Publications of the U.S. Geological Survey, 1994

U.S. DEPARTMENT OF THE INTERIOR

UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1995

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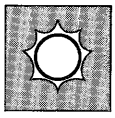

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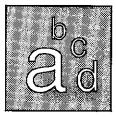

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Publications of the U.S. Geological Survey

This catalog is a list of (1) books and maps[1] that were published during 1994 and (2) articles by U.S. Geological Survey personnel in non-U.S. Geological Survey journals and books that came to our attention in 1994; 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, and 1993 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.

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, 582 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.

[1]Individual 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, 1994

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 1994 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

U.S. Geological Survey, 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

For maps of all areas of the United States, address mail orders to

U.S. Geological Survey, Information Services
Box 25286, Federal Center
Denver, CO 80225

On an order amounting to $500 or more at the list price, a 50-percent discount is allowed; no other discount is applicable. The discount applies to all maps and charts distributed by the U.S. Geological Survey. A $1 postage and handling charge is applicable on orders of less than $10. 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 U.S. Geological Survey offices, all of which are authorized agents of the Superintendent of Documents:

ANCHORAGE, Alaska—Rm. 101, 4230 University Dr.
LAKEWOOD, Colorado—Federal Center, Bldg. 810
MENLO PARK, California—Bldg. 3, Rm. 3128, 345 Middlefield Rd.
RESTON, Virginia—USGS National Center, Rm. 1C402, 12201 Sunrise Valley Dr.
SALT LAKE CITY, Utah—2222 West 2300 South, 2d floor.
SPOKANE, Washington—U.S. Post Office Bldg., Rm. 135, 904 West Riverside Ave.
WASHINGTON, D.C.—Main Interior Bldg., Rm. 2650, 1849 C St., 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-0006. Stratigraphic nomenclature databases for the United States, its possessions and territories. Update of data added since 1992. 1994. One CD-ROM. (Release 2.)

This CD-ROM was produced in accordance wth the ISO 9660 standard and can be accessed by any computer system with an ISO 9660 software driver; however, this disc is intended for use in a DOS environment. The minimum system requirements to use the data with the software provided on this disc are as follows: (1) IBM or compatible personal computer with 640K RAM, (2) MS-or PC-DOS version 5.0 or later, (3) Microsoft MSCDEX version 2.1 or later, (4) CD-ROM drive with ISO 9660 software driver, (5) hard disk drive, and (6) EGA/VGA graphics system.

Geologic Names Unit Lexicon (GNULEX), compiled by M. E. MacLachlan, W. A. Bryant, T. W. Judkins, O. B. Williams, E. D. Koozmin, R. C. Orndorff, M. L. Hubert, C. R. Murdock, S. W. Starratt and J. R. LeCompte.

Geologic Names of the United States (GEONAMES), compiled by C. R. Murdock and M. L. Hubert; data base designer and programmer, C. C. Abston.

DDS-0011. Geology of the conterminous United States at 1:2,500,000 scale; a digital representation of the 1974 P. B. King and H. M. Beikman map, by P. G. Schruben, R. E. Arndt, and W. J. Bawiec; display software by R. A. Ambroziak. 1994. One CD-ROM.

This CD-ROM was produced in accordance with the ISO 9660 standard and thus allows access to the map data files and MAPPER source code by computers with ISO 9660 software drivers. The disc contains menu and display programs that operate only on DOS-compatible computers. The minimum system requirements to use the data with the software provided on this disc are as follows: (1) IBM or compatible personal computer with 640K RAM (at least 540K free memory), (2) math coprocessor, (3) MS- or PC-DOS version 5.0 or later, (4) Microsoft MSCDEX version 2.1 or later, (5) CD-ROM drive with ISO 9660 software driver, (6) hard disk drive (5MB free), (7) Super VGA graphics card (640x480 pixels with 256 colors), and (8) VGA color monitor.

DDS-0012. COLORADO, UTAH. Photographs of historical mining operations in Colorado and Utah from the U.S. Geological Survey Library, by J. K. McGregor and C. C. Abston. 1994. 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) 640K RAM, (3) MS or PC-DOS version 5.0 or later, (4) Super VGA graphics card (640x480 pixels with 256 colors), (5) Super VGA 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-0013. International Phase of Ocean Drilling; Seismic Line 1 demultiplexed data, Cape Hatteras to Mid-Atlantic Ridge, by F. N. Zihlman, C. C. Abston, D. J. Taylor, W. F. Agena and H. L. Oliver. 1994. 39 CD-ROMs.

This CD-ROM was produced in accordance with the ISO 9660 standard, and the data are accessible from any computer platform having a CD-ROM device complying with that standard. The SEG-Y data, observers' logs, and shotpoint-location map display software are intended for use only on DOS-based computer systems. The SEG-Y data review and editing program is intended for use on DOS-based and Data General UNIX systems. The source code may be compiled for use on any system supporting an ANSI-compliant C compiler. The minimum DOS system requirements to use the display software as follows: (1) IBM or compatible personal computer, having an 80286 or higher numbered processor, (2) 512K RAM, (3) MS-DOS or PC-DOS version 3.1 or later, (4) Microsoft MSCDEX version 2.1 or later, (5) CD-ROM drive with ISO 9660 software driver, and (6) EGA, VGA, or Hercules graphics system.

DDS-0016. WASHINGTON. Deep seismic reflection studies in the Pacific Northwest United States, data visualization disc, by W. J. Gwilliam, D. J. Taylor, G. V. Latham, S. C. Krehbiel, W. D. Stanley and K. J. Westhusing. Prepared in cooperation with the U.S. Department of Energy, Morgantown Energy Technology Center. 1994. One CD-ROM.

DOS environment system requirements: (1) Intel 80386 or higher processor, (2) DOS version 3.1 or higher, (3) Microsoft MSCDEX version 2.1 or higher, (4) CD-ROM drive with ISO 9660 software driver, (5) EGA, VGA, or SVGA graphics system, and (6) math coprocessor is not required but will be used if available and is strongly recommended.

DDS-0018-A. National Geochemical Data Base; National Uranium Resource Evaluation data for the conterminous United States, by J. D. Hoffman and K. P. Buttleman; MAPPER display software by R. A. Ambroziak; MAPPER documentation by C. A. Cook. 1994. One CD-ROM. (Supersedes DDS-1.)

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 access the data with the software provided on the CD-ROM are as follows: (1) IBM or compatible personal computer, (2) 640K RAM (at least 540K free memory), (3) math coprocessor, (4) hard disk drive, (5) VGA graphics card, (6) VGA color monitor, (7) MS- or PC-DOS version 5.0 or later, (7) MS- or PC-DOS version 5.0 or later, (8) Microsoft MSCDEX version 2.1 or later, (9) CD-ROM drive with ISO 9660 software driver, and (10) a Microsoft-compatible mouse is highly recommended.

DDS-0023. Photoglossary of marine and continental ichnofossils, by S. T. Hasiotis, T. M. Bown and C. C. Abston. 1994. One CD-ROM.

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) 640K RAM, (3) MS- or PC-DOS version 5.0 or later, (4) Microsoft MSCDEX version 2.1 or later, (5) CD-ROM drive with ISO 9660 software driver, (6) hard disk drive, (7) Super VGA graphics card (640×480; 256 color), and (8) SVGA color monitor.

DDS-0025. 500-MHz ground penetrating radar data collected during an intentional spill of tetrachloroethylene at Canadian Forces Base Borden in 1991, by K. A. Sander and G. R. Olhoeft. Prepared in cooperation with the U.S. Environmental Protection Agency and the Waterloo Centre for Groundwater Research. 1994. One CD-ROM.

The minimum system requirements to use the data with the software provided on this disc are as follows: (1) IBM or compatible presonal computer with math coprocessor, (2) 386DX or 486DX or Pentium, (3) 4.0MB RAM (3.5MB available), (4) MS- or PC-DOS version 5.0 or later, (5) SVGA graphics card (1024 (col) by 768 (row) by 256 colors), (6) SVGA color monitor, (7) Microsoft MSCDEX version 2.1 or later, (8) CD-ROM drive with ISO 9660 software driver, and (9) hard disk drive.

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 0932-D. WYOMING. Leidy Formation; new name for a Pleistocene glacio-fluviatile-lacustrine sequence in northwestern Wyoming, by J. D. Love. Prepared in cooperation with the Geological Survey of Wyoming and the Department of Geology of the University of Wyoming. 1994. p. D1-D13. (Geology of the Teton-Jackson Hole region, northwestern Wyoming.)

P 1044-L. OREGON. Hydrothermal systems of the Cascade Range, north-central Oregon, by S. E. Ingebritsen, R. H. Mariner and D. R. Sherrod. 1994. p. L1-L86. 2 plates in pocket. (Geohydrology of geothermal systems.) (Supersedes Open-file report 91-69.)

P 1395. Map projections; a working manual, by J. P. Snyder. 1987 (1994). 383 p. 1 plate in pocket (Reprint.)

P 1404-K. Geohydrology and simulation of ground-water flow in the Northern Atlantic Coastal Plain aquifer system, by P. P. Leahy and Mary Martin. 1993. p. K1-K81. 22 plates in separate case. (Regional Aquifer-System Analysis; Northern Atlantic Coastal Plain.)

P 1409-H. NEVADA. Ground-water flow and simulated effects of development in Stagecoach Valley, a small, partly drained basin in Lyon and Storey counties, western Nevada, by J. R. Harrill and A. M. Preissler. 1994. p. H1-H74. (Regional Aquifer-System Analysis; Great Basin, Nevada-Utah)

P 1410-D. Geochemistry of ground water in the Southeastern Coastal Plain aquifer system in Mississippi, Alabama, Georgia, and South Carolina, by R. W. Lee. 1993. p. D1-D72. 6 plates in separate case. (Regional Aquifer-System Analysis; Southeastern Coastal Plain.)

P 1410-H. ALABAMA. Geohydrology of the Southeastern Coastal Plain aquifer system in Alabama, by Michael Planert, J. S. Williams and S. S. DeJarnette. 1993. p. H1-H75. 6 plates in pocket. (Regional Aquifer-System Analysis; Southeastern Coastal Plain.)

P 1413-B. WASHINGTON, OREGON, IDAHO. The hydrogeologic framework and geochemistry of the Columbia Plateau Aquifer System, Washington, Oregon, and Idaho, by K. J. Whiteman, J. J. Vaccaro, J. B. Gonthier and H. H. Bauer. 1994. p. B1-B73. (Regional Aquifer-System Analysis; Columbia Plateau, Washington-Oregon.)

P 1414-B. Regional aquifers in Kansas, Nebraska, and parts of Arkansas, Colorado, Missouri, New Mexico, Oklahoma, South Dakota, Texas, and Wyoming; geohydrologic framework, by D. G. Jorgensen, J. O. Helgesen and J. L. Imes. 1993. p. B1-B72. 25 plates in pocket. (Regional Aquifer-System Analysis; central Midwest.)

P 1414-D. Geohydrology of the Ozark Plateaus aquifer system in parts of Missouri, Arkansas, Oklahoma, and Kansas, by J. L. Imes and L. F. Emmett. 1994. p. D1-D127. (Regional Aquifer-System Analysis; central Midwest.)

P 1414-E. NEBRASKA, COLORADO, KANSAS. Hydrology of the Great Plains aquifer system in Nebraska, Colorado, Kansas, and adjacent areas, by J. O. Helgesen, R. B. Leonard and R. J. Wolf. 1993. p. E1-E80. 10 plates in separate case. (Regional Aquifer-System Analysis; central Midwest.)

P 1439. OREGON, IDAHO, WASHINGTON. Geology of the Blue Mountains region of Oregon, Idaho, and Washington; stratigraphy, physiography, and mineral resources of the Blue Mountains region, edited by T. L. Vallier and H. C. Brooks, U.S. Geological Survey. 1994. 198 p.

1. Sedimentology and stratigraphy of the Martin Bridge Limestone and Hurwal Formation (Upper Triassic to Lower Jurassic) from the Wallowa Terrane, Oregon, by M. F. Follo, University of North Carolina. p. 1-27.

2. The Mesozoic geologic evolution of the northern Wallowa Terrane, northeastern Oregon and western Idaho, by P. M. Goldstrand, Oak Ridge National Laboratory. p. 29-53.

3. Geologic evolution of the Pittsburg Landing area, Snake River canyon, Oregon and Idaho, by D. L. White, Colton, Washington; and T. L. Vallier, U.S. Geological Survey. p. 55-73.

4. Intra-arc basin deposits within the Wallowa Terrane, Pittsburg Landing area, Oregon and Idaho, by J. D. L. White, University of California, Santa Barbara. p. 75-89.

5. Physiography of the Seven Devils Mountains and adjacent Hells Canyon of the Snake River, Idaho and Oregon, by T. R. Alpha and T. L. Vallier, U.S. Geological Survey. p. 91-100.

6. Geology of the Peck Mountain massive sulfide prospect, Adams County, Idaho, by J. R. Mangham, Charlottesville, Virginia. p. 101-111.

7. Geology, mineralization, and alteration of the Red Ledge volcanogenic massive sulfide deposit, western Idaho, by R. H. Fifarek, Southern Illinois University; A. P. Juhas, Lakeside, Colorado; and C. W. Field, Oregon State University. p. 113-150.

8. Geology of the Iron Dyke Mine and surrounding Permian Hunsaker Creek Formation, by S. D. Bussey, Western Mining Corporation, Reno, Nevada; and P. J. LeAnderson, Jeddah, Saudi Arabia. p. 151-181.

9. The environmental and tectonic significance of two coeval Permian radiolarian-sponge associations in eastern Oregon, by B. L. Murchey, U.S. Geological Survey; and D. L. Jones University of California, Berkeley. p. 183-198.

P 1470. TENNESSEE. Gradation processes and channel evolution in modified West Tennessee streams; process, response, and form, by Andrew Simon. Prepared in cooperation with the Tennessee Department of Transportation. 1994. 84 p.

P 1514. UTAH. Coal mine bumps as related to geologic features in the northern part of the Sunnyside District, Carbon County, Utah, by F. W. Osterwald (deceased), C. R. Dunrud, and D. S. Collins. 1993. 76 p. 5 plates in pocket.

P 1531. ALASKA. Systematic paleontology of Quaternary ostracode assemblages from the Gulf of Alaska; Part 2, Families Trachyleberididae, Hemicytheridae, Loxoconchidae, Paracytherideidae, by E. M. Brouwers. 1993. 47 p.

P 1534. Atlas of volcanic landforms on Mars, by C. A. Hodges and H. J. Moore. 1994. 194 p. 1 plate in pocket.

P 1535. A detailed taxonomy of Upper Cretaceous and lower Tertiary Crassatellidae in the Eastern United States; an example of the nature of extinction at the boundary, by G. L. Wingard. 1993. 131 p.

P 1538-A-C. Investigations of the New Madrid seismic zone, edited by K. M. Shedlock, U.S. Geological Survey; and A. C. Johnston, Memphis State University. 1994. 35 p. (Chapters A-C are issued as a single volume and are not available separately.)

A. Introduction; Investigations of the New Madrid seismic zone, by K. M. Shedlock, U.S. Geological Survey; and A. C. Johnston, Memphis State University. p. A1-A6.

B. Summary and discussion of crustal stress data in the region of the New Madrid seismic zone, by W. L. Ellis, U.S. Geological Survey. p. B1-B13.

C. Preliminary seismic reflection study of Crowley's Ridge, Northeast Arkansas, by R. B. VanArsdale, University of Arkansas; R. A. Williams, E. S. Schweig III, K. M. Shedlock, U.S. Geological Survey; L. R. Kanter, Memphis State University; and K. W. King, U.S. Geological Survey. p. C1-C16.

P 1538-D. Analysis of the origin of landslides in the New Madrid seismic zone, by R. W. Jibson and D. K. Keefer. 1994. p. D1-D23. (Investigations of the New Madrid seismic zone; edited by K. M. Shedlock and A. C. Johnston.)

P 1538-F-G. Investigations of the New Madrid seismic zone, edited by K. M. Shedlock; U.S. Geological Survey; and A. C. Johnston. 1994. 22 p. (Chapters F and G are issued as a single volume and are not available separately.)

F. Geodetically derived strain across the northern New Madrid seismic zone, by R. A. Snay, NOAA; J. F. Ni, New Mexico State University; and H. C. Neugebauer, NOAA. p. F1-F6.

G. Seismic hazard mitigation in the central United States; the role of the states, by R. B. Olshansky, University of Illinois. p. G1-G16.

P 1540. WYOMING. Distribution and stratigraphic correlation of upper Paleocene and lower Eocene fossil mammal and plant localities of the Fort Union, Willwood, and Tatman formations, southern Bighorn Basin, Wyoming, by T. M. Bown, U.S. Geological Survey; K. D. Rose, Johns Hopkins University School of Medicine; E. L. Simons, Duke University Primate Center; and S. L. Wing, Smithsonian Institution. 1994. 103 p. 2 plates in pocket.

P 1541. ARIZONA. Mantle origin and flow sorting of megacryst-xenolith inclusions in mafic dikes of Black Canyon, Arizona, by J. E. Nielson and J. K. Nakata. 1994. 41 p.

P 1548. Hydrogeology of Jurassic and Triassic wetlands in the Colorado Plateau and the origin of tabular sandstone uranium deposits, by R. F. Sanford. 1994. 40 p.

P 1550-F. CALIFORNIA. The Loma Prieta, California, earthquake of October 17, 1989; tectonic processes and models, edited by R. W. Simpson, U.S. Geological Survey. 1994. p. F1-F131. (Earthquake occurrence; coordinated by W. H. Bakun and W. H. Prescott.)

Introduction, by R. W. Simpson, U.S. Geological Survey. p. F1-F2.

Relations between folding and faulting in the Loma Prieta epicentral zone; strike-slip fault-bend folding, by J. H. Shaw, R. E. Bischke, and John Suppe, Princeton University. p. F3-F21.

Geologic assessment of the relative contribution of strike-slip faulting, reverse-slip faulting, and bulk squeezing in the creation of the central Santa Cruz Mountains, California, by Gianluca Valensise, Istituto Nazionale di Geofisica, Italy. p. F23-F47.

Complex fault interactions in a restraining bend on the San Andreas Fault, southern Santa Cruz Mountains, California, by S. Y. Schwartz, D. L. Orange, and R. S. Anderson, University of California at Santa Cruz. p. F49-F54.

Earthquake-induced static-stress changes on Central California faults, by R. W. Simpson and P. A. Reasenberg, U.S. Geological Survey. p. F55-F89.

Cumulative slip along the peninsular section of the San Andreas Fault, California, estimated from two-dimensional boundary-element models of historical rupture, by Paul Bodin and Roger Bilham, University of Colorado. p. F91-F101.

Three-dimensional lithospheric kinematics in the Loma Prieta region, California; implications for the earthquake cycle, by K. P. Furlong and David Verdonck, Pennsylvania State University. p. F103-F131.

P 1551-A. CALIFORNIA. The Loma Prieta, California, earthquake of October 17, 1989; strong ground motion, edited by R. D. Borcherdt, U.S. Geological Survey. 1994. p. A1-A272. (Strong ground motion and ground failure; coordinated by T. L. Holzer.)

Synopsis, by R. D. Borcherdt, U.S. Geological Survey. p. A1-A7.

Strong-motion recordings, by A. G. Brady, U.S. Geological Survey; and A. F. Shakal, California Division of Mines and Geology. p. A9-A38.

Effect of known three-dimensional crustal structure on the strong ground motion and estimated slip history of the earthquakes, by V. F. Cormier and Wei-Jou Su, University of Connecticut. p. A39-A52.

Simulation of strong ground motion, by J. L. Stevens, Maxwell Laboratories; and S. M. Day, San Diego State University. p. A53-A60.

Influence of near-surface geology on the direction of ground motion above a frequency of 1 Hz, by J. E. Vidale, U.S. Geological Survey; and Ornella Bonamassa, University of California at Santa Cruz. p. A61-A66.

Effect of critical reflections from the Moho on the attenuation of strong ground motion, by P. G. Somerville, N. F. Smith, and R. W. Graves, Woodward-Clyde Consultants. p. A67-A75.

Influences of local geology on strong and weak ground motions recorded in the San Francisco Bay region and their implications for site-specific building-code provisions, by R. D. Borcherdt and G. N. Glassmoyer, U.S. Geological Survey. p. A77-A108.

Ground response on Treasure Island, by K. M. Rollins, M. D. Mchood, Brigham Young University; R. D. Hryciw, Matthew Homolka, University of Michigan; and S. E. Shewbridge, Tensar. p. A109-A121.

Ground-response studies at the Alameda Naval Air Station, by Harvey Carlisle, U.S. Naval Civil Engineering Laboratory; and K. M. Rollins, Brigham Young University. p. A123-A143.

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- Wa Earth Science Informaton Center, U.S. Department of the Interior, Rm. 2650, 1849 C St., NW., Washington, DC 20240. (Closed.)
- Wb U.S. Department of the Interior, Natural Resources Library, Gifts and Exchange Section, 1849 C St., NW., Washington, DC 20240.

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Lake Michigan Basin, by J. M. Fenelon. p. 17-24.

St. Joseph River basin, by K. K. Fowler. p. 25-34.

Kankakee River basin, by J. M. Fenelon. p. 35-50.

Maumee River basin, by T. K. Greeman. p. 51-62.

Upper Wabash River basin, by T. K. Greeman. p. 63-84.

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Lower Wabash River basin, by K. E. Bobay. p. 101-112.

White River basin, by M. E. Hoover and J. M. Durbin. p. 113-134.

East Fork White River basin, by J. M. Fenelon and T. K. Greeman. p. 135-156.

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WRI 93-4191. VIRGINIA. Ground-water discharge from the coastal plain of Virginia, by D. L. Richardson. Prepared in cooperation with the Department of Environmental Quality, Water Division. 1994. 15 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 3600 West Broad St., Room 606, Richmond, VA 23230; 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.)

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OF 91-0298. UTAH, NEVADA, IDAHO. Landslide deposits in the Grouse Creek 30′ × 60′ Quadrangle, Utah, Nevada, and Idaho, by R. B. Colton. Prepared in cooperation with the Utah Geological and Mineral Survey. 1994. 5 p., 1 over-size sheet, scale

1:100,000 (1 inch = about 1.6 miles). (NC, Da, M, U; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1403.)

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OF 92-0020-H. Geological map of ophiolite complexes and associated volcanic arc and metamorphic terranes of northeastern Russia, by A. J. Khanchuk, S. A. Palandzjan and I. V. Panchenko. Prepared in cooperation with the Russian Academy of Sciences, Far East Branch. 1994. 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.)

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OF 92-0136. Guidelines for preparing a quality assurance plan for district offices of the U.S. Geological Survey, by L. J. Schroder and W. J. Shampine. 1992. 14 p. (NC, Da, M, Wb.)

OF 92-0155. RHODE ISLAND. Hydrologic data for Block Island, Rhode Island, by Emily Burns. Prepared in cooperation with the Town of New Shoreham. 1993. 141 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 237 John O. Pastore Federal Bldg., Providence, RI 02903.)

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OF 92-0171. TEXAS. Simulation of ground-water flow and the movement of saline water in the Hueco Bolson aquifer, El Paso, Texas, and adjacent areas, by G. E. Groschen. Prepared in cooperation with the El Paso Water Utilities-Public Service Board, Texas Water Development Board, and U.S. Department of Defense. 1994. 87 p. (NC, Da, M, Wb; USGS, WRD, 8011 Cameron Rd., Austin, TX 78753.)

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OF 92-0259. UTAH. Analytical results and sample locality map of stream-sediment and heavy-mineral-concentrate samples from the Deep Creek Mountains Wilderness Study Area, Juab and Tooele counties, Utah, by B. F. Arbogast, P. L. Hageman, R. H. Hill, D. L. Fey and D. R. Zimbelman. 1993. 22 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 92-0272. CALIFORNIA. San Francisco Bay area, California, earthquake faults; the BASIX, by D. V. Prose. 1994. 2 p., 1 VHS videotape. (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.)

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OF 92-0288. ARKANSAS. Mineralogical and chemical composition of samples from the Christy vanadium-titanium deposit, Hot Spring County, Arkansas, by G. N. Breit, C. A. Rice, D. L. Fey and W. J. Sadler. 1992. 41 p. (NC, Da, M; Arkansas Geol. Commission, 3815 West Roosevelt Rd., Little Rock, AR 72204.)

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OF 92-0368-B. NEVADA, CALIFORNIA. Bibliography for Triassic and Jurassic magmatic arc, western Nevada and eastern California, compiled by Verne Beardslee and Howard McCarthy. 1993. One 5 1/4 inch diskette. (NC, Da, M, U; California Dep. of Conservation Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., 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.)

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OF 92-0393. Lead-isotopic characteristics of the Cracow-Silesia Zn-Pb ores, southern Poland, by S. E. Church and R. B. Vaughn. 1992. 16 p. (NC, Da, M.)

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The data described in this report are available on a 3 1/2 inch, high-density, and double-sided diskette formatted for IBM personal computers. The diskette 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.

OF 92-0435. CALIFORNIA. Loma Prieta, California, earthquake; video images, by D. V. Prose. 1994. 4 p., 1 VHS videotape. (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.)

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OF 92-0563. WASHINGTON. Geologic map of the Sasquatch Steps area, north flank of Mount St. Helens, Washington, by B. P. Hausback. 1992. 20 p., 2 over-size sheets, scale 1:4,000 (1 inch = about 350 feet). (NC, Da, M, S; Washington DNR/Div. of Geol. and Earth Resources Library, 1111 Washington St. SE, Olympia, WA 98501.)

OF 92-0631. NEW JERSEY. Records of wells, exploratory boreholes, and ground-water quality, Atlantic County and vicinity, New Jersey, by G. J. Barton, D. A. Storck and G. N. Paulachok. Prepared in cooperation with the New Jersey Department of Environmental Protection and Energy. 1993. 95 p., 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, Mountain View Office Park, 810 Bear Tavern Rd., Suite 206, West Trenton, NJ 08628.)

OF 92-0642. OKLAHOMA. Ground-water-quality assessment of the Central Oklahoma Aquifer, Oklahoma; geochemical and geohydrologic investigations, by D. L. Parkhurst, S. C. Christenson and G. N. Breit. 1993. 113 p. (NC, Da, M, Wb.)

OF 92-0650. NEVADA. Micrometeorological measurements at Ash Meadows and Corn Creek springs, Nye and Clark counties, Nevada, 1986-87, by M. J. Johnson and Alex Pupacko. 1992. 46 p., three 3 1/2 inch DS/HD IBM compatible diskettes. (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 92-0702. CALIFORNIA. Isostatic residual gravity map of the Palm Springs 1:100,000-scale Quadrangle, California, by D. A. Ponce and V. E. Langenheim. 1992. 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 92-0718. COLORADO. Measured sections of the Cambrian Sawatch Quartzite and Peerless Formation, and the lower part of the Ordovician Manitou Formation, Manitou Springs area, Front Range of Colorado, by T. S. Dyman and R. R. Charpentier. 1992. 8 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.)

OF 93-0009. WEST VIRGINIA. Preliminary bedrock geology of parts of the Burlington, Headsville, Old Fields, Romney, and Springfield quadrangles, Grant, Hampshire, Hardy, and Mineral counties, West Virginia, by R. A. Parker and T. D. Heibel. 1993. 6 over-size sheets. (NC, Da, M.)

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OF 93-0063. OREGON. Statistical summaries of streamflow data in Oregon; Volume 2, Annual low and high flow and instantaneous peak flow, by R. E. Wellman, J. M. Gordon and R. L. Moffatt. Prepared in cooperation with the Oregon Water Resources Department. 1993. 406 p., 1 over-size sheet, scale 1:750,000 (1 inch = about 12 miles). (NC, Da, M, Wb.)

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OF 93-0078. NORTH CAROLINA. Hydrologic and water-quality data in selected agricultural drainages in Beaufort and Hyde counties, North Carolina, 1990-92, by M. W. Treece, Jr. Prepared in cooperation with the North Carolina Department of Environment, Health, and Natural Resources. 1993. 98 p. (NC, Da, M, Wb.)

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OF 93-0151. MONTANA. Water-resources activities of the U.S. Geological Survey in Montana, October 1991 through September 1993, compiled by K. S. Midtlyng and C. J. Harksen. Prepared in cooperation with the State of Montana and other agencies. 1993. 80 p. (NC, Da, M, Wb.)

OF 93-0152. PENNSYLVANIA. Water-resources investigations in Pennsylvania; programs and activities of the U.S. Geological Survey, 1993, compiled by L. O. McLanahan. 1993. 74 p. (NC, Da, M, Wb; USGS, WRD, 840 Market St., Lemoyne, PA 17043-1586; Great Valley Corporate Ctr., 111 Great Valley Pkwy., Malvern, PA 19355; and Room 2204 Federal Bldg., 1000 Liberty Ave., Pittsburgh, PA 15222.)

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P.O. Box 1044, Room 208 Federal Bldg., 275 3rd St., Elko, NV 89801.)

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1. The USGS/EPA state radon potential assessments; an introduction, by L. C. Gundersen, R. R. Schumann and S. W. White. p. 1-35.

