

Publications of the U.S. Geological Survey, 1987

DEPARTMENT OF THE INTERIOR



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DONALD PAUL HODEL, *Secretary*

U.S. GEOLOGICAL SURVEY

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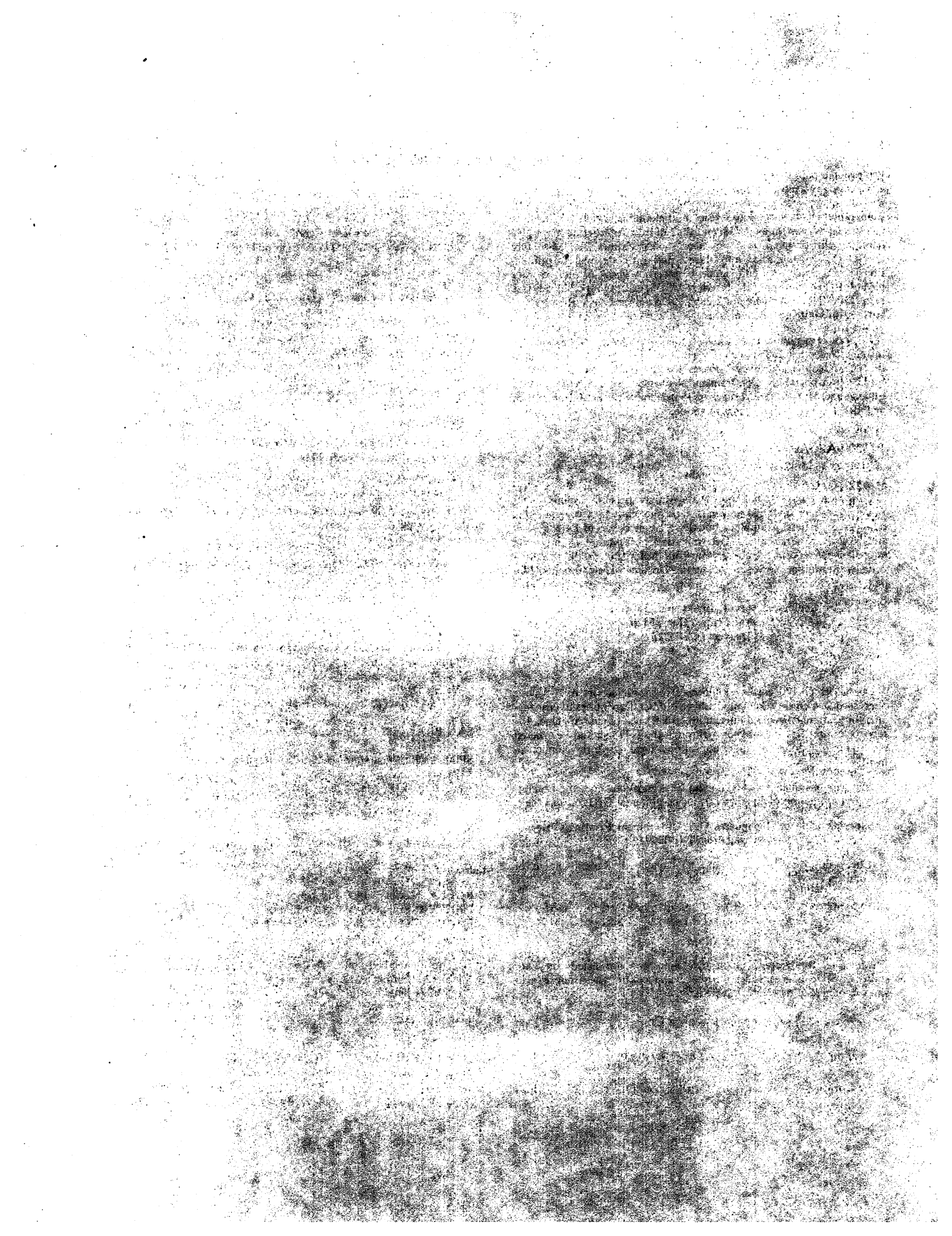
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- C 1011. The National Geographic Names Data Base; Phase II instructions, by D. J. Orth, and R. L. Payne. 1987. 133 p. (Supersedes Open-file report 84-36.)
- C 1015. CALIFORNIA. A review of circulation and mixing studies of San Francisco Bay, California, by L. H. Smith. 1987. 38 p.
- C 1020. National Geologic Mapping Program; goals, objectives and long-range plans. 1987. 29 p.

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

- TWI 03-B2. Introducción a la hidráulica de aguas subterráneas; un texto programado para auto-enseñanza (Introduction to ground-water hydraulics; a programed text for self-instruction), by G. D. Bennett; translated by Victor Ricaldi and M. V. Avendaño. 1987. 167 p. (Spanish edition; English text printed in 1976, reprinted in 1978 and 1985.)
- TWI 03-B5. Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems; an introduction, by O. L. Franke, T. E. Reilly, and G. D. Bennett. 1987. 15 p. (Supersedes Open-file report 84-458.)
- TWI 03-B6. The principle of superposition and its application in ground-water hydraulics, by T. E. Reilly, O. L. Franke, and G. D. Bennett. 1987. 28 p. (Supersedes Open-file report 84-459.)
- TWI 05-A3. Methods for the determination of organic substances in water and fluvial sediments, edited by R. L. Wershaw, M. J. Fishman, R. R. Grabbe, and L. E. Lowe. 1987. 80 p. (Revision.) (Supersedes Open-file report 82-1004.)

YEARBOOKS

- United States Geological Survey yearbook, fiscal year 1985. 1986. 144 p.

Periodicals

EARTHQUAKES AND VOLCANOES

For a complimentary copy write to Earthquakes and Volcanoes, U.S. Geological Survey, 904 National Center, Reston, VA 22092.

- Earthquakes and Volcanoes, v. 18, no. 1. 1986. p. 1-72.
- Earthquakes and Volcanoes, v. 18, no. 2. 1986. p. 73-108.
- Earthquakes and Volcanoes, v. 18, no. 3. 1986. p. 109-144.
- Earthquakes and Volcanoes, v. 18, no. 4. 1986. p. 145-180.
- Earthquakes and Volcanoes, v. 18, no. 5. 1986. p. 181-220.
- Earthquakes and Volcanoes, v. 18, no. 6. 1986. p. 221-240.

Earthquakes and Volcanoes, v. 19, no. 1. 1987. p. 1-36.

PRELIMINARY DETERMINATION OF EPICENTERS

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

Single copies of monthly issues may be purchased only from U.S. Geological Survey, Books and Open-File Reports, Federal Center, Box 25425, Denver, CO 80225.

Preliminary determination of epicenters. Monthly listing for June 1986. 28 p.

Preliminary determination of epicenters. Monthly listing for July 1986. 36 p.

Preliminary determination of epicenters. Monthly listing for August 1986. 24 p.

Preliminary determination of epicenters. Monthly listing for September 1986. 20 p.

Preliminary determination of epicenters. Monthly listing for October 1986. 28 p.

Preliminary determination of epicenters. Monthly listing for November 1986. 24 p.

Preliminary determination of epicenters. Monthly listing for December 1986. 20 p.

