gold ores OP-331

Ray Deposit

copper ores OP-1381

Rayleigh number

geophysical surveys OP-1563

Rayleigh waves

California

OP-889; OP-2144

crust OP-2239

Indonesia, Quaternary OP-467

Mexico, Quaternary OP-467

Philippine Islands, Quaternary OP-467

Rhode Island OP-274

Washington, Quaternary OP-467

razor stone *see* novaculiteRb *see* rubidium**Rb-87/Sr-86**

Russian Federation, geochemistry OP-843

Rb/Sr

OP-1826

Antarctica, magmas C 1129

Argentina

geochemistry C 1129

magmas C 1129

Brazil

geochemistry C 1129

geochronology C 1129

California, magmas C 1129

Canada, structural geology OP-1863

China, geochemistry C 1129

Colorado

intrusions OP-1423

Proterozoic OP-1982

Hong Kong, geochemistry C 1129

Illinois, heat flow OP-2050

India, metamorphism C 1129

Japan, petrology C 1129

Kenya, geochemistry C 1129

Minnesota, Precambrian OP-886

Montana, structural geology OP-1863

North Carolina, petrology OP-1647

Norway, structural geology OP-2156

Russian Federation, geochemistry OP-50

Spain

geochemistry C 1129

magmas C 1129

metal ores OP-22

Virginia, magmas P 1529

Wyoming

metamorphic rocks OP-1929

Proterozoic OP-1982

Yemen, geochemistry C 1129

RCHRES

hydrology WRI 93-4160

Re *see* rhenium**Re/Os**

Finland, Proterozoic OP-2242

Montana, geochronology OP-516

Russian Federation, Proterozoic OP-2242

Read, Charles Brian

paleobotany OP-582

Recent *see* Holocene**recharge** *see also* artificial recharge; hydrologic cycle; infiltration.

Alabama, ground water WRI 94-4074

Alaska

environmental geology OF 95-0180

hydrogeology C 1112; OF 95-0172

Arizona

environmental geology WRI 94-4192

hydrogeology WRI 95-4062; OP-1965

California

ground water WRI 93-4003; OF 94-0072

hydrogeology OP-1281

pollution WRI 93-4140

seismology OP-2039

waste disposal OP-2291

Caribbean region, ground water OF 94-0531

Colorado

hydrogeology YR

hydrology WRI 92-4187; OP-384

pollution OP-1796

Florida

ground water W 2409; OP-472; OP-473;
OP-1614

hydrogeology WRI 94-4128

Georgia

ground water OP-1244

hydrogeology OF 94-0350

Great Plains, hydrogeology OP-1017

ground water OP-734; OP-949; OP-1432

Hawaii, hydrogeology C 1112; OP-2076

hydrogeology OP-798

Idaho

ground water WRI 94-4116

hydrogeology P 1408-C; WRI 94-4247

Indiana, hydrogeology OF 92-0139

Kentucky, ground water WRI 94-4239

Lesser Antilles, ground water OF 94-0531

Louisiana, ground water OP-1996

Mariana Islands, hydrology WRI 93-4116

Maryland, pollution OP-1089

Massachusetts, ground water OF 94-0316

Micronesia, hydrology WRI 93-4116

Midwest, pollution OP-1652

Minnesota, pollution OP-1139; OP-1686

Mississippi, ground water OP-901

Nevada

ground water OF 94-0031; OP-2273

hydrogeology OF 93-0356; OF 94-0456;

OF 94-0491; OP-1281; OP-1747

hydrology OF 94-0317

New Hampshire

ground water OF 95-0363

hydrogeology WRI 92-4154

New Mexico

environmental geology WRI 94-4192

ground water WRI 94-4078; OP-2308

hydrogeology WRI 94-4072; OF 94-0702-

W

New York, pollution OP-115

North Dakota, pollution OP-179

Ohio, ground water WRI 94-4131; WRI 94-

4231; WRI 94-4243

Oklahoma, hydrogeology WRI 93-4230

Oman, hydrogeology OP-1801

Oregon

ground water OF 94-0505

hydrogeology P 1408-C; WRI 92-4010

Pennsylvania

environmental geology OP-354

ground water WRI 93-4109

pollution OP-174

Puerto Rico

ground water OF 93-0499

hydrogeology WRI 91-4183

South Carolina

ground water OP-1244; OP-1685

hydrogeology OF 94-0487

Tennessee, ground water OP-1259

Texas

ground water WRI 93-4039; WRI 95-4030;

OP-2308

hydrogeology OF 94-0702-W; FS 94-0048

United Arab Emirates, hydrogeology OP-1801

Utah

ground water WRI 93-4221; OP-316

hydrogeology WRI 93-4219; WRI 95-4072

Venezuela, hydrogeology WRI 93-4219

Vermont, ground water WRI 94-4108

Virginia, ground water W 2401

Washington

dams OP-2038

ground water WRI 92-4098; OF 94-0505

hydrogeology WRI 92-4010

West Virginia, hydrogeology WRI 93-4073

Wisconsin, hydrogeology OP-992

Wyoming, hydrogeology WRI 95-4095

reclamation *see also* abandoned mines; conserva-
tion; impact statements; waste water.

OP-658

Alaska, mineral resources OF 95-0537

coal C 1108

Colorado, hydrology WRI 92-4187

Florida C 1108

Louisiana, engineering geology OF 94-0275

Ohio OF 95-0224

Washington OF 95-0230

Wisconsin OF 95-0163

recumbent folds

Massachusetts OP-782

Utah, sedimentary petrology OP-1464

red beds

Alaska, Proterozoic B 2107

Colorado

metal ores B 2116

stratigraphy OP-2027

Nevada

energy sources OF 94-0670

structural geology OP-1944

stratigraphy OP-225; OP-1319

Utah OP-1179

Red Bird Field

sedimentary petrology B 2110

Red Bluff Granite

magmas C 1129

Red Hill

neotectonics B 2056

Quaternary B 2056

Red Lake Indian Reservation

mineral resources OF 94-0447

Red River

environmental geology OP-2168; OP-2268

ground water OP-899

pollution OP-102; OP-900; OP-2166

Red River of the North Basinenvironmental geology WRI 95-4047; OP-
2168; OP-2268

ground water OP-899

hydrogeology WRI 93-4231

hydrology WRI 93-4200; WRI 94-4058;
OF 95-0283

pollution OP-102; OP-900; OP-2166

Red River valley

environmental geology WRI 95-4047

ground water WRI 94-4228

hydrogeology WRI 93-4231

hydrology WRI 93-4200; OF 95-0283

red rock *see* red beds**Red Sea**

Quaternary, Gulf of Aqaba OF 94-0568

Red Sea Hills

geophysical surveys OP-2068

Red Sea region

geochemistry C 1129

Red Snapper Sink

continental shelf OP-2293

redbeds *see* red beds

Redcloud Peak

metal ores OF 95-0079

Redoubt

earthquakes EV; OP-1107
 elastic waves OP-786
 engineering geology OP-1683
 geochemistry OF 95-0055
 geologic hazards OF 95-0083; OP-1316; OP-2257; OP-2318
 Quaternary OF 95-0061-A; OF 95-0061-B; OP-1854
 seismology OP-1598; OP-1855; OP-2157

Redwood City California

hydrology OF 95-0327

Reed, Bruce Loring OP-523**reefs see also biostromes.**

Atlantic Coastal Plain, Quaternary FS 0117-95
 atolls, ground water OP-949
 barrier reefs
 Marshall Islands OP-2254
 Micronesia OP-2254
 Bermuda, Quaternary OP-1732; OP-1733
 Florida, Quaternary OP-1732; OP-1733; OP-2206
 patch reefs, Bahamas OP-1866
 Puerto Rico OP-2108; OP-2277

Reelfoot Lake

faults P 1538-I
 seismology OP-1907

Reelfoot Rift

deformation P 1538-J
 economic geology OF 94-0670
 faults P 1538-Q; OF 94-0298
 geophysical surveys P 1538-P
 lead-zinc deposits B 1989-F
 petroleum OF 94-0298
 petrology OP-1299
 Quaternary OF 94-0568
 seismology P 1538-N; OP-405
 structural geology P 1538-E; OP-1689; OP-2272

refractory clay *see* fireclay**Reg Dog Creek Deposit**

metal ores OP-1895

Regional Aquifer-System Analysis Program *see* RASA**regional metamorphism**

OP-83
 Alaska
 OP-229
 metal ores OP-1893
 metal ores OP-870
 Rocky Mountains, structural geology OP-1232
 South Carolina, gold ores OP-2090
 Spain C 1129
 Wyoming OP-1929

regolith

OP-259; OP-486
 Georgia, hydrogeology OP-2161
 Pennsylvania, ground water OF 95-0193
 Queensland Australia OP-31

regression analysis *see* autoregression**Reinvention Lab YR****relaxation**

geophysical surveys OF-713
 mineralogy OP-434

relief

OP-2182
 California, geophysical surveys OP-522
 Egypt, sedimentary petrology OP-1770
 Florida, shore features OP-1174

Nevada, structural geology OP-1469

plate tectonics SM

Quaternary OF 94-0568

remanent magnetization *see also* characteristic remanent magnetization; isothermal remanent magnetization; natural remanent magnetization; thermoremanent magnetization.

Arizona, stratigraphy OP-353
 Colorado, stratigraphy OP-2012
 Idaho, tectonophysics OP-361
 Nevada, geophysical surveys OF 93-0397-A; OF 93-0397-B
 Oregon, tectonophysics OP-361
 Utah

geophysical surveys OF 93-0397-A; OF 93-0397-B

stratigraphy OF 95-0001

remediation *see* bioremediation

remote sensing *see also* albedo; AVHRR; AVIRIS; Galileo Program; Global Positioning System; infrared methods; infrared surveys; lineaments; maps; Mariner 9; SAR; SLAR; telemetry; Voyager Program.

YR; OP-33; OP-339; OP-485; OP-541; OP-1487; OP-1634; OP-1781; OP-1784; OP-1785; OP-2182

Alaska

environmental geology YR; OF 94-0627
 geochemistry B 2139
 geologic hazards OP-2318
 hydrology OP-127
 Quaternary B 2107; OP-1507; OP-1664; OP-1854
 volcanic features B 2139

Antarctica

geophysical surveys OP-560
 Quaternary P 1386-B

Arizona, geomorphology OP-1926

Armenia, seismology OP-957

California

Quaternary OP-2006
 seismology OP-957
 waste disposal OP-1610

Colorado, environmental geology B 2220

Egypt, sedimentary petrology OP-1770

environmental geology OF 95-0651

Florida, shore features OP-1174
 geomorphology YR; OF 94-0626; FS 94-0009
 geophysical surveys YR; OP-166; OP-219; OP-242; OP-416; OP-561; OP-562; OP-911; OP-1695; OP-1961; OP-2102

Greenland

geophysical surveys P 1386-C
 glacial geology P 1386-C

Hawaii

magmas OP-47
 ocean floors OP-1964

hydrogeology OP-643

hydrology OP-14

Indonesia, Quaternary OP-467

Louisiana, geomorphology OF 94-0275

Mexico, Quaternary OP-467

Mississippi Valley, hydrology YR

Missouri, hydrogeology OP-1311

Nevada

Quaternary OP-2006
 structural geology OP-1469

Ohio

environmental geology OF 95-0224
 geomorphology OF 95-0224

Oregon

environmental geology OF 95-0652

geophysical surveys OP-459

Philippine Islands, Quaternary OP-467

pollution C 1108

Spain, metal ores OP-22

Tennessee, Quaternary OF 94-0568

Texas, environmental geology WRI 93-4233

Washington

environmental geology OF 95-0652

Quaternary OP-467; OP-975

Wisconsin, environmental geology OF 95-0163

Wyoming, hydrology OP-883

Reno Nevada

earthquakes OP-1994

Reno Quadrangle

mineral resources OP-793

petrology I-2473

Rensselaer Graywacke

structural geology OP-782

replacement deposits

Idaho

base metals P 1525
 gold ores P 1525
 mercury ores P 1525
 metal ores P 1525
 non-metal deposits P 1525

report *see* annual report**representative basins**

Arizona, hydrogeology P 1406-A

reptiles

dinosaurs

Colorado OF 94-0670; OP-1953
 New Mexico OF 94-0670; OP-1482; OP-1953
 stratigraphy OP-2022
 Wyoming OP-667
 Ornithischia, Utah OP-145

Reptilia

Carnosauria

China OP-418
 Mongolia OP-418

dinosaurs

Colorado OF 94-0670; OP-1953
 New Mexico OF 94-0670; OP-1482; OP-1953
 stratigraphy OP-2022
 Wyoming OP-667
 Ornithischia, Utah OP-145
 Theropoda OP-417

Republican River valley

hydrogeology WRI 95-4014

Research Triangle North Carolina

hydrology OF 94-0379

reservoirs see also dams; floods.

Arizona, hydrology WRI 95-4053
 California, pollution WRI 94-4040
 Colorado

hydrogeology OF 94-0363
 hydrology WRI 94-4097; OP-1345
 pollution OF 95-0087; OP-1210; OP-1337; OP-1922

Commonwealth of Independent States, environmental geology OP-2302

Europe, environmental geology OP-2302

hydrology OF 94-0363; OF 95-0308

Idaho

environmental geology WRI 93-4156
 hydrology OF 94-0109

Kansas, pollution OF 94-0670; OP-1693

Mariana Islands, hydrology WRI 93-4116

Massachusetts, hydrology WRI 94-4003;
 WRI 94-4084

- Micronesia, hydrology WRI 93-4116
 New York, hydrology OF 94-0368
 North Carolina, hydrology WRI 94-4123;
 WRI 94-4140; OF 94-0379; OF 94-0509
 North Dakota, hydrogeology OF 95-0105
 Oregon, environmental geology WRI 93-4156
 Puerto Rico
 environmental geology OP-1405; OP-1791
 sedimentary petrology OP-310
 Texas, hydrogeology WRI 94-4036; FS 0090-95
 Virginia, hydrology WRI 94-4140
 Washington
 environmental geology OF 95-0195
 hydrology OF 94-0109; OF 94-0363
 Wisconsin
 ecology OF 95-0163
 hydrogeology WRI 94-4101
- residence time**
 OP-259
 Atlantic Ocean, Cenozoic OP-1198
 California, seismology OP-2042
 Colorado
 geochemistry OP-1318
 pollution OP-1337
 Florida, ground water OP-472
 geochemistry OP-1114
 Georgia, hydrogeology OP-2161
 Hawaii, hydrogeology OP-2076
 Minnesota, environmental geology OP-831
 Pacific Ocean, Cenozoic OP-1198
 Texas, pollution OP-1093
- Resolution Guyot**
 ocean floors OP-2127
- RESSQC**
 ground water WRI 94-4012
- restites**
 Argentina, magmas C 1129
 Australia, magmas C 1129
 Italy, intrusions OP-866
 magmas C 1129
 Pakistan, geochemistry C 1129
- resurfacing** OP-1644; OP-1844; OP-2069
- retrograde metamorphism**
 Colorado GQ-1764
 Wyoming OP-1929
- Retsof Mine**
 ground water YR
- Revere Anticline**
 energy sources OP-2059
- reverse faults** *see also* imbricate tectonics.
 OP-1422
 Alabama OP-1988
 Alaska I-2272
 Arkansas P 1538-J
 Basin and Range Province OP-1741
 California
 metal ores OP-663
 metamorphism OP-319
 Quaternary OF 94-0568
 seismicity OP-2120
 seismology OP-914
 Canada, tectonophysics OP-2265
 Chile, tectonophysics OP-1762
 China, Quaternary OF 94-0568
 Ecuador, engineering geology OF 94-0568
 Missouri, geophysical surveys P 1538-P
 Oregon, geophysical surveys OP-72
 Pakistan OF 94-0670
 Tennessee
 OP-1988
 Quaternary OF 94-0568
- United States, tectonophysics OP-2265
 Victoria Australia OF 94-0228
 Washington
 geophysical surveys OP-72
 tectonophysics OP-1975
- reverse slip faults** *see* thrust faults
- Revett Quartzite**
 metal ores P 1525
- Reynolds Creek**
 hydrogeology OP-2221
- Reynolds number**
 geophysical surveys OP-1450
- Reynoldsville Quadrangle**
 ground water WRI 87-4136
- rhabdophane**
 Idaho, metal ores P 1525
- Rhaetian Alps** *see* Adamello Massif
- rhodium**
 geochemistry C 1129; OP-976
 Nevada, gold ores OP-2151
 petrology OP-647
- rhizoliths**
 Colorado Plateau, stratigraphy OP-1321
 Nevada, pedogenesis OP-1763
- Rhode Island**
 continental margin I-1987-D
 earthquakes OF 94-0643
 environmental geology OP-2227
 ground water P 1415-A; WRI 94-4138; OF 93-0464; OF 95-0188; OF 95-0355
 hydrogeology, Washington County Rhode Island OF 95-0305
 seismology, Providence County Rhode Island OP-274
- rhodonite**
 Africa OP-781
- rhyacite** *see* sanidine
- Rhynchonellida** *see also* Rhynchonellidae.
 Alaska
 OP-51
- Rhynchonellidae**
 Alaska, Devonian B 2107
- rhyolite** *see* rhyolites
- Rhyolite Canyon Tuff**
 maps MF-2292
- rhyolite tuff**
 Nevada
 geochemistry P 1559; B 2056
 stratigraphy B 2056
 structural geology B 2056; OP-454
- rhyolites** *see also* comendite; pantellerite.
 Andes, Quaternary OP-1511
 Arizona, tectonophysics OP-352
 Bolivia C 1129
 California, geochronology OP-625
 Caribbean region, metal ores B 2057
 Colorado
 geophysical surveys OP-1118
 metal ores OP-1096
 structural geology OP-1247
 East Pacific Ocean Islands OP-309
 Galapagos Islands OP-309
 geochemistry C 1129
 Idaho, metal ores P 1525; B 2081
 Lesser Antilles, metal ores B 2057
 mineralogy OP-1378
 Minnesota, Precambrian OP-886
 Nevada
 OP-1817
 geochemistry B 1988-K; B 2056
 metal ores B 2090
- New Mexico
 I-2399
 geochemistry B 2081
 North Carolina, Mesozoic OP-1399
 Utah
 geochemistry B 1988-K
 molybdenum ores OP-1725
 Virginia
 C 1129
 Mesozoic OP-1399
 Proterozoic B 2060
 Wyoming, geophysical surveys OP-1913
 Yemen, geochemistry OP-1079
- rhytmite**
 Columbia Plateau, Quaternary OP-2237
 Oregon, Quaternary OP-680
 Washington, Quaternary OP-680
- Ribbon Cliff Washington**
 seismology OP-573
- Rice Lake**
 hydrogeology WRI 94-4101
- Richardson Bay**
 pollution OP-1064; OP-1534; OP-1538
- Rico Colorado**
 geochemistry OP-1806
 molybdenum ores OP-526
- Ridgely Fault**
 faults P 1538-I
- Ridley Limestone**
 stratigraphy OP-1502
- Rietveld refinement**
 mineralogy OP-1680
- Rifle Colorado**
 Quaternary OP-2113
- Rifle Quadrangle**
 maps OF 95-0052
- rift zones**
 OP-35
 Antarctic Ocean
 geophysical surveys OP-156
 neotectonics OP-1103
 Antarctica
 Pliocene OF 94-0588
 tectonophysics OP-55; OP-245
 Appalachians
 faults OF 94-0298
 metal ores OP-306
 Arizona, deformation OP-15
 Arkansas, deformation P 1538-J
 Australia, tectonophysics OP-2334
 Basin and Range Province, metal ores OP-1874
 Belarus, structural geology OP-948
 California, tectonophysics OP-2334
 Canada
 structural geology B 1904-T
 tectonophysics OP-2334
 fluvial features OP-2138
 Great Basin, metal ores OP-1874
 Hawaii
 earthquakes OP-232
 environmental geology OF 94-0553
 geologic hazards OF 94-0713; OP-474; OP-696; OP-1722
 ground water OP-2077
 hydrogeology OP-2076
 magmas OP-1293; OP-1372
 Quaternary OP-1453; OP-1768; OP-2246
 seismology OP-1654; OP-1911
 Idaho, faults OP-1650
 Illinois, faults P 1538-Q
 India, tectonophysics OP-2334

- Indiana, structural geology OF 94-0298
 Israel, Quaternary OF 94-0568
 Kentucky
 faults P 1538-Q; OF 94-0298
 structural geology OF 94-0298
 Mexico, petrology OP-827
 Mississippi Valley
 faults OF 94-0298
 seismology P 1538-N
 structural geology P 1538-E
 Missouri
 geophysical surveys P 1538-P
 petrology OP-1299
 Nevada
 deformation OP-15
 geophysical surveys OP-2029
 North Carolina, Triassic OP-925
 Oklahoma, tectonophysics OP-2334
 Oregon
 lava OP-1254
 structural geology OP-1436
 Pacific Ocean, heat flow B 2022
 sedimentary petrology OF 94-0298
 Tennessee, Quaternary OF 94-0568
 Ukraine, structural geology OP-948
 United States, structural geology B 1904-T
 Virginia
 tectonophysics OP-413
 Triassic OP-925
 Washington, lava OP-1254
- right-lateral faults**
 Alaska OP-1447
 California
 OP-107; OP-822; OP-824; OP-1839; OP-2332
 elastic waves OP-212
 Quaternary B 1982; OF 94-0568
 seismology OP-818; OP-825
 Canada, petrology C 1129
 China, Quaternary OF 94-0568
 Ecuador, engineering geology OF 94-0568
 Japan, Quaternary OF 94-0568
 Mexico OP-824
 Nevada, Quaternary OF 94-0568
 New Zealand, Quaternary OF 94-0568
 North Carolina OP-1202
 Russian Federation, earthquakes OP-532
 tectonophysics OP-985
 Virginia OP-1202
 Washington OP-1592; OP-1979
- Rillito Creek basin**
 hydrogeology WRI 94-4114; WRI 95-4062
- rills**
 soils OP-322
- Rincon Formation**
 Miocene OF 95-0265
- Rincon Puerto Rico**
 engineering geology OF 95-0072
- ring dikes**
 Nevada, structural geology OP-454
- ring silicates** *see also* aquamarine; axinite; beryl; cordierite; dravite; emerald; schorl; tourmaline.
 South Africa OP-912
- ring structures** *see also* ring dikes.
 Spain, metal ores OP-799
 United States, metal ores OP-799
- ring-fracture intrusion** *see* ring dikes
rings, planetary *see* planetary rings
rings, tree *see* tree rings
 Rio Amazonas *see* Amazon River
- Rio Grande**
 hydrology WRI 94-4071
- Rio Grande de Loiza**
 hydrology OF 94-0363
- Rio Grande do Norte Brazil**
 geochronology C 1129
 inclusions C 1129
- Rio Grande National Forest**
 environmental geology C 1108
- Rio Grande Rift**
 faults OP-2243
 metal ores OP-1874
 structural geology OP-1741
 tectonophysics OP-442
- Rio Grande River** *see* Rio Grande
- Rio Grande Valley**
 ground water WRI 94-4251; OF 95-0360
 hydrogeology WRI 94-4061
 petrology OP-546
- Rio Puerco**
 environmental geology WRI 94-4192
 hydrogeology OF 94-0377; OP-335
 pollution OP-2226; OP-2264
- Rio Tinto Spain**
 environmental geology OP-662
- Rio Vista California**
 energy sources OP-1746
 hydrology OF 94-0470
- Riotinto Spain** *see* Rio Tinto Spain
- ripple marks**
 Egypt OP-1770
 Pennsylvania OF 95-0240
 Puerto Rico OP-2080
 United States OP-2080
 Washington OP-1376
 West Virginia OF 95-0240
- rise, continental** *see* continental rise
risk, seismic *see* seismic risk
 Riukiu Islands *see* Ryukyu Islands
river piracy *see* stream capture
river plain *see* alluvial plains
rivers *see also* channel geometry; channels; drainage basins; drainage patterns; floodplains; meanders; stream transport.
 Arizona
 hydrogeology WRI 95-4010
 Quaternary OF 95-0057
 Colorado OP-986
 Florida, hydrology OF 94-0709-W
 hydrology OP-829
 Idaho, Quaternary B 2105
 Illinois, hydrology WRI 94-4190
 Indiana, hydrology WRI 94-4190
 Louisiana, waterways OF 94-0275
 Nevada OF 94-0670
- Riverside Quadrangle**
 maps OF 88-0753; OF 88-0754
- RMIBUP**
 uranium ores OF 95-0571
- Rn** *see* radon
- Rn-222**
 New Jersey, pollution WRI 92-4144
 Nicaragua, geochemistry OP-1678
 Pennsylvania, pollution WRI 92-4088
 pollution OP-984
- Road River Formation** OP-1624
- robbery** *see* stream capture
- Roberts Mountains Allochthon**
 geophysical surveys OP-2029
 sedimentary petrology OP-1404
- Roberts Mountains Formation**
 gold ores OP-2151
- Robertson River Formation**
 geochemistry C 1129
 petrology C 1129
 Proterozoic B 2060
- Robinwood Ridge California**
 seismology OP-373
- Rocas Alijos Seamount**
 geochemistry OP-197
- Rock Canyon Utah**
 structural geology OP-1734
- Rock Creek Fault**
 seismology OP-375
- rock crystal** *see* quartz crystal
Rock Eval *see* Rock-Eval
- rock glaciers**
 California, Quaternary OP-449
- rock mechanics** *see also* compressive strength; deformation; tunnels.
 OF 94-0228; OF 95-0028; OP-1841
 California
 OF 94-0228; FS 0132-95
 fractures OF 94-0228
 hydrogeology OP-2043
 petrology OP-708
 China, seismology OF 95-0562
 earthquakes OF 94-0228
 Massachusetts, geophysical surveys WRI 94-4185
 Nevada, fractures OF 94-0228
 New Mexico, environmental geology C 1108
 seismic sources OP-1788
- Rock Point Member**
 stratigraphy OP-222
- Rock River Illinois**
 pollution WRI 94-4034
- rock salt** *see* halite
rock slip *see* rockslides
- rock varnish**
 Arizona, Quaternary OP-1287
 geochronology OP-368
 Nevada, weathering OP-1468
 Utah, Quaternary OP-1287
- Rock-Eval**
 Alaska
 deformation OP-1250
 energy sources OP-574
 California
 energy sources OF 95-0530
 natural gas OP-542
 Colorado
 energy sources OP-297
 geochemistry OP-1700
 sedimentary petrology OP-1272
 energy sources B 2137; OP-537
 geophysical surveys OP-1898
 Indiana
 energy sources OP-2020
 petroleum B 2094-D; OF 94-0298
 Nevada
 energy sources OP-1083
 geochemistry OP-794
 North Dakota, energy sources OP-749
 Ohio, energy sources OP-2057
 petroleum OP-830
 Utah
 energy sources OP-297
 sedimentary petrology OP-1272
- rock-stratigraphy** *see* lithostratigraphy
rock-water interface *see* water-rock interaction

Rockefeller Mine Pluton

geochemistry C 1129

Rockford mining district

metal ores OP-1260

rockslides

California, engineering geology OP-1467

Japan

engineering geology OP-367

geologic hazards OP-2007

Rocky Boy's Indian Reservation

energy sources C 1108

Rocky Flats Plant

geomorphology OP-1219

pollution OP-1466

Rocky Mountain and Intermontane Basins**Uranium Province**

uranium ores OF 95-0571

Rocky Mountain Arsenal

ground water OP-1562

Rocky Mountain National Park

fluvial features OP-1743

Rocky Mountains *see also* Madison Range.

areal geology

OP-1179

Beartooth Mountains OP-280

Owl Creek Mountains OP-279; OP-280

coal OP-947

Cretaceous I-2474-A

crust, Beartooth Mountains OP-1831

crystalline rocks

Beaverhead Mountains OP-362

Tendoy Range OP-362

energy sources

OP-281

Owl Creek Mountains OP-1942

Wind River Range OP-1942

environmental geology

YR; C 1108; OF 95-0043; OF 95-0508

San Juan Mountains OP-334

faults

OP-476

Beaverhead Mountains OP-2125

fluvial features, Southern Rocky Mountains

OP-1743

geochemistry

OF 95-0098; OP-146

Medicine Bow Mountains OP-269

Spanish Peaks OP-1939

geochronology

B 2113

Absaroka Range OP-1517

Bitterroot Range C 1129

geologic hazards OF 95-0059

geomorphology

OF 95-0266

San Juan Mountains I-2504

geophysical surveys

OP-1660

San Juan Mountains OP-1118

ground water WRI 95-4034; OF 94-0536;

OF 95-0143; OP-1633

hydrogeology

OP-1062; OP-2196; OP-2213

Sangre de Cristo Mountains WRI 94-4072

hydrology OF 94-0375; OF 95-0139; OP-1632

maps

OF 95-0232; GQ-1757; GQ-1764; MF-

2282; MF-2283; I-2462

Big Belt Mountains MF-2291

Bridger Range OF 95-0011-A; OF 95-0011-

B

Laramie Mountains I-2233

metal ores

OF 95-0079; OF 95-0097; OP-1366

San Juan Mountains OF 94-0291; OP-98;

OP-284

Sangre de Cristo Mountains B 2116

metamorphic rocks, Laramie Mountains OP-

1929

mineral resources, Bridger Range OP-1344

mineralogy, Mount Antero OP-1828

molybdenum ores, San Juan Mountains OP-526

neotectonics

Gravelly Range OP-1902

Tendoy Range OP-1943

orogeny, Bridger Range OF 94-0670

petrology

C 1129

San Juan Mountains OP-546; OP-840

pollution

OF 94-0670

San Juan Mountains OP-493

Proterozoic, Central Rocky Mountains OP-

1982

Quaternary

OF 95-0063; OP-11

Gravelly Range OP-1868

Wind River Range OP-355

sedimentary petrology

OP-528

Beartooth Mountains OP-1622

Laramie Mountains OP-1622

Owl Creek Mountains OP-1622

Wind River Range OP-1622

sedimentation, San Juan Mountains OF 94-

0437

stratigraphy

OP-2305

Laramie Mountains OP-364

San Juan Mountains OF 94-0583

structural geology

OF 94-0228; OP-1599

Bridger Range OP-480

Laramie Mountains OP-1232; OP-1288

Spanish Peaks OP-480

Tobacco Root Mountains OP-480; OP-1863

uranium ores OF 95-0571

Rodalquilar Deposit

gold ores OF 95-0221

metal ores OP-22; OP-799

Rodentia *see* Myomorpha**rodents *see also* packrats.**

Basin and Range Province, Quaternary OP-

2198

Egypt, stratigraphy OP-1528

Great Basin, Quaternary OP-2198

Quaternary OP-875

Rodgers Creek Fault

geophysical surveys OF 94-0568

seismology OP-2284

structural geology OP-1007; OP-1234

Rodríguez Seamount

geochemistry OP-197

roestone *see* oolite**Rogers Lake**

ground water OP-2010; OP-2335

Romania

geochemistry

Tismana Romania C 1129

Transylvanian Alps C 1129

Rome Trough

faults OF 94-0298

Ronda, Serrania de *see* Serrania de Ronda**Roosevelt Lake**

hydrology WRI 95-4053

rooseveltite

mineralogy B 2140

RORA

hydrogeology OP-798

Roseau Quadrangle

metal ores OP-148

mineral resources OF 94-0447

Rosebud Quadrangle

maps MF-2290

Roselli, Francisco Lucas

ichnofossils OP-311

Roskrige Volcanics

stratigraphy OP-353

Ross Ice Shelf

neotectonics OP-1103

Quaternary OP-54

Ross Sea

geophysical surveys OF 94-0293; OP-156

Pliocene OF 94-0588

Roswell Resource Area

economic geology DDS-0017; B 2063

energy sources B 2063

metal ores B 2063

mineral resources B 2063

uranium ores B 2063

Rotaliina *see* Buliminacea; Cassidulinacea;

Globigerinacea

rotational wave *see* S-waves**Rough Creek fault zone**

diagenesis OF 94-0298

faults P 1538-Q; OF 94-0298

natural gas OF 94-0298

petroleum OF 94-0298

sedimentary petrology OF 94-0298

structural geology OF 94-0298

Round Lake Oregon

Quaternary OF 95-0033

Round Lake Quadrangle

ground water WRI 93-4029

Round Mountain

geochronology OP-844

Round Mountain Quadrangle

maps GQ-1756

Rowland Nevada

maps I-2536

Roxana Silt

pedogenesis OP-2319

Rub al Khali

Quaternary OP-1016

rubblerock *see* breccia**rubidium**

Italy, geochemistry OP-865

Maine, geochemistry C 1129

Nevada, Miocene OP-1408

Rb-87/Sr-86, Russian Federation OP-843

Vermont, geochemistry C 1129

rubidium-strontium *see* Rb/Sr**Ruby Louisiana**

ground water WRI 94-4228

Ruby Mountains

orogeny OP-619

Ruby Range

structural geology OP-480

Ruby Terrane

areal geology OP-711; OP-725

geochemistry OP-23

metamorphism OP-784

Rugosa

- New York OP-686
- Ohio OP-686
- South America OP-684

Ruja Deposit

- metal ores OP-799

Rum Jungle

- metal ores OP-2126

Runnemeade Quadrangle

- stratigraphy P 1554
- iral environment**
 - Colorado, hydrology FS 0153-95
 - environmental geology OF 95-0651
 - hydrology WRI 94-4148
 - Missouri, pollution OP-2282
 - pollution FS 0114-95
 - Tennessee, pollution OF 95-0156
 - Wisconsin, reclamation OF 95-0163

Rush Creek Texas

- ecology OP-1180

Russ fault zone

- seismicity OP-1745

Russell Fault

- natural gas OP-542

Russell Fjord

- Quaternary OP-1263

Russia *see* Russian Federation**Russian Far East**

- environmental geology CP-0043
- structural geology OF 94-0714

Russian Federation *see also* Dnieper River.

- continental shelf, Anadyr Basin OP-589
- earthquakes
 - Kuril Islands OP-1657
 - Sakhalin Russian Federation OP-532
- energy sources YR
- engineering geology
 - Kola Peninsula OP-650
 - Kola Russian Federation OP-650
- environmental geology, Russian Far East CP-0043
- Eocene OP-1573
- geochemistry
 - Kola Peninsula C 1129
 - Lake Baikal OP-1559
 - Maymecha-Kotuy OP-50
 - Norilsk region OP-50; OP-421
 - Polar Urals OP-843
 - Transbaikalia C 1129
- geochronology
 - Norilsk Russian Federation OP-194
 - Yakutia region OP-1493
- geophysical surveys
 - Kola Peninsula OP-958
 - Kola Russian Federation OP-651
 - Lake Baikal OF 94-0263
- hydrology, Lake Baikal OF 94-0445
- magmas, Komandorski Islands C 1129
- natural gas
 - Sakhalin Russian Federation OP-2219
 - Timan-Pechora region OP-2219
- petroleum
 - Lena Basin OP-153
 - Timan-Pechora region OP-152
 - Tunguska Basin OP-153
- Pliocene OF 94-0588
- Proterozoic, Pechenga OP-2242
- Quaternary
 - Lake Baikal OP-94; OP-165
 - Tolbachik OP-1257
- sedimentary petrology, Lake Baikal OP-1877

- structural geology, Russian Far East OF 94-0714

- tectonophysics, Kola Peninsula OP-2228

Russian Pacific region *see* Kamchatka Peninsula;**Kuril Islands****Russian Platform *see* Dnieper-Donets Basin;****Ukrainian Shield****rutile**

- metal ores B 2097
- Mexico, phase equilibria OP-387; OP-1489
- Ontario, phase equilibria OP-387; OP-1489
- Utah OP-288

Rutland Quadrangle

- Proterozoic B 2060

Ryoke Belt

- geochemistry C 1129

Ryukyu Islands

- engineering geology OP-367; OP-1027

S**S *see* sulfur****S-34/S-32****Alaska**

- base metals B 2107
- gold ores OP-624

Arabian Peninsula, metal ores OP-1220**China**

- hydrology OP-1003
- metal ores OP-1871

Colorado

- environmental geology OP-945
- metal ores OP-1793

Florida, ground water OP-473**Idaho**

- hydrogeology OF 94-0503
- metal ores B 2064-A-R

metal ores OP-870**Nevada, gold ores OP-1245****Pacific Ocean, geochemistry B 2022; OP-1032; OP-1033; OP-2098****Pennsylvania, sedimentary petrology OP-1951****Rocky Mountains, hydrogeology OP-2213****South Carolina, gold ores OP-2090****Spain**

- gold ores OF 95-0221
- metal ores OP-22

Utah, sedimentary petrology B 2110**Western Interior, stratigraphy OP-2063****Wyoming, geochemistry OP-269****s-triazines *see* triazines****S-type granites****Argentina C 1129****Australia C 1129****Finland, geochemistry C 1129****geochemistry C 1129****India, geochemistry C 1129****Iran C 1129****Japan C 1129****New South Wales Australia C 1129****Northwest Territories C 1129****Queensland Australia, metal ores C 1129****Tasmania Australia, metal ores C 1129****S-waves *see also* SH-waves; SV-waves.****OP-80****Africa, tectonophysics OP-636****Alaska OP-1107; OP-1978****Bolivia OP-961****California**

- OF 94-0552; OF 94-0706; OP-62; OP-254; OP-430; OP-539; OP-587; OP-1143; OP-

- 1144; OP-1222; OP-1347; OP-1375; OP-1499; OP-1514; OP-1540; OP-1703; OP-1705; OP-1753; OP-1853; OP-2091; OP-2286; OP-2325

geophysical surveys OF 94-0590; OP-2046**China, mantle OP-1020****core OP-482****Hawaii, petrology OP-1500****Iceland, tectonophysics OP-298****Nevada OF 94-0618****Nicaragua OP-961****Russian Federation****geophysical surveys OP-958****tectonophysics OP-2228****SAC****hydrology OF 94-0360****Sacajawea Ridge Till****Quaternary OP-1583****Sacramento Basin****hydrogeology FS 94-0029****Sacramento California****ecology OP-495****pollution OF 95-0110****Sacramento River****deformation OP-1774****engineering geology OP-788****environmental geology YR****geochemistry OF 94-0362****geologic hazards FS 94-0049****hydrology OF 94-0470****pollution OF 95-0110; OP-1051; OP-2251****soils OP-787****structural geology OP-1773****Sacramento Valley****geologic hazards OF 94-0494; OP-437****hydrology OF 93-0068****stratigraphy OP-1341****Sacramento-San Joaquin Delta****deformation OP-1774****engineering geology OP-788****geologic hazards FS 94-0049****Saddle Island Fault****deformation OP-1323****Saddle Mountain East Fault****faults OP-2079****Sadlerochit Group****structural geology OP-2247****Sadlick Sequence****structural geology OP-2115****Safford Basin****isostasy OP-1666****Safsaf Oasis****geophysical surveys OP-2068****Sag River Sandstone****areal geology OP-641****Sagami Bay****plate tectonics OF 94-0568****Sagavanirktok Formation****Eocene OF 94-0653****Saguenay earthquake 1988****Canada OP-374****Quebec OP-88****Saguenay Valley****Quaternary OF 94-0568****Sahara****Quaternary OP-909****Sailor Canyon Formation****metamorphism OP-319****structural geology OP-1462**

- Saint Clair River**
hydrogeology FS 94-0056
- Saint Croix**
ground water WRI 93-4162; OF 91-0503;
OF 94-0531
- Saint Elias Mountains**
geochemistry OF 95-0222
geomorphology B 2072
plate tectonics OP-1682
Quaternary OP-1805
- Saint George Basin**
continental shelf OP-589
- Saint George Quadrangle**
areal geology B 2056
- Saint Johns River basin**
ground water OF 94-0495; OF 95-0115
- Saint Kevin Gulch**
pollution OP-487
- Saint Lawrence Island**
areal geology OP-931
- Saint Louis Limestone**
energy sources OP-2020
geochemistry OF 94-0298
petroleum B 2094-D; OF 94-0298
- Saint Louis Park Minnesota**
ground water WRI 94-4204
- Saint Mary River Formation**
ground water OP-1215
- Saint Marys Alaska**
environmental geology OF 94-0481
- Saint Marys Formation** *see also* Chesapeake Group.
OP-1412
ground water WRI 92-4111
Vertebrata OP-2275
- Saint Paul Minnesota**
ground water OF 93-0435
hydrogeology WRI 94-4163; OF 94-0478
- Saint Peter Aquifer**
metal ores B 1989-G
- Saint Peter Sandstone**
diagenesis OF 94-0298
lead-zinc deposits OF 94-0298
- Saint Rose coal field**
geochemistry OP-1867
- Saint Thomas Quadrangle**
maps OF 92-0326
- Sainte Genevieve Limestone**
petroleum OF 94-0298
- Sakhalin earthquake 1995**
earthquakes OP-532
- Sakhalin Russian Federation** *see also* Kuril Islands.
earthquakes OP-532
natural gas OP-2219
- Sakura-jima**
Quaternary OP-1952
- Salcha seismic zone**
seismology OP-1459
- Saline Range**
geochronology OP-625
saline water *see* salt water
- Salisbury Embayment**
stratigraphy OF 94-0217; OF 94-0683; OF 94-0708; OP-736; OP-1412
- Salix**
Pacific Ocean, Quaternary OP-1354
- Salonika Greece**
Quaternary OF 94-0568
- salt** *see also* diapirs.
Colorado, pollution OP-732
Mississippi OP-828
Montana, stratigraphy B 2112
New York, ground water YR; OP-1608
North Dakota, stratigraphy B 2112
- salt domes**
Belarus, structural geology OP-948
Ukraine, structural geology OP-948
Utah, sedimentary petrology OP-1178
- salt lakes**
Texas, Quaternary OP-812
Utah, hydrogeology WRI 93-4028
- salt marshes**
Alaska, Quaternary OF 94-0568
Florida, sedimentation OP-1698
Louisiana
engineering geology OF 94-0275
waterways OF 94-0275
- Salt Range**
coal B 2096
- Salt River**
hydrogeology OP-2262
hydrology WRI 95-4059
- Salt River valley**
hydrology WRI 95-4053
- salt tectonics** *see also* deformation; diapirs; faults;
folds; salt domes.
Colorado OP-1551
Pakistan B 2126
Utah I-2462; OP-1551
- Salt Wash Sandstone Member**
OF 94-0583
sedimentary petrology OP-2031
- salt water**
Florida, pollution OP-806
ground water OP-2283
Puerto Rico, sedimentary petrology OP-2277
Texas, ground water WRI 93-4126
United Arab Emirates, ground water OP-1018
Utah, hydrogeology WRI 93-4028
- salt-water intrusion**
Alaska, impact statements OF 95-0174
California, ground water OP-1370
Caribbean region, ground water WRI 93-4162
Florida
diagenesis OP-2263
ground water WRI 92-4174; WRI 94-4010;
OF 94-0457
Georgia, ground water OF 94-0520; OP-1402
Lesser Antilles, ground water WRI 93-4162
Louisiana, ground water OP-1996
New Jersey, ground water WRI 94-4113; OP-751
New York, ground water WRI 92-4171
North Carolina, ground water WRI 94-4186
pollution OP-762
Puerto Rico, hydrogeology WRI 91-4183
Samoa, ground water WRI 94-4142
Texas
ground water WRI 93-4100
hydrogeology WRI 94-4036; FS 94-0048;
OP-1684
Virginia
ground water W 2401; OP-376; OP-1977
hydrogeology OP-678
Washington, ground water WRI 94-4236
- Salta Argentina**
orogeny OP-2011
- Saltash Formation**
stratigraphy B 2060
- saltation** OP-2104
- Salter Canyon Colorado**
stratigraphy OC-0144; OC-0145
- Salton Sea**
stratigraphy OP-1736
- Salton Trough**
Pliocene OP-2061
structural geology OP-824
tectonophysics OP-814
- Saltos Shale Member**
natural gas OP-542
- Saltville Fault**
structural analysis OP-1091
- Samail Ophiolite** *see* Semail Ophiolite
- samarium**
Sm-147/Nd-144
California OP-321
Hawaii OP-861
petrology OP-939
Russian Federation OP-421; OP-843
- Samoa**
ground water WRI 94-4142
- sample location maps** *see* site location maps
- Sams Creek Formation**
magmas OP-1126
- San Agustin Basin**
hydrogeology WRI 94-4125
- San Andreas Fault**
deformation OP-107; OP-2332
earthquakes OP-393; OP-491; OP-1595
economic geology OP-216
elastic waves OP-461
engineering geology OF 94-0228; OF 94-0568
faults OP-320; OP-1108; OP-1205; OP-2288
geophysical surveys OP-817; OP-1525
metal ores OP-801
neotectonics OP-1145; OP-2070
plate tectonics OP-1576
Pliocene OP-2061
pollution OP-2047
Quaternary OF 94-0568
rock mechanics OF 94-0228
seismicity OP-2120
seismology OF 94-0228; OF 94-0568; OF 95-0038; OP-783; OP-819; OP-820; OP-825; OP-893; OP-914; OP-957; OP-1130; OP-1207; OP-1224; OP-1349; OP-1385; OP-1474; OP-1596; OP-1600; OP-1640; OP-1705; OP-1715; OP-1808; OP-1984; OP-2084; OP-2325
stratigraphy B 1995-J,K
structural geology OF 94-0228; OP-816; OP-821; OP-872; OP-1007; OP-1234; OP-1599; OP-1741; OP-1839; OP-1914
tectonophysics OP-82; OP-1524; OP-1651; OP-2181; OP-2195; OP-2334
- San Antonio Texas**
ground water WRI 93-4100
hydrogeology OP-1684
hydrology OF 95-0103
petroleum OP-1286
- San Bernardino California**
earthquakes OP-1266
seismology OP-1600
- San Bernardino Mountains**
non-metal deposits OF 95-0039; OF 95-0535
- San Bernardino National Forest**
non-metal deposits OF 95-0039; OF 95-0535
- San Bernardino Valley**
seismology OP-1385

San Bruno Shoal

geophysical surveys OP-1759
neotectonics OP-1760
Quaternary OP-1216

San Fernando de Apure Quadrangle
maps MF-2247**San Fernando earthquake 1971**
California FS 0096-95; OP-649**San Fernando Valley**

crust OP-649
earthquakes OP-383; OP-430
engineering geology OP-1585
geologic hazards OF 95-0062
seismology OP-1336

San Fernando Valley earthquake 1971 *see* San Fernando earthquake 1971**San Francisco Bay**

deformation OP-2332
earthquakes OP-1753
engineering geology OF 94-0709
environmental geology YR; C 1108; OF 95-0291; OF 95-0299; OP-894
faults OP-1225; OP-1577
geochemistry OP-512; OP-954
geophysical surveys OF 94-0568; OF 94-0639; OP-1759; OP-1928; OP-1966
ground water WRI 94-4151; OP-1370
hydrology OF 94-0470; OF 94-0471; OF 94-0543; OF 95-0327
neotectonics OP-1760
oceanography OF 95-0326
pollution OP-215; OP-1064; OP-1397; OP-1534; OP-1538; OP-1735; OP-1940; OP-2026; OP-2223
Quaternary OF 94-0568; OP-1216; OP-1308
sediments OP-1065
seismology OP-91; OP-587; OP-1224; OP-1617; OP-2284
structural geology OP-1773; OP-1914
tectonophysics OP-1521; OP-1651
waterways OP-877

San Francisco Bay region *see also* Loma Prieta earthquake 1989.

areal geology OF 94-0622
crust OP-1967
deformation OP-1774
earthquakes OP-1641; OP-1712
ecology OP-495
engineering geology OF 94-0568; OP-366
faults OP-492
geochemistry OF 95-0015
geologic hazards C 1130; OF 93-0684; OF 94-0259; OF 95-0479; FS 0112-95; FS 94-0049
geophysical surveys OF 94-0613; OF 94-0692; OP-1525; OP-1966; OP-1968
hydrogeology OF 94-0357
maps OF 95-0597
Quaternary OF 94-0568; OP-1787
seismology OF 95-0038
soil mechanics OF 94-0699
structural geology OP-1007; OP-1234; OP-1701; OP-1773; OP-1914
tectonophysics OP-1524

San Francisco California

deformation OP-2332
earthquakes OF 94-0706; OP-2091
geophysical surveys OF 94-0706; OP-1966
Quaternary OP-1787
seismicity OP-654
seismology OP-587; OP-2333
waste disposal OP-1610

San Francisco earthquake 1906

California
OP-1475; OP-1617; OP-1984; OP-2084;
OP-2333
neotectonics OP-2070
Quaternary OF 94-0568

San Francisco Peninsula

deformation OP-2332
ground water WRI 94-4151; OP-1370
hydrogeology OF 94-0357
neotectonics OP-1145
structural geology OP-1584

San Gabriel Fault

fractures OF 94-0228
Pliocene OP-2061
Quaternary OF 94-0568
rock mechanics OF 94-0228

San Gabriel Mountains

engineering geology OP-1467; OP-1585
geophysical surveys OP-1285
intrusions OP-46
non-metal deposits OF 95-0039; OF 95-0535
petrology OP-45
seismicity OP-462

San Gregorio Fault

oceanography OP-1918
plate tectonics OP-1431
Quaternary OF 94-0568
seismology OP-914
structural geology OP-1701

San Jacinto Fault

seismology OP-1385; OP-1474
structural geology OP-705

San Jacinto Mountains

non-metal deposits OF 95-0039; OF 95-0535

San Joaquin Basin

sedimentation OF 94-0577

San Joaquin River

environmental geology YR
geochemistry OF 94-0362
geologic hazards FS 94-0049
pollution OF 95-0110; OF 95-0165; OP-2251
soils OP-787

San Joaquin Valley

engineering geology OP-788
ground water WRI 95-4048; OF 94-0045; OF 94-0072; OP-226
pollution OF 95-0286; OP-132; OP-1297
stratigraphy OP-1341

San Jose California

environmental geology OF 95-0299

San Juan Basin

economic geology OP-601
energy sources C 1108
geochemistry C 1108; OF 94-0295
sedimentary petrology B 1808-P
stratigraphy OP-2019

San Juan Bautista California

faults OP-320
seismology OP-1715

San Juan Formation

metal ores OF 94-0291
petrology OP-546

San Juan Islands

structural geology OP-1981

San Juan Mountains

environmental geology OP-334
geomorphology I-2504
geophysical surveys OP-1118
metal ores OF 94-0291; OP-98; OP-284
molybdenum ores OP-526

petrology OP-546; OP-840
pollution OP-493
sedimentation OF 94-0437
stratigraphy OF 94-0583

San Juan Quadrangle
maps OF 94-0685**San Juan River**

hydrology YR
pollution OP-657
Quaternary OP-1287
stratigraphy OP-1731

San Juan volcanic field *see also* Fish Canyon Tuff.

geophysical surveys OP-1118
magmas OP-1325
metal ores OP-284; OP-333; OP-728
petrology OP-773; OP-1716

San Leandro California

geophysical surveys OP-1759
neotectonics OP-1760
structural geology OP-1430

San Lorenzo River basin

crust OF 94-0228
hydrogeology OP-789

San Luis Caldera

petrology OP-546; OP-1716

San Luis Peak Quadrangle

petrology OP-546

San Luis Valley

ecology OP-150
environmental geology B 2220; OF 95-0043
hydrogeology OF 95-0569
pollution OP-34; OP-253; OP-730; OP-929; OP-1082; OP-1957

San Manuel mining district

copper ores OP-291

San Mateo Bridge

faults OP-1225

San Mateo Quadrangle

geologic hazards OF 93-0684

San Nicolas Basin

geophysical surveys OF 95-0228

San Pablo Bay

environmental geology YR
geophysical surveys OF 94-0568; OP-1968
pollution OP-1064; OP-1534; OP-1538
seismology OP-2284
structural geology OP-2107

San Pedro Basin

geophysical surveys OF 95-0228

San Pedro Coal

sedimentary petrology OP-2256

San Pedro Hills *see* Palos Verdes Hills**San Pedro Valley**

geophysical surveys OF 95-0076

San Rafael Group

OC-0144; OC-0145
structural geology OF 95-0491

San Rafael Swell

structural geology OF 95-0491
tectonics OP-1292

San Salvador El Salvador

Quaternary OP-1816

San Simeon Fault

Quaternary OF 94-0568

sand

Alaska
OP-2094
Quaternary OP-124; OP-1457; OP-1692
Arizona

- fluvial features OP-1607
- geomorphology OF 94-0597
- hydrology FS 0120-95; OP-2203
- Arkansas, Quaternary OP-2216
- California
 - earthquakes OP-1529; OP-1530
 - ground water OP-2335
 - pollution OP-1064
- Colorado
 - geochemistry OP-1046; OP-1812
 - geomorphology OP-572
 - ground water OP-1562
 - Quaternary OP-1742
- Columbia Plateau, Quaternary OP-2237
- Delaware, pollution OP-1077
- Egypt OP-1770
- engineering geology OP-1310
- environmental geology OP-811
- Florida
 - Devonian OP-1971
 - shore features OP-1174
 - geochemistry OP-1284
 - geologic hazards OP-2240
 - Georgia, Devonian OP-1971
 - Great Plains, Quaternary OP-656
 - ground water OP-2283
 - Gulf of Mexico OP-2081
 - Hawaii, engineering geology OF 94-0638
 - Illinois, Quaternary OP-1630
 - Iowa, Quaternary OP-1630
 - Japan, Quaternary OF 94-0568
 - Kazakhstan, energy sources OP-1258
 - Maryland, pollution OP-1077; OP-1089
 - Massachusetts, waste disposal OP-2249
 - Midwest, pollution OP-1056
 - Minnesota, pollution OF 95-0116
 - Mississippi, Quaternary OF 94-0558
 - Mississippi Valley, geologic hazards OP-1578
 - Missouri, hydrogeology OP-1311
 - Nebraska, geochemistry OP-1046
 - Nevada, fluvial features OP-2289
 - New England, ground water P 1415-A
 - New Jersey, pollution OP-2176
 - Ohio, geomorphology OF 95-0224
 - Oman
 - ground water OP-2311
 - hydrogeology OP-1801
 - Ontario, ground water OP-170
 - Oregon, Quaternary OP-1629
 - Pacific Ocean OP-1218
 - Quaternary OF 94-0568
 - South Carolina
 - geomorphology OP-1471
 - ground water OF 95-0507
 - structural geology OP-1061
 - United Arab Emirates
 - ground water OP-2311
 - hydrogeology OP-1801
 - Utah, hydrology OP-2203
 - Virginia, ground water OP-1977
 - Washington
 - earthquakes OP-1189
 - engineering geology OP-1859
 - Quaternary OP-1076
- sand bars *see* bars
- sand blows**
 - Arkansas, Quaternary OP-946
 - California
 - Quaternary OF 94-0568
 - seismology OP-860
 - Mississippi Valley, Quaternary OF 94-0568
 - Missouri, Quaternary OP-1707
- South Carolina, Quaternary OF 94-0568
- sand bodies**
 - Colorado OF 94-0670
 - Illinois OF 94-0298
 - seismology OP-1075
 - Utah OF 94-0670
- sand dunes *see* dunes
- Sand Hills**
 - geochemistry OP-1046
 - ground water OP-1614
 - sedimentary petrology B 2110
- Sand Key Reef**
 - Quaternary OP-2206
- sand sheets**
 - Alaska, Quaternary OP-1692
 - Colorado
 - OP-572
 - geochemistry OP-1812
 - Egypt, sedimentary petrology OP-1770
 - Washington, earthquakes OP-1189
- sand volcanoes *see* mud volcanoes
- sand waves**
 - geomorphology OP-1792
- Sandia Granite**
 - petrology C 1129
- sands**
 - OP-75
 - Arizona OF 95-0031
 - California OF 95-0535
 - Idaho P 1525
 - Montana I-2446
 - New Hampshire OF 94-0201
- sandstone**
 - OF 94-0228; OF 94-0298; OP-1226
 - Alabama, petroleum OF 94-0670
 - Alaska
 - B 2107
 - energy sources DDS-0030; OP-65; OP-1270
 - Proterozoic OP-1624
 - Quaternary OP-1921
 - stratigraphy OP-1439
 - Arizona OP-2023
 - Arkansas, lead-zinc deposits B 1989-F
 - Basin and Range Province, structural geology
 - OP-2115
 - California
 - B 1995-H,I; OF 94-0577; OP-603; OP-1097
 - energy sources OP-2146
 - metal ores OP-805
 - Miocene B 1995-J,K
 - petrology OP-1315
 - Pliocene OP-2061
 - Colorado
 - B 1808-P; OF 94-0670
 - energy sources OP-297
 - Oligocene OP-1691
 - Paleocene OP-1531
 - petroleum OF 94-0670
 - Colorado Plateau, stratigraphy OP-1321
 - Florida
 - OP-1861
 - Devonian OP-1971
 - Georgia, Devonian OP-1971
 - Great Basin, structural geology OP-2115
 - ground water OP-1167
 - Idaho
 - crystalline rocks OP-362
 - mercury ores P 1525
 - metal ores B 2064-A-R
 - Illinois, energy sources OF 94-0298
 - Iowa, geophysical surveys OP-1880
 - Kentucky
 - energy sources OF 94-0298
 - natural gas OF 94-0298
 - stratigraphy B 2135
 - Louisiana, natural gas OP-1543
 - Maryland OP-848
 - Massachusetts OF 95-0044
 - Mexico OP-1932
 - Micronesia, manganese ores OP-1409
 - Minnesota, ground water OF 93-0435
 - Mississippi OP-828
 - Missouri, lead-zinc deposits B 1989-F
 - Montana
 - OP-1622
 - crystalline rocks OP-362
 - stratigraphy OP-596
 - Nevada
 - B 1988-I
 - Miocene OP-1408
 - stratigraphy OF 94-0460; OF 95-0102
 - New Mexico B 1808-P
 - New York, stratigraphy OP-685
 - Oregon
 - petrology OP-1315
 - stratigraphy OP-1176; OP-1177
 - Pennsylvania
 - B 2110
 - energy sources OP-2059
 - petroleum OF 94-0298
 - rock mechanics OF 94-0228
 - Rocky Mountains, metal ores OP-1366
 - South Dakota B 1917-S
 - stratigraphy OP-2139
 - Texas
 - OP-1472; OP-2256
 - energy sources OP-220
 - Utah
 - B 2115-A; OF 94-0670; OP-1464; OP-1882; OP-2031
 - energy sources OP-297; OP-1461; OP-1557
 - petroleum B 2000-J
 - stratigraphy B 2115-B
 - Virginia, conservation OF 94-0592
 - Washington
 - OP-1376
 - Eocene B 2085-A; OP-1593
 - petrology OP-2173
 - West Virginia, stratigraphy OP-69
 - Wisconsin, ground water OF 95-0163
 - Wyoming
 - OP-279; OP-456; OP-1622
 - energy sources C 1108; OF 94-0670; OP-477; OP-701; OP-1621
 - oil and gas fields OF 94-0670
 - Paleocene OP-1531
 - Yukon Territory, Proterozoic OP-1624
- sandstone deposits**
 - Idaho P 1525
- sandstone dikes**
 - California OF 94-0577
 - Utah, metal ores OF 94-0417
- sandstone-type**
 - Colorado, metal ores OP-98
 - Idaho, uranium ores P 1525
 - New Mexico, metal ores B 2063
 - Rocky Mountains, uranium ores OF 95-0571
- sandurs *see* outwash plains
- Sangamon River**
 - seismology OP-1451
- Sangamonian**
 - California OF 94-0568

- Mississippi Valley OP-1758; OP-2319
Sangre de Cristo Mountains *see also* Spanish Peaks.
 hydrogeology WRI 94-4072
 metal ores B 2116
- sanidine**
 OF 94-0576
 California, Quaternary OP-1575
 Colorado
 sedimentation OP-1690
 stratigraphy OP-507
 Europe, geochronology OP-510
 geochronology OP-1572
 Gulf Coastal Plain, stratigraphy OP-1906
 Iowa, stratigraphy OP-1671
 Nevada, stratigraphy B 2056
 New Mexico, Quaternary OP-1575
 North Carolina, Mesozoic OP-1399
 Utah
 OP-288
 geochronology OP-1142
 stratigraphy OP-507
 Virginia, Mesozoic OP-1399
 Western Interior
 geochronology OP-506
 stratigraphy OP-1906
 Wyoming, geochronology OP-569
- Santa Barbara Basin**
 geochemistry P 1566; OP-244
 Quaternary OP-1501
- Santa Barbara Islands** *see* Channel Islands
- Santa Barbara System Argentina**
 orogeny OP-2011
- Santa Clara Formation**
 energy sources OP-2146
- Santa Clara River**
 engineering geology OP-1467
- Santa Cruz Argentina**
 petrology C 1129
 Vertebrata OP-1151
- Santa Cruz California**
 seismic sources OP-2286
 seismology OP-1222
- Santa Cruz Mountains**
 earthquakes OP-1144
 engineering geology OP-1010
 faults OP-1577
 geologic hazards OF 93-0684
 hydrogeology OP-2043
 Quaternary OF 94-0568
 seismology OP-820; OP-914; OP-1143; OP-1984; OP-2084
- Santa Cruz River**
 geomorphology W 2429; OP-1926
- Santa Fe Group**
 faults OP-2243
 ground water WRI 94-4251
- Santa Fe New Mexico**
 ground water WRI 94-4078
 hydrogeology WRI 94-4072
- Santa Isabel Puerto Rico**
 hydrogeology WRI 91-4183
- Santa Lucia Range**
 oceanography OP-1410
- Santa Maria Basin**
 areal geology OP-2189
 clay mineralogy B 1995-H,I
 energy sources OF 95-0530
 geochemistry P 1566
 Miocene B 1995-J,K
 Neogene B 1995-J,K
- paleomagnetism OP-1916
 petroleum OF 95-0014
 sedimentary petrology B 1995-H,I
 stratigraphy B 1995-J,K; B 1995-L
 tectonophysics OP-1778
- Santa Maria Quadrangle**
 maps OF 95-0025
- Santa Monica Fault**
 earthquakes OF 94-0568
- Santa Monica Mountains**
 areal geology OP-2189
 engineering geology OP-1467
- Santa Rita Mountains**
 stratigraphy OP-350
- Santa Rosa California**
 metal ores OP-805
- Santa Susana Mountains**
 crust OP-649
 engineering geology OP-891; OP-1467; OP-1585
 Quaternary OF 94-0568
- Santa Ynez Fault**
 sedimentary petrology B 1995-H,I
- Santa Ynez Mountains**
 areal geology OP-2189
- Santacrucian**
 Vertebrata OP-1151
- Santee Limestone OP-1359**
- Santee River**
 hydrogeology FS 94-0010
- Santo Tomas Coal**
 sedimentary petrology OP-2256
- Santonian**
 Western Interior B 2113
- Sanyo Belt**
 geochemistry C 1129
- Sao Rafael Batholith**
 geochronology C 1129
- saprolite**
 Egypt, geophysical surveys OP-2068
 Georgia, soils OP-1555
- sapropel**
 Texas, sedimentary petrology OP-2256
- SAR**
 Basin and Range Province, Quaternary OP-1414
 California
 seismology OP-714
 volcanic features OP-305
 Egypt, geophysical surveys OP-2068
 Great Basin, Quaternary OP-1414
- Sarasota Quadrangle**
 maps OF 95-0261
 Quaternary OP-1001
 stratigraphy OP-2295
- Saratoga Springs Quadrangle**
 ground water WRI 93-4029
- Sardinia Italy**
 geochemistry C 1129
 paleomagnetism OP-962
- Sardinia-Corsica Batholith**
 geochemistry C 1129
- Sargent Fault**
 Quaternary OF 94-0568
 seismology OP-914
 tectonophysics OP-2181
- Sargent-Hollister Basin**
 energy sources OP-2146
- Saskatchewan** *see also* Williston Basin.
 structural geology B 1904-T; OP-1073
- SAST**
 OP-1648
 hydrology YR
- satellites** *see also* Callisto Satellite; Ganymede Satellite; icy satellites; Io Satellite; Moon.
 I-2410; OP-57; OP-134; OP-484; OP-485
- saturated hydrocarbons** *see also* hopanes.
 Alaska, energy sources OP-574
 California, energy sources OP-1746
- Saturday Mountain Formation**
 sedimentary petrology P 1525
- Saturn** *see* planetary rings; Voyager Program
- Saudi Arabia** *see also* Arabian Shield.
 geochemistry OP-753
- Saurischia** *see* Theropoda
- sausage structure** *see* boudinage
- Savage Fen**
 geochemistry OP-498
- Savannah Georgia**
 ground water OP-1402
- Savannah River**
 Paleocene OP-1359
- Savannah River Plant**
 environmental geology OP-1099
 geophysical surveys OF 95-0518
 ground water OF 95-0507; OP-1100; OP-1243; OP-1244; OP-1358
 hydrogeology OP-2270
- Sawatch Range** *see* Mount Antero
- Sawmill Canyon fault zone**
 tectonophysics OP-352
- Sawtooth Shale**
 stratigraphy OP-1341
- Saxony-Thuringia**
 geochemistry C 1129
 metasomatism C 1129
- Sb** *see* antimony
- Sc** *see* scandium
- SCAMP**
 geophysical surveys OF 94-0599; OF 95-0016
- Scandinavia** *see* Denmark; Finland; Norway; Sweden
- scandium**
 Gulf of California, sedimentation OP-1987
- scanning electron microscopy**
 geochemistry OP-130
- scapolite OP-880**
- Scarecrow Peak Quadrangle**
 maps GQ-1759
- scarps**
 Colorado, geomorphology OP-1219
 Dominican Republic, plate tectonics OP-1983
 East Pacific Ocean Islands, petrology OP-390
 New Mexico, geomorphology WRI 94-4205
 Wyoming OP-280
- schist** *see* schists
- schistosity**
 Vermont OP-1997
- schists** *see also* biotite schist; blueschist; greenschist; greenstone.
 Alaska
 geochemistry B 2107
 geophysics OP-594
 Montana, crust OP-1831
 Northwest Territories, faults OP-1856
 Rocky Mountains, structural geology OP-1232
 Saudi Arabia C 1129
 South Dakota, geochemistry C 1129
 tectonophysics OP-985
 Vermont, Proterozoic B 2060

- Virginia, structural geology OP-2062
 schizomycetes *see* bacteria
 Schizophyta *see* Cyanophyta
schlieren
 Egypt, geophysical surveys OP-2068
 Victoria Australia, geochemistry C 1129
Schlumberger methods
 OF 94-0676
 California, ground water OP-2335
 Colorado OP-67
 Utah, hydrogeology OP-1123
Schopf, James Morton
 paleobotany OP-182
schorl
 Canadian Shield, metal ores OP-2126
 Great Britain, metal ores OP-2126
Schrodinger Basin OP-852
Schultz Coulee Quadrangle
 maps MF-2281
 schuppen texture *see* imbricate tectonics
 Schwarzwald *see* Black Forest
Science Citation Index OP-68
Scientific Assessment and Strategy Team
 OP-1648
 hydrology YR
Scioto River basin
 hydrogeology OP-448
Scleractinia *see also* Acropora palmata;
 Montastrea
 Puerto Rico, neotectonics OP-2179
SCoRE '90
 Mohorovicic discontinuity OP-109
scoria
 Arizona OP-991
Scotland
 geochemistry, Sutherland Scotland C 1129
 magmas C 1129
 Quaternary OF 94-0568
 structural geology, Grampian Highlands
 C 1129
Scott Mills earthquake 1992
 earthquakes OP-571
 Scottish Highlands *see* Grampian Highlands
Scotty Wash Quartzite
 sedimentary petrology B 1988-I
 structural geology OP-1252
scour marks
 Great Lakes, lacustrine features OF 95-0224
Scoyenia
 ichnofossils OP-380
 Phanerozoic OP-1480
 stratigraphy OP-381
SCRNDIGW OF 94-0697-A; OF 94-0697-B
ScS-waves
 China, mantle OP-763; OP-868
Se *see* selenium
Sea Beam *see* Seabeam
Sea Cliff hydrothermal field
 geochemistry OP-1033
 sea fan *see* submarine fans
 sea floor spreading *see* sea-floor spreading
 sea floors *see* ocean floors
sea ice
 Alaska
 OF 95-0070
 geochemistry OP-1676
 Pliocene OF 94-0281
 Quaternary OP-1221
 Antarctic Ocean, Pliocene OF 94-0588
 Northwest Territories OP-396
Sea Mapping and Remote Characterization *see*
 SeaMarc
 sea mounts *see* seamounts
 Sea of Japan *see* Japan Sea
 Sea of Okhotsk *see* Okhotsk Sea
Sea of Rains OP-58
 sea water *see also* brines; salt-water intrusion.
 Alaska
 OF 95-0070
 geochemistry OP-1676
 Atlantic Ocean
 Cenozoic OP-1198
 Cretaceous OP-1161
 geochemistry OP-1129
 Bahamas, Quaternary OP-1865; OP-1866
 California
 OF 95-0326
 geochemistry OP-512; OP-954
 hydrology OF 94-0543
 pollution OP-215
 Florida
 ecology OP-610
 ground water OP-1455
 geochemistry OP-126; OP-175; OP-602
 ground water OP-949
 Hawaii, hydrogeology OP-2076
 Indian Ocean, Cretaceous OP-1161
 Italy, geochemistry OP-227
 Louisiana OF 94-0275
 Marshall Islands, stratigraphy OP-1229
 Massachusetts, environmental geology OF 94-
 0649
 Micronesia, stratigraphy OP-1229
 Pacific Ocean
 OP-503; OP-842
 Cenozoic OP-1198
 geochemistry B 2022; OP-1129; OP-2098
 stratigraphy OP-1197
 sedimentary petrology OP-1885
sea-floor spreading *see also* fracture zones; mag-
 netic anomalies; mid-ocean ridges; spreading
 centers.
 OF 95-0573
 Alaska, metal ores OP-1893
 Atlantic Ocean OP-1931
 Bering Sea OP-1261
 California OP-1778
 Chile OP-1762
sea-floor trench *see* trenches
sea-level changes *see also* eustacy; raised
 beaches; shorelines.
 Alaska
 paleomagnetism OP-1881
 Pliocene OF 94-0281
 Quaternary OF 94-0568; OP-1098; OP-
 2260
 stratigraphy OF 94-0588
 Antarctica, Pliocene OF 94-0588
 Arctic Ocean, Quaternary OP-1049
 Atlantic Coastal Plain, Quaternary FS 0117-95
 Atlantic Ocean
 Pliocene OF 94-0588; OP-218
 Quaternary OP-233
 stratigraphy OP-1334
 Australia, stratigraphy OP-1338
 Bahamas, Quaternary OP-1865; OP-1866
 Bering Sea, Quaternary OP-1049
 Bermuda, Quaternary OP-1732; OP-1733
 Black Sea, Quaternary OP-1289
 California
 engineering geology OF 94-0568
 Miocene B 1995-J,K
 Quaternary OP-1216
 Caribbean Sea, Quaternary OP-1289
 Chile, Quaternary OP-1098
 Florida
 OF 95-0216
 diagenesis OP-2263
 Quaternary OP-1719; OP-1732; OP-1733;
 OP-2206
 Georgia
 Cenozoic OP-738
 Miocene OP-739
 Hawaii, Quaternary OP-1848; OP-2175
 Louisiana
 OF 94-0275
 ecology OF 94-0275
 Quaternary OF 94-0275
 shore features OP-1937
 Maine, Quaternary OP-990
 Massachusetts, Quaternary OP-683; OP-990
 Middle East, plate tectonics OF 94-0568
 New England, Quaternary OP-2163
 New Zealand, Quaternary OF 94-0568
 ocean circulation OF 94-0363
 Oregon, Quaternary OP-1629
 Pacific Ocean
 Pliocene OP-218
 Quaternary OP-1354
 Papua New Guinea
 Quaternary OF 94-0568
 stratigraphy OP-1338
 Quaternary OP-981
 seismology OP-1075
 South Carolina OP-1471
 Washington, Quaternary OP-205
 Western Australia, Quaternary OP-1973
 Western U.S., Quaternary OP-2086
sea-surface temperature
 Antarctic Ocean, Pliocene OF 94-0588
 Atlantic Ocean, Pliocene OF 94-0588
 British Columbia, Quaternary OF 95-0034
 Louisiana, environmental geology OF 94-0275
 Pacific Ocean, Pliocene OF 94-0588
 Pliocene OF 94-0588
 United States, Quaternary OF 95-0034
 sea-water intrusion *see* salt-water intrusion
Seabeam
 Atlantic Ocean, oceanography B 2079
 Hawaii, ocean floors OP-1230
 Pacific Ocean
 ocean floors B 2022
 oceanography B 2029
Seal Cove California
 Quaternary OF 94-0568
SeaMarc
 Gulf of Mexico, oceanography OP-2081
seamounts
 California
 geochemistry OP-197
 geochronology OF 94-0587
 East Pacific Ocean Islands, petrology OP-390
 Hawaii
 geophysical surveys OP-1655
 ocean floors OP-1964
 Mexico
 geochemistry OP-197
 geochronology OF 94-0587
 Pacific Ocean, ocean floors OP-2127
 Vanuatu, plate tectonics OP-336
Searchlight Pluton
 geochemistry C 1129
 seas, epicontinental *see* epicontinental seas

Seattle Fault

earthquakes OP-1189
 faults OP-2079
 structural geology OP-1592; OP-1611; OP-1979; OP-2158

Seattle Washington

engineering geology OP-1367
 hydrogeology WRI 94-4082
 Quaternary OP-1076
 structural geology OP-1981

seawater *see* sea water

Sebago Batholith

geochemistry C 1129

secondary ion mass spectroscopy

geochemistry C 1129

secondary migration

energy sources B 2137

secondary recovery

energy sources B 2000-H
 Illinois, energy sources OF 94-0298

secondary structures *see* armored mud balls; concretions; stylolites

secondary wave *see* S-waves

SEDCALC

hydrology OF 94-0459

sediment load *see* bedload

sediment supply

Alaska OP-2160
 Atlantic Coastal Plain, stratigraphy OP-1958
 California, oceanography OP-2180
 Colorado, hydrology OP-1345
 Ohio, geomorphology OF 95-0224
 Puerto Rico OP-2080
 Rocky Mountains, hydrogeology OP-1062
 Russian Federation OP-1877
 stratigraphy OP-2099
 United States OP-2080
 Western Interior, stratigraphy OP-2030

sediment transport *see also* ice rafting; marine transport; saltation; stream transport.
 OP-879

Alaska

OP-2160
 engineering geology WRI 94-4073

Arizona

ecology OP-2130
 engineering geology OP-1435
 fluvial features OP-1607
 hydrology OP-1516; OP-2203
 weathering OP-1504

Atlantic Ocean, oceanography OP-1679

California

OP-1097
 oceanography OP-2180
 Colorado, hydrology OP-1345; OP-1927
 Europe OP-2052
 Georgia, soils OP-1555
 Gulf of Mexico, oceanography OP-2081
 hydrogeology OP-795; OP-2261
 hydrology OP-18; OP-829
 Idaho, Quaternary OP-1900
 Louisiana, geomorphology OF 94-0275
 Missouri, environmental geology OP-447
 Montana, non-metal deposits OP-1492
 Nevada

hydrogeology WRI 94-4233
 hydrology OP-1516

Ohio, geomorphology OF 95-0224

Pacific Ocean OP-1218

Puerto Rico OP-2080

Rocky Mountains, hydrogeology OP-1062

South Carolina, geomorphology OP-1471

United States OP-2080

Utah

engineering geology OP-1435
 hydrology OP-2203

Washington

OP-1182
 Eocene OP-1593
 Quaternary OP-975

sedimentary fault *see* growth faults

sedimentary petrology *see* clay mineralogy; diagenesis; heavy minerals; reefs; sedimentary structures; sedimentation; sediments; weathering

sedimentary quartzite *see* orthoquartzite

sedimentary rocks *see also* chemically precipitated rocks; clay mineralogy; coal; diagenesis; lithostratigraphy; oil sands; oil shale; volcanoclastics.
 OF 94-0582; I-2433-B

Alaska

plate tectonics OF 94-0228
 structural geology OF 94-0714

arenite

Montana OP-1622
 Wyoming OP-1622

argillite

Alaska OP-1361; OP-1624
 British Columbia OP-1361
 California B 1995-H,I; OP-1315
 Florida OP-1971
 Georgia OP-1971
 Idaho P 1525
 Oregon OP-1315
 Yukon Territory OP-1624

Arkansas OF 94-0430

arkose

California OP-1036
 Mexico OP-1036
 New Mexico OP-21
 Washington OP-2173

bentonite

Colorado OP-507
 geochronology OP-1572
 Gulf Coastal Plain OP-1906
 Utah OP-507; OP-1142
 Western Interior OP-506; OP-1906
 Wyoming OP-569

biomicrite, stratigraphy OP-1558

black shale

Basin and Range Province OP-2115
 California OP-1955
 China OP-1871
 Colorado B 2110
 geochemistry B 2110
 Great Basin OP-2115
 Idaho P 1525; B 2064-A-R
 Nebraska B 2110
 Ohio OP-2057
 petroleum OP-1811
 Utah B 2000-L; B 2110
 Wyoming B 2110

boundstone, Kazakhstan OP-1258

breccia

Arizona OP-1282
 Arkansas OF 94-0450
 Atlantic Coastal Plain OP-1960
 British Columbia OP-1509; OP-1847
 California OP-804; OP-1315
 Colorado OP-333; OP-546; OP-1488; OP-1626; OP-1879; OP-2012
 geochronology OP-1572

Hawaii OP-1184

Idaho P 1525; B 2064-A-R; OP-362

Iowa OP-16; OP-1059; OP-1880; OP-2154

Micronesia OP-1409

Minnesota OF 94-0447

Missouri OP-1299

Montana OP-362; OP-480; OP-2224

Nevada OP-454; OP-1469; OP-2143

New Jersey OP-1959

Oregon OP-1315

Peru OP-202

Poland OP-908

Spain OP-22

stratigraphy OP-1558

Utah OP-1283

Virginia OP-1977

British Columbia, structural geology OF 94-0714

calcarene

Pennsylvania OF 95-0240

West Virginia OF 95-0240

calcrete, Nevada OP-1763; OP-2326

caliche, Atlantic Ocean OP-1334

California B 1995-H,I

Canada, geochronology OP-308

carbonate rocks

OF 94-0298
 Alabama OF 94-0670
 Alaska B 2107; OP-65; OP-1623
 Appalachians OP-1365
 Arctic region B 2110
 Arizona B 2110
 Arkansas OP-1159
 California OF 95-0039; OP-1362; OP-2066
 Colorado B 2110; OF 94-0670; OP-1168; OP-1384

environmental geology OP-1160

Florida WRI 93-4171; OP-1204; OP-1591; OP-1710

ground water OP-1597

Hungary OP-155

Idaho P 1525; B 2064-A-R; OF 95-0270

Illinois OF 94-0298

Indiana B 2094-D; OP-369; OP-2020

metal ores B 1989-G

Midwest OF 93-0663

Montana B 2112

Nevada OF 94-0670; OP-59; OP-794; OP-1362; OP-2065; OP-2066

North Dakota B 2112

Pennsylvania OF 93-0659; OF 95-0113

Puerto Rico OF 93-0465; OF 93-0466

Utah B 2110; OP-1168

West Virginia WRI 93-4073

Wisconsin OP-792

Wyoming OF 95-0270

chalk

Alaska DDS-0030

Denmark OP-1140

chemically precipitated rocks

New Mexico OP-1275

Pacific Ocean OF 94-0015; OF 95-0505

chert

Alaska OP-39; OP-1624; OP-1895

Arizona OP-1287

California P 1566; OP-1430; OP-1448

Idaho OF 95-0270

Mexico OP-1448

Montana OP-1868

Pennsylvania OP-1895

stratigraphy OP-768

Texas WRI 94-4117

Utah OP-1287

- Wyoming OF 95-0270
Yukon Territory OP-1624
- clastic rocks
Alaska OP-201; OP-1623
California OP-159; OP-1362
Colorado OP-1384
Illinois OF 94-0298
Massachusetts OP-782
Montana OP-282
Nevada OP-1362
Oregon OP-123
Pakistan B 2096; OF 94-0274
Washington B 2085-C
Wyoming OP-780; OP-1620
- claystone, Colorado OP-1101
Colorado
geochemistry OP-1806
Oligocene OP-1625
stratigraphy B 2110
- conglomerate
OP-879
Alaska OP-1447; OP-1604; OP-1921
Arizona OP-2023
Bahamas OP-1366
Basin and Range Province OP-2115
Bolivia OP-2244
California B 1995-H,I; OP-805; OP-1315
China OP-2253
Colorado OF 94-0291; OF 94-0437
Great Basin OP-2115
ground water OP-1167
Hawaii OP-1183; OP-1184
Idaho B 2113
Iran OP-2253
Montana B 2113; OP-1622; OP-1943
Nevada OP-1944
New Mexico OP-21
Oregon OP-1177; OP-1315
Pakistan OP-2253
Poland OP-908
Rocky Mountains OP-1366
stratigraphy OP-2139
Texas OP-2253
Utah OP-695; OP-1842
Washington OP-2173
Wyoming OP-1621; OP-1622
- Connecticut, ground water OP-1799
coquina, California OF 94-0568
- diamictite
Iowa OP-16
Wyoming OP-1621
- diatomaceous earth
California B 1995-J,K
Idaho OP-2147
Nevada OP-2147
- dolostone
California P 1566; OP-785; OP-1916
China OP-1024
Colorado OP-1242
Missouri OP-1299
- ecolomite
Pennsylvania OF 95-0240
West Virginia OF 95-0240
- evaporites
OP-2140; OP-2290
Colorado B 2110; MF-2295
Florida OP-1971
Georgia OP-1971
Indiana B 2094-D
Kansas OF 95-0256
stratigraphy OP-225; OP-1319
Texas WRI 95-4030
Utah B 2110; OP-1179
- ferricrete, Colorado OP-730
- flysch
Alaska OP-672; OP-727; OP-1361; OP-2184
British Columbia OP-1361
- fractures OP-1094
Georgia, Miocene OP-739
- grainstone
Basin and Range Province OP-2115
Great Basin OP-2115
Illinois OF 94-0298
Kentucky OF 94-0298
- graywacke
Alaska OP-711; OP-1361; OP-1447
British Columbia OP-1361
New South Wales Australia C 1129
- Great Plains, ground water P 1402-F
ground water HA-0730-H
- Idaho
metal ores P 1525; B 2064-A-R
mineral resources B 2064-A-R
uranium ores P 1525
- Japan, structural geology OF 94-0714
jasperoid, Idaho B 2064-A-R
Kansas, geochemistry OF 95-0209
- limestone
OP-1340
Alaska OP-217; OP-1439; OP-1624
Appalachians OP-1324
Arizona OP-2023
California P 1566; OP-1036
Colorado OP-1096; OP-1242; OP-1272
Cretaceous I-2474-A
Egypt OP-1770
energy sources B 2000-H
Florida OP-1455; OP-1948; OP-1971
geochemistry OF 94-0298; OP-602
Georgia OP-1971
Illinois OF 94-0298
Indiana OF 94-0298
Iran OP-154
Kansas WRI 94-4166
Massachusetts OF 95-0044
Mexico OP-1036
Missouri OP-1299
Montana OP-1131
Nevada OP-1946; OP-1947; OP-2326
New Mexico OP-21; OP-1274
Pacific Ocean OP-2127
Papua New Guinea OP-1035
Pennsylvanian OP-1228
petroleum OF 94-0298
Puerto Rico OF 93-0499; OP-1304; OP-2179
stratigraphy OP-768
Texas WRI 94-4117; WRI 95-4030
Utah OP-1272
Virginia B 2135
Western Interior OP-1324
Yukon Territory OP-217; OP-1624
- marl
Colorado OP-1101
Montana OP-1131
Nevada OP-1083
Papua New Guinea OP-1035
- megabreccia, Kazakhstan OP-1258
- micrite
Colorado OP-2060
Idaho P 1525
- microbreccia, Wyoming OP-936
Missouri OF 94-0430
Montana, tectonics OP-1452
- mudstone
OP-2117; OP-2140
Alaska OP-711
Arizona OP-2023
California P 1566; B 1995-J,K; OF 95-0530; OP-603; OP-1097; OP-1410; OP-1916
fluvial features OP-2138
geochemistry OP-1070
ground water OP-1167
Idaho OF 95-0270
Mexico OP-1932
Montana OP-596
Nevada OP-794; OP-1083
New Jersey OP-1568; OP-2118
Oregon OP-1177
Pennsylvania OP-2118
stratigraphy OP-1558
Utah OP-2031
Washington OP-1376; OP-1593
Wyoming OF 95-0270; OP-456; OP-1621
- Nevada
geophysical surveys OF 93-0397-A; OF 93-0397-B
gold ores OP-20; OP-331; OP-438
structural geology OP-744
- New Mexico
ground water WRI 94-4178
mineral resources B 2063
- novaculite, engineering geology OF 95-0028
Oklahoma, hydrogeology OF 94-0504
oolitic limestone, Illinois OF 94-0298
Oregon, natural gas OF 95-0093
orogeny B 2110
- orthoquartzite
Pennsylvania OF 95-0240
rock mechanics OF 94-0228
West Virginia OF 95-0240
- phosphate rocks
California P 1566
Georgia OP-398; OP-583; OP-584; OP-586
Idaho OF 95-0270
Wyoming OF 95-0270
- plate tectonics OP-1256
pollution OP-1923
- porcellanite
California P 1566; B 1995-J,K; OP-1430
Montana B 2113
- quartz arenite
OP-1226
Alaska OP-1270
- red beds
Alaska B 2107
Colorado B 2116; OP-2027
Nevada OF 94-0670; OP-1944
stratigraphy OP-225; OP-1319
Utah OP-1179
- Russian Federation, structural geology OF 94-0714
- sandstone
OF 94-0228; OF 94-0298; OP-1226
Alabama OF 94-0670
Alaska DDS-0030; B 2107; OP-65; OP-1270; OP-1439; OP-1624; OP-1921
Arizona OP-2023
Arkansas B 1989-F
Basin and Range Province OP-2115
California B 1995-H,I; B 1995-J,K; OF 94-0577; OP-603; OP-805; OP-1097; OP-1315; OP-2061; OP-2146
Colorado B 1808-P; OF 94-0670; OP-297; OP-1531; OP-1691
Colorado Plateau OP-1321

- Florida OP-1861; OP-1971
 Georgia OP-1971
 Great Basin OP-2115
 ground water OP-1167
 Idaho P 1525; B 2064-A-R; OP-362
 Illinois OF 94-0298
 Iowa OP-1880
 Kentucky B 2135; OF 94-0298
 Louisiana OP-1543
 Maryland OP-848
 Massachusetts OF 95-0044
 Mexico OP-1932
 Micronesia OP-1409
 Minnesota OF 93-0435
 Mississippi OP-828
 Missouri B 1989-F
 Montana OP-362; OP-596; OP-1622
 Nevada B 1988-I; OF 94-0460; OF 95-0102; OP-1408
 New Mexico B 1808-P
 New York OP-685
 Oregon OP-1176; OP-1177; OP-1315
 Pennsylvania B 2110; OP-2059
 petroleum OF 94-0298
 rock mechanics OF 94-0228
 Rocky Mountains OP-1366
 South Dakota B 1917-S
 stratigraphy OP-2139
 Texas OP-220; OP-1472; OP-2256
 Utah B 2000-J; B 2115-A; B 2115-B; OF 94-0670; OP-297; OP-1461; OP-1464; OP-1557; OP-1882; OP-2031
 Virginia OF 94-0592
 Washington B 2085-A; OP-1376; OP-1593; OP-2173
 West Virginia OP-69
 Wisconsin OF 95-0163
 Wyoming C 1108; OF 94-0670; OP-279; OP-456; OP-477; OP-701; OP-1531; OP-1621; OP-1622
 Yukon Territory OP-1624
- saprolite**
 Egypt OP-2068
 Georgia OP-1555
- shale**
 B 2137; OF 94-0298
 Alaska DDS-0030; OF 95-0236; OP-65; OP-1895
 Alberta C 1129
 Appalachians OP-1324
 Arizona OP-1435
 California OF 94-0228; OF 95-0265; OF 95-0530; OP-385; OP-1097; OP-1430; OP-1955; OP-2146
 Colorado OF 94-0670; OP-2316
 Cretaceous I-2474-A
 Florida OP-1971
 geochemistry OP-1070
 Georgia OP-1971
 Idaho B 2064-A-R
 Iowa OP-1059; OP-1880
 Italy C 1129
 Kentucky B 2135
 Mississippi Valley P 1538-N
 North Dakota OP-749
 Ohio OF 95-0224
 Pennsylvania OP-1895; OP-2058; OP-2059
 Texas OP-812; OP-2256
 Utah OF 94-0670; OP-1435
 Virginia B 2135
 Washington OP-1042; OP-1181
 West Virginia OP-69
 Western Interior OP-1324
- Wyoming OP-456
- siliceous sinter**
 California OP-804; OP-940
 Wyoming OP-300
- siltstone**
 Alaska OP-574
 California OP-1097; OP-1315
 Colorado B 2116
 ground water OP-1167
 Iowa OP-1880
 Massachusetts OF 95-0044
 Nevada OP-794
 New Mexico OP-190
 Oregon OP-1176; OP-1177; OP-1315
 stratigraphy OP-768; OP-2139
 Texas OP-1472
 Virginia B 2135
 Washington OP-1376
 West Virginia OP-69
 Wyoming OP-1621
- tonstein**
 Appalachians OP-766; OP-1737
 Europe OP-510
 petrology OP-989
 Utah OP-1142
 Washington OP-1042; OP-1181
 West Virginia OP-69
- travertine**
 Basin and Range Province OF 95-0037
 California OP-802; OP-804
 Colorado OP-1118; OP-1488; OP-1691
 Great Basin OF 95-0037
 Montana OP-902
 Wyoming OP-902
- tufa, Nevada** OP-59
- United States, geochronology OP-308
- Utah**
 geophysical surveys OF 93-0397-A; OF 93-0397-B
 stratigraphy B 2110
 structural geology OP-744
- volcanic breccia**
 Nevada B 1988-K; B 2056
 Utah B 1988-K
- wackestone, stratigraphy OP-1558
- Washington**
 geophysical surveys OP-1821
 structural geology OP-1979
- Wyoming, structural geology OP-1288
- sedimentary structures**
 OP-2104
 Alaska B 2107
 algal mats, Wyoming OP-2128
- Arizona**
 geomorphology OF 94-0594
 stratigraphy OP-224
- armored mud balls, California OP-998
- banks**
 geomorphology OP-1792
 Massachusetts OP-2222
- bedding**
 Alaska OP-1098
 Chile OP-1098
 Utah OP-1464
- biogenic structures, stratigraphy OP-225
- bioherms, Denmark OP-1140
- bioturbation**
 OP-1340
 Bahamas OP-2109
 California OP-1064
 Colorado Plateau OP-1321
 New Mexico OP-1050
- Washington OP-1593
 Wyoming OP-928
- clastic dikes**
 Arkansas OP-946
 Illinois OP-1451
 Indiana OP-1451
 Utah OP-1464
 Washington OF 94-0589; OP-1859
- concretions**
 Colorado OP-1646
 Wyoming OP-1646
- cross-bedding**
 OP-879
 Alaska OP-604
 California OP-1036
 Colorado OF 94-0670; OP-1531
 Idaho OP-2092
 Kazakhstan OP-1258
 Mexico OP-1036
 Pennsylvania OF 95-0240
 South Dakota B 1917-S
 Utah OF 94-0670
 Washington OP-1376
 West Virginia OF 95-0240
 Wyoming OF 94-0670; OP-1531
- cyclothem**
 Arizona B 2110
 Kansas B 2110
 Pennsylvanian B 2110; OP-1228
 Western Interior OP-2063
- dune structures**
 Arizona OP-1607
 Nebraska B 2110
 Wyoming B 2110
- flaser bedding, Washington OP-1376
- fossil ice wedges, New England OP-1072
- geologic hazards OF 94-0663
- graded bedding**
 California OP-1097
 Colorado OP-1691; OP-1879
- hummocky cross-stratification**
 Colorado OF 94-0670
 Utah OF 94-0670
- laminations**
 OP-1340
 Alaska OP-1457; OP-2094
 California OP-860; OP-1158
 Colorado OP-1691
 Great Lakes OP-436
 Idaho OP-2093
 Indiana OP-2020
 New Mexico OP-1050
 Oregon OP-1158
 Pacific Ocean OP-1218; OP-1501
 South Dakota B 1917-S
 Washington OP-1593
- lebensspuren**
 Alaska OP-1624
 stratigraphy OP-1319
 Yukon Territory OP-1624
- mud mounds, petroleum OF 94-0298
- New Mexico, stratigraphy OP-224
- North Carolina, Triassic OP-925
- Pacific Ocean OP-776
- Pennsylvanian OF 94-0298
- rhythmite**
 Columbia Plateau OP-2237
 Oregon OP-680
 Washington OP-680
- ripple marks**
 Egypt OP-1770
 Pennsylvania OF 95-0240
 Puerto Rico OP-2080