2. EPA Region 1 geologic radon potential summary, by L. C. Gundersen, R. R. Schumann and S. L. Szarzi. p. 36-46.

3. Preliminary geologic radon potential assessment of Connecticut, by L. C. Gundersen and R. R. Schumann. p. 47-82.

4. Preliminary geologic radon potential assessment of Maine, by L. C. Gundersen and R. R. Schumann. p. 83-122.

5. Preliminary geologic radon potential assessment of Massachusetts, by R. R. Schumann and L. C. Gundersen. p. 123-156.

6. Preliminary geologic radon potential assessment of New Hampshire, by L. C. Gundersen and R. R. Schumann. p. 157-190.

7. Preliminary geologic radon potential assessment of Rhode Island, by L. C. Gundersen and R. R. Schumann. p. 191-218.

8. Preliminary geologic radon potential assessment of Vermont, by L. C. Gundersen and R. R. Schumann. p. 219-245.

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2. EPA Region 2 geologic radon potential summary, by L. C. Gundersen and R. R. Schumann. p. 36-43.

3. Preliminary geologic radon potential assessment of New Jersey, by L. C. Gundersen and R. R. Schumann. p. 44-83.

4. Preliminary geologic radon potential assessment of New York, by L. C. Gundersen and R. R. Schumann. p. 84-131.

OF 93-0292-C. Geologic radon potential of EPA Region 3; Delaware, Maryland, Pennsylvania, Virginia, and West Virginia, edited by R. R. Schumann. Prepared in cooperation with the U.S. Environmental Protection Agency. 1993. 206 p. (NC, Da, M; Delaware Geol. Surv., Univ. of Delaware, 101 Penny Hall, Newark, DE 19716; Maryland Geol. Surv., 2300 St. Paul St., Baltimore, MD 21218; Bur. of Topographic and Geol. Surv., Dep. of Environmental Resources, P.O. Box 2357, Harrisburg, PA 17120; Virginia Div. of Mineral Resources, P.O. Box 3667, Charlottesville, VA 22903; West Virginia Geol. and Economic Surv., Mont Chateau Research Ctr., P.O. Box 879, Morgantown, WV 26507-0879.)

1. The USGS/EPA state radon potential assessment; an introduction, by L. C. Gundersen, R. R. Schumann and S. W. White. p. 1-35.

2. EPA Region 3 geologic radon potential summary, by L. C. Gundersen, J. K. Otton and S. L. Szarzi. p. 36-47.

3. Preliminary geologic radon potential assessment of Delaware, by L. C. Gundersen. p. 48-72.

4. Preliminary geologic radon potential assessment of Maryland, by L. C. Gundersen. p. 73-104.

5. Preliminary geologic radon potential assessment of Pennsylvania, by L. C. Gundersen and J. P. Smoot. p. 105-145.

6. Preliminary geologic radon potential assessment of Virginia, by L. C. Gundersen. p. 146-184.

7. Preliminary geologic radon potential assessment of West Virginia, by J. K. Otton and L. C. Gundersen. p. 185-206.

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2. EPA Region 4 geologic radon potential summary, by L. C. Gundersen, J. K. Otton and R. R. Schumann. p. 36-51.

3. Preliminary geologic radon potential assessment of Alabama, by L. C. Gundersen. p. 52-79.

4. Preliminary geologic radon potential assessment of Florida, by J. K. Otton. p. 80-104.

5. Preliminary geologic radon potential assessment of Georgia, by L. C. Gundersen and J. P. Smoot. p. 105-138.

6. Preliminary geologic radon potential assessment of Kentucky, by R. R. Schumann. p. 139-161.

7. Preliminary geologic radon potential assessment of Mississippi, by L. C. Gundersen. p. 162-182.

8. Preliminary geologic radon potential assessment of North Carolina, by L. C. Gundersen. p. 183-220.

9. Preliminary geologic radon potential assessment of South Carolina, by L. C. Gundersen. p. 221-245.

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2. EPA Region 5 geologic radon potential summary, by R. R. Schumann, D. E. Owen and S. L. Szarzi. p. 36-41.

3. Preliminary geologic radon potential assessment of Illinois, by R. R. Schumann. p. 42-72.

4. Preliminary geologic radon potential assessment of Indiana, by R. R. Schumann. p. 73-96.

5. Preliminary geologic radon potential assessment of Michigan, by R. R. Schumann. p. 97-121.

6. Preliminary geologic radon potential assessment of Minnesota, by R. R. Schumann and K. M. Schmidt. p. 122-147.

7. Preliminary geologic radon potential assessment of Ohio, by D. E. Owen. p. 148-170.

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1. The USGS/EPA state-radon potential assessments; an introduction, by L. C. Gundersen, R. R. Schumann and S. W. White. p. 1-35.

2. EPA Region 6 geologic radon potential summary, by L. C. Gundersen, J. K. Otton, R. F. Dubiel and S. L. Szarzi. p. 36-44.

3. Preliminary geologic radon potential assessment of Arkansas, by L. C. Gundersen. p. 45-67.

4. Preliminary geologic radon potential assessment of Louisiana, by L. C. Gundersen. p. 68-88.

5. Preliminary geologic radon potential assessment of New Mexico, by R. F. Dubiel. p. 89-114.

6. Preliminary geologic radon potential assessment of Oklahoma, by J. K. Otton. p. 115-134.

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OF 93-0296. CALIFORNIA. Assessment of mineral resource potential of the western half of the Redding 1:250,000 Quadrangle, northwestern California, by M. L. Silberman, J. R. Hassemer, Jennifer Force and R. B. Tripp. 1994. 68 p. (NC, Da, M, A; 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; Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

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OF 93-0317. OREGON. Onshore-offshore wide-angle seismic recordings from central Oregon; the ocean bottom seismometer data, by A. M. Tréhu and Yosio Nakamura. 1993. 30 p., 3 over-size sheets. (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 956, 800 NE Oregon St. #28, Portland, OR 97232.)

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OF 93-0326-A. KENTUCKY. Surface-water-quality assessment of the Kentucky River basin in Kentucky; chemical analyses of major, minor, and trace elements in fine-grained streambed sediments, by J. L. Ryder, R. F. Sanzolone and S. D. Porter. 1993. 89 p., 1 over-size sheet, scale 1:500,000 (1 inch = about 8 miles). (NC, Da, M; Kentucky Geol. Surv., Univ. of Kentucky, 311 Breckinridge Hall, Lexington, KY 40506; Pirth Geol. Library, 100 Bowman Hall, Univ. of Kentucky, Lexington, KY 40506.)

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One 5 1/4 inch DS/HD IBM compatible diskette. MS-DOS 2.0 or greater, math coprocessor required for the conversion program which is included on the diskette.

OF 93-0331. ALASKA. Onshore oil and gas resource assessment areas; Alaska 1993, by G. L. Dolton, K. J. Bird, K. L. Varnes and D. L. Gautier. 1993. 1 over-size sheet, scale 1:5,000,000 (1 inch = about 80 miles). (NC, Da, M, S, A; Alaska Dep. of Natural Resources, 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.)

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OF 93-0350. DISTRICT OF COLUMBIA. Preliminary report on examination of column capitals at the Jefferson Memorial, Washington, D.C., by E. S. McGee and M. E. Woodruff. 1993. 25 p. (NC, Da, M.)

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OF 93-0353. Iterative restoration deblurring of SPOT panchromatic images, by G. P. Lemeshewsky. 1993. 26 p. (M, Da, NC.)

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OF 93-0355. A comparison of change detection methods using multispectral scanner data, by P. M. Seevers, B. K. Jones, Zhicheng Qiu and Yutong Liu. 1993. 24 p. (M, Da, NC.)

OF 93-0357. NEVADA. A response to "Milankovitch theory viewed from Devils Hole" by J. Imbrie, A. C. Mix and D. G. Martinson, by I. J. Winograd and J. M. Landwehr. 1993. 9 p. (NC, Da, M, Wb.)

OF 93-0359. WASHINGTON, OREGON. Selected ground-water information for the Columbia Plateau regional aquifer system, Washington and Oregon, 1982-85; Volume III, Ground-water quality data, by R. J. Wagner and R. C. Lane. 1994. 226 p. (NC, Da, M, Wb, S; USGS, WRD, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402; and Room 656, U.S. Court House, West 920 Riverside Ave., Spokane, WA 99201.)

OF 93-0362. MISSOURI. Occurrence of selected pesticides, nutrients, selected trace elements, and radionuclides in ground and surface water from west-central Missouri; July 1990-March 1991, by A. C. Ziegler, D. H. Wilkison and R. D. Maley. Prepared in cooperation with the Missouri Department of Health. 1994. 65 p. (NC, Da, M, Wb.)

OF 93-0364. FLORIDA. Estimated discharge of treated wastewater in Florida, 1990, by R. L. Marella. Prepared in cooperation with the Florida Department of Environmental Protection. 1994. 53 p. (NC, Da, M, Wb.)

OF 93-0365. TENNESSEE. Ground-water quality for Grainger County, Tennessee, by J. D. Weaver, A. R. Patel and A. C. Hickey. Prepared in cooperation with Grainger County. 1994. 14 p. (NC, Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville, TN 32703; 1013 North Broadway, Knoxville, TN 37917; and AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)

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OF 93-0370. NEW YORK. Water-resources of Monroe County, New York, water years 1984-88, with emphasis on water quality in the Irondequoit Creek basin; Part 1, Water-resources data, by W. H. Johnston and D. A. Sherwood. Prepared in cooperation with the Monroe County Department of Health. 1994. 311 p. (NC, Da, M, Wb; USGS, WRD, 903 Hanshaw Rd., Ithaca, NY 14850.)

OF 93-0372. WEST VIRGINIA, OHIO. Water-quality data for the Ohio River from Willow Island Dam to Belleville Dam, West Virginia and Ohio, June-October 1991, by D. B. Chambers, K. F. Miller, M. C. Waldron and C. W. Falkenburg. Prepared in cooperation with the City of New Martinsville, West Virginia. 1994. 114 p. (NC, Da, M, Wb; USGS, WRD, 603 Morris St., Charleston, WV 25301.)

OF 93-0373. MINNESOTA. Crude-oil spill research project near Bemidji, Minnesota; bibliography, 1984-94, by S. E. Smith and M. F. Hult. Prepared in cooperation with the U.S. Geological Survey Toxic Substances Hydrology Program. 1994. 15 p. (NC, Da, M, Wb.)

OF 93-0375. MISSISSIPPI. Total water withdrawals in Mississippi, 1990, by P. M. Johnson. Prepared in cooperation with the Mississippi Department of Environmental Quality, Office of Land and Water Resources. 1994. 67 p. (NC, Da, M, Wb.)

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OF 93-0377. Potential of hot-dry-rock geothermal energy in the Eastern United States, by J. H. Sass and others. Prepared in cooperation with the U.S. Department of Energy. 1993. 37 p. (NC, Da, M.)

OF 93-0378. CALIFORNIA. Bulk and shear moduli of near-surface geologic units near the San Andreas Fault at Parkfield, California, by M. Stewart and M. J. Johnston. 1993. 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 93-0379. The USGS/USAID Volcano Disaster Assistance Program; the next five years, by C. D. Miller, J. W. Ewert and A. B. Lockhart. 1993. 7 p. (NC, Da, M.)

OF 93-0380-A. Make your own Earth and tectonic globes, by T. R. Alpha, S. W. Starratt and C. C. Chang. 1993. 14 p. (NC, Da, M.)

OF 93-0380-B. Make your own Earth and tectonic globes, by T. R. Alpha, S. W. Starratt and C. C. Chang. 1993. One 3 1/2 inch diskette. (NC, Da, M.)

Requirements are an Apple Macintosh computer with a hard disk and generic graphics and word-processing software (not supplied). The map projections and graphics are saved in PICT and paint format: the text was saved in Microsoft Word.

OF 93-0382. CALIFORNIA. Abundances of major elements and sedimentary components in cuttings from the Foxen, Sisquoc, Monterey, and Point Sal formations, OCS P-0315-1 Well, Point Arguello oil field, offshore Santa Maria Basin, Southern California, by C. M. Isaacs, M. D. Medrano, D. F. Siems and J. S. Mee. 1993. 32 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 93-0383. CALIFORNIA. Permanent ground movement associated with the 1992 M=7 Cape Mendocino, California, earthquake; implications for damage to infrastructure and hazards to navigation, by R. S. Stein, G. A. Marshall and M. H. Murray. 1993. 40 p., 2 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 93-0384. WYOMING, MONTANA. The question of recharge to the geysers and hot springs of Yellowstone National Park, by R. O. Rye and A. H. Truesdell. 1993. 40 p. (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701; Idaho Geol. Surv., Univ. of Idaho Campus, Morrill Hall, Room 332, Moscow, ID 83843; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071.)

OF 93-0385-A. MAINE. Total-field aeromagnetic map of portions of Penobscot, Piscataquis, and Aroostook counties, Maine, by K. R. Bond. 1993. 1 over-size sheet, scale 1:125,000 (1 inch = about 2 miles). (NC, Da, M.)

OF 93-0385-B. MAINE. Total-field aeromagnetic map of portions of Penobscot, Piscataquis, and Aroostook counties, Maine, by K. R. Bond. 1993. One 5 1/4 inch diskette. (NC, Da, M.)

The digital data are in ASCII format on a 5 1/4 inch IBM-compatible floppy disk.

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OF 93-0494. LOUISIANA, ARKANSAS. Saltwater in shallow aquifers in east-central and northeastern Louisiana and southeastern Arkansas, by G. F. Huff and J. P. Bonck. 1993. 54 p. (NC, Da, M, Wb; USGS, WRD, 3535 South Sherwood Forest Blvd., Suite 120, Baton Rouge, LA 70816.)

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OF 93-0497. CALIFORNIA, OREGON. Physical, chemical, and biological data for detailed study of irrigation drainage in the Klamath Basin, California and Oregon, 1990-92, by D. E. MacCoy. Prepared in cooperation with the U.S. Fish and Wildlife Service, U.S. Bureau of Reclamation, and U.S. Bureau of Indian Affairs. 1994. 168 p. (NC, Da, M, Wb; USGS, WRD, Room W-2233, Federal Bldg., 2800 Cottage Way, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)

OF 93-0498. ALABAMA. Streamflow and water-quality data for Lake Purdy and its tributaries, Jefferson and Shelby counties, Alabama, water years 1987-91, by V. E. Stricklin. Prepared in cooperation with the City of Birmingham, Water Works and Sewer Board. 1993. 32 p. (NC, Da, M, Wb; USGS, WRD, 520 19th Ave., Tuscaloosa, AL 35401.)

OF 93-0500. CALIFORNIA. Trace metals in clams (*Macoma balthica*) and sediments at the Palo Alto mudflat in South San Francisco Bay; June 1993-May 1993, by S. N. Luoma, D. J. Cain, C. L. Brown and M. I. Hornberger. Prepared in cooperation with the City of Palo Alto, California. 1993. 52 p. (NC, Da, M, Wb.)

OF 93-0503. CALIFORNIA. Map and checklists of Jurassic and Cretaceous macrofossil localities within the San Jose 1:100,000 Quadrangle, California, and discussion of paleontological results, by W. P. Elder and J. W. Miller. 1993. 49 p., 3 over-size sheets; sheet 1, 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 94109-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 93-0507. COLORADO. Chemical results and variability assessment of selected water-extractable constituents from soils of the Uncompahgre Project area, west-central Colorado, by K. C. Stewart, J. G. Crock and R. C. Severson. 1993. 27 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 Section, 1313 Sherman St., Room 818, Denver, CO 80203.)

OF 93-0510. MONTANA. Glaciers and glaciation in Glacier National Park, Montana, by P. E. Carrara. 1993. 18 p. (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)

OF 93-0514. HAWAII. Distribution of past debris flows and other rapid slope movements from natural hillslopes in the Honolulu District of Oahu, Hawaii, by D. M. Peterson, S. D. Ellen and D. L. Knifong. Prepared in cooperation with the City and County of Honolulu. 1993. 32 p., 2 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M.)

OF 93-0517. ARIZONA. Surficial geology, geomorphology, and erosion of archeologic sites along the Colorado River, eastern Grand Canyon, Grand Canyon National Park, Arizona, by Richard Hereford, H. C. Fairley, K. S. Thompson and J. R. Balsom. Prepared in cooperation with the U.S. Bureau of Reclamation, Glen Canyon Environmental Studies. 1993. 46 p., 4 over-size sheets; sheet 1, scale 1:1,000 (1 inch = about 85 feet); sheets 2-4, scale 1:2,000 (1 inch = 167 feet). (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., Tucson, AZ 85719.)

OF 93-0518. Discussions and recommendations from the workshop on the Impacts of volcanic ash on airport facilities, Seattle, Washington, April 26-28, 1993, by T. J. Casadevall. 1993. 52

p. (NC, Da, M, S, A; Geol. and Earth Resources Div., Dep. of Natural Resources, Olympia, WA 98504; David A. Johnston Cascade Volcano Observatory, 5400 MacArthur Blvd., Vancouver, WA 98661.)

OF 93-0520. CALIFORNIA. Aeromagnetic map of the Southern California borderland east of the Patton Escarpment, by V. E. Langenheim. 1993. 1 over-size sheet, scale 1:500,000 (1 inch = about 8 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 93-0523. Coal resource assessment of the Jherruck area, Sonda coal field, Sindh Province, Pakistan, by J. R. SanFilipo, S. A. Khan and A. H. Chandio. 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. 151 p., 19 over-size sheets, scale 1:50,000 (1 inch = about 4,200 feet). (NC, Da, M.)

OF 93-0530. Rasterizing vector and discrete data with the Woods Hole Image Processing System software, by V. F. Paskevich. 1993. 61 p. (NC, Da, M.)

OF 93-0531. UISO; a program for calculation of ^{230}Th-^{234}U-^{238}U isochron ages, by K. R. Ludwig. 1993. 9 p. (NC, Da, M.)

OF 93-0532. Distribution of mineral deposits in the United States-Mexico border region, by Center for Inter-American Mineral Resource Investigations (CIMRI), *with contributions by* G. J. Orris, K. S. Bolm, Marguerite Carbonaro, Floyd Gray, K. R. Long, N. J Page, J. M. G. Staude, and Tina Wells. 1993. 29 p. (NC, Da, M.)

OF 93-0534. COLORADO. Geochemical and lead-isotope data from stream and lake sediments, and cores from the upper Arkansas River drainage; effects of mining at Leadville, Colorado on heavy-metal concentrations in the Arkansas River, by S. E. Church, *with contributions by* C. W. Holmes, P. H. Briggs, R. B. Vaughn, J. D. Cathcart, and Margaret Marot. 1993. 61 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 Section, 1313 Sherman St., Room 818, Denver, CO 80203.)

OF 93-0535. OREGON. Digital recordings of aftershocks of the March 25, 1993, Scotts Mills, Oregon, earthquake, by D. L. Carver, D. M. Worley and T. S. Yelin. 1993. 117 p. (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232-2162.)

OF 93-0537. Publications of the Branch of Atlantic Marine Geology for calendar year 1992, by M. C. Mons-Wengler and R. N. Oldale. 1993. 30 p. (NC, Da, M.)

OF 93-0539. OHIO. Winter coastal observations, Lake Erie, Ohio shore, by P. W. Barnes, Michael McCormick and D. E. Guy, Jr. 1993. 28 p. (NC, Da, M.)

OF 93-0541. MARIANA ISLANDS. Volcanologic investigations in the Commonwealth of the Northern Mariana Islands, May 1992, by R. B. Moore, R. Y. Koyanagi, M. K. Sako, F. A. Trusdell, R. L. Ellorda and George Kojima. Prepared in cooperation with the Commonwealth of the Northern Mariana Islands, Disaster Control Office. 1993. 37 p. (NC, Da, M; Div. of Water and Land Dev., P.O. Box 373, Honolulu, HI 96809.)

OF 93-0542. Proceedings of Conference LXII; eighth joint meeting of the U.S.-Japan conference on natural resources (UJNR), panel on earthquake prediction technology, November 16-21, 1992, chaired by R. L. Wesson and Yamato Miyazaki. 1993. 280 p. (NC, Da, M.)

Opening remarks, by W. L. Ellsworth. p. x.

Opening remarks, by Yamato Miyazaki. p. x.

Activities of the Coordinating Committee for Earthquake Prediction, by Yamato Miyazaki and Yoshitake Egawa. p. 1-10.

A tsunami about 1000 years ago in Puget Sound, Washington, by B. F. Atwater and A. L. Moore. p. 11-14.

Study of turbidite as an indicator of an earthquake and its intensity, by Yoshio Inouchi, Yoshihiro Kinugasa and Fujio Kumon. p. 15.

Great subduction-zone earthquakes in the Pacific Northwest? Differentiating coseismic from nontectonic tidal-marsh deposits along the Oregon coast, by A. R. Nelson. p. 16-22.

Comparison of paleoseismic geology of subduction zone earthquakes in Alaska and Cascadia, by G. A. Carver. p. 23.

Some features of large shallow earthquakes along subduction zones and the Recent crustal activities in the Tokai (Japan) region, by Kiyoo Mogi. p. 24-45.

Seismic gap hypothesis; ten years after; discussion, by S. P. Nishenko and L. R. Sykes. p. 46-71.

Recurrence history of great subduction zone earthquakes along the Sagami and Suruga-Nankai troughs, Japan, and its tectonic implication, by Katsuhiko Ishibashi. p. 72.

Strong ground motion prediction for Cascadia subduction earthquakes, by P. G. Somerville. p. 73-74.

Abrupt uplift within the past 1700 years at southern Puget Sound, Washington, by R. C. Bucknam, Eileen Hemphill-Haley and E. B. Leopold. p. 75-78.

The work of the Coastal Movements Data Center, by Shouichi Matsumura. p. 79-93.

Seismicity, stress orientation and configuration of the Aleutian megathrust in the vicinity of the great 1964 Alaska earthquake, by C. D. Stephens, R. A. Page, J. C. Lahr, K. A. Fogleman, T. M. Brocher, M. A. Fisher and E. L. Geist. p. 94-104.

Regional seismic network recording and analysis under technological change, by S. D. Malone. p. 105-109.

The plan for intensified observational facilities for prediction research of earthquakes occurring in the Tokyo metropolitan area, by Kazuo Hamada. p. 110.

Probing the active subduction zone of the Pacific NW, USA, by W. D. Mooney, J. H. Luetgert, E. E. Criley, K. Miller, J. M. Gridley, G. R. Keller, A. M. Tréhu, J. L. Nabelek and N. I. Christensen. p. 111-114.

Cascadia subduction zone; large scale structure studies, by R. S. Crosson. p. 115.

Results of recent geodetic VLBI experiments by the Communications Research Laboratory, by Takeo Yoshino, F. Takahashi, H. Kunimori, Y. Koyama, Kosuke Heki, J. Amagai, T. Kondo, S. Matsuzaka, M. Tobita, Shouichi Matsumura and Masaki Murakami. p. 116-131.

New bathymetric survey and processing system based on Sea Beam 2000, by Akira Asada and Shigeru Kato. p. 132-141.

Statistics of earthquake precursors in Japan in the 20 years preceding the end of 1990, by Kazuo Hamada. p. 142.

A constitutive law for rate of earthquake production and its application to earthquake clustering, by J. H. Dieterich. p. 143-198.

Foreshock occurrence in Kanto, central Japan, and its performance as a precursor, by Masajiro Imoto. p. 199-213.

Seismicity and creep at Parkfield, by A. G. Lindh, K. S. Breckenridge and M. T. Gladwin. p. 214.

Relocation of earthquakes in the Parkfield region, Central California, 1932-1969, by K. L. Meagher. p. 215-223.

Probability estimation of large earthquake occurrence from the viewpoint of successiveness of seismic activity, by Noritake Nishide and Masaaki Seino. p. 224-236.

An overview of the 1992 Joshua Tree, Landers and Big Bear earthquakes, by L. J. Hwang. p. 237.

Seismicity in the Western United States remotely triggered by the M 7.4 Landers, California, earthquake of June 28, 1992, by D. P. Hill, P. A. Reasenberg, A. J. Michael, W. J. Arabasz, G. C. Beroza, J. N. Brune, D. S. Brumbaugh, Raul Castro, S. D. Davis, D. M. dePolo, W. L. Ellsworth, J. S. Gomberg, S. C. Harmsen, Leigh House, S. M. Jackson, M. J. Johnston, L. M. Jones, Randy Keller, S. D. Malone, Luis Munguia, S. J. Nava, J. C. Pechmann, A. R. Sanford, R. W. Simpson, R. S. Smith, M. A. Stark, M. C. Stickney, Antonio Vidal, S. R. Walter, Victor Wong and J. E. Zollweg. p. 238-276.

OF 93-0544. CALIFORNIA. Preliminary geologic map of the north-central San Bernardino Mountains, California, by J. C. Matti, H. J. Brown, F. K. Miller, C. T. Wrucke, J. P. Calzia and C. M. Conway. 1993. 9 p., 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 93-0545. ALASKA. Results of 110 apatite fission track analyses from the Brooks Range and North Slope of Northern Alaska, completed in cooperation with the Trans-Alaska Crustal Transect (TACT), by P. B. O'Sullivan, J. M. Murphy, T. E. Moore and D. G. Howell. 1993. 104 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 93-0547. 3D-DEF; a user's manual (a three-dimensional, boundary element modeling program), by J. S. Gomberg and Michael Ellis. 1993. 15 p. (NC, Da, M.)

OF 93-0548. COLORADO. Description, origin, and implications of a newly identified Slumgullion Landslide deposit, San Juan Mountains, southwestern Colorado, by A. F. Chleborad. 1993. 17 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 Section, 1313 Sherman St., Room 818, Denver, CO 80203.)

OF 93-0551-B. HAWAII. Annotated bibliography, seismicity of and near the Island of Hawaii and seismic hazard analysis of the East Rift of Kilauea, by F. W. Klein. 1994. 11 p. (NC, Da, M.)

OF 93-0551-C. HAWAII. Annotated bibliography; marine geologic hazards of the Hawaiian Islands with special focus on submarine slides and turbidity currents, by W. R. Normark and H. H. Herring. Prepared in cooperation with the U.S. Department of Energy. 1993. 29 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 93-0551-D. HAWAII. Annotated bibliography; hydrogeology of Kilauea Volcano, Hawaii, by S. E. Ingebritsen and M. A. Scholl. Prepared in cooperation with the U.S. Department of Energy. 1993. 30 p. (NC, Da, M.)

OF 93-0551-E. Annotated bibliography; volcanic gas emissions and their effect on ambient air character, by A. J. Sutton and T. Elias. Prepared in cooperation with the U.S. Department of Energy. 1993. 26 p. (NC, Da, M.)

OF 93-0552. CALIFORNIA. Mineral resource assessment of the San Bernardino National Forest, California; executive summary and a non-technical summary for land and resource managers, by J. P. Calzia. 1993. 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 93-0553. ARIZONA. Description of map units and discussion to accompany map showing surficial geology and geomorphology of the Palisades Creek Archeologic Area, Grand Canyon National Park, Arizona, by Richard Hereford. Prepared in cooperation with the U.S. Bureau of Reclamation, Glen Canyon Environmental Studies. 1993. 20 p., 1 over-size sheet, scale 1:2,000 (1 inch = 167 feet). (NC, Da, M, U; Arizona Geol. Surv., 845 North Park Ave., No. 100, Tucson, AZ 85719.)

OF 93-0555. NEVADA. Report on seismologic field investigations of the 29 June 1992 Little Skull Mountain earthquake, by M. E. Meremonte, Edward Cranswick, J. S. Gomberg, D. M. Worley, D. L. Carver, J. Brooks, Robert Banfill, D. E. Overturf and T. Bice. 1993. 95 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)

OF 93-0556. CALIFORNIA. Relation of Arias intensity to magnitude and distance in California, by R. C. Wilson. 1993. 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 93-0557. CALIFORNIA. Strong-motion accelerograph records from the M=7.5 Landers, California earthquake of June 28, 1992, by E. C. Etheredge, R. P. Maley, R. L. Porcella and J. C. Switzer. 1993. 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 93-0558. CALIFORNIA. Uranium-series analyses of evaporites from the 1000-foot PAN-3 core, Panamint Valley, California, by J. A. Fitzpatrick, J. L. Bischoff and G. I. Smith. 1993. 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 93-0559. NEVADA. The interdependence of the chemical compositions and the physical properties of non-pegmatite beryl from the Snake Range of eastern Nevada, by R. E. Van Loenen. 1993. 11 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)

OF 93-0560-A. Materials provided at the workshop Geophysical map interpretation on the PC, convened April 21-22, 1993, by V. J. Grauch, J. D. Phillips, D. B. Hoover, J. A. Pitkin, K. E. Livo and A. E. McCafferty. 1993. 210 p. (NC, Da, M.)

OF 93-0560-B. Materials provided at the workshop Geophysical map interpretation on the PC, convened April 21-22, 1993, by V. J. Grauch, J. D. Phillips, D. B. Hoover, J. A. Pitkin, K. E. Livo and A. E. McCafferty. 1993. Four 3 1/2 inch diskettes. (Version 2.11 update to potential-field software.) (NC, Da, M.)

Requires previous installation of version 2.0 (OF 92-18) or version 2.1 (Digital Data Series CD-ROM DDS-9) and a PC with a math coprocessor.

OF 93-0560-C. Materials provided at the workshop Geophysical map interpretation on the PC, convened April 21-22, 1993, by V. J. Grauch, J. D. Phillips, D. B. Hoover, J. A. Pitkin, K. E. Livo and A. E. McCafferty. 1993. Two 3 1/2 inch diskettes. (Version 1.03 REMAPP software.) (NC, Da, M.)

Does not require any previous installation of software nor math coprocessor, although obtaining test data sets and a printed version of the documentation text from version 1.00 (OF 90-88) may be desired.