Preliminary determination of epicenters. Monthly listing for January 1987. 28 p.

Preliminary determination of epicenters. Monthly listing for February 1987. 24 p.

Preliminary determinations of epicenters. Monthly listing for March 1987. 28 p.

Preliminary determination of epicenters. Monthly listing for April 1987. 24 p.

Preliminary determination of epicenters. Monthly listing for May 1987. 24 p.

Miscellaneous and Special Books

GEOGRAPHIC NAMES INFORMATION SYSTEM (GNIS)

The Geographic Names Information System currently consists of approximately two million name entries with information about the feature name and category and its geographic location by coordinates, county, and USGS topographic maps. The name file was developed from published 7.5-minute topographic maps. In areas where 7.5-minute maps have not been published, 15-minute maps or 1:250,000-scale maps provided basic name data.

Alphabetical listings are available for each State, territory and outlying area. These preliminary gazetteers list only those names found on the topographic maps of the U.S. Geological Survey. Two topical listings are available: a national listing of populated places and an abridged version of all States, territories and outlying areas, which contains about 40,000 populated places, other administrative places, and major physical features. Many of these files are also available in microfiche.

Other computer listings, specialized searches, and computer tapes may also be purchased.

GNIS, developed by Branch of Geographic Names, Office of Geographic and Cartographic Research, National Mapping Division, is the basis for Professional Paper 1200. The first chapter, P-1200-NJ (New Jersey) was published in 1982 (revised 1983). Each State, territory, and outlying area will be published as a separate chapter after further research and compilation. All other Federal sources, most State sources and other pertinent materials as well as historical documents are researched to complete the requirements for the National Names Depository. Additional published gazetteers include Delaware, Kansas and Arizona; and Oregon, South Dakota, North Dakota, Indiana, Iowa and Florida are complete and in

various stages of printing and editing. State files in compilation include Alabama, Mississippi, Massachusetts, Utah, Pennsylvania and Rhode Island. The interim materials described may meet the needs of a wide variety of potential users until all chapters have been published.

Products may be ordered from U.S. Geological Survey, NCIC, 507 National Center, Reston, Virginia 22092. Telephone (703) 860-6045.

Information may be requested from U.S. Geological Survey, Manager GNIS, 523 National Center, Reston, Virginia 22092. Telephone (703) 648-4544.

OTHER SPECIAL BOOKS

Data Users Guides provide information necessary for the successful utilization of several of the various digital data bases made available to the public by the U.S. Geological Survey. Generally they contain detailed information concerning the content, structure, attribute coding, distribution formats, and source materials from which the data are derived. Available from Books and Open-file reports (see p. v for availability by mail).

Information may be requested from U.S. Geological Survey, Manager GNIS, 523 National Center, Reston, Virginia 22092. Telephone (703) 860-6261.

Digital line graphs from 1:24,000-scale maps. 1986. 109 p. (Data Users Guide 1.)

Digital line graphs from 1:100,000-scale maps. 1985. 74 p. (Data Users Guide 2.)

Digital line graphs from 1:2,000,000-scale maps. 1987. 71 p. (Data Users Guide 3.)

Land use and land cover digital data from 1:250,000- and 1:100,000-scale maps. 1986. 36 p. (Data Users Guide 4.)

Geographic Names Information System. 1987. 30 p. (Data Users Guide 6.)

ALASKA. Alaska interim land cover mapping program. 1987. 18 p. (Data Users Guide 7.)

CATALOGS

ALASKA. List of U.S. Geological Survey geologic and water-supply reports and maps for Alaska. 1986. 355 p.

CALIFORNIA. List of U.S. Geological Survey geologic and water-supply reports and maps for California. 1987. 468 p.

FLORIDA. List of U.S. Geological Survey geologic and water-supply reports and maps for Florida. 1986. 76 p.

NEW YORK. List of U.S. Geological Survey geologic and water-supply reports and maps for New York. 1986. 76 p.

Price and availability list of U.S. Geological Survey publications, 1986. 1987. 49 p.

Publications of the U.S. Geological Survey, 1986. 1987. 428 p.

REPORTS AVAILABLE ONLY THROUGH NTIS

The following reports may be obtained from the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. When ordering, please use the NTIS number preceding each item.

PB-88 103 668. MINNESOTA. Analytical results for rock and B-horizon soil samples collected from the Ely greenstone belt, northeastern Minnesota, by H. V. Alminas, D. J. Grimes, and M. L. Tompkins. 1986. Tape.

PB-87 136 883/AS. Feasibility of assigning a probability to the probable maximum flood, prepared by the Work Group on Probable Maximum Flood Risk Assessment under the direction of the Hydrology Subcommittee of the Interagency Advisory Committee on Water Data. 1987. 79 p.

PB-87 137 972/AS. A national data base of nonurban-non-point-source discharges and their effect on the Nation's water quality, by L. P. Gianessi, H. M. Peskin, and C. A. Puffer. 1987. 297 p.

PB-87 142 899. NEVADA. Documentation for a digital computer model of the basin-fill aquifer in Smith Creek valley, Lander County, Nevada, by S. M. Carlton, and J. M. Thomas. 1987. 6 p. (Magnetic tape accompaniment available as PB-87 142 907.) (Inspection copies of the text and magnetic tape are available at USGS, WRD, Room 227, Federal Bldg., 705 North Plaza St., Carson City, NV 89701.)

PB-87 142 907. NEVADA. Documentation for a digital computer model of the basin-fill aquifer in Smith Creek valley, Lander County, Nevada, by S. M. Carlton, and J. M. Thomas. 1987. 1 tape. (Text available as PB-87 142 899.) (Inspection copies of the text and magnetic tape are available at USGS, WRD, Room 227, Federal Bldg., 705 North Plaza St., Carson City, NV 89701.)

WATER-RESOURCES INVESTIGATIONS REPORTS

"Water-Resources Investigations Report" (WRI) in this listing is applied to reports that are of an interpretative nature made available to the public outside the formal USGS publications series. WRI's are not reproduced and distributed in quantity as are formal USGS publications, but are available for public inspection at the indicated depositories.

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

WRI 82-4002. TENNESSEE. Preliminary delineation and description of the regional aquifers in Tennessee; the Central Basin system, by J. V. Brahana, and M. W. Bradley. 1986. 35 p. (NC, Da, M, Wb; USGS, WRD, Room A-413 Federal Bldg., U.S. Courthouse, Nashville, TN 37203.)

WRI 82-4003. WYOMING. Evaluation of selected surface-water-quality stations in Wyoming, by S. J. Rucker, IV, and L. L. DeLong. 1987. 72 p. (NC, Da, M, Wb, T, U; USGS, WRD, Room 4007, 2120 Capitol Ave., Cheyenne, WY 82003.)

WRI 82-4008. WYOMING. Water quality of streams and springs, Green River basin, Wyoming, by L. L. DeLong. 1986. 36 p., 2 over-size sheets. (NC, Da, M, Wb, Db, T, U; USGS, WRD, Room 4007, 2120 Capitol Ave., Cheyenne, WY 82003.)