- United States OP-2080
 Washington OP-1376
 West Virginia OF 95-0240
 sand bodies
 Colorado OF 94-0670
 Illinois OF 94-0298
 seismology OP-1075
 Utah OF 94-0670
 sand waves, geomorphology OP-1792
 sandstone dikes
 California OF 94-0577
 Utah OF 94-0417
 scour marks, Great Lakes OF 95-0224
 soft sediment deformation
 California OF 94-0568
 geologic hazards OF 94-0663
 Israel OF 94-0568
 Mississippi Valley OF 94-0568
 Quaternary OF 94-0568
 South Carolina OF 94-0568; OF 94-0663
 Sweden OF 94-0568
 Washington OF 94-0663
 striations, Wyoming OP-936
 stylolites
 Illinois OF 94-0298
 Mississippi Valley P 1538-N
 turbidity current structures, Pacific Ocean OP-1218
 Utah OP-1178
 varves
 Israel OF 94-0568
 Minnesota OF 94-0578; OP-1290
 New England OP-2163
 Pacific Coast OP-1401
 Virginia, Triassic OP-925
 Washington, structural geology OP-1611
 Wyoming
 OP-1620
 energy sources OP-1621
sedimentation *see also* basins; beaches; bedload; bioturbation; carbonate platforms; channels; continental shelf; cyclothems; deltas; diagenesis; foreland basins; heavy minerals; lakes; progradation; rhythmite; salt marshes; sediment supply; sediment transport; sedimentary rocks; sedimentation rates; sediments; stream transport.
 OP-559; OP-1844
 Alaska, Quaternary B 2107; OP-772; OP-1692
 Antarctica, Quaternary OP-214
 Arizona
 OP-2023
 structural geology OP-1110
 biochemical sedimentation
 California OF 95-0034
 North Dakota WRI 94-4171
 Oregon OF 95-0034
 pollution C 1108
 bioclastic sedimentation
 California OF 95-0034
 Japan Sea OP-722
 Oregon OF 95-0034
 Pacific Ocean B 2022
 Russian Federation OP-165
 California
 OF 94-0577
 geochemistry OF 95-0034
 Quaternary OP-1216; OP-1308; OP-2006
 structural geology OP-348; OP-1110
 China, Quaternary P 1549; OF 94-0568
 coastal sedimentation
 OP-547; OP-548
 Brazil OP-117
 California B 1995-H,I
 Connecticut OF 95-0556
 Louisiana OF 94-0275; I-2150-B
 Ohio OF 95-0224
 Colorado
 OF 94-0437; OP-1690
 faults OP-2243
 geomorphology OP-572
 metal ores OP-284; OP-1488
 stratigraphy B 2110; OP-2012
 continental margin sedimentation
 Alaska P 1545; I-2272
 Atlantic Coastal Plain B 2110
 California OF 95-0034; OP-603
 Oregon OF 95-0034
 deep-sea sedimentation
 B 2022
 Pacific Ocean B 2022
 deltaic sedimentation
 Alaska OF 94-0568
 Brazil OP-117
 Hungary OP-951
 Montana OP-596
 detrital sedimentation
 Alaska B 2098
 Canada OP-308
 Nebraska B 2110
 United States OP-308
 Washington B 2085-A; OF 94-0568
 Wyoming B 2110
 estuarine sedimentation
 California OF 94-0543
 Florida WRI 94-4081
 Washington OP-205
 fluvial sedimentation
 Alaska WRI 94-4073
 Arizona WRI 95-4059; OF 94-0594; OF 94-0597; OF 95-0591; FS 0120-95; OP-2262
 Atlantic Coastal Plain WRI 94-4164
 California OP-1584
 fluvial features OP-2138
 hydrology OF 94-0459
 Illinois WRI 94-4190
 Indiana WRI 94-4190
 Kansas W 2352-B; WRI 94-4187
 Mississippi Valley OF 94-0474; OP-1526; OP-1578
 Missouri OF 94-0538; OP-1311; OP-1764
 Montana OP-596
 Nebraska W 2352-B; WRI 94-4187
 Nevada OF 94-0670
 New Mexico WRI 95-4050
 New York OF 93-0161
 Puerto Rico OP-310
 South Dakota B 1917-S
 Tennessee OF 95-0156
 Virginia WRI 94-4225
 Wyoming OP-456; OP-477; OP-701; OP-780; OP-928
 fluvio-lacustrine sedimentation
 Idaho OF 94-0109
 Washington OF 94-0109
 geochemistry OP-602
 glacial sedimentation
 Antarctic Ocean OP-173
 Antarctica OP-2188
 Great Lakes OP-436
 glaciofluvial sedimentation
 Montana I-2446
 New Hampshire WRI 92-4013
 glaciolacustrine sedimentation
 Michigan OF 95-0224
 Ohio OF 95-0224
 glaciomarine sedimentation
 Alaska OF 94-0588
 Antarctic Ocean OP-246; OP-921
 Antarctica OF 94-0588
 Arctic Ocean OF 94-0588
 Maine OP-990
 Massachusetts OF 94-0672; OP-990
 Washington OP-205
 Great Plains, Quaternary OP-656
 Idaho
 geochemistry OF 95-0270
 silver ores P 1525
 stratigraphy B 2113
 Illinois OF 94-0298
 Indiana, petroleum OF 94-0298
 intertidal sedimentation
 Colorado OP-1242
 Louisiana OF 94-0275
 Washington OP-205
 Japan Sea, Quaternary OP-1954
 Kentucky, stratigraphy B 2135
 lacustrine sedimentation
 Colorado OP-1890
 Great Lakes OF 95-0224; OP-436
 Hungary OP-951
 Israel OF 94-0568
 North Carolina WRI 94-4123
 Ohio OF 95-0224
 Russian Federation OP-165
 South Carolina OF 95-0186
 Washington OF 94-0568
 Wyoming OP-456
 marine sedimentation
 Arkansas B 2110
 Bahamas OP-2109
 California OF 95-0034; OF 95-0527; OP-1584; OP-1918
 Chile B 2110
 Colorado OP-1645
 Florida OP-1719
 Japan OF 94-0568
 Montana OP-596
 New York OP-686
 Ohio OP-686
 Oklahoma B 2110
 Oregon OF 95-0034
 Montana
 OP-282
 stratigraphy B 2112; B 2113
 Nevada
 non-metal deposits OF 95-0084
 Quaternary OP-2006
 New Mexico OP-1276
 North Dakota, stratigraphy B 2112
 Oregon
 geochemistry OF 95-0040
 Quaternary OP-1629
 structural geology OP-348
 Pacific Ocean, oceanography OP-52
 Pakistan, coal B 2096
 paludal sedimentation
 Florida OP-1425
 Louisiana OF 94-0275
 pelagic sedimentation
 Bering Sea OP-1217
 British Columbia OF 94-0568
 United States OF 94-0568
 Pennsylvania OF 95-0240
 Spain, geochemistry OP-118
 stratigraphy B 2110; OP-2139
 Utah
 B 2115-A

stratigraphy B 2110
 structural geology OP-695
 Washington
 geochemistry OF 94-0670
 geologic hazards P 1547
 neotectonics OP-1980
 West Virginia OF 95-0240
 Wisconsin, hydrology OF 95-0163
 Wyoming
 geochemistry OF 95-0270
 stratigraphy OP-1155
 Yukon Territory, Quaternary OP-772

sedimentation rates
 Arizona
 fluvial features OP-1607
 geomorphology OF 94-0594
 Arkansas, Quaternary B 2110
 Atlantic Coastal Plain
 B 2110
 stratigraphy OP-1958; OP-1960
 Bahamas, stratigraphy OP-540
 California
 geochemistry OP-1955
 Quaternary OP-761; OP-1040; OP-1575
 tectonophysics OP-1448
 Chile, Quaternary B 2110
 Colorado
 OP-1646
 geochemistry OP-1168
 geochemistry OP-1070
 geomorphology OP-1792
 Gulf of California OP-1987
 Illinois
 hydrogeology OP-164
 hydrology WRI 94-4190
 Indiana
 hydrogeology OP-164
 hydrology WRI 94-4190
 Japan
 ocean floors OF 94-0568
 Quaternary OF 94-0568
 Japan Sea, Quaternary OP-722
 Massachusetts, environmental geology OP-1187
 Mexico, tectonophysics OP-1448
 Micronesia, geochemistry OP-520; OP-689
 Nevada, Quaternary OP-761
 New Mexico, Quaternary OP-1050; OP-1575
 North Carolina, hydrology WRI 94-4123
 Oklahoma, Quaternary B 2110
 Oregon
 Quaternary OP-1040
 stratigraphy OP-1176
 Pacific Coast, Quaternary OP-1401
 Pacific Ocean
 oceanography B 2022
 tectonophysics OP-1702
 Puerto Rico, environmental geology OP-1791
 Russian Federation OP-1877
 Utah, geochemistry OP-1168
 Washington, structural geology OP-1611
 Western Interior, stratigraphy OF 94-0670; OP-2030; OP-2063
 Wyoming OP-928; OP-1646

sediments *see also* bedload; breccia; clay mineralogy; diagenesis; liquefaction; lithostratigraphy; peat; stream sediments; turbidite; volcanic ash; weathering.
 Alaska
 OP-1086
 Quaternary OP-1790; OP-1805
 stratigraphy OF 94-0588

alluvium
 Arizona. OF 95-0057; OP-381; OP-1926; OP-1965; OP-2072
 California OF 94-0568; OP-2084; OP-2291
 Colorado WRI 94-4118; WRI 94-4129; OP-1562; OP-1743
 Dominican Republic OF 94-0568
 environmental geology OP-1619
 Georgia B 1589-E; OP-1555
 Idaho P 1525
 Louisiana OF 94-0275
 Mississippi WRI 94-4172
 Montana C 1108
 Nevada B 2056; OF 92-0657; OF 93-0477; OF 94-0451; OF 94-0670; OP-340; OP-2289
 New Mexico OP-382
 Oklahoma OF 94-0504; OP-143
 Oman OP-1801; OP-2311
 Tennessee WRI 95-4011; OP-208
 United Arab Emirates OP-1801; OP-2311
 Utah B 2056

Antarctica, Pliocene OF 94-0588

Arizona
 hydrogeology WRI 94-4114; WRI 95-4062
 hydrology WRI 95-4053
 pollution WRI 95-4074
 Quaternary OF 95-0591

Armenia, engineering geology OP-265
 Atlantic Ocean OP-1343
 Black Sea, Quaternary OP-1289

boulders
 Basin and Range Province OP-1414
 California OP-2047
 Colorado OP-986; OP-1345; OP-2259
 Great Basin OP-1414
 Hawaii OP-1183
 Idaho OP-1900
 Peru OP-2032

British Columbia, hydrology OF 94-0315

California
 OP-1065
 engineering geology WRI 94-4184
 environmental geology OF 95-0299; OP-894
 geochemistry OP-1955
 geologic hazards OF 94-0494
 ground water OF 94-0072
 hydrology OF 94-0470
 petroleum OP-513
 pollution WRI 93-4140; OP-1051; OP-1397; OP-1538; OP-2026
 Quaternary OF 94-0568; OF 94-0641; OF 94-0651; OF 95-0034; OP-1040; OP-1157; OP-1505

Canada, pollution OF 94-0472

carbonate sediments
 California OP-1918
 Puerto Rico OP-2080
 United States OP-2080

Caribbean Sea, Quaternary OP-1289

clastic sediments
 Alaska OF 95-0177
 Arkansas P 1538-H
 Atlantic Coastal Plain OP-903
 California OF 94-0593; OF 95-0015; OF 95-0535
 Connecticut OP-1460; OP-2218
 Georgia OP-344
 Great Lakes OF 95-0224
 Hawaii OP-1102
 Illinois OP-43; OP-1111
 Indiana OP-43

Iowa OP-2034
 Massachusetts WRI 94-4256; OP-1460
 Minnesota WRI 94-4204
 Missouri P 1538-H
 New Hampshire WRI 92-4013; WRI 92-4154; OF 95-0281; OF 95-0363
 non-metal deposits OP-75
 Ohio WRI 94-4131
 Oregon OF 94-0568
 South Carolina OF 95-0186
 Utah OF 94-0568

clay
 Arizona OP-1287
 Atlantic Ocean OP-2149
 California OP-437; OP-1529; OP-1688; OP-2298; OP-2335
 Colorado OP-67; OP-1562
 environmental geology OP-1619
 Great Lakes OP-436
 Idaho OP-2096
 Illinois OP-1630
 Iowa OP-1630
 Maryland OP-1089
 Midwest WRI 93-4204
 Mississippi Valley WRI 94-4191; OP-1578
 New Mexico WRI 93-4192
 New York OP-1775
 South Carolina OF 95-0507
 Utah OP-1273; OP-1287
 Virginia OP-1977
 Washington P 1547
 Wyoming OP-355; OP-928; OP-1620

cobbles
 Alaska OP-1457
 Arizona OP-2023; OP-2072
 Idaho OP-1900

colluvium
 California OF 94-0568; OP-2084
 China OF 94-0568
 Colorado OP-986
 geomorphology OP-1368
 Georgia OP-1555
 Nevada OF 92-0657; OF 94-0451; OP-1468; OP-1469; OP-1904

Colorado
 geochemistry OF 95-0250; OP-760; OP-1700
 ground water WRI 94-4037
 hydrology WRI 94-4041; OF 94-0412
 pollution OP-34; OP-204; OP-329; OP-488; OP-608; OP-929; OP-1081; OP-1082; OP-1337; OP-1535
 Colorado Plateau, stratigraphy OP-1481
 Connecticut, oceanography OP-1972

diamicton
 Alaska OP-1457
 Antarctic Ocean OP-246
 Illinois OP-1630
 Iowa OP-1630
 New York WRI 90-4168
 Oregon OP-2088

dust
 OP-1844; OP-1885; OP-2134
 California OP-761; OP-1585; OP-2005
 geologic hazards OP-791
 Minnesota OP-1290
 Nevada OP-761; OP-2005
 engineering geology OP-1569
 environmental geology OP-131; OP-675; OP-690; OP-955

erratics
 Oregon OP-680
 Washington OP-680

Florida

hydrology WRI 93-4103
Quaternary OP-2206
geochemistry OF 94-0458; OF 95-0140; OP-719; OP-1070

Georgia, ground water OP-151; OP-1358

gravel

Alaska OP-127; OP-1457
Arizona OP-2072; OP-2203
California OP-1430; OP-2335
Colorado OP-1562
Columbia Plateau OP-2237
environmental geology OP-811
geochemistry OP-1284
geologic hazards OP-2240
geomorphology OP-1792
Georgia OP-1969
ground water OP-2283
hydrogeology OP-970
hydrology OP-18; OP-1063
Illinois OP-1630
Iowa OP-1630
Massachusetts OP-2249
Missouri OP-447
Nevada OF 94-0670; OP-2289
New England P 1415-A
Ohio OF 95-0224
Oman OP-1801; OP-2311
United Arab Emirates OP-1801; OP-2311
Utah OP-2203
Virginia OP-1977
Washington OP-1859

Great Lakes

lacustrine features I-2429
Quaternary OP-163

Great Lakes region, Quaternary OP-163

Great Plains, Quaternary I-1970-D

ground water WRI 95-4105

gyttja, Oregon OF 94-0568

Hawaii, Quaternary OP-1848

hydrology OP-706

Idaho

OP-2004
environmental geology WRI 93-4156;
OF 94-0443
hydrology WRI 93-4229; FS 94-0026
pollution OP-1039; OP-2129
Quaternary B 2105

Illinois

OP-295
hydrology WRI 94-4094

Iowa

hydrology OP-465
pollution OP-1605
Israel, Quaternary OF 94-0568

Italy, Quaternary OF 94-0568

Kansas

hydrology W 2352-B
pollution W 2352-B

Kentucky, hydrology WRI 94-4134; WRI 94-4227

loess

Alaska OP-1692
Appalachians OP-1324
China P 1549; OF 95-0562
Colorado OP-572; OP-2027; OP-2113
Idaho OF 94-0568
Mississippi Valley OP-1757; OP-2319
Tennessee WRI 95-4011
Western Interior OP-1324

Louisiana

Paleocene OF 95-0208
Quaternary OP-1936

marine sediments

B 2022; OF 94-0669-A; OF 94-0669-B
Alaska P 1544; OF 94-0228; OF 95-0070
Antarctic Ocean OF 94-0588; OP-246; OP-921

Arctic Ocean OF 94-0588; OP-1049

Arkansas B 2110

Atlantic Coastal Plain B 2110; MF-2268

Atlantic Ocean C 1108; OF 94-0588;
OF 95-0262; I-1987-D; I-2456; OP-2073; OP-2149

Bering Sea OP-1049

Brazil OP-117

British Columbia OF 94-0568; OF 95-0034

California B 2022; OF 94-0568; OF 95-0015; OF 95-0034; OF 95-0527; OF 95-0533; OF 95-0587; OP-116; OP-215;
OP-944; OP-1918; OP-2047; OP-2180

Chile B 2110

Connecticut OF 94-0620; OF 95-0556

energy sources OP-1147

geochemistry OF 95-0041

Georgia OP-344; OP-398; OP-399; OP-584;
OP-586; OP-739

Gulf of California OP-1987

Hawaii OF 94-0638

Japan OF 94-0568

Japan Sea OP-722; OP-1954

Louisiana OF 94-0228

Massachusetts OF 94-0649

New Jersey OP-1188

New York OF 94-0620

Oklahoma B 2110

Oregon OF 94-0228; OF 95-0034; OP-157;
OP-1772

Pacific Coast OF 95-0034

Pacific Ocean B 2022; OF 94-0711; OF 95-0034; OP-1495; OP-1702; OP-1829

Peru OP-1069

Puerto Rico OP-2080

Quaternary OP-61

Texas OF 94-0228

Tyrrhenian Sea OP-942

United States OF 94-0568; OF 95-0034;
OP-2080

Washington OP-205

Maryland

environmental geology W 2399

geochemistry OP-856

Massachusetts

environmental geology OF 95-0290; OP-1187

oceanography OP-2222

pollution OP-36

metal ores B 2097

Minnesota

ground water WRI 94-4149

Quaternary OF 94-0578; OP-2082

Mississippi, Paleocene OF 95-0208

Mississippi Valley, geologic hazards OP-1295

Montana

hydrology OF 94-0375

non-metal deposits I-2446

mud

Alaska OP-2094

Bahamas OP-2109

Brazil OP-117

California OF 94-0639; OP-1308; OP-1753;
OP-1787

Missouri OP-1311

Nebraska

hydrology W 2352-B
pollution W 2352-B; OP-204

Nevada

environmental geology OP-894

hydrology OP-1989

New Jersey, environmental geology OP-913

New Mexico

environmental geology OF 94-0547

hydrogeology OF 94-0377

pollution OP-1019

Quaternary OP-1050

New York

geomorphology OP-2170

ground water OP-1608

pollution OP-1186

North Carolina

hydrology WRI 94-4123; OF 94-0509

pollution W 2435

North Dakota

environmental geology OP-2168

hydrology WRI 94-4171; WRI 95-4087

pollution OP-1112; OP-1696

oceanography OF 94-0584

Ohio

frost action OF 95-0224

geomorphology OF 95-0224

geophysical surveys OF 95-0252

oaze

Hawaii OF 94-0638; OP-1500

Pacific Ocean OP-1088

Oregon

environmental geology WRI 93-4156

hydrology OF 95-0373

Quaternary OF 95-0033; OF 95-0034; OP-659; OP-1040; OP-1505; OP-2045

outwash

Alaska OP-1692

Basin and Range Province OP-1414

Great Basin OP-1414

Illinois OP-1630

Iowa OP-1630

Massachusetts OP-1396

New York WRI 92-4171; WRI 93-4029

Pennsylvania WRI 93-4109

South Dakota WRI 93-4195; OP-359

Washington OP-205

Pacific Ocean

geochemistry OP-1032

Quaternary OP-1501

pebbles

Alaska OP-1457; OP-1604

Atlantic Ocean OP-1334

pedogenesis OP-993

Pennsylvania

OP-1164

environmental geology WRI 94-4060

hydrogeology OF 92-0635

pollution OP-13; OP-422; OP-692; OP-693;
OP-1923

Puerto Rico

environmental geology OP-1405

geomorphology OP-106

stratigraphy OP-1924

Quaternary OF 94-0568; OF 95-0034

Russian Federation, Quaternary OP-165

sand

Alaska OP-124; OP-1457; OP-1692; OP-2094

Arizona OF 94-0597; FS 0120-95; OP-1607; OP-2203

Arkansas OP-2216

California OP-1064; OP-1529; OP-1530;
OP-2335

Colorado OP-572; OP-1046; OP-1562; OP-1742; OP-1812

- Columbia Plateau OP-2237
 Delaware OP-1077
 Egypt OP-1770
 engineering geology OP-1310
 environmental geology OP-811
 Florida OP-1174; OP-1971
 geochemistry OP-1284
 geologic hazards OP-2240
 Georgia OP-1971
 Great Plains OP-656
 ground water OP-2283
 Gulf of Mexico OP-2081
 Hawaii OF 94-0638
 Illinois OP-1630
 Iowa OP-1630
 Japan OF 94-0568
 Kazakhstan OP-1258
 Maryland OP-1077; OP-1089
 Massachusetts OP-2249
 Midwest OP-1056
 Minnesota OF 95-0116
 Mississippi OF 94-0558
 Mississippi Valley OP-1578
 Missouri OP-1311
 Nebraska OP-1046
 Nevada OP-2289
 New England P 1415-A
 New Jersey OP-2176
 Ohio OF 95-0224
 Oman OP-1801; OP-2311
 Ontario OP-170
 Oregon OP-1629
 Pacific Ocean OP-1218
 Quaternary OF 94-0568
 South Carolina OF 95-0507; OP-1471
 structural geology OP-1061
 United Arab Emirates OP-1801; OP-2311
 Utah OP-2203
 Virginia OP-1977
 Washington OP-1076; OP-1189; OP-1859
- silt**
- Alaska OP-1457; OP-2094
 California OP-1308; OP-1529
 China P 1549
 Columbia Plateau OP-2237
 Gulf of Mexico OP-2081
 Illinois OP-1630
 Iowa OP-1630
 Midwest WRI 93-4204
 Mississippi Valley WRI 94-4191; OP-1578
 Missouri OP-1311; OP-1764
 New Jersey OP-1188; OP-2176
 Ontario OP-170
 Pacific Ocean OP-1218
 Puerto Rico OP-741; OP-2080
 South Carolina OP-1471
 stratigraphy OP-768
 United States OP-2080
 Virginia OP-1977
- soils** OP-322
- South Carolina**
- ground water OP-1358
 pollution OF 94-0486
- Spain, environmental geology** OP-662
- Tennessee**
- hydrology OP-2162
 pollution OP-2044
 Quaternary OF 94-0568
- Texas**
- ecology OP-1180
 pollution OF 94-0302; OP-1019
- till**
- Alaska OP-1921; OP-2258
- Antarctic Ocean OP-246
 Colorado GQ-1764
 Connecticut WRI 94-4255
 Great Lakes OP-436
 Illinois OP-1630
 Iowa OP-1630
 Missouri OF 94-0705-W
 New Hampshire OF 95-0142
 New York WRI 93-4004
 Ohio OF 95-0224
 South Dakota WRI 93-4195
 Sweden OF 94-0568
 United Arab Emirates, Quaternary OP-1016
 United States, pollution OF 94-0472
 Utah
 hydrology WRI 94-4041
 stratigraphy OF 95-0001
 Virginia
 geochemistry OP-856
 ground water WRI 92-4111; OP-376
 hydrogeology OP-678
 Washington
 hydrology OF 94-0308; OF 94-0315
 Quaternary OF 95-0034
 Wisconsin
 environmental geology OF 95-0163; OP-1663
 hydrology WRI 94-4094; OF 95-0163
 Wyoming
 environmental geology OF 95-0121
 hydrology WRI 93-4229
 Quaternary OP-1583
- Seeland** *see* Zealand
- seeps, oil** *see* oil seeps
- SEG-Y**
- geophysical surveys OF 95-0516
- SEISMIC**
- seismology OP-1917
- seismic doublets**
- California, seismology OP-62
- seismic energy**
- Alaska, elastic waves B 2139
 California
 seismicity OP-1769
 seismology OP-1550; OP-1600; OP-1617; OP-1808
 Caribbean region, earthquakes OP-1313
 elastic waves OP-1718
 Greater Antilles, earthquakes OP-1313
- seismic gaps**
- California
 seismicity OP-1116
 seismology OP-1130; OP-1207
 seismology OP-324; OP-2135
- seismic intensity**
- California
 earthquakes EV; OF 95-0092
 seismology OF 95-0095; OP-25
 Greece, Quaternary OF 94-0568
 Mississippi Valley, earthquakes OF 94-0670
 Quaternary OF 94-0568
- seismic logging**
- California, geophysical surveys OF 94-0706
 petroleum OP-917
 Russian Federation
 geophysical surveys OP-958
 tectonophysics OP-2228
 South Carolina, geophysical surveys OF 95-0518
- seismic methods** *see also* elastic waves; stacking; vertical seismic profiles.
- OF 94-0228; OF 95-0516
 engineering geology OP-1683
 ground water P 1415-A
 magmas OP-1571
 mantle OP-294
 tectonophysics OP-442; OP-1837; OP-2229
- seismic migration**
- Arkansas, deformation P 1538-J
 Pacific Ocean, plate tectonics OP-2234
- seismic moment**
- Alaska, seismicity OP-93
 Bolivia
 mantle OP-1643
 seismicity OP-1910
 seismology OP-1353
 California
 earthquakes OP-429; OP-1375; OP-2232
 faults OP-492
 microearthquakes OP-1054; OP-2153
 seismicity OP-406; OP-457; OP-1116; OP-1769
 seismology OP-249; OP-375; OP-460; OP-1349; OP-1637; OP-1872; OP-2212
 Canada
 seismic sources OP-374
 seismology OP-606
 Colombia, earthquakes OP-1392
 earthquakes OP-89; OP-1074
 Iceland, seismology OP-1813
 Japan
 earthquakes OP-1800
 seismology OP-974
 Nevada, faults OP-492
 Oregon, Quaternary OP-1945
 seismic sources OP-1788
 seismology OP-1348; OP-1544; OP-2041
 South Africa, seismology OP-606
- seismic networks**
- Alaska, earthquakes OP-1058; OP-1107
 California
 crust OP-1967
 earthquakes OF 92-0284; OF 95-0204; OP-1302; OP-1486
 geophysical surveys OP-1966; OP-2046
 microearthquakes OP-2153
 Mohorovicic discontinuity OP-1853
 seismicity OP-1356; OP-1561; OP-2144
 seismology OF 91-0592; OF 95-0269; OP-277; OP-347; OP-825; OP-1421; OP-1514; OP-1540; OP-1810; OP-2252; OP-2325
 Chile, elastic waves OP-1071
 Colorado, structural geology OP-325
 earthquakes OP-1124; OP-1125; OP-1193; OP-2313; OP-2330
 Hawaii, seismology OP-1654
 Nevada, earthquakes OP-365
 Russian Federation, earthquakes OP-1657
 seismicity OP-867; OP-1560
 seismology OP-324; OP-1744; OP-1864
 tectonophysics OP-60
 Virginia FS 0046-95
 Washington, geologic hazards OP-674; OP-1163; OP-1330
- seismic profiles** *see also* vertical seismic profiles.
- Alaska
 geophysical surveys OP-10
 Mohorovicic discontinuity OP-1398
 Quaternary OP-1263
 sedimentary petrology OP-2094

- sedimentation OP-2160
stratigraphy OP-1439
structural geology OP-1394
tectonics OP-2299
Antarctic Ocean, geophysical surveys OF 94-0293
Antarctica, geophysical surveys OF 95-0225
Arkansas, earthquakes OP-1005
Atlantic Coastal Plain, stratigraphy OP-1958
Basin and Range Province, geophysical surveys OP-1835
California
deformation OP-1774; OP-2332
geophysical surveys OP-136; OP-1525; OP-1759; OP-1928; OP-1966; OP-1968
neotectonics OP-1760
plate tectonics OP-1431
seismology OP-1143
structural geology OP-2107
tectonophysics OP-620; OP-1521
Caribbean region, earthquakes OP-1313
Colorado Plateau, geophysical surveys OP-1835
Florida, Quaternary OP-2206
Georgia
Cenozoic OP-738
Miocene OP-739
stratigraphy OP-742
Great Lakes
Quaternary OP-163
stratigraphy OP-436
Great Lakes region, Quaternary OP-163
Greater Antilles, earthquakes OP-1313
Hawaii, magmas OP-1090
Louisiana, Quaternary OP-1936
Massachusetts, Quaternary OP-683
Montana, structural geology OP-480
Nevada
structural geology OP-1820
tectonophysics OP-2230
New Mexico, structural geology OF 95-0506
Oman, ground water OP-2311
Oregon, tectonophysics OP-157
Pacific Ocean
plate tectonics OP-965
tectonophysics OP-247
plate tectonics OP-1173
Russian Federation
geochemistry OP-1559
geophysical surveys OP-958
South Carolina, geomorphology OP-1471
structural geology OP-2287
tectonophysics OP-228
United Arab Emirates, ground water OP-2311
Washington, structural geology OP-1592; OP-1611
seismic quiescence
California, seismology OP-1130; OP-1207
seismic response
California
earthquakes OF 94-0706; OP-430; OP-1753
engineering geology OP-389
seismic sources OP-2286
seismology OP-1222
earthquakes OP-89
East Pacific Ocean Islands, engineering geology C 1121
Polynesia, engineering geology C 1121
seismic risk *see also* nuclear facilities.
Alaska, seismology OF 95-0257-A; OF 95-0257-B; OF 95-0257-C
California
earthquakes OF 94-0568
engineering geology FS 0096-95; FS 0132-95
geologic hazards C 1130; OF 94-0259
Quaternary OF 94-0568
seismology OF 95-0038; OP-371
Canada, neotectonics OP-994
China, Quaternary OF 94-0568
earthquakes OF 94-0571
Ecuador, engineering geology OF 94-0568
geologic hazards OF 95-0067
Hawaii, geologic hazards OP-696
Iran, geologic hazards OF 94-0568
Italy, Quaternary OF 94-0568
Missouri, geologic hazards OF 95-0241; OF 95-0574
neotectonics OP-1190
Nevada
earthquakes OP-12
environmental geology OP-2306
Quaternary OF 94-0568
Oregon
geophysical surveys OP-72
structural geology OP-2054
Pacific region, geologic hazards OP-2190
United States, neotectonics OP-994
Washington
geophysical surveys OP-72
structural geology OP-2054
seismic sea waves *see* tsunamis
seismic sounding *see* deep seismic sounding
seismic sources
OP-80; OP-1192; OP-1788; OP-2040; OP-2041
Alaska OF 95-0257-A; OF 95-0257-B; OF 95-0257-C; OP-1855
California
OP-1038; OP-1421; OP-1514; OP-1540; OP-1761; OP-2286
earthquakes OP-1503
geophysical surveys OP-1759
Canada
OP-374
mantle OP-960
Caribbean region OP-1739
Hawaii OP-323
Italy OP-1239
neotectonics OP-1190
Nevada, environmental geology OP-2306
Quebec OP-88
structural geology OP-2287
tectonophysics OP-60
United States, mantle OP-960
seismic stratigraphy
Alaska OP-1439
Antarctic Ocean, Quaternary OP-173; OP-246
Antarctica, Quaternary OP-2188
Arkansas, earthquakes OP-1005
Atlantic Ocean OP-1334
Georgia
Cenozoic OP-738
Miocene OP-739
Great Lakes OP-436
South Carolina, geophysical surveys OF 95-0518
Vanuatu OP-275
seismic surge *see* tsunamis
seismic survey maps
New Mexico, structural geology OF 95-0506
Wisconsin, hydrogeology WRI 93-4053
seismic surveys *see also* crust; Lithoprobe; seismic logging; seismic migration; seismic profiles; seismic stratigraphy; vertical seismic profiles.
OP-2002
Alaska
continental shelf OP-589
energy sources C 1108
geomorphology WRI 94-4165
Mohorovicic discontinuity OP-2301
natural gas OP-17; OP-2074
Proterozoic OP-1624
tectonics B 2107
tectonophysics OP-953
Antarctica, tectonophysics OP-245
Arctic Ocean, natural gas OP-1060
Arizona, isostasy OP-1666
Atlantic Ocean, natural gas C 1108
Australia, stratigraphy OP-1338
California
faults OP-1225; OP-2288
geophysical surveys OP-1285; OP-2046
ground water OP-2010
Mohorovicic discontinuity OP-1706
plate tectonics OP-941
pollution OP-1051
seismology OP-254; OP-539; OP-1224
structural geology OP-705; OP-1234; OP-1701
tectonophysics OP-1651
China, mantle OP-763
Colorado
ground water OP-1562
salt tectonics OP-1551
structural geology OP-325
Florida, continental shelf OP-1425
geomorphology OP-2035
Georgia, phosphate deposits OP-1506
Hawaii
geophysical surveys OP-1655
magmas OP-47
petrology OP-1500
tectonophysics OP-442
Illinois, faults OF 94-0298
India, tectonophysics OP-442
Indiana, structural geology OF 94-0298
Iowa, stratigraphy OP-372
Japan, ocean floors OF 94-0568
Kentucky
faults OF 94-0298
petroleum OF 94-0298
structural geology OF 94-0298
Kenya, tectonophysics OP-478
Maryland, pollution OP-1089
Middle East, tectonophysics OP-923
Nevada, structural geology OP-1440; OP-1976
New Hampshire
hydrogeology WRI 92-4013
pollution OF 95-0142
New Mexico, tectonophysics OP-442
New York, geomorphology OP-2170
Ohio, geomorphology OF 95-0224
Oregon
structural geology OP-2054
tectonophysics OF 94-0228
Pacific Ocean, tectonophysics OP-1246
Papua New Guinea, stratigraphy OP-1338
Pennsylvania, energy sources OP-2058; OP-2059
Puerto Rico, sedimentary petrology OP-2080
Quaternary OP-981
Russian Federation, continental shelf OP-589
Tennessee
Quaternary OF 94-0568

- seismology OP-1907
 United Arab Emirates, ground water OP-1018
 United States, sedimentary petrology OP-2080
 Utah, salt tectonics OP-1551
 Vanuatu, plate tectonics OP-162
 Virginia, tectonophysics OP-413
 Washington
 Eocene OP-1593
 geophysical surveys OP-1821
 neotectonics OP-1980
 structural geology OP-1979; OP-1981; OP-2054
 Wisconsin, plate tectonics OP-2121
 Yukon Territory, Proterozoic OP-1624
- Seismic Unified Data System**
 seismology OP-2252
- seismic waves *see* elastic waves
- seismic zoning**
 Arkansas, seismology MF-2279
 California, geologic hazards OP-419
 engineering geology OP-1333
 Illinois, faults P 1538-Q
 Kentucky, faults P 1538-Q
 Mississippi Valley
 geophysical surveys P 1538-L
 structural geology P 1538-E
 Missouri, seismology MF-2279; OP-405
 Puerto Rico, Quaternary OF 94-0568
 Quaternary OF 94-0568
- seismicity** *see also* paleoseismicity; seismic gaps; seismic quiescence; seismotectonics.
 OF 95-0060; OP-80; OP-209; OP-549; OP-867; OP-1192; OP-1298; OP-1300; OP-1348; OP-1417; OP-1560; OP-1744; OP-1864; OP-1892; OP-1917; OP-2056
- Alaska
 B 2139; OP-93; OP-458; OP-609; OP-1598; OP-1855; OP-1978
 glacial geology B 2139
 plate tectonics OF 94-0228
 Quaternary OP-1406
- Arkansas, structural geology OP-956
 Australia, tectonophysics OP-2334
 Basin and Range Province, structural geology OP-1741
 Bolivia
 OP-494; OP-1353; OP-1910; OP-2294
 plate tectonics OP-180; OP-252
- California
 OF 94-0228; OF 95-0484; OP-91; OP-203; OP-239; OP-254; OP-255; OP-277; OP-301; OP-406; OP-457; OP-462; OP-654; OP-889; OP-1037; OP-1165; OP-1224; OP-1296; OP-1309; OP-1347; OP-1349; OP-1356; OP-1421; OP-1514; OP-1561; OP-1601; OP-1602; OP-1715; OP-1769; OP-1809; OP-1810; OP-1832; OP-1883; OP-1999; OP-2144; OP-2212; OP-2284
 deformation OP-1774
 geophysical surveys OP-522
 geothermal energy OP-884
 petroleum OP-1280
 structural geology OP-1773
 tectonophysics OP-2334
- Canada, tectonophysics OP-2334
 Colorado
 environmental geology OP-1045
 petroleum OP-1280
 core OP-482
 faults OP-407
 Germany, tectonophysics OP-2331
- Gulf Coastal Plain, engineering geology P 1538-M
 Hawaii
 OP-1654; OP-1911; OP-1912
 magmas OP-1372
 Quaternary OP-977; OP-1291
- Iceland OP-1813
 Illinois
 faults P 1538-Q
 structural geology OP-956
- India, tectonophysics OP-2334
 Italy OP-1239
 Japan
 OP-1601
 geologic hazards OP-420
 tectonophysics OP-2307
- Kentucky, faults P 1538-Q
 Mariana Islands, geologic hazards OF 91-0320; OF 94-0705
 Mexico OP-613
 Micronesia, geologic hazards OF 91-0320; OF 94-0705
 Middle East, tectonophysics OP-923
 Mississippi Valley
 P 1538-N
 engineering geology P 1538-M
 structural geology P 1538-E
 neotectonics OP-1190
- Nevada
 OP-614; OP-823
 waste disposal OP-997
- Oklahoma, tectonophysics OP-2334
 Oregon OP-203
 Pacific Ocean
 OP-1329
 lava OP-1351
- Rhode Island OP-274
 structural geology OP-1689
 tectonics OP-1206
 Texas, petroleum OP-1286
 United States, tectonophysics OP-2307
 Utah OP-103
 Washington
 OP-573
 geologic hazards OP-674
- seismicity maps**
 California
 earthquakes OF 94-0647
 seismology OF 95-0095
 Nevada, earthquakes OF 94-0647
- seismographs *see* ocean bottom seismographs; short-period seismographs; strain seismographs; three-component seismographs; vertical-component seismographs
- seismology *see* core; crust; earthquakes; elastic waves; explosions; mantle; microearthquakes; Mohorovicic discontinuity; seismic sources; seismicity
- seismostratigraphy *see* seismic stratigraphy
- seismotectonic maps**
 Missouri
 geologic hazards OF 95-0574
 seismology I-2521
- seismotectonics** *see also* seismic gaps.
 OP-1422; OP-2287
- Alaska
 plate tectonics OP-1682
 seismology OP-697; OP-1459
- Arkansas
 OP-2285
 seismology OP-1004
- Armenia, seismology OP-140
- Atlantic Ocean, plate tectonics OP-1312
 Bahamas, plate tectonics OP-1314
 Bolivia, seismology OP-961
- California
 OP-107; OP-822; OP-835; OP-1007; OP-1145; OP-1914; OP-2107; OP-2332
 earthquakes OP-383; OP-1712
 elastic waves OP-461
 geologic hazards OF 94-0259; OP-419
 plate tectonics OF 94-0568
 Quaternary OF 94-0568
 seismicity OP-1420; OP-1745; OP-2120
 seismology; OF 95-0038; OP-591; OP-714; OP-783; OP-818; OP-820; OP-914; OP-1271; OP-1550; OP-1586; OP-1617; OP-1637; OP-1704; OP-1761; OP-2084; OP-2333
- Canada
 OP-2271
 tectonophysics OP-2265
- Caribbean region
 earthquakes OP-1313
 seismology OP-1739
- China, Quaternary OF 94-0568
 Dominican Republic, plate tectonics OP-1751
 earthquakes OP-1346
 Ecuador, engineering geology OF 94-0568
 engineering geology OP-1333
 Greater Antilles, earthquakes OP-1313
 Indiana, earthquakes OF 94-0298
 Japan, earthquakes OP-1800
 Mississippi Valley, seismology OP-2013; OP-2014
 Missouri, earthquakes OF 94-0298
 Montana OP-1902
 New England OP-2272
 Nicaragua, seismology OP-961
 Pacific Coast, Quaternary OF 94-0568; OP-661
 Philippine Islands, geologic hazards OP-1048
 Puerto Rico, earthquakes OP-2238
 seismology OP-1075
 Tennessee, seismology OP-1907
- Turkey
 earthquakes OF 94-0568
 Quaternary OF 94-0568
- United States
 OP-2271
 tectonophysics OP-2265
- Utah OP-1494
 Washington
 OP-1592; OP-1611; OP-2079
 geologic hazards OF 94-0589
- West Indies, plate tectonics OP-1312
- SEISRISK-III**
 seismology OF 95-0257-A; OF 95-0257-B; OF 95-0257-C
- Seistec**
 geophysical surveys OF 94-0639
- Selawik National Wildlife Refuge**
 environmental geology OF 94-0627
- Seldovia Quadrangle**
 geochemistry B 2107
- selection, natural *see* natural selection
- selenates**
 California, environmental geology OP-894
 Nevada, environmental geology OP-894
- Selenga River valley**
 geochemistry OP-1559
 sedimentary petrology OP-1877
- selenite**
 Colorado, pollution OP-2316

selenium

- California
 - environmental geology C 1108; OP-894
 - ground water WRI 95-4048; OF 94-0072; OF 94-0334; OP-226; OP-1231
 - pollution OP-1297
- Colorado
 - geochemistry OP-1168
 - hydrology WRI 94-4041
 - pollution OP-2316
- geochemistry B 2117
- ground water OP-1167
- Idaho, environmental geology WRI 93-4156
- Nevada, environmental geology OP-894
- Oregon, environmental geology WRI 93-4156
- Rocky Mountains, pollution OF 94-0670
- Utah
 - geochemistry OP-1168
 - hydrology WRI 94-4041
- Wisconsin
 - environmental geology OF 95-0163
 - hydrology OF 95-0163
- Wyoming, environmental geology OF 95-0121
- Small Ophiolite**
 - California, geochemistry OP-753
 - Oman, geochemistry OP-753
 - Saudi Arabia, geochemistry OP-753
- Senegal**
 - environmental geology OP-918
- Senonian *see* Campanian; Maestrichtian; Santonian
- sensing, remote *see* remote sensing
- sensitive high mass-resolution ion microprobe data *see* SHRIMP data
- Separation Point Batholith**
 - geochemistry C 1129
- Septentrional Fault**
 - plate tectonics OP-1751; OP-1983
 - Quaternary OF 94-0568
- Sequatchie Valley**
 - stratigraphy OP-1502
- sequence stratigraphy**
 - OP-2099
- Alaska
 - OP-217; OP-641; OP-711
 - continental shelf OP-589
 - energy sources OP-1270
- Atlantic Coastal Plain OP-903
- Atlantic Ocean OP-1334
- Basin and Range Province, structural geology OP-2115
- California OP-1341
- Cretaceous I-2474-A
- Florida, Quaternary OP-1719
- Great Basin, structural geology OP-2115
- Hungary OP-951
- Indiana, petroleum B 2094-D
- Louisiana, Quaternary OP-1936
- Maryland
 - OP-736
- sedimentary petrology OP-848
- Montana
 - OP-1974
- Cretaceous OP-743
- North Dakota OP-2255
- Oregon OP-1176; OP-1177
- Russian Federation, continental shelf OP-589
- Utah
 - B 2115-B
 - sedimentation B 2115-A
- Virginia OP-736
- Wyoming OP-747
- Yukon Territory OP-217
- Sequoia National Park**
 - areal geology OF 94-0650
- Serbia**
 - magmas C 1129
 - weathering OP-2052
- Sergipe Brazil**
 - petrology C 1129
- sericite**
 - Peru, metal ores OP-1411
- serpentine group *see* antigorite; chrysotile
- serpentinite**
 - California, structural geology OP-1599
 - Europe, weathering OP-2052
 - Micronesia, manganese ores OP-1409
 - Pakistan, gems OP-1303
 - Washington, sedimentary petrology OP-1182
- Serpukhovian**
 - OP-809
- Kazakhstan OP-1258
- Serra fault zone**
 - neotectonics OP-1145
- Serrania de Ronda**
 - magmas C 1129
- Serravallian**
 - Georgia OP-1506; OP-1969
- Serre Batholith**
 - metal ores OP-199
- Servia *see* Serbia
- SESCA**
 - ocean floors B 2022
 - oceanography B 2022
- Sespe Formation**
 - OF 94-0630
 - sedimentary petrology B 1995-H,I
- Setouchi *see* Inland Sea
- Sevier Desert**
 - stratigraphy OF 95-0001
 - structural geology OP-695
- Sevier Lake**
 - Quaternary OP-1273
- Sevier orogenic belt**
 - metal ores OP-1874
 - mineral resources B 2064-A-R
 - petroleum B 2000-J
 - stratigraphy OP-2030
 - structural geology OP-744; OP-2124
- Sevy Dolomite**
 - structural geology B 2056
- Seward Peninsula**
 - areal geology OP-931
 - coal OP-972
 - geochemistry OP-23
 - magmas OP-626
 - metal ores OP-1893
 - petrology OP-229
 - pollution OF 95-0178
 - stratigraphy OP-357
- Seward Quadrangle**
 - base metals B 2107
- Seward, Albert C.**
 - paleobotany OP-644
- Seymour Aquifer**
 - pollution OP-1093
- Sg-waves**
 - seismology OP-103
- SH-waves**
 - OP-1477
 - California OP-1266; OP-1603; OP-1708
 - Canada OP-374

- Iceland OP-1603; OP-1813
- Italy OP-1239
- shaded relief mapping**
 - geophysical surveys OP-242
- shake wave *see* S-waves
- shale**
 - B 2137; OF 94-0298
- Alaska
 - DDS-0030; OP-65; OP-1895
 - geochemistry OF 95-0236
- Alberta, magmas C 1129
- Appalachians, stratigraphy OP-1324
- Arizona, engineering geology OP-1435
- California
 - OF 95-0530; OP-385; OP-1097; OP-2146
 - fractures OF 94-0228
 - geochemistry OP-1955
 - Miocene OF 95-0265
 - structural geology OP-1430
- Colorado
 - OF 94-0670
 - pollution OF 94-0670; OP-2316
- Cretaceous I-2474-A
- Florida, Devonian OP-1971
- geochemistry OP-1070
- Georgia, Devonian OP-1971
- Idaho B 2064-A-R
- Iowa
 - geomorphology OP-1059
 - geophysical surveys OP-1880
- Italy, petrology C 1129
- Kentucky, stratigraphy B 2135
- Mississippi Valley, seismology P 1538-N
- North Dakota OP-749
- Ohio, geomorphology OF 95-0224
- Pennsylvania OP-1895; OP-2058; OP-2059
- Texas
 - OP-2256
 - Quaternary OP-812
- Utah
 - OF 94-0670
 - engineering geology OP-1435
- Virginia, stratigraphy B 2135
- Washington OP-1042; OP-1181
- West Virginia, stratigraphy OP-69
- Western Interior, stratigraphy OP-1324
- Wyoming OP-456
- shale oil *see* oil shale
- shallow aquifers**
 - Alaska, environmental geology OF 94-0525
- California
 - ground water WRI 94-4127; WRI 95-4048; OF 94-0072; OF 94-0334
 - pollution OF 95-0286
- Colorado
 - ground water WRI 92-4143; WRI 94-4118
 - hydrogeology OF 95-0536
- environmental geology OP-1160
- Florida
 - ground water OP-1614
 - hydrogeology WRI 94-4128
- ground water OP-1553
- Idaho, ground water WRI 94-4116
- Indiana, hydrogeology OF 92-0139
- Iowa, pollution OP-982
- Kansas, ground water WRI 94-4166
- Massachusetts, pollution OP-897
- Midwest, pollution OP-497
- Minnesota
 - environmental geology OP-558
 - ground water WRI 94-4149
 - hydrogeology WRI 94-4207

- pollution OF 95-0116
 Mississippi, environmental geology C 1108
 Mississippi Valley, environmental geology C 1120-G
Montana
 environmental geology C 1108
 ground water WRI 95-4034
 New Jersey, environmental geology WRI 92-4122
 New York, ground water WRI 92-4171
 Pennsylvania, environmental geology OP-354
 pollution FS 0114-95; OP-13; OP-630
 Puerto Rico, ground water OF 93-0465; OF 93-0466
South Carolina
 environmental geology OP-558
 ground water WRI 93-4185
 Tennessee, pollution OP-1006
 United Arab Emirates, ground water OP-1018
 Vermont, hydrogeology OP-1194
 Virginia, ground water WRI 92-4111; OF 94-0301
 Wisconsin, hydrogeology OP-2241
shallow-focus earthquakes
 Alaska OP-697; OP-2157
 Australia, Quaternary OF 94-0568
 Hawaii OP-1709; OP-1911
 Texas, petroleum OP-1286
Sharon Springs Member OP-1572
Shasta Dam
 pollution OP-1051
shatter cones
 Idaho, crystalline rocks OP-362
 Montana, crystalline rocks OP-362
Shaw Air Force Base
 pollution WRI 94-4209
Shawangunk Mountains
 metal ores OP-303
 shear wave *see* S-waves
shear zones *see also* metamorphic core complexes; mylonites.
 Alaska
 crust OP-2075
 fractures OF 94-0228
 gold ores OP-624
 natural gas OP-2074
 structural geology OP-1447
 Appalachians, gold ores OP-1909
 Argentina, faults C 1129
 California
 deformation OP-2332
 faults C 1129
 geophysical surveys OP-1928
 neotectonics OP-2070
 Quaternary OF 94-0568
 seismology OP-1207; OP-1704
 structural geology OP-824; OP-1599
 tectonophysics OP-620; OP-2195
 Colorado
 Proterozoic OP-1982
 uranium ores OF 95-0242
 Colorado Plateau, tectonophysics OP-1669
 Cyprus, structural geology OP-2
 deformation OP-2187
 Idaho
 faults OP-1650
 metal ores P 1525; B 2064-A-R
 structural geology OP-1903
 Italy, petrology C 1129
 Japan, petrology C 1129
 Mexico, structural geology OP-824
 Middle East, deformation OP-1615
 Montana
 crust OP-1831
 structural geology OP-1903
 Nevada
 structural geology OP-1252
 volcanism OP-1388
 Northern Territory Australia, magmas C 1129
 Northwest Territories, faults OP-1856
 Quebec, gold ores OF 94-0228
 Queensland Australia, magmas C 1129
 Scotland, structural geology C 1129
 structural geology OP-402; OP-1422; OP-1668
 Utah, neotectonics B 2056
 Western Australia, gold ores OF 94-0228
 Wyoming
 I-2233
 Proterozoic OP-1982
 shear-cleavage folds *see* cleavage folds
sheath folds
 Arizona OP-1380
Sheep Pass Basin
 structural geology OP-1944
Sheep Pass Formation
 energy sources OF 94-0670
 structural geology OP-1944
Sheeprock Group
 magmas C 1129
sheet silicates *see also* chlorite group; clay minerals; mica group; prehnite; serpentine group; talc.
 California, rock mechanics OF 94-0228
sheeted dikes
 Cyprus, structural geology OP-2
Sheffield Illinois
 waste disposal OP-1491
 shelf, continental *see* continental shelf
 shelves, ice *see* ice shelves
Shenandoah Valley
 stratigraphy B 2135; OF 94-0573
 waste disposal OP-1133
Sherman Granite
 stratigraphy OP-364
Sheyenne River
 hydrology WRI 93-4200
 pollution OP-179
Shickard Crater OP-1873
shield volcanoes
 Alaska, earthquakes EV
 Bolivia, metal ores OP-1028
 California, petrology OP-968
 East Pacific Ocean Islands, magmas OP-309
 Galapagos Islands, magmas OP-309
 Hawaii
 geochemistry OP-2321
 petrology OP-1025
 Quaternary OP-1328
 Indonesia, Quaternary OP-1767
 Japan, earthquakes EV
 Oregon, earthquakes EV
 Washington
 Quaternary OP-1767
 volcanic features I-2359
shields
 Saudi Arabia, structural geology OP-455
Shimane Japan *see* Oki Islands
Shinarump Member OP-222
Shingle Pass Tuff
 stratigraphy B 2056
 Tertiary OF 95-0545
Shingobee Lake
 Quaternary OP-2082
Ship Mountain Point Quadrangle
 stratigraphy B 2115-B
Ship Mountain Quadrangle
 sedimentation B 2115-A
Ship Mountains Pluton
 magmas OP-313
Shir-Kih Batholith
 magmas C 1129
Shirley Basin
 energy sources OP-1942
Shirshov Ridge
 crust OP-2075
 natural gas OP-2074
 Shizuoka-Itoigawa tectonic line *see* Itoigawa-Shizuoka tectonic line
shoals
 California, neotectonics OP-1760
 Great Lakes, lacustrine features OF 95-0224; I-2429
shock metamorphism
 Colorado OP-1665
 Denmark, stratigraphy OP-1140
 geochronology OP-1572
 Idaho OP-362
 Iowa
 geomorphology OP-1059; OP-2034
 stratigraphy OP-1671
 Montana OP-362
 stratigraphy OP-84
 Utah, structural geology OP-2111
shock waves
 Alaska, seismology OP-1855
Shoemaker-Levy 9 Comet YR; OP-850; OP-851; OP-987; OP-2112
shonkinite
 Montana, geochronology OP-1465
 Utah, structural geology OF 95-0491
Shoo Fly Complex
 structural geology OP-1462
 shore drift *see* littoral drift
shore features *see also* barrier islands; bars; beach ridges; beaches; bluffs; chenier plains; cliffs; coastal dunes; coastlines; deltas; dunes; fjords; marine terraces; raised beaches; salt marshes.
 Alaska, environmental geology C 1108
 California, environmental geology C 1108
 Egypt, ichnofossils OP-1012
 Great Lakes OP-285
 Great Lakes region OP-285
 Louisiana OF 94-0275
 Pakistan, sedimentary petrology OP-1386
shorelines *see also* barrier islands; coastal sedimentation; coastlines; waterways.
 California, engineering geology OF 94-0662
 Hawaii, engineering geology OF 94-0638
 Louisiana, engineering geology OF 94-0275; OP-1938
 Puerto Rico
 engineering geology OF 95-0072
 geologic hazards OP-1201
short-period seismographs
 California
 earthquakes OF 92-0284
 seismology OF 91-0592
 Oceania, mantle OP-1109
 tectonophysics OP-60
 shortening, crustal *see* crustal shortening
shoshonite
 Brazil C 1129

SHRIMP data

- Arizona, geochronology OP-2310
- California, geochronology OP-2310
- Colorado, metal ores OP-1793
- Montana
 - Archean OP-1862
 - crust OP-1831
- Shublik Formation**
 - areal geology OP-641
 - energy sources OP-65
 - geochemistry OF 95-0236
- Shuiximiao Granite**
 - petrology C 1129
- Shuksan Metamorphic Suite**
 - geophysical surveys OP-1821
- Shungnak Quadrangle**
 - environmental geology OF 94-0627
- Shushan Quadrangle**
 - maps OF 94-0262; OF 95-0483-A; OF 95-0483-B
- Shuttle Imaging Radar**
 - Egypt, geophysical surveys OP-2068
- Shuyak Formation**
 - metamorphism OP-39
- Si *see* silicon
- Siberia**
 - geochemistry OP-50; OP-421; OP-1559
 - geochronology OP-194
 - hydrology OF 94-0445
 - natural gas OP-593
 - petroleum OP-153
 - stratigraphy OP-1212
- Siberia-Soviet Far East *see* Russian Far East
- Siberian Lowland**
 - natural gas OP-2219
- Siberian Platform *see* Yakutia region
- Sibi Pakistan**
 - structural geology OF 94-0670
- Sicily Italy *see* Lipari Islands; Pantelleria; Peloritani Mountains
- side-looking airborne radar *see* SLAR
- siderite (meteorite) *see* iron meteorites
- Sierra Buttes Formation**
 - volcanism OP-531
- Sierra de Ronda *see* Serrania de Ronda
- Sierra Madre**
 - maps I-2452
 - natural gas OP-542
 - Proterozoic OP-1982
 - seismicity OP-462
- Sierra Madre Occidental**
 - petrology OP-827
- Sierra Nevada**
 - areal geology OF 94-0650
 - faults OP-1740
 - geochemistry C 1129
 - geomorphology OF 94-0105
 - maps I-2295
 - metal ores OP-1874
 - metamorphism OP-319
 - petrology C 1129
 - Quaternary OP-449; OP-988; OP-1157; OP-1414; OP-1803
 - structural geology OP-1462
 - tectonophysics OP-620
- Sierra Nevada Batholith**
 - faults C 1129
 - geochemistry OP-160
 - inclusions C 1129
- Sierras Pampeanas *see* Pampean Mountains

Signal Batholith

- petrology C 1129
- Signal Hills**
 - Quaternary OP-737
- Signor Ridge**
 - energy sources OP-477; OP-701
- Siksikpuk Formation**
 - deformation OP-479
 - structural geology OP-2247
- Sila Massif**
 - geochemistry OP-27
- Silesia**
 - lead-zinc deposits OP-908
- Silesian coal basin**
 - energy sources OP-770
- Siletz River Volcanics**
 - stratigraphy OP-1176; OP-1177
- silica**
 - California, metal ores OP-720
 - Florida, ground water OP-473
 - hydrogeology OP-1532
 - Montana, stratigraphy OP-1131
 - Nevada
 - environmental geology OF 93-0477
 - geochemistry OP-1857; OP-2169; OP-2326
 - Oregon, geologic hazards OP-2088
 - Pacific Coast, Quaternary OP-1401
 - Pacific Ocean
 - geochemistry OF 94-0015
 - oceanography OP-503
 - petrology OP-125
 - Russian Federation, Quaternary OP-165
 - stratigraphy OP-2274
 - structural geology OP-401
 - tectonophysics OP-141
- silica minerals *see also* chalcedony; coesite; opal; quartz.**
 - engineering geology OF 94-0228
- silicates *see also* aluminosilicates; asbestos; borosilicates; chain silicates; framework silicates; orthosilicates; ring silicates; sheet silicates.**
 - geochemistry C 1129; OP-1170
 - geophysics B 2131
- siliceous slinter**
 - California, metal ores OP-804; OP-940
 - Wyoming, geochemistry OP-300
- siliciclastics**
 - Alaska
 - Proterozoic B 2107
 - stratigraphy P 1545
 - Appalachians, stratigraphy OP-1324
 - Atlantic Coastal Plain
 - sedimentary petrology B 2110
 - stratigraphy OP-1958
 - Colorado, sedimentary petrology OF 94-0670
 - diagenesis OF 94-0298
 - Florida
 - Cenozoic OP-1204
 - sedimentary petrology OP-1710
 - stratigraphy OP-2087
 - Georgia, stratigraphy OP-2087
 - Illinois
 - energy sources OF 94-0298
 - sedimentation OF 94-0298
 - Maryland, sedimentary petrology OP-848
 - Nevada, sedimentary petrology B 1988-I
 - Pennsylvanian OP-1228
 - petroleum OF 94-0298
 - Utah, sedimentary petrology OF 94-0670
 - Western Interior, stratigraphy OP-1324

silicification

- Pacific Ocean, geochemistry OP-1033
- stratigraphy OP-768
- Silicoflagellata** OF 95-0260
- silicon**
 - geochemistry C 1129
 - tectonophysics OP-228
- silification *see* silicification
- sillimanite**
 - Alaska, geochemistry B 2139
 - Colorado GQ-1764
- sills**
 - Alaska, geochemistry P 1564
 - Arizona, copper ores OP-1381
 - Hawaii OP-1090
 - Pacific Ocean OP-920
 - South Dakota
 - C 1129
 - geochemistry C 1129
 - Texas
 - C 1129
 - tectonics OP-363
 - Utah, sedimentary petrology OP-1464
 - Washington
 - sedimentary petrology B 2085-C
 - tectonics OP-1449
- silt**
 - Alaska
 - OP-2094
 - Quaternary OP-1457
 - California
 - earthquakes OP-1529
 - Quaternary OP-1308
 - China, Quaternary P 1549
 - Columbia Plateau, Quaternary OP-2237
 - Gulf of Mexico OP-2081
 - Illinois, Quaternary OP-1630
 - Iowa, Quaternary OP-1630
 - Midwest, hydrology WRI 93-4204
 - Mississippi Valley
 - geologic hazards OP-1578
 - hydrology WRI 94-4191
 - Missouri
 - geologic hazards OP-1764
 - hydrogeology OP-1311
 - New Jersey
 - OP-1188
 - pollution OP-2176
 - Ontario, ground water OP-170
 - Pacific Ocean OP-1218
 - Puerto Rico OP-741; OP-2080
 - South Carolina, geomorphology OP-1471
 - stratigraphy OP-768
 - United States OP-2080
 - Virginia, ground water OP-1977
- Silt Quadrangle**
 - maps OF 94-0696
- silts *see* silt
- siltstone**
 - Alaska, energy sources OP-574
 - California
 - OP-1097
 - petrology OP-1315
 - Colorado, metal ores B 2116
 - ground water OP-1167
 - Iowa, geophysical surveys OP-1880
 - Massachusetts OF 95-0044
 - Nevada, geochemistry OP-794
 - New Mexico, solution features OP-190
 - Oregon
 - petrology OP-1315
 - stratigraphy OP-1176; OP-1177

stratigraphy OP-768; OP-2139
Texas OP-1472
Virginia, stratigraphy B 2135
Washington OP-1376
West Virginia, stratigraphy OP-69
Wyoming, energy sources OP-1621

Silurian

OP-870
Alaska P 1545; P 1564; OP-39; OP-330; OP-931
Bloomsburg Formation OF 94-0573
Canada C 1129
Clinton Group B 2086
Clough Formation, structural geology OP-782
Idaho B 2064-A-R
Llandoveryan, Alaska OP-1
Lockport Formation B 2086
Maine C 1129
Medina Formation B 2086
Midwest OF 93-0663
New Hampshire OP-1995
New Jersey OF 95-0557
New York OP-303
Newfoundland C 1129
Norway OP-2156
Roberts Mountains Formation, gold ores OP-2151
Tonoloway Limestone OF 94-0573
Vermont C 1129; OP-1068; OP-1995; OP-1997
Victoria Australia C 1129

silver

Alaska, geochemistry B 2107
Colorado, metal ores B 2116
New Mexico
environmental geology OF 94-0547
metal ores OF 94-0691
uranium ores B 2063

Silver Bay Fault

structural geology OP-1447

Silver Creek Fault

faults OP-1577

Silver Island Mountains

orogeny OP-619

silver ores

OP-104; OP-863; OP-870
Alaska OP-1893; OP-1895
Arabian Peninsula OP-1220
Arizona B 2138; OP-1606
Basin and Range Province OP-1874
Bolivia OP-188; OP-1028
California OP-415; OP-940
Colorado
OP-284; OP-333; OP-733; OP-1096
geophysical surveys OP-1118
Great Basin OP-1874

Idaho

P 1525; B 2064-A-R; OF 94-0690
faults P 1525
pollution OP-1156
Minnesota OP-148
Montana OF 94-0670; OP-2224
Nevada B 2081; B 2090
New York OP-303
Oregon B 1738-E; B 1741-H; OF 94-0677
Pennsylvania OP-1895
Peru OP-202; OP-1411
Spain OP-22

Silver Plume Granite

maps GQ-1764

Silver Springs Florida

hydrogeology WRI 92-4159

Silverton Caldera

metal ores OF 94-0291

Simeonof Island Quadrangle

maps I-2272

Simi Valley California

engineering geology OP-1585

Simmons Peak Quadrangle

tectonophysics OP-352

Simonson Dolostone

energy sources OF 94-0670
stratigraphy OP-1558
structural geology B 2056; OP-1944

Simpson Group

hydrogeology WRI 93-4230

Simpson Park Mountains

maps MF-2257

Simpsonian

Quaternary OP-1221

SIMS *see* secondary ion mass spectroscopy

Sind Pakistan

coal OF 94-0274; OF 94-0595; OF 94-0596-A;
OF 94-0596-B; OF 94-0596-C; OF 94-0596-D
geochemistry OF 93-0591
lignite OF 94-0557
sedimentary petrology OP-1386

sinhalite

mineralogy OP-1771

Siniktanneyak Mountain

petrology OP-710

sinkholes

Colorado, geologic hazards MF-2295
Florida
OP-1203
ground water OF 93-0026; OP-472; OP-473
hydrogeology WRI 92-4159
Georgia, hydrogeology OF 94-0350
Missouri, hydrogeology WRI 93-4154
Pennsylvania, hydrogeology OF 95-0113
Texas, ground water WRI 95-4030

Sinkiang Weiwu'er Zizhiqu *see* Xinjiang China

Sinnipee Group

ground water OF 95-0163

Siqueiros fracture zone

petrology OP-2266

Sirius Group

Pliocene OF 94-0588
stratigraphy OF 94-0588

Sisquoc Formation B 1995-J,K

site location maps

Alabama, ground water WRI 94-4074
Alaska
mineral resources OF 94-0277-A; OF 94-0277-B; OF 95-0509
paleontology OF 94-0215
stratigraphy MF-2021-G
Antarctica, hydrology OF 94-0545
Arizona, geochemistry B 2021-E
British Columbia, hydrology OF 94-0315
California
ground water WRI 93-4003; OF 95-0158;
OF 95-0160
mineral resources OF 93-0698
Colorado
engineering geology OF 95-0296
geochronology B 2104
ground water OF 94-0383
hydrology WRI 94-4097
metal ores OF 94-0291
Florida, hydrogeology WRI 92-4159
Hawaii, geophysical surveys OF 95-0017

hydrology WRI 94-4148; WRI 94-4159

Idaho

economic geology P 1525
hydrogeology P 1408-C

Kentucky

ground water WRI 94-4239
hydrology WRI 94-4134

Massachusetts, ground water OF 94-0316;
OF 95-0188

Midwest, ground water OF 93-0663

Minnesota, hydrology WRI 93-4200; OF 93-0046; OF 93-0047; OF 95-0333

Montana, ground water WRI 95-4034

Nevada

environmental geology OF 95-0284
geophysical surveys OF 94-0296
gold ores OF 94-0282
ground water OF 95-0158; OF 95-0160
metal ores OF 94-0270-A

New Mexico

economic geology B 2063
ground water WRI 94-4078
hydrogeology WRI 93-4163; WRI 94-4125
tectonophysics OF 94-0695

New York

ground water WRI 91-4138; WRI 93-4004;
WRI 93-4029

Quaternary WRI 90-4168

North Carolina, hydrology WRI 94-4140

North Dakota

hydrogeology OF 95-0304
hydrology WRI 93-4200

Ohio, ground water WRI 94-4131

Oregon

geochemistry OF 94-0261
ground water OF 94-0505
hydrogeology P 1408-C
mineral resources OF 95-0006

Pennsylvania

hydrogeology OF 94-0381
pollution WRI 92-4088

Rhode Island

ground water OF 95-0188; OF 95-0355
hydrogeology OF 95-0305

Rocky Mountains, ground water OF 95-0143

South Carolina, ground water WRI 93-4185

South Dakota

hydrology OF 93-0046
metal ores I-2445

Tennessee, ground water OF 94-0483

Texas, hydrology WRI 94-4213; WRI 95-4019

Utah

geophysical surveys OF 94-0296
hydrogeology OF 95-0101
metal ores OF 94-0270-A

Virginia

ground water OF 94-0301
hydrology WRI 94-4140
magmas P 1529

Washington

geochemistry OF 94-0680-A
ground water WRI 94-4236; OF 94-0505
hydrogeology WRI 94-4082
hydrology OF 94-0315
pollution WRI 92-4017

Wyoming, metal ores I-2445

sites, archaeological *see* archaeological sites

Sitka Fault

metal ores OP-1169

Sitka Quadrangle

environmental geology OF 95-0345
maps OF 94-0658

Sixes River Marsh

Quaternary OP-1629

Sixmile Creek Colorado

hydrogeology OF 95-0536

Sjaeland *see* Zealand**Skaergaard Intrusion**

petrology OP-1752

Skagit Valley

Quaternary OP-2008

skarn

Alaska, metal ores OP-1893

Basin and Range Province, metal ores OP-1874

Canadian Shield, metal ores OP-2126

Great Basin, metal ores OP-1874

Great Britain, metal ores OP-2126

Idaho

economic geology B 2064-A-R

metal ores B 2064-A-R

polymetallic ores P 1525; B 2064-A-R

metal ores OP-863

Skidaway Island

phosphate deposits OP-399

Skookum Creek Volcano

geomorphology B 2072

Quaternary OP-628

Skookumchuck Formation

sedimentary petrology OP-1042; OP-1376

SKS-waves

Africa, tectonophysics OP-636

Skunk River Aquifer

ground water WRI 94-4244

skystones *see* meteoritesslant stacks *see* Radon transforms**SLAP**

geochemistry OP-175

SLAR

California, mineral resources OP-793

geophysical surveys OP-1661

Nevada, mineral resources OP-793

Rocky Mountains, geophysical surveys OP-1660

slates

Alaska, fractures OF 94-0228

California, gold ores OF 94-0640-A; OF 94-0640-B

Slave Province

geochemistry C 1129

magmas C 1129

Sleeper Mine

hydrogeology WRI 95-4119

metal ores B 2090

Sleepers River Research Watershed

hydrogeology OP-1194; OP-1631

hydrology OF 94-0475; OP-1632

Sleetmute Quadrangle

environmental geology B 2107

Slick Rock Colorado

stratigraphy OC-0144

slickensides

Alaska, structural geology OP-1447

California, Quaternary OF 94-0568

Nevada, structural geology OP-1904; OP-2143; OP-2276

sliding, gravity *see* gravity sliding**Slippery Creek Greenstone**

magmas OP-1126

slope stability *see also* avalanches; debris flows; embankments; landslides; liquefaction; mudflows; tunnels.

Alaska, geologic hazards OP-2257

Arizona, geologic hazards OF 95-0617

Colorado, geomorphology OF 95-0024

Hawaii, engineering geology OF 94-0638

Mississippi, engineering geology OP-1009

slope, continental *see* continental slope**Slope-Area Computation**

hydrology OF 94-0360

sludging *see* solifluction**slug tests**

Connecticut, ground water WRI 94-4255

ground water WRI 95-4012

Virginia, ground water OF 94-0301

Slumgullion Landslide

engineering geology EV

structural geology OP-325

Sm-147/Nd-144

California, magmas OP-321

Hawaii, geochemistry OP-861

petrology OP-939

Russian Federation, geochemistry OP-421; OP-843

Sm/Nd

OP-1826

Argentina, magmas C 1129

Brazil, geochronology C 1129

Canada, structural geology B 1904-T

Chile, geochemistry C 1129

Colorado

intrusions OP-1423

Proterozoic OF 94-0437; OP-1982

geochronology DDS-0014

Minnesota

geochemistry B 1904-U

Precambrian OP-886

Montana

Archean OP-1862

geochronology OP-516

petrology OP-938

Russian Federation, geochemistry OP-50

United States, structural geology B 1904-T

Wisconsin, plate tectonics OP-2121

Wyoming, Proterozoic OP-1982

Smackover Formation

petroleum OF 94-0670

smaragd *see* emerald**smectite**

OP-241; OP-1134

Colorado, metal ores OP-98

geochemistry OP-2001

Oregon, sedimentary petrology B 2108

Pacific Ocean, geochemistry B 2022

Washington, sedimentary petrology B 2085-C

SMILE

continental shelf OP-944

Smith River Allochthon

petrology C 1129

Smokies *see* Great Smoky Mountains**Smooth Ridge California**

plate tectonics OP-1431

SMOW

geochemistry OP-175

SMTF B 2103Sn *see* tin**Snake Range**

maps OF 94-0687; OF 95-0010

Snake River

gold ores OF 95-0495

hydrogeology P 1408-C; WRI 94-4247

hydrology OF 94-0109

Quaternary OP-1900

Snake River basin

environmental geology WRI 93-4156; WRI 95-4006

ground water WRI 94-4135

hydrogeology WRI 94-4221

hydrology WRI 93-4229

Quaternary OP-2237

sedimentary petrology OP-2004

Snake River canyon

tectonophysics OP-361

Snake River plain

geochemistry OP-716

ground water WRI 94-4053; WRI 94-4257; OP-44

hydrogeology P 1408-C; OF 94-0503

maps MF-2278

metal ores OP-799

neotectonics OF 94-0568

petrology OP-1851

Quaternary B 2105; OF 94-0686

sedimentary petrology OF 94-0374

stratigraphy OP-2147

structural geology OP-2123; OP-2124

volcanism OP-1674

Snake River Plain Aquifer

ground water WRI 94-4053; WRI 94-4257

hydrogeology OF 94-0503

Snowden Mountain

stratigraphy P 1545

Snowshoe Mountain Tuff

geochemistry OP-760

geophysical surveys OP-1118

metal ores OP-1793

Oligocene OP-1691

sedimentation OP-1690

stratigraphy OP-2012

Snowstorm Mountains

geochronology B 2081

Sny Magill Watershed

hydrology OP-465

pollution OP-839

SO₂ *see* sulfur dioxidesoap clay *see* bentonitesoda ash *see* sodium carbonate**Soda Lake**

seismology OP-860

Soda Lake Shale Member

natural gas OP-542

sedimentary petrology OP-1097

sodium

China, Conodonta OP-1021

geochemistry C 1129; OP-1369

Massachusetts

geochemistry OF 94-0384

pollution OP-897

mineralogy OF 94-0576

Minnesota, Quaternary OP-1290

stratigraphy OP-2274

tectonophysics OP-228

Western Interior, stratigraphy OP-2063

sodium carbonate *see* trona**sodium chloride**

Colorado, geochemistry OF 95-0056

geochemistry OF 94-0298; OP-2106

Texas, hydrogeology OP-1684

thermal waters OP-1756

soft coal *see* bituminous coalsoft sediment deformation *see also* clastic dikes; sandstone dikes.

California, Quaternary OF 94-0568

geologic hazards OF 94-0663

- Israel, Quaternary OF 94-0568
 Mississippi Valley, Quaternary OF 94-0568
 Quaternary OF 94-0568
 South Carolina
 geologic hazards OF 94-0663
 Quaternary OF 94-0568
 Sweden, Quaternary OF 94-0568
 Washington, geologic hazards OF 94-0663
 software *see* computer programs
Soil and Water Assessment Tool
 hydrology OF 95-0163
 soil fluctuation *see* solifluction
 soil liners *see* disposal barriers
soil mechanics *see also* alluvium; cone penetration tests; deformation; foundations; geologic hazards; hydraulics; land subsidence; liquefaction; rock mechanics; seismic response; slope stability; tunnels.
 OP-168
 soil ulmin *see* humus
soil vapor extraction
 ground water OP-30
 pollution OP-137; OP-138; OP-629
soil venting
 Nevada, waste disposal OP-1990
 New York, waste disposal OP-1775
soils *see also* alluvium; bacteria; clay mineralogy; colluvium; conservation; geomorphology; glacial geology; infiltration; land use; landslides; lysimeters; Paleosols; pedogenesis; soil vapor extraction; soils maps; solifluction; tillage; weathering.
 OP-787; OP-880; OP-2182
 Alabama, ground water WRI 94-4074
 Alfisols
 Idaho OP-119
 Washington OP-119
 Aridisols, Pennsylvanian OP-1228
 Arizona
 hydrology OF 95-0122
 Quaternary OF 95-0591; OP-1730
 Calcareous soils, Nevada OP-1763
 California
 engineering geology OF 94-0568
 ground water OF 94-0072
 pollution OF 95-0165; OP-2251
 Clay soils, Missouri OF 94-0705-W; OP-934
 Colorado
 OF 94-0648
 economic geology OF 94-0289
 environmental geology B 2220
 geomorphology OP-572
 ground water WRI 94-4037
 hydrogeology OF 95-0536
 pollution OF 94-0670; OP-253
 Colorado Plateau, stratigraphy OP-1481
 Commonwealth of Independent States, environmental geology OP-2302
 Delaware, pollution OP-1077
 Entisols
 Idaho OP-119
 Washington OP-119
 environmental geology C 1108; OP-581; OP-675
 Europe, environmental geology OP-2302
 geochemistry OF 95-0140; OF 95-0486; OP-1011
 geomorphology OP-638
 geophysical surveys OP-1961
 geophysics OP-1552
 ground water OP-1432
 Histosols, California OP-788
 Idaho, environmental geology OP-2096
 Illinois, waste disposal OP-1491
 Iowa, hydrology OP-312
 Kansas
 OF 94-0670
 pollution OF 94-0497
 laterites, Europe OP-2052
 loam
 OP-322
 Missouri OP-934
 Louisiana, pollution OP-758
 Manitoba, Quaternary OP-1463
 Maryland, pollution OP-1077; OP-1786
 metal ores OP-870
 Michigan
 environmental geology OF 94-0670
 pollution OP-1267
 Midwest, pollution OP-1056; OP-2201
 mineralogy OP-79
 Mississippi, pollution OP-758
 Mississippi Valley
 geologic hazards OP-1295
 Quaternary OF 94-0568
 Mollisols
 Idaho OP-119
 Washington OP-119
 Nevada
 OP-1891
 geothermal energy OF 95-0485
 hydrology OF 94-0489
 structural geology OP-2276
 waste disposal OP-1990
 New England OP-529
 New Jersey, pollution OP-114
 New Mexico, environmental geology OF 94-0547
 New York, hydrology OF 94-0368
 North Dakota
 environmental geology OP-2168
 pollution OP-900
 Ohio, pollution OF 95-0371
 Oklahoma, hydrology OP-312
 Oregon, Quaternary OP-1876
 Pennsylvania, environmental geology OP-354
 Phanerozoic OP-1480
 pollution OP-95; OP-97; OP-692
 seismology OP-1075
 South Carolina, pollution WRI 94-4209
 Tennessee
 hydrology OP-2162
 pollution OF 95-0156; OP-688; OP-1006;
 OP-2044
 Ultisols
 Appalachians OP-1324
 Western Interior OP-1324
 Utah
 hydrogeology WRI 95-4072
 Quaternary OP-1730
 Vermont
 hydrogeology OP-1194
 hydrology OF 94-0475
 Vertisols, Pennsylvanian OP-1228
 Washington
 geochemistry WRI 94-4047
 hydrogeology WRI 92-4109
 pollution WRI 94-4030
 Quaternary OP-1876
 waste disposal OF 94-0514
 Wisconsin, pollution OP-508
 Wyoming, geochemistry OP-269
soils maps
 California, soil mechanics OF 94-0699
 Mississippi, ground water WRI 94-4088
 Missouri, hydrogeology WRI 93-4154
solar activity
 Nevada, soils OP-1891
Soldier Pass Quadrangle
 maps I-2464
 sole faults *see* detachment faults
sofataras
 Mariana Islands, geologic hazards OF 91-0320
 Micronesia, geologic hazards OF 91-0320
solifluction
 Wyoming, Quaternary OP-355
Sollitario Canyon Fault
 Quaternary OF 94-0568
 structural geology OP-1469; OP-1904
Solomon Quadrangle
 pollution OF 95-0178
Solomons Island
 stratigraphy OF 94-0683; OF 94-0708
solute transport
 Arizona, pollution OF 94-0508
 California, pollution WRI 94-4040; OF 95-0165; OP-2251
 Colorado, pollution OP-34; OP-691; OP-979;
 OP-1081; OP-1337; OP-1922
 environmental geology OP-1160
 Florida, pollution OP-933
 ground water OP-796; OP-967; OP-1699
 hydrogeology OP-1532
 hydrology WRI 94-4115
 Iowa, hydrogeology OF 94-0711-W
 Kansas, pollution W 2419; OF 94-0670
 Kentucky, hydrology WRI 94-4065
 Maryland, hydrogeology OF 94-0507
 Massachusetts
 hydrology WRI 94-4003
 pollution OP-897
 Michigan, pollution OP-1267
 Midwest
 hydrology WRI 93-4204
 pollution OP-1807; OP-2201
 Minnesota, ground water WRI 94-4204
 Mississippi Valley
 hydrology WRI 94-4191; OF 95-0149
 pollution OF 94-0376
 Missouri, pollution OP-933; OP-934
 Nebraska, pollution W 2419
 Nevada, hydrology OF 94-0489
 New Hampshire, ground water FS 0138-95
 New York, hydrology OF 94-0368
 North Carolina, hydrology OF 94-0454; OF 94-0511
 Ontario, ground water OP-170
 pollution OP-1508
 South Carolina, ground water OF 95-0507
 Tennessee, pollution OF 95-0156; OF 95-0329
 Virginia
 ground water OP-376
 hydrogeology OP-678
 Wisconsin
 environmental geology OF 95-0163
 pollution OF 95-0163
solution features *see also* caverns; caves; karst; sinkholes; speleothems.
 Arizona, uranium ores OF 94-0566
 Utah, metal ores OF 94-0417
solution mining
 New York, ground water OP-1608
 solution phenomena *see* solution features
 solution transport *see* solute transport

solvents

Illinois, pollution OP-702
 Maryland, pollution OP-702
 pollution OP-6; OP-138; OP-630

SOLVEQ

metal ores OP-728
 non-metal deposits OP-729

Sombrero Key

Quaternary OP-2206

Sonda coal field

geochemistry OF 93-0591

Sonoma volcanic field

metal ores OP-800; OP-801; OP-805

Sonora Mexico

maps OF 94-0685
 sedimentary petrology OP-1404

Soos Creek basin

geochemistry WRI 94-4047

Soquel Canyon

ocean floors OP-1433; OP-2150

sorositicates *see* epidote group; melilite group;
 thortveitite

Souhegan New Hampshire

ground water OF 95-0281

Souli Fault

Quaternary OF 94-0568

sources, energy *see* energy sources

sources, seismic *see* seismic sources

Souris River basin

hydrogeology OP-2269

Souris River Formation

stratigraphy OP-1558

South Africa

diamonds OP-74
 economic geology OP-905
 metal ores OP-2126
 ring silicates OP-912
 seismology OP-606

South America *see also* Andes; Argentina;
 Bolivia; Brazil; Chile; Colombia; Ecuador; Guy-
 ana; Peru; Uruguay; Venezuela.

coal OF 95-0235
 environmental geology, Guyana Shield YR
 magmas, Patagonian Andes C 1129
 mantle OP-1109
 maps, Guyana Shield OF 95-0493
 marine geology, Amazon River OP-117
 petrology, Patagonia C 1129
 Quaternary, Orinoco River OP-1993
 tectonophysics OP-2003
 Vertebrata, Patagonia OP-1151

South American Plate

Bolivia, plate tectonics OP-180; OP-252
 Pacific Ocean, tectonophysics OP-1702
 Puerto Rico, plate tectonics OP-1304

South Arabia *see* Yemen

South Atlantic *see* Falkland Plateau

South Bohemian Pluton

inclusions C 1129

South Boston Quadrangle

geophysical surveys OF 94-0253
 maps OF 95-0004
 Paleozoic OP-1670

South Canyon Fire

environmental geology OF 95-0508

South Carolina *see also* Kings Mountain.

environmental geology
 OP-558
 Jasper County South Carolina OP-1099
 Savannah River Plant OP-1099

geologic hazards OF 94-0663

geomorphology OP-1471

geophysical surveys, Savannah River Plant
 OF 95-0518

gold ores OP-2090

ground water
 OP-1685

Aiken County South Carolina OF 95-0507;
 OP-1243

Barnwell County South Carolina OF 95-
 0507; OP-1243

Beaufort County South Carolina WRI 94-
 4012

Clarendon County South Carolina WRI 93-
 4185

Richland County South Carolina WRI 93-
 4185

Savannah River Plant OF 95-0507; OP-
 1100; OP-1243; OP-1244; OP-1358

Sumter County South Carolina WRI 93-
 4185

hydrogeology

P 1410-C; OF 94-0487

Santee River FS 94-0010

Savannah River Plant OP-2270

hydrology

Georgetown County South Carolina
 WRI 95-4111

Horry County South Carolina WRI 95-4111

Richland County South Carolina OF 95-
 0186

York County South Carolina OF 94-0385

maps

Aiken County South Carolina OF 94-0673

Allendale County South Carolina OF 94-
 0673

Bamberg County South Carolina OF 94-
 0673

Barnwell County South Carolina OF 94-
 0673

Orangeburg County South Carolina OF 94-
 0673

metal ores B 2097

mineral resources OF 95-0045

natural gas C 1108

pollution

OP-132
 Richland County South Carolina OF 94-
 0486

Sumter County South Carolina WRI 94-
 4209

Quaternary

Beaufort County South Carolina OF 94-
 0568

Charleston County South Carolina OF 94-
 0568

Georgetown County South Carolina OF 94-
 0568

sedimentary petrology OP-2080

stratigraphy OP-1393

South Carpathians *see* Transylvanian Alps

South Cascades Glacier

hydrology WRI 94-4139

South Dakota *see also* Black Hills; Fort Union
 Formation; Hell Creek Formation; High Plains
 Aquifer; Madison Aquifer; Pierre Shale; Red
 River; Red River valley; Sharon Springs Mem-
 ber; Williston Basin; Wyoming Province.

economic geology C 1124; OP-267
 environmental geology C 1120-G
 geochemistry, Harney Peak Granite C 1129
 geophysical surveys OP-1661

ground water

OF 94-0320

Charles Mix County South Dakota OF 95-
 0153

Codington County South Dakota OP-359

Douglas County South Dakota OF 95-0153

Grant County South Dakota OP-359

hydrogeology

Beadle County South Dakota OF 95-0313

Custer County South Dakota OF 94-0319

Fall River County South Dakota OF 94-
 0319

Lawrence County South Dakota OF 94-
 0319

Lincoln County South Dakota WRI 93-4195

Meade County South Dakota OF 94-0319

Pennington County South Dakota OF 94-
 0319

Union County South Dakota WRI 93-4195

hydrology

C 1120-H; OF 95-0162

Brookings County South Dakota OF 93-
 0046

Deuel County South Dakota OF 93-0046

magmas, Harney Peak Granite C 1129

maps

I-1420 (NL-14)

