

Publications  
of the  
U.S.  
Geological  
Survey,  
1996

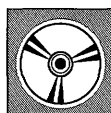
BRITISH AIRWAYS



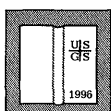
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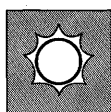
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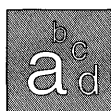
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## Publications of the U.S. Geological Survey

This catalog is a list of (1) books and maps<sup>1</sup> that were published during 1996 and (2) articles by U.S. Geological Survey personnel in non-U.S. Geological Survey journals and books that came to our attention in 1996; 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 U.S. 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, and 1995 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.

The quarterly catalog "New Publications of the U.S. Geological Survey" may be obtained free on request. Those wishing to be placed on a free subscription list of the quarterly 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.

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 on the USGS's World Wide Web home page, which is located on the Internet at <http://www.usgs.gov>.

<sup>1</sup>Individual 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 or MasterCard 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 or MasterCard 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 \$3.50 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

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

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

### Books and Maps

Book reports and maps of the U.S. Geological Survey are available over the counter at the following USGS Earth Science Information Centers (ESIC'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.  
SALT LAKE CITY, Utah—2222 West, 2300 South, 2d floor  
SPOKANE, Washington—Rm. 135, U.S. Post Office Bldg., 904 West Riverside Ave.  
WASHINGTON, D.C.—Rm. 2650, Main Interior Bldg., 18th and C Sts., NW.

## Maps Only

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

ROLLA, Missouri—1400 Independence Rd.

Survey maps are also sold by commercial dealers throughout the United States. For the nearest authorized USGS Business Partner, call 1-800-help-map or 1-800-usa-maps or check <http://www.nmd.usgs.gov/esic/usimage/dealers.html> on the World Wide Web.

## AVAILABILITY OF PERIODICALS

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

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

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

## 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. 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.

## AVAILABILITY OF OFFICE OF MINERALS INFORMATION PUBLICATIONS

After 85 years of service, the U.S. Bureau of Mines closed, effective January 1996. Certain functions, such as the collection, analysis, and dissemination of minerals information, have been returned to the U.S. Geological Survey, where they are now the responsibility of the Office of Minerals Information (OMI).

Health and safety and materials research functions are also continuing. For information on the health and safety research, contact:

Rob Tuchman	Elaine Cullen
Pittsburgh Research Ctr.	Spokane Research Ctr.
Cochrans Mill Road	315 E. Montgomery Ave.
P.O. Box 18070	Spokane, WA 99207
Pittsburgh, PA 15236	(509) 484-1610
(412) 892-6601	

For information on materials research, contact:

William D. Riley  
Albany Research Center Marketing Office  
1450 Queen Avenue, SW.  
Albany, OR 97321-2198  
(541) 967-5891

### Electronic Information

Many OMI products are available through the systems or formats listed below:

**Mines FaxBack:** Return fax service.

1. Use the touch-tone handset attached to your fax machine's telephone jack. (ISDN [digital] telephones cannot be used with fax machines.)
2. Dial (703) 648-4999.
3. Listen to the menu options and punch in the number of your selection, using the touch-tone telephone.
4. After completing your selection, press the start button on your fax machine.

**Mines Data:** Computer bulletin board. Log on via modem through (703) 648-7799, or call (703) 648-7943 for technical assistance.

**CD-ROM:** This OMI disc is updated quarterly and sold by the Government Printing Office's Superintendent of Documents. For information on the latest product, please contact Rodger Wedgeworth (703) 648-4756.

**Internet/World Wide Web:** Text and graphics.

Access via PC-based browsing software such as Netscape or Mosaic. The Universal Resource Locator (URL) is <http://minerals.er.usgs.gov/minerals/>

**Internet System Administrator:**  
jgambogi@usgs.gov

### Publications

**Availability:** Some of the publications listed in this catalog are free from OMI. Others are available for sale from the Government Printing Office (GPO) or the National Technical Information Service (NTIS). Information on availability for each series is included in the listings that follow.

Publications indicated as being available from GPO can be ordered by calling (202) 512-1800 or by faxing inquiries to (202) 512-2250. Or mail or fax the GPO order form at the end of this catalog. You can find out about new OMI publications as they are published through GPO's free Priority Announcement Service. To take advantage of this service, complete and return the request form at the end of this catalog.

Publications available through NTIS can be ordered by using the NTIS form at the end of this catalog or by calling the phone number indicated on the form. If you do not know the publication stock number, call (703) 487-4780 (NTIS Research Services).

**Alternative formats:** Some OMI publications may be available in CD-ROM or diskette format. Where this is the case, the format, price, and ordering information are indicated in the catalog for the appropriate entries.

Many of the publications listed in this catalog are also available at local and academic libraries that are part of the GPO's depository library system.

## AVAILABILITY OF OLD PUBLICATIONS, U.S. BUREAU OF MINES (USBM)

USBM publications are available as shown here. Also note that the USBM, since its creation in 1910, issued compilations of USBM publications, including subject and author indexes. These compilations are sold by the National Technical Information Service (NTIS).

Source	What is Available	Format	Price Range
Contact your local library for the location of your closest depository library	USBM publications since 1910	Printed	Available <u>only</u> for review onsite or by interlibrary loan
Pittsburgh Research Center Production and Distribution P.O. Box 18070 Pittsburgh, PA 15236 (412) 892-4338 FAX: (412) 892-6877	Some USBM publications from 1991 to early 1994 (limited supply)	Printed	Free
Pittsburgh Research Center Library P.O. Box 18070 Pittsburgh, PA 15236 (412) 892-4431 FAX: (412) 892-4292	USBM publications from 1910	Printed copies and microfiche	Available <u>only</u> for review onsite or by interlibrary loan
NTIS 5285 Port Royal Road Springfield, VA 22161 (703) 487-4650 FAX: (703) 321-8547	Most USBM publications since late 1970's (some earlier)	Photocopies and microfiche	Call for pricing
UPDATA 1736 Westwood Blvd. Los Angeles, CA 90034 1-800-882-2844 FAX: (310) 474-4095	USBM publications from 1910 to 1993	Microfiche collection only, complete runs of years or categories only (i.e., Reports of Investigations, Information Circulars, Bulletins, etc.)	Call for pricing
USGS Library Minerals Information Collection 952 National Center Reston, VA 22092 (703) 648-7754 FAX: (703) 648-7753	USBM publications since 1910	Printed copies and microfiche	Available <u>only</u> for review onsite or by interlibrary loan
Internet: <a href="http://speedy.usbm.gov:8000">http://speedy.usbm.gov:8000</a> and select NEW USERS. For information contact Laura Crabtree, (412) 892-4104, or John Sammarco, (412) 892-4207	Many research publications, 1970-95	Electronic	Free



## CD-ROM's

### DIGITAL DATA SERIES

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

**DDS-0006.** Stratigraphic nomenclature databases for the United States, its possessions and territories. 1996. One CD-ROM. (Release 3.)

This CD-ROM was produced in accordance with the ISO 9660 standard and can be accessed by any computer system (for example, DOS, Macintosh, workstations, minicomputers) that has the appropriate software to read ISO 9660 discs; however, the software on this disc is intended for use in a DOS environment. The minimum system requirements to use the data with the software provided on this disc are as follows: (1) IBM or compatible personal computer, (2) 640K RAM, (3) MS- or PC-DOS version 5.0 or later, (4) Microsoft MSCDEX version 2.1 or later, (5) CD-ROM drive with ISO 9660 software driver, (6) hard disk drive, and (7) EGA/VGA graphics system.

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

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

**DDS-0018-B.** National Geochemical Data Base; 1, National Uranium Resource Evaluation (NURE) Hydrogeochemical and Stream Sediment Reconnaissance (HSSR) data for Alaska, formatted for GSSREARCH data base search software; 2, NURE HSSR data formatted as dBASE files for Alaska and the conterminous United States; 3, NURE HSSR data as originally compiled by the Department of Energy for Alaska and the conterminous United States, by J. D. Hoffman and K. P. Buttleman; MAPPER display software by R. A. Ambroziak; MAPPER documentation by C. A. Cook. 1996. One CD-ROM.

This CD-ROM was produced in accordance with the ISO 9660 standard. However, it is intended for use only on MS-DOS or PC-DOS-based computer systems. The minimum system requirements to access the data with the software provided on the CD-ROM are as follows: (1) IBM or compatible personal computer, (2) 640K RAM (at least 540K free memory), (3) math coprocessor, (4) VGA graphics card and VGA color monitor, (5) MS- or PC-DOS version 5.0 or later, (6) Microsoft MSCDEX version 2.1 or later, and (7) CD-ROM drive with ISO 9660 software driver. A Microsoft-compatible mouse is highly recommended.

**DDS-0019.** Geology and resource assessment of Costa Rica at 1:500,000 scale; a digital representation of maps of the U.S. Geological Survey's 1987 Folio I-1865, by P. G. Schruben. 1996. One CD-ROM.

The minimum system requirements to use the data with the software provided on this disc are: DOS: (1) IBM/PC or compatible computer, 80386 or better CPU, with mouse, (2) 640K of RAM (at least 540K of free memory), (3) MS- or PC-DOS version 5.0 or later, and (4) Super VGA graphics system, 256 colors. Windows/ArcView 1: 1 and 4 above and 4MB of RAM, 8 strongly recommended and Windows 3.0 or higher. Macintosh: system 7.x, 8MB of RAM and 245-color graphic system.

**DDS-0021.** Earth science photographs from the U.S. Geological Survey Library, by J. K. McGregor and C. C. Abston. 1995. Four CD-ROMs.

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

**DDS-0027.** Monthly average polar sea-ice concentration, by P. N. Schweitzer. 1995. One CD-ROM.

The minimum system requirements to use the data with the software provided on this disc are as follows for three systems. For the MS-DOS system: (1) IBM or compatible personal computer, (2) 80386 or 80486 CPU, (3) MS- or PC-DOS version 3.3 or later, (4) Microsoft MSCDEX version 2.1 or later, (5) CD-ROM drive with ISO 9660 driver, (6) 4MB extended RAM, and (7) Super VGA graphics system. For the Macintosh system: (1) Macintosh computer, (2) System 7.0 or later, (3) CD-ROM drive, (4) 4MB RAM and (5) 256-color display. For the UNIX system: (1) ANSI-conformant C-language compiler, (2) CD-ROM drive with ISO 9660 driver, (3) 8MB RAM, and (4) X Window System version 11, release 4 or later.

**DDS-0030.** 1995 National assessment of United States oil and gas resources; results, methodology, and supporting data, edited by D. L. Gautier, G. L. Dolton, K. I. Takahashi and K. L. Varnes. 1996. One CD-ROM. (Revision.)

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

**DDS-0032.** MONTANA, WYOMING. National energy research seismic library; Powder River basin, Montana-Wyoming; surface reflection and vertical seismic profile data used in seismic-stratigraphic investigations for ground-water aquifers and hydrocarbon traps, by J. J. Miller, M. W. Lee, R. T. Ryder and A. H. Balch. 1996. (Discs 1 and 2.)

**DDS-0035.** Digital map data, text, and graphical images in support of the 1995 National assessment of United States oil and gas resources, compiled by W. R. Beeman, R. C. Obuch and J. D. Brewton. 1996. One CD-ROM.



The programs on this CD-ROM require either (1) a Macintosh running system 7 or later and having a 13-inch color monitor and CD-ROM drive or (2) a PC system running DOS 5.0 or later and having a VGA color monitor and a CD-ROM drive. The Macintosh should have at least 8MB of RAM. The PC system should have at least 4MB of RAM. The map- and image-viewing programs are PC-based only. Instructions for obtaining shareware Macintosh-based viewing programs are included.

DDS-0036. Tabular data, text, and graphical images in support of the 1995 National assessment of United States oil and gas resources, compiled by R. R. Charpentier, T. R. Klett, R. C. Obuch and J. D. Brewton. 1996. One CD-ROM.