OF 93-0560-D. NEVADA. Materials provided at the workshop Geophysical map interpretation on the PC, convened April 21-22, 1993, by V. J. Grauch, J. D. Phillips, D. B. Hoover, J. A. Pitkin, K. E. Livo and A. E. McCafferty. 1993. Eight 3 1/2 inch diskettes. (Getchell grids and image files.) (NC, Da, M.)

Includes binary grid and image files from the Getchell trend airborne geophysical project which were used during the workshop to demonstrate the techniques presented. In order to view the image files, installation of the updated potential-field software (OF 93-560-B and OF 92-18 or DDS-9) is required. In order to work the independent exercises, acquisition of all parts of OF 93-560 and OF 92-18 or DDS-9 are required.

OF 93-0562. CALIFORNIA. Macrofossils from the Imperial Formation in the Ocotillo Wells State Vehicle Recreation Area, Imperial and San Diego counties, California, by C. L. Powell, II. 1993. 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 93-0563. FLORIDA. Pliocene palynomorph census data from the Pinecrest Beds (Tamiami Formation), in Quality Aggregates Phase 6 pit, southwestern Florida, by D. A. Willard. 1993. 9 p. (NC, Da, M.)

OF 93-0564. CALIFORNIA. Aeromagnetic map of the San Diego 1:100,000-scale Quadrangle, California-Baja California Norte, by V. E. Langenheim and R. C. Jachens. 1993. 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 93-0565. ARIZONA. Geological map of the Lost Spring Mountain East Quadrangle, northern Mohave County, Arizona, by G. H. Billingsley. 1993. 9 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Arizona Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

OF 93-0566. ARIZONA. Geologic map of the Lost Spring Mountain West Quadrangle, northern Mohave County, Arizona, by G. H. Billingsley. 1993. 11 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Arizona Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

OF 93-0567. CALIFORNIA. Cretaceous coccolith correlation for Point Loma Formation outfall test well, San Diego, California, by David Bukry. 1993. 14 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 93-0568. CALIFORNIA. Geologic map of the area around the Nebo Annex, Marine Corps Logistics Base, Barstow, California, by B. F. Cox and H. G. Wilshire. 1993. 36 p., 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 93-0569. Notification procedures for Kamchatka volcanic eruptions; a case history of Sheveluch Volcano, April, 1993, by T. P. Miller and V. Y. Kirianov. 1993. 10 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 93-0570-A. Bibliography on the occurrence, properties, and uses of zeolites from sedimentary deposits, 1985-1992, by R. A. Sheppard and E. W. Sheppard. 1993. 102 p. (NC, Da, M.)

OF 93-0570-B. Bibliography on the occurrence, properties, and uses of zeolites from sedimentary deposits, 1985-1992, by R. A.

Sheppard and E. W. Sheppard. 1993. One 3 1/2 inch diskette. (NC, Da, M.)

The bibliography on the 3 1/2 inch floppy diskette was prepared on a Macintosh LC computer using EndNote Plus software. EndNote Plus works with Macintosh models 512KE and up, and system 4.2 or later. To perform bibliographic searches of the diskette, either the EndNote Plus program or the less-expensive but limited EndNote Plus demonstration disk must be installed on a Macintosh computer.

OF 93-0571. COLORADO. Integrated mineral-resource and mineral-environmental assessments of public lands; applications for land management and resource planning, by G. S. Plumlee, S. M. Smith, M. I. Toth, and S. P. Marsh; *with contributions by* S. D. Ludington, A. R. Wallace, W. H. Ficklin, K. S. Smith, J. T. Nash, N. K. Foley, R. E. Van Loenen, B. R. Berger, and G. Green. 1993. 18 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 93-0572-A. MINNESOTA. Geochemical data of diamond drill core samples adjacent to the Red Lake Indian Reservation, northern Minnesota, by W. C. Day, R. L. Earhart, P. H. Briggs, J. S. Mee, D. F. Siems, D. L. Fey, B. H. Roushey, B. M. Adrian, G. A. Wandless, P. M. Theodorakos, A. L. Meier and Q. Hennigh. 1993. 24 p. (NC, Da, M; Minnesota Geol. Surv., 2642 University Ave., St. Paul, MN 5514-1057.)

OF 93-0572-B. MINNESOTA. Geochemical data of diamond drill core samples adjacent to the Red Lake Indian Reservation, northern Minnesota, by W. C. Day, R. L. Earhart, P. H. Briggs, J. S. Mee, D. F. Siems, D. L. Fey, B. H. Roushey, B. M. Adrian, G. A. Wandless, P. M. Theodorakos, A. L. Meier and Q. Hennigh. 1993. One 3 1/2 inch diskette. (NC, Da, M; Minnesota Geol. Surv., 2642 University Ave., St. Paul, MN 55114-1057.)

Data are reported in both Microsoft Excel and ASCII formats and are on a 3 1/2 inch diskette using IBM-compatible DOS format.

OF 93-0573-A. MAINE. Total-field aeromagnetic map of part of northern Maine, by K. R. Bond. 1993. 1 over-size sheet, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M.)

OF 93-0576. Investigation of the coal properties and the potential for cold-bed methane in the Forest City Basin, by J. L. Bostic, L. L. Brady, Mary Howes, R. R. Burchett and B. S. Pierce. 1993. 44 p. (NC, Da, M; Kansas Geol. Surv., 1930 Constant Ave., Campus West, Lawrence, KA 66046; Dep. of Natural Resources, Div. of Geol. and Land Surv., 111 Fairgrounds Rd., P.O. Box 250, Rolla, MO 65401.)

OF 93-0577. COLORADO. Control and deformation surveys at the Slumgullion Slide, Hinsdale County, Colorado; a progress report, by D. J. Varnes, W. K. Smith, W. Z. Savage and K. L. Varnes. 1993. 15 p., 2 over-size sheets, scale 1:2,000 (1 inch = 167 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 93-0578. CALIFORNIA. The Northern California Seismic Network Bulletin; January-December 1992, by D. H. Oppenheimer, F. W. Klein, J. P. Eaton and F. W. Lester. 1993. 45 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 93-0579-A. Bibliography of well-log applications; annual update, October 1, 1992 to September 30, 1993, by S. E. Prensky. 1993. 115 p. (NC, Da, M.)

OF 93-0579-B. Bibliography of well-log applications; annual update, October 1, 1992 to September 30, 1993, by S. E. Prensky. 1993. One 3 1/2 inch diskette. (NC, Da, M.)

Macintosh version consisting of one text files on one 3 1/2 inch 1.44MB disk. Formatted in Microsoft Word, version 5.0.

OF 93-0579-C. Bibliography of well-log applications; annual update, October 1, 1992 to September 30, 1993, by S. E. Prensky. 1993. One 3 1/2 inch diskette. (NC, Da, M.)

IBM-PC, or compatible, version, consisting of one text files on one 3 1/2 inch 1.44MB disk. Formatted in WordPerfect, version 5.1.

OF 93-0581. VIRGINIA. Detailed sections from auger holes in the Bowling Green, Penola, Sparta, and Supply quadrangles, Virginia, by R. E. Weems, D. S. Powars and A. M. Clark. 1993. 62 p. (NC; Virginia Div. of Mineral Resources, Natural Resources Bldg., Alderman and McCormick Rd., P.O. Box 3667, Charlottesville, VA 22903.)

OF 93-0582. Probability and statistics for petroleum resource assessment, by R. A. Crovelli. 1993. 143 p. (NC, Da, M.)

OF 93-0583. CALIFORNIA. Low strain level acoustic emission due to seismic waves and tidal/thermoelastic strains observed at the San Francisco Presidio, California, by B. H. Armstrong, C. M. Valdes-Gonzales, M. J. Johnston and J. D. Leaird. 1993. 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 93-0584. COLORADO. Concentrations of N_2, O_2, CO_2, and He in soil gases collected in the northern San Luis Valley, Colorado, by M. E. Hinkle. 1993. 18 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 Section, 1313 Sherman St., Room 818, Denver, CO 80203.)

Requirements: IBM or compatible PC using MS DOS, with a 5 1/4 inch, 360K drive.

OF 93-0585. Program Kolor-map and section, Amiga version 2.0, by A. A. Zohdy. 1993. 111 p., one 3 1/2 inch diskette. (NC, Da, M.)

Requirements are an Amiga computer with a minimum of 5MB RAM (4MB Fast RAM and 1MB Chip RAM), running under AmigaDOS 1.3 or higher. A math coprocessor is strongly recommended. A program that reads files on MS-DOS diskettes into the Amiga is required (for example, CrossDOS, which is part of AmigaDOS 2.1 and higher). The disk contains the executable

program, source code, libraries, a utility program with a header file for generating data that can be imported into commercial 3-D shaded relief programs (such as VistraPro 3.0), and examples of data files and image files. The disk is a 3 1/2 inch MS-DOS double-sided, double-density (720K) format.

OF 93-0587. ARIZONA. Geologic map of the Dutchman Draw Quadrangle, northern Mohave County, Arizona, by G. H. Billingsley. 1993. 12 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Arizona Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

OF 93-0588. ARIZONA. Geologic map of the Grandstand Quadrangle, northern Mohave County, Arizona, by G. H. Billingsley. 1993. 15 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Arizona Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

OF 93-0589. Results of standard coal quality analysis for COALREAP drilling from January 1988 to February 1989, JK-series boreholes, Jherruck area of the Sonda coal field, Sindh Province, Pakistan, compiled by J. R. SanFilipo, A. H. Chandio, S. A. Khan, R. A. Khan and C. L. Oman. 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. 1993. 167 p. (NC, Da, M.)

OF 93-0590-A. ARIZONA. Preliminary geologic map of Chiricahua National Monument, Cochise County, Arizona, with digital geologic map data, by E. A. du Bray and J. S. Pallister. 1993. 13 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

OF 93-0590-B. ARIZONA. Preliminary geologic map of Chiricahua National Monument, Cochise County, Arizona, with digital geologic map data, by E. A. du Bray and J. S. Pallister. 1993. One 3 1/2 inch diskette. (NC, Da, M, U; Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

Digital files (in ASCII and GSMAP v.8 formats) used to produce the geologic map are provided on diskette. Requirements: IBM PC or compatible; minimum 512K RAM: math coprocessor; EGA or VGA graphics board. Digital data are on a 3 1/2 inch 1.44MB diskette.

OF 93-0592. The U.S. Geological Survey digital spectral library; version 1:0.2 to 3.0 μm, by R. N. Clark, G. A. Swayze, A. J. Gallagher, T. V. King and W. M. Calvin. 1993. 1326 p. (NC, Da, M.)

OF 93-0593-A. SPVIEW; spectral plot program for accessing the USGS Digital Spectral Library database with MS-DOS personal computers, version 1.00, by K. E. Livo, R. N. Clark and D. H. Knepper, Jr. 1993. 26 p. (NC, Da, M.)

OF 93-0593-B. SPVIEW; spectral plot program for accessing the USGS Digital Spectral Library database with MS-DOS personal computers, version 1.00, by K. E. Livo, R. N. Clark and D. H. Knepper, Jr. 1993. Three 3 1/2 inch diskettes. (NC, Da, M.)

Requirements: an MS-DOS compatible computer with color VGA graphics, a 1.44MB 3 1/2 inch floppy disk-drive, MS-DOS 5.0 or greater, 12MB of hard-disk space, and at least 415K of free conventional memory.

OF 93-0596-A. ALASKA. Plays for assessment in Region I, Alaska, as of October 4, 1993; 1995 National Assessment of Oil and Gas, compiled by D. L. Gautier and K. L. Varnes. 1993. 7 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 Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513.)

OF 93-0596-B. Plays for assessment in Region II, Pacific Coast, as of October 4, 1993; 1995 National Assessment of Oil and Gas, compiled by D. L. Gautier and K. L. Varnes. 1993. 11 p. (NC, Da, M, S; Geol. and Earth Resources Div., Dep. of Natural Resources, Olympia, WA 98504; David A. Johnston Cascade Volcano Observatory, 5400 MacArthur Blvd., Vancouver, WA 98661; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232-2162; 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 93-0596-C. Plays for assessment in Region III, Colorado Plateau and Basin and Range, as of October 4, 1993; 1995 National Assessment of Oil and Gas, compiled by D. L. Gautier and K. L. Varnes. 1993. 18 p. (NC, Da, M, S, U; Geol. and Earth Resources Div., Department of Natural Resources, Olympia, WA 98504; David A. Johnston Cascade Volcano Observatory, 5400 MacArthur Blvd., Vancouver, WA 98661; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232-2162; 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; Idaho Geol. Surv., Univ. of Idaho Campus, Morrill Hall, Room 332, Moscow, ID 83843; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1403; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of State Engineer, Ground Water Section, 1313 Sherman St., Room 818, Denver, CO 80203; New Mexico Bur. of Mines and Mineral Resources, Campus Station, Socorro, NM 87801; Arizona Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

OF 93-0596-D. Plays for assessment in Region IV, Rocky Mountains and Northern Great Plains, as of October 4, 1993; 1995 National Assessment of Oil and Gas, compiled by D. L. Gautier and K. L. Varnes. 1993. 34 p. (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701; North Dakota Geol. Surv., University Station, Grand Forks, ND 58202-8156; 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; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1403; Idaho Geol. Surv., Univ. of Idaho Campus, Morrill Hall, Room 332, Moscow, ID 83843; Conservation and Surv. Div., Inst. of Agriculture and Natural Resources, 113 Nebraska Hall, Univ. of Nebraska, Lincoln, NE 68588-0517; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of State Engineer, Ground Water Section, 1313 Sherman St., Room 818, Denver, CO 80203; New Mexico

Bur. of Mines and Mineral Resources, Campus Station, Socorro, NM 87801.)

OF 93-0596-E. TEXAS, NEW MEXICO. Plays for assessment in Region V, West Texas and eastern New Mexico, as of October 4, 1993; 1995 National Assessment of Oil and Gas, compiled by D. L. Gautier and K. L. Varnes. 1993. 9 p. (NC, Da, M, U; New Mexico Bur. of Mines and Mineral Resources, Campus Station, Socorro, NM 87801; Bur. of Economic Geol., Univ. of Texas at Austin, University Station, Box X, Austin, TX 78713-7508.)

OF 93-0596-F. Plays for assessment in Region VI, Gulf Coast, as of October 4, 1993; 1995 National Assessment of Oil and Gas, compiled by D. L. Gautier and K. L. Varnes. 1993. 60 p. (NC, Da, M; Geol. Surv. of Alabama, P.O. Box Drawer 0, University Station, Tuscaloosa, AL 35486, Dep. of Natural Resources, Div. of Resource Management, 903 West Tennessee St., Tallahassee, FL 32304; Louisiana Geol. Surv., Dep. of Natural Resources, Box G, University Station, Baton Rouge, LA 70893; Bur. of Geol., Mississippi Dep. of Natural Resources, P.O. Box 5348, Jackson, MS 39216; Bur. of Economic Geol., University of Texas at Austin, University Station, Box X, Austin, TX 78713-7508.)

OF 93-0596-G. Plays for assessment in Region VII, Mid-Continent, as of October 4, 1993; 1995 National Assessment of Oil and Gas, compiled by D. L. Gautier and K. L. Varnes. 1993. 17 p. (NC, Da, M; Minnesota Geol. Surv., 2642 University Ave., St. Paul, MN 55114-1057; Geol. Surv. Div., Michigan Dep. of Natural Resources, P.O. Box 30028, Lansing, MI 48909; Iowa Geol. Surv., 123 North Capitol St., Iowa City, IA 52242; Conservation and Surv. Div., Inst. of Agriculture and Natural Resources, 113 Nebraska Hall, Univ. of Nebraska, Lincoln, NE 68588-0517; Kansas Geol. Surv., 1930 Constant Ave., Campus West. Univ. of Kansas, Lawrence, KS 66046; Oklahoma Geol. Surv., Univ. of Oklahoma, 830 Van Vleet Oval, Room 163, Norman, OK 73019; Bur. of Geol., Mississippi Dep. of Natural Resources, P.O. Box 5348, Jackson, MS 39216; Arkansas Geol. Commission, 3815 West Roosevelt Rd., Little Rock, AR 72204.)

OF 93-0596-H. Plays for assessment in Region VIII, Eastern, as of October 4, 1993; 1995 National Assessment of Oil and Gas, compiled by D. L. Gautier and K. L. Varnes. 1993. 23 p. (NC, Da, M; Arkansas Geol. Commission, 3815 West Roosevelt Rd., Little Rock, AR 72204; Geol. Surv. of Alabama, P.O. Box Drawer 0, University Station, Tuscaloosa, AL 35486; Connecticut Geol. and Natural History Surv., Natural Resource Ctr., 165 Capitol Ave., Room 553, Hartford, CT 06106; Delaware Geol. Surv., Univ. of Delaware, 101 Penny Hall, Newark, DE 19716; Georgia Geol. Surv., Room 400, 19 Martin Luther King Jr. Dr. SW, Atlanta, GA 30334; Illinois State Geol. Surv., Natural Resources Bldg., 615 East Peabody Dr., Room 121, Champaign, IL 61820; Kentucky Geol. Surv., Univ. of Kentucky, 311 Breckinridge Hall, Lexington, KY 40506; Pirth Geology Library, 100 Bowman Hall, Univ. of Kentucky, Lexington, KY 40506; Coastal Zone Management, 100 Cambridge St., 20th Floor, Boston, MA 02202; Maryland Geol. Surv., 2300 St. Paul St., Baltimore, MD 21218; Maine Geol. Surv., Dep. of Conservation, State House, Station 22, Augusta, ME 04333; Geol. Surv. Div., Michigan Dep. of Natural Resources, P.O. Box 30028, Lansing, MI 48909; Bur. of Geol., Mississippi Dep. of Natural Resources, P.O. Box 5348, Jackson, MS 39216; Div. of Land Resources, Dep. of Natural Resources and Community Dev., P.O. Box 27687, Raleigh, NC 27611; Dep. of Resources and Economic Dev., 117 James Hall, Univ. of New Hampshire, Durham, NH 03824; New York State Geol. Surv., 3136 Cultural Education Ctr., Empire State Plaza, Albany, NY 12230; Dep. of Natural Resources, Div. of Geol. Surv., Fountain Square, Bldg. B, Columbus, OH 43224; Bur. of Topographic and Geol. Surv., Dep. of Environmental Resources, P.O. Box 2357, Harrisburg, PA 17120; Dep. of Geol., Green Hall, Univ. of Rhode Island, Kingston, RI 02881; South Carolina Geol. and Geodetic Surv., Harbison Forest Rd., Columbia, SC 28210; Dep. of Conservation, Div. of Geol., Customs House, 701 Broadway, Nashville, TN 37219-5237; Virginia Div. of Mineral Resources, P.O. Box 3667, Charlottesville, VA 22903; Office of the State Geologist, 103 South Main St., Ctr. Bldg., Waterbury, VT 05676; West Virginia Geol. and Economic Surv., Mont Chateau Research Ctr., P.O. Box 879, Morgantown, WV 26507-0879.)

OF 93-0597. COLORADO. Photogrammetric determination of movement on the Slumgullion Slide, Hinsdale County, Colorado 1985-1990, by W. K. Smith. 1993. 17 p., 2 over-size sheets, scale 1:5,000 (1 inch = about 400 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 93-0598. The Ibexian Series (Lower Ordovician), a replacement for "Canadian Series" in North American chronostratigraphy, by R. J., Ross, Jr., L. F. Hintze, R. L. Ethington, J. F. Miller, M. E. Taylor, and J. E. Repetski; *with a section on* Echinoderm biostratigraphy, by James Sprinkle and T. E. Guensburg. 1993. 75 p., 3 over-size sheets. (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; Missouri Dep. of Natural Resources, Div. of Geol. and Land Surv., 111 Fairgrounds Rd., P.O. Box 250, Rolla, MO 65401.)

OF 93-0600-A. Preliminary determination of epicenters; monthly listing January-March 1993, by National Earthquake Information Center. 1993. 104 p. (NC, Da, M.)

OF 93-0600-B. Preliminary determination of epicenters; monthly listing April-June 1993, by National Earthquake Information Center. 1993. 112 p. (NC, Da, M.)

OF 93-0600-C. Preliminary determination of epicenters; monthly listing July-September 1993, by National Earthquake Information Center. 1993. 132 p. (NC, Da, M.)

OF 93-0601-A. Earthquake data report, January 1993, by National Earthquake Information Center. 1993. 406 p. (NC, Da, M.)

OF 93-0601-B. Earthquake data report, January 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 93-0602-A. Earthquake data report, February 1993, by National Earthquake Information Center. 1993. 346 p. (NC, Da, M.)

OF 93-0602-B. Earthquake data report, February 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 93-0603-A. Earthquake data report, March 1993, by National Earthquake Information Center. 1993. 490 p. (NC, Da, M.)

OF 93-0603-B. Earthquake data report, March 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 93-0604-A. Earthquake data report, April 1993, by National Earthquake Information Center. 1993. 406 p. (NC, Da, M.)

OF 93-0604-B. Earthquake data report, April 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 and the documentation is given in file AAREADME.DAT on the first disk.

OF 93-0605-A. Earthquake data report, May 1993, by National Earthquake Information Center. 1993. 489 p. (NC, Da, M.)

OF 93-0605-B. Earthquake data report, May 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 and the documentation is given in file AAREADME.DAT on the first disk.

OF 93-0606-A. Earthquake data report, June 1993, by National Earthquake Information Center. 1993. 428 p. (NC, Da, M.)

OF 93-0606-B. Earthquake data report, June 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 and the documentation is given in file AAREADME.DAT on the first disk.

OF 93-0607-A. Earthquake data report, July 1993, by National Earthquake Information Center. 1993. 588 p. (NC, Da, M.)

OF 93-0607-B. Earthquake data report, July 1993, by National Earthquake Information Center. 1993. Six 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 and the documentation is given in file AAREADME.DAT on the first disk. Succeeding disks are a continuation of the data file which starts on the first disk. Each disk contains a title page file, named AATPAGEn.DAT, and a data file, OFEDRmmn.DAT, where n is the disk number and mm is a two-character code for the month (JA, FE, MR, etc.).

OF 93-0608-A. Earthquake data report, August 1933, by National Earthquake Information Center. 1993. 490 p. (NC, Da, M.)

OF 93-0608-B. Earthquake data report, August 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 and the documentation is given in file AAREADME.DAT on the first disk. Succeeding disks are a continuation of the data file which starts on the first disk. Each disk contains a title page file, named AATPAGEn.DAT, and a data file, OFEDRmmn.DAT, where n is the disk number and mm is a two-character code for the month (JA, FE, MR, etc.).

OF 93-0609-A. Earthquake data report, September 1993, by National Earthquake Information Center. 1993. 509 p. (NC, Da, M.)

OF 93-0609-B. Earthquake data report, September 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 and the documentation is given in file AAREADME.DAT on the first disk. Succeeding disks are a continuation of the data file which starts on the first disk. Each disk contains a title page file, named AATPAGEn.DAT, and a data file, OFEDRmmn.DAT, where n is the disk number and mm is a two-character code for the month (JA, FE, MR, etc.).

OF 93-0613. Economic fundamentals of mining law, by K. R. Long. 1993. 33 p. (NC, Da, M.)

OF 93-0614. VIRGINIA. Preliminary bedrock geologic map of the Wightman 7.5′ Quadrangle, Virginia, by W. C. Burton. 1993. 9 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet.) (NC.)

OF 93-0615. COLORADO. Summary of isotopic geochronology for the Leadville 1° × 2° Quadrangle, central Colorado, by A. R. Wallace. 1993. One 3 1/2 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 Section, 1313 Sherman St., Room 818, Denver, CO 80203.)

Diskette is in Excel (.XLS) and Lotus 1-2-3 (.WK1) formats.

OF 93-0616. COLORADO. Impact of the Summitville Mine on irrigation water, agricultural soils, and alfalfa in the southwestern San Luis Valley, Colorado, by J. A. Erdman and K. S. Smith. 1993. 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 Section, 1313 Sherman St., Room 818, Denver, CO 80203.)

OF 93-0617. ARIZONA. Geology of Chiricahua National Monument, a review for the non-specialist, by J. S. Pallister, E. A. du

Bray and D. B. Hall. 1993. 17 p. (NC, Da, M, U; Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

OF 93-0618. MASSACHUSETTS. A geologic overview of Cape Cod and a geologic transect of Wellfleet from the Atlantic Ocean to Cape Cod Bay, by R. N. Oldale, J. V. O'Connor, B. B. Tormey and R. S. Williams, Jr. 1993. 26 p. (NC, Da, M.)

OF 93-0619. ARIZONA. A hydrogeochemical survey for mineralized breccia pipes; data from springs, wells, and streams on the Hualapai Indian Reservation, northwestern Arizona, by K. J. Wenrich, S. Q. Boundy, R. M. Aumente-Modreski, S. P. Schwarz, H. B. Sutphin and J. M. Been. 1994. 66 p. (NC, Da, M, U; Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

OF 93-0620. NEVADA, CALIFORNIA. Late Pleistocene and Holocene environmental changes in Fish Lake valley, Nevada-California; geomorphic response of alluvial fans to climate change, by C. K. Throckmorton and M. C. Reheis. 1993. 82 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, Reno, NV 89557-0088.)

OF 93-0622. CALIFORNIA. Earthquake research at Parkfield, 1993 and beyond; report of the National Earthquake Prediction Evaluation Council (NEPEC) working group to evaluate the Parkfield earthquake prediction experiment, by National Earthquake Prediction Evaluation Council (NEPEC). 1993. 19 p. (NC, Da, M.)

OF 93-0623. OREGON. Coccolith-bearing late middle Eocene kerogen shale, Tillamook Highlands, Northwest Oregon Coast Range, by P. D. Snavely, Jr., David Bukry and R. E. Wells. 1993. 13 p. (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)

OF 93-0624. SOUTH DAKOTA, WYOMING, NEBRASKA. Favorable areas for uranium in the Oligocene White River Beds of southwestern South Dakota, southeastern Wyoming and northwestern Nebraska, by K. A. Dickinson. 1993. 7 p., 1 over-size sheet. (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; Conservation and Surv. Div., Inst. of Agriculture and Natural Resources, 113 Nebraska Hall, Univ. of Nebraska, Lincoln, NE 68588-0517.)

OF 93-0625. CALIFORNIA. USGS National Earthquake Hazard Reduction Program (NEHRP) in Northern California in FY94, by W. H. Bakun. 1993. 27 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 93-0626. State water-data reports; hydrologic records of the United States water years 1990, 1991, and 1992, by D. F. Alt. 1993. One CD-ROM. (NC, Da, M, Wb.)

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 93-0627. Selected data on characteristics of glacial-deposit and carbonate-rock aquifers, Midwestern Basins and Arches region, by R. L. Joseph and S. M. Eberts. 1994. 43 p. (NC, Da, M, Wb; USGS, WRD, 975 West 3rd Ave., Columbus, OH 43212.)

OF 93-0630. WISCONSIN. Evaluation of nonpoint-source contamination, Wisconsin; selected data for 1992 water year, by D. J. Graczyk, J. F. Walker, S. R. Greb, S. R. Corsi and D. W. Owens. Prepared in cooperation with the Wisconsin Department of Natural Resources. 1993. 48 p. (NC, Da, M, Wb; USGS, WRD, 6417 Normandy Lane, Madison, WI 53719-1133.)

OF 93-0631. WASHINGTON. Floods of November 1990 in western Washington, by L. L. Hubbard. 1994. 10 p., 1 over-size sheet. (NC, Da, M, Wb, S; USGS, WRD, 10615 SE Cherry Blossom Dr., Portland, OR 97216.)

OF 93-0633. ARKANSAS. Summary of reported agriculture and irrigation water use in Pulaski County, Arkansas, 1991, by T. W. Holland, C. A. Manning and K. L. Stafford. Prepared in cooperation with the Arkansas Soil and Water Conservation Commission. 1993. 8 p. (NC, Da, M, Wb.)

OF 93-0634. ARKANSAS. Summary of reported agriculture and irrigation water use in Woodruff County, Arkansas, 1991, by T. W. Holland, C. A. Manning and K. L. Stafford. Prepared in cooperation with the Arkansas Soil and Water Conservation Commission. 1993. 8 p. (NC, Da, M, Wb.)

OF 93-0635. ARKANSAS. Summary of reported agriculture and irrigation water use in northwestern Arkansas counties, 1991, by T. W. Holland, C. A. Manning and K. L. Stafford. Prepared in cooperation with the Arkansas Soil and Water Conservation Commission. 1993. 8 p. (NC, Da, M, Wb.)

OF 93-0636. ARKANSAS. Summary of reported agriculture and irrigation water use in southwestern Arkansas counties, 1991, by T. W. Holland, C. A. Manning and K. L. Stafford. Prepared in cooperation with the Arkansas Soil and Water Conservation Commission. 1993. 8 p. (NC, Da, M, Wb.)

OF 93-0637. ARKANSAS. Summary of reported agriculture and irrigation water use in west-central Arkansas counties, 1991, by T. W. Holland, C. A. Manning and K. L. Stafford. Prepared in cooperation with the Arkansas Soil and Water Conservation Commission. 1993. 8 p. (NC, Da, M, Wb.)

OF 93-0640. WASHINGTON. Mass balance, meteorological, and runoff measurements at South Cascade Glacier, Washington, 1992 balance year, by R. M. Krimmel. 1993. 38 p. (NC, Da, M, Wb.)

OF 93-0644. ALASKA. Levels of lakes in the North Kenai area, Alaska, 1970 to 1992, by B. J. Bailey and J. A. McIntire. Prepared in cooperation with the Alaska Department of Natural Resources. 1993. 18 p. (NC, Da, M, Wb, A, S; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; 800 Yukon Dr., Fairbanks, AK 99775-5170; and 9101 Mendenhall Mall Rd., Federal Bldg. Annex, Suite 8, Juneau, AK 99802.)