Custer County South Dakota I-2433-B

Fall River County South Dakota I-2433-B

metal ores

Custer County South Dakota OF 95-0066-
 A; OF 95-0066-B; I-2445

Fall River County South Dakota OF 95-
 0066-A; OF 95-0066-B; I-2445

Lawrence County South Dakota OF 95-
 0066-A; OF 95-0066-B; I-2445

Meade County South Dakota OF 95-0066-
 A; OF 95-0066-B; I-2445

Pennington County South Dakota OF 95-
 0066-A; OF 95-0066-B; I-2445

natural gas OF 94-0022-E

Proterozoic, Harney Peak Granite OP-1117

Quaternary I-1970-D

sedimentary petrology

Custer County South Dakota B 1917-S

Fall River County South Dakota B 1917-S

stratigraphy OP-1889

volcanism I-2291-C

South Florida Ecosystem Program

environmental geology FS 0134-95

South Island

energy sources OP-207

geochemistry C 1129

magmas C 1129

petrology C 1129

Quaternary OF 94-0568

South Kona *see* Kona

South Kona Landslide

Quaternary OP-639

South Pacific *see* Southeast Pacific; Southwest
 Pacific

South Park Colorado

geologic hazards MF-2295

South Platte River

ecology FS 0154-95

geochemistry OP-1812

ground water OP-1797

hydrogeology YR

pollution OP-204; OP-608; OP-1796

South Victoria Land *see* Victoria Land

Southeast Georgia Embayment

Devonian OP-1971

- stratigraphy OP-742
 Southeast Pacific *see* Chile Ridge; Lau Basin
 Southeastern Alaska *see* Alexander Archipelago; Juneau Alaska
 Southern Africa *see* Kaapvaal Craton; South Africa
 Southern Alaska *see* Anchorage Alaska; Chugach Mountains; Kenai Peninsula; Prince William Sound; Redoubt; Susitna River basin; Talkeetna Mountains; Turnagain Arm; Wrangell Mountains; Yakutat Bay
 Southern California Areal Mapping Project geophysical surveys OF 94-0599; OF 95-0016
 Southern California Bight geochemistry OP-244
 Southern California Earthquake Center earthquakes OP-1503
 Southern California Seismic Network seismology OP-347
 Southern Carpathians *see* Transylvanian Alps
 Southern Escanaba Trough Study Area ocean floors B 2022 oceanography B 2022
 Southern Europe *see* Dinaric Alps; Greece; Iberian Peninsula; Italy; Macedonia; Romania; Serbia
 Southern Hemisphere Pliocene OF 94-0588; OP-1565
 southern Italy earthquake 1980 *see* Irpinia earthquake 1980
 Southern Oklahoma Aulacogen petrology C 1129
 Southern Rocky Mountains fluvial features OP-1743
 Southern Ute Indian Reservation energy sources C 1108 geochemistry OF 94-0295
 Southern Yemen *see* Yemen
 Southwest Alluvial Basins hydrogeology P 1406-A
 Southwest Florida Water Management District ground water W 2409; OF 95-0277; OF 95-0303
 Southwest Nevada volcanic field Miocene OP-1408 stratigraphy OP-1860 volcanism OP-1388
 Southwest Pacific *see* Arafura Sea
 Southwestern Alaska *see* Alaska Peninsula; Aleutian Islands; Katmai; Katmai National Park; Kodiak Island; Novarupta; Valley of Ten Thousand Smokes
 Soviet Far East *see* Russian Far East
 spacecraft OP-676 geophysical surveys OP-166; OP-219
 Spain environmental geology, Rio Tinto Spain OP-662 geochemistry Iberian Mountains C 1129 Lugo Spain C 1129 Madrid Basin OP-118 Pontevedra Spain C 1129 geochronology, Barcelona Spain OP-66 gold ores, Almeria Spain OF 95-0221 magmas Caceres Spain C 1129 Catalanian Coastal Ranges C 1129 Serrania de Ronda C 1129 metal ores OP-799 Betic Cordillera OP-22 petrology, Spanish Pyrenees C 1129
 Spanish Peaks geochemistry OP-1939 structural geology OP-480
 Spanish Pyrenees petrology C 1129
 Spanish Valley metal ores OF 94-0417
 Spartina patens ecology OF 94-0275
 spatial data YR; C 1108; OP-1445; OP-1533; OP-1648 Florida, ground water WRI 94-4167 geophysical surveys OP-911 pollution WRI 94-4176; OP-692
 Spaulding Wilderness Study Area economic geology B 1738-E
 Spavinaw Creek basin hydrogeology OF 94-0706-W
 SPECMAP Quaternary OP-1866; OP-2175 spectra *see* near-infrared spectra
 spectroscopy accelerator mass spectroscopy petrology C 1129 Quaternary OP-121 Auger spectroscopy, geochemistry OP-1011 AVIRIS, Colorado OP-150; OP-493 emission spectroscopy, geochemistry OP-130 inductively coupled plasma methods Alaska OF 95-0236 California WRI 93-4122; OF 95-0034 geochemistry OF 94-0298; OP-1011 Mexico OF 95-0514 Nebraska OF 94-0292 Nevada B 2056; WRI 93-4122 New York B 2106 Utah B 2056 Washington OF 94-0680-A mass spectroscopy geochemistry OF 95-0181; OF 95-0206; OP-1949 hydrogeology OF 94-0708-W pollution OP-2089 Raman spectroscopy, geochemistry OP-130
 speleothems California OP-775; OP-785 Nevada OP-775 New Mexico environmental geology C 1108 mineralogy OP-1275 sedimentation OP-1276
 Spermatophyta *see* angiosperms; gymnosperms
 spessartine New York, geochemistry B 2106
 Sphagnum Alaska OP-184 Manitoba, Quaternary OP-1463 Utah OP-184
 sphalerite *see also* zinc ores. Wisconsin, lead-zinc deposits OP-792
 sphene *see* titanite
 Sphenopsida *see* Equisetales
 spills, oil *see* oil spills
 spinel Europe, weathering OP-2052 Pacific Ocean, geochemistry B 2022 Washington, sedimentary petrology OP-1182
 Spiriferida *see also* Cyrtospirifer. Alaska OP-76
 Spirit Lake hydrogeology OP-2197 maps GQ-1681
 Spirit Mountain Pluton petrology C 1129
 Spitak earthquake 1988 Armenia OP-140; OP-265; OP-957 California OP-957
 splitting, wave *see* wave splitting
 Spokane Basin pollution OP-2064
 Spokane River environmental geology OF 95-0195 guidebook OF 94-0636
 sponges Kazakhstan, energy sources OP-1258
 spontaneous fission-track dating *see* fission-track dating
 sporinite Tertiary OP-1888
 spreading centers *see also* mid-ocean ridge basalts. California geochemistry OP-197; OP-753 oceanography B 2022 tectonophysics OP-82 Cyprus, structural geology OP-2 Djibouti, tectonophysics OP-2152 Mexico geochemistry OP-197 tectonophysics OP-82 Oman, geochemistry OP-753 Pacific Ocean geochemistry OP-1033 heat flow B 2022 ocean floors B 2022 oceanography B 2022; OP-52 tectonophysics OP-247; OP-1702 Saudi Arabia, geochemistry OP-753 tectonophysics OP-1136 spreading-floor hypothesis *see* sea-floor spreading
 Spring City Tennessee hydrogeology OF 95-0278
 Spring Mountains gold ores OP-1946 hydrogeology OP-1747
 Springfield Coal Member sedimentary petrology OF 94-0298; OP-1002
 Springfield Plateau pollution OP-1041
 springs FS 0151-95 Alaska, Quaternary OP-1921 Arizona OF 94-0356; OF 95-0546 Arkansas OF 94-0537; OF 94-0706-W; OP-1159 California FS 0149-95; OP-789; OP-1281 crust OF 94-0228 metal ores OP-804 seismology OF 95-0042; OP-2042 Colorado OF 95-0536 pollution OP-1031 Florida WRI 92-4159; WRI 94-4162; OP-1591 Georgia OP-2161 pedogenesis B 1589-E

- Hawaii OF 94-0586; OP-2076
hot springs
Alaska OP-627
California WRI 94-4180-A; FS 0079-95; OP-663; OP-720; OP-801; OP-802; OP-927; OP-940; OP-988; OP-1564; OP-2142
Colorado OF 95-0569
Mariana Islands OF 91-0320
Mexico FS 0079-95
Micronesia OF 91-0320
Montana OP-302; OP-634; OP-885
Oregon OP-38; OP-1564
Washington FS 0079-95; OP-2197
Wyoming OP-302; OP-634; OP-885; OP-1897; OP-2128
Idaho WRI 94-4247; OF 94-0503
Italy, geochemistry OP-227
Japan, crust OF 94-0228
Missouri
WRI 93-4154; OF 95-0106
petrology OP-1299
Montana, crust OF 94-0228
Nevada WRI 94-4079; WRI 94-4222; WRI 94-4233; OP-1281; OP-1747; OP-1947
New Hampshire WRI 92-4013
New Mexico OF 94-0356
North Dakota OF 95-0304
Oklahoma WRI 93-4230
Pennsylvania OF 95-0113
pollution OP-1041
South Dakota OF 94-0319
submarine springs, Florida OP-1425
Texas FS 94-0048
Utah WRI 93-4219; WRI 95-4025; OF 95-0101; OF 95-0340; OP-1123
Venezuela WRI 93-4219
Washington WRI 94-4082
West Virginia WRI 93-4073
Wyoming WRI 95-4095
- Spurr**
geochemistry OF 95-0055
geologic hazards OF 95-0083; OP-2257
Quaternary B 2139; OF 95-0061-A; OF 95-0061-B
seismicity OP-1978
- Spyder**
earthquakes OP-2330
- Sr** *see* strontium
- Sr-86/Rb-87** *see* Rb-87/Sr-86
- Sr-87/Sr-86**
Alaska
geochemistry OP-23
magmas OP-626
petrology OP-632
sedimentary petrology OP-1361
Antarctica, magmas C 1129
Arabian Peninsula, metal ores OP-1220
Arctic Ocean, stratigraphy OF 94-0588
Argentina
geochemistry C 1129
magmas C 1129
petrology C 1129
Atlantic Coastal Plain, stratigraphy OP-903
Atlantic Ocean
Cenozoic OP-1198
Cretaceous OP-1161
Brazil
geochemistry C 1129
geochronology C 1129
petrology C 1129
British Columbia, sedimentary petrology OP-1361
California
geochemistry C 1129; OP-197; OP-260
lava OP-1149
magmas OP-313; OP-1095
petrology OP-45
Chile, magmas C 1129
China, geochemistry C 1129
Colorado
metal ores OP-98
petrology OP-773
Egypt, magmas C 1129
Florida
diagenesis OP-2263
hydrogeology OP-1613
stratigraphy OF 95-0003; OP-2087; OP-2295
France
geochemistry C 1129
petrology C 1129
geochemistry C 1129; OF 94-0298
Georgia, stratigraphy OP-2087
Germany, geochemistry C 1129
Hawaii
geochemistry OP-861; OP-2321
petrology OP-1025
Hong Kong, geochemistry C 1129
Indian Ocean, Cretaceous OP-1161
Italy, geochemistry C 1129; OP-865
Japan
geochemistry C 1129
petrology C 1129
magmas C 1129
Maine, geochemistry C 1129
Marshall Islands, stratigraphy OP-2254
Mexico, geochemistry OP-197
Micronesia, stratigraphy OP-2254
Montana, geochemistry OP-2133
Nevada
geochemistry B 2056; C 1129; OP-2169
gold ores OP-1946
hydrogeology OP-1747; OP-1947
magmas OP-258
pedogenesis OP-1763
New Jersey
Miocene OP-622
stratigraphy OP-623
New Mexico, geochemistry OP-959
New South Wales Australia, magmas C 1129
New Zealand, geochemistry C 1129
North Carolina, geochemistry C 1129
Oklahoma, petrology C 1129
Oregon, geochemistry OP-29
Pacific Ocean
Cenozoic OP-1198
lava OP-2132
petrology C 1129
pollution OP-174
Queensland Australia, metal ores C 1129
Russian Federation, geochemistry OP-50
Spain
geochemistry C 1129
gold ores OF 95-0221
Tasmania Australia, metal ores C 1129
Texas, magmas C 1129
Utah
economic geology OP-189
geochemistry B 2056
Vanuatu, plate tectonics OP-337
Vermont
geochemistry C 1129
hydrogeology OP-1194; OP-1631
Victoria Australia
geochemistry C 1129
petrology C 1129
Virginia, magmas P 1529
Wisconsin, hydrogeology OP-2241
Yemen, geochemistry C 1129; OP-1079
- Sr-90**
Commonwealth of Independent States, environmental geology OP-2302
Europe, environmental geology OP-2302
Idaho, hydrogeology OF 94-0503
- Sr/Rb** *see* Rb/Sr
- Sr/Sr**
Arizona, magmas OP-887
California, magmas OP-313
New Jersey, stratigraphy OP-2171
Papua New Guinea, tectonophysics OP-1035
- SRL-1**
geophysical surveys OP-2068
- SS-waves**
mantle OP-1020
- SSAM**
elastic waves OP-786
- stable isotopes** *see* Ar-40/Ar-39; B-11/B-10; Be-10/Be-9; C-13; C-13/C-12; D/H; deuterium; He-4/He-3; Hf-177/Hf-176; N-15; N-15/N-14; Nd-144/Nd-143; O-18; O-18/O-16; Os-187/Os-186; Pb-206/Pb-204; Pb-207/Pb-204; Pb-207/Pb-206; Pb-208; Pb-208/Pb-204; Pb-208/Pb-206; Rb-87/Sr-86; S-34/S-32; Sm-147/Nd-144; Sr-87/Sr-86; U-238/Pb-206
- stacking** B 2102; OP-961; OP-1544; OP-1912; OP-1978; OP-2233; OP-2328
- STACOM**
hydrology OF 94-0363
- Stagecoach Valley**
hydrogeology OF 93-0356
- Standing Pond Volcanics**
metal ores OP-870
- STARE**
ground water WRI 94-4076
- STATMAP**
maps OP-1164
statistical analysis *see* kriging; regression analysis; trend-surface analysis
- Staunton Formation**
OF 94-0298
coal OF 94-0298
- staurolite** OF 95-0517
- Ste. Genevieve Limestone** *see* Sainte Genevieve Limestone
- Steamboat Springs**
hydrogeology OF 94-0363
- Steele Creek South Carolina**
hydrology OF 94-0385
- Steele Shale**
stratigraphy B 2113
- Stellwagen Bank**
ocean floors OP-2073
oceanography OF 94-0672; OP-2222
- Stephanian B** 2110; OP-567
- Stepovak Bay Quadrangle**
maps I-2272
Quaternary OP-2292
- steppes**
Quaternary OP-2199
- steranes**
California, petroleum OP-513
Colorado, geochemistry OP-1713
Pacific Ocean, geochemistry B 2022

- Wisconsin, lead-zinc deposits OP-792
 stereochemistry *see* crystal chemistry
Sterling Formation
 coal OP-972
Stevens Klint
 stratigraphy OP-1140
Stewart Valley
 stratigraphy OP-2147
 stibium *see* antimony
Stibnite Idaho
 environmental geology OF 94-0443
Stickley Run Member
 stratigraphy B 2135
Stikinia Terrane
 metal ores OP-1169
 petrology OP-409
 tectonics OP-360
stilbite
 faults OF 94-0228
Stillwater Complex *see also* J-M Reef.
 geochemistry OP-554
Stillwater Range
 energy sources OP-1083
 structural geology OP-454
Stillwater-Kulthlieth System
 energy sources OP-576
stocks
 Bolivia, metal ores OP-188
 Canada C 1129
 Chile C 1129
 Colorado, metal ores B 2109; OP-1626
 Egypt
 C 1129
 geophysical surveys OP-2068
 Germany, geochemistry C 1129
 Montana
 geochemistry OF 95-0098
 metal ores OF 94-0670; OP-2224
 Nevada
 C 1129
 geochemistry B 2056
 New Mexico B 2063
 Oregon OP-1590
 Spain, metal ores OP-799
 United States, metal ores OP-799
 Utah, geochemistry B 2056
Stockton Formation
 energy sources OP-2058; OP-2059
 sedimentary petrology OP-1950
Stockton Quadrangle
 geophysical surveys OF 94-0613
stockwork deposits
 Alaska, metal ores OP-1195
 Basin and Range Province, metal ores OP-1874
 Colorado, molybdenum ores OP-526
 Great Basin, metal ores OP-1874
 Idaho
 metal ores P 1525
 molybdenum ores P 1525
 Mexico OF 94-0685
 Nevada, metal ores B 2090
 Stone Age *see* Paleolithic
 stone, building *see* building stone
 stone, crushed *see* crushed stone
Stoneley waves
 petroleum OP-917
Stones River Group OP-1502
Stoneville Formation
 Triassic OP-925
Stoney Fork Member
 stratigraphy OP-768
Stony Creek Fault
 metal ores OP-804; OP-940
Stony Fork basin
 hydrology WRI 94-4056
 stony meteorites *see* achondrites; chondrites
Storm King Mountain
 environmental geology OF 95-0508
storm water
 Arizona
 hydrology WRI 94-4240
 pollution WRI 95-4074
 Iowa, hydrology WRI 94-4130
 Missouri, hydrology OF 93-0495
Straight Cliffs Formation
 B 2115-B
 sedimentation B 2115-A
strain seismographs
 California, seismology OP-1596
Straits of Florida
 environmental geology OP-1427
strategic minerals B 1989-G; C 1124; OP-905
 stratified volcano *see* stratovolcanoes
stratigraphic boundary *see also* K-T boundary.
 Atlantic Ocean, stratigraphy OP-1334
 Bahamas, stratigraphy OP-540
 California
 Miocene B 1995-J,K
 Quaternary OP-1575
 stratigraphy OP-1341
 Colorado, stratigraphy OP-507
 Commonwealth of Independent States, stratigraphy OP-1212
 Egypt, stratigraphy OP-1528
 Maryland, stratigraphy OP-736
 Montana
 Cretaceous OP-743
 stratigraphy OP-1131; OP-1974
 New Jersey, stratigraphy P 1554
 New Mexico, Quaternary OP-1575
 Pacific Ocean, stratigraphy OP-1162
 stratigraphy OP-809; OP-2099
 Tennessee, stratigraphy OP-370
 Utah
 stratigraphy OP-507
 tectonics OP-1556
 Vermont, Silurian OP-1068
 Virginia, stratigraphy OP-736
 Western Interior, geochronology OP-506
 Wyoming, sedimentary petrology OP-456
stratigraphic maps
 Alaska, structural geology OF 94-0714
 British Columbia, structural geology OF 94-0714
 Japan, structural geology OF 94-0714
 Russian Federation, structural geology OF 94-0714
stratigraphic traps
 Alaska, energy sources OP-65; OP-1270
 Belarus, structural geology OP-948
 Colorado, energy sources C 1108
 New Mexico, energy sources C 1108
 Russian Federation, natural gas OP-2219
 South America, energy sources OF 94-0559
 Ukraine, structural geology OP-948
 Utah, energy sources OP-1557
 stratigraphy *see* Archean; Cambrian; Carboniferous; Cenozoic; Cretaceous; Devonian; Eocene; Holocene; Jurassic; Mesozoic; Miocene; Mississippian; Neogene; Oligocene; Ordovi-
 cian; Paleocene; Paleogene; paleomagnetism; Paleozoic; palynomorphs; Pennsylvanian; Permian; Phanerozoic; Pleistocene; Pliocene; Precambrian; problematic fossils; Proterozoic; Quaternary; Silurian; Tertiary; Triassic; worms
stratovolcanoes
 Alaska
 geologic hazards OP-2257
 Quaternary OP-2258
 Andes, Quaternary OP-1511
 California
 geochemistry OP-790
 geophysical surveys OP-1564
 Indonesia, Quaternary OP-1767
 Japan, geologic hazards OP-2007
 Nicaragua, geochemistry OP-1678
 Oregon, geophysical surveys OP-1564
 Philippine Islands, Quaternary OP-1886
 Washington
 Holocene OP-1513
 petrology OP-1512
 Quaternary OP-1767
Strawberry Lake Quadrangle
 maps GQ-1764
stream capture
 Nevada, fluvial features OP-2289
stream flow *see* streamflow
stream gradient
 Tennessee, fluvial features OP-208
stream order
 Missouri, environmental geology OP-447
stream robbery *see* stream capture
stream sediments
 Alabama, metal ores OP-1260
 Alaska
 geochemistry B 2107
 gold ores B 2107
 metal ores B 2084
 mineral resources OF 95-0509; OF 95-0623; OF 95-0625; OF 95-0626; OF 95-0627; MF-2058-D; I-2225-B; I-2225-C; I-2225-D
 Arizona, metal ores OF 94-0670
 California, mineral resources OF 93-0698; OF 95-0013
 Colombia, geochemistry OF 94-0623-A; OF 94-0623-B; OF 94-0623-C
 geochemistry OF 94-0351
 Idaho
 geochemistry P 1525
 metal ores B 2064-A-R
 mineral resources B 2064-A-R
 metal ores OP-870
 Nevada, metal ores OF 94-0270-A; OF 94-0270-B
 New Mexico
 metal ores OF 94-0691
 uranium ores B 2063
 Oregon, economic geology B 1738-E; B 1741-H
 Utah, metal ores OF 94-0270-A; OF 94-0270-B
 Washington, geochemistry OF 94-0680-A; OF 94-0680-B
stream transport *see also* bedload; fluvial sedimentation.
 Arizona, hydrogeology OP-335; OP-521
 Colorado
 hydrogeology OP-2196
 hydrology FS 0153-95
 pollution OP-487; OP-876; OP-929; OP-979; OP-1081; OP-1922
 hydrogeology OP-423

- hydrology OP-706
 Idaho, pollution OP-2129
 Illinois, pollution OP-2185
 Kentucky, hydrology WRI 94-4065; WRI 94-4134
 Midwest
 environmental geology OP-2303
 pollution OP-1807
 Mississippi, engineering geology OP-1009
 Mississippi Valley, pollution OF 94-0376
 New Mexico, hydrogeology OP-335
 North Carolina, environmental geology OP-1427
 North Dakota, hydrology WRI 95-4087
 pollution OP-693; OP-1508
 Tennessee
 hydrology OP-2162
 pollution OP-2044
 Washington, hydrology OP-859
- streamflow**
 Alabama, hydrology WRI 93-4186
 Alaska, hydrology C 1123; OF 95-0338
 Antarctica, hydrology OF 94-0545
 Appalachians, hydrology OP-1632
 Arizona
 ecology OP-2130
 fluvial features OP-1607
 geomorphology OF 94-0594
 hydrogeology WRI 95-4010; OF 94-0356
 pollution WRI 95-4074
 Arkansas
 hydrogeology OF 94-0537; OF 94-0706-W
 hydrology OF 94-0364
 Atlantic Coastal Plain, engineering geology WRI 94-4164
 California
 hydrogeology OP-789; OP-2043
 hydrology FS 0115-95
 seismology OP-2042
 Colorado
 hydrogeology WRI 94-4111
 hydrology WRI 94-4054; WRI 94-4194; OP-1345; OP-1927
 Paleocene OP-1531
 Florida, hydrology WRI 94-4217
 geologic hazards OP-926
 Great Plains, hydrology C 1120-H
 ground water OP-1014
 hydrogeology OF 94-0493; OP-798; OP-970
 hydrology TWI 03-A21; WRI 93-4160; OF 94-0363; OP-18; OP-829; OP-1063
 Idaho, hydrogeology P 1408-C; OP-2221
 Illinois, hydrology WRI 95-4023
 Indiana, hydrology WRI 91-4051
 Iowa, hydrogeology OF 94-0711-W
 Kansas
 geomorphology W 2352-B
 hydrogeology FS 0085-95
 hydrology W 2352-B
 Kentucky, hydrology WRI 94-4065
 Massachusetts
 hydrogeology WRI 94-4256
 hydrology W 2418; WRI 94-4100; WRI 94-4155; FS 0139-95
 Minnesota
 hydrogeology OF 94-0478
 hydrology WRI 93-4200
 Mississippi Valley, hydrology C 1120-H
 Missouri
 geologic hazards OP-1764
 hydrogeology OP-1311
 Montana
 environmental geology C 1108
 hydrology WRI 95-4022; OF 94-0375
 Nebraska
 geomorphology W 2352-B
 hydrology W 2352-B
 Nevada
 hydrogeology WRI 94-4222; WRI 94-4233
 hydrology WRI 94-4210; FS 0115-95
 New Hampshire, hydrogeology WRI 92-4154
 New Jersey
 hydrogeology OP-750
 hydrology OF 94-0065
 New Mexico
 hydrogeology OF 94-0356; OF 94-0377
 hydrology WRI 94-4071; WRI 94-4143
 New York
 engineering geology OP-113
 hydrology OF 93-0161
 waterways OP-172
 North Carolina, hydrology WRI 94-4067; OF 94-0454; OF 94-0511
 North Dakota
 hydrogeology OP-2269
 hydrology WRI 93-4200; WRI 95-4087; OF 95-0123
 Ohio, hydrogeology WRI 95-4037; OF 95-0357
 Oklahoma, hydrology OF 94-0364
 Oregon
 hydrogeology P 1408-C
 hydrology WRI 93-4181; OF 95-0373
 Pennsylvania, hydrology WRI 94-4056
 Rocky Mountains
 hydrogeology OP-1062
 hydrology OP-1632
 South Carolina, hydrology OF 94-0385
 South Dakota, hydrogeology WRI 93-4195
 Tennessee
 fluvial features OP-208
 hydrology OF 94-0068
 Texas, hydrology WRI 95-4019; FS 94-0073
 Utah, geomorphology OF 95-0515
 Vermont, hydrogeology OP-1194
 Virginia, hydrology WRI 94-4042; WRI 94-4067; WRI 94-4225
 Washington
 geologic hazards P 1547
 hydrogeology OP-2116
 hydrology OP-859
 Wisconsin
 hydrology OF 95-0163
 pollution OF 95-0163
 Wyoming
 hydrogeology WRI 95-4095
 Paleocene OP-1531
- streams** *see also* bedload; braided streams; channelization; channels; meanders; stream order.
 Arizona, hydrogeology OP-335; OP-521
 California, hydrogeology OP-1281
 Colorado
 fluvial features OP-2259
 hydrogeology OP-2196
 pollution OP-1823
 Delaware, pollution OP-1077
 environmental geology OF 94-0378
 Florida, hydrology OF 94-0709-W
 geomorphology OP-638
 Great Plains, hydrology OF 95-0162
 ground water OP-1779
 Iowa, hydrology OP-465
 Kansas, pollution W 2419
 Maryland, pollution OP-1077
 Midwest, pollution OP-1652
 Minnesota, hydrology OF 93-0046; OF 93-0047
 Nebraska, pollution W 2419
 Nevada
 hydrogeology OP-1281
 hydrology OF 94-0317
 New Jersey, hydrology WRI 91-4141
 New Mexico, hydrogeology OP-335
 South Dakota, hydrology OF 93-0046
 Wisconsin, hydrogeology OP-2327
 stretch modulus *see* Young's modulus
- striations**
 Wyoming OP-936
- strike-slip faults** *see also* oblique-slip faults; transcurrent faults; transform faults.
 OP-1206; OP-2083; OP-2187
- Alaska
 B 2107
 continental shelf OP-589
 crust OP-2075
 gold ores OP-2184
 magmas OP-626
 Mohorovicic discontinuity OP-1398
 natural gas OP-2074
 paleomagnetism OP-727
 seismology OP-697
- Arizona
 OP-15
 tectonophysics OP-352
- California
 OF 94-0228; OP-107; OP-872; OP-1599; OP-1773; OP-1774; OP-2070; OP-2332
 geologic hazards OF 93-0684
 geophysical surveys OP-1525
 metal ores OP-801; OP-940
 microearthquakes OP-2153
 Quaternary B 1982; OF 94-0568
 rock mechanics OF 94-0228
 sedimentary petrology OP-159
 seismicity OP-2120; OP-2144
 seismology OF 94-0568; OF 95-0038; OP-203; OP-893; OP-914; OP-1130; OP-1207; OP-1271; OP-1374; OP-1473; OP-1601; OP-2084
 tectonophysics OP-82; OP-620; OP-2195
- Canada, petrology C 1129
 Canadian Shield, geochemistry C 1129
 Chile, magmas C 1129
 China, Quaternary OF 94-0568
 Colorado OP-325
 Dominican Republic
 plate tectonics OP-1751; OP-1983
 Quaternary OF 94-0568
 earthquakes OF 94-0228
 Hawaii, crust OP-1709
 Idaho OP-2124
 Japan
 Quaternary OF 94-0568
 seismology OP-893; OP-1601
- Mexico, tectonophysics OP-82
 Mississippi Valley
 economic geology B 2094-C
 seismology P 1538-N
- Nevada
 OP-15; OP-619; OP-1323; OP-1904
 metal ores B 2081
 volcanism OP-1388
- New Zealand, Quaternary OF 94-0568
- Oregon
 geophysical surveys OP-72
 Quaternary OP-1945

- seismology OP-203
 Pacific Ocean, tectonophysics OP-1246
 Pakistan OF 94-0670
 Puerto Rico, plate tectonics OP-1304
 Russian Federation
 continental shelf OP-589
 earthquakes OP-532
 seismic sources OP-1788
 tectonophysics OP-985
 Turkey, Quaternary OF 94-0568
 Utah OP-619
 Washington
 OP-1592; OP-1979; OP-1981
 geophysical surveys OP-72
- strip mining**
 Oklahoma, ecology OF 94-0324
- stromatoporoids**
 Kazakhstan, energy sources OP-1258
 stratigraphy OP-1558
- Stromboli**
 seismology OP-1239
- strombolian-type eruptions**
 Alaska, Quaternary OP-1921
 Nicaragua, geochemistry OP-1678
- strong motion**
 California
 crust OF 94-0552
 earthquakes YR; EV; OF 94-0706; OP-1530
 engineering geology OP-389
 geologic hazards OF 95-0062; OF 95-0480
 seismicity OP-301
 seismology OP-91; OP-1385; OP-2042
 earthquakes OF 95-0555; OP-89; OP-451; OP-2085
 East Pacific Ocean Islands, engineering geology C 1121
 Illinois, seismology OP-1451
 Indiana, seismology OP-1451
 Japan, engineering geology OP-81
 Oregon, earthquakes OP-571
 Polynesia, engineering geology C 1121
 seismology OP-358
 Washington, geologic hazards OF 94-0589
- strontium**
 Alberta, geochemistry C 1129
 Argentina, geochemistry C 1129
 California, petrology C 1129
 geochemistry OP-2001; OP-2015
 Germany, geochemistry OP-499
 Mexico, petrology C 1129
 Nevada, Miocene OP-1408
 Pacific Ocean, stratigraphy OP-1197
 Rb-87/Sr-86, Russian Federation OP-843
 Sr-87/Sr-86
 Alaska OP-23; OP-626; OP-632; OP-1361
 Antarctica C 1129
 Arabian Peninsula OP-1220
 Arctic Ocean OF 94-0588
 Argentina C 1129
 Atlantic Coastal Plain OP-903
 Atlantic Ocean OP-1161; OP-1198
 Brazil C 1129
 British Columbia OP-1361
 California C 1129; OP-45; OP-197; OP-260;
 OP-313; OP-1095; OP-1149
 Chile C 1129
 China C 1129
 Colorado OP-98; OP-773
 Egypt C 1129
 Florida OF 95-0003; OP-1613; OP-2087;
 OP-2263; OP-2295
 France C 1129
 geochemistry C 1129; OF 94-0298
 Georgia OP-2087
 Germany C 1129
 Hawaii OP-861; OP-1025; OP-2321
 Hong Kong C 1129
 Indian Ocean OP-1161
 Italy C 1129; OP-865
 Japan C 1129
 magmas C 1129
 Maine C 1129
 Marshall Islands OP-2254
 Mexico OP-197
 Micronesia OP-2254
 Montana OP-2133
 Nevada B 2056; C 1129; OP-258; OP-1747;
 OP-1763; OP-1946; OP-1947; OP-2169
 New Jersey OP-622; OP-623
 New Mexico OP-959
 New South Wales Australia C 1129
 New Zealand C 1129
 North Carolina C 1129
 Oklahoma C 1129
 Oregon OP-29
 Pacific Ocean OP-1198; OP-2132
 petrology C 1129
 pollution OP-174
 Queensland Australia C 1129
 Russian Federation OP-50
 Spain C 1129; OF 95-0221
 Tasmania Australia C 1129
 Texas C 1129
 Utah B 2056; OP-189
 Vanuatu OP-337
 Vermont C 1129; OP-1194; OP-1631
 Victoria Australia C 1129
 Virginia P 1529
 Wisconsin OP-2241
 Yemen C 1129; OP-1079
- Sr-90
 Commonwealth of Independent States OP-2302
 Europe OP-2302
 Idaho OF 94-0503
 Virginia, petrology C 1129
- strontium ores**
 Italy OP-199
- structural analysis** *see also* axial-plane structures; boudinage; brittle deformation; cleavage; deformation; faults; folds; foliation; fractures; joints; lineation; petrofabrics; preferred orientation; schistosity; shear zones.
 Germany, magmas C 1129
 Italy OP-755
 Spain, magmas C 1129
- structural basins** *see* basins
- structural geology** *see* deformation; faults; folds; foliation; fractures; geosynclines; isostasy; lineation; neotectonics; orogeny; salt tectonics; tectonics
- structural maps**
 Montana, stratigraphy OP-596
 Nevada, engineering geology OF 93-0269
- structural traps**
 Alaska, energy sources OP-65; OP-574
 Atlantic Ocean, natural gas OP-1305
 Belarus, structural geology OP-948
 California, energy sources OP-2146
 Montana, structural geology OP-480
 natural gas OP-1675
 New Jersey, structural geology OP-1959
 New Mexico, energy sources B 2063
 Russian Federation, natural gas OP-2219
- Ukraine, structural geology OP-948
 Wyoming, energy sources OP-1621
- structure contour maps**
 energy sources B 2000-H
 Florida, ground water WRI 92-4174
 Nebraska, structural geology OF 95-0330
- structure maps** *see* structural maps
- Stuart Crater** OP-1846
- study and teaching** *see* education
- Styliolina**
 paleontology OP-543
- stylolites**
 Illinois, petroleum OF 94-0298
 Mississippi Valley, seismology P 1538-N
- sub-bituminous coal** *see* subbituminous coal
- subantarctic regions**
 Atlantic Ocean, Pliocene OF 94-0588
- subarctic regions**
 Antarctica, stratigraphy OP-2305
 Russian Federation, Pliocene OF 94-0588
- subbituminous coal**
 Washington OP-1042; OP-1182
- subduction** *see also* Benioff zone; obduction; subduction zones; trenches.
 Alaska
 gold ores OP-349
 magmas OP-626
 metamorphism OP-784
 paleomagnetism OP-727
 petrology OP-100; OP-632
 tectonophysics OP-953; OP-2300
 California
 geochemistry OP-260
 lava OP-1149
 plate tectonics OP-941; OP-1576
 stratigraphy B 1995-J,K
 tectonophysics OP-1778
 Chile, tectonophysics OP-1762
 energy sources OP-1546
 geophysics OP-2051
 Japan
 plate tectonics OP-271
 Quaternary OF 94-0568
 Mexico, petrology OP-827
 Micronesia, manganese ores OP-1409
 New Zealand
 magmas C 1129
 Quaternary OF 94-0568
 Oregon, folds OP-1128
 Pacific Ocean
 plate tectonics OP-2234
 tectonophysics OP-56; OP-1702
 plate tectonics OP-1256
 Puerto Rico
 earthquakes OP-2238
 plate tectonics OP-1304
 tectonophysics OP-1136
 Utah, magmas C 1129
 Vanuatu, plate tectonics OP-336
- subduction zones** *see also* Benioff zone; fore-arc basins; trenches.
 Alaska
 fractures OF 94-0228
 natural gas OP-2074
 petrology OP-1822
 plate tectonics OP-1894
 Quaternary OF 94-0568
 Antarctica, magmas C 1129
 Bolivia
 plate tectonics OP-180; OP-252
 seismicity OP-2294

- Brazil, inclusions C 1129
 British Columbia
 geologic hazards OF 94-0568
 Quaternary OF 94-0568
 California
 plate tectonics OF 94-0568
 seismology OP-1601; OP-1872
 tectonophysics OP-1448
 Ecuador, engineering geology OF 94-0568
 Europe, geochemistry OF 94-0228
 Far East, tectonophysics OP-2328
 geochemistry OP-1026
 Hawaii, tectonophysics OP-442
 India, tectonophysics OP-442
 Japan
 earthquakes OP-1800
 seismology OP-1601
 Mexico, tectonophysics OP-1448
 New Mexico, tectonophysics OP-442
 Oceania, mantle OP-1109
 Oregon
 Quaternary OF 94-0568; OP-1945
 tectonophysics OP-660
 Pacific Coast, Quaternary OF 94-0568; OP-661
 Pacific Ocean
 natural gas OP-1371
 plate tectonics OP-965
 Philippine Islands, geologic hazards OP-1048
 Polynesia, tectonophysics OP-2328
 Quebec, Quaternary OF 94-0568
 seismology OP-1075
 tectonophysics OP-985
 United States, geologic hazards OF 94-0568
 Washington
 geochemistry OP-315
 geologic hazards OF 94-0589
 structural geology OP-1611
- sublimates**
 Indonesia, geochemistry OP-907
- submarine canyons** *see also* Monterey Canyon.
 Atlantic Ocean, oceanography B 2079
 California, ocean floors OP-1433; OP-2150
 New Jersey, oceanography OP-1188
 Oregon, ocean floors OP-1772
 Pacific Ocean
 oceanography B 2079
 sedimentary petrology OP-1218
 tectonophysics OP-1919
- submarine fans**
 Maine, Quaternary OP-990
 Massachusetts, Quaternary OP-990
 Tyrrhenian Sea, Quaternary OP-942
- submarine features** *see* bottom features
- submarine geology** *see* marine geology
- submarine hills** *see* abyssal hills
- submarine installations**
 Hawaii OF 94-0638
- submarine springs**
 Florida, continental shelf OP-1425
- submarine valleys** *see* submarine canyons
- submarine volcanoes**
 Atlantic Ocean, oceanography B 2079
 California, geochronology OF 94-0587
 Hawaii
 geochemistry OP-2321
 ocean floors OP-1230
 Mexico, geochronology OF 94-0587
 Pacific Ocean
 lava OP-1351
 ocean floors B 2022; OP-1119
 oceanography B 2022; B 2079; OF 94-0711
- sea water OP-842
- submarine weathering** *see* halmyrolysis
- submersible pressure sensors**
 California, ground water OF 94-0531
 ground water OF 94-0531
 hydrogeology OF 94-0531
 Kansas, hydrology OF 94-0531
- subsurface mining** *see* underground mining
- Sudbury Aquifer**
 hydrogeology WRI 94-4256
- SUDS**
 seismology OP-2252
- Sugarloaf Quadrangle**
 maps OF 94-0658
- sugillite**
 South Africa, ring silicates OP-912
- Suisun Bay**
 Quaternary OP-1308
- sulfarsenates** *see* enargite
- sulfates** *see also* alunite; anhydrite; barite; celestine; gypsum; polyhalite; selenite.
 OP-470; OP-880
 California, pollution WRI 94-4040
 environmental geology OP-131
 Florida, ground water OP-1614
 Great Plains, ground water P 1402-F
 Japan Sea, Quaternary OP-1954
 metal ores OP-870
 Pacific Ocean, geochemistry OF 94-0015;
 OF 95-0505; OP-1032
 Tennessee, environmental geology OF 95-0477
- sulfides** *see also* acanthite; chalcopyrite; cinnabar; galena; marcasite; massive sulfide deposits; molybdenite; pyrite; pyrrhotite; sphalerite; wurtzite.
 Alaska, metal ores OP-424
 Arabian Peninsula, metal ores OP-1220
 California, geochemistry OP-512
 Colorado
 metal ores OP-1793
 pollution OP-730; OP-732
 geophysics B 2131
 Idaho, pollution OP-1156
 metal ores OP-1208
 Micronesia, geochemistry OP-520
 Minnesota, metal ores OP-148; OP-862
 Mississippi Valley, metal ores OP-888
 ocean floors B 2022
 Pacific Ocean
 OP-1829
 geochemistry OF 94-0015; OF 95-0505;
 OP-1032
 ocean floors OP-2137
 oceanography OP-503
 polymetallic ores OP-1495
- sulfosalts** *see* sulfarsenates
- sulfur**
 Alaska
 environmental geology C 1108
 hydrology B 2139
 British Columbia, petrology OP-1509
 Colorado
 environmental geology OP-334
 geochemistry OP-535; OP-1700
 environmental geology C 1108
 geochemistry OP-1278
 Hawaii
 hydrogeology WRI 95-4001
 Quaternary OP-639
 Illinois, geochemistry OF 94-0555
 Kentucky
 energy sources OF 94-0298
- sedimentary petrology OF 94-0298
 metal ores OP-1013
- Nevada**
 energy sources OP-1083
 geochemistry OP-535
- New Mexico**
 mineralogy OP-1275
 sedimentation OP-1276
- Pakistan, sedimentary petrology** OP-1386
- Rocky Mountains, pollution** OF 94-0670
 S-34/S-32
 Alaska B 2107; OP-624
 Arabian Peninsula OP-1220
 China OP-1003; OP-1871
 Colorado OP-945; OP-1793
 Florida OP-473
 Idaho B 2064-A-R; OF 94-0503
 metal ores OP-870
 Nevada OP-1245
 Pacific Ocean B 2022; OP-1032; OP-1033;
 OP-2098
 Pennsylvania OP-1951
 Rocky Mountains OP-2213
 South Carolina OP-2090
 Spain OF 95-0221; OP-22
 Utah B 2110
 Western Interior OP-2063
 Wyoming OP-269
- sedimentary petrology OP-1885
 Washington, sedimentary petrology OP-1042
 Wyoming, geochemistry OP-1897
- sulfur deposits**
 California, geochronology OP-625
 New Mexico B 2063
- sulfur dioxide**
 Alaska
 geochemistry B 2139; OF 95-0055
 Quaternary OP-1406
 energy sources OP-1547
 New York, geochemistry OP-832
 Quaternary OP-2174
 Washington, geochemistry OP-315; OP-1407
- Sullivan Draw Arizona**
 maps I-2396
- Sullivan Mine**
 metal ores OP-2126
- sulphates** *see* sulfates
- sulphides** *see* sulfides
- sulphur** *see* sulfur
- Sulphur Bank Mine**
 economic geology OP-802
 metal ores OP-801
- Sulphur Creek mining district**
 geochemistry OP-927
 metal ores OP-663; OP-720
- Sulphur Mound Mine**
 economic geology OP-803
- Sumail Ophiolite** *see* Semail Ophiolite
- Sumatra**
 geochronology OP-443
- Summer Camp Deposit**
 geochemistry OF 94-0670
- Summer Lake Oregon**
 Quaternary OP-397; OP-659; OP-1505
- Summitville mining district**
 ecology OP-150
 environmental geology B 2220; OF 95-0023;
 OF 95-0043; OP-334
 geochemistry OF 95-0250
 geophysical surveys OP-67
 hydrology OF 95-0071

- metal ores OP-333
 pollution OP-34; OP-92; OP-253; OP-329; OP-493; OP-691; OP-730; OP-732; OP-876; OP-929; OP-979; OP-1081; OP-1082; OP-1337; OP-1535; OP-1823; OP-1922; OP-1957
- Sun Valley Group**
 polymetallic ores B 2064-A-R
 sundry minerals *see* mineral inventory
- Sunflower Mountain Tuff**
 geochemistry B 2056
 stratigraphy B 2056
- Sunnyvale California**
 environmental geology OF 95-0299
- sunspots**
 Quaternary OP-717
- Supai Formation** OP-21
- Superfund**
 California, pollution OP-2047
 Colorado, environmental geology OP-334
 Idaho, pollution OP-1146; OP-1156
 Illinois, pollution WRI 94-4034
 pollution OP-97
 Washington, pollution OP-1146
- supergene processes**
 Colorado
 environmental geology OP-334
 metal ores OP-333; OP-733
 Idaho, uranium ores P 1525
 metal ores B 2110
 Spain, metal ores OP-22
- superimposed metamorphism** *see* polymetamorphism
- Superior Deposit**
 copper ores OP-1381
- Superior Province** *see also* Abitibi Belt; Quetico Belt; Wawa Belt.
 geochemistry B 1904-U
 plate tectonics OP-2121
 structural geology B 1904-T
- Superstition Mountains**
 Quaternary OF 94-0568
- Sur fault zone**
 Quaternary OF 94-0568
- surface mining** *see also* open-pit mining; strip mining.
 Colorado, hydrology WRI 92-4187
 environmental geology C 1108
 Pennsylvania, hydrology WRI 94-4056
 Poland, geochemistry C 1108
 United States, geochemistry C 1108
- surface waves** *see also* coda waves; Lg-waves; Love waves; Rayleigh waves; Stoneley waves.
 California OP-1266; OP-1421
 Hawaii OP-323
 Italy OP-1239
- surfaces, erosion** *see* erosion surfaces
- surficial aquifers**
 Colorado, ground water WRI 94-4037
 Connecticut, ground water WRI 94-4255
 Florida
 geomorphology OP-1203
 ground water OF 94-0457
 Massachusetts, environmental geology OF 95-0290
 Pennsylvania, hydrogeology OF 92-0635
- surficial geology maps**
 Alaska, geomorphology OF 95-0128
 Colorado, geomorphology OF 95-0266
 Idaho, geomorphology I-2472
 New York
 ground water WRI 93-4029
 Quaternary WRI 90-4168
 Pennsylvania, geomorphology OF 93-0723
 Texas, hydrogeology WRI 94-4036
 Washington
 geomorphology MF-2297; I-2472
 ground water WRI 94-4236
 hydrogeology WRI 92-4109; WRI 94-4082
- Surghar coal field** B 2096
- Surprise Lake Alaska**
 Quaternary B 2107; OP-1790
- Surprise Resource Area**
 economic geology OF 94-0712
- Surtsey**
 Quaternary OP-640
- Suruga Bay**
 plate tectonics OF 94-0568
- survey organizations**
 Illinois State Geological Survey, Illinois OF 94-0298
 U.S. Geological Survey
 YR; CAT; OF 94-0501; OF 94-0670; OP-237; OP-266; OP-339; OP-570; OP-1484; OP-1533; OP-2193; OP-2194; OP-2214; OP-2245
 Alaska YR; B 2107; C 1108; C 1123; OF 95-0247; OF 95-0257-A; OF 95-0257-B; OF 95-0257-C; OF 95-0537
 Antarctic Ocean OF 94-0293
 Appalachians C 1108
 Basin and Range Province OF 95-0078
 California OF 95-0150; OP-1809; OP-2189
 coal C 1108
 Colorado OF 94-0383; OF 95-0023; OP-1214
 Connecticut OP-2165
 East Pacific Ocean Islands C 1121
 energy sources C 1108; OF 95-0075-A; OP-1044
 engineering geology OP-519
 environmental geology OP-518; OP-955
 Florida OF 95-0185; FS 0134-95
 geochemistry B 2117; OF 94-0351; OF 94-0362; OF 94-0369; OF 95-0041; OF 95-0117
 geologic hazards OP-2078
 geophysical surveys OF 95-0077; OP-416; OP-505; OP-1695
 Georgia OF 94-0307
 Great Basin OF 95-0078
 ground water OF 94-0465; OF 94-0468; OF 95-0288
 hydrogeology OF 94-0493; OF 94-0708-W
 hydrology WRI 93-4208; WRI 94-4002; OF 94-0353; OF 94-0363; OF 94-0382; OF 94-0539; OF 94-0710-W
 Illinois WRI 94-4141; OF 93-0141
 Indiana OF 94-0061
 Iowa OP-16
 Kansas OF 95-0120; FS 0085-95
 maps OF 95-0201
 Massachusetts OF 94-0649
 mineral resources B 2081; OF 95-0082; OP-846
 Minnesota OF 94-0338
 Mississippi FS 94-0075
 Mississippi Valley OF 93-0628
 Missouri OF 94-0538
 Montana OF 95-0194; OP-1265
 natural gas OF 95-0075-C; OF 95-0075-F
 Nevada OF 95-0126; OP-2209
 New Mexico OF 95-0314
- New York OP-113
 North Dakota OF 95-0105; OP-1113
 ocean floors OP-1962
 oceanography OF 94-0669-A; OF 94-0669-B
 Ohio OF 95-0224
 Oregon OF 95-0652
 Papua New Guinea OP-1720
 petroleum OF 95-0075-B; OF 95-0075-E; OF 95-0246
 pollution OP-2018
 Polynesia C 1121
 Puerto Rico OF 93-0629
 Rocky Mountains OP-1660
 Russian Federation OF 94-0445
 sedimentary petrology OF 95-0065-A; OF 95-0065-B
 sedimentary rocks OF 94-0582
 seismicity OP-1560
 Tennessee OF 94-0354
 Utah OF 94-0309; OF 95-0138
 Virginia FS 0046-95
 Washington OF 95-0652
- Surveyor Program** B 2103
 surveys *see* geophysical surveys
- Susie Creek basin**
 hydrogeology WRI 94-4222
- Susitna River basin**
 uranium ores B 2098
- suspect terranes** *see* terranes
- suspension current** *see* turbidity currents
- Sussex Wyoming**
 stratigraphy OP-667
- Sutherland Scotland**
 geochemistry C 1129
- suture zones**
 Alaska, plate tectonics OP-1894
 Atlantic Ocean, plate tectonics OP-1312
 Australia, tectonophysics OP-2334
 California
 petrology C 1129
 tectonophysics OP-2334
 Canada, tectonophysics OP-2334
 Caribbean region, earthquakes OP-1313
 Greater Antilles, earthquakes OP-1313
 Idaho, faults OP-1650
 India, tectonophysics OP-2334
 Maryland, magmas OP-1126
 Mexico, petrology C 1129
 Oklahoma, tectonophysics OP-2334
 Saudi Arabia, petrology C 1129
 Virginia, magmas OP-1126
 West Indies, plate tectonics OP-1312
 Wisconsin, plate tectonics OP-2121
- Suwannee Limestone**
 OF 95-0003; OP-2087; OP-2295
 diagenesis OP-2263
 ground water WRI 94-4010
- Suwannee River basin**
 hydrology OF 94-0709-W
 sedimentary petrology OP-1861
- SV-waves**
 California OP-1603
 Iceland OP-1603
 Indonesia, Quaternary OP-392
- Svecofennian**
 Baltic region C 1129
 Finland C 1129
 Scandinavia C 1129
- swamps**
 Egypt, ichnofossils OP-1012

Pakistan, sedimentary petrology OP-1386

SWAT
hydrology OF 95-0163

Swat Pakistan
gems OP-1303

Swauger Formation
Proterozoic P 1525

Sweden *see also* Fennoscandia.
environmental geology YR
iron ores, Kiruna Sweden OP-87
magmas, Goteborg Sweden C 1129
stratigraphy, Vastergotland OP-386
waste disposal OP-2235

Sweetgrass Arch
non-metal deposits OP-1492

Switzerland
magmas, Aar Massif C 1129

SWRRB
hydrology OF 95-0163

Sydney coal field
geochemistry OP-1867
sedimentary petrology OP-565

syenites *see also* monzonites; quartz syenite;
shonkinite.
California OP-321
Maine, metal ores OP-555
New Mexico, geochemistry OP-959
Poland OP-1827
Virginia
geochemistry C 1129
Proterozoic B 2060
Wyoming, stratigraphy OP-364

symmicton *see* diamicton

symposia
Alaska
OF 95-0247
faults OF 94-0228
petrology C 1129
Pliocene OF 94-0588
Quaternary OF 94-0568
stratigraphy B 2110
California
earthquakes OP-892
geologic hazards OF 94-0259; OF 95-0480
metal ores OP-800
earthquakes OF 94-0571
economic geology OF 94-0298
energy sources C 1108
environmental geology OF 94-0490; OP-511;
OP-955
geophysical surveys OP-133
hydrogeology OF 94-0531
hydrology OF 94-0363; OP-14
Italy, earthquakes OP-892
Louisiana, environmental geology OF 94-0275
Michigan, hydrogeology OF 95-0163
Midwest, industrial minerals OP-855
Montana, energy sources OP-281
New England, earthquakes OF 94-0643
New York
hydrology OF 94-0090
mineral resources OP-718
non-metal deposits B 2111
Ohio, geomorphology OF 95-0224
petroleum OP-579
pollution OP-692
Quaternary OF 95-0034
Utah, faults OP-1390
Vermont, mineral resources OP-718
Wisconsin, hydrogeology OF 95-0163
Wyoming, energy sources OP-281

synchrotron radiation
geochemistry OP-130
geophysics OP-2317

synclines
Alaska
OP-2247
Proterozoic OP-1624
California, pollution OP-2047
Indiana P 1538-O
Montana OP-480
Virginia OP-1091
Yukon Territory, Proterozoic OP-1624

synclinoria
B 2110
Pakistan OF 94-0670

synform folds
Texas C 1129

syngensis
California, metal ores C 1129
Colorado
geochemistry OP-1700
metal ores C 1129
Idaho
base metals P 1525
metal ores P 1525; B 2064-A-R
mineral resources B 2064-A-R
polymetallic ores B 2064-A-R
vanadium ores P 1525
Mexico, metal ores C 1129

synthetic aperture radar *see* SAR

Syria
plate tectonics OF 94-0568

SYSDOC OF 94-0501

Szolnok Hungary
natural gas OP-155

Szombathely Hungary
stratigraphy OP-524

T

T-waves
seismology OP-1329

Ta *see* tantalum

Tabulata *see* Favositidae

Tacoma Basin
structural geology OP-1979; OP-1981

Taconic Orogeny
Argentina, petrology C 1129
Europe, structural geology OP-598
Massachusetts, structural geology OP-782
New England, metamorphism OP-2208
orogeny B 2110
Virginia, structural geology OP-1317

TACT
Alaska
structural geology OP-2247
tectonics OP-1850

TACTS
continental shelf OP-584
geochemistry OP-398
Miocene OP-739
oceanography OP-585; OP-586
phosphate deposits OP-583

TAG hydrothermal field
metal ores OP-502

Tahoma Creek
geologic hazards OP-2329
Quaternary OP-975

tailings ponds
Idaho, environmental geology OF 94-0443

Oklahoma, ecology OF 94-0324

Taiwan
earthquakes OP-2320

Tajiguas Landfill
Miocene OF 95-0265

Taku Transect
metamorphic rocks C 1129

talc
Pacific Ocean, geochemistry B 2022

Talkeetna Formation
areal geology OP-672
metamorphism OP-39

Talkeetna Mountains
areal geology OP-672
geomorphology B 2107
metal ores OP-1893
petrology OP-632

Talkeetna Quadrangle
environmental geology OF 95-0177

Taltson magmatic zone
geochemistry C 1129
magmas C 1129

talus fan *see* alluvial fans

Tamarack Tuff
volcanism OP-531

Tamaulipas Mexico
sedimentary petrology OP-1141

Tamlami Aquifer
ground water OF 95-0303

Tamiami Formation
OP-2295
Quaternary OP-1001

Tampa Bay
ecology OP-610
marine geology WRI 94-4081

Tampa Florida
hydrogeology WRI 93-4171

Tampere Finland
geochemistry C 1129

Tanana Alaska
environmental geology OF 94-0527

Tanana River
areal geology OP-296

tangential tectonics *see* compression tectonics

tangential wave *see* S-waves

Tank Mountains
maps I-2454

tantalates *see* niobotantalates

tantalum
Maine, geochemistry C 1129
Vermont, geochemistry C 1129

tantalum ores
Alabama OP-1260
Idaho P 1525

Tapeats Sandstone
energy sources OP-1714

Tar River
hydrology OF 95-0136

Tar Sand Triangle
energy sources OP-1557
petroleum B 2000-J

tar sands *see* oil sands

Tasmania Australia *see* Lachlan fold belt

Tasmanites
petroleum OP-1811

Taupo volcanic zone
petrology OP-1542
Quaternary OP-431

Taylor Creek Rhyolite
maps I-2399**Taylor Dome**
geochemistry OF 95-0222**Taylor Mountains Quadrangle**
environmental geology B 2107
Trilobita OP-1**Taylor Valley**
hydrology OF 94-0545Taymyr Dolgan-Nenets Russian Federation *see*
Norilsk region; Norilsk Russian Federation

TCP/IP B 2103

Te *see* tellurium**teacher education**

OP-327

California, geologic hazards OF 95-0479

industrial minerals B 2111

Washington OF 94-0636

teaching aids *see* educational resources**technical cooperation**

YR

environmental geology OF 94-0490

Kansas, hydrogeology FS 0085-95

Ohio, geomorphology OF 95-0224

Papua New Guinea, geologic hazards OP-1720

tektites *see* tektitestectogenesis *see* orogenytectonic imbrication *see* imbricate tectonicstectonic lines *see* lineaments**tectonic maps**

Alaska

neotectonics OP-726

structural geology OF 94-0714; OP-857

tectonics OF 94-0194

British Columbia, structural geology OF 94-0714

California, geologic hazards OF 93-0684

Japan, structural geology OF 94-0714

Nevada, Quaternary I-2501

New England, structural geology OP-2272

Russian Federation, structural geology OF 94-0714

Yukon Territory, structural geology OP-857

tectonic sutures *see* suture zones**tectonic wedges**

Alaska, tectonics OP-1850; OP-2299

tectonics *see also* Acadian Phase; accretionary wedges; Alleghany Orogeny; back-arc basins; basins; breccia; continental margin; Cordilleran Orogeny; crust; decollement; deformation; eu-geosynclines; faults; fold and thrust belts; fold belts; folds; foliation; fore-arc basins; foreland basins; fractures; geosynclines; gravity sliding; Laramide Orogeny; lineaments; lineation; miogeosynclines; nappes; neotectonics; Nevada Orogeny; ophiolite complexes; orogeny; Pan-African Orogeny; plate tectonics; pull-apart basins; rift zones; salt tectonics; shear zones; shields; structural analysis; suture zones; tectonic maps; terranes; thrust sheets; transpression; transtension; uplifts.

OP-916; OP-1206

Alaska

B 2107; OP-471; OP-723

seismicity OP-1978

stratigraphy OP-357

basement tectonics

Indiana OF 94-0298

Manitoba OP-1073

Montana OF 94-0670; OP-1628

Saskatchewan OP-1073

Basin and Range Province B 2056

Colorado

geochronology B 2104

Proterozoic OF 94-0437

Colorado Plateau B 2056

compression tectonics

Alabama OP-1988

Alaska OP-231; OP-624; OP-697; OP-784;

OP-1249; OP-1682

Arizona C 1129; OP-1380

Bolivia OP-2244; OP-2294

California OP-1362; OP-1839; OP-2332

Montana OP-1831

Nevada OP-1362

New Mexico C 1129

Tennessee OP-1988

Washington C 1129; OP-1776

Wyoming OP-283

Connecticut, stratigraphy OP-2297

extension tectonics

OP-1844

Alaska OP-624

Andes OP-1511

Arizona OP-15; OP-291; OP-887; OP-991;

OP-1110; OP-1666

Basin and Range Province OP-515; OP-814; OP-1874

California OF 94-0568; OP-159; OP-313; OP-542; OP-820; OP-822; OP-824; OP-

1040; OP-1110; OP-1362; OP-1462; OP-2107; OP-2142; OP-2332

Canada OP-2265; OP-2271

Europe OF 94-0228

Great Basin OP-1874

Greece OP-453

Idaho B 2064-A-R; OP-1581; OP-2124; OP-2125

Italy OP-754

Mexico OP-824

Montana OP-480; OP-1943

Nevada OP-15; OP-20; OP-105; OP-258; OP-438; OP-619; OP-631; OP-836; OP-

1323; OP-1362; OP-1388; OP-1740; OP-1817; OP-1976; OP-2151

New Mexico OP-1878

Norway OP-158

Oregon OP-1040

tectonophysics OP-985

United States OP-2265; OP-2271

Utah B 2056; OP-105; OP-619; OP-1494; OP-1740

Idaho, stratigraphy B 2113

igneous rocks OP-618

imbricate tectonics

Alaska OP-479; OP-1251

Japan OF 94-0568

Montana OP-480

New Mexico OP-1878

Vanuatu OP-162

Montana, stratigraphy B 2113

New Jersey, metal ores OP-290

New York

fluid inclusions OP-1794

metal ores OP-290

petrology OP-1138

seismotectonics

OP-1422; OP-2287

Alaska OP-697; OP-1459; OP-1682

Arkansas OP-1004; OP-2285

Armenia OP-140

Atlantic Ocean OP-1312

Bahamas OP-1314

Bolivia OP-961

California ; OF 94-0259; OF 94-0568; OF 95-0038; OP-107; OP-383; OP-419; OP-461; OP-591; OP-714; OP-783; OP-818; OP-820; OP-822; OP-835; OP-914; OP-1007; OP-1145; OP-1271; OP-1420; OP-1550; OP-1586; OP-1617; OP-1637; OP-1704; OP-1712; OP-1745; OP-1761; OP-1914; OP-2084; OP-2107; OP-2120; OP-2332; OP-2333

Canada OP-2265; OP-2271

Caribbean region OP-1313; OP-1739

China OF 94-0568

Dominican Republic OP-1751

earthquakes OP-1346

Ecuador OF 94-0568

engineering geology OP-1333

Greater Antilles OP-1313

Indiana OF 94-0298

Japan OP-1800

Mississippi Valley OP-2013; OP-2014

Missouri OF 94-0298

Montana OP-1902

New England OP-2272

Nicaragua OP-961

Pacific Coast OF 94-0568; OP-661

Philippine Islands OP-1048

Puerto Rico OP-2238

seismology OP-1075

Tennessee OP-1907

Turkey OF 94-0568

United States OP-2265; OP-2271

Utah OP-1494

Washington OF 94-0589; OP-1592; OP-1611; OP-2079

West Indies OP-1312

Texas, ground water WRI 94-4039

Utah OP-1292; OP-1556

Vanuatu, oceanography OP-338

Washington

OP-1449

Quaternary OP-1076

Wyoming, Mammalia OP-1527

tectonophysics *see* continental drift; core; crust; heat flow; isostasy; mantle; Mohorovicic discontinuity; paleomagnetism; plate tectonics; sea-floor spreadingtectonostratigraphic terranes *see* terranes**Tecuamburro**

geologic hazards OP-952

Tehachapi Mountains

Quaternary OF 94-0568

Teheran Iran

geologic hazards OF 94-0568

tektites

australite, Far East OP-1574

geochemistry OP-130

indochinite, Far East OP-1574

philippinite, Far East OP-1574

Russian Federation, Eocene OP-1573

Telegraph Creek Formation

stratigraphy B 2113

telemetry

seismicity OP-654

seismology OP-1744; OP-1864

Telica Volcano

geochemistry OP-1678

Telluride Conglomerate

metal ores OF 94-0291

Telluride Quadrangle

geomorphology OF 95-0024

tellurides

Colorado, metal ores OP-1626

tellurium

Spain, metal ores OP-22

Tempe Terrae OP-35; OP-1844

temperature logging

California, geophysical surveys OF 94-0692
Greenland, geophysical surveys OF 94-0254
Hawaii, hydrogeology OF 95-0532
Massachusetts, geophysical surveys WRI 94-4185

temperature surveys *see* heat flow

Tendoy Range

crystalline rocks OP-362
neotectonics OP-1943

Tengger Caldera

Quaternary OP-392

Tennile Creek Dolomite

Invertebrata OP-686

Tennessee *see also* Appalachian Basin; Loveland Loess; Mississippi Embayment; Mississippi River; New Madrid region; Reelfoot Rift; Rome Trough.

earthquakes OF 94-0670
economic geology C 1124

environmental geology

Fayette County Tennessee OF 95-0156
Haywood County Tennessee OF 95-0156
Sevier County Tennessee OF 95-0477
Shelby County Tennessee OF 95-0156
Tipton County Tennessee OF 95-0156

faults

OP-2271
Lake County Tennessee P 1538-I
Obion County Tennessee P 1538-I
Reelfoot Lake P 1538-I

fluvial features OP-208**geophysical surveys** OP-1661**ground water**

OF 94-0483; HA-0730-K
Anderson County Tennessee OP-1259
Memphis Tennessee WRI 94-4212;
WRI 95-4011; OP-1825

hydrogeology

OF 94-0354
Coffee County Tennessee WRI 93-4207
Franklin County Tennessee WRI 93-4207
Rhea County Tennessee OF 95-0278

hydrology

OP-2162
Bedford County Tennessee OF 95-0372
Fayette County Tennessee OF 95-0156
Haywood County Tennessee OF 95-0156
Nashville Tennessee OF 94-0068
Shelby County Tennessee OF 95-0156
Tipton County Tennessee OF 95-0156

maps OF 94-0359**non-metal deposits** B 2111

Pennsylvanian OP-1737

pollution

OP-688; OP-1006; OP-2044
Fayette County Tennessee OF 95-0156;
OF 95-0312; OF 95-0329
Haywood County Tennessee OF 95-0156;
OF 95-0312; OF 95-0329
Shelby County Tennessee OF 95-0156;
OF 95-0312; OF 95-0329
Tipton County Tennessee OF 95-0156;
OF 95-0312; OF 95-0329

Quaternary, Lake County Tennessee OF 94-0568

seismology, Reelfoot Lake OP-1907

stratigraphy

Humphreys County Tennessee OP-370
Sequatchie Valley OP-1502
structural geology OP-1988
waterways WRI 94-4229

Tepee Creek Uplift

structural geology OP-1681

Tepee Trail Formation OP-1517

tephra *see* pyroclastics

tephrochronology**Alaska**

Pliocene OF 95-0217-A; OF 95-0217-B
Quaternary OP-772; OP-774; OP-2021
California, Quaternary OF 95-0034; OP-1158;
OP-1505

Nevada, stratigraphy B 2056

Oregon, Quaternary OF 95-0034; OP-1158;
OP-1505

Pacific Coast, Quaternary OF 95-0034

Washington, Quaternary OP-1023

Yukon Territory

Pliocene OF 95-0217-A; OF 95-0217-B
Quaternary OP-772

Terrace Reservoir

environmental geology OF 95-0043
pollution OF 95-0087; OP-691; OP-963; OP-1081;
OP-1210; OP-1337; OP-1535; OP-1922

terraces *see also* erosion features; floodplains;
marine terraces.

Alaska, Quaternary OP-1172; OP-1790

Arizona

geomorphology OP-2072
Quaternary OF 95-0057; OP-1287; OP-1730

California

economic geology OP-802
metal ores OP-804
Quaternary OF 94-0568
structural geology OP-1584

environmental geology OP-1085

geomorphology OP-1368

Georgia, pedogenesis B 1589-E

Idaho, Quaternary P 1525

Iowa, geomorphology OP-16

Montana, non-metal deposits I-2446

Nevada

fluvial features OP-2289
geomorphology OF 94-0670

Oklahoma

hydrogeology OF 94-0504
pollution OP-143

Pacific Ocean, sedimentary petrology OP-1218

Pennsylvania, ground water WRI 93-4109

Utah, Quaternary OP-1287; OP-1730

Wyoming, Quaternary OP-11; OP-1583

terranes *see also* exotic terranes; greenstone belts.

Alaska

OP-217; OP-296; OP-672; OP-711; OP-725; OP-931

continental shelf OP-589

geochemistry OP-23

magmas OP-626

metal ores OP-1893

metamorphic rocks C 1129; OF 94-0268

metamorphism OP-39

Mohorovicic discontinuity OP-1398

natural gas OP-2074

paleomagnetism OP-727; OP-1135

petrology OP-229; OP-231

plate tectonics OP-1894

structural geology OF 94-0714; OP-304;
OP-1447

tectonics OF 94-0194; OP-1850

tectonophysics OP-408

Appalachians, structural geology OF 94-0682

Arizona

geochemistry OP-1104

Miocene OP-669

Atlantic region, structural geology OF 94-0682

British Columbia

metamorphic rocks OF 94-0268

structural geology OF 94-0714

California

I-2148

Miocene OP-669

structural geology OP-348; OP-1599

Canada

geochemistry C 1129

geochronology OP-308

paleomagnetism OP-1135

structural geology OP-1863

energy sources OP-1546

Idaho

P 1525

faults P 1525; OP-1650

metal ores B 2064-A-R

petrology P 1525

Proterozoic P 1525

Quaternary P 1525

sedimentary petrology P 1525

tectonophysics OP-361

Iowa, geomorphology OP-16; OP-1059

Japan

Permian OP-1132

structural geology OF 94-0714

Maine

geochemistry C 1129

petrology C 1129

Massachusetts, structural geology OP-782

metal ores B 2097

Mexico, petrology OP-1870

Minnesota

geochemistry B 1904-U

Precambrian OP-886

Montana, structural geology OP-1863

New England, tectonics OP-2296

New South Wales Australia, petrology OP-871

Oregon

I-2148

Permian OP-1132

structural geology OP-348

tectonophysics OP-361

Pakistan, structural geology B 2126; OF 94-0670

plate tectonics OP-1327

Russian Federation

continental shelf OP-589

structural geology OF 94-0714

Saudi Arabia, structural geology OP-455

sedimentary petrology OP-1404

structural geology OP-1668

tectonophysics OP-985

Texas, paleomagnetism OP-1350

United States, geochronology OP-308

Vermont, geochemistry C 1129

Wales, geochemistry C 1129

Yukon Territory

OP-217

tectonics OP-360

TERRAscope

earthquakes OP-1486

elastic waves OP-461

- seismology OP-460; OP-1540; OP-1600; OP-1744
- Terrebonne Bay**
geomorphology OF 94-0275
oceanography OF 94-0275
shore features OF 94-0275
- Terrill Mountains**
metal ores B 2081
- Terry Montana**
hydrology WRI 94-4230
- Tertiary** *see also* Laramide Orogeny; Neogene; Paleogene; San Juan Formation.
C 1108; OP-1597; OP-1888
Alaska B 2098; B 2107; OF 94-0215; MF-2021-G; OP-40; OP-296; OP-330; OP-357; OP-589; OP-626; OP-972; OP-1169; OP-1195; OP-1249
Arizona OF 94-0670; OP-887; OP-1282
Bolivia B 2119; OP-2244
California OF 94-0568; OP-159
Canada B 2135; OP-1169
Caribbean region B 2057
Catahoula Formation, ground water WRI 95-4013; OP-901
Challis Volcanics, structural geology OP-1581
Chile C 1129
China OP-2016
Colorado B 2104; OP-2243
Greenland OP-1752
Idaho P 1525; OP-1633
Japan C 1129; OP-271
Lesser Antilles B 2057
Mississippi WRI 94-4223
Montana OP-281; OP-1215; OP-1633
Muddy Creek Formation, fluvial features OP-2289
Nevada B 2056; B 2090; OF 94-0670; OF 95-0545; OP-1083; OP-1084; OP-1468; OP-1469; OP-2151
New Mexico B 2063; OF 94-0670
Poland OP-908
Rocky Mountains OF 94-0670
Russian Federation OP-589
Soda Lake Shale Member
natural gas OP-542
sedimentary petrology OP-1097
Spain OF 95-0221
United States B 2135
Washington B 2085-C; OP-2329
Wyoming OP-281
Yemen C 1129; OP-1079
- Teshkepuk Quadrangle**
Quaternary B 2107
tectonics B 2107
- Tesuque Aquifer**
hydrogeology WRI 94-4072
- Tethys**
Colorado Plateau, stratigraphy OP-2019
Montana, stratigraphy OP-1131
- Teton Fault**
faults OF 94-0228
seismology OP-2135
- Teton-Gros Ventre Uplift**
faults OP-476
- Tetrabranchiata** *see* Ammonoidea; Nautiloidea
- Tetracoralia** *see* Rugosa
- Tetrapoda** *see also* Mammalia.
Carnosauria
China OP-418
Mongolia OP-418
Theropoda OP-417
- tetrapods *see* birds; mammals
- Texas** *see also* Delaware Mountain Group; Frio Formation; Guadalupe Mountains; Gulf Coastal Plain; High Plains Aquifer; Ogallala Aquifer; Permian Basin; Rio Grande Valley; Trinity River basin.
ecology, Tarrant County Texas OP-1180
environmental geology
YR
Edwards Aquifer WRI 93-4233
Medina County Texas WRI 93-4233
Upton County Texas C 1108
Uvalde County Texas WRI 93-4233
geophysical surveys OP-1661
ground water
OP-2308
Balcones fault zone WRI 95-4030
Bee County Texas WRI 95-4038
Bexar County Texas WRI 95-4030
Brazoria County Texas OF 94-0345; OF 94-0346; OF 95-0182
Chambers County Texas OF 94-0346
Childress County Texas OF 94-0387
Collingsworth County Texas OF 94-0387
Comal County Texas WRI 94-4117
Crockett County Texas WRI 94-4039
Edwards Aquifer WRI 93-4039; WRI 93-4100; WRI 93-4126; WRI 94-4039; WRI 94-4117; WRI 95-4030
Edwards County Texas WRI 94-4039
El Paso Texas WRI 94-4092; OF 94-0329
Fort Bend County Texas OF 94-0345; OF 94-0346; OF 95-0182; OF 95-0183
Galveston Texas OF 94-0346; OF 95-0182
Glasscock County Texas WRI 94-4039
Goliad County Texas WRI 95-4038
Hardeman County Texas OF 94-0387
Houston Texas OF 94-0345; OF 94-0346; OF 95-0182
Kimble County Texas WRI 94-4039
Liberty County Texas OF 94-0346
Menard County Texas WRI 94-4039
Midland County Texas WRI 94-4039
Montgomery County Texas OF 94-0346
Pecos County Texas WRI 94-4039
Reagan County Texas WRI 94-4039
San Antonio Texas WRI 93-4100
Schleicher County Texas WRI 94-4039
Sutton County Texas WRI 94-4039
Terrell County Texas WRI 94-4039
Upton County Texas WRI 94-4039
Val Verde County Texas WRI 94-4039
Waller County Texas OF 94-0345; OF 94-0346
- hydrogeology
WRI 93-4190
Balcones fault zone FS 94-0048
Bexar County Texas FS 94-0048
Coke County Texas WRI 94-4036
Concho County Texas WRI 94-4036
Edwards Aquifer FS 94-0048; OP-1684
Edwards County Texas FS 94-0048
El Paso County Texas OF 95-0111
Howard County Texas WRI 94-4036
Kendall County Texas FS 94-0048
Kerr County Texas FS 94-0048
Medina County Texas FS 94-0048
Mitchell County Texas WRI 94-4036
Runnels County Texas WRI 94-4036
San Antonio Texas OP-1684
Scurry County Texas WRI 94-4036
Sterling County Texas WRI 94-4036
- Tom Green County Texas WRI 94-4036
Uvalde County Texas FS 94-0048
- hydrology
WRI 94-4213
Hays County Texas WRI 95-4019
San Antonio Texas OF 95-0103
magmas, El Paso County Texas C 1129
Oligocene
Brewster County Texas OF 94-0227
Davis Mountains OF 94-0227; OP-1925
Jeff Davis County Texas OF 94-0227
Reeves County Texas OF 94-0227
paleomagnetism, Van Horn Texas OP-1350
petroleum
Atascosa County Texas OP-1286
Karnes County Texas OP-1286
San Antonio Texas OP-1286
pollution
Austin Texas OF 94-0302
Knox County Texas OP-1093
Tarrant County Texas OP-2009
Quaternary
Edwards Aquifer OP-812
Lynn County Texas OP-812
sedimentary petrology, Webb County Texas OP-2256
stratigraphy
Fort Worth Basin OP-1324
Medina County Texas OF 94-0551
structural geology
Llano County Texas C 1129
Llano Uplift C 1129
tectonics, Big Bend National Park OP-363
- Texas earthquake 1993**
petroleum OP-1286
- textbooks**
geochemistry OP-673
geophysical surveys OP-71
- Textulariina *see* Litolacea
- Th *see* thorium
- Th-230**
environmental geology OP-518
Th-230/Th-232 *see* Th-232/Th-230
Th-230/U-234 *see* U-234/Th-230
Th-230/U-238 *see* U-238/Th-230
- Th-232**
Florida, Cenozoic OP-1204
pollution OP-984
- Th-232/Th-230**
geochemistry OP-126
Marshall Islands, stratigraphy OP-1229
Micronesia, stratigraphy OP-1229
Nevada, sedimentary petrology OP-59
Sahara, Quaternary OP-909
Spain, geochronology OP-66
- Th-234**
California, pollution OP-1397
- Th/Th**
Spain, geochronology OP-66
- Th/U**
Arizona, petrology OP-1185
Bahamas, Quaternary OP-1866
Basin and Range Province, Quaternary OF 95-0037
Chile, Quaternary OP-1697
geochemistry OP-126
Great Basin, Quaternary OF 95-0037
Hawaii, Quaternary OP-1848; OP-2175
Israel, Quaternary OF 94-0568
New England, Quaternary OP-1658
Puerto Rico, neotectonics OP-2179

- Western Australia, Quaternary OP-1973
 thallophytes *see* algae; bacteria; fungi
thalwegs
 California, Quaternary OP-1216
Thar Desert
 coal OF 94-0274; OF 94-0595; OF 94-0596-D
 lignite OF 94-0557
Tharsis OP-559; OP-916
Tharsis Montes OP-35
thaw lakes
 Alaska, geomorphology OP-101
The Delta Mississippi
 ground water WRI 95-4127
The Geysers
 earthquakes OP-1603
 economic geology OF 95-0030; OP-216; OP-803
 energy sources OP-193; OP-890
 geophysical surveys OP-2046
 geothermal energy OP-299
 gold ores OP-341
 metal ores OP-720; OP-800
 seismicity OP-2120
 seismology OP-254; OP-1421
The Himalaya *see* Himalayas
Thebes Illinois
 geologic hazards OP-2048
 pollution OP-2185
Theodore Roosevelt Lake
 hydrology WRI 95-4053
Theria *see* Eutheria; Metatheria
 thermal alteration index *see* color alteration index
thermal metamorphism
 Nevada, energy sources OP-1083
 New Jersey, stratigraphy OF 95-0557
 South Dakota, Proterozoic OP-1117
 thermal remanent magnetization *see* thermoremanent magnetization
 thermal springs *see* hot springs
 thermal surveys *see* heat flow
thermal waters *see also* brines; fumaroles; geothermal fields; geothermal gradient; hot springs; springs.
 OP-1756
 California
 OF 93-0033
 economic geology OP-216
 Hawaii OF 95-0532
 Iceland, geophysical surveys OP-1389
 Nevada OF 93-0033; OF 93-0356
 United States, geophysical surveys OP-1389
thermoluminescence
 California, Quaternary OP-2006
 Mississippi Valley, Quaternary OP-1757
 Nevada, Quaternary OP-2006
 Quaternary OF 94-0568
 Utah, Quaternary OF 94-0568
thermomagnetic analysis
 Quaternary OF 94-0633
 thermometamorphism *see* thermal metamorphism
thermoremanent magnetization
 Colorado, stratigraphy OP-1363
 Nevada, structural geology B 2056
 Texas, tectonics OP-363
Theropoda *see also* Carnosauria.
 OP-417
 Thessaloniki Greece *see* Salonika Greece
Thiessen, Reinhardt
 paleobotany OP-566
thiophenes
 Italy, geochemistry OP-500
thiosulfate
 Wyoming, geochemistry OP-1897
tholeiite
 Hawaii
 OP-1307
 geochemistry OP-2321
tholeiitic basalt
 California, geochemistry OP-197
 Hawaii OP-1025
 Mexico, geochemistry OP-197
 Oregon, geochemistry OF 95-0040
Thomas Formation
 geochemistry B 1904-U
Thomas Range
 mineral inventory OP-289
 mineralogy OP-288; OP-1377; OP-1518
Thomas, H. Hamshaw
 paleobotany OP-644
Thompson coal seam
 sedimentary petrology OP-1042
Thompson Manitoba
 Quaternary OP-1463
thorium
 Colorado, geochemistry OP-1812
 Florida, sedimentary petrology OP-1861
 geochemistry DDS-0014
 Gulf of California, sedimentation OP-1987
 metal ores B 2097
 Mississippi Valley, economic geology B 2094-C
 Missouri
 economic geology OF 94-0670
 petrology OP-1299
 New Mexico, uranium ores B 2063
 Oregon, structural geology OP-1436
 Russian Federation, geochemistry C 1129
 Th-230, environmental geology OP-518
 Th-232
 Florida OP-1204
 pollution OP-984
 Th-232/Th-230
 geochemistry OP-126
 Marshall Islands OP-1229
 Micronesia OP-1229
 Nevada OP-59
 Sahara OP-909
 Spain OP-66
 Th-234, California OP-1397
 U-234/Th-230, Sahara OP-909
 U-238/Th-230, Hawaii OP-861
thorium ores
 Alaska, geochemistry B 2107
 Missouri OF 94-0670
 thorium-lead *see* Pb/Th
 thorium-uranium *see* Th/U
 thoron *see* Rn-222
thortveitite
 Montana OP-287
Thousand Oaks Quadrangle
 maps OF 95-0088
Three Bar Field
 geophysical surveys OF 94-0670
Three Creeks Caldera
 economic geology OP-189
Three Fingers Caldera
 metal ores OP-799
Three Sisters
 geologic hazards OP-1901
 geophysical surveys OP-1564
 lava OP-1254
three-component seismographs
 California
 earthquakes OF 94-0710; OP-1499
 geophysical surveys OF 95-0275
 Papua New Guinea, geologic hazards OP-1720
thrust faults *see also* compression tectonics; crustal shortening; fold and thrust belts; foreland basins; imbricate tectonics; reverse faults; thrust sheets.
 B 2110; OF 94-0228; OP-1061
 Alaska
 OP-217; OP-1849; OP-1850; OP-2248; OP-2299
 plate tectonics OF 94-0228
 Quaternary OP-2292
 Appalachians
 OP-1908
 gold ores OP-1909
 Bahamas, plate tectonics OP-1314
 California
 OF 94-0568; OP-432; OP-444; OP-1145; OP-1599
 crust OP-649
 earthquakes YR; OP-383; OP-892
 energy sources OP-2146
 engineering geology OP-389; OP-891
 geologic hazards OF 94-0259
 geophysical surveys OP-1759
 magmas OP-313
 metal ores OP-801; OP-940
 Quaternary OF 94-0568
 Canada OP-1863
 Europe, geochronology OP-510
 Hawaii, Quaternary OP-1453
 Idaho
 OP-2123
 metal ores B 2064-A-R
 mineral resources B 2064-A-R
 Italy, earthquakes OP-892
 Massachusetts OP-782
 metal ores OP-870
 Montana
 OF 94-0670; OP-1628; OP-1863
 geochronology OP-1465
 sedimentary petrology OP-1622
 Nevada
 B 2056; OP-1252
 energy sources OF 94-0670
 New England OP-2296
 New Zealand, Quaternary OF 94-0568
 North Carolina, petrology OP-1647
 Northern Territory Australia, magmas C 1129
 Norway OP-158
 Oregon
 Quaternary OP-1945
 tectonophysics OF 94-0228; OP-157
 Pacific Ocean, tectonophysics OP-1246; OP-1919
 Queensland Australia, magmas C 1129
 Rocky Mountains OP-1232
 Utah
 OP-1283
 petroleum B 2000-J
 Washington
 OF 94-0403; OP-1592
 geophysical surveys OP-1821
 Wyoming
 OF 94-0228
 metamorphic rocks OP-1929
 sedimentary petrology OP-1622

- Yukon Territory OP-217
- thrust sheets** *see also* fold and thrust belts.
California, structural geology OP-348
Idaho, structural geology OP-1903
Montana, structural geology OP-1903
Oregon, structural geology OP-348
Vanuatu, plate tectonics OP-162
Virginia, structural analysis OP-1091
Washington
 neotectonics OP-1980
 structural geology OP-1979; OP-1981; OP-2158
- thrusts and thrusting** *see* thrust faults
- Thunder Basin National Grassland**
environmental geology C 1108
- Thurlow Quadrangle**
maps MF-2290
- Ti *see* titanium
- Tian-Shan *see* Tien Shan
- Tibet China *see* Xizang China
- Tibetan Plateau *see* Qinghai-Xizang Plateau
- tidal flats**
Oregon, tectonophysics OP-660
West Virginia, paleobotany OP-2304
- tidal surges**
Florida, environmental geology OF 94-0116
- tidal wave** *see* tsunamis
- Tien Shan** *see also* Alai Range; Karatau Range.
hydrology OP-1003
Quaternary OF 94-0568
- Tiger Mountain Formation**
Eocene B 2085-A
- tight sands**
energy sources C 1108
Wyoming, energy sources OF 94-0670
- till** *see also* moraines.
Alaska, Quaternary OP-1921; OP-2258
Antarctic Ocean, Quaternary OP-246
Colorado GQ-1764
Connecticut, ground water WRI 94-4255
Great Lakes, stratigraphy OP-436
Illinois, Quaternary OP-1630
Iowa, Quaternary OP-1630
Missouri, hydrogeology OF 94-0705-W
New Hampshire, pollution OF 95-0142
New York, ground water WRI 93-4004
Ohio, geomorphology OF 95-0224
South Dakota, hydrogeology WRI 93-4195
Sweden, Quaternary OF 94-0568
- tillage**
Missouri, hydrogeology OF 94-0705-W
North Carolina, pollution W 2435
Tennessee, pollution OF 95-0156; OF 95-0329
Wisconsin, hydrology OF 95-0163
- Timan-Pechora region**
natural gas OP-2219
petroleum OP-152
- Timbalier Bay**
oceanography OF 94-0275
- Timber Mountain Caldera**
ground water OP-2066
petroleum OP-1470
- TIMS**
geophysical surveys FS 0079-95
Quaternary OP-757
- tin**
OP-980
Mississippi Valley, structural geology P 1538-E
- Tin Mountain Pegmatite**
geochemistry C 1129
- tin ores**
OP-980
Alabama OP-1260
Bolivia OP-188; OP-1028
Canadian Shield OP-2126
Caribbean region B 2057
Great Britain OP-2126
Idaho P 1525; B 2064-A-R
Lesser Antilles B 2057
New Mexico, mineralogy OP-1518
Spain OP-22
Utah, mineralogy OP-1518
- Tingmerkuk Sandstone**
energy sources OP-1270
stratigraphy OP-1439
- Tintina Fault**
seismology OP-697
- Tinton Formation**
stratigraphy OP-903
- Tippecanoe Sequence** OP-1971
- Tismana Romania**
geochemistry C 1129
- titanite**
Colorado, metal ores B 2109
Massachusetts, geochronology OP-1047
Montana, Archean OP-1862
New Hampshire, geochronology OP-1047
phase equilibria OP-1236
- titanium**
OP-58
Alaska, sedimentary petrology OP-1604
California, geochemistry OF 95-0015
metal ores B 2097
Minnesota, Quaternary OP-1290
Nevada, Miocene OP-1408
New Jersey, metal ores OP-290; OP-1379
New York
 fluid inclusions OP-1794
 metal ores OP-290; OP-1379
South Dakota, geochemistry C 1129
Utah, mineralogy OP-288
- titanium ores**
Missouri OF 94-0670
- titanium oxides**
geophysics OP-1237
- titanomagnetite**
Alaska, paleomagnetism OP-1135
Canada, paleomagnetism OP-1135
Wyoming, stratigraphy OP-364
- Tithonian**
Utah OP-145
- Tiva Canyon Member**
deformation OF 95-0002
engineering geology OF 93-0269
stratigraphy OF 94-0342; OF 95-0102
- Tkope-Portland Peninsula Belt**
petrology OP-100
- Toano Range**
orogeny OP-619
- Toba Tuff**
geochronology OP-443
- Tobacco Root Mountains**
structural geology OP-480; OP-1863
- todorokite**
New Mexico, sedimentation OP-1276
- Togiak Terrane**
areal geology OP-201; OP-725
magmas OP-626
- Tohoku**
petrology OP-270
plate tectonics OP-271
- Tohono O'Odham Indian Nation**
maps I-2017
- Tokai Japan**
tectonophysics OP-2307
- Tolbachik**
Quaternary OP-1257
- Toledo Ohio**
geomorphology OF 95-0224
- toluene**
Appalachians, pollution OP-1365
Iowa, pollution OP-982
petroleum OF 94-0298
- Tombigbee River**
hydrogeology WRI 90-4112
- Tombstone Arizona**
tectonophysics OP-352
- TOMS**
geochemistry B 2139; OP-315; OP-1407
- Toms River**
hydrology WRI 91-4141
- tonalite**
C 1129
Alaska
 C 1129; OP-100
 geochemistry B 2107
Argentina, geochemistry C 1129
Australia C 1129
Brazil
 C 1129
 geochemistry C 1129
California
 OP-45
 geochemistry C 1129
Canada C 1129
Canadian Shield, geochemistry C 1129
Carpathians C 1129
Chile
 C 1129
 geochemistry C 1129
geochemistry C 1129
Germany C 1129
Greece, geochemistry C 1129
Italy C 1129
Japan
 C 1129
 Neogene C 1129
Mexico C 1129
Nevada C 1129
Ordovician B 2060
Oregon OP-1590
Russian Federation C 1129
Spain C 1129
Virginia C 1129
- tonalite gneiss**
Minnesota, Precambrian OP-886
- Tonga**
mantle OP-1109
tectonophysics OP-2328
- Tongue River Member**
pollution OP-185; OP-186
- Tonka Formation**
sedimentary petrology B 1988-I
- tonnage**
Indiana, coal OF 94-0298
Oregon, metal ores OF 94-0677
South Africa, diamonds OP-74
- Tonoloway Limestone** OF 94-0573

tonstein

- Appalachians
 - Pennsylvanian OP-1737
 - stratigraphy OP-766
- Europe, geochronology OP-510
- petrology OP-989
- Utah, geochronology OP-1142
- Washington OP-1042; OP-1181
- West Virginia, stratigraphy OP-69

Tonto Basin

- geologic hazards OF 95-0617

Toolkit OP-206

- Topanga Quadrangle**
 - maps OF 95-0091

topaz

- OF 95-0517; OP-1378
- Colorado OP-1828
- Idaho, non-metal deposits P 1525
- Utah OP-288; OP-289; OP-1377

Topaz Valley

- mineralogy OP-288

tophus *see* tufa**TOPMODEL**

- ground water OP-1014

topographic maps

- I-2397
 - Arizona, geomorphology OF 94-0563; OF 94-0564; OF 95-0529; OP-2072
 - Colorado, environmental geology OF 95-0508
 - Florida, environmental geology OF 94-0116
 - Indiana, ground water WRI 94-4195
 - New York, ground water WRI 93-4029
 - plate tectonics SM
 - Utah, hydrogeology WRI 93-4219
 - Venezuela, hydrogeology WRI 93-4219

Topopah Spring Member

- OF 94-0342; OF 95-0102
- deformation OF 95-0002

Toquima Range

- geochronology OP-844

Torak-Nanushuk System

- energy sources OP-576

tornadoes

- Colorado, engineering geology EV

Toroh Formation

- coal OP-972

Torok Formation

- geochemistry OF 95-0236

Toroweap Formation

- energy sources OP-1557

Tortel Formation

- natural gas OP-155

Totkomlos Hungary

- natural gas OP-155

tourmaline

- Canadian Shield, metal ores OP-2126
- Great Britain, metal ores OP-2126
- South Dakota, geochemistry C 1129

tourmalinization

- Nevada, geochronology OP-844

Tournaisian

- B 2110; OP-809
- Kazakhstan OP-1258
- Russian Federation OP-152

Toutle River

- hydrogeology OP-2116; OP-2197
- hydrology OP-859
- Quaternary OP-1023

Trace Creek Member

- geochronology OP-510

stratigraphy OP-766**trace metals**

- Alaska
 - environmental geology B 2107
 - geochemistry B 2107
- Arizona
 - hydrogeology WRI 94-4114; WRI 95-4062
 - pollution WRI 95-4074
- British Columbia, hydrology OF 94-0315
- California
 - economic geology OF 95-0030
 - environmental geology C 1108; OF 95-0299
 - geochemistry OP-512; OP-954
 - ground water WRI 95-4048
 - pollution WRI 93-4140
- Colorado
 - environmental geology OF 94-0580; OF 95-0043
 - hydrology WRI 94-4041; OF 94-0412
 - pollution C 1122
- Connecticut, geochemistry OF 94-0620
- environmental geology C 1108; OP-511
- Idaho
 - cobalt ores OP-167
 - environmental geology OF 94-0443
- Kentucky, hydrology WRI 94-4134
- Maryland, environmental geology W 2399
- metal ores OF 94-0298
- Micronesia
 - geochemistry OP-520
 - manganese ores OP-1409
- Mississippi Valley, hydrology OF 93-0628
- Missouri, hydrology OF 93-0495
- New York, geochemistry OF 94-0620
- Oregon, metal ores OF 94-0677
- Pennsylvania, hydrogeology OF 94-0381
- South Carolina, pollution WRI 94-4209
- Utah, hydrology WRI 94-4041
- Washington
 - environmental geology OF 95-0195
 - hydrology OF 94-0315
- Wyoming, environmental geology OF 95-0121

tracers *see also* D/H; radioactivity.