The programs on this CD-ROM (DDS-36) require either (1) Macintosh running system 7 or later and having a 13-inch color monitor and CD-ROM drive, or (2) a PC system running DOS 5.0 or later and having a VGA color monitor and a CD-ROM drive. The Macintosh should have at least 8MB of RAM. The PC system should have at least 4MB of RAM. The map- and image-viewing programs are PC-based only. Instructions for obtaining shareware Macintosh-based viewing programs are included.



## 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 1357. CALIFORNIA. Hillside materials and slopes of the San Francisco Bay region, California, by S. D. Ellen and C. M. Wentworth. 1995. 215 p. 7 plates in pocket.

P 1386-H. Glaciers of Irian Jaya, Indonesia, and New Zealand, by Ian Allison, Australian Antarctic Division; J. A. Peterson, Monash University; and T. J. H. Chinn, New Zealand Geological Survey. 1989 (1995). p. H1-H48. (Satellite image atlas of glaciers of the world, edited by R. S. Williams, Jr., and J. G. Ferrigno.) (Reprint.)

1. Glaciers of Irian Jaya, Indonesia, by Ian Allison, Australian Antarctic Division; and J. A. Peterson, Monash University. p. H1-H20.

2. Glaciers of New Zealand, by T. J. H. Chinn, New Zealand Geological Survey. p. H25-H48.

P 1387. WASHINGTON. Direct temperature measurements of deposits, Mount St. Helens, Washington, 1980-1981, by N. G. Banks and R. P. Hoblitt. 1996. 76 p.

P 1404-I. NORTH CAROLINA. Hydrogeologic framework of the North Carolina coastal plain, by M. D. Winner, Jr. and R. W. Coble. 1996. p. I1-I106. 24 plates in separate case. (Regional Aquifer-System Analysis; Northern Atlantic Coastal Plain.) (Supersedes Open-file report 87-690.)

P 1404-J. MARYLAND, DELAWARE, DISTRICT OF COLUMBIA. Simulation of ground-water flow of the coastal plain aquifers in parts of Maryland, Delaware, and the District of Columbia, by W. B. Fleck and D. A. Vroblecky. 1996. p. J1-J40. 9 plates in separate case. (Regional Aquifer-System Analysis; Northern Atlantic Coastal Plain.)

P 1406-D. ARIZONA. Simulation of ground-water flow in alluvial basins in south-central Arizona and parts of adjacent states, by T. W. Anderson and G. W. Freethy. 1995. p. D1-D78. (Regional Aquifer-System Analysis; Southwest Alluvial Basins, Arizona and Adjacent States.)

P 1408-A. IDAHO, OREGON. Summary of the Snake River plain Regional Aquifer-System Analysis in Idaho and eastern Oregon, by G. F. Lindholm. 1996. p. A1-A59. 1 plate in pocket. (Regional Aquifer-System Analysis; Snake River plain, Idaho.) (Supersedes Open-file report 91-98.)

P 1409-B. NEVADA, UTAH. Hydrogeologic framework of the Great Basin region of Nevada, Utah, and adjacent states, by R. W. Plume. 1996. p. B1-B64. 5 plates in pocket. (Regional Aquifer-System Analysis; Great Basin, Nevada-Utah.)

P 1409-D. NEVADA, UTAH. Conceptual evaluation of regional ground-water flow in the carbonate-rock province of the Great Basin, Nevada, Utah, and adjacent states, by D. E. Prudic, J. R. Harrill and T. J. Burbey. 1995. p. D1-D102. (Regional Aquifer-System Analysis; Great Basin, Nevada-Utah.) (Revision.) (Supersedes Open-file report 93-170.)

P 1409-F. NEVADA. Ground-water flow and simulated effects of development in Paradise Valley, a basin tributary to the Humboldt River in Humboldt County, Nevada, by D. E. Prudic and M. E. Herman. 1996. p. F1-F92. (Regional Aquifer-System Analysis; Great Basin, Nevada-Utah.)

P 1416-D. Hydrology of the Mississippi River valley alluvial aquifer, south-central United States, by D. J. Ackerman. 1996. p. D1-D56. 8 plates in separate case. (Regional Aquifer-System Analysis; Gulf Coastal Plain.) (Supersedes Open-file report 90-358.)

P 1416-G. Regional stratigraphy and subsurface geology of Cenozoic deposits, Gulf Coastal Plain, south-central United States, by R. L. Hosman. 1996. p. G1-G35. 14 plates in separate case. (Regional Aquifer-System Analysis; Gulf Coastal Plain.) (Supersedes Open-file report 91-66.)

P 1422-B. Estimated hydrologic characteristics of shallow aquifer systems in the Valley and Ridge, the Blue Ridge, and the Piedmont physiographic provinces based on analysis of streamflow recession and base flow, by A. T. Rutledge and T. O. Mesko. 1996. p. B1-B58. (Regional Aquifer-System Analysis; Appalachian Valley and Piedmont)

P 1438. OREGON, IDAHO, WASHINGTON. Geology of the Blue Mountains region of Oregon, Idaho, and Washington; petrology and tectonic evolution of pre-Tertiary rocks of the Blue Mountains region, edited by T. L. Vallier, U.S. Geological Survey; and H. C. Brooks, Oregon Department of Geology and Mineral Industries. 1995. 540 p.

1. Petrology of the Canyon Mountain Complex, eastern Oregon, by W. P. Leeman, H. G. Avé Lallemant, Rice University; D. C. Gerlach, Charles Evans and Associates, Redwood City, Cal-



- ifornia; J. F. Sutter, U.S. Geological Survey; and R. J. Arculus, Australian National University. p. 1-43.
2. A closer look at the Bald Mountain Batholith, Elkhorn Mountains, and some comparisons with the Wallowa Batholith, Wallowa Mountains, northeastern Oregon, by W. H. Taubeneck, Oregon State University. p. 45-123.
  3. Petrology of pre-Tertiary igneous rocks in the Blue Mountains region of Oregon, Idaho, and Washington; implications for the geologic evolution of a complex island arc, by T. L. Vallier, U.S. Geological Survey. p. 125-209.
  4. High-pressure, low-temperature schistose rocks of the Baker Terrane, northeastern Oregon, by E. M. Bishop, Union, Oregon. p. 211-219.
  5. Mafic and ultramafic rocks of the Baker Terrane, eastern Oregon, and their implications for terrane origin, by E. M. Bishop, Union, Oregon. p. 221-245.
  6. Tectonic implications of U-Pb zircon ages of the Canyon Mountain Complex, Sparta Complex, and related metaplutonic rocks of the Baker Terrane, northeastern Oregon, by N. W. Walker, Brown University. p. 247-269.
  7. Pre-Cretaceous tectonic evolution of the Blue Mountains Province, northeastern Oregon, by H. G. Avé Lallemant, Rice University. p. 271-304.
  8. Pre-Tertiary deformation in the Desolation Butte Quadrangle, northeastern Oregon, by J. G. Evans, U.S. Geological Survey. p. 305-330.
  9. The Bourne and Greenhorn subterrane of the Baker Terrane, northeastern Oregon; implications for the evolution of the Blue Mountains island-arc system, by M. L. Ferns and H. C. Brooks, Oregon Department of Geology and Mineral Industries. p. 331-358.
  10. An  $^{40}\text{Ar}/^{39}\text{Ar}$  chronicle of the tectonic development of the Salmon River suture zone, western Idaho, by L. W. Snee, Karen Lund, J. F. Sutter, U.S. Geological Survey; D. E. Balcer, Chevron USA; and K. V. Evans, U.S. Geological Survey. p. 359-414.
  11. Geology of the northern part of the Ironside Mountain inlier, northeastern Oregon, by P. R. Hooper, M. D. Houseman, J. E. Beane, G. M. Caffrey, K. R. Engh, J. V. Scrivner, and A. J. Watkinson, Washington State University. p. 415-455.
  12. Petrology and deformation history of the Burnt River Schist and associated plutonic rocks in the Burnt River Canyon area, northeastern Oregon, by R. P. Ashley, U.S. Geological Survey. p. 457-495.
  13. Gravity studies of an island-arc/continent suture zone in west-central Idaho and southeastern Washington, by G. B. Mohl and R. L. Theissen, Washington State University. p. 497-515.
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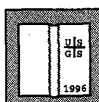
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- OF 87-0495-B. Palinspastic thickness map of the Paleogene sequence of the Circum-Borneo region, Southeast Asia, by Keith Robinson. Prepared in cooperation with the U.S. Geological Survey World Energy Resources Program, International Union of Geological Sciences, Committee for Co-ordination of Joint Prospecting for Mineral Resources in Asian Offshore Areas (CCOP), and Circum-Pacific Map Project of the Circum-Pacific Council. 1987. 1 over-size sheet, scale 1:2,000,000 (1 inch = about 32 miles). (NC, Da, M.)
- OF 87-0495-C. Palinspastic paleogeographic map of the Paleogene sequence of the Circum-Borneo region, Southeast Asia, by Keith Robinson. Prepared in cooperation with the U.S. Geological Survey World Energy Resources Program, International Union of Geological Sciences, Committee for Co-ordination of Joint Prospecting for Mineral Resources in Asian Offshore Areas (CCOP), and Circum-Pacific Map Project of the Circum-Pacific Council. 1987. 1 over-size sheet, scale 1:2,000,000 (1 inch = about 32 miles) (NC, Da, M.)
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- The USGS/EPA state radon potential assessments; an introduction, by L. C. Gundersen, R. R. Schumann and S. W. White. p. 1-18.
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- OF 95-0765. FLORIDA. Analysis of tests of subsurface injection,  
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 Okeechobee County, Florida, by Vicente Quiñones-Aponte, Kevin  
 Kotun and J. F. Whitley. Prepared in cooperation with the South  
 Florida Water Management District. 1996. 32 p. (NC, Da, M,  
 Wb; USGS, WRD, Suite 3015, 227 North Bronough St.,  
 Tallahassee, FL 32301; Libraries of the State Univ. System of  
 Florida at Boca Raton, Gainesville, Jacksonville, Miami, Orlando,  
 Pensacola, Tallahassee (2), and Tampa, FL.)
- OF 95-0768. NEW MEXICO. Listings of model input and se-  
 lected output values for the simulation of ground-water flow near  
 Los Alamos, north-central New Mexico, by P. F. Frenzel. 1995.  
 6 p., one 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da,  
 M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200,  
 Albuquerque, NM 87110-3929.)
- OF 95-0769. TENNESSEE. Ground-water-quality data for se-  
 lected wells in the Beaver Creek watershed, West Tennessee, by  
 S. D. Williams. Prepared in cooperation with the Tennessee De-  
 partment of Environment and Conservation. 1996. 30 p. (NC,  
 Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville,  
 TN 37203; 1013 North Broadway, Knoxville, TN 37917; and  
 AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2,  
 Memphis, TN 38120.)
- OF 95-0770. FLORIDA. Reconnaissance of water quality at four  
 swine farms in Jackson County, Florida, 1993, by J. J. Collins.  
 Prepared in cooperation with the Florida Department of Environ-  
 mental Protection. 1996. 33 p. (NC, Da, M, Wb; USGS, WRD,  
 Suite 3015, 227 North Bronough St., Tallahassee, FL 32301;