OF 93-0645. OHIO. Estimated water use in Ohio; 1990 thermoelectric-power data, by R. J. Veley. 1993. 2 p. (NC, Da, M, Wb, A, S, U.) (Water fact sheet.)

OF 93-0646. OHIO. Estimated water use in Ohio, 1990 livestock, animal-specialties, and irrigation data, by R. J. Veley. 1993. 2 p. (NC, Da, M, Wb, A, S, U.) (Water fact sheet.)

OF 93-0647. USGS global change research. 1993. 2 p. (NC, Da, M, Wb.)

OF 93-0648. MISSOURI. Geohydrology, water quality, and simulation of ground-water flow at the Weldon Spring chemical plant and vicinity, St. Charles County, Missouri, 1987-90, by M. J. Kleeschulte and J. L. Imes. Prepared in cooperation with the U.S. Department of Energy. 1994. 106 p. (NC, Da, M, Wb; USGS, WRD, 1400 Independence Rd., Rolla, MO 65401.)

OF 93-0649. ILLINOIS. Water-resources activities of the U.S. Geological Survey in Illinois, 1992, compiled by G. O. Balding. 1994. 83 p. (NC, Da, M, Wb; USGS, WRD, 102 East Main St., 4th Floor, Urbana, IL 61801.)

OF 93-0650. Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory; determination of selected carbamate pesticides in water by high-performance liquid chromatography, by S. L. Werner and S. M. Johnson. 1994. 29 p. (NC, Da, M, Wb, U.)

OF 93-0651. NEVADA. Meteorological, stream-discharge, and water-quality data for 1986 through 1991 from two small basins in central Nevada, by P. W. McKinley and T. A. Oliver. Prepared in cooperation with the U.S. Department of Energy. 1994. 167 p. (NC, Da, M, Wb.)

OF 93-0652. MARYLAND. Potentiometric surface of the Aquia Aquifer in southern Maryland, September 1991, by S. E. Curtin, D. C. Andreasen and F. K. Mack. Prepared in cooperation with the Maryland Geological Survey and Maryland Tidewater Administration. 1993. 1 p. (NC, Da, M, Wb; USGS, WRD, 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21286; and Tawes State Office Bldg.-E2, 580 Taylor Ave., Annapolis, MD 21401.)

OF 93-0653. MARYLAND. Potentiometric surface of the Magothy Aquifer in southern Maryland, September 1991, by S. E. Curtin, D. C. Andreasen and F. K. Mack. Prepared in cooperation with the Maryland Geological Survey and Maryland Tidewater Administration. 1993. 1 p. (NC, Da, M, Wb; USGS, WRD, 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21286; and Tawes State Office Bldg.-E2, 580 Taylor Ave., Annapolis, MD 21401.)

OF 93-0654. MARYLAND. Potentiometric surface of the upper Patapsco Aquifer in southern Maryland, September 1991, by S. E. Curtin, D. C. Andreasen and F. K. Mack. Prepared in cooperation with the Maryland Geological Survey and Maryland Tidewater Administration. 1993. 1 p. (NC, Da, M, Wb; USGS, WRD, 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21286; and Tawes State Office Bldg.-E2, 580 Taylor Ave., Annapolis, MD 21401.)

OF 93-0655. MARYLAND. Potentiometric surface of the lower Patapsco Aquifer in southern Maryland, September 1991, by S. E. Curtin, D. C. Andreasen and F. K. Mack. Prepared in cooperation with the Maryland Geological Survey and Maryland Tidewater Administration. 1993. 1 p. (NC, Da, M, Wb; USGS, WRD, 208 Carroll Bldg., 8600 La Salle Rd., Towson, MD 21286; and Tawes State Office Bldg.-E2, 580 Taylor Ave., Annapolis, MD 21401.)

OF 93-0656. IDAHO. The effect of mining and related activities on the sediment-trace element geochemistry of Lake Coeur d'Alene, Idaho, U.S.A.; Part II, Subsurface sediments, by A. J. Horowitz, K. A. Elrick, J. A. Robbins and R. B. Cook. 1993. 28 p. (NC, Da, M, Wb; USGS, WRD, 3039 Amwiler Rd., Atlanta, GA 30360-2824; and 230 Collins Rd., Boise, ID 83702-4520.)

OF 93-0658. NEW HAMPSHIRE. Data on observation wells, ground-water levels, and ground-water quality for the stratified-drift aquifer in the northwestern basin of Country Pond, Kingston, New Hampshire, by P. J. Stekl. Prepared in cooperation with the U.S. Environmental Protection Agency and the New Hampshire Department of Environmental Services. 1994. 18 p. (NC, Da, M, Wb; USGS, WRD, 525 Clinton St., Bow, NH 03304.)

OF 93-0661. NEW MEXICO. Water-resources activities of the U.S. Geological Survey in New Mexico, fiscal year 1992, compiled by H. R. Allen. 1994. 75 p. (NC, Da, M, Wb, U; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110.)

OF 93-0664. Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory; determination of antimony by automated-hydride atomic absorption spectrophotometry, by G. E. Brown and B. J. McLain. 1993. 17 p. (NC, Da, M, Wb, U.)

OF 93-0665. CALIFORNIA. Effects of management alternatives on shallow, saline ground water in the western San Joaquin Valley, California, by P. M. Barlow, B. J. Wagner, K. R. Belitz and J. L. Fio. 1994. 2 p. (NC, Da, M, Wb, A, S, U, Wa.) (Water fact sheet.)

OF 93-0676. Enhancing USGS image processing capabilities; the development of a users guide, video tape guide, and in-house course outline for ERDAS software, by N. L. Falcone. 1993. 21 p. (NC, Da, M.)

OF 93-0677. COLORADO. Geologic framework and environmental geology of the Summitville, Colorado acid-sulfate mineral deposit, by J. E. Gray, M. F. Coolbaugh and G. S. Plumlee. 1993. 29 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 Section, 1313 Sherman St., Room 818, Denver, CO 80203.)

OF 93-0678. CALIFORNIA. Palynological data from the Imperial and Palm Spring formations, Anza-Borrego Desert State Park, California, by R. F. Fleming. 1993. 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 93-0679. Principal radioactive minerals encountered in mining and associated environmental concerns, by W. I. Finch. 1993. 14 p. (NC, Da, M.)

OF 93-0680. Abstracts of the U.S. Geological Survey, Central region, 1993 poster review, compiled by C. E. Baker and A. B. Coury. 1993. 27 p. (NC, Da, M.)

Element composition of Rocky Mountain Province Cretaceous coals, by R. H. Affolter and J. R. Hatch. p. 1.

The minimal response to contact metamorphism of the burial metamorphosed Devonian Buchan Group limestones, Buchan Trough, Victoria, Australia; evidence from impsonite reflectance, isotopic composition and fluid inclusions, by C. E. Barker and Yvonne Bone. p. 2.

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A new aeromagnetic compilation of Utah using new techniques to merge older data, by Viki Bankey. p. 8.

A new approach to geothermal exploration; integrating geochemistry with remote sensing, by J. A. Erdman, M. E. Hinkle, Kenneth Watson, A. J. Gallagher, C. M. Ager and K. S. Smith. p. 9.

A Landsat digital mosaic of the New Madrid seismic zone, by L. M. Highland and J. A. Michael. p. 10.

Aeromagnetic and gravity anomalies of the Tobacco Root Mountains and adjacent areas of southwestern Montana, by M. D. Kleinkopf. p. 11.

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High-resolution seismic imaging of Quaternary faulting on the Crittenden County fault zone, New Madrid seismic zone, northeastern Arkansas, by R. A. Williams, E. A. Luzietti and D. L. Carver. p. 13.

Arroyo el Mimbral, Mexico, K/T unit; origin as a debris flow/turbidite, not a tsunami deposit, by B. F. Bohor and W. J. Betterton. p. 14.

Clay mineralogy, origin, and diagenesis of the Cretaceous/Tertiary boundary unit, Western Interior of North America, by R. M. Pollastro and B. F. Bohor. p. 15.

Mineral resources of the Black Mountain-Miners Gulch area, Rocky Boy's Indian Reservation, Bearpaw Mountains, Montana, by T. J. Armbrustmacher, P. J. Modreski and H. D. King. p. 16.

Rhyolite-hosted REE-Fe-Nb-bearing titanite from Willow Spring Draw, Sierra County, New Mexico, U.S.A., by E. E. Foord, P. F. Hlava, R. C. Erd and F. E. Lichte. p. 17.

Major-element evidence for multiple magma batches in the evolution of Pleistocene and Holocene volcanic rocks of the Markagunt Plateau volcanic field, southwestern Utah, by L. D. Nealey, Florian Maldonado, D. M. Unruh and J. R. Budahn. p. 18.

Delineation of terranes favorable for the occurrence of lode gold deposits in the Coast Ranges and western Klamath Mountains, western half of the Redding 1 × 2 degree Quadrangle, Northern California, by M. L. Silberman, J. R. Hassemer, Jennifer Force and R. B. Tripp. p. 19.

Limestone-pebble conglomerate facies of the Eocene Ghazij Formation, Balochistan, Pakistan; evidence for collision-related tectonism on the northwestern margin of the Indian Plate, by E. A. Johnson, P. D. Warwick, S. B. Roberts and I. H. Khan. p. 20.

Sequence boundaries and other surfaces in Lower and lower Upper Cretaceous rocks of Central and Southwest Montana, by K. W. Porter, T. S. Dyman and R. G. Tysdal. p. 21.

A regional marker unit within the upper Paleozoic Bird Spring Formation, southern Nevada; evidence for a slope facies, by W. R. Page. p. 22.

Paleogeographic inferences from a paleocurrent study of Pennsylvanian to Early Permian rocks of the Oquirrh and Wood River basins in northwestern Lesser Pangea, by D. A. Seeland. p. 23.

Fluid flow along a fault; petrofabric evidence from a fault bend, English Hill fault system, Southeast Missouri, by S. F. Diehl and C. W. Clendenin. p. 24.

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Backflooding upstream from the resurgent dome of the 0.6 Ma Yellowstone Caldera; two backflooding cycles in the last 8,000 years, by K. L. Pierce, K. P. Cannon, G. M. Crothers, G. A. Meyer and Meyer Rubin. p. 26.

Stratigraphic comparison of the evaporite-bearing early Mesozoic Fundy and Argana basins, Nova Scotia and Morocco, by J. P. Smoot. p. 27.

OF 93-0681. A preliminary review of coal exploration activities conducted by the government of Armenia and the coal resource potential of Armenia, by P. D. Warwick, B. S. Pierce and E. R. Landis. Prepared in cooperation with the Republic of Armenia, Department of Underground Resources. 1993. 17 p. (NC, Da, M.)

OF 93-0682. ARIZONA. Geologic map of the Little Tanks Quadrangle, northern Mohave County, Arizona, by G. H. Billingsley. 1993. 13 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Arizona Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

OF 93-0683. CALIFORNIA. Core OL-92 from Owens Lake, Southeast California, edited by G. I. Smith and J. L. Bischoff. 1993. 398 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.)

Core OL-92 from Owens Lake, Southeast California; introduction, by G. I. Smith. p. 1-3.

Field log of Core OL-92, by G. I. Smith. p. 4-57.

Sediment size analyses of the Owens Lake core, by K. M. Menking, H. M. Musler, J. P. Fitts, J. L. Bischoff and R. S. Anderson. p. 58-74.

Clay mineralogical analyses of the Owens Lake core, by K. M. Menking, H. M. Musler, J. P. Fitts, J. L. Bischoff and R. S. Anderson. p. 75-82.

Geochemistry of sediments in Owens Lake drill hole OL-92, by J. L. Bischoff, J. P. Fitts, J. A. Fitzpatrick, K. M. Menking and B. W. King. p. 83-99.

Sediment pore-waters of Owens Lake drill hole OL-92, by J. L. Bischoff, J. P. Fitts and K. M. Menking. p. 100-105.

Isotope geochemistry of Owens Lake Core OL-92, by L. V. Benson and J. L. Bischoff. p. 106-109.

Deuterium-hydrogen ratios of interstitial fluids from Owens Lake Core OL-92, by Irving Friedman, C. A. Johnson and J. P. Fitts. p. 110-118.

The distribution and isotopic composition of sulfur in Owens Lake Core OL-92, by M. L. Tuttle. p. 119-125.

Rock- and paleo-magnetic results from Core OL92, Owens Lake, CA, by J. M. Glen, R. S. Coe, K. M. Menking, S. S. Boughn and Inna Altschul. p. 127-183.

Age and correlation of tephra layers in Owens Lake drill core OL-92-1 and -2, by A. M. Sarna-Wojcicki, C. E. Meyer, Elmira Wan and Stan Soles. p. 184-245.

AMS radiocarbon dates on sediments from Owens Lake drill hole OL-92, by J. L. Bischoff, T. W. Stafford, Jr. and Meyer Rubin. p. 246-250.

Age-depth relations for the sediment column at Owens Lake, California; OL-92 drill hole, by J. L. Bischoff. p. 251-260.

Diatoms in sediments, by J. P. Bradbury. p. 261-302.

Ostracodes present in sediments, by Claire Carter. p. 303-306.

Identification of Mollusca from Core OL-92-2, Owens Lake, California, by J. R. Firby. p. 307-309.

Owens Lake Core OL92 fish remains, by G. R. Smith. p. 310-311.

Macroscopic organic material from Owens Lake Core, by W. G. Spaulding. p. 312-313.

Pollen present in cores OL-92-1,2 and -3, by W. B. Woolfenden. p. 314-332.

Continental-marine correlation of late Pleistocene climate change; census of palynomorphs from core OL-92, Owens Lake, California, by R. J. Litwin, N. O. Frederiksen, D. P. Adam, V. A. Andrle and T. P. Sheehan. p. 333-391.

OF 93-0685-A. ALASKA. Catalog of earthquake-hypocenters at Redoubt Volcano and Mt. Spurr, Alaska; October 12, 1989-December 31, 1990, by J. A. Power, G. D. March, J. C. Lahr, A. D. Jolly and G. R. Cruse. 1993. 57 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 93-0685-B. ALASKA. Catalog of earthquake-hypocenters at Redoubt Volcano and Mt. Spurr, Alaska; October 12, 1989-December 31, 1990, by J. A. Power, G. D. March, J. C. Lahr, A. D. Jolly and G. R. Cruse. 1993. One 5 1/4 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 PC or compatible with 1.2MB 5 1/4 inch floppy disk drive.

OF 93-0686. WASHINGTON. Chemical data for Tertiary volcanic and intrusive rocks of the Spirit Lake 15-minute Quadrangle, southern Washington Cascade Range, by R. C. Evarts and K. R. Bishop. 1994. 24 p. (NC, Da, M, S; Washington DNR/Geol. and Earth Resources Library, 1111 Washington St. SE, Olympia, WA 98501.)

OF 93-0687. WYOMING. Geomorphic, sedimentologic and chronologic analysis of the Opal dune field, Lincoln County, Wyoming, by T. S. Ahlbrandt and Wynn Downing. 1993. 53 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071.)

OF 93-0688. CALIFORNIA. Aeromagnetic map of the Palo Alto 1:100,000 Quadrangle, California, by R. C. Jachens and C. W. Roberts. 1993. 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 93-0689. NEVADA. Field trip guide; Quaternary-Holocene-lacustrine sediments of Lake Lahontan, Truckee River canyon north of Wadsworth, Nevada, by J. P. Smoot. 1993. 35 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)

OF 93-0690. NEVADA. Preliminary study of lead isotopes in the carbonate-silica veins of Trench 14, Yucca Mountain, Nevada, by R. E. Zartman and L. M. Kwak. 1993. 18 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)

OF 93-0692. Assessment of chemical variability in three independently prepared batches of National Institute for Standards and Technology SRM 2704, Buffalo River Sediment, by S. A. Wilson. 1993. 23 p. (NC, Da, M.)

OF 93-0693. CALIFORNIA. General distribution of geologic materials in the southern San Francisco Bay region, California; a digital map database, compiled by C. M. Wentworth. 1993. 12 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 93-0699. COLORADO. Preliminary geologic map of the Horse Mountain Quadrangle, Garfield County, Colorado, by G. M. Fairer, M. W. Green and R. R. Shroba. 1993. 23 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 Section, 1313 Sherman St., Room 818, Denver, CO 80203.)

OF 93-0700. COLORADO. Preliminary geologic map of the Rifle Falls Quadrangle, Garfield County, Colorado, by M. W. Green, G. M. Fairer and R. R. Shroba. 1993. 21 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 Section, 1313 Sherman St., Room 818, Denver, CO 80203.)

OF 93-0701. ARIZONA. Laboratory measurements of the radio-frequency electrical and magnetic properties of soils from near Yuma, Arizona, by G. R. Olhoeft and D. E. Capron. 1993. 214 p. (NC, Da, M, U; Arizona Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

OF 93-0702-A. ALASKA. Digital terrain in the Bethel, Russian Mission, and Goodnews Bay 1° × 3° quadrangles, Alaska, including improved terrain for parts of these quadrangles, by R. L. Morin. 1993. 9 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 93-0702-B. ALASKA. Digital terrain in the Bethel, Russian Mission, and Goodnews Bay 1° × 3° quadrangles, Alaska, including improved terrain for parts of these quadrangles, by R. L. Morin. 1993. Two 3 1/2 inch diskettes. (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 PC or compatible computer running PC-DOS or MS-DOS; high-density disk drive.

OF 93-0703. OREGON, CALIFORNIA. Preliminary geologic map of the Squaw Lakes Quadrangle, Oregon and California, by M. M. Donato. 1993. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (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 93-0704. UTAH. Geophysical site characterization of the Midvale slag site, Midvale, Utah, by K. J. Ellefsen and R. M. Bochicchio. 1993. 134 p. (NC, Da, M, U; Utah Geol. Surv., 2363 Foothill Dr., Salt Lake City, UT 84109-1403.)

OF 93-0705. Petroleum exploration plays and resource estimates, 1989, onshore United States; Region 6, Gulf Coast, edited by R. B. Powers. 1993. 106 p. (NC, Da, M; Geol. Surv. of Alabama, P.O. Box Drawer 0, University Station, Tuscaloosa, AL 35486; Arkansas Geol. Commission, 3815 West Roosevelt Rd., Little Rock, AR 72204; Dep. of Natural Resources, Div. of Resource Management, 903 West Tennessee St., Tallahassee, FL 32304; Louisiana Geol. Surv., Dep. of Natural Resources, Box G, University Station, Baton Rouge, LA 70893; Bur. of Geol., Mississippi Dep. of Natural Resources, P.O. Box 5348, Jackson, MS 39216; Bur. of Economic Geol., Univ. of Texas at Austin, University Station, Box X, Austin, TX 78713-7508.)

Geologic framework, by R. B. Powers. p. 9-10.

Western Gulf Basin province (112), by R. Q. Foote, L. M. Massingill, R. H. Wells, G. L. Dolton and M. M. Ball. p. 11-47.

East Texas Basin province (113), by R. Q. Foote, L. M. Massingill and R. H. Wells. p. 48-68.

Louisiana-Mississippi salt basins province (114), by R. Q. Foote, R. H. Wells, L. M. Massingill and M. M. Ball. p. 69-103.

OF 93-0706. Cascadia; regional lithospheric studies of the Pacific Northwest, compiled by R. E. Wells and the Cascadia Working Group. 1993. 39 p. (NC, Da, M.)

OF 93-0707. ALASKA. Photographs of the 1992 eruptions of Crater Peak, Spurr Volcano, Alaska, by C. A. Neal, R. G. McGimsey, M. P. Doukas and Inyo Ellersieck. 1993. 9 p., 20 color slides. (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 93-0708. IDAHO. Analyses of rocks and stream sediment from the Special Mining Management Zone; Clear Creek, Lemhi County, Idaho, by K. V. Evans, Karen Lund, Robert Fairfield, R. T. Hopkins, Jr., T. A. Roemer and S. J. Sutley. 1993. 50 p., 1 over-size sheet, scale 1:50,000 (1 inch = about 4,200 feet); 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.)

One 3 1/2 inch, 1.44MB (DOS) diskette provides the data in three formats which can be imported into most major spreadsheet software.

OF 93-0709. WASHINGTON. Geologic map of the Aeneas Valley Quadrangle, Okanogan County, Washington, by C. D. Rinehart and K. F. Fox, Jr. 1994. 7 p., 2 over-size sheets. (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 93-0712. COLORADO. Measured section of the Pennsylvanian Hermosa Group near Ouray, Colorado, by K. J. Franczyk. 1993. 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 93-0713. ALASKA. Mesozoic macrofossil locality information for the Mount Katmai and part of the Afognak quadrangles, Alaska, by W. P. Elder and J. W. Miller. 1993. 83 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 93-0714. Two-dimensional numerical simulation of elastic wave propagation for environmental and geotechnical studies, by K. J. Ellefsen. 1993. 35 p. (NC, Da, M.)

OF 93-0715. WASHINGTON. Geologic map of the Twin Lakes 15′ Quadrangle, Ferry County, Washington, by K. F. Fox, Jr. and G. E. Becraft. 1994. 11 p., 2 over-size sheets; sheet 1, scale 1:62,500 (1 inch = about 1 mile). (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 93-0717. ARIZONA. Geologic map of the Russell Spring Quadrangle, northern Mohave County, Arizona, by G. H. Billingsley. 1993. 17 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Arizona Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

OF 93-0718. Map of metallic mining districts and mineral deposit types in Chihuahua, Mexico, by J. G. Staude. 1993. 1 over-size sheet, scale 1:750,000 (1 inch = about 12 miles). (NC, Da, M.)

OF 93-0720. NEW YORK. A technique for the analysis of xylem tracheid cells in sediments from the 106-mile dump site off New York; an indicator of sewage sludge contamination, by R. F. Commeau, A. M. Moffett and M. H. Bothner. 1993. 63 p. (NC.)

OF 93-0724. Bottom character map of the northern Blake Plateau, by Peter Popenoe. 1994. 35 p., 2 over-size sheets, scale 1:375,000 (1 inch = about 6 miles). (NC, Da, M.)

OF 94-0001. U.S. Geological Survey scientific visualization workshop; New Orleans, Louisiana, April 11-12, 1994; program and abstracts, compiled by Gerry Lebing, D. C. Brown and R. A. MacDonald. 1994. 32 p. (NC, Da, M.)

Color techniques for effective scientific visualizations, by M. J. Bailey. p. 1.

Poor man's visualization of Venus or terrain animation for the economically challenged, by J. M. Barrett, L. A. Soderblom, R. L. Kirk and M. G. Chapman. p. 2-3.

Volume visualization; just the beginning, by Eric Bayer. p. 4-5.

Infobase; a multimedia data environment, by J. R. Bergen. p. 6.

Using geographic information, image processing, and animation systems to visualize a digital terrain flyby, by R. G. Clark, J. W. Jones, T. E. Ciciarelli and D. F. Stanfill, IV. p. 7.

Geographic information system in an electronic meeting environment with application to land resource allocation issues, by B. G. Faber, R. D. Watts, W. W. Wallace, J. E. Hautaluoma and Jef Knutson. p. 8-9.

Video capabilities provided by the U.S. Geological Survey Scientific Visualization Laboratory, by C. F. Ferrigno and B. R. Schachte. p. 10-11.

Environmental data visualization; issues and lessons, by K. J. Hussey. p. 12.

A temporal comparison of forest cover using digital earth science data and visualization techniques, by J. W. Jones. p. 13.

National Information Display Laboratory overview, by M. J. Lister. p. 14-15.

An animated three-dimensional visualization of the geologic and bathymetric features surrounding Isla de Mona, Puerto Rico, by L. E. Menoyo. p. 16.

MOSAIC; a tool for presenting U.S. Geological Survey visualizations on the Internet, by W. G. Miller. p. 17.

Extending the dimensions of data visualization, by T. J. Myerson. p. 18.

Visualization of a structural model of Aspo, Sweden, by M. E. Powell, W. A. Gurney, S. S. Bong and C. I. Voss. p. 19-20.

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How to construct and view computer-generated animation sequences on your workstations; shareware tools or working with compression files, by R. P. Signell. p. 22.

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GeoMedia2; a multimedia education system on global environmental change for middle school students, by D. A. Wiltshire and C. F. Ferrigno. p. 29-30.

Visualization of marine scientific data, by E. L. Wright, R. P. Signell and D. F. Coleman. p. 31.

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OF 94-0002-A. WASHINGTON. Data for four drill holes, Mount Margaret copper-molybdenum-gold deposit, Skamania County, Washington, by M. A. Chaffee. 1994. 10 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 94-0002-B. WASHINGTON. Data for four drill holes, Mount Margaret copper-molybdenum-gold deposit, Skamania County, Washington, by M. A. Chaffee. 1994. One 5 1/4 inch 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.)

Minimum requirements: IBM PC or compatible computer using MS-DOS 3.0 or higher; math coprocessor; 5 1/4 inch floppy disk drive able to read 360K diskette.

OF 94-0005. NEVADA. Grade and tonnage model of tungsten skarn deposits, Nevada, by D. A. John and J. D. Bliss. 1993.

35 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)

OF 94-0006-A. NEVADA, CALIFORNIA. Principal facts and field data for gravity data in and adjacent to the Reno 1° × 2° Quadrangle, Nevada and California, by Donald Plouff. 1994. 16 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 94-0006-B. NEVADA, CALIFORNIA. Principal facts and field data for gravity data in and adjacent to the Reno 1° × 2° Quadrangle, Nevada and California, by Donald Plouff. 1994. One 3 1/2 inch diskette. (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.)

This report consists of one double-sided, double density 3 1/2 inch diskette written in ASCII format for personal computers with MS-DOS or PC-DOS, for example.

OF 94-0010. UTAH. Preliminary report, measured sections, and map of the geology of the Asay Bench Quadrangle, Garfield and Kane counties, Utah, by D. W. Moore, L. D. Nealey and E. G. Sable. 1994. 26 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 94-0012. OREGON. Lithologic description of sediment cores from Buck Lake, Klamath County, Oregon, by D. P. Adam, H. J. Rieck, M. L. McGann, K. H. Schiller and A. M. Sarna-Wojcicki. 1994. 48 p. (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)

OF 94-0014-A. ALASKA. Principal facts for gravity data in the Bethel and Russian Mission 1° × 3° quadrangles, Alaska, by R. L. Morin. 1994. 6 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 94-0014-B. ALASKA. Principal facts for gravity data in the Bethel and Russian Mission 1° × 3° quadrangles, Alaska, by R. L. Morin. 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 PC or compatible computer running PC-DOS or MS-DOS; high density disk drive.

OF 94-0017. ALABAMA. Wave data in Mobile Bay, Alabama from March 1991 to May 1992, by S. L. Pendygraft and G. R. Gelfenbaum. 1994. 73 p. (NC, Da, M; Library, Geol. Surv. of Alabama, P.O. Box Drawer 0, University Station, Tuscaloosa, AL 35486.)

OF 94-0020. Current data from Karin Ridge in the Central Pacific, by K. L. Kinoshita and M. A. Noble. 1994. 32 p. (NC, Da, M.)

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OF 94-0023. Pliocene terrestrial environments and data/model comparisons, edited by R. S. Thompson. 1994. 93 p. (NC, Da, M.)

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Landscape and climate of the southwestern Russian Plain in the Pliocene, by T. V. Svetlitskaya. p. 56-60.

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OF 94-0024. Petroleum exploration plays and resource estimates, 1989, onshore United States; Region 7, Mid-Continent, edited by R. B. Powers. 1994. 97 p. (NC, Da, M; Arkansas Geol. Commission, 3815 West Roosevelt Rd., Little Rock, AR 72204; Iowa Geol. Surv., 123 North Capitol St., Iowa City, IA 52242; Kansas Geol. Surv., 1930 Constant Ave., Campus West, Univ. of Kansas, Lawrence, KS 66046; Minnesota Geol. Surv., 2642 University Ave., St. Paul, MN 55114-1057; Missouri Dep. of Natural Resources, Div. of Geol. and Land Surv., 111 Fairgrounds Rd., P.O. Box 250, Rolla, MO 65401; Conservation and Surv. Div., Institute of Agriculture and Natural Resources, 113 Nebraska Hall, University of Nebraska, Lincoln, NE 68588-0517; Oklahoma Geol. Surv., Univ. of Oklahoma, 830 Van Vleet Oval, Room 163, Norman, OK 73019.)

Geologic framework, by R. B. Powers. p. 9-10.

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OF 94-0025. Studies of sediment transported by Beaufort Gyre pack ice, Arctic Ocean, 1993; concentrations, textural and carbon data, by Michael McCormick and P. W. Barnes. 1994. 30 p. (NC, Da, M.)

OF 94-0026. Using analytical services at the National Water Quality Laboratory, by L. K. Pratt. 1994. 15 p. (NC, Da, M, Wb, U.)

OF 94-0027. NORTH CAROLINA. Water-quality data from continuously monitored sites in the Pamlico and Neuse River estuaries, North Carolina, 1991-92, by R. G. Garrett. Prepared in cooperation with the North Carolina Department of Environment, Health and Natural Resources. 1994. 161 p. (NC, Da, M, Wb; USGS, WRD, 3916 Sunset Ridge Rd., Raleigh, NC 27607.)