WRI 82-4054. TENNESSEE. Preliminary delineation and description of regional aquifers of Tennessee; the Highland Rim aquifer system, by J. V. Brahana, and M. W. Bradley. 1986. 38 p. (NC, Da, M, Wb; USGS, WRD, Room A-413 Federal Bldg., U.S. Courthouse, Nashville, TN 37203.)

WRI 82-4091. TENNESSEE. Preliminary delineation and description of the regional aquifers of Tennessee; the East Tennessee aquifer system, by J. V. Brahana, Dolores Mulderink, J. A. Macy, and M. W. Bradley. 1986. 30 p. (NC, Da, M, Wb; USGS, WRD, Room A-413 Federal Bldg., U.S. Courthouse, Nashville, TN 37203.)

- WRI 83-4011. TENNESSEE. Preliminary delineation and description of the regional aquifers of Tennessee; Tertiary aquifer system, by J. V. Brahana, M. W. Bradley, and Dolores Mulderink. 1986. 23 p. (NC, Da, M, Wb; USGS, WRD, Room A-413 Federal Bldg., U.S. Courthouse, Nashville, TN 37203.)
- WRI 83-4039. TENNESSEE. Preliminary delineation and description of the regional aquifers of Tennessee; the Cretaceous aquifer system of West Tennessee, by J. V. Brahana, Dolores Mulderink, and M. W. Bradley. 1986. 20 p. (NC, Da, M, Wb; USGS, WRD, Room A-413 Federal Bldg., U.S. Courthouse, Nashville, TN 37203.)
- WRI 83-4127. WYOMING. Pesticide data for selected Wyoming streams, 1976-78, by D. L. Butler. 1987. 41 p. (NC, Da, M, Wb, Db, T, U; USGS, WRD, Room 4007, 2120 Capitol Ave., Cheyenne, WY 82003.)
- WRI 83-4199. PUERTO RICO. Water resources of the lower Rio Grande de Manati Valley, Puerto Rico, by Fernando Gomez-Gomez. 1983. (Available only through USGS, WRD, G.P.O. Box 4424, San Juan, PR 00936.)
- WRI 83-4279. NORTH DAKOTA. Hydrologic effects of withdrawal of ground water on the West Fargo aquifer system, eastern Cass County, North Dakota, by C. A. Armstrong. 1985. 28 p., 5 over-size sheets. (NC, Da, M, Wb; USGS, WRD, 821 East Interstate Ave., Bismarck, ND 58501.)
- WRI 84-4061. OHIO. Overview of surface-water quality in Ohio's coal region, by Susan Westover, and Michael Eberle. 1987. 32 p. (NC, Da, M, Wb.)
- WRI 84-4079. WYOMING. Water resources of Weston County, Wyoming, by M. E. Lowry, W. J. Head, J. G. Rankl, and J. F. Busby. 1986. 33 p., 1 over-size sheet. (NC, Da, M, Wb, Db, T, U; USGS, WRD, Room 4007, 2120 Capitol Ave., Cheyenne, WY 82003.)
- WRI 84-4106. MASSACHUSETTS. Exploration for areas suitable for ground-water development, central Connecticut Valley lowlands, Massachusetts, by B. P. Hansen. 1986. 37 p., 1 over-size sheet, scale 1:48,000 (1 inch = 4,000 feet). (NC, Da, M, Wb; USGS, WRD, 150 Causeway St., Suite 1309, Boston, MA 02114-1384.)
- WRI 84-4119. CALIFORNIA. Geohydrology and potential for artificial recharge in the western part of the U.S. Marine Corps Base, Twentynine Palms, California, 1982-83, by J. P. Akers. 1986. 18 p., 2 over-size sheets, scale 1:62,500 (1 inch = about 1 mile). (NC, Da, M, Wb, SF, LA; USGS, WRD, 2800 Cottage Way, Room W-2234, Sacramento, CA 95825; and 5201 Ruffin Rd., Suite F, COC Annex, San Diego, CA 92123.)
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- WRI 84-4148. NEW YORK. Hydrogeology and leachate movement near two chemical-waste sites in Oswego County, New York, by H. R. Anderson, and T. S. Miller. 1986. 37 p. (NC, Da, M, Wb; USGS, WRD, 521 West Seneca St., Ithaca, NY; and 343 U.S. Post Office and Courthouse, Albany, NY 12201.)
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- WRI 84-4158. SOUTH CAROLINA, GEORGIA. Simulated flood discharges and elevations for the Savannah River, South Carolina and Georgia, using an unsteady streamflow model, by B. B. McDonald, and C. L. Sanders, Jr. 1987. 34 p. (NC, Da, M, Wb.)
- WRI 84-4167. WEST VIRGINIA. Traveltime and dispersion of a soluble dye in the South Branch Potomac River, Petersburg to Green Spring, West Virginia, by A. R. Jack. 1986. 14 p. (NC, Da, M, Wb; USGS, WRD, 603 Morris St., Charleston, WV 25301.)
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- WRI 84-4217. Evaluation of regional ground-water quality in relation to land use; U.S. Geological Survey Toxic Waste—Ground-Water Contamination Program, by D. R. Helsel, and S. E. Ragone. 1984. 33 p. (NC, Da, M, Wb.)
- WRI 84-4221. CONNECTICUT. Ground-water availability and water quality at Southbury and Woodbury, Connecticut, by D. L. Mazzaferro. 1986. 105 p., 6 over-size sheets, scale 1:24,000 (1 inch = 2,000 feet). (NC, Da, M, Wb; USGS, WRD, Room 525, Federal Bldg., Hartford, CT 06103.)
- WRI 84-4226. MISSOURI, KANSAS. Quality of stormwater runoff in the Blue River basin, Missouri and Kansas, July-October 1981 and April-July 1982, by D. W. Blevins. 1986. 131 p. (NC, Da, M, Wb; USGS, WRD, 1400 Independence Road, Mail Stop 200, Rolla, MO 65401.)
- WRI 84-4227. UTAH. Hydrologic maps of the Price 30 by 60-minute Quadrangle, Utah, by H. F. McCormack, K. L. Lindskov, and B. J. Stolp. 1984. 4 over-size sheets. (NC, Da, M, Wb, U, Db; USGS, WRD, Room 1016, Administration Bldg., 1745 West 1700 South, Salt Lake City, UT 84104.)