- Libraries of the State Univ. System of Florida at Boca Raton, Gainesville, Jacksonville, Miami, Orlando, Pensacola, Tallahassee (2), and Tampa, FL.)
- OF 95-0771. ILLINOIS. Traveltime and reaeration characteristics for Salt Creek basin in northeastern Illinois, June-October 1995, by M. J. Turner. Prepared in cooperation with the Illinois Environmental Protection Agency. 1996. 14 p. (NC, Da, M, Wb.)
- OF 95-0772. ARIZONA. Activities of the Water Resources Division in Arizona, 1995-96, compiled by J. R. Marie, E. K. van de Vanter and C. L. Moss. 1996. 69 p. (NC, Da, M, S, U, Wb; USGS, WRD, 375 South Euclid Ave., Tucson, AZ 85719-6644; 1940 South 3rd Ave., Yuma, AZ 85364; 1545 West University Dr., Tempe, AZ 85281; and 2255 North Gemini Dr., Bldg. 3, Flagstaff, AZ 86001.)
- OF 95-0773. NEW MEXICO. Chemical analyses of ground-water samples from the Rio Grande Valley in the vicinity of Albuquerque, New Mexico, October 1993 through January 1994, by D. W. Wilkins, J. L. Schlottmann and D. M. Ferree. Prepared in cooperation with the City of Albuquerque Public Works Department. 1996. 27 p. (NC, Da, M, Wb; USGS, WRD, 4501 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110-3929.)
- OF 95-0774. ARKANSAS. Sampling and analysis plan-quality assurance project plan for site investigations and RCRA facility investigations at the Fort Chaffee facility, Fort Chaffee, Arkansas, by P. D. Hays and G. P. Stanton. Prepared in cooperation with the U.S. Army, Fort Chaffee Environmental Branch. 1996. 126 p. (NC, Da, M, Wb.)
- OF 95-0775. NORTH CAROLINA. Bibliography of selected water-resources publications by the U.S. Geological Survey for North Carolina, 1886-1995, by M. D. Winner, Jr. 1996. 104 p. (NC, Da, M, Wb; USGS, WRD, 3916 Sunset Ridge Rd., Raleigh, NC 27607.)
- OF 95-0776. CALIFORNIA. Summary of suspended-solids concentration data, San Francisco Bay, California, water year 1994, by P. A. Buchanan, D. H. Schoellhamer and R. C. Shepline. Prepared in cooperation with the San Francisco Regional Water Quality Control Board, the U.S. Army Corps of Engineers, and the Interagency Ecological Program. 1996. 48 p. (NC, Da, M, Wb; USGS, WRD, 2800 Cottage Way, Room W-2233, Sacramento, CA 95825; and 5735 Kearny Villa Rd., Suite O, San Diego, CA 92123.)
- OF 95-0777. A guide to safe field operations, by D. K. Yobbi, T. H. Yorke and R. T. Mycyk. 1996. 29 p. (NC, Da, M, Wb.)
- OF 95-0800. CALIFORNIA. Preliminary geologic map of the Newhall 7.5' Quadrangle, Southern California; a digital database, compiled by R. F. Yerkes and R. H. Campbell. 1995. 8 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0801. CALIFORNIA. Preliminary geologic map of the Piru 7.5' Quadrangle, Southern California; a digital database, compiled by R. F. Yerkes and R. H. Campbell. 1995. 8 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0802. CALIFORNIA. Preliminary geologic map of the Fillmore 7.5' Quadrangle, Southern California; a digital database, compiled by R. F. Yerkes and R. H. Campbell. 1995. 8 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0804-A. COLORADO. Regional sampling of waters and sediments variably impacted by mine drainage in the Denver West 1:100,000 Quadrangle, October, 1994; preliminary data, compiled by S. A. Asher-Bolinder. 1995. 25 p. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 95-0804-B. COLORADO. Regional sampling of waters and sediments variably impacted by mine drainage in the Denver West 1:100,000 Quadrangle, October, 1994; preliminary data, compiled by S. A. Asher-Bolinder. 1995. One 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- The database can also be downloaded via "anonymous ftp" from a USGS system named [greenwood.cr.usgs.gov](http://greenwood.cr.usgs.gov) (136.177.48.5). The files are located in a directory named `pub/open-file-reports/ofr-95-0804`. The data are presented as two spreadsheet computer files created in Microsoft Excel, version 5.0, saved as Lotus 1-2-3 worksheets, `dwwat.wk 1` and `dwsed.wk 1`, plus a `read1.st.txt` file.
- OF 95-0805-A. Time drill; an introduction to geologic time, by K. P. Purcell. 1995. 47 p. (NC, Da, M.)
- OF 95-0805-B. Time drill; an introduction to geologic time, by K. P. Purcell. 1995. One 3 1/2 inch diskette. (NC, Da, M.)
- Requirements: An Apple Macintosh computer with a high-density disk drive and HyperCard 2.0 software. At least 3MB of RAM with 1.5MB of system memory available for HyperCard is recommended for use with Apple's system 7 operating system.
- OF 95-0806. MASSACHUSETTS. Description and calibration results of an in-situ suspended matter sampler; the McLane water transfer system, by R. R. Rendigs and J. A. Commeau. 1995. 32 p. (NC, Da, M.)
- OF 95-0807. Icelandic-English glossary of selected geoscience terms, by R. S. Williams, Jr. 1995. 31 p. (NC, Da, M.)
- OF 95-0808. COLORADO. Secondary mineralogy of altered rocks, Summitville Mine, Colorado, by M. J. Flohr, R. G. Dillenburg, G. L. Nord, Jr. and G. S. Plumlee. 1995. 27 p. (NC, Da, M, U.)
- OF 95-0811. CALIFORNIA. Bench mark descriptions and photographs for Global Positioning System (GPS) stations in the vicinity of Mt. Shasta and Medicine Lake, California, by K. M.



- Yamashita and D. E. Wieprecht. 1995. 27 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0813. CALIFORNIA. Hydrologic effects associated with the January 17, 1994 Northridge, California, earthquake, by E. G. Quilty, C. D. Farrar, D. L. Galloway, S. N. Hamlin, R. J. Laczniak, E. A. Roeloffs, M. L. Sorey and D. E. Woodcock. 1995. 47 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 95-0814-A,B. CALIFORNIA. The Hayward Fault, we can't ignore it; a video tape; Part 1, Faults, earthquake history and Hayward Fault tour, and Part 2, Fault creep, earthquake hazards and the future, by S. E. Hirschfeld and F. W. Klein. 1995. 6 p. VHS videotape. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0815. CALIFORNIA. A proposal to upgrade the Northern California seismic network, by D. H. Oppenheimer. 1995. 31 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 95-0816. NEVADA. Re-examination of rock geochemistry in the Copper Canyon area, Lander County, Nevada, by B. B. Kotlyar, T. G. Theodore and R. C. Jachens. 1995. 47 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)
- OF 95-0817-A. Bibliography of well-log applications; annual update, October 1, 1994 to September 30, 1995, by S. E. Prenskey. 1995. 136 p. (NC, Da, M.)
- OF 95-0817-B. Bibliography of well-log applications; annual update, October 1, 1994 to September 30, 1995, by S. E. Prenskey. 1995. One 3 1/2 inch Macintosh-compatible diskette. (NC, Da, M.)
- The database can be downloaded via "anonymous ftp" from a USGS system named [greenwood.cr.usgs.gov](http://greenwood.cr.usgs.gov) (136.177.48.5). The file is located in a directory named [pub/open-file-reports/ofr-95-817](http://pub/open-file-reports/ofr-95-817). The data are in Microsoft Word 5.1 for Mac format.
- OF 95-0817-C. Bibliography of well-log applications; annual update, October 1, 1994 to September 30, 1995, by S. E. Prenskey. 1995. One 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da, M.)
- The database can be downloaded via "anonymous ftp" from a USGS system named [greenwood.cr.usgs.gov](http://greenwood.cr.usgs.gov) (136.177.48.5). The file is located in a directory named [pub/open-file-reports/ofr-95-817](http://pub/open-file-reports/ofr-95-817). The data are in WordPerfect 5.1 format.
- OF 95-0818. COLORADO. Stratigraphic study of Elk Park wetland, Gilpin County, Colorado, by E. D. McCafferty and D. E. Owen. 1996. 12 p., 1 over-size sheet. (NC, Da, M, U; Vicki J. Cowart, Colorado Geol. Surv., 1313 Sherman St., Room 715, Denver, CO 80203; Donald Fawcett, Office of the State Engineer, Ground Water Sect., 1313 Sherman St., Room 818, Denver, CO 80203.)
- OF 95-0819. OREGON. Onshore-offshore wide-angle seismic recording in October 1994 near Cape Blanco, Oregon, by T. M. Brocher, M. J. Davis, S. H. Clark, Jr. and E. L. Geist. 1995. 69 p. (NC, Da, M, S; Oregon Dep. of Geol. and Mineral Industries, Suite 965, 800 NE Oregon St. #28, Portland, OR 97232.)
- OF 95-0823. ALASKA. Kinematic and subsidence modeling of the north-central Brooks Range and North Slope of Alaska, by F. E. Cole, K. J. Bird, Jaime Toro, François Roure and D. G. Howell. 1995. 4 p., 3 over-size sheets, scale 1:500,000 (1 inch = about 8 miles). (NC, Da, M, A, S; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513; Alaska Dep. of Natural Resources, Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645.)
- OF 95-0824. FLORIDA. Preliminary analysis of integrated stratigraphic data from the Phred #1 corehole, Indian River County, Florida, by S. D. Weedman, T. M. Scott, L. E. Edwards, G. L. Brewster-Wingard and J. C. Libarkin. Prepared in cooperation with the Florida Geological Survey, Tallahassee, Florida. 1995. 63 p. (NC, Da, M.)
- OF 95-0825. OKLAHOMA. Results of geophysical investigations near the Norman, Oklahoma, municipal landfill, 1995, by J. E. Lucius and R. J. Bisdorf. 1995. 125 p. (NC, Da, M; Oklahoma Geol. Surv., Univ. of Oklahoma, 830 Van Vleet Oval, Room 163, Norman, OK 73019.)
- OF 95-0826. CALIFORNIA, NEVADA. Some fluid-inclusion measurements for geothermal drill holes in California, Nevada, El Salvador, and Russia, by K. E. Bargar. 1995. 14 p. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 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 95-0827. CALIFORNIA. Preliminary geologic map of the Moorpark 7.5' Quadrangle, Southern California, by R. F. Yerkes and R. H. Campbell. 1995. 10 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0828. CALIFORNIA. Preliminary geologic map of the Simi Quadrangle, Southern California, by R. F. Yerkes and R. H. Campbell. 1995. 10 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)
- OF 95-0829. CALIFORNIA. Preliminary geologic map of the Santa Susana Quadrangle, Southern California, by R. F. Yerkes





and R. H. Campbell. 1995. 12 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 95-0830. CALIFORNIA. Response of U.S. Geological Survey creepmeters in Central California to the October 18, 1989, Loma Prieta earthquake, by K. S. Breckenridge and R. W. Simpson. 1995. 63 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 95-0831. Preliminary compilation of descriptive geoenvironmental mineral deposit models, edited by E. A. du Bray. 1995. 272 p. (NC, Da, M.)

Geoenvironmental models of mineral deposits; fundamentals and applications, by G. S. Plumlee and J. T. Nash. p. 1-9.

Bioavailability of metals, by D. A. John and J. S. Leventhal. p. 10-18.

Geophysical methods in exploration and mineral environmental investigations, by D. B. Hoover, D. P. Klein and D. C. Campbell. p. 19-27.

Magmatic sulfide deposits, by M. P. Foose, M. L. Zientek and D. P. Klein. p. 28-38.

Serpentine- and carbonate-hosted asbestos deposits, by C. T. Wrucke. p. 39-46.

Carbonatite deposits, by P. J. Modreski, T. J. Armbrustmacher and D. B. Hoover. p. 47-49.

Th-rare earth element vein deposits, by T. J. Armbrustmacher, P. J. Modreski, D. B. Hoover and D. P. Klein. p. 50-53.

Sn and (or) W skarn and replacement deposits, by J. M. Hammarstrom, J. E. Elliott, B. B. Kotlyar, T. G. Theodore, J. T. Nash, D. A. John, D. B. Hoover and D. H. Knepper, Jr. p. 54-61.

Vein and greisen Sn and W deposits, by J. E. Elliott, R. J. Kamilli, W. R. Miller and K. E. Livo. p. 62-69.

Climax Mo deposits, by S. D. Ludington, A. A. Bookstrom, R. J. Kamilli, B. M. Walker and D. P. Klein. p. 70-74.

Porphyry Cu deposits, by L. J. Cox, M. A. Chaffee, D. P. Cox and D. P. Klein. p. 75-89.