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OF 94-0033. FLORIDA. Potentiometric surface of the upper Floridan Aquifer in the St. John's Water Management District and vicinity, Florida, September 1993, by R. M. Spechler, G. G. Phelps, L. A. Bradner, L. C. Murray and K. J. Halford. Prepared in cooperation with the Saint Johns River Water Management District, South Florida Water Management District, and Southwest Florida Water Management District. 1993. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, Spalding Woods Office Park, 3850 Holcomb Bridge Rd., Suite 160, Norcross, GA 30092; Suite 3015, 227 North Bronough St., Tallahassee, FL 32301; and 4710 Eisenhower Blvd., Tampa, FL 33634-6381.)

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OF 94-0035. KANSAS, NEBRASKA. Water resources on and near Indian lands in northeastern Kansas and southeastern Nebraska; hydrologic data through 1990, by L. D. Brewer, T. J. Trombley and M. L. Pomes. Prepared in cooperation with the U.S. Bureau of Indian Affairs, the Iowa Tribe of Kansas and Nebraska, the Kickapoo Tribe of Kansas, the Prairie Band of Potawatomi, and the Sac and Fox Tribe of Missouri. 1994. 424 p. (NC, Da, M, Wb; USGS, WRD, 4821 Quail Crest Pl., Lawrence, KS 66049-3839; and Room 406, Federal Bldg., 100 Centennial Mall North, Lincoln, NE 68508.)

OF 94-0037. Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory; determination of triazine and other nitrogen-containing compounds by gas chromatography with nitrogen phosphorus detectors, by D. J. Markovchick, J. A. Lewis, R. W. Brenton, J. L. Iverson and H. L. Wharry. 1994. 17 p. (NC, Da, M, Wb, U.)

OF 94-0038. OKLAHOMA. Oklahoma, a summary of activities of the U.S. Geological Survey, Water Resources Division, in fiscal years 1991-92, compiled by J. S. Havens. 1994. 38 p. (NC, Da, M, Wb.)

OF 94-0039. NEVADA, CALIFORNIA. Data on ground-water quality in the Carson River basin, western Nevada and eastern California, 1987-90, by Rita Whitney. 1994. 139 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.)

OF 94-0040. OREGON. Water-quality data for the South Umpqua River basin, Oregon, 1990-92, by C. W. Anderson, D. Q. Tanner and D. B. Lee. Prepared in cooperation with Douglas County. 1994. 156 p. (NC, Da, M, Wb.)

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OF 94-0042. Report on the U.S. Geological Survey's evaluation program for standard reference samples distributed in October 1993; T-127 (trace constituents), M-128 (major constituents), N-40 (nutrients), P-21 (low ionic strength), Hg-17 (mercury), AMW-3 (acid mine water), and WW-1 (whole water), by H. K. Long and J. W. Farrar. 1994. 177 p. (NC, Da, M, Wb.)

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OF 94-0044. Summary of national standards and guidelines for pesticides in water, bed sediment, and aquatic organisms and their application to water-quality assessments, by L. H. Nowell and E. A. Resek. Prepared in cooperation with the U.S. Environmental Protection Agency. 1994. 115 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 94-0046. Description and use of a geographic-information-system-based Water Information Management and Analysis System (WIMAS), by K. E. Juracek. Prepared in cooperation with the Kansas State Board of Agriculture, Division of Water Resources. 1994. 20 p. (NC, Da, M, Wb; USGS, WRD, 4821 Quail Crest Pl., Lawrence, KS 66049; and 206 Fulton Terrace, Garden City, KS 67846.)

OF 94-0048. OHIO. Estimated water use in Ohio, 1990 reservoir evaporation data, by R. M. Timmons. Prepared in cooperation with the Ohio Department of Natural Resources. 1994. 2 p. (NC, Da, M, Wb, A, S, U.) (Water fact sheet.)

OF 94-0049. NEVADA. The Sundance Fault; a new recognized shear zone at Yucca Mountain, Nevada, by R. W. Spengler, C. A. Braun, L. G. Martin and C. W. Weisenberg. Prepared in cooperation with the U.S. Department of Energy. 1994. 11 p. (NC, Da, M, Wb.)

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OF 94-0052. U.S. Geological Survey national computer technology meeting; program and abstracts, New Orleans, Louisiana, April 10-15, 1994, compiled by B. H. Balthrop and E. G. Baker. 1994. 61 p. (NC, Da, M, Wb.)

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OF 94-0152. NEW JERSEY, NEW YORK. Geologic features of the sea bottom around a municipal sludge dumpsite near 39°N, 73°W, offshore New Jersey and New York, by J. M. Robb. 1994. 42 p. (NC, Da, M; New York State Geol. Surv., 3136 Cultural Education Ctr., Empire State Plaza, Albany, NY 12230.)

OF 94-0153. ARIZONA. Preliminary geologic map of the New River Quadrangle, Maricopa and Yavapai counties, Arizona, by B. H. Bryant. 1994. 17 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719; Tucson Earth Science Information Ctr., 340 North 6th Ave., Tucson, AZ 85705-8325.)

OF 94-0154. Work in progress in the Pacific Northwest National Earthquake Hazards Reduction Program, fiscal year 1994, by C. S. Weaver. 1994. 34 p. (NC, Da, M.)

OF 94-0155. MONTANA. Organic petrographic and Rock-Eval pyrolysis analyses of Proterozoic Belt Supergroup rocks, west central Montana, by M. J. Pawlewicz. 1994. 11 p. (NC, Da, M,

U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)

OF 94-0156. CALIFORNIA. Onshore-offshore wide-angle seismic recordings of the San Francisco Bay Area Seismic Imaging eXperiment (BASIX); data from the Northern California Seismic Network, by T. M. Brocher and D. C. Pope. 1994. 123 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 94-0157. NEVADA. Gas chromatography and Rock-Eval pyrolysis analyses of some well cuttings and cores from Nevada, by C. E. Barker, J. G. Palacas, P. G. Lillis and T. A. Daws. 1994. 8 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)

OF 94-0158. Remote sensing and airborne geophysics in the assessment of natural aggregate resources, by D. H. Knepper, Jr., W. H. Langer and S. H. Miller. 1994. 62 p. (NC, Da, M.)

OF 94-0159. WASHINGTON. Analysis of deep seismic reflection and other data from the southern Washington Cascades, by W. D. Stanley, S. Y. Johnson and V. F. Nuccio. Prepared in cooperation with the U.S. Department of Energy. 1994. 179 p., 1 over-size sheet. (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 94-0160. NEVADA. Analytical results of mineralized rock samples, Tonopah 1° × 2° Quadrangle, Nevada, by J. T. Nash and D. F. Siems. 1993. One 5 1/4 inch diskette. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, NV 89557-0088.)

Requirements: IBM-PC or compatible computer and software capable of reading DBF or WK1 files on 5 1/4 inch HD 96 TPI diskette.

OF 94-0161. NEVADA. Thermal and petroleum generation history of the Mississippian Eleana Formation and Tertiary source rocks, Yucca Mountain area, southern Nye County, Nevada, by C. E. Barker. 1994. 42 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)

OF 94-0162. COLORADO. Preliminary surficial geologic map of the Rocky Flats Plant and vicinity, Jefferson and Boulder counties, Colorado, by R. R. Shroba and P. E. Carrara. 1994. 16 p., 1 over-size sheet, 1:6,000 (1 inch = 500 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 Section, 1313 Sherman St., Room 818, Denver, CO 80203.)

OF 94-0163. OREGON. The Scotts Mills, Oregon, earthquake of March 25, 1993; intensities, strong-motion data, and teleseismic data, by J. W. Dewey, B. G. Reagor, D. A. Johnson, G. L. Choy and F. W. Baldwin. 1994. 26 p. (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232-2162.)

OF 94-0164. COLORADO. Aeromagnetic map of parts of the Denver, Greeley, and Pueblo 1×2 degree quadrangles, Colorado, by F. E. Riggle and Isidore Zietz. 1994. 1 over-size sheet, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M, U.)

OF 94-0165. Simple Bouguer gravity anomaly maps of the Venezuelan Guayana Shield, Southeast Venezuela, by K. R. Bond and J. C. Wynn. 1994. 11 over-size sheets, scale 1:500,000 (1 inch = about 8 miles). (NC.)

OF 94-0166. Regional geology and hydrocarbon resource potential, the Mediterranean Sea region, by J. A. Peterson. 1994. 118 p. (NC, Da, M.)

OF 94-0167. Geology and coal resources of the Thar coal field, Sindh Province, Pakistan, by J. E. Fassett and N. A. Durrani. 1994. 87 p. (NC, Da, M.)

OF 94-0168. The SPECTRA program library; a PC based system for gamma-ray spectra analysis and INAA data reduction, by P. A. Baedecker and J. N. Grossman. 1994. 52 p. (NC, Da, M.)

OF 94-0169. HAWAII. Hawaiian Volcano Observatory; Summary 88, Part I, Seismic data, January to December 1988, by J. S. Nakata, A. H. Tomori, J. P. Tokuuke, R. Y. Koyanagi, W. R. Tanigawa, and P. G. Okubo; *with a* Chronological summary, by T. L. Wright. 1994. 78 p. (NC, Da, M.)

OF 94-0170-A. Routine processing of seismic hypocentral data using personal computers, by T. L. Murray. 1994. 29 p. (NC, Da, M.)

OF 94-0170-B. Routine processing of seismic hypocentral data using personal computers, by T. L. Murray. 1994. One 5 1/2 inch diskette. (NC, Da, M.)

Requirements: IBM PC or compatible computer with 5 1/4 inch disk drive (25-MHz 386SX processor preferred); MS DOS 5.0 or greater; math coprocessor; hard disk drive capacity at least 80MB. The computer used for analysis must be connected with the data-acquisition computer on a network with at least 2 mbps capacity (for example, Artisoft Lantastic).

OF 94-0172. Earthquake hazard mitigation; using science for safety decisions, by R. L. Bernknopf and D. R. Soller. 1994. 40 p. (NC, Da, M.)

OF 94-0173. CALIFORNIA. Preliminary geologic map of Fort Irwin Basin, north-central Mojave Desert, California, by J. C. Yount, E. R. Schermer, T. J. Felger, D. M. Miller and K. A. Stephens. 1994. 27 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 Broadway, Los Angeles, CA 90012.)

OF 94-0174. Codicil to The geophysical expression of selected mineral deposit models, edited by W. D. Heran. 1994. 36 p. (NC, Da, M.) (Extension of OF 92-557.)

Geophysical model of massive sulfide deposits, compiled by W. D. Heran. p. 4-15.

Geophysical model of chromite deposits, compiled by A. K. Kospiri and W. D. Heran. p. 16-27.

Geophysical model of bedded barite, compiled by D. B. Hoover, P. L. Hill and D. H. Knepper, Jr. p. 28-31.

Geophysical model of diamond pipes, compiled by D. B. Hoover and D. L. Campbell. p. 32-36.

OF 94-0176. National Earthquake Hazards Reduction Program, summaries of technical reports; Volume XXXV, compiled by M. L. Jacobson. Prepared by participants in the National Earthquake Hazards Reduction Program. 1994. 906 p. (In two volumes.) (NC, Da, M.)

OF 94-0177. The U.S. Geological Survey coal quality data base (COALQUAL), by R. B. Finkelman, C. L. Oman, L. J. Bragg and S. J. Tewalt. 1994. 46 p. (NC, Da, M.)

OF 94-0179-A. U.S.G.S. earthquake videotapes, by D. V. Prose. 1994. 4 p. (NC, Da, M.)

OF 94-0179-B. CALIFORNIA. San Francisco Bay seismic 1, by D. V. Prose. 1994. One VHS videotape. (NC, Da, M.)

OF 94-0179-C. CALIFORNIA. San Francisco Bay seismic 2, by D. V. Prose. 1994. One VHS videotape. (NC, Da, M.)

OF 94-0179-D. ALASKA. Alaska, by D. V. Prose. 1994. One VHS videotape. (NC, Da, M.)

OF 94-0179-E. WASHINGTON. Pacific Northwest, by D. V. Prose. 1994. One VHS videotape. (NC, Da, M.)

OF 94-0179-F. CALIFORNIA. Mendocino seismic, by D. V. Prose. 1994. One VHS videotape. (NC, Da, M.)

OF 94-0179-G. HAWAII. Hawaii, by D. V. Prose. 1994. One VHS videotape. (NC, Da, M.)

OF 94-0179-H. CALIFORNIA. Landers earthquake, 1992, by D. V. Prose. 1994. One VHS videotape. (NC, Da, M.)

OF 94-0179-I. CALIFORNIA. Northridge earthquake, 1994, by D. V. Prose. 1994. One VHS videotape. (NC, Da, M.)

OF 94-0179-J. CALIFORNIA. San Francisco Bay area, by D. V. Prose. 1994. One VHS videotape. (NC, Da, M.)

OF 94-0179-K. CALIFORNIA. San Andreas & Hayward faults, by D. V. Prose. 1994. One VHS videotape. (NC, Da, M.)

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OF 94-0179-O. New Madrid 4, by D. V. Prose. 1994. One VHS videotape. (NC, Da, M.)

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OF 94-0179-S. New Madrid 8, by D. V. Prose. 1994. One VHS videotape. (NC, Da, M.)

OF 94-0179-T. New Madrid 9, by D. V. Prose. 1994. One VHS videotape. (NC, Da, M.)

OF 94-0179-U. New Madrid 10, by D. V. Prose. 1994. One VHS videotape. (NC, Da, M.)

OF 94-0180. Aeromagnetic maps of the eastern Ross transect zone, West Antarctica, Folio A, by R. E. Sweeney, C. A. Finn, J. C. Behrendt, D. D. Blankenship, R. E. Bell, S. M. Hodge, K. A. Najmulski, Maureen Noonan, R. P. Kucks, R. W. Saltus, Kenneth Griffiths, Robert Arko and Sheila Dopplehammer. Prepared in cooperation with the National Science Foundation. 1994. 4 over-size sheets, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M.)

OF 94-0181. SOUTH CAROLINA. Preliminary geologic map of the Savannah River Site, Aiken, Allendale, and Barnwell counties, South Carolina, by D. C. Prowell. 1994. 15 p., 1 over-size sheet, scale 1:48,000 (1 inch = 4,000 feet). (NC; South Carolina Geol. Surv., 5 Geology Rd., Columbia, SC 29210-9998.)

OF 94-0182-A. Analytical data for stream sediment, heavy-mineral concentrate, and outcrop samples, Sur Medio region, departments of Ica, Ayacucho, and Huancavelica, Peru; Part A, General discussion, by R. E. Learned, K. R. Long, R. L. Turner, Cesar Rios C. and Joe Rodriguez C. 1994. 9 p. (NC, Da, M.)

OF 94-0182-B. Analytical data for stream sediment, heavy-mineral concentrate, and outcrop samples, Sur Medio region, departments of Ica, Ayacucho, and Huancavelica, Peru; Part B, Printout of analytical data, by R. E. Learned, K. R. Long, R. L. Turner, Cesar Rios C. and Joe Rodriguez C. 1994. 228 p. (NC, Da, M.)

OF 94-0182-C. Analytical data for stream sediment, heavy-mineral concentrate, and outcrop samples, Sur Medio region, departments of Ica, Ayacucho, and Huancavelica, Peru, by R. E. Learned, K. R. Long, R. L. Turner, Cesar Rios C. and Joe Rodriguez C. 1994. One 3 1/2 inch diskette. (NC, Da, M.)

OF 94-0183. KEY analysis system; Volume 1, User's guide, by R. P. Massé. 1994. 134 p. (NC, Da, M.)

OF 94-0184. KEY analysis system; Volume 2, Subroutines, by R. P. Massé. 1994. 113 p. (NC, Da, M.)

OF 94-0185. KEY analysis system; Volume 3, Subroutines, by R. P. Massé. 1994. 120 p. (NC, Da, M.)

OF 94-0186. KEY analysis system; Volume 4, Subroutines, by R. P. Massé. 1994. 132 p. (NC, Da, M.)

OF 94-0187. CALIFORNIA. Geomorphic investigations of deformation along the northeastern margin of the Santa Cruz Mountains, by C. S. Hitchcock, K. I. Kelson and S. C. Thompson. 1994. 50 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 94-0188. CALIFORNIA. Soil carbon and nitrogen data set for a soil sequence disturbed by timber harvest, Blodgett Experimental Forest, Georgetown, California, by T. A. Black and J. W. Harden. 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 94-0189. OREGON. Lithologic description of sediment cores from Wocus Marsh, Klamath County, Oregon, by D. P. Adam, H. J. Rieck, M. L. McGann, K. H. Schiller, A. M. Sarna-Wojcicki and D. A. Trimble. 1994. 65 p. (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)

OF 94-0190. $^{40}Ar/^{39}Ar$ thermochronologic data for minerals from plutons of the Variscan Sila Batholith, southern Italy (Calabria), by J. F. Sutter, Antonia Messina, Benedetto De Vivo and Roberto Compagnoni. 1994. 45 p. (NC, Da, M.)

OF 94-0191. WYOMING. Geologic map of the Sheep Mountain-Little Sheep Mountain area, Big Horn County, Wyoming, by R. L. Rioux. 1994. 1 over-size sheet, scale 1:31,680 (1 inch = one-half mile). (NC, Da.)

OF 94-0193. NEVADA. Field guide to Oligocene-Miocene ash-flows and source calderas in the Great Basin of Nevada, edited by D. A. John. 1994. 44 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)

1. Indian Peak caldera complex, White River narrows ("outflow alley"), the central Nevada caldera complex, and road log from Caliente to Austin, Nevada, by M. G. Best, E. H. Christiansen, A. L. Deino and C. S. Grommé. p. 2-19.

2. Stillwater caldera complex and road log from Austin to Fallon, Nevada, by D. A. John. p. 20-39.

3. Nine Hill Tuff near Soda Springs, California, by A. L. Deino. p. 40-41.

OF 94-0195. Earth science issues in the Missouri River basin; man's adaptation to the changing landscape, by W. H. Langer, C. K. Throckmorton and S. P. Schilling. 1994. 42 p. (NC, Da, M, U, S; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Section, 1313 Sherman St., Room 818, Denver, CO 80203; Iowa Geol. Surv., 123 North Capitol St., Iowa City, IA 52242; Kansas Geol. Surv., 1930 Constant Ave., Campus West, Univ. of Kansas, Lawrence, KS 66046; Geol. Surv., 2642 University Ave., St. Paul, MN 55114-1057; Dep. of Natural Resources, Div. of Geol. and Land Surv., 111 Fairgrounds Rd., P.O. Box 250, Rolla, MO 65401; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701; Conservation and Surv. Div., Inst. of Agriculture and Natural Resources, 113 Nebraska Hall, Univ. of Nebraska, Lincoln, NE 68588-0517; North Dakota Geol. Surv., Univ. Station, Grand Forks, ND 58202-8156; Dep. of Water and Natural Resources, South Dakota Geol. Surv., Sci. Ctr., University of South Dakota, Vermillion, SD 57069; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071.)

OF 94-0196. Rapid computation of electromagnetic fields for high-frequency sounding in the 300 kHz to 30 MHz range over layered media, by W. L. Anderson. 1994. 11 p. (NC, Da, M.)

OF 94-0197. CALIFORNIA. Maps of peak horizontal and vertical accelerations recorded for the Northridge, California, earthquake of January 17, 1994 and general geology of the epicentral region, compiled by C. M. Wentworth, R. D. Borcherdt, R. K. Mark and D. M. Boore. 1994. 3 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 94-0198. MONTANA. Preliminary map showing Quaternary faults and landslides in the Cliff Lake 15′ Quadrangle, Madison County, Montana, by J. M. O'Neill, T. H. LeRoy and P. E. Carrara. 1994. 1 over-size sheet, scale 1:62,500 (1 inch = about 1 mile). (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)

OF 94-0199. CALIFORNIA. The Southern California Network Bulletin, January-December 1993, by L. A. Wald, S. C. Perry-Huston and D. D. Given. 1994. 56 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 94-0200. 2nd annual Lake Erie coastal erosion study workshop, February 2-4, 1994, edited by D. W. Folger. Prepared in cooperation with the Ohio Geological Survey. 1994. 55 p. (NC, Da, M.)

Quantity and fate of sediments in the coastal ice along the Ohio Lake Erie coast, 1993 and 1994, by P. W. Barnes, Michael McCormick and D. E. Guy, Jr. p. 9-10.

The distribution of surficial sediments in Lake Erie's western basin, by R. C. Circé and J. A. Fuller. p. 11.

Preliminary mapping of Lake Erie bottom sediments between Sandusky and Conneaut, Ohio based on sidescan sonar imagery, by D. S. Foster. p. 12-13.

Offshore geology of the Ohio part of Lake Erie interpreted from high-resolution seismic-reflection profiles, by J. A. Fuller, R. N. Oldale, R. C. Circé, D. L. Liebenthal, K. E. Parolski, D. R. Nichols and V. A. Cross. p. 14-16.

Video monitoring of the shoreline near Painesville, Ohio, by J. W. Haines, R. A. Holman and William Townsley. p. 17-18.

Comparison of long- and short-term recession rates along Ohio's central basin shore of Lake Erie, by S. D. Mackey and D. E. Guy, Jr. p. 19-27.

Geologic framework and restoration of an eroded Lake Erie coastal marsh; Metzger Marsh, Ohio, by S. D. Mackey and D. E. Guy, Jr. p. 28-31.

Till lithostratigraphy, bluff morphology, and erosion rates in the Lake Erie coastal zone of Ohio, by R. R. Pavey, B. D. Stone and Cynthia Prosser. p. 32-34.

Mapping and CD-ROM short course, by C. F. Polloni. p. 35-37.

Potential for wetland expansion in the Lake Erie Basin following lacustrine regressions, by E. I. Robbins. p. 38-41.

Bedrock surface topography and preliminary Quaternary stratigraphy in the western Lake Erie coastal zone, northwestern Ohio and southeastern Michigan, by B. D. Stone and G. L. Shideler. p. 42-44.

Geologic studies of coastal wetlands processes, by S. J. Williams. p. 45-47.

OF 94-0202. CALIFORNIA. A direct-current resistivity survey near the Marine Corps logistics bases at Nebo and Yermo, Barstow, California, by A. A. Zohdy and R. J. Bisdorf. Prepared in cooperation with the U.S. Department of the Navy. 1994. 155 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 94-0203. Geoenvironmental models of mineral deposits, and geology-based mineral-environmental assessments of public lands, by G. S. Plumlee, K. S. Smith and W. H. Ficklin. 1994. 7 p. (NC, Da, M.)

OF 94-0204. WYOMING. Geologic map of the La Barge Quadrangle, Lincoln and Sublette counties, Wyoming, by R. L. Rioux. 1994. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071.)

OF 94-0205. U.S. Geological Survey coal quality (COALQUAL) database; version 1.3, by L. J. Bragg, J. K. Oman, S. J. Tewalt, C. L. Oman, N. H. Rega, P. M. Washington and R. B. Finkelman. 1994. (NC, Da, M.) (Available free of charge from L. J. Bragg, USGS, 956 National Ctr., 12201 Sunrise Valley Dr., Reston, VA 22092.)

OF 94-0206. Branch of Petroleum Geology, bibliography, 1993, compiled by S. A. Oscarson. 1994. 28 p. (NC, Da, M.)

OF 94-0207. GEORGIA. Digital data for an aeromagnetic survey of central Georgia, by D. L. Daniels. 1994. 6 p., one 3 1/2 inch diskette. (NC, Da, M; Georgia Geol. Surv., 19 Martin Luther King Jr. Dr. SW, Room 400, Atlanta, GA 30334.)

The digital data are contained on a 3 1/2 inch, high density diskette written on a microcomputer using the MS-DOS operating system. The output digital file is a binary file of 63,512 records and a total size of 889,170 bytes. Each logical record represents one digitized location and consists of 3 fields: west longitude, north latitude (both in degrees), and residual magnetic field in nanoTeslas (arbitrary datum). The binary file can be converted to an ASCII listing by a program included on the disk. The program operates under the DOS operating system but requires a math coprocessor. The ASCII output file will be 3,175,600 bytes. Direct the output to a hard drive which has more than 3.2MB of free space.

OF 94-0208. ARKANSAS, TENNESSEE, MISSISSIPPI. Second progress report on chronostratigraphic and paleoclimatic studies, middle Mississippi River valley, eastern Arkansas, western Tennessee, and northwestern Mississippi, edited by H. W. Markewich; contributing authors are P. B. Maat, J. P. McGeehin, H. T. Millard, Jr., M. J. Pavich, F. J. Rich, Meyer Rubin, E. M. Rutledge, S. G. Van Valkenburg, L. B. Ward, and D. A. Wysocki. Prepared in cooperation with the U.S. Department of Agriculture, Soil Conservation Service. 1994. 51 p. (NC, Da, M; Office of Geol., P.O. Box 20307, Jackson, MS 39289-1307.) (Update of OF 93-273.)

OF 94-0209. OREGON, WASHINGTON. Geology of Holocene liquefaction features along the lower Columbia River at Marsh, Brush, Price, Hunting, and Wallace islands, Oregon and Washington, compiled by B. F. Atwater. 1994. 64 p. (NC, Da, M, S; Washington DNR/Div. of Geol. and Earth Resources Library, 1111 Washington St. SE, Olympia, WA 98501; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)

OF 94-0210. Crustal structure of Kuwait; constraints from gravity anomalies, by F. Bou-Rabee and M. D. Kleinkopf. 1994. 27 p. (NC, Da, M.)

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Requirements: Apple Macintosh computer with high-density drive and Apple Computer, HyperCard 2.0 or above software.

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Potential effects of a major earthquake on structures in the Anchorage area, by John Aho. p. 55-60.

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OF 94-0419. MISSOURI. Geologic map of the Coffman 7 1/2′ Quadrangle, Ste. Genevieve County, Missouri, by R. W. Harrison and A. P. Schultz. 1994. 6 p., 2 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; Dep. of Natural Resources, Div. of Geol. and Land Surv., 111 Fairgrounds Rd., P.O. Box 250, Rolla, MO 65401.)

OF 94-0420. NORTH CAROLINA, SOUTH CAROLINA, VIRGINIA. Lithotectonic map and field data; reconnaissance geology of the Carolina slate belt and adjacent rocks from southern Virginia to central South Carolina, by T. W. Offield. 1994. Two 3 1/2 inch DS/HD diskettes. (NC, Da, M.)

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OF 94-0434. PENNSYLVANIA. Late Wisconsinan to pre-Illinoian(G?) glacial and periglacial events in eastern Pennsylvania (guidebook for the 57th field conference, Friends of the Pleistocene Northeastern Section, May 20-22, 1994, Hazleton, Pennsylvania), by D. D. Braun, E. J. Ciolkosz, J. D. Inners, and J. B. Epstein; *with contributions by* G. M. Clark, I. D. Sasowsky, and Robin Koberle. 1994. 117 p. (NC, Da, M.)

Late Wisconsinan to pre-Illinoian(G?) glacial events in eastern Pennsylvania, by D. D. Braun. p. 1-20.

Paleomagnetism of glacial sediments from three locations in eastern Pennsylvania, by I. D. Sasowsky. p. 21-23.

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Sorted patterned ground in the Middle and Southern Anthracite fields areas, Ridge and Valley Province, Pennsylvania, by G. M. Clark. p. 37-39.

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OF 94-0436. NEVADA. Preliminary geologic map of the Snow Gulch Quadrangle, Humboldt and Lander counties, Nevada, by T. G. Theodore, *with sections on* Radiolarians in the Ordovician Valmy Formation and Devonian Scott Canyon Formation by B. L. Murchey, and *Helicoprion* sp. from the Pennsylvanian and Permian Antler Peak Limestone, Lander County, Nevada by R. A. Hanger, E. E. Strong, and R. T. Ashinhurst. Prepared in cooperation with the Santa Fe Pacific Mining Co. 1994. 31 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 94-0438. The Venus geologic mappers' handbook, compiled by K. L. Tanaka, *with contributions from* H. J. Moore, G. G. Schaber, M. G. Chapman, E. B. Stofan, D. B. Campbell, P. A. Davis, J. E. Guest, G. E. McGill, P. G. Rogers, R. S. Saunders, and J. R. Zimbelman. 1994. 66 p. (NC, Da, M.)

OF 94-0439. NEVADA. Field trip guide to the southern East Humboldt Range and northern Currie Hills, Northeast Nevada; age and style of attenuation faults in Permian and Triassic rocks, by C. H. Thorman and W. E. Brooks. 1994. 10 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)

OF 94-0441-A. NEVADA. A computer-assisted annotated bibliography and preliminary survey of Nevada paleobotany, by H. E. Schorn, C. J. Bell, S. W. Starratt and D. T. Wheeler. 1994. 180 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)

OF 94-0441-B. NEVADA. A computer-assisted annotated bibliography and preliminary survey of Nevada paleobotany, by H. E. Schorn, C. J. Bell, S. W. Starratt and D. T. Wheeler. 1994. One 3 1/2 inch diskette. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)

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slides. (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 94-0446. Planktic foraminifer census data from Site RC-15-62 and Ocean Drilling Program holes 747A and 751A, by M. M. Robinson and S. L. Brown. 1994. 6 p. (NC, Da, M.)

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OF 94-0449. ARIZONA. Geologic map of the Antelope Knoll Quadrangle, northern Mohave County, Arizona, by G. H. Billingsley. 1994. 18 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.)

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For information on availability and price of these reports, write to the address indicated by a dagger (†) in the listing for the report.

OF 93-0381. Large scale coastal behavior '93, edited by J. H. List. 1993. 238 p. (NC, Da, M.) †USGS, Center for Coastal Geology, 600 4th St. South, St. Petersburg, FL 33701.