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- WRI 84-4279. WASHINGTON. Geologic, hydrologic, and cultural factors in the selection of sites for the land disposal of wastes in Washington, by N. P. Dion, R. C. Alvord, and T. D. Olson. 1986. 16 p., 12 over-size sheets, scale 1:750,000 (1 inch = about 12 miles). (NC, Da, M, Wb, SF, LA, S; USGS, WRD, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402.)
- WRI 84-4280. SOUTH CAROLINA. Impact of the proposed I-326 crossing on the 500-year flood stages of the Congaree River near Columbia, South Carolina, by C. S. Bennett, III. 1987. 23 p., 3 over-size sheets, scale 1:12,000 (1 inch = 1,000 feet). (NC, Da, M, Wb.)
- WRI 84-4313. NEW YORK. Hydrologic analysis of two head-water lake basins of differing lake pH in the west-central Adirondack Mountains of New York, by P. S. Murdoch, N. E. Peters, and R. M. Newton. 1987. 49 p. (NC, Da, M, Wb; USGS, WRD, P.O. Box 1669, Albany, NY 12201.)
- WRI 84-4326. WASHINGTON. Surficial geology, structure, and thickness of selected geohydrologic units in the Columbia Plateau, Washington, by B. W. Drost, and K. J. Whiteman. 1986. 11 over-size sheets; sheets 2-11, scale 1:500,000 (1 inch = about 8 miles). (NC, Da, M, Wb, SF, LA, S; USGS, WRD, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402; USGS Library, Room 656, West 920 Riverside, Spokane, WA 99201.)
- WRI 84-4335. PENNSYLVANIA. Estimating iron and aluminum content of acid mine discharge from a north-central Pennsylvania coal field by use of acidity titration curves, by A. N. Ott. 1986. 25 p. (NC, Da, M, Wb; USGS, WRD, 228 Walnut St., 4th Floor, Harrisburg, PA 17108.)
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- WRI 84-4356. WYOMING. Wastewater movement near four treatment and disposal sites in Yellowstone National Park, Wyoming, by E. R. Cox. 1986. 81 p. (NC, Da, M, Wb, Db, T, U; USGS, WRD, Room 4007, 2120 Capitol Ave., Cheyenne, WY 82003.)
- WRI 84-4359. LOUISIANA. Map showing generalized potentiometric surface of the Evangeline and equivalent aquifers in Louisiana, 1980, by Angel Martin, Jr., and C. D. Whiteman, Jr. 1985. 1 over-size sheet, scale 1:506,880 (1 inch = 8 miles). (NC, Da, M, Wb, T.)
- WRI 84-4364. Approximate potentiometric surface for the aquifer unit A4, southeastern coastal plain aquifer system of the United States, prior to development, by V. A. Stricker, W. R. Aucott, R. E. Faye, J. S. Williams, and M. J. Mallory. 1985. 1 over-size sheet, scale 1:2,000,000 (1 inch = about 32 miles). (NC, Da, M, Wb; USGS, WRD, 75 Spring St. SW, Suite 772, Atlanta, GA 30303.)
- WRI 84-4365. TENNESSEE. Floods during the summer of 1982 in central and east Tennessee, by R. H. Bingham, and C. R. Gamble. 1986. 3 over-size sheets. (NC, Da, M, Wb; USGS, WRD, Room A-413, Federal Bldg., U.S. Courthouse, Nashville, TN 37203; and 1013 North Broadway, Knoxville, TN 37917.)
- WRI 84-4366. COLORADO. Hydrogeology of and potential mining impacts on strippable lignite areas in the Denver Aquifer, east-central Colorado, by N. E. Driver, and R. S. Williams, Jr. 1986. 39 p. (NC, Da, M, Wb, Db; USGS, WRD, Box 25046, Mail Stop 415, Denver, CO 80225.)
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- WRI 85-4008. PENNSYLVANIA. Statistical analyses of flood frequency, low-flow frequency, and flow duration of streams in the Philadelphia area, Pennsylvania, by Andrew Voytik. 1986. 34 p. (NC, Da, M, Wb; USGS, WRD, 111 Great Valley Parkway, Malvern, PA.)
- WRI 85-4013. NEW YORK. Ground-water assessment of the Montauk area, Long Island, New York, by K. R. Prince. 1986. 103 p., 2 over-size sheets. (NC, Da, M, Wb; USGS, WRD, 5 Aerial Way, Syosset, NY 11791.)
- WRI 85-4014. COLORADO. Hydrologic description of the Tamarack Wildlife Area and vicinity, Logan County, Colorado, and simulated effects of possible water-management activities, by A. W. Burns. 1985. 42 p., 1 over-size sheet. (NC, Da, M, Wb, Db; USGS, WRD, Box 25046, Mail Stop 415, Federal Ctr., Denver, CO 80225.)
- WRI 85-4015. SOUTH DAKOTA. Water resources of Walworth County, South Dakota, by Jack Kume, and Lewis Howells. 1987. 70 p. (NC, Da, M, Wb, Db.)
- WRI 85-4018. WASHINGTON. Reconnaissance of the water resources of the Hoh Indian Reservation and the Hoh River basin, Washington, by W. E. Lum II, *with a section on* Fluvial sediment transport in the Hoh River by L. M. Nelson. 1986. 56 p. (NC, Da, M, Wb, SF, LA, S; USGS, WRD, 1201 Pacific Ave., Suite 600, Tacoma, WA 98402; USGS Library, Room 656, West 920 Riverside, Spokane, WA 99201.)
- WRI 85-4019. Approximate potentiometric surface for the aquifer unit A2, Southeastern Coastal Plain aquifer system of the United States, prior to development, by V. A. Stricker, W. R. Aucott, R. E. Faye, J. S. Williams, and M. J. Mallory. 1985. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 75 Spring St. SW, Suite 772, Atlanta, GA 30303.)
- WRI 85-4023. PENNSYLVANIA. Results of a preimpoundment water-quality study of Swatara Creek, Pennsylvania, by D. K. Fishel, and J. E. Richardson. 1986. 84 p. (NC, Da, M, Wb.)
- WRI 85-4025. Areal and temporal variability of selected water-quality characteristics in two hydrologic-benchmark basins in the Northeastern United States, by R. A. Hainly, and J. R. Ritter. 1986. 22 p. (NC, Da, M, Wb.)