Cu, Au, and Zn-Pb skarn deposits, by J. M. Hammarstrom, B. B. Kotlyar, T. G. Theodore, J. E. Elliott, D. A. John, J. L. Doebrich, J. T. Nash, R. R. Carlson, G. K. Lee, K. E. Livo and D. P. Klein. p. 90-111.

Fe skarn deposits, by J. M. Hammarstrom, T. G. Theodore, B. B. Kotlyar, J. L. Doebrich, J. E. Elliott, J. T. Nash, D. A. John and K. E. Livo. p. 112-120.

Polymetallic vein and replacement deposits, by G. S. Plumlee, M. R. Montour, C. D. Taylor, A. R. Wallace and D. P. Klein. p. 121-129.

Au-Ag-Te vein deposits, by K. D. Kelley, T. J. Armbrustmacher and D. P. Klein. p. 130-136.

Volcanic-associated massive sulfide deposits, by C. D. Taylor, R. A. Zierenberg, R. J. Goldfarb, J. E. Kilburn, R. R. Seal, II and M. D. Kleinkopf. p. 137-144.

Blackbird Co-Cu deposits, by K. V. Evans, J. T. Nash, W. R. Miller, M. D. Kleinkopf and D. L. Campbell. p. 145-151.

Creede, Comstock, and Sado epithermal vein deposits, by G. S. Plumlee, K. S. Smith, B. R. Berger, N. K. Foley-Ayuso and D. P. Klein. p. 152-161.

Epithermal quartz-alunite Au deposits, by G. S. Plumlee, K. S. Smith, J. E. Gray and D. B. Hoover. p. 162-169.

Epithermal Mn deposits, by D. L. Mosier and D. L. Campbell. p. 170-173.

Rhyolite-hosted Sn deposits, by E. E. Foord, R. A. Ayuso, D. B. Hoover and D. P. Klein. p. 174-178.

Low-Ti iron oxide Cu-U-Au-REE deposits, by M. P. Foose and V. J. Grauch. p. 179-183.

Sediment-hosted Au deposits, by A. H. Hofstra, J. S. Leventhal, D. J. Grimes and W. D. Heran. p. 184-192.

Almaden Hg deposits, by J. J. Rytuba and D. P. Klein. p. 193-198.

Silica-carbonate Hg deposits, by J. J. Rytuba and M. D. Kleinkopf. p. 199-203.

Stibnite-quartz deposits, by R. R. Seal, II, J. D. Bliss and D. L. Campbell. p. 204-208.

Algoma Fe deposits, by W. F. Cannon, D. G. Hadley and R. J. Horton. p. 209-213.

Sediment-hosted Cu deposits, by D. A. Lindsey, L. G. Woodruff, W. F. Cannon, D. P. Cox and W. D. Heran. p. 214-224.

Sedimentary exhalative Zn-Pb-Ag deposits, by K. D. Kelley, R. R. Seal, II, J. M. Schmidt, D. B. Hoover and D. P. Klein. p. 225-233.

Mississippi valley-type Pb-Zn deposits, by D. L. Leach, J. B. Viets, N. K. Foley-Ayuso and D. P. Klein. p. 234-243.

Solution-collapse breccia pipe U deposits, by K. J. Wenrich, B. S. Van Gosen and W. I. Finch. p. 244-251.

Superior Fe deposits, by W. F. Cannon, D. G. Hadley and R. J. Horton. p. 252-256.

Sedimentary Mn deposits, by E. R. Force, W. F. Cannon and D. P. Klein. p. 257-260.

Low sulfide Au quartz veins, by R. J. Goldfarb, B. R. Berger, T. L. Klein, W. J. Pickthorn and D. P. Klein. p. 261-267.

Stratabound Au in iron-formations, by Ed DeWitt, W. D. Heran and M. D. Kleinkopf. p. 268-272.

OF 95-0833. WASHINGTON. Distribution and taxonomy of diatoms (Bacillariophyta) in surface samples and a two-meter core from Winslow Marsh, Bainbridge Island, Washington, by Eileen Hemphill-Haley and R. C. Lewis. 1995. 105 p. (NC, Da, M, S;





Washington DNR/Geol. and Earth Resources Library, 1111 Washington St. SE, Olympia, WA 98501.)

- OF 95-0835. ALASKA. Revised digital aeromagnetic data for areas in and adjacent to the National Petroleum Reserve area (NPRA), North Slope, Alaska, by V. J. Grauch and Esther Castellanos. 1995. 11 p. (NC, Da, M, A, S; Alaska Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645; U.S. Dep. of the Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513.)

The revised digital data and a brief summary of the text of this report (without figures) can be downloaded via "anonymous ftp" from a USGS system named [greenwood.cr.usgs.gov](http://greenwood.cr.usgs.gov) (136.177.48.5). The files are located in a directory named /pub/open-file-reports/ofr-95-0835 and are all in ASCII format.

- OF 95-0836. ARKANSAS. Geochemical data of alkaline igneous rocks and carbonatites, Potash Sulphur Springs igneous complex, Arkansas, by M. J. Flohr and J. M. Howard. 1995. 13 p. (NC, Da.)

- OF 95-0837. ALABAMA. Rock and soil geochemical and natural-water hydrogeochemical surveys and environmental implications, Fort McClellan, AL, by R. E. Tucker, J. B. McHugh, R. T. Hopkins and B. W. Garland. 1995. 62 p. (NC, Da, M.)

- OF 95-0838. CALIFORNIA. The Monterey submarine canyon, California moored array data report, by K. L. Kinoshita and M. A. Noble. 1995. 121 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 95-0839. HAWAII. K1-95-HW cruise report 1995; preliminary results; Phase III, Sediment chemistry and biological sampling survey, by M. E. Torresan, M. A. Hampton, J. H. Barber, Jr. and F. L. Wong. 1995. 93 p. (NC, Da, M.)

- OF 95-0841. MONTANA. Measured sections and correlations of Mid-Cretaceous rocks near the Lombard Thrust of the Helena Salient in southwestern Montana, by T. S. Dyman, R. G. Tysdal, K. W. Porter and G. A. Thompson. 1995. 8 p. (NC, Da, M, U, S; Montana Bur. of Mines and Geol., Montana Coll. of Mineral Sci. and Technol., Butte, MT 59701.)

- OF 95-0842. Borate deposits, by G. J. Orris. 1995. 57 p. (NC, Da, M.)

- OF 95-0843-A. Arctic delta processes, by T. R. Alpha and Erk Reimnitz. 1995. 27 p. (NC, Da, M.)

- OF 95-0843-B. Arctic delta processes, by T. R. Alpha and Erk Reimnitz. 1995. One 3 1/2 inch DS/HD diskette. (NC, Da, M.)

Requirements; Apple Computer HyperCard 2.2 software, Apple Macintosh computer with high density drive. For system 7, recommend using at least 3MB of RAM with 4500K of memory available for HyperCard.

- OF 96-0002. TEXAS. Map and data for Quaternary faults in West Texas and adjacent parts of Mexico, by E. E. Collins, J. A. Raney, M. N. Machette, K. M. Haller and R. L. Dart. 1996. 74 p., 1 over-size sheet, scale 1:500,000 (1 inch = about 8 miles). (NC, Da, M; Bur. of Economic Geol., Univ. of Texas at Austin, University Station, Box X, Austin, TX 78713-7508.)

- OF 96-0003. ALASKA. Surficial geologic map of the Anchorage A-8 NE Quadrangle, Alaska, by H. R. Schmoll, L. A. Yehle and Ernest Dobrovolsky. 1996. 49 p., 2 over-size sheets, scale 1:25,000 (1 inch = about 2,000 feet). (NC, Da, M, A, S; Alaska Div. of Geol. and Geophys. Surv., 794 University Ave., Suite 200, Fairbanks, AK 99709-3645; U.S. Dep. of Interior, Alaska Resource Library, 701 C St., Box 36, Anchorage, AK 99513.)

- OF 96-0004. CALIFORNIA. Active-, inactive-, and abandoned-mine information and selected geochemical data for the State of California, by J. L. Ryder. 1996. Two 3 1/2 inch DS/HD diskettes. (NC, Da, M; California Dep. of Conservation, Div. of Mines and Geol., Mail Stop 14-34, Library, 801 K St., Sacramento, CA 95814-3532; 185 Berry St., Suite 210, San Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

Minimum requirements: IBM-PC compatible computer with a minimum of 48MB of hard drive disk space for copying and unarchiving these files and software capable of importing dBase (.DBF) formatted files up to 38MB in size.

- OF 96-0006. ARIZONA. Geologic map of the Silver Bell and West Silver Bell mountains, southern Arizona, by D. A. Sawyer. 1996. 21 p., 1 over-size sheet, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, U; Bur. of Geol. and Mineral Technol., 845 North Park Ave., Tucson, AZ 85719.)

- OF 96-0007. GSMCAD, a new program that combines the functions of the GSMAP and GSMEDIT programs and is compatible with Microsoft Windows and ARC/INFO, by V. S. Williams, G. I. Selner and R. B. Taylor. 1996. One 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da, M.)

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- OF 96-0261. CALIFORNIA. Shallow P- and S- wave velocities at eleven aftershock recording stations of the Northridge earthquake, San Fernando Valley, California, by R. A. Williams, W. J. Stephenson, J. K. Odum and D. M. Worley. 1996. 10 p. (NC, Da, M; Mines & Geol. Library, Dep. of Conservation, 801 K St., Mail Stop 14-34, Sacramento, CA 95814-3532; California Div. of Mines & Geol., State Office Bldg., 107 South Broadway, Los Angeles, CA 90012; and 185 Berry St., Suite 210, San Francisco, CA 94107.)
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- OF 96-0343. TENNESSEE, KENTUCKY. Base-flow data for the Little West Fork Basin, Fort Campbell, Tennessee and Kentucky, 1993 and 1994, by D. E. Ladd. Prepared in cooperation with the U.S. Department of the Army, Fort Campbell, Directorate of Public Works, Environmental Division. 1996. 28 p. (NC, Da, M, Wb; USGS, WRD, 810 Broadway, Suite 500, Nashville, TN 37203; 1013 North Broadway, Knoxville, TN 37917; and AgriCenter International, 7777 Walnut Grove Rd., Suite LLB2, Memphis, TN 38120.)
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Francisco, CA 94107-1728; and State Office Bldg., 107 South Broadway, Los Angeles, CA 90012.)

OF 96-0510. Cross-well radar in layered sediments, by K. J. Ellefsen. 1996. 24 p. (NC, Da, M.)

OF 96-0512. NEVADA. Thickness and storage capacity of basin fill of the northern part of the Eldorado Valley, Nevada, and the extent of the Boulder City Pluton, by V. E. Langenheim and K. M. Schmidt. 1996. 27 p. (NC, Da, M, U; Nevada Bur. of Mines and Geol., Univ. of Nevada, Reno, NV 89557.)

#### Reports Available Only Through Certain USGS Field Offices

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

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OF 94-0533. Documentation of AIR3D, an adaptation of the ground-water-flow code MODFLOW to simulate three-dimensional air flow in the unsaturated zone, by C. J. Joss and A. L. Baehr. 1994. 164 p., one 3 1/2 inch DS/HD IBM-compatible diskette. (NC, Da, M, Wb.) †Arthur Baehr, USGS, WRD, Mountain View Office Park, 810 Bear Tavern Rd., Suite 206, West Trenton, NJ 08628; telephone 609-771-3978 or 609-771-3900.

OF 96-0033-A. VERMONT. Digital bedrock geologic map of the Rochester Quadrangle, Vermont, by G. J. Walsh and C. K. Falta. 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 0567-0301; telephone 802-241-3488.

OF 96-0033-B. VERMONT. Digital bedrock geologic map of the Rochester Quadrangle, Vermont, by G. J. Walsh and C. K. Falta. 1996. Two 3 1/2 inch DS/HD IBM compatible diskettes. (NC, Da, M.) †Vermont Agency of Natural Resources, Vermont Geol. Surv., 103 South Main St., Center Bldg., Office of Information Management Services, Waterbury, VT 0567-0301; telephone 802-241-3488.

