

**U.S. Department of the Interior
U.S. Geological Survey**

Publications of the U.S. Geological Survey, 1999

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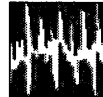
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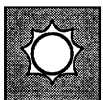
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* No new publications in this series for this quarter.

Publications of the U.S. Geological Survey

This catalog is a list of (1) books and maps¹ that were published during 1998 and (2) articles by U.S. Geological Survey personnel in non-U.S. Geological Survey journals and books that came to our attention in 1998; 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 USGS Information Services, Box 25286, Federal Center, Denver, CO 80225. The catalogs are also available over the counter at any of the U.S. Geological Survey offices that sell books.

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

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

Supplements for 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, and 1998 may be purchased in paperback book form and are priced as follows: 1982, \$3; 1983, \$3; 1984, \$3.25; 1985, \$3.75; 1986, \$4.25; 1987, \$4; 1988, \$3.75; 1989, \$4; 1990, \$4.50; 1991, \$4.25; 1992, \$5; 1993, \$7.50; 1994, \$7.50; 1995, \$7.50; 1996, \$7.50; 1997, \$7.50; 1998, \$7.50.

The quarterly catalog "New Publications of the U.S. Geological Survey" may be obtained free on request. Subscribers to this catalog are requested to provide notice for change of address promptly, giving new and old addresses and ZIP codes. Those wishing to be placed on a free subscription list for the quarterly catalog "New Publications of the U.S. Geological Survey" or wishing to change their address should write to the U.S. Geological Survey, 903 National Center, Reston, VA 20192.

Prices of available publications, except informal reports released to the open files and through the National Technical Information Service (NTIS), are given in current issues of the quarterly catalog "New Publications of the U.S. Geological Survey." Limited quantities of Circulars and publications of general interest are free.

"New Publications of the U.S. Geological Survey" is also available electronically through the USGS at <http://pubs.usgs.gov/publications/>.

The U.S. Geological Survey Publications Data Base includes comprehensive bibliographic information on USGS reports and maps published from 1880 to the present and references for non-USGS publications with USGS authors published from 1983 to date—a total of approximately 110,000 publications. Free public access to the data base is provided as a public service by the U.S. Geological Survey at <http://usgs-georef.cos.com> and through the USGS home page at <http://www.usgs.gov>.

¹Individual topographic quadrangle maps are not listed; they are shown on State indexes to topographic maps, which are free on application to USGS 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.

AVAILABILITY OF BOOKS AND MAPS BY MAIL

An order form for USGS books and maps is provided at the end of this catalog. 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. Payment (check, money order, purchase order, VISA, MasterCard, American Express, or Discover Card information, or Government account) must accompany order. Make all drafts payable to Dept. of the Interior - USGS. **Do not send cash.** Customers outside the United States, please send an international money order or check drawn on a U.S. bank in U.S. dollars. VISA, MasterCard, American Express, or Discover Card is also accepted.

Prices listed include cost of domestic surface transportation. Delivery is via USPS First Class or UPS Ground. For other delivery services, actual shipping costs will be billed. Please provide your courier account number if you request billing through a specific courier service. A \$5.00 handling charge is applicable on each order.

Books and Maps

Professional Papers, Bulletins, Water-Supply Papers, Techniques of Water-Resources Investigations, Circulars, single copies of "Preliminary Determination of Epicenters," the annual catalog "Publications of the U.S. Geological Survey," topographic and thematic maps, 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

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Open-file reports should be ordered according to instructions under appropriate headings in this announcement. An order form for USGS open-file reports is provided at the end of this catalog.

AVAILABILITY OF BOOKS AND MAPS OVER THE COUNTER

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Book reports and maps of the U.S. Geological Survey are available over the counter at the following USGS Earth Science Information Centers (ESIC's):

ANCHORAGE, Alaska—Rm. 101, 4230 University Dr.
DENVER, Colorado—Bldg. 810, Federal Center
MENLO PARK, California—Rm. 3128, Bldg. 3, 345
Middlefield Rd.
RESTON, Virginia—Rm. 1C402, USGS National Center,
12201 Sunrise Valley Dr.
SPOKANE, Washington—Rm. 135, U.S. Post Office Bldg.,
904 West Riverside Ave.
WASHINGTON, DC—Rm. 2650, Main Interior Bldg., 18th
and C Sts., NW.

Maps Only

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

ROLLA, Missouri—1400 Independence Rd.

USGS maps are also sold by commercial dealers throughout the United States. For the nearest authorized USGS Business Partner, call 1-888-ASK-USGS or check <http://www.nmd.usgs.gov/esic/usimage/dealers.html> on the World Wide Web.

AVAILABILITY OF BOOKS AND MAPS BY TELEPHONE

Books and maps of the U.S. Geological Survey can be ordered by calling 1-888-ASK-USGS.

AVAILABILITY OF PERIODICALS

Subscriptions to the periodical "Preliminary Determination of Epicenters" can be obtained ONLY from the

**Superintendent of Documents
U.S. 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.

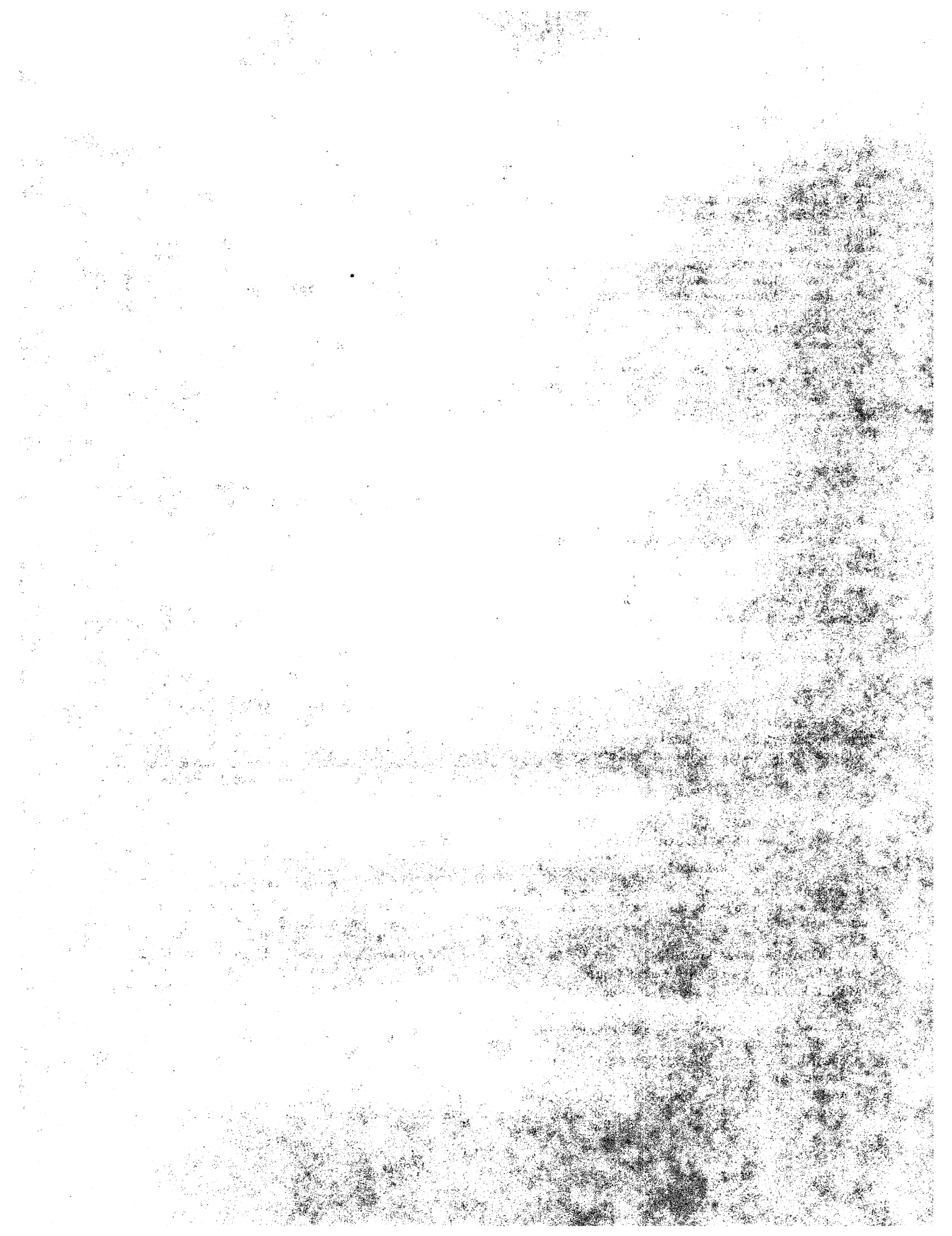
SUBSCRIPTIONS TO THIS CATALOG

Those wishing to be placed on a free subscription list of the catalog "New Publications of the U.S. Geological Survey" should apply in writing to the U.S. Geological Survey, 903 National Center, Reston, VA 20192. Subscribers to this announcement are requested to provide notice for change of address promptly, giving new and old addresses and zip codes. Include a current address label. Send changes to U.S. Geological Survey, 903 National Center, Reston, VA 20192.

IMPORTANT NOTICE

Prices of Government publications are subject to change. Increases in costs make it necessary for the Superintendent of Documents to increase the selling prices of many publications offered. As it is not feasible for the Superintendent of Documents to correct the prices manually in all previous announcements and publications stocked, the prices charged may differ from the prices in the announcements and publications.

The minimum for any USGS book publication is \$1.50 with the exception of circulars, which are free in limited quantities. This minimum applies to all publications previously advertised.





DIGITAL DATA SERIES

The Digital Data Series encompasses a broad range of digital data, including computer programs, interpreted results of investigations, comprehensive reviewed data bases, spatial data sets, digital images and animation, and multimedia presentations that are not intended for printed release. Scientific reports in this series cover a wide variety of subjects on all facets of U.S. Geological Survey investigations and research that are of lasting scientific interest and value. Releases in the Digital Data Series offer access to scientific information that is available in digital form; the information is primarily for viewing, processing, and (or) analyzing by computer.

DDS-0031. Profiles of gamma-ray and magnetic data from aerial surveys over the conterminous United States, by J. S. Duval and F. E. Riggle. 1999. Three CD-ROMs. (Release 2.) (Supersedes DDS-31 [Release 1]).

These CD-ROM's were produced in accordance with the ISO 9660 standard and can be accessed by any computer system that has the appropriate software to read ISO 9660 discs. The compiled programs included will work only on Windows-based computer systems. The minimum system requirements to use the data with the software provided on these discs are as follows: (1) Windows 95 or higher, (2) IBM or compatible personal computer, (3) 16 MB RAM, (4) Microsoft MSCDEX version 2.1 or later, (5) CD-ROM drive with ISO 9660 software driver, (6) Hard disk drive, and (7) VGA color graphics system.

DDS-0053. The mineral economy of Brazil—Economia mineral do Brasil, by A. C. Gurmendi, F. L. Barboza and C. H. Thorman. Prepared in cooperation with Departamento Nacional de Produção Mineral. 1999. One CD-ROM.

This CD-ROM was produced in accordance with both the ISO 9660 (PC) and HFS (Macintosh) standards. Minimum system requirements: A color graphics monitor is recommended with all platforms. Macintosh: (1) Mac OS 7.0 or later, (2) 68020 microprocessor, 12.5 MB available hard disk space, (3) 3.5 MB Ram for 680x0-based systems, and (4) 5 MB RAM for Power PC-based systems. Microsoft Windows systems: (1) Microsoft Windows 3.1, 95, 98, or NT and (2) 386 microprocessor, 4 MB RAM, 7 MB available hard disk space. The report can be viewed with Adobe Acrobat Reader, version 3.0 or later; version 3 is provided on the CD-ROM.

DDS-0054. ALASKA. Thermal maturity of sedimentary rocks in Alaska; digital resources, by M. J. Johnsson, K. R. Evans and H. A. Marshall. 1999. One CD-ROM. Also available on the web at <http://wrgis.wr.usgs.gov/dds/dds-54/>

This CD-ROM was produced in accordance with the ISO 9660 standard and Apple Computer's hierarchical-file-system (HFS) standard. The minimum system requirements to use the data with the software provided on this disc are as follows: Macintosh: (1) Macintosh or compatible computer with a 68020 or higher processor (PowerPC recommended), (2) 8 megabytes RAM (16 MB recommended), (3) Apple System Software v. 7.0 or later (7.1.2 or later recommended), (4) 13-inch color monitor that can display 256 colors (16.7 million colors recommended), and (5) CD-ROM drive; Windows: (1) IBM or compatible personal computer with a 386 or higher processor (486 required for

ArcExplorer software, Pentium recommended), (2) Microsoft Windows 3.1 or higher (Windows 95 or Windows NT recommended), (3) 8 megabytes RAM (16 MB recommended), (4) VGA color monitor that can display 256 colors (PCI card that can display 16.7 million colors recommended), and (5) CD-ROM drive; UNIX: Almost any UNIX workstation should be capable of manipulating these files if having a CD-ROM drive. All platforms: (1) Geographic information system software, needed for taking full advantage of ARC/INFO files, (2) Database management of spreadsheet software such as Microsoft Excel (v. 5.0 or higher), useful for sorting data files, and (3) Graphical PostScript editor such as Adobe Illustrator (v. 7.0 or higher), useful for editing map output files.

DDS-0055. HAWAII, CALIFORNIA, NEVADA. Sea-floor images and data from multibeam surveys in San Francisco Bay, Southern California, Hawaii, the Gulf of Mexico, and Lake Tahoe, California-Nevada, by Peter Dartnell and J. V. Gardiner. 1999. One CD-ROM. Also available on the web at <http://wrgis.wr.usgs.gov/dds/dds-55/>

Compatible computers (all computers must have a CD-ROM drive and capable of displaying at least 256 colors): (1) UNIX, (2) Macintosh with a 68020 or higher processor (PowerPC recommended), and (3) IBM-compatible computers running Windows 95 or higher or NT4.0 or higher with a 386 or higher processor (Pentium recommended). Software: (1) Most Web browsers, (2) ARC/INFO, or ARCVIEW with Spatial Analyst, or any GIS software that is capable of importing ARC/INFO export (.e00) files or geo-referenced TIFF images, and (3) Any image processing software capable of importing TIFF images.



BOOKS

PROFESSIONAL PAPERS

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

P 1386-I. Satellite image atlas of glaciers of the world; South America, edited by R. S. Williams, Jr., and J. G. Ferrigno. 1998. p. I1-I206. (Satellite image atlas of glaciers of the world, edited by R. S. Williams, Jr. and J. G. Ferrigno.)

1. Glaciers of Venezuela, by Carlos Schubert, Instituto Venezolano de Investigaciones Científicas. p. I1-I10.

2. Glaciers of Colombia, by Fabian Hoyos-Patiño, Universidad Nacional de Colombia. p. I11-I130.

3. Glaciers of Ecuador, by Ekkehard Jordan, Heinrich-Heine-Universität; and S. L. Hastenrath, University of Wisconsin. p. I31-I50.

4. Glaciers of Peru; with sections on the Cordillera Blanca on Landsat imagery and Quelccaya ice cap, by B. M. Arnao, Peru, Consult Control S.A.; and S. L. Hastenrath, University of Wisconsin. p. I51-I79.



5. Glaciers of Bolivia, by Ekkehard Jordan, Heinrich-Heine-Universität. p. I81-I108.

6. Glaciers of Chile and Argentina, by Louis Lliboutry, Corenc, France. p. I109-I206.

Glaciers of the dry Andes; with a section on rock glaciers, by Louis Lliboutry, Corenc, France; and A. E. Corte, Argentina, CONICET. p. I119-I147.

Glaciers of the wet Andes, by Louis Lliboutry, Corenc, France. p. I148-I206.

P 1404-H. NEW JERSEY. Ground-water flow in the New Jersey Coastal Plain, by Mary Martin. 1998. p. H1-H146. (Regional Aquifer-System Analysis; Northern Atlantic Coastal Plain.)

P 1416-A. Summary of hydrology of the regional aquifer systems, Gulf Coastal Plain, south-central United States, by H. F. Grubb. 1998. p. A1-A61. (Regional Aquifer-System Analysis; Gulf Coastal Plain.)

P 1416-I. Ground-water flow analysis of the Mississippi Embayment aquifer system, South-Central United States, by K. J. Arthur and R. E. Taylor. 1998. p. I1-I48. 9 plates in pocket. (Regional Aquifer-System Analysis; Gulf Coastal Plain.)

P 1424-A. OREGON, WASHINGTON. Geologic framework of the Willamette Lowland aquifer system, Oregon and Washington, by M. W. Gannett and R. R. Caldwell. 1998. p. A1-A32. 8 plates in pocket. (Regional Aquifer-System Analysis; Puget-Willamette Lowland.)

P 1424-B. OREGON, WASHINGTON. Hydrogeologic framework of the Willamette Lowland aquifer system, Oregon and Washington, by D. G. Woodward, M. W. Gannett and J. J. Vaccaro. 1998. p. B1-B82. 1 plate in pocket. (Supersedes Open-file report 96-114.)

P 1425. Hydrologic budgets of regional aquifer systems of the United States for predevelopment and development conditions, by R. H. Johnston. 1997. 34 p. (Regional Aquifer-System Analysis.)

P 1425. Hydrologic budgets of regional aquifer systems of the United States for predevelopment and development conditions, by R. H. Johnston. 1997. 34 p. (Regional Aquifer-System Analysis.) (Revised 1999.)

P 1552-A. CALIFORNIA. The Loma Prieta, California, earthquake of October 17, 1989; lifelines, edited by A. J. Schiff, Stanford University. Prepared in cooperation with the National Science Foundation. 1998. p. A1-A133. (Performance of the built environment; T. L. Holzer, coordinator.)

Electrical-power systems, by A. J. Schiff, Stanford University; Sam Swan, EQE International; and E. N. Matsuda, Pacific Gas & Electric Company. p. A5-A21.

Communication systems, by A. J. Schiff, Stanford University; Alex Tang, Nortel Canada; L. F. Wong, Pacific Bell; and Luis Cusa, Los Angeles Department of Airports. p. A23-A35.

Modeling the impact of the earthquake on telecommunication services, by M. L. Cohen, MITRE. p. A37-A42.

The media; radio, television, and newspapers, by R. J. Rapaport. p. A43-A46.

Water and wastewater systems, by LeVal Lund; Gordon Lavery, Lavery Associates; Holly Cornell, CH2M Hill; A. R. Guerrero, Southern California Edison; Michael Cassaro, University of Louisville; Andries Godschak, Seismic Construction Consultants; John McLaughlin, Archon Associates; Curt Edwards, Pountney & Associates; George Brodt, Los Angeles Department of Water and Power; Donald Ballantyne and Ronald Eguchi, EQE International; Mark Pickett, Omar Abu-Yasein, and Chenwun Lay, University of Toledo; A. J. Schiff, Stanford University; J. R. Blacklock, University of Arkansas; and Steven French, California Polytechnic State University. p. A47-A62.

Water-distribution system, by J. M. Eidinger, G&E Engineering Systems. p. A63-A78.

Water- and wastewater-treatment plants, by W. F. Heubach, Summit Technology Consulting Engineers; and D. B. Ballantyne, EQE International. p. A79-A86.

Lessons learned by water and wastewater utilities, by Mary Pickett, University of Toledo; and G. L. Lavery, Lavery Associates. p. A87-A98.

Transportation systems, by Joel Markowitz, Metropolitan Transportation Commission. p. A99-A102.

Transportation systems; airports, by A. J. Schiff, Stanford University; and Luis Cusa, Los Angeles Department of Airports. p. A103-A110.

Transportation systems; seaports, by C. R. Farrar, Los Alamos National Laboratory; and A. C. Griffin, Greiner. p. A111-A119.