- WRI 85-4028. NEW YORK. Reaeration coefficients of six streams in New York; a comparison of results obtained by a hydrocarbon-gas-tracer method with those obtained by radioactive tracers and predictive equations, by D. A. Stedfast, and R. E. Draper. 1986. 30 p. (NC, Da, M, Wb; USGS, WRD, P.O. Box 1669, 343 U.S. Post Office and Courthouse, Albany, NY 12201.)
- WRI 85-4031. Approximate potentiometric surface for the aquifer unit A3, southeastern coastal plain aquifer system of the United States, prior to development, by V. A. Stricker, W. R. Aucott, R. E. Faye, J. S. Williams, and M. J. Mallory. 1985. 1 over-size sheet, scale 1:2,000,000 (1 inch = about 32 miles). (NC, Da, M, Wb; USGS, WRD, 75 Spring St. SW, Suite 772, Atlanta, GA 30303.)
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- WRI 85-4045. CALIFORNIA. A water-resources data network evaluation for Monterey County, California; Phase 1; South county, by Patricia Showalter, and S. H. Hoffard. 1986. 102 p., 1 over-size sheet. (NC, Da, M, Wb, SF, LA; USGS, WRD, Federal Bldg., Room W-2234, 2800 Cottage Way, Sacramento, CA 95825; and 5201 Ruffin Rd., Suite F, COC Annex, San Diego, CA 92123.)
- WRI 85-4051. NEW YORK. Hydrogeology and ground-water quality of the northern part of the Town of Oyster Bay, Nassau County, New York, in 1980, by Chabot Kilburn, and R. K. Krulik. 1987. 61 p., 6 over-size sheets. (NC, Da, M, Wb; Library, USGS, WRD, P.O. Box 1669, Albany, NY 12201.)
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- OF 86-0399. PUERTO RICO, VIRGIN ISLANDS. Magnetic and bathymetric data from R/V Farnella cruise FRNL 85-4 in the Puerto Rico and U.S. Virgin Islands Exclusive Economic Zone, by K. M. Scanlon. 3 p. (NC, Da, M). (Original records can be seen and studied at the USGS office, Woods Hole, MA 02543. Copies of the seismic-reflection profiles and the sidescan sonographs can be purchased only from the National Geophysical Data Ctr., NOAA-E64, 325 Broadway, Boulder, CO 80303; telephone 303-497-6338.)
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- OF 86-0402. CALIFORNIA. Analytical results and sample locality map of heavy-mineral-concentrate and rock samples from the Funeral Mountains Wilderness Study Area (CDCA-143), Inyo County, California, by B. M. Adrian, J. G. Frisken, L. A. Bradley, P. H. Briggs, and J. G. Crock. 14 p., 1 over-size sheet, scale 1:62,500 (1 inch = about 1 mile). (NC, Da, M, SF, LA; California Dep. of Conservation, Div. of Mines and Geol., Room 1341, Resources Bldg., 1416 9th St., Sacramento, CA 95814; 367 Civic Dr., Pleasant Hill, CA 94523-1997; and State Office Bldg., 107 South Broadway, Room 1065, Los Angeles, CA 90012.)
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- OF 86-0407-W. Forward modeling computer program for the very low frequency, radio-wave, earth-resistivity electromagnetic method; VLF.BAS, by D. G. Grantham, F. P. Haeni, and D. L. Mazzaferro. 35 p., one 5 1/4 inch diskette. (NC, Da, M, Wb; USGS, WRD, 450 Main St., Room 525, Hartford, CT 06103.)
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- OF 86-0424-W. ALASKA. Sediment transport characteristics of selected streams in the Susitna River basin, Alaska, October 1983 to September 1984, by J. M. Knott, S. W. Lipscomb, and T. W. Lewis. 73 p. (NC, Da, M, Wb; USGS, WRD, 4230 University Dr., Suite 201, Anchorage, AK 99508-4664; Room 168, Federal Bldg. and Courthouse, Fairbanks, AK; and Room 441, Federal Bldg., 710 West 9th Ave., Juneau, AK.)
- OF 86-0425. Proceedings of Conference XXXV; a workshop on Earth science considerations for earthquake hazards reduction in the central United States, edited by W. W. Hays and P. L. Gori. 191 p. (NC, Da, M.)
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- OF 87-0450-C. Play analysis of undiscovered oil and gas resources on onshore Federal lands; Phase I, Atlantic Coastal Plain, by Jan Libby-French. 1985. 19 p., 4 over-size sheets. (NC, Da, M.) (Formerly Open-file report 85-269.)
- OF 87-0450-E. KANSAS. Central Kansas Uplift - Cambridge Arch Province oil and gas play summary, by D. K. Higley. 1987. 16 p. (NC, Da, M, Db; Kansas Geol. Surv., 1930 Constant Ave., Campus West, Univ. of Kansas, Lawrence, KS 66046.)
- OF 87-0450-F. Federal Lands Assessment Project (FLAP); Salina Basin Province, Phase I, by S. E. Prensky. 1986. 13 p., 1 over-size sheet. (NC, Da, M.) (Formerly Open-file report 85-581.)
- OF 87-0451. FLORIDA. Potentiometric surface of the upper Floridan Aquifer, west-central Florida, May 1987, by B. R. Lewelling. 1987. 1 over-size sheet, scale 1:500,000 (1 inch = about 8 miles). (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301; and Suite B-5, 4710 Eisenhower Blvd., Tampa, FL.)
- OF 87-0454. Patterns of acid deposition variability in the Eastern United States, 1981-84, by H. F. Lins, K. J. Lanfear, and T. L. Schertz. 1987. 13 p. (NC, Da, M, Wb.)
- OF 87-0458. ARIZONA. Progress report on the ground-water, surface-water, and quality-of-water monitoring program, Black Mesa area, northeastern Arizona, 1987, by G. W. Hill, and J. P. Sottolare. 1987. 29 p. (NC, Da, M, Wb; USGS, WRD, Room 5A, Federal Bldg., 300 West Congress St., Tucson, 85701; 3738 North 16th St., Suite E, Phoenix, AZ; 1940 South 3rd Ave., Yuma, AZ; and 2255 North Gemini Dr., Flagstaff, AZ.)
- OF 87-0459. ARKANSAS. Ground-water levels in Arkansas, spring 1987, by D. A. Freiwald, and Maria Plafcan. 1987. 66 p. (NC, Da, M, Wb.)
- OF 87-0460. MAINE, MASSACHUSETTS, NEW HAMPSHIRE. Flood of April 1987 in Maine, Massachusetts, and New Hampshire, by R. A. Fontaine. 1987. 35 p. (NC, Da, M, Wb; USGS, WRD, 26 Ganneston Dr., Augusta, ME.)
- OF 87-0464. FLORIDA. Potentiometric surface of the upper Floridan Aquifer in the St. Johns River Water Management District and vicinity, Florida, May 1987, by G. R. Schiner. 1987. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, Suite 3015, 227 North Bronough St., Tallahassee, FL 32301; Suites 106/107, 9100 Northwest 36th St., Miami, FL; Suite 216, 80 North Hughey Ave., Orlando, FL 32801; Suite 200, 1851 Executive Center Dr., Jacksonville, FL; and Suite B-5, 4710 Eisenhower Blvd., Tampa, FL.)
- OF 87-0465. IDAHO. Selected water-quality data for the Minidoka Irrigation District, south-central Idaho, June 1987, by H. W. Young, D. J. Parlman, and I. O'Dell. 1987. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 230 Collins Rd., Boise, ID 83702.)
- OF 87-0466. IDAHO. Selected water-quality data for the Murtaugh Lake area, south-central Idaho, June 1987, by D. J. Parlman, and H. W. Young. 1987. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, 230 Collins Road, Boise, ID 83702.)
- OF 87-0476. In-situ stress project; Technical Report Number 5; Interpretation of hydraulic fracturing data from Xiaguan, western Yunnan, China, by M. D. Zoback, J. E. Springer, Zhai Qingshan, B. C. Haimson, M. Y. Lee, and Li Fangquan. 1987. 25 p. (NC, Da, M.)
- OF 87-0477. In-situ stress project; Technical Report Number 6; Results of hydraulic fracturing stress measurements at Jianchuan, western Yunnan Province, China, by B. C. Haimson, J. E. Springer, M. Y. Lee, M. D. Zoback, Li Fangquan, Zhai Qingshan, and Liang Haiqing. 1987. 60 p. (NC, Da, M.)
- OF 87-0485. NEW YORK, VERMONT, NEW HAMPSHIRE. Field trip guidebook to selected metallic mineral deposits in the Glens Falls 1° by 2° Quadrangle, New York, Vermont, and New Hampshire, by J. F. Slack, G. R. Robinson, Jr., and J. M. McLelland. 1987. 37 p. (NC, Da, M; New York State Geol. Surv., 3136 Cultural Education Ctr., Empire State Plaza, Albany, NY 12230.)