Includes digital files developed on an IBM-compatible personal computer using PC ARC/INFO version 3.4D Plus.

OF 96-0052-B. VERMONT. Digital bedrock geologic map of the Saxtons River 7.5 × 15 minute Quadrangle, Vermont, by N. M. Ratcliffe and T. R. Armstrong. Prepared in cooperation with the Vermont Geological Survey. 1996. Four 3 1/2 inch DS/HD IBM-compatible diskettes. (NC, Da, M.) †Vermont Agency of Natural Resources, Vermont Geol. Surv., 103 South Main St., Center Bldg., Office of Information Management Services, Waterbury, VT 05671-0301; telephone 802-241-3488.



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Multicolor geologic maps on topographic bases in 7 1/2- or 15-minute quadrangle units; scales mainly 1:24,000 or 1:62,500; show bedrock, surficial, or engineering geology. Maps are accompanied by brief texts and some maps by structure and columnar sections also.

GQ-1747. CALIFORNIA. Geologic map of the Point Dume Quadrangle, Los Angeles County, California, by R. H. Campbell, B. A. Blackerby, R. F. Yerkes, J. E. Schoellhamer, P. W. Birke-land and C. M. Wentworth. Prepared in cooperation with Los Angeles County, California. 1996. Lat 34° to 34°07'30", long 118°45' to 118°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 57 by 45 inches (in color).

GQ-1760. COLORADO. Geologic map of the Ophir Quadrangle, San Juan, San Miguel, and Dolores counties, Colorado, by R. G. Luedke. 1996. Lat 37°45' to 37°52'30", long 107°45' to 107°52'30", Scale 1:24,000 (1 inch = 2,000 feet). Sheet 48 by 41 inches (in color).

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Maps on topographic or planimetric bases; various scales; show results of surveys using geophysical techniques, such as gravity, magnetic, seismic, or radioactivity, which reflect subsurface structures that are of economic or geologic significance. Many maps are correlated with the geology.

GP-0998-B. OKLAHOMA. Bouguer and isostatic residual gravity anomaly and derivative maps of the Lawton area, southwestern Oklahoma, by Meridee Jones-Cecil and S. L. Robbins. 1996. Two sheets. Sheet 1, lat 34°30' to 35°05', long 98°00' to 99°15'; sheet 2, lat 34°30' to 35°05', long 98°22'30" to 99°15'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 58 by 41 inches; sheet 2, 34 by 57 inches (both in color).

GP-1016. ALASKA. Bouguer gravity map of interior Alaska, by J. F. Meyer, Jr., R. W. Saltus, D. F. Barnes and R. L. Morin. Prepared in cooperation with the State of Alaska, Division of Oil and Gas. 1996. Two sheets. Sheet 1, lat 61° to 66°, long 151°30' to 159°; sheet 2, lat 61° to 66°, long 144° to 151°30'. Each sheet,



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I-1088. HAWAII. Geologic map of the crater section of Haleakala National Park, Maui, Hawaii, by G. A. Macdonald. 1978 (1996). Lat 20°42'30" to 20°45', long 156°10' to 156°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 32 by 22 inches (in color). (Accompanied by 8-page text.) (Reprint.)

I-1257-N. CALIFORNIA. Map showing vegetation map in San Mateo County, California, by S. W. Buechel and A. F. Wagner. 1996. Lat 37°06' to 37°43', long 122°04'30" to 122°33'15". Scale 1:62,500 (1 inch = about 1 mile). Sheet 35 by 50 inches (in color).

I-1898-D. MAINE, NEW HAMPSHIRE, VERMONT. Geologic map of the Sherbrooke-Lewiston area, Maine, New Hampshire, and Vermont, United States, and Quebec, Canada, by R. H. Moench, G. M. Boone, W. A. Bothner, E. L. Boudette, N. L. Hatch, Jr., A. M. Hussey III, and R. G. Marvinney; *with* contributions to geochronology by J. N. Aleinikoff. Prepared in cooperation with the Maine Geological Survey and the New Hampshire Geological Survey. 1995. Two sheets. Sheet 1, lat 44° to 46°, long 70° to 72°. Sheet 1, scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 57 by 41 inches; sheet 2, 47 by 31 inches (all in color). (Accompanied by 56-page text.)

I-2180 (MC-8). Revised shaded relief map and controlled color photomosaic of the Amazonis Quadrangle (MC-8) of Mars, by Anonymous. Prepared for the National Aeronautics and Space Administration. 1996. Two sheets. Lat 0° to 30°, long 135° to 180°. Scale 1:5,000,000 (1 mm = 5 km) at 0° latitude Mercator projection. Sheet 1, 28 by 26 inches; sheet 2, 27 by 20 inches (both in color).

I-2312-C. COLORADO. Geologic map of the Trinchera Ranch Quadrangle, Costilla County, Colorado, by A. R. Wallace. 1996. Lat 37°22'30" to 37°30', long 105°15' to 105°22'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 40 by 39 inches. (Accompanied by 14 page text.)

I-2350 (MC-21). Revised shaded relief map and controlled color photomosaic of the Iapygia Quadrangle (MC-21) of Mars, by Anonymous. Prepared for the National Aeronautics and Space Administration. 1996. 2 sheets. Lat-30° to 0°, long 270° to 315°. Scale 1:5,000,000 (1 mm = 5 km) at 0° latitude Mercator projection. Sheet 1, 28 by 26 inches; sheet 2, 27 by 20 inches (both in color).

I-2352 (MC-22). Revised shaded relief map and controlled color photomosaic of the Tyrrhenum Quadrangle (MC-22) of Mars, by Anonymous. Prepared for the National Aeronautics and Space Administration. 1996. 2 sheets. Lat -30° to 0°, long 225° to 270°.

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I-2353 (MC-24). Revised shaded relief map and controlled color photomosaic of the Phaethontis Quadrangle (MC-24) of Mars, by Anonymous. Prepared for the National Aeronautics and Space Administration. 1996. 2 sheets. Lat -65° to -30°, long 120° to 180°. Scale 1:4,336,000 (1 mm = 4,336 km) at -30° latitude Lambert conformal conic projection. Sheet 1, 34 by 30 inches; sheet 2, 33 by 26 inches (both in color).

I-2364-I. WEST VIRGINIA. Aerial gamma-ray maps of regional surface concentrations of potassium, uranium, and thorium in West Virginia, by K. R. Bond and J. S. Duval. 1995. Lat 37° to 41°, long 77° to 83°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 43 by 38 inches (in color).

I-2398. Geologic maps of the MTM 25062 Quadrangle (digital compilation) and the MTM 25067 Quadrangle (manual compilation), Kasei Valles region of Mars, by M. G. Chapman and K. L. Tanaka. Prepared for the National Aeronautics and Space Administration. 1996. Two sheets. Sheet 1, lat 22.5° to 27.5°, long 60° to 65°; sheet 2, lat 22.5° to 27.5°, long 65° to 70°. Each sheet, scale 1:502,000 (1 mm = 502 m) at 70° long. Sheet 1, 51 by 38 inches; sheet 2, 31 by 31 inches (all in color). (Transverse Mercator projection.)

I-2401-B. ARIZONA, NEW MEXICO. Structure contour map on the Martin Formation (Devonian) in the Sierrita-Mogollon Corridor Study Area, Arizona-New Mexico, by L. J. Cox. 1996. Lat 31°45' to 33°30', long 108°45' to 111°15'. Scale 1:250,000 (1 inch = about 4 miles). Sheet 41 by 51 inches (in color).

I-2430. CALIFORNIA. Geologic map of the west border of the San Joaquin Valley in the Panoche Creek-Cantua Creek area, Fresno and San Benito counties, California, by J. A. Bartow. 1996. Lat 36°22'30" to 36°45', long 120°22'30" to 120°45'. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 46 by 39 inches (in color).

I-2432. Geologic map of the Darvel Quadrangle (MTM 20052, Maja Valles region of Mars), by J. W. Rice, Jr. and R. A. De Hon. Prepared for the National Aeronautics and Space Administration. 1996. Lat 17.5° to 22.5°, long 50° to 55°. Scale 1:502,000 (1 mm = 502 m) at 50° long. Sheet 45 by 39 inches in color. (Transverse Mercator projection.)

I-2441. Geologic/geomorphologic map of the Chryse Planitia region of Mars, by S. L. Rotto and K. L. Tanaka. Prepared for the National Aeronautics and Space Administration. 1995. Lat -20° to 45°, long 10° to 85°. Scale 1:5,000,000 (1 mm = 5 km) at lat 15°N, long 40°W. Sheet 55 by 40 inches (in color). (Accompanied by 10-page text.) (Stereographic projection.)

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I-2461. Map of Mars showing channels and possible paleolake basins, by D. H. Scott, J. M. Dohm and J. W. Rice, Jr. Prepared for the National Aeronautics and Space Administration. 1995. Lat -57° to 57°, long 0° to 360°. Scale 1:30,000,000 (1 mm