Transportation systems; passenger railways and buslines, by S. D. Werner, Seismic Systems & Engineering Consultants; and A. J. Schiff, Stanford University. p. A121-A124.

Residential natural-gas piping and appliances, by P. W. McDonough, Questar. p. A125-A128.

Repair patterns for the gas-distribution system in San Francisco, by D. G. Honegger. p. A129-A133.

P 1552-D. CALIFORNIA. The Loma Prieta, California, earthquake of October 17, 1989; earth structures and engineering characterization of ground motion, edited by T. L. Holzer, U.S. Geological Survey. 1998. p. D1-D80. (Performance of the built environment; coordinated by T. L. Holzer.)

Performance of earth dams during the Loma Prieta earthquake, by L. F. Harder, Jr., California Department of Water Resources; J. D. Bray, University of California; R. L. Volpe, R. L. Volpe & Associates; and R. V. Rodda, Wahler Associates. p. D3-D26.

Analysis of soil-nailed excavations stability during the 1989 Loma Prieta earthquake, by Mladen Vucetic, University of California at Los Angeles; M. R. Tufenkjian, California State University; G. Y. Felio, National Research Council; Pirooz Barar, Pirooz Barar & Associates; and K. R. Chapman, Schnabel Foundation Company. p. D27-D45.

Empirical analysis of peak horizontal acceleration, peak horizontal velocity, and modified Mercalli intensity, by K. W. Campbell, EQE International. p. D47-D68.

Attenuation of vertical and horizontal response spectra of the Loma Prieta earthquake, by Yousef Bozorgnia, Exponent Fail-

ure Analysis Associates; and Mansour Niazi, Berkeley Geophysical Consultants. p. D69-D80.

- P 1553-D. CALIFORNIA. The Loma Prieta, California, earthquake of October 17, 1989; recovery, mitigation, and reconstruction, by J. M. Nigg, U.S. Geological Survey. Prepared in cooperation with the National Science Foundation. 1998. p. D1-D90.

Macroeconomic effects of the earthquake, by R. J. Brady and J. B. Perkins, Association of Bay Area Governments. p. D3-D16.

Sheltering and housing of low-income and minority groups in Santa Cruz County after the Loma Prieta earthquake, by B. D. Phillips, Texas Woman's University. p. D17-D28.

Hazards mitigation and housing recovery; Watsonville and San Francisco one year later, by M. C. Comerio, University of California at Berkeley. p. D29-D34.

Local earthquake mitigation programs; perceptions of their effectiveness following the Loma Prieta earthquake, by P. A. Bolton and C. E. Orians, Battelle Seattle Research Center. p. D35-D51.

Rebuilding after the earthquake in areas of ground failure, Santa Cruz Mountains summit area, by M. B. Tyler and G. G. Mader, Spangle Associates. p. D53-D62.

CALIFORNIA. The response of the State of California to the Loma Prieta earthquake, by C. C. Thiel, Jr., Stanford University; G. W. Housner, California Institute of Technology; and L. T. Tobin, California Seismic Safety Commission. p. D63-D80.

Earth science, earthquake response, and hazard mitigation; lessons from the Loma Prieta earthquake, by W. M. Brown, III and C. E. Mortensen, U.S. Geological Survey. p. D81-D90.

- P 1560. Assessing earthquake hazards and reducing risk in the Pacific Northwest, edited by A. M. Rogers, T. J. Walsh, W. J. Kockelman, U.S. Geological Survey; and G. R. Priest, Oregon Department of Geoscience. 1998. p. 307-545. 6 plates in pocket. (Volume 2.)

An introduction to predicting earthquake hazards and losses in the Pacific Northwest, by A. M. Rogers, U.S. Geological Survey; and G. R. Priest, Oregon Department of Geoscience. p. 307-310.

Engineering characterization of earthquake strong ground motions in the Pacific Northwest, by W. J. Silva, Pacific Engineering & Analysis; I. G. Wong, Woodward-Clyde Federal Services; and R. B. Darragh, California Division of Mines and Geology. p. 313-324.

Simulated strong ground motions for magnitude 8 earthquakes on the Cascadia subduction zone, by Brian Cohee, Stanford University; and Paul Somerville, Woodward-Clyde Federal Services. p. 325-344.

WASHINGTON. Earthquake ground-response studies in West and South Seattle, Washington, by D. L. Carver, K. W. King, R. A. Williams, and D. M. Worley, U.S. Geological Survey. p. 345-354.

OREGON. Earthquake-hazard geologic maps of the Portland, Oregon, metropolitan area, by I. P. Madin, Oregon Department of Geology and Mineral Industries. p. 355-370.

Ground failure associated with the Puget Sound region earthquakes of April 13, 1949, and April 29, 1965, by A. F. Chleborad and R. L. Schuster, U.S. Geological Survey. p. 373-439.

WASHINGTON. Evaluation of liquefaction potential in Seattle, Washington, by W. P. Grant, Kleinfelder; W. J. Perkins, Shannon & Wilson; and T. L. Youd, Brigham Young University. p. 441-473.

Reducing earthquake hazards; an introduction, by W. J. Kockelman. p. 477-478.

Techniques for reducing earthquake hazards, by W. J. Kockelman. p. 479-496.

OREGON. Earthquake risk-reduction prospects for the Puget Sound and Portland, Oregon, areas, by P. J. May, University of Washington. p. 497-515.

WASHINGTON. Integrated tsunami-hazard assessment for a coastal community, Grays Harbor, Washington, by Jane Preuss, Urban Regional Research; and G. T. Hebenstreit, Science Applications International. p. 517-536.

WASHINGTON. Approaches to seismic-hazard mitigation by local governments; an example from King County, Washington, by D. B. Booth, King County Basin Planning; and J. P. Bethel, King County Building and Land Development Division. p. 537-542.

WASHINGTON. Liability for earthquake hazards or losses and its impacts on the cities and counties of Washington, by J. B. Perkins and K. K. Moy, Association of Bay Area Governments. p. 543-545.

- P 1565-C. NEW JERSEY. Geochemistry and stratigraphic relations of middle Proterozoic rocks of the New Jersey Highlands, by R. A. Volkert and A. A. Drake, Jr. Prepared in cooperation with the New Jersey Geological Survey. 1999. p. C1-C77. (Geologic studies in New Jersey and eastern Pennsylvania.)

- P 1571. RHODE ISLAND. Ground-water flow and contaminant transport at a radioactive-materials processing site, Wood River Junction, Rhode Island, by B. J. Ryan and K. L. Kipp, Jr. 1997. 89 p. 89 p., 1 diskette in pocket. (Supersedes Open-file report 93-401.)

- P 1578. OREGON. Hydrothermal mineralogy of core from geothermal drill holes at Newberry Volcano, Oregon, by K. E. Bargar and T. E. Keith. 1999. 92 p.

- P 1586. WASHINGTON. Hydrologic consequences of hot-rock/snowpack interactions at Mount St. Helens Volcano, Washington, edited T. C. Pierson, U.S. Geological Survey. 1999. 117 p.

WASHINGTON. Hydrologic consequences of hot-rock/snowpack interactions at Mount St. Helens Volcano, Washington, 1982-84; introduction, by T. C. Pierson and R. B. Waitt, U.S. Geological Survey. p. 1-8.

Nature of depositional contacts between pyroclastic deposits and snow or ice, by J. S. Walder, U.S. Geological Survey. p. 9-18.

Transformation of water flood to debris flow following the eruption-triggered transient-lake breakout from the crater on March 19, 1982, by T. C. Pierson, U.S. Geological Survey. p. 19-36.



4 PUBLICATIONS OF THE U.S. GEOLOGICAL SURVEY, 1999

Sediment transport in the hyperconcentrated phase of the March 19, 1982, lahar, by R. L. Dinehart, U.S. Geological Survey. p. 37-52.

Dome-collapse rockslide and multiple sediment-water flows generated by a small explosive eruption on February 2-3, 1983, by T. C. Pierson and R. B. Waitt, U.S. Geological Survey. p. 53-68.

Rock avalanches, rockfalls, and associated processes induced by spreading of the lava dome, March 1984, by J. J. Major, U.S. Geological Survey; and P. T. Pringle, Washington Division of Geology and Earth Resources. p. 69-80.

Eruption-triggered lahar on May 14, 1984, by P. T. Pringle, Washington Division of Geology and Earth Resources; and K. A. Cameron, Portland, OR. p. 81-103.

P 1587. CALIFORNIA. Water quality assessment of the San Joaquin-Tulare basins, California; analysis of available data on nutrients and suspended sediment in surface water, 1972-1990, by C. R. Kratzer and J. L. Shelton. National Water-Quality Assessment Program. 1998. 92 p.

P 1598. ARIZONA, NEW MEXICO, CALIFORNIA. Desert winds; monitoring wind-related surface processes in Arizona, New Mexico, and California, edited by C. S. Breed and M. C. Reheis, U.S. Geological Survey. 1999. 153 p.

A. Monitoring surface changes in desert areas, by C. S. Breed, U.S. Geological Survey. p. 1-27.

B. Instrumented field studies of sediment transport by wind, by P. J. Helm and C. S. Breed, U.S. Geological Survey. p. 28-51.

C. ARIZONA. Wind erosion susceptibility near Desert Wells, Arizona, by S. A. Wolfe, Geological Survey of Canada; and P. J. Helm, U.S. Geological Survey. p. 53-68.

D. ARIZONA, NEW MEXICO. Field monitoring of vegetation characteristics related to surface changes in the Yuma Desert, Arizona, and at the Jornada experimental range in the Chihuahuan Desert, New Mexico, by H. B. Musick, New Mexico Environment Department. p. 69-84.

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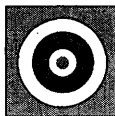
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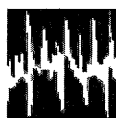
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- WRI 97-4147. NEW MEXICO. Seismic investigation of the buried horst between the Jornada del Muerto and Mesilla ground-water basins near Las Cruces, Dona Ana County, New Mexico, by D. G. Woodward and R. G. Myers. Prepared in cooperation with the City of Las Cruces; New Mexico State Engineer Office. 1997. 45 p., 1 over-size sheet. (NC, Da, M, Wb.)
- WRI 97-4150. Ground-water age dating and other tools used to assess land-use effects on water quality, by J. D. Stoner, T. K. Cowdery and L. J. Puckett. 1997. 5 p. (NC, Da, M, Wb.)
- WRI 97-4157. Guide to the revised heat and solute transport simulator; HST3D, Version 2, by K. L. Kipp, Jr. 1997. 149 p.
- WRI 97-4203. Combining satellite data for ancillary data to produce a refined land-use land-cover map, by J. S. Stewart. National Water-Quality Assessment Program; Western Lake Michigan Drainages. 1998. 11 p., 3 over-size sheets. (NC, Da, M, Wb.)
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- WRI 97-4205. CALIFORNIA. Environmental setting of the San Joaquin-Tulare basins, California, by J. A. Gronberg, N. M. Dubrovsky, C. R. Kratzer, J. L. Domagalski, L. R. Brown and K. R. Burow. National Water-Quality Assessment Program. 1998. 45 p. (NC, Da, M, Wb; USGS, WRD, Placer Hall, 6000 J St., Sacramento, CA 95819-6129.)
- WRI 97-4224. WASHINGTON. Evaluation of factors that influence estimated zones of transport of six municipal wells in Clark County, Washington, by L. L. Orzol and Margot Truini. Prepared in cooperation with Intergovernmental Resource Center, Clark County, Washington. 1999. 65 p. (NC, Da, M, S, Wb.)
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- WRI 97-4234. Ground-water quality in three urban areas in the coastal plain of the Southeastern United States, 1995, by M. P. Berndt, D. R. Galeone, T. B. Spruill and C. A. Crandall. National Water-Quality Assessment Program. 1998. 25 p. (NC, Da, M, Wb; USGS, WRD, Placer Hall, 6000 J St., Sacramento, CA 95819-6129.)



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WRI 97-4263. TEXAS. Hydrology of the shallow aquifer and uppermost confined aquifer near El Paso, Texas, by D. E. White, E. T. Baker, Jr. and Roger Sperka. Prepared in cooperation with the El Paso Water Utilities-Public Service Board. 1997. 37 p., 4 over-size sheets, scale 1:64,000 (1 inch = about 1 mile). (NC, Da, M, Wb.)

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WRI 99-4015. SOUTH CAROLINA. Development of a 14-digit hydrologic unit code numbering system for South Carolina, by D. E. Bower, Claude Lowry, Jr., M. A. Lowery and N. M. Hurley, Jr. Prepared in cooperation with South Carolina Department of Health and Environmental Control; U.S. Department of Agriculture, Natural Resource Conservation Service. 1999. 2 over-size sheets, scale 1:500,000 (1 inch = about 8 miles) and one CD-ROM. (NC, Da, M, Wb.)

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OF 93-0193. UTAH. Principal drill stem test database (UBDST) and documentation; analysis of Uinta Basin, Utah gas-bearing Cretaceous and Tertiary strata, by J. B. Wesley, C. J. Wandrey and T. D. Fouch. 1993. 18 p. 18 p., one 3 1/2 inch DS/HD IBM-compatible computer diskette. (NC, M, Da, U; Utah Geol. Surv., 1594 West North Temple, Suite 3110, P.O. Box 146100, Salt Lake City, UT 84114-6100.)

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- Protection Agency. 1994. 27 p. 27 p., one 3 1/2 inch DS/HD IBM compatible computer diskette. (NC, Da, M, Wb.)
- OF 95-0146. NEVADA. Precipitation data for water years 1992 and 1993 from a network of nonrecording gages at Yucca Mountain, Nevada, by D. S. Amobs, A. L. Flint and J. A. Hevesi. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1995. 100 p. (NC, Da, M, Wb, U; USGS, WRD, Yucca Mountain Project Branch, Box 25046, Mail Stop 421 Federal Ctr., Denver, CO 80225; U.S. Dep. of Energy Technical Library, P.O. box 98518, Mail Stop 505, Las Vegas, NV 89193-8518; U.S. Dep. of Energy, Office of Scientific and Technical Information, P.O. Box 62, Oak Ridge, TN 37831.)
- OF 95-0413. Is Glacier Peak a dangerous volcano?, by L. G. Mastin and R. B. Waitt. 1995. 4 p. (NC, Da, M, Wb.) Also available on the web at <http://vulcan.wr.usgs.gov/Volcanoes/GlacierPeak/Hazards/OF95-413/OF95-413.html>
- OF 95-0705. FLORIDA. Trends in water-table altitude (1984-93) and saltwater intrusion (1974-93) in the Biscayne Aquifer, Dade County, Florida, by R. S. Sonenshein and E. J. Koszalka. Prepared in cooperation with the Miami-Dade Water and Sewer Department. 1996. 2 over-size sheets. (NC, Da, M, Wb.)
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- OF 96-0015. Circulation and effluent dilution modeling in Massachusetts Bay; model implementation, verification and results, by R. P. Signell, H. L. Jenter and A. F. Blumberg. 1996. 121 p. (NC, Da, M.) Also available on the web at <http://crusty.er.usgs.gov/mbayopen/mbayopen.html>
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- OF 96-0086. CALIFORNIA. Preliminary geologic map of the Van Nuys 7.5' quadrangle, Southern California, compiled by R. F. Yerkes. 1996. 7 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
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- OF 96-0092. Coal fields of the conterminous United States, compiled by John Tully. 1996. 1 over-size sheet, scale 1:5,000,000 (1 inch = 80 miles). (NC, Da, M.) Also available on the web at <http://energy.er.usgs.gov/products/openfile/OF96-92/index.htm>
- OF 96-0173. OREGON. Water-quality, streamflow, and meteorological data for the Tualatin River basin, Oregon, 1991-93, by M. C. Doyle and J. M. Caldwell. Prepared in cooperation with the Unified Sewerage Agency of Washington County. 1996. 49 p., one over-size sheet and one CD-ROM. (NC, Da, M, Wb.)
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- OF 96-0253. CALIFORNIA. Preliminary geologic map of the Burbank 7.5' quadrangle, Southern California, compiled by R. F. Yerkes. 1996. 7 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
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- OF 96-0273. MASSACHUSETTS. Maps showing topography, backscatter, and interpretation of sea floor features in the Massachusetts Bay disposal-site region off Boston, Massachusetts, by P. C. Valentine, W. W. Danforth, E. T. Roworth and S. T. Stillman. Prepared in cooperation with the National Oceanic and Atmospheric Administration. 1996. 2 over-size sheets, scales 1:10,000 (1 inch = 833.3 feet) and 1:12,500 (1 inch = about 1050 feet). (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360.) Also available on the web at <http://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-96-0273/>
- OF 96-0280. Areal extent of the Pittsburgh coal bed and horizon and mined areas of the Pittsburgh coal bed, compiled by L. F. Ruppert, S. J. Tewalt, L. J. Bragg, John Tully, J. Pierce, A. Weller and Jeanette Yarnell. 1996. 1 over-size sheet, scale 1:425,000 (1 inch = 6.7 miles). (NC, Da, M.) Also available on the web at <http://energy.er.usgs.gov/products/openfile/of96-280/>
- OF 96-0285. NEVADA. Interpretive geophysical fault map across the central block of Yucca Mountain, Nevada, by D. A. Ponce. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1996. 15 p., 4 over-size sheets. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)
- OF 96-0419. NEBRASKA. The chemical quality of overbank sediment deposited by the 1993 floods and streambed sediment in major streams at selected sites in eastern Nebraska, by A. D. Druliner, A. H. Chen and S. H. Hull. Prepared in cooperation with the Nebraska Department of Environmental Quality. 1997. 57 p. (NC, Da, M, Wb.)
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- OF 96-0521. NEVADA. Preliminary geologic map of the Moapa West Quadrangle, Clark County, Nevada, by D. L. Schmidt, W. R. Page and J. B. Workman. Prepared in cooperation with the Southern Nevada Water Authority. 1996. 17 p., 1 over-size sheet. (NC, Da, M, U.)
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- OF 96-0551. NEBRASKA. Streamflow gain-and-loss measurements and water-quality data of Salt Creek and its tributaries near Lincoln, Nebraska, 1994-95, by I. M. Verstraeten. Prepared in cooperation with the City of Lincoln. 1997. 66 p. (NC, Da, M, Wb.)
- OF 96-0617. FLORIDA. Potentiometric surface of the upper Floridan Aquifer in the Suwannee River Water Management District, Florida, May and June 1995, by G. L. Mahon, A. F. Choquette and A. A. Sepulveda. Prepared in cooperation with the Florida Department of Environmental Protection. 1997. 1 over-size sheet. (NC, Da, M, Wb.)
- OF 96-0684. SOUTH CAROLINA. Biostratigraphic data for the Cretaceous marine sediments in the USGS-St. George No. 1 core (DOR-211), Dorchester County, South Carolina, by J. M. Self-Trail and G. S. Gohn. Prepared in cooperation with the U.S. Department of Energy, Savannah River Site. 1996. 29 p., one 3 1/2 inch DS/DD IBM compatible computer diskette. (NC; South Carolina Geol. Surv., 5 Geology Rd., Columbia, SC 29210-9998.) Also available on the web at <http://geology.usgs.gov/pdf/of96-684.html>
- OF 96-0712. NEVADA, CALIFORNIA. Metallic mineral resources in the U. S. Bureau of Land Management's Winnemucca District and Surprise resource area, Northwest Nevada and Northeast California, by S. G. Peters, J. T. Nash, D. A. John, G. T. Spanski, H. D. King, K. A. Connors, B. C. Moring, J. L. Doebrich, D. J. McGuire, G. V. Albino, V. C. Dunn, T. G. Theodore and S. D. Ludington. 1996. 146 p., 11 over-size sheets, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M, U; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, 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 96-0723. Site-response maps for the Los Angeles region based on earthquake ground motions, by Stephen Hartzell, S. C. Harmsen, A. D. Frankel, D. L. Carver, Edward Cranswick, M. E. Meremonte and J. A. Michael. 1996. 14 p., 2 over-size sheets, scale 1:200,000 (1 inch = about 3.2 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.) Also available on the web at <http://geohazards.cr.usgs.gov/pub/open-file-reports/ofr-96-723/>
- OF 96-0727. Summary Circum-North Pacific tectonostratigraphic terrane map, by W. J. Nokleberg, L. M. Parfenov, J. W. Monger, B. V. Baranov, S. G. Byalobzhesky, T. K. Bundtzen, T. D. Fenney, Kazuya Fujita, S. P. Gordey, Arthur Grantz, A. I. Khanchuk, B. A. Natalin, L. M. Natapov, I. O. Norton, W. W. Patton, Jr., George Plafker, D. W. Scholl, S. D. Sokolov, G. M. Sosunov, D. B. Stone, R. W. Tabor, N. V. Tsukanov and T. L. Vallier. 1996. 1 over-size sheet, scale 1:10,000,000 (1 inch = about 160 miles). (NC, Da, M.)