OF 87-0534. CALIFORNIA. A review of circulation and mixing studies of San Francisco Bay, California, by L. H. Smith. 1987. 38 p. (NC, Da, M, Wb.)

Reports Available Only Through Certain Geological Survey Field Offices

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

OF 83-0266. KANSAS, OKLAHOMA, MISSOURI. Hydrology of area 40, Western Region, Interior Coal Province, Kansas, Oklahoma and Missouri, by M. V. Marcher, J. F. Kenny, and others. (NC, Da, M, Wb; USGS, WRD, 1950 Ave. A, Campus West, Univ. of Kansas, Lawrence, KS 66044; 215 Dean A. McGee Ave., Room 621, Oklahoma City, OK 73102; and 1400 Independence Road, Mail Stop 200, Rolla, MO 65401.) †A limited number of copies are available from District offices listed above. (Water-Resources Investigations.)

OF 83-0544. ILLINOIS. Hydrology of area 28, Eastern Region, Interior Coal Province, Illinois, by E. E. Zuehls, K. K. Fitzgerald, and C. A. Peters. 87 p. (NC, Da, M, Wb; USGS, WRD, Champaign County Bank Plaza, 102 East Main St., 4th Floor, Urbana IL 61801.) †A limited number of copies of this report are available from USGS, WRD, Champaign County Bank Plaza, 4th Floor, 102 East Main St., Urbana, IL 61801. (Water-Resources Investigations.)

OF 84-0068. UTAH, ARIZONA. Hydrology of area 57, Northern Great Plains and Rocky Mountain coal provinces, Utah and Arizona, by Don Price and others. 87 p. (NC, Da, M, Wb, U, Db; USGS, WRD, Room 1016, Administration Bldg., 1745 West 1700 South, Salt Lake City, UT 84104.) †A limited number of copies of this report are available from USGS, WRD, Room 1016, Administration Bldg., 1745 West 1700 South, Salt Lake City, UT 84104. (Water-Resources Investigations.)

OF 84-0129. OKLAHOMA, ARKANSAS. Hydrology of area 41, Western Region, Interior Coal Province, Oklahoma and Arkansas, by M. V. Marcher, D. L. Bergman, L. J. Slack, and S. P. Blumer. 99 p. (NC, Da, M, Wb.) †USGS, WRD, 215 Dean A. McGee Ave., Room 621, Oklahoma City, OK 73102. (Water-Resources Investigations.)

OF 85-0093. UTAH. Ground-water conditions in the Lake Powell area, Utah, by P. J. Blanchard. 89 p. (NC, Da, M, Wb; USGS, WRD, 1745 West 1700 South, Room 1016 Administration Bldg., Salt Lake City, UT 84104.) †Utah Dep. of Natural Resources, 1636 West North Temple, Salt Lake City, UT 84116.

OF 86-0503. ARIZONA. Rapids of the Colorado River, Grand Canyon, Arizona, by S. W. Kieffer. 1 tape. (NC, Da, M.) (Note: A 20-minute VHS video showing the major rapids and explaining the hydraulics and geomorphology.) †USGS, 2255 North Gemini Drive, Flagstaff, AZ 86001.

MAPS

GEOLOGIC QUADRANGLE MAPS

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

GQ-1592. NEW MEXICO. Geologic map of the Hard Ground Flats Quadrangle, McKinley County, New Mexico, by A. R. Kirk, and R. S. Zech. 1987. Lat 35°37'30" to 35°45', long 108°30' to 108°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 34 by 40 inches. (Supersedes Open-file report 76-859.)

GQ-1593. NEW MEXICO. Geologic map of the Dalton Pass Quadrangle, McKinley County, New Mexico, by A. R. Kirk, and M. W. Sullivan. 1987. Lat 35°37'30" to 35°45', long 108°15' to 108°22'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 37 inches. (Supersedes Open-file reports 76-184 and 76-348.)

GQ-1594. NEW MEXICO. Geologic map of the Big Rock Hill Quadrangle, McKinley County, New Mexico, by A. R. Kirk, and R. S. Zech. 1987. Lat 35°37'30" to 35°45', long 108°37'30" to 108°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 38 inches. (Supersedes Open-file report 78-115.)

GQ-1595. COLORADO. Geologic map of the Handies Peak Quadrangle, San Juan, Hinsdale, and Ouray counties, Colorado, by R. G. Luedke, and W. S. Burbank. 1987. Lat 37°52'30" to 38°, long 107°30' to 107°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 34 by 39 inches.

GQ-1598. PENNSYLVANIA. Geologic map of the Slatedale Quadrangle, Lehigh and Carbon counties, Pennsylvania, by P. T. Lyttle, G. G. Lash, and J. B. Epstein. 1986. Lat 40°37'30" to 40°45', long 75°37'30" to 75°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 37 by 44 inches.

GQ-1599. IDAHO. Geologic map of the Challis Quadrangle, Custer and Lemhi counties, Idaho, by D. H. McIntyre, and S. W. Hobbs. 1987. Lat 44°30' to 44°45', long 114° to 114°15'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 24 by 36 inches. (Supersedes Open-file report 78-1059.)

GQ-1604. COLORADO. Geologic map of the Mt. Axtell Quadrangle, Gunnison County, Colorado, by D. L. Gaskill, J. E. DeLong, Jr., and D. M. Cochran. 1987. Lat 38°45' to 38°52'30", long 107° to 107°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 46 inches. (Accompanied by 7-page text.)

GQ-1605. NEW MEXICO. Geologic map of the Tres Hermanos Peak Quadrangle, Colfax County, New Mexico, by M. H. Staatz. 1987. Lat 36°30' to 36°37'30", long 104°15' to 104°22'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 30 by 42 inches.

GQ-1610. NEW MEXICO. Geologic map of the Alma Quadrangle, Catron County, New Mexico, by B. B. Houser. 1987. Lat 33°22'30" to 33°30', long 108°52'30" to 109°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 37 inches.

GQ-1612. WEST VIRGINIA. Geologic map of the Big Chimney Quadrangle, Kanawha County, West Virginia, by J. F. Windolph, Jr. 1987. Lat 38°22'30" to 38°30', long 81°30' to 81°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 34 by 41 inches.

GQ-1631. WYOMING. Geologic map of the Crowheart NE Quadrangle, Fremont County, Wyoming, by R. C. Warlow, N. L. Hickling, and J. F. Windolph, Jr. 1987. Lat 43°22'30" to 43°30', long 109° to 109°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 34 by 44 inches.

GQ-1636. CALIFORNIA. Geologic map of the Triple Divide Peak Quadrangle, Tulare County, California, by J. G. Moore, and T. W. Sisson. 1987. Lat 36°30' to 36°45', long 118°30' to 118°45'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 27 by 36 inches.

GQ-1642. COLORADO. Geologic map of the Buckhorn Lakes Quadrangle, Gunnison, Montrose, and Ouray counties, Colorado, by R. G. Dickinson. 1987. Lat 38°15' to 38°22'30", long 107°37'30" to 107°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 33 inches.

GQ-1643. COLORADO. Geologic map of the Washboard Rock Quadrangle, Gunnison, Montrose, and Ouray counties, Colorado, by R. G. Dickinson. 1987. Lat 38°15' to 38°22'30", long 107°30' to 107°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 32 inches.