- = 30 km) at 0° lat. Sheet 55 by 40 inches (in color). (Mercator projection.)
- I-2471. VIRGINIA, NORTH CAROLINA. Geologic map of the Clarksville South and Tungsten 7.5-minute quadrangles, Virginia and North Carolina, by J. D. Peper, T. W. Clark and K. A. Kanahale. 1996. Lat 36°30' to 36°37'30", long 78°22'30" to 78°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 56 by 39 inches (in color).
- I-2491. SOUTH CAROLINA. Geology of the Clubhouse Crossroads and Osborn quadrangles, Charleston and Dorchester counties, South Carolina, by R. E. Weems and E. M. Lemon, Jr. 1996. Two sheets. Lat 32°45' to 33°, long 80°15' to 80°22'30". Sheet 1, scale 1:24,000 (1 inch = 2,000 feet); sheet 2, scale 1:48,000 (1 inch = 4,000 feet); Sheet 1, 38 by 52 inches; sheet 2, 45 by 32 inches (all in color). (Accompanied by 7-page text.)
- I-2492. WASHINGTON. Geologic map of the Addy area, Stevens County, Washington, by F. K. Miller. 1996. Lat 48°15' to 48°30', long 117°45' to 118°. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 51 by 41 inches (in color).
- I-2493. WASHINGTON. Geologic map of the Empey Mountain area, Stevens County, Washington, by F. K. Miller. 1996. Lat 48° to 48°15', long 117°45' to 118°. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 56 by 38 inches (in color).
- I-2494. ALASKA. Generalized thermal maturity map of Alaska, compiled by M. J. Johnsson and D. G. Howell. 1996. Lat 55° to 70°, long 130° to 170°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 57 by 35 inches (in color).
- I-2497. Geologic map of the Etana region (Jg-1) of Ganymede, by R. J. Wagner, Ralf Jaumann and G. P. Neukum. Prepared for the National Aeronautics and Space Administration. 1995. Lat 90° to 65°, long 0° to 360°. Scale 1:5,000,000 (1 mm = 5 km) at 90° lat. Sheet 36 by 27 inches (in color). (Polar stereographic projection.)
- I-2499. MICHIGAN. Geologic map of the Ontonagon and part of the Wakefield 30'x60' quadrangles, Michigan, by W. F. Cannon, S. W. Nicholson, L. G. Woodruff, C. A. Hedgman and K. J. Schulz. 1995. Lat 46°15' to 47°, long 89° to 90°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 57 by 41 inches (in color).
- I-2503. NEW YORK, VERMONT, NEW HAMPSHIRE. Map showing metallic mineral resource potential of the Glens Falls 1° x 2° Quadrangle, New York, Vermont, and New Hampshire, by J. F. Slack. 1995. Lat 43° to 44°, long 72° to 74°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 39 by 32 inches (in color).
- I-2520. NEVADA. Map showing fault activity in the Yucca Mountain area, Nye County, Nevada, by F. W. Simonds, J. W. Whitney, K. F. Fox, U.S. Geological Survey; A. R. Ramelli, Nevada Bureau of Mines and Geology; J. C. Yount, M. D. Carl, C. M. Menges, U.S. Geological Survey; R. P. Dickerson, Scientific Applications International; and R. B. Scott, U.S. Geological Survey. Prepared in cooperation with the U.S. Department of Energy. 1995. Lat 36°42'30" to 36°55', long 116°22'30" to 116°35'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 54 by 42 inches (in color).
- I-2522. ARIZONA. Breccia-pipe and geologic map of the northwest part of the Hualapai Indian Reservation and vicinity, Arizona, by K. J. Wenrich, G. H. Billingsley and P. W. Huntoon. Prepared in cooperation with the U.S. Bureau of Indian Affairs and the Hualapai Tribe. 1996. Two sheets. Lat 35°45' to 36°07'30", long 113°22'30" to 114°00'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 1, 57 1/2 by 40 inches; sheet 2, 54 1/2 by 40 inches (both in color). (Accompanied by 16 page text.)
- I-2524-A. HAWAII. Geologic map of the Island of Hawaii, compiled by E. W. Wolfe and Jean Morris. 1996. Three sheets. Sheet 1, lat 19°30' to 20°17'30", long 155°22'30" to 156°05'; sheet 2, lat 19°12' to 20°06', long 154°45' to 155°22'30"; sheet 3, lat 18°52'30" to 19°30', long 155°22'30" to 156°05'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 31 by 40 inches; sheet 2, 34 by 44 inches; sheet 3, 31 1/2 by 33 inches (all in color). (Accompanied by 18 page text.)
- I-2524-B. HAWAII. Sample data for the geologic map of the Island of Hawaii, compiled by W. W. Wolfe and Jean Morris. 1996. Three sheets. Sheet 1, lat 19°30' to 20°17'30", long 155°22'30" to 156°05'; sheet 2, lat 19°12' to 20°06', long 154°45' to 155°22'30"; sheet 3, lat 18°52'30" to 19°30', long 155°22'30" to 156°05'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 29 by 41 inches; sheet 2, 32 by 44 inches; sheet 3, 32 by 33 inches (all in color). (Accompanied by 51 page text.)
- I-2525. MONTANA. Geologic map and cross sections of the central and southern Highland Mountains, southwestern Montana, by J. M. O'Neill, M. R. Klepper, H. W. Smedes, D. L. Hanne-man, G. D. Fraser and H. H. Mehnert. 1996. Lat 45°30' to 45°50', long 112°15' to 112°45'. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 58 by 42 inches (in color).
- I-2526. COLORADO. Surficial geologic map of the Rocky Flats environmental technology site and vicinity, Jefferson and Boulder counties, Colorado, by R. R. Shroba and P. E. Carrara. Prepared in cooperation with the U.S. Department of Energy. 1996. Lat 39°52'30" to 39°54'30", long 105°10' to 105°14'. Scale 1:12,000 (1 inch = 1000 feet). Sheet 41 by 30 inches (in color).
- I-2535. NEVADA. Geologic map of the Mount Ichabod area, Elko County, Nevada, by K. B. Ketner, B. L. Murchey, R. G. Stamm and B. R. Wardlaw. 1996. Lat 41°32'30" to 41°37'30", long 115°32'30" to 115°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 26 by 23 inches (in color).
- I-2537. Geologic map of the Río Caura 2° x 3° Quadrangle, Estado Bolívar and Estado Amazonas, Venezuela, by W. E. Brooks, G. B. Sidder, U.S. Geological Survey; A. E. García, Corporación Venezolana de Guayana, Técnica Minera, Venezuela; J. C. Wynn, P. G. Schruben, U.S. Geological Survey; Elis Lugo, Corporación Venezolana de Guayana, Técnica Minera, Venezuela; D. P. Cox, U.S. Geological Survey; Felix Martínez, Haydeé Rincón, Corporación Venezolana de Guayana, Técnica Minera, Venezuela; J. H. Stewart, U.S. Geological Survey; Yasin Estanga, Iris Marcano, Miguel Martínez, Inés Rendón, Iván Rivero, Nelson Rivero, and Urbano Ubencio, Corporación Venezolana de Guayana, Técnica Minera, Venezuela. Prepared in cooperation with the Corporación Venezolana De Guayana, Técnica Minera, C.A. 1996. Lat 4° to 6°, long 63° to 66°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 41 by 57 inches (in color).
- I-2559. ALASKA. Geologic map of the Unalakleet Quadrangle, West-Central Alaska, by W. W. Patton, Jr. and E. J. Moll-Stalcup. 1996. Lat 63° to 64°, long 159° to 162°. Scale 1:250,000



(1 inch = about 4 miles). Sheet 40 by 27 inches (in color). (Accompanied by 39 page text.)

I-2563. IDAHO. Geologic map of adjacent areas in the Hayden Creek and Mogg Mountain quadrangles, Lemhi County, Idaho, by R. G. Tysdal. 1996. Lat 44°42'30" to 44°47'30", long 113°37'30" to 113°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 28 by 34 inches (in color).

I-2583-A. ILLINOIS, INDIANA, KENTUCKY. Map showing seismicity in the vicinity of the lower Wabash Valley, Illinois, Indiana, and Kentucky, by Susan Rhea and R. L. Wheeler. 1996. Lat 36°30' to 39°, long 87° to 89°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 36 by 49 inches (in color). (Accompanied by 14 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-0042. Mineral-resources map of the Circum-Pacific region, southwest quadrant, by W. D. Palfreyman, H. F. Douth, Australian Geological Survey Organisation; R. L. Braithwaite, New Zealand Geological Survey; Masaharu Kamitani, Geological Survey of Japan; D. Z. Piper, T. R. Swint-Iki, U.S. Geological Survey; F. W. McCoy, Associated Scientists at Woods Hole; L. G. Sullivan, Lamont-Doherty Earth Observatory; F. T. Manheim and C. M. Lane-Bostwick, U.S. Geological Survey. Prepared by Circum-Pacific Council for Energy and Mineral Resources. 1996. Lat 70°S to 16°N, long 90°E to 160°W. Scale 1:10,000,000 (1 inch = about 160 miles). Sheet 54 by 41 inches (in color). (Accompanied by 66-page text.)

CP-0044. Mineral-resources map of the Circum-Pacific region, southeast quadrant, by D. José Corvalán, Servicio Nacional de Geología y Minería; P. W. Guild, D. Z. Piper, T. R. Swint-Iki, U.S. Geological Survey; F. W. McCoy, University of Hawaii; L. G. Sullivan, Lamont-Doherty Earth Observatory; F. T. Manheim, C. M. Lane-Bostwick and Gretchen Luepke, U.S. Geological Survey. Prepared by Circum-Pacific Council for Energy and Mineral Resources. 1996. Lat 70°S to 16°N, long 50°W to 166°W. Scale 1:10,000,000 (1 inch = about 160 miles). Sheet 54 by 41 inches (in color). (Accompanied by 30-page text.)

### OIL AND GAS INVESTIGATIONS CHARTS

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

OC-0143. NEW MEXICO, ARIZONA, COLORADO. Regional stratigraphic cross sections of the Gallup Sandstone and associated strata around the San Juan Basin, New Mexico, and parts of adjoining Arizona and Colorado, by C. M. Molenaar, U.S. Geological Survey; Dag Nummedal, Louisiana State University; and W. A. Cobban, U.S. Geological Survey. 1996. Sheet 50 by 41 inches (in color.)

OC-0147-A. MONTANA, WYOMING. Structure-contour maps of the Powder River basin, Montana and Wyoming, by J. E. Fox and D. K. Higley. 1996. Lat 43° to 45°, long 104° to 107°. Scale

1:630,000 (1 inch = about 10 miles). Sheet 57 by 41 inches. (Accompanied by 7-page text.)

OC-0147-B. MONTANA, WYOMING. Isopach maps of the Powder River basin, Montana and Wyoming, by J. E. Fox and D. K. Higley. 1996. Three sheets. Lat 43° to 45°, long 104° to 107°. Each sheet, scale 1:630,000 (1 inch = about 10 miles). Sheet 1, 44 by 39 inches; sheet 2, 56 by 42 inches; sheet 3, 57 by 41 inches.

OC-0148. COLORADO. Correlation of Jurassic San Rafael Group and associated rocks from Slick Rock to La Sal Creek in southwestern Colorado, by R. B. O'Sullivan. 1996. Lat 38° to 38°15', long 108°45' to 109°15'. Sheet 43 by 29 inches.

### MISCELLANEOUS FIELD STUDIES MAPS

Multicolor or black and white maps on topographic or planimetric bases; quadrangle or irregular areas; various scales. Pre-1971 maps show bedrock geology in relation to specific mining or mineral-deposit problems; the majority of post-1971 maps are preliminary black and white maps on various subjects such as environmental studies or Wilderness mineral investigations.

MF-0916. Preliminary map of young faults in the United States as a guide to possible fault activity, compiled by K. A. Howard, J. M. Aaron, E. E. Brabb, M. R. Brock, H. D. Gower, S. J. Hunt, D. J. Milton, W. R. Muehlberger, J. K. Nakata, George Plafker, D. C. Prowell, R. E. Wallace and I. J. Witkind. 1978 (1996). Two sheets. Sheet 1, lat 22° to 48°, long 63° to 128°. Sheet 1, scale 1:5,000,000 (1 inch = about 80 miles). Sheet 1, 41 by 31 inches; sheet 2, 42 by 31 inches. (Reprint.)

MF-1176-I. ALASKA. Mineral resource potential map of the Survey Pass Quadrangle, Brooks Range, Alaska, by D. J. Grybeck, S. W. Nelson, J. B. Cathrall, J. W. Cady and J. R. LeCompte. 1996. Lat 67° to 68°, long 153° to 156°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 44 by 27 inches. (Accompanied by 16-page text.) (Folio of the Survey Pass Quadrangle, Alaska.)

MF-1835-I. Maps showing thickness and limestone-dolostone ratios of selected Paleozoic carbonate units in the northern Midcontinent, U.S.A.; folio of the northern Midcontinent area, compiled by W. P. Pratt and C. J. Wandrey. Prepared in cooperation with the Geological Surveys of Arkansas, Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, Oklahoma, and Wisconsin. 1996. Three sheets. Lat 36° to 46°, long 88° to 100°. Scale 1:1,000,000 (1 inch = about 16 miles). Each sheet 42 by 56 inches (all in color). (Accompanied by 10-page text.)

MF-2144-E. ALASKA. Maps showing mineral resource assessment of the Chandler Lake Quadrangle, Alaska, by S. E. Church, J. S. Kelley and Diedra Bohn. 1996. Lat 68° to 69°, long 150° to 153°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 34 by 44 inches (in color). (Accompanied by 37-page text.)

MF-2155-F. ALASKA. Maps showing the resource assessment of the Port Moller, Stepovak Bay, and Simeonof Island quadrangles, Alaska Peninsula with a section on Geology of the Pyramid porphyry copper deposit, Alaska Peninsula, Alaska by W. H. White, J. S. Christie, M. R. Wolfhard, and F. H. Wilson and a section on Description of the Shumagin epithermal gold vein deposit by W. H. White and L. D. Queen, by F. H. Wilson, W. H. White, R. L. Dettnerman and J. E. Case. 1996. Two sheets. Lat 54°45' to 56°, long 158°20' to 162°. Sheet 1, scale 1:250,000 (1 inch = about 4 miles); sheet 2, scale 1:500,000 (1 inch = about 8





miles). Sheet 1, 38 by 35 inches; sheet 2, 47 by 31 1/2 inches. (Accompanied by 46 page text.)

MF-2226-B. ALASKA. Complete Bouguer and isostatic gravity maps of the Bethel and southern part of the Russian Mission quadrangles, Southwestern Alaska, by R. L. Morin. 1996. Two sheets. Lat 60° to 61°15', long 159° to 162°. Each sheet, scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 34 by 45 inches; sheet 2, 28 by 30 inches (all in color). (Folio of the Bethel area.)

MF-2285. VIRGINIA, NORTH CAROLINA. Geologic map of the Bracey 7.5-minute Quadrangle, Mecklenburg County, Virginia, and Warren County, North Carolina, by P. E. Sacks. 1996. Lat 36°30' to 36°37'30", long 78°07'30" to 78°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 33 inches (in color).