OF 97-0042. NEW YORK. Borehole geophysical data from bedrock wells at Windham, New York, by P. M. Heisig and K. D. Knutson. Prepared in cooperation with the New York Department of Environmental Protection. 1997. 24 p. (NC, Da, M, Wb.)

OF 97-0044. NEW YORK. Number of water level measurements made in Kings and Queens county wells, Long Island, New York, 1910-95, by decade, by Jack Monti, Jr. Prepared in cooperation with New York City Department of Environmental Protection. 1997. 15 p. (NC, Da, M, Wb.)

OF 97-0061. NEW YORK, NEW JERSEY. Mapping the sea floor geology offshore on the New York-New Jersey metropolitan area using sidescan sonar; preliminary report, by W. C. Schwab, W. Corso, M. A. Allison, Bradford Butman, J. F. Denny, L. Lotto, W. W. Danforth, D. S. Foster, T. F. O'Brien, D. A. Nichols, B. J. Irwin and K. F. Parolski. 1997. 3 over-size sheets. (NC, Da, M.)

OF 97-0134. U. S. Geological Survey Coal Quality (COALQUAL) database; version 2.0, by L. J. Bragg, J. K. Oman, S. J. Tewalt, C. L. Oman, N. H. Rega, P. M. Washington and R. B. Finkelman. 1997. One CD-ROM. (NC, Da, M.)

This CD-ROM was produced in accordance with the ISO 9660 standard. Although the data and text files are accessible by any computer system recognizing this standard, the data manipulation and display software (LandViewIII) requires a Windows (3.x, 95 or NT) environment. Although the software will run on a system with as little as 4 MB of RAM and a 1X CD-ROM drive, larger memory and a faster drive will enhance performance.

OF 97-0145. SOUTH CAROLINA. Paleontology and physical stratigraphy of the USGS-Pregall No. 1 core (DOR-208), Dorchester County, South Carolina, by L. E. Edwards, L. M. Bybell, G. S. Gohn and N. O. Frederiksen. Prepared in cooperation with the U.S. Department of Energy, Savannah River Site. 1997. 35 p. 3 1/2 inch DS/HD IBM compatible computer diskette. (NC, Da, M; South Carolina Geol. Surv., 5 Geology Rd., Columbia, SC 29210-9998.) Also available on the web at <http://geology.usgs.gov/pdf/of97-145.html>

This diskette is formatted for DOS, but will run on new Macintosh systems. It contains the Acrobat(TM) electronic version of USGS Open-File Report 97-145.

OF 97-0172. Map showing outcrop of the coal-bearing units and land use in the Gulf Coast region, compiled by P. D. Warwick, J. R. SanFilipo, S. S. Crowley, R. E. Thomas, John Freid and J. K. Tulley. 1997. 1 over-size sheet, scale 1:2,000,000 (1 inch = about 32 miles). (NC, Da, M.) Also available on the web at <http://energy.er.usgs.gov/products/openfile/OFR97-172/>

OF 97-0180. TEXAS. Water-level altitudes 1997 and water-level changes 1990-97 and 1996-97 in the Chicot and Evangeline aquifers, Fort Bend County and adjacent areas, Texas, by L. S. Coplin, M. C. Kasmarek, H. X. Santos and D. A. Sneck-Fahrer. Prepared in cooperation with the Fort Bend Subsidence District. 1997. 6 over-size sheets. (NC, Da, M, Wb.)

OF 97-0181. TEXAS. Water-level altitudes 1997, water-level changes 1977-97 and 1996-97, and compaction 1973-96 in the Chicot and Evangeline aquifers, Houston-Galveston region, Texas, by M. C. Kasmarek, L. S. Coplin and H. X. Santos. Prepared in cooperation with the City of Houston; Harris-Galveston

Coastal Subsidence District. 1997. 8 over-size sheets. (NC, Da, M, Wb.)

OF 97-0203. MONTANA. Hydrologic and water-quality data related to the occurrence of arsenic for areas along the Madison and upper Missouri rivers, southwestern and west-central Montana, by L. K. Tuck, D. M. Dutton and D. A. Nimick. Prepared in cooperation with the Montana Department of Natural Resources and Conservation; Bureau of Reclamation. 1997. 124 p. (NC, Da, M, Wb; USGS, WRD, 428 Federal Bldg., 301 South Park, Helena, MT 59626-0076; and Montana State Univ.-Billings, 1500 North 30th, Billings, MT 59101.)

OF 97-0241. NEW YORK. Geohydrology and water quality of the Walkill River valley near Middletown, New York, by E. F. Bugliosi, G. D. Casey and Denise Ramelot. Prepared in cooperation with the Orange County Department of Public Works. 1998. 32 p. (NC, Da, M, Wb; USGS, WRD, 425 Jordan Rd., Troy, NY 12180.)

OF 97-0242. ILLINOIS. Geologic, hydrologic, and water-quality data from selected boreholes and wells in and near Belvidere, Illinois, 1989-96, by P. C. Mills, D. J. Yeskis and T. D. Straub. Prepared in cooperation with the U.S. Environmental Protection Agency. 1998. 151 p. (NC, Da, M, Wb.)

OF 97-0254. CALIFORNIA. Preliminary geologic map of the Los Angeles 7.5 quadrangle, Southern California, compiled by R. F. Yerkes. 1997. 9 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 97-0255. CALIFORNIA. Preliminary geologic map of the Hollywood 7.5 quadrangle, Southern California, compiled by R. F. Yerkes. 1997. 10 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 97-0256. CALIFORNIA. Preliminary geologic map of the Beverly Hills 7.5 quadrangle, Southern California, compiled by R. F. Yerkes. 1997. 9 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 97-0290. PUERTO RICO. Maps showing the surficial geology of the Culebra shelf, Puerto Rico, by M. A. Hampton, M. E. Torresan, J. L. Trias, D. W. Folger and F. L. Wong. 1997. 3 over-size sheets, scale 1:40,000 (1 inch = about 3,500 feet). (NC, Da, M.)

OF 97-0381. ILLINOIS. Geohydrology of the upper part of the Galena-Plateville Aquifer underlying a waste-disposal site near Wempletown, Illinois, by S. M. Robinson and D. J. Yeskis. Prepared in cooperation with the U.S. Environmental Protection Agency. 1998. 22 p. (NC, Da, M, Wb.)



OF 97-0410. Finite-element surface-water modeling system; two-dimensional flow in the horizontal plane; addendum to the users manual, by J. K. Lee. Prepared in cooperation with the South Florida Water Management District. 1999. 74 p. (NC, Da, M, Wb.)

OF 97-0428. CALIFORNIA. Preliminary geologic map of the Newbury Park 7.5' quadrangle, Southern California, compiled by R. F. Yerkes and R. H. Campbell. 1997. 9 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 97-0438. VIRGINIA. Debris-flow hazards in areas affected by the June 27, 1995, storm in Madison County, Virginia, by B. A. Morgan, G. F. Wiczorek, R. H. Campbell and P. L. Gori. Prepared in cooperation with the Federal Emergency Management Agency. 1997. 34 p., 2 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; Virginia Div. of Mineral Resources, Natural Resources Bldg., Alderman and McCormick Rds., P.O. Box 3667, Charlottesville, VA 22903.)

OF 97-0443. ALASKA. What is the Alaska Volcano Observatory?, by C. A. Neal. 1997. 2 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. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)

OF 97-0465. CALIFORNIA, OREGON. Preliminary map of selected post-Nevadan geologic features of the Klamath Mountains and adjacent areas, California and Oregon, compiled by W. P. Irwin. 1997. 29 p., 1 over-size sheet, scale 1:500,000 (1 inch = about 8 miles). (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 210, 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.) Also available on the web at <http://wrgis.wr.usgs.gov/open-file/of97-465/>

OF 97-0470-E. Map showing geology, oil and gas fields, and geologic provinces of the former Soviet Union, by F. M. Persits, G. F. Ulmishek and D. W. Steinshouer. 1997. One CD-ROM. (NC, M, Da.)

Minimum requirements to use the data on this disc depend on files that are to be used. Requirements are as follows: For Macintosh computer with 68020 (Macintosh II series) or greater processor, Mac OS 7.0 or later, 4 MB application RAM, 20 MB hard disk space. For Intel - x86-based personal computer (386 minimum: 486, Pentium, or Pentium Pro recommended), Microsoft Windows 3.1, Microsoft Windows for Workgroups, Microsoft Windows 95, Microsoft Windows NT 3.51 or 4.0, 32 MB application, RAM minimum, 64 MB recommended, 25 MB hard disk space. For Sun SPARCstation, Sun OS(TM) 4.1.3 or later, or Solaris (R) 2.3, 2.4, or 2.5 operating system software, Open Windows(TM) (version 3.0 or later), Motif(TM) window manager (1.2.3 or later) OpenLook version 3.0 or Common Desktop Environment (CDE) 1.0 and above, 12 MB of available hard disk space, 32 MB RAM. For HP workstation, 9000 series workstation model 700 or 800. HP-UX(TM) 9.0.3 or later oper-

ating system software, X Window System(TM), X11R5 with HP-VUE or CDE 1.0, 12 megabytes of available hard disk space, 32 MB RAM. For Silicon Graphics workstation, IRIX (TM) 5.3 or later operating system software, 12 megabytes of available hard disk space, 32 MB RAM. For IBM RS/6000 workstation, AIX(R) 4.1 or later operating system, CDE 1.0 or Motif window manager, 12 megabytes of available hard disk space, 32 MB RAM.

OF 97-0470-F. Maps showing geology, oil and gas fields, and geologic provinces of the Asia Pacific region, by D. W. Steinshouer, Jin Qiang, P. J. McCabe and R. T. Ryder. 1997. One CD-ROM. (NC, M, Da.)

This CD-ROM has been produced in accordance with the ISO 9660 CD-ROM standard and is therefore capable of being read on any computing platform that has appropriate CD-ROM driver software installed.

OF 97-0475. ALASKA. Geologic map of the Nabesna A-6 Quadrangle, Alaska, by D. H. Richter, E. J. Moll-Stalcup, W. A. Duffield and Nora Shew. 1997. 22 p., 1 over-size sheet. (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. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)

OF 97-0483. Preliminary geologic map of the west half, Los Angeles 60' x 30' quadrangle, compiled by R. F. Yerkes and R. H. Campbell. 1997. 2 over-size sheets, scale 1:100,000 (1 inch = about 1.6 miles). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 97-0484-A. ALASKA. Generalized geologic map of the Livengood Quadrangle, Alaska, by F. R. Weber, K. L. Wheeler, C. D. Rinehart and T. D. Light. 1997. 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. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)

OF 97-0484-B. ALASKA. Map showing mineral resource potential of the Livengood Quadrangle, Alaska, by R. B. McCammon, T. D. Light, C. D. Rinehart, F. R. Weber, G. K. Lee and S. W. Bie. 1997. 47 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. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)

OF 97-0502. MASSACHUSETTS. Sea floor topography of Quadrangle 1 in the Stellwagen Bank National Marine Sanctuary off Boston Massachusetts, by P. C. Valentine, J. L. Baker, T. S. Unger and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet). (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)

OF 97-0503. MASSACHUSETTS. Sea floor topography of Quadrangle 2 in the Stellwagen Bank National Marine Sanctuary off



Boston, Massachusetts, by P. C. Valentine, T. S. Unger, J. L. Baker and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet). (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)

OF 97-0504. MASSACHUSETTS. Sea floor topography of Quadrangle 3 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, J. L. Baker, T. S. Unger and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet). (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 389 Woods Hole Rd., Woods Hole, MA 02543-1598.)

OF 97-0505. MASSACHUSETTS. Sea floor topography of Quadrangle 4 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, T. S. Unger, J. L. Baker and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = 2,100 feet). (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)

OF 97-0506. MASSACHUSETTS. Sea floor topography of Quadrangle 5 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, J. L. Baker, T. S. Unger and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet). (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)

OF 97-0507. MASSACHUSETTS. Sea floor topography of Quadrangle 6 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, T. S. Unger, J. L. Baker and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet). (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)

OF 97-0508. MASSACHUSETTS. Sea floor topography of Quadrangle 7 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, J. L. Baker, T. S. Unger and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet). (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)

OF 97-0509. MASSACHUSETTS. Sea floor topography of Quadrangle 8 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, T. S. Unger, J. L. Baker and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet). (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)

OF 97-0512. Navigation and geophysical data collected onboard the R/V Fay from 1975-1976, by V. F. Paskevich and N. K. Soderberg. 1997. One CD-ROM.

This CD-ROM was produced in accordance with the ISO 9660 standard and is therefore capable of being read on any computing platform that has appropriate CD-ROM driver software installed.

OF 97-0514. OREGON. Reconnaissance geologic map of the Dodson Butte 7.5' quadrangle, Oregon, by A. S. Jayko. 1997. 12 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, S; Oregon Dep. of Geol. & Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)

OF 97-0521. NEW MEXICO. Geology, mineral and energy resources, Mimbres resource area, New Mexico. Prepared in cooperation with the New Mexico Bureau of Mines and Mineral Resources. 1997. One CD-ROM. (NC, M, Da, U; New Mexico Bur. of Mines & Geol., Mineral Resources, Campus Station, Socorro, NM 87801.)

This CD-ROM was produced in accordance with both ISO 9660 (PC and UNIX) and HES (Macintosh) standards.

OF 97-0526. Florida Bay bottom types, by E. J. Prager and R. B. Halley. Prepared for the South Florida Ecosystem Restoration Program. 1997. 1 over-size sheet, scale 1:120,000 (1 inch = 10,000 feet). (NC, Da, M.)

OF 97-0527. OREGON. Reconnaissance geologic map of the Myrtle Creek 7.5' quadrangle, Oregon, by A. S. Jayko and M. Gallagher. 1997. 10 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, S; Oregon Dep. of Geol. & Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)

OF 97-0533. NEVADA. Major structural controls on the distribution of pre-Tertiary rocks, Nevada Test Site vicinity, southern Nevada, by J. C. Cole. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1997. 18 p., one over-size sheet. (NC, M, Da, U; Nevada Bur. of Mines & Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)

OF 97-0535. COLORADO, SOUTH DAKOTA, WYOMING. Locatable mineral reports for Colorado, South Dakota, and Wyoming provided to the U.S. Forest Service in fiscal years 1996 and 1997, by A. B. Wilson. 1997. 108 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; Dep. of Water & Natural Resources, South Dakota Geol. Surv., Science Ctr., Univ. of South Dakota, Vermillion, SD 57069; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071.)

OF 97-0538. CALIFORNIA. A record of the inarticulate brachiopod *Glottidia*? from the ancestral Gulf of California (Miocene to Pliocene Imperial Formation), Southern California, by C. L. Powell, II. 1997. 5 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 97-0587. NEW YORK. Water resources of Monroe County, New York water years 1989-93, with emphasis on water quality in the Irondequoit Creek basin; Part 1, Water resources data, by D. A. Sherwood. Prepared in cooperation with the Monroe County De-



- partment of Health. 1997. 219 p. (NC, Da, M, Wb; USGS, WRD, 425 Jordan Rd., Troy, NY 12180.)
- OF 97-0600-A. Preliminary determination of epicenters. Monthly listing for January-March 1997, by National Earthquake Information Center. 1997. 98 p. (NC, M, Da.)
- OF 97-0600-B. Preliminary determination of epicenters. Monthly listing for April-June 1997, by National Earthquake Information Center. 1997. 91 p. (NC, M, Da.)
- OF 97-0600-C. Preliminary determination of epicenters. Monthly listing for July-September 1997, by National Earthquake Information Center. 1997. 91 p. (NC, M, Da.)
- OF 97-0600-D. Preliminary determination of epicenters. Monthly listing for October-December 1997, by National Earthquake Information Center. 1999. 108 p. (NC, M, Da.)
- OF 97-0625. NEW JERSEY. Water-quality data for 90 community water supply wells in New Jersey, 1994-95, by R. M. Clawges, T. D. Oden and E. F. Vowinkel. Prepared in cooperation with the New Jersey Department of Environmental Protection. 1998. 31 p. (NC, Da, M, Wb.)
- OF 97-0630. Documentation of R-UNSAT, a computer model for the simulation of reactive, multispecies transport in the unsaturated zone, by M. A. Lahvis and A. L. Baehr. 1997. 104 p. (NC, Da, M, Wb.)
- OF 97-0638. NEW YORK. Identification of potential water-resources monitoring sites in the Croton Reservoir system, southeastern New York, by K. S. Linsey, S. W. Wolcott and N. B. Schoonmaker. Prepared in cooperation the New York City Department of Environmental Protection. 1999. 36 p. (NC, Da, M, Wb.)
- OF 97-0678. NEVADA. Sub-crop geologic map of pre-Tertiary rocks in the Yucca Flat and northern Frenchman Flat areas, Nevada Test Site, southern Nevada, by J. C. Cole, A. G. Harris and R. Wahl. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1997. 24 p., 1 over-size sheet. (NC, M, Da, U; Nevada Bur. of Mines & Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)
- OF 97-0682. MASSACHUSETTS. Sea floor topography of Quadrangle 9 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, J. L. Baker, T. S. Unger and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet). (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)
- OF 97-0683. MASSACHUSETTS. Sea floor topography of Quadrangle 10 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, T. S. Unger, J. L. Baker and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet). (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)
- OF 97-0684. MASSACHUSETTS. Sea floor topography of Quadrangle 11 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, J. L. Baker, T. S. Unger and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet). (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)
- OF 97-0685. MASSACHUSETTS. Sea floor topography of Quadrangle 12 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, T. S. Unger, J. L. Baker and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet). (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)
- OF 97-0693. CALIFORNIA. Preliminary geologic map of the Little Piute Mountains, California; a digital database, by K. A. Howard, M. L. Dennis, Karl Karlstrom and G. A. Phelps. 1997. 13 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.) Also available on the web at <http://wrgis.wr.usgs.gov/open-file/of97-693>
- OF 97-0697. NEVADA. Geologic map of the Mine Mountain area, Nevada Test Site, southern Nevada, by J. C. Cole and P. H. Cashman. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1997. 8 p., 1 over-size sheet. (NC, M, Da, U; Nevada Bur. of Mines & Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)
- OF 97-0716. CALIFORNIA. Estimated temperatures for geothermal drill holes at Medicine Lake Volcano, northeastern California, based on fluid inclusion and hydrothermal mineralogy studies, by K. E. Bargar and T. E. Keith. 1997. 116 p. 116 p., one VHS video tape. (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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 97-0724. Lava-cooling operations during the 1973 eruption of Eldfell Volcano, Heimaey, Vestmannaeyjar, Iceland, edited by R. S. Williams, Jr. 1997. 73 p. (NC, Da, M.)
- Editor's introduction, by R. S. Williams, Jr. p. 2-11.
- Lava cooling, by Þorbjörn Sigurgeirsson. p. 13-27.
- Lava cooling on Heimaey; methods and procedures, by V. K. Jonsson and Matthias Matthiasson. p. 28-63.
- OF 97-0726. MASSACHUSETTS. Sea floor topography of Quadrangle 13 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, J. L. Baker, T. S. Unger and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet). (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)
- OF 97-0727. MASSACHUSETTS. Sea floor topography of Quadrangle 14 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, T. S. Unger, J. L. Baker and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet). (NC, Da, M; Stellwagen Bank National Ma-