- Alaska
 - geochemistry OP-23
 - hydrology OP-127
- Atlantic Ocean, geochemistry OP-1129
- Colorado
 - hydrogeology OP-2196
 - pollution OP-487
 - environmental geology OP-1160
- Florida
 - environmental geology OP-2202
 - ground water OP-472; OP-473
 - hydrogeology WRI 93-4171
 - geochemistry OP-1026; OP-1284
- Georgia, hydrology OP-1554
- Great Plains, hydrogeology OP-1017
- ground water C 1108; OP-734; OP-1699
- hydrogeology OP-1532
- Idaho
 - hydrogeology OP-2221
 - pollution OP-1039
- Kentucky, ground water WRI 94-4189
- Maryland, pollution OP-1786
- Massachusetts
 - environmental geology OP-2136
 - pollution OP-1175
- Midwest, pollution OP-2201
- Minnesota, pollution OP-1686
- Nevada
 - gold ores OP-1946

pedogenesis OP-1763

- New Jersey, oceanography OP-1188
- New Mexico, hydrology WRI 94-4071
- Ohio, ground water WRI 94-4243
- Oklahoma, ground water OP-144
- Ontario, ground water OP-170
- Pacific Ocean, geochemistry OP-1129
- pollution OP-7; OP-174; OP-1923
- Tennessee
 - ground water WRI 94-4212
 - hydrogeology WRI 93-4207
- Vermont, hydrogeology OP-1631
- Washington, waste disposal OF 94-0514
- trachyandesites *see also* latite.**
 - California, Quaternary OF 94-0633
- Colorado
 - metal ores OP-1626
 - Oligocene OP-1625
- trachytes *see* keratophyre
- tracks**
 - Colorado, stratigraphy OF 94-0670; OP-1953
 - New Mexico
 - ichnofossils OP-1482
 - stratigraphy OF 94-0670; OP-1953
- Tradewater Formation**
 - diagenesis OF 94-0298
 - sedimentary petrology OF 94-0298
- trail maps**
 - Colorado, environmental geology I-2469
 - Kansas, environmental geology I-2469
- Tram Member**
 - structural geology OP-2143
- Trans-Alaska Crustal Transect *see* TACT
- Trans-Alaska Pipeline**
 - energy sources C 1108
- Trans-Challis Fault**
 - faults OP-1650
- Trans-Hudsonian Orogeny *see* Hudsonian Orogeny
- Trans-Pecos**
 - ground water WRI 94-4092
 - Oligocene OF 94-0227; OP-1925
- Trans-Scandinavian igneous belt**
 - magmas C 1129
- Transantarctic Mountains**
 - geophysical surveys OF 94-0293; OF 95-0225
 - Pliocene OF 94-0588
 - stratigraphy OF 94-0588
- Transbaikalia**
 - geochemistry C 1129
- transcurrent faults**
 - Arizona OP-1380
 - Basin and Range Province, metal ores OP-1874
 - Great Basin, metal ores OP-1874
 - petrology C 1129
 - Saudi Arabia, petrology C 1129
- transducers**
 - Arkansas
 - ground water OF 94-0531
 - hydrology OF 94-0363
 - California
 - ground water OF 94-0531
 - hydrogeology OF 94-0363
 - Caribbean region, ground water OF 94-0531
 - Colorado
 - hydrogeology OF 94-0363
 - hydrology OF 94-0363
 - Florida, ground water OF 94-0531
 - ground water OF 94-0531; OP-1779
 - hydrogeology OF 94-0531
 - hydrology OF 94-0363

Iowa, hydrology OF 94-0363
 Kansas, hydrology OF 94-0531
 Lesser Antilles, ground water OF 94-0531
 Nevada
 geophysical surveys OF 94-0531
 ground water OF 94-0531
 ocean circulation OF 94-0363
 Oregon, hydrology OF 94-0363
 Puerto Rico, hydrology OF 94-0363
 Washington, hydrology OF 94-0363

transform faults
 Alaska
 plate tectonics OP-1682
 sedimentation OP-2160
 Atlantic Ocean, sea-floor spreading OP-1931
 Bolivia
 mantle OP-1643
 plate tectonics OP-180
 California, stratigraphy B 1995-J,K
 East Pacific Ocean Islands, petrology OP-390
 Iceland, tectonophysics OP-298
 Pacific Ocean, seismology OP-1329

transgression
 Alaska
 Quaternary OP-604
 stratigraphy B 2110
 Appalachians, stratigraphy OP-1324
 Arizona, stratigraphy B 2110
 Atlantic Coastal Plain, stratigraphy OP-1958;
 OP-1960
 California, stratigraphy OP-1341
 Colorado
 geochemistry OP-1168
 stratigraphy B 2110; OP-1384
 Commonwealth of Independent States, petro-
 leum B 2110
 Florida, Quaternary OP-1719
 geochemistry OP-2015
 Illinois, sedimentation OF 94-0298
 Indiana
 energy sources OP-2020
 petroleum B 2094-D; OF 94-0298
 Kazakhstan, energy sources OP-1258
 Maryland
 sedimentary petrology OP-848
 stratigraphy OP-736
 metal ores B 2110
 Montana, Cretaceous OP-743
 Pennsylvania, sedimentation B 2110
 Pennsylvanian B 2110; OP-1228
 stratigraphy OP-1558
 Utah
 OP-1179
 geochemistry OP-1168
 stratigraphy B 2110
 Virginia, stratigraphy OP-736
 Western Interior, stratigraphy OF 94-0670; OP-
 1324; OP-2030

transmission electron microscopy
 geochemistry OP-130

transport *see also* solute transport; stream trans-
 port.
 California, pollution WRI 93-4140
 Colorado, pollution OP-488
 Florida
 environmental geology OP-2202
 pollution OP-806
 Georgia, hydrology OP-1554
 ground water OP-1779
 Gulf of Mexico, environmental geology OP-
 715
 Kansas, hydrology W 2352-B

Louisiana, pollution OP-758
 Maryland, pollution OP-1089; OP-1786
 Massachusetts
 environmental geology OP-2136
 geophysical surveys WRI 94-4185
 pollution OP-36; OP-509
 waste disposal OP-2249
 Minnesota, environmental geology OP-831
 Mississippi, pollution OP-681; OP-758
 Mississippi Valley, environmental geology OP-
 1748
 Nebraska, hydrology W 2352-B
 New Jersey, environmental geology OP-913
 New York, waste disposal OP-1775
 Pennsylvania, environmental geology OP-354
 pollution OP-377; OP-692
 Tennessee
 hydrogeology WRI 93-4207
 pollution OP-688; OP-1006
 Utah, ground water OP-316
 waterways OP-544
 Wisconsin
 hydrogeology OP-2327
 pollution OP-508
 Wyoming, hydrology OP-883

transpression
 Alaska
 crust OP-2075
 natural gas OP-2074
 Atlantic Ocean, plate tectonics OP-1312
 California
 metal ores OP-940
 Quaternary OF 94-0568
 structural geology OP-1599
 tectonophysics OP-1778
 Canada, tectonophysics OP-2265
 Europe, geochemistry OF 94-0228
 Newfoundland, petrology C 1129
 petrology C 1129
 Rocky Mountains, energy sources OP-1942
 Scotland, structural geology C 1129
 United States, tectonophysics OP-2265
 Washington, structural geology OP-1592
 West Indies, plate tectonics OP-1312

transtension
 Alaska, energy sources OP-1545
 Atlantic Ocean, plate tectonics OP-1312
 Basin and Range Province, metal ores OP-1874
 California
 structural geology OP-705
 tectonophysics OP-1778
 Canada, tectonophysics OP-2265
 Great Basin, metal ores OP-1874
 Italy, geochemistry C 1129
 Nevada, orogeny OP-619
 tectonophysics OP-985
 United States, tectonophysics OP-2265
 Utah, orogeny OP-619
 Washington, Eocene OP-1593
 West Indies, plate tectonics OP-1312

transverse faults
 New Mexico OP-1878

Transverse Ranges
 crust OP-649
 earthquakes OP-383
 fractures OF 94-0228
 microearthquakes OP-2153
 Quaternary OF 94-0568
 sedimentary petrology OP-159
 stratigraphy B 1995-J,K; OP-1036
 tectonophysics OP-1778

transverse wave *see* S-waves

Transylvanian Alps
 geochemistry C 1129

Trap Spring Field
 energy sources OF 94-0670
 structural geology OP-1944

Trapper Creek Tuff
 geochemistry OP-716

traps *see* stratigraphic traps; structural traps

Traverse Group
 areal geology OP-295

travertine
 Basin and Range Province, Quaternary OF 95-
 0037
 California
 economic geology OP-802
 metal ores OP-804
 Colorado
 geophysical surveys OP-1118
 metal ores OP-1488
 Oligocene OP-1691
 Great Basin, Quaternary OF 95-0037
 Montana, Quaternary OP-902
 Wyoming, Quaternary OP-902

trawl marks
 Atlantic Ocean, ocean floors OP-2073

Treadwell Formation
 gold ores OP-624

Treasure Island California
 engineering geology OF 94-0709
 seismology OP-1617

Treasure Mountain Tuff
 pollution OP-92

tree rings
 Alaska, Quaternary OP-1098; OP-2281
 Chile, Quaternary OP-1098
 Colorado
 fluvial features OP-2259
 geomorphology OP-986
 pollution OP-329
 geologic hazards OF 94-0663
 Illinois, hydrology WRI 94-4190
 Indiana, hydrology WRI 94-4190
 New York, ground water OP-1608
 Pacific Coast, Quaternary OP-661
 Rocky Mountains, Quaternary OF 95-0063
 Washington, Quaternary OP-1023

trenches
 Alaska
 I-2272
 crust OP-2075
 plate tectonics OP-1682
 California, sedimentary petrology OP-603
 Puerto Rico, Quaternary OF 94-0568

trenching
 Arkansas, Quaternary OP-946
 California
 earthquakes OP-892
 engineering geology OF 94-0568
 neotectonics OP-2070
 Quaternary OF 94-0568
 China, Quaternary OF 94-0568
 Dominican Republic, Quaternary OF 94-0568
 Greece, Quaternary OF 94-0568
 Idaho, Quaternary OF 94-0568
 Israel, Quaternary OF 94-0568
 Italy
 earthquakes OP-892
 Quaternary OF 94-0568
 Japan, Quaternary OF 94-0568
 Nevada

- environmental geology OF 92-0458; OF 93-0477
 Quaternary OF 94-0568
 Philippine Islands, Quaternary OF 94-0568
 Sweden, Quaternary OF 94-0568
 Tennessee, Quaternary OF 94-0568
 Turkey
 earthquakes OF 94-0568
 Quaternary OF 94-0568
 Utah, Quaternary OF 94-0568
- trend-surface analysis**
 ground water WRI 93-4224
 hydrology W 2352-B; WRI 91-4141; WRI 94-4213; WRI 95-4083
- Trentino-Alto Adige Italy *see* Cima d'Asta
- Trenton Canyon Pluton**
 phase equilibria C 1129
- Trenton Group**
 petroleum OF 94-0298
- trevorite**
 Washington, sedimentary petrology OP-1182
- Triangle Area Water Supply Monitoring Project**
 hydrology OF 94-0379
- triangle zones**
 Montana, orogeny OF 94-0670
- Triassic**
 OP-225; OP-1319; OP-1327; OP-1483; OP-2139
 Alaska OP-39; OP-408; OP-725
 California OF 95-0227-A; OF 95-0227-B; I-2148
 Canada OP-308
 Carnian, Nevada OP-78
 Chinle Formation
 OP-223; OP-224; OP-382; OP-1320; OP-1321; OP-1322; OP-1481
 ichnofossils OP-1482
 Invertebrata OP-1479
 metal ores B 2063
 sedimentary petrology OP-1404
 Commonwealth of Independent States OP-1212
 Egypt OP-1770
 Lockatong Formation
 OP-1672
 diagenesis OP-2118
 energy sources OP-2058; OP-2059
 sedimentary petrology OP-2140
 Moenkopi Formation
 energy sources OP-1557
 sedimentary petrology OP-1178
 tectonics OP-1556
 Muschelkalk, Poland OP-908
 North Carolina OP-925
 Oregon OF 95-0227-A; OF 95-0227-B; I-2148
 Petrified Forest Member
 OP-381
 ichnofossils OP-379; OP-380
 metal ores OP-805
 sedimentation OP-2023
 Sag River Sandstone, areal geology OP-641
 Shinarump Member OP-222
 Shublik Formation
 areal geology OP-641
 energy sources OP-65
 geochemistry OF 95-0236
 United States OP-308
 Virginia OP-925
 Yukon Territory OP-360
- triazines *see also* atrazine.**
 Gulf of Mexico, environmental geology OP-715
- Kansas, pollution OF 94-0497
 Midwest, pollution OF 94-0396
 Minnesota, pollution OF 95-0116
 pollution OP-630
- trichloroethylene**
 environmental geology OP-131
 Illinois, pollution WRI 94-4034
 pollution OP-137
- trihalomethane**
 Mississippi Valley, pollution OF 94-0036
- Trilobita**
 OF 94-0667-A; OF 94-0667-B
 Alaska OP-1
- trilobites**
 Alaska OP-711
- Trilobitomorpha *see* Trilobita
- Trinidad**
 stratigraphy
 OP-1150
- Trinidad and Tobago**
 stratigraphy, Trinidad OP-1150
- Trinity Aquifer**
 ground water WRI 93-4039; WRI 94-4039
 hydrogeology FS 94-0048
- Trinity Complex**
 geochemistry OP-753
- Trinity Group**
 ground water WRI 93-4126
- Trinity Pass Nevada**
 non-metal deposits OF 95-0084
- Trinity River basin**
 hydrogeology FS 0090-95
 hydrology WRI 94-4218; FS 94-0073
 pollution FS 0088-95
- triple junctions *see also* Chile Margin Triple Junction; Mendocino fracture zone.**
 California, tectonophysics OP-1448
 Iceland, tectonophysics OP-298
 Mexico
 petrology OP-827
 tectonophysics OP-1448
 Pacific Ocean, tectonophysics OP-1702
- tripolite *see* diatomaceous earth
- triterpanes**
 California, petroleum OP-513
 Pacific Ocean, geochemistry B 2022
- Triticites**
 Arizona, stratigraphy B 2110
- tritium**
 California
 ground water WRI 95-4048
 waste disposal OP-2291
 Florida, ground water W 2409; OP-472; OP-1614
 Georgia, hydrogeology OP-2161
 Great Plains, hydrogeology OP-1017
 ground water OP-734
 Hawaii
 ground water OP-2077
 hydrogeology OP-2076
 hydrogeology OP-1532
 Idaho, hydrogeology WRI 94-4247; OF 94-0503
 Maryland, pollution OP-1786
 Minnesota, pollution OP-1139
 New Jersey, pollution OP-910
 New Mexico, ground water OP-2308
 New York, hydrology OP-617
 Ontario, ground water OP-170
 Tennessee, ground water WRI 94-4212
 Texas
 ground water OP-2308
 pollution OP-2009
- Triumph Mine**
 metal ores B 2064-A-R
- TRM *see* thermoremanent magnetization
- Trochammina**
 Western U.S., Quaternary OP-2086
- Troms Norway *see* Lyngen Peninsula
- trona**
 Wyoming OF 95-0476
- Trona California**
 maps OF 94-0318
- trondhjemite**
 Alaska C 1129
 Iran C 1129
 Japan C 1129
 Mexico C 1129
 Montana, crust OP-1831
 Ordovician B 2060
 Oregon OP-1590
 Russian Federation C 1129
- Troodontidae**
 Vertebrata OP-417; OP-418
- Troodos Ophiolite**
 Cyprus, structural geology OP-2
- Tropic Shale**
 geochronology OP-1142
- Tropical Storm Alberto**
 geologic hazards YR
- Tropical Storm Allison**
 geologic hazards WRI 94-4188
- Trout Creek Quadrangle**
 maps OF 94-0658
- Troy North Quadrangle**
 ground water WRI 93-4029
- Troy Pluton**
 structural geology OP-1440
- Trucial Oman *see* United Arab Emirates
- Truth or Consequences New Mexico**
 engineering geology WRI 95-4050
- Tshirege Member**
 geochemistry B 2081
- tsunamis**
 Atlantic Coastal Plain, stratigraphy OP-1960
 California, seismology OP-203
 East Pacific Ocean Islands, engineering geology OP-1367
 geologic hazards OP-1456
 Hawaii
 Quaternary OP-1183
 sedimentary petrology OP-1184
 Japan
 earthquakes OP-1800
 Quaternary OF 94-0568
 Oregon
 Quaternary OP-1629
 seismology OP-203
 Pacific Coast
 earthquakes OP-26
 Quaternary OF 94-0568
 Pacific region, geologic hazards OP-2190
 Peru, stratigraphy OP-200
 Polynesia, engineering geology OP-1367
 Washington
 earthquakes OP-1189
 faults OP-2079
 Quaternary OP-395; OP-1076
- tubes, lava *see* lava tubes
- Tucson Arizona**
 geomorphology W 2429

- hydrogeology WRI 94-4114; WRI 95-4062
structural geology OP-1282
- tufa**
Nevada OP-59
- tuff** *see also* ash flows; volcanic ash; volcanoclastics.
Alaska, Quaternary OP-774
Argentina, orogeny OP-2011
Arizona MF-2292
British Columbia OP-1509
California
OP-531
geochronology OP-625
ground water OP-2066
metal ores OP-805
Colorado
OP-1716
geophysical surveys OP-1879
metal ores OF 94-0291
Oligocene OP-1691
sedimentary petrology B 1808-P
stratigraphy OP-2012
geochronology OP-1029
Idaho
metal ores P 1525
non-metal deposits P 1525
Indonesia, geochronology OP-443
Italy, paleomagnetism OP-962
Nevada
OP-1388; OP-2037
deformation OF 95-0002
engineering geology OF 93-0269
environmental geology OF 94-0451
geochemistry P 1559; B 2056
ground water OF 92-0657; OP-1567; OP-2066; OP-2273
hydrology OP-1998
mineralogy OP-2036
Miocene B 2056
seismology OF 94-0618
stratigraphy B 2056; OF 94-0342
structural geology B 2056
Tertiary OF 95-0545
weathering OP-1468
New Mexico
geochemistry B 2081
geochronology OP-443
sedimentary petrology B 1808-P
Oregon, economic geology B 1741-H
Peru, metal ores OP-202; OP-1411
Texas, Oligocene OP-1925
Utah
geochemistry B 2056
Miocene B 2056
Wyoming
geochronology OP-569
Quaternary OP-1583
- tuff lava** *see* welded tuff
tuft *see* tufa
- Tufts abyssal plain**
sedimentation OP-2160
- Tulare Basin**
ground water WRI 95-4048; OF 94-0334; OP-1231
- Tularosa Basin**
ground water WRI 93-4192
- Tule Lake**
Quaternary OP-397; OP-1040; OP-1505
- Tule Valley Utah**
hydrogeology OP-1123
- Tulloch Member** OP-667
- Tully Valley New York**
environmental geology OF 94-0615
ground water OP-1608
- Tumbledown Mountain Maine**
petrology C 1129
- Tumey Sandstone**
sedimentation OF 94-0577
- Tunalik Alaska**
energy sources C 1108
stratigraphy OP-1439
- tundra**
Alaska, paleomagnetism OP-1881
Atlantic Ocean, Pliocene OP-218
Pacific Ocean, Pliocene OP-218
- tungsten**
Nevada, gold ores OP-340
- tungsten ores**
Alaska OP-296
Canadian Shield OP-2126
Great Britain OP-2126
Idaho
P 1525
Quaternary P 1525
Italy OP-199
Peru OP-202
- Tungsten Quadrangle**
maps OF 94-0629
- Tunguska Basin**
petroleum OP-153
- Tunisia**
stratigraphy OP-1416
- tunnels**
OP-833
Alaska, geochemistry B 2107
California
seismicity OP-1769
seismology OP-1984
Nevada, seismology OF 94-0618
- turbidite** *see also* turbidity current structures.
Alaska
OP-672
energy sources OP-1270
gold ores OP-349
natural gas OP-2074
paleomagnetism OP-727
stratigraphy OP-1439
British Columbia, geologic hazards OF 94-0568
Chile, tectonophysics OP-1762
Colorado
metal ores OP-1096
Oligocene OP-1691
Idaho
metal ores B 2064-A-R
sedimentary petrology OP-2092
Mexico, sedimentary petrology OP-1141
Oregon, stratigraphy OP-1176
Pacific Ocean
geochemistry B 2022
ocean floors B 2022
oceanography B 2022
sedimentary petrology OP-776
tectonophysics OP-1246
Russian Federation
hydrology OF 94-0445
sedimentary petrology OP-1877
Tyrrhenian Sea, Quaternary OP-942
United States, geologic hazards OF 94-0568
Washington
Quaternary OF 94-0568
structural geology OP-1611
- turbidity current structures** *see also* graded bedding.
Pacific Ocean OP-1218
turbidity currents *see* submarine canyons
- Turkey**
earthquakes, North Anatolian Fault OF 94-0568
plate tectonics OF 94-0568
Quaternary, North Anatolian Fault OF 94-0568
- Turkey Creek Caldera**
geochemistry B 2021-E
- Turkey Creek Quadrangle**
maps OF 94-0656
- Turnagain Arm**
Quaternary OP-1098
- Turonian**
Colorado OP-507
Montana OP-1131
Utah B 2115-A; B 2115-B; OP-507
Western Interior OP-506; OP-2063
Wyoming OP-569
- Turret mining district**
base metals OP-557
- Turritella**
California, stratigraphy OP-1036
Colombia OP-77
Mexico, stratigraphy OP-1036
Nevada OP-77
- Tuscaloosa Aquifer**
ground water WRI 94-4223
- Tuttle Creek Dam**
pollution W 2419
- Tuttle Lake Formation**
metamorphism OP-319
structural geology OP-1462
- Tutulla Samoa**
ground water WRI 94-4142
- Tuxedni Group**
areal geology OP-672
energy sources OP-574; OP-576
- Tuya British Columbia**
petrology OP-1509; OP-1847
- Twentynine Palms Marine Corps Base**
mineral resources OF 95-0013
- Twilight Gneiss**
intrusions OP-1423; OP-1424
- Twin Falls Idaho**
hydrogeology WRI 94-4247
- Twin Lakes**
hydrology OF 94-0412
- Two Medicine Formation**
ground water OP-1215
- Two Medicine Glacier**
Quaternary OP-121
- two-mica granite**
California C 1129
Finland C 1129
Nevada C 1129
Ordovician B 2060
- Tybee Island**
phosphate deposits OP-399
- Tyee Basin**
stratigraphy OP-1176; OP-1177
- Tyee Formation**
natural gas OF 95-0093
- Tyonek Formation**
coal OP-972
- Tyonek Formation**
sedimentary petrology B 2107
uranium ores B 2098

Tyonek Quadrangle

Quaternary OF 94-0614
sedimentary petrology B 2107

Tyrannosauridae

Vertebrata OP-417; OP-418

Tyringham Gneiss

structural geology OP-782

Tyrrhenian Sea

Quaternary OP-942

Tyson Formation

stratigraphy B 2060

U

U *see* uranium

U-234/Th-230

Sahara, Quaternary OP-909

U-234/U-238 *see* U-238/U-234

U-238

Atlantic Coastal Plain, pollution OP-2264
environmental geology OP-518
Florida, Cenozoic OP-1204
pollution OP-984
thermal waters OP-1756

U-238/Pb-204

OP-1826; OP-2183
petrology OP-939

U-238/Pb-206

California
geochemistry OP-160
magmas OP-321
petrology OP-938
Western Interior, geochronology OP-506

U-238/Th-230

Hawaii, geochemistry OP-861

U-238/U-234

Basin and Range Province, Quaternary OF 95-0037
Bermuda, Quaternary OP-1732; OP-1733
Florida, Quaternary OP-1732; OP-1733
geochemistry OP-126
Great Basin, Quaternary OF 95-0037
Marshall Islands, stratigraphy OP-1229
Micronesia, stratigraphy OP-1229
Nevada, sedimentary petrology OP-59
Sahara, Quaternary OP-909
Spain, geochronology OP-66

U. S. Bureau of Indian Affairs

energy sources C 1108

U. S. Bureau of Land Management

conservation C 1108
environmental geology OF 94-0269; OP-955
maps OF 95-0202

U. S. Bureau of Mines

Appalachians, coal C 1108
environmental geology C 1108

U. S. Department of Agriculture

pollution OF 95-0156

U.S. Exclusive Economic Zone *see* United States

Exclusive Economic Zone U. S. Forest Service

U. S. Forest Service

environmental geology C 1108

U.S. Geological Survey *see also* NAWQA.

YR; CAT; OF 94-0501; OF 94-0670; OP-237;
OP-266; OP-339; OP-570; OP-1484; OP-1533;
OP-2193; OP-2194; OP-2214; OP-2245

Alaska

areal geology B 2107; OF 95-0247
bibliography B 2107
hydrology YR; C 1123

mineral resources OF 95-0537

natural gas C 1108

seismology OF 95-0257-A; OF 95-0257-B;
OF 95-0257-C

Antarctic Ocean, geophysical surveys OF 94-0293

Appalachians, coal C 1108

Basin and Range Province, Quaternary OF 95-0078

California

areal geology OP-2189
hydrogeology OF 95-0150
seismology OP-1809

coal C 1108

Colorado

environmental geology OF 95-0023
geophysical surveys OP-1214
ground water OF 94-0383

Connecticut, Quaternary OP-2165

East Pacific Ocean Islands, engineering geology C 1121

energy sources C 1108; OF 95-0075-A; OP-1044

engineering geology OP-519

environmental geology OP-518; OP-955

Florida

environmental geology FS 0134-95
hydrology OF 95-0185

geochemistry B 2117; OF 94-0351; OF 94-0362; OF 94-0369; OF 95-0041; OF 95-0117

geologic hazards OP-2078

geophysical surveys OF 95-0077; OP-416; OP-505; OP-1695

Georgia, hydrogeology OF 94-0307

Great Basin, Quaternary OF 95-0078

ground water OF 94-0465; OF 94-0468; OF 95-0288

hydrogeology OF 94-0493; OF 94-0708-W
hydrology WRI 93-4208; WRI 94-4002;
OF 94-0353; OF 94-0363; OF 94-0382;
OF 94-0539; OF 94-0710-W

Illinois

ground water OF 93-0141
hydrology WRI 94-4141

Indiana, hydrology OF 94-0061

Iowa, geomorphology OP-16

Kansas, hydrogeology OF 95-0120; FS 0085-95

maps OF 95-0201

Massachusetts, environmental geology OF 94-0649

mineral resources B 2081; OF 95-0082; OP-846

Minnesota, hydrogeology OF 94-0338

Mississippi, hydrogeology FS 94-0075

Mississippi Valley, hydrology OF 93-0628

Missouri, hydrogeology OF 94-0538

Montana

ground water OP-1265
hydrogeology OF 95-0194

natural gas OF 95-0075-C; OF 95-0075-F

Nevada

environmental geology OP-2209
hydrogeology OF 95-0126

New Mexico OF 95-0314

New York, engineering geology OP-113

North Dakota

hydrogeology OF 95-0105
pollution OP-1113

ocean floors OP-1962

oceanography OF 94-0669-A; OF 94-0669-B

Ohio, geomorphology OF 95-0224

Oregon, environmental geology OF 95-0652

Papua New Guinea, geologic hazards OP-1720
petroleum OF 95-0075-B; OF 95-0075-E;
OF 95-0246

pollution OP-2018

Polynesia, engineering geology C 1121

Puerto Rico, hydrogeology OF 93-0629

Rocky Mountains, geophysical surveys OP-1660

Russian Federation, hydrology OF 94-0445

sedimentary petrology OF 95-0065-A; OF 95-0065-B

sedimentary rocks OF 94-0582

seismicity OP-1560

Tennessee, hydrogeology OF 94-0354

Utah, hydrogeology OF 94-0309; OF 95-0138

Virginia FS 0046-95

Washington, environmental geology OF 95-0652

U. S. International Volcano Disaster Assistance Program

earthquakes EV

U. S. Marine Corps bases

ground water WRI 94-4186
maps OF 94-0681

U. S. Minerals Management Service

energy sources C 1108

U. S. National Park Service

environmental geology C 1108

U. S. National Seismograph Network

earthquakes OP-1193

U. S. Rocky Mountains *see* Absaroka Range; Big Belt Mountains; Bitterroot Range; Bridger Range; Gravelly Range; Laramie Mountains; Medicine Bow Mountains; Owl Creek Mountains; San Juan Mountains; Sangre de Cristo Mountains; Sawatch Range; Spanish Peaks; Tendency Range; Tobacco Root Mountains; Wind River Range

U. S. Virgin Islands *see also* Saint Croix.

hydrogeology OF 93-0629
metal ores B 2057

U/Pb *see also* Pb/Pb.

Antarctica, magmas C 1129

Arizona, geochronology OP-2310

California

geochronology OP-2310

intrusions OP-46

magmas OP-313

metamorphism OP-319

petrology OP-45

structural geology OP-432; OP-1462

Canada

geochronology OP-308

structural geology OP-1863

Colorado

intrusions OP-1423

petrology OP-1665

Proterozoic OF 94-0437

stratigraphy OP-507

Finland, geochemistry C 1129

Florida, sedimentary petrology OP-1861

Idaho, geochronology C 1129

magmas C 1129

Maine, geochemistry C 1129

Massachusetts, geochronology OP-1047

Mexico, petrology OP-1870

Minnesota, Precambrian OP-886

Montana

Archean OP-1862

crust OP-1831

geochronology B 2113; C 1129

- metamorphism OP-1627
structural geology OP-1863
New Hampshire, geochronology OP-1047
New Zealand, magmas C 1129
Pennsylvania, Proterozoic OP-3
petrology C 1129; OP-938; OP-939
Rocky Mountains, structural geology OP-1232
Spain, geochemistry C 1129
United States, geochronology OP-308
Utah, stratigraphy OP-507
Virginia
magmas P 1529
petrology C 1129
Proterozoic OP-3
Wales, geochemistry C 1129
Wyoming, maps I-2233
U/Th *see* Th/U
U/Th/Pb
Bolivia, metal ores OP-1028
Colorado, Proterozoic OP-1982
geochronology DDS-0014; OP-1029
Idaho, metal ores B 2081
Wyoming, Proterozoic OP-1982
Uchee Belt
structural geology OP-2155
Uinta Basin
coal OP-947
energy sources OP-297; OP-1166
Uintacrinus
stratigraphy B 2113
Uintah and Ouray Indian Reservation
energy sources C 1108
Uintah Basin *see* Uinta Basin
uintaite *see* gilsonite
Ukinrek Alaska
Quaternary OP-1920; OP-1921
Ukraine *see also* Dnieper River.
energy sources YR
structural geology, Ukrainian Shield
OP-948
Ukrainian Shield
structural geology OP-948
Ullin Formation
petroleum OF 94-0298
Ullisols
Appalachians, stratigraphy OP-1324
Western Interior, stratigraphy OP-1324
ultramafics *see also* chromitite; clinopyroxenite;
gamet pyroxenite; hornblende; kimberlite;
meimechite; ophiolite; peridotites; pyroxenite;
websterite.
Alaska
OP-296; OP-672
paleomagnetism OP-1135
California, chromite ores OP-864
Canada, paleomagnetism OP-1135
Oregon, chromite ores OP-864
Umbria Italy *see* Perugia Italy
Umpqua Formation
natural gas OF 95-0093
Umpqua River basin
natural gas OP-1677
stratigraphy OP-1176
Unalakleet Alaska
environmental geology OF 95-0347
Unalaska Island *see* Makushin
Uncompahgre Uplift
environmental geology OF 94-0580
salt tectonics OP-1551
sedimentary petrology OP-1178
stratigraphy B 2110; OP-1384
structural geology OP-1668
unconformities *see* angular unconformities; ero-
sional unconformities
underground installations
OP-1331
geophysical surveys OP-1695
Midwest, hydrology OP-1824
Nevada, earthquakes OP-365
underground mining *see also* longwall mining.
Colorado, metal ores OP-333
Illinois, economic geology OF 94-0298
Utah, hydrogeology WRI 95-4025
underground water *see* ground water
underthrust faults
Atlantic Ocean, plate tectonics OP-1312
Japan, earthquakes OP-1800
Puerto Rico, Quaternary OF 94-0568
West Indies, plate tectonics OP-1312
Ungava
seismic sources OP-374
tectonophysics OP-2334
Union City California
Quaternary OF 94-0568
Union School Quadrangle
maps OF 88-0617
United Arab Emirates
ground water
YR
Abu Dhabi OP-1018; OP-2311
hydrogeology, Abu Dhabi OP-1801
Quaternary OP-1016
United Kingdom *see also* English Channel Is-
lands; Great Britain.
economic geology OP-905
stratigraphy B 2110
United States *see also* Alabama; Alaska; Appala-
chians; Arizona; Arkansas; Atlantic Coastal
Plain; Basin and Range Province; California;
Colorado; Colorado Plateau; Columbia Plateau;
Connecticut; Delaware; District of Columbia;
Florida; Georgia; Great Basin; Hawaii; Idaho;
Illinois; Indiana; Iowa; Kansas; Kentucky; Lou-
isiana; Maine; Maryland; Massachusetts; Mich-
igan; Midwest; Minnesota; Mississippi;
Mississippi Valley; Missouri; Montana; Ne-
braska; Nevada; New England; New Hampshire;
New Jersey; New Mexico; New York; North
Carolina; North Dakota; Ohio; Oklahoma; Ore-
gon; Pennsylvania; Rhode Island; Rocky Moun-
tains; South Carolina; South Dakota; Tennessee;
Texas; Utah; Vermont; Virginia; Washington;
West Virginia; Western Interior; Western U.S.;
Wisconsin; Wyoming.
YR; OP-1240; OP-1415; OP-1445
areal geology
OP-2002
Beartooth Mountains OP-280
Bighorn Basin OP-280
Owl Creek Mountains OP-279; OP-280
Paradox Basin OP-1179
Powder River basin OP-280
bibliography
Cascade Range OF 94-0403
Klamath Mountains OF 95-0558
Carboniferous B 2110
coal
C 1108
Illinois Basin C 1108; OF 94-0298
Powder River basin C 1108; OP-947
Uinta Basin OP-947
conservation C 1108
continental shelf OP-1970
Cretaceous, Bighorn Basin C-0146
crust
OF 94-0228
Beartooth Mountains OP-1831
crystalline rocks
Beaverhead Mountains OP-362
Tendoy Range OP-362
dams, Mount Saint Helens OP-2038
deformation
Bighorn Basin OP-283
New Madrid region P 1538-J
Powder River basin OP-283
Reelfoot Rift P 1538-J
diagenesis
Denver Basin OP-665
Floridan Aquifer OP-2263
Illinois Basin OF 94-0298
Newark Basin OP-2118
Paradox Basin OP-1242
Permian Basin OP-1472
earthquakes
OF 94-0571; OP-1193
Mount Hood EV
New Madrid region OF 94-0298; OP-451;
OP-1005; OP-2085
ecology
FS 94-0014; OP-346; OP-896
Mississippi River OF 94-0275
South Platte River FS 0154-95
economic geology
OP-905
Illinois Basin B 2094-C; OF 94-0298
New Madrid region OF 94-0670
Reelfoot Rift OF 94-0670
energy sources
C 1108; OF 95-0075-A
Four Corners B 2000-H
Illinois Basin B 2137; OF 94-0298; OP-
2020
Newark Basin OP-2058; OP-2059
Owl Creek Mountains OP-1942
Paradox Basin B 2000-H; OP-1557
Powder River basin OP-278; OP-1942
Uinta Basin OP-297; OP-1166
Wind River Range OP-1942
Yellowstone National Park OP-302; OP-
634; OP-885
Yellowstone River OP-302; OP-885
engineering geology
OP-519
Mississippi River OF 94-0275
Missouri River OP-1310
Mount Hood OP-1367
Mount Rainier OP-1367
Mount Saint Helens OP-19; OP-1367
New Madrid region P 1538-M
Yellowstone National Park OP-1367
environmental geology
C 1108; OP-545; OP-658; OP-675
Amargosa Desert OF 95-0155
Cascade Range OF 95-0230; OF 95-0498
Floridan Aquifer OP-2202
Great Smoky Mountains OF 95-0477
Mississippi River OF 95-0163; OP-715; OP-
1427; OP-1748; OP-2303
Missouri River OP-1748; OP-2303
Mount Rainier HA-0729
Navajo Indian Reservation WRI 94-4192
Ozark Mountains OF 94-0333; OP-447; OP-
1160
Paradox Basin OP-1045

Powder River basin C 1108
 San Juan Mountains OP-334
 Uncompahgre Uplift OF 94-0580

Eocene

Cascade Range OP-1593
 Chesapeake Bay OP-735

faults

Beaverhead Mountains OP-2125
 Cascade Range C 1129
 Idaho Batholith OP-1650
 Illinois Basin OF 94-0298
 New Madrid region P 1538-I; P 1538-Q
 Reelfoot Rift P 1538-Q; OF 94-0298
 Wasatch fault zone OF 94-0228

fluvial features

OP-2138
 Virgin River valley OP-2289

folds

Cascade Range OP-1128
 Klamath Mountains OP-1128

geochemistry

DDS-0014; B 2110; OP-1170; OP-2015
 Black Warrior Basin C 1108
 Cascade Range OF 94-0261; OP-29
 Chesapeake Bay OP-856
 Illinois Basin OF 94-0298
 Klamath Mountains OF 95-0227-A; OF 95-0227-B
 Medicine Bow Mountains OP-269
 Midcontinent OF 94-0450; OP-1955
 Mohave Mountains OP-1104
 Mount Saint Helens OP-315; OP-1407
 Paradox Basin OP-1168
 Potomac River OP-719; OP-856
 Powder River basin C 1108
 South Platte River OP-1812
 Spanish Peaks OP-1939
 Yellowstone National Park OP-300; OP-1897; OP-2128
 Yellowstone River OP-2133

geochronology

DDS-0014; OP-308
 Absaroka Range OP-1517
 Bitterroot Range C 1129
 Culpeper Basin OP-1672
 Gallatin Range OP-1517
 Gettysburg Basin OP-1672
 Idaho Batholith C 1129
 Midcontinent OP-510
 Newark Basin OP-1672
 Pine Mountain Window OP-510

geologic hazards

OP-926; OP-2078
 Cascade Range OF 94-0585; OP-1330; OP-1901
 Mississippi River OP-1526; OP-1578; OP-1764; OP-1836; OP-2048
 Missouri River YR; OP-1836
 Missouri River valley OP-1295; OP-1578
 Mount Adams OP-674
 Mount Hood OP-2088
 Mount Rainier YR; P 1547; OP-674; OP-1163; OP-2329
 Mount Saint Helens OF 95-0085; OP-674
 New Madrid region OF 94-0663; OF 95-0241; OF 95-0574
 Yellowstone National Park OF 95-0059

geomorphology

Lake Powell OP-1368
 Lake Tahoe OF 94-0105
 Mississippi River P 1538-R; OP-682
 New Madrid region P 1538-R
 Ozark Mountains OP-1792

San Juan Mountains I-2504

Virgin River valley OF 94-0670; OF 95-0515

geophysical surveys

OP-505; OP-2102; OP-2314
 Cascade Range OP-1564; OP-1821
 Illinois Basin OP-1898
 Mississippi Embayment P 1538-L; P 1538-P
 Mount Hood OP-459; OP-1389
 Mount Saint Helens FS 0079-95; OP-1389
 New Madrid region P 1538-L; P 1538-P
 Newberry Volcano OF 95-0099
 Reelfoot Rift P 1538-P
 San Juan Mountains OP-1118
 Yellowstone National Park OP-1913

gold ores

OP-1909
 Battle Mountain High OP-331

ground water

OF 94-0465
 Albuquerque Basin WRI 94-4251; OF 94-0349; OF 95-0360
 Amargosa Desert OF 95-0158
 Chesapeake Bay OP-1977
 Chicot Aquifer WRI 94-4202; WRI 95-4038; OF 94-0345; OF 95-0182; OF 95-0183
 Delmarva Peninsula W 2401; OP-356; OP-376; OP-845; OP-1977
 Evangeline Aquifer WRI 95-4038; OF 94-0345; OF 95-0182; OF 95-0183
 Floridan Aquifer W 2409; WRI 92-4174; WRI 93-4158; WRI 93-4224; WRI 94-4012; OF 93-0026; OF 94-0081; OF 94-0457; OF 94-0495; OF 94-0520; OF 94-0528; OF 94-0531; OF 95-0115; OF 95-0277; OF 95-0302; OF 95-0303; OP-472; OP-473; OP-1402; OP-1597; OP-1614; OP-1685; OP-1948
 High Plains Aquifer YR; WRI 94-4157
 Illinois Basin OF 94-0298
 Madison Aquifer P 1402-F
 Magothy Aquifer WRI 92-4171; OF 94-0391; OF 94-0395
 Mississippi River WRI 95-4127
 Newark Basin OP-1568
 Ogallala Aquifer WRI 94-4157
 South Platte River OP-1797
 Trans-Pecos WRI 94-4092
 Wasatch Front WRI 93-4221

heat flow, Illinois Basin OP-2050

Holocene

Cascade Range OP-1513
 Mount Adams OP-1513

hydrogeology

C 1108; WRI 95-4031; OP-2261
 Amargosa Desert WRI 94-4124
 Arkansas River valley WRI 94-4051; OF 94-0331; OF 95-0536
 Black Warrior Basin WRI 90-4112
 Connecticut Valley WRI 92-4013
 Delmarva Peninsula OP-678
 Floridan Aquifer P 1410-C; WRI 92-4159; WRI 93-4171; OF 94-0350; OP-1591; OP-1613; OP-1819
 Gila River WRI 94-4125
 High Plains Aquifer WRI 95-4014; OF 94-0702-W; FS 0085-95
 Lake Tahoe WRI 94-4079
 Mississippi Embayment FS 94-0047
 Mississippi River WRI 94-4163; OF 94-0478; OF 94-0493

Missouri River WRI 93-4195

Missouri River valley OP-1311

Mount Saint Helens OP-2116; OP-2197

Navajo Indian Reservation OF 94-0356

Ogallala Aquifer OF 94-0702-W; FS 0085-95; OP-1017

Ozark Mountains WRI 93-4154; WRI 94-4022; OF 94-0670

Sangre de Cristo Mountains WRI 94-4072

South Platte River YR

Tombigbee River WRI 90-4112

hydrology

WRI 93-4208; WRI 94-4002; OP-829
 Amargosa Desert OF 94-0489; OP-1989
 Arkansas River WRI 94-4054
 Arkansas River valley WRI 94-4097; OF 94-0364; OF 94-0412
 Cascade Range WRI 94-4139
 Chesapeake Bay WRI 94-4067
 Clark's Fork Basin OF 94-0375
 Delaware River OF 93-0662
 Delaware River basin WRI 93-4160; OF 95-0308; OP-1015
 Floridan Aquifer WRI 93-4130
 Gila River WRI 95-4083
 Hudson Valley OF 94-0090
 Lake Tahoe OF 95-0316
 Mississippi River C 1120-F; WRI 93-4204; WRI 94-4130; WRI 94-4191; OF 93-0628; OF 93-0657; OF 94-0474; OF 95-0149
 Missouri River YR; WRI 95-4087; OF 93-0657
 Mount Saint Helens OP-859
 Ohio River OF 93-0657; OF 95-0129; OF 95-0184
 Ozark Mountains FS 0116-95; FS 94-0015
 Virgin River valley WRI 94-4159; WRI 94-4210; OP-1516
 Yellowstone River WRI 94-4230

igneous rocks OF 94-0624-A; OF 94-0624-B

industrial minerals, Midcontinent B 2111

Invertebrata OP-684

lava

Cascade Range OP-1149
 Mount Adams OP-1254
 Mount Hood OP-1254

lead-zinc deposits

Illinois Basin OF 94-0298
 Midcontinent B 1989-F; OP-731
 Ozark Mountains B 1989-F; OP-731
 Reelfoot Rift B 1989-F

magmas

Cascade Range C 1129
 Klamath Mountains OP-41

Mammalia, Bighorn Basin OP-1527

mantle OP-1109

maps

SGM
 Big Belt Mountains MF-2291
 Bridger Range OF 95-0011-A; OF 95-0011-B
 Cascade Range OF 94-0591; OF 95-0219
 Gallatin Range OF 95-0011-A; OF 95-0011-B
 Klamath Mountains I-2148
 Laramie Mountains I-2233
 Mount Adams I-2460
 Newberry Volcano I-2455
 Powder River basin I-2433-B
 Yellowstone National Park I-0711

metal ores

Cascade Range OF 94-0666

- Connecticut Valley OP-869; OP-870
 Idaho Batholith B 2064-A-R; OF 94-0690; OP-1874
 Illinois Basin OF 94-0298
 San Juan Mountains OF 94-0291; OP-98; OP-284
 Sangre de Cristo Mountains B 2116
 Sevier orogenic belt OP-1874
 metamorphic rocks
 Laramie Mountains OP-1929
 Wyoming Province OP-1929
 metamorphism, Wyoming Province OP-1627
 mineral resources
 OF 95-0082
 Blue Ridge Mountains OP-428
 Bridger Range OP-1344
 Gallatin Range OP-1344
 Idaho Batholith B 2064-A-R
 Sevier orogenic belt B 2064-A-R
 mineralogy, Mount Anfero OP-1828
 molybdenum ores, San Juan Mountains OP-526
 natural gas
 C 1108; OF 95-0075-C; OF 95-0075-F; OP-1305
 Klamath Mountains OF 95-0093; OP-1677
 neotectonics
 Gravelly Range OP-1902
 New Madrid region OP-2285
 Tendoy Range OP-1943
 Wasatch fault zone OP-1494
 Wasatch Front OP-1494
 non-metal deposits
 Midcontinent B 2111
 Wyoming Province OP-1492
 oil and gas fields, Powder River basin OF 94-0670
 Oligocene, Trans-Pecos OF 94-0227; OP-1925
 Ordovician, Potomac River basin B 2060
 orogeny
 Bridger Range OF 94-0670
 Pilot Range OP-619
 Paleocene
 Bighorn Basin OP-666
 Powder River basin OP-666
 Savannah River OP-1359
 paleomagnetism, Bighorn Basin OP-403
 pedogenesis
 Midcontinent OP-2319
 Pine Mountain Window B 1589-E
 Pennsylvanian
 Illinois Basin OF 94-0298
 Midcontinent OP-1228
 Permian, Klamath Mountains OP-78
 petroleum
 B 2110; OF 95-0075-B; OF 95-0075-E; OF 95-0246
 Battle Mountain High OP-2065
 Denver Basin OF 94-0670
 Illinois Basin B 2094-D; OF 94-0298
 Mississippi Embayment OF 94-0298
 Paradox Basin B 2000-J
 Reelfoot Rift OF 94-0298
 Sevier orogenic belt B 2000-J
 petrology
 Blue Ridge Mountains OP-1200
 Cascade Range OP-968
 Hayfork Terrane OP-1315
 Idaho Batholith P 1525
 Klamath Mountains OP-1315
 Mount Adams OP-1512; OP-2173
 Mount Saint Helens OP-391
 New Madrid region OP-1299
 Ogallala Aquifer WRI 94-4057
 Reelfoot Rift OP-1299
 San Juan Mountains OP-546; OP-840
 Southern Oklahoma Aulacogen C 1129
 Yellowstone National Park OP-1851
 plate tectonics, Wyoming Province OP-2121
 pollution
 YR; WRI 94-4176; OF 94-0399; OF 94-0506; FS 0114-95; OP-97
 Arkansas River OP-422; OP-488; OP-538
 Arkansas River valley OF 94-0670; OP-1031
 Cascade Range OP-2064
 Chesapeake Bay OP-999; OP-1077
 Coeur d'Alene mining district OP-1039; OP-1146; OP-1156; OP-2129
 Connecticut Valley OP-1460
 Delaware River basin OP-1693
 Delmarva Peninsula OP-1077
 Floridan Aquifer OP-132; OP-806
 High Plains Aquifer OP-204; OP-1019
 Hudson Valley OP-1186; OP-1460
 Lake Powell OP-1476
 Mississippi River YR; OF 94-0036; OF 94-0336; OF 94-0376; OP-758; OP-1652; OP-2185
 Missouri River OF 94-0036; OP-1112; OP-1426; OP-1652
 Mount Saint Helens OP-1146
 Ohio River OF 94-0036; OF 94-0336; OP-1426
 Ozark Mountains OP-1041
 Potomac River basin OP-1365
 Powder River basin OF 94-0670; OP-185
 San Juan Mountains OP-493
 South Platte River OP-204; OP-608; OP-1796
 Proterozoic
 Blue Ridge Mountains OP-3
 Mullen Creek-Nash Fork shear zone OP-1982
 Quaternary
 OF 94-0568; OF 95-0034; OP-1057; OP-1537; OP-2199
 Cascade Range OF 95-0033; OP-2008; OP-2045
 Connecticut Valley OP-1072; OP-2164
 Gravelly Range OP-1868
 Lake Powell OP-1730
 Mississippi River OF 94-0568; OP-1936
 Mississippi Sound OF 94-0558
 Mount Adams OP-1511
 Mount Rainier OP-975; OP-1511
 Mount Saint Helens OP-467; OP-1023; OP-1511; OP-1767; OP-1952
 New Madrid region OF 94-0568; OP-946; OP-1707
 Ogallala Aquifer OP-812
 Ouachita Mountains B 2110
 Reelfoot Rift OF 94-0568
 Wasatch fault zone OF 94-0568
 Wind River Range OP-355
 Yellowstone National Park OP-902
 salt tectonics
 Paradox Basin OP-1551
 Uncompahgre Uplift OP-1551
 sedimentary petrology
 OP-1226; OP-1227; OP-2117
 Beartooth Mountains OP-1622
 Bighorn Basin OP-780; OP-1622
 Black Warrior Basin OP-1915
 Book Cliffs OP-1464
 Cascade Range OP-1182
 Four Corners B 1808-P; OP-2290
 Illinois Basin OF 94-0298; OP-1002
 Laramie Mountains OP-1622
 Newark Basin OP-2140
 Owl Creek Mountains OP-1622
 Paradox Basin B 2110; OP-1178; OP-1272; OP-2290
 Powder River basin OP-1622
 Uncompahgre Uplift OP-1178
 Wind River Range OP-1622
 sedimentary rocks OF 94-0582
 sedimentation
 Illinois Basin OF 94-0298
 Powder River basin OP-282
 San Juan Mountains OF 94-0437
 seismicity, Yellowstone National Park OP-1298
 seismology
 OP-1917; OP-2135
 Mississippi Embayment OP-405
 Mississippi River OP-1907; OP-2014
 New Madrid region P 1538-N; MF-2279; I-2521; OP-405; OP-1004; OP-1838; OP-2013; OP-2014
 Reelfoot Rift P 1538-N; OP-405
 Wasatch fault zone OF 94-0568
 Wasatch Front OP-103
 shore features, Mississippi River OP-1937
 stratigraphy
 B 2060; OP-668; OP-2148
 Bighorn Basin OP-1155
 Chesapeake Bay OP-1960
 Four Corners B 2110; OP-223
 Laramie Mountains OP-364
 Merrimack Synclinorium OP-2297
 Midcontinent B 2110; OP-766
 Mississippi Embayment MF-2284
 Newark Basin OP-1736
 Paradox Basin B 2000-L; B 2110; OP-1384
 Powder River basin OP-667
 Salisbury Embayment OF 94-0217; OF 94-0683; OF 94-0708; OP-736; OP-1412
 San Juan Mountains OF 94-0583
 Sevier orogenic belt OP-2030
 Shenandoah Valley B 2135; OF 94-0573
 Uncompahgre Uplift B 2110; OP-1384
 structural geology
 Arkoma Basin OP-598
 Bridger Range OP-480
 Bronson Hill Anticlinorium OP-782
 Cascade Range OP-1436
 Charlotte Belt OP-1908
 Chesapeake Bay OP-1959
 Culpeper Basin OP-1317
 Idaho Batholith OP-1673; OP-1863
 Illinois Basin P 1538-O; OF 94-0298
 Klamath Mountains OP-348
 Laramie Mountains OP-1232; OP-1288
 Merrimack Synclinorium OP-782
 Mississippi Embayment P 1538-E
 Mohave Mountains OP-1110
 New Madrid region P 1538-E; P 1538-O; OP-1422; OP-2272; OP-2287
 Ohio River P 1538-O
 Paradox Basin OP-1438; OP-1668
 Pine Mountain Window OP-2155
 Reelfoot Rift P 1538-E; OP-1689; OP-2272
 Sevier orogenic belt OP-744; OP-2124
 Spanish Peaks OP-480
 Tobacco Root Mountains OP-480; OP-1863
 Uncompahgre Uplift OP-1668
 Wasatch fault zone OP-1734
 Wyoming Province B 1904-T; OP-1288
 tectonics

- Cascade Range OP-1449
Paradox Basin OP-1556
tectonophysics
OP-923; OP-1306; OP-1510; OP-2003; OP-2309
Cascade Range OP-70; OP-442; OP-1357; OP-2307
Mount Shasta OP-1444
thermal waters, Mount Saint Helens OP-1756
Triassic, Dan River basin OP-925
Vertebrata
Chesapeake Bay OP-1137
Dinosaur National Monument OP-145
volcanic features, Mount Saint Helens I-2359
volcanism, Yellowstone National Park OP-1852
waste disposal
C 1108
Potomac River basin OP-1133
Shenandoah Valley OP-1133
waterways, Mississippi River OF 94-0275
weathering, Bighorn Basin OP-928
zinc ores, Illinois Basin OF 94-0298
United States Exclusive Economic Zone
Atlantic Ocean, oceanography B 2079
California
areal geology OP-2189
environmental geology C 1108
heavy mineral deposits OF 95-0587
oceanography B 2022
petroleum OP-513
Georgia
oceanography OP-585
phosphate deposits OP-399; OP-583
Pacific Ocean, oceanography B 2079
United States Geological Survey *see* U.S. Geological Survey
UNITHERM
metal ores OP-1013
University of Alaska Geophysical Institute
earthquakes OP-1058
University of California
phase equilibria OP-1609
Unkar Creek
geomorphology OP-1368; OP-2072
Quaternary OP-1287
Unzen
earthquakes EV
Upheaval Dome
structural geology OP-2111
uplifts *see also* domes; isostatic rebound.
Alabama, structural geology OP-1988
Alaska
deformation OP-479
geochronology OP-1905
petrology OP-409
Quaternary OF 94-0568
structural geology OP-1249
Antarctica, Pliocene OF 94-0588
Argentina, orogeny OP-2011
Arizona
metal ores OP-1606
neotectonics OP-709
structural geology OP-1110; OP-1380
Atlantic Coastal Plain, stratigraphy OP-1958
Basin and Range Province, tectonophysics OP-515
Bolivia, structural geology OP-2244
California
engineering geology OP-1467; OP-1585
plate tectonics OF 94-0568; OP-1431
Quaternary OF 94-0568; OP-737; OP-2006
seismology OP-1872
stratigraphy B 1995-J,K
structural geology OP-432; OP-1110; OP-1584; OP-1701
tectonophysics OP-1778
Canada, petrology OP-409
Chile, Quaternary OP-1697
Colorado, Proterozoic OP-1982
deformation OP-2187
Egypt, geophysical surveys OP-2068
Hawaii, Quaternary OP-1294; OP-1328
Idaho
crystalline rocks OP-362
stratigraphy OP-2147
Iowa, geomorphology OP-2034
Middle East, plate tectonics OF 94-0568
Mississippi Valley, geomorphology P 1538-R
Montana
crust OP-1831
crystalline rocks OP-362
neotectonics OP-1902
orogeny OF 94-0670
sedimentary petrology OP-1622
structural geology OP-480; OP-1681
Nevada
orogeny OP-619
Quaternary OP-2006
stratigraphy OP-2147
New Zealand, Quaternary OF 94-0568
ocean floors B 2022
Oregon
Quaternary OP-1945
tectonophysics OP-157
Pacific Ocean, tectonophysics OP-1656
Pakistan, sedimentary petrology OP-1386
Papua New Guinea
Quaternary OF 94-0568
tectonophysics OP-1035
Puerto Rico, neotectonics OP-2179
Rocky Mountains
structural geology OP-1232
uranium ores OF 95-0571
stratigraphy OP-2139
structural geology OP-1422; OP-1668
Tennessee, structural geology OP-1988
Utah
OP-1179
orogeny OP-619
structural geology OP-2111
Washington
crust OP-1776
earthquakes OP-1189
faults OP-2079
sedimentary petrology OP-1182
structural geology OP-1592; OP-1777; OP-1979; OP-1981
tectonophysics OP-1975
Wyoming
faults OP-476
Proterozoic OP-1982
sedimentary petrology OP-1622
structural geology OP-1681
Upper Austria
inclusions C 1129
Upper Cambrian *see* Bonnetter Formation; Conococheague Formation; Lamotte Sandstone; Mount Simon Sandstone
Upper Carboniferous *see* Bashkirian; Namurian; Stephanian; Westphalian
Upper Cracker Box School Quadrangle
maps OF 88-0612
Upper Cretaceous *see* Belle Fourche Shale; Black Creek Formation; Blackhawk Formation; Bridge Creek Limestone Member; Carlile Shale; Cenomanian; Cody Shale; Colville Group; Ferron Sandstone Member; Frontier Formation; Fruitland Formation; Greenhorn Limestone; Gulfian; Hell Creek Formation; Judith River Formation; K-T boundary; Kodiak Formation; Lance Formation; Marshalltown Formation; Mesaverde Group; Mikkendorf Formation; Navesink Formation; Niobrara Formation; Peedee Formation; Pierre Shale; Point Loma Formation; Senonian; Sharon Springs Member; Straight Cliffs Formation; Turonian; Two Medicine Formation
Upper Devonian *see* Famennian; Frasnian; Kanayut Conglomerate; New Albany Shale; Ohio Shale
upper Eocene *see* Ocala Group; Piney Point Formation; Tepee Trail Formation
Upper Jurassic *see* Brushy Basin Shale Member; Entrada Sandstone; Kimmeridgian; Morrison Formation; Naknek Formation; Portlandian; Salt Wash Sandstone Member; Smackover Formation
upper Mesozoic
Alaska OP-100; OP-1447
Upper Midwest Gap Analysis Program
ecology OF 95-0163
upper Miocene *see* Eastover Formation; Messinian; Modelo Formation; Yorktown Formation
Upper Mississippi Valley
economic geology B 2094-C
environmental geology C 1120-G
geologic hazards OP-1526; OP-1836
heat flow OP-2050
hydrogeology OF 94-0478
hydrology YR; C 1120-F; C 1120-H
lead-zinc deposits OF 94-0298; OP-792
metal ores B 2094-B; OP-888
seismology OP-2014
stratigraphy MF-2284
zinc ores OF 94-0298
Upper Mississippian *see* Chesterian; Meramecian; Serpukhovian
upper Oligocene *see* Suwannee Limestone
Upper Ordovician *see* Caradocian; Maquoketa Formation; Utica Shale
Upper Palatinate
geochemistry OP-499
upper Paleozoic *see* Antrim Shale; Bakken Formation; Calaveras Formation; Wood River Formation
Upper Peninsula, Michigan *see* Michigan Upper Peninsula
Upper Pennsylvanian *see* Ames Limestone; Missourian; Virgilian
upper Pleistocene *see* Eemian; Illinoian; Old Crow Tephra; Sangamonian; Weichselian; Wisconsinian
upper Precambrian *see* Proterozoic
upper Proterozoic *see* Lynchburg Formation
upper Quaternary *see* Bull Lake Glaciation; Pinedale Glaciation
Upper Republican Natural Resources District
hydrogeology WRI 95-4014
Upper Silesia
energy sources OP-770
lead-zinc deposits OP-908
Upper Silurian *see* Bloomsburg Formation; Cayugan

Upper Triassic *see* Camian; Chinle Formation; Dockum Group; Lockatong Formation; Petrified Forest Member; Sag River Sandstone; Shinarump Member

UPSAR

seismicity OP-889
seismology OP-277

Urals *see also* Polar Urals.

geochemistry C 1129
magmas C 1129
paleontology OP-543

uraninite

Gabon, bitumens OP-1403

uranium

Appalachians, pollution OP-1365

Arizona

hydrogeology OF 94-0356; OP-335
pollution OP-2226

California

geochemistry OP-1955
ground water WRI 95-4048

Colorado

geochemistry OP-1812
pollution C 1122; OF 94-0670; OP-1031;
OP-1466

environmental geology C 1108

Florida, sedimentary petrology OP-1710

Gabon, bitumens OP-1403

geochemistry DDS-0014; OP-973; OP-1070

ground water OP-1167

Kentucky, energy sources OF 94-0298

metal ores B 2097

Mississippi Valley, economic geology B 2094-
C

Nevada, geochemistry OP-2169

New Jersey

ground water OP-1568
pollution WRI 92-4144

New Mexico

B 2063
hydrogeology OF 94-0356; OF 94-0377;
OP-335

pollution OP-2226

Pennsylvania, pollution WRI 92-4088

Rocky Mountains, pollution OF 94-0670

Russian Federation, geochemistry C 1129

U-234/Th-230, Sahara OP-909

U-238

Atlantic Coastal Plain OP-2264
environmental geology OP-518

Florida OP-1204

pollution OP-984

thermal waters OP-1756

U-238/Pb-204

OP-1826; OP-2183

petrology OP-939

U-238/Pb-206

California OP-160; OP-321

petrology OP-938

Western Interior OP-506

U-238/Th-230, Hawaii OP-861

U-238/U-234

Basin and Range Province OF 95-0037

Bermuda OP-1732; OP-1733

Florida OP-1732; OP-1733

geochemistry OP-126

Great Basin OF 95-0037

Marshall Islands OP-1229

Micronesia OP-1229

Nevada OP-59

Sahara OP-909

Spain OP-66

Utah, mineralogy OP-288

uranium disequilibrium

Bahamas, Quaternary OP-1865; OP-1866

Basin and Range Province, Quaternary OF 95-
0037

Bermuda, Quaternary OP-1733

Chile, Quaternary OP-1697

Egypt, sedimentary petrology OP-1770

Florida, Quaternary OP-1733

Great Basin, Quaternary OF 95-0037

Hawaii, geochemistry OP-861

Montana, Quaternary OP-902

Sahara, Quaternary OP-909

Spain, geochronology OP-66

Wyoming, Quaternary OP-902

uranium mines

Arizona, environmental geology WRI 94-4192

New Mexico, environmental geology WRI 94-
4192

uranium ores *see also* sandstone-type.

B 2097

Alaska

B 2098

environmental geology C 1108

geochemistry B 2107

Arizona OF 94-0566

Canadian Shield OP-2126

Colorado B 2116; OF 95-0242

environmental geology OP-518

Great Britain OP-2126

Idaho P 1525

Montana OP-2225

New Jersey OP-290; OP-1379

New Mexico B 2063; OP-601

New York OP-290; OP-1379

Rocky Mountains OP-1366

South Dakota OP-267

Utah OF 94-0417

Wyoming OP-1030

uranium-lead *see* U/Pb

uranium-series method *see* uranium disequilibrium

uranium-thorium *see* Th/U

Uranus *see also* planetary rings.

I-2410

urellite

petrology OP-939

Uruguay

ichnofossils OP-311

Urumqi River

hydrology OP-1003

USBM *see* U. S. Bureau of Mines

Usquepaug Rhode Island

hydrogeology OF 95-0305

Usu

Quaternary OP-1952

Utah *see also* Chainman Shale; Chinle Formation; Claron Formation; Colorado River; Cutler Formation; Entrada Sandstone; Ferron Sandstone Member; Green River Formation; Guilmette Formation; Kaibab Formation; Lake Powell; Mancos Shale; Moenkopi Formation; Navajo Sandstone; Paradox Basin; Phosphoria Formation; Salt Wash Sandstone Member; San Juan River; Shinarump Member; Toroweap Formation; Uinta Basin; Uncompahgre Uplift; Wasatch fault zone; Wasatch Front; Western Interior Seaway.

areal geology

Canyonlands National Park OP-1179

Garfield County Utah B 2056

Iron County Utah B 2056

Kane County Utah B 2056

Washington County Utah B 2056

coal C 1108

conservation

Arches National Park OF 94-0670

Grand County Utah OF 94-0670

economic geology, Marysville Utah OP-189

energy sources

C 1108; OP-1714

Emery County Utah B 2000-H

Grand County Utah B 2000-H

San Juan County Utah B 2000-H

Wayne County Utah B 2000-H

environmental geology

Arches National Park OF 94-0560

Grand County Utah OF 94-0560

Eocene OP-105

faults

OP-1740; OP-1842

Henry Mountains OP-1390

geochemistry

Box Elder County Utah B 1988-K

Iron County Utah B 2056

Tooele County Utah B 1988-K

Washington County Utah B 2056

geochronology OP-1142

geomorphology, Washington County Utah
OF 95-0515

geophysical surveys

DDS-0031; OF 94-0285; OF 94-0286;
OF 94-0287; GP-1012; OP-1835

Juab County Utah OF 93-0397-A; OF 93-
0397-B; OF 94-0296

Tooele County Utah OF 93-0397-A; OF 93-
0397-B; OF 94-0296

Washington County Utah OF 94-0676

ground water

Box Elder County Utah WRI 93-4221

Cache County Utah WRI 93-4221

Morgan County Utah WRI 93-4221

Salt Lake County Utah WRI 93-4221; OP-
316

Utah County Utah WRI 93-4221

Weber County Utah WRI 93-4221

hydrogeology

OF 94-0309; OF 95-0138; OP-1123

Beaver County Utah WRI 95-4072

Bonneville Salt Flats OF 95-0104

Box Elder County Utah WRI 93-4028;
OF 95-0104

Carbon County Utah WRI 95-4025

Garfield County Utah OF 95-0340

Great Salt Lake WRI 93-4028

Juab County Utah OF 95-0101

Tooele County Utah WRI 93-4028

Utah County Utah WRI 93-4219

hydrology

San Juan County Utah WRI 94-4041

Washington County Utah WRI 94-4159

Invertebrata

Canyonlands National Park OP-1479

San Juan County Utah OP-1479

magmas, Juab County Utah C 1129

maps

Cache County Utah I-2210

Carbon County Utah I-2462

Duchesne County Utah I-2462

Emery County Utah I-2462

Garfield County Utah OF 95-0009

Juab County Utah I-2462

Millard County Utah OF 95-0010

Rich County Utah I-2210

- San Juan County Utah GQ-1722
 Sanpete County Utah I-2462
 Sevier County Utah I-2462
 Utah County Utah I-2462
 Wasatch County Utah I-2462
 Washington County Utah GQ-1759
- metal ores
 Grand County Utah OF 94-0417
 Juab County Utah OF 94-0270-A; OF 94-0270-B
 San Juan County Utah OF 94-0417
 Tooele County Utah OF 94-0270-A; OF 94-0270-B
- mineral inventory
 Juab County Utah OP-289
 Thomas Range OP-289
- mineralogy
 Juab County Utah OP-288; OP-1377; OP-1518
 Thomas Range OP-288; OP-1377; OP-1518
- Miocene
 Iron County Utah B 2056
 Washington County Utah B 2056
- molybdenum ores
 OP-1725
 Beaver County Utah OP-849
- natural gas OF 94-0022-I
- neotectonics, Iron County Utah B 2056
- orogeny, Oquirrh Mountains OP-619
- petroleum
 Canyonlands National Park B 2000-J
 Garfield County Utah B 2000-J
 Wayne County Utah B 2000-J
- Quaternary
 Box Elder County Utah OF 94-0568
 Iron County Utah B 2056
 Millard County Utah OP-1273
 Salt Lake County Utah OF 94-0568
 Wasatch County Utah OF 94-0568
- sedimentary petrology
 Grand County Utah OF 94-0670
 San Juan County Utah B 2110
 Wasatch Plateau OP-1464
- sedimentation
 Kaiparowits Plateau B 2115-A
 Kane County Utah B 2115-A
- stratigraphy
 B 2110; OP-507
 Grand County Utah B 2000-L
 Kaiparowits Plateau B 2115-B
 Kane County Utah B 2115-B
 Millard County Utah OF 95-0001
 San Juan County Utah B 2000-L; B 2110
 Sevier Desert OF 95-0001
- structural geology
 OP-2111
 Carbon County Utah P 1528
 Emery County Utah P 1528; OF 95-0491
 Garfield County Utah OF 95-0491
 Juab County Utah P 1528
 Millard County Utah P 1528; OP-695
 Provo Utah OP-1734
 San Rafael Swell OF 95-0491
 Sanpete County Utah P 1528
 Sevier County Utah P 1528; OF 95-0491
 Sevier Desert OP-695
 Tooele County Utah OP-744
 Utah County Utah P 1528
 Wayne County Utah OF 95-0491
- tectonics
 Marysville Utah OP-1283
 San Rafael Swell OP-1292
- tectonophysics OP-1669
- Vertebrata, Uintah County Utah OP-145
- Utah Lake
 hydrogeology WRI 93-4219
- Ute Mountain Ute Indian Reservation
 energy sources C 1108
- Utica Shale
 energy sources OP-2057
- Uwekahuna Ash Member
 petrology OP-234
- V
- V *see* vanadium
- Vadnais Lake Minnesota
 hydrogeology WRI 94-4062
- Val d'Or Quebec
 gold ores OF 94-0228
- Val Verde Quadrangle
 maps OF 95-0504
- Valdez Group
 metamorphism OP-39
 sedimentary petrology OP-1361
- Valdez Quadrangle
 metal ores B 2084
- Valdosta Georgia
 hydrogeology OF 94-0350
- Vale Oregon
 environmental geology WRI 93-4156
- Valencia Trough
 sedimentary petrology OP-1877
- Valentian *see* Llandoveryan
- Valle Grande Mountains
 geochemistry B 2081
 petrology OP-840
 Quaternary OP-1575
- Valles Caldera
 geochemistry B 2081
 geochronology OP-443
 stratigraphy OP-1736
- Valles Marineris OP-35; OP-559; OP-916; OP-1728; OP-1729
- Valley and Ridge Province
 ground water WRI 94-4189
 hydrogeology OP-1819
 hydrology FS 94-0019
- valley fever
 California, engineering geology OP-1585
- Valley Heads Moraine
 Quaternary WRI 90-4168
- Valley of Ten Thousand Smokes
 geochemistry OF 95-0047
 Quaternary OP-2292
 volcanism OP-496
- Valley View Hot Springs KGRA
 hydrogeology OF 95-0569
- valleys
 OP-33; OP-259
 California
 earthquakes OF 95-0022; OP-430
 Quaternary OF 94-0568
 Colorado, fluvial features OP-1743
 Great Lakes, stratigraphy OP-436
 Hawaii, geologic hazards OF 95-0218
 New York, ground water WRI 93-4004
 Utah, hydrogeology OP-1123
- Valmy Formation
 sedimentary petrology OP-1404
- Van Horn Texas
 paleomagnetism OP-1350
- vanadium
 California
 environmental geology C 1108
 geochemistry OP-1955
 Colorado
 metal ores B 2116
 pollution OP-1082
 geochemistry OP-1070
 Gulf of California, sedimentation OP-1987
 Kentucky, energy sources OF 94-0298
 New Mexico, uranium ores B 2063
 Western Interior, stratigraphy OP-2063
- vanadium ores
 Arizona OP-1606
 Colorado OP-98
 Idaho P 1525
 New Mexico B 2063
- Vancouver Island
 faults OP-248
 Quaternary OF 94-0568
 tectonophysics OP-2265
- Vancouver Washington
 environmental geology OF 95-0652
 geophysical surveys OP-72; OP-404
 hydrogeology WRI 92-4010
- Vandercreek Lake
 hydrogeology OP-992
- Vanport Limestone Member
 stratigraphy OP-768
- Vanuatu
 oceanography OP-338
 plate tectonics OP-162; OP-336; OP-337
 stratigraphy OP-275
- vapor extraction, soil *see* soil vapor extraction
- Vaqueros Formation *see* Soda Lake Shale Member
- Variscan Orogeny *see* Hercynian Orogeny
- Variscides
 geochemistry C 1129
 inclusions C 1129
 magmas C 1129
 metasomatism C 1129
 petrology C 1129
- varves
 Israel, Quaternary OF 94-0568
 Minnesota, Quaternary OF 94-0578; OP-1290
 New England, Quaternary OP-2163
 Pacific Coast, Quaternary OP-1401
- Vassar Meadow Study Area
 pollution C 1122
- Vastergotland
 stratigraphy OP-386
- Vaughn Member
 geochronology B 2113
- Vega Alta Puerto Rico
 ground water OF 93-0466
- veins *see* quartz veins
- velocimeters
 geophysical surveys OP-1450
- Venezuela
 environmental geology YR
 hydrogeology, Aves Island WRI 93-4219
 Invertebrata OP-684
 maps
 OF 95-0493
 Apure Guarico Plain MF-2247
 Bolivar Venezuela MF-2246; MF-2247
 Guarico Venezuela MF-2247
 stratigraphy, Orinoco Delta OP-1150
 Venezuelan Islands *see* Aves Island

- Veniaminof**
geologic hazards OP-2257
Quaternary OF 95-0061-A; OF 95-0061-B;
OF 95-0271; OP-2021; OP-2292
- Venice Clay**
stratigraphy OP-2295
- Venice Florida**
stratigraphy OF 95-0003
- venting, soil *see* soil venting
- Ventura Basin**
geochemistry P 1566
natural gas OP-1121
Quaternary OF 94-0568
- Venus** B 2129; OF 95-0519; OF 95-0561; OP-470; OP-1587; OP-1644; OP-1662; OP-1845; OP-1846; OP-2069
- Veracruz Mexico**
guidebook OP-838
- Verde Valley**
non-metal deposits OF 95-0031
- Verdigris Formation**
stratigraphy OP-1324
- verification**
Arkansas, hydrology WRI 94-4216
Florida, ground water WRI 94-4076
Mariana Islands, hydrology WRI 93-4116
Micronesia, hydrology WRI 93-4116
Minnesota, hydrology WRI 94-4058
New Mexico, hydrology WRI 94-4143
North Dakota, hydrology WRI 94-4058
- Vermes** *see* worms
- Vermillion Range**
Precambrian OP-886
- Vermont** *see also* Ammonoosuc Volcanics; Barre Granite; Connecticut Valley; Gile Mountain Formation; Littleton Formation.
areal geology OP-1253
earthquakes OF 94-0643
geochemistry C 1129
ground water
P 1415-A; OP-937
Addison County Vermont WRI 94-4108
hydrogeology, Caledonia County Vermont OP-1194; OP-1631
hydrology
OP-1632
Caledonia County Vermont OF 94-0475
maps
Bennington County Vermont OF 94-0262;
OF 95-0483-A; OF 95-0483-B
Caledonia County Vermont OF 94-0410
Essex County Vermont OF 94-0410
Rutland County Vermont OF 94-0225-A;
OF 94-0225-B
Windsor County Vermont OF 94-0225-A;
OF 94-0225-B; OF 94-0654-A; OF 94-0654-B; OF 95-0203-A; OF 95-0203-B
metal ores OP-2126
mineral resources OP-718
pollution
Addison County Vermont OF 94-0472
Chittenden County Vermont OF 94-0472
Franklin County Vermont OF 94-0472
Proterozoic, Rutland County Vermont B 2060
soils OP-529
stratigraphy
Rutland County Vermont B 2060
Windsor County Vermont B 2060
structural geology OP-1997
- Vermont copper belt**
metal ores OP-869; OP-870
- mineral resources OP-718
- Vernalis California**
pollution OF 95-0110
- Verneullia**
Invertebrata OP-76
- Vertebrata *see* Tetrapoda
- vertebrates** *see also* fish; tetrapods.
Alaska OP-296
- vertical gradient methods *see* vertical-gradient methods
- vertical seismic profiles** *see also* seismic logging.
Alaska, structural geology OP-304
Antarctic Ocean, Quaternary OP-246
Arctic Ocean, tectonophysics OP-445
Arizona, neotectonics OP-709
Arkansas, deformation P 1538-J
California, geophysical surveys OF 94-0568;
OF 94-0590; OF 94-0639; OF 95-0228;
OF 95-0275
Hungary, stratigraphy OP-951
Illinois, faults P 1538-Q
Indiana, structural geology P 1538-O
Kentucky, faults P 1538-Q
Mississippi Valley, seismology P 1538-N
Missouri, geophysical surveys P 1538-P
New Mexico, tectonophysics OF 94-0695
Pacific Ocean
heat flow B 2022
ocean floors B 2022
Russian Federation, geophysical surveys
OF 94-0263
Tennessee, faults P 1538-I
Tyrrhenian Sea, Quaternary OP-942
- vertical-component seismographs**
seismology OF 91-0635
- vertical-gradient methods**
New Mexico, hydrogeology WRI 94-4125
- Vertisols**
Pennsylvanian OP-1228
- very long baseline interferometry**
structural geology OP-1007
- Vesuvian garnet *see* leucite
- Vesuvius**
fluid inclusions OP-950
- VFLOW** OP-1587
- Viburnum Trend**
lead-zinc deposits B 1989-F
- Victoria Australia** *see also* Lachlan fold belt.
geochemistry, Gippsland Australia C 1129
- Victoria Land**
geophysical surveys OP-560
hydrology OF 94-0545
neotectonics OP-1103
Pliocene OF 94-0588
Quaternary P 1386-B
- Victorville Quadrangle**
geophysical surveys OF 95-0016
- videoconferencing** YR
- Vienna Pee Dee belemnite**
geochemistry OP-175
- Vietnam**
petrology OP-1574
- Vigil Network**
geomorphology OP-694
- Vigo Seamount**
Cretaceous OP-1161
- Viopull Ignimbrite Member**
stratigraphy OP-353
- Virgelle Sandstone**
ground water OP-1215
- Virgil Creek valley**
Quaternary WRI 90-4168
- Virgilian**
Nebraska B 2110
New Mexico OP-21
Wyoming B 2110
- Virgin Islands** *see also* U. S. Virgin Islands.
plate tectonics OP-1304
- Virgin Mountains**
fluvial features OP-2289
- Virgin River valley**
fluvial features OP-2289
geomorphology OF 94-0670; OF 95-0515
hydrology WRI 94-4159; WRI 94-4210; OP-1516
- Virginia** *see also* Appalachian Basin; Appalachian Plateau; Ashe Formation; Baltimore Gneiss; Blue Ridge Mountains; Blue Ridge Province; Calvert Formation; Catoclin Formation; Chesapeake Bay; Chesapeake Group; Choptank Formation; Culpeper Basin; Delmarva Peninsula; Eastover Formation; Glenarm Series; Lynchburg Formation; New River; Ocoee Supergroup; Piedmont; Potomac River; Saint Marys Formation; Salisbury Embayment; Valley and Ridge Province; Yorktown Formation.
FS 0046-95
coal C 1108; OF 95-0572
conservation, Arlington County Virginia
OF 94-0592
continental margin I-1987-D
energy sources C 1108
engineering geology
Hanover County Virginia WRI 94-4164
Pamunkey River WRI 94-4164
environmental geology, Loudoun County Virginia OP-882
faults OF 94-0298; OP-2271
geophysical surveys
Brunswick County Virginia OF 94-0253
Charlotte County Virginia OF 94-0253
Dinwiddie County Virginia OF 94-0253
Greensville County Virginia OF 94-0253
Halifax County Virginia OF 94-0253
Mecklenburg County Virginia OF 94-0253
Southampton County Virginia OF 94-0253
Sussex County Virginia OF 94-0253
ground water
OF 94-0370
Accomack County Virginia W 2401
King George County Virginia OF 94-0301
Northampton County Virginia OP-376
York County Virginia WRI 92-4111
hydrogeology
FS 94-0057
Northampton County Virginia OP-678
hydrology
Brunswick County Virginia WRI 94-4140
Charles City County Virginia WRI 94-4225
Hanover County Virginia WRI 94-4225
Henrico County Virginia WRI 94-4225
New Kent County Virginia WRI 94-4225
Rappahannock River WRI 94-4042
magmas
Culpeper County Virginia P 1529
Louisa County Virginia P 1529
Orange County Virginia P 1529
maps
Arlington County Virginia GQ-1748
Charlotte County Virginia OF 95-0004
Fairfax County Virginia GQ-1748
Loudoun County Virginia GQ-1755

- Lunenburg County Virginia OF 95-0004
 Mecklenburg County Virginia OF 94-0629
 Mesozoic, Brunswick County Virginia OP-1399
 metal ores B 2097
 mineral resources OF 95-0045
 natural gas C 1108
 Ordovician
 Arlington County Virginia B 2060
 Fairfax County Virginia B 2060
 Pennsylvanian OP-1737
 petrology C 1129
 Proterozoic
 Albemarle County Virginia B 2060
 Culpeper County Virginia B 2060
 Fauquier County Virginia B 2060
 Grayson County Virginia OP-3
 Greene County Virginia B 2060
 Loudoun County Virginia OP-3
 Orange County Virginia B 2060
 Smyth County Virginia OP-3
 stratigraphy
 B 2135
 Augusta County Virginia B 2135
 Clarke County Virginia B 2135; OF 94-0573
 Frederick County Virginia B 2135; OF 94-0573
 New Kent County Virginia OF 94-0217
 Page County Virginia B 2135
 Rockingham County Virginia B 2135
 Shenandoah County Virginia B 2135; OF 94-0573
 Warren County Virginia B 2135
 structural analysis, Smyth County Virginia OP-1091
 structural geology
 Brunswick County Virginia OP-2062
 Goochland County Virginia OP-2062
 Mecklenburg County Virginia OP-1199; OP-1536
 tectonophysics OP-413
 Triassic, Danville Virginia OP-925
- Visean**
 B 2110; OP-809
 Kazakhstan OP-1258
- visualization**
 YR; B 2103; OF 95-0593
 California
 hydrogeology OP-1281
 ocean floors OP-2150
 geologic hazards OP-1052; OP-1053
 geomorphology YR
 Massachusetts, pollution OP-1765
 Nevada, hydrogeology OP-1281
 Oregon, geophysical surveys OP-459
 Sweden, waste disposal OP-2235
- vitrain**
 Kentucky
 geochemistry OP-2053
 sedimentary petrology OP-1950
 sedimentary petrology OP-2025
- vitrinite**
 Alaska
 deformation OP-1250
 energy sources OP-65
 stratigraphy OP-1439
 Appalachians, sedimentary petrology OP-528
 Belarus, structural geology OP-948
 California
 energy sources OF 95-0530
 natural gas OP-542
- Colorado
 energy sources OP-297
 sedimentary petrology OP-1373
 energy sources OF 94-0298
 geophysical surveys OP-1898
 Illinois, pollution OP-702
 Maryland, pollution OP-702
 Mexico, sedimentary petrology OP-1932
 Nevada, geochemistry OP-794
 New Mexico, sedimentary petrology OP-1373
 Rocky Mountains, sedimentary petrology OP-528
 Ukraine, structural geology OP-948
 Utah, energy sources OP-297
 Wyoming
 energy sources OP-677
 sedimentation OF 94-0670
- vitrophyre**
 Idaho, geochemistry OP-716
 Pacific Ocean OP-2266
- Vitus Lake**
 hydrology OP-1429; OP-1833
- Vivero Spain**
 geochemistry C 1129
- VLBI *see* very long baseline interferometry
 volatile matter *see* volatiles
- volatile organic compounds**
 Appalachians, pollution OP-1365
 Connecticut, pollution OP-1460
 hydrogeology OF 94-0708-W
 Illinois, pollution WRI 94-4034
 Iowa, pollution OP-982
 Louisiana, hydrology WRI 92-4181
 Massachusetts, pollution OP-37; OP-1460
 Mississippi Valley, environmental geology C 1120-G
 New Mexico, environmental geology OF 94-0547
 Ohio, pollution OF 95-0371
 Oregon, hydrology OF 95-0373
 Pennsylvania, hydrogeology OF 94-0381
 pollution FS 0114-95
 Texas, pollution OP-2009
 OP-259; OP-486; OP-880
- volatiles**
 Alaska, Quaternary OP-1854
 British Columbia, petrology OP-1509; OP-1847
 California
 oceanography OP-1410
 petrology OP-1211
 seismology OP-1514
 Canada, ground water OP-937
 Colorado, molybdenum ores OP-849
 geochemistry C 1129
 Hawaii
 hydrogeology OP-2076
 petrology OP-1307
 magmas OP-2122
 Nevada, gold ores OP-1245
 petrology OP-1437
 Quaternary OP-2174
 United States, ground water OP-937
 Utah, molybdenum ores OP-849; OP-1725
- volcanic arcs** *see* island arcs
volcanic ash *see* also volcanoclastics.
 Alaska
 geologic hazards OP-2318
 geophysical surveys B 2139
 palynomorphs OP-184
 petrology B 2139
 Quaternary OP-772; OP-1920
- Arizona, sedimentation OP-2023
 California, Pliocene OP-2061
 Colorado, sedimentation OP-1690
 Costa Rica, Quaternary OP-1952
 Guatemala, Quaternary OP-1952
 Idaho, pollution OP-1146
 Indonesia, Quaternary OP-1952
 Japan, Quaternary OP-1952
 Papua New Guinea, Quaternary OP-1952
 petrology OP-989
 Philippine Islands, Quaternary OP-1952
 Utah, palynomorphs OP-184
 Washington
 geochemistry OP-1407
 pollution OP-1146
 Quaternary OP-1952
 sedimentary petrology OP-1042
 Yukon Territory, Quaternary OP-772
- volcanic bombs**
 Alaska, petrology B 2139
- volcanic breccia**
 Nevada, geochemistry B 1988-K; B 2056
 Utah, geochemistry B 1988-K
- volcanic clay** *see* bentonite
- volcanic earthquakes**
 OP-464
 Alaska
 B 2139; OP-786; OP-1978
 glacial geology B 2139
 California
 OP-255; OP-654; OP-1356
 Quaternary OP-2142
 Chile OP-1071
 Hawaii
 OP-323; OP-1241; OP-1649; OP-1911
 geologic hazards OP-696
 Quaternary DDS-0024
 Indonesia OP-1498
 Japan OP-2007
 Mariana Islands, geologic hazards OF 94-0705
 Micronesia, geologic hazards OF 94-0705
 Papua New Guinea, geologic hazards OP-1720
 Rocky Mountains, geologic hazards OF 95-0059
- volcanic features** *see* also calderas; cinder cones; lava tubes; maars; volcanic necks; volcanoes.
 OP-470
 Antarctic Ocean, Quaternary OP-54
 California
 OP-305
 volcanism OP-531
 economic geology OP-250; OP-251
 Hawaii, ocean floors OP-1230
 volcanism I-2291-C
 Washington I-2359
- volcanic fields**
 Bolivia, petrology C 1129
 California
 OF 92-0179; OF 92-0181; OF 92-0182;
 OF 92-0183
 petrology OF 95-0585; OP-708
 volcanic features OP-305
 Hawaii, petrology OP-1307
 Idaho OF 94-0659
 Nevada
 Eocene OP-105
 geochemistry P 1559; B 1988-K
 geochronology B 2081
 volcanism OP-1388
 Texas, Oligocene OF 94-0227
 Utah
 Eocene OP-105

- geochemistry B 1988-K
Washington
I-2460
Holocene OP-1513
Yemen, geochemistry OP-1079
- volcanic glass**
Alaska
B 2139
geochemistry B 2139
Quaternary OP-774
California, geochronology OF 94-0587
East Pacific Ocean Islands OP-390
Hawaii
Quaternary OP-639
sedimentary petrology OP-1102
Idaho, geochemistry OP-716
Mexico, geochronology OF 94-0587
Pacific Coast, Quaternary OF 95-0034
Pacific Ocean, geochemistry B 2022
- volcanic necks**
New Zealand, petrology OP-1542
Oregon, petrology OP-2172
- volcanic risk**
Alaska
earthquakes EV
Quaternary OP-772
California, environmental geology OP-261
geologic hazards OF 94-0585
Hawaii
geologic hazards OP-696
geophysical surveys OF 94-0288
Idaho, Quaternary OF 94-0686
Japan, earthquakes EV
Mariana Islands, geologic hazards OF 91-0320;
OF 94-0705
Micronesia, geologic hazards OF 91-0320;
OF 94-0705
Oregon
earthquakes EV
geophysical surveys OP-72
Papua New Guinea, geologic hazards OP-1720
Rocky Mountains, geologic hazards OF 95-0059
Washington
environmental geology OF 95-0498
geologic hazards P 1547
geophysical surveys OP-72
Yukon Territory, Quaternary OP-772
- volcanic rocks** *see also* andesites; basalts; dacites; glasses; lava; phonolites; pyroclastics; rhyolites; trachyandesites; trachytes; volcanic fields; volcanism; volcanoes.
OP-1487
Alaska
OP-40; OP-100
geothermal energy OP-627
metal ores OP-1169; OP-1195
tectonophysics OP-408
Antarctica, tectonophysics OP-55; OP-245
Arizona
OF 94-0670; OF 95-0263
geochemistry B 2021-E
Miocene OP-669
stratigraphy OP-350
California
I-2362; OP-319
gold ores OF 94-0640-A; OF 94-0640-B
ground water OP-1362
Miocene OP-669
Canada, metal ores OP-1169
Canadian Shield, metal ores OP-2126
Colorado, stratigraphy OF 94-0583
Great Britain, metal ores OP-2126
Idaho P 1525
Nevada
geochemistry OP-2326
ground water OP-1362
mineral resources OF 95-0248
orogeny OP-619
petroleum OP-1470
structural geology OP-1944
New Mexico OF 94-0670; OF 95-0263
Oregon OF 95-0219
Pacific Ocean, metal ores OP-1080
Spain, gold ores OF 95-0221
Utah
faults OP-1842
orogeny OP-619
Victoria Australia C 1129
Washington, geophysical surveys OP-1821
Wyoming
OP-280
structural geology OP-1288
volcanic tremors *see* volcanic earthquakes
volcanicity *see* volcanism
- volcaniclastics**
Alabama, stratigraphy OP-386
Alaska
Proterozoic OP-1624
Quaternary OP-2292
Bolivia, structural geology OP-2244
California
petrology OP-1315
sedimentation OF 94-0577
Colorado, Proterozoic OP-1982
Hawaii, engineering geology OF 94-0638
Idaho
geochemistry OP-716
gold ores P 1525
structural geology OP-1581
Montana, geochronology B 2113
Nebraska, geochemistry OF 94-0292
Nevada
Miocene OP-1408
stratigraphy OF 94-0460; OF 95-0102
Oregon
economic geology B 1738-E
geochemistry OF 95-0040
metal ores OF 94-0666
petrology OP-1315
sedimentary petrology B 2108
Pacific Coast, Quaternary OF 95-0034
Philippine Islands, Quaternary OP-1886
Sweden, stratigraphy OP-386
Virginia, petrology C 1129
Washington
GQ-1681
petrology OP-2173
Wyoming
OP-280
paleomagnetism OP-403
Proterozoic OP-1982
sedimentary petrology OP-936
Yukon Territory, Proterozoic OP-1624
- volcanics** *see* volcanic rocks
- volcanism** *see also* ash falls; calderas; eruptions; explosive eruptions; fumaroles; lahars; lava; phreatomagmatism; plinian-type eruptions; pyroclastic flows; shield volcanoes; submarine volcanoes; volcanic features; volcanic fields; volcanic risk; volcanoes.
OP-1844; OP-1852; OP-2103
Alaska
I-2272; OP-632
geochemistry OP-23
Antarctic Ocean, neotectonics OP-1103
Arizona
Quaternary OF 95-0591
sedimentation OP-2023
structural geology OP-1110
Basin and Range Province, tectonophysics OP-814
California
economic geology OP-216
geochronology OP-625
structural geology OP-1110; OP-1462
tectonophysics OP-1444; OP-1778
Canada, tectonophysics OP-2265
China, seismology OF 95-0562
Hawaii, environmental geology OF 94-0553
Idaho
OP-1674
neotectonics OF 94-0568
structural geology OP-1581
Iran OP-154
Kenya, tectonophysics OP-478
Mexico OP-827
Montana, geochronology B 2113; OP-1517
Oregon, tectonophysics OP-1444
Pacific Ocean, ocean floors B 2022
stratigraphy OP-1418
United States, tectonophysics OP-2265
Utah, tectonics OP-1283
Wyoming, geochronology OP-1517
Yemen, geochemistry C 1129
- Volcano Disaster Assistance Program**
geologic hazards OP-1720
- volcanoes** *see also* Alba Patera; ash falls; Augustine; El Chichon; Fuego; hot spots; Hualalai; Irazu; Katmai; Kilauea; Krakatoa; Lassen Peak; Makushin; Mauna Kea; Mauna Loa; Medicine Lake; Merapi; Mount Pinatubo; Mount Rainier; Mount Saint Helens; Newberry Volcano; Novarupta; Pacaya; Pavlof; plugs; Poas; Puu Oo; Redoubt; Sakura-jima; shield volcanoes; stratovolcanoes; Stromboli; submarine volcanoes; Surtsey; Usu; Vesuvius; volcanic earthquakes.
OP-1845; OP-1873
Alaska
geochemistry B 2139
geologic hazards B 2139
geomorphology B 2072
geophysical surveys B 2139
hydrology B 2139
petrology B 2139; OP-1822
Quaternary B 2107; B 2139; OF 94-0614;
OF 95-0520; OP-628; OP-774; OP-1406;
OP-1790; OP-1920; OP-1921; OP-2260
seismicity OP-609
seismology OP-458
volcanic features B 2139
British Columbia, petrology OP-1509; OP-1847
California, environmental geology OP-261
Canada, geologic hazards B 2139
East Pacific Ocean Islands, petrology OP-128
engineering geology OP-1569
environmental geology GP-1011
Galapagos Islands, petrology OP-128
geologic hazards OF 94-0585; OF 95-0231;
OP-2240
geomorphology OP-721
Hawaii
geologic hazards OP-1523
geomorphology OP-1570