MF-2286. VIRGINIA, NORTH CAROLINA. Geologic map of the South Hill SE 7.5-minute Quadrangle, Mecklenburg and Brunswick counties, Virginia, and Warren County, North Carolina, by P. E. Sacks. 1996. Lat 36°30' to 36°37'30", long 78° to 78°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 43 by 32 inches (in color).

MF-2287. VIRGINIA, NORTH CAROLINA. Geologic map of the Gasburg 7.5-minute Quadrangle, Brunswick County, Virginia, and Warren, Northampton, and Halifax counties, North Carolina, by P. E. Sacks. 1996. Lat 36°30' to 36°37'30", long 77°52'30" to 78°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 48 by 34 inches (in color).

MF-2288. VIRGINIA, NORTH CAROLINA. Geologic map of the Valentines 7.5-minute Quadrangle, Brunswick and Greensville counties, Virginia, and Northampton and Halifax counties, North Carolina, by P. E. Sacks. 1996. Lat 36°30' to 36°37'30", long 77°45' to 77°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 44 by 34 inches.

MF-2293. MONTANA. Photogeologic and reconnaissance geologic map of the Hathaway NW and Butterfly Creek quadrangles, Custer and Rosebud counties, Montana, by R. B. Colton, J. L. Klockenbrink, S. L. Durst, M. S. Ellis, U.S. Geological Survey; and E. L. Heffern, U.S. Bureau of Land Management. 1996. Lat 46°22'30" to 46°30', long 106° to 106°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 40 by 31 inches.

MF-2294. COLORADO. Reconnaissance geologic map of the Cucharas Pass Quadrangle, Huerfano and Las Animas counties, Colorado, by D. A. Lindsey. 1996. Lat 37°15' to 37°22'30", long 105° to 105°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 41 by 33 inches (in color).

MF-2298. CALIFORNIA. Geologic map of the Tar Spring Ridge Quadrangle, San Luis Obispo County, California, by Hugh McLean. 1995. Lat 35°07'30" to 35°15', long 120°22'30" to 120°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 50 inches.

MF-2299. OREGON. Geologic map of the Beaverdam Creek Quadrangle, Baker County, Oregon, by J. G. Evans. 1995. Lat 44°30' to 44°37'30", long 118° to 118°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 34 inches. (Accompanied by 17-page text.)

MF-2300. SOUTH CAROLINA. Geologic map of the Savannah River Site, Aiken, Allendale, and Barnwell counties, South Carolina, by D. C. Prowell. 1996. Lat 33° to 33°25', long 81°25' to

81°50'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 40 by 50 inches (in color). (Accompanied by 7-page text.)

MF-2301. MONTANA. Photogeologic and reconnaissance geologic map of the Smith Creek and Smith Creek NE quadrangles, Rosebud County, Montana, by R. B. Colton, J. L. Klockenbrink, M. S. Ellis, M. A. Grout, U.S. Geological Survey; and E. L. Heffern, U.S. Bureau of Land Management. Prepared in cooperation with the U.S. Bureau of Land Management and the Montana Bureau of Mines and Geology. 1996. Lat 46°07'30" to 46°15', long 106°30' to 106°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 32 inches.

MF-2302. MONTANA. Photogeologic and reconnaissance geologic map of the Griffin Coulee and Griffin Coulee SW quadrangles, Rosebud and Treasure counties, Montana, by R. B. Colton, M. S. Ellis, D. A. Coates, U.S. Geological Survey; E. L. Heffern, P. R. Bierbach, U.S. Bureau of Land Management; J. L. Klockenbrink, and M. A. Grout, U.S. Geological Survey. Prepared in cooperation with the U.S. Bureau of Land Management and the Montana Bureau of Mines and Geology. 1996. Lat 46° to 46°07'30", long 106°45' to 107°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 32 inches.

MF-2303. MONTANA. Photogeologic and reconnaissance geologic map of the Mitchell Coulee and Crain Place quadrangles, Rosebud County, Montana, by R. B. Colton, M. S. Ellis, J. L. Klockenbrink, M. A. Grout, U.S. Geological Survey; and E. L. Heffern, U.S. Bureau of Land Management. Prepared in cooperation with the U.S. Bureau of Land Management and the Montana Bureau of Mines and Geology. 1996. Lat 46° to 46°07'30", long 106°15' to 106°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 32 inches.

MF-2304. MONTANA. Photogeologic and reconnaissance geologic map of the Sheep Creek Camp and McKerlich Creek quadrangles, Rosebud County, Montana, by R. B. Colton, M. S. Ellis, J. L. Klockenbrink, S. L. Durst, U.S. Geological Survey; and E. L. Heffern, U.S. Bureau of Land Management. Prepared in cooperation with the U.S. Bureau of Land Management and the Montana Bureau of Mines and Geology. 1996. Lat 46° to 46°07'30", long 106°30' to 106°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 32 inches.

MF-2305. MONTANA. Photogeologic and reconnaissance geologic map of the Rosebud Buttes and Indian Creek quadrangles, Rosebud County, Montana, by R. B. Colton, M. S. Ellis, J. L. Klockenbrink, M. A. Grout, U.S. Geological Survey; E. L. Heffern, and P. R. Bierbach, U.S. Bureau of Land Management. Prepared in cooperation with the U.S. Bureau of Land Management and the Montana Bureau of Mines and Geology. 1996. Lat 46°07'30" to 46°15', long 106°15' to 106°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 31 inches.

MF-2306. WASHINGTON. Geologic map of the Doe Mountain 15' Quadrangle, Okanogan County, Washington, by V. R. Todd. 1995. Lat 48°30' to 48°45', long 120° to 120°15'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 44 by 31 inches. (Accompanied by 17-page text.)

MF-2308. COLORADO. Geologic map of the Banta Ridge Quadrangle, Rio Blanco County, Colorado, by M. P. Pantea and L. J. Schmitt. 1996. Lat 39°52'30" to 40°, long 108°52'30" to 109°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 38 by 29 inches.



MF-2309. OHIO, MICHIGAN. Map showing bedrock-surface topography of the Toledo area, northwestern Ohio and southeastern Michigan, by G. L. Shideler, B. D. Stone, U.S. Geological Survey; and G. E. Larsen, Ohio Department of Natural Resources. Prepared in cooperation with the Ohio Division of Geological Survey and the Michigan Geological Survey Division. 1996. Lat 41°30' to 42°, long 83° to 84°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 56 by 30 inches.

MF-2312-A. COLORADO. Geologic map of the Trinchera Peak Quadrangle, Costilla, Huerfano, and Las Animas counties, Colorado, by A. R. Wallace and D. A. Lindsey. 1996. Lat 37°15' to 37°22'30", long 105°07'30" to 105°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 33 inches.

MF-2312-B. COLORADO. Geologic map of the Ojito Peak Quadrangle, Costilla County, Colorado, by A. R. Wallace and S. J. Soulliere. 1996. Lat 37°15' to 37°22'30", long 105°15' to 105°22'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 41 by 40 inches.

MF-2313. COLORADO, KANSAS, OKLAHOMA, TEXAS. Map showing petroleum exploration intensity and production in major Cambrian to Ordovician reservoir rocks in the Anadarko Basin, by M. E. Henry and T. C. Hester. 1996. Three sheets. Lat 35° to 39°, long 98° to 103°. Sheet 1, 57 by 41 inches; sheet 2, 57 by 38 1/2 inches; sheet 3, 49 1/2 by 38 1/2 inches.

MF-2314. COLORADO. Geologic map of the Gillam Draw Quadrangle, Rio Blanco County, Colorado, by B. E. Barnum and W. J. Hail, Jr. 1996. Lat 40° to 40°07'30", long 108°37'30" to 108°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 34 inches.

MF-2315. MONTANA. Photogeologic and reconnaissance geologic map of the Box Canyon Coulee and Sand Buttes quadrangles, Rosebud County, Montana, by R. B. Colton, M. S. Ellis, J. L. Klockenbrink, S. L. Durst, U.S. Geological Survey; and E. L. Heffern, U.S. Bureau of Land Management. Prepared in cooperation with the U.S. Bureau of Land Management and the Montana Bureau of Mines and Geology. 1996. Lat 46°22'30" to 46°30', long 106°15' to 106°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 32 inches.

MF-2319. ALASKA. Geologic map of the Craig, Dixon Entrance, and parts of the Ketchikan and Prince Rupert quadrangles, Southeastern Alaska, compiled by D. A. Brew. 1996. Lat 54°30' to 56°, long 131°30' to 134°40'. Scale 1:250,000 (1 inch = about 4 miles). Sheet 53 by 33 inches. (Accompanied by 53 page text.)

MF-2322. COLORADO, UTAH, NEW MEXICO, ARIZONA. Structure contour map of the Paradox Basin area, Colorado, Utah, New Mexico, and Arizona, compiled by R. B. O'Sullivan. 1996. Lat 36° to 39°, long 108° to 111°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 29 by 37 inches.

## HYDROLOGIC INVESTIGATIONS ATLASES

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

HA-0730-B. CALIFORNIA, NEVADA. Ground water atlas of the United States; Segment 1, California, Nevada, by Michael Planert and J. S. Williams. 1995. p. B1-B28. Lat 32°32' to 41°, long

114° to 124°25'. Various scales. Sheets 18 by 23 inches (all in color).

HA-0730-C. ARIZONA, COLORADO, NEW MEXICO, UTAH. Ground water atlas of the United States; Segment 2, Arizona, Colorado, New Mexico, and Utah, by S. G. Robson and E. R. Banta. 1995. p. C1-C32. Lat 31°20' to 42°, long 103° to 114°40'. Various scales. Sheets 18 by 23 inches (all in color).

HA-0732-A. MARYLAND, NEW JERSEY, PENNSYLVANIA. Hydrogeologic terranes and potential yield of water to wells in the Valley and Ridge physiographic province in Maryland, New Jersey, and Pennsylvania, by E. F. Hollyday, G. E. Hileman, M. A. Smith and D. J. Pavlicek. 1996. 2 sheets. Sheet 2, lat 74°26' to 79°01', long 40°17'30" to 41°42'30". Each sheet 44 by 32 inches (both in color).

HA-0733. SOUTH CAROLINA. Hydrologic aspects of Hurricane Hugo in South Carolina, September 1989, by R. E. Schuck-Kolben and R. N. Cherry. 1995. 3 sheets. Sheet 1, lat 32°37'30" to 32°52'30", long 79°37'30" to 79°52'30"; sheet 2, lat 33°07'30" to 33°22'30", long 79°07'30" to 79°15'; sheet 3, lat 33°37'30" to 33°45', long 78°45' to 78°52'30". Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 42 by 33 inches; sheet 2, 42 by 33 inches; sheet 3, 37 1/2 by 28 inches.

HA-0735-A. MISSOURI. Delineation of flooding within the upper Mississippi River basin; flood of July 30, 1993, in Jefferson City and vicinity, Missouri, by T. W. Alexander. 1995. Lat 38°32'30" to 38°37'30", long 92°05' to 92°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 31 inches (in color).

HA-0735-B. IOWA. Delineation of flooding within the upper Mississippi River basin, 1993; flood of June 29-September 18, 1993, in Iowa City and vicinity, Iowa, by B. D. Schaap and C. A. Harvey. 1995. Lat 41°33' to 41°45', long 91°28'45" to 91°35'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 44 by 41 1/2 inches (in color).

HA-0735-C. IOWA. Delineation of flooding within the upper Mississippi River basin; flood of June 19-July 31, 1993, in Davenport, Iowa, and vicinity, by B. D. Schaap. 1996. Lat 41°25' to 41°35', long 90°30' to 90°41'15". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 41 1/2 by 42 inches (in color).

HA-0735-D. IOWA. Delineation of flooding within the upper Mississippi River basin; flood of June 18 through August 4, 1993, in Des Moines and vicinity, Iowa, by B. D. Schaap. 1996. 2 sheets. Sheet 1, lat 40° to 45°, long 90° to 95°; sheet 2, lat 41°31' to 41°45', long 93°30' to 93°45'. Sheet 2, scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 30 by 41 inches; sheet 2, 37 by 47 inches (sheet 2 in color).