- rine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)
- OF 97-0728. MASSACHUSETTS. Sea floor topography of Quadrangle 15 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, J. L. Baker, T. S. Unger and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet.) (NC, M, Da; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)
- OF 97-0729. MASSACHUSETTS. Sea floor topography of Quadrangle 16 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, T. S. Unger, J. L. Baker and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet.) (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)
- OF 97-0730. MASSACHUSETTS. Sea floor topography of Quadrangle 17 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, J. L. Baker, T. S. Unger and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet.) (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)
- OF 97-0731. MASSACHUSETTS. Sea floor topography of Quadrangle 18 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, T. S. Unger, J. L. Baker and E. T. Roworth. 1997. 1 over-size sheet, scale 1:25,000 (1 inch = about 2,100 feet.) (NC, Da, M; Stellwagen Bank National Marine Sanctuary, 14 Union St., Plymouth, MA 02360; USGS, Woods Hole Field Ctr., 384 Woods Hole Rd., Woods Hole, MA 02543-1598.)
- OF 97-0735. WASHINGTON. Marine, high-resolution, multichannel, seismic-reflection data collected during cruise G3-95-PS, northwestern Washington, by S. V. Dadisman, S. Y. Johnson and J. R. Childs. 1997. Three CD-ROMs. (NC, Da, M, S; Washington DNR/Geol. & Earth Resources Library, 1111 Washington St., S.E., Olympia, WA 98501.)
- Minimum DOS requirements: (1) IBM or compatible personal computer, having an 80286 or higher processor (80386 or higher recommended), (2) 640 kb RAM, (3) MS- 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 EGA/VGA graphics system with 256 colors.
- OF 97-0744. CALIFORNIA. General distribution of geologic materials in the San Francisco Bay region, California; a digital database, compiled by C. M. Wentworth. 1997. 26 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.) Also available on the web at <http://wrgis.wr.usgs.gov/open-file/of97-744>
- OF 97-0748. Map showing generalized thickness contours of the Pittsburgh coal bed in Pennsylvania, Ohio, West Virginia, and Maryland, compiled by S. J. Tewalt, L. F. Ruppert, L. J. Bragg, Richard Carlton, David Brezinski and R. N. Wallack. 1997. 1 over-size sheet, scale 1:425,000 (1 inch = 6.7 miles). (NC, Da, M.) Also available on the web at <http://energy.er.usgs.gov/products/openfile/OFR97-748/>
- OF 97-0761. NEW HAMPSHIRE. Lineament map of Area 5 of the New Hampshire bedrock aquifer assessment, southwestern New Hampshire, by E. W. Ferguson, S. F. Clark, Jr., M. Z. Picard and R. B. Moore. Prepared in cooperation with the New Hampshire Department of Environmental Services, Water Division. 1997. 1 over-size sheet, scale 1:48,000 (1 inch = 4,000 feet). (NC, Da, M, Wb.)
- OF 97-0762. NEW HAMPSHIRE. Lineament map of Area 3 of the New Hampshire bedrock aquifer assessment, eastern New Hampshire, by E. W. Ferguson, S. F. Clark, Jr., M. Z. Picard and R. B. Moore. Prepared in cooperation with the New Hampshire Department of Environmental Services, Water Division. 1997. 1 over-size sheet, scale 1:48,000 (1 inch = 4,000 feet). (NC, Da, M, Wb.)
- OF 97-0763. NEW HAMPSHIRE. Lineament map of Area 4 of the New Hampshire bedrock aquifer assessment, south-central New Hampshire, by S. F. Clark, Jr., E. W. Ferguson, M. Z. Picard and R. B. Moore. Prepared in cooperation with the New Hampshire Department of Environmental Services, Water Division. 1997. 1 over-size sheet, scale 1:48,000 (1 inch = 4,000 feet). (NC, Da, M, Wb.)
- OF 97-0784. TEXAS. Water-level altitudes in wells completed in the Chicot and Evangeline aquifers, Fort Bend County and adjacent areas, Texas, January-February 1990, by M. C. Kasmarek. Prepared in cooperation with the Fort Bend Subsidence District. 1997. 2 over-size sheets. (NC, Da, M, Wb.)
- OF 97-0785. TEXAS. Water-level altitudes in wells completed in the Chicot and Evangeline aquifers, Fort Bend County and adjacent areas, Texas, January-February 1992, 1993, and 1994, by M. C. Kasmarek. Prepared in cooperation with the Fort Bend Subsidence District. 1997. 6 over-size sheets. (NC, Da, M, Wb.)
- OF 97-0786. TEXAS. Water-level altitudes in wells completed in the Chicot and Evangeline aquifers, Houston-Galveston region, Texas, January-February 1992, 1993, and 1994, by M. C. Kasmarek. Prepared in cooperation with the City of Houston; Harris-Galveston Coastal Subsidence District. 1997. 6 over-size sheets. (NC, Da, M, Wb.)
- OF 97-0831. CALIFORNIA. Organic contaminants in peninsula berms and agricultural soils at the Sonoma Baylands Wetland Demonstration project site and adjacent seasonal wetlands, Sonoma County, California, by W. E. Pereira, F. D. Hostettler, K. A. Kvenvolden, R. J. Rosenbauer and Fred Murphy. 1998. 31 p. (NC, M, Da.)
- OF 97-0864. Map showing structure contours and overburden thickness isopleths of the Pittsburgh coal bed in Pennsylvania, Ohio, West Virginia, and Maryland, compiled by S. J. Tewalt, L. F. Ruppert, L. J. Bragg, Richard Carlton, David Brezinski, Jeanette Yarnell and R. N. Wallack. 1997. 1 over-size sheet, scale 1:425,000 (1 inch = 6.7 miles). (NC, Da, M.) Also available on the



web at
<http://energy.er.usgs.gov/products/openfile/OFR97-864/>

OF 97-0866. ALASKA. Revised geologic map of the Cold Bay and False Pass quadrangles, Alaska Peninsula, by F. H. Wilson, F. R. Weber, T. M. Dochat, T. P. Miller and R. L. Detterman. 1997. 34 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. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)

OF 98-0034. ALASKA. The oil and gas resource potential of the Arctic National Wildlife Refuge 1002 area, Alaska, by Arctic National Wildlife Refuge Assessment Team. 1998. One CD-ROM. (NC, M, Da, A, S; Div. of Geol. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645; U.S. Dep. of Interior, Alaska Resources Library, 3150 C St. #100, Anchorage, AK 99503-3916.)

This CD-ROM has been produced in accordance with the ISO 9660 CD-ROM standard and is therefore capable of being read on any computing platform that has appropriate CD-ROM driver software installed.

OF 98-0043. UTAH, COLORADO. Stratigraphy and depositional environments of the late Campanian coal-bearing Neslen/Mount Garfield formations, eastern Book Cliffs, Utah and Colorado, by M. A. Kirschbaum and R. D. Hettinger. 1998. 1 over-size sheet. (NC, M, Da, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203-2277; Chief, Geotechnical Services Branch, Office of the State Engineer, 1313 Sherman St., Room 818, Denver, CO 80203-2277; Utah Geol. Surv., 1594 West North Temple, Suite 3110, P.O. Box 146100, Salt Lake City, UT 84114-6100.)

OF 98-0052. Results of the U. S. Geological Survey's analytical evaluation program for standard reference samples; T-151 (trace constituents), M-144 (major constituents), N-55 (nutrient constituents), N-56 (nutrient constituents), P-29 (low-ionic strength constituents), GWT-2 (ground-water trace constituents), GWM-2 (ground-water major constituents), AMW-4 (acid mine water constituents), and Hg-25 (mercury) distributed in September 1997, by J. W. Farrar. 1998. 191 p. (NC, Da, M, Wb.)

OF 98-0064. CALIFORNIA. Supporting data for hydrologic studies in San Francisco Bay, California; meteorological measurements at the Port of Redwood City 1995-1997, by L. E. Schemel. 1998. 29 p. 29 p., one 3 1/2 inch DS/HD IBM compatible computer diskette. (NC, Da, M, Wb; USGS, WRD, Placer Hall, 6000 J St., Sacramento, CA 95819-6129; and 439 National Ctr., Reston, VA 20192.)

OF 98-0065. NEW YORK. Trends in base flows in the Beaver Kill Basin, Catskill Mountains, New York, 1915-94, by B. P. Baldigo. Prepared in cooperation with the Town of Rockland. 1999. 17 p. (NC, Da, M, Wb.)

OF 98-0083. NEVADA. Applications of isotope geochemistry to the reconstruction of Yucca Mountain, Nevada, paleohydrology; status of investigation, June 1996, by J. F. Whelan, R. J. Moscati, S. B. Allerton and B. D. Marshall. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1998. 41 p. (NC, Da, M, Wb.)

OF 98-0095. TEXAS. Water-level altitudes 1998 and water-level changes 1990-98 and 1997-98 in the Chicot and Evangeline aquifers, Fort Bend County and adjacent areas, Texas, by L. S. Coplin and H. X. Santos. Prepared in cooperation with the Fort Bend Subsidence District. 1998. 6 over-size sheets. (NC, Da, M, Wb.)

OF 98-0096. TEXAS. Water-level altitudes 1998, water-level changes 1977-98 and 1997-98, and compaction 1973-97 in the Chicot and Evangeline aquifers, Houston-Galveston region, Texas, by L. S. Coplin. Prepared in cooperation with the City of Houston; Harris-Galveston Coastal Subsidence District. 1998. 8 over-size sheets. (NC, Da, M, Wb.)

OF 98-0101. NEVADA. Geologic map of Paleozoic rocks in the Calico Hills, Nevada Test Site, southern Nevada, by J. C. Cole and P. H. Cashman. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1998. 17 p., 1 over-size sheet (NC, M, Da, U; Nevada Bur. of Mines & Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.)

OF 98-0105. OREGON. Geologic map of the Stemler Ridge Quadrangle, Malheur County, southeastern Oregon, by J. A. Johnson, P. R. Hooper, C. J. Hawkesworth and G. B. Binger. 1998. 11 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, S; Oregon Dep. of Geol. & Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)

OF 98-0113. CALIFORNIA. A method for producing digital probabilistic seismic landslide hazard maps; an example from the Los Angeles, California, area, by R. W. Jibson, E. L. Harp and J. A. Michael. 1998. 17 p., 2 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, M, Da; 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.) Also available on the web at <http://geohazards.cr.usgs.gov/pubs/ofr/98-113/ofr98-113.html>

OF 98-0114. CALIFORNIA, OREGON. Rotational and accretionary evolution of the Klamath Mountains, California and Oregon, from Devonian to present time, by W. P. Irwin and E. A. Mankinen. 1998. (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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012; Oregon Dep. of Geol. & Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.) Also available on the web at <http://wrgis.wr.usgs.gov/open-file/of98-114/>

OF 98-0133-A. ALASKA. Geologic map of central (interior) Alaska, by F. H. Wilson, J. H. Dover, D. C. Bradley, F. R. Weber, T. K. Bundtzen and P. J. Haeussler. 1998. One CD-ROM. (NC, Da, M, A, S; Alaska Resource Library Information Services [ARLIS], 3150 "C" St., Suite 100, Anchorage, AK 99503; Alaska Dep. of Natural Resources, Div. of Geol. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.) Also available on the web at <http://wrgis.wr.usgs.gov/open-file/of98-133-a/>

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or an IBM or compatible personal computer equipped with a CD-ROM drive. The Macintosh should have a 68030 or higher processor (PowerPC recommended), 8 megabytes RAM (16 MB recommended). Apple System Software version 7.1.2 or later (8.1 or later recommended), and a 13-inch color monitor that can display 256 colors. The PC should have an 80486 or higher processor (Pentium recommended). Microsoft Windows 95 or higher (Windows 98 or NT recommended), 8 megabytes RAM (32 MB recommended), and a VGA color monitor that can display 256 colors. Both platforms require MS Word 97/98 or higher to read the .DOC files, MS Excel or higher to read the .XLS files, FileMaker Pro 3.0 or higher to read the .FP3 file, and Adobe Acrobat Reader 3.0 or higher (3.01 provided on this disc) to read the .PDF files. You will need GIS software such as ArcView or ARC/INFO to read the Arc graphics and related files.

OF 98-0136. Summary terrane, mineral deposit, and metallogenic belt maps of the Russian Far East, Alaska, and the Canadian Cordillera, by W. J. Nokleberg, T. D. West, K. M. Dawson, V. I. Shpikerman, T. K. Bundtzen, L. M. Parfenov, J. W. Monger, V. V. Ratkin, B. V. Baranov, S. G. Byalobzhesky, M. F. Diggles, R. A. Eremin, Kazuya Fujita, S. P. Gordey, M. E. Gorodinskiy, N. A. Goryachev, T. D. Feeney, Y. F. Frolov, Arthur Grantz, A. I. Khanchuk, R. D. Koch, B. A. Natalin, L. M. Natapov, I. O. Norton, W. W. Patton, Jr., George Plafker, A. I. Pozdeev, I. S. Rozenblum, D. W. Scholl, S. D. Sokolov, G. M. Sosunov, D. B. Stone, R. W. Tabor, N. V. Tsukanov and T. L. Vallier. Prepared in cooperation with the Geological Survey of Canada; Russian Academy of Sciences; Russian Committee on Geology; Alaska Division of Geological and Geophysical Surveys; Exxon Production Research Company; Michigan State University; University of Alaska. 1998. One CD-ROM. (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. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.) Also available on the web at <http://wrgis.wr.usgs.gov/open-file/of98-136/>

OF 98-0138. MASSACHUSETTS. Sea floor topographic map and perspective-view imagery of quadrangles 1-18, Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts, by P. C. Valentine, J. L. Baker, T. S. Unger and C. F. Polloni. 1998. One CD-ROM. (NC, Da, M.)

This CD-ROM has been produced in accordance with the ISO 9660 CD-ROM standard and is therefore capable of being read on any computing platform that has appropriate CD-ROM driver software installed.

OF 98-0143. Earthquake Hazards Program five-year plan 1998-2002, by R. A. Page, Jim Mori, E. A. Roeloffs and E. S. Schweig. 1997. 37 p. (NC, Da, M.)

OF 98-0165. Methods of analysis of the U.S. Geological Survey National Water Quality Laboratory; determination of elements in whole-water digests using inductively coupled plasma-optical emission spectrometry and inductively coupled plasma-mass spectrometry, by J. R. Garbarino and T. M. Struzeski. 1998. 101 p. (NC, Da, M, Wb.)

OF 98-0169. NEVADA. Water levels in the Yucca Mountain area, Nevada, 1996, by R. P. Graves. Prepared in cooperation with the U.S. Department of Energy, Nevada Operations Office. 1998. 81

p. (NC, Da, M, Wb, U; USGS, WRD, Yucca Mountain Project Branch, Box 25046, Mail Stop 421 Federal Ctr., Denver, CO 80225; U.S. Dep. of Energy Technical Library, P.O. Box 98518, Mail Stop 505, Las Vegas, NV 89193-8518; U.S. Dep. of Energy, Office of Scientific and Technical Information, P.O. Box 62, Oak Ridge, TN 37831.)

OF 98-0170. IOWA. Statistical summaries of selected Iowa streamflow data through September 1996, by E. E. Fischer and D. A. Eash. Prepared in cooperation with the Iowa Department of Transportation; Iowa Department of Natural Resources; U.S. Army Corps of Engineers. 1998. 681 p. (NC, Da, M, Wb.)

OF 98-0176. NEW HAMPSHIRE. Geophysical characterization of a high-yield, fractured-bedrock well, Seabrook, New Hampshire, by T. J. Mack, C. D. Johnson and J. W. Lane, Jr. Prepared in cooperation with the Town of Seabrook, New Hampshire. 1998. 22 p. (NC, Da, M, Wb.)

OF 98-0180. Water-quality assessment of the Potomac River basin; water-quality and selected spatial data, 1992-96. 1998. One CD-ROM. (NC, Da, M, Wb.)

The minimum system requirements to use of the data are an IBM or compatible personal computer, CD-ROM drive, and World Wide Web browser.

OF 98-0189. NEW HAMPSHIRE. Lineament map of Area 6 of the New Hampshire bedrock aquifer assessment, central New Hampshire, by S. F. Clark, Jr., E. W. Ferguson, M. Z. Picard and R. B. Moore. Prepared in cooperation with the New Hampshire Department of Environmental Services, Water Division. 1998. 1 over-size sheet, scale 1:48,000 (1 inch = 4,000 feet). (NC, Da, M, Wb.)

OF 98-0190. NEW HAMPSHIRE. Lineament map of Area 7 of the New Hampshire bedrock aquifer assessment, west-central New Hampshire, by S. F. Clark, Jr., H. A. Short, E. W. Ferguson and R. B. Moore. Prepared in cooperation with the New Hampshire Department of Environmental Services, Water Division. 1998. 1 over-size sheet, scale 1:48,000 (1 inch = 4,000 feet). (NC, Da, M, Wb.)

OF 98-0191. NEW HAMPSHIRE. Lineament map of Area 8 of the New Hampshire bedrock aquifer assessment, northeast-central New Hampshire, by E. W. Ferguson, H. A. Short, S. F. Clark, Jr., G. J. Marcoux and R. B. Moore. Prepared in cooperation with the New Hampshire Department of Environmental Services, Water Division. 1998. 1 over-size sheet, scale 1:48,000 (1 inch = 4,000 feet). (NC, Da, M, Wb.)