- paleomagnetism OP-1522
 Quaternary OP-441; OP-2315
 Iceland, Quaternary OF 95-0500
 Kenya, geochemistry C 1129
 Mariana Islands, geologic hazards OF 91-0320
 Micronesia, geologic hazards OF 91-0320
 Oregon, geologic hazards OP-2088
 Pacific Ocean
 geologic hazards OP-2191
 seismology OP-1329
 plate tectonics SM
 sedimentary petrology OP-1885
 Washington
 environmental geology OF 95-0498
 geologic hazards OP-1330
 volcanology *see* ash falls; calderas; craters; eruptions; explosive eruptions; fumaroles; lava; phreatomagmatism; plinian-type eruptions; strombolian-type eruptions; submarine volcanoes; volcanic earthquakes; volcanic features; volcanic rocks; volcanism
 volume susceptibility (magnetic) *see* magnetic susceptibility
 volunteerism YR
 Volyno-Azov Massif *see* Ukrainian Shield
 Vosges Mountains
 geochemistry C 1129
 magmas C 1129
 Voyager 1 OP-1782 I-2410
 Voykar Ophiolite
 geochemistry OP-843
 vulcanism *see* volcanism
 vulcanology *see* volcanology
 vulnerability, aquifer *see* aquifer vulnerability

W

- W *see* tungsten
 Wabash Valley
 earthquakes OF 94-0298
 engineering geology OP-1859
 faults OF 94-0298
 geologic hazards OF 94-0663
 seismology OP-1451
 structural geology P 1538-O; OF 94-0298
 Waccamaw River
 hydrology WRI 95-4111
 Waccasassa Bay
 continental shelf OP-1425
 wackestone
 stratigraphy OP-1558
 Wadati-Benioff Zone *see* Benioff zone
 Walanae
 paleomagnetism OP-1522
 Wairarapa
 Quaternary OF 94-0568
 Wairau Fault
 Quaternary OF 94-0568
 Waits River Formation
 hydrogeology OP-1194
 Walachia *see* Tismana Romania
 Wales
 geochemistry, Anglesey Wales C 1129
 Walker Lake
 hydrology FS 0115-95
 Walker Lane
 metal ores B 2081
 Walker River
 hydrology FS 0115-95
 wall rocks
 California
 geochemistry OP-753
 magmas C 1129
 metamorphism OP-319
 structural geology OP-1462
 Colorado, pollution OP-1957
 geochemistry C 1129
 Illinois, non-metal deposits OP-729
 Italy, petrology C 1129
 Japan, petrology C 1129
 Kentucky, non-metal deposits OP-729
 magmas C 1129
 metal ores OP-870; OP-1013
 Nevada
 geochemistry OP-2326
 orogeny OP-619
 Oman, geochemistry OP-753
 Saudi Arabia, geochemistry OP-753
 Utah, orogeny OP-619
 wall-rock alteration
 C 1129
 Colorado, metal ores OP-733
 Spain, metal ores OP-22
 Walla Walla River valley
 ground water WRI 89-4179
 Quaternary OP-679; OP-680
 Wallowa Mountains
 petrology OP-1590
 tectonophysics OP-361
 wallrock alteration *see* wall-rock alteration
 wallrocks *see* wall rocks
 Walnut Creek watershed
 pollution OP-1485
 Walnut Gulch Experimental Watershed
 hydrogeology OP-521
 Waloomsac Formation
 structural geology OP-782
 Waltham Shale
 stratigraphy OP-1341
 Waltman Shale Member
 areal geology OP-279
 energy sources C 1108; OP-677; OP-1942
 sedimentary petrology OP-456
 Walton, John
 paleobotany OP-644
 Wanakah Formation
 stratigraphy OF 94-0583
 wandering, polar *see* polar wandering
 Wapiti Formation
 sedimentary petrology OP-936
 Ward Valley Waste Disposal Site
 waste disposal OP-2291
 Warren Aquifer
 hydrogeology OF 95-0313
 Warren Quadrangle
 ground water WRI 87-4136
 Warrior coal field
 sedimentary petrology OP-1915
 Warsaw Formation
 metal ores B 1989-G
 petroleum OF 94-0298
 Wasatch fault zone
 faults OF 94-0228
 neotectonics OP-1494
 Quaternary OF 94-0568
 seismology OF 94-0568
 structural geology OP-1734
 Wasatch Front
 ground water WRI 93-4221

- neotectonics OP-1494
 seismology OP-103
 Wasatch Plateau
 sedimentary petrology OP-1464
 Washakie Point Till
 Quaternary OP-1583
 Washakie Range
 areal geology OP-280
 deformation OP-283
 Washington *see also* Cascade Range; Coast Ranges; Columbia River; Columbia River Basalt Group; Columbia River basin; Deschutes River; Grays Harbor; Lake Missoula; Mazama Ash; Mount Adams.
 bibliography, Skagit County Washington OF 94-0403
 dams, Mount Saint Helens OP-2038
 earthquakes, Puget Sound OP-1189
 engineering geology
 OP-1859
 Mount Rainier OP-1367
 Mount Saint Helens OP-19; OP-1367
 Seattle Washington OP-1367
 environmental geology
 Chelan County Washington OF 95-0230
 Cowlitz County Washington OF 95-0652
 King County Washington HA-0729
 Lincoln County Washington OF 95-0195
 Mount Rainier HA-0729
 Puget Lowland HA-0729
 Stevens County Washington OF 95-0195
 Vancouver Washington OF 95-0652
 Whatcom County Washington OF 95-0498
 Eocene
 King County Washington B 2085-A
 Puget Lowland B 2085-A
 faults, Olympic Mountains OP-2079
 geochemistry
 Chelan County Washington OF 94-0680-A;
 OF 94-0680-B
 King County Washington WRI 94-4047;
 OF 94-0670
 Mount Saint Helens OP-315; OP-1407
 Puget Lowland WRI 94-4047
 geologic hazards
 OF 94-0663
 Clark County Washington OF 94-0589
 Cowlitz County Washington OF 94-0589
 Grays Harbor County Washington OF 94-0589
 Lewis County Washington OF 94-0589
 Mount Rainier YR; P 1547; OP-674; OP-1163; OP-2329
 Mount Saint Helens OF 95-0085; OP-674
 Pacific County Washington OF 94-0589
 Puget Lowland P 1547
 Puget Sound OP-1163
 Wahkiakum County Washington OF 94-0589
 geomorphology
 King County Washington MF-2297
 Pend Oreille County Washington I-2472
 Spokane County Washington I-2472
 Stevens County Washington I-2472
 geophysical surveys
 DDS-0031
 Mount Saint Helens FS 0079-95; OP-1389
 Puget Sound OP-1821
 Vancouver Washington OP-72; OP-404
 ground water
 HA-0730-H
 Clark County Washington OF 94-0505

- Columbia County Washington WRI 89-4179
 Franklin County Washington WRI 89-4179
 King County Washington WRI 92-4098
 Puget Lowland WRI 92-4098
 Puget Sound WRI 94-4236
 Skagit County Washington WRI 94-4236
 Skamania County Washington OF 94-0505
 Walla Walla County Washington WRI 89-4179
 guidebook, Spokane County Washington OF 94-0636
 hydrogeology
 Cowlitz County Washington WRI 92-4010
 Island County Washington OF 94-0108
 Jefferson County Washington OF 94-0108
 King County Washington OF 94-0108
 Kitsap County Washington OF 94-0108
 Mason County Washington OF 94-0108
 Mount Saint Helens OP-2116; OP-2197
 Pierce County Washington OF 94-0108
 Puget Lowland OF 94-0108
 Puget Sound OF 94-0108
 San Juan County Washington OF 94-0108
 Seattle Washington WRI 94-4082
 Skagit County Washington OF 94-0108
 Snohomish County Washington OF 94-0108
 Thurston County Washington WRI 92-4109; OF 94-0108
 Toutle River OP-2116; OP-2197
 Vancouver Washington WRI 92-4010
 Whatcom County Washington OF 94-0108
 hydrology
 OF 94-0363
 Adams County Washington WRI 94-4215
 Asotin County Washington OF 94-0109
 Benton County Washington WRI 94-4215; OF 94-0308
 Columbia County Washington WRI 94-4215
 Douglas County Washington WRI 94-4215
 Ferry County Washington OF 94-0315
 Franklin County Washington WRI 94-4215
 Garfield County Washington WRI 94-4215
 Grant County Washington WRI 94-4215
 Kittitas County Washington OF 94-0308
 Lewis County Washington OP-178
 Lincoln County Washington WRI 94-4215
 Mount Saint Helens OP-859
 Skagit County Washington WRI 94-4139
 Spokane County Washington WRI 94-4215
 Stevens County Washington OF 94-0315
 Toutle River OP-859
 Walla Walla County Washington WRI 94-4215
 Whitman County Washington WRI 94-4215
 Yakima County Washington OF 94-0308
 magmas
 Chelan County Washington C 1129
 Kittitas County Washington C 1129
 mantle OP-960
 maps
 Cowlitz County Washington GQ-1681
 Klickitat County Washington I-2460
 Okanogan County Washington OF 95-0523
 Skamania County Washington OF 94-0591; GQ-1681; I-2460
 Yakima County Washington I-2460
 metal ores B 2097; OP-1874
 mineral resources I-2364-A
 neotectonics
 Puget Lowland OP-1980
 Puget Sound OP-1980
 petrology
 C 1129
 Chelan County Washington C 1129
 Mount Rainier National Park OP-2173
 Mount Saint Helens OP-391
 pollution
 Mount Rainier National Park WRI 94-4030
 Mount Saint Helens OP-1146
 Pierce County Washington WRI 94-4030
 Puget Lowland OP-2064
 Yakima County Washington WRI 92-4017
 Quaternary
 OF 95-0034; OP-1876; OP-2086
 Grays Harbor County Washington OF 94-0568; OP-661
 Island County Washington OP-205
 Jefferson County Washington OP-205
 King County Washington OF 94-0568
 Klickitat County Washington OF 95-0034
 Mount Rainier OP-975; OP-1511
 Mount Saint Helens OP-467; OP-1023; OP-1511; OP-1767; OP-1952
 Pacific County Washington OP-395; OP-661
 Puget Lowland OF 94-0568; OP-205
 Puget Sound OF 94-0568; OP-1076; OP-2008
 San Juan County Washington OP-205
 Seattle Washington OP-1076
 Skagit County Washington OP-205
 Snohomish County Washington OP-205
 Toutle River OP-1023
 Whatcom County Washington OP-205
 Willapa Bay OF 94-0568
 sedimentary petrology
 OP-1376
 King County Washington B 2085-C; OP-1181
 Lewis County Washington B 2085-C
 Pierce County Washington B 2085-C
 Puget Lowland B 2085-C
 Skagit County Washington OP-108; OP-1182
 Thurston County Washington OP-1042
 Whatcom County Washington OP-108; OP-1182
 seismology
 Chelan County Washington OP-573
 Douglas County Washington OP-573
 soils
 Adams County Washington OP-119
 Franklin County Washington OP-119
 Hanford Reservation OP-119
 Lewis County Washington OP-119
 Whitman County Washington OP-119
 structural geology
 OP-1777
 Pierce County Washington OP-1981
 Puget Lowland OP-1592; OP-1981; OP-2158
 Puget Sound OP-1611; OP-1979; OP-1981; OP-2158
 Seattle Washington OP-1981
 tectonics
 Lewis County Washington OP-1449
 Skamania County Washington OP-1449
 tectonophysics
 OP-985; OP-2265
 Olympic Mountains OP-1975
 Puget Lowland OP-1975
 Puget Sound OP-2307
 thermal waters, Mount Saint Helens OP-1756
 volcanic features, Mount Saint Helens I-2359
 waste disposal
 Benton County Washington OF 94-0514
 Hanford Reservation OF 94-0514
Washington West Quadrangle
 maps GQ-1748
 Ordovician B 2060
waste disposal *see also* agricultural waste; bioremediation; chemical waste; disposal barriers; geologic hazards; hazardous waste; impact statements; industrial waste; landfills; pesticides; radioactive waste; reclamation; tailings ponds; underground installations; waste disposal sites; waste water.
 C 1108; OP-9; OP-1262; OP-2131
 Arizona, hydrogeology OF 94-0356
 California OF 95-0299
 Colorado
 OP-334
 ground water OP-1562
 Florida
 OP-2202
 hydrology WRI 93-4103
 ground water OP-1699
 Gulf Coastal Plain, ground water C 1108
 hydrogeology OF 94-0670
 Indiana, hydrology WRI 94-4066
 Massachusetts
 OF 94-0649; OP-2249
 geochemistry OF 94-0384
 ground water OF 94-0384
 Minnesota, hydrogeology WRI 94-4207
 Mississippi C 1108
 Montana C 1108
 Nevada OP-1990
 New Jersey WRI 92-4134; OP-913
 New Mexico
 OF 94-0547
 hydrogeology OF 94-0356
 North Carolina, hydrogeology FS 94-0010
 Ohio OP-1022
 South Carolina
 geophysical surveys OF 95-0518
 hydrogeology FS 94-0010
 Washington, geochemistry OF 94-0680-A; OF 94-0680-B
waste disposal sites *see also* radioactive waste.
 Hawaii
 geophysical surveys OF 95-0017
 pollution OP-2205
 Maryland, pollution OP-999
 Nevada, faults OP-1802
 New Hampshire
 ground water OF 94-0398
 pollution OF 95-0142
waste management
 California, waste disposal OP-1610
 Maryland, pollution OP-999
 pollution OP-97
waste water
 Colorado, pollution OP-538; OP-608
 Florida, ground water WRI 93-4224
 Great Lakes region, hydrology WRI 93-4188
 Kansas, hydrology WRI 94-4077
 Massachusetts, environmental geology OF 95-0290
 Minnesota, hydrology WRI 94-4058
 Missouri, hydrogeology OF 95-0109
 Nebraska, hydrology WRI 94-4077
 New Jersey, environmental geology WRI 92-4122
 North Dakota

- environmental geology OP-2268
hydrology WRI 94-4058
South Carolina, hydrology WRI 95-4111
Texas, ground water OF 94-0329
waste, agricultural *see* agricultural waste
waste, human *see* human waste
waste, industrial *see* industrial waste
waste, radioactive *see* radioactive waste
WATEQ4F
geochemistry OP-1369
water cycle *see* hydrologic cycle
water falls *see* waterfalls
water resources *see also* reservoirs; springs;
water rights; water use.
Alaska
environmental geology OF 95-0342
hydrology OF 94-0467
Arizona
hydrogeology P 1406-A
pollution OP-1476; OP-2226
Arkansas, pollution OP-32
Atlantic Coastal Plain
ground water OP-356; OP-845
hydrogeology P 1410-C
pollution OP-2264
California, ground water OP-226; OP-700; OP-2010
Canada, hydrogeology FS 94-0056
Colorado
ground water OF 94-0383
hydrogeology OF 94-0331
hydrology OP-384
Delaware, pollution OP-707
environmental geology OP-5; OP-131; OP-545
Florida
environmental geology FS 0134-95
hydrology WRI 93-4130; OF 95-0185
Georgia
ground water OF 95-0302; OP-1402
hydrogeology OF 94-0307; OF 94-0350
ground water HA-0730-H; OP-734; OP-949
Gulf Coastal Plain, hydrogeology P 1410-C
hydrogeology OF 94-0493; OP-653; OP-798
hydrology OP-1063
Indiana, pollution OP-777
Italy, earthquakes PDE
Kansas, hydrogeology OF 95-0120; FS 0085-95
Louisiana
ground water OP-1996
pollution OP-758
Maryland, hydrogeology OP-211
Massachusetts, pollution OP-37
Midwest, ground water HA-0730-K
Minnesota
ground water WRI 94-4199
hydrogeology OF 94-0338
pollution OP-1653
Mississippi
ground water OP-901
hydrogeology OF 94-0452; FS 94-0075
pollution OP-758
Missouri, hydrogeology OF 94-0538
Montana
ground water OP-1215
hydrogeology OF 95-0194
Nevada, hydrogeology OF 95-0126
New Jersey, pollution OP-114; OP-910; OP-966
New Mexico
OF 95-0314
ground water WRI 94-4178
pollution OP-1019; OP-2226
New York, hydrology OP-1015
North Dakota
environmental geology OP-2168; OP-2268
ground water OP-899
hydrogeology OP-2269
pollution OP-102; OP-179; OP-533; OP-808; OP-900; OP-1112; OP-1653; OP-1696
Ohio, waste disposal OP-1022
Oklahoma, ground water OP-144
Pennsylvania, hydrology OP-1015
pollution OP-4; OP-7; OP-8; OP-28; OP-174; OP-762; OP-984; OP-2018; OP-2166; OP-2279; OP-2322
Puerto Rico, hydrogeology OF 93-0629
Rhode Island, ground water OF 93-0464
Rocky Mountains, hydrogeology OP-1062
South Dakota, hydrogeology WRI 93-4195
Tennessee, hydrogeology OF 94-0354
Texas
hydrogeology OP-1684
pollution OP-1019
Ukraine, pollution OP-595
United Arab Emirates, ground water YR; OP-1018
United States, hydrogeology FS 94-0056
Utah
hydrogeology OF 94-0309; OF 95-0138
pollution OP-1476
West Virginia, hydrogeology FS 94-0033
Wisconsin, hydrogeology WRI 93-4053
Water Resources Division
OF 94-0501
geochemistry OF 94-0362; OF 94-0458; OF 95-0140
ground water OF 94-0383
hydrogeology OF 93-0629; OF 94-0307; OF 94-0309; OF 94-0338; OF 94-0354; OF 94-0452; OF 94-0493; OF 95-0105; OF 95-0120; OF 95-0138; OF 95-0150; OF 95-0164; OF 95-0194
hydrology C 1123; OF 94-0061; OF 94-0353; OF 94-0382; OF 94-0455
water rights
Wyoming, hydrogeology WRI 95-4095
water use
Alabama, ground water WRI 94-4074
Arizona
ground water OF 94-0476
hydrogeology FS 94-0016
California
environmental geology WRI 94-4208
ground water OP-1370
Colorado, hydrogeology WRI 94-4051
Florida, ground water WRI 93-4158
Great Plains, ground water YR
Hawaii, hydrogeology WRI 93-4180
hydrogeology WRI 90-4112; WRI 93-4098
hydrology FS 94-0074
Idaho, hydrogeology WRI 94-4221
Iowa, hydrogeology FS 94-0031
Kansas, geomorphology W 2352-B
Louisiana, ground water WRI 94-4085
Maryland, hydrogeology WRI 93-4225
Massachusetts, ground water OF 94-0316
Mississippi
ground water WRI 94-4219; WRI 95-4013
hydrogeology FS 94-0060
Nebraska, geomorphology W 2352-B
Nevada, ground water OF 95-0107
New England, hydrogeology WRI 94-4252
New Hampshire, hydrogeology WRI 93-4096
New Jersey, ground water WRI 92-4152
North Carolina, hydrogeology OF 94-0522
Oklahoma, hydrogeology WRI 93-4230
South Dakota, ground water OP-359
Tennessee, ground water OF 94-0483
Texas, hydrogeology WRI 93-4190; FS 94-0048
Virginia, hydrogeology FS 94-0057
Wyoming, hydrogeology WRI 94-4221
water, energy, and biogeochemical budget
Vermont, hydrology OF 94-0475
water, waste *see* waste water
water-control structures
North Carolina, hydrology WRI 94-4226
water-mineral interface *see* mineral-water interface
water-rock interaction
California
engineering geology OF 94-0228
rock mechanics OF 94-0228
China, polymetallic ores OP-1024
Colorado
hydrology OF 95-0071
molybdenum ores OP-526
diagenesis OF 94-0228
engineering geology OF 94-0228
environmental geology OP-9
Florida, ground water OP-473
geochemistry OP-973; OP-1369
geophysics OP-552
Illinois, non-metal deposits OP-729
Kentucky, non-metal deposits OP-729
Nevada
gold ores OP-340
hydrogeology OP-1947
rock mechanics OF 94-0228
structural geology OP-401; OP-402
Texas, hydrogeology OP-1684
waterfalls
Tennessee, seismology OP-1907
WaterGage II
hydrology OF 94-0363
waterways *see also* canals.
OF 95-0137; OP-544
Alaska
WRI 94-4073
geomorphology WRI 94-4165
Arizona
geomorphology W 2429; OF 94-0594; OF 94-0597
hydrology WRI 95-4059
California
OP-877
hydrology OF 93-0068
Colorado OF 95-0296
geomorphology OP-858
Georgia
geologic hazards WRI 95-4017
hydrology WRI 94-4158
Great Plains, hydrology C 1120-H
hydrology TWI 03-A21; WRI 94-4159; OF 95-0308
Louisiana
OF 94-0275
ground water WRI 94-4228
Minnesota, hydrology WRI 93-4200
Mississippi WRI 94-4241
Mississippi Valley, hydrology YR; C 1120-F; C 1120-H
Missouri
OF 94-0544

- hydrology WRI 94-4200
 New Jersey, hydrology OF 93-0662; OF 94-0065; OF 94-0499; OF 94-0500
 New Mexico WRI 95-4050
 New York
 OP-172
 hydrology OF 93-0161
 North Dakota, hydrology WRI 93-4200;
 WRI 95-4087
 Ohio, hydrology W 2432
 South Carolina, hydrology WRI 95-4111
 Tennessee
 WRI 94-4229
 pollution OP-688
Watkins Quadrangle
 maps OF 88-0624; OF 93-0521
Wattle Gully fault zone
 deformation OF 94-0228
Waulsortian facies
 Kazakhstan, energy sources OP-1258
 petroleum OF 94-0298
wave amplification
 Armenia, engineering geology OP-265
 California
 earthquakes OP-2091
 Mohorovicic discontinuity OP-1853
 seismology OP-587; OP-1385; OP-1596
 Rhode Island, seismology OP-274
wave splitting
 Africa, tectonophysics OP-636
 California, seismology OP-254
wave-cut platforms
 Alaska, Quaternary OP-1790
 California, Quaternary OF 94-0568
Waverly Tennessee
 stratigraphy OP-370
Wawa Belt
 Precambrian OP-886
weathering *see also* rock varnish.
 OP-259
 Arizona
 OP-1504
 hydrogeology OP-335
 Quaternary OF 95-0057
 Basin and Range Province, Quaternary OP-1414
 California, engineering geology OP-650
 chemical weathering
 Colorado OP-1318
 geochemistry OP-995
 Hawaii OP-1594
 Maryland OP-771
 mineralogy OP-79
 New York OP-832
 Oregon OP-2045
 Puerto Rico OP-741
 stratigraphy OP-2274
 China, hydrology OP-1003
 Colorado
 geophysical surveys OP-1118
 pollution OP-1031; OP-1957
 earthquakes OP-475
 Egypt, geophysical surveys OP-2068
 environmental geology OP-834; OP-2131
 Europe OP-2052
 geochemistry OP-1170
 Georgia, pedogenesis B 1589-E
 Germany, engineering geology OP-650
 Great Basin, Quaternary OP-1414
 Hawaii
 geologic hazards OP-1342
 Quaternary OP-1183
 Nevada, pedogenesis OP-1763
 New Mexico, hydrogeology OP-335
 Oregon, metal ores OF 94-0677
 Peru, Quaternary OP-2032
 Russian Federation, engineering geology OP-650
 Tennessee, environmental geology OF 95-0477
 Utah OP-1882
 Vermont, engineering geology OP-650
 Virginia, conservation OF 94-0592
 Washington, pollution OP-2064
 Wyoming OP-928
weathering rinds
 geologic hazards OF 94-0663
WEBB
 hydrogeology OP-2241
 hydrology OF 94-0475
websterite
 Russian Federation, geochemistry OP-843
 wedges, fossil ice *see* fossil ice wedges
 wedges, ice *see* ice wedges
Wedron Formation
 areal geology OP-295
Week's Creek Landslide
 engineering geology OP-366
 Wegener hypothesis *see* continental drift
wehrlite
 Alaska, geochemistry P 1564
Weichselian *see also* Younger Dryas.
 Greenland C 1108
Weinsberg Granite
 inclusions C 1129
welded tuff
 Colorado, geochemistry OP-760
 Nevada
 geochronology B 2081
 stratigraphy OP-1860
 structural geology OP-2143
well-logging *see also* radioactivity.
 OP-2002
 acoustical logging
 Arizona OP-664
 geophysical surveys OP-699
 Nevada OP-1820
 New Mexico OF 95-0360
 Pennsylvania OP-2058
 Russian Federation OP-2228
 Wyoming OP-456
 Alaska, frost action OP-161
 Arkansas, geophysical surveys MF-2296
 California
 crust OF 94-0552
 earthquakes OF 94-0706
 ground water WRI 94-4151; OF 94-0334;
 OF 94-0531
 hydrogeology OP-2043
 petroleum OF 95-0014
 pollution WRI 94-4040
 stratigraphy B 1995-J,K
 caliper logging
 Massachusetts WRI 94-4185
 New Mexico OF 95-0360
 Pennsylvania WRI 94-4109
 Colorado
 environmental geology OP-1045
 salt tectonics OP-1551
 Connecticut, ground water OP-1799
 electrical logging
 California OP-700
 Florida OP-1204; OP-1710
 Illinois OF 94-0298
 Indiana OF 94-0298
 Massachusetts WRI 94-4185
 New Mexico OF 95-0360
 South Carolina OF 95-0507
 Texas OF 94-0329
 electromagnetic logging, ground water OP-2283
 energy sources B 2000-H
 Florida, ground water OF 94-0531
 geochemical logging, Arizona OP-664
 geophysical surveys OF 94-0652-A; OF 94-0652-B; OF 94-0652-C; OF 95-0064-A;
 OF 95-0064-B; OF 95-0064-C
 Georgia, ground water OP-151
 gravity logging
 California OF 95-0054
 Nevada OF 92-0657
 ground water OP-698
 Hungary, stratigraphy OP-951
 hydrogeology OF 94-0531
 Idaho, ground water OP-44
 Kentucky, natural gas OF 94-0298
 Massachusetts, sedimentary petrology OF 95-0044
 Minnesota
 ground water WRI 94-4199; OF 94-0337
 mineral resources OF 94-0447
 Mississippi, Quaternary OF 94-0558
 Nevada
 environmental geology OF 94-0451
 geophysical surveys OF 94-0531
 stratigraphy OF 95-0102
 New England, ground water P 1415-A
 New Hampshire
 ground water OP-1549
 hydrogeology WRI 92-4013; WRI 92-4154
 pollution OF 95-0142
 New Jersey, Miocene OP-622
 New Mexico, ground water WRI 93-4192
 New York
 geomorphology OP-2170
 ground water WRI 93-4004
 Pakistan, coal OF 94-0274; OF 94-0595
 sedimentary rocks OF 94-0582
 seismic logging
 California OF 94-0706
 petroleum OP-917
 Russian Federation OP-958; OP-2228
 South Carolina OF 95-0518
 temperature logging
 California OF 94-0692
 Greenland OF 94-0254
 Hawaii OF 95-0532
 Massachusetts WRI 94-4185
 Tennessee, ground water WRI 95-4011
 Texas, ground water WRI 95-4038
 Utah, salt tectonics OP-1551
 Virginia, ground water OF 94-0301
 Wyoming, stratigraphy OP-747
 wellbore breakouts *see* borehole breakouts
wellhead protection
 Florida, hydrogeology WRI 93-4171
 Ohio, ground water WRI 94-4231
 South Carolina, ground water WRI 94-4012
Wellington Formation
 ground water OP-1167
Wellington New Zealand
 Quaternary OF 94-0568
Wells Creek Volcanics
 geophysical surveys OP-1821
Weminuche Wilderness Area
 environmental geology OP-945

- Wenatchee National Forest**
geochemistry OF 94-0680-A; OF 94-0680-B
- Wenonah Formation**
stratigraphy OP-903
- Wenonah-Mount Laurel Aquifer**
ground water WRI 92-4152
- Wessels Mine**
ring silicates OP-912
- West Africa** *see* Cameroon; Nigeria; Senegal
- West African Shield**
geophysical surveys OP-2068
- West Antarctic rift system**
tectonophysics OP-55
- West Atlantic**
marine geology OP-117
- West Bridgewater Vermont**
stratigraphy B 2060
- West Chazy Quadrangle**
hydrology B 2103
- West Coast** *see* Pacific Coast
- West Coyote Field**
energy sources OP-385
- West Decker Mine**
pollution OP-185
- West End Deposit**
metal ores OP-663
- West Glacier Lake Wyoming**
geochemistry OP-269
- West Indies** *see* Antilles; Bahamas
- West Mediterranean** *see* Tyrrhenian Sea; Valencia Trough
- West Neck Creek Virginia**
hydrology WRI 94-4067
- West Pacific** *see* Northwest Pacific; Southwest Pacific
- West Pacific Ocean Islands**
mantle, Bonin Islands OP-1109
- West Pakistan** *see* Pakistan
- West Pond Utah**
hydrogeology WRI 93-4028
- West Siberian Plain** *see* Siberian Lowland
- West Valley New York**
waste disposal OP-1775
- West Virginia** *see also* Allegheny Group; Appalachian Basin; Appalachian Plateau; Blue Ridge Province; Kanawha Formation; New River; Pittsburgh Coal; Pocahontas Formation; Pottsville Group; Valley and Ridge Province.
coal C 1108; OF 95-0572
energy sources C 1108
geomorphology, West Virginia Panhandle OP-196
ground water OF 92-0140
hydrogeology
FS 94-0033
Berkeley County West Virginia WRI 93-4073
hydrology
Brooke County West Virginia OF 95-0129
Hancock County West Virginia OF 95-0129
Ohio County West Virginia OF 95-0129
Pleasants County West Virginia OF 95-0184
Wood County West Virginia OF 95-0184
impact statements
Marshall County West Virginia OF 95-0589
Monongalia County West Virginia OF 95-0589
mineral resources I-2364-J
Pennsylvanian OP-1737
sedimentation, Monongalia County West Virginia OF 95-0240
- West Virginia Panhandle**
geomorphology OP-196
- West-Central Alaska** *see also* Nixon Fork Terrane; Nome Alaska; Seward Peninsula.
environmental geology OF 94-0481; OF 94-0525; OF 94-0627; OF 95-0347
geochemistry B 2107
geologic hazards OF 95-0175
Invertebrata OP-51; OP-76
mineral resources OF 94-0277-A; OF 94-0277-B
Proterozoic B 2107
- Westdahl**
geologic hazards OF 95-0083
Quaternary OF 95-0061-A; OF 95-0061-B
- Westerly Granite**
engineering geology OP-650; OP-1841
faults OP-759
geophysics OP-551
structural geology OP-637; OP-1840
- Western Australia**
gold ores OF 94-0228
Quaternary OP-1973
- Western Canada** *see* Alberta; British Columbia; Canadian Cordillera; Manitoba; Northwest Territories; Saskatchewan; Yukon Territory
- Western Desert**
sedimentary petrology OP-1770
- Western Europe** *see* France; Iceland; Ireland; Scandinavia; United Kingdom
- Western Fjordland Orthogneiss**
magmas C 1129
- Western Hemisphere**
folds OF 94-0568
- Western Interior** *see also* Montana; Utah; Wyoming.
Cretaceous
B 2113
Western Interior Seaway P 1561
diagenesis OP-665
economic geology OP-597
geochemistry, Western Interior Seaway OF 95-0209
geochronology OP-506
Jurassic OP-745
paleomagnetism OP-403
Pennsylvanian B 2110
sedimentary petrology OP-1373
stratigraphy
B 2113; OP-1906
Western Interior Seaway OF 94-0670; OP-596; OP-1131; OP-2030; OP-2063
- Western Interior Seaway**
Cretaceous P 1561
geochemistry OF 95-0209
stratigraphy OF 94-0670; OP-596; OP-1131; OP-2030; OP-2063
- Western Metamorphic Belt**
metamorphism B 2107
- Western Samoa** *see* Samoa
- Western U.S.** *see* Pacific Coast
- Westminster West fault zone**
Silurian OP-1068
- Westphalian**
B 2110
Appalachians OP-766
Kentucky OP-1548
- wetlands**
Arkansas, ground water OF 94-0531
- California**
environmental geology YR
hydrogeology OP-1281
- Canada, ecology I-2451**
- Colorado**
environmental geology OF 95-0023
pollution C 1122; OP-34; OP-1082
ecology C 1108
environmental geology OP-811
- Florida**
continental shelf OP-1425
ecology OF 95-0007
environmental geology C 1108
geomorphology OF 95-0216
ground water OP-615
marine geology WRI 94-4081
sedimentation OP-1698
- Great Plains, hydrology OF 95-0162**
ground water OP-1553
- Idaho, pollution OP-2129**
- Illinois, hydrology WRI 94-4190**
- Indiana**
hydrogeology OF 92-0139
hydrology WRI 94-4190
- Louisiana**
conservation OF 94-0275
ecology OF 94-0275
energy sources C 1108
engineering geology OF 94-0275; OP-1938
environmental geology OF 94-0275
geomorphology OF 94-0275
shore features OP-1937
waterways OF 94-0275
- Manitoba, Quaternary OP-1463**
- Maryland, environmental geology OP-837**
- Minnesota**
ecology C 1108
geochemistry OP-498
hydrology OF 93-0046; OF 93-0047
pollution OP-1139
- Mississippi Valley, hydrogeology FS 94-0047**
- Missouri, hydrogeology OF 95-0109**
- Nevada, hydrogeology OP-1281**
- New Mexico, pollution OP-1019**
- New York, ground water OP-1608**
- North Dakota**
environmental geology OP-2168
hydrology WRI 94-4171; OF 94-0546
- Ohio, environmental geology OF 95-0224**
- Oregon, Quaternary OP-1876**
pollution OP-1723
- South Dakota, hydrology OF 93-0046**
- Tennessee**
hydrogeology OF 95-0278
pollution OF 95-0312
- Tertiary OP-1888**
- Texas, pollution OP-1019**
- United States, ecology I-2451**
- Virginia**
FS 0046-95
ground water OP-376
hydrogeology OP-678
- Washington, Quaternary OP-1876**
- Wisconsin**
ecology C 1108
pollution OP-508
- Wyoming, environmental geology OF 95-0121**
- Whalen Group**
structural geology OP-1288
- Whatley Fault**
Silurian OP-1068

Wheatgrass Spring Quadrangle
maps OF 94-0175**Whidbey Island**
Quaternary OP-1076
structural geology OP-1592; OP-1979**Whipple Mountains**
Miocene OP-669
structural geology OP-1110**White Creek Batholith**
petrology C 1129**White Knob Mountains**
metal ores B 2064-A-R
white mica *see* muscovite**White Mountains**
areal geology OP-217
ground water FS 0138-95; OP-937
magmas C 1129; OP-1095**White Picacho District**
mineralogy OP-2110**White Pine Mine**
mineralogy OP-2028**White Point East Field**
energy sources OP-220**White Rim Sandstone Member**
energy sources OP-1461; OP-1557
petroleum B 2000-J**White River**
geochemistry P 1559
hydrogeology OP-1947
hydrology WRI 94-4066
lava OP-1254
structural geology OP-1820; OP-1976**White River Ash**
Quaternary OP-772**White River Group** *see also* Brule Formation.
geochemistry OP-1046
uranium ores OP-1030**White Russia** *see* Belarus**White Sage Formation**
structural geology OP-744**White Sands**
ground water WRI 93-4192**White Tail Ridge Member**
stratigraphy OP-1176**White Wolf Fault**
faults OF 94-0228**White, David**
paleobotany OP-563**White-Inyo Range** *see* Inyo Mountains**Whitetop Mountain Quadrangle**
Proterozoic OP-3**Whitewater Lake Wisconsin**
hydrogeology WRI 94-4101**Whitney Pocket Quadrangle**
maps OF 93-0716**Whittier Narrows earthquake 1987**
California OP-462**wiborgite** *see* rapakivi**Wide Awake Deposit**
metal ores OP-663**Wiggins Formation** OP-1517**Wightman Fork**
hydrology OF 95-0071
pollution OP-732; OP-1082; OP-1823; OP-1957**Wilcox Aquifer**
ground water WRI 93-4134**Wilcox Formation** B 2060**Wild Cherry Formation**
Oligocene OP-1925**Wilkes Basin**
geophysical surveys OF 95-0225**Wilkes Land**
Quaternary OP-246
tectonophysics OP-245**Willamette Valley**
geophysical surveys OP-459
hydrology OF 95-0373**Willapa Bay**
Quaternary OF 94-0568**Williston Basin**
energy sources OP-749
ground water P 1402-F
lignite OP-268
pollution OF 94-0670
sedimentary petrology OP-1622
stratigraphy B 2112; OP-1558; OP-2255**Willow Island Dam**
hydrology OF 95-0184**Wills Creek Formation**
stratigraphy OF 94-0573**Willwood Formation**
OP-1155
areal geology OP-280
Mammalia OP-1154; OP-1527
sedimentary petrology OP-780
weathering OP-928**Willyama Complex**
petrology OP-871**Wilson Ridge Pluton**
deformation OP-1323**Wilson, Leonard Richard**
paleobotany OP-501**Wilsons Promontory Batholith**
inclusions C 1129**Wind River**
Quaternary OP-11**Wind River basin**
areal geology OP-279
deformation OP-283
energy sources OF 94-0670; OP-477; OP-677;
OP-701; OP-1621; OP-1942
Paleocene OP-666
Quaternary OP-1055; OP-1583
sedimentary petrology OP-456; OP-1622
sedimentary structures OP-1620
sedimentation OF 94-0670**Wind River Formation**
energy sources C 1108; OP-1621**Wind River Indian Reservation**
areal geology OP-279
energy sources C 1108
environmental geology OF 95-0121**Wind River Range**
energy sources OP-1942
Quaternary OP-355
sedimentary petrology OP-1622**Windy Fork Formation**
Proterozoic B 2107**Windy Peak Quadrangle**
maps OF 94-0687**Windy Wash Nevada**
structural geology OP-1469; OP-1904**Winifrede Sandstone Member**
stratigraphy OP-69**Winnemucca mining district**
economic geology OF 94-0712wireline logging *see* well-logging**Wiscasset Quadrangle**
Quaternary OP-990**Wisconsin** *see also* Decorah Shale; Galena Dolomite; Glenwood Shale; Lake Michigan; Maquoketa Formation; Mississippi River; Upper Mississippi Valley.
ecology C 1108; OF 95-0163
economic geology C 1124
environmental geology
OP-1663

Brown County Wisconsin OF 95-0163

Kenosha County Wisconsin OF 95-0163

Racine County Wisconsin OF 95-0163

Sheboygan County Wisconsin OF 95-0163

Waukesha County Wisconsin OF 95-0163

ground water

Brown County Wisconsin OF 95-0163

Outagamie County Wisconsin OF 95-0163

hydrogeology

OP-992; OP-2327

Menominee County Wisconsin WRI 93-4053

Vilas County Wisconsin OP-2241

Walworth County Wisconsin WRI 94-4101

hydrology

WRI 95-4021; OF 91-0175; OF 94-0363

Brown County Wisconsin OF 95-0163

Kenosha County Wisconsin WRI 93-4188;
WRI 94-4094; WRI 95-4005Racine County Wisconsin WRI 93-4188;
WRI 94-4094; WRI 95-4005

Waukesha County Wisconsin WRI 95-4005

lead-zinc deposits, Lafayette County Wisconsin
OP-792

plate tectonics OP-2121

pollution

OP-497; OP-508

Adams County Wisconsin OF 95-0163

Brown County Wisconsin OF 95-0163

Calumet County Wisconsin OF 95-0163

Fond du Lac County Wisconsin OF 95-0163

Outagamie County Wisconsin OF 95-0163

Shawano County Wisconsin OF 95-0163

Sheboygan County Wisconsin OF 95-0163

Washington County Wisconsin OF 95-0163

Winnebago County Wisconsin OF 95-0163

reclamation

Brown County Wisconsin OF 95-0163

Outagamie County Wisconsin OF 95-0163

Wisconsinan

Alaska OP-1457

California OP-761; OP-2005

Columbia Plateau OP-2237

Greenland OP-187

Maine OP-990; OP-2200

Massachusetts OP-683; OP-990

Mississippi Valley OP-1757

Montana OP-121

Nevada OP-761; OP-2005

New England OP-1658; OP-1659; OP-2163

New Jersey OP-1188

Washington OP-205

Wyoming OP-355

Wise Pluton

structural geology OP-2062

WISK-DP

geochemistry OF 95-0209

Wolf Mountain Intrusion

structural geology C 1129

Wolf River basin

hydrogeology OF 95-0163

pollution OF 95-0163

- Wolfcampian *see* Abo Formation
- Wono Ash**
Quaternary OF 95-0034; OP-2250
- Wood Lake South Carolina**
hydrology OF 95-0186
- Wood River**
Permian OP-2093
sedimentary petrology OP-2092
- Wood River Formation**
OP-2093
metal ores B 2064-A-R
polymetallic ores B 2064-A-R
sedimentary petrology P 1525; OP-2092
structural geology OP-2123
- Woodbine Aquifer**
pollution OP-2009
- Woodford Shale**
energy sources OP-537
- Woodland California**
geologic hazards OF 94-0494
- Woodrow Quadrangle**
maps OF 88-0625
- Woodside Quadrangle**
geologic hazards OF 93-0684
- Woodworth Hill Quadrangle**
maps OF 88-0626
- Wooster Ohio**
ground water WRI 94-4131
- World Energy Resources Program**
energy sources OF 94-0556; OP-1044
- World War II** OP-2194
- worms**
Pacific Ocean
ocean floors OP-2097
Quaternary B 2022
- Worthington Mountains**
Tertiary OF 95-0545
- Wrangell Mountains**
areal geology OP-672
environmental geology OF 95-0344
geochemistry OF 95-0222
geomorphology B 2072
geothermal energy OP-627
metal ores OP-1893
Quaternary OP-628
stratigraphy OP-357
- Wrangellia**
Alaska
areal geology OP-725
geophysical surveys OP-10
gold ores OP-624; OP-2184
metal ores B 2084; OP-1169
metamorphic rocks OF 94-0268
metamorphism OP-39
structural geology OP-1447
tectonophysics OP-408
British Columbia, metamorphic rocks OF 94-0268
Canada, metal ores OP-1169
Idaho, tectonophysics OP-361
Oregon, tectonophysics OP-361
plate tectonics OP-1327
- Wray dune field**
geochemistry OP-1046
- Wright-Patterson Air Force Base**
ground water WRI 94-4231; WRI 94-4243
pollution OF 95-0371
waste disposal OP-1022
- Wrights Tunnel California**
seismology OP-1984
- Wrightstown Pennsylvania**
ground water OF 93-0417
- wuestite**
geochemistry OP-1279
- wurtzite**
Pacific Ocean, geochemistry OP-2098
- wustite** *see* wuestite
- WWW**
earthquakes OP-2313
seismology OP-1809
- Wyandotte Limestone**
ground water WRI 94-4166
- Wyoming** *see also* Absaroka Range; Bighorn Basin; Cody Shale; Fort Union Formation; Galatin Range; Granite Mountains; Green River basin; Hanna Formation; High Plains Aquifer; Lance Formation; Laramie anorthosite complex; Laramie Mountains; Madison Aquifer; Medicine Bow Mountains; Mesaverde Group; Mullen Creek-Nash Fork shear zone; Ogallala Aquifer; Phosphoria Formation; Powder River basin; Snake River basin; Tepee Trail Formation; Tongue River Member; Western Interior Seaway; White River Group; Wiggins Formation; Willwood Formation; Wyoming Province; Yellowstone National Park.
areal geology, Owl Creek Mountains OP-279; OP-280
coal C 1108
Cretaceous
Hot Springs County Wyoming C-0146
Washakie County Wyoming C-0146
energy sources
C 1108; OP-281
Fremont County Wyoming C 1108; OF 94-0670; OP-1621
Hanna Basin OP-1942
Owl Creek Mountains OP-1942
Park County Wyoming OP-302; OP-634; OP-885
Shirley Basin OP-1942
Uinta County Wyoming OP-746
Wind River Range OP-1942
environmental geology
YR; C 1108
Campbell County Wyoming C 1108
Converse County Wyoming C 1108
Fremont County Wyoming OF 95-0121
Lincoln County Wyoming C 1108
Weston County Wyoming C 1108
faults
OF 94-0228
Grand Teton National Park OP-476
Jackson Hole OP-476
geochemistry
Fremont County Wyoming OF 95-0270
Lincoln County Wyoming OF 95-0270
Sublette County Wyoming OF 95-0270
geochronology
Lincoln County Wyoming OP-569
Uinta County Wyoming OP-569
geologic hazards
Park County Wyoming OF 95-0059
Teton County Wyoming OF 95-0059
geophysical surveys
DDS-0031; OF 95-0032
Jackson Hole OF 95-0239
Park County Wyoming OP-1913
Teton County Wyoming OP-1913
ground water OF 94-0466
hydrogeology
WRI 94-4095
- Fremont County Wyoming WRI 95-4095
hydrology OF 95-0379; OP-883
maps
Albany County Wyoming I-2233
Campbell County Wyoming I-2433-B
Carbon County Wyoming I-2452
Converse County Wyoming I-2433-B
Johnson County Wyoming I-2433-B
Lincoln County Wyoming I-2210
Natrona County Wyoming I-2433-B
Niobrara County Wyoming I-2433-B
Platte County Wyoming I-2233
Uinta County Wyoming I-2210
Weston County Wyoming I-2433-B
metal ores
B 2097
Crook County Wyoming OF 95-0066-A; OF 95-0066-B; I-2445
Niobrara County Wyoming OF 95-0066-A; OF 95-0066-B; I-2445
Weston County Wyoming OF 95-0066-A; OF 95-0066-B; I-2445
natural gas OF 94-0022-B
non-metal deposits, Sweetwater County Wyoming OF 95-0476
paleomagnetism, Park County Wyoming OP-403
pollution, Hanna Basin OF 94-0670
Quaternary
OP-1055; OP-1583
Fremont County Wyoming OP-11
Park County Wyoming OP-902
Sublette County Wyoming OP-355
Wind River Range OP-355
sedimentary petrology
Heart Mountain Fault OP-936
Niobrara County Wyoming B 2110
Owl Creek Mountains OP-1622
Wind River Range OP-1622
sedimentation
OP-1646
Fremont County Wyoming OF 94-0670
stratigraphy
OP-364; OP-1324
Carbon County Wyoming B 2113
Fremont County Wyoming B 2113
Johnson County Wyoming OP-667
Natrona County Wyoming B 2113
structural geology OF 94-0228; OP-1681
uranium ores OF 95-0571
volcanism I-2291-C
- Wyoming Craton**
structural geology OP-1232; OP-1288; OP-1863
- Wyoming Province**
metamorphic rocks OP-1929
metamorphism OP-1627
non-metal deposits OP-1492
plate tectonics OP-2121
structural geology B 1904-T; OP-1288
- X**
- X-ray analysis** *see also* synchrotron radiation.
geochemistry OP-1011
- X-ray radiography**
hydrology OF 94-0445
- xanthosiderite** *see* goethite
- xenoliths**
OP-611

Alaska
OP-632
geochemistry B 2139
Alberta
C 1129
geochemistry C 1129
Argentina
C 1129
geochemistry C 1129
California OF 95-0585; OP-531; OP-708
Canadian Shield, geochemistry C 1129
India, geochemistry C 1129
Japan C 1129
Mexico OP-1489
Montana, non-metal deposits OP-1492
New Jersey, geochemistry P 1565-A
Ontario OP-1489
Spain C 1129
Xidatan-Dongdatan Valley
Quaternary OF 94-0568
Xinjiang China *see also* Tien Shan.
magmas OP-1935
Xizang Plateau *see* Qinghai-Xizang Plateau

Y

Y *see* yttrium
Yachats Basalt
geochemistry OF 95-0040
Yakima River basin
hydrology OF 94-0308
pollution OP-2064
Quaternary OP-679; OP-680
Yakima Washington
pollution WRI 92-4017
Yakutat Alaska
hydrogeology OF 94-0713-W
Yakutat Bay
Quaternary OP-1263
Yakutat Terrane
areal geology OP-725
energy sources OP-576
paleomagnetism OP-727
plate tectonics OP-1682
Yakutia region
geochronology OP-1493
Yamato Meteorites
petrology OP-938
Yampa River
hydrology OF 95-0139
Yanshanian
China OP-2016
Yap
manganese ores OP-1409
Yates Formation
solution features OP-190
Yavapai Province
geochemistry OP-1104
plate tectonics OP-1256
structural geology OP-1668; OP-1863
tectonophysics OP-1669
Yazd Iran
magmas C 1129
Yellowjacket Deposit
metal ores OP-805
Yellowjacket Formation
P 1525
cobalt ores OP-167
metal ores P 1525
Yellowknife Northwest Territories
faults OP-1856
Yellowstone hot spot
tectonophysics OP-442
volcanism OP-1852
Yellowstone National Park
energy sources OP-302; OP-634; OP-885
engineering geology OP-1367
geochemistry OP-300; OP-1897; OP-2128
geologic hazards OF 95-0059
geophysical surveys OP-1913
maps I-0711
petrology OP-1851
Quaternary OP-902
seismicity OP-1298
volcanism OP-1852
Yellowstone River
energy sources OP-302; OP-885
geochemistry OP-2133
hydrology WRI 94-4230
Yemen
geochemistry C 1129; OP-1079
Yenshanian Orogeny *see* Yanshanian
Yermo California
maps OF 94-0681
Yocum Creek basin
hydrogeology OF 94-0537
Yolo Formation
stratigraphy OP-1341
Yorktown Aquifer
ground water W 2401; WRI 92-4111; WRI 94-4186
Yorktown Formation
OP-2071
Quaternary OP-1001
Vertebrata OP-2275
Young's modulus
rock mechanics OP-703
Younger Dryas
Pacific Ocean OP-1354
Peru OP-2032
Youngquist Mine Quadrangle
maps OF 88-0627
yttrium
Gulf of California, sedimentation OP-1987
Russian Federation, geochemistry C 1129
Virginia, petrology C 1129
Yucatan Peninsula *see* Chicxulub Crater
Yucca Flat
faults OP-631
ground water OP-2066
hydrogeology OF 94-0491
structural geology OP-1252
Yucca Mountain
deformation OF 95-0002
earthquakes OP-12
energy sources OP-1084
engineering geology OF 93-0269; OP-1367
environmental geology OF 92-0458; OF 93-0477; OF 94-0451; OP-2306
faults OP-1802
fluid inclusions OP-2037
geochemistry OP-1857; OP-2169; OP-2326
geophysical surveys OF 93-0540-A; OF 93-0540-B; OF 93-0586-A; OF 93-0586-B; OF 94-0531
gold ores OP-1946
ground water OF 92-0657; OF 93-0098; OF 94-0303; OF 94-0311; OF 94-0531; OF 95-0158; OP-1567; OP-2273
hydrogeology OF 94-0456; OP-1947

hydrology OF 94-0317; OP-1998
mineralogy OP-2036
Miocene OP-1408
pedogenesis OP-1763
petroleum OP-1470
Quaternary OF 94-0568; OF 95-0037
seismicity OP-823
seismology OP-614
stratigraphy OF 94-0342; OF 94-0460; OF 95-0102; OP-1860
structural geology OP-1469; OP-1904; OP-2143; OP-2276
volcanism OP-1388
waste disposal OP-997
weathering OP-1468
Yukon *see* Yukon Territory
Yukon River
areal geology OP-217
environmental geology OF 94-0526; OF 94-0527
Yukon Terrane
areal geology OP-725
petrology OP-409; OP-632
Yukon Territory *see also* Old Crow Tephra; Road River Formation; Stikinia Terrane; Yukon-Tanana Terrane.
areal geology, Ogilvie Mountains OP-217
petrology B 2139
Pliocene
Dawson Yukon Territory OF 95-0217-A; OF 95-0217-B
Klondike OF 95-0217-A; OF 95-0217-B
Quaternary OP-772
structural geology OP-857
tectonophysics OP-985
Yukon-Koyukuk Basin
geochemistry B 2107
Yukon-Tanana Terrane
areal geology OP-296
geophysics OP-594
metal ores OP-1893
metamorphism OP-39
petrology OP-231
tectonics OP-360
Yukon-Tanana Upland
maps OP-878

Z

Zaleski Flint Member
stratigraphy OP-768
Zamora California
ground water OF 94-0531
Zealand
stratigraphy OP-1140
zebra mussels
ecology FS 94-0014
Wisconsin, environmental geology OF 95-0163
Zelgler Field
energy sources OF 94-0298
Zeiss Ni 1 method OF 94-0698
Zeljin Pluton
magmas C 1129
zeolite deposits
Idaho P 1525
zeolite group *see* analcime; chabazite; clinoptilolite; erionite; laumontite; mordenite; phillipsite; stilbite
zeolitization
Idaho, non-metal deposits P 1525

- Oregon, sedimentary petrology B 2108
Zhejiang China
 metal ores OP-1871
zinc *see also* heavy metals.
 Alaska, geochemistry B 2107
 British Columbia, hydrology OF 94-0315
 California
 geochemistry OP-954; OP-1955
 pollution OP-1051
 Colorado
 hydrology OF 94-0412
 metal ores B 2116
 pollution OP-488; OP-1082; OP-1535; OP-1823; OP-1957
 Idaho, pollution OP-1146; OP-2129
 Massachusetts, geochemistry OF 94-0384; OP-1396
 metal ores OP-1013
 Micronesia, geochemistry OP-520
 New Mexico
 metal ores OF 94-0691
 uranium ores B 2063
 Washington
 hydrology OF 94-0315
 pollution OP-1146; OP-2064
zinc blende *see* sphalerite
zinc ores *see also* mississippi valley-type.
 OP-870; OP-1013
 Alaska OP-1893
 Arabian Peninsula OP-1220
 Arizona B 2138; OP-1606
 Bolivia OP-188
 Canadian Shield OP-2126
 Colorado
 OP-733; OP-1096
 geophysical surveys OP-1118
 Great Britain OP-2126
 Idaho
 P 1525; B 2064-A-R
 pollution OP-1156
 Illinois, heat flow OP-2050
 Mississippi Valley OF 94-0298
- Spain OP-22
Zion National Park
 geomorphology OF 95-0515
zircon
 C 1129
 Alaska, geochronology OP-1905
 Antarctica, magmas C 1129
 Argentina, orogeny OP-2011
 Australia, inclusions C 1129
 Austria, inclusions C 1129
 Bolivia, metal ores OP-1028
 Brazil, geochronology C 1129
 California
 geochemistry OP-160
 magmas OP-313; OP-321
 metamorphism OP-319
 petrology OP-45
 structural geology OP-1462
 Canada
 geochronology OP-308
 structural geology OP-1863
 Colorado
 geochemistry OP-1046
 metal ores B 2109
 molybdenum ores OP-526
 petrology OP-1665
 Proterozoic OF 94-0437; OP-1982
 stratigraphy OP-507
 Finland, geochemistry C 1129
 Florida, sedimentary petrology OP-1861
 geochronology OP-1029
 Germany, metasomatism C 1129
 Idaho
 geochronology C 1129
 metal ores B 2081
 Japan, Neogene C 1129
 magmas C 1129
 Massachusetts, geochronology OP-1047
 metal ores B 2097
 Mexico, petrology OP-1870
 Minnesota, Precambrian OP-886
 Montana
- Archean OP-1862
 geochronology B 2113; C 1129
 metamorphism OP-1627
 structural geology OP-1863
 Nebraska, geochemistry OP-1046
 New Hampshire, geochronology OP-1047
 New Zealand, magmas C 1129
 Pennsylvania, Proterozoic OP-3
 petrology C 1129
 sedimentary petrology OP-1404
 Spain, geochemistry C 1129
 United States, geochronology OP-308
 Utah, stratigraphy OP-507
 Virginia
 geochemistry C 1129
 magmas P 1529
 Proterozoic OP-3
 Wales, geochemistry C 1129
 Wyoming, Proterozoic OP-1982
- zirconium**
 Australia, inclusions C 1129
 metal ores B 2097
Zn *see* zinc
Zoantharia *see* Rugosa; Scleractinia; Tabulata
 zone of mobility *see* asthenosphere
 zone, Benioff *see* Benioff zone
 zones, fault *see* fault zones
 zones, fracture *see* fracture zones
 zones, high-velocity *see* high-velocity zones
 zones, rift *see* rift zones
 zones, shear *see* shear zones
 zones, subduction *see* subduction zones
 zones, suture *see* suture zones
 zoogeography *see* biogeography
Zuni Mountains
 Proterozoic OP-21

AUTHORS

- A**
- A'Hearn, M. F. OP-987
 Aaron, J. M. OP-1034
 Abbey, W. J. C 1129
 Abbott, E. A. OP-757
 Abbott, L. D. OP-1035
 Abbott, M. M. C 1108
 Abbott, P. L. OP-1036
 Abdulrahman, Fadel OP-392
 Abe, Katsumi OP-1269
 Abella, S. E. OF 94-0568; OP-1611
 Abercrombie, R. E. OP-1037, 1038
 Abert, C. C. OP-1111
 Abraham, Joju OP-1039
 Abramian, A. A. OP-265
 Abramovich, I. I. OP-1266
 Abrams, G. A. B 2064-A-R; OF 95-0506
 Abston, C. C. DDS-0014, 0024
 Acevedo, William OP-495
 Ackerman, D. J. WRI 94-4257
- Ackermann, H. D. OF 94-0695
 Ackman, T. E. C 1108
 Acosta, Antonio C 1129
 Acton, C. H. OP-676
 Adam, D. P. OF 94-0593, 94-0651, 95-0033, 95-0034; OP-1040, 1635, 2045
 Adams, C. E., Jr. OF 94-0275
 Adams, D. D. OP-539, 1703
 Adams, G. P. OF 94-0504
 Adams, John OF 94-0568
 Adams, K. D. OP-1994
 Adams, K. E. OP-1270
 Adams, S. D. C 1129
 Adams, T. OP-1994
 Adamski, J. C. WRI 94-4022; OP-211, 1041
 Adrain, J. M. OP-1
 Adrian, B. M. OF 94-0289
 Aelion, C. M. OP-95
 Affolter, R. H. C 1108; OF 94-0670; OP-108, 1042, 1181, 1182
 Afonina, G. G. OP-2110
- Aga, D. S. OF 94-0670; OP-1043
 Agar, S. M. OP-2
 Agena, U. OP-1605
 Agena, W. F. B 2102; YR; OF 94-0263
 Ager, C. M. OP-150, 493
 Ager, T. A. OP-2171
 Agnon, Amotz OF 94-0568
 Ahall, K. I. C 1129
 Aharonian, Vigen OP-265
 Ahern, T. K. OP-1749
 Ahlbrandt, T. S. B 2110; C 1108; OF 95-0240; OP-1044, 1226, 1228
 Ahmad, Al-Saleh C 1129
 Ahmad, Mujeeb OF 94-0274
 Ake, J. P. OP-1045
 Akernand, Dietrich OP-390
 Aki, Keiiti OP-539, 1503, 1694, 1703, 1704, 1705
 Akimoto, Kazumi OP-338
 Albino, G. V. B 2081; OF 94-0712
- Aleinkoff, J. N. C 1129; OP-3, 39, 784, 1046, 1047, 1946, 2296, 2297
 Alexander, R. B. OF 94-0399
 Alexeev, D. V. OP-1258
 Algermissen, S. T. OP-1048
 Alias, S. A. OP-1049
 Allard, D. J. OP-96
 Allen, B. D. OP-1050
 Allen, C. M. C 1129
 Allerton, S. B. OP-1245
 Alley, R. B. OP-187
 Alley, W. M. C 1112; OP-4, 5, 6, 7, 8, 356, 756
 Allison, M. A. OP-1186, 1188, 2080
 Almendinger, J. E. WRI 94-4207
 Alminas, H. V. B 2057
 Alonso Zarza, A. M. OP-118
 Alpers, C. N. WRI 94-4040; OP-9, 1051
 Alpha, T. R. OF 94-0667-A, 94-0667-B, 95-0573; OP-1052, 1053

- Alt, D. F. OF 94-0467, 95-0418
 Altschul, Inna OF 95-0034
 Alvarado, Alexandra OF 94-0568
 Alvarez, M. OP-1073
 Am Ende, B. A. OP-1969
 Amadei, Bernard OP-703
 Amato, Alessandro OP-136
 Ambos, E. L. OP-10
 Ambrose, W. A. OP-947
 Amelung, Falk OP-492, 1054
 American Association of State Geologists C 1108
 Ames, K. C. OP-2064
 Amit, R. OF 94-0568
 Ammon, C. J. OP-1838
 Amos, G. L. OF 94-0338
 Amundson, R. G. OP-11, 1055
 Anderholm, S. K. WRI 93-4113, 94-4061, 94-4078
 Anders, D. E. OP-297, 701
 Anders, M. H. OF 94-0228
 Anders, Nuni-Lyn OP-1522, 1523
 Anders, R. B. WRI 94-4127
 Andersen, G. L. OP-670
 Andersen, Janel OP-1089
 Anderson, A. V. OP-740
 Anderson, C. W. OF 95-0373
 Anderson, J. E. C 1108
 Anderson, J. G. OP-12
 Anderson, J. L. C 1129; WRI 94-4149; OF 94-0337; OP-1056, 1104, 1230, 1686, 1870
 Anderson, K. H. OP-1057
 Anderson, L. D. OF 94-0384; OP-13
 Anderson, M. OP-1311
 Anderson, M. G. OP-14
 Anderson, M. P. OP-1058, 2252
 Anderson, P. B. WRI 93-4221
 Anderson, R. E. B 2056; OP-15
 Anderson, R. L. OF 95-0034
 Anderson, R. R. OP-16, 372, 1059, 1880, 2034
 Anderson, R. S. OP-1035, 1803
 Anderson, R. Y. OF 94-0578; OP-1050, 1290
 Anderson, S. B. I-2474-A
 Anderson, T. W. P 1406-A
 Anderson, W. L. OF 95-0077
 Andraski, B. J. OF 94-0489
 Andreasen, D. C. OF 94-0390, 94-0391, 94-0392, 94-0393, 94-0394, 94-0395
 Andreassen, K. OP-17, 1060
 Andren, A. W. OP-508
 Andresen, Arild OP-158, 2156
 Andrews, D. J. OP-1061
 Andrews, E. D. OF 94-0545; OP-18, 1062, 1063
 Andrews, G. W. OF 94-0683
 Andrews, W. J. WRI 93-4224, 94-4162
 Andrie, V. A. OF 95-0034
 Anger, C. D. OP-58
 Anima, R. A. OF 94-0594, 94-0597
 Anima, R. J. OF 94-0639; OP-1064, 1065, 1066, 1216, 1308, 1759, 1760, 1773, 2180, 2284
 Anning, D. W. OF 94-0476
 Anooshehpour, Abdolrasool OF 94-0228
 Anovitz, L. M. C 1129; OP-1771
 Antweiler, R. C. OF 95-0149; OP-2185
 Anwar, Mohammad OF 94-0274, 94-0557
 Aoki, Masahiro OF 95-0221; OP-300
 Aparicio N., Hugo OP-188
 Apple, Russ OP-1722
 Arattano, M. OP-19
 Archuleta, A. S. OP-34
 Archuleta, R. J. OP-1336
 Arculus, R. J. OP-554
 Arehart, G. B. OP-20
 Arihood, L. D. WRI 94-4239
 Armbrustmacher, T. J. B 2063; OP-1067, 1827
 Armentrout, D. L. OP-1924
 Armentrout, J. M. OP-1592
 Armstrong, A. K. B 2110; OP-21
 Armstrong, D. E. OP-2327
 Armstrong, T. R. OP-1068, 1997, 2208
 Arnadottir, Thora OF 94-0567; OP-696
 Arnaud-Vanneau, A. OP-2127
 Arpigny, C. OP-987
 Arribas, Antonio, Jr. OF 95-0221; OP-22
 Arrowsmith, J. R. OF 94-0568
 Arteaga, F. E. OF 95-0107
 Arth, J. G. P 1529; C 1129; OP-23
 Arthur, J. K. WRI 94-4172, 95-4127
 Arthur, M. A. OF 95-0209; OP-96, 1069, 1070, 2063
 Arvin, D. V. OF 94-0352, 94-0382
 Asaro, Frank OP-1416
 Asch, G. OP-1071
 Ash, S. R. OP-224, 582, 1322, 2023
 Asher-Bolinder, S. A. C 1108; OF 94-0670, 95-0536; OP-1031
 Ashley, G. M. OP-1072, 2164
 Ashley, R. P. GQ-1681
 Ashton, K. C. I-2364-A
 Ashworth, A. C. OF 94-0588
 Asioli, A. OP-2086
 Ask, M. V. OP-338
 Askin, R. A. OP-369
 Asquith, W. H. WRI 95-4019
 Asudeh, Isa OP-248, 1073, 1804
 Atherton, M. P. C 1129
 Atkins, J. B. WRI 93-4186
 Atkinson, G. M. OP-24, 25, 88, 1074
 Atkinson, W. W. OP-334
 Attanasi, E. D. C 1108; OF 95-0075-A, 95-0075-F; OP-593
 Attrep, Moses, Jr. OP-1416
 Atwater, B. F. OP-26, 661, 1075, 1076, 1876
 Aubry, Marie-Pierre OP-621, 622, 623, 735
 Aung, Soe OP-834
 Autin, W. J. OF 94-0275
 Avery, C. F. WRI 94-4034; OF 93-0141
 Axen, G. J. GQ-1759
 Axon, A. G. C 1108
 Axtmann, E. V. OF 94-0375; OP-488
 Ayotte, J. D. OF 95-0142, 95-0363
 Ayuso, R. A. B 2081; C 1129; OF 95-0082; OP-27, 199, 284, 555, 1361, 2090
- ## B
- Babaiian, T. O. OP-265
 Babb, I. G. OP-1962
 Babcock, L. E. B 2107
 Babiarz, C. L. OP-508
 Bachl, C. A. OP-160
 Bachman, L. J. OP-1077
 Back, William C 1108; OP-28, 2210
 Backjinski, Natalka OF 95-0590
 Bacon, C. R. OP-29, 2122, 2172
 Bader, L. R. OF 94-0578, 95-0034
 Bae, Deg-Hyo OP-312
 Baedeker, M. J. C 1108; OP-28
 Baehr, A. L. OP-30
 Baevsky, Y. H. OF 94-0368
 Bagaric, Steve C 1129
 Baharie, B. S. WRI 94-4127
 Bai Qingzhao OP-2016
 Bai, T. B. OP-139
 Baier, W. G. OP-1248
 Bailey, A. M. OF 94-0275; OP-1078, 1937
 Bailey, E. A. B 2107
 Bain, D. M. OP-1121
 Bain, John OP-31
 Bair, E. S. OP-448
 Baker, D. N. OP-676
 Baker, E. G. OF 94-0354, 95-0156
 Baker, E. T. OP-1351
 Baker, E. T., Jr. WRI 94-4039
 Baker, J. OP-1079
 Baker, J. E. OP-511
 Baker, L. L. C 1129
 Baker, L. M. OP-277, 393, 889, 1375, 1499, 2144
 Baker, N. T. OP-32
 Baker, P. A. OP-233, 652, 776
 Baker, P. E. OP-338
 Baker, V. R. OP-33
 Bakulin, Y. I. OP-1080
 Balay, R. H. OF 95-0075-E
 Baldigo, B. P. OF 94-0368
 Balding, G. O. OF 94-0493
 Baldo, E. C 1129
 Baldrige, W. S. OP-861
 Baldwin, J. A. WRI 94-4178
 Baldys, Stanley, III WRI 95-4083
 Balen, M. D. OF 94-0272
 Bales, J. D. WRI 94-4067; OF 94-0454, 94-0511
 Bales, R. C. OP-883
 Balistrieri, L. S. OP-34, 329, 329, 1081, 1082, 1337, 1922, 2129
 Ball, J. W. WRI 93-4122; OF 95-0514; OP-1897
 Ball, M. M. B 2063
 Ballew, M. D. OF 94-0307
 Balzarini, M. A. OP-205
 Band, L. E. OP-638
 Banerdt, W. B. OP-35
 Bangs, N. L. OP-56
 Bankey, Viki OF 95-0077
 Banks, N. G. OP-952
 Bannister, S. C. OF 95-0225
 Bao Peisheng OP-1935
 Baranov, B. V. OF 94-0714
 Barbarin, Bernard C 1129
 Barber, J. H., Jr. OF 95-0017; OP-1877, 2205
 Barber, L. B. WRI 94-4191; OP-36, 37
 Barber, N. L. WRI 94-4219
 Barber, Valerie B 2107
 Barboza, S. A. C 1129
 Bargar, K. E. OP-38
 Bargh, M. H. OF 94-0298
 Bargossi, G. M. C 1129
 Barka, A. A. OF 94-0568
 Barker, C. E. OF 94-0670, 94-0712; OP-1083, 1084, 1932
 Barker, Fred OP-39, 40
 Barker, R. A. P 1410-C; WRI 94-4039
 Barks, C. S. WRI 94-4216; OF 94-0364
 Barlow, P. M. OF 94-0316, 95-0290
 Barnes, A. E. OP-1804
 Barnes, C. G. C 1129; OF 95-0227-A, 95-0227-B; OP-41, 348, 1315, 1590
 Barnes, D. F. OP-42
 Barnes, K. K. OF 94-0711-W
 Barnes, M. A. OF 95-0227-A, 95-0227-B; OP-41
 Barnes, P. L. OP-1085
 Barnes, P. W. OF 95-0224; OP-43, 285, 286, 396, 1086
 Barnhard, T. P. OP-15
 Barnhill, M. L. OF 94-0298
 Barovich, K. M. C 1129
 Barr, S. M. C 1129
 Barrash, Warren OP-44
 Barringer, J. L. WRI 90-4095; OP-1087
 Barringer, T. H. WRI 92-4144
 Barron, J. A. B 1995-J,K; OF 94-0281, 94-0588; OP-200, 218, 1088, 1916, 2061
 Barron, W. R., Jr. OF 94-0359
 Barry, J. P. OP-1434, 1918
 Barry, T. F. OP-92
 Barsotti, A. F. B 2111
 Bartek, L. R. OP-1089
 Barth, A. P. OP-45, 46
 Barth, G. A. OP-47, 1090, 1500
 Bartholomay, R. C. OF 94-0374, 94-0503; OP-2004

- Bartholomew, M. J. OP-1091
 Bartlein, P. J. OP-1092, 1537
 Bartolino, J. R. OP-1093
 Barton, C. A. OP-1094
 Barton, C. C. OF 93-0269, 95-0067; OP-48, 49, 176
 Barton, G. J. WRI 95-4033
 Barton, H. N. I-2225-C, 2225-D
 Barton, M. D. C 1129; OP-1095
 Barton, P. B. OF 95-0082; OP-1096, 1488
 Bartow, J. A. OF 94-0577; OP-1097
 Bartsch-Winkler, S. B. DDS-0017; B 2063; OF 94-0269; OP-972, 1098
 Basabilvazo, G. T. WRI 93-4192
 Basdekas, P. O. OF 95-0048, 95-0086
 Basileo, M. A. OF 94-0363
 Baskaran, M. OP-1397
 Baskin, R. L. WRI 93-4219, 93-4221
 Bassett, W. A. OP-139, 1237, 1478, 2106, 2317
 Basu, A. R. OP-50
 Batatian, L. D. B 2064-A-R
 Bates, A. L. C 1108; OP-1951
 Bates, G. T. OP-1537
 Batson, R. M. B 2129; OP-195, 1662
 Battaglin, W. A. WRI 94-4176; OP-384, 1426, 1427
 Baum, J. S. OP-1099, 1100, 1358
 Baum, R. L. OF 95-0617; OP-1101
 Baumbach, G. E. OF 95-0113
 Baumgart, Paul OF 95-0163
 Bautista, B. C. OP-1048
 Baxter, M. E. OP-51
 Bayless, E. R. WRI 94-4195
 Bea, Fernando C 1129
 Beanland, Sarah B 1982
 Beard, J. S. C 1129
 Beard, L. S. OF 91-0132, 92-0326, 93-0716; OP-1323, 1976
 Beard, S. L. OF 94-0334
 Beasley, T. M. WRI 94-4053
 Beaty, D. S. OF 94-0298
 Beaudoin, B. C. OF 95-0275; OP-941
 Bechtel, T. F. C 1108
 Beck, T. L. OP-281
 Becker, Keir B 2022; OP-52, 652
 Becker, L. D. WRI 94-4200
 Becker, T. A. OP-2215
 Becker, Tammy OP-1781
 Bedford, J. M. OP-1282
 Beeler, N. M. OP-53
 Beeman, W. R. OF 94-0022-A, 94-0022-B, 94-0022-C, 94-0022-D, 94-0022-E, 94-0022-F, 94-0022-G, 94-0022-H, 94-0022-I, 94-0022-J, 95-0025, 95-0075-C
 Been, J. M. C 1108; OF 94-0295
 Beeson, M. H. OP-72, 639, 1102
 Begay, Stephanie C 1108
 Begét, J. E. OP-1458
 Behr, Jeffrey OF 94-0228
 Behrendt, J. C. OP-54, 55, 1103
 Behrmann, J. H. OP-56, 1762
 Beikman, H. M. I-2017; SGM
 Beinekas, A. I. OP-1383
 Bekins, B. A. OP-2149
 Belkin, H. E. OP-27, 185, 199, 766, 950
 Bell, C. F. OF 94-0301
 Bell, Cindy OP-495
 Bell, J. W. OF 94-0568; OP-1994
 Bell, R. E. OP-1103
 Bell, R. W. WRI 94-4138
 Belshaw, N. S. OP-1129
 Belton, M. J. OP-57, 58, 134, 1869, 1873
 Belval, D. L. WRI 94-4042
 Bemis, Bill OF 94-0363
 Ben-Zion, Yehuda OF 94-0228
 Bencala, K. E. OP-487
 Bender, E. E. OP-1104
 Bender, J. F. OP-1941
 Benito, Gerardo OP-679, 680
 Benjamin, S. P. OF 95-0652
 Bennecke, W. M. OP-44
 Bennett, Annie OP-1781
 Bennett, E. H. P 1525
 Bennett, K. OP-1105
 Bennett, M. J. OF 94-0709; OP-1529, 1530
 Bennett, V. C. OP-321
 Benninger, L. M. B 2022
 Benoit, J. M. OP-508, 1663
 Benoit, J. P. OP-1459
 Benson, L. V. OF 95-0034; OP-59, 1106
 Bent, G. C. OP-322
 Benthien, M. OP-1285
 Benz, H. M. OP-60, 1107, 1108, 1109, 1544, 1967, 1968, 2231, 2328, 2333
 Beratan, K. K. OP-669, 1110
 Berenbrock, C. E. WRI 93-4003, 94-4116, 94-4119
 Berg, H. C. OP-670, 671, 723, 724, 725, 857
 Berg, R. C. OP-1111, 1630
 Berg, T. M. OP-881
 Bergantz, G. W. C 1129
 Berger, B. R. B 2081
 Berger, D. L. WRI 95-4119
 Berggren, W. A. OP-61
 Bergman, D. L. WRI 93-4230; OF 94-0504
 Bergman, E. A. OP-1353
 Bergman, S. C. OP-201
 Bergquist, J. R. OF 95-0006
 Bering Sea EEZ-Scan Team OP-1217
 Bering-Chukchi Working Group OP-1398
 Berkas, W. R. WRI 95-4087; OP-1112, 1113
 Berndt, M. E. OP-1114
 Bernknopf, R. L. C 1108; OF 94-0662, 94-0699; OP-882, 1115, 1213, 2141
 Bernstein-Taylor, B. L. OP-1702
 Beroza, G. C. OP-62, 212, 249, 1116, 1309, 1348
 Berquist, C. R., Jr. OP-63, 1536
 Berrocal, Jesus OP-252
 Berry, J. M. OP-1117
 Berryman, K. R. OF 94-0568
 Berza, T. C 1129
 Best, M. G. B 2056
 Betancourt, J. L. OP-875
 Bethke, C. M. OP-385
 Bethke, P. M. OP-1096, 1118, 1793, 2060
 Betterton, W. J. OP-1141
 Beu, A. G. OF 94-0568
 Beus, S. S. OP-1607
 Beutner, E. C. OP-2070
 Bevans, H. E. W 2352-B, 2419
 Bexfield, L. M. OF 94-0702-W
 Beyer, L. A. C 1108; OF 95-0054
 Bezrukova, Y. V. OP-94
 Bhagwat, S. B. B 2111
 Bhowmik, J. OP-1285
 Biasi, G. P. OF 94-0568; OP-1189
 Bice, T. OP-1266
 Bidlake, W. R. OP-119
 Bierbach, P. R. MF-2289
 Bierman, P. R. OP-368
 Biewick, L. R. C 1108; OF 95-0235
 Bilham, R. G. OP-406, 457, 1514
 Billingsley, G. H. OF 94-0290, 94-0554, 94-0634, 95-0559, 95-0560; I-2396; OP-991
 Bills, B. G. OP-64
 Binard, Nicolas OP-390, 1119
 Birmian, E. F. OP-1120
 Bird, D. K. OP-1752
 Bird, K. J. B 2107; C 1108; OF 95-0236; OP-65, 161, 641, 642, 1121, 1122, 1249, 1250, 1251, 1439
 Birmingham, S. D. OP-287
 Birt, C. S. OP-478
 Bischoff, J. L. OF 95-0034; OP-66, 1026, 1803
 Bisdorf, R. J. OF 94-0676; OP-67, 1123, 2298, 2335
 Bisese, J. A. WRI 94-4148
 Bishop, L. M. OF 94-0036
 Bittenbinder, A. N. OF 92-0538; OP-1124, 1125, 1302
 Bjerrum, C. J. OP-1607
 Black, B. D. OP-1734
 Black, L. P. OP-31
 Blackburn, W. H. OP-1126
 Blackerby, B. A. OP-991
 Blackwood, D. S. OF 95-0556
 Blair, N. L. OP-68, 1127
 Blake, B. M., Jr. OP-69
 Blake, M. C. OP-1599
 Blakely, R. J. OP-70, 71, 72, 331, 341, 890, 1128, 1444
 Blakey, Suzanne C 1129
 Blamont, J. E. OP-676
 Blanchard, B. W. OF 94-0275
 Blanchard, S. F. WRI 95-4021; OF 91-0175
 Blancke, C. D. B 2111
 Blanckenburg, F. V. OP-1129
 Bland, A. E. OP-1126
 Blanford, J. H. OP-643
 Blank, H. R., Jr. OP-836
 Blankenship, D. D. OP-54, 1103
 Blanpied, M. L. OF 94-0228; OP-73, 590, 872, 1130
 Blencoe, J. G. C 1129
 Blevin, P. L. C 1129
 Blevins, D. W. OF 94-0705-W
 Blewett, R. S. OP-31
 Bliss, J. D. OF 94-0566, 94-0677, 94-0690, 95-0514; OP-74, 75
 Block, E. K. OF 94-0315
 Blodgett, R. B. B 2107; OF 94-0215; OP-1, 51, 76, 77, 201, 345, 740, 826
 Blome, C. D. OP-78, 1131, 1132
 Blomquist, J. D. OP-1133
 Blong, R. J. CP-0043
 Bloomer, S. H. OP-920
 Blout, D. O. OF 92-0657
 Blowes, D. W. OP-9
 Bluemle, J. P. I-1420 (NL-14)
 Blum, A. E. OP-79, 995, 1134, 1554, 2274
 Blumberg, A. F. OP-2114
 Blundy, J. D. C 1129
 Bluth, G. J. B 2139
 Blutitude, Bob OP-31
 Blythe, A. E. OP-1905
 Boatwright, John OP-80, 587, 1375, 1753
 Bobrowsky, P. T. OP-26, 661
 Boccaletti, Mario OF 94-0568
 Bock, Yehuda OP-1550
 Bodén, Per OP-56
 Bodin, P. A. OP-81, 325
 Bodin, P. R. OP-2070
 Bodnar, R. J. OP-1355
 Boesflug, K. L. OP-2168
 Bogaert, B. M. OP-1124, 1125, 1302, 1883, 1917
 Boggs, Sally OP-1209
 Bogino, V. A. OP-948
 Bogue, S. W. OP-1135
 Bohannon, R. G. OF 95-0086, 95-0228, 95-0560; OP-82, 1136, 1656, 1706
 Bohaska, D. J. OP-1137
 Bohlen, S. R. OF 95-0255; OP-83, 387, 1138, 1446, 1489, 1858
 Bohlke, J. K. B 2022; YR; OP-1139, 1796, 1899, 2136, 2177
 Bohor, B. F. OP-84, 1140, 1141, 1142, 1665
 Bohrsen, W. A. OF 89-0284, 94-0587; OP-197
 Boice, D. C. OP-987
 Boling, J. K. WRI 95-4010
 Bolles, T. P. OF 94-0301
 Bollinger, G. A. OP-103
 Bonamassa, Ornella OP-1143, 1144
 Bonardi, Maurizio OP-778
 Bond, K. R. OP-85, 86, 426

- Boni, Maria OP-652
 Bonilla, M. G. OP-1145
 Bonin, Bernard C 1129
 Bonito, M. V. OF 95-0573
 Bookstrom, A. A. OP-87, 1146, 1156, 1220, 2129
 Boore, D. M. FS 0096-95; OP-24, 88, 89
 Booth, D. B. OF 94-0403; MF-2297
 Booth, J. S. C 1108; OP-90, 1147
 Borchardt, Glenn OF 94-0568
 Borchardt, R. D. OF 94-0706; OP-91, 654, 1148, 1864
 Borden, J. C. B 2084, 2107
 Borg, L. E. OP-1149
 Borne, P. F. OP-1150
 Bortleson, G. C. OF 94-0315
 Bossiroy, Dominique C-0146
 Bothner, M. H. OF 94-0649; OP-683, 913, 1187
 Boti, Emilija OP-2052
 Bott, J. D. OF 94-0568; OP-2307
 Boucher, M. S. OF 94-0303
 Bouchez, Jean-Luc C 1129
 Boughn, S. S. OF 95-0034
 Boulègue, J. J. OP-652
 Boullier, Anne-Marie OF 94-0228
 Boumans, R. M. OF 94-0275
 Bourgeois, Joanne OF 94-0568; OP-26
 Bourgois, Jacques OP-200
 Bouse-Schaenemann, R. M. OF 95-0299
 Boutillier, S. A. OF 94-0384
 Bouwer, E. J. OP-377
 Bove, D. J. OF 94-0670; OP-92
 Bowell, J. A. OP-560, 1781
 Bowering, P. OP-1772
 Bowers, T. L. OF 95-0232; I-2473; OP-793
 Bown, T. M. OF 94-0630; OP-311, 1151, 1152, 1153, 1154, 1155, 1527, 1801
 Box, S. E. OP-39, 201, 710, 711, 1039, 1146, 1156, 2129
 Boyce, B. C. OF 94-0295
 Boyd, K. F. P 1538-R
 Boyd, T. M. OP-93
 Bozeman, D. K. OF 88-0608, 88-0609, 88-0610, 88-0611, 88-0612, 88-0613, 88-0615, 88-0619, 88-0620, 88-0626, 88-0627, 93-0521, 93-0529
 Brabb, E. E. OF 94-0622, 95-0597; OP-1430, 1599
 Brabets, T. P. WRI 94-4073, 94-4165
 Bracht, C. J. OF 95-0001
 Bradbury, J. P. P 1543 A-B; OF 94-0578, 95-0001, 95-0034; OP-94, 165, 1157, 1158, 1290, 1635, 2045
 Bradford, K. J. OP-160
 Bradford, W. L. OF 94-0319
 Bradley, D. C. OP-349, 598
 Bradley, Lee-Ann OF 93-0698, 94-0270-A, 94-0270-B; OP-661, 1876
 Bradley, P. M. OP-95, 131
 Bradner, L. A. OF 94-0495
 Bragg, L. J. C 1108; OF 94-0298
 Brahana, J. V. OP-1159, 1160, 1360
 Bralower, T. J. OP-96, 1161, 1162
 Brancolini, Giuliano OP-156
 Brandon, A. D. C 1129
 Brantley, S. L. OF 94-0228; OP-810
 Brantley, S. R. OF 95-0231; OP-1163, 1330
 Bratton, Lisa WRI 94-4256
 Braun, D. D. OF 93-0723; OP-1164
 Braun, I. C 1129
 Brearley, A. J. OP-364
 Brease, P. F. B 2107
 Breckenridge, K. S. OP-320, 1165, 1715
 Brede, L. M. OF 95-0278
 Bredehoeft, J. D. OP-97, 957, 1166
 Breed, C. S. OF 95-0078; OP-2068
 Breen, K. J. WRI 94-4131
 Breit, G. N. B 2063; C 1122; OP-98, 1167, 1168, 2015
 Brendle, D. L. OF 94-0528, 94-0529
 Breneman, H. OP-58
 Brett, C. E. B 2086
 Bretz, B. H. OP-399
 Bretz, R. F. I-1420 (NL-14)
 Breuer, G. OP-1605
 Brew, D. A. B 2107, 2135; C 1129; OF 94-0194, 94-0268, 95-0082, 95-0215; OP-99, 100, 409, 633, 670, 671, 1169
 Brew, D. C. I-2555
 Brewer, M. C. OP-101
 Brewer, T. S. C 1129
 Briar, D. W. OF 95-0143; OP-1633
 Bricker, O. P. C 1108; FS 0136-95; OP-771, 1170
 Bridges, J. L. OF 94-0308
 Bridges, N. J. OP-601
 Briggs, P. H. B 2106; OF 95-0006, 95-0007, 95-0250, 95-0485, 95-0486; OP-289, 732, 876, 1011, 1377, 1969
 Briggs, P. M. OF 94-0289
 Briggs, R. M. OP-431
 Brigham, M. E. WRI 93-4231; OF 95-0283; OP-102
 Brigham-Grette, Julie OF 94-0588; OP-1171, 1172
 Bright, D. J. WRI 94-4127
 Brinton, T. I. OF 93-0628, 95-0149; OP-2185
 Briole, Pierre OP-2152
 Briqueu, Louis OP-338
 Britsch, L. D. OF 94-0275
 Britt, D. T. OP-2134
 Brobst, D. A. OP-112
 Brocher, T. M. OF 94-0259, 95-0228; OP-1173, 1285, 1371, 1521, 1524, 1525, 1966, 1967, 1968
 Brock, R. D. WRI 94-4092; OF 94-0302, 94-0329
 Brockman, A. R. WRI 92-4111
 Brockman, S. R. OP-103
 Brodscholl, A. L. OP-392
 Brooks, E. G. OF 94-0584
 Brooks, E. R. OP-531
 Brooks, G. R. OP-1174
 Brooks, H. R. C 1129
 Brooks, M. H. OF 94-0384; OP-616, 1175, 2136, 2323
 Brooks, R. R. OP-104
 Brooks, W. E. B 1988-K, 2119; OF 94-0670, 95-0263; MF-2246; OP-105
 Brosgé, W. P. OP-479, 1623
 Broshears, R. E. OP-487
 Brothers, W. C. OF 95-0104
 Brotospusto, K. S. OP-392, 1498
 Brouwers, E. M. P 1544; OF 94-0588; OP-1153, 1171, 1176, 1177, 1801
 Brown, C. L. C 1108; OF 95-0299; I-2429
 Brown, E. H. OF 94-0403
 Brown, E. T. OP-106
 Brown, F. H. OP-716
 Brown, J. F. OF 95-0652; OP-896
 Brown, J. H. OP-875
 Brown, J. L. OF 94-0687, 95-0010; GQ-1758; OP-667, 1178, 1179
 Brown, K. M. OF 94-0594; OP-56, 1066, 1762
 Brown, L. R. FS 94-0029
 Brown, M. F. WRI 94-4218; OP-1180
 Brown, Michael C 1129
 Brown, P. A. WRI 93-4204
 Brown, P. W. OF 95-0122
 Brown, R. D. OP-107
 Brown, T. A. OF 94-0515
 Brown, T. M. OP-1012
 Brownell, D. L. OF 95-0285
 Brownfield, I. K. B 1808-P
 Brownfield, M. E. OF 94-0670; OP-108, 1042, 1181, 1182, 2110
 Browning, J. V. OP-621, 622, 623
 Bruce, Bret OP-1796
 Bruce, Scott OP-1959, 1960, 1977
 Bruhn, R. L. OF 94-0228; OP-402
 Brune, J. N. OF 94-0228; OP-12
 Bruner, D. J. B 2064-A-R
 Brunner, C. A. OP-652
 Bruno, P. W. OF 95-0224
 Bruns, T. R. OP-953, 1051, 1371, 2160
 Brunstein, F. C. OF 95-0063
 Brüstle, Wolfgang OP-392
 Brustolon, A. E. OF 94-0568
 Bryan, B. A. WRI 94-4229
 Bryan, K. A. OP-319
 Bryan, W. B. OP-639, 1183, 1184
 Bryant, A. S. OF 95-0204
 Bryant, B. H. I-2489; OP-1185, 2310
 Bryant, C. J. C 1129
 Bryant, Karen C 1108; OF 95-0588, 95-0589
 Bryant, W. A. OF 94-0568
 Bubeck, R. C. WRI 92-4052
 Buchan, K. L. OP-704
 Buchanan, P. A. OF 94-0543
 Buchholtz-ten Brink, M. R. OF 94-0649; OP-1186, 1187, 1188
 Buchmiller, R. C. WRI 94-4244; OP-982, 1485
 Buchner, J. OF 95-0001
 Bucknam, R. C. OP-1189, 1190
 Buckwalter, T. F. WRI 87-4136
 Bucy, L. R. OF 94-0315
 Budahn, J. R. B 2056, 2107; OF 91-0596; OP-836
 Buell, G. R. OP-423
 Buesch, D. C. OF 94-0342, 95-0102
 Bufe, C. G. OF 95-0060; OP-1191, 1192, 1892
 Bugliosi, E. F. OF 94-0473
 Buika, J. K. OF 95-0480
 Bukry, David OF 94-0678, 95-0260; OP-621, 623, 903, 1176, 1177, 1916
 Buland, R. P. OP-482, 1193, 1352, 1749
 Bull, W. B. OF 94-0568
 Bullen, T. D. OP-1149, 1194, 1613, 1631, 2241
 Bullock, J. H., Jr. OF 94-0270-A, 94-0270-B
 Bultman, M. W. OF 95-0032
 Bundtzen, T. K. OF 94-0714; OP-201, 670, 671, 1195, 1893
 Buppert, G. D. OP-1692
 Buratti, B. J. OP-676, 1783
 Burbank, W. S. OF 94-0583
 Burciaga, A. M. OP-1285, 1561
 Burckle, L. D. OP-621, 622, 623
 Burdette, T. R. OP-1835, 2288
 Bürgmann, Roland OF 94-0568; OP-696
 Burianyk, M. J. OP-109, 468
 Burke, K. J. OF 95-0057; OP-1504
 Burke, R. M. OP-1414
 Burkett, Virginia OF 94-0275
 Burkhardt, D. J. OF 93-0098, 94-0311, 94-0531
 Burnett, W. C. OP-520, 689, 1069
 Burns, D. A. OF 94-0368; OP-1632
 Burns, I. M. C 1129
 Burns, M. G. OP-216
 Burns, S. F. OP-679, 680
 Burow, K. R. OF 95-0286
 Burr, G. S. OF 94-0568; OP-1751, 1983
 Burrows, R. L. OP-127
 Burruss, R. C. OF 94-0298; OP-110, 1196, 1355, 2057
 Bursik, M. I. OP-988
 Burton, B. R. B 2064-A-R
 Burton, K. W. OP-1197, 1198
 Burton, P. J. OP-670