GEOPHYSICAL INVESTIGATIONS MAPS

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

GP-0953-B. Digital colored Bouguer gravity, free-air gravity, station location, and terrain maps for the conterminous United States, by R. W. Simpson, T. G. Hildenbrand, R. H. Godson, and M. F. Kane. 1987. Two sheets. Lat about 25° to about 50°, long about 65° to about 125°. Scale 1:7,500,000 (1 inch = about 118 miles). Sheet 1, 32 by 44 inches; sheet 2, 30 by 44 inches.

GP-0964. Gravity anomaly map of the United States; Part A, Conterminous United States. 1986. Two sheets. Sheet 1, lat 23° to 49°, long 63° to 96°; sheet 2, lat 23° to 49°, long 96° to 129°. Scale 1:2,500,000 (1 inch = about 40 miles). Sheet 1, 42 by 52 inches; sheet 2, 42 by 52 inches. (Available in flat only.)

GP-0966. OHIO. Aerial radiometric color contour maps and composite color map of regional surface concentrations of uranium, potassium, and thorium in Ohio, by J. S. Duval. 1987. Lat about 38°30' to about 42°, long about 80° to about 85°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 42 by 58 inches.

GP-0972. CALIFORNIA, OREGON, WASHINGTON. Gravity anomaly and terrain maps of the Cascade Range, California, Oregon, Washington, and British Columbia, by Carol Finn, D. L. Williams, R. W. Couch, Z. F. Danes, G. S. Pitts, and W. M. Phillips. 1986. Two sheets. Lat about 40° to about 51°, long about 120° to about 125°. Scale 1:2,500,000 (1 inch = about 40 miles). Sheet 1, 27 by 44 inches; sheet 2, 27 by 43 inches.

GP-0974. COLORADO. Interpretive aeromagnetic map using the horizontal gradient; Lake City Caldera area, San Juan Mountains, Colorado, by V. J. Grauch. 1987. Lat about 37°50' to about 38°05', long about 107°15' to about 107°35'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 27 by 51 inches.

GP-0975. Isostatic residual gravity, topographic, and first-vertical derivative gravity maps of the conterminous United States, by R. W. Simpson, R. C. Jachens, R. W. Saltus, and R. J. Blakely. 1986. Two sheets. Lat about 15° to about 50°, long about 70° to about 120°. Scale 1:7,500,000 (1 inch = about 118 miles). Sheet 1, 42 by 48 inches; sheet 2, 39 by 48 inches.

GP-0976. NEVADA. Bouguer and isostatic gravity maps of the Winnemucca 1° by 2° Quadrangle, Nevada, by Alexander Wagini. 1986. Two sheets. Lat 40° to 41°, long 116° to 118°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 27 by 34 inches; sheet 2, 25 by 29 inches. (Supersedes Open-file report 85-516.)

GP-0984. Seismicity map of the conterminous United States and adjacent areas, 1975-1984, by C. W. Stover. 1986. Lat about 23° to about 52°, long about 63° to about 129°. Scale 1:5,000,000 (1 inch = about 80 miles). Sheet 30 by 41 inches.

MISCELLANEOUS INVESTIGATIONS SERIES MAPS

Maps on planimetric or topographic bases; regular and irregular areas; various scales; a wide variety of format and subject matter. The series also includes 7 1/2-minute quadrangle photogeologic maps on planimetric bases which show geology as interpreted from aerial photographs. Series also includes maps of Mars and the Moon.

I-1091-F. ALASKA. Map showing distribution, composition, and age of late Cenozoic volcanic centers in Alaska, by R. G. Luedke, and R. L. Smith. 1986. Three sheets. Sheet 1, lat about 58° to about 67°, long about 157° to about 172°; sheet 2, lat about 53° to about 62°, long about 151° to about 170°; sheet 3, lat about 51° to about 53°, long about 170° to about 172°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 1, 44 by 56 inches; sheet 2, 43 by 48 inches; sheet 3, 43 by 53 inches.

I-1198-D. WASHINGTON. Map showing unconsolidated deposits grouped on the basis of texture, Port Townsend 30' by 60' Quadrangle, Puget Sound region, Washington, compiled by R. D. Miller, and Fred Pessl, Jr. 1986. Lat 48° to 48°30', long 122° to 123°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 36 by 52 inches.

I-1251-J. NORTH CAROLINA, SOUTH CAROLINA. Mineral resource potential for beryllium, molybdenum and niobium in the Charlotte 1° by 2° Quadrangle, North Carolina and South Carolina, by J. E. Gair. 1986. Lat 35° to 36°, long 80° to 82°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 28 by 45 inches.

I-1251-K. NORTH CAROLINA, SOUTH CAROLINA. Mineral resource potential for lithium, kyanite-sillimanite, and barite in the Charlotte 1° by 2° Quadrangle, North Carolina and South Carolina, by J. W. Horton, Jr. 1987. Lat 35° to 36°, long 80° to 82°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 28 by 44 inches.

I-1257-G. CALIFORNIA. Map showing liquefaction susceptibility of San Mateo County, California, by T. L. Youd, and J. B. Perkins. 1987. Lat 37°06' to 37°43', long 122°04'30" to 122°33'15". Scale 1:62,500 (1 inch = about 1 mile). Sheet 40 by 50 inches.

I-1257-H. CALIFORNIA. Map showing predicted seismic-shaking intensities of an earthquake in San Mateo County, California, comparable in magnitude to the 1906 San Francisco earthquake, by J. M. Thompson, and J. F. Evernden. 1986. 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.