OF 98-0205. FLORIDA. Lithostratigraphy, petrography, biostratigraphy, and strontium-isotope stratigraphy of the surficial aquifer system of western Collier County, Florida, by L. E. Edwards, S. D. Weedman, R. Simmons, T. M. Scott, G. L. Brewster-Wingard, S. E. Ishman and N. M. Carlin. Prepared in cooperation with the Florida Geological Survey. 1998. 79 p. 79 p., one 3 1/2 inch DS/HD IBM compatible computer diskette. (NC, Da, M.) Also available on the web at <http://pubs.usgs.gov/pdf/of/of98205.pdf>

OF 98-0206-A,B. Database of significant deposits of gold, silver, copper, lead, and zinc in the United States, by K. R. Long, J. H. DeYoung, Jr. and S. D. Ludington. 1998. 33 p., one 3 1/2 inch



- DS/HD IBM compatible computer diskette. (NC, Da, M.) (Parts A and B are issued together and are not available separately.)
- A. Part A, Database description and analysis, by K. R. Long, J. H. DeYoung, Jr. and S. D. Ludington. 33 p.
- B. Part B, Database of significant deposits, by K. R. Long, J. H. DeYoung, Jr. and S. D. Ludington.
- OF 98-0208. OREGON. Geologic map of the Frederick Butte volcanic center, Deschutes and Lake counties, south-central Oregon, by J. A. Johnson. 1998. 1 over-size sheet, scale 1:40,000 (1 inch = about 3,500 feet). (NC, Da, M, S; Oregon Dep. of Geol. & Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)
- OF 98-0219-A. IDAHO. Potential mineral resources, Payette National Forest, Idaho; description and probabilistic estimation, by A. A. Bookstrom, B. R. Johnson, T. M. Cookro, Karen Lund, K. C. Watts, H. D. King, M. D. Kleinkopf, J. A. Pitkin, J. D. Sanchez and J. D. Causey. Prepared in cooperation with the U.S. Forest Service. 1998. 254 p., 1 over-size sheet, scale 1:200,000 (1 inch = about 3.2 miles). (NC, Da, M, S, U; Idaho Geol. Surv., Morill Hall, Room 332, Univ. of Idaho Campus, Moscow, ID 83843.)
- OF 98-0219-B. IDAHO. Digital geologic map database of the Payette National Forest and vicinity, Idaho, by Karen Lund, P. D. Derkey, T. R. Brandt and J. R. Oblad. 1999. 45 p. (NC, M, Da, U, S; Idaho Geol. Surv., Univ. of Idaho Campus, Morrill Hall, Room 332, Moscow, ID 83843.) Also available on the web at <http://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-98-0219-b/>
- OF 98-0219-C. IDAHO. Gamma-ray radioactivity data, Payette National Forest, west-central Idaho, by J. A. Pitkin. 1998. 34 p. (NC, M, Da, U, S; Idaho Geol. Surv., Univ. of Idaho Campus, Morrill Hall, Room 332, Moscow, ID 83843.)
- OF 98-0219-D. IDAHO. Aeromagnetic and gravity studies of Payette National Forest, Idaho, by M. D. Kleinkopf. 1998. 27 p. 27 p., 4 over-size sheets. (NC, M, Da, U, S; Idaho Geol. Surv., Univ. of Idaho Campus, Morrill Hall, Room 332, Moscow, ID 83843.)
- OF 98-0220. NEVADA. Drill-hole lithology map of the Winnemucca 1:250,000-scale quadrangle, Nevada, by D. A. Ponce and B. C. Moring. 1998. 1 over-size sheet, scale 1:250,000 (1 inch = about 4 miles). (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)
- OF 98-0223. Caribbean seismicity 1900-1994, by U. S. Geological Survey, National Earthquake Information Center and Middle America Seismograph (MIDAS) Consortium. 1998. 1 over-size sheet, scale 1:6,500,000 (1 inch = about 102.6 miles). (NC, M, Da.)
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- OF 98-0634. Method of analysis by the U. S. Geological Survey Organic Geochemistry Research Group; determination of triazine and chloroacetanilide herbicides in water by solid-phase extraction and capillary-column gas chromatography/mass spectrometry with selected-ion monitoring, by L. R. Limmerman and E. M. Thurman. 1999. 21 p. (NC, Da, M, Wb.)
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- OF 98-0641. HAWAII. Drilling, construction, geologic, and caliper logs from well 8-4010-01, Kaumana exploratory well, Island of Hawaii, by C. J. Ewart. Prepared in cooperation with the County of Hawaii, Department of Water Supply. 1998. 13 p. (NC, Da, M, Wb; USGS, WRD, 677 Ala Moana Blvd., Suite 415, Honolulu, HI 96813.)
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Puniwai. 1998. 163 p. (NC, M, Da; Div. of Water & Land Development, P.O. Box 373, Honolulu, HI 96809.)

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OF 98-0780. NEW MEXICO. Digital earth science database; Caballo resource area, Sierra and Otero counties, south-central New Mexico, by G. N. Green and J. M. O'Neill. 1998. One CD-ROM. (NC, M, Da, U; New Mexico Bur. of Mines & Mineral Resources, Campus Station, Socorro, NM 87801.)

Requirements: A CD-ROM drive, a color display monitor and a mouse. To take full advantage of the databases ARC/INFO software and hardware are required.

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- OF 98-0806. CALIFORNIA. Geochemical studies of anthropogenic and natural organic compounds at the Sonoma Baylands wetland demonstration project site and adjacent marshlands, Sonoma County, California, by W. E. Pereira, F. D. Hostettler, R. J. Rosenbauer, K. A. Kvenvolden and Fred Murphy. 1998. 80 p. (NC, Da, M, Wb.)
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COLORADO. Influence of the oil and gas production infrastructure on land use in the Front Range of Colorado, by N. S. Fishman, C. L. Woodward and W. H. Langer. p. 10-13.

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COLORADO. Element concentrations and water solubility in waste fines associated with aggregate production in the Front Range of Colorado, by J. R. Herring and N. K. Nigol. p. 17-18.

COLORADO. Oil and natural gas resources of the Wattenberg Field, Denver Basin, Colorado, by D. K. Higley and D. O. Cox. p. 19-22.

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COLORADO. Gravel deposits of the South Platte River valley north of Denver, Colorado, by D. A. Lindsey and W. H. Langer. p. 25-28.

Industrial-mineral characterization using remotely sensed data, by K. E. Livo and D. H. Knepper, Jr. p. 29-30.

Characteristics and origins of saline (alkalai) soils in the Front Range portion of the western Denver Basin, by J. K. Otton and R. A. Zielinski. p. 31-34.

COLORADO. Digital coverages showing the extent of mining, bedrock faults, and thickness of overburden above abandoned coal mines in the Boulder-Weld coal field, Boulder and Weld counties, Colorado; a cooperative effort by the U. S. Geological Survey and the Colorado Geological Survey, compiled by S. B. Roberts, J. L. Hynes and C. L. Woodward. p. 35-37.

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OF 99-0009. Annotated bibliography of recent papers on environmental and human health impacts of coal and coal use, compiled by P. M. Gross and R. B. Finkelman. 1999. 40 p. (NC, Da, M.)

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the web at
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OF 99-0016. ALASKA. Merged aeroradiometric data for Alaska; a web site for distribution of gridded data and plot files, by R. W. Saltus, F. E. Riggle, B. T. Clark and P. L. Hill. 1999. 13 p. (NC, M, Da, A, S; Div. of Geol. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645; U.S. Dep. of Interior, Alaska Resources Library, 3150 C St. #100, Anchorage, AK 99503-3916.) Also available on the web at
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OF 99-0020-A. IDAHO. Stratigraphic sections and equivalent uranium (eU), Meade Peak phosphatic shale member of Permian Phosphoria Formation; central part of Rasmussen Ridge, Caribou County, Idaho, by R. G. Tysdal, E. A. Johnson, J. R. Herring and G. A. Desborough. Prepared in cooperation with the U.S. Bureau of Land Management; U.S. Forest Service; Agrium U.S.; FMC Corporation; J.R. Pilot Company; Rhodia; Solutia. 1999. 1 over-size sheet. (NC, M, Da, U, S; Idaho Geol. Surv., Univ. of Idaho Campus, Morrill Hall, Room 332, Moscow, ID 83843.)

OF 99-0021. Animations for petroleum systems; 36 short MPEG movies, by D. G. Howell, J. P. Swinchatt and J. F. Vigil. 1999. One CD-ROM. (NC, Da, M.)

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<http://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-99-0029/of99-29.pdf>

A CD-ROM drive, a color display monitor and a mouse are required to take full advantage of the databases, ARC/INFO software and hardware are required.

OF 99-0030. ARIZONA. Physiographic rim of the Grand Canyon, Arizona; a digital database, by G. H. Billingsley and H. M. Hampton. 1999. (NC, Da, M, U; Arizona Geol. Surv., 416 West Congress St. #100, Tucson, AZ 85701-1315; USGS Library, Suite 355, 520 North Park Ave., Tucson, AZ 85719.) Available only on the web at
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OF 99-0032. CALIFORNIA. Preliminary geologic map of the San Guillermo Mountain Quadrangle, Ventura County, California, by S. A. Minor. 1999. (NC, M, Da; 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.) Available only on the web at
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OF 99-0034. CALIFORNIA, NEVADA. Geologic map of the Hart Peak Quadrangle, California and Nevada; a digital database, by J. E. Nielson, R. D. Turner and D. R. Bedford. 1999. 9 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012; Nevada



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- OF 99-0040. ALASKA. Alaska resources data file; Afognak Quadrangle, by S. H. Pilcher. 1999. 15 p. (NC, Da, M, A, S; Alaska Resource Library Information Services [ARLIS], 3150 "C" St., Suite 100, Anchorage, AK 99503; Alaska Dep. of Natural Resources, Div. of Geol. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.) Also available on the web at <http://ardf.wr.usgs.gov/ardf/quads/html/Afognak.html>
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- OF 99-0042. ALASKA. Alaska resource data file; Karluk Quadrangle, by S. H. Pilcher. 1999. 71 p. (NC, Da, M, A, S; Alaska Resource Library Information Services [ARLIS], 3150 "C" St., Suite 100, Anchorage, AK 99503; Alaska Dep. of Natural Resources, Div. of Geol. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.) Also available on the web at <http://ardf.wr.usgs.gov/ardf/quads/html/Karluk.html>
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- OF 99-0050-C. The Santa Cruz-Tarija Province of central South America; Los Monos-Machareti(!) petroleum system, by S. J. Lindquist. 1998. (NC, M, Da.) Available only on the web at <http://energy.cr.usgs.gov/energy/WorldEnergy/OF99-50C/index.html>
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- OF 99-0051. NEW HAMPSHIRE. Geophysical surveys of Country Pond and adjacent wetland and implications for contaminant-plume monitoring, Kingston, New Hampshire, 1998, by J. D. Ayotte, T. J. Mack and C. M. Johnston. 1999. 16 p. (NC, Da, M, Wb.)
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- OF 99-0060. Digital data used to relate nutrient inputs to water quality in the Chesapeake Bay watershed, version 1.0, by J. W. Brakebill and S. D. Preston. 1999. Available only on the web at <http://md.usgs.gov/publications/ofr-99-60/>
- OF 99-0061. MISSISSIPPI. Summary of data collected for the Demonstration Erosion Control Project in the Yazoo River basin, north-central Mississippi, October 1996-September 1997, by M. S. Runner and B. A. Roberts. Prepared in cooperation with the U.S. Army Corps of Engineers, Vicksburg District. 1999. 24 p. (NC, Da, M, Wb; USGS, WRD, 308 South Airport Rd., Pearl, MS 39208-6649.)
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- OF 99-0085. MARYLAND. Potentiometric surface the upper Patapsco Aquifer in southern Maryland; September 1997, by S. E. Curtin, D. C. Andreasen and F. K. Mack. Prepared in cooperation with Maryland Geological Survey; Maryland Department of Natural Resources, Resource Assessment Service. 1999. 1 p. (NC, Da, M, Wb; USGS, WRD, 8987 Yellow Brick Rd., Baltimore, MD



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- OF 99-0086. MARYLAND. The difference between the potentiometric surfaces of the upper Patapsco Aquifer of September 1990 and September 1997 in southern Maryland, by S. E. Curtin, D. C. Andreasen and F. K. Mack. Prepared in cooperation with the Maryland Geological Survey; Maryland Department of Natural Resources, Resource Assessment Service. 1999. 1 p. (NC, Da, M, Wb; USGS, WRD, 8987 Yellow Brick Rd., Baltimore, MD 21237.) Also available on the web at <http://de.usgs.gov/publications/ofr-99-86/>
- OF 99-0087. MARYLAND. Potentiometric surface of the lower Patapsco Aquifer in southern Maryland, September 1997, by S. E. Curtin, D. C. Andreasen and F. K. Mack. Prepared in cooperation with the Maryland Geological Survey; Maryland Department of Natural Resources, Resource Assessment Service. 1999. 1 p. (NC, Da, M, Wb; USGS, WRD, 8987 Yellow Brick Rd., Baltimore, MD 21237.) Also available on the web at <http://de.usgs.gov/publications/ofr-99-87/>
- OF 99-0088. MARYLAND. The difference between the potentiometric surfaces of the lower Patapsco Aquifer of September 1990 and September 1997 in southern Maryland, by S. E. Curtin, D. C. Andreasen and F. K. Mack. Prepared in cooperation with the Maryland Geological Survey; Maryland Department of Natural Resources, Resource Assessment Service. 1999. 1 p. (NC, Da, M, Wb; USGS, WRD, 8987 Yellow Brick Rd., Baltimore, MD 21237.) Also available on the web at <http://de.usgs.gov/publications/ofr-99-88/>
- OF 99-0098. WISCONSIN. Water-quality and lake-stage data for Wisconsin lakes, water year 1998, lead by D. M. Robertson, J. F. Elder, H. S. Garn, G. L. Goddard, S. B. Marsh, D. L. Olson and W. J. Rose. Prepared in cooperation with the State of Wisconsin and other agencies. 1999. 143 p. (NC, Da, M, Wb; USGS, WRD, 8505 Research Way, Middleton, WI 53562.)
- OF 99-0099. Computer program for Point Location And Calculation Error (PLACER), by G. E. Granato. Prepared in cooperation with the Federal Highway Administration. 1999. 36 p. 3 1/2 inch DS/HD IBM compatible computer diskette. (NC, Da, M, Wb.)
- OF 99-0100. FLORIDA. Potentiometric surface of the upper Floridan Aquifer, St. Johns River Water Management District, September 1998, by L. A. Bradner. Prepared in cooperation with the St. Johns River Water Management District; South Florida Water Management District; Southwest Florida Water Management District. 1999. 1 over-size sheet. (NC, Da, M, Wb; Bill Martin, Florida Dep. of Environmental Regulation, Bur. of Ground Water Protection, Tallahassee, FL 32301; L. Elliot Jones, USGS, WRD, 3039 Amwiler Rd., Suite 130, Atlanta, GA, 30360-2824.)
- OF 99-0102. Restoration of bighorn sheep metapopulations in and near 15 national parks; conservation of a severely fragmented species; Volume I, Planning, problem definition, findings, and restoration, by F. J. Singer and M. A. Gudorf. 1999. 96 p. (NC, M, Da.)
- OF 99-0105. Restoration of bighorn sheep metapopulations in and near 15 national parks; conservation of severely fragmented species; Volume II, Synopsis of research findings, by F. J. Singer and M. A. Gudorf. Prepared in cooperation with Colorado State University, Natural Resources Ecology Lab. 1999. 35 p. (NC, M, Da.)
- Development of sightability models for the census of bighorn sheep in Badlands and Canyonlands national parks, progress report 1992-95, by M. E. Moses and F. J. Singer. p. 6-7.
- Simulating desert bighorn sheep populations to support management decisions; effects of patch size, spatial structure, and disease, by J. E. Gross, M. E. Moses and F. J. Singer. p. 8-9.
- Translocation as a tool for restoring populations of bighorn sheep, *Ovis canadensis*, into historic range, by F. J. Singer, C. M. Papouchis and K. K. Symonds. p. 9-11.
- Dispersal and colonization rates of unoccupied patches by mountain sheep; the role of disease, corridor features, and patch sizes, by F. J. Singer, M. E. Moses, S. Bellew and W. B. Sloan. p. 11-12.
- Assessing decisions on restoration of metapopulations of bighorn sheep; implications of disease, patches, and dispersal rates, by J. E. Gross, F. J. Singer and M. E. Moses. p. 12-13.
- Investigations of infectious keratoconjunctivitis (pinkeye) in mule deer, by Shelli Dubay and Elizabeth Williams. p. 14-16.
- The role of infectious diseases on fecundity, survivorship, and dispersal in recovering populations of bighorn sheep, by F. J. Singer, Elizabeth Williams, Michael Miller and M. E. Moses. p. 16-18.
- Morphometric analysis of skull and horn variation in the northern regions of *Ovis canadensis*, by R. R. Ramey, II and J. D. Wehausen. p. 18-19.
- Further morphometric analyses of mountain sheep in Southwestern United States and Mexico; a report to cooperators, by J. D. Wehausen and R. R. Ramey, II. p. 19-20.
- Comparative analysis of allozyme and microsatellite DNA variations in mountain sheep (*Ovis canadensis*) populations; implications for conservation, by R. R. Ramey, II, J. Johnson and F. J. Singer. p. 21.
- A test of a habitat evaluation procedure for Rocky Mountain bighorn sheep, by T. L. Johnson and D. M. Swift. p. 22-23.
- A summary of bighorn sheep habitat patterns in Badlands National Park, by R. S. Gamo, M. E. Moses, Bruce Bessken and F. J. Singer. p. 23-24.
- Unique aspects of the ecology of bighorn sheep occupying a clay hills-prairie environment in Badlands National Park, by M. E. Moses, Bruce Bessken, R. S. Gamo, Steve Cordts and F. J. Singer. p. 25-26.
- Influence on scale and topography on GIS-based bighorn sheep habitat models, by P. Y. Sweanor, M. A. Gudorf and F. J. Singer. p. 27-29.
- Applying GIS technology to habitat use by a transplanted bighorn sheep herd in Theodore Roosevelt National Park, by S. T. Lewis. p. 29-30.
- Effects of increased recreational activity on desert bighorn sheep in Canyonlands National Park, Utah, by C. M. Papouchis, F. J. Singer and W. B. Sloan. p. 31-33.
- OF 99-0126. SEGYY to ASCII; conversion and plotting program, by M. R. Goldman. 1999. One 3 1/2 inch DS/HD IBM compatible



computer diskette. (NC, Da, M.) Also available on the web at <http://wrgis.wr.usgs.gov/open-file/of99-126>

Requirements for compiling the source code into an executable are a C++ which may be downloaded free. Requirements for plotting the seismic data are the existence of the GMT plotting package which may be downloaded free.

OF 99-0127. ARIZONA. Evaluation of sand and gravel resources in and near the Prescott National Forest in the Verde Valley, Arizona; with a section on evaluation of sand and gravel resources using selected engineering variables, by L. J. Cox, J. D. Bliss and R. J. Miller. 1999. 39 p. (NC, Da, M, U; Arizona Geol. Surv., 416 West Congress St. #100, Tucson, AZ 85701-1315; USGS Library, Suite 355, 520 North Park Ave., Tucson, AZ 85719.)

OF 99-0128. Calibration of the "gas effect" using neutron, density, and gamma-ray-intensity wire-line logs, by T. C. Hester. 1999. 23 p. (NC, M, Da.)

OF 99-0129. IDAHO. Preliminary mineralogical and chemical studies related to the potential mobility of selenium associated elements in Phosphoria Formation strata, southeastern Idaho, by G. A. Desborough, Ed DeWitt, Jeff Jones, A. H. Meier and G. P. Meeker. Prepared in cooperation with the U.S. Bureau of Land Management; U.S. Forest Service; Agrium U.S.; FMC; J.R. Simplot; Rhodia; Solutia. 1999. 20 p. (NC, M, Da, U, S; Idaho Geol. Surv., Univ. of Idaho Campus, Morrill Hall, Room 332, Moscow, ID 83843.)

OF 99-0131. The contribution of giant fields to United States oil production and reserves, by J. W. Schmoker. 1999. 25 p. (NC, M, Da.)

OF 99-0132. How to build a model illustrating sea-floor spreading and subduction, by J. C. Lahr. 1999. 16 p. (NC, M, Da.) Also available on the web at <http://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-99-0132/>

OF 99-0133. COLORADO. Geology of the Engineer Pass to Cinnamon Pass Loop, west of Lake City, San Juan Mountains, Colorado, by A. B. Wilson and M. D. Woodard. 1999. 2 over-size sheets. (NC, M, Da, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203-2277; Chief, Geotechnical Services Branch, Office of the State Engineer, 1313 Sherman St., Room 818, Denver, CO 80203-2277.)