Burton, W. C. OF 95-0004; OP-3, 1199, 1200
 Busby, C. J. OP-618
 Busby, J. F. P 1402-F
 Busby, J. W. OP-1562
 Busenberg, Eurybiades OF 94-0350; OP-170, 472, 473, 1259, 1614
 Bush, A. L. B 2111; OP-111, 112
 Bush, C. A. DDS-0014
 Bush, D. M. OP-1201, 2035
 Bush, P. W. WRI 93-4126, 94-4039; OP-1597
 Bush, W. V. OF 94-0430
 Bussey, K. W. OF 94-0384
 Bustillo, Manuel OP-118
 Bustin, R. M. OP-565
 Buszka, P. M. WRI 94-4036, 94-4092; OF 94-0329
 Butch, G. K. WRI 91-4051; OP-113
 Butler, D. L. WRI 94-4041
 Butler, J. R. OP-1202, 1536
 Butler, W. C. B 2063
 Butman, Bradford OF 94-0649; OP-847, 944
 Butterfield, D. A. OP-1351
 Buursink, M. L. OP-1203, 1204
 Buvtyshkin, V. M. OP-169, 1258
 Buxton, D. E. WRI 93-4101; OP-114
 Buxton, H. T. OP-115
 Buyyounouski, M. OP-1520
 Buzas, J. S. OP-233
 Byalobzhesky, S. G. OF 94-0714
 Bybell, L. M. P 1554; OF 94-0217, 94-0708, 95-0478; OP-151, 1359
 Byerlee, J. D. OF 94-0228, 95-0028; OP-73, 262, 551, 835, 1205, 1206, 1207, 1364, 1721, 1839, 1841, 1856
 Byl, T. D. OF 94-0378, 95-0156, 95-0372
 Byrd, J. O. OP-2135
 Byrer, C. W. C 1108
 Byrne, G. F. OP-478
 Byrnes, D. OP-57
 Byrnes, M. R. OF 94-0275; OP-1938

C

Cabri, L. J. OP-1208
 Cacchione, D. A. OP-116, 117, 847, 998
 Caffee, M. W. OP-1287, 1368, 1730
 Caggianelli, Alfredo C 1129
 Cahoon, D. R. OF 94-0275
 Cai, Jinkui OP-1218
 Cailliet, G. M. OP-1434
 Cain, D. J. OF 94-0308, 95-0299; OP-1209
 Cain, D. L. OP-1210
 Cain, J. A. OP-2227
 Calderone, G. J. OP-1583
 Calk, L. C. OP-1509, 1847
 Calkin, P. E. OP-1000

Callender, E. C. OP-488
 Callis, J. G. OF 94-0298
 Callomon, J. H. OP-964
 Calvo, J. P. OP-118
 Calzia, J. P. B 2107; OF 95-0039, 95-0535; OP-1211
 Campagna, D. J. OF 91-0132
 Campana, M. E. OP-227
 Campbell, A. C. B 2022
 Campbell, A. S. WRI 92-4143
 Campbell, B. A. OF 95-0519
 Campbell, B. G. C 1108
 Campbell, D. H. OP-945, 1632
 Campbell, D. L. OF 95-0239
 Campbell, G. S. OP-119
 Campbell, H. W. B 2064-A-R
 Campbell, I. H. OP-1212
 Campbell, J. A. B 2098; OF 94-0437
 Campbell, J. P. WRI 94-4042
 Campbell, L. J. OF 94-0503
 Campbell, R. H. OF 94-0699, 95-0051, 95-0088, 95-0089, 95-0090, 95-0091, 95-0502, 95-0503, 95-0504, 95-0511; OP-1213, 2141
 Campbell, W. H. C 1109
 Campbell, W. R. OP-1118, 1214
 Campen, E. B. I-2474-A
 Cande, R. F. OP-2085
 Cande, S. C. OP-56, 1702
 Candela, P. A. C 1129; OP-1278
 Cannia, J. C. WRI 94-4057
 Cannon, M. R. OP-1215
 Cannon, S. H. OF 95-0508; OP-1342
 Cannon, W. F. I-2364-A
 Canudo, J. I. OP-1416
 Capel, P. D. OF 94-0458, 94-0506; OP-831
 Cappa, J. A. B 2000-H
 Cappellato, Rosanna OP-120
 Caputo, R. OF 94-0568
 Carbonell, Eudald OP-66
 Carey, M. A. OP-2019
 Carey, W. P. OP-1927
 Cargill, J. G. OP-1161
 Carkin, B. A. OF 95-0034; OP-1992
 Carlo, Milton OF 95-0072; OP-2035
 Carlross, M. OF 94-0275
 Carlson, D. D. WRI 94-4159
 Carlson, P. E. C 1108
 Carlson, P. R. OF 94-0639; OP-1065, 1216, 1217, 1218, 1263, 1759, 1760
 Carlson, R. R. OF 94-0670; OP-1344, 2225
 Carlson, R. W. OP-516
 Carlson, S. T. OP-900
 Carman, R. L. OF 94-0491
 Carmichael, J. K. WRI 95-4011
 Carpenter, G. F. C 1108
 Carpenter, M. C. WRI 95-4010; OF 94-0485, 94-0531
 Carr, Jennifer OP-2124
 Carr, M. H. OP-33, 58, 259, 1634
 Carr, W. J. OF 95-0155; OP-775
 Carracedo, J. C. OP-1522

Carrara, P. E. I-2472; OP-121, 1219, 1902
 Carreño, A. L. OP-122
 Carrington, D. C 1129
 Carroll, Peter OP-1804
 Carroll, R. D. OF 94-0618
 Carroll, W. J. C 1129
 Carruth, R. L. WRI 95-4010; OF 94-0485
 Carson, Bobb OP-123
 Carten, R. B. OP-1220
 Carter, Claire OF 94-0641, 95-0034
 Carter, J. M. OF 95-0313
 Carter, L. D. B 2107; OF 94-0588, 94-0653; OP-101, 124, 1171, 1172, 1221, 1354, 1881
 Carter, L. M. C 1108
 Carter, M. D. C 1108
 Carter, S. J. OF 94-0445; OP-165
 Cartier, K. D. OF 94-0105, 95-0316
 Carver, D. L. OP-373, 1004, 1222, 2285, 2286
 Carver, G. A. OF 94-0568; OP-26, 661
 Cary, L. E. WRI 95-4022
 Casadevall, T. J. B 2139; GP-1011; OP-234
 Case, J. E. I-2272
 Casey, G. D. OF 93-0663
 Casey, J. F. OP-1931
 Cashman, K. V. OP-1223
 Cashman, P. H. OP-1252
 Caskey, S. J. OF 94-0568; OP-1994
 Castaño, J. R. OP-1746
 Casteel, C. A. OF 94-0307
 Castillo, D. A. OP-2119, 2153
 Castle, R. O. OF 94-0698; OP-125
 Catchings, R. D. OP-405, 1224, 1225, 1651, 2287, 2288
 Cates, S. W. OF 95-0304
 Cathcart, J. D. OF 94-0670; OP-1042, 1181
 Caudron, M. OP-928
 Caulet, J. P. OP-200
 Cayan, D. R. OP-312
 Cecil, C. B. B 2110; OP-1226, 1227, 1228, 1324, 1338, 1885
 Cederstrand, J. R. OF 94-0388
 Cetin, Haluk C 1108; OF 94-0298
 Chabaux, François OP-126, 1229
 Chabernaud, T. J. OP-338
 Chacho, E. F., Jr. OP-127
 Chacko, Thomas C 1129
 Chadwick, O. A. OP-11, 1055
 Chadwick, W. W., Jr. OP-128, 1230, 1329, 1351, 2132
 Chaffee, M. A. OF 94-0640-A, 94-0640-B, 94-0670
 Chaiken, R. F. C 1108
 Chalmers, A. T. OP-1231
 Chamberlain, K. R. I-2233; OP-1232
 Chambers, D. B. OF 95-0129, 95-0184
 Champion, D. E. OF 94-0686; OP-129, 351, 1674

Chan, M. A. B 2110
 Chandio, A. H. OF 94-0274, 94-0557, 94-0595
 Chandler, M. A. OF 94-0588
 Chandra, N. OF 94-0275
 Chang, C. C. OP-1632
 Chang, P. S. OP-1045
 Chao, E. C. OP-130
 Chapelle, F. H. C 1108; OP-131, 132, 558, 1724
 Chapellier, Dominique OP-133
 Chapman, C. R. OP-57, 58, 134
 Chapman, M. G. I-2397; OP-1233
 Chappell, B. W. C 1129
 Chappell, John OF 94-0568; OP-1338
 Char, S. J. OF 95-0113, 95-0193
 Charpentier, R. R. B 2063; C 1108; OP-135
 Chase, T. E. OF 95-0017
 Chatterton, B. D. OP-1
 Chatzipetros, A. OF 94-0568
 Chavez, P. S., Jr. C 1108; OP-1610
 Cheadle, M. J. C 1129
 Chen Gouda OP-1080
 Chen, J. H. OP-1973
 Chen, T. OF 94-0228
 Cheney, J. T. OP-2208
 Cheng, C. H. OP-699, 917
 Chenoweth, C. A. OF 94-0298
 Chernyaeva, G. P. OP-94
 Cherry, D. E. WRI 94-4208
 Cherry, Gregory OF 91-0503
 Cherryholmes, K. L. OP-982
 Chester, F. M. OF 94-0228
 Chezar, Henry OP-1772, 1919
 Chiao, Ling-Yun OP-180, 2294
 Chiarabba, Claudio OP-136
 Chichester, D. C. OF 95-0193
 Chida, Noboru OF 94-0568; OP-2107
 Childs, J. R. OF 94-0639; OP-156, 1234, 1398, 1760
 Childs, P. R. OP-1759
 Chin, J. L. OP-1610
 Chin, James OP-1336
 Chinn, T. J. P 1386-B
 Chiou, C. T. OP-137, 138
 Chipp, E. R. OP-670
 Chirnside, William OP-288, 289, 1377
 Chitwood, L. A. I-2455
 Chornack, M. P. OF 92-0657; OP-1998
 Chou, I-Ming OF 94-0703; OP-139, 980, 1235, 1236, 1237, 1238, 1279, 1478, 2106, 2317
 Chouet, B. A. OP-323, 1107, 1239, 1854, 1855, 2157
 Chown, E. H. C 1129
 Choy, G. L. OP-80, 140, 1353
 Christensen, A. H. WRI 94-4127
 Christensen, N. I. OP-141, 304, 708
 Christensen, P. R. OP-142
 Christenson, S. C. OP-143, 144, 356
 Christian, E. J. OP-1240

- Christian, S. B. OP-930
 Christiansen, E. H. C 1129; OP-506, 507
 Christiansen, R. L. OF 95-0059; OP-1444
 Christoffersen, R. G. OF 94-0228
 Christofides, G. C 1129
 Christopher, R. A. OP-1988
 Chrzastowski, M. J. OF 95-0224; I-2429
 Chung, R. M. OP-1027
 Chung, Wai-Ying OP-2320
 Church, S. E. OF 94-0412, 95-0250
 Chure, D. J. OP-145
 Cichon, H. A. OF 94-0275
 Ciciarelli, T. E. B 2103
 Ciener, J. S. ; OF 94-0295
 Cieutat, B. A. B 2107; OF 95-0509
 Cinti, F. R. OF 94-0568, 95-0062
 Circé, R. C. OF 95-0224, 95-0252; MF-2280
 Circum-Pacific Council for Energy and Mineral Resources CP-0043
 Claassen, H. C. OP-146, 760
 Clague, D. A. B 2022; OF 89-0284; OP-147, 861, 1025, 1102, 1230, 1241, 1307, 1848, 2321
 Clague, J. J. OP-26, 661
 Clark, B. C. OP-1634
 Clark, D. H. OP-449
 Clark, D. L. OF 94-0588
 Clark, G. M. WRI 92-4187, 93-4229
 Clark, Germaine I-2555; OP-1242, 1384
 Clark, J. OP-1021
 Clark, J. R. WRI 94-4134; OP-148, 149
 Clark, M. M. B 1982; OP-449
 Clark, R. F. B 2116
 Clark, R. G. B 2103; YR
 Clark, R. N. OP-150, 493
 Clark, S. F. FS 95-0002; OF 94-0472; OP-1194
 Clark, S. H. I-2364-A; OP-2090
 Clark, T. W. OF 94-0629
 Clark, V. L. OF 94-0269
 Clarke, J. S. OP-151, 1243, 1244
 Clarke, J. W. OP-152, 153, 154
 Clarke, K. C. OP-495
 Clarke, S. H., Jr. OP-941
 Clawges, R. M. OP-966, 2236
 Clayton, J. L. C 1108; OP-155
 Clayton, Lee I-1420 (NL-14)
 Clayton, R. W. OF 95-0228; OP-1285, 1486, 1744
 Clemens, J. D. C 1129
 Clemens-Knott, D. E. OP-865
 Clement, A. C. OP-265
 Cline, J. S. OP-1245
 Clough, G. A. OP-1350
 Clough, J. G. OP-201
 Clow, D. W. OP-1318
 Clow, G. D. OF 94-0254; OP-187, 514, 559
 Clowes, R. M. OP-109, 248, 468
 Cluer, B. L. WRI 95-4010
 Clutsom, F. G. OF 95-0054
 Clymer, R. W. OP-1641
 Clynne, M. A. OP-790, 1149, 1444
 Coakley, J. M. OF 95-0022
 Cobb, E. D. OF 94-0363
 Cobban, W. A. B 2113; I-2474-A; OP-481, 1572, 1974
 Cobbs, E. F. OF 94-0558
 Coble, R. W. WRI 94-4186
 Cocherie, Alain C 1129
 Cochrane, G. R. OF 94-0228; OP-156, 157, 1246
 Cochrane, H. H. OF 95-0156
 Coder, Christopher OF 95-0591
 Coe, J. A. OP-1247, 1802
 Coe, R. S. OF 95-0034; OP-408, 1916
 Cohen, A. D. OP-1078
 Cohen, A. J. B 2103
 Cohen, A. S. OP-126, 1229
 Cohen, D. A. OF 92-0139, 94-0061
 Cohn, T. A. OP-1248
 Coker, J. E. OP-158
 Cole, A. T. OP-62, 1349, 2232
 Cole, D. R. C 1129
 Cole, F. E. B 2107; C 1108; OP-433, 1122, 1249, 1250, 1251
 Cole, J. C. OF 95-0567; OP-1252, 2066
 Cole, R. B. OP-159
 Coleman, D. F. C 1108; MF-2268; OP-1304, 1305
 Coleman, D. S. OP-160
 Coleman, J. A. OF 94-0472
 Coler, D. G. C 1129
 Collett, T. S. C 1108; OF 94-0653; OP-161, 192
 Collins, D. S. MF-2296; OP-1907
 Collins, E. S. OP-2086
 Collins, J. A. OP-608
 Collins, M. R. OP-338
 Collins, W. J. C 1129
 Collombat, Hélène OP-56
 Collot, Jean-Yves OP-162, 275, 336, 337, 338
 Colman, S. M. OF 94-0445; OP-94, 163, 164, 165, 285, 286, 292, 1559, 1877
 Colombia, Instituto Nacional de Investigaciones Geológicas OF 94-0623-A, 94-0623-B, 94-0623-C
 Colony, W. E. I-2359
 Colton, R. B. OF 88-0607, 88-0608, 88-0609, 88-0610, 88-0611, 88-0612, 88-0613, 88-0614, 88-0615, 88-0617, 88-0618, 88-0619, 88-0620, 88-0621, 88-0624, 88-0625, 88-0626, 88-0627, 88-0635, 93-0521, 93-0529; MF-2281, 2289, 2290
 Coltorti, Massimo OP-338
 Colvard, E. M. WRI 94-4180-A
 Colvocoresses, A. P. OP-166
 Combs, L. J. OF 95-0120
 Comer, J. B. B 2137
 Commeau, J. A. OP-736, 741
 Conca, J. L. OP-1021
 Condon, S. M. B 2110; C 1108
 Coney, P. J. OP-857
 Congdon, R. D. OP-989, 1737, 2028
 Conlon, K. OP-1393
 Conlon, T. D. WRI 93-4053; OF 95-0163
 Connell, J. F. OF 94-0359
 Connolly, W. M. B 2110
 Connor, B. F. OF 95-0140
 Connor, C. B. OP-1257, 1678
 Connor, J. J. OP-167
 Connors, K. A. B 2081
 Conolly, Carol OF 94-0298
 Conrad, D. L. OP-1253
 Conrad, J. E. MF-2257; OP-303
 Conrad, K. L. OP-1482
 Conrads, P. A. WRI 95-4111; OF 94-0487
 Conrey, R. M. OP-1254
 Constantz, J. E. OP-168, 1432
 Constenius, K. N. OP-1282
 Contopoulos, C. OP-1285
 Conway, C. M. OF 94-0437; OP-1185, 1255, 1256, 1423, 1424
 Conway, F. M. OP-1257, 1678
 Conyers, L. B. OP-1816
 Cook, H. E. YR; OP-169, 1258
 Cook, P. G. OP-170, 1259
 Cook, R. B. OP-1260
 Cookro, T. M. P 1525; OF 94-0668
 Coolbaugh, M. F. OP-333, 334, 730
 Cooley, E. F. OF 94-0277-A, 94-0277-B
 Cooley, R. L. OP-171, 1515
 Coombs, C. R. OP-1487
 Coon, W. F. OF 93-0161; OP-172
 Coonrad, W. L. OP-201
 Cooper, A. K. OF 94-0293; OP-54, 156, 173, 246, 589, 1261
 Cooper, B. J. OP-1882
 Cooper, R. E. WRI 94-4225
 Cooper, R. L. OP-516
 Cooper, W. C. OP-791
 Coplen, T. B. OP-174, 175, 1613
 Coplin, L. S. OF 94-0345, 94-0346, 95-0182, 95-0183
 Coppola, S. P. OF 94-0384
 Cordero, D. I. OP-679, 680
 Cordy, G. E. FS 94-0016
 Corley, C. OP-1722
 Cornelius, R. J. OF 94-0315
 Cornero, G. A. OP-1152
 Cornero, S. E. OP-1152
 Corrège, Thierry OP-233
 Correggiari, A. OP-942
 Corson, M. P. OP-676
 Cortesini, Henry, Jr. P 1529; OF 94-0227
 Cortini, Massimo OP-176
 Costa, C. H. OF 94-0568
 Costa, J. E. OP-177, 178, 1330, 1952
 Coston, J. A. OP-1396
 Côté, T. OP-109, 468, 779
 Couchman, M. R. OP-1720
 Councell, T. B. OP-1262
 Coupe, R. H. WRI 94-4141; OF 93-0657
 Coury, A. B. OF 94-0670
 Coveney, R. M., Jr. B 2110; OP-1871
 Cowan, E. A. OP-1218, 1263, 2094
 Cowan, J. R. OF 95-0343, 95-0348
 Cowdery, T. K. OP-179
 Cox, B. F. OF 88-0753, 88-0754, 94-0681
 Cox, D. A. YR; WRI 94-4157
 Cox, L. J. OF 95-0031, 95-0202; OP-1282
 Cox, S. E. OF 94-0315, 95-0195
 Cox, S. F. OF 94-0228
 Craddock, R. A. I-2402
 Craigg, S. D. C 1108; OP-1264, 1265
 Cramer, C. H. OF 94-0568
 Cranswick, Edward OP-614, 1266, 2286
 Craven, J. A. OP-2085
 Cravotta, C. A., III C 1108
 Crawford, A. J. OP-337
 Crawford, J. K. OF 94-0308
 Crawford, J. S. OF 95-0652
 Crawford, W. C. OP-1655
 Creager, K. C. OP-180, 1643, 2294
 Creaser, R. A. C 1129
 Crepeau, K. L. OF 94-0362, 95-0110
 Cressler, A. M. OF 95-0302
 Criddle, A. J. OP-778
 Criley, E. E. OP-1835
 Criss, R. E. OP-790
 Crock, J. G. OF 94-0580; OP-1378
 Crocket, J. H. OP-1416
 Crompton, E. J. WRI 94-4233
 Cromwell, A. E. OF 94-0670; OP-1267
 Crone, A. J. OF 94-0568; MF-2279; OP-2334
 Cronin, T. M. OF 94-0281, 94-0588; OP-122, 218, 233, 1150, 1268, 1269, 1565, 2071, 2254
 Cropp, B. OP-965
 Cross, A. T. OP-181, 182, 501
 Cross, V. A. OF 95-0224
 Crossey, L. J. OP-1691
 Crossland, Andy C 1129
 Crosswhite, J. A. OF 94-0485
 Crovelli, R. A. B 2063; C 1108; OF 94-0560, 94-0670, 95-0075-E, 95-0234; OP-183
 Crowder, R. K. OP-1270
 Crowe, B. M. OP-1388
 Crowe, D. E. OP-2098
 Crowley, J. K. B 2081
 Crowley, S. S. OP-184, 185, 186
 Cruikshank, K. M. OP-1271, 1374, 1586
 Cruz, M. J. C 1129

Crysedale, B. L. OF 94-0670; OP-1272
 Csejtey, Bela, Jr. B 2107
 Cuffey, K. M. OP-187
 Cui, Yulong OP-1273
 Culbertson, C. W. OP-690
 Cummings, L. S. OP-1742
 Cummings, M. L. OP-263
 Cunningham, C. G. B 2109; OF 95-0221; OP-22, 188, 189, 526, 1028, 1806
 Cunningham, K. I. C 1108; OP-190, 1274, 1275, 1276, 1277
 Cunningham, K. M. OP-1051, 1897
 Cunningham, W. L. WRI 94-4243; OP-1022
 Curl, H. C., Jr. OP-1610
 Currey, D. R. OP-64
 Curry, J. OF 95-0486
 Curtin, G. C. OF 94-0443
 Curtin, S. E. OF 94-0390, 94-0391, 94-0392, 94-0393, 94-0394, 94-0395; OP-191
 Curtis, G. H. OF 95-0591; OP-1287, 1368, 1730
 Cutler, Reese OP-1864
 Cygan, G. L. OP-378, 1278, 1279
 Cypser, D. A. OP-1280
 Czamanske, G. K. OP-194, 421, 554, 1208, 1212

D

D'Addezio, Giuliana OF 94-0568
 D'Agnesse, F. A. OF 94-0318; OP-1281, 1362
 D'Amario, L. OP-57
 D'Angelo, J. OP-2227
 d'Angelo, W. M. OF 94-0680-A, 94-0680-B, 95-0079, 95-0097; OP-702
 D'Lemos, R. S. C 1129
 Da Silva Filho, A. F. C 1129
 Da Silva, J. L. OP-586
 Dahl, A. R. OP-2151
 Dahlstrom, D. J. B 1917-S
 Daligdig, J. A. OF 94-0568
 Dall'Agnol, Roberto C 1129
 Dalla Salda, L. H. C 1129
 Dallimore, S. R. OP-192
 Dalrymple, G. B. OP-193, 194, 569, 938, 1142, 1573, 1755
 Daly, D. J. OP-268
 Damaske, Detlef OP-54, 55, 1103
 Damberger, H. H. C 1108
 Danforth, W. W. OP-2222
 Daniel, C. C., III WRI 94-4186; OP-798
 Danskin, W. R. OF 95-0042
 Darbyshire, D. P. C 1129
 Darienzo, M. E. OP-26, 661
 Darling, M. E. WRI 89-4179
 Darling, R. S. B 2064-A-R
 Darst, M. R. OF 95-0167
 Dart, R. L. OF 94-0568; MF-2284; OP-1454, 1741
 Dartnell, Peter OF 95-0017, 95-0034; OP-1401, 1612, 2205

Dash, R. G. WRI 94-4051
 DaSilva, J. L. OP-2081
 David, M. B. OP-529
 Davidson, C. B. OF 94-0465
 Davies, G. R. C 1129
 Davies, M. E. OP-57, 58, 134, 195, 676
 Davies, W. E. OP-196
 Davis, D. W. OF 94-0275
 Davis, A. M. C 1129; OP-288
 Davis, A. S. B 2022; OF 94-0587, 95-0040; OP-197
 Davis, D. M. OF 94-0228
 Davis, D. R. OP-57
 Davis, E. E. B 2022; OP-52, 652
 Davis, G. H. OP-1282, 1283
 Davis, J. A. OP-13, 973, 1284, 1396
 Davis, J. C. OP-1765
 Davis, J. S. OP-1447
 Davis, J. V. WRI 94-4022
 Davis, M. E. OF 95-0591
 Davis, Marie OP-1287, 1368, 1730, 1731
 Davis, P. A. OP-242, 1126
 Davis, P. M. OP-1285, 1706
 Davis, S. D. OP-1280, 1286, 1346, 1392, 1421, 2320
 Davis, S. W. OF 95-0591
 Davis, Sidney OP-1287, 1368, 1730, 1731
 Dawson, D. D. OP-2069
 Dawson, D. L. OP-46
 Dawson, P. B. OP-1107, 1239, 1571
 Day, J. W., Jr. OF 94-0275
 Day, S. M. OP-1474, 1706
 Day, T. J. OP-693
 Day, W. C. OP-1288
 Day-Lewis, F. D. WRI 95-4012
 de Carvalho, Delfim B 2081
 De Cola, Lee OP-495
 De Leeuw, J. W. OP-500
 De Luca, G. OP-1239
 de Medeiros Delgado, Inacio OP-198
 de Saint Blanquat, Michel C 1129
 De Vivo, Benedetto OP-27, 199, 950
 de Vries, M. P. OP-1491
 De Wever, Patrick OP-200
 Deacon, J. R. OF 94-0710-W
 Dean, A. A. C 1129
 Dean, C. J. OF 95-0195
 Dean, K. G. OP-2318
 Dean, W. E. OF 94-0578, 95-0034, 95-0209, 95-0527, 95-0533; OP-1050, 1069, 1070, 1158, 1289, 1290, 1401, 1955, 1987, 2063, 2082
 Dearmont, L. H. OP-652
 DeBortoli, M. L. WRI 94-4208; OF 95-0150
 Decker, C. L. OF 94-0228
 Decker, J. E. OP-201
 Decker, R. W. OP-1291
 Deen, J. A. OP-202
 Defant, M. J. C 1129

Degnan, C. H. OP-1433, 1964, 2150
 Dehler, C. M. OF 95-0048, 95-0086
 Deino, A. L. OP-506, 507
 Del Moro, Aldo C 1129
 Delaloye, Michel C 1129
 Delaney, J. R. OP-1351
 Delaney, P. T. OF 94-0553, 94-0567, 95-0491; OP-977, 1292, 1293, 1294, 1367, 1453, 2246
 DeLaune, R. D. OF 94-0275
 Delin, G. N. WRI 94-4149; OF 93-0435, 94-0337; OP-1056, 1139, 1686
 Delorey, C. M. OP-2035
 Demarchi, Gabriella OP-865, 866
 Demartin, Francesco OP-287
 Demas, C. R. OF 94-0539; OP-1295
 Demcheck, D. K. FS 0118-95; WRI 92-4181
 Demko, T. M. OP-1322, 1483, 2023
 Demsey, K. A. I-2454
 Deng Qidong OF 94-0568
 Dengler, L. A. OF 95-0092; OP-203, 1832
 DeNiro, M. J. OP-11, 1055
 Denk, Tilmann OP-134
 Denlinger, R. P. B 2022; OF 94-0288; OP-696, 1241
 Dennehy, K. F. WRI 94-4095; OP-204, 1797
 Dennis, M. L. OF 95-0598
 Denny, J. F. OP-1962
 Denson, N. M. I-2433-B
 Denver, J. M. OP-845, 1077
 DePaolo, D. J. OP-861
 dePolo, C. M. OF 94-0568; OP-1994
 dePolo, D. M. OP-12
 Derasary, L. OP-1311
 Dersch, J. S. C 1108
 Desai, A. OP-1296
 Desborough, G. A. OF 95-0049, 95-0056, 95-0087
 Desbruyeres, Daniel OP-2097
 DeSimone, L. A. OF 95-0290
 DesMarais, D. J. OP-1634
 Desrosiers, Marc OP-396
 Dethier, D. P. OP-205
 Detterman, R. L. I-2272; MF-2021-G; OP-745, 964
 Dettinger, M. D. OP-206
 Devera, J. A. OF 94-0298
 Deverel, S. J. OP-226, 787, 788, 1297, 2251
 Devey, C. W. OP-390
 DeVincenzi, D. L. OP-1634
 Dewers, T. A. OF 94-0228
 Dewey, J. W. OF 95-0092; OP-203, 1298, 1490, 1657, 1832
 DeWitt, Ed B 2138; OF 95-0066-A, 95-0066-B; I-2445; OP-1185, 2309, 2310
 Diaz, P. L. OF 94-0363
 Dickinson, K. A. B 2098; OF 94-0292
 Dickinson, W. R. OP-291, 308, 1404

Dickinson, W. W. OP-207
 Didenko, A. N. OP-56
 Didyk, B. M. OP-56
 Diehl, S. F. P 1538-N; B 1989-F; OF 94-0670; OP-1299
 Diehl, T. H. OF 95-0156; OP-208, 2162
 Dietel, C. M. OP-430
 Dieterich, J. H. OP-128, 209, 210, 1300, 1301, 1503
 Dieterich-Rurup, K. V. OF 94-0578
 Dietz, L. D. OP-1302
 Diffendal, R. F., Jr. I-2496
 Diggles, M. F. B 2107
 Digiacomo-Cohen, M. L. OP-2165
 Dill, R. F. OP-2109
 Dillenburg, R. G. OF 95-0477; OP-434
 Dilles, J. H. OP-1303
 Dillon, J. T. OP-641
 Dillon, M. A. OP-253
 Dillon, W. P. C 1108; MF-2268; OP-1304, 1305
 DiMichele, W. A. OF 94-0298; OP-1002
 Dindi, E. W. OP-478
 Dine, J. R. OP-191, 211
 Ding Guoyu OF 94-0568; OP-1190
 Ding, Xiao-Yang OP-960, 1306
 Dingler, J. R. OF 94-0275
 Dingwell, D. B. C 1129
 Dion, N. P. WRI 92-4098, 92-4109, 94-4082
 DiVenere, V. J. B 2110
 Dixon, E. T. OP-1396
 Dixon, J. E. OP-147, 1307
 Dixon, T. H. OP-988
 Dmitriev, L. V. OP-1931
 Docherty, K. E. OP-1308
 Dodge, D. A. OP-212, 1309
 Dodson, C. L. OF 94-0417; GQ-1722
 Doe, B. R. B 2064-A-R
 Doeblich, J. L. OF 94-0664, 94-0712; OP-213
 Doherty, H. B. OF 94-0465
 Dohrenwend, J. C. YR; OP-31, 1310, 1311
 Dohrenwend, K. A. OP-1311
 Dolan, J. F. OF 94-0568; OP-1312, 1313, 1314, 2238
 Dolton, G. L. DDS-0030; B 2063; C 1108; OP-135
 Domack, E. W. OP-214, 440
 Domagalski, J. L. FS 94-0029; OF 94-0362, 95-0165; OP-215
 Dombrowski, Tonya OF 94-0670
 Donatich, A. J. B 2063
 Donato, M. M. OF 95-0227-A, 95-0227-B; OP-348, 1315
 Donnelly-Nolan, J. M. I-2362; OP-129, 216, 397, 802, 803, 804, 968, 1444, 1505
 Donovan-Ealy, P. F. OP-1471
 Doose, L. R. OP-2134
 Dorais, M. J. OP-1399

- Dorava, J. M. B 2139; OF 94-0481, 94-0482, 94-0525, 94-0526, 94-0527, 94-0614, 94-0713-W, 95-0061-A, 95-0061-B, 95-0173, 95-0175, 95-0176, 95-0177, 95-0178, 95-0347; OP-1316
- Dorgan, T. H. OF 95-0142, 95-0363
- Dorn, R. I. OP-368
- Douglas, E. M. WRI 92-4013
- Douglass, Katrin OP-1486
- Doukas, M. P. B 2139; OF 95-0055, 95-0061-A, 95-0061-B, 95-0083, 95-0271; OP-1406
- Dover, J. H. I-2210; OP-217
- Dow, W. G. OP-577, 578
- Dowdy, R. H. OP-1056, 1686
- Dowgiallo, Joanna OP-2324
- Dowgiallo, M. J. OP-1427
- Downey, J. S. P 1402-F; OP-146, 1947
- Dowsett, H. J. OF 94-0281, 94-0588; OP-218, 1150, 1565
- Doyle, F. J. OP-219
- Doyle, W. H., Jr. OF 95-0156
- Draeger, W. C. OP-416
- Dragos, S. L. OF 94-0309, 95-0138
- Drahovzal, J. A. P 1538-Q; OF 94-0298
- Drake, A. A., Jr. B 2060; OF 94-0682, 95-0253; GQ-1748; OP-63, 1317
- Drake, D. E. OP-116, 117, 847, 998
- Dreger, D. S. OP-1539, 1540
- Dreiss, S. J. OP-2149
- Drenkard, Stefan OP-937, 2204
- Dresser, D. J. OP-1269
- Drever, J. I. OP-269, 1318, 1519
- Drew, L. J. OP-220, 1024
- Drewes, H. D. B 2126; I-2450
- Drewes, P. A. WRI 95-4111
- Drexler, J. W. OP-202
- Driedger, C. L. OP-975
- Drinkwater, J. L. B 2107, 2135; C 1129
- Driscoll, D. G. OF 94-0319
- Driscoll, N. W. OP-1343, 1679, 2073
- Driver, N. E. OP-221
- Druhan, R. M. OP-1536
- Drummond, F. E. WRI 94-4164
- Drummond, M. S. C 1129
- Du Bois, G. D. OP-1008
- du Bray, E. A. P 1559; B 2021-E, 2119; OF 95-0098, 95-0545; I-2450; MF-2291
- Duba, A. G. OP-594
- Dubiel, R. F. B 1988-K; OP-222, 223, 224, 225, 379, 380, 381, 382, 744, 1179, 1319, 1320, 1321, 1322, 1482, 1483, 1556, 2023
- Dubrovsky, N. M. OF 95-0286; OP-132, 226
- DuChene, H. R. C 1108; OP-1274, 1275
- Duchesne, J. C. C 1129
- Duchi, Vittorio OP-227
- Duckworth, R. C. OP-652
- Duebendorfer, E. M. OP-1323
- Duennebie, F. K. OP-1655
- Duet, N. R. OF 94-0476
- Dufek, D. A. OP-184
- Duffield, W. A. OF 94-0712; I-2399; OP-1293, 1920
- Dugan, J. T. W 2352-B; YR; WRI 94-4157, 95-4014
- Dugas, D. L. OF 95-0113
- Duggan, James OP-2086
- Duigon, M. T. OP-211
- Duke, E. F. OP-1117
- Dula, W. F., Jr. B 2098
- Dulong, F. T. B 2110; OP-1227, 1324, 1340, 1737, 2025
- Dumitrica, Paulian OP-200
- Dumitru, T. A. OF 94-0568
- Dumont, M. P. B 1995-J-K
- Dumoulin, J. A. P 1545; OP-931
- Dunbier, John OP-670
- Duncanson, Russell OP-700
- Duncker, J. J. WRI 95-4023; OF 94-0113
- Dungan, M. A. OP-1325
- Dunhill, Gita OF 95-0224
- Dunlap, W. W. OP-612
- Dunn, V. C. OF 94-0712
- Dunne, Paul OF 93-0662, 94-0065, 94-0499, 94-0500
- Durham, W. B. OP-1105, 1326, 1642, 2159
- Durheim, R. J. OP-228
- Durst, S. L. OF 88-0607, 88-0609, 88-0611, 88-0614, 88-0617, 88-0618, 88-0620, 88-0621, 88-0624, 88-0625, 88-0635
- Dusel-Bacon, Cynthia OP-229, 230, 231, 360, 784
- Duthou, Jean-Louis C 1129
- Dutro, J. T., Jr. B 2107; OF 94-0215; OP-21, 1327
- Dutton, D. M. OF 95-0143
- Duval, J. S. DDS-0031; B 2063
- Duxbury, T. C. OP-605, 676, 1783, 1784
- Dvorak, J. J. OP-232, 1328
- Dwyer, D. F. OP-509
- Dwyer, G. S. OF 94-0588; OP-233
- Dwyer, M. J. OF 94-0568
- Dyman, T. S. B 2113; I-2474-A; OP-743, 1452, 1974
- Dyni, J. R. OF 95-0476
- Dziak, R. P. OP-1329, 1656
- Dziewonski, A. M. OP-294
- Dzurisin, Daniel OF 95-0059; OP-234, 522, 1330
- Eaton, J. P. OF 91-0592, 91-0635, 92-0284, 95-0269; OP-239
- Ebbert, J. C. WRI 94-4047, 94-4215
- Ebel, J. E. OF 94-0643; OP-1333, 2272
- Eberhart-Phillips, Donna OF 94-0228, 94-0590, 94-0710; OP-240, 1769
- Eberli, D. D. OP-241
- Eberli, G. P. OP-1334
- Eble, C. F. B 2110; OF 94-0298; OP-1548, 1950, 2053
- Ebsch, C. L. OF 94-0363
- Eckert, Bea-Yeh B 2086
- Eckert, J. O., Jr. OP-83, 1335
- Eddy-Miller, C. A. WRI 95-4095
- Edelman, Adam OP-1336
- Edelmann, P. R. WRI 94-4097; OF 95-0023; OP-1081, 1337, 1922
- Edenborn, H. M. C 1108
- Edgar, N. T. B 2110; OP-1228, 1338
- Edmond, J. M. B 2022
- Edwards, B. D. OF 95-0533
- Edwards, C. A. OP-570, 1533
- Edwards, D. D. OF 94-0503
- Edwards, Kathleen OP-242, 1781
- Edwards, L. E. OF 94-0653, 95-0003; OP-151, 243, 1359, 2087, 2295
- Edwards, M. H. OP-1339, 1941, 2097
- Egan, J. A. OP-1617
- Eganhouse, R. P. OP-244
- Egestorff, Jörg OP-509
- Eggert, D. L. OP-1002
- Eggleston, J. R. C 1108; OP-1340
- Ehmann, W. J. I-2473
- Eichelberger, J. C. B 2139; OP-2318
- Eicher, D. L. OP-1131
- Eidam, Joerg C 1129
- Eimers, J. L. WRI 94-4186
- Eisenreich, S. J. OP-831
- Eiswerth, B. A. I-2473
- Eitheim, S. L. OP-245, 246, 247
- Ekstrom, H. OP-1285
- Elburg, M. A. C 1129
- Elder, W. P. OF 94-0551; MF-2021-G; OP-1341, 1645
- Eldridge, C. S. OP-1793, 1871
- Eleftheriadis, G. E. C 1129
- Eliason, E. M. OP-605, 676, 852, 1781, 1784
- Ellefson, K. J. OF 95-0518
- Ellen, S. D. OF 95-0218; OP-588, 1342, 1594
- Ellingson, J. A. OF 94-0437
- Elliott, E. OP-1343, 1679
- Elliott, J. E. OF 95-0011-A, 95-0011-B; OP-1344, 2225
- Elliott, J. G. OP-1345, 1927
- Ellis, M. A. OP-1346, 1422, 1637, 1707, 2085
- Ellis, M. S. C 1108; OF 94-0670, 95-0065-A, 95-0065-B; MF-2281, 2289, 2290
- Ellis, M. Y. YR
- Ellis, R. M. OP-109, 248, 468
- Ellis, W. L. OF 95-0617
- Ellorda, R. L. OF 91-0320
- Ellsworth, W. L. OP-62, 212, 249, 591, 893, 1116, 1296, 1309, 1347, 1348, 1349, 1749, 1761, 2232
- Elrick, K. A. OP-423, 1535
- Elston, D. P. OP-524, 1255, 1350
- Elston, W. E. OP-250, 251
- Embley, R. W. OP-1329, 1351, 1656, 2132
- Emerson, D. G. OP-1653
- Emmett, W. W. OP-127, 694
- Emre, Omer OF 94-0568
- Enderle, U. OP-478
- Enderlin, D. A. OP-804, 805, 940
- Endo, E. T. OF 95-0237; OP-1720
- Engberg, R. A. W 2352-B
- Engdahl, E. R. OP-93, 180, 252, 482, 494, 1352, 1353, 1643, 1910, 2294
- Engelbretson, D. C. OP-2075
- Engelder, Terry OF 94-0228
- Engelhardt, Hermann OP-612
- England, P. C. OP-2195
- Engle, C. M. OF 95-0567
- Enrique, Pedro C 1129
- Enzel, Yehuda OF 94-0568
- Eppinger, R. G. B 2107; OF 94-0270-A, 94-0270-B, 94-0685
- Epstein, J. B. B 2135; OF 93-0723, 94-0573; OP-1164
- Epstein, Samuel OP-1354
- Erb, Kevin OF 95-0163
- Erbes, D. B. OP-659
- Erd, R. C. OP-778
- Erdman, J. A. B 2063, 2064-A-R; OF 95-0043, 95-0569; OP-253, 1957
- Erdmer, Philippe OP-360
- Eriksen, G. E. OP-188
- Erickson, C. L. OP-1355
- Erickson, M. S. OF 95-0006
- Ernst, W. G. OP-348
- Ervin, E. M. WRI 94-4113
- Escobar-Diaz, Angel OF 95-0494
- Escutia, Carlota OP-1877
- Esposito, K. J. B 2085-C; OP-288, 2329
- Essene, E. J. OP-387, 1489
- Etheridge, M. A. OF 94-0228
- Evaldi, R. D. WRI 94-4065
- Evans, B. J. OF 94-0228; OP-401, 552
- Evans, B. W. OP-39
- Evans, H. F., Jr. OP-1737
- Evans, H. T., Jr. OP-2028
- Evans, J. G. OP-263
- Evans, J. P. OF 94-0228
- Evans, J. R. OF 95-0022, 95-0555; OP-136, 254, 255, 298, 914, 1356, 1357, 1571, 2046, 2181, 2325

E

- Eash, D. A. OP-235, 465, 926
- East, J. W. FS 94-0073
- Eastler, T. E. OP-1331
- Eastoe, C. J. OP-1245
- Eaton, G. P. OP-236, 237, 238, 1332
- Eaton, J. G. OP-1153

- Evans, John OP-834
 Evans, K. V. B 2081; OP-167
 Evans, L. J. OP-1329
 Evans, N. H. OP-63
 Evans, W. C. OP-256, 261, 885, 1640, 1756
 Evarts, R. C. GQ-1681
 Everett, M. C. OF 94-0228
 Everett, T. OF 95-0222
 Everheart, J. T. WRI 94-4125
 Ewert, J. W. OP-1720
 Ewing, J. I. OP-413
 Eychaner, J. H. FS 94-0019; OP-257, 1965
 Eyre, P. R. WRI 94-4142
- F**
- Fahnestock, M. A. OP-612
 Fairer, G. M. OF 94-0655, 94-0656, 94-0657, 94-0658, 94-0696, 95-0052, 95-0256
 Fairley, H. C. OF 95-0057; OP-1504
 Falkner, C. M. C 1129; OP-258, 1817
 Fallick, A. E. C 1129
 Fallon, J. D. OF 94-0670
 Falls, W. F. OP-151, 1100, 1358, 1359
 Fanale, F. P. OP-58, 259
 Fanelli, Michael OP-433
 Fanning, B. J. OP-1360
 Fanning, C. M. C 1129; OP-1047
 Farina, Frederic OP-988
 Farmer, G. L. OP-260, 959, 1361
 Farmer, J. D. OP-1634
 Farrar, C. D. OF 95-0042; OP-261, 884
 Farrar, J. W. OF 94-0369, 95-0117
 Farrar, S. S. OP-63
 Farrell, K. M. OP-399
 Farrington, J. W. OP-913
 Fassett, J. E. OF 94-0274
 Faulkenburg, C. W. OF 95-0129, 95-0184
 Faunt, C. C. OF 94-0305, 94-0318; OP-1281, 1362
 Fay, R. G. WRI 94-4127
 Faybisenko, B. A. OP-2302
 Fedorenko, V. A. OP-194, 421
 Fedorko, Nick C 1108
 Feeney, T. D. OF 94-0714; OP-1894
 Fegeas, R. G. OP-339
 Fegley, Bruce, Jr. OP-470
 Fehlberg, K. M. OF 95-0181
 Fehlhaber, K. L. C 1108; MF-2268
 Feig, A. D. OP-1363
 Feigenson, M. D. OP-621, 622, 903, 2295
 Feigl, K. L. OP-714
 Feldman, P. D. OP-987
 Femmer, S. R. FS 0116-95, 94-0015
 Feng Xianyue OF 94-0568
 Fenoglio, M. A. OF 94-0228; OP-262, 1364
 Fenton, C. H. OF 94-0568
 Ferderer, D. A. C 1108
 Ferguson, C. H. OP-2150
 Ferguson, H. M. OP-1728
 Ferguson, S. A. OF 94-0356
 Ferns, M. L. OP-263
 Ferrari, M. J. OP-1365
 Ferreira, J. T. OP-116
 Ferreira, V. P. C 1129
 Ferrelli, L. OF 94-0568
 Ferres, M. C 1129
 Ferrians, O. J., Jr. OP-264
 Ferrigno, C. F. YR
 Ferrigno, J. G. P 1386-B, 1386-C
 Fershtater, G. B. C 1129
 Fey, D. L. OF 93-0698, 94-0289, 94-0412, 94-0680-A, 94-0680-B, 95-0013
 Ficken, J. H. OP-317
 Ficklin, W. H. OF 95-0026; OP-340, 732, 876
 Field, D. W. OP-2102
 Field, E. H. OP-265
 Field, M. E. OP-942
 Field, S. J. WRI 94-4101
 Fielder, A. M. OP-1006
 Fierstein, J. E. I-2460; OP-1512
 Filipek, L. H. C 1108
 Finch, W. I. B 2063; C 1108; OF 95-0571; OP-601, 1366
 Findley, J. E. OP-266
 Finger, K. L. B 1995-L
 Fink, J. B. WRI 95-4010
 Fink, J. H. OP-1367
 Finkel, R. C. OP-1287, 1368, 1730, 1731
 Finkelman, R. B. C 1108; OF 93-0591; OP-267, 268, 702, 922, 1867, 1915, 2052
 Finklestein, D. F. OP-2060
 Finlayson, B. J. OP-1051
 Finley, J. B. OP-269, 1369
 Finn, C. A. OP-270, 271, 1103, 1592
 Finn, T. M. OP-456, 677
 Finnegan, D. P. FS 94-0056
 Finney, M. A. OF 95-0163
 Finton, C. D. OP-448
 Fio, J. L. WRI 94-4151; OF 94-0045, 94-0072, 94-0357; OP-1297, 1370
 Firby, J. R. OF 95-0034
 Fischer, E. E. OP-272
 Fischer, J. N. OP-273
 Fischer, K. M. OP-274, 1147
 Fisher, A. T. OP-652
 Fisher, D. M. OF 94-0228
 Fisher, F. S. P 1525; OF 94-0291
 Fisher, G. R., Jr. I-2341
 Fisher, G. T. OP-1133
 Fisher, M. A. OP-162, 275, 337, 338, 589, 953, 1371, 2234
 Fisher, P. R. OP-1331
 Fishman, M. J. OF 94-0351
 Fishman, N. S. B 1808-P; OF 94-0298
 Fisk, G. G. FS 0120-95; OF 94-0356; OP-335
 Fiske, P. S. OP-362
 Fiske, R. S. OP-1372
 Fitterman, D. V. OP-133, 1801
 Fitts, J. P. OF 95-0034; OP-1803
 Fitzgerald, K. K. OF 94-0539
 Fitzmaurice, P. L. OF 95-0034
 Fitzpatrick, D. J. OF 95-0163
 Fitzpatrick, F. A. OF 95-0163
 Fitzpatrick, J. A. OF 95-0034
 Fitzpatrick, J. J. C 1108; OF 95-0222
 Flanagan, S. M. FS 94-0027; OF 94-0398
 Fleagle, J. G. OP-1151
 Fleck, R. J. OP-716
 Flegal, A. R. OP-2026
 Fleischer, Michael B 2140; OP-276
 Fleisher, P. J. OP-1833
 Fleming, A. H. B 2060; GQ-1748
 Fleming, R. F. OF 94-0281, 94-0588, 94-0670; OP-218, 668, 1373, 1953
 Fleming, R. W. OF 95-0008, 95-0218; OP-1271, 1374, 1586
 Fletcher, J. B. OP-277, 393, 889, 1375, 1499, 2144
 Flinders, James C 1129
 Flint, A. L. OP-1552, 1567, 1998
 Flint, L. E. OP-1552, 1567
 Flippo, H. N., Jr. WRI 93-4160
 Flocks, J. G. OP-1471
 Flohr, M. J. OF 94-0450, 95-0477; OP-730, 1957
 Flood, R. H. C 1129
 Flores, R. M. B 2107; C 1108; OF 94-0670; OP-278, 279, 280, 281, 282, 283, 456, 477, 701, 928, 1376, 1620, 1621, 1622, 1942, 2255
 Flueh, E. R. OP-2234
 Flug, Marshall C 1108
 Fluter, S. L. OF 94-0308
 Flynn, K. M. WRI 95-4085; OF 94-0501
 Focazio, M. J. WRI 94-4225; OF 94-0370, 94-0372, 94-0373
 Foglesong, M. T. OF 95-0126
 Foland, K. A. OP-20
 Foland, R. L. OP-1624
 Foley, J. Y. OP-670
 Foley, N. K. OP-284, 2090
 Folger, D. W. OF 95-0224, 95-0252; I-2429; OP-285, 286, 295
 Folger, H. A. OF 95-0509
 Foord, E. E. B 2057; OP-287, 288, 289, 450, 466, 912, 1260, 1377, 1378, 1518, 2110
 Foose, M. P. OP-290, 1379, 1794
 Foote, A. L. OF 94-0275
 Force, E. R. B 2110; OF 95-0082; OP-291, 1380, 1381
 Ford, A. B. B 2107, 2135; C 1129; OF 94-0268; OP-409
 Foreman, W. T. OF 94-0710-W, 95-0140
 Forester, R. M. OF 95-0001; OP-163, 292, 527, 2100, 2101
 Forizs, Istvan C 1129
 Forman, S. L. OF 94-0568
 Fornari, D. J. OP-1339, 1941, 2097
 Forster, C. B. OF 94-0228
 Förster, H. J. C 1129
 Forsyth, D. A. OP-109, 468, 1073, 1804
 Forsythe, Randy OP-56
 Fort, Rafael OP-118
 Forte, A. M. OP-293, 294, 1382, 2312
 Fossum, K. D. WRI 94-4240, 95-4074, 95-4083
 Foster, Andy OP-1085
 Foster, D. A. C 1129; OP-432
 Foster, D. S. OF 95-0224, 95-0252; I-2429; OP-163, 164, 295
 Foster, H. L. OP-296
 Foster, R. N. OP-1383
 Fouch, T. D. C 1108; OF 94-0653; OP-297, 1166
 Foulger, G. R. OF 94-0285, 94-0286, 94-0287; OP-254, 298, 1603, 1813, 2046
 Fournier, R. O. OF 95-0030; OP-299, 300
 Fourtanier, Elisabeth OP-200
 Fowler, T. K., Jr. C 1129
 Fox, C. G. B 2022; OP-1230, 1329
 Fox, C. O. OP-338
 Fox, J. E. B 1917-S; I-2474-A
 Francheteau, J. M. OP-390
 Franczyk, K. J. B 2110; I-2555; OP-1242, 1384
 Franke, O. L. WRI 92-4171
 Frankel, Arthur OP-301, 1385
 Frankie, W. T. B 2137
 Franklin, J. M. OP-652
 Franklin, M. A. OF 94-0709-W
 Fraser-Smith, A. C. OP-2186
 Frazier, Ann OF 95-0651
 Frederiksen, N. O. OF 94-0653, 95-0034, 95-0208, 95-0265; OP-151, 1359, 1386
 Freeman, C. J. OP-670
 Freeman, C. W. OP-1543
 Freeman, L. A. OF 94-0531
 Freeman, W. O. OF 94-0090
 Freethey, G. W. WRI 95-4025
 Freiwald, D. A. WRI 94-4022; OF 94-0670
 French, J. A. B 2110
 Frey, F. A. OP-1025, 2321
 Freyberg, D. L. OP-1432
 Freymueller, J. T. OP-696, 1387
 Friberg, P. A. OP-265
 Fridrich, C. J. OP-1388
 Friedly, J. C. OP-1284
 Friedman, Irving OF 95-0034; OP-302
 Friedman, J. D. OF 95-0500; OP-303, 1389, 1390
 Frieauf, J. S. OP-1121

- Friesen, W. B. B 2022; OF 95-0505; OP-147
 Frimpter, M. H. WRI 94-4138
 Frishman, David OF 95-0056
 Fritsch, Jürgen OP-55
 Frizzell, V. A., Jr. OF 94-0571
 Frodeman, Robert OP-2214
 Froelich, P. N. OP-56, 1391
 Frohlich, Cliff OP-1286, 1392
 Frohne, K. H. C 1108
 Fromm, C. H. W 2419
 Fronabarger, A. K. OP-1393
 Frost, B. R. I-2233; OP-1232, 1929
 Frost, E. G. OF 94-0568
 Frost, T. P. OF 94-0636; OP-160
 Fuchs, Karl OP-478, 2056
 Fuentes, J. M. OP-2084
 Fuhrer, G. J. OF 94-0308
 Fuis, G. S. OP-10, 304, 1285, 1394, 1395, 1849, 1850, 2299, 2300, 2301
 Fujii, Roger WRI 95-4048; OF 94-0334; OP-132, 1231
 Fujimura, R. W. OP-1051
 Fujita, Kazuya OF 94-0714; OP-1894
 Fujitani, Tatsuya C 1129
 Fukuyama, Eiichi OP-1800
 Fulford, J. M. OF 94-0360, 95-0137
 Fullagar, P. D. OP-1161, 1647
 Fuller, C. C. OP-1396, 1397
 Fuller, J. A. OF 95-0224, 95-0252; I-2451
 Fullerton, D. S. I-1420 (NL-14), 1420 (NM-15)
 Fumal, T. E. OF 94-0552, 94-0706, 95-0062
 Furer, L. C. OF 94-0298
 Furlong, E. T. OF 95-0140; OP-1295
 Furlong, K. P. OF 94-0259; OP-1108, 1967, 1968
 Furnish, W. M. OP-607
 Fusillo, T. V. WRI 94-4113
- G**
- Gaard, D. R. OP-670
 Gable, Gregg OP-1431
 Gaciri, S. J. OP-478
 Gaddis, L. R. OP-305, 1587, 1781
 Gaggiani, N. G. WRI 94-4037
 Gagnon, Mario OP-1528
 Gair, J. E. OP-112, 306, 428
 Gajewski, D. J. OP-478
 Galan, Gumer C 1129
 Galanis, S. P., Jr. OF 94-0692; OP-814
 Galewsky, Joseph OP-1035
 Gallagher, R. A. OP-1087
 Gallego, Marcos C 1129
 Galloway, B. K. OP-1398
 Galloway, D. L. OF 95-0042
 Galloway, J. P. B 2107; OF 94-0675-A, 94-0675-B, 94-0675-C, 95-0573
 Gamble, B. M. B 2119; OF 95-0082; OP-523, 670
 Gamo, Toshitaka B 2022
 Gangemi, Paul OP-163
 Ganguli, P. M. OP-1399
 Gann, J. T. OF 94-0598, 95-0017
 Gans, P. B. OF 94-0687
 Gantenbein, M. E. OF 95-0039
 Gao, S. OP-1285
 Garbarino, J. R. OF 93-0628, 95-0149
 Garbe-Schönberg, Dieter OP-390
 Garcia, C. A. OF 95-0185
 Garcia, J. F. OP-66
 Garcia, M. O. OP-307, 1025, 1230, 1400, 2321
 Garcia, P. A. OF 95-0078
 Gardini, C. E. OF 94-0568
 Gardner, C. A. B 2139; OF 94-0261, 95-0498; OP-2088
 Gardner, J. V. OF 94-0669-A, 94-0669-B, 95-0034, 95-0228, 95-0527, 95-0533; OP-1050, 1401, 1612
 Gardner, N. K. C 1108
 Garniewicz, R. C. OP-1451
 Garrett, R. G. OF 94-0379
 Gartner, A. E. OF 95-0491; OP-1292
 Gartner, J. W. OF 94-0545
 Garvin, C. D. OF 95-0062; OP-860
 Garza, R. M. OP-1402
 Gasparotto, Giorgio C 1129
 Gasser, T. M. OF 95-0373
 Gates, J. S. OF 94-0676
 Gatovsky, Y. A. OP-169
 Gauthier-Lafaye, François OP-1403
 Gautier, D. L. DDS-0030; B 2137; C 1108; OF 95-0236
 Gay, F. B. WRI 94-4224
 Gay, F. E. OP-1214
 Gaydos, L. J. OP-495
 Gayes, P. T. OP-1471, 2080
 Geary, R. R. OP-1561
 Gehrels, G. E. OP-39, 40, 308, 1404
 Geissler, P. E. OP-58, 559
 Geissman, J. W. OP-363, 364, 1363
 Geist, D. J. OP-309
 Geist, E. L. OP-162, 275, 1371, 2075
 Gelfenbaum, G. R. OP-1174, 1450
 Gellenbeck, D. J. OF 94-0508
 Gellis, A. C. WRI 94-4205; OP-310, 1405, 1791
 Genise, J. F. OP-311
 Gent, C. A. B 2107; OP-624, 1245, 2184
 Georgakakos, K. P. OP-312
 George, S. L. OF 95-0623, 95-0625, 95-0626, 95-0627
 Gerald, T. R. B 1589-E
 Gerber, M. E. OP-313, 1818
 Gerla, P. J. OP-899
 Gerlach, T. M. B 2139; OF 95-0085; OP-314, 315, 1406, 1407
 Gerlitz, C. N. OF 94-0351
 German, C. R. B 2022
 German, M. I. C 1108
 Gerner, L. J. OF 95-0104
 Gerould, Sarah FS 0134-95
 Geroyan, R. I. C 1108
 Gesch, D. B. OF 94-0626
 Geslin, J. K. OF 94-0342, 94-0451, 94-0460, 95-0102; OP-1408
 Gettings, M. E. OF 94-0291, 95-0032, 95-0076
 Gettings, P. E. OF 94-0291, 95-0032
 Gharbi, Ali OP-316
 Ghasnavi, Ishaq OF 93-0591
 Ghidotti, G. A. C 1129; OP-1095
 Ghil, Michael OP-206
 Ghorashi, M. OF 94-0568
 Giardino, Marco MF-2279
 Gibbons, A. B. B 2064-A-R
 Gibbons, Wes C 1129
 Gibbs, A. E. OP-1409, 1410
 Gibbs, J. F. OF 94-0552, 94-0706
 Gibs, Jacob OP-317
 Gibson, P. C. OP-1411
 Gibson, T. G. OF 94-0217, 94-0683, 94-0702, 94-0708, 95-0478; I-2174; OP-151, 1359, 1412
 Gielstra, Neal OP-1471
 Gierasch, P. J. OP-58
 Giese, G. L. OF 94-0709-W
 Gieskes, J. M. B 2022; OP-1026
 Gilbert, M. C. C 1129
 Gilbert, W. G. OP-201, 887
 Gillard, Dominique OP-1413, 1709
 Gillespie, A. R. OP-368, 449, 1414
 Gillespie, S. R. OP-1415
 Gilliom, R. J. C 1112; OP-226, 2279, 2280
 Gillis, K. S. OP-1867
 Gilmore, T. D. OF 94-0698
 Gilpin, L. M. OF 94-0568; OP-726
 Ginsburg, R. N. OP-1334, 1416
 Ginzemer, M. OP-1433, 2150
 Giordano, T. H. OP-318
 Giorgi, Filippo OP-1537
 Gipson, J. M. OP-815
 Girón, J. R. OP-952
 Girty, G. H. OP-319, 1462
 Girty, M. S. OP-319
 Girvin, Kristin OF 95-0163
 Gissendanner, J. W. OF 94-0385
 Given, D. D. OP-1285, 1417
 Gladenkov, Y. B. OF 94-0588
 Gladwin, M. T. OP-320, 1715
 Glancy, P. A. OF 92-0458
 Glascock, M. D. C 1129
 Glassmoyer, G. N. OP-91, 430, 654, 1541, 1864
 Glatfelter, D. R. WRI 91-4051
 Glazner, A. F. OP-160, 260, 1367
 Gleason, J. D. OP-321
 Glen, J. M. OF 95-0034
 Glen, William OP-1418, 1419
 Glenn, C. R. OP-1069
 Glenn, R. K. OP-101
 Glick, E. E. OF 94-0430
 Glover, Lynn, III OP-413
 Gluskoter, H. J. C 1108
 Glynn, P. D. OP-734
 Gribidenko, H. S. OP-247
 Goddard, J. V. OF 94-0228
 Godfrey, N. J. OF 95-0275
 Godfrey, Nicola OP-941
 Godsy, E. M. OF 94-0329
 Goebel, J. E. I-1420 (NL-14), 1420 (NM-15)
 Goenaga, Carlos I-2387
 Goes, S. D. OP-961
 Goff, B. F. OP-322
 Goff, F. E. I-2362; OP-216
 Goff, Karin OP-179
 Gohn, G. S. OF 94-0558; OP-1359
 Gold, R. L. OF 94-0377
 Goldberg, D. S. OP-1094
 Goldfarb, R. J. B 2084, 2107; OF 94-0272, 95-0082, 95-0509; OP-349, 624, 2184
 Goldhaber, M. B. P 1538-Q; B 1989-F; OF 94-0298, 94-0670; OP-729, 792, 1299, 1915, 2050
 Goldsmith, Richard OP-1658, 1659
 Goldstein, Peter OP-277, 323
 Goldstein, R. M. WRI 95-4047
 Goldstein, S. J. OP-861, 1941
 Golmshtok, A. J. OP-1559
 Golod, V. M. OP-1931
 Golombek, M. P. OP-35
 Golovchenko, Xenia OP-56
 Golub, L. Y. OP-169
 Gombert, J. S. OP-12, 81, 324, 325, 614, 1420, 1421, 1422, 1637
 Gomez, Basil OP-1578
 Gómez-Gómez, Fernando OF 93-0499
 Gonthier, G. J. OF 94-0531
 Gonzales, D. A. OF 94-0437; OP-1256, 1423, 1424
 Gonzalez, Edward OP-274
 Gonzawa, Y. OP-1080
 Good, S. C. OP-744
 Goodard, G. L. WRI 94-4101
 Goodbred, S. L. OP-1425
 Goodchild, M. F. OP-326
 Goodfellow, W. D. OP-652
 Goodmacher, J. C. OP-761
 Goodman, T. A. W 2352-B
 Goodman, W. M. B 2086
 Goodwin, L. B. C 1129
 Goolsby, D. A. WRI 94-4176; OF 93-0657, 94-0396; OP-497, 1426, 1427, 2089
 Gorday, S. P. OF 94-0714; OP-1894
 Gordon, J. D. WRI 93-4208
 Gordon, L. C. OF 95-0479; OP-327, 1428
 Gorman, J. G. OF 94-0363
 Gorton, A. E. OF 94-0568
 Goss, Matthew OP-621, 622, 623

Gostin, V. A. OP-2111
 Göter, S. K. OF 94-0647
 Gottfried, M. D. OP-1137
 Gough, L. P. C 1108; YR;
 OF 95-0007; OP-34, 329,
 329, 1082
 Gowen, M. H. OF 95-0017; OP-
 2205
 Grady, S. J. OP-1460
 Graf, J. B. FS 0120-95
 Graff, P. J. I-2452
 Graham, D. D. OF 94-0712-W
 Gramaccioli, C. M. OP-287
 Granato, G. E. WRI 94-4115
 Grand, S. P. OP-960, 1306,
 2233
 Grant, L. B. OF 94-0568
 Grant, R. E. OP-2253
 Grant, W. C. OP-26, 661
 Grantz, Arthur OF 94-0194, 94-
 0714; OP-17, 330, 445,
 1060, 1894
 Grassle, J. F. B 2022
 Grasso, D. N. OF 95-0121
 Gratier, J. P. OF 94-0228
 Grauch, R. L. OP-1871
 Grauch, V. J. OP-331
 Graves, R. P. WRI 93-4162
 Gray, Floyd YR
 Gray, J. E. B 2107; OP-332,
 333, 334, 730
 Gray, J. R. OF 94-0459; OP-
 335, 518, 1429, 1491, 1805
 Gray, K. J. C 1129; OF 95-
 0045; OP-2090
 Gray, Leda-Beth OF 95-0040;
 OP-197, 1656
 Graymer, R. W. OF 94-0622,
 95-0597; OP-1430
 Greb, S. F. OF 94-0298
 Greeley, Ronald I-2402; OP-
 58, 916
 Green, B. K. OF 91-0503
 Green, H. G. OP-1431
 Green, M. W. OF 94-0655, 94-
 0656, 94-0657, 94-0658, 94-
 0696, 95-0052, 95-0256
 Green, R. C. OF 95-0003
 Green, R. K. OP-2306
 Green, S. L. OF 94-0466
 Green, T. R. OP-1432
 Green, W. R. OF 94-0537, 94-
 0706-W
 Greenberg, Richard OP-57, 58
 Greene, H. G. OP-162, 275,
 336, 337, 338, 1433, 1434,
 1750, 1918, 2150
 Greene, K. E. WRI 94-4215
 Greene, R. C. OF 95-0535
 Greenlee, D. D. OP-1648
 Greenwood, W. R. OP-1080
 Gregory, R. T. OP-753
 Greve, C. W. OP-339
 Gridley, J. M. OP-1821
 Grier, S. P. OF 94-0687; GQ-
 1758
 Griffin, M. S. WRI 94-4029
 Griffiths, P. G. OP-1435
 Griggs, G. B. OP-1066, 2180
 Grim, M. S. OP-1338
 Grimes, D. J. B 2081; OF 94-
 0670; OP-340

Griscom, Andrew OP-341, 342,
 426, 444, 1436, 1576, 1577
 Groat, C. G. B 2111
 Grommé, C. S. B 2056; OP-
 1135, 1738
 Gronberg, J. A. OF 95-0286;
 OP-751
 Gröschel-Becker, H. M. OP-652
 Groschen, G. E. WRI 93-4100
 Gross, T. F. OP-847
 Gross, W. K. OP-818, 823, 824
 Grossling, B. F. OP-343
 Grossman, J. N. I-2233; OP-
 647, 1095, 1437
 Grosz, A. E. B 2097; OP-344
 Grout, M. A. MF-2289, 2290;
 OP-947, 1438
 Grove, T. L. OP-968
 Grow, J. A. OF 95-0155; OP-
 1439, 1440, 1470, 1820,
 1976, 2058, 2059
 Growitz, D. J. C 1108
 Grubb, F. V. OF 95-0054
 Grubbs, J. W. OF 95-0167
 Grube, J. P. OF 94-0298
 Grubensky, M. J. I-2454; OP-
 887
 Grundy, W. D. OF 95-0476; I-
 2433-B
 Grybeck, D. J. OP-670, 671,
 710, 1080
 Gryc, George OP-1441, 1442,
 1443
 Gubanov, A. P. OP-345
 Guccione, M. J. OP-2085, 2217
 Guenther, R. S. WRI 93-4200
 Guffanti, M. C. OP-1444
 Guimaraes, I. P. C 1129
 Gulick, Sean OP-941
 Gulick, V. C. OP-33
 Gullett, C. D. OP-2028
 Gundersen, L. C. C 1108; OP-
 2078, 2227
 Gunderson, K. D. OF 94-0299
 Gunn, S. H. OP-29, 197
 Gupta, S. C. OP-339, 1445
 Gurtz, M. E. C 1112; OF 94-
 0490; OP-346
 Gutentag, E. D. OP-1947
 Guthrie, J. M. B 2137; OF 94-
 0298
 Gutmacher, C. E. B 2022
 Guy, D. E., Jr. OF 95-0224
 Guzmán-Otero, R. L. OF 93-
 0629
 Gwynn, David OP-621, 622
 Gwyther, R. L. OP-320

H

Haag, K. H. FS 94-0014;
 WRI 94-4227
 Haapala, Ilmari C 1129
 Haase, J. S. OP-347
 Hacker, B. R. OF 95-0227-A,
 95-0227-B; OP-348, 1138,
 1446
 Hackett, P. OP-1343, 1679
 Hackett, W. R. OF 94-0568
 Hadley, D. G. OP-1801
 Haefner, R. J. WRI 94-4131

Haeni, F. P. P 1415-A; OP-1687
 Haeussler, P. J. B 2107; OP-
 349, 1447, 2184
 Hafner, Katrin OF 95-0204;
 OP-1285, 1336
 Hageman, P. L. OF 94-0270-A,
 94-0270-B, 95-0486
 Hager, S. W. OF 94-0470, 94-
 0471
 Hagstrum, J. T. OP-291, 350,
 351, 352, 353, 1448, 1449
 Haig, D. W. OP-1035
 Haines, J. W. OF 95-0224; OP-
 1450, 1455
 Haithcoat, T. L. B 2111
 Hajash, Andrew OF 94-0228
 Hajic, E. R. OP-1451
 Hajjeh, R. A. OP-1585
 Hajnal, Zoltan OP-248
 Hakala, Kathryn OF 95-0034
 Hale, G. S. OF 95-0158
 Hale, T. W. YR
 Haley, B. R. OF 94-0430; OP-
 1737
 Haley, J. C. B 2113; I-2474-A;
 OP-1452
 Halford, K. J. WRI 94-4219;
 OF 94-0495
 Halili, Nicole OP-1915
 Hall Wallace, Michelle OP-
 1453
 Hall, D. W. OP-354
 Hall, J. D. OF 95-0175, 95-
 0177, 95-0346
 Hall, J. F. OP-389
 Hall, Jeremy OP-779
 Hall, R. D. OP-355
 Hall, R. L. OP-745
 Hall, S. A. OP-1931
 Hall, W. E. P 1525
 Haller, K. M. OF 94-0568; OP-
 1454, 1740, 1741
 Hallet, Bernard OP-1805
 Halley, R. B. OP-1455, 1732,
 1733, 1865, 1866, 2108
 Halliday, A. N. C 1129
 Halling, M. J. OP-389
 Haltom, T. C. WRI 94-4208
 Halvorson, P. F. OP-341, 1436
 Ham, L. K. WRI 95-4053, 95-
 4083
 Hamann, D. M. OP-1688
 Hamer, M. R. OP-1433, 2150
 Hamidzadeh, N. A. OP-2227
 Hamilton, J. C. OF 95-0062
 Hamilton, P. A. WRI 95-4031;
 OP-356, 845
 Hamilton, R. M. OP-1456
 Hamilton, T. D. OP-357, 1457,
 1458
 Hamilton-Smith, Terence
 B 2137; OF 94-0298
 Hamlin, S. N. WRI 94-4040;
 OF 95-0042
 Hammarstrom, J. M. OP-1344,
 2225
 Hammer, Joerg C 1129
 Hammermeister, D. P. OF 92-
 0657
 Hammond, B. F. OP-1581
 Hammond, E. C. OF 94-0370,
 94-0372, 94-0373
 Hammond, R. H. I-2474-A

Hammond, W. R. B 2139; OP-
 1459
 Hammouda, T. C 1129
 Hampton, M. A. OF 95-0017;
 OP-2205
 Hanchar, D. W. OP-1460
 Hanchar, J. M. C 1129
 Handley, L. R. OF 94-0275
 Hankin, H. C. OF 95-0156
 Hankins, W. B. OF 95-0255;
 OP-83, 1138, 1858
 Hanks, T. C. OP-25, 358, 1074,
 1287, 1368, 1730, 1731, 2153
 Hanna, W. F. OF 94-0712
 Hannah, M. M. OF 95-0034
 Hanover, R. H. WRI 94-4105
 Hansen, D. S. OP-359
 Hansen, V. L. OP-231, 360
 Hanski, E. J. OP-2242
 Hansley, P. L. B 2106; OF 94-
 0298; OP-1461, 1557
 Hanson, G. N. B 1904-U
 Hanson, J. A. WRI 94-4117
 Hanson, K. L. OF 94-0568
 Hanson, R. E. OP-319, 1462
 Hanson, S. L. OF 95-0257-A,
 95-0257-B, 95-0257-C; OP-
 1048
 Haraden, C. C. OF 94-0568
 Harbaugh, A. W. OF 94-0468,
 95-0288
 Harbert, W. P. OP-361
 Harbin, M. L. B 2139
 Harch, A. OP-134
 Harden, J. W. OP-761, 1414,
 1463
 Hardgree, Melissa OF 94-0496
 Hardie, J. K. OP-1464
 Harding, A. E. B 2056; OF 95-
 0094; OP-836
 Hardison, J. H., III OP-859,
 1901
 Hardy, E. E. OF 94-0309, 95-
 0138
 Hardy, M. A. WRI 94-4060
 Hardyman, R. F. B 2081; OP-
 2244
 Hargadine, D. A. WRI 94-4166
 Hargraves, R. B. OP-362
 Harkness, W. W. OF 95-0308
 Harkrider, D. G. OP-467
 Harksen, C. J. OF 95-0194; OP-
 1265
 Harlan, S. S. OP-363, 364, 704,
 1363, 1465, 2133
 Harley, S. L. C 1129
 Harlow, G. E., Jr. OF 94-0301
 Harmon, A. E. OF 95-0556
 Harmon, J. G. OF 93-0068, 95-
 0291
 Harms, T. F. B 2117; OF 94-
 0691
 Harmsen, S. C. OP-12, 365
 Harned, D. A. W 2435; OF 95-
 0164
 Harnish, R. A. OF 94-0545; OP-
 1466
 Harp, E. L. OF 95-0213; OP-
 366, 367, 1027, 1467, 1585
 Harper, R. W. OF 94-0109
 Harrell, J. A. OP-1152

- Harrill, J. R. WRI 95-4052; OF 95-0107
- Harrington, C. D. OP-368, 1468, 1469
- Harris, A. G. P 1545; OF 94-0215, 95-0557; OP-369, 370, 1470, 2057
- Harris, D. C. OF 94-0298
- Harris, J. B. OF 94-0568
- Harris, M. S. OP-1471
- Harris, N. B. C 1129
- Harris, Patrick OP-1472
- Harris, R. A. OP-371, 1473, 1474, 1475, 1999, 2119
- Harris, S. L. WRI 94-4156
- Harrison, H. E. OF 95-0373
- Harrison, J. B. OF 94-0568
- Harrison, R. W. MF-2277
- Hart, G. E. OP-322
- Hart, P. E. OF 94-0639; OP-17, 156, 330, 445, 1060, 1234, 1759, 1760, 1773, 1774, 1928, 2074
- Hart, R. H. OP-320
- Hart, R. J. OP-1429, 1476, 1805
- Harte, P. T. WRI 92-4154; OF 94-0343, 95-0281
- Hartley, J. L. OF 93-0465
- Hartung, J. B. OP-16, 372
- Hartzell, S. H. OP-373, 374, 375, 549, 1222, 1477
- Harvey, J. W. OP-376, 678
- Harvey, R. W. OP-377, 616
- Harwood, D. M. OF 94-0588
- Harwood, D. S. I-2341; OP-319, 1462
- Haselton, H. T., Jr. OF 94-0576, 94-0703; OP-378, 1236, 1237, 1478
- Hasemi, Akiko OP-539, 1703
- Hasenaka, Toshiaki OP-338
- Hasenmueller, N. R. B 2137
- Hasiotis, S. T. OP-224, 379, 380, 381, 382, 1012, 1153, 1320, 1321, 1322, 1479, 1480, 1481, 1482, 1483, 1531, 2023
- Haskell, B. J. OF 94-0445
- Hassibe, W. R. OP-1484
- Hassig, P. J. OP-851
- Hatch, J. R. B 2137; C 1108; OF 94-0298; OP-1898, 2050, 2057
- Hatfield, J. L. OP-1485
- Hatton, Josephine OF 94-0445
- Haugerud, R. A. OF 94-0403; OP-2008
- Haugh, C. J. WRI 93-4207
- Hauksson, Egill ; OP-347, 383, 462, 1336, 1486, 1561, 1744
- Hawke, B. R. OP-1487, 1784
- Hawkins, D. B. OF 95-0172
- Hawley, C. C. OP-670
- Haxel, G. B. I-2017, 2454
- Hay, L. E. OP-384
- Hayashida, D. N. B 2110
- Hayba, D. O. OP-385, 439, 1096, 1488, 1563
- Hayes, D. C. WRI 94-4164
- Hayes, J. M. OP-1634
- Hayes, T. S. B 2111
- Hayes, W. W. YR
- Haymon, R. M. OP-1339, 1941, 2097
- Haynes, C. V., Jr. OP-909, 1770
- Haynes, D. D. GQ-0351
- Haynes, J. T. OP-386
- Hayob, J. L. OP-387, 1489
- Hays, P. D. OP-1472
- Hazel, J. E., Jr. OP-1607
- He Qunlu OF 94-0568
- Head, J. W. OP-58, 1869, 1873
- Headrick, F. D. OF 94-0538
- Heald, M. T. OP-1226
- Healy, J. H. OP-1490, 1657
- Healy, R. W. OP-388, 1491
- Heaman, L. M. OP-506, 507
- Hearn, B. C., Jr. OF 95-0496; I-2362; OP-1492
- Hearn, P. P., Jr. OP-1493
- Hearne, G. A. WRI 92-4143
- Heath, R. C. W 2220
- Heatherington, A. L. OP-1861, 1862, 1863, 2132, 2133
- Heaton, T. H. OP-389, 1486, 1744, 2239
- Hecht, W. S. OP-685
- Heckel, P. H. B 2110
- Hecker, B. OP-1343, 1679
- Hecker, Suzanne OF 94-0568, 95-0062; OP-1494
- Hedal, J. A. OP-557
- Hedge, C. E. OP-189
- Heffern, E. L. MF-2281, 2289, 2290
- Heffernan, C. OP-58
- Heigold, P. C. P 1538-Q; OF 94-0298
- Heiken, G. H. OP-1691
- Heilweil, V. M. WRI 93-4221
- Hein, J. R. OP-126, 197, 1129, 1197, 1198, 1229, 1409, 1410, 1495
- Heinrichs, T. A. OF 94-0512
- Heiny, J. S. FS 0153-95; WRI 94-4095
- Heise, B. A. C 1108
- Heisig, P. M. WRI 93-4029
- Heizler, M. T. C 1129; OP-258, 1817
- Hekinian, Roger OP-390
- Helfenstein, Paul OP-134
- Helgesen, J. O. OF 94-0365
- Heliker, C. C. DDS-0024; OF 94-0713, 95-0496; OP-391, 474, 1496, 1497, 1768
- Hellmann, Roland OF 94-0228
- Hellweg, M. A. OP-277, 392, 393, 889, 1071, 1375, 1498, 1499, 1912, 2144
- Helm, D. C. OP-394
- Helm, P. J. OF 95-0078
- Helmberger, D. V. OP-461, 1853
- Helper, M. A. OF 95-0227-A, 95-0227-B
- Helsel, D. R. WRI 95-4031
- Helseley, C. E. OP-247
- Helsley, C. E. OP-397, 1505
- Helz, R. T. OF 94-0684, 95-0496; OP-47, 1090, 1500
- Hemingway, B. S. B 2131; OF 94-0575, 94-0576, 94-0671, 94-0688, 95-0255, 95-0510, 95-0517; OP-781, 1771
- Hemley, J. J. OP-1013, 2001
- Hemming, S. R. B 1904-U
- Hemphill-Haley, Eileen OF 94-0568, 95-0034; OP-26, 395, 1501, 1629
- Hemphill-Haley, M. A. OF 94-0568
- Hendley, J. W., II OF 94-0667-A, 94-0667-B; OP-1502
- Hendricks, J. D. P 1538-E
- Hengst, R. A. OP-2022
- Henika, W. S. OP-63
- Henley, R. W. OF 94-0228
- Henry, C. D. OF 94-0227; OP-363, 1925, 1994
- Henry, D. J. OP-1831
- Henry, M. E. B 2063; OF 94-0298
- Henry, T. W. OP-766, 768
- Henry, V. J. OP-739
- Henstock, T. J. OP-941
- Henvey, T. L. OP-1285, 1503, 1706
- Hepburn, J. C. OP-782
- Héquet, Arnaud OP-396
- Hereford, Richard OF 94-0563, 94-0564, 95-0057, 95-0515; OP-1504
- Herkenhoff, K. E. OP-2111
- Herman, J. S. OP-806
- Hermes, O. D. OP-2227
- Hernandez, M. OP-521
- Hernández, R. M. OP-2011
- Hernly, B. M. OP-46
- Herrero-Bervera, Emilio OP-397, 1505
- Herring, J. R. C 1108; OF 94-0295; OP-398, 399, 584, 585, 1506, 1969
- Herve, Francisco C 1129
- Herwanger, J. OP-478
- Herzfeld, U. C. OP-1507
- Hess, G. W. WRI 94-4158
- Hess, K. M. OF 94-0384; OP-1765
- Hess, K. U. C 1129
- Hester, T. C. OF 94-0670
- Hettinger, R. D. B 2115-A; C 1108; OF 94-0670
- Heumann, A. C 1129
- Heusser, L. E. OF 95-0034; OP-1401
- Heyl, A. V. B 2094-B; OP-400, 888
- Hibsch, Christian OF 94-0568
- Hickman, J. S. OP-1508
- Hickman, R. E. WRI 91-4141
- Hickman, S. H. OF 94-0228; OP-401, 402, 651, 958, 2042, 2043, 2228
- Hicks, J. F. OP-403
- Hickson, C. J. OP-1509, 1847
- Hiatt, J. K. OP-767
- Higer, A. L. FS 0134-95
- Higley, D. K. OF 94-0670
- Hildebrand, J. A. OP-1655
- Hildebrand, R. T. OP-108, 922
- Hildenbrand, T. G. P 1538-E; OF 94-0298; OP-404, 405, 1510, 1689, 1964
- Hildreth, Wes OF 95-0498; I-2460; OP-1511, 1512, 1513
- Hilgen, F. J. OP-61
- Hill, B. J. OF 94-0670
- Hill, C. A. OP-319
- Hill, D. P. OF 94-0228; OP-406, 407, 457, 924, 1514
- Hill, M. C. OP-171, 1515
- Hill, M. D. OP-39
- Hill, P. L. OF 95-0506
- Hill, R. I. OP-1212
- Hill, R. S. OF 94-0588
- Hillhouse, J. W. OP-361, 408, 1135
- Hills, F. A. OF 94-0298, 95-0242; OP-2015
- Hilmes, M. M. OP-1516
- Himmelberg, G. R. P 1564; B 2107, 2135; C 1129; OP-409
- Hinaman, K. C. OP-410
- Hine, A. C. OP-1425, 1698, 1719, 2206
- Hines, L. B. WRI 95-4052
- Hinkle, M. E. OF 94-0289, 95-0080, 95-0485, 95-0569; I-2364-A
- Hinman, N. W. OP-2128
- Hintze, L. F. GQ-1759
- Hirsch, R. M. C 1123
- Hirshorn, Barry OP-1302
- Hitchcock, H. A. OF 94-0363
- Hitt, K. J. WRI 94-4250, 95-4031
- Hitzman, M. W. OP-670
- Hiza, M. M. OP-1517
- Hlava, P. F. OP-1518
- Ho, R. A. OP-307
- Hoare, R. D. OP-411
- Hobart, M. A. OP-338
- Hobba, W. A., Jr. WRI 93-4073
- Hobbs, S. W. P 1525
- Hoblitt, R. P. B 2139; OP-1023
- Hoch, A. R. OP-1519
- Hockey, David I-2451
- Hodell, D. A. OF 94-0588
- Hodge, S. M. OP-446
- Hodgeboom, J. A. OP-1831
- Hodges, C. A. OP-412
- Hodkinson, D. C 1129
- Hoffman, J. D. OF 95-0509
- Hoffman, R. J. OP-775
- Hoffmann, J. P. OF 94-0713
- Hofstra, A. H. OF 93-0698, 95-0013; OP-536, 731, 1245, 2151
- Hogan, E. V. OF 95-0173, 95-0179, 95-0342, 95-0344, 95-0345
- Hogan, J. P. C 1129
- Hoge, H. P. GQ-1212
- Hogenboom, D. L. OP-1520, 1609
- Hogrefe, A. R. OP-2051
- Hohmann, G. W. OP-712, 1934
- Hoisch, T. D. OP-619
- Holbrook, H. S. OP-413

Holbrook, W. S. OP-1521, 1524, 1525, 1966
 Holcomb, R. T. I-2359; OP-1119, 1522, 1523
 Holden, J. OP-1351
 Holden, P. N. C 1129; OP-1095
 Holden, T. C. OP-1520
 Hole, J. A. OP-941, 1107, 1108, 1521, 1524, 1525
 Holl, J. E. OP-941
 Holland, F. D. OP-414
 Holland, H. OP-1634
 Holland, J. P., II WRI 95-4095
 Hollett, K. J. CF 94-0531
 Holliday, V. T. OP-636
 Holligan, K. Q. WRI 93-4039
 Holliger, Klaus OP-2300
 Holliger, Philippe OP-1403
 Hollister, V. F. OP-415
 Holm, M. R. C 1108
 Holm, T. M. OP-416, 2102
 Holmes, C. W. C 1108; OP-569
 Holmes, M. L. B 2022; OP-123, 1611
 Holmes, R. R., Jr. OP-1526, 1578
 Holmes, W. F. WRI 93-4219; OF 94-0713-W
 Holmjam, Josef OP-640
 Holroyd, P. A. OP-1154, 1527, 1528
 Holtz, François C 1129
 Holtz, T. R., Jr. OF 94-0281; OP-218, 417, 418, 1268, 1269
 Holub, D. F. OP-1963
 Holzer, T. L. OP-419, 420, 1529, 1530
 Hon, Ken OF 94-0713; I-2504; OP-92, 546, 757, 1230
 Honey, J. G. I-2498; OP-1531
 Hook, R. W. OP-2256
 Hook, S. J. C 1129
 Hooper, P. R. OP-1254
 Hooper, R. P. WRI 94-4092; OP-1532
 Hoos, A. B. OF 94-0068
 Hoover, D. L. B 2056
 Hopkins, D. A. OF 95-0013
 Hopkins, D. M. OF 94-0270-A, 94-0270-B, 94-0588; OP-1171, 1172
 Hopkins, I. L. OP-570, 1533
 Hopkins, M. S. WRI 94-4195
 Hopkins, R. T. OF 94-0443, 94-0680-A, 94-0680-B, 95-0509
 Hopper, M. G. OF 94-0670
 Horak, J. M. C 1129
 Horan, D. M. OP-676
 Horan, M. F. OP-421, 976
 Horita, Juske C 1129
 Horn, M. A. WRI 93-4096, 93-4098, 94-4252
 Horn, M. F. OP-647
 Hornberger, G. Z. WRI 94-4115
 Hornberger, M. I. OF 94-0308, 94-0375, 95-0299; OP-1209, 1534, 2026
 Horowitz, A. J. OF 94-0539; OP-422, 423, 1535
 Horton, G. W. C 1108

Horton, J. W., Jr. OF 94-0682; OP-63, 1202, 1536, 1670, 2062
 Horton, R. J. OP-424, 425, 426, 427, 1562
 Horton, W. J. OP-428
 Hostettler, S. W. OP-1537
 Hostettler, F. D. B 2022; OF 94-0376; OP-513, 715, 1538, 1940
 Hougen, S. B. OP-362
 Hough, S. E. OP-265, 274, 429, 430, 460, 461, 1266, 1539, 1540, 1541, 1600
 Houghton, B. F. OP-431, 1542
 Houghton, H. F. OF 95-0253
 Houseknecht, D. W. C 1108; OP-1543
 Houser, B. B. OF 95-0076; OP-1666
 Houston, Heidi OP-1544
 Houston, R. S. I-2452
 Hovanesian, S. M. OP-265
 Howard, J. L. B 1995-H, I
 Howard, J. M. OF 94-0450
 Howard, K. A. OF 95-0598; OP-309, 432, 453, 2291, 2309, 2310
 Howard, T. M. OF 93-0269
 Howell, D. G. B 2107; C 1108; OP-308, 433, 1122, 1249, 1250, 1251, 1404, 1545, 1546, 1547, 1604, 2105
 Hower, J. C. OP-1002, 1548, 1950, 2053
 Howes, B. L. OF 95-0290
 Howington-Kraus, A. E. OP-1781
 Howle, J. F. OP-261, 884
 Hoy, N. D. OF 95-0185
 Hsieh, P. A. FS 0138-95; OP-930, 1549
 Hsu, Shih-Ang OF 94-0275
 Huang, C. OP-1051
 Huang, W. C. OP-1910
 Hubacher, F. A. OP-1590
 Hubbard, L. E. WRI 89-4179
 Huber, D. F. OF 95-0248
 Huckins, H. E. OF 93-0477
 Huddleston, P. F. OP-399, 586, 739
 Hudnut, K. W. OP-714, 1550
 Hudson, M. R. B 2056; OP-1388, 1878, 1904
 Huebner, J. S. OP-434, 781
 Huerta, A. D. B 2064-A-R
 Huff, G. F. WRI 94-4228
 Huffman, A. C., Jr. B 2110; C 1108; OP-1390, 1551
 Hughes, P. E. OF 94-0363
 Hughes, S. S. OP-779
 Hughes, W. B. FS 94-0010
 Hughes-Clark, J. E. OP-2222
 Huh, O. K. OF 94-0275
 Huizinga, R. J. OF 94-0544
 Hulen, J. B. OP-1118, 1691
 Hummel, P. R. WRI 95-4085
 Humphrey, J. R. OP-1994
 Humphrey, M. D. OP-1552
 Humphrey, N. F. OP-612
 Hund, G. E. OP-436
 Hungerford, R. D. OP-119