Coastal development in Suriname at different temporal and spatial scales, by P. G. Augustinus. p. 1-4.

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Predicting morphodynamic change from tidal residual vectors at a large tidal inlet, Tauranga Harbour, New Zealand, by T. R. Healy, R. G. Bell and W. P. de Lange. p. 64-67.

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Wave climatologies of the Australian southeastern coast, by N. I. Trenaman and A. D. Short. p. 205-208.

Reduction process of river delta due to natural change of its river mouth; in the case of the Kurobe River, by Yoshito Tsuchiya and Takao Yamashita. p. 209-211.

Large scale behavior of the coast of the "closed" part of the Dutch coast, by Jan van de Graaff. p. 212-215.

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The analysis of coastal profiles for large-scale coastal behavior, by K. M. Wijnberg and J. H. Terwindt. p. 224-227.

Formation process of river delta by short cutting of river; in the case of Shinanogawa River flowing into Japan Sea, by Takao Yamashita, Masakatsu Saito and Yoshito Tsuchiya. p. 228-231.

OF 94-0073. Water resources professional's outreach notebook; ground water grade level 6-8, by S. J. Vandas. 1994. 104 p. (NC, Da, M, Wb.) †S. J. Vandas, USGS, Box 25046, Mail Stop 414, National Training Center, Lakewood, CO 80225; telephone 303-236-4932.

OF 94-0226-A. WASHINGTON, OREGON. Earthquakes in Washington and Oregon; 1872-1993, by S. K. Goter. 1994. 1 p., 1 over-size sheet, scale 1:1,000,000 (1 inch = about 16 miles). (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; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232-2162.) †This colored map cannot be reproduced by Open-File Services, but copies are available from: Kay Massé, USGS, Box 25046, Denver Federal Ctr., Mail Stop 967, Denver, CO 80225; telephone 303-273-8477.

OF 94-0321. WISCONSIN. Water-resources investigations in Wisconsin, 1994, by D. E. Maertz. 1994. 92 p. (NC, Da, M, Wb; USGS, WRD, 6417 Normandy Lane, Madison, WI 53719-1133.) †USGS, WRD, 6417 Normandy Lane, Madison, WI 53719-1133; telephone 608-274-3535.

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-1680. WASHINGTON. Geologic map of the Vanson Peak Quadrangle, Lewis, Cowlitz, and Skamania counties, Washington, by R. C. Evarts and R. P. Ashley. Prepared in cooperation with the Washington Department of Natural Resources, Geology and Earth Resources Division. 1993. Lat 46°22′30″ to 46°30′, long 122°07′30″ to 122°15′. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 39 by 32 inches (in color). (Accompanied by 12-page text.)

GQ-1682. WASHINGTON. Geologic map of the Cowlitz Falls Quadrangle, Lewis and Skamania counties, Washington, by R. C. Evarts and R. P. Ashley. Prepared in cooperation with the Washington Department of Natural Resources, Geology and Earth Resources Division. 1993. Lat 46°22′30″ to 46°30′, long 122° to 122°07′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 40 by 33 inches (in color). (Accompanied by 10-page text.)

GQ-1696. ARIZONA. Geologic map of the Rustler Park Quadrangle, Cochise County, Arizona, by J. S. Pallister, E. A. du Bray and J. S. Latta, IV. 1994. Lat 31°52′30″ to 32°, long 109°15′ to 109°22′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 49 by 35 inches (in color).

GQ-1708. ARIZONA. Geologic map of the Fife Peak Quadrangle, Cochise County, Arizona, by J. S. Pallister and E. A. du Bray. 1994. Lat 31°52′30″ to 32°, long 109°22′30″ to 109°30′. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 38 by 32 inches (in color.)

GQ-1709. ARIZONA. Geologic map of the Signal Quadrangle, Mohave County, Arizona, by Ivo Lucchitta, U.S. Geological Survey; and N. H. Suneson, Oklahoma Geological Survey. 1994. Lat 34°22′30″ to 34°30′, long 113°37′30″ to 113°45′. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 43 by 34 inches (in color).

GQ-1710. NEVADA. Geologic map of the La Plata Canyon Quadrangle, Churchill County, Nevada, by D. A. John and N. J. Silberling. 1994. Lat 39°22′30″ to 39°30′, long 118°15′ to 118°22′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 38 by 32 inches (in color). (Accompanied by 8-page text.)

GQ-1711. ARIZONA. Geologic map of the Valentine Southeast Quadrangle, Mohave County, Arizona, by L. S. Beard and Ivo Lucchitta. 1993. Lat 35°15′ to 35°22′30″, long 113°30′ to 113°37′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 40 by 34 inches (in color).

GQ-1717. NEW JERSEY. Bedrock geologic map of the Tranquility Quadrangle, Warren, Sussex, and Morris counties, New Jersey, by A. A. Drake, Jr., U.S. Geological Survey; R. A. Volkert, New Jersey Geological Survey; P. T. Lyttle, U.S. Geological Survey; and Mark Germine, New Jersey Geological Survey. Prepared in cooperation with the New Jersey Geological Survey. 1993. Lat 40°52′30″ to 41°, long 74°45′ to 74°52′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 52 by 35 inches (in color.)

GQ-1718. ARIZONA. Geologic map of the Centennial Wash Quadrangle, Mohave and La Paz counties, Arizona, by Ivo Lucchitta, U.S. Geological Survey; and N. H. Suneson, Oklahoma Geological Survey. 1994. Lat 34°15′ to 34°22′30″, long 113°45′ to 113°52′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 44 by 33 inches (in color). (Accompanied by 7-page text.)

GQ-1719. ARIZONA. Geologic map of the Castaneda Hills SW Quadrangle, Mohave and La Paz counties, Arizona, by Ivo Lucchitta, U.S. Geological Survey; and N. H. Suneson, Oklahoma Geological Survey. 1994. Lat 34°15′ to 34°22′30″, long 113°52′30″ to 114°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 41 by 33 inches (in color).

GQ-1720. ARIZONA. Geologic map of the Castaneda Hills Quadrangle, Mohave County, Arizona, by Ivo Lucchitta, U.S. Geological Survey; and N. H. Suneson, Oklahoma Geological Survey. 1994. Lat 34°22′30″ to 34°30′, long 113°52′30″ to 114°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 44 by 33 inches (in color).

GQ-1723. CALIFORNIA. Geologic map of the Lopez Mountain Quadrangle, San Luis Obispo County, California, by Hugh McLean. 1994. Lat 35°15′ to 35°22′30″, long 120°30′ to 120°37′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 40 by 33 inches (in color).

GQ-1725. MONTANA. Geologic map of the Cherry Lake Quadrangle, Madison County, Montana, by K. S. Kellogg. 1993. Lat 45°22′30″ to 45°30′, long 111°30′ to 111°37′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 50 by 35 inches (in color).

GQ-1726. WASHINGTON. Geologic map of the Omak Lake 15′ Quadrangle, Okanogan County, Washington, by J. W. Goodge and V. L. Hansen. 1994. Lat 48°15′ to 48°30′, long 119°15′ to 119°30′. Scale 1:62,500 (1 inch = about 1 mile). Sheet 36 by 30 inches (in color). (Accompanied by 20-page text.)

GQ-1727. PENNSYLVANIA. Bedrock geologic map of the Allentown West Quadrangle, Lehigh and Berks counties, Pennsylvania,

by A. A. Drake, Jr. 1993. Lat 40°30′ to 40°37′30″, long 75°30′ to 75°37′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 54 by 34 inches (in color).

GQ-1728. ALASKA. Geologic map of the Gulkana A-1 Quadrangle, south-central Alaska, by D. H. Richter, W. A. Duffield, D. A. Sawyer, J. C. Ratté and H. R. Schmoll. 1994. Lat 62° to 62°15′, long 144° to 144°30′. Scale 1:63,360 (1 inch = 1 mile). Sheet 49 1/2 by 34 inches (in color).

GQ-1731. NEVADA. Geologic map of the Chief Mountain Quadrangle, Lincoln County, Nevada, by P. D. Rowley, R. R. Shroba, F. W. Simonds, K. J. Burke, G. J. Axen and S. D. Olmore. 1994. Lat 37°37′30″ to 37°45′, long 114°30′ to 114°37′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 54 by 42 inches (in color).

GQ-1732. VIRGINIA. Geologic map of the Manassas Quadrangle, Fairfax and Prince William counties, Virginia, by A. A. Drake, Jr., A. J. Froelich, R. E. Weems and K. Y. Lee. 1994. Lat 38°45′ to 38°52′30″, long 77°22′30″ to 77°30′. Scale 1:24,000 (1 inch = 2,000 ft). Sheet 52 by 38 inches (in color).

GQ-1733. ARIZONA. Geologic map of the Chiricahua Peak Quadrangle, Cochise County, Arizona, by E. A. du Bray and J. S. Pallister. 1994. Lat 31°45′ to 31°52′30″, long 109°15′ to 109°22′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 49 by 40 inches (in color).

GQ-1735. ARIZONA. Geologic map of the Long Valley Quadrangle, Coconino County, Arizona, by G. W. Weir, G. E. Ulrich and L. D. Nealey. 1994. Lat 34°30′ to 34°37′30″, long 111°15′ to 111°22′30″. Scale 1:24,000 (1 inch = 2,000 ft). Sheet 36 by 33 inches (in color).

GQ-1736. NEW MEXICO. Geologic map of the Milligan Mountain Quadrangle, Catron County, New Mexico, by J. C. Ratté, D. J. Bove, U.S. Geological Survey; and W. C. McIntosh, New Mexico Bureau of Mines and Mineral Resources. 1994. Lat 33°37′30″ to 33°45′, long 108°37′30″ to 108°45′. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 56 by 41 inches (in color).

GQ-1737. NEW MEXICO. Geologic map of the Clifton House Quadrangle, showing fossil zones in the Pierre Shale, Colfax County, New Mexico, by C. L. Pillmore and G. R. Scott. 1994. Lat 36°45′ to 36°52′30″, long 104°22′30″ to 104°30′. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 37 by 29 inches (in color).

GQ-1738. MONTANA. Geologic map of the Norris Quadrangle, Madison County, Montana, by K. S. Kellogg. 1994. Lat 45°30′ to 45°37′30″, long 111°37′30″ to 111°45′. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 43 by 31 inches (in color).

GQ-1739. VIRGINIA. Geologic map of the Bluemont Quadrangle, Loudoun and Clarke counties, Virginia, by C. S. Southworth. 1994. Lat 39° to 39°07′30″, long 77°45′ to 77°52′30″. Scale 1:24,000 (1 inch = 2,000 feet.) Sheet 54 by 41 inches (in color).

GQ-1740. NEW HAMPSHIRE. Surficial geologic map of the Kingston Quadrangle, Rockingham County, New Hampshire, by Carl Koteff and R. B. Moore. Prepared in cooperation with the State of New Hampshire. 1994. Lat 42°52′30″ to 43°, long 71° to 71°07′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 32 by 32 inches (in color).

GQ-1741. NEW JERSEY. Bedrock geologic map of the Washington Quadrangle, Warren, Hunterdon, and Morris counties, New Jersey, by A. A. Drake, Jr., U.S. Geological Survey; R. A. Volkert, D. H. Monteverde, and R. L. Kastelic, Jr., New Jersey Geological Survey. Prepared in cooperation with the New Jersey Geological Survey. 1994. Lat 40°45′ to 40°52′30″, long 74°52′30″ to 75°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 52 by 34 inches (in color).

GQ-1742. IDAHO. Geologic map of the Mahoney Butte Quadrangle, Blaine County, Idaho, by B. A. Skipp, W. E. Hall and P. K. Link. 1994. Lat 43°30′ to 43°37′30″, long 144°22′30″ to 114°30′. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 47 by 36 inches (in color).

GQ-1743. ARIZONA. Geological map of the Stanford Canyon Quadrangle, Cochise County, Arizona, by E. A. du Bray and J. S. Pallister. 1994. Lat 31°45′ to 31°52′30″, long 109°22′30″ to 109°30′. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 44 by 33 inches (in color).

GQ-1744. OREGON. Geologic map of the Brannan Gulch 7-1/2′ Quadrangle, Baker County, Oregon, by J. G. Evans. 1993. Lat 44°30′ to 44°37′30″, long 117°52′30″ to 118°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 41 by 34 inches (in color).

GQ-1745. NEVADA. Geologic map of the Deadman Spring SE Quadrangle, Lincoln County, Nevada, by W C Swadley and F. W. Simonds. 1993. Lat 37°45′ to 37°52′30″, long 114°45′ to 114°52′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 32 by 29 inches (in color.)

GQ-1746. NEVADA. Geologic map of the Pahroc Spring NE Quadrangle, Lincoln County, Nevada, by W C Swadley and F. W. Simonds. 1994. Lat 37°37′30″ to 37°45′, long 114°45′ to 114°52′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 39 by 29 inches (in color).

GQ-1749. NEW MEXICO, COLORADO. Geologic map of the Los Pinos Quadrangle, Rio Arriba and Taos counties, New Mexico, and Conejos County, Colorado, by R. A. Thompson and P. W. Lipman. 1994. Lat 36°52′30″ to 37°, long 106° to 106°07′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 30 by 29 inches (in color).

GQ-1750. NEW MEXICO. Geologic map of the San Antonio Mountain Quadrangle, Rio Arriba County, New Mexico, by R. A. Thompson and P. W. Lipman. 1994. Lat 36°45′ to 36°52′30″, long 106° to 106°07′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 32 by 29 inches (in color).

GQ-1751. CALIFORNIA. Geologic map of the Giant Forest Quadrangle, Tulare County, California, by T. W. Sisson and J. G. Moore. 1994. Lat 36°30′ to 36°45′, long 118°45′ to 119°. Scale 1:62,500 (1 inch = about 1 mile). Sheet 40 by 25 inches (in color).

GQ-1752. NEVADA. Geologic map of the Pahroc Spring SE Quadrangle, Lincoln County, Nevada, by W C Swadley and P. D. Rowley. 1994. Lat 37°30′ to 37°37′30″, long 114°45′ to 114°52′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 56 by 34 inches (in color).

GQ-1753. MONTANA, IDAHO. Geologic map of the Deadman Pass Quadrangle, Beaverhead County, Montana, and Lemhi County, Idaho, by J. W. M'Gonigle. 1994. Lat 44°45′ to

44°52′30″, long 113°07′30″ to 113°15′. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 51 by 32 inches (in color).

GQ-1754. NEVADA. Geologic map of the Delamar 3 SE Quadrangle, Lincoln County, Nevada, by W C Swadley, W. R. Page, R. B. Scott and E. H. Pampeyan. 1994. Lat 37° to 37°07′30″, long 114°45′ to 114°52′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 54 by 39 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-1003-B. NEVADA. Aeromagnetic and related maps of the Getchell gold trend, Osgood Mountains, north-central Nevada, by V. J. Grauch and Viki Bankey. 1994. Six sheets. Sheets 1, 3-6, lat 41° to 41°15′, long 117°15′ to 117°30′; sheet 2, lat 40°45′ to 41°15′, long 117°15′ to 117°30′. Each sheet, scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 44 by 39 inches; sheet 2, 57 by 35 inches; sheet 3, 50 by 31 inches; sheet 4, 44 by 33 inches; sheet 5, 46 by 31 inches; sheet 6, 54 by 27 inches (sheets 1, 3-6 in color).

GP-1005. NEW HAMPSHIRE, VERMONT. Bouguer gravity anomaly maps and four derivative maps of New Hampshire, Vermont, and vicinity, by W. A. Bothner and R. P. Kucks. 1993. Four sheets. Lat 42°45′ to 45°15′, long 70°30′ to 73°30′. Sheet 1, scale 1:250,000 (1 inch = about 4 miles); sheets 2-4, scale 1:500,000 (1 inch = about 8 miles). Sheet 1, 41 1/2 by 54 inches; sheet 2, 27 by 32 inches; sheet 3, 52 by 32 inches; sheet 4, 50 by 31 inches (all in color).

GP-1006. CALIFORNIA. Isostatic residual gravity map of the San Francisco Bay area, California, by C. W. Roberts and R. C. Jachens. 1993. Lat 37° to 39°, long 121° to 124°. Scale 1:286,500 (1 inch = about 4.5 miles). Sheet 31 by 37 inches (in color).

GP-1007. CALIFORNIA. Aeromagnetic map of the San Francisco Bay area, California, by R. C. Jachens and C. W. Roberts. 1993. Lat 37° to 39°, long 121° to 123°. Scale 1:286,500 (1 inch = about 4.5 miles). Sheet 31 by 37 inches (in color).

GP-1008. Gravity maps of the Dead Sea basin, by U. S. ten Brink, D. F. Coleman, Zvi Ben-Avraham, R. E. Bell, G. E. Andreasen and B. A. Seekins. 1994. Lat 30°30′N to 32°N, long 35°45′E to 35°E. Scale 1:250,000 (1 inch = about 4 miles). Sheet 56 by 35 inches (in color).

GP-1009. COLORADO. Complete Bouguer gravity anomaly, isostatic-residual gravity, horizontal gradient, and terrain maps of Colorado, by G. A. Abrams and D. H. Knepper, Jr. 1994. Two sheets. Lat 37° to 41°, long 102° to 109°. Each sheet, Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 1, 33 by 44 inches; sheet 2, 30 by 44 inches (all 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-1632. IDAHO. Geologic map of the Craters of the Moon, Kings Bowl, and Wapi lava fields, and the Great Rift volcanic rift zone, south-central Idaho, by M. A. Kuntz, D. E. Champion, R. H. Lefebvre and H. R. Covington. 1988 (1994). Lat 42°37′30″ to 43°45′, long 113°03′45″ to 114°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 41 by 55 inches (in color). (Reprint.)

I-1803-I. IDAHO, MONTANA. Maps showing gravity and aeromagnetic anomalies in the Dillon 1° × 2° Quadrangle, Idaho and Montana, by W. F. Hanna, H. E. Kaufmann, J. H. Hassemer, B. D. Ruppel, R. C. Pearson, U.S. Geological Survey; and E. T. Ruppel, Montana Bureau of Mines and Geology. 1993. Two sheets. Lat 45° to 46°, long 112° to 114°. Each sheet, scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 33 by 58 inches; sheet 2, 34 by 43 inches (all in color). (Accompanied by 27-page text.)

I-1970-A. Map showing the thickness and character of Quaternary sediments in the glaciated United States east of the Rocky Mountains; northeastern states, the Great Lakes, and parts of southern Ontario and the Atlantic offshore area (east of 80°31′ west longitude), by D. R. Soller. 1993. Lat 40° to 48°, long 67° to 80°31′. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 58 by 41 inches (in color).

I-2050-I. MONTANA. Map showing gravity and aeromagnetic anomalies in the Butte 1° × 2° Quadrangle, Montana, by W. F. Hanna, J. H. Hassemer, J. E. Elliott, C. A. Wallace and S. L. Snyder. 1994. Two sheets. Lat 46° to 47°, long 112° to 114°. Sheet 1, scales 1:250,000 (1 inch = about 4 miles) and 1:500,000 (1 inch = about 8 miles); sheet 2, scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 33 by 58 inches; sheet 2, 32 by 41 inches (all in color). (Accompanied by 35-page text.)

I-2091-A. Map showing sediment isopachs in the deep-sea basins of the Pacific continental margin, Strait of Juan de Fuca to Cape Mendocino, by J. V. Gardner, D. A. Cacchione, D. E. Drake, B. D. Edwards, M. E. Field, M. A. Hampton, H. A. Karl, U.S. Geological Survey; N. H. Kenyon, D. G. Masson, Institute of Oceanographic Sciences, United Kingdom; D. S. McCulloch, and M. S. Grim, U.S. Geological Survey. Prepared in cooperation with the U.S. Geological Survey—National Oceanic and Atmospheric Administration Joint Office for Mapping and Research. 1993. Lat 40°N to 49°N, long 122°W to 132°W. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 41 by 46 inches (in color).

I-2091-B. Map showing depth to basement in the deep-sea basins of the Pacific continental margin, Strait of Juan de Fuca to Cape Mendocino, by J. V. Gardner, D. A. Cacchione, D. E. Drake, B. D. Edwards, M. E. Field, M. A. Hampton, H. A. Karl, U.S. Geological Survey; N. H. Kenyon, D. G. Masson, Institute of Oceanographic Sciences, United Kingdom; D. S. McCulloch, and M. S. Grim, U.S. Geological Survey. Prepared in cooperation with the U.S. Geological Survey—National Oceanic and Atmospheric Administration Joint Office for Mapping and Research. 1993. Lat 40°N to 49°N, long 122°W to 132°W. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 41 by 46 inches (in color).

I-2138. ARIZONA. Geologic map of the Castle Dome Mountains, southwestern Arizona, by M. J. Grubensky, G. B. Haxel and R. D. Koch. Prepared in cooperation with the Arizona Geological Survey. 1993. Lat 33° to 33°20′, long 114° to 114°15′. Scale 1:62,500 (1 inch = about 1 mile). Sheet 41 by 40 inches (in color).

I-2184-D. UTAH. Stratigraphic and time-stratigraphic cross sections; a north-south transet from near the Uinta Mountain axis across the Basin and Range transition zone to the western margin of the San Rafael Swell, Utah, by D. A. Sprinkel. Prepared in cooperation with the Utah Geological Survey. 1994. Sheet 1, 51 by 32 inches; sheet 2, 50 by 40 inches (all in color). (Accompanied by 31-page text.)

I-2204. ALASKA. Geologic map of the Mount Katmai Quadrangle and adjacent parts of the Naknek and Afognak quadrangles, Alaska, by J. R. Riehle, R. L. Detterman, M. E. Yount and J. W. Miller. 1993. Lat 58° to 59°, long 153° to 157°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 56 by 41 inches (in color).

I-2205. ARIZONA. Geologic map of the Tucson Mountains Caldera, southern Arizona, by P. W. Lipman. 1993. Two sheets. Lat 32°07′30″ to 32°22′30″, long 111° to 111°12′30″. Each sheet, scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 40 by 50 inches; sheet 2, 55 by 40 inches (all in color).

I-2282. NEVADA. Geologic map of the Seaman Range, Lincoln and Nye counties, Nevada, by E. A. du Bray and D. O. Hurtubise. 1994. Lat 37°45′ to 38°15′, long 115° to 115°15′. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 37 by 56 inches (in color).

I-2291-B. COLORADO, UTAH. Map showing distribution, composition, and age of early and middle Cenozoic volcanic centers in Colorado and Utah, by R. G. Luedke. 1993. Two sheets. Lat 37° to 42°, long 102° to 114°. Each sheet, scale 1:1,000,000 (1 inch = about 16 miles). Sheet 1, 44 by 41 inches; sheet 2, 44 by 41 inches (all in color). (Accompanied by 13-page text.)

I-2294. Geologic map of the MTM-05152 and -10152 quadrangles, Mangala Valles region of Mars, by M. G. Chapman and K. L. Tanaka. Prepared for the National Aeronautics and Space Administration. 1993. Two sheets. Sheet 1, lat -12.5° to -2.5°, long 150° to 155°. Sheet 1, scale 1:502,000 (1 mm = 502 m) at 150° long. Sheet 1, 58 by 40 inches; sheet 2, 30 by 32 inches (all in color). (Transverse Mercator projection.)

I-2296. ARIZONA. Geologic map of the Wolf Hole Mountain and vicinity, Mohave County, northwestern Arizona, by G. H. Billingsley. 1993. Lat 36°45′ to 37°, long 113°30′ to 113°45′. Scale 1:31,680 (1 inch = 2,640 feet). Sheet 47 by 42 inches (in color). (Supersedes Open-file reports 90-540, 90-541, 90-643, and 90-644.)

I-2298. Geologic map of the Powder River basin and surrounding area, Wyoming, Montana, South Dakota, North Dakota, and Nebraska, by M. S. Ellis and R. B. Colton. 1994. Two sheets. Sheet 1, lat 42° to 47°, long 103° to 109°. Sheet 1, Scale 1:500,000 (1 inch = about 8 miles). Sheet 1, 42 by 50 inches; sheet 2, 30 by 41 inches (all in color).

I-2305. CALIFORNIA. Geologic map of the central and northern Funeral Mountains and adjacent areas, Death Valley region, Southern California, by L. A. Wright and B. W. Troxel. Prepared in cooperation with the U.S. Department of Energy. 1993. Lat 36°30′ to 36°45′, long 116°35′ to 117°05′. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 57 by 41 inches (in color).

I-2306. NEW YORK, NEW JERSEY. Bedrock and engineering geologic maps of New York County and parts of Kings and Queens counties, New York, and parts of Bergen and Hudson counties, New Jersey, by C. A. Baskerville. 1994. Two sheets. Lat 40°40′ to 40°52′30″, long 73°52′30″ to 74°02′30″. Each sheet, scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 41 by 56 inches; sheet 2, 41 by 46 inches (all in color).

I-2307. VERMONT. Bedrock geologic map of the Mount Snow and Readsboro quadrangles, Bennington and Windham counties, Vermont, by N. M. Ratcliffe. 1993. Lat 42°45′ to 43°, long 72°52′30″ to 73°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 58 inches (in color.) (Accompanied by 9-page text.)

I-2310. Geologic map of the MTM-20147 Quadrangle, Mangala Valles region of Mars, by R. A. Craddock and Ronald Greeley. Prepared for the National Aeronautics and Space Administration. 1994. Lat -22.5° to -17.5°, long 145° to 150°. Scale 1:502,000 (1 mm = 502 m) at 150° long. Sheet 44 by 35 1/2 inches (in color). (Transverse Mercator projection.)

I-2327. Geologic maps of the Olympus Mons region of Mars, by E. C. Morris and K. L. Tanaka. Prepared for the National Aeronautics and Space Administration. 1994. Two sheets. Sheet 1, lat 5° to 40°, long 125° to 150°; sheet 2, lat 13° to 25°, long 128° to 140°. Sheet 1, scale 1:2,016,000 (1 mm = 2.016 km) at 137.5° long; sheet 2, scale 1:1,000,000 (1 mm = 1 km) at 134° long. Sheet 1, 34 by 54 inches; sheet 2, 45 by 40 inches (all in color). (Transverse Mercator projection.) (Accompanied by 18-page text.)

I-2328. Geologic map of the Tiamat Sulcus Quadrangle (Jg-9) of Ganymede, by S. K. Croft, Ruggero Casacchia and R. G. Strom. Prepared for the National Aeronautics and Space Administration. 1994. Lat -22° to 22°, long 216° to 288°. Scale 1:5,000,000 (1 mm = 5 km) at ±13° lat. Sheet 32 by 38 inches (in color).

I-2329. MAINE. Global Geoscience Transect 8; Quebec-Maine-Gulf of Maine Transect, southeastern Canada, northeastern United States of America, compiled by D. B. Stewart, B. E. Wright, J. D. Unger, J. D. Phillips, D. R. Hutchinson, U.S. Geological Survey; *with contributions by* J. H. Luetgert, U.S. Geological Survey; W. A. Bothner, University of New Hampshire; K. D. Klitgord, L. M. Liberty, U.S. Geological Survey; and C. P. Spencer, Geological Survey of Canada. Prepared in cooperation with the Geological Survey of Canada and the Geological Survey of Maine. 1993. Lat 40° to 47°, long 67° to 73°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 40 by 58 inches (in color). (Accompanied by 17-page text.) (Supersedes Open-file report 91-353.)

I-2330. IDAHO. Geologic map of the Idaho National Engineering Laboratory and adjoining areas, eastern Idaho, by M. A. Kuntz, B. A. Skipp, M. A. Lanphere, W. E. Scott, K. L. Pierce, G. B. Dalrymple, D. E. Champion, U.S. Geological Survey; G. F. Embree, Ricks College; W. R. Page, L. A. Morgan, U.S. Geological Survey; R. P. Smith, EG&G Idaho; W. R. Hackett, and D. W. Rodgers, Idaho State University. Prepared in cooperation with the U.S. Department of Energy. 1994. Lat 43°30′ to 44°, long 112°30′ to 113°15′. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 58 by 41 inches (in color).

I-2344. Controlled photomosaic of the MTM 40102 Quadrangle (revised), Alba Patera region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 37.5° to 42.5°, long 100° to 105°. Scale 1:502,000 (1 mm = 502 m) at 110° long. Sheet 22 by 38 inches. (Transverse Mercator projection.)

I-2345. Controlled photomosaic of the MTM 35107 Quadrangle (revised). Alba Patera region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 32.5° to 37.5°, long 105° to 110°. Scale 1:502,000 (1 mm = 502 m) at 110° long. Sheet 23 by 38 inches. (Transverse Mercator projection.)

I-2346. Controlled photomosaic of the MTM 35312 Quadrangle, northern Arabia region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 32.5° to 37.5°, long 310° to 315°. Scale 1:502,000 (1 mm = 502 m) at 310° long. Sheet 23 by 38 inches. (Transverse Mercator projection.)

I-2347. Controlled photomosaic of the MTM 30312 Quadrangle, northern Arabia region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 27.5° to 32.5°, long 310° to 315°. Scale 1:502,000 (1 mm = 502 m) at 310° long. Sheet 23 1/2 by 38 inches. (Transverse Mercator projection.)

I-2348. Controlled photomosaic of the MTM 30317 Quadrangle, northern Arabia region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 27.5° to 32.5°, long 315° to 320°. Scale 1:502,000 (1 mm = 502 m) at 310° long. Sheet 24 by 38 inches. (Transverse Mercator projection.)