OF 99-0134. CALIFORNIA. Time series analysis of physical properties from Ocean Drilling Program sites 1018 and 1020, California margin, by H. J. Dowsett. 1999. 10 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 99-0136. ALASKA. A geological and geophysical study of the gold-silver vein system of Unga Island, Southwestern Alaska, edited by J. R. Riehle. 1999. One CD-ROM. (NC, Da, M, A, S; Alaska Resource Library Information Services [ARLIS], 3150 "C" St., Suite 100, Anchorage, AK 99503; Alaska Dep. of Natural Resources, Div. of Geol. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)

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an IBM or compatible personal computer, all equipped with a CD-ROM drive. Macintosh: 68030 or higher processor (PowerPC recommended), 8 megabytes RAM 64 MB recommended, Apple System Software version 7.1.2 or later (8.1 or later recommended), 13-inch color monitor that can display 256 colors (16.7 million colors recommended). Windows: 80386 or higher processor (Pentium recommended), Microsoft Windows 3.1 or higher (Windows 95, 98, or NT recommended), 8 megabytes RAM (64 MB recommended), VGA color monitor that can display 256 colors (16.7 million colors recommended.) All platforms: Adobe Acrobat Reader 3.0 or higher (3.01) and 4.0 included on this disc for Macintosh and Windows) or other software that can translate PDF files.

1. Introduction to the present study, previous studies, and a descriptive summary of the vein systems and their production history, by J. R. Riehle. 10 p.

2. Geology of Unga Island and the northwestern part of Popof Island, by J. R. Riehle, F. H. Wilson, Nora Shew and W. H. White. 19 p.

3. Chemical compositions of the volcanic rocks on Unga Island and some inferences about their origins, by J. R. Riehle. 19 p.

4. Geologic structures of Unga Island, their relations to mineralization, and some speculations on their origins, by J. R. Riehle. 14 p.

5. ALASKA. Geologic interpretation of DIGHEM^{IV} airborne aeromagnetic and electromagnetic data over Unga Island, Alaska, by J. W. Cady and B. D. Smith. 28 p.

6. ALASKA. Rock, stream sediment, and heavy-mineral concentrate geochemical data from Unga and western Popof islands, Alaska Peninsula, Alaska, by F. H. Wilson, S. E. Church and E. A. Bailey. 7 p.

7. ALASKA. Classifying the Shumagin and Alaska Apollo deposits, by D. A. Singer. 6 p.

OF 99-0137. CALIFORNIA. Comparison of seismic slope-performance models; case study of the Oakland East Quadrangle, California, by S. B. Miles and D. K. Keefer. 1999. 38 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.) Also available on the web at <http://salish.wr.usgs.gov/pubs/ofr-99-137/>

OF 99-0138. OREGON. Geologic map of the Shumway Reservoir Quadrangle, Malheur County, Oregon, by J. G. Evans and G. B. Binger. 1999. 15 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, S; Oregon Dep. of Geol. & Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)

OF 99-0139. ALASKA. Alaska resource data file, Talkeetna Quadrangle, by Madelyn Milholland. 1999. 183 p. (NC, Da, M, A, S; Alaska Resource Library Information Service [ARLIS], 3150 "C" St., Suite 100, Anchorage, AK 99503; Alaska Dep. of Natural Resources, Div. Geol. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.) Also available on the web at <http://ardf.wr.usgs.gov/quads/html/Talkeetna.html>



- OF 99-0140. A bibliography of geomorphometry, the quantitative representation of topography; supplement 3.0, by R. J. Pike. 1999. 57 p. (NC, Da, M.)
- OF 99-0141. OREGON. Geologic map of the Scotts Mills, Silverton, and Stayton Northeast 7.5 minute quadrangles, Northwest Oregon; a digital database, by Terry Tolan, Marvin Beeson and K. L. Wheeler. 1999. 11 p. (NC, Da, M, S; Oregon Dep. of Geol. & Mineral Industries, Suite 956, 800 NE Oregon St. #28, Portland, OR 97232.) Also available on the web at <http://wrgis.wr.usgs.gov/open-file/of99-141>
- OF 99-0142. Proceedings; UJNR workshop on soil-structure interaction, edited by Mehmet Celebi and Izuru Okawa. 1999. 431 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- State of the art on soil-structure interaction researches relating to recent strong earthquakes in Japan, by Michio Iguchi and Yuzuru Yasui. p. 1.1-1.17.
- Lateral seismic soil pressure; an updated approach, by Farhang Ostadan and W. H. White. p. 2.1-2.36.
- Design of piles considering the deformation response under the action of earthquake shaking, by M. B. Karkee, Yoshihiro Sugimura and Kaoru Fujiwara. p. 3.1-3.13.
- Response to horizontal ground shaking of cantilever retaining walls, by A. S. Veletsos and A. H. Younan. p. 4.1-4.10.
- Dynamic behavior of pile foundations in liquefaction process; shaking table and oscillator tests utilizing big shear box, by Hatsukazu Mizuno, Michio Sugimoto, Masanori Iiba, Toshihiro Mori and Tsutomu Hirade. p. 5.1-5.9.
- Energy dissipation in soil-structure interaction; a consultant's perspective, by C. B. Crouse. p. 6.1-6.17.
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- Nonlinear SSI analysis, by R. I. Borja, Heng-Yih Chao and Chao-Hua Lin. p. 9.1-9.12.
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- A statistical measure of fit for analytical models conditioned on experimental results, by Roger Ghanem. p. 11.1-11.10.
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- Seismic design procedure of building structures including soil-structure interaction effect, by Yoshikazu Kitagawa, Yutaka Matushima, Yutaka Yamazaki, Soichi Kawamura and Yoshio Inoue. p. 20.1-20.7.
- Experimental facilities in the United States for soil-structure interaction research, by S. A. Ashford. p. 21.1-21.5.
- Dense instrumentation in BRI building and surrounding ground, by Izuru Okawa, Toshihide Kashima and Shin Koyama. p. 22.1-22.9.
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- Equivalent 1-DOF model for structural control including soil-structure interaction effects, by J. E. Luco. p. 24.1-24.32.
- Seismic response of a pipeline embedded in a layered medium, by J. E. Luco and F. C. de Barros. p. 25.1-25.51.
- OF 99-0143. HAWAII. New radiocarbon age from Haleakala Crater, Island of Maui, Hawaii, by D. R. Sherrod and J. P. McGeehin. 1999. 14 p. (NC, Da, M; USGS Library, Hawaiian Volcano Observatory, P.O. Box 51, Hawaii National Park, HI 96718-0051.)
- OF 99-0144. WASHINGTON, IDAHO, MONTANA. Digital geologic map of the Sandpoint 1- by 2-degree quadrangle, Washington, Idaho, and Montana, by F. K. Miller, R. F. Burmester, R. E. Powell, D. M. Miller and P. D. Derkey. 1999. (NC, Da, M, S; Washington DNR/Geol. & Earth Resources Library, 1111 Washington St. S.E., Olympia, WA 98501; Idaho Geol. Surv., Morill Hall, Room 332, Univ. of Idaho Campus, Moscow, ID 83843; Montana Bur. of Mines & Geol., Montana Coll. of Mineral Sci. & Technol., Butte, MT 59701.) Available only on the web at <http://wrgis.wr.usgs.gov/open-file/of99-144>
- OF 99-0145. CALIFORNIA. Data-base model specifications from digital geologic-map based produced by the Southern California Areal Mapping Project (SCAMP), by S. A. Kennedy and J. C. Matti. Prepared in cooperation with the Mojave Water Agency; U.S. Forest Service (San Bernardino National Forest); San Bernardino Valley Municipal Water District; California Division

of Mines and Geology. 1999. 47 p. (NC, Da, M; California Dep. of Conservation, Div. Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 197 South Broadway, Los Angeles, CA 90012.)

OF 99-0146. CALIFORNIA. Data report for seismic refraction surveys conducted from 1980 to 1982 in the Livermore Valley and Santa Cruz Mountains, California, by A. J. Williams, T. M. Brocher, W. D. Mooney and Annette Boken. 1999. 78 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 99-0148-A. SOUTH CAROLINA, GEORGIA. Geologic maps and block diagrams of the Barite Hill gold-silver deposit and vicinity, South Carolina and Georgia, by S. H. Clark. 1999. One CD-ROM. (NC, Da, M; Georgia Geol. Surv., Room 400, 19 Martin Luther King, Jr., Dr., S.W., Atlanta, GA 30334; South Carolina Geol. Surv., 5 Geology Rd., Columbia, SC 29210-9998.) Also available on the web at <http://pubs.usgs.gov/openfile/99-148a/>

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OF 99-0149. MICHIGAN. Geology and mineral deposits of the Keweenaw Peninsula and vicinity, Michigan, by W. F. Cannon, M. E. McRae and S. W. Nicholson. 1999. One CD-ROM. (NC, Da, M.) Also available on the web at <http://pubs.usgs.gov/openfile/of99-149/>

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OF 99-0151. The determination of forty-four elements in aqueous samples by inductively coupled plasma-mass spectrometry, by P. J. Lamothe, A. L. Meier and S. A. Wilson. 1999. 14 p. (NC, M, Da.)

OF 99-0152. CALIFORNIA. Cruise report for A1-98-SC Southern California Earthquake Hazards Project, by W. R. Normark, R. G. Bohannon, Ray Sliter, Gita Dunhill, D. W. Scholl, Jane Laursen, J. A. Reid and David Holton. 1999. 60 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 99-0155. CALIFORNIA. Geologic and seismic hazards investigations of the Cow Creek area, Death Valley National Park, California, by M. N. Machette, C. N. Martinez, A. J. Crone, K. M. Haller and Giuliana D'Addezio. 1999. 42 p., 2 over-size sheets. (NC, M, Da; 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 210, San Francisco, CA

94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 99-0156. ALASKA. Alaska resource data file, Medfra Quadrangle, by T. K. Bundtzen. 1999. 176 p. (NC, Da, M, A, S; Alaska Resource Library Information Services [ARLIS], 3150 "C" St., Suite 100, Anchorage, AK 99503; Alaska Dep. of Natural Resources, Div. of Geol. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.) Also available on the web at <http://ardf.wr.usgs.gov/html/quads/Medfra.html>

OF 99-0157. Turbidite pathways in Cascadia Basin and Tufts abyssal plain; Part A, Astoria Channel, Blanco Valley, and Gorda Basin, by S. C. Wolf and M. R. Hamer. 1999. (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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012; Washington DNR/Geol. & Earth Resources Library, 1111 Washington St. S.E., Olympia, WA 98501; Oregon Dep. of Geol. & Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232. Available only on the web at <http://wrgis.wr.usgs.gov/open-file/of99-157>

OF 99-0158. CALIFORNIA. Long Valley Coring Project, Inyo County, California, 1998; preliminary stratigraphy and images of recovered core, by P. C. Sackett, V. S. McConnell, A. L. Roach, S. S. Priest and J. H. Sass. 1999. One CD-ROM. (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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.) Also available on the web at <http://wrgis.wr.usgs.gov/open-file/of99-158>

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OF 99-0159. COLORADO. Determination of chemical-constituent loads during base-flow and storm-runoff conditions near historical mines in Prospect Gulch, upper Animas River watershed, southwestern Colorado, by Laurie Wirt, K. J. Leib, D. J. Bove, M. A. Mast, J. B. Evans and G. P. Meeker. Prepared in cooperation with the Bureau of Land Management. 1999. 39 p. (NC, M, Da, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203-2277; Chief, Geotechnical Services



- Branch, Office of the State Engineer, 1313 Sherman St., Room 818, Denver, CO 80203-2277.) Available only on the web at <http://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-99-0159/>
- OF 99-0160. Preliminary report on the International Energy Agency mode of occurrence inter-laboratory comparison; Phase I, USGS results, by C. A. Palmer, Allan Kolker, J. C. Willett, S. J. Mroczkowski, R. B. Finkelman, K. C. Taylor, F. T. Dulong and J. H. Bullock, Jr. 1999. 48 p. (NC, Da, M.)
- OF 99-0161. MASSPEC; a PC program to control and to process data from an automated mass spectrometer, by R. C. Bigelow, R. B. Vaughn and S. E. Church. 1999. 34 p. (NC, M, Da.)
- OF 99-0162. CALIFORNIA. Geology of the Cordelia and the northern part of the Benicia 7.5 minute quadrangles, California; a digital database, by R. W. Graymer, E. E. Brabb and D. L. Jones. Prepared in cooperation with the California Department of Conservation, Division of Mines and Geology. 1999. (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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.) Available only on the web at <http://wrgis.wr.usgs.gov/open-file/of99-162>
- OF 99-0163. IDAHO. Trace elements and major-element oxides in the Phosphoria Formation at Enoch Valley, Idaho; Permian sources and current reactivities, by D. Z. Piper. 1999. 66 p. (NC, Da, M, S; Idaho Geol. Surv., Morill Hall, Room 332, Univ. of Idaho Campus, Moscow, ID 83843.)
- OF 99-0166. The determination of forty two elements in geological materials by inductively coupled plasma-mass spectrometry, by P. H. Briggs and A. L. Meier. 1999. 15 p. (NC, M, Da.)
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- OF 99-0308-A. SOUTH CAROLINA. Physical stratigraphy, paleontology, and magnetostratigraphy of the USGS-Santee Coastal Reserve core (CHN-803), Charleston County, South Carolina, by L. E. Edwards, G. S. Gohn, J. M. Self-Trail, D. C. Prowell, L. M. Bybell, L. P. Bardot, J. V. Firth, B. T. Huber, N. O. Frederiksen and K. G. MacLeod. Prepared in cooperation with the South Carolina Department of Natural Resources. 1999. 36 p. (NC, Da, M; South Carolina Geol. Surv., 5 Geology Rd., Columbia, SC 29210-9998.) Also available on the web at <http://pubs.usgs.gov/pdf/of/ofr99308/>
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- OF 99-0314. WASHINGTON. Wide-angle seismic recordings from the 1998 Seismic Hazards Investigation of Puget Sound (SHIPS),



western Washington and British Columbia, by T. M. Brocher, T. E. Parsons, K. C. Creager, R. S. Crosson, N. P. Symons, G. D. Spence, B. C. Zelt, P. T. Hammer, R. D. Hyndman, D. C. Mosher, A. M. Trehu, K. C. Miller, U. S. ten Brink, M. A. Fisher, T. L. Pratt, M. G. Alvarez, B. C. Beaudoin, K. E. Loudon and C. S. Weaver. 1999. 110 p. (NC, Da, M, S; Washington DNR/Geol. & Earth Resources Library, 1111 Washington St., S.E., Olympia, WA 98501.)

OF 99-0315-A. WYOMING, MONTANA. An assessment of in-place gas resources in the low-permeability basin-centered gas accumulation of the Bighorn Basin, Wyoming and Montana, by R. C. Johnson, R. A. Crovelli, B. G. Lowell and T. M. Finn. Prepared in cooperation with the U.S. Department of Energy, Federal Energy Technology Center. 1999. 123 p. (NC, M, Da, S; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071; Montana Bur. of Mines & Geol., Montana Coll. of Mineral Sci. & Technol.; Butte, MT 59701.)

OF 99-0315-B. WYOMING, MONTANA. Computer spreadsheets for an assessment of in-place gas resources in the low-permeability basin-centered gas accumulation of the Bighorn Basin, Wyoming and Montana, by R. A. Crovelli, R. C. Johnson and B. G. Lowell. 1999. Two 3 1/2 inch DS/HD IBM-compatible computer diskettes. (NC, M, Da, S; Geol. Surv. of Wyoming, P.O. Box 3008, University Station, Laramie, WY 82071; Montana Bur. of Mines & Geol., Montana Coll. of Mineral Sci. & Technol., Butte, MT 59701.)

Requirements: IBM-PC compatible computer with at least 4 MB of hard disk storage available; Windows 95 (Office 97), Microsoft Word 7.0 for Windows 95 (Office 97), and Microsoft Excel 7.0 for Windows 95 (Office 97); or compatible versions.

OF 99-0316. ALASKA. An interpretation of the aeromagnetic and gravity data and derivative maps of the Craig and Dixon Entrance 1-degree by 3-degree quadrangles and the western edges of the Ketchikan and Prince Rupert quadrangles, Southeastern Alaska, by J. C. Wynn, R. P. Kucks and D. J. Grybeck. 1999. One CD-ROM. (NC, Da, M, S, A.)

The system requirements for using this CD are: 486 computer, 32 MB RAM, JPEG Viewer, and an Adobe Acrobat reader version 3 which can be downloaded free.

OF 99-0318. CALIFORNIA. Timing of paleoearthquakes on the northern Hayward Fault; preliminary evidence in El Cerrito, California, by J. J. Lienkaemper, D. P. Schwartz, K. I. Kelson, W. R. Lettis, G. D. Simpson, J. R. Southon, J. A. Wanket and P. L. Williams. 1999. 34 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 99-0319. MISSISSIPPI. Mississippi Basin Carbon Project; up-land soil database for sites in Yazoo Basin, northern Mississippi, by J. W. Harden, T. L. Fries and Thomas Huntington. 1999. 46 p. (NC, Da, M.)

OF 99-0322. COLORADO. Acid generation and metal mobility of some metal-mining related wastes in Colorado, by G. A. Desborough, R. W. Leinz, Kathy Smith, P. L. Hageman, D. L. Fey and Tom Nash. 1999. 18 p. (NC, M, Da; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203-2277; Chief, Geotechnical Services Branch, Office of the

State Engineer, 1313 Sherman St., Room 818, Denver, CO 80203-2277.)

OF 99-0323. COLORADO. Geochemical investigations and interim recommendations for priority abandoned mine sites, BLM lands, upper Animas River watershed, San Juan County, Colorado; paper edition, by J. T. Nash. 1999. 43 p. (NC, M, Da; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203-2277; Chief, Geotechnical Services Branch, Office of the State Engineer, 1313 Sherman St., Room 818, Denver, CO 80203-2277.)

OF 99-0324. Heat capacity and thermodynamic properties of equilibrium sulfur to the temperature 388.86 K, and the heat capacity of Calorimetry Conference copper, by B. S. Hemingway. 1999. 17 p. (NC, Da, M.)

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OF 99-0327. Gas-oil ratios for source rocks containing Type-I, -II, -IIS, and -III kerogens as determined by hydrous pyrolysis, by M. D. Lewan and A. A. Henry. 1999. 17 p. (NC, M, Da.)

OF 99-0328. ALASKA. Regional baseline geochemistry and environmental effects of gold placer mining operations on the Fortymile River, eastern Alaska, by R. B. Wanty, Bronwen Wang, Jim Vohden, P. H. Briggs and A. H. Meier. 1999. 19 p. (NC, M, Da, A, S; Div. of Geol. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645; U.S. Dep. of Interior, Alaska Resources Library, 3150 C St. #100, Anchorage, AK 99503-3916.)

OF 99-0330. NEVADA. Stratigraphy, tephrochronology, and structure of part of the Miocene Truckee Formation in the Trinity Range-Hot Springs Mountains area, Churchill County, west-central Nevada, by J. H. Stewart and M. E. Perkins. 1999. 23 p., 1 over-size sheet. (NC, Da, M, S; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)

OF 99-0331. OREGON. Preliminary geologic map of the Skull Springs Quadrangle, Malheur County, Oregon, by J. G. Evans and G. B. Binger. 1999. 16 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, S; Oregon Dep. of Geol. & Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)

OF 99-0335. Delineation of background laboratory contamination in the analysis of trace concentrations of extractable organic materials in crystalline rocks by Soxhlet extraction, column chromatography, and gas chromatography, by Koichi Mimura and L. C. Price. 1999. 43 p. (NC, M, Da.)

OF 99-0336. VIRGINIA. Geographic information system (GIS) procedure for preliminary delineation of debris-flow hazard areas from a digital terrain model, Madison County, Virginia, by R. H. Campbell and P. G. Chirico. 1999. 25 p. (NC, Da, M; Virginia Div. of Mineral Resources, Natural Resources Bldg., Alderman and McCormick Rds., P.O. Box 3667, Charlottesville, VA 22903.)