Hunt, A. P. OF 94-0670
 Hunt, R. J. OP-1553
 Hunter, R. E. OF 94-0594
 Hunter, Y. R. OF 94-0508
 Huntington, T. G. OP-435, 1554, 1555
 Huntton, J. E. OP-1556, 1557
 Hurley, J. P. OP-508
 Hurbise, D. O. OP-1558
 Husband, R. A. OF 94-0351
 Huston, W. R. OP-1561
 Hutchinson, C. B. W 2409; YR
 Hutchinson, D. R. OF 94-0263; MF-2268; OP-413, 436, 1559
 Hutson, F. E. C 1129
 Hutson, S. S. OF 94-0483
 Hutt, C. R. OP-1560, 2313
 Hutton, D. H. C 1129
 Hutton, L. K. ; OP-383, 1486, 1561, 2119
 Huyck, H. L. OP-2131
 Hylbert, D. K. GQ-1212
 Hyndman, R. D. OF 94-0228; OP-248

I

Ibrahim, A. W. OP-1562
 Idleman, B. D. OP-2011
 Ignatyev, A. B. OP-1080
 Ikami, Akira OP-248
 Ikeda, A. OP-2107
 Ikeda, Hiroshi OF 94-0594
 Ikehara, M. E. WRI 94-4184; OF 94-0494; OP-437
 Ikeya, Noriyuki OP-1269
 Ikramuddin, Mohammed OP-1039, 2129
 Ilchnik, R. P. OP-438
 Imana, E. OP-478
 Imbrigiotta, T. E. OF 92-0139; OP-317
 Imes, J. L. OP-1016
 Imhoff, Matthias OF 94-0228
 Indrick, S. S. I-2451
 Ingebritsen, S. E. WRI 95-4001; OP-439, 1563, 1564, 1752
 Ingersoll, A. P. OP-58
 Ingersoll, G. P. WRI 92-4143; OF 95-0139
 Ingle, J. C., Jr. B 1995-J, K; OP-1035, 1778
 Ingram, B. L. OF 94-0568; OP-1216, 1848
 Inman, E. J. WRI 94-4158, 95-4017
 Inners, J. D. OP-1164
 Inoue, Masamichi OF 94-0275
 Irving, A. J. OP-39
 Irwin, B. J. OF 95-0224
 Irwin, Sarah OF 94-0568
 Irwin, W. P. OF 95-0558; I-2148
 Isaacs, C. M. P 1566; C 1108; OF 95-0236; OP-722, 1954, 1955
 Isachsen, C. E. OP-1232
 Isbell, C. E. OP-1781
 Isbell, N. K. OP-1662, 1729, 1782

Ishman, S. E. OF 94-0281, 94-0588, 95-0226; OP-214, 218, 440, 1565, 1566
 Istok, J. D. OP-1552, 1567
 Ivahnenko, Tamara WRI 93-4101; OP-910, 1568, 2178
 Iverson, J. L. OF 93-0657
 Iverson, R. M. OP-441, 1569, 1570
 Iwatsubo, E. Y. OF 94-0288, 95-0237
 Iyer, H. M. OP-442, 1571
 Izett, G. A. I-2498; OP-443, 1572, 1573, 1574, 1575

J

Jachens, P. E. OP-1759
 Jachens, R. C. B 1741-H; OF 94-0599, 94-0613, 95-0238; GP-1012; OP-42, 331, 341, 444, 1576, 1577
 Jackson, D. D. OP-1503
 Jackson, H. R. OP-445
 Jackson, L. L. OF 95-0007; OP-1378
 Jackson, M. D. C 1129
 Jackson, M. E. OP-325
 Jackson, S. M. OF 94-0568
 Jacob, A. W. OP-478
 Jacob, K. H. OP-265
 Jacobel, R. W. OP-446
 Jacobson, M. L. OF 94-0228
 Jacobson, R. B. OF 94-0333; OP-447, 682, 1578
 Jacobson, R. J. OF 94-0298
 Jacobson, S. R. B 2110
 Jacoby, G. C. OF 95-0515; OP-26
 Jacques, J. M. C 1129
 Jaffe, B. E. OF 94-0594; I-2150-B
 Jäger, Stefan OF 94-0615
 Jagucki, M. L. OP-448
 Jahnke, R. A. OP-1069
 Jakob, Matthias OP-449
 Jakobsson, S. P. OP-640
 Jakosky, B. M. OP-484, 485, 676, 1634
 Jambor, J. L. OP-9
 James, E. C 1129
 James, O. B. OP-1579, 1580, 1789
 Janecke, S. U. OP-1581
 Janik, C. J. OF 94-0586; OP-2076, 2077
 Jansen, S. M. FS 0120-95
 Jarrett, R. D. OP-986, 1582, 2259
 Jarriel, Jeff OP-1899
 Javed, Shahid B 2096
 Jaworowski, Cheryl OP-1583
 Jayko, A. S. OP-1584
 Jaynes, D. B. OP-1485
 Jaynes, M. L. WRI 94-4226; OF 94-0509
 Jenkins, D. M. OP-378
 Jenkins-Bartle, K. L. OF 94-0538
 Jenne, E. A. OF 95-0514
 Jennings, A. OP-2086

- Jennings, M. D. OP-2102
 Jennings, M. E. WRI 94-4002;
 OF 95-0121
 Jensen, Charles C 1129
 Jensen, E. G. WRI 94-4041
 Jensen, M. C. OP-450
 Jensen, R. A. I-2455
 Jenson, S. K. OP-638
 Jenter, H. L. YR; OP-2114
 Jessop, J. M. OP-1804
 Jiang, T. M. OP-1058
 Jiang, Xinhe OF 94-0588
 Jibson, R. W. OF 94-0663, 95-
 0213; OP-366, 451, 452,
 1467, 1585
 Jiménez C., Néstor OP-188,
 2244
 Johannes, Wilhelm C 1129
 John, B. E. C 1129; OF 94-
 0568; OP-453
 John, D. A. OF 95-0082; OP-
 454
 Johnson, A. M. OP-1271, 1374,
 1586
 Johnson, B. R. B 2103
 Johnson, C. A. OF 95-0034, 95-
 0206, 95-0536
 Johnson, C. D. WRI 92-4013
 Johnson, C. E. OP-1124, 1125,
 1555
 Johnson, C. G. OP-913
 Johnson, C. M. C 1129; OP-773
 Johnson, D. C. OF 94-0624-A,
 94-0624-B
 Johnson, D. O. OP-1938
 Johnson, D. R. WRI 94-4230
 Johnson, G. C. OF 95-0278
 Johnson, G. P. WRI 94-4190
 Johnson, H. S., Jr. OP-112
 Johnson, J. A. OP-1282
 Johnson, J. G. OP-76, 77
 Johnson, J. R. OP-1587
 Johnson, K. M. P 1525; B 2064-
 A-R; OF 95-0082; OP-1588
 Johnson, K. R. OF 94-0670;
 OP-1589, 1953
 Johnson, Kenneth OP-41, 1590
 Johnson, L. A. OF 94-0275
 Johnson, L. E. OP-920
 Johnson, M. J. WRI 94-4124
 Johnson, P. A. OF 94-0228
 Johnson, P. M. FS 94-0060
 Johnson, P. R. OP-455, 1220
 Johnson, R. A. OF 94-0363;
 OP-1666
 Johnson, R. C. B 1589-E;
 C 1108; OP-456, 1621
 Johnson, R. H. OP-1591
 Johnson, R. W. CP-0043
 Johnson, S. Y. B 2085-A, 2110;
 OF 95-0530; OP-1376, 1592,
 1593, 1979, 1980, 1981, 2027
 Johnson, T. V. OP-57, 58, 134
 Johnson, William WRI 92-4154
 Johnsson, M. J. OF 95-0218;
 OP-1594
 Johnston, A. C. OP-358
 Johnston, D. A. OP-664, 680
 Johnston, J. M. OP-1934
 Johnston, M. J. OF 94-0228;
 OP-262, 406, 457, 654,
 1364, 1514, 1595, 1596,
 1715, 1864, 2186
 Johnston, R. H. OP-1597
 Johnston, S. T. OP-360
 Joiner, C. N. OF 95-0302
 Jolly, A. D. B 2139; OP-458,
 1598, 1978
 Jonasson, I. R. B 2022; OP-
 503, 1033, 1351, 2132
 Jones, A. OP-1917
 Jones, B. F. OF 95-0532; OP-
 118, 473
 Jones, B. K. OP-670
 Jones, D. L. OF 94-0622, 95-
 0597; OP-745, 857, 1430,
 1599
 Jones, G. A. OP-163
 Jones, J. H. OP-648
 Jones, J. S. OP-519
 Jones, J. W. B 2103; OP-459
 Jones, K. H. OF 94-0487
 Jones, Kevin OP-2234
 Jones, L. E. OF 94-0520, 95-
 0302; OP-460, 1600
 Jones, L. F. OP-461
 Jones, L. M. OP-383, 462,
 1486, 1561, 1601, 1602, 2119
 Jones, M. A. WRI 92-4109
 Jones, R. W. OP-281
 Jones-Cecil, Meridee GP-0998-
 A; OP-463
 Jordan, P. R. W 2352-B;
 WRI 94-4187
 Joseph, R. L. FS 94-0015;
 OF 94-0537, 94-0706-W
 Joss, C. J. OP-30
 Jovic, Vidojko C 1129
 Joyce, G. F. OP-1634
 Joye, J. L. OP-160
 Joyner, W. B. OP-89
 Julian, B. R. OF 94-0285; OP-
 254, 298, 464, 1603, 1813,
 2046
 Jull, A. J. OP-66, 214, 1469
 Jungbauer, J. D., Jr. OP-119
 Juracek, K. E. OF 94-0497, 94-
 0670
- ### K
- Kable, M. W. OP-1604
 Kadinsky-Cade, K. A. OP-1392
 Kadko, D. C. OP-503
 Kachrie, W. R. OF 94-0363
 Kagan, Y. Y. OP-1503
 Kahle, A. B. OP-757
 Kahle, S. C. WRI 94-4082, 94-
 4236
 Kaiser, W. P. OF 94-0693
 Kalakay, T. J. C 1129
 Kalkhoff, S. J. FS 94-0031; OP-
 465, 1605
 Kaluderovic, Miodrag OP-2052
 Kamata, Hiroki OP-2172
 Kamb, Barclay OP-612
 Kamilli, R. J. OP-1606
 Kamiya, Takahiro OP-1269
 Kammerer, P. A., Jr. WRI 93-
 4053
 Kamo, S. L. OP-1665
 Kampf, A. R. OP-466
 Kanahale, K. A. OF 94-0629
 Kanamori, Hiroo OP-347, 462,
 467, 1486, 1744
 Kanasevich, E. R. OP-109,
 248, 468
 Kane, A. R. B 2111
 Kanter, L. R. P 1538-J
 Kantrowitz, I. H. FS 0134-95;
 WRI 94-4217
 Kaplinski, M. A. OP-1607
 Kappel, W. M. YR; OP-1608
 Karabanov, E. B. OP-165, 1877
 Karageorgi, E. D. OP-1966
 Karapetian, S. S. OP-265
 Karcz, Iaakov OF 94-0568
 Kargel, J. S. OP-469, 470,
 1520, 1609
 Karl, H. A. B 2079; C 1108;
 OP-1610
 Karl, S. M. OP-426, 471, 641,
 642, 1447, 2184
 Karlin, R. E. B 2022; OF 94-
 0568; OP-1611
 Karlinger, M. R. OP-943, 1711
 Karlstrom, K. E. C 1129;
 OF 95-0598; OP-2309
 Karr, J. R. OP-658
 Kashgarian, Michael OP-59,
 1612
 Kasmarck, M. C. OF 94-0346,
 95-0182, 95-0183
 Katuna, M. P. OP-1393
 Katz, B. G. OP-472, 473, 1613,
 1614
 Katz, M. OP-260
 Katzman, Rafael OP-1615,
 2187
 Kauahikaua, J. P. OF 94-0553,
 95-0496; OP-474, 1223,
 1293, 1496, 1616, 1754, 1964
 Kauffman, S. J. OP-806
 Kaufman, D. S. OP-1172
 Kawano, Yoshinobu C 1129
 Kayen, R. E. OF 94-0639; OP-
 117, 1617, 2094
 Kazahaya, Kohei OP-849
 Keay, Sue C 1129
 Keefer, D. K. OP-451, 475,
 1467, 1618, 1619
 Keefer, W. R. C 1108
 Keene, J. B. OF 95-0228
 Keifer, M. C. MF-2289
 Keighin, C. W. OP-278, 279,
 280, 476, 477, 701, 1620,
 1621, 1622
 Keigwin, L. D. OP-163, 292
 Keiser, A. F. OP-69
 Keith, B. D. OF 94-0298
 Keith, T. E. B 2139; OF 95-
 0047; OP-296, 496
 Keller, B. L. OF 94-0568
 Keller, G. R. OP-478, 1821,
 1835
 Keller, H. U. OP-2134
 Keller, M. A. C 1108; OF 95-
 0236
 Keller, M. B. OP-948
 Keller, S. M. OF 95-0155
 Kelley, J. B. OP-900
 Kelley, J. S. OP-39, 479, 1623,
 1624
 Kelley, K. D. B 2107; C 1117;
 I-2225-A, 2225-B, 2225-C,
 2225-D; OP-1625, 1626
 Kelley, Lee B 2139
 Kellogg, K. S. GQ-1757; OP-
 362, 480, 1627, 1628, 1681
 Kelly, B. P. OF 94-0705-W
 Kelly, D. C. OP-1162
 Kelly, T. J. W 2352-B
 Kelly, W. C. OP-22
 Kelmelis, J. A. YR; OP-339
 Kelsey, H. M. OF 94-0568; OP-
 26, 1629
 Kelsey, R. OF 95-0001
 Kelson, K. I. OF 94-0568
 Kemp, G. P. OF 94-0275
 Kempema, E. W. OP-43
 Kempton, J. P. OP-1630
 Kendall, Carol OF 94-0475;
 OP-11, 118, 1055, 1532,
 1631, 1632, 2221, 2241
 Kendy, Eloise OP-1633
 Kennedy, B. M. OP-261, 300
 Kennedy, H. I. OF 94-0466
 Kennedy, J. OP-1605
 Kennedy, W. J. OP-481
 Kennett, B. L. OP-482
 Kent, D. B. OF 94-0384; OP-
 13, 1284
 Kent, D. V. OP-61, 621, 622
 Kenter, J. A. OP-1334
 Kenyon, N. H. OP-2081
 Kepezhinskis, P. K. C 1129
 Kepferle, R. C. GQ-1342
 Kern, R. A. WRI 95-4014
 Kernodle, J. M. WRI 94-4251
 Kerr, B. D. OP-261
 Kerrich, R. K. OF 94-0228; OP-
 1856
 Kerridge, J. F. OP-1634
 Kerwin, M. W. OF 95-0034;
 OP-1635, 2045
 Kesler, S. E. OP-20
 Keszthelyi, L. P. OP-483
 Ketcham, D. H. C 1129
 Ketner, K. B. I-2536
 Keuler, R. F. OP-205
 Khalili, M. C 1129
 Khan, A. L. B 2096
 Khan, A. M. B 2096
 Khan, M. A. OP-478
 Khan, M. D. OF 94-0274, 94-
 0557
 Khan, R. A. OF 94-0595, 94-
 0596-A, 94-0596-B, 94-0596-
 C, 94-0596-D
 Khan, S. A. OF 94-0274, 94-
 0557, 94-0595
 Khan, S. H. OF 94-0670
 Khan, Z. M. OF 94-0274, 94-
 0557
 Khanchuk, A. I. OF 94-0714;
 OP-1894
 Kharaka, Y. K. C 1108; OP-
 318, 885
 Khursevich, G. K. OP-94
 Kibler, J. E. OF 95-0507; OP-
 1879, 1880
 Kibler, R. L., Jr. W 2352-B
 Kidd, R. E. WRI 94-4074
 Kidd, W. S. OP-598

- Kieffer, H. H. OP-484, 485, 486, 797, 1636
 Kiilgaard, T. H. P 1525
 Kilb, D. OP-1637
 Kilburn, J. E. OF 94-0680-A, 94-0680-B, 95-0230
 Kile, D. E. OP-137
 Kilgore, B. D. OP-210
 Kilpatrick, J. M. WRI 95-4014
 Kim, A. G. C 1108
 Kimball, B. A. P 1402-F; OP-487, 488
 Kimbrough, D. L. C 1129
 Kimbrough, R. A. WRI 94-4111
 Kimura, Gaku OP-271
 Kind, Rainer OP-140
 Kindinger, J. L. OP-1471, 1865, 1866
 Kineke, G. C. OP-117
 King, Bi-Shia OP-491, 1146
 King, Chi-Yu OP-261, 489, 490, 491, 1638, 1639, 1640
 King, Edward OP-2324
 King, G. C. OF 94-0228; OP-492, 1054, 1999
 King, H. D. B 1738-E; OF 94-0277-A, 94-0277-B, 94-0443, 95-0006; MF-2058-D
 King, H. M. I-2364-A
 King, J. D. OP-2057
 King, J. W. OP-94, 163, 165
 King, K. W. OP-373, 956
 King, N. E. OP-823, 824, 1387, 1641
 King, P. B. SGM
 King, T. R. C 1129
 King, T. V. B 2220; OP-150, 493, 1378
 Kingsbury, J. A. WRI 94-4212, 95-4011; OP-1825
 Kingston, John OF 94-0559
 Kinoshita, Masataka OP-652
 Kinugasa, Yoshihiro OF 94-0568
 Kirby, S. H. OP-494, 1105, 1326, 1353, 1446, 1642, 1643, 1910, 2051, 2159
 Kirby, W. H. OF 94-0363
 Kirianov, V. Y. OP-1822, 2260
 Kirk, R. L. OF 95-0561; OP-470, 1644, 1781
 Kirk, William OF 94-0627
 Kirkham, R. A. OP-624
 Kirkham, R. M. OP-92
 Kirkland, J. L. OP-1645
 Kirschbaum, M. A. P 1561; C 1108; OF 94-0670; OP-1142, 1646, 2030
 Kirschbaum, R. A. OF 94-0670
 Kirschenbaum, H. K. OF 94-0684
 Kirtland, D. A. OP-495
 Kish, S. A. OP-1647
 Kistler, R. W. OP-41, 1590
 Kitagawa, Yuichi OP-490
 Kitamura, Akihisa OP-1269
 Kite, J. S. I-2364-A
 Kittelson, R. L. OF 94-0363
 Kittle, J. L., Jr. WRI 94-4168, 95-4085; OF 94-0501
 Kiusalaas, N. J. OP-687
 Kiver, E. P. I-2472
 Kjelstrom, L. C. P 1408-C
 Klaasen, K. P. OP-57, 58, 134
 Klaeschen, Dirk OP-965
 Klaine, S. J. OF 95-0156; OP-688, 2044
 Klamath Core Study Team OF 95-0034
 Klaver, J. M. OP-1648
 Kleeschulte, M. J. OF 95-0106
 Klein, D. P. OF 94-0695, 95-0506
 Klein, F. W. OP-1649
 Klein, H. P. OP-1634
 Klein, T. L. OF 94-0447, 95-0045
 Kleinkopf, M. D. B 2064-A-R; OP-1650
 Kleinman, J. W. OF 94-0693
 Kleinmann, R. L. C 1108
 Kleinrock, M. C. OP-47, 1090
 Klemme, H. D. OP-2220
 Klemperer, S. L. OP-941, 1398, 1524, 1525
 Klett, T. R. B 2110
 Kliever, J. D. OF 95-0305
 Kling, G. W. OP-256
 Kling, S. OP-1035
 Klitgord, K. D. OF 95-0228; OP-2, 1559, 1931
 Klockenbrink, J. L. MF-2281, 2289, 2290
 Kloetzli, U. S. C 1129
 Knebel, H. J. OF 94-0649; I-1987-D; MF-2280; OP-683
 Kneller, W. A. OP-2025
 Knepper, D. H., Jr. OF 95-0582
 Knight, R. J. OF 95-0485
 Knipe, R. J. OF 94-0228
 Knoche, Ruth C 1129
 Knochenmus, D. D. WRI 94-4085
 Knoll, A. H. OP-1634
 Knowles, Leel, Jr. OF 95-0115
 Knudsen, J. M. OP-2134
 Knuepfer, P. L. OF 94-0568
 Knutilla, R. L. WRI 94-4143
 Knutson, Janice OP-31
 Koch, R. D. B 2107; OF 95-0509
 Kochevar, R. OP-1918
 Kodiak Seis/Vent Research Group OP-2234
 Kodosky, L. G. OP-496
 Kohler, W. M. OP-1073, 1224, 1225, 1302, 1651, 1804
 Kohut, Milan C 1129
 Koizumi, Naoji OP-490
 Kojima, George OF 91-0320, 94-0705
 Kolata, D. R. OF 94-0298
 Kolesar, P. T. OP-775
 Kolinovic, Rada OP-2052
 Koller, F. C 1129
 Kolpin, D. W. C 1120-G; OP-497, 1652
 Koltun, G. F. WRI 95-4037; OF 94-0459
 Komatsu, Masayuki C 1129
 Komor, S. C. OP-498, 499, 1653
 Koncz, Istvan OP-155
 Kong, F. OP-1282
 Kong, L. S. OP-1654, 1655
 Konikow, L. F. WRI 94-4115, 95-4012; OP-810, 1699
 Konopka, E. H. B 2110
 Konoplev, A. V. OP-2302
 Kontis, A. L. WRI 94-4131
 Konyukhov, B. A. OP-652
 Koopmans, M. P. OP-500
 Koozmin, E. D. OP-767
 Kordas, J. F. OP-676
 Kork, J. O. OP-601
 Körner, Ulrike OP-652
 Korzendorfer, B. A. WRI 94-4252
 Kosanke, R. M. B 2000-L; OP-181, 182, 501, 768
 Koski, M. S. OP-516
 Koski, R. A. B 2022; OF 94-0015, 95-0505; OP-502, 503, 1329, 1351, 1495, 1656, 1829, 2137
 Kossobokov, V. G. OP-1490, 1657
 Kostinski, A. B. B 2139
 Kotarba, Machiej OP-770
 Koteff, Carl OF 94-0201; OP-504, 990, 1658, 1659, 2200
 Kotov, A. B. C 1129
 Kotra, R. K. C 1108
 Kottowski, F. E. OP-21
 Kovach, V. P. C 1129
 Kover, A. N. OP-505, 1660, 1661
 Kowallis, B. J. OP-506, 507
 Koyanagi, R. Y. OF 91-0320, 94-0705; OP-1291
 Kozak, R. C. OP-1662
 Kozar, M. D. WRI 93-4073
 Kozinski, Jane WRI 92-4144
 Krabbenhoft, D. P. OP-508, 1553, 1663, 2241, 2327
 Kraemer, T. F. OP-617
 Kraft, Clifford OF 95-0163
 Krähenbühl, Urs OP-1416
 Krammer, Anton OP-338
 Krantz, D. E. OP-1471
 Krasnov, S. G. OP-652
 Krasnow, M. R. OP-702
 Kraus, M. J. OP-1155
 Krause, R. E. OP-1402
 Krebs, W. N. P 1543 A-B
 Kremjas, B. E. OF 95-0308
 Kresch, D. L. WRI 94-4047
 Krimmel, R. M. WRI 94-4139; OP-612, 1664, 1834
 Krogh, T. E. OP-1665
 Krogstad, E. J. C 1129
 Krohelski, J. T. WRI 93-4053
 Krohn, M. D. B 2139
 Kronenberg, A. K. OF 94-0228
 Krueger, A. J. B 2139
 Krueger, H. W. OP-661
 Krueger, R. P. WRI 94-4041
 Kruger, D. W. C 1108
 Kruger, J. M. OP-1666
 Kruger, M. H. OP-1765
 Krumme, M. L. OP-509
 Krumrie, J. R. OF 94-0488
 Kubo, Kazuya C 1129
 Kuecher, G. J. OF 94-0275; OP-1937
 Kuhn, Gerhard WRI 94-4054
 Kuhn, Gerry OF 94-0568
 Kuiper, L. K. WRI 93-4020; OP-1667
 Kuivila, K. M. OF 94-0362, 95-0110; OP-215
 Kulik, D. M. B 2063; OP-1344, 1668, 1669, 2225
 Kumar, Santosh C 1129
 Kume, Jack OP-2049
 Kumiansky, E. L. WRI 93-4039
 Kunikov, V. E. OP-1212
 Kunk, M. J. OF 94-0227, 95-0217-A, 95-0217-B; OP-158, 372, 386, 506, 507, 510, 766, 1399, 1647, 1670, 1671, 1672, 1925, 2155, 2156, 2296, 2297
 Kunkel, K. W. B 2064-A-R
 Kuntz, M. A. OF 94-0659, 94-0686; OP-898, 1673, 1674
 Kurklin, J. K. OF 94-0504
 Kurnosov, Victor OP-56
 Kurtz, J. P. OP-92
 Kurzmack, M. A. OP-2049
 Kusc, Ismail OF 94-0568
 Kustas, W. P. OP-643
 Kutsukake, Toshio C 1129
 Kuwahara, J. S. OP-511, 512
 Kuzmiak, J. M. OF 94-0331, 95-0296
 Kvenvolden, K. A. B 2022, 2107; C 1108; OF 95-0041, 95-0070, 95-0093; OP-513, 1391, 1538, 1675, 1676, 1677
 Kwak, L. M. OP-1029, 2326
 Kyser, T. K. OF 94-0228

L

- La Femina, P. C. OP-1257, 1678
 La Pointe, P. R. OP-49
 Labonte, Marcel OP-1867
 Laborel, Jacques OF 94-0568
 Labson, V. F. OP-2298
 Lachenbruch, A. H. OF 94-0694; OP-514, 515, 814
 Laczniak, R. J. OF 95-0567; OP-2066
 Ladd, J. W. OP-1343, 1679
 Lafferty, R. H. OP-2085, 2216, 2217
 Lager, G. A. OP-1680
 Lagerbaeck, Robert OF 94-0568
 Lageson, D. R. OF 94-0670; OP-1628, 1681, 2133
 Lahr, J. C. OP-726, 1107, 1459, 1598, 1682
 Lahr, N. B. OP-2252
 Lahtinen, Raimo C 1129
 Lahusen, R. G. OP-1683
 Lajoie, K. R. OP-397, 737, 1505, 2120
 Lamb, J. A. WRI 94-4149; OF 94-0337; OP-1056, 1686
 Lamb, T. E. OF 94-0363
 Lambert, D. D. OP-516
 Lambert, R. B. OP-1684
 Lambeth, D. S. WRI 94-4074

- Lambing, J. H. OF 94-0375
 Lamothe, P. J. OP-662
 Lamy, P. OP-987
 Lance, L. M. OP-1895
 Land, L. F. FS 0090-95
 Land, M. T. WRI 94-4127
 Landa, E. R. OP-517, 518, 1262, 2302
 Landenberger, B. C 1129
 Landers, M. N. OP-519
 Landing, W. M. OP-520, 689
 Landis, E. R. YR
 Landis, G. P. OF 95-0222; OP-731, 1245, 2022
 Landmeyer, J. E. C 1108; WRI 94-4012, 94-4209; OP-1685
 Landon, M. K. WRI 94-4149; OF 94-0337; OP-1139, 1686
 Lane, D. E. I-2474-A
 Lane, J. W., Jr. OP-1687
 Lane, L. J. OP-521
 Lane, L. S. OP-1624
 Lancy, Jim OF 94-0675-A, 94-0675-B, 94-0675-C
 Lanfear, K. J. YR
 Langbein, J. O. OF 94-0228; OP-406, 457, 522, 783, 1514, 1688
 Lange, I. M. OP-670
 Langenheim, V. E. P 1538-L; OF 93-0397-A, 93-0397-B, 93-0540-A, 93-0540-B, 93-0586-A, 93-0586-B, 94-0298, 94-0599, 95-0479; OP-405, 962, 1388, 1689
 Langer, A. M. OP-791
 Langer, C. J. OP-374
 Langer, W. H. YR; OF 95-0582
 Langereis, C. G. OP-61
 Langseth, M. G. OP-652
 Lanphere, M. A. OF 94-0686; I-2504; OP-29, 194, 431, 523, 784, 1513, 1542, 1674, 1690, 1716, 2012, 2088
 Lantos, Miklos OP-524
 LaRock, E. J. C 1108; OP-190, 1276
 Larocque, A. C. OP-1208
 Larsen, C. F. OP-525
 Larsen, Daniel OP-1096, 1691
 Larsen, Eric OF 93-0269
 Larsen, F. D. OP-1659
 Larsen, Gudrum OF 95-0500
 Larsen, M. C. OP-106
 Larson, B. S. C 1108
 Larson, P. B. OP-309, 526, 1806
 Larson, S. A. C 1129
 Larson, S. M. OP-987
 Lasemi, Zakaria OF 94-0298
 Lashari, G. S. OF 94-0274, 94-0557
 Last, W. M. OP-527
 Latif, N. OF 94-0275
 Latkovich, V. J. OF 94-0353, 94-0531
 Laubach, S. E. OP-947
 Laurs, B. M. OP-1303
 Laursen, T. OF 94-0228
 Laustrop, M. OP-1311
 Law, B. E. C 1108; OP-528
 Law, R. D. C 1129
 Lawford, A. J. C 1129
 Lawlor, S. M. OF 95-0143
 Lawrence, G. B. OF 94-0368; OP-529
 Lawrence, S. J. OF 93-0356
 Lawson, R. L. C 1108
 Lay, Thorne OP-2328
 Laz'ko, E. E. OP-843
 Lazarewicz, A. R. OP-1333
 Le Compte, J. R. OP-2148
 Lea, P. D. OP-1692
 Leach, D. L. OP-731, 908
 Leahy, P. P. OP-1693
 Leatham, S. P. OP-1174
 Leavesley, G. H. OP-384, 955
 Lebing, Gerry YR
 LeBlanc, D. R. OF 94-0384; OP-1175
 Leckie, R. M. OP-96, 1645
 Lee, E. M. OP-1781
 Lee, G. K. OF 95-0026; OP-1344, 2225
 Lee, H. J. OF 94-0638; OP-1246, 1772, 1919, 2081
 Lee, M. W. B 2102; C 1108; OF 94-0263, 95-0262; MF-2268; OP-1305, 1559
 Lee, Meei-You OF 95-0258; OP-654, 1864, 1976
 Lee, P. J. OP-530
 Lee, T. C. OP-705
 Lee, T. M. OF 93-0026; OP-472, 473
 Lee, W. H. OP-539, 1225, 1694, 1703, 1704, 2286, 2288
 Lee, Y. F. C 1129; OP-1817
 Leeman, W. P. OP-39
 Leenheer, J. A. YR; WRI 93-4204, 94-4191
 Leetaru, H. E. OF 94-0298
 Leffler, L. M. P 1538-H
 LeFort, Patrick C 1129
 Leftwich, J. T., Jr. OF 94-0228
 Léger, A. J. OP-594
 Legg, M. R. OF 94-0568
 Leggé, Charmaine OP-785
 Leggett, J. K. C 1108
 Legler, J. L. OP-531
 Lehreman, N. J. OP-940
 Leighton, D. A. WRI 94-4151; OF 94-0072, 94-0357; OP-1370
 Leighton, M. W. B 2111
 Leiker, T. J. OF 94-0376, 94-0710-W
 Leith, W. S. OP-532, 1695
 Leitner, Beate OP-941
 Lemeschewsky, G. P. OF 95-0651
 Lendl, Christof OF 95-0275; OP-941
 Lenox, A. M. YR
 Lent, R. M. WRI 94-4171, 95-4102; OP-533, 1696
 Lentz, L. J. B 2110
 Lenz, B. N. OF 95-0163
 Leonard, B. F. P 1525; OP-534
 Leonard, E. M. OP-1697
 Leonard, J. N. OP-338
 Leonard, L. A. OP-1698
 Lerch, H. E. C 1108
 Lerner-Lam, A. L. OP-867
 Leroy, T. H. OP-1902
 Leschin, M. F. OP-2072
 Lescinsky, D. T. OP-1920
 Leslie, Karen C 1129
 Lessoff, S. C. OP-1699
 Lesure, F. G. I-2364-A; OP-112
 Lesure, N. P. OP-112
 Lettis, W. R. OF 94-0568
 Levander, A. R. OP-304, 941, 1394, 1395, 2299, 2300, 2301
 Leventhal, J. S. C 1108; OF 95-0495; OP-535, 536, 1403, 1691, 1700, 1871
 Levesque, V. A. WRI 94-4081
 Levy, D. H. OP-987
 Lewan, M. D. B 2137; OF 95-0209; OP-500, 537, 2128
 Lewis, C. F. OP-436
 Lewis, I. T. OP-676
 Lewis, J. F. OP-1935
 Lewis, J. J. OF 94-0298
 Lewis, M. E. WRI 94-4097, 94-4118, 94-4129; OP-538
 Lewis, R. S. OF 94-0620, 95-0556; I-2456; OP-1972, 2165, 2218, 2324
 Lewis, S. D. OP-56, 1701, 1702, 1762
 Lewis, S. E. OP-1091
 Lewis, Sanford OP-1089
 Li Bingyuan P 1549
 Li Ke OF 94-0568
 Li, S. L. OP-1838
 Li, Yong-Gang OP-539, 1474, 1694, 1703, 1704, 1705, 1706, 1707, 1708, 2085
 Liang, Beiyuan OP-1709
 Liao Yuhua OF 94-0568
 Libarkin, J. C. OP-1710
 Lichte, F. E. OP-287, 288, 289, 329, 329, 1377
 Lichtenberg, C. L. OP-676
 Lichty, R. W. OP-1711
 Lico, M. S. OF 94-0031
 Liddicoat, J. C. OP-397, 1505
 Lidz, B. H. OP-540, 1334
 Liebenthal, D. L. OF 95-0224
 Liegeois, J. P. C 1129
 Lienkaemper, J. J. OF 94-0568; OP-1712
 Lierman, R. T. OP-369
 Light, D. L. OP-541
 Light, H. M. OF 95-0167
 Light, T. D. MF-2058-D
 Likhachev, A. P. OP-194
 Likosway, Y. V. OP-94
 Lilley, M. D. OP-1351, 1676, 2097
 Lillis, P. G. C 1108; OP-542, 1713, 1714, 1746
 Lima, Annamaria OP-199
 Limeburner, Richard OP-944
 Lin, Jian OP-1615, 2187
 Linde, A. T. OP-457, 1596, 1715
 Lindemann, R. H. OP-543
 Lindgren, R. J. WRI 94-4204
 Lindley, G. T. OP-1336
 Lindsay, J. R. OP-1039, 1146, 1156, 2129
 Lindsey, D. A. B 2116; OF 95-0082; MF-2282, 2283
 Lindsley, D. H. OP-125
 Lindsley-Griffin, Nancy OP-56, 1762
 Lindstrom, Mona OP-2156
 Ling, Chi-Hai OP-544
 Link, P. K. B 2064-A-R; OP-2125
 Linke, P. OP-1772
 Lins, H. F. YR; OP-545
 Lins, K. F. OF 95-0652
 Lipin, B. R. OP-516, 1935
 Lipman, P. W. OP-352, 353, 546, 773, 840, 1325, 1716, 1717
 Lips, Roosmarijn OP-1924
 Lipscomb, S. W. OF 94-0109
 Lipsitz, Bev OP-1092
 Liscum, Fred FS 94-0073
 Lisowski, Michael OP-819, 820, 821, 822, 823, 824, 825, 1007, 1872
 List, J. H. I-2150-B; OP-547, 548
 Liszewski, M. J. OP-982
 Litke, D. W. YR; WRI 94-4095
 Litvinovsky, B. A. C 1129
 Litwin, R. J. OF 95-0034; OP-151, 1089, 1322
 Liu Fengjing OP-1003
 Liu Pengcheng OP-375, 549
 Liu Tungsheng P 1549
 Liu, Chengjie OP-621, 622, 623
 Liu, H. OP-1285
 Liu, Hsi-Ping OF 94-0706; OP-550, 1718, 2091
 Liu, L. Q. OF 95-0028
 Liu, L. S. OF 95-0218
 Liu, P. C. OP-1477
 Livingston, R. K. OF 95-0314
 Lizeca B., J. L. OP-188
 Lizeca, J. L. OP-2244
 Lloyd, O. B., Jr. OF 95-0136; HA-0730-K
 Lobmeyer, D. H. OF 93-0098
 Locke, G. L. OF 95-0160, 95-0284
 Locke, S. M. OP-2082
 Locker, S. D. OP-1719
 Lockhart, A. B. OP-1720
 Lockley, M. G. OF 94-0670; OP-1482, 1953
 Lockner, D. A. OF 94-0228, 95-0028; OP-73, 551, 552, 637, 650, 651, 759, 835, 958, 1207, 1721, 1840, 1841, 1856, 2228
 Lockwood, B. M. OP-1722
 Lockwood, J. P. OP-234, 474, 1102, 1291, 1722, 1754
 Lockwood, Millington OP-553
 LoDuca, S. T. B 2086
 Loferski, P. J. OP-554, 555
 Logan, J. M. OF 94-0228
 Logan, R. L. OP-2079
 Lohrmann, Atle OP-1450
 Lohuis, Kimberly OP-1507
 Loiselle, M. C. WRI 93-4098
 London, David C 1129

- Loney, R. A. P 1564; B 2107; OF 95-0095
- Long, H. K. OF 94-0369, 95-0117
- Long, K. F. OF 95-0316
- Long, L. E. C 1129
- Loong, C. K. OP-1680
- Lopes, T. J. WRI 94-4240, 95-4074
- López de Luchi, M. G. C 1129
- Lopez, D. A. OP-1903
- Lorah, M. M. W 2399
- Lorenson, T. D. B 2107; OF 95-0070, 95-0093; OP-1676, 1677
- Lorenz, D. L. OF 93-0046, 93-0047; OP-2166
- Lorenz, F. OP-478
- Loskot, C. L. OF 92-0657
- Love, A. H. OF 94-0270-A, 94-0270-B
- Loveland, T. R. YR; OP-556, 896
- Lovering, T. G. OP-557
- Lovley, D. R. OP-558, 719, 1262, 1723, 1724
- Low, D. J. OF 95-0193
- Low, W. H. WRI 94-4247
- Lowenstern, J. B. C 1129; OP-849, 1725
- Lucas, S. B. OP-1073
- Lucchitta, B. K. OP-559, 560, 1726, 1727, 1728, 1729
- Lucchitta, Ivo OF 95-0048, 95-0086, 95-0529, 95-0591; OP-1287, 1368, 1730, 1731
- Lucey, K. J. WRI 94-4130; OP-2067
- Lucey, P. G. OP-605, 676, 1487, 1784
- Luckey, R. R. OF 93-0098
- Lucy, Daniel OF 94-0352
- Ludington, S. D. B 2119; OF 95-0082, 95-0494; OP-1874
- Ludwig, K. R. I-2233; OP-66, 189, 1184, 1697, 1732, 1733, 1848, 1865, 1866, 2175
- Luedke, R. G. B 2109; C 1129; OF 94-0291, 94-0583, 95-0024; I-2291-C
- Luepke, Gretchen OF 95-0015, 95-0587; OP-741
- Luetgert, J. H. OF 95-0275; OP-109, 248, 468, 478, 779, 941, 1821
- Lugo, C. M. OP-1678
- Lull, J. S. OP-39, 531
- Lull, K. J. OP-608, 1797
- Lumb, A. M. WRI 94-4168, 95-4085; OF 94-0501
- Lumia, Richard OP-113
- Lumm, D. K. OF 94-0298
- Lund, Karen OP-1440, 1976
- Lund, S. P. C 1129
- Lund, W. R. OP-1734
- Lundberg, Joyce OP-2206
- Lundstrom, S. C. OP-612
- Lunetta, R. S. OP-561, 562
- Luoma, S. N. C 1108; OF 95-0299; OP-954, 1209, 1735
- Lupton, J. E. OP-1329
- Lupton, J. L. OP-1351
- Lurry, D. L. WRI 93-4190
- Luth, W. C. OP-1736
- Luther, G. W., III OP-512
- Luther, M. E. OP-1698
- Luther, M. R. OP-2168
- Lutter, W. J. OP-240, 304, 1394, 1395, 2299, 2301
- Lutz, R. A. OP-2097
- Luzietti, E. A. P 1538-J, 1538-P; OP-1004, 2285
- Lyke, W. L. HA-0730-K
- Lynn, W. C. B 1589-E; OP-1555
- Lynton, S. J. C 1129
- Lyons, P. C. OF 95-0572; OP-563, 564, 565, 566, 567, 568, 582, 644, 645, 646, 989, 1737
- Lyons, W. B. OP-520, 689
- Lytochkin, V. N. OP-345
- Lytle, P. T. OF 94-0262, 95-0483-A, 95-0483-B; OP-3, 63
- M**
- M'Gonigle, J. W. OP-569, 1943
- Maars, C. D. OP-670
- Maat, P. B. OP-1758, 1812
- Mabey, D. R. P 1525
- Mabey, M. A. OP-571
- Mabin, M. G. OF 94-0588
- MacCoy, D. E. OF 95-0110
- MacDonald, C. G. OP-570, 1533
- Macdonald, M. A. OP-1655
- MacDonald, W. D. OP-1738
- Macfarlane, A. W. OP-1257, 1678
- MacGregor, I. D. OP-1736
- Macharia, H. OP-478
- Machette, M. N. OF 94-0568; OP-1739, 1740, 1741, 2334
- MacIntyre, I. G. OP-1973
- Mack, F. K. OF 94-0390, 94-0391, 94-0392, 94-0393, 94-0394, 94-0395
- Mack, T. J. WRI 94-4108
- MacKay, M. E. OP-157
- Macke, D. L. OF 94-0298
- Mackenzie, D. E. OP-31
- MacKevett, N. H. OP-1746
- Mackey, S. D. OF 95-0224
- MacLeod, C. L. OP-1087
- MacLeod, N. S. I-2455
- MacNeil, L. J. OP-1867
- Madden, T. M., Jr. WRI 93-4160; OF 92-0635
- Maddox, E. M. OP-621
- Madin, I. P. OP-72, 571
- Madole, R. F. OP-572, 573, 1742, 1743
- Madsen, J. E. OF 94-0710-W
- Maechling, P. OP-1744
- Magee, M. E. OP-1745
- Magenheim, A. J. B 2022
- Magistrale, Harold OP-1336
- Magnuson, J. J. OP-658
- Magoon, L. B., III C 1108; OP-574, 575, 576, 577, 578, 579, 580, 1122, 1746
- Maguire, P. K. OP-478
- Mahan, S. A. OP-1747, 1763, 1802, 1947
- Maher, N. M. OP-1610
- Mahoney, E. N. WRI 93-4207
- Mahoney, J. B. B 2064-A-R
- Majewski, M. S. YR; OF 94-0506
- Majima, Ryuichi OP-1269
- Major, R. P. OP-2109
- Malaret, Erick OP-676
- Malcolm, M. J. OF 95-0486
- Malcolm, R. L. OP-581
- Maldonado, Florian B 2056; OF 94-0670; OP-1153
- Maley, R. D. OF 94-0332; OP-2282
- Malin, P. E. OF 94-0228; OP-1705
- Mallard, G. E. OP-1748
- Mallory, M. J. FS 94-0047; WRI 94-4223
- Malone, S. D. OP-571, 1124, 1749
- Mamay, S. H. OP-582
- Mamet, B. L. B 2110; OP-21
- Mandarino, J. A. OP-276
- Manes, John-James OF 95-0590
- Manes, Milton OP-138
- Manetsch, C. OP-521
- Manetti, Piero C 1129
- Mangan, M. T. OF 94-0713, 95-0496; OP-1496, 1768
- Manheim, F. T. OF 94-0584, 94-0649; OP-398, 399, 583, 584, 585, 586, 1187, 1506
- Mankinen, E. A. OF 94-0633
- Mann, D. M. OF 94-0639; OP-247, 1431, 1750, 1760
- Mann, G. M. OP-1216, 1760, 2107
- Mann, L. J. WRI 94-4053, 94-4247
- Mann, Paul OF 94-0568; OP-1751, 1983
- Mann, R. C. OP-1759
- Manning, C. E. OP-1752
- Manydeeds, S. A. C 1108
- Mao, Shaozhi OP-652
- Maples, C. G. B 2110; OP-2027
- March, R. S. OF 94-0512
- Marchig, Vesna OP-652
- Marco, Shmuel OF 94-0568
- Maret, T. R. WRI 95-4006
- Margheriti, Lucia OP-587, 1753, 2091
- Margrter, S. C. OP-474, 1754
- Marín, L. E. OP-1755
- Marincovich, Louie, Jr. OF 94-0588; OP-1171, 1172, 1176
- Marinenko, J. W. OF 94-0684
- Mariner, R. H. OP-1756
- Marino, John OP-42
- Mark, R. K. OF 94-0662; OP-588, 1342, 1875, 1887
- Markewich, H. W. B 1589-E; OP-1555, 1757, 1758, 2319
- Markon, Carl OF 94-0627
- Markovchick, D. J. OF 93-0657
- Marley, M. S. OP-33
- Marlow, J. E. FS 0120-95
- Marlow, M. S. OF 94-0639; OP-589, 920, 1065, 1216, 1234, 1759, 1760, 1914
- Marone, C. J. OP-590, 591, 1704, 1761, 2232
- Marples, D. R. OP-595
- Marr, J. D., Jr. OP-63, 1536
- Marron, D. C. WRI 95-4021
- Marsaglia, K. M. OP-56, 1762
- Marsden, B. G. OP-987
- Marsh, S. P. OF 95-0494
- Marshall, B. D. OP-1763
- Marshall, G. A. OP-64, 522, 884, 988, 1585, 1872
- Martel, D. J. OP-1198
- Marth, N. J. OF 95-0216
- Martin, A. J. OP-1336
- Martin, C. R. OF 95-0105
- Martin, D. A. OP-1764
- Martin, G. R. WRI 94-4029
- Martin, J. B. OP-338
- Martin, J. D. WRI 94-4066; OF 94-0061
- Martin, J. W. OP-1159
- Martin, L. M. FS 0154-95
- Martin, Suzette C 1108
- Martínez, Félix MF-2246
- Martínez-Pardo, Ruben OF 95-0226
- Martini, M. A. OF 93-0722
- Martini, Marino OP-1239
- Marui, Atsunao OP-592
- Marumo, Katsumi OP-652
- Marvin, R. F. B 2109; OP-844
- Marvinney, C. L. OP-990
- Marzo, B. OF 94-0588
- Masaitis, V. L. OP-1573
- Mashhadi, S. T. B 2096
- Maslia, M. L. OF 94-0520
- Mason, G. W., III OF 95-0163
- Mason, J. L. OF 95-0104
- Massé, R. P. OF 94-0647
- Massie, M. A. OP-676
- Massoth, G. J. OP-1351
- Mast, M. A. OP-883
- Mast, R. F. B 2063; OF 94-0022-A, 94-0022-B, 94-0022-C, 94-0022-D, 94-0022-E, 94-0022-F, 94-0022-G, 94-0022-H, 94-0022-I, 94-0022-J, 95-0075-C; OP-220, 297
- Mastalerz, Maria OP-565
- Masters, B. OP-1416
- Masters, C. D. C 1108; OF 94-0556; OP-593
- Masterson, J. P. OF 94-0316; OP-1765
- Mastin, L. G. B 2139; OP-1766, 1767
- Mastrilli, T. M. WRI 94-4056
- Mathes, M. V. OF 92-0140
- Mathews, P. OP-1433, 2150
- Mathez, E. A. OP-594
- Matile, Lusius C 1129
- Matsui, Sei-ichiro OP-1269
- Mattey, D. P. C 1129
- Matthews, M. D. B 2110
- Matthews, M. S. OP-485
- Matti, J. C. OF 95-0039
- Mattick, R. E. OP-951

- Mattox, T. N. OF 94-0713, 95-0496; OP-1496, 1768
 Matraw, H. C., Jr. OF 95-0372
 Matzko, J. R. OF 95-0562; OP-595, 807
 Maughan, E. K. OP-596, 597
 Maupin, M. A. WRI 94-4221
 Maurer, D. K. WRI 94-4126
 Maxwell, C. H. MF-2295
 Maxwell, G. L. OF 95-0258
 Maxwell, S. C. OP-1769
 Maxwell, T. A. OP-909, 1770
 May, C. L. OP-1322, 2023
 May, J. E. OF 94-0504
 May, S. D. OP-330, 445
 Mayer, Adriano OP-754, 755, 865, 866, 1991
 Mayer, Helmut OP-598
 Mayer, L. A. OP-2222
 Mayers, J. L. OP-2072
 Mayo, D. P. C 1129
 Mayo, L. R. OF 94-0512
 Mazdab, F. K. OP-1771
 Mazzella, A. T. C 1108
 Mazzucchelli, Maurizio OP-865
 McAda, D. P. WRI 94-4251
 McAdoo, B. G. OP-1772, 1919
 McArthur, W. G. OF 94-0638
 McArthur, W. J. OP-2081
 McAuley, S. D. FS 0137-95
 McBride, R. A. OF 94-0275; I-2150-B
 McCabe, G. J., Jr. OP-1014, 1015
 McCabe, P. J. C 1108; OF 94-0670; OP-599, 1646, 2031, 2099
 McCafferty, A. E. B 2064-A-R; OP-1103, 1913
 McCaffrey, K. J. OP-432
 McCaffrey, W. F. OP-2010
 McCauley, J. P. OF 94-0568
 McCammon, R. B. WRI 94-4168; OP-600, 601
 McCann, W. R. OF 94-0568
 McCartan, Lucy OF 95-0261; GQ-1748; OP-2263, 2295
 McCarthy, Jill OP-709, 1234, 1521, 1773, 1774, 1838, 1928, 1966, 2284
 McCarthy, K. A. OF 94-0367
 McCauley, J. F. OP-2068
 McChesney, J. A. OF 94-0496
 McClain, J. S. OP-1033
 McClennen, C. E. OP-214
 McConnaughey, T. A. OP-602, 1775
 McConnell, J. B. OF 94-0350
 McConnell, V. S. OP-1920
 McCord, V. A. OF 95-0515
 McCormick, Michael OP-43
 McCormick, T. C. OP-241, 1691
 McCrory, P. A. B 1995-J,K; OP-603, 1776, 1777, 1778
 McCulloch, T. M. YR
 McCurry, M. O. OP-959
 McDonald, G. D. OP-1634
 McDonald, R. R. OF 94-0594; OP-795
 McDonnell, J. J. OP-1779, 2221
 McDougall, Kristin OP-604
 McDowell, R. C. OP-1091
 McDuff, R. E. OP-1351
 McElhone, T. J. OF 94-0459
 McEvilly, T. V. OF 94-0228; OP-2284, 2288
 McEwen, A. S. OP-57, 58, 134, 559, 605, 676, 1487, 1780, 1781, 1782, 1783, 1784, 1785, 1869, 1873
 McFadden, L. D. OP-761
 McFarlan, J. P. OF 94-0712
 McFarland, E. R. WRI 94-4170; OF 94-0370, 94-0372, 94-0373, 94-0507; OP-1786
 McFarland, J. D., III OF 94-0430
 McFarland, W. D. OF 94-0505
 McFarlane, S. I. WRI 93-4233
 McGann, M. L. OF 94-0593, 94-0651, 95-0033, 95-0034; OP-1787, 1992
 McGarr, A. F. OP-606, 1788
 McGee, B. D. WRI 94-4085
 McGee, E. S. OF 94-0592, 95-0566
 McGee, J. J. OP-1580, 1789, 1935
 McGee, K. A. OF 95-0085; OP-315, 1407
 McGill, P. R. OP-2186
 McGill, S. F. OF 94-0568
 McGimsey, R. G. B 2107, 2139; OF 94-0614, 95-0061-A, 95-0061-B, 95-0083, 95-0271, 95-0520; OP-772, 1790, 2318
 McGrath, T. S. WRI 92-4010
 McGraw, J. P. OF 88-0607, 88-0608, 88-0609, 88-0610, 88-0611, 88-0612, 88-0613, 88-0614, 88-0615, 88-0617, 88-0618, 88-0619, 88-0620, 88-0621, 88-0624, 88-0625, 88-0626, 88-0627, 88-0635, 93-0521, 93-0529
 McGraw, M. A. OP-1998
 McGregor, B. A. C 1108
 McGregor, J. K. OP-570, 1533
 McGrew, A. J. OF 95-0010
 McGuire, A. V. OF 95-0585
 McGuire, D. J. OF 94-0712
 McHugh, J. B. B 2107; OF 94-0670, 95-0071, 95-0079, 95-0097; OP-340, 1823
 McIntosh, T. H. OF 95-0163
 McIntyre, D. H. P 1525
 McIntyre, S. C. OP-1791
 McKay, C. P. OP-1634
 McKay, R. M. OP-607
 McKee, E. H. B 2081; OF 95-0221, 95-0248; MF-2257; OP-22, 188, 303, 1411
 McKelvey, B. C. OF 94-0588
 McKenney, R. A. OP-1792
 McKenzie, D. J. WRI 94-4128
 McKenzie, S. W. OF 94-0308
 McKeown, F. A. P 1538-N
 McKibben, M. A. OP-1793
 McKinley, P. W. OF 94-0456
 McKittrick, M. A. OP-1594
 McKnight, D. M. OF 94-0545; OP-487, 658, 1466
 McKown, D. M. OP-895
 McLaughlin, R. J. OP-663, 802, 803, 804, 805, 1745
 McLean, Hugh B 1988-I, 1995-H,I
 McLean, J. S. OF 94-0387; OP-1274, 1275
 McLelland, J. M. OP-290, 1379, 1794
 McLennan, Robin OF 95-0163
 McLennan, S. M. B 1904-U
 McMahon, Gerard OF 95-0136, 95-0164; OP-1795
 McMahon, P. B. YR; WRI 94-4095; OP-131, 132, 608, 933, 1796, 1797, 2316
 McManus, B. C. OF 93-0417, 93-0659, 94-0381, 95-0119
 McNeill, D. F. OP-540, 1334
 McNulty, B. A. C 1129
 McNutt, S. R. B 2139; OP-609, 1598
 McPherson, B. F. FS 0134-95; OP-610
 McPherson, K. R. WRI 94-4208
 McPherson, R. C. OP-203
 McPherson, W. S. WRI 91-4138, 93-4004
 McQuiston, N. K. OP-652
 McRaney, J. K. OF 95-0228
 McWilliams, M. O. OP-348, 397, 431, 1505, 1542
 Meade, R. H. YR; OF 94-0474
 Mechie, James OP-478
 Medalie, Laura WRI 93-4096, 93-4098
 Medrano, M. D. OF 95-0236, 95-0270
 Mee, J. S. OF 95-0486; OP-1011
 Meech, K. J. OP-987
 Meeker, G. P. OP-611, 939, 1798
 Mehnert, H. H. B 2056; OP-189, 836, 844, 1465
 Mehring, K. T. OP-281
 Mehtab-ur-Rahman OF 94-0274
 Meier, A. L. OF 94-0680-A, 94-0680-B, 95-0071, 95-0079, 95-0097; OP-148, 340, 732, 876, 1031, 1823
 Meier, Dan OP-571
 Meier, M. F. OP-612
 Melack, J. M. OP-1003
 Melcher, N. B. OF 94-0363
 Melching, C. S. WRI 94-4141, 94-4224, 95-4023
 Melis, T. S. OP-1435
 Melnikov, A. I. OP-1493
 Melson, W. G. OP-386
 Meltzer, A. S. OF 95-0275; OP-941
 Melvin, R. L. OP-1799
 Memon, A. R. OF 94-0274, 94-0557
 Mendocino Working Group OP-941
 Mendoza, Carlos OP-374, 613, 1800
 Menéndez, L. G. C 1129
 Mengal, J. M. OF 94-0670
 Menger, Stefan OP-338
 Menges, C. M. OF 94-0568; OP-1801, 1802, 2306, 2311
 Menking, K. M. OF 95-0034; OP-1803
 Menzel, W. P. OF 94-0275
 Menzie, W. D. OP-296, 670
 Menzies, M. A. C 1129; OP-1079
 Meredith, J. A. OP-699
 Meremonte, M. E. OP-614
 Mereu, R. F. OP-1804
 Merewether, E. A. C 1108
 Merline, W. J. OP-57, 134
 Merrand, Y. OP-1805
 Merritts, D. J. OF 94-0568
 Merritt, M. L. OF 94-0457; OP-615
 Merritts, D. J. OP-2070
 Merten, L. M. OF 95-0140
 Mertzman, S. A. OP-959
 Meschede, Martin OP-338
 Messina, Antonia OP-27, 199
 Metge, D. W. OP-616
 Metz, P. A. WRI 93-4158; OF 94-0528, 94-0529, 95-0277, 95-0303; OP-670
 Metzger, L. F. WRI 94-4151
 Meuzelaar, Tom OP-1806
 Meyer de Stadelhofen, C. OP-133
 Meyer, C. E. OF 95-0034; OP-397, 659, 1505, 2021, 2250
 Meyer, D. F. B 2139; WRI 94-4159
 Meyer, M. A. OP-1634
 Meyer, M. T. OF 94-0396; OP-1807
 Michael, A. J. OP-1602, 1749, 1808, 1809, 1810, 1917
 Michael, J. A. P 1538-P; OP-1743
 Michalko, J. C 1129
 Michalski, T. C. OP-1828
 Michel, Jacqueline C 1108
 Michel, R. L. OF 94-0228; OP-256, 617, 734, 789
 Michetti, A. M. OF 94-0568
 Michmerhuizen, C. M. C 1108
 Michnick, S. M. OP-1073
 Middendorf, M. A. OF 94-0430
 Middleton, T. L. OF 94-0379
 Midtlyng, K. S. OF 95-0194; OP-1265
 Mikesell, J. L. OP-1880
 Miklius, Asta OF 94-0288, 94-0567; OP-696, 1328
 Milana, G. OP-1239
 Milici, R. C. B 2110; OP-1811
 Millar, I. L. C 1129
 Millard, H. T., Jr. OP-1416, 1812
 Millen, T. M. B 2094-B
 Miller, A. D. OP-298, 1813
 Miller, A. J. OP-177
 Miller, B. M. B 2118; OP-1814, 1815
 Miller, C. D. OF 95-0498; OP-1720, 1816
 Miller, C. F. C 1129; OP-258, 313, 321, 1817, 1818
 Miller, D. M. OP-618, 619, 2291, 2309, 2310
 Miller, E. L. OF 94-0687, 95-0010; GQ-1758

- Miller, G. K. OF 94-0293
 Miller, J. OP-965
 Miller, J. A. OP-1597, 1819
 Miller, J. J. OF 94-0263; OP-1439, 1440, 1820, 1976, 2058, 2059
 Miller, J. S. C 1129; OP-160
 Miller, J. W. I-2272; MF-2021-G
 Miller, K. C. OP-620, 1821, 1835
 Miller, K. F. OF 95-0129, 95-0184
 Miller, K. G. OP-621, 622, 623, 903, 2171
 Miller, L. J. OP-624
 Miller, M. L. OF 94-0272; OP-201, 1195
 Miller, M. S. B 1738-E; OF 94-0712
 Miller, R. B. C 1129
 Miller, R. J. I-2017; OP-625, 887, 1310, 1311
 Miller, R. L. OP-610
 Miller, R. T. OF 93-0435
 Miller, T. L. OF 94-0539; OP-423
 Miller, T. P. B 2139; OF 94-0194, 95-0520; OP-40, 626, 627, 628, 711, 1822, 2260
 Miller, T. S. YR; WRI 90-4168, 93-4004
 Miller, W. G. YR
 Miller, W. R. OF 95-0071, 95-0079, 95-0097; OP-1823
 Mills, M. S. OP-629, 630
 Mills, P. C. OF 94-0515; OP-1491
 Milly, P. C. OP-1824
 Milosavljevic, Milan OP-2052
 Minasian, D. L. OF 95-0040
 Minissale, Angelo OP-227
 Minor, S. A. OF 95-0567; OP-631
 Minster, J. B. OP-1503
 Mirecki, J. E. WRI 94-4212; OP-1825
 Misawa, Keiji OP-938, 1826, 2183
 Mitchell, J. G. OP-920
 Mitchell, R. L., III OF 94-0359
 Mitchell, W. M. OF 94-0298
 Mitrova, J. X. OP-293, 1382
 Mitton, G. B. WRI 94-4207
 Mixon, R. B. OP-1960, 1977, 2071
 Mixon, P. R. OF 94-0709-W
 Miyatake, Takashi OF 94-0568
 Modene, J. S. OP-670
 Modica, Edward OP-115
 Modreski, P. J. OP-1827, 1828
 Moeller, C. OF 94-0275
 Moëlo, Yves OP-1829
 Moench, R. H. OP-1830
 Moffett, A. M. OF 94-0620; I-2456
 Mogk, D. W. OP-1627, 1831, 1862, 1863
 Mohammed, F. A. OP-1801
 Moley, Kathy OF 95-0092; OP-203, 1832
 Molina-Garza, R. S. OP-1363
 Moll-Stalcup, E. J. OF 94-0194; OP-632, 633, 711
 Molnar, Peter OP-1020
 Molnia, B. F. OP-634, 635, 1429, 1507, 1805, 1833, 1834, 2017, 2207, 2281
 Molnia, C. L. C 1108
 Molyneux, S. J. C 1129
 Monger, J. W. OF 94-0714; OP-857, 1894
 Monical, J. E. WRI 94-4240
 Montana, C. J. OP-1835
 Montero, P. G. C 1129
 Montour, M. R. OP-732, 876, 1957
 Montoya, Peter OF 95-0296
 Moody, J. A. C 1120-F; OF 94-0376, 94-0474; OP-1836, 2185
 Moon, W. M. OP-1804
 Mooney, T. C. OF 94-0624-A, 94-0624-B
 Mooney, W. D. OP-10, 141, 228, 405, 478, 620, 636, 941, 1821, 1837, 1838
 Moore, A. L. OP-1076
 Moore, B. L. WRI 94-4065
 Moore, C. M. OP-1081, 1337, 1922
 Moore, C. R. WRI 94-4060
 Moore, D. E. OF 95-0028; OP-637, 1839, 1840, 1841
 Moore, D. G. OP-918
 Moore, D. W. OF 95-0009, 95-0266; OP-1842
 Moore, G. F. OF 94-0228; OP-157, 1655
 Moore, G. T. B 2110
 Moore, H. J. OP-142, 1843, 1844, 1845, 1846
 Moore, I. D. OP-638
 Moore, J. C. OF 94-0228; OP-157, 727, 1246, 1772, 1919
 Moore, J. G. OF 94-0650; OP-147, 639, 640, 1119, 1183, 1184, 1230, 1367, 1509, 1717, 1847, 1848
 Moore, J. N. OF 95-0030; OP-1209
 Moore, L. D. OF 94-0298
 Moore, R. B. FS 95-0002; WRI 92-4013, 92-4154; OF 89-0284, 91-0320, 94-0553, 94-0705; OP-352
 Moore, T. A. OP-185, 282
 Moore, T. C. OP-1559
 Moore, T. E. B 2107; OF 94-0194; OP-304, 641, 642, 1394, 1395, 1849, 1850, 1905, 2247, 2248
 Moorlag, Susan OP-196
 Moos, Daniel OP-1094
 Mootty, W. S. WRI 90-4112
 Moran, M. S. OP-643
 Morelock, Jack I-2387
 Morey, E. D. OP-563, 564, 644, 645, 646
 Morgan, D. S. WRI 92-4010; OF 94-0505
 Morgan, G. B., VI C 1129
 Morgan, H. F. OP-1781
 Morgan, J. W. OP-516, 647, 648, 976, 2151, 2242
 Morgan, L. A. OP-1851, 1852
 Morgan, Paul OP-515, 814
 Morgan, S. S. C 1129
 Mori, J. J. YR; OF 94-0590, 94-0647; OP-60, 347, 467, 649, 1037, 1038, 1285, 1336, 1486, 1541, 1561, 1853
 Morin, R. H. OP-44, 52
 Morin, R. L. OF 95-0016; OP-42
 Moring, B. C. OF 95-0248
 Moritani, Tomoyuki OP-1443
 Morrison, Jean OP-45, 46
 Morrissey, M. M. OP-1854, 1855
 Morrow, C. A. OP-650, 651, 1856
 Mortenson, C. E. OF 95-0480
 Morton, D. M. OF 88-0753, 88-0754
 Morton, J. L. B 2022
 Moscati, R. J. OP-1747, 1857
 Moseley, M. E. OP-1618
 Mosenfelder, J. L. OP-1138, 1858
 Moses, L. J. OP-1859
 Moses, T. H., Jr. OP-814, 1118
 Mosier, E. L. OP-732, 876, 929, 1957
 Moss, C. P. FS 94-0075; OF 94-0452
 Moss, M. E. OP-1015, 2262
 Mossman, D. J. OP-1403
 Motooka, J. M. B 2107; OF 93-0698, 94-0270-A, 94-0270-B, 94-0289, 94-0680-A, 94-0680-B, 95-0013, 95-0485
 Mottl, M. J. OP-652
 Mouat, N. M. OP-339
 Moukhsil, Abdelali C 1129
 Mountrakis, D. M. OF 94-0568
 Moy, Wai-See OF 95-0261
 Moya, Juan-Carlos OF 94-0568
 Moye, F. J. B 2064-A-R; OF 94-0659
 Moyer, T. C. OF 94-0342, 94-0451, 94-0460, 95-0102; OP-1860
 Mrozek, C. A. WRI 94-4208
 Mueller, C. S. OP-1541
 Mueller, Clarke OP-1621
 Mueller, D. K. WRI 95-4031; OP-653
 Mueller, K. J. OF 94-0568
 Mueller, P. A. OP-1831, 1861, 1862, 1863, 2310
 Mueller, R. J. OP-654, 1864, 2186
 Mueller, Steve OP-2075
 Muffler, L. J. OP-655, 1444
 Mughannam, A. J. OP-790
 Muhs, D. R. OP-656, 1046, 1697, 1732, 1733, 1812, 1865, 1866, 2169, 2175, 2276
 Muir Wood, R. OF 94-0228
 Muir, P. S. OF 95-0104
 Muir, R. J. C 1129
 Muir, T. A. OF 94-0490
 Mukhopadhyay, P. K. OP-1867
 Mukinya, J. OP-478
 Mularoni, R. A. OF 94-0081, 94-0531
 Mull, C. G. B 2107; C 1117; I-2225-A, 2225-B, 2225-C, 2225-D; OP-641, 642, 1270, 1439
 Mullaney, J. R. WRI 94-4255
 Muller, E. H. OP-2281
 Muller, J. R. OP-2070
 Mulligan, Paul OP-2288
 Mullikin, Lloyd OP-621, 622
 Mullin, A. H. OP-2264
 Mullins, W. H. WRI 93-4156
 Munger, B. S. OP-1868
 Munn, M. D. WRI 94-4215; OF 94-0315, 95-0195
 Munoz, J. L. OP-202, 673
 Munroe, R. J. OP-814
 Munson, P. J. OP-1451
 Munson, Thomas OP-607
 Murakami, N. OP-1080
 Murali, Dev OP-1089
 Murchey, B. L. OP-1448
 Murchie, S. L. OP-1869, 1873
 Murdoch, P. S. OF 94-0368
 Murillo S., Fernando OP-188, 2244
 Murillo, M. V. OF 94-0568
 Murillo-Muneton, Gustavo OP-1870
 Murowchick, J. B. OP-1871
 Murphy, E. C. OP-2255
 Murphy, J. M. OP-201, 1285, 1838, 1849, 1905
 Murphy, K. M. OP-1318
 Murray, D. F. OP-101
 Murray, K. R. OF 94-0090
 Murray, M. H. OF 94-0116; OP-203, 1641, 1872
 Murray, R. P. OF 95-0176
 Murray, R. W. OP-1604
 Murray, S. P. OF 94-0275
 Murray, T. L. B 2139; OP-1720
 Murrell, M. T. OP-861, 902
 Murtagh, L. K. OF 94-0302
 Musgrave, R. J. OP-56
 Musler, H. M. OP-1803
 Mussett, A. E. OP-478
 Mustard, J. F. OP-1869, 1873
 Mutschler, F. E. OF 94-0624-A, 94-0624-B; OP-303, 1874
 Myers, B. M. OF 95-0231, 95-0498
 Myers, D. N. FS 94-0056
 Myers, N. C. OF 94-0531
 Myers, R. G. WRI 93-4192, 94-4125
 Mylroie, J. E. OP-1924

N

- Nakanishi, A. S. OF 94-0481, 94-0525, 94-0526, 94-0527, 94-0712-W, 95-0171, 95-0174
- Nakata, J. K. OP-1875, 1887
- Nakata, J. S. OP-1291, 1709
- Nakata, Takashi OF 94-0568; OP-2107, 2284
- Nall, C. A. OP-1263
- Nankervis, J. M. OP-18
- Nardi, A. OP-1144
- Nash, J. T. B 2090; OF 95-0026, 95-0084
- Nash, W. P. OP-716
- Natal'in, B. A. OF 94-0714; OP-1894
- Natapov, L. M. OF 94-0714; OP-1894
- Nathenson, Manuel OF 94-0586
- Nativ, Ronit OP-2308
- Nauman, C. R. OP-670
- Navoy, A. S. WRI 92-4152
- Navrotsky, Alexandra OP-1771
- Neal, C. A. B 2107, 2139; OF 94-0713, 95-0083, 95-0271; OP-1790, 1920, 1921
- Neal, W. J. OP-1201
- Nealey, L. D. B 2056; I-2233; OP-836
- Nealson, K. H. OP-1634
- Nebert, D. D. YR
- Nédélec, Anne C 1129
- Negrini, Luisa OP-865
- Negrini, R. M. OP-397, 659, 1505
- Neitzert, K. M. OF 95-0153
- Neiva, A. M. C 1129
- Nekvasil, Hanna C 1129
- Nelsen, C. E. OP-274
- Nelson, A. R. OF 94-0568; OP-26, 660, 661, 1629, 1876, 2086
- Nelson, B. K. OP-1523
- Nelson, C. H. OP-662, 1877, 2081
- Nelson, D. D. OP-1471
- Nelson, E. P. OP-1247, 1878
- Nelson, G. C. OP-663, 940
- Nelson, G. L. OF 95-0180
- Nelson, H. C. OP-1049
- Nelson, H. L., Jr. WRI 94-4099
- Nelson, J. M. OF 94-0594; OP-1927
- Nelson, K. R. OP-687
- Nelson, Nicole OP-1081, 1922
- Nelson, P. H. OF 95-0507; OP-664, 1691, 1879, 1880
- Nelson, R. E. OP-1881
- Nelson, S. W. B 2107; OF 94-0272; OP-670
- Nelson, W. H. B 2107; OP-936
- Nelson, W. J. OF 94-0298
- Nesbitt, D. M. C 1108
- Netoff, D. I. OP-1882
- Neuhauser, D. S. OP-1883
- Neukum, Gerhard OP-58
- Neumayr, P. OP-1208
- Neuzil, C. E. OP-665, 1884
- Neuzil, S. G. OP-1885
- New Jersey Geological Survey, Department of Environmental Protection and Energy OP-904
- Newberry, R. J. OP-670
- Newell, W. L. OP-504
- Newhall, C. G. OP-752, 1886
- Newkirk, S. R. OP-670
- Newman, E. B. OP-1887
- Newman, J. OP-207
- Newman, R. H. OP-207
- Newton, R. C. C 1129
- Nicholls, I. A. C 1129
- Nicholls, J. W. OP-898
- Nichols, D. J. B 2115-B; I-2474-A; OP-666, 667, 668, 1589, 1888, 1889, 1890, 1942
- Nichols, D. R. OF 95-0224
- Nichols, F. H. YR
- Nichols, K. M. OP-2115
- Nichols, M. H. OP-521
- Nichols, W. D. OP-1891
- Nicholson, Craig OF 94-0228; OP-1336
- Nickerson, E. L. WRI 93-4192; OF 95-0111
- Nickless, R. C. WRI 94-4054
- Niehus, C. A. WRI 93-4195
- Nielson, J. E. OP-669, 1110
- Niem, A. R. OF 95-0093; OP-1677
- Nikonov, A. A. OF 94-0568
- Nilles, M. A. WRI 93-4208
- Nimmo, J. R. OP-2095, 2096
- Nironen, Mikko C 1129
- Nishenko, S. P. OF 94-0568, 94-0643, 95-0067; OP-26, 1191, 1192, 1892
- Nishimura, K. OP-1080
- Nitkiewicz, A. M. OF 95-0510
- Nizamani, M. A. OF 94-0274, 94-0557
- Noble, D. C. OP-1411
- Noble, J. E. OF 95-0183
- Nokleberg, W. J. OF 94-0194, 94-0650, 94-0714, 95-0509; OP-39, 670, 671, 672, 1080, 1893, 1894, 1895
- Nolan, B. T. OF 95-0239
- Nolan, R. P. OP-791
- Noll, K. S. OP-987
- Noller, J. S. OF 94-0568
- Norby, R. D. OF 94-0298
- Nord, G. L., Jr. OP-1237, 1238, 1671, 1896
- Norden, A. W. C 1108
- Nordstrom, D. K. WRI 93-4122; OP-9, 673, 984, 1369, 1897
- Noriega, M. C. OP-37
- Normark, W. R. B 2022; OP-639, 942, 1119
- Norris, J. OP-1285
- Norris, R. D. OP-674
- Northrup, D. E. OP-1276
- Northrup, D. E. OP-190
- Norton, I. O. OF 94-0714
- Novak, O. OP-478
- Nowell, L. H. OP-675
- Nowlan, G. A. OF 95-0546
- Noyes, T. I. WRI 93-4204, 94-4191
- Nozette, S. D. OP-676
- Nuccio, V. F. B 2094-D; OF 94-0298; OP-297, 677, 1272, 1898, 2020, 2057
- Nurcahya, B. E. OP-392
- Nutman, A. P. OP-1831, 1861, 1862, 1863, 2309, 2310
- Nutt, C. J. B 1988-K; OF 94-0270-A, 94-0270-B
- Nuttall, B. C. OF 94-0298
- Nuttle, J. R. OP-608
- Nuttle, W. K. OP-376, 678
- Nyambok, I. O. OP-478
- Nye, C. J. B 2139
- Nyffenegger, P. A. OP-1286
- Nyman, J. A. OF 94-0275
- Nyman, M. W. C 1129

O

- O'Brien, G. M. OF 93-0098, 94-0311, 94-0531
- O'Connel, D. R. OP-1045
- O'Connell, M. E. OP-1899
- O'Connell, S. B. OP-1343
- O'Connor, J. E. OP-178, 679, 680, 1900, 1901
- O'Connor, J. T. B 2085-A; OF 94-0405, 94-0406
- O'Donnell, J. C. YR
- O'Hara, C. G. WRI 94-4088; OP-681
- O'Leary, D. W. OP-997
- O'Leary, R. M. B 2107; OF 94-0289
- O'Neill, G. B. OF 94-0363
- O'Neill, J. M. OP-1628, 1681, 1868, 1902, 1903, 1904
- O'Neill, K. P. OP-1463
- O'Neill, Michael C 1129
- O'Nions, R. K. OP-126, 1129, 1197, 1198, 1229
- O'Reilly, A. M. OF 94-0495
- O'Sullivan, P. B. OP-1849, 1905
- O'Sullivan, R. B. OC-0144, 0145
- Oakley, W. T. WRI 95-4013; OP-901
- Oaksford, E. T. OP-132
- Oancea, V. G. OF 94-0228
- Obel, J. D. OP-478
- Oberg, K. A. OP-682
- Obermeier, S. F. OF 94-0568, 94-0589, 94-0663; OP-1451, 1859
- Obradovich, J. D. OP-61, 403, 443, 1452, 1517, 1574, 1575, 1906, 1974, 2255
- Ocean Drilling Program, Leg 141, Shipboard Scientific Party OP-56, 1391, 1762
- Ocean Drilling Program, Leg 145, Shipboard Scientific Party OP-1088
- Oda, Hi. okuni OP-652
- Odum, J. K. P 1538-L, 1538-P; OP-452, 956, 1005, 1101, 1907
- Offield, T. W. OP-718, 869, 870, 1908, 1909
- Ohe, D. J. WRI 94-4213
- Ohlen, D. O. OP-556
- Okada, Atsumasa OF 94-0568
- Okal, E. A. OP-494, 1353, 1643, 1910
- Okamura, A. T. OF 94-0288, 94-0567; OP-1291, 1328
- Okamura, Makoto OF 94-0568; OP-2107, 2284
- Okaya, D. A. C 1129; OP-1285, 1706
- Okoth, William OP-478
- Okrend, Harold OP-834
- Okubo, P. G. OF-1291, 1413, 1649, 1654, 1655, 1911, 1912
- Okuma, Shigeo OP-1913
- Okumura, Koji OF 94-0568; OP-2084
- Oldale, R. N. OF 94-0672, 95-0224; OP-683
- Oldow, J. S. OP-1394, 2300, 2301
- Oldson, B. B. OF 94-0354
- Olhoeft, G. R. OF 95-0058
- Olig, S. S. OF 94-0568
- Olimpio, J. R. OF 95-0281
- Olive, T. E. OF 94-0363
- Oliver, D. H. OP-360
- Oliver, H. W. OF 93-0586-A, 93-0586-B, 94-0670; OP-2029
- Oliver, T. A. OF 94-0456
- Oliver, W. A., Jr. OP-684, 685, 686
- Oliveros, J. P. W 2399
- Ollila, P. W. WRI 94-4185
- Olmsted, Valerie OP-1616
- Olsen, H. W. OP-687
- Olsen, L. D. OF 95-0156, 95-0329; OP-688
- Olsen, T. D. WRI 94-4236
- Olson, J. A. OF 95-0038; OP-1914, 2332, 2333
- Olsson, R. K. OP-1416
- Oltz, D. F. OF 94-0298
- Oman, C. L. C 1108; OF 93-0591, 94-0298, 94-0555; OP-1915
- Omarzai, S. K. OP-1916
- Onishi, Yasuo OP-2302
- Onstott, T. C. OP-363
- Opdyke, N. D. B 2110
- Oppenheimer, D. H. OF 94-0647; OP-492, 1054, 1745, 1773, 1774, 1917, 2120
- Orange, D. L. OP-1431, 1434, 1772, 1918, 1919
- Orem, W. H. C 1108; OP-520, 565, 689, 1078
- Oremland, R. S. C 1108; OP-690, 894
- Orndorff, R. C. B 2135; OF 94-0573, 95-0253, 95-0254
- Ornelas, R. H. OP-1282
- Orris, G. J. OF 94-0623-A, 94-0623-B, 94-0623-C
- Ort, M. H. OP-1920, 1921
- Orth, C. J. OP-1416
- Ortiz, R. F. OP-691, 963, 979, 1081, 1337, 1922
- Ortiz-Zayas, J. R. OF 95-0379
- Orue-Etxebarria, X. OP-1416
- Oscarson, S. A. OF 95-0075-B, 95-0246
- Osmundson, B. C. WRI 94-4041

Osozawa, Soichi OP-56, 1762
 Osterkamp, W. R. OP-521, 692, 693, 694, 706
 Oswald, J. A. OP-1802
 Ota, Yoko OF 94-0568
 Otto, B. R. B 2064-A-R
 Otton, J. K. B 2063; C 1108; OP-695
 Oudin, E. OP-1829
 Outerbridge, W. F. OP-1737
 Outlaw, G. S. WRI 94-4229; OF 94-0068
 Overstreet, W. C. OP-112
 Overton, Keith OF 94-0531
 Overturf, D. E. OP-1266
 Oviatt, C. G. OF 95-0001; OP-1273
 Owen, D. E. C 1108, 1122
 Owen, Susan OP-696
 Owen-Joyce, S. J. FS 94-0074; OF 95-0122
 Owens Lake Core-Study Team OF 95-0034
 Owens, J. P. OF 95-0253, 95-0254; OP-904, 2171
 Owens, T. OP-1311
 Ozuna, G. B. WRI 95-4030

P

- Paces, J. B. OP-1802
 Packard, F. A. WRI 92-4098
 Page, G. W. OP-2302
 Page, N. J. YR; OP-75
 Page, R. A. B 2139; FS 0096-95; OP-458, 697, 1107, 1682
 Page, W. D. OP-1994
 Page, W. R. B 2056; OF 93-0269, 94-0283, 95-0035
 Paillet, F. L. WRI 94-4185; OP-698, 699, 700, 917, 1923
 Pain, C. F. OP-31
 Palacas, J. G. OP-701, 1557, 1714
 Palcsak, B. B. OF 94-0482
 Pallister, J. S. B 2021-E; I-2450; OP-39
 Pallon, J. E. OP-1223, 1616
 Palmer, C. A. OP-702
 Palmer, H. C. OP-1738
 Palmer, M. R. B 2022
 Palmer, S. P. OP-26, 1859
 Pampeyan, E. H. OF 93-0684, 95-0095
 Pan, Ernian OP-703
 Pankey, J. T. OF 94-0068
 Pankhurst, R. J. C 1129
 Pankow, J. F. OP-317
 Pankratz, L. W. OF 94-0695
 Pantosti, Daniela OF 94-0568; OP-2084
 Panuska, B. C. OP-1924
 Papanastassiou, D. A. OP-843
 Papp, C. S. OF 94-0289
 Parasnis, D. S. OP-133
 Pardy, G. M. OP-413
 Parfenov, L. M. OF 94-0714; OP-1894
 Parizek, R. R. OP-2302
 Park, H. S. OP-676
 Park, J. K. OP-704
 Park, S. K. OP-705
 Parker, C. B. OF 94-0228
 Parker, D. F. OP-1925
 Parker, G. W. WRI 94-4256
 Parker, J. T. W 2429; WRI 95-4059; OP-1926
 Parker, R. A. OF 95-0253
 Parker, R. S. OP-384, 693, 706, 1927
 Parkhurst, D. L. OP-707, 2264
 Parkhurst, R. S. OF 94-0324, 94-0546
 Parks, B. O. OP-326
 Parks, W. S. WRI 94-4212; OP-1825
 Parlange, J. Y. OP-811
 Parnell, J. M. OF 95-0371
 Parolski, K. E. OF 95-0224
 Parrett, Charles WRI 94-4230, 95-4022
 Parry, W. T. OF 94-0228
 Parsons, T. E. OP-82, 708, 709, 1136, 1773, 1928
 Paskevich, V. F. OP-123
 Paskievitch, J. F. B 2139
 Passmore, M. E. C 1108
 Pasyanos, M. E. OP-203
 Patel, J. P. OP-478
 Patel, S. C. OP-1232, 1929
 Paterson, S. R. C 1129
 Patiño Douce, A. E. C 1129
 Patrick, B. E. OP-39, 1930
 Patrick, D. W. C 1129
 Patrick, W. H., Jr. OF 94-0275
 Patterson, G. G. OF 95-0186
 Patterson, R. T. OP-2086
 Patterson, S. H. OP-112
 Patton, C. J. OF 95-0141
 Patton, W. W., Jr. OF 94-0194, 94-0714; OP-710, 711, 1894
 Paulachok, G. N. WRI 94-4188
 Paulin, C. E. WRI 93-4208
 Paull, C. K. OP-1161
 Pavey, R. R. OF 95-0224
 Pavia, Robert C 1108
 Pavich, M. J. B 1589-E; OP-1757, 1758
 Pavlenko, E. K. OP-1931
 Pavlides, Louis P 1529; OP-63
 Pavlides, S. B. OF 94-0568
 Pawlewicz, M. J. OF 95-0530; OP-794, 1250, 1932
 Paylor, R. L. I-2364-A
 Payne, G. A. OF 93-0047, 94-0478
 Payne, T. E. OP-973
 Peach, C. L. OP-594
 Pearl, J. C. OP-1782
 Pearman, J. L. WRI 93-4186
 Pearson, R. C. B 2113; OP-1933
 Pecha, M. OP-1282
 Peck, J. A. OP-165
 Peckenpaugh, J. M. WRI 95-4014
 Pedreilha, A. J. OP-198
 Pellerin, L. D. OP-712, 1934
 Pelletier, Bernard OP-338
 Pelton, W. H. OP-713
 Peltz, L. A. WRI 94-4126; OF 94-0105, 95-0316
 Peltzer, Gilles OP-714
 Pembroke, J. W. C 1129
 Pen Yunbiao OP-1080
 Peña, L. R. OF 94-0568; OP-1751, 1983
 Pendergraft, D. M. OP-705
 Peng Sizhen OF 94-0568
 Peng, Genyong OP-1935
 Penland, Shea OF 94-0275; I-2150-B; OP-1936, 1937, 1938
 Penn, B. S. OP-1939
 Peper, J. D. OF 94-0629; OP-1670
 Pepin, R. O. OP-259
 Peralta, R. C. OP-316
 Percious, D. J. OP-595, 1331
 Pereira, W. E. OF 94-0376; OP-715, 1538, 1940
 Perembo, R. C. OP-338
 Perez, Hugo OF 94-0568
 Perfect, D. L. OF 94-0305
 Perfit, M. R. OP-1941, 2097, 2132
 Perkins, D. M. OF 95-0257-A, 95-0257-B, 95-0257-C; OP-2040, 2041
 Perkins, M. E. OP-716
 Perlmutter, M. A. B 2110
 Pernik, Maribeth P 1410-C
 Perry, C. A. OP-717
 Perry, S. C. OP-1561
 Perry, W. J., Jr. B 2113; OF 94-0670; I-2474-A; OP-283, 1440, 1452, 1622, 1942, 1943, 1944
 Perry-Houston, S. C. OF 94-0710
 Person, M. A. WRI 95-4012
 Personius, S. F. OP-1945
 Pessl, Fred, Jr. OP-205
 Peter, K. D. P 1402-F
 Peterman, Z. E. OP-886, 1946, 1947, 2169
 Peters, C. A. OF 95-0163
 Peters, E. K. OP-216
 Peters, N. E. OP-14, 120, 1779
 Peters, S. G. B 2081; OF 94-0712
 Peters, T. J. B 1741-H
 Petersen, E. U. OP-718
 Petersen, J. C. WRI 94-4022
 Petersen, M. D. OF 94-0568
 Peterson, C. A. OP-1487
 Peterson, C. D. OP-26
 Peterson, F. L. OP-949
 Peterson, Fred OP-145
 Peterson, J. A. OF 94-0666, 94-0670; OP-745, 1944
 Petford, Nick C 1129
 Petit, J. M. OP-57
 Petkewich, M. D. C 1108
 Petrecca, R. F. B 2022
 Petrusak, R. L. OP-933
 Pevear, D. R. OP-205
 Peverly, J. H. OP-811
 Péwé, T. L. P 1549
 Pezzopane, S. K. OF 94-0568; OP-2306
 Pfefferkorn, H. W. OP-1993
 Pflaum, R. C. OP-1604
 Phelps, G. A. OF 95-0598
 Phelps, G. G. WRI 92-4159, 93-4130; OF 94-0495; OP-1948
 Phi, T. N. OF 94-0669-A, 94-0669-B
 Philley, J. C. GQ-1212
 Phillips, E. J. OP-719
 Phillips, G. G. B 1589-E
 Phillips, J. V. WRI 94-4240
 Phillips, L. R. OP-1049
 Phillips, P. J. OP-845, 1077
 Phillips, R. L. OF 94-0588
 Phillips, S. P. WRI 94-4184, 94-4208
 Phillips, T. L. OP-182
 Phillips, W. OP-1469
 Phinney, C. S. OP-1949
 Phipps, R. L. WRI 94-4190
 Piccardi, L. OF 94-0568
 Piccoli, P. M. C 1129
 Pichavant, Michel C 1129
 Pickthorn, W. J. OP-260, 720, 1033
 Piekarska, Ewa OP-936
 Pierce, B. S. YR; OP-1373, 1950, 1951
 Pierce, H. A. OF 94-0623-A, 94-0623-B, 94-0623-C, 95-0590
 Pierce, K. L. OF 95-0059; OP-902, 1852
 Pierce, W. G. OP-936
 Pieri, D. C. OP-757
 Pierson, C. T. B 2063; C 1108; OF 94-0566; I-2433-B
 Pierson, T. C. OP-721, 1952
 Pieters, C. M. OP-58, 676, 1869, 1873
 Pietruszka, A. J. OP-1400
 Pihl, R. A. OF 95-0508
 Pike, R. J. OF 94-0662, 95-0046
 Pilati, Tullio OP-287
 Pilcher, C. B. OP-58
 Pilcher, R. C. OP-2016
 Pillmore, C. L. OF 94-0670; OP-1953
 Pin, Christian C 1129
 Pinarelli, Laura C 1129
 Piper, D. Z. P 1566; C 1108; OF 95-0236, 95-0270; OP-722, 1954, 1955
 Pirazzoli, P. A. OF 94-0568
 Pisias, N. G. OF 95-0034
 Pitkin, J. A. OF 94-0282
 Pitman, J. K. OF 94-0298; I-2555; OP-297
 Pitt, A. M. OP-255, 1298, 1356
 Plafcan, Maria WRI 95-4095
 Plafker, George OF 94-0194, 94-0568, 94-0714; OP-39, 594, 672, 697, 723, 724, 725, 726, 727, 815, 857, 1361, 1893, 1894, 1956, 2247, 2248
 Plahuta, J. T. OP-670
 Platt, L. B. MF-2278
 Plaut, J. J. OP-1845
 Pleasance, L. P. OP-676
 Plouff, Donald B 1738-E; OF 94-0712
 Plume, R. W. WRI 94-4222