I-2349. Controlled photomosaic of the MTM 35317 Quadrangle, northern Arabia region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 32.5° to 37.5°, long 315° to 320°. Scale 1:502,000 (1 mm = 502 m) at 310° long. Sheet 22 1/2 by 38 inches. (Transverse Mercator projection.)

I-2351. Geologic map of science study area 8, Apollinaris Patera region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat -12.6° to -6.8°, long 183.2° to 189.1°. Scale 1:502,000 (1 mm = 502 m) at 190° long. Sheet 48 by 36 inches (in color.) (Transverse Mercator projection.)

I-2357. Geologic map of the science study area 4, Chasma Boreale region of Mars, by A. L. Dial, Jr. and J. M. Dohm. Prepared for the National Aeronautics and Space Administration. 1994. Lat 77.5° to 85°, long 20° to 60°. Scale 1:502,000 (1 mm = 502 m) at 30° and 50° long. Sheet 56 by 41 inches (in color). (Transverse Mercator projection.)

I-2358-A. MINNESOTA. Bedrock geologic map of the Roseau 1° × 2° Quadrangle, Minnesota, United States, and Ontario and Manitoba, Canada, by W. C. Day, T. L. Klein and K. J. Schulz. Prepared in cooperation with the Minnesota Geological Survey and the Minnesota Department of Natural Resources. 1994. Lat 48° to 49°, long 94° to 96°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 41 by 27 inches (in color).

I-2360. MAINE. Geologic map of the Lucerne Granite, Hancock and Penobscot counties, Maine, by D. R. Wones and R. A. Ayuso. 1993. Lat 44°30′ to 45°, long 68°15′ to 68°45′. Scale 1:125,000 (1 inch = about 2 miles). Sheet 43 by 34 inches (in color).

I-2361. UTAH. Geologic map of the Blue Mountain-Lund area, Beaver and Iron counties, Utah, by L. F. Hintze, S. K. Grant, C. L. Weaver and M. G. Best. Prepared in cooperation with the Utah Geological Survey. 1994. Lat 38° to 38°15′, long 113°15′ to 113°30′. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 54 by 31 inches (in color).

I-2363. Maps showing seismicity and tectonic stresses along the Eurasia-Africa plate boundary, by Agustin Udías, Universidad Complutense, Madrid; A. F. Espinosa, U.S. Geological Survey, and E. Buforn, Universidad Complutense, Madrid. Prepared in cooperation with the U.S.-Spain Joint Committee for Scientific and Technological Cooperation, under the auspices of the U.S. Department of State and the Ministerio de Asuntos Exteriores de España. 1994. Lat 30°N to 60°N, long 50°E to 40°W. Scale 1:25,000,000 (1 inch = about 395 miles). Sheet 34 by 41 inches (in color.)

I-2364-C. WEST VIRGINIA. Summary and interpretive geochemical maps of West Virginia, by K. C. Watts, Jr., M. E. Hinkle and W. R. Griffitts. 1993. Lat 38°20′ to 39°45′, long 78° to 81°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 55 by 41 inches (in color). (Accompanied by 22-page text.)

I-2364-D. WEST VIRGINIA. Isopleth maps of iron, manganese, vanadium, and related elements in stream sediments of West Virginia, by M. E. Hinkle, K. C. Watts, Jr. and W. R. Griffitts. 1994. Two sheets. Sheet 1, lat 38° to 40°, long 78° to 82°; sheet 2, lat 38°20′ to 39°40′, long 78°30′ to 80°40′. Sheet 1, scale 1:1,000,000 (1 inch = about 16 miles); sheet 2, scale 1:500,000 (1 inch = about 8 miles). Sheet 1, 55 by 36 inches; sheet 2, 33 by 41 inches (all in color).

I-2364-E. WEST VIRGINIA. Isopleth maps of pH and alkalinity in stream waters, and sodium in stream sediments of West Virginia, by M. E. Hinkle, K. C. Watts, Jr. and W. R. Griffitts. 1994. Lat 38°20′ to 39°45′, long 78° to 81°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 58 by 40 inches (in color).

I-2364-F. WEST VIRGINIA. Isopleth maps of uranium, thorium, cerium, lanthanum, and related elements in stream sediments of West Virginia, by M. E. Hinkle, K. C. Watts, Jr. and W. R. Griffitts. 1994. Two sheets. Sheet 1, lat 38° to 40°, long 78° to 82°; sheet 2, lat 38°30′ to 39°40′, long 79°40′ to 80°40′. Sheet 1, scale 1:1,000,000 (1 inch = about 16 miles); sheet 2, scale 1:500,000 (1 inch = about 8 miles). Sheet 1, 55 by 36 inches; sheet 2, 42 by 33 inches (all in color).

I-2364-G. WEST VIRGINIA. Isopleth maps of titanium, aluminum, and associated elements in stream sediments of West Virginia, by K. C. Watts, Jr., M. E. Hinkle and W. R. Griffitts. 1994. Two sheets. Sheet 1, lat 38° to 40°, long 78° to 82°; sheet 2, lat 39° to 39°45′, long 79°30′ to 81°. Sheet 1, scale 1:1,000,000 (1 inch = about 16 miles); sheet 2, scale 1:500,000 (1 inch = about 8 miles). Sheet 1, 55 by 40 inches; sheet 2, 50 by 36 inches (all in color).

I-2370. VIRGINIA, COLORADO. Geologic map of large rock block slides at Sinking Creek Mountain, Appalachian Valley and Ridge Province, southwestern Virginia, and comparison with the Colorado Front Range, by A. P. Schultz. 1993. Lat 37°17′30″ to 37°27′30″, long 80°07′30″ to 80°30′. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 58 by 42 inches (in color.)

I-2371. CALIFORNIA. Geologic map of the Palo Alto and part of the Redwood Point 7-1/2′ quadrangles, San Mateo and Santa Clara counties, California, by E. H. Pampeyan. 1993. Lat 37°22′30″ to 37°32′30″, long 122°07′30″ to 122°15′. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 37 by 40 inches (in color). (Accompanied by 26-page text.)

I-2372. Controlled photomosaic of the MTM 35347 Quadrangle, western Arabia region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 32.5° to 37.5°, long

345° to 350°. Scale 1:502,000 (1 mm = 502 m) at 350° long. Sheet 22 1/2 by 38 inches. (Transverse Mercator projection.)

I-2373. Controlled photomosaic of the MTM 35352 Quadrangle, western Arabia region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 32.5° to 37.5°, long 350° to 355°. Scale 1:502,000 (1 mm = 502 m) at 350° long. Sheet 22 1/2 by 38 inches. (Transverse Mercator projection.)

I-2374. Controlled photomosaic of the MTM 35357 Quadrangle, western Arabia region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 32.5° to 37.5°, long 355° to 360°. Scale 1:502,000 (1 mm = 502 mm) at 350° long. Sheet 22 1/2 by 38 inches. (Transverse Mercator projection.)

I-2375. Controlled photomosaic of the MTM 30352 Quadrangle, western Arabia region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 27.5° to 32.5°, long 350° to 355°. Scale 1:502,000 (1 mm = 502 m) at 350° long. Sheet 23 1/2 by 38 inches. (Transverse Mercator projection.)

I-2376. Controlled photomosaic of the MTM 30357 Quadrangle, western Arabia region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 27.5° to 32.5°, long 355° to 360°. Scale 1:502,000 (1 mm = 502 m) at 350° long. Sheet 23 1/2 by 38 inches. (Transverse Mercator projection.)

I-2381. Controlled photomosaic of the MTM 30337 Quadrangle, western Arabia region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 27.5° to 32.5°, long 335° to 340°. Scale 1:502,000 (1 mm = 502 m) at 330° long. Sheet 23 1/2 by 38 inches. (Transverse Mercator projection.)

I-2382. Controlled photomosaic of the MTM 30342 Quadrangle, western Arabia region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 27.5° to 32.5°, long 340° to 345°. Scale 1:502,000 (1 mm = 502 m) at 350° long. Sheet 23 1/2 by 38 inches. (Transverse Mercator projection.)

I-2383. Controlled photomosaic of the MTM 30347 Quadrangle, western Arabia region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 27.5° to 32.5°, long 345° to 350°. Scale 1:502,000 (1 mm = 502 m) at 350° long. Sheet 1, 23 by 38 inches. (Transverse Mercator projection.)

I-2384. Controlled photomosaic of the MTM 35337 Quadrangle, western Arabia region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 32.5° to 37.5°, long 335° to 340°. Scale 1:502,000 (1 mm = 502 m) at 330° long. Sheet 22 1/2 by 38 inches. (Transverse Mercator projection.)

I-2385. Controlled photomosaic of the MTM 35342 Quadrangle, western Arabia region of Mars. Prepared for the National Aeronautics and Space Administration. 1993. Lat 32.5° to 37.5°, long 340° to 345°. Scale 1:502,000 (1 mm = 502 m) at 350° long. Sheet 22 1/2 by 38 inches. (Transverse Mercator projection.)

I-2386. Geologic map of the Tamdy Mountains, Uzbekistan, by L. J. Drew. 1993. Lat 41°30′N, long 64°30′E. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 50 by 41 inches (in color).

I-2388. Geologic map of the Hathor region (Jg-15) of Ganymede, by R. A. De Hon, A. C. Leith and W. B. McKinnon. Prepared for the National Aeronautics and Space Administration. 1994. Lat -65° to 90°. Scale 1:5,000,000 (1 mm = 5 km) at -90° lat. Sheet 38 by 30 inches (in color). (Polar stereographic projection.)

I-2390. CALIFORNIA. Geologic map of the Montara Mountain and San Mateo 7-1/2′ quadrangles, San Mateo County, California, by E. H. Pampeyan. 1994. Lat 37°30′ to 37°37′30″, long 122°15′ to 122°30′. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 54 by 39 inches (in color). (Accompanied by 19-page text.)

I-2391. Geologic map of the MTM-85080 Quadrangle, Planum Australe region of Mars, by K. E. Herkenhoff and B. C. Murray. Prepared for the National Aeronautics and Space Administration. 1994. Lat -87.5° to -82.5°, long 60° to 100°. Scale 1:500,000 (1 mm = 500 m) at -87.5° long. Sheet 38 by 32 inches (in color). (Polar stereographic projection.)

I-2393. ALASKA. Mineral resource potential maps of the Anchorage 1° × 3° Quadrangle, Southern Alaska, by D. J. Madden-McGuire and G. R. Winkler. 1994. Three sheets. Lat 61° to 62°, long 147° to 150°. Each sheet, scale 1:250,000 (1 inch = about 4 miles). Sheets 1-3, 32 by 44 inches (all in color). (Accompanied by 30-page text.)

I-2395. IDAHO. Geologic map of the eastern part of the Challis National Forest and vicinity, Idaho, by A. B. Wilson and B. A. Skipp. 1994. Lat 43°30′ to 45°, long 112°45′ to 114°30′. Scale 1:250,000 (1 inch = about 4 miles). Sheet 37 by 32 inches (in color).

I-2400. COLORADO. Geologic map of the northern part of the Piceance Creek basin, northwestern Colorado, by W. J. Hail, Jr. and M. C. Smith. 1994. Lat 39°45′ to 40°22′30″, long 107°56′15″ to 108°45′. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 56 by 34 inches (in color).

I-2409. NEVADA. Geologic map of the Dun Glen Quadrangle, Pershing County, Nevada, by D. H. Whitebread. Prepared in cooperation with the Nevada Bureau of Mines. 1994. Lat 40°30′ to 40°45′, long 117°45′ to 118°. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 29 by 29 inches (in color).

I-2426-A. KANSAS, MISSOURI. Coal resources of the Joplin 1° × 2° Quadrangle, Kansas and Missouri, by L. L. Brady, Kansas Geological Survey; L. M. Nuelle, Missouri Department of Natural Resources; D. B. Haug, Kansas Geological Survey; D. C. Smith, J. L. Bostic, and J. C. Jacquess, Missouri Department of Natural Resources. Prepared in cooperation with the Kansas Geological Survey and the Missouri Department of Natural Resources, Division of Geology and Land Survey. 1994. Two sheets. Sheet 1, lat 37° to 38°, long 94° to 96°. Sheet 1, scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 52 by 39 inches (in color); sheet 2, 28 by 27 inches. (Folio of the Joplin 1° × 2° Quadrangle, Kansas and Missouri.)

I-2427. UTAH. Geologic map of the Motoqua and Gunlock quadrangles, Washington County, Utah, by L. F. Hintze, Brigham Young University; R. E. Anderson, U.S. Geological Survey; and G. F. Embree, Ricks College, Rexburg, Idaho. 1994. Lat 37°15′ to 37°22′30″, long 113°45′ to 114°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 58 by 40 inches (in color). (Accompanied by 7-page text.)

I-2433-A. MONTANA, WYOMING. Geologic map showing thickness of sedimentary rocks from ground surface to the top of the Upper Cretaceous Pierre Shale in the north half of the Powder River basin, southeastern Montana and northeastern Wyoming, by N. M. Denson, C. T. Pierson and W. D. Grundy. 1994. Lat

44° to 45°30′, long 104°30′ to 107°30′. Scale 1:200,000 (1 inch = about 3.2 miles). Sheet 58 by 41 inches (in color).

I-2434. MONTANA. Geologic map of the Cretaceous strata between Birch Creek and Brownes Creek, eastern flank of Pioneer Mountains, Beaverhead County, Montana, by R. G. Tysdal, T. S. Dyman, U.S. Geological Survey; and S. E. Lewis, Westinghouse Savannah River Co. 1994. Lat 45°22′30″ to 45°32′30″, long 112°42′30″ to 112°47′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 44 inches (in color).

I-2468. COLORADO, KANSAS. Historic trail map of the Limon 1° × 2° Quadrangle, Colorado and Kansas, by G. R. Scott. 1994. Lat 39° to 40°, long 102° to 104°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 36 by 32 inches (in color).

I-2478. MONTANA. Correlation chart of Lower and Upper Cretaceous Blackleaf Formation, eastern Pioneer Mountains, southwestern Montana, to Drummond, central-western Montana, by T. S. Dyman, R. G. Tysdal, C. A. Wallace and S. E. Lewis. 1994. Two sheets. Sheet 1, 54 by 40 inches; sheet 2, 54 by 40 inches. (Accompanied by 15-page text.)

MISCELLANEOUS INVESTIGATIONS SERIES MAPS—QUATERNARY GEOLOGICAL ATLAS OF THE UNITED STATES

I-1420 (NI-14). Quaternary geologic map of the Dallas 4° × 6° Quadrangle, United States, State compilations by K. V. Luza, K. M. Jensen, W. D. Fishman, E. G. Wermund, Jr., and G. M. Richmond. Edited and integrated by G. M. Richmond and A. C. Christiansen. Prepared in cooperation with the Texas Bureau of Economic Geology and the Oklahoma Geological Survey. 1994. Lat 32° to 36°, long 96° to 102°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 58 by 30 inches (in color).

I-1420 (NK-14). Quaternary geologic map of the Platte River 4° × 6° Quadrangle, United States, State compilations by J. B. Swinehart, V. H. Dreeszen, G. M. Richmond, M. J. Tipton, R. F. Bretz, F. V. Steece, G. R. Hallberg, and J. E. Goebel. Edited and integrated by G. M. Richmond. Prepared in cooperation with the University of Nebraska, Conservation and Survey Division; South Dakota Geological Survey; Iowa Geological Survey; and Minnesota Geological Survey. 1994. Lat 40° to 44°, long 96° to 102°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 56 by 37 inches (in color).

I-1420 (NM-16). Quaternary geologic map of the Lake Nipigon 4° × 6° Quadrangle, United States and Canada, State and Province compilations by E. V. Sado, D. S. Fullerton, and W. R. Farrand. Edited and integrated by D. S. Fullerton. Prepared in cooperation with the Ontario Geological Survey and the University of Michigan, Department of Geological Sciences. 1994. Lat 48° to 52°, long 84° to 90°. Scale 1:1,000,000 (1 inch = 4,000 feet). Sheet 45 by 33 inches (in color).

COAL INVESTIGATIONS MAPS

Geologic maps on topographic or planimetric bases; various scales; show bedrock geology, stratigraphy, and structural relations in certain coal-resource areas.

C-0143-A. MONTANA, WYOMING. Maps and diagrams showing thickness and morphology of the Paleocene Canyon Coal Bed in the northern Powder River basin, western part of the Broadus 30′ × 60′ Quadrangle, Montana and Wyoming, by L. R. Biewick. 1994. Two sheets. Sheet 1, lat 45° to 45°30′, long 105°30′ to 106°. Sheet 1, scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 41 by 56 inches (in color); sheet 2, 31 by 44 inches.

C-0145. Coal map of South America, by J. N. Weaver and G. H. Wood, Jr. 1994. Lat 54°S to 12°N, long 30°to 90°. Scale 1:7,500,000 (1 inch = about 118 miles). Sheet 40 by 46 inches (in color). (Accompanied by 42-page text.)

OIL AND GAS INVESTIGATIONS CHARTS

Charts show stratigraphic information for certain oil and gas fields and other areas having hydrocarbon potential.

OC-0141. COLORADO, ARIZONA, NEW MEXICO. Southwest-northeast-oriented stratigraphic cross sections of Jurassic through Paleozoic rocks, San Juan Basin and vicinity, Colorado, Arizona, and New Mexico, by A. C. Huffman, Jr. and S. M. Condon. 1994. Three sheets. Sheet 1, 56 by 41 inches; sheet 2, 45 by 39 inches; sheet 3, 56 by 36 inches.

OC-0142. Northwest-southeast-oriented stratigraphic cross sections of Jurassic through Paleozoic rocks, San Juan Basin and vicinity, Utah, Colorado, Arizona, and New Mexico, by S. M. Condon and A. C. Huffman, Jr. 1994. Three sheets. Sheet 1, 58 by 40 inches; sheet 2, 56 by 41 inches; sheet 3, 23 by 41 inches.

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-0880-B. ALASKA. Map showing placer deposits of the Seward and Blying Sound quadrangles, Alaska, by R. G. Tysdal. 1978 (1994). Two sheets. Sheet 1, lat 59°45′ to 61°, long 148° to 150°. Sheet 1, scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 22 by 34 1/2 inches; sheet 2, 34 by 27 inches. (Folio of the Seward and Blying Sound quadrangles.) (Reprint.)

MF-2081-F. UTAH. Maps showing interpretation, using R-mode factor analysis, of trace-element abundances in stream-sediment samples, Delta 1° × 2° Quadrangle, Utah, by D. R. Zimbelman. 1994. Two sheets. lat 39° to 40°, long 112° to 114°. Each sheet, scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 41 by 57 inches; sheet 2, 40 by 41 1/2 inches.

MF-2081-G. UTAH. Maps showing interpretation, using R-mode factor analysis, of trace-element abundances in heavy-mineral concentrate samples, Delta 1° × 2° Quadrangle, Utah, by D. R. Zimbelman. 1994. Two sheets. Lat 39° to 40°, long 112° to 114°. Each sheet, scale 1:250,000 (1 inch = about 4 miles). Each sheet, 41 by 57 inches.

MF-2154-D. NEVADA, CALIFORNIA. Map showing compilation of isotopic ages of Cenozoic rocks in the Reno 1° × 2° Quadrangle, Nevada and California, by J. H. Stewart, E. H. McKee and D. A. John. 1994. Lat 39° to 40°, long 118° to 120°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 30 by 32 inches. (Accompanied by 19-page text.)

MF-2155-E. ALASKA. Sample locality map and analytical data for potassium-argon ages in the Port Moller, Stepovak Bay, and Simeonof Island quadrangles, Alaska Peninsula, by F. H. Wilson, N. B. Shew, G. D. DuBois and S. W. Bie. 1994. Lat 54°45′ to 56°, long 158°30′ to 162°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 39 by 36 inches. (Accompanied by 18-page text.)

MF-2198-A. SOUTH CAROLINA, GEORGIA, NORTH CAROLINA. Mineral resource assessment of gold and silver in the Greenville 1° × 2° Quadrangle, South Carolina, Georgia, and North Carolina, by F. G. Lesure, G. C. Curtin and J. P. D'Agostino. 1993. Lat 34° to 35°, long 82° to 84°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 53 by 41 1/2 inches (in color).

MF-2198-B. SOUTH CAROLINA, GEORGIA, NORTH CAROLINA. Mineral resource assessment of kyanite, sillimanite, and andalusite in the Greenville 1° × 2° Quadrangle, South Carolina, Georgia, and North Carolina, by F. G. Lesure. 1993. Lat 34° to 35°, long 82° to 84°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 52 by 34 inches (in color).

MF-2198-C. SOUTH CAROLINA, GEORGIA, NORTH CAROLINA. Mineral resource assessment of mafic and ultramafic rocks in the Greenville 1° × 2° Quadrangle, South Carolina, Georgia, and North Carolina, by F. G. Lesure, J. P. D'Agostino and David Gottfried. 1993. Lat 34° to 35°, long 82° to 84°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 39 by 46 inches (in color). (Accompanied by 30-page text.)

MF-2198-D. SOUTH CAROLINA, GEORGIA, NORTH CAROLINA. Mineral resource assessment of pegmatite minerals in the Greenville 1° × 2° Quadrangle, South Carolina, Georgia, and North Carolina, by F. G. Lesure and J. P. D'Agostino. 1993. Lat 34° to 35°, long 82° to 84°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 53 by 39 inches (in color).

MF-2198-E. SOUTH CAROLINA, GEORGIA, NORTH CAROLINA. Mineral resource assessment of rare-earth elements, thorium, titanium, and uranium in the Greenville 1° × 2° Quadrangle, South Carolina, Georgia, and North Carolina, by F. G. Lesure, G. C. Curtin, D. L. Daniels and J. C. Jackson. 1993. Lat 34° to 35°, long 82° to 84°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 47 by 41 inches (in color).

MF-2215-B. SOUTH CAROLINA, GEORGIA, NORTH CAROLINA. Mines, prospects, and occurrences of metallic (excluding gold), pegmatite, and rare-earth mineral commodities in the Greenville 1° × 2° Quadrangle, South Carolina, Georgia, and North Carolina, by J. P. D'Agostino, A. J. Zupan, A. H. Maybin, III, C. E. Abrams and J. M. German. 1994. Lat 34° to 35°, long 82° to 84°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 50 by 40 inches.

MF-2215-C. SOUTH CAROLINA, GEORGIA, NORTH CAROLINA. Gold occurrences in the Greenville 1° × 2° Quadrangle, South Carolina, Georgia, and North Carolina, by J. P. D'Agostino, G. T. Mason, U.S. Geological Survey; A. J. W. Zupan, A. H. Maybin III, South Carolina Geological Survey; J. M. German, and C. E. Abrams, Georgia Geological Survey. 1994. Lat 34° to 35°, long 82° to 84°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 50 by 41 inches.

MF-2215-D. SOUTH CAROLINA, GEORGIA, NORTH CAROLINA. Mines, prospects, and occurrences of nonmetallic mineral commodities in the Greenville 1° × 2° Quadrangle, South Carolina, Georgia, and North Carolina, by J. P. D'Agostino, U.S. Geological Survey; B. J. O'Connor, Georgia Geological Survey; A. J. W. Zupan, and A. H. Maybin III, South Carolina Geological Survey. 1994. Lat 34° to 35°, long 82° to 84°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 56 by 41 inches.

MF-2219-A. ALASKA. Generalized geologic map of the Iditarod Quadrangle, Alaska, showing potassium-argon, major-oxide, trace-element, fossil, paleocurrent, and archaeological sample localities, by M. L. Miller, U.S. Geological Survey; and T. K. Bundtzen, Alaska Division of Geological and Geophysical Surveys. 1994. Lat 62° to 63°, long 156° to 159°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 42 by 34 inches (in color). (Accompanied by 48-page text.)

MF-2229. VIRGINIA. Geologic map of the Robertson River Igneous Suite, Blue Ridge Province, northern and central Virginia, by R. P. Tollo, George Washington University; and T. K. Lowe, Stanford University. 1994. Lat 38°52′30″ to 39°07′30″, long 77°42′30″ to 78°37′30″. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 38 by 54 inches (in color). (Accompanied by 15-page text.)

MF-2235. PUERTO RICO. Maps showing the effects of Hurricane Hugo on the Escollo de Arenas sand and gravel deposit, Vieques Island, Puerto Rico, by C. M. Delorey, L. J. Poppe and R. W. Rodriguez. 1993. Two sheets. Sheet 1, lat 18°07′ to 19°, long 65° to 68°; sheet 2, lat 18°08′ to 18°10′, long 65°34′ to 65°37′. Sheet 1, 45 by 31 inches; sheet 2, 42 by 37 inches.

MF-2237. HAWAII. Bathymetry of Puna Ridge, Kilauea Volcano, Hawaii, by D. A. Clague, K. A. Hon, U.S. Geological Survey; J. L. Anderson, University of Hawaii; W. W. Chadwick, Jr., Oregon State University; and C. G. Fox, National Oceanic and Atmospheric Administration. Prepared in cooperation with the U.S. Geological Survey—National Oceanic and Atomospheric Administration Joint Office for Mapping and Research. 1994. Lat 19°12′ to 20°06′, long 154°06′ to 154°54′. Scale 1:150,000 (1 inch = about 2.4 miles). Sheet 25 by 33 1/2 inches (in color).

MF-2239. VIRGINIA, WEST VIRGINIA, MARYLAND. Conodont color alteration index (CAI) map and conodont-based age determinations for the Winchester 30′ × 60′ Quadrangle and adjacent area, Virginia, West Virginia, and Maryland, by A. G. Harris, N. R. Stamm, D. J. Weary, J. E. Repetski, R. G. Stamm and R. A. Parker. 1994. Lat 39° to 39°30′, long 78° to 79°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 53 by 40 inches. (Accompanied by 40-page text.)

MF-2240. Geologic map of the Venezuela part of the Atabapo 2° × 3° Quadrangle, Amazonas Federal Territory, Venezuela, by J. W. Wynn, U.S. Geological Survey; S. D. Olmore, Golden, CO; Vicente Mendoza, Miguel Martínez, Haydée Rincón, Corporación Venezolana de Guayana; Andrés García, Colorado School of Mines; Nelson Rivero, Inés Rendón, Iris Marcano, Elis Lugo, Corporación Venezolana de Guayana; and P. G. Schruben, U.S. Geological Survey. Prepared in cooperation with the Corporacíon Venezolana de Guayana, Técnica Minera. 1994. Lat 2°N to 4°N, long 66°W to 68°W. Scale 1:500,000 (1 inch = about 8 miles). Sheet 39 1/2 by 25 inches.

MF-2241. Geologic map of the Venezuela part of the Río Mavaca 2° × 3° Quadrangle, Amazonas Federal Territory, Venezuela, by J. C. Wynn, U.S. Geological Survey; S. D. Olmore, Golden, CO;

Vicente Mendoza, Corporación Venezolana de Guayana; Andrés García, Colorado School of Mines; Miguel Martínez, Corporación Venezolana de Guayana; and P. G. Schruben, U.S. Geological Survey. Prepared in cooperation with the Corporacíon Venezolana de Guayana, Técnica Minera. 1994. Lat 1°N to 2°N, long 64°W to 66°W. Scale 1:500,000 (1 inch = about 8 miles). Sheet 40 by 23 inches.

MF-2243. Geologic map of the Venezuela part of the Piedra de Cocuy 2° × 3° Quadrangle, Amazonas Federal Territory, Venezuela, by J. C. Wynn, U.S. Geological Survey; S. D. Olmore, Golden, Colorado; Vicente Mendoza, Haydée Rincón, Corporación Venezolana de Guayana; Andrés García, Colorado School of Mines; Nelson Rivero, Inés Rendón, Corporación Venezolana de Guayana; Floyd Gray, U.S. Geological Survey; Iris Marcano, Elis Lugo, Corporación Venezolana de Guayana; and P. G. Schruben, U.S. Geological Survey. 1994. Lat 1°N to 2°N, long 66°W to 67°W. Scale 1:500,000 (1 inch = about 8 miles). Sheet 34 by 24 inches.

MF-2244. Geologic map of the Venezuela part of the La Esmeralda 2° × 3° Quadrangle, Amazonas Federal Territory, Venezuela, by J. C. Wynn, U.S. Geological Survey; S. D. Olmore, Golden, Colorado; Vicente Mendoza, Corporación Venezolana de Guayana; Andrés García, Colorado School of Mines; Miguel Martínez, Frank Tovar, Inés Rendón, Haydée Rincón, Félix Martínez, Elis Lugo, Corporación Venezolana de Guayana; and P. G. Schruben, U.S. Geological Survey. Prepared in cooperation with the Corporación Venezolana de Guayana, Técnica Minera. 1994. Lat 2°N to 4°N, kong 63°W to 66°W. Scale 1:500,000 (1 inch = about 8 miles). Sheet 48 by 27 inches.

MF-2245. Geologic map of the Venezuela part of the Puerto Ayacucho 2° × 3° Quadrangle, Amazonas Federal Territory, Venezuela, by J. C. Wynn, U.S. Geological Survey; S. D. Olmore, Golden, Colorado; Vicente Mendoza, Corporación Venezolana de Guayana; Andrés García, Colorado School of Mines; Inés Rendón, Yasmin Estanga, Haydée Rincón, Félix Martínez, Elis Lugo, Nelson Rivero, Corporación Venezolana de Guayana; and P. G. Schruben, U.S. Geological Survey. Prepared in cooperation with the Corporación Venezolana de Guayana, Técnica Minera. 1994. Lat 4°N to 6°N, long 66°W to 68°W. Scale 1:500,000 (1 inch = about 8 miles). Sheet 42 by 27 inches.