OF 99-0338. Quantitative paleoclimatic reconstructions from late Pleistocene plant macrofossils of the Yucca Mountain region, by R. S. Thompson, K. H. Anderson and P. J. Bartlein. 1999. 38 p. (NC, M, Da; Nevada Bur. of Mines & Geol., Univ. of Nevada-Reno, Reno, NV 89557-0088.) Also available on the web at <http://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-99-0338/>



OF 99-0340. FLORIDA. Digitized images of coral growth bands, fluorescent growth bands, and their age assignments from cores of *Montastrea faveolata*, Biscayne National Park, upper Florida Keys, by Y. Tao, L. M. Roullet, K. M. Higgins, M. L. Hayes, R. B. Halley and J. H. Hudson. 1999. One CD-ROM. (NC, Da, M.)

This CD-ROM was produced in accordance with both the ISO 9660 (PC) and HFS (MacIntosh) standards. Minimum system requirements: (1) MicroSoft Windows 3.x, Windows 95, 98, NT, (2) 486 microprocessor, 12.5 MB hard disk free space, (3) 8 MB ram, (4) CD-ROM drive. MacIntosh: (1) Mac OS 7.0 or higher, (2) 68020 microprocessor, 12.5 MB hard disk free space, (3) 8 MB ram, (4) CD-ROM drive. This report can only be viewed with Netscape version 4.0 or higher with Acrobat Reader version 3.0 or higher plug-ins.

OF 99-0341. NEVADA. Geochemistry of stream-sediment samples from the Santa Renia Fields and Beaver Peak quadrangles, northern Carlin Trend, Nevada, by T. G. Theodore, B. B. Kotlyar, V. I. Berger, B. C. Moring, D. A. Singer and S. A. Edstrom. 1999. 103 p. (NC, Da, M; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.) Also available on the web at <http://wrgis.wr.usgs.gov/open-file/of99-341/>

OF 99-0343. Probabilistic method for subdividing petroleum resources into depth slices, by R. A. Crovelli. 1999. 9 p. (NC, M, Da.)

OF 99-0344-A. WASHINGTON. Digital analytical data from mineral resource assessments of national forest lands in Washington, by D. E. Boleneus and D. W. Chase. Prepared in cooperation with the U.S. Forest Service. 1999. 5 p. (NC, Da, M, S; Washington DNR/Geol. & Earth Resources Library, 1111 Washington St., S.E., Olympia, WA 98501.) Also available on the web at <http://wrgis.wr.usgs.gov/open-file/of99-344>

OF 99-0344-B. WASHINGTON. Digital analytical data from mineral resource assessments of national forest lands in Washington, by D. E. Boleneus and D. W. Chase. 1999. One 3 1/2 inch DS/HD IBM-compatible computer diskette. (NC, Da, M, S; Washington DNR/Geol. & Earth Resources Library, 1111 Washington St., S.E., Olympia, WA 98501.) Also available on the web at <http://wrgis.wr.usgs.gov/open-file/of99-344>

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OF 99-0346. An evaluation of alternative chemical classifications of sandstones, by D. A. Lindsey. 1999. 23 p. (NC, M, Da.) Also available on the web at <http://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-99-0346>

OF 99-0348. WASHINGTON. Analytical results and conceptual model of mine drainage at the Holden Mine, Chelan County, Washington, by J. E. Kilburn, D. B. Smith and S. J. Sutley. 1999. 36 p. (NC, M, Da, S; Geol. & Earth Resources Div., Dep. of National Resources, P.O. Box 47007, Olympia, WA 98504-7007; David A. Johnston Cascade Volcano Observatory, 5400 MacArthur Blvd., Vancouver, WA 98661.)

OF 99-0350. NEVADA. Stratigraphy, tephrochronology, and structural setting of Miocene sedimentary rocks in the Middlegate area, west-central Nevada, by J. H. Stewart, A. M. Sarna-Wojcicki, C. E. Meyer, S. W. Starratt and Elmira Wan. 1999. 17 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)

OF 99-0352. NEVADA. Stratigraphy, tephrochronology, and structural setting of Miocene sedimentary rocks in the Cobble Cuesta area, west-central Nevada, by J. H. Stewart, A. M. Sarna-Wojcicki, C. E. Meyer and Elmira Wan. 1999. 21 p., 1 over-size, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)

OF 99-0353. PUERTO RICO, VIRGIN ISLANDS. Seismic and tsunami hazard in Puerto Rico and the Virgin Islands, edited by U. S. ten Brink, W. P. Dillon, A. D. Frankel, C. S. Mueller and R. W. Rodriguez. 1999. Available only on the web at <http://woodshole.er.usgs.gov/epubs/openfiles/ofr99-353/>

Marine geology and geophysics working group report, lead by N. Driscoll and K. M. Scanlon. Available only on the web at <http://woodshole.er.usgs.gov/epubs/openfiles/ofr99-353/geophysicsgrp.html>

Paleoseismology and active faults working group report, lead by C. S. Prentice and J. C. Moya. Available only on the web at <http://woodshole.er.usgs.gov/epubs/openfiles/ofr99-353/paleogrp.html>

Earthquake seismology and engineering joint working group report; earthquake seismology, lead by C. S. Mueller and C. von Hillebrandt. Available only on the web at <http://woodshole.er.usgs.gov/epubs/openfiles/ofr99-353/jointgrp.html>

Earthquake seismology and engineering joint working group report; engineering, lead by E. V. Leyendecker and J. M. Cruzado. Available only on the web at <http://woodshole.er.usgs.gov/epubs/openfiles/ofr99-353/engineering.html>

Tsunamis working group report, lead by E. L. Geist and Aurelio Mercado. Available only on the web at <http://woodshole.er.usgs.gov/epubs/openfiles/ofr99-353/tsunamigrp.html>

Societal concerns working group report, lead by M. M. Irizarry and Mariano Vargas. Available only on the web at <http://woodshole.er.usgs.gov/epubs/openfiles/ofr99-353/societalgrp.html>

OF 99-0360. CALIFORNIA. Cruise report; RV Coastal Surveyor cruise C1-99; multibeam mapping of the Long Beach California continental shelf; April 12, through May 19, 1999, by J. V. Gardner, J. E. Hughes Clarke and L. A. Mayer. 1999. 43 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

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OF 99-0365. A geochemical isotopic (Nd-Pb) comparison of volcanic rocks erupted during the last 3,550 yrs. B.P. of interplinian activity of Somma-Vesuvius Volcano, southern Italy, by R. Somma, R. A. Ayuso and B. De Vivo. 1999. 16 p. (NC, Da, M.)



OF 99-0366. Pb isotopes and toxic metal abundances in the floodplain and stream sediments from the Volturno River basin (Campania, Italy); natural and anthropogenic contributions, by R. Somma, R. A. Ayuso, B. De Vivo and S. Pagliuca. 1999. 18 p. (NC, Da, M.)

OF 99-0367-A. CALIFORNIA. Analytical results and sample locality maps for rock, stream-sediment, and soil samples, Joshua Tree National Park, Riverside and San Bernardino counties, California, by H. D. King and M. A. Chaffee. 1999. 63 p. (NC, M, Da; 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 99-0367-B. CALIFORNIA. Analytical results and sample locality maps for rock, stream-sediment, and soil samples, Joshua Tree National Park, Riverside and San Bernardino counties, California, by H. D. King and M. A. Chaffee. 1999. One 3 1/2 inch DS/HD IBM compatible computer diskette. (NC, M, Da; 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 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

The text file is in ASCII format and also in COREL WordPerfect 6.1 format. The data files are in database file (.dbf) and also in Lotus 123 (.wk1) format. Requirements: an IBM compatible computer capable of reading 3.5 inch diskettes, and a spreadsheet product capable of importing the data files.

OF 99-0418. ALASKA. Building a magnetic view of Alaska, by R. W. Saltus, P. L. Hill, G. G. Connard, T. L. Hudson and Adrienne Barnett. 1999. Available only on the web at <http://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-99-0418>

OF 99-0448. ALASKA. 1997 volcanic activity in Alaska and Kamchatka; summary of events and response of the Alaska Volcano Observatory, by R. G. McGimsey and K. L. Wallace. 1999. 42 p. (NC, Da, M, A, S; Alaska Resource Library Information Services [ARLIS], 3150 "C" St., Suite 100, Anchorage, AK 99503; Alaska Dep. of Natural Resources, Div. of Geol. & Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)

OF 99-0514. Puget Sound aeromagnetic maps and data, by R. J. Blakely, R. E. Wells and C. S. Weaver. 1999. Available only on the web at <http://geopubs.wr.usgs.gov/open-file/of99-514/>

OF 99-0516. OHIO. Sediment magnetic data and thermomagnetic determinations of Holocene and Pleistocene soils and their parent materials from Zanesville, Ohio; contributions to Quaternary paleoclimate studies of Midcontinent loess deposits, by S. S. Harlan, J. G. Rosenbaum, E. M. Rutledge and D. R. Muhs. 1999. 29 p. (NC, M, Da; Dep. of Natural Resources, Div. of Geol. Surv., Fountain Square, Bldg. B, Columbus, OH 43224.)

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OF 96-0031-A. VERMONT. Digital bedrock geologic map of the Andover Quadrangle, Vermont, by N. M. Ratcliffe. Prepared in

cooperation with the Vermont Geological Survey. 1996. 2 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M.) †Vermont Agency of Natural Resources, Vermont Geol. Surv., 103 South Main St., Center Bldg., Waterbury, VT 05671-0301 (telephone 802-241-3488; URL <http://www.anr.state.vt.us/geology/ofreps.htm>).

OF 96-0526-A. VERMONT. Digital bedrock geologic map of the Weston Quadrangle, Vermont, by N. M. Ratcliffe and W. C. Burton. Prepared in cooperation with the Vermont Geological Survey. 1996. 2 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M.) †Vermont Agency of Natural Resources, Vermont Geol. Surv., 103 South Main St., Center Bldg., Office of Information Management Services, Waterbury, VT 05671-0301 (telephone 802-241-3488; URL <http://www.anr.state.vt.us/geology/ofreps.htm>).

OF 96-0733-A. VERMONT. Digital bedrock geologic map of the Vermont part of the 7.5 × 15 minute Mount Ascutney and Springfield quadrangles, Vermont, by G. J. Walsh, T. R. Armstrong and N. M. Ratcliffe. Prepared in cooperation with the Vermont Geological Survey. 1996. 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M.) †Vermont Agency of Natural Resources, Vermont Geol. Surv., 103 South Main St., Center Bldg., Waterbury, VT 05671-0301 (telephone 802-241-3608; URL <http://www.anr.state.vt.us/geology/ofreps.htm>).

OF 97-0485. Archive of the ISIS sidescan sonar and navigation field data collected on USGS Cruise 97009 (24 Feb.-8 Mar. 1997); 44 lines, by Brynn Bemis, W. C. Schwab and V. F. Paskevich. 1997. Ten CD-ROMs. (NC, Da, M.) †Customer Service, USGS, EROS Data Center, 47914 252nd St., Sioux Falls, SD 57198-0001 (telephone 800-252-4547, fax 605-594-6589; URL <http://edcwww.cr.usgs.gov/webglis>).

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I-2487. Revised shaded relief map and controlled color photomosaic of the Memnonia Quadrangle (MC-16) of Mars. Prepared for the National Aeronautics and Space Administration. 1998. Two sheets. Lat -30° to 0°, long 135° to 180°. Scale 1:5,000,000 (1 mm = 5 km) at 0° latitude. Sheet 1, 27 by 27 inches; sheet 2, 27 by 20 inches (both in color). (Mercator projections.)

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I-2540-B. NEW JERSEY. Bedrock geologic map of central and southern New Jersey, by J. P. Owens; P. J. Sugarman, New Jersey Geological Survey; N. F. Sohl; R. A. Parker, U.S. Geological Survey; H. F. Houghton, R. A. Volkert, New Jersey Geological Survey; A. A. Drake, Jr., R. C. Orndorff, L. M. Bybell, G. W. Andrews, David Bukry, O. S. Zapeczka, G. N. Paulachok, U. S. Geological Survey; and Lloyd Mullikin, New Jersey Geological Survey. Prepared in cooperation with the New Jersey Geological Survey. 1998. Four sheets. Sheet 1, lat 39°45' to 40°30', long 74° to 75°; sheet 2, lat 39° to 39°45', long 74°07'30" to 75°30'. Scale 1:100,000 (1 inch = about 1.6 miles). Each sheet 58 by 41 inches (all in color).

I-2551. MAINE. Geology of northern Penobscot Bay, Maine, by D. B. Stewart and R. D. Tucker. 1998. Two sheets. Sheet 1, lat 43° to 44°45', long 68°30' to 69°; sheet 2, lat 43°45' to 45°, long 68° to 69°30'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 1, 41 by 58 inches; sheet 2, 44 by 41 inches (both in color).

I-2552. VERMONT. Bedrock geologic map of the West Dover and Jacksonville quadrangles, Windham County, Vermont, by N. M. Ratcliffe and T. R. Armstrong. 1999. Two sheets. Lat 42°45' to 43°, long 72°45' to 72°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 38 by 53 inches; sheet 2, 53 by 30 inches (both in color). (Accompanied by 30 page text.)

I-2554. ARIZONA. Breccia-pipe and geologic map of the southwestern part of the Hualapai Indian Reservation and vicinity, Arizona, by G. H. Billingsley, K. J. Wenrich, P. W. Huntoon, and R. A. Young, U.S. Geological Survey. Prepared in cooperation with the U.S. Bureau of Indian Affairs and the Hualapai Tribe. 1999. Two sheets. Lat 35°30' to 35°45', long 113°22'30" to 113°45'. Scale 1:48,000 (1 inch = 4000 feet). Sheet 1, 43 by 29 inches; sheet 2, 40 by 29 inches (both in color). (Accompanied by 50 page text.) (Supersedes Open-File Report 86-458-D.)

ARIZONA. Appendix; nomenclature and ages of Late Cretaceous(?); Tertiary strata in the Hualapai Plateau region, Northwest Arizona, R. A. Young, State University of New York. p. 21-50.

I-2556. Geologic map of part of the Tyrrhena Patera region of Mars (MTM quadrangle -20252), by T. K. P. Gregg, Arizona State University; D. A. Crown, University of Pittsburgh; and Ronald



- Greeley, Arizona State University. Prepared for the National Aeronautics and Space Administration. 1998. Lat -22 1/2° to -17 1/2°, long 250° to 255°. Scale 1:502,000 (1 mm = 502 m) at 250° longitude. Sheet 46 by 38 inches (in color). (Transverse Mercator projection.)
- I-2568. Geologic map of Ophir and Central Candor chasmata (MTM-05072) of Mars, by B. K. Lucchitta. Prepared for the National Aeronautics and Space Administration. 1999. Lat -7.5° to -2.5°, long 70° to 75°. Scale 1:502,000 (1 mm = 502 m) at 70° longitude. Sheet 49 by 37 inches (in color). (Transverse Mercator projection.)
- I-2570. Revised shaded relief map and controlled color photomosaic of the Mare Boreum region (MC-1) of Mars. Prepared for the National Aeronautics and Space Administration. 1999. Two sheets. Lat 65° to 90°, long 0° to 0°. Scale 1:4,306,000 (1 mm = 4,306 km) at 65° latitude. Sheet 1, 32 by 36 inches; sheet 2, 31 by 32 inches (both in color). (Polar Stereographic projections.)
- I-2571. Revised shaded relief map and controlled color photomosaic of the Mare Australe region (MC-30) of Mars. Prepared for the National Aeronautics and Space Administration. 1999. Two sheets. Lat -65° to 90°, long 180° to 180°. Scale 1:4,306,000 (1 mm = 4,306 km) at -65° latitude. Sheet 1, 32 by 36 inches; sheet 2, 31 by 32 inches (both in color). (Polar Stereographic projections.)
- I-2572. Revised shaded relief map and controlled color photomosaic of the Diacia Quadrangle (MC-2) of Mars. Prepared for the National Aeronautics and Space Administration. 1999. Two sheets. 30° to 65°, long 120° to 180°. Scale 1:4,336,000 (1 mm = 4.336 km) at 30° latitude. Sheet 1, 34 by 30 1/2 inches; sheet 2, 30 by 26 inches (both in color). (Lambert Conformal Conic projections.)
- I-2573. Revised shaded relief map and controlled color photomosaic of the Arcadia Quadrangle (MC-3) of Mars. Prepared for the National Aeronautics and Space Administration. 1999. Two sheets. Lat 30° to 65°, long 60° to 120°. Scale 1:4,336,000 (1 mm = 4.336 km) at 30° latitude. Sheet 1, 34 by 30 1/2 inches; sheet 2, 30 by 26 inches (both in color). (Lambert Conformal Conic projections.)
- I-2574. Revised shaded relief map and controlled color photomosaic of the Mare Acidaliu Quadrangle (MC-4) of Mars. Prepared for the National Aeronautics and Space Administration. 1999. Two sheets. Lat 30° to 65°, long 0° to 60°. Scale 1:4,336,000 (1 mm = 4.336 km) at 30° latitude. Sheet 1, 34 by 30 1/2 inches; sheet 2, 30 by 26 inches (both in color). (Lambert Conformal Conic projection.)
- I-2575. Revised shaded relief map and controlled color photomosaic of the Ismenius Lacus Quadrangle (MC-5) of Mars. Prepared for the National Aeronautics and Space Administration. 1999. Two sheets. Lat 30° to 65°, long 300° to 360°. Scale 1:4,336,000 (1 mm = 4.336 km) at 30° latitude. Sheet 1, 34 by 30 1/2 inches; sheet 2, 30 by 26 inches (both in color). (Lambert Conformal Conic projections.)
- I-2576. Revised shaded relief map and controlled color photomosaic of the Casius Quadrangle (MC-6) of Mars. Prepared for the National Aeronautics and Space Administration. 1999. Two sheets. Lat 30° to 65°, long 240° to 300°. Scale 1:4,336,000 (1 mm = 4.336 km) at 30° latitude. Sheet 1, 34 by 30 1/2 inches; sheet 2, 30 by 26 inches (both in color). (Lambert Conformal Conic projections.)
- I-2577. Revised shaded relief map and controlled color photomosaic of the Cebrenia Quadrangle (MC-7) of Mars. Prepared for the National Aeronautics and Space Administration. 1999. Two sheets. Lat 30° to 65°, long 180° to 240°. Scale 1:4,336,000 (1 mm = 4.336 km) at 30° latitude. Sheet 1, 34 by 30 1/2 inches; sheet 2, 30 by 26 inches (both in color). (Lambert Conformal Conic projections.)
- I-2578. Revised shaded relief map and controlled color photomosaic of the Aeolis Quadrangle (MC-23) of Mars. Prepared for the National Aeronautics and Space Administration. 1999. Two sheets. Lat -30° to 0°, long 180° to 225°. Scale 1:5,000,000 (1 mm = 5 km) at 0° latitude. Sheet 1, 28 by 27 inches; sheet 2, 27 by 21 inches (both in color). (Mercator projections.)
- I-2579. Geologic map of the Galaxias Quadrangle (MTM 35217) of Mars, by Rene De Hon, P. J. Mouginis-Mark and E. E. Brick. Prepared for the National Aeronautics and Space Administration. 1999. Lat 32.5° to 37.5°, long 215° to 220°. Scale 1:502,000 (1 mm = 502 m) at 210 longitude. Sheet 49 by 37 inches (in color). (Transverse Mercator projection.)
- I-2610. Geologic map of the Berrymore Quadrangle (V-59), Venus, by J. R. Johnson, Goro Komatsu and V. R. Baker. Prepared for the National Aeronautics and Space Administration. 1999. Lat -75° to -50°, long 240° to 180°. Scale 1:4,711,886 (1 mm = 4.712 km) at -25° latitude and 1:500,000 at -34° and -73° latitudes. Sheet 1, 49 by 39 inches (in color). (Lambert projection.)