- Plumlee, G. S. OF 95-0023, 95-0026, 95-0477; OP-250, 251, 334, 728, 729, 730, 731, 732, 733, 876, 1957
- Plummer, L. N. OF 94-0350; OP-170, 472, 473, 707, 734, 1259, 1614
- Poag, C. W. B 2110; OP-735, 736, 742, 1958, 1959, 1960, 1970, 1971, 1977
- Podwysocki, M. H. C 1108; OP-22, 1961
- Poeter, E. P. OP-687
- Pogacsas, George OP-951
- Pogue, T. R., Jr. OF 95-0373
- Pohn, H. A. I-2364-J
- Pojeta, John, Jr. OP-414
- Polanco, E. F. OF 95-0226
- Poli, Giampiero C 1129
- Pollack, J. B. OP-259
- Pollard, D. D. OP-1292
- Pollastro, R. M. B 1995-H,I; C 1108; OP-190, 1276
- Pollock, D. W. OF 94-0463, 94-0464; OP-1515
- Polloni, C. F. OF 95-0224; I-2429; OP-1383, 1962
- Polyak, L. V. OP-1566
- Pomes, M. L. OF 94-0396; OP-1963
- Ponce, D. A. OF 93-0397-A, 93-0397-B, 93-0540-A, 93-0540-B, 93-0586-A, 93-0586-B; OP-1964
- Ponomarev, A. V. OP-1721
- Ponti, D. J. OF 95-0062; OP-737, 1984
- Pontolillo, James OF 94-0631
- Pool, D. R. OP-1965
- Poole, F. G. OP-794
- Poole, J. M. WRI 94-4099
- Poore, R. Z. OF 94-0281, 94-0588; OP-218, 1566
- Pope, D. A. FS 0114-95; OF 94-0375; OP-750, 751
- Pope, D. C. OP-1966, 1967, 1968
- Pope, L. M. WRI 94-4077; OP-1085
- Popenoe, Peter OP-738, 739, 742, 1506, 1969, 1971
- Popov, L. Y. OP-740
- Poppe, L. J. OF 94-0620, 95-0044, 95-0556; I-1987-D, 2456; OP-741, 742, 1970, 1971, 1972, 2218, 2324
- Porat, Naomi OF 94-0568
- Porcella, R. L. C 1121
- Porcelli, D. OP-1973
- Poreda, R. J. OP-50
- Porter, J. E. OF 94-0364
- Porter, K. W. I-2474-A; OP-743, 1974
- Porter, S. D. WRI 94-4134, 94-4227
- Post, Austin OP-1000, 1833, 1834, 2281
- Postawko, S. E. OP-259
- Pote, J. W. OP-758
- Potter, C. J. P 1538-Q; B 1988-K; OF 94-0298; OP-744, 1440, 1592, 1820, 1975, 1976, 1979, 1980, 1981
- Potter, K. W. OP-177
- Potter, P. W. OF 94-0363
- Poulton, T. P. OP-745
- Powars, D. S. OF 94-0558; OP-1959, 1960, 1977
- Powell, C. L., II OF 95-0489; OP-2061
- Powell, R. D. OP-1218, 1263, 2094
- Power, J. A. B 2139; OP-458, 1598, 1978
- Powers, M. H. OF 95-0058; OP-1562
- Powers, P. S. OF 94-0697-A, 94-0697-B, 95-0508
- Powers, R. B. OP-746
- Powers, T. J. OF 95-0062; OP-2084
- Poynter, D. T. OF 93-0374
- Poznyakevich, Z. L. OP-948
- Pratt, D. A. OP-2262
- Pratt, T. L. OP-405, 1005, 1907, 1979, 1980, 1981, 2158, 2286
- Pratt, W. P. B 1989-G; C 1124
- Preece, S. J. OP-772
- Premo, W. R. OP-1982, 2183
- Premoli Silva, Isabella OP-1162
- Prensky, S. E. OF 94-0652-A, 94-0652-B, 94-0652-C, 95-0064-A, 95-0064-B, 95-0064-C; OP-747
- Prentice, C. S. OF 94-0568, 95-0062; OP-1751, 1983, 1984, 2070
- Prentice, M. L. OF 94-0588
- Prescott, W. H. OP-1007, 1641
- Presgrave, B. W. OP-1749
- Presnall, D. C. OP-978
- Prestegard, K. L. OP-1899
- Preston, S. D. OP-1985
- Prestvik, Tore OP-41
- Pribnow, D. F. OP-748, 1986
- Price, C. V. FS 0114-95
- Price, J. D. C 1129
- Price, L. C. C 1108; OP-207, 749
- Pride, C. J. OP-1987
- Priest, G. R. OP-571
- Priest, R. E. OP-676
- Priest, S. S. I-2399; OP-814
- Primm, A. T. OF 94-0333
- Pringle, M. S. OP-431, 1542
- Pringle, P. T. P 1547; OF 95-0498; OP-2079
- Prior, D. J. OP-56, 1762
- Prisloe, M. P. OP-1962
- PRISM Project Members OF 94-0281
- Proch, Thomas WRI 94-4056
- Prodehl, Claus OP-478
- Provencher, P. L. OF 94-0384
- Prowell, D. C. OF 94-0673; OP-1359, 1988
- Prudic, D. E. OP-1989, 1990, 2209
- Prugh, B. J., Jr. C 1108
- Pruitt, D. J. OF 94-0504
- Prych, E. A. WRI 94-4047; OF 94-0514
- Pucci, A. A., Jr. OP-750, 751
- Puchner, C. C. OP-670
- Puffer, J. H. P 1565-A
- Puffett, W. P. OF 94-0417; GQ-1722
- Pugh, A. L. OP-1041
- Pulpan, Hans OP-697
- Punongbayan, R. S. OP-752, 1048, 1886
- Pupin, Jean-Pierre C 1129

Q

- Qian, H. X. OP-1561
- Qian, Rachel OF 94-0684
- Quarrier, Sidney I-2456
- Queen, D. G. OF 94-0558; OP-621, 622, 623
- Quezada Mufeton, J. M. OP-1755
- Quick, J. E. OP-753, 754, 755, 843, 865, 866, 1991
- Quilty, E. G. OF 95-0042; OP-2039
- Quinlan, G. M. OP-779
- Quinn, H. M. OF 95-0042
- Quinn, J. C. OF 95-0075-F
- Quinn, T. M. OP-338, 2254
- Quintana, L. R. OP-1416
- Quinterno, P. J. B 2022; OF 95-0034; OP-1992
- Quittmeyer, R. C. OP-2306

R

- Raabe, E. A. OF 95-0216
- Rabold, J. M. OP-1993
- Rachlin, Jack OP-595
- Radell, M. J. WRI 94-4061, 94-4129; OP-1337
- Rademacher, Horst OP-392
- Rader, E. K. B 2135
- Rader, J. C. OF 95-0188, 95-0355
- Raese, J. W. OF 94-0351
- Raffi, Isabella OP-61
- Ragozin, Nikita OP-247
- Raines, G. L. OF 94-0712
- Raisbeck, G. M. OP-106
- Ramelli, A. R. OF 94-0568; OP-1994
- Ramo, O. T. C 1129
- Ramos-Ginés, Orlando WRI 91-4183
- Ramsey, K. E. OP-1937
- Rankin, D. R. WRI 94-4178; OF 94-0349, 94-0356, 94-0377
- Rankin, D. W. OF 94-0410, 94-0682; OP-3, 63, 1517, 1995
- Ranville, J. F. OP-1466
- Rao Bing C 1129
- Rao, P. S. OP-756
- Rapela, C. W. C 1129
- Rapp, D. H. OF 94-0363
- Rapp, J. B. B 2022; OP-513, 1538
- Rapp, T. R. OP-1996
- Rasmussen, P. P. WRI 94-4166
- Ratajeski, Kent C 1129
- Ratcliffe, N. M. B 2060; OF 94-0225-A, 94-0225-B, 94-0654-A, 94-0654-B, 95-0203-A, 95-0203-B; OP-782, 1253, 1997, 2058, 2059
- Rathbun, R. E. OF 94-0036, 94-0336
- Ratté, J. C. B 2119; OF 94-0670, 95-0263
- Rautman, C. A. OP-1567, 1998
- Ray, P. K. C 1108
- Raymo, M. E. OP-61, 233
- Raymond, L. H. WRI 93-4233
- Raymond, W. H. OF 95-0087
- Rea, A. H. OF 94-0388; OP-143, 144
- Rea, B. A. OP-2249
- Reagor, B. G. OF 95-0092
- Realmutto, V. J. OP-757
- Reasenber, P. A. OF 94-0221, 95-0484; OP-371, 1999
- Reavy, R. J. C 1129
- Rebich, R. A. OP-758
- Rechens, Ze'ev OP-759
- Records, A. W. OF 94-0531
- Rector, Jamie OP-2288
- Reddy, M. M. OP-760, 832, 1519, 2000
- Redkin, A. F. OP-2001
- Reed, B. C. OP-896
- Reed, D. J. OF 94-0275
- Reed, J. C., Jr. OF 94-0194; OP-2002, 2003
- Reed, K. M. OP-78, 1132
- Reed, M. F. OF 94-0374; OP-2004
- Reed, M. J. C 1129
- Reed, R. M. C 1129
- Rees, T. F. WRI 94-4127
- Reese, R. S. WRI 94-4010
- Regeon, P. OP-676
- Reheis, M. C. I-2464; OP-761, 2005, 2006
- Reick, H. J. OF 95-0086
- Reid, I. D. OP-445
- Reid, J. A. OP-1656
- Reid, M. E. OF 95-0218; OP-1919, 2007
- Reid, R. P. OP-338
- Reidel, J. L. OP-2008
- Reifenstuhl, R. R. OP-878
- Reilly, T. E. WRI 92-4171; OF 94-0384; OP-762
- Reimer, G. M. C 1108; OF 94-0295; OP-1257, 1678
- Reimnitz, Erk OP-43, 1086
- Reiner, S. R. OF 95-0160, 95-0284
- Reiners, P. W. OP-1522
- Reinhardt, Juergen OF 94-0558; I-2174
- Reinhart, M. A. OF 94-0568; OP-26
- Reiss, C. A. B 2022; OF 94-0711
- Reiss, T. E. OF 94-0594
- Reisse, R. A. OP-676
- Ren, Rosa OP-2288
- René, R. M. P 1538-O
- Renken, R. A. OF 93-0499
- Renne, P. R. OP-50, 2215
- Rennie, T. W. OP-1994

- Renno, A. D. C 1129
 Repenning, C. A. B 2105
 Repetski, J. E. OF 95-0557; I-2536; OP-370, 1021, 1470
 Resek, E. A. OP-675
 Resnick, J. H. OP-676
 Retallack, G. J. B 2110
 Retelle, M. J. OP-990
 Reutter, D. C. OP-2009
 Revenaugh, Justin OP-763, 868
 Revesz, K. M. OP-473
 Rewis, D. L. OP-2010
 Rexroad, C. B. OP-369, 1002
 Reynolds, J. H. OP-2011
 Reynolds, K. A. OF 94-0275
 Reynolds, R. L. OF 94-0298, 95-0034; OP-163, 292, 1635, 1716, 2012, 2045
 Reynolds, S. J. OP-887
 Rhea, B. S. P 1538-M; OF 94-0298, 95-0241, 95-0574; I-2521; OP-1333, 1907, 2013, 2014
 Rheau, S. J. OF 95-0163
 Rhede, D. C 1129
 Rhodes, J. M. OP-307, 1400
 Rhodes, L. C. OF 94-0486
 Riaroh, Don OP-478
 Rice, C. A. OP-2015
 Rice, C. L. B 2135; OF 94-0298; OP-69, 510, 764, 765, 766, 767, 768, 874
 Rice, D. D. B 2000-H; C 1108; OF 94-0295, 95-0075-A; I-2474-A; OP-297, 769, 770, 854, 2016
 Rice, D. E. OP-910, 2177, 2178, 2236
 Rice, J. R. OF 94-0228
 Rice, K. C. C 1108; FS 0136-95; OP-771
 Rice, Keith OP-2288
 Rice, W. A. OF 95-0179
 Richard, S. M. OP-887
 Richards, D. L. OF 94-0582
 Richards, J. M. OF 95-0109; OP-2303
 Richards, P. G. OP-961
 Richards, R. W. OP-2017
 Richardson, D. L. W 2401; WRI 92-4111
 Richardson, J. W., Jr. OP-1680
 Richardson, M. I. B 2110
 Richardson, R. M. OP-2334
 Richey, S. F. WRI 94-4061
 Richmond, B. R. OP-1201, 2035
 Richter, D. H. B 2072, 2119; OF 95-0494; I-2399; OP-628, 772
 Riciputi, L. R. OP-773
 Rickert, D. A. OF 94-0539; OP-2018
 Rickman, R. L. OF 95-0338
 Riddle, G. O. OP-148
 Ridgley, J. L. B 2094-D; C 1108; OF 94-0298; OP-2019, 2020
 Ridley, W. L. OP-1941, 2132, 2266
 Rieck, H. J. OF 94-0593, 94-0651, 95-0033, 95-0034
 Riedel, W. R. OP-338
 Riehle, J. R. B 2139; OP-774, 2021
 Ries, K. G., III W 2418; WRI 94-4155
 Rigali, M. J. OP-1403
 Rigby, J. K., Jr. OP-2022
 Riggs, A. C. OP-775
 Riggs, E. M. OP-1561
 Riggs, H. C. WRI 94-4002
 Riggs, N. R. OP-1322, 2023
 Rigsby, C. A. OP-652, 776
 Rinallo, M. R. OF 95-0285
 Rinella, F. A. WRI 93-4156; OF 95-0373
 Rinella, J. F. OF 94-0308
 Ringrose, S. M. I-1420 (NM-15)
 Risch, J. S. I-2429
 Risch, M. R. OP-777, 2024
 Risek, R. M. OP-2025
 Risley, J. C. WRI 93-4181, 94-4084, 94-4100
 Risoli, D. A. OF 94-0277-A, 94-0277-B
 Risser, D. W. WRI 93-4113, 95-4033; OF 92-0635; OP-354
 Risty, R. R. OP-416
 Ritson, P. I. OP-2026
 Ritter, J. R. WRI 94-4056; OP-1357
 Rittmaster, R. L. WRI 93-4126, 94-4003
 Ritz, G. F. WRI 95-4095
 Rivalenti, Giorgio OP-865
 Robb, A. J., III OP-2027
 Robb, R. L. OP-1561
 Robbins, E. I. C 1108; I-2451; OP-925, 2028
 Robbins, J. C. OF 94-0454, 94-0511
 Robbins, S. L. OF 94-0670; OP-1250, 2029
 Robert, Francois OF 94-0228
 Roberts, A. C. OP-778
 Roberts, A. P. OF 94-0593, 95-0001, 95-0034; OP-659, 1273
 Roberts, B. OP-779, 1073
 Roberts, C. W. OP-42, 444, 1577
 Roberts, D. OP-478
 Roberts, D. J. OF 95-0120
 Roberts, H. H. OF 94-0275; OP-1936, 1937
 Roberts, L. N. P 1561; C 1108; OF 94-0670; OP-1646, 2030
 Roberts, M. P. C 1129
 Roberts, S. B. B 2107; C 1108; C-0146; OP-278, 279, 280, 283, 780
 Robertson, C. E. OF 94-0430
 Robertson, D. M. OF 95-0163
 Robertson, J. D. OP-1548
 Robertson, J. F. OF 94-0486
 Robertson, M. C. OP-1285, 1336
 Robie, L. S. OF 95-0160, 95-0284
 Robie, R. A. B 2131; OF 94-0575, 94-0671, 94-0688; OP-781
 Robinson, Anthony OF 94-0473
 Robinson, J. L. WRI 93-4171
 Robinson, J. W. OP-2031
 Robinson, K. W. B 2063; FS 94-0027
 Robinson, M. R. OP-1058
 Robinson, M. S. OP-201, 605, 670, 671, 676, 852, 878, 1487, 1781, 1783, 1784
 Robinson, Peter OP-782
 Robinson, R. A. OF 95-0026
 Robinson, S. M. OF 94-0113
 Robison, B. H. OP-1750
 Rocchia, Robert OP-1416
 Röchford, E. L. OP-1762
 Röckel, T. OP-651
 Rockwell, T. K. OF 94-0568; OP-761
 Rodbell, D. T. OP-2032
 Roddick, J. A. C 1129
 Roddy, D. J. OP-16, 851, 935, 1059, 2033, 2034
 Roden, E. E. OP-719
 Rodgers, D. W. B 2064-A-R
 Rodriguez, B. D. OF 94-0228; OP-240
 Rodriguez, E. P. OP-1282
 Rodriguez, J. I. OP-338
 Rodriguez, R. W. OP-2035, 2080
 Rodríguez-Martínez, Jesús OF 93-0465, 93-0466
 Roe, C. H. OF 94-0272
 Roebber, M. M., Jr. OP-730
 Roedder, E. W. OP-2036, 2037
 Roeloffs, E. A. OF 95-0042; OP-783, 957, 2038, 2039
 Roeske, S. M. OP-784, 1447
 Rogers, A. M. OP-2040, 2041
 Rogers, B. W. OP-785
 Rogers, J. A. OF 95-0555; OP-786
 Rogers, J. D. OP-1619
 Rogers, P. OP-1994
 Rogers, R. K. OP-670
 Rogers, W. P. OF 95-0508
 Rohrbacher, T. J. C 1108
 Rojstaczer, S. A. OF 94-0228; OP-787, 788, 789, 2042, 2043
 Rollins, C. J. OP-676
 Rollins, H. B. OP-2025
 Roman-Mas, A. J. OF 95-0156; OP-688, 1006, 2044
 Romanowicz, Barbara OP-1641, 1883
 Ron, Hagai OF 94-0568
 Root, D. H. OF 94-0022-A, 94-0022-B, 94-0022-C, 94-0022-D, 94-0022-E, 94-0022-F, 94-0022-G, 94-0022-H, 94-0022-I, 94-0022-J, 95-0075-C; OP-593
 Roperch, Pierrick OP-338
 Rose, D. L. OF 94-0708-W
 Rose, K. D. OP-1154, 1155, 1527
 Rose, M. F. WRI 94-4239
 Rose, M. M. OP-2101
 Rose, S. E. OP-2161
 Rose, T. P. OP-790
 Rose, W. I. B 2139; OP-952
 Rose, W. J. OP-992
 Rosen, M. E. OP-317
 Rosenbauer, R. J. B 2022; OP-513, 1026
 Rosenbaum, J. G. B 2056; OF 95-0034; OP-1635, 1716, 2012, 2045, 2143
 Rosenberry, D. O. OF 94-0546
 Rosenblum, Sam B 2140
 Rosenkrans, D. S. B 2072, 2107
 Ross, Alwyn OP-254, 2046
 Ross, C. A. B 2110
 Ross, C. R., II OP-2051
 Ross, D. C. I-2295
 Ross, G. M. OP-308, 1404
 Ross, Malcolm OP-791, 915, 2047
 Ross, S. L. B 2022; OP-1656
 Rossi de Toselli, J. N. C 1129
 Rossi, Philippe C 1129
 Rostad, C. E. WRI 94-4191; OF 94-0376; OP-2048
 Rota, J. C. OP-450
 Rotella, F. J. OP-1680
 Roth, D. A. OF 95-0149; OP-2185
 Roth, E. G. OP-274
 Rottura, Alessandro C 1129
 Roure, François OP-1250
 Roush, J. J. OP-1507
 Roushey, B. H. OF 93-0698, 94-0270-A, 94-0270-B, 94-0680-A, 94-0680-B
 Rousseau, J. P. OF 94-0531; OP-2049
 Rowan, E. L. OF 94-0298; OP-729, 731, 792, 2050
 Rowan, L. C. I-2473; OP-793, 794
 Rowe, C. A. OP-1459
 Rowe, G. L. WRI 94-4131; OP-810
 Rowe, M. M. OP-1147
 Rowland, C. J. OF 93-0417
 Rowland-Lesitsky, C. J. OF 94-0381
 Rowley, P. D. B 2056; OP-189, 1283
 Roybal, R. G. WRI 93-4113
 Rubie, D. C. OP-2051
 Rubin, A. M. OF 94-0228; OP-1294, 1413
 Rubin, C. M. OF 94-0568; OP-39, 670
 Rubin, D. M. OF 94-0594, 94-0597; OP-795, 829, 1607, 2072
 Rubin, Jacob OP-796
 Rubin, Meyer OF 94-0568; OP-59, 234
 Ruddy, B. C. WRI 95-4031
 Rudnicki, J. W. OF 94-0228
 Ruegg, J. C. OP-2152
 Ruhl, J. F. WRI 94-4062, 94-4146, 94-4199; OF 95-0116
 Ruhl, P. M. WRI 94-4094
 Rundie, J. B. OP-522
 Runkle, D. L. OF 94-0387
 Rupert, M. G. WRI 94-4135
 Rupp, J. A. OF 94-0298
 Ruppert, L. F. OP-185, 186, 1548, 2052, 2053
 Ruppert, S. D. OP-2325
 Rusanov, M. S. OP-651, 958, 2228

Rushmer, Tracy C 1129
 Russ, D. P. OP-1736
 Russell, J. F. B 2129; OP-797
 Russell, T. F. OP-388
 Russo, Selma OP-27, 199
 Rustan, P. OP-676
 Rutherford, D. W. OP-138
 Rutherford, M. J. C 1129
 Rutledge, A. T. OP-798
 Rutledge, E. M. OP-2319
 Ryan, C. J. CP-0043
 Ryan, H. F. OP-2054
 Ryan, M. P. OP-2055
 Ryberg, Trond OP-2056
 Rybicki, R. A. I-2451
 Ryder, Graham OP-1755
 Ryder, J. L. W 2352-B; OF 94-0579, 95-0229, 95-0528, 95-0578, 95-0644
 Ryder, R. T. C 1108; OF 95-0572; OP-2057, 2058, 2059
 Rye, R. O. OF 95-0221; OP-22, 202, 1096, 1793, 2060
 Ryer, T. A. OP-184
 Ryka, Wacław OP-1827
 Rymer, M. J. OF 95-0062; OP-1225, 2061
 Rytuba, J. J. OF 95-0221; OP-22, 663, 799, 800, 801, 802, 803, 804, 805
 Ryu, In-Chang OP-1176, 1177

S

Saad, D. A. OF 95-0163
 Saavedra, Julio C 1129
 Sabin, A. L. OF 95-0034
 Sachnoff, Lisa OP-1616
 Sacks, L. A. OP-806
 Sacks, P. E. OP-1399, 1536, 2062
 Sadler, W. J. OF 95-0121
 Sado, E. V. I-1420 (NM-15)
 Sagan, Carl OP-58
 Sageaman, B. B. OF 95-0209; OP-1070, 2063
 Sagers, M. J. OP-807
 Sako, M. K. OF 91-0320, 94-0288, 94-0567, 94-0705, 95-0099; OP-696
 Salender, H. A. OP-900
 Salisbury, M. H. OP-1804
 Sallenger, A. H., Jr. I-2150-B
 Salnikova, E. B. C 1129
 Saltus, R. W. OF 94-0254; GP-1012; OP-187, 1103
 Salvati, L. A. OP-274
 Sammis, C. G. OP-835
 Sampson, J. A. OF 94-0296
 Samson, S. D. C 1129
 San Juan, C. F. OP-2064
 Sanchez, J. D. OF 94-0269
 Sánchez, R. M. OP-579
 Sandberg, C. A. OP-1558
 Sanders, M. B. OP-2028
 Sanders, Rex OF 94-0594, 94-0597
 Sando, S. K. OP-808
 Sando, W. J. B 2112; OP-809

Sandstrom, M. W. WRI 95-4105; OF 95-0181
 SanFilipo, J. R. C 1108; OF 93-0591, 94-0595, 94-0596-A, 94-0596-B, 94-0596-C, 94-0596-D
 Sanford, R. F. B 2000-J, 2064-A-R
 Sanford, W. E. OP-810, 811, 812, 1017, 1259
 Sangster, D. F. OP-908
 Sanocki, C. A. OF 93-0046, 94-0488, 95-0162, 95-0333
 Santos, H. X. OF 94-0345, 94-0346, 95-0182, 95-0183
 Sanzalone, R. F. W 2352-B
 Sargent, B. P. WRI 92-4122
 Sargent, M. L. OF 94-0298
 Sarna-Wojcicki, A. M. OF 94-0593, 94-0651, 95-0033, 95-0034; OP-397, 573, 659, 1505, 1635, 2045, 2061, 2250
 Sarnecki, J. C. OP-267
 Saroglu, Fuat OF 94-0568
 Sass, J. H. OP-514, 515, 748, 813, 814, 1094, 1986, 2065
 Satake, Kenji OF 94-0568
 Sato, Hiroshi OF 94-0568
 Sato, Motoaki OP-2028
 Sauber, J. M. OP-815
 Sauer, P. E. OP-342
 Saul, L. R. OP-1036
 Savage, J. C. OP-816, 817, 818, 819, 820, 821, 822, 823, 824, 825
 Savage, M. K. OF 94-0647; OP-12
 Savage, N. M. OP-826
 Savage, W. Z. OP-19, 325, 703
 Savard, C. S. OF 94-0317
 Savoca, M. E. WRI 93-4230
 Sawatzky, D. L. OF 94-0712
 Sawlan, M. G. B 1738-E, 1741-H; OP-827
 Sawyer, D. A. OF 95-0567; OP-353, 546, 773, 2066
 Sawyer, Dale OP-56
 Sawyer, E. W. C 1129
 Sawyer, T. L. OF 94-0568; I-2464; OP-1994
 Scaillet, Bruno C 1129
 Scala, J. A. OP-231
 Scanlon, K. M. OP-1304
 Scarpa, Roberto OP-1239
 Schaap, B. D. WRI 94-4130; OP-2067
 Schaber, G. G. OF 95-0561; OP-1644, 1846, 2068, 2069
 Schaefer, H. T. OP-2028
 Schaefer, D. H. OF 95-0042
 Schalk, C. W. WRI 94-4243
 Schalk, G. K. OF 93-0495
 Scharlach, R. A. OF 93-0466
 Schatzel, S. J. C 1108
 Scheckel, N. J. OP-1561
 Scheirer, D. S. OP-1339
 Schemel, L. E. OF 95-0291, 95-0326, 95-0327
 Schenk, C. J. C 1108; OP-828
 Schenk, P. M. OP-1845
 Scherkenbach, D. A. OP-670
 Schertz, T. L. WRI 94-4213
 Schiff, S. L. OP-170
 Schiffer, D. M. FS 0151-95; WRI 93-4103; OF 94-0495
 Schiffman, Peter OP-1033
 Schill, A. B. OP-2070
 Schiller, K. H. OF 94-0593, 94-0651, 95-0033, 95-0034
 Schiller, R. J. OP-1179
 Schindler, J. S. OF 94-0558; I-2174; OP-2071
 Schlanger, S. O. OP-96
 Schlee, J. S. B 2079; I-1987-D, 2429; OP-1186, 1188
 Schlosser, Peter OP-937, 2204
 Schlottmann, J. L. OP-1167
 Schluter, M. B. OP-1772
 Schmidt, A. R. FS 94-0018
 Schmidt, C. J. OP-480
 Schmidt, D. L. B 2056; OF 94-0625
 Schmidt, J. C. OF 94-0594; OP-829, 2072
 Schmidt, J. M. OP-670, 1895
 Schmidt, K. L. C 1129
 Schmidt, R. G. OP-1465
 Schmoker, J. W. C 1108; OF 94-0670, 95-0075-B, 95-0075-E, 95-0075-F; OP-828, 830
 Schmoll, H. R. OP-1098
 Schmuck, E. A. OP-1679, 1962, 2073, 2222
 Schneider, Christopher OP-921, 2188
 Schneider, D. A. OF 94-0588
 Schneider, D. J. B 2139
 Schneider, E. E. OP-1585
 Schneidermann, Nahum C 1108
 Schnetzler, C. C. B 2139
 Schoell, Martin OP-749
 Schoellhamer, D. H. WRI 94-4081; OF 94-0543
 Schoenberg, M. E. WRI 94-4163
 Scholl, D. W. OF 94-0714; OP-56, 953, 1261, 1894, 2074, 2075
 Scholl, M. A. WRI 95-4001; OF 94-0586; OP-2076, 2077
 Scholz, C. A. OP-1559
 Scholz, C. H. OF 94-0228
 Schoonen, M. A. OP-1897
 Schoonmaker, J. W., Jr. OP-505, 1660, 1661
 Schopp, R. D. OF 93-0662
 Schottler, S. P. OP-831
 Schrader, T. P. OF 94-0522
 Schreffler, C. L. WRI 94-4109; OF 93-0417, 94-0381
 Schreiber, J. D. OP-758
 Schroder, L. J. WRI 93-4208
 Schroeder, D. A. GQ-1763, 1764
 Schroeder, M. P. OF 94-0708-W
 Schroeder, R. A. WRI 93-4003, 93-4140
 Schruben, P. G. B 2097; OF 95-0493
 Schuennmeyer, J. H. OP-220
 Schuler, C. A. WRI 93-4156
 Schulmeyer, P. M. WRI 94-4211; OF 94-0711-W

Schultz, A. P. OP-1091
 Schultz, D. J. OP-856
 Schultz, R. A. OP-559
 Schumacher, G. A. OP-2057
 Schumaker, R. J. OF 94-0315
 Schumann, R. R. C 1108; OP-2078
 Schumm, S. A. P 1538-R
 Schuraytz, B. C. OP-1755
 Schuster, L. C. OP-1497
 Schuster, P. F. OP-832
 Schuster, R. L. OP-573, 833, 2079
 Schwab, W. C. OP-2035, 2080, 2081
 Schwalb, Antje OP-2082
 Schwartz, D. P. OF 94-0568; OP-1503, 1734, 2083, 2084
 Schwartzman, D. W. OP-834
 Schwarz, G. E. OF 94-0399
 Schweickert, R. A. OP-319
 Schweig, E. S. P 1538-J; OF 94-0568; MF-2279; OP-405, 946, 956, 1707, 2085, 2216, 2217
 Schweitzer, Johannes OP-392
 Scorca, M. P. WRI 92-4171
 Scotese, C. R. B 2110
 Scott, A. C. OP-1002
 Scott, C. J. B 2139
 Scott, D. B. OP-2086
 Scott, D. H. I-2397; OP-916
 Scott, D. R. OP-835
 Scott, G. R. B 2105; OF 95-0266; I-2469
 Scott, J. S. OP-1336
 Scott, K. M. P 1547; OF 95-0498; HA-0729
 Scott, R. B. B 2056; OF 94-0175, 94-0283, 95-0094; OP-836
 Scott, T. M. OF 95-0003; OP-2087
 Scott, W. E. OF 95-0219; OP-2088
 Scotti, J. V. OP-987
 Screation, E. J. OP-1919
 Scribner, E. A. OF 94-0396; OP-2089
 Scrivner, C. W. OP-1285
 Scudder, B. C. OF 95-0163
 Seal, R. R., II OP-1114, 2028, 2090
 Seaman, S. J. C 1129
 Seanor, R. C. WRI 94-4228
 Searcy, Cheryl OP-2318
 Sebrier, Michel OF 94-0568
 Sechrist, D. R. OP-837
 Seekins, B. A. I-2429
 Seekins, L. C. OP-2091
 Seeland, D. A. OP-2092, 2093
 Segall, Paul OP-696, 1387
 Segerstrom, Kenneth OP-838
 Séguin, M. K. OP-1804
 Seidl, Dieter OP-1071, 1498, 1912
 Seifert, F. A. OP-2051
 Seigley, L. S. OP-607, 839
 Seik, G. S. OP-1423
 Seiler, R. L. OF 94-0031
 Seitz, G. G. OF 94-0568

- Sekanina, Zdenek OP-987
 Seke, Erol OP-123
 Self, Stephen OP-840
 Self-Trail, J. M. P 1554; OF 95-0478
 Selner, G. I. OF 92-0372-A, 92-0372-B
 Sembera, E. D. OP-430, 1541
 Semken, S. C. C 1108
 Sen Gupta, B. K. OP-1150
 Senior, L. A. WRI 92-4088, 93-4109
 Senterfit, Marilla OF 95-0239
 Senterfit, R. M. OF 95-0239; OP-426, 427, 841
 Seramur, K. C. OP-2094
 Sergeieva, L. V. OP-1258
 Serva, Leonello OF 94-0568
 Setterholm, D. R. I-2474-A
 Severson, R. C. OF 94-0580, 94-0648; OP-34, 1082
 Sewell, R. J. C 1129
 Seyfried, W. E., Jr. OP-1114
 Seyler, Beverly OF 94-0298
 Shackleton, N. J. OP-61
 Shade, P. J. WRI 93-4180
 Shafiqullah, Muhammad OP-887
 Shah, A. A. OF 94-0274, 94-0557, 94-0595, 94-0596-A, 94-0596-B, 94-0596-C, 94-0596-D
 Shakofsky, S. M. OP-2095, 2096
 Shakoor, Tariq B 2096
 Shalev, Eylon OF 94-0228
 Shank, T. M. OP-2097
 Shankland, T. J. OP-594
 Shanks, W. C., III B 2022; OP-842, 870, 1114, 1339, 2097, 2098
 Shanks, W. G. OF 94-0334
 Shanley, J. A. OP-1632
 Shanley, J. B. WRI 94-4003, 94-4084; OF 94-0475; OP-1194, 1631
 Shanley, K. W. OP-2099
 Shannon, W. M. C 1129
 Shapiro, A. M. FS 0138-95; OP-937, 1549, 2204
 Sharkov, E. V. OP-843
 Sharma, M. M. OP-843
 Sharp, R. V. OF 95-0062; OP-2267
 Sharp, T. G. OP-2051
 Sharp, W. D. OP-2215
 Sharpe, S. E. OP-2100, 2101
 Sharpton, V. L. OP-1755
 Shasby, M. B. OP-1120
 Shaw, D. M. OP-2102
 Shaw, H. R. OP-2103
 Shaw, S. C. OP-2104
 Shaw, S. E. C 1129; OP-432
 Shawe, D. R. GQ-1756; MF-2295; OP-844
 Shedlock, K. M. P 1538-I, 1538-J, 1538-P; OP-705, 956, 1005, 1907
 Shedlock, R. J. OF 92-0139; OP-845
 Sheehan, A. F. OP-12
 Sheehan, T. P. OF 95-0034
 Sheets, R. A. WRI 94-4231, 94-4243
 Shelton, K. L. OP-1871, 2105
 Shelton, L. R. OF 94-0455, 94-0458
 Shen, A. H. OP-1237, 1478, 2106, 2317
 Shepard, T. B. FS 0139-95
 Sheppard, R. A. B 2108
 Sheridan, R. E. OP-413
 Sherlock, M. G. OP-846
 Sherman, G. E. OF 94-0272
 Sherrod, D. R. OF 95-0219; I-2455; OP-1128, 1254, 2088
 Sherwood, C. R. OP-847
 Sherwood, J. M. W 2432
 Sherwood, S. I. OP-832
 Shew, N. B. OP-1008
 Shideler, G. L. OF 95-0224; OP-848
 Shields, R. R. OF 94-0363
 Shigley, J. E. OP-912
 Shih, H. H. OF 94-0363
 Shiller, A. M. OF 93-0628
 Shillo, N. A. OP-1080
 Shimazaki, Kunihiko OF 94-0568; OP-2107, 2284
 Shimura, Toshiaki C 1129
 Shinn, E. A. OP-1455, 1719, 1732, 1733, 1865, 1866, 1973, 2108, 2109, 2206
 Shinohara, Hiroshi OP-849
 Shirey, S. B. C 1129; OP-516
 Shmakin, B. M. OP-2110
 Shock, E. L. OP-1634
 Shockley, J. C. WRI 94-4166
 Shoemaker, C. S. YR; OP-853, 987, 2112
 Shoemaker, E. M. OP-16, 676, 850, 851, 852, 853, 987, 1059, 1573, 1785, 2034, 2111, 2112, 2154
 Short, S. K. OP-1049
 Shortle, W. C. OP-529
 Showers, W. J. OP-689
 Shroba, R. R. B 2056; OF 94-0696, 95-0052; OP-355, 761, 1219, 1882, 2113
 Shropshire, R. G. OP-1259
 Shultz, R. A. WRI 93-4073
 Shurr, G. W. I-2474-A; OP-854
 Shuster, R. D. OP-1863
 Sial, A. N. C 1129
 Sibray, S. S. WRI 94-4057
 Sibson, R. H. OF 94-0228; OP-402
 Sidder, G. B. OP-855
 Siddiqi, Gunter OF 94-0228
 Sieben, E. T. B 2111
 Siebert, Lee OP-952
 Siedl, Dieter OP-392
 Sieh, K. E. OF 94-0568
 Siems, D. F. OF 95-0486; I-2233; OP-1011
 Siesser, W. G. OP-1502
 Sigleo, A. C. OP-856
 Signell, R. P. OF 94-0649; OP-2114
 Signor, D. S. OP-1801
 Sikora, R. F. OF 93-0540-A, 93-0540-B, 93-0586-A, 93-0586-B
 Sikora, W. B. OF 94-0275
 Silantiev, Sergei OP-1931
 Silberling, N. J. OP-857, 2115
 Silberman, M. L. OP-415
 Sill, W. R. OP-713
 Silva, S. R. OF 94-0194; OP-1632
 Silver, E. A. OP-1035
 Silver, L. T. OP-1256
 Silverman, S. A. OP-654, 1864
 Simard, C. M. I-2364-A
 Simiyu, S. M. OP-478
 Simkin, Tom SM
 Simmons, C. L. OP-1248
 Simmons, E. C. OP-1939
 Simmons, K. R. OP-1733, 1866, 2175
 Simmons, R. H. WRI 94-4188
 Simon, Andrew WRI 94-4229; OP-858, 859, 2116
 Simoneit, B. R. OP-652
 Simonov, O. N. OP-194
 Simonson, B. M. OP-1672, 2117, 2118, 2140
 Simpson, G. D. OF 94-0568
 Simpson, R. A. OP-676
 Simpson, R. W. OF 95-0238; OP-371, 1475, 1914, 1999, 2119, 2120, 2153
 Sims, J. D. OF 94-0568; OP-277, 860
 Sims, K. W. OP-861
 Sims, P. K. B 1904-T; OP-855, 862, 1288, 2121
 Sincioco, Jimmy OP-752
 Singer, D. A. OP-530, 863, 864
 Singer, R. B. OP-559, 2134
 Singh, Jagmohan C 1129
 Singhroy, V. H. OP-1961
 Sinigoi, Silvano OP-754, 755, 865, 866, 1991
 Sinninghe Damsté, J. S. OP-500
 Sipkin, S. A. OP-763, 867, 868, 2330
 Sirkin, L. A. OP-2171
 Siskind, D. E. C 1108
 Sisson, T. W. OF 94-0650; OP-978, 2122, 2329
 Sites, R. S. C 1108
 Skach, K. A. OF 94-0308
 Skema, V. W. B 2110
 Skinner, J. E. OP-319
 Skipp, B. A. B 2064-A-R; OF 94-0659, 94-0670; OP-411, 2123, 2124, 2125
 Skipp, G. L. MF-2296
 Skrobialowski, S. C. WRI 94-4067
 Slack, J. F. OP-718, 869, 870, 871, 2126
 Slade, R. M., Jr. WRI 94-4036, 95-4019
 Slagle, S. E. WRI 95-4034; OF 94-0536
 Slate, J. L. I-2464; OP-2006
 Slatt, R. M. P 1549
 Slaughter, C. B. WRI 95-4025
 Sleep, N. H. OP-872, 1130
 Slemmons, D. B. OF 94-0568
 Sliter, R. W. OF 95-0228; OP-247, 1759
 Sliter, W. V. OP-96, 1035, 1036, 1161, 1162, 2127
 Sloan, L. C. OF 94-0588
 Sloto, R. A. WRI 94-4109; OF 93-0659, 94-0381; OP-873
 Slucher, E. R. OP-874
 Small, T. A. WRI 94-4117
 Smeltzer, J. A. OP-2128
 Smink, J. A. OF 95-0156
 Smith, A. J. OP-2082
 Smith, B. D. C 1108; OP-713
 Smith, C. F. WRI 94-4114
 Smith, C. L. B 2064-A-R; OP-1146, 1156, 2129
 Smith, D. B. I-2473
 Smith, D. E. OP-676
 Smith, D. P. OP-1036
 Smith, D. R. C 1129
 Smith, E. I. OP-1323
 Smith, F. A. OP-875
 Smith, G. A. OP-1487
 Smith, G. F. OF 94-0378, 95-0156
 Smith, G. I. OF 95-0034; OP-1803
 Smith, G. R. OF 95-0034
 Smith, J. D. OP-2104, 2130, 2203, 2278
 Smith, J. G. B 2107; OP-1444
 Smith, J. L. OF 94-0105, 95-0107
 Smith, J. R. OP-1230
 Smith, K. D. OP-12
 Smith, K. S. OF 95-0026, 95-0043; OP-253, 732, 876, 1957, 2131
 Smith, M. OP-2133
 Smith, M. C. OP-1941, 2132
 Smith, P. OP-745
 Smith, P. E. OP-877
 Smith, P. H. OP-2134
 Smith, P. R. OP-670
 Smith, R. OP-1035
 Smith, R. A. OF 94-0399
 Smith, R. B. OP-2135
 Smith, R. L. B 2081; OP-509, 616, 1175, 2136, 2323
 Smith, R. P. OF 94-0568
 Smith, S. E. OF 95-0116
 Smith, S. G. OF 95-0181
 Smith, S. M. OF 95-0026
 Smith, T. E. OP-670, 671, 878, 987
 Smith, V. K. OF 94-0015; OP-503, 1656, 2137
 Smith, W. D. OP-1867
 Smoot, C. W. WRI 94-4228
 Smoot, J. P. OP-225, 879, 1672, 2117, 2118, 2138, 2139, 2140
 Snaveley, P. D., Jr. OF 95-0040
 Snee, L. W. B 1988-K, 2056, 2081; OF 94-0272; OP-15, 105, 349, 364, 624, 744, 784, 836, 886, 932, 959, 1079, 1117, 1303, 1465, 1517, 1581, 1625, 1939, 2151, 2184
 Snoke, A. W. C 1129
 Snow, K. M. FS 94-0007
 Snyder, C. W. OP-484, 485, 797
 Snyder, D. L. OF 94-0568

- Snyder, D. T. WRI 92-4010
 Snyder, G. I. OF 95-0201
 Snyder, G. L. WRI 95-4038; I-2233; OP-1232, 1288, 1929
 Snyder, J. P. P 1453
 Sobolev, N. V. OP-50
 Socolow, R. S. FS 94-0017; WRI 94-4138
 Soderblom, L. A. OP-880, 2134
 Soenksen, P. J. OP-1485
 Sohl, N. F. OF 95-0253, 95-0254
 Sokolov, S. D. OF 94-0714; OP-1894
 Solar, G. S. C 1129
 Soldatos, T. C 1129
 Sole, J. C 1129
 Soles, Stan OF 95-0034
 Solin, G. L. OF 94-0367
 Soller, D. R. C 1108; OF 94-0201, 94-0699; I-1970-D; OP-881, 882, 1111, 1115, 1630, 2141
 Solomon, D. K. OP-170, 1259
 Somers, Georgene WRI 93-4113
 Somerville, P. G. OP-974
 Sommerfeld, R. A. OP-883
 Sonafrank, G. H. OP-1058
 Sonenshein, R. S. WRI 94-4076, 94-4167
 Sorauf, J. E. OP-686
 Sorenson, T. C. OP-676
 Sorey, M. L. WRI 94-4180-A; OF 95-0042; OP-261, 884, 885, 902, 1564, 2142
 Soria-Escalante, Eduardo B 2119; OF 95-0494
 Sosunov, G. M. OF 94-0714
 Soulliere, S. J. B 2064-A-R
 Southard, R. E. C 1120-H
 Southon, J. R. OP-261
 Southwick, D. L. OP-886
 Southworth, C. S. GQ-1755; OP-1200
 Sowers, J. M. OP-761
 Spahr, N. E. OP-945
 Spall, H. R. SM
 Spangler, L. E. WRI 93-4219, 95-4025; OP-657
 Spanski, G. T. OF 94-0712
 Sparks, R. J. OP-661
 Spaulding, W. G. OF 95-0034
 Spear, F. S. OP-2208
 Spechler, R. M. FS 0151-95; WRI 92-4174; OF 94-0495; OP-2293
 Speer, J. A. C 1129
 Spence, G. D. OP-109, 248, 468
 Spencer, C. P. OP-779
 Spencer, C. W. B 2063; C 1108; OP-155
 Spencer, J. E. OP-887
 Spencer, William OP-93
 Spengler, R. W. OP-2143
 Spiegel, R. A. OP-1585
 Spiegler, Dorothee OP-56
 Spiker, E. C. C 1108; OP-1951
 Spiller, R. W. C 1108
 Spirakis, C. S. B 2063, 2094-C; OF 94-0298; OP-888, 1274, 1275, 1277
 Spittal, L. P. WRI 92-4052
 Spivack, A. J. OP-1026
 Spötl, Christoph OF 94-0298
 Sprende, J. J. OF 94-0363
 Springer, A. E. OP-448
 Sprod, I. E. B 2139
 Spruill, T. B. OF 95-0164
 Spudich, Paul OP-277, 393, 889, 1375, 1499, 2144
 Spudis, P. D. OP-605, 676, 1487
 Squillace, P. J. FS 0114-95; WRI 87-4136; OF 94-0711-W; OP-983
 Squyres, W. W. OP-559
 Srivastav, Aradhna OF 94-0588
 St. John, James B 2107
 Staerker, T. S. OP-338
 Stafford, T. W., Jr. OF 95-0034; OP-66, 661, 1876
 Stakes, D. S. OP-652
 Stallard, R. F. OP-106, 1764
 Stamer, J. K. W 2352-B; OP-1693, 2145
 Stamey, T. C. YR
 Stamm, N. R. OF 95-0557
 Stamm, R. G. I-2536; OP-21
 Stanchits, S. A. OP-1721
 Stanesco, J. A. OP-1556
 Stanfill, D. F., IV B 2103
 Stanford, J. A. OP-658
 Stangl, R. OP-478
 Stanley, R. G. B 1995-J,K, 2120; C 1108; OF 94-0594, 95-0530; OP-159, 1607, 1746, 1778, 2146
 Stanley, W. D. OF 94-0228; OP-240, 405, 890, 1593, 1913
 Stannard, D. I. OP-643
 Stanonis, F. L. P 1538-O
 Stanton, M. R. C 1108; OP-2028
 Stanton, R. W. OF 94-0631; OP-184, 185, 186, 780, 1951
 Starn, J. J. WRI 94-4239
 Starratt, S. W. OF 94-0667-A, 94-0667-B; OP-2147, 2148
 Staubit, W. W. WRI 92-4052; OF 94-0108
 Staude, J. G. OP-452
 Staudigel, Hubert C 1129
 Stauffer, P. OP-2149
 Steck, L. K. OP-889, 2144
 Stedfast, D. A. OP-114
 Steece, F. V. I-1420 (NL-14)
 Steefel, C. I. OP-670
 Steele, W. C. OP-1433, 2150
 Steenhuis, T. S. OP-811
 Steeples, D. W. OP-133
 Steeves, P. A. WRI 94-4156
 Stefanescu, S. S. OF 95-0544
 Steidl, J. H. OP-1336
 Steiger, J. I. OF 95-0101
 Steigerwald, M. J. B 2072
 Stein, A. B. OP-214
 Stein, H. J. OP-1626, 2151
 Stein, Mordechai OF 94-0568
 Stein, R. S. OP-522, 891, 892, 893, 988, 1585, 1872, 1999, 2152, 2153
 Stein, Seth OP-2051
 Stein, W. G. WRI 95-4030
 Steinberg, N. A. OP-894
 Steinen, R. P. OP-2109
 Steiner, M. B. OP-1573, 2154
 Steinkampf, W. C. OF 94-0305
 Steltenpohl, M. G. OP-158, 2155, 2156
 Stepanov, V. OP-1212
 Stephens, C. D. OP-786, 1682, 2157
 Stephens, J. E. OP-670
 Stephens, V. C. OP-1466
 Stephens, W. E. C 1129
 Stephenson, W. J. P 1538-I, 1538-P; OP-549, 705, 1005, 1907, 1979, 1980, 1981, 2158
 Stern, L. A. OP-1105, 1326, 1642, 2159
 Stern, S. A. OP-987
 Stern, T. W. P 1529
 Sternberg, R. W. OP-117, 847
 Steven, T. A. I-2504; MF-2295; OP-189, 1096
 Stevens, B. P. OP-871
 Stevens, C. L. WRI 94-4099
 Stevens, M. R. OF 95-0296
 Stevens, P. R. OP-2209
 Stevenson, A. J. OP-953, 2054, 2074, 2075, 2160
 Stewart, D. B. OP-400
 Stewart, I. C. OP-455
 Stewart, J. H. MF-2246, 2247; OP-308, 1404
 Stewart, J. S. OF 95-0163
 Stewart, K. C. OF 94-0580; OP-895, 929
 Stewart, L. M. OP-2161
 Steyaert, L. T. OP-326, 896
 Stickney, M. C. OP-1902
 Stihler, S. D. OP-1598
 Stirling, M. W. OP-1994
 Stiros, S. C. OF 94-0568
 Stockdale, R. G. WRI 95-4095
 Stoffers, Peter OP-390
 Stogner, R. W., Sr. OF 95-0156; OP-2162
 Stokes, S. R. OP-1770
 Stokking, L. B. OP-338
 Stollenwerk, K. G. OP-897, 2249
 Stoltz, K. W. OF 95-0007
 Stone, B. D. YR; OF 94-0558, 95-0224; OP-1310, 1311, 1383, 2163
 Stone, D. B. OF 94-0714; OP-612
 Stone, E. C. OF 95-0216
 Stone, J. R. OP-1072, 1799, 2164, 2165
 Stone, P. A. OP-1685
 Stoner, J. D. OP-2166
 Stonestrom, D. A. OP-2167
 Storck, D. A. WRI 92-4122, 92-4134
 Storm, T. L. OP-2313
 Storrs, A. D. OP-57, 987
 Stout, M. Z. OP-898
 Stradling, D. F. I-2472
 Strand, Kari OP-56
 Straub, A. W. OF 95-0009
 Streufert, R. K. OF 95-0026
 Stricker, G. D. B 2063, 2107; C 1108; OF 94-0670; OP-108, 972, 1182
 Strickland, H. H. OF 94-0331
 Striegl, R. G. C 1108; OP-1775, 1990
 Stringfield, W. J. OF 94-0487
 Strobel, M. L. OP-899, 900, 2168
 Strom, A. L. OF 94-0568
 Strom, E. W. WRI 94-4223, 95-4013; OP-901
 Strom, R. G. OF 95-0561; OP-1644, 2069
 Strong, C. M. OP-206
 Stuart, C. G. WRI 94-4085
 Stuart, W. D. OP-462, 2212
 Stuckless, J. S. OP-1947, 2169, 2273
 Stuiver, Minze OP-187, 661
 Stumm, Frederick OP-2170
 Stumpf, R. P. OF 95-0216; OP-1425, 1698
 Stunitz, Holger C 1129
 Sturchio, N. C. OP-902
 Sturdavant, C. D. OP-1247
 Sturdevant, J. A. OP-561, 562, 2102
 Sturrock, A. M. OF 94-0546
 Stute, Martin OP-937, 2204
 Sugarman, P. J. OF 95-0253, 95-0254; OP-621, 622, 623, 903, 904, 2171, 2295
 Suhayda, J. N. OF 94-0275; OP-1937
 Sullivan, D. E. OP-1433, 1434, 2150
 Sullivan, D. J. OF 91-0175, 95-0163
 Sultz, L. G. OF 94-0363
 Sumioka, S. S. WRI 92-4098, 94-4030
 Summers, R. S. OF 95-0028; OP-1841
 Sun, S. S. OP-31
 Sundquist, E. T. C 1108; OF 94-0475
 Sundvoll, Bjorn OP-41
 Suppe, John OF 94-0568
 Surface, J. M. OP-811
 Susilo, Adi OP-392
 Susong, D. D. WRI 93-4221, 95-4072; OP-2135
 Sutherland, W. M. C 1108
 Sutley, S. J. B 2107; OF 94-0640-A, 94-0640-B, 94-0680-A, 94-0680-B, 95-0106, 95-0230
 Sutphin, D. M. B 2063; OP-905
 Sutter, J. F. P 1529; OP-27, 1115, 1493, 2141, 2297
 Suyanto, Imam OP-392
 Suyehiro, Kiyoshi OP-271
 Suzuki-Kamata, Keiko OP-2172
 Svarc, J. L. OP-823, 825, 1007
 Swadley, W. C. B 2056; OF 94-0175, 94-0283, 95-0094; I-2501
 Swain, E. D. WRI 94-4076; OP-906
 Swain, W. C. WRI 95-4048
 Swainbank, R. C. OP-670
 Swan, F. H. OP-1802

Swancar, Amy W 2409; OF 93-0026
 Swanson, D. A. OF 94-0591; OP-1372, 1449, 2173
 Swanson, K. E. OP-1411
 Swanson, S. E. B 2139
 Swayze, G. A. OP-150, 493, 1680
 Sweet, P. C. C 1108
 Sweetkind, D. S. OP-163, 2012
 Swift, B. A. OP-742, 1970, 1971
 Swinchart, J. P. OF 94-0642
 Swinehart, J. B. I-2496
 Swisher, C. C., III I-2496
 Swithinbank, Charles P 1386-B
 Switzer, J. C. C 1121
 Sylvester, A. G. OP-2135
 Symonds, R. B. OP-907, 2174
 Symons, D. T. OP-908
 Synnott, S. P. OP-57
 Szabo, Attila OP-951
 Szabo, B. J. OF 95-0037; OP-909, 1770, 2175
 Szabo, Zoltan C 1108; WRI 92-4144; OP-910, 1568, 2176, 2177, 2178, 2236, 2264
 Szarzi, S. L. C 1108; OF 94-0295
 Szczytko, S. W. OF 95-0163
 Szmraj, J. A. OP-911
 Szmajter, R. J. OP-456
 Szymanski, J. T. OP-778

T

Tabor, R. W. OF 94-0403, 94-0714; OP-1894
 Tadayon, Saeid WRI 94-4114, 95-4062
 Tagar, M. A. OF 94-0274, 94-0557
 Taggart, B. E. OP-2179
 Taggart, J. E., Jr. OP-912, 1378
 Tait, J. F. OP-1066, 2180
 Tait, Mike OF 95-0652
 Takada, Hideshige OP-913
 Takahashi, K. L. DDS-0030; C 1108
 Takahashi, Kozo OP-56
 Takahashi, T. J. DDS-0024; OP-2315
 Takahashi, Yoshi OP-37
 Takauchi, Y. OP-914, 2181
 Takeda, Hiroshi OP-915
 Tallman, A. J. WRI 94-4188
 Talwani, Manik OP-413
 Talwani, Pradeep OF 94-0568
 Tan Keren OP-1080
 Tanaka, K. L. OP-35, 916, 2182
 Taney, Paul OP-2235
 Tang, X. M. OP-917
 Tanigawa, W. R. OP-1709
 Tankersley, K. B. OP-1451
 Tanner, D. Q. WRI 94-4057
 Tanyileke, Gregory OP-256
 Tao, Q. OF 94-0275
 Tappan, G. G. OP-918
 Tapponnier, Paul OF 94-0568; OP-2152
 Tari, Gabor OP-951
 Tarr, A. C. P 1538-M; OP-2014
 Tasker, G. D. WRI 95-4019; OP-1015
 Tate, C. M. FS 0154-95; WRI 94-4095; OF 95-0379
 Tate, G. B. OP-116, 117
 Tatsumoto, Mitsunobu OP-938, 939, 1826, 2183
 Tatu, M. C 1129
 Tauxe, Lisa OP-403
 Tavera V., Franz OP-188
 Taylor, B. B. OF 95-0556
 Taylor, Brian OP-920
 Taylor, C. D. B 2107; OP-349, 426, 919, 2184
 Taylor, C. J. WRI 94-4189, 94-4195
 Taylor, D. G. OP-745
 Taylor, D. J. C 1108; YR; OP-1551
 Taylor, E. M. OF 93-0477; OP-761
 Taylor, F. W. OP-338
 Taylor, G. J. OP-1487
 Taylor, H. E. OF 93-0628, 95-0149; OP-1295, 2185
 Taylor, J. E. OF 94-0379
 Taylor, Pamela OP-1712
 Taylor, R. B. OF 92-0372-A, 92-0372-B; MF-2295
 Taylor, R. L. OF 95-0103
 Taylor, R. N. OP-920
 Taylor, T. A. OP-1568
 Taylor, W. J. OF 94-0175, 95-0094
 Teague, C. OP-2186
 Teas, P. OP-1772
 Teeters, D. D. C 1108
 Tegeler, J. L. C 1129
 Teichmann, Friedrich OP-50
 Teichmüller, Marlies OP-566
 Teller, J. T. OP-527
 Templin, W. E. WRI 94-4208
 ten Brink, U. S. OF 94-0293, 95-0225; OP-921, 1521, 1524, 1615, 2187, 2188
 Teng, Leon OP-1336
 Tennyson, M. E. C 1108; OF 95-0014, 95-0025; OP-2189
 Tenor, M. J. OF 95-0163
 Tepordei, V. V. B 2111
 Tepper, D. H. B 2086; YR
 ter Kuile, Maya OP-253
 Terakado, Yasutaka C 1129
 Terman, M. J. OP-2190, 2191, 2192, 2193, 2194
 Ternes, K. A. C 1129
 Terrio, P. J. WRI 93-4188, 94-4190, 95-4005
 Terwindt, J. H. OP-547, 548
 Terziotti, Silvia OF 94-0522
 Tessensohn, Franz OP-560
 Tewalt, S. J. C 1108; OF 94-0298; OP-268, 922
 Thamke, J. N. C 1108
 Thatcher, Wayne OP-407, 923, 924, 2195
 Thayer, P. A. OP-925
 Thelin, G. P. OP-2102
 Thenhaus, P. C. OP-1048, 1385
 Theobald, P. K. B 2064-A-R; OF 94-0685
 Theodorakos, P. M. B 2107; OF 94-0670
 Thibodeaux, K. G. OF 94-0363
 Thieler, E. R. OF 95-0072; OP-2080
 Thiem, S. M. OP-509
 Thirlwall, M. F. C 1129; OP-1079
 Thodal, C. E. WRI 94-4079
 Thomas, A. P. OP-1802
 Thomas, E. OP-1162
 Thomas, G. J. B 1589-E
 Thomas, J. M. FS 0115-95; OF 93-0356
 Thomas, K. C. OF 94-0430
 Thomas, P. C. OP-57, 134
 Thomas, R. E. OF 94-0274, 94-0557
 Thomas, Rainer C 1129
 Thomas, Randy WRI 94-4229
 Thomas, W. O., Jr. C 1123; WRI 94-4002; OP-926
 Thompson, A. B. C 1129
 Thompson, D. M. OP-2196
 Thompson, G. A. OP-1388
 Thompson, J. K. OF 95-0291
 Thompson, J. M. B 2139; OP-216, 227, 300, 927, 2197
 Thompson, K. S. OF 94-0563, 94-0564, 95-0057; OP-1504
 Thompson, R. S. OF 94-0281, 94-0588, 95-0001; OP-218, 1057, 1092, 1273, 2198, 2199
 Thompson, S. C. OF 94-0568
 Thompson, T. A. OF 92-0139; I-2429
 Thompson, T. B. GP-1011; OP-1625
 Thompson, W. B. OP-990, 1659, 2200
 Thompson, W. R. OP-58
 Thomson, K. C. WRI 93-4154
 Thordarson, William OP-2049
 Thorez, J. OP-928
 Thorman, C. H. B 1988-K; OP-105, 198
 Thorn, C. R. WRI 94-4251
 Throckmorton, C. K. OF 95-0002
 Thunell, R. C. OP-1987
 Thurman, E. M. C 1120-G; OF 94-0396, 94-0670; OP-37, 629, 630, 734, 1043, 1267, 1807, 1963, 2089, 2201
 Thurow, Gregory OP-670
 Thybo, Hans OP-478, 1525
 Tidball, R. R. DDS-0017; B 2063; OF 94-0269; OP-929
 Tiedeman, C. R. OP-930
 Tiedje, J. M. OP-509
 Tieh, T. T. OP-1472
 Tierney, D. P. OF 94-0670
 Tigges, R. K. OF 95-0078
 Tihansky, A. B. OP-2202
 Tikhonov, I. N. OP-1657
 Tilk, J. E. OP-2028
 Till, A. B. B 2107; OP-931, 932, 1930
 Tilling, R. I. OF 95-0532; SM; OP-2088
 Timmis, K. N. OP-509
 Tindall, J. A. OP-608, 933, 934
 Tinsley, J. C., III OF 94-0662
 Tinus, R. W. OP-935
 Tipper, H. W. OP-745
 Tipton, M. J. I-1420 (NL-14)
 Tiren, S. A. OP-2235
 Tischendorf, Gerhard C 1129
 Tobin, H. J. OP-1772, 1919
 Tobisch, O. T. C 1129
 Todd, Frederick OF 95-0224
 Todd, V. R. C 1129; OF 95-0522, 95-0523
 Tokarski, A. K. OP-936
 Tollo, R. P. B 2060; C 1129
 Tomascak, P. B. C 1129
 Tomasko, M. G. OP-2134
 Tommasini, Simone C 1129
 Tong, Weixing C 1129
 Topping, D. J. OP-2203
 Torgersen, Thomas OP-937, 2204
 Torigoye-Kita, Noriko OP-938, 939
 Tormanen, T. O. OP-1656
 Tormes, L. H. WRI 93-4231; OF 95-0283
 Toro, Jaime OP-1250
 Torres, M. E. OP-56, 1391
 Torresan, M. E. B 2079; OF 94-0638, 95-0017; OP-2205
 Tortorici, C. OP-1311
 Toscano, M. A. OP-1719, 2206
 Tosdal, R. M. OF 95-0221; OP-22, 45, 46, 663, 940, 1033, 1870, 2244
 Toselli, A. J. C 1129
 Tosta, N. D. C 1108
 Toth, M. I. OF 95-0026
 Tourtelot, H. A. OF 94-0648
 Townsley, William OF 95-0224
 Trabant, D. C. B 2139; OF 94-0367, 94-0512; OP-1834, 2207
 Tracey, D. C. OF 94-0353
 Tracy, R. J. OP-2208
 Trail, David OP-31
 Trask, N. J. OP-2209
 Trauger, J. T. OP-987
 Treece, M. W., Jr. WRI 94-4226; OF 94-0522
 Tréhu, A. M. OP-941
 Treiman, A. H. OP-470
 Treiman, J. A. OF 94-0568
 Tremain, C. W. OP-947
 Trench, E. C. OF 93-0464
 Trent, R. E. OP-519
 Tresch, R. E. OF 95-0143
 Trevits, M. A. C 1108
 Treworgy, C. G. C 1108; OF 94-0298
 Treworgy, J. D. OF 94-0298
 Trexler, J. H., Jr. OP-1252
 Trias, J. L. OP-2035
 Tribe, I. R. C 1129
 Trigila, Raffaello OP-950
 Trincardi, Fabio OP-942
 Triplehorn, D. M. OP-1142
 Tripp, B. W. OP-913
 Tripp, R. B. B 2063; MF-2058-D; OP-929

Troester, J. W. OP-1924, 2210, 2277
 Trommer, J. T. OP-2202
 Tromp, D. E. B 2110
 Troutman, B. M. OP-943
 Trowbridge, J. H. OP-944
 Trudeau, D. A. OP-2066
 Trudel, W. S. B 2090
 Truitt, E. P. OF 95-0141
 Trumbore, S. E. OP-1463
 Trumbull, R. B. C 1129
 Trusdell, F. A. OF 91-0320, 94-0705; OP-1400, 1754, 2211
 Tsukanov, N. V. OF 94-0714; OP-1894
 Tsutsumi, Hiroyuki OF 94-0568; OP-2107
 Tucci, Patrick OF 94-0311
 Tucker, R. E. B 2057
 Tullis, T. E. OF 94-0228; OP-53, 2212
 Tulloch, A. J. C 1129
 Tully, J. K. OF 95-0589
 Tumarkin, Alexis OP-1336
 Tungate, A. M. WRI 94-4116
 Tungol, N. M. OF 94-0568
 Turk, J. T. C 1108; YR; OP-269, 945, 1003, 2213
 Turner, A. K. OF 94-0305, 94-0318; OP-638, 1247, 1281, 1362
 Turner, C. E. B 1808-P; OP-2214
 Turner, Christopher OP-145
 Turner, R. L. B 1741-H
 Turner, R. W. B 2064-A-R
 Turner, Sandy WRI 92-4143
 Turney, G. L. WRI 92-4109, 94-4047, 94-4082
 Turrin, B. D. OF 95-0591; OP-50, 397, 1287, 1368, 1505, 1730, 2215
 Turtora, Michael WRI 94-4138
 Tuttle, M. L. B 2110; OF 95-0034; OP-256, 1139, 1168
 Tuttle, M. P. OF 94-0568; OP-946, 1707, 2085, 2216, 2217
 Twichell, D. C. OP-1343, 1679, 1972, 2080, 2081, 2218
 Tyler, M. B. C 1130
 Tyler, Roger OP-947
 Tysdal, R. G. B 2113; I-2474-A; OP-743, 1974
 Tytgat, G. C. B 2139

U

U. S. Geological Survey
 FS 0112-95, 0117-95, 0121-95, 94-0009, 94-0057
 U.S. Geological Survey
 B 2060, 2098, 2113, 2135; CAT; YR; FS 0046-95, 0079-95, 0085-95, 0132-95, 0149-95, 94-0026, 94-0048, 94-0049; EV; PDE; OF 94-0253, 94-0383, 94-0444, 94-0585, 95-0312, 95-0525, 95-0526; I-0711, 2403, 2404, 2405, 2406, 2407, 2410, 2411, 2412, 2413, 2417, 2418, 2419, 2421, 2422, 2425, 2428

U.S. Geological Survey, Center for Inter-American Mineral Resource Investigations OF 94-0623-A, 94-0623-B, 94-0623-C
 U.S. Geological Survey, National Earthquake Information Center
 OF 93-0600-D, 93-0610-A, 93-0610-B, 93-0611-A, 93-0611-B, 93-0612-A, 93-0612-B, 94-0600-A, 94-0600-B, 94-0600-C, 94-0601-A, 94-0601-B, 94-0602-A, 94-0602-B, 94-0603-A, 94-0603-B, 94-0604-A, 94-0604-B, 94-0605-A, 94-0605-B, 94-0606-A, 94-0606-B, 94-0607-A, 94-0607-B, 94-0608-A, 94-0608-B, 94-0609-A, 94-0609-B
 U.S. Geological Survey, National Oil and Gas Assessment Team
 C 1118
 U.S. Geological Survey, National Plan Committee OF 95-0537
 U.S., Energy Gases Committee
 OF 94-0642
 U.S., Magnetic-Anomaly Data Set Task Group OP-1510
 Uchirin, C. G. OP-966
 Udegbunam, E. O. OF 94-0298
 Ueber, E. OP-1610
 Ulery, R. L. FS 0088-95; WRI 93-4126, 94-4218
 Ulmer, Peter C 1129
 Ulmishek, G. F. YR; OP-135, 948, 2219, 2220
 Ulrich, G. E. OF 94-0713; OP-307
 Underwood, M. B. OP-1772, 2105
 Underwood, M. R. OP-949
 Unger, J. D. SM
 Unger, R. W. OF 94-0531
 Unkefer, Jason C 1129; OP-1817
 Unnikrishna, P. V. OP-2221
 Unruh, D. M. B 2056; OP-836, 1939
 Unruh, J. R. OP-2307
 Unthank, M. D. WRI 94-4099
 Urban, S. B. OF 95-0025
 Utterback, W. C. B 2090

V

Vacher, H. L. OP-1455
 Vaggelli, Gloria OP-950
 Vail, P. R. OP-951
 Vail, Rick OP-1772, 1919
 Vail, T. J. WRI 95-4023; OF 94-0113
 Vaill, J. E. OF 95-0296
 Vakarc, Gabor OP-951
 Valensise, Gianluca OF 94-0568
 Valentine, P. C. OP-2073, 2222
 Valenzuela, Eduardo OF 95-0226
 Valin, Z. C. OF 95-0530; OP-580, 1121, 1250
 Valla, Pierre OP-133
 Vallance, J. W. P 1547; HA-0729; OP-952, 2088
 Vallier, T. L. OF 94-0714; OP-361, 633, 953, 1894, 2075
 van der Hilst, R. D. OP-252, 1352
 Van Dissen, R. J. OF 94-0568
 Van Fossen, M. C. OP-621, 622, 623
 van Geen, Alexander OP-954, 1397, 1735, 2223
 van Genuchten, M. T. OP-2302
 Van Gosen, B. S. OF 94-0670; OP-1344, 2224, 2225
 Van Haveren, B. P. OP-955
 van Heerden, I. L. OF 94-0275
 Van Hoven, R. L. OF 94-0384
 Van Loenen, R. E. OP-92
 Van Metre, P. C. OP-2226, 2264
 Van Peeters, W. OP-1610
 Van Schmus, W. R. OP-886, 1424
 Van Winkle, S. W. OP-2156
 VanArsdale, R. B. P 1538-J; OF 94-0568; OP-956
 Vandyke, T. M. C 1108
 Vaniman, D. T. OP-2036, 2037
 Vaquero, M. OP-66
 Varnes, D. J. OF 95-0060; OP-1191, 1192
 Varnes, K. L. DDS-0030
 Vartanyan, G. S. OP-957
 Vasiliev, Y. R. OP-50
 Vaughn, R. B. OF 94-0412
 Vaught, D. G. OF 95-0140
 Vecchia, A. V. OF 95-0123
 Veeger, A. L. OP-2227
 Veenhuis, J. E. WRI 94-4143
 Veas, R. OP-478
 Vega, R. G. OF 95-0567
 Vega-Faundes, Marta OP-56
 Velde, Bruce OP-241
 Velnich, A. J. OF 94-0065
 Vencill, W. K. OP-934
 Venkatesan, M. I. OP-244
 Venz, K. A. OF 94-0588
 Verbeek, E. R. OF 95-0002; OP-1438
 Vergara, Hernán OP-56
 Vernik, Lev OP-958, 2228
 Vernon, F. L. OP-1336
 Vernon, R. H. C 1129
 Verosub, K. L. OP-659, 1273
 Verplanck, P. L. OP-959
 Verstraeten, I. M. WRI 94-4057
 Vetter, U. R. OP-1045
 Veverka, Joseph OP-57, 58, 134
 Vidal, Alain OP-643
 Vidale, J. E. OP-60, 591, 960, 961, 1109, 1143, 1144, 1306, 1349, 1474, 1544, 1694, 1704, 1705, 1708, 1761, 2229, 2230, 2231, 2232, 2233, 2325, 2328
 Vieth-Redemann, Angelika OP-565
 Viets, J. G. OP-149, 731
 Viger, R. J. C 1108
 Vigliotti, Luigi OP-962
 Vignerresse, J. L. C 1129
 Villinger, H. W. OP-652
 Viscardi, Anna OP-199

Vita Finzi, Claudio OF 94-0568
 Vittori, E. OF 94-0568
 Vogel, K. L. WRI 92-4088
 Vogt, P. R. SM
 Voitsekovich, O. V. OP-2302
 Volborth, Alexis C 1129
 Volkert, R. A. P 1565-A; OF 95-0253
 Von Damm, K. L. OP-2097
 von Gnielinski, Friedrich OP-31
 von Guerard, Paul WRI 94-4194; OF 94-0545; OP-423, 691, 963, 979
 von Hillebrandt, Axel OP-964
 von Huene, Roland OP-953, 965, 2234
 Vorder Bruegge, R. W. OP-676
 Vork, D. R. OF 95-0530
 Voronin, L. M. WRI 94-4113
 Voss, C. I. YR; OP-949, 2235
 Vowinkel, E. F. OP-910, 966, 2178, 2236
 Voxland, P. M. P 1453
 Vozarik, J. OP-2324
 Vroblesky, D. A. W 2399; WRI 93-4185; OP-95, 132
 Vukov, M. C 1129

W

Waddell, K. M. WRI 93-4028; OP-316
 Waddington, E. D. OP-187
 Wagner, B. J. OP-967
 Wagner, C. R. TWI 03-A21
 Wagner, R. H. OP-564, 567
 Wagner, R. J. WRI 92-4017
 Wagner, T. P. OP-968
 Wahl, K. L. C 1123; OP-969, 970
 Wahl, R. R. OF 95-0567
 Wahrhaftig, C. A. OP-971, 972
 Waight, Tod C 1129
 Waite, L. A. WRI 93-4154; OF 94-0544
 Waite, T. D. OP-973
 Waitt, R. B. B 2139; OP-679, 680, 2237
 Wakita, Koji OF 94-0714
 Wald, D. J. OP-389, 649, 974, 1312, 1313, 1314, 2238
 Wald, J. D. OF 95-0304; OP-1696
 Wald, L. A. YR; OF 95-0204; OP-1561, 2239
 Walder, J. S. YR; OP-975, 2240
 Waldron, M. C. OF 92-0140, 95-0129, 95-0184
 Walker, B. M. OP-1220
 Walker, J. F. OP-2241
 Walker, N. D. OF 94-0275
 Walker, R. J. C 1129; OP-421, 516, 647, 976, 2151, 2242
 Wallace, A. R. B 2081, 2104, 2109; OF 95-0026; OP-2243, 2244
 Wallace, L. G. OP-2245
 Wallace, M. H. OP-977, 1294, 2246
 Wallace, W. C. OF 94-0705-W

- Wallace, W. K. OP-201, 641, 642, 1850, 2247, 2248
 Walling, D. E. OP-14
 Walsh, G. J. OF 94-0225-A, 94-0225-B, 94-0654-A, 94-0654-B; OP-1253
 Waltemeyer, S. D. WRI 94-4071, 95-4050
 Walter, D. A. OP-2249
 Walter, L. S. B 2139
 Walter, M. J. OP-978
 Walter, Marianne OP-3, 1046, 1047
 Walters, D. J. WRI 94-4202
 Walters, Dorothy OP-1160
 Walters, R. A. OP-612
 Walton-Day, Katherine OP-691, 979
 Wambold, Brett OF 94-0228
 Wan, Elmira OF 95-0034; OP-2250
 Wandrey, C. J. B 2063
 Wang Xibin OP-1935
 Wang Yurong OP-980
 Wang, B. OP-2251
 Wang, F. C. OF 94-0275
 Wang, F. F. OP-981
 Wang, H. D. OF 95-0207
 Wang, Menglou OF 94-0275
 Wang, P. Y. YR
 Wang, Wuncheng OP-982, 983
 Wang, Yang OP-11, 1055
 Wannamaker, P. E. OF 94-0228
 Wannesson, Jacques OP-246
 Wanty, R. B. C 1108; OP-984, 1139
 Ward, D. M. OP-1634
 Ward, L. B. OP-2319
 Ward, P. L. OP-985, 1058, 1598, 2252
 Ward, S. N. OP-1503
 Warden, Augusta OP-1714, 1746
 Wardlaw, B. R. OF 94-0274; I-2536; OP-1324, 2253, 2254
 Wareham, C. D. C 1129
 Warner, J. D. OP-670
 Warner, K. L. FS 94-0018
 Warnke, D. A. OF 94-0588
 Warren, R. G. OF 95-0567
 Warrick, R. E. OF 94-0706
 Warwick, P. D. B 2096; C 1108; OF 94-0274, 95-0208; OP-2255, 2256
 Waseda, Amane OP-56
 Wasiolek, Maryann WRI 94-4072
 Wasserburg, G. J. OP-843, 1973
 Wasserman, M. D. OF 95-0221
 Watkins, S. A. W 2419
 Watney, W. L. B 2110
 Watson, E. B. C 1129
 Watson, W. D. C 1108; OF 95-0588, 95-0589
 Watt, G. R. C 1129
 Watterson, J. R. OF 95-0495; OP-104
 Watts, K. R. WRI 94-4129, 94-4238; OF 94-0531
 Waugh, B. J. I-2341
 Waychunas, G. A. OP-973
 Wayne, L. D. OF 94-0275
 Waythomas, C. F. B 2107; OF 95-0128; OP-878, 986, 1582, 1692, 1790, 2257, 2258, 2259, 2260
 Weary, D. J. OF 95-0557; OP-21, 370
 Weasma, T. R. B 2105
 Weathers, M. S. OP-2317
 Weaver, C. S. OP-1592
 Weaver, H. A. OP-987
 Weaver, J. C. WRI 94-4123
 Weaver, J. N. OF 95-0235
 Weaver, S. D. C 1129; OP-431
 Webb, F. H. OP-988
 Webb, P. N. OF 94-0588
 Webb, R. H. OP-1435, 2261, 2262
 Webb, S. C. OP-1655
 Webb, S. L. C 1129
 Weber, F. R. OF 94-0215; OP-878
 Weber, L. A. OF 94-0298
 Webring, M. W. P 1525
 Webster, J. D. C 1129; OP-989
 Webster, K. E. OP-992
 Webster, M. D. OF 94-0363, 94-0531
 Weddle, T. K. OP-990
 Weedman, S. D. OF 94-0228, 95-0003; OP-2087, 2263
 Weems, R. E. OP-2071
 Wegenka, E. A. OF 95-0480
 Wehmiller, J. F. OP-1697
 Weibel, W. L. OP-206
 Weichert, Dieter OF 94-0568
 Weidemann, A. D. WRI 92-4052
 Weidick, Anker P 1386-C
 Weinberg, R. F. C 1129
 Weintraub, V. C. C 1108
 Weir, G. W. OF 94-0417; GQ-1722
 Weisenfluh, G. A. C 1108
 Weiss, W. B. WRI 94-4194
 Weisskopf, C. P. OF 95-0156; OP-688, 2044
 Weitz, C. M. OP-1845, 1846
 Welch, A. H. OF 93-0033; OP-356, 2264
 Weldon, R. J. OF 94-0568; OP-514, 1503
 Wellman, J. J. OP-607, 839
 Wellman, Peter OP-31
 Wells, D. S. OP-1561
 Wells, F. C. WRI 94-4213
 Wells, R. E. OP-72, 1128, 2265
 Wells, T. W. OF 94-0623-A, 94-0623-B, 94-0623-C
 Welsch, E. P. OF 94-0270-A, 94-0270-B
 Wendlandt, R. F. OP-1939, 2266
 Wenk, H. R. OP-1105
 Wennerberg, L. G. OP-587, 1541, 1753, 2091, 2267
 Wenrich, K. J. OP-991
 Wentz, D. A. OP-992
 Weres, Oleh OP-2302
 Wershaw, R. L. OP-993
 Wesley, J. B. OP-1166
 Wesling, J. R. OP-1802
 Wesnousky, S. G. P 1538-H; OF 94-0568
 Wesolowski, E. A. WRI 94-4058; OP-2268, 2269
 Wesson, R. L. OF 94-0228; OP-649
 West, C. T. OP-1244, 2270
 West, R. R. B 2110
 Westenburg, C. L. WRI 94-4210; OF 95-0158
 Westerfield, P. W. WRI 93-4134; OF 93-0374
 Westerlund, R. E. OF 94-0706
 Westermann, G. E. OP-745, 964
 Westgate, J. A. OP-772, 1458
 Weston, P. E. OP-1315
 Wetzal, K. L. WRI 94-4060
 Weyand, E. OP-1862
 Whatley, R. C. OP-1268
 Wheat, C. G. OP-652
 Wheeler, J. C. FS 94-0033; WRI 93-4225
 Wheeler, R. L. P 1538-M; OF 94-0298; I-2521; OP-994, 1333, 2013, 2014, 2271, 2272
 Whelan, J. F. OP-1221, 1857, 2036, 2037, 2100, 2101, 2169, 2273
 Whelan, J. K. OP-652
 White, A. F. OP-995, 1554, 2274
 White, D. J. OP-109, 468, 1073
 White, E. R. B 2107
 White, K. D. WRI 94-4029, 94-4134
 White, K. E. OF 95-0308
 White, L. D. OP-256, 1308, 1756, 2197
 White, R. R. WRI 93-4163
 Whitehead, R. L. HA-0730-H
 Whitehouse-Veaux, P. H. OP-733
 Whitelaw, J. L. OP-1835
 Whitfield, J. W. OF 94-0430
 Whitlock, Cathy OF 95-0034
 Whitman, S. K. B 2064-A-R
 Whitmore, F. C., Jr. OP-996, 1137, 2275
 Whitney, C. G. B 2085-C, 2110; OF 94-0680-A, 94-0680-B, 95-0034, 95-0230; OP-730, 2329
 Whitney, J. W. OF 94-0568; OP-368, 997, 1468, 1469, 1802, 1904, 2276
 Wiant, M. D. OP-1451
 Wiberg, P. L. OP-847, 998
 Wicander, E. R. OP-243
 Wiche, G. J. OF 95-0123; OP-533
 Wickham, S. M. C 1129
 Wicks, C. M. OP-2277
 Wiebe, R. A. C 1129
 Wiecezorek, G. F. OF 94-0615; OP-1010
 Wiegand, W. OP-2186
 Wiele, S. M. OP-2278
 Wieprecht, D. E. OF 95-0099
 Wiese, Katryn OP-433
 Wiggins, W. D. OF 94-0363
 Wiig, S. V. OF 95-0476
 Wilber, W. G. OP-2279, 2280
 Wilberg, D. E. OF 95-0340
 Wilbourn, S. L. OF 94-0363, 94-0531
 Wilcock, P. R. OP-177
 Wilcox, R. W. OF 94-0547
 Wilde, F. D. OP-999
 Wildey, R. L. OP-1636
 Wilen, B. O. OP-837
 Wiles, G. C. OP-1000, 2281
 Wilford, J. R. OP-31
 Wilkey, P. L. OF 94-0275; OP-1938
 Wilkins, D. W. OF 95-0360
 Wilkinson, J. M. OP-592
 Wilkison, D. H. OF 94-0332, 94-0705-W; OP-2282
 Willard, D. A. OF 94-0281; OP-218, 1001, 1002
 Willden, A. T. OP-687
 Williams, A. J., III OF 93-0722; OP-847
 Williams, C. A. OP-2246
 Williams, C. F. OF 94-0692; OP-2065
 Williams, C. R. OF 94-0568; OP-33
 Williams, D. A. OF 94-0298
 Williams, D. F. OP-165
 Williams, D. R. WRI 94-4056
 Williams, F. J. B 2064-A-R
 Williams, I. S. OP-1212
 Williams, J. H. YR; OP-2283
 Williams, Kenneth OP-1712
 Williams, L. P. OF 94-0022-A, 94-0022-B, 94-0022-C, 94-0022-D, 94-0022-E, 94-0022-F, 94-0022-G, 94-0022-H, 94-0022-I, 94-0022-J, 95-0075-C; OP-1861
 Williams, M. E. OF 94-0643
 Williams, M. L. C 1129
 Williams, M. W. OP-1003
 Williams, P. L. OF 94-0568; OP-1712, 2284
 Williams, R. A. OF 94-0384; OP-956, 1004, 1005, 1907, 2285, 2286
 Williams, R. S., Jr. P 1386-B, 1386-C; WRI 92-4187; OF 95-0247
 Williams, R. T. OP-2287
 Williams, S. D. OF 95-0156; OP-1006, 1007
 Williams, S. J. OF 94-0275; I-2150-B; OP-1936, 1937, 1938
 Williams, T. A. OF 94-0275; OP-1938
 Williams, Teresa OP-2288
 Williams, V. S. B 2056; OF 94-0670; OP-2289
 Williams-Sether, T. J. OP-533
 Williams-Stroud, Sherilyn B 2063; OP-1272, 2290
 Williamson, Courteney OF 94-0670; OP-2029
 Willis, C. J. OF 94-0568
 Wilshire, H. G. C 1108; OF 92-0179, 92-0181, 92-0182, 92-0183, 94-0681, 95-0585; OP-260, 708, 2291

Wilson, A. B. B 2064-A-R;
OF 95-0011-A, 95-0011-B,
95-0066-A, 95-0066-B; I-
2445; OP-92, 1288, 1344,
2225

Wilson, C. A. WRI 94-4125

Wilson, C. J. OP-431, 1542

Wilson, D. S. B 1995-J,K; OP-
1778

Wilson, E. A. OF 94-0363

Wilson, Eric B 2064-A-R

Wilson, F. H. I-2272; OP-672,
953, 1008, 2292

Wilson, G. S. OF 94-0588

Wilson, J. P. OP-638

Wilson, June OF 95-0533

Wilson, K. V., Jr. WRI 94-
4241; OP-1009

Wilson, R. C. OP-1010, 1467

Wilson, R. M. W 2352-B

Wilson, R. P. FS 94-0074

Wilson, S. A. OF 94-0412, 95-
0250, 95-0486; OP-1011

Wilson, Susan OP-2324

Wilson, W. L. OP-2293

Wiltshire, D. A. B 2103; YR

Winchester, J. P., Jr. OP-180,
2294

Winfrey, M. R. OP-690

Wing, S. L. OP-1012

Wingard, G. L. OF 95-0003;
OP-2087, 2295

Wingate, F. H. OP-1890

Winget, E. A. I-2387

Winkler, G. R. B 2064-A-R,
2084; OP-727

Winograd, I. J. OF 95-0037

Winter, D. M. OF 94-0588

Winter, D. R. OF 94-0320

Winter, T. C. FS 0138-95;
OF 94-0546

Winters, R. A. B 1741-H

Winters, W. J. C 1108; OF 94-
0584; OP-2081

Winterstein, T. A. OF 93-0046

Wintsch, R. P. OF 94-0228; OP-
1399, 2296, 2297

Wireman, Michael WRI 92-
4143

Wirt, Laurie WRI 94-4192;
OF 94-0356

Wise, R. A. OP-2298

Wise, W. S. OF 89-0284

Wiseman, W. J. OF 94-0275

Wissinger, E. S. OP-304, 1394,
1395, 2299, 2300, 2301

Witherspoon, P. A. OP-2302

Witkind, I. J. P 1528; I-2446,
2462

Witt, E. C., III OP-2303

Witter, R. C. OF 94-0568; OP-
1629

Wittmann, J. H. OP-196

Witzke, B. J. OP-16, 1059,
1880

Wnuk, Christopher OP-1993,
2304

Wohletz, K. H. OP-1920, 1921

Woitsekhowskaya, M. B. OP-
1013

Wold, S. R. WRI 93-4028, 93-
4221

Wolf, M. B. C 1129

Wolf, S. C. OF 94-0228; OP-
789

Wolfe, E. W. OF 94-0713; OP-
307

Wolfe, J. A. OP-2305

Wolfe, R. F. OP-853

Wolock, D. M. OP-1014, 1015

Wong, A. S. OP-1548

Wong, F. L. B 2022; OF 95-
0017; OP-503

Wong, I. G. OF 94-0568; OP-
2306, 2307

Wong, M. F. WRI 94-4052

Wood, J. L. OF 94-0489

Wood, L. F. OP-2156

Wood, Lynnette OP-918

Wood, S. H. OP-44

Wood, W. W. OP-28, 812,
1016, 1017, 2308

Woodcock, D. E. OF 95-0042

Wooden, J. L. B 2064-A-R;
C 1129; OP-29, 45, 46, 258,
260, 313, 321, 432, 1104,
1185, 1817, 1818, 1831,
1861, 1862, 1863, 2309, 2310

Woodham, W. M. WRI 94-4217

Woodruff, L. G. OP-27, 870

Woods, P. F. WRI 94-4119

Woodside, M. D. WRI 94-
4042, 94-4140

Woodward, D. G. WRI 92-
4098; OP-1018, 1019, 2311

Woodward, J. C. OP-558, 1724

Woodward, R. L. OP-293, 294,
1020, 1382, 2312, 2313, 2330

Woollenden, W. B. OF 95-0034

Worl, R. G. B 2064-A-R; OP-
1588

Worley, D. M. OP-2286

Worthy, L. D. OP-2102

Wosick, F. D. OP-854

Wright, B. E. OF 95-0652; OP-
2314

Wright, E. L. OF 95-0593

Wright, J. A. OP-779

Wright, J. E. C 1129

Wright, Judith OP-1021

Wright, Melinda OP-1081, 1922

Wright, P. R. OP-1022

Wright, T. L. OP-1372, 2315

Wright, W. G. OP-190, 1276,
1277, 2316

Wrucke, C. T. OP-625, 1255,
1256, 1624

Wu Weimin OF 94-0568

Wu, S. S. OP-195

Wu, T. C. OP-2317

Wyatt, F. K. OP-1688

Wyatt, W. C. OP-2318

Wylegalla, K. OP-1071

Wynne, L. D. OP-1938

Wysocki, D. A. OP-1758, 2319

Wyss, Max OP-1709

X

Xie Xiande OP-130

Xiong Xialoin C 1129

Xu Xiwei OF 94-0568

Xu, N. OP-973

Xu, Y. OP-1897

Y

Yager, D. B. MF-2292

Yajima, Michiko OP-1269

Yakovlev, Y. O. OP-2302

Yamaguchi, D. K. OP-26, 1023

Yamashita, K. M. OF 94-0288,
94-0693, 95-0099, 95-0237

Yamazaki, Haruo OF 94-0568

Yan, Yongxia OP-2320

Yanai, Keizo OP-939, 1826

Yang Daqing OP-1003

Yang Xiaoping OF 94-0568

Yang Ziyuan OP-1024

Yang, H. J. OP-2321

Yang, Huai-Jen OP-1025

Yanosky, T. M. OP-329, 329,
1608

Yates, M. OP-2322

Yeats, R. S. OF 94-0568; OP-
1190

Yeend, W. E. B 2107; OP-670,
671

Yehle, L. A. B 2107

Yelin, T. S. OP-72, 571, 2307

Yeomans, D. K. OP-987

Yepes, Hugo OF 94-0568

Yerkes, R. F. FS 0096-95;
OF 95-0051, 95-0088, 95-
0089, 95-0090, 95-0091, 95-
0502, 95-0503, 95-0504,
95-0511

Yiou, Françoise OP-106

Yiou, Pascal OP-206

Yochelson, E. L. OP-543

Yoklavich, M. M. OP-1434

Yonekura, Nobuyuki OF 94-
0568

York, L. L. OP-1471

Yoshinari, T. OP-2136, 2323

Yoshinobu, A. S. C 1129; OP-
319

Yoshioka, Toshikazu OF 94-
0568

Yost, B. T. OF 95-0291

Yost, W. P. OF 95-0357

You, C. F. OP-1026

Youd, T. L. OP-367, 1027

Young, L. E. OP-670

Young, N. O. OP-423

Young, R. P. OP-1769

Young, S. W. OP-480

Yount, J. C. OP-1994

Yule, J. D. OF 95-0227-A, 95-
0227-B

Yurewicz, M. C. OF 95-0163

Z

Zachos, J. C. OP-1162

Zagorsky, V. Y. OP-2110

Zainhofsky, S. D. WRI 95-4102

Zajac, R. N. I-2456; OP-1972,
2218, 2324

Zandt, George OP-2325

Zane, S. K. OF 91-0320

Zanvilevich, A. N. C 1129

Zapczca, O. S. WRI 92-4144

Zari, Sylvia OP-1991

Zartman, R. E. DDS-0014;
B 2081, 2094-B, 2113;
OF 94-0298; OP-3, 303, 766,
1028, 1029, 2326

Zaugg, S. D. OF 93-0657, 95-
0181; OP-1427

Zech, R. S. C 1108

Zelewski, L. M. OP-2327

Zellner, B. OP-57, 987

Zelt, B. C. OP-248

Zelt, R. B. OF 95-0330

Zempolich, W. G. OP-1258

Zen, E-an C 1129

Zent, A. P. OP-486

Zhaimina, V. Y. OP-1258

Zhang Peizhen OF 94-0568

Zhang Wei OP-491

Zhang Yuming OP-1190

Zhang, Jie OF 94-0293; OP-
1550

Zhang, P. OF 94-0568

Zhang, Wei OP-1640

Zhao Guoguang OF 94-0568

Zhao, Xixi OP-338

Zheleznyak, M. J. OP-2302

Zhelinsky, V. M. OP-1493

Zhemchuzhnikov, V. G. OP-
169, 1258

Zhi, Zhang OP-2328

Zhou, Huitang OF 94-0298

Zhu Jinchu C 1129

Zielinski, R. A. C 1108; OF 94-
0670, 95-0536; OP-1030,
1031

Zientek, M. L. OP-516

Zierenberg, R. A. B 2022;
OF 94-0711; OP-652, 776,
1032, 1033, 1895

Zihlman, F. N. C 1108; OF 95-
0516

Zimbelman, D. R. OP-2329

Zimbelman, J. R. I-2402

Zink, L. L. B 1995-H,I; OF 95-
0017

Zirbes, M. D. OP-2330

Zoback, M. D. OP-1094, 2331,
2334

Zoback, M. L. OF 95-0038; OP-
1914, 2331, 2332, 2333, 2334

Zodrow, E. L. OP-565, 568

Zohdy, A. A. OF 94-0676, 95-
0544; OP-2335

Zorin, A. Y. OP-169

Zouros, N. OF 94-0568

Zuber, M. T. OP-676

The Secretary of the Interior has determined that the publication of this periodical is necessary in the transaction of the public business required by law of this Department. Use of funds for printing this periodical has been approved by the Director of the Office of Management and Budget.