MF-2251. Correlations of subsurface rocks in the Southeast Georgia Embayment, U.S. South Atlantic continental shelf, by L. J. Poppe, Peter Popenoe, C. W. Poag and B. A. Swift. 1994. Two sheets. Sheet 1, 43 by 32 inches; sheet 2, 50 1/2 by 28 1/2 inches.

MF-2254. WISCONSIN. Temporal variability of shoreline positions and coastal wetlands along lower Green Bay, Oconto and Brown counties, Wisconsin, by G. L. Shideler. 1994. Lat 44°32′30″ to 45°, long 86°30′ to 88°02′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 39 by 53 inches (in color).

MF-2255. HAWAII. Bathymetry of the southwest flank of Mauna Loa Volcano, Hawaii, by W. W. Chadwick, Jr., Oregon State University; J. G. Moore, U.S. Geological Survey; and C. G. Fox, National Oceanic and Atmospheric Administration. Prepared in cooperation with the U.S. Geological Survey—National Oceanic and Atmospheric Administration Joint Office for Mapping and Research. 1994. Lat 18°30′ to 19°18′, long 155°54′ to 156°48′. Scale 1:150,000 (1 inch = about 2.4 miles). Sheet 29 by 34 inches (in color).

MF-2256. OREGON. Geologic map of the Irish Lake Quadrangle, Harney County, south-central Oregon, by D. R. Sherrod and J. A. Johnson. 1994. Lat 42°52′30″ to 43°, long 118°52′30″ to 119°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 32 by 44 inches.

MF-2258. ALASKA. Surficial geologic map of the Tyonek B-4 Quadrangle, south-central Alaska, by L. A. Yehle and H. R. Schmoll. 1994. Lat 61°15′ to 61°30′, long 151°07′30″ to 151°30′. Scale 1:31,680 (1 inch = about 2,650 feet). Sheet 50 by 41 inches.

MF-2259. MONTANA. Reconnaissance geologic map of the Sliderock Mountain area, Sweet Grass and Stillwater counties, Montana, by E. A. du Bray, J. E. Elliott, B. S. Van Gosen, E. J. LaRock and A. W. West. 1994. Lat 45°30′ to 45°40′, long 109°50′ to 110°. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 32 by 34 inches.

MF-2260. NEVADA. Geologic map of the Monte Cristo Range area, Esmeralda and Mineral counties, Nevada, by J. H. Stewart, P. C. Kelleher and E. A. Zorich. 1994. Lat 38° to 38°15′, long 117°30′ to 118°. Scale 1:62,500 (1 inch = about 1 mile). Sheet 37 by 40 inches. (Accompanied by 15-page text.)

MF-2262. VIRGINIA, WEST VIRGINIA. Sinkholes and karst-related features of the Shenandoah Valley in the Winchester 30′ × 60′ Quadrangle, Virginia and West Virginia, by R. C. Orndorff and K. E. Goggin. 1994. Lat 39° to 39°30′, long 78° to 78°30′. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 32 by 29 inches (in color).

MF-2263-A. Principal reference section for part of the Eocene Ghazij Formation, Abraham Marri Mine area, Pir Ismail Ziarat coal field, Balochistan, Pakistan, by E. A. Johnson, U.S. Geological Survey; and I. H. Khan, Geological Survey of Pakistan. Prepared in cooperation with the Geological Survey of Pakistan. 1994. Sheet 56 by 31 inches.

MF-2263-B. Principal reference section for part of the Eocene Ghazij Formation, Shin Ghwazha Mine area, Sor Range coal field, Balochistan, Pakistan, by E. A. Johnson, U.S. Geological Survey; and I. M. Khan, Geological Survey of Pakistan. Prepared in cooperation with the Geological Survey of Pakistan. 1994. Sheet 54 by 31 inches.

MF-2263-C. Principal reference section for part of the Eocene Ghazij Formation, Gishtari Nala area, Mach coal field, Balochistan, Pakistan, by P. D. Warwick, E. A. Johnson, U.S. Geological Survey; I. H. Khan, and M. A. Kazim, Geological Survey of Pakistan. Prepared in cooperation with the Geological Survey of Pakistan. 1994. Sheet 52 by 30 inches.

MF-2263-D. Principal reference section for part of the Eocene Ghazij Formation, Moghal Mine area, Mach coal field, Balochistan, Pakistan, by E. A. Johnson, P. D. Warwick, U.S. Geological Survey; I. H. Khan, and M. A. Kazim, Geological Survey of Pakistan. Prepared in cooperation with the Geological Survey of Pakistan. 1994. Sheet 54 by 30 inches.

MF-2263-E. Principal reference section for part of the Eocene Ghazij Formation, Sarawan River area, Johan coal field, Balochistan, Pakistan, by E. A. Johnson, P. D. Warwick, U.S. Geological Survey; I. H. Khan, A. N. Rana, and M. A. Kazim,

Geological Survey of Pakistan. Prepared in cooperation with the Geological Survey of Pakistan. 1994. Sheet 39 by 54 inches.

MF-2264-A. MISSOURI. Map showing seismicity and sandblows in the vicinity of New Madrid, Missouri, by B. S. Rhea, R. L. Wheeler and A. C. Tarr. 1994. Lat 35° to 37°, long 89° to 91°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 51 by 41 inches.

MF-2264-B. MISSOURI. Map showing large structures interpreted from geophysical data in the vicinity of New Madrid, Missouri, by B. S. Rhea and R. L. Wheeler. 1994. Lat 35° to 37°, long 89° to 91°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 46 by 41 inches (in color).

MF-2264-C. MISSOURI. Map showing locations of geophysical survey and modeling lines in the vicinity of New Madrid, Missouri, by B. S. Rhea and R. L. Wheeler. 1994. Lat 35° to 37°, long 89° to 91°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 51 by 41 inches (in color).

MF-2264-D. MISSOURI. Map showing structure of the Mississippi Valley Graben in the vicinity of New Madrid, Missouri, by R. L. Wheeler, B. S. Rhea and R. L. Dart. 1994. Lat 35° to 37°, long 89° to 91°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 56 by 41 inches (in color).

MF-2264-E. MISSOURI. Map showing surficial and hydrologic features in the vicinity of New Madrid, Missouri, by R. L. Wheeler and B. S. Rhea. 1994. Lat 35° to 37°, long 89° to 91°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 56 by 41 inches (in color).

MF-2265. WASHINGTON. Map showing depth to bedrock of the Tacoma and part of the Centralia 30′ × 60′ quadrangles, Washington, by J. M. Buchanan-Banks and D. S. Collins. 1994. Two sheets. Sheet 1, lat 47° to 47°30′, long 122° to 123°. Sheet 1, scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 37 by 52 inches; sheet 2, 41 by 25 1/2 inches.

MF-2266. CALIFORNIA. Logs of trenches across the central part of the Fish Lake valley fault zone, Mono County, California, by M. C. Reheis. 1994. Sheet 55 by 38 inches. (Accompanied by 20-page text.)

MF-2267. COLORADO. Geologic map of the Krumbo Reservoir Quadrangle, Harney County, southeastern Oregon, by J. A. Johnson. 1994. Lat 42°52′30″ to 43°, long 118°45′ to 118°52′30″. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 26 1/2 by 34 inches. (Accompanied by 11-page text.)

MF-2269. HAWAII. Bathymetry of the west-central slope of the Island of Hawaii, by W. W. Chadwick, Jr., J. G. Moore and C. G. Fox. 1994. Lat 19°12′ to 20°, long 155°54′ to 156°48′. Scale 1:150,000 (1 inch = about 2.4 miles). Sheet 30 by 40 inches (in color).

MF-2270. Maps showing platinum-group-element occurrences in the conterminous United States, updated as of 1993, by J. A. Paterson. 1994. Lat 24° to 50°, long 66° to 125°. Scale 1:7,500,000 (1 inch = about 118 miles). Sheet 34 by 46 inches (in color). (Accompanied by 55-page text.)

MF-2271. ALASKA. Oblique maps of Southeastern Alaska, showing major mineral localities, by T. R. Alpha and A. B. Ford. 1994. Two sheets. Sheet 1, 48 by 32 inches; sheet 2, 48 by 25 inches.

MF-2272. IDAHO. Geologic and mineral resource potential map of the Salmon River and Cove Mountain additions to the Frank Church-River of No Return Wilderness, Idaho County, Idaho, by K. V. Evans, Karen Lund, G. A. Nowlan and L. E. Esparza. 1994. Lat 45°15′ to 45°30′, long 115°22′30″ to 116°. Scale 1:50,000 (1 inch = about 4,200 ft). Sheet 57 by 38 inches (in color).

MF-2273. SOUTH CAROLINA. Stratigraphic framework for geologic and geohydrologic studies of the subsurface Cretaceous section near Charleston, South Carolina, by B. G. Campbell and G. S. Gohn. 1994. Two sheets. Each sheet 42 by 34 inches. (Accompanied by 11-page text.)

MF-2274. MONTANA. Stratigraphic columns for traverses through the lower and middle banded series, Stillwater Complex, Stillwater County, Montana, by J. A. Peterson, M. L. Zientek and R. W. Cooper. 1995. Two sheets. Each sheet 34 by 51 inches.

MF-2275. KENTUCKY. Revised correlation chart of coal beds, coal zones, and key stratigraphic units in the Pennsylvanian rocks of eastern Kentucky, by C. L. Rice and J. K. Kiett. 1994. Sheet 41 by 40 inches.

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-0722-F. KANSAS. Geohydrologic systems in Kansas; physical framework of the lower aquifer unit in the Western Interior Plains aquifer system, by C. V. Hansen, Brigham Young University; J. M. Spinazola, U.S. Geological Survey; and R. J. Wolf, Ricks College, Rexburg, Idaho. 1994. Two sheets. Lat 37° to 40°, long 95° to 102°. Sheet 1, scales 1:1,000,000 (1 inch = about 16 miles) and 1:3,000,000 (1 inch = about 48 miles); sheet 2, scale 1:1,000,000 (1 inch = about 16 miles). Sheet 1, 50 by 41 inches; sheet 2, 42 by 36 inches (all in color).

HA-0726. CALIFORNIA, NEVADA. Surface-water hydrology of Honey Lake valley, Lassen County, California, and Washoe County, Nevada, by G. L. Rockwell. Prepared in cooperation with the California Department of Water Resources and the Nevada Division of Water Resources. 1993. Two sheets. Sheet 1, lat 40° to 40°30′, long 119°45′ to 120°45′. Sheet 1, scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 45 by 34 inches; sheet 2, 42 by 27 inches (all in color). (Supersedes Open-file report 90-177.)

HA-0727. CALIFORNIA. Deuterium content of water from wells and perennial springs, southeastern California, by J. D. Gleason, Guida Veronda, G. I. Smith, Irving Friedman and P. M. Martin. 1994. Lat 33° to 37°, long 115° to 119°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 35 by 48 inches (in color). (Supersedes Open-file report 91-470.)

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 1994. 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. R. E. Abercrombie* and J. J. Mori. CALIFORNIA. Local observations of the onset of a large earthquake; 28 June 1992 Landers, California. Bulletin of the Seismological Society of America, *in* The 1992 Landers, California, earthquake sequence. (C. A. Langston, editor). v. 84, no. 3, June 1994. p. 725-734.

OP-2. G. V. Albino. NEVADA. Geology and lithogeochemistry of the Ren gold prospect, Elko County, Nevada; the role of rock sampling in exploration for deep carlin-type deposits. Journal of Geochemical Exploration. v. 51, no. 1, April 1994. p. 37-58.

OP-3. G. V. Albino and C. I. Boyer*. NEVADA. Lithologic and structural setting of gold deposits of the Santa Fe District, Mineral County, Nevada, *in* Geological Society of Nevada; proceedings volume; Walker Lane symposium; Structure, tectonics & mineralization of the Walker Lane. (S. D. Craigg, editor). Reno, NV: Geological Society of Nevada, April 24, 1992. p. 187-211.

OP-4. R. B. Alexander, R. A. Smith and G. E. Schwarz. Correction of stream quality trends for the effects of laboratory measurement bias. Water Resources Research. v. 29, no. 11, November 1993. p. 3821-3833.

OP-5. J. E. Almendinger. The travel-time ellipse; an approximate zone of transport. Journal of Hydrology. v. 161, no. 1-4, September 1994. p. 365-373.

OP-6. C. J. Ammon*, Thorne Lay*, A. A. Velasco* and J. E. Vidale. Routine estimation of earthquake source complexity; the 18 October 1992 Colombian earthquake. Bulletin of the Seismological Society of America. v. 84, no. 4, August 1994. p. 1266-1271.

OP-7. D. J. Andrews. Dynamic growth of mixed-mode shear cracks. Bulletin of the Seismological Society of America. v. 84, no. 4, August 1994. p. 1184-1198.

OP-8. E. D. Andrews. CALIFORNIA. Marginal bed load transport in a gravel bed stream, Sagehen Creek, California. Water Resources Research. v. 30, no. 7, July 1994. p. 2241-2250.

OP-9. M. Arattano* and W. Z. Savage. A comparison between two kinematic wave solutions for movement of debris flows. Hydraulic Engineering: Proceedings of the National Conference on Hydraulic Engineering, *in* 1993 national conference on Hydraulic engineering. (H. W. Shen, editor and others). 1993, 1993. p. 1592-1597.

OP-10. T. J. Armbrustmacher, P. J. Modreski and H. D. King. MONTANA. Mineral resources of the Black Mountain-Miners Gulch area, Rocky Boy's Indian Reservation, Bearpaw Mountains, Montana. General Publication - United States. Bureau of Indian Affairs. Division of Energy and Mineral Resources, *in* 1992 mineral frontiers on Indian lands. (S. A. Manydeeds, editor). Report no. 92-2, 1992. p. 107-116.

OP-11. Antonio Arribas, Jr.* and R. M. Tosdal. Isotopic composition of Pb in ore deposits of the Betic Cordillera, Spain; origin and relationship to other European deposits. Economic Geology and the Bulletin of the Society of Economic Geologists. v. 89, no. 5, August 1994. p. 1074-1093.

OP-12. M. A. Arthur. When worlds collide; the end-Cretaceous global crisis. Earth and Mineral Sciences. v. 62, no. 1, 1993. p. 3-12.

OP-13. W. H. Asquith* and M. E. Jennings. TEXAS. Generalized statistical model of the Edwards Aquifer, *in* Proceedings; Texas sections joint spring meeting and Texas hydrology roundup. (M. E. Jennings, president). Am. Inst. Hydrol. 1993. 6 p.

OP-14. E. D. Attanasi and D. H. Root. The enigma of oil and gas field growth. AAPG Bulletin. v. 78, no. 3, March 1994. p. 321-332.

OP-15. B. F. Atwater. WASHINGTON. Prehistoric earthquakes in western Washington. Bulletin - State of Washington, Department of Natural Resources, Division of Geology and Earth Resources, *in* Regional geology of Washington State. (Raymond Lasmanis, convener and others). Report no. 80, 1994. p. 219-222.

OP-16. Tanya Atwater*, J. G. Sclater*, D. T. Sandwell*, J. P. Severinghaus* and M. S. Marlow. Fracture zone traces across the North Pacific Cretaceous Quiet Zone and their tectonic implications. Geophysical Monograph, *in* The Mesozoic Pacific; geology, tectonics, and volcanism. (M. S. Pringle, editor and others). 77, 1993. p. 137-154.

OP-17. R. J. Avanzino and V. C. Kennedy. Long-term frozen storage of stream water samples for dissolved orthophosphate, nitrate plus nitrite, and ammonia analysis. Water Resources Research. v. 29, no. 10, October 1993. p. 3357-3362.

OP-18. M. A. Ayress*, T. Correge* and R. C. Whatley. Glyphidocythere, a new deep marine, paradoxostomatid (Ostracoda) from the Quaternary and Recent of the Indo-Pacific. Journal of Micropalaeontology. 12, Part 1, August 1993. p. 77-81.

OP-19. J. M. Back and S. H. Clark. SOUTH CAROLINA. Preliminary results of petrographic studies of the Barite Hill gold deposit in the southern Carolina slate belt, South Carolina. South Carolina Geology. 35, 1992. p. 67-78.

OP-20. William Back. Resources; Hydrogeology. Geotimes. v. 39, no. 2, February 1994. p. 23.

OP-21. M. J. Baedecker and I. M. Cozzarelli. The determination and fate of unstable constituents of contaminated groundwater, *in* Groundwater contamination and analysis at hazardous waste sites. (Suzanne Lesage, editor and others). New York, NY: Marcel Dekker, 1992. p. 425-461.

OP-22. W. H. Bakun, F. G. Fischer, E. G. Jensen and J. R. VanSchaack. Early warning system for aftershocks. Bulletin of the Seismological Society of America. v. 84, no. 2, April 1994. p. 359-365.

OP-23. J. D. Bales and S. C. Skrobialowski. VIRGINIA. Salt transport in a tidal canal, West Neck Creek, Virginia. Hydraulic Engineering: Proceedings of the National Conference on Hydraulic Engineering, *in* 1993 national conference on Hydraulic engineering. (H. W. Shen, editor and others). 1993, 1993. p. 1422-1427.

OP-24. L. S. Balistrieri, J. W. Murray* and Barbara Paul*. The geochemical cycling of trace elements in a biogenic meromictic lake. Geochimica et Cosmochimica Acta. v. 58, no. 19, October 1994. p. 3993-4008.

OP-25. N. L. Bangs*, S. C. Cande*, S. D. Lewis and John Miller. Structural framework of the Chile margin at the Chile ridge collision zone. Proceedings of the Ocean Drilling Program, Part A: Initial Reports, *in* Proceedings of the Ocean Drilling Program, Volume 141, Initial reports, Chile triple junction; covering Leg 141 of the cruises of the drilling vessel JOIDES Resolution, Balboa Harbor, Panama, to Valparaiso, Chile, sites 859-863, 12 November 1991-12 January 1992. (J. H. Behrmann and others). 141, December 1992. p. 11-21.

OP-26. L. B. Barber, II. MASSACHUSETTS. Hierarchical analytical approach to evaluating the transport and biogeochemical fate of organic compounds in sewage-contaminated groundwater, Cape Cod, Massachusetts, *in* Groundwater contamination and analysis at hazardous waste sites. (Suzanne Lesage, editor and others). New York, NY: Marcel Dekker, 1992. p. 73-120.

OP-27. K. E. Bargar. OREGON. Fluid-inclusive evidence for previous higher temperatures in the SUNEDCO 58-28 drill hole near Breitenbush hot springs, Oregon. Transactions - Geothermal Resources Council, *in* Utilities and geothermal; an emerging partnership. (S. H. Ponder, chairperson). 17, 1993. p. 83-89.

OP-28. A. Barkatt*, J. C. Sang*, A. N. Thorpe*, F. E. Senftle*, I. G. Talmy, M. K. Norr*, J. J. Mazer*, G. A. Izett* and Haraldur Sigurdsson*. Surface alteration and physical properties of glass from the Cretaceous-Tertiary boundary. Geochimica et Cosmochimica Acta. v. 58, no. 13, July 1994. p. 2889-2891.

OP-29. C. E. Barker, T. C. Bartke, P. G. Hatcher* and T. A. Daws. WYOMING. An empirical correlation between coal bed gas with Rock-Eval pyrolysis and ^{13}C NMR results, Cretaceous Mesaverde and Meeteetse formations, Wind River basin, Wyoming, *in* Wyoming Geological Association special symposium on oil and gas and other resources of the Wind River basin, Wyoming. (W. R. Keefer, editor and others). Casper, WY: Wyo. Geol. Assoc. 1993. p. 243-256.

OP-30. C. E. Barker and Yvonne Bone*. The minimal response to contact metamorphism by the Devonian Buchan Caves Limestone, Buchan Rift, Victoria, Australia. Organic Geochemistry, *in* Collected papers from the Tenth annual meeting of the Society for Organic Petrology. (B. J. Cardott, editor and others). v. 22, no. 1, January 1995. p. 151-164.

OP-31. C. E. Barker and B. L. Crysdale. WYOMING. Burial and temperature history of gas generation from coaly organic matter in the Late Cretaceous Mesaverde Formation and associated rocks in the deeper portions of the Wind River basin, Wyoming. Guidebook - Wyoming Geological Association, *in* Wyoming Geological Association jubilee anniversary field conference; guidebook. (Betty Stroock, editor and others). [44], 1993. p. 235-258.

OP-32. V. E. Barlock and D. B. Vander Meulen. OREGON. Stratigraphy of Pole Creek Top area, Malheur County, Oregon, *in* Geology and ore deposits of the Great Basin; field trip guidebook compendium. (R. H. Buffa, editor and others). Reno, NV: Geol. Soc. Nevada, 1991. p. 686-695.

OP-33. P. M. Barlow. MASSACHUSETTS. Two- and three-dimensional pathline analysis of contributing areas to public-supply wells of Cape Cod, Massachusetts. Ground Water. v. 32, no. 3, June 1994. p. 399-410.

OP-34. P. W. Barnes, E. W. Kempema, Erk Reimnitz, Michael McCormick, W. S. Weber and E. C. Hayden. Beach profile modification and sediment transport by ice; an overlooked process on Lake Michigan. Journal of Coastal Research. v. 9, no. 1, 1993. p. 65-86.

OP-35. Luis Barrera*, Oscar Flores B.*, Néstor Jiménez C.*, J. L. Lizeca B.*, Fernando Murillo S.*, Orlando Sanjines*, Franz Tavera V.*, B. A. Eiswerth, R. F. Hardyman, A. H. Hofstra, J. T. Nash, L. C. Rowan, R. M. Tosdal and A. R. Wallace. Geologia y mineralizacion de las regiones de Berenguela y Laurani, Bolivia [Geology and mineralization of the Berenguela and Laurani regions, Bolivia], *in* Investigaciones de metales preciosos en le complejo volcanico neogeno-cuaternario de los Andes centrales (Investigations on precious metals in the Neogene-Quaternary volcanic complex of the Central Andes). (Bolivia, Servicio Geologico and others). Washington, DC: Banco Interamericano de Desarrollo, March 1993. p. 57-130.

OP-36. J. A. Barron. Diatoms, *in* Fossil prokaryotes and protists. (J. H. Lipps, editor). Cambridge, MA: Blackwell Scientific Publications, 1993. p. 155-167.

OP-37. J. A. Barron. CALIFORNIA. Paleoceanographic and tectonic controls on the Pliocene diatom record of California, *in* Pacific Neogene; environment, evolution, and events. (Ryuichi Tsuchi, editor and others). Tokyo: University of Tokyo Press, 1992. p. 25-41.

OP-38. J. A. Barron and A. D. Mahood*. Exceptionally well-preserved early Oligocene diatoms from glacial sediments of Prydz Bay, East Antarctica. Micropaleontology. v. 39, no. 1, 1993. p. 29-45.

OP-39. G. J. Barton. NEW JERSEY. Hydrogeologic reconnaissance at the Ciba-Geigy Superfund Site, Ocean County, New Jersey, *in* Hydrogeologic investigation, evaluation, and ground water modeling. (Yoram Eckstein, editor and others). Alexandria, VA: Water Environment Federation, 1993. p. 69-85.

OP-40. J. A. Bartow. CALIFORNIA. Tuffaceous ephemeral lake deposits on an alluvial plain, middle Tertiary of Central California. Sedimentology. v. 41, no. 2, April 1994. p. 215-232.

OP-41. S. B. Bartsch-Winkler and H. R. Schmoll. Evidence for late Holocene relative sea-level fall reconnaissance stratigraphical studies in an area of earthquake-subsided intertidal deposits, Isla Chiloe, southern Chile. Special Publication of the International Association of Sedimentologists, *in* Tectonic controls and signatures in sedimentary successions. (L. E. Frostick, editor and others). 20, 1993. p. 91-108.

OP-42. S. B. Bartsch-Winkler, D. M. Sutphin, M. M. Ball, S. L. Korzeb, R. F. Kness* and J. T. Dutchover*. NEW MEX-

ICO. Summary of the mineral- and energy-resource endowment, BLM Roswell Resource Area, east-central New Mexico. Nonrenewable Resources. v. 2, no. 4, 1993. p. 262-283.

OP-43. C. A. Baskerville and D. G. Mose*. NEW YORK. The separation of the Hartland Formation and Ravenswood Granodiorite from the Fordham Gneiss at Cameron's Line in the New York City area. Northeastern Geology. v. 11, no. 1, 1989. p. 22-28.

OP-44. W. A. Bassett*, A. H. Shen*, M. Bucknum* and I-Ming Chou. Hydrothermal studies in a new diamond anvil cell up to 10 GPa and from -190°C to 1200°C. Pure and Applied Geophysics. v. 141, no. 2-4, 1993. p. 487-496.

OP-45. T. M. Beasley*, L. D. Cecil, P. Sharma*, P. W. Kubik*, L. J. Mann*, H. E. Gove and Udo Fehn*. IDAHO. Chlorine-36 in the Snake River Plain Aquifer at the Idaho National Engineering Laboratory; origin and implications. Ground Water. v. 31, no. 2, April 1993. p. 302-310.

OP-46. B. C. Beaudoin, G. S. Fuis, W. J. Lutter, W. D. Mooney and T. E. Moore. ALASKA. Crustal velocity structure of the northern Yukon-Tanana Upland, central Alaska; results from TACT refraction/wide-angle reflection data. Geological Society of America Bulletin. v. 106, no. 8, August 1994. p. 981-1001.

OP-47. J. C. Behrendt. Comment; Environmental effects of development of Antarctic petroleum and mineral resources. Veröffentlichungen des Instituts für Internationales Recht an der Universität Kiel, *in* Antarctic Challenge 2; Conflicting interests, cooperation environmental protection, economic development. (R. Wolfrum, editor and others). 95, 1986. p. 42-45.

OP-48. J. C. Behrendt. Scientific studies relevant to the question of Antarctica's petroleum resource potential. Oxford Monographs on Geology and Geophysics, *in* The geology of Antarctica. (R. J. Tingey, editor). 17, 1991. p. 588-618.

OP-49. J. C. Behrendt, D. D. Blankenship*, C. A. Finn, R. E. Bell*, R. E. Sweeney, S. M. Hodge and J. M. Brozena*. CASERTZ aeromagnetic data reveal late Cenozoic flood basalts(?) in the West Antarctic rift system. Geology (Boulder). v. 22, no. 6, June 1994. p. 527-530.

OP-50. J. C. Behrendt and A. K. Cooper. Minimal Pliocene-Pleistocene uplift of the dry valleys sector of the Transantarctic Mountains; a key parameter in ice-sheet reconstructions: Comment. Geology (Boulder). v. 22, no. 7, July 1994. p. 668-669.

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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 authorship 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.**

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OP-1288. M. L. Ferns*, M. L. Cummings* and J. G. Evans. OREGON. Spatial and temporal relationships between calc-alkaline volcanism and late Miocene mineralization in the Ore-Ida Graben [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 89th annual Cordilleran Section meeting and 46th annual Rocky Mountain Section meeting. v. 25, no. 5, April 1993. p. 37.

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OP-1298. N. K. Foley and R. A. Ayuso. COLORADO. Geochemical and Pb isotopic signatures of Au mineralization in the central San Juan area, CO; a case study of the North amethyst vein [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Rocky Mountain Section; abstracts with programs. (J. W. Geissman, chairperson and others). v. 23, no. 4, April 1991. p. 22.

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OP-1303. E. R. Force. The preservation of placer concentrations [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 1991 annual meeting. v. 23, no. 6, 1991. p. 172.

OP-1304. A. B. Ford, J. G. Arth and Bela Csejtey, Jr. ALASKA. Trondhjemite of the Talkeetna Mountains; an unusually large low-K pluton in Alaska's Peninsular Terrane [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, 89th annual Cordilleran Section meeting and 46th annual Rocky Mountain Section meeting. v. 25, no. 5, April 1993. p. 38.

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OP-1311. J. D. Friedman, J. E. Conrad, E. H. McKee, F. E. Mutschler* and R. E. Zartman. NEW YORK. New evidence of a Jurassic thermotectonic event as an overprint to late Paleozoic tectonism in southeastern New York [abstr.] Abstracts with Programs - Geological Society of America, *in* Geological Society of America, Northeastern Section, 29th annual meeting. v. 26, no. 3, March 1994. p. 18.

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ABBREVIATIONS USED

A-	Antarctic Geologic Map
B	Bulletin
C	Circular
C-	Coal Investigations Map
CAT	Catalog
CF	Coal Map
CP-	Circum-Pacific Map Series
DDS-	Digital Data Series
EV	Earthquakes and Volcanoes
GN	General Interest Publication
GP-	Geophysical Investigations Map
GQ-	Geologic Quadrangle Map
HA-	Hydrologic Investigations Atlas
HUM	Hydrologic Unit Map
I-	Miscellaneous Investigations Series Map
L-	Land Use and Land Cover Map
MF-	Miscellaneous Field Studies Map
MR-	Mineral Investigations Resources Map
MSB	Miscellaneous and Special Books
OC-	Oil and Gas Investigations Chart
OM-	Oil and Gas Investigations Map
OF	Open-File Report
OP	Outside Publication
P	Professional Paper
PB-,ADA	Report available only through the National Technical Information Service
PDE	Preliminary Determination of Epicenters
SGM	Special Geologic Map
SGMI	Geologic Map Index
SM	Special Map
STM	State Geologic Map
TWI	Techniques of Water-Resources Investigations
W	Water-Supply Paper
WRI	Water-Resources Investigations Report
YR	Yearbook

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