HA-0736. COLORADO. Geohydrology of the shallow aquifers in the Denver metropolitan area, Colorado, by S. G. Robson. Prepared in cooperation with the U.S. Army, Rocky Mountain Arsenal; U.S. Department of Energy, Rocky Flats Field Office; Colorado Department of Public Health and Environment; Colorado Department of Natural Resources, State Engineers Office; Denver Water Department; Littleton-Englewood Wastewater Treatment Plant; East Cherry Creek Valley Water and Sanitation District; Metro Wastewater Reclamation District; Willows Water District; and Cities of Aurora, Lakewood, and Thornton. 1996. 5 sheets. Lat 39°35' to 39°45', long 104°45' to 105°00'. Each sheet, scale 1:50,000 (1 inch = about 4,200 feet). Each sheet 38 by 45 inches (all in color).



HA-0737. MONTANA. Geology and ground-water resources of the Blackfeet Indian Reservation, northwestern Montana, by M. R. Cannon. Prepared in cooperation with the Blackfeet Water Resources Department. 1996. 2 sheets. Lat 48°15' to 48°45', long 112°55' to 113°30'. Each sheet, scale 1:125,000 (1 inch = about 2 miles). Sheet 1, 46 by 40 inches; sheet 2, 45 by 40 inches (both in color). (Supersedes Open-file report 95-331.)

HA-0738-C. MONTANA, IDAHO. Quality of ground water and surface water in intermontane basins of the Northern Rocky Mountains, Montana and Idaho, by D. W. Clark and D. M. Dutton. 1996. Lat 44° to 49°, long 112° to 116°. Scale 1:750,000 (1 inch = about 12 miles). Sheet 41 by 47 inches (in color).

HA-0694-D. NEVADA, UTAH. Hydrogeology of structurally extended terrain in the eastern Great Basin of Nevada, Utah, and adjacent states, from geologic and geophysical models, by M. D. Dettinger and D. H. Schaefer. Prepared in cooperation with the State of Nevada; Las Vegas Water District; City of North Las Vegas; and Bureau of Reclamation. 1996. Lat 35° to 40°, long 112° to 117°. Sheet 44 by 36 inches (in color).

HA-0694-E. NEVADA, UTAH. Distribution of oil and natural-gas wells in relation to ground-water flow systems in the eastern Great Basin region of Nevada, Utah, and adjacent states, by D. H. Schaefer. 1996. Lat 36° to 42°, long 112° to 120°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 41 by 41 inches (in color).



## OUTSIDE PUBLICATIONS

### ARTICLES AND REPORTS

Articles by U.S. Geological Survey personnel in non-U.S. Geological Survey publications that came to our attention in 1996. Non-U.S. Geological Survey personnel who share authorship in articles with U.S. Geological Survey personnel are indicated by an asterisk (\*) immediately following the name. These publications are not available from the U.S. Geological Survey.

OP-1. K. R. Aalto\*, R. J. McLaughlin, G. A. Carver\*, J. A. Barron, W. V. Sliter and Kristin McDougall\*. CALIFORNIA. Uplifted Neogene margin, southernmost Cascadia-Mendocino triple junction region, California. *Tectonics*. v. 14, no. 5, October 1995. p. 1104-1116.

OP-2. K. R. Aalto\*, Kathy Moley\*, W. Miller, III\* and P. A. McCrory. CALIFORNIA. Evolution of a trench-slope basin within the Cascadia subduction margin; the Neogene Humboldt Basin, California; discussion and reply. *Sedimentology*. v. 43, no. 4, August 1996. p. 761-769.

OP-3. J. M. Aaron. Publishing in a digital world; the past is the key to the future. *Proceedings - Geoscience Information Society, in Changing gateways; the impact of technology on geoscience information exchange; proceedings*. (B. E. Haner, editor and others). 25, 1994. p. 39-44.

OP-4. R. E. Abercrombie\* and J. J. Mori. Occurrence patterns of foreshocks to large earthquakes in the Western United States. *Nature (London)*. v. 381, no. 6580, May 23, 1996. p. 303-307.

OP-5. D. S. Aga and E. M. Thurman. Coupling solid-phase extraction and enzyme-linked immunosorbent assay for ultratrace determination of herbicides in pristine water. *Analytical Chemistry (Washington, DC)*. v. 65, no. 20, October 15, 1993. p. 2894-2898.

OP-6. S. M. Agar\* and K. D. Klitgord. Rift flank segmentation, basin initiation and propagation; a neotectonic example from Lake Baikal. *Journal of the Geological Society of London*. 152, Part 5, September 1995. p. 849-860.

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OP-8. S. T. Algermissen, Edgar Kausel\*, S. L. Hanson and P. C. Thenhaus. Earthquake hazard in Chile. *Revista Geofísica (Mexico, D.F.)*. 37, December 1992. p. 195-218.

OP-9. W. M. Alley. Concepts of understanding regional ground water quality, *in* Protecting ground water; promoting understanding, accepting responsibility, and taking action; proceedings. Washington, DC: Terrene Institute, 1994. p. 20.

OP-10. Y. V. Amelin\*, L. A. Neymark, E. Y. Ritsk\* and A. A. Nemchin\*. Enriched Nd-Sr-Pb isotopic signatures in the Dovyren layered intrusion (eastern Siberia, Russia); evidence for source contamination by ancient upper-crustal material. *Chemical Geology*. v. 129, no. 1-2, June 14, 1996. p. 39-69.

OP-11. E. R. Anderman\*, E. P. Poeter\* and M. C. Hill. Presentation and evaluation of a new multi-stage parameter estimation method using advective transport observations. IAHS-AISH Publication, *in* Proceedings of the ModelCARE'96 conference on Calibration and reliability in groundwater modelling. (Karel Kovar, editor and others). 237, 1996. p. 179-188.

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OP-13. M. T. Anderson. SOUTH DAKOTA. Use of hydrologic budgets and hydrochemistry to determine ground-water and surface-water interactions for Rapid Creek, western South Dakota, *in* Groundwater management. (R. J. Charbeneau, editor). New York, NY: American Society of Civil Engineers, 1995. p. 145-150.

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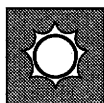
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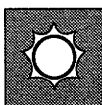
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- OP-22. William Back, E. R. Landa and L. Meeks\*. Bottled water, spas, and early years of water chemistry. *Ground Water*. v. 33, no. 4, August 1995. p. 605-614.
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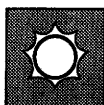
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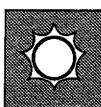


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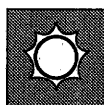
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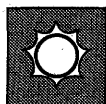
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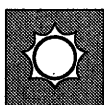
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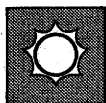
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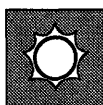
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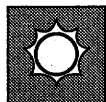


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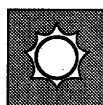




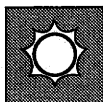
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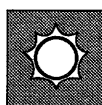
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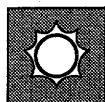
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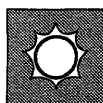
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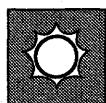
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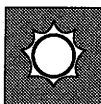
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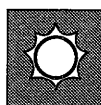
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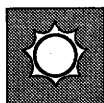
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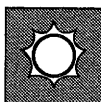
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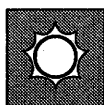
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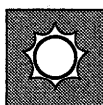


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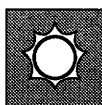




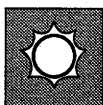
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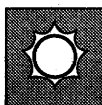
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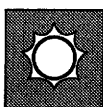
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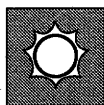
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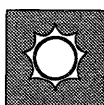


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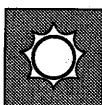




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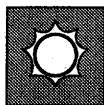
## ABSTRACTS

Abstracts are condensed but informative summaries of presentations made at meetings of scientific and professional organizations. Typically they summarize the principal conclusions of an author's current work but contain little supporting data. Non-U.S. Geological Survey personnel who share authorship in abstracts with U.S. Geological Survey personnel are indicated by an asterisk (\*) immediately following the name. **These publications are not available from the U.S. Geological Survey.**

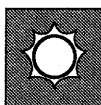
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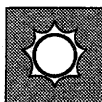


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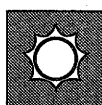




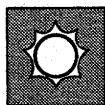
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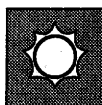
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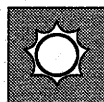
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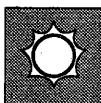
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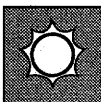
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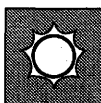




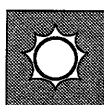
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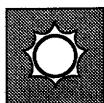
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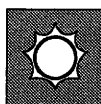
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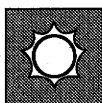
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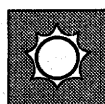


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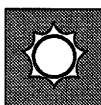




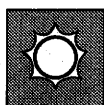
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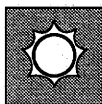
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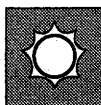
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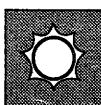


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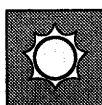




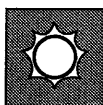
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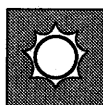
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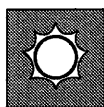
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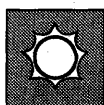


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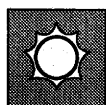
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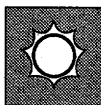
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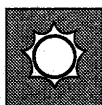
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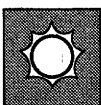




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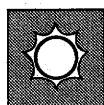
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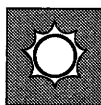
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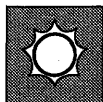
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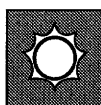
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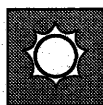


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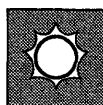
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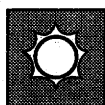
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## ABBREVIATIONS USED

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

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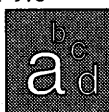
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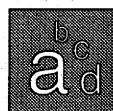
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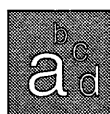
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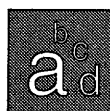
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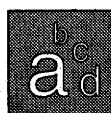


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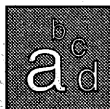
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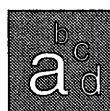
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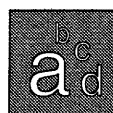
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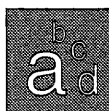
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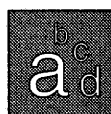
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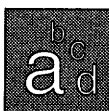
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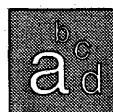
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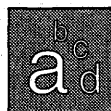
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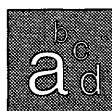
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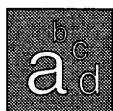
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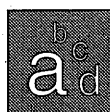
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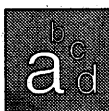
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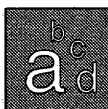
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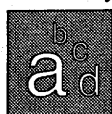
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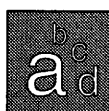
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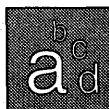
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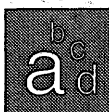
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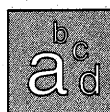
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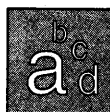
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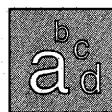
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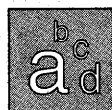
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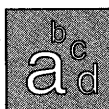
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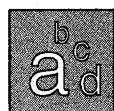
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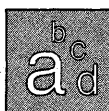
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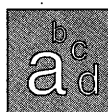
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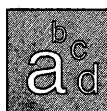
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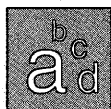
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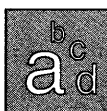
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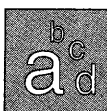
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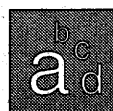
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## AUTHORS

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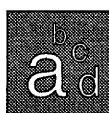
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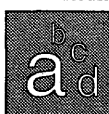
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