GEOLOGIC INVESTIGATIONS SERIES

In August 1996, the I-map series name was changed from Miscellaneous Investigations Series Maps to Geologic Investigations Series. All geologic maps approved for publication after August 1996 will be published in the Geologic Investigations Series. The series definition remains the same.

- I-2580. CALIFORNIA. Seismicity maps of the San Francisco and San Jose 1° x 2° quadrangles, California for the period 1967-1993, by S. R. Walter, D. H. Oppenheimer and R. I. Mandel. 1998. Three sheets. Sheet 1, lat 37° to 38°, long 120° to 123°; sheet 2, lat 37° to 38°, long 121°30' to 122°30'. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 47 by 33 inches; sheet 2, 48 by 36 inches; sheet 3, 47 by 36 inches (all in color).
- I-2582. Areas of historical oil and gas exploration and production in the conterminous United States, by R. F. Mast, D. H. Root, L. P. Williams, W. R. Beeman and D. L. Barnett. 1998. Lat 25° to 50°, long 65° to 125°. Scale 1:3,750,000 (1 inch = 59 miles). Sheet 56 by 40 inches (in color).
- I-2597. The Lower Pennsylvanian unconformity in the central Appalachian Basin, by R. E. Thomas and K. J. Englund. 1999. Lat 36°30' to 38°30', long 80°30' to 84°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 58 by 41 inches (in color).
- I-2608. ARIZONA. Quaternary geology and geomorphology of the Nankoweap Rapids area, Marble Canyon, Arizona, by Richard Hereford, K. J. Burke and K. S. Thompson. Prepared in cooperation with the U.S. Bureau of Reclamation, Glen Canyon Environmental Studies. 1998. Lat 36°17'30" to 36°18'45", long 111°51'15" to 111°52'. Scale 1:2,000 (1 inch = about 167 feet). Sheet 40 by 50 inches (in color). (Accompanied by 18 page text.)
- I-2610. Geologic map of the Barrymore Quadrangle (V-59), Venus, by J. R. Johnson, Goro Komatsu and V. R. Baker. Prepared for the National Aeronautics and Space Administration. 1999. Lat -75° to



-50°, long 240° to 180°. Scale 1:4,711,886 (1 mm = 4.712 km) at -25° latitude and 1:5,000,000 at -34° and -73° latitudes. Sheet 50 by 40 inches (in color).

I-2615. PUERTO RICO. Marine geologic map of the southwestern insular shelf of Puerto Rico; Mayagüez to Cabo Rojo, by J. S. Schlee, R. W. Rodriguez, R. M. Webb and M. A. Carlo. Prepared in cooperation with the Commonwealth of Puerto Rico, Department of Natural Resources. 1999. Lat 17°51' to 18°15', long 67°07'30" to 67°30'. Scale 1:40,000 (1 inch = 3,330 feet). Sheet 41 by 58 inches (in color).

I-2618. MISSOURI. Geologic map of the Greer Quadrangle, Oregon County, Missouri, by R. C. McDowell. 1998. Lat 36°45' to 36°52'30", long 91°15' to 91°22'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 50 by 32 inches (in color).

I-2621. WASHINGTON, OREGON. Well stratigraphy and correlations, western Washington and northwestern Oregon, by W. W. Raul, Washington Division of Geology and Earth Resources; and S. Y. Johnson, U.S. Geological Survey. 1999. Three sheets. Sheets 1 and 2, 58 by 41 inches; sheet 3, 47 by 41 inches. (Accompanied by 31 page text.)

I-2623-A. VIRGINIA. Map of rainfall, debris flows, and flood effects of the June 27, 1995, storm in Madison County, Virginia, by B. A. Morgan, G. F. Wiczorek and R. H. Campbell. Prepared in cooperation with the Federal Emergency Management Agency. 1999. Lat 38°20' to 38°32'30", long 78°15' to 78°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 40 by 50 inches (in color).

I-2623-B. VIRGINIA. Historical and potential debris-flow and flood hazard map of the area affected by the June 27, 1995, storm in Madison County, Virginia, by B. A. Morgan, G. F. Wiczorek and R. H. Campbell. Prepared in cooperation with the Federal Emergency Management Agency. 1999. Lat 38°20' to 38°32'30", long 78°15' to 78°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 39 by 48 inches (in color).

I-2635. WYOMING. Geologic map of Precambrian rocks, Rawhide Buttes West Quadrangle and part of Rawhide Buttes East Quadrangle, Hartville Uplift, Goshen and Niobrara counties, Wyoming; with a section on geochronology, by W. C. Day, P. K. Sims, G. L. Snyder, A. B. Wilson, T. L. Klein, Z. E. Peterman, Kiyoto Futa and R. E. Zartman. 1999. Lat 42°30' to 42°37'30", long 104°25' to 104°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 36 by 32 inches (in color). (Accompanied by 14 page text.)

I-2639. COLORADO. Historic trail map of the Denver 1° × 2° quadrangle, central Colorado, by G. R. Scott. Prepared in cooperation with the Denver Public Library, Western History and Genealogy Department. 1999. Two sheets. Sheet 1, lat 39° to 40°, long 104° to 106°; sheet 2, lat 39°30' to 40°, long 105° to 106°. Sheet 1, scale 1:250,000 (1 inch = about 4 miles); sheet 2, scale 1:100,000 (1 inch = about 1.6 miles). Both sheets 49 by 37 1/2 inches (in color). (Accompanied by 53 page text.) Also available on the web at <http://greenwood.cr.usgs.gov/pub/i-maps/i-2639/>

I-2644. COLORADO. Pleistocene glaciation in the upper Platte River drainage basin, Colorado, by R. F. Madole, D. P. VanSistine and J. A. Michael. 1998. Lat 38°52'30" to 40°52'30", long 105°07'30" to 106°22'30". Sheet 49 by 38 inches (in color).

I-2645-B. UTAH. Aeromagnetic and gravity maps of the central Marysville volcanic field, southwestern Utah, by D. L. Campbell,

T. A. Steven, C. G. Cunningham and P. D. Rowley. 1999. Lat 38°15' to 38°40', long 112° to 112°37'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 37 1/2 by 48 1/2 inches (in color). (Accompanied by 50 page text.)

I-2648. CALIFORNIA. Shaded-relief bathymetric and backscatter maps of Santa Monica Margin, California, by J. V. Gardner, Peter Dartnell, L. A. Mayer and J. H. Clarke. Prepared in cooperation with the University of New Brunswick. 1999. Two sheets. Lat 33°38' to 34°03', long 118°15' to 118°51'. Scale 1:75,000 (1 inch = 6,250 feet). Each sheet 33 by 31 inches (sheet 1 in color).

I-2659. CONNECTICUT, NEW YORK. Maps showing acoustic and textural characteristics and distribution of bottom sedimentary environments in Long Island Sound, Connecticut and New York, by H. J. Knebel, R. P. Signell, R. R. Rendigs, L. J. Poppe and J. H. List. Prepared in cooperation with the State of Connecticut, Department of Environmental Protection, Geological and Natural History Survey; U.S. Environmental Protection Agency. 1999. Two sheets. Lat 40°50'N to 41°20'N, long 72°05'W to 73°40'W. Sheet 1, 41 1/2 by 52 inches; sheet 2, 58 by 41 1/2 inches.

I-2671. CONNECTICUT. Sidescan sonar image, surficial geologic interpretation, and bathymetry of the Long Island Sound sea floor around Falkner Island, Connecticut, by L. J. Poppe, R. S. Lewis, J. F. Denny, M. L. DiGiacomo-Cohen and K. F. Parolski. Prepared in cooperation with the State of Connecticut, Department of Environmental Protection, Geological and Natural History Survey. 1999. Two sheets. Sheet 1, lat 41°N to 41°20'N, long 72°W to 72°41'W; sheet 2, lat 41°12'N to 41°13'30"N, long 72°38'W to 72°41'W. Sheet 1, scale 1:12,500 (1 inch = about 1042 feet); sheet 2, scale 1:10,000 (1 inch = about 833 feet). Both sheets 46 by 41 inches.

I-2700. World map of volcanoes and principal aeronautical features, by T. J. Casadevall, U.S. Geological Survey; T. B. Thompson, Jeppesen Sanderson; Tom Fox, Quebec, International Civil Aviation Organization. Prepared in cooperation with Jeppesen Sanderson. 1999. Lat 70°S to 80°N, long 90°E to 90°W. Scale 1:34,268,000 (1 inch = about 541 miles). Sheet 62 by 39 inches (in color). (Accompanied by 12 page text.)

CIRCUM-PACIFIC MAP SERIES

Multicolor equal-area maps at scales of 1:10,000,000 for the Northwest, Northeast, Southwest, Southeast quadrants of the Pacific and the Arctic and Antarctic regions, and of 1:17,000,000 for the whole Pacific Basin. The series consists of base, geographic, geodynamic, plate-tectonic, geologic, tectonic, mineral-resources, and energy-resources maps, as well as other miscellaneous maps.

CP-0046. Mineral-resources map of the Circum-Pacific region, Northwest Quadrant, compiled by George Gryc, U.S. Geological Survey. 1999. Lat 10°S to 80°N, long 90°E to 160°W. Scale 1:10,000,000 (1 inch = about 160 miles). Sheet 40 by 41 inches (in color). (Accompanied by 29 page text.)

Mineral resources map of the Northwest Quadrant, by Masaharu Kamitani, Geological Survey of Japan; Tomoyuki Moritani, Sumitomo Construction Company; and George Gryc, U.S. Geological Survey. p. 1-3.

Resource symbols, by Masaharu Kamitani, Geological Survey of Japan; D. Z. Piper and T. R. Swint-Iki, U.S. Geological Survey. p. 3-5.



Land resources, by Masaharu Kamitani and Sadahisa Sudo, Geological Survey of Japan; and Yoshihiko Shimazaki, Nikko Exploration and Development Company. p. 5-13.

Seafloor sediment, by F. W. McCoy, University of Hawaii. p. 13-14.

Ferromanganese nodules, by D. Z. Piper and T. R. Swint-Iki, U.S. Geological Survey. p. 14-16.

Ferromanganese crust, by F. T. Manheim and C. M. Lane-Bostwick, U.S. Geological Survey. p. 16.

Polymetallic sulfides, by T. R. Swint-Iki, U.S. Geological Survey. p. 16-17.

Phosphorites and phosphatized rocks, by D. Z. Piper and T. R. Swint-Iki, U.S. Geological Survey. p. 17.

Heavy-mineral deposits, by Gretchen Luepke, U.S. Geological Survey. p. 18.

HYDROLOGIC INVESTIGATIONS ATLAS

Multicolored or black and white maps on topographic or planimetric bases presenting a wide range of geohydrologic data; both regular and irregular areas.

HA-0730-F. ARKANSAS, LOUISIANA, MISSISSIPPI. Ground water atlas of the United States; Segment 5; Arkansas, Louisiana, and Mississippi, by R. A. Renken. 1998. p. F1-F28. Each sheet 18 by 23 inches (all in color).



OUTSIDE PUBLICATIONS

ARTICLES AND REPORTS

Articles by USGS personnel in non-USGS publications recently cited in the GeoRef data base of the American Geological Institute are listed below. Non-USGS personnel who share authorship in articles with USGS personnel are indicated by an asterisk (*) immediately following the name. **These publications are not available from the U.S. Geological Survey.**

OP-1. T. S. Ahlbrandt and J. E. Fox*. Middle Jurassic incised valley fill (eolian/estuarine) and nearshore marine petroleum reservoirs, Powder River basin. *The Mountain Geologist*. v. 34, no. 3, July 1997. p. 97-115.

OP-2. T. S. Ahlbrandt and J. E. Fox*. Petrophysical evaluation of low contrast/low resistivity Middle Jurassic valley-fill (eolian/estuarine) reservoirs, Powder River basin, Wyoming. *Journal - Canadian Well Logging Society*. 21, 1998. p. 1-11.

OP-3. G. V. Albino. Iron- and aluminum-rich serpentine and chlorite from the Boundary Ultramafic Complex, Cape Smith Belt, New Quebec. *The Canadian Mineralogist*. 33, Part 3, June 1995. p. 559-568.

OP-4. A. A. Aldahan*, G. Possnert*, J. A. Peck*, J. King* and S. M. Colman. Linking the ^{10}Be continental record of Lake Baikal to marine and ice archives of the last 50 ka; implication for the global dust-aerosol input. *Geophysical Research Letters*. v. 26, no. 18, September 15, 1999. p. 2885-2888.

OP-5. J. N. Aleinikoff, W. C. Burton, P. T. Lyttle, A. E. Nelson and C. S. Southworth. VIRGINIA, MARYLAND. U-Pb geochronology of zircon and monazite from Mesoproterozoic granitic gneisses of the northern Blue Ridge, Virginia and Maryland, USA. *Precambrian Research*. v. 99, no. 1-2, January 15, 2000. p. 113-146.

OP-6. J. N. Aleinikoff, D. R. Muhs, R. R. Sauer and C. M. Fanning*. COLORADO. Late Quaternary loess in northeastern Colorado; Part II, Pb isotopic evidence for the variability of loess sources. *Geological Society of America Bulletin*. v. 111, no. 12, December 1999. p. 1876-1883.

OP-7. R. B. Alexander, J. R. Slack, A. S. Ludtke, K. K. Fitzgerald and T. L. Schertz. Data from selected U.S. Geological Survey national stream water quality monitoring networks. *Water Resources Research*. v. 34, no. 9, September 1998. p. 2401-2405.

OP-8. B. D. Allen*, S. D. Connell*, J. W. Howley* and B. D. Stone. Core drilling provides information about Santa Fe Group aquifer system beneath Albuquerque's West Mesa. *New Mexico Geology*. v. 20, no. 1, February 1998. p. 8-13.

OP-9. Michael Allen, M. P. Escayola* and L. M. Villar*. New data on the alkalic volcanic centers of the Chajan region, provinces of Cordoba and San Luis, Argentina. *Actas - Congreso Geológico Chileno, in 7 congreso geológico chileno; actas (7th Chilean geologic congress; abstracts)*. (Eduardo Campos, editor and others). 7, Vol. 2, 1994. p. 954-956.

OP-10. R. M. Allen*, Guust Nolet*, W. J. Morgan*, Kristin Vogtfjord*, B. H. Bergsson*, Palmi Erlendsson*, G. R. Foulger*, Steinunn Jakobsdottir*, B. R. Julian, M. J. Pritchard*, Sturla Ragnarsson* and Ragnar Stefansson*. The thin hot plume beneath Iceland. *Geophysical Journal International*. v. 137, no. 1, April 1999. p. 51-63.

OP-11. R. B. Alley*, A. J. Gow*, D. A. Meese*, J. J. Fitzpatrick, E. D. Waddington* and J. F. Bolzan*. Grain-scale processes, folding, and stratigraphic disturbance in the GISP2 ice core. *Journal of Geophysical Research, C, Oceans, in Greenland Summit ice cores; Greenland Ice Sheet Project 2 (GISP2); Greenland Ice Core Program (GRIP)*. (C. U. Hammer, prefacer and others). v. 102, no. 12, November 30, 1997. p. 26,819-26,830.

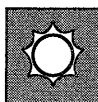
OP-12. R. B. Alley*, C. A. Shuman*, D. A. Meese*, A. J. Gow*, K. C. Taylor*, K. M. Cuffey*, J. J. Fitzpatrick, P. M. Grootes*, G. A. Zielinski*, Michael Ram*, G. Spinelli* and B. C. Elder*. Visual-stratigraphic dating of the GISP2 ice core; basis, reproducibility, and application. *Journal of Geophysical Research, C, Oceans, in Greenland Summit ice cores; Greenland Ice Sheet Project 2 (GISP2); Greenland Ice Core Program (GRIP)*. (C. U. Hammer, prefacer and others). v. 102, no. 12, November 30, 1997. p. 26,367-26,381.

OP-13. J. E. Almendinger and J. H. Leete*. Peat characteristics and groundwater geochemistry of calcareous fens in the Minnesota River basin, USA. *Biogeochemistry (Dordrecht)*. v. 43, no. 1, 1998. p. 17-41.

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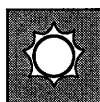
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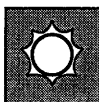
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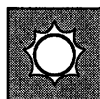
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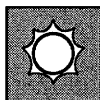
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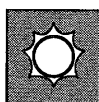
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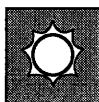
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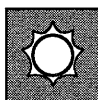
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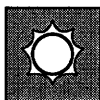
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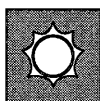
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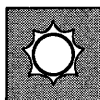
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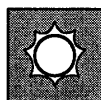
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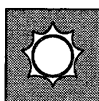
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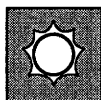
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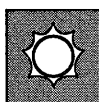
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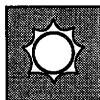
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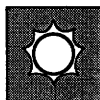
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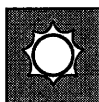
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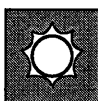
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ABSTRACTS

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-USGS personnel who share authorship in abstracts with USGS 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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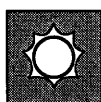
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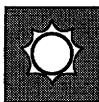
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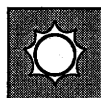
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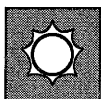
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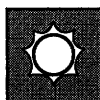
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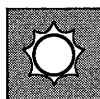
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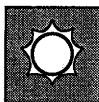
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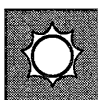
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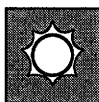
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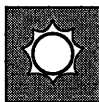
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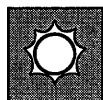
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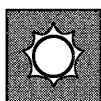
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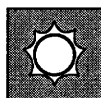
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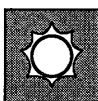
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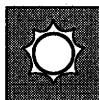
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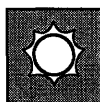
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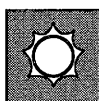
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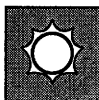
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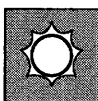
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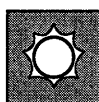
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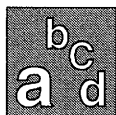


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ABBREVIATIONS USED

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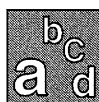
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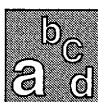
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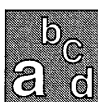
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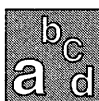
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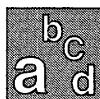
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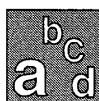
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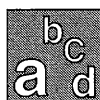
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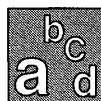
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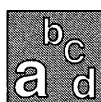
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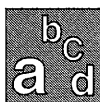
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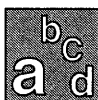
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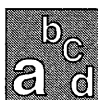
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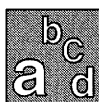
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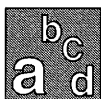
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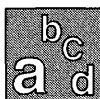
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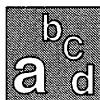
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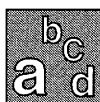


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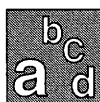
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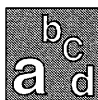
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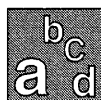
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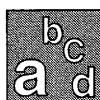
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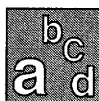
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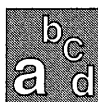
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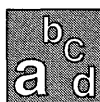
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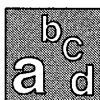
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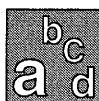
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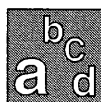
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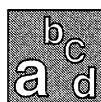
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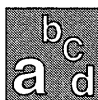
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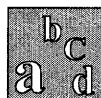
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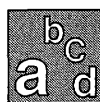
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