- I-1257-I. CALIFORNIA. Maps showing cumulative damage potential from earthquake ground shaking, San Mateo County, California, by J. B. Perkins. 1987. Three sheets. Lat 37°06' to 37°43', long 122°04'30" to 122°33'15". Scale 1:62,500 (1 inch = about 1 mile). Each sheet, 37 by 50 inches. (Accompanied by 17-page text.)
- I-1310-D. NEW MEXICO, ARIZONA. Aeromagnetic map of the Silver City 1° by 2° Quadrangle, New Mexico and Arizona, by D. P. Klein. 1987. Lat 32° to 33°, long 108° to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 30 by 38 inches.
- I-1313-H. VIRGINIA, MARYLAND. Low-flow characteristics and chemical quality of streams in the Culpeper geologic basin, Virginia and Maryland, by D. D. Lynch, E. H. Nuckels, and Chester Zenone. 1987. Two sheets. Lat about 39°15' to about 39°30', long 77°15' to about 78°15'. Scale 1:125,000 (1 inch = about 2 miles). Sheet 1, 37 by 49 inches; sheet 2, 34 by 49 inches.
- I-1579. NEVADA. Geologic map of the Mount Annie NE, Mount Annie, Ramsey Spring, and Mount Annie SE quadrangles, Mineral and Nye counties, Nevada, by E. B. Ekren, and F. M. Byers, Jr. 1986. Lat 38°45' to 39°, long 118° to 118°15'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 31 by 38 inches. (Supersedes Open-file report 78-915.)
- I-1631. UTAH. Geologic map of the Manti 30' by 60' Quadrangle, Carbon, Emery, Juab, Sanpete, and Sevier counties, Utah, by I. J. Witkind, M. P. Weiss, and T. L. Brown. 1987. Lat 39° to 39°30', long 111° to 112°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 38 by 57 inches.
- I-1635 (MC-30 E). Controlled photomosaic of the Mare Australe E Quadrangle of Mars. 1985. Scale 1:2,000,000 (1 inch = about 32 miles). Sheet 24 by 34 inches.
- I-1654. SOUTH DAKOTA. Geologic map of the Medicine Mountain Quadrangle, Pennington County, South Dakota, by J. C. Ratté. 1986. Lat 43°52'30" to 44°, long 103°37'30" to 103°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 30 by 38 inches. (Supersedes Open-file report 80-1083.)
- I-1657. PUERTO RICO. Geologic map of the Mayaguez and Rosario quadrangles, Puerto Rico, by A. F. Curet. 1986. Lat 18°07'30" to 18°15', long 67° to 67°12'30". Scale 1:20,000 (1 inch = about 1,667 feet). Sheet 42 by 57 inches.
- I-1661. WASHINGTON. Geologic map of the Chelan 30' by 60' Quadrangle, Washington, by R. W. Tabor, V. A. Frizzell, Jr., J. T. Whetten, R. B. Waitt, Jr., D. A. Swanson, G. R. Byerly, D. B. Booth, M. J. Hetherington, and R. E. Zartman. 1987. Lat 47°30' to 48°, long 120° to 121°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 40 by 52 inches. (Accompanied by 33-page text.)
- I-1662. ARIZONA. Geologic map and cross sections of the Driest Mountains, southeastern Arizona, by Harald Drewes. 1987. Two sheets. Lat about 31°50' to about 32°02'30", long about 109°52'30" to about 110°02'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 42 by 58 inches; sheet 2, 25 by 44 inches.
- I-1685. ALASKA. Geologic map of the Ugashik, Bristol Bay, and western part of Karluk quadrangles, Alaska, by R. L. Detterman, J. E. Case, F. H. Wilson, and M. E. Yount. 1987. Lat 57° to 58°, long 155° to 158°41'. Scale 1:250,000 (1 inch = about 4 miles). Sheet 34 by 44 inches.
- I-1687. Divisions of potential fracture permeability based on distribution of structures and linear features in sedimentary rocks, Northern Great Plains-Rocky Mountains region of Montana, North Dakota, South Dakota, Wyoming, and northern Nebraska, by M. E. Cooley. 1986. Lat 41° to 49°, long 96° to 114°. Scale 1:1,335,000 (1 inch = about 23 miles). Sheet 33 by 56 inches.
- I-1699. WASHINGTON. Maps showing ground-failure hazards in the Columbia River valley between Richland and Priest Rapids Dam, south-central Washington, by W. H. Hays, and R. L. Schuster. 1987. Two sheets. Lat about 46°15' to about 46°45', long about 119°10' to about 120°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 30 by 54 inches; sheet 2, 30 by 32 inches.
- I-1700. COLORADO. Geologic, biostratigraphic, and structure map of the Pierre Shale between Loveland and Round Butte, Colorado, by G. R. Scott, and W. A. Cobban. 1986. Two sheets. Lat 40°22'30" to 41°, long 104°45' to 105°15'. Scale 1:50,000 (1 inch = 4,150 feet). Sheet 1, 40 by 57 inches; sheet 2, 43 by 57 inches.
- I-1701. NEVADA. Bouguer gravity anomalies, depth to bedrock, and shallow temperature in the Humboldt House geothermal area, Pershing County, Nevada, by D. H. Schaefer. 1986. Sheet 30 by 42 inches.
- I-1705. NEW MEXICO. Geologic and structure contour map of the Springer 30' by 60' Quadrangle, Colfax, Harding, Mora, and Union counties, New Mexico, by G. R. Scott. 1986. Two sheets. Lat 36° to 36°30', long 104° to 105°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 28 by 57 inches; sheet 2, 28 by 43 inches.
- I-1713. Shaded relief and surface markings map of Io; shaded relief map, and controlled photomosaic of Io. 1987. Three sheets. Scale 1:15,000,000 (1 inch = 240 miles). Sheet 1, 32 by 33 inches; sheet 2, 32 by 33 inches; sheet 3, 33 by 34 inches.
- I-1715. NEW JERSEY, PENNSYLVANIA, NEW YORK. Geologic map of the Newark 1° by 2° Quadrangle, New Jersey, Pennsylvania, and New York, by P. T. Lyttle, and J. B. Epstein. 1987. Two sheets. Lat 40° to 41°, long 74° to 76°. Scale 1:250,000 (1 inch = about 4 miles). Each sheet, 33 by 43 inches. (Supersedes Open-file report 78-595.)
- I-1724. WYOMING. Geologic maps of greenstone-granite areas, northern Laramie Mountains, Converse and Natrona counties, Wyoming, by D. J. Gable. 1987. Lat about 42°39' to about 42°47', long about 105°39' to about 106°03'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 39 by 42 inches.
- I-1728. CALIFORNIA. Late Tertiary and Quaternary geology of the Tecopa Basin, southeastern California, by J. W. Hillhouse. 1987. Lat 35°47' to 36°04', long 116°04' to 116°24'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 28 by 32 inches. (Accompanied by 16-page text.)
- I-1730. NEW MEXICO, COLORADO. Geologic map of the Aztec 1° by 2° Quadrangle, northwestern New Mexico and southern Colorado, by Kim Manley, G. R. Scott, and R. A. Wobus. 1987. Lat 36° to 37°, long 106° to 108°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 31 by 44 inches.

- I-1762. UTAH. Map showing surficial units and bedrock geology of the Fort Douglas Quadrangle and parts of the Mountain Dell and Salt Lake City North quadrangles, Davis, Salt Lake, and Morgan counties, Utah, by Richard Van Horn, and M. D. Crittenden, Jr. 1987. Lat 40°45' to 40°52'30", long 111°42'30" to 111°55'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 40 by 55 inches.
- I-1767. NEVADA, CALIFORNIA. Geologic map of the Quaternary and Tertiary deposits of the Big Dune Quadrangle, Nye County, Nevada, and Inyo County, California, by W. C. Swadley, and W. J. Carr. 1987. Lat 36°30' to 36°45', long 116°30' to 116°45'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 33 by 38 inches.
- I-1769. Shaded relief and surface markings of the Osiris Quadrangle of Ganymede; air brush base for the Osiris Quadrangle of Ganymede. 1987. Two sheets. Scale 1:5,000,000 (1 inch = about 80 miles). Sheet 1, 30 by 33 inches; sheet 2, 26 by 33 inches.
- I-1776. CALIFORNIA. Oblique map of Yosemite National Park, central Sierra Nevada, California, by T. R. Alpha, N. K. Huber, and Clyde Wahrhaftig. 1986. Sheet 29 by 37 inches. (Available unfolded only.)
- I-1777. NEW MEXICO. Interpretive geology of the Chaco area, northwestern New Mexico, by J. W. Mytton, and G. B. Schneider. 1987. Lat 36° to about 36°05', long 107°52'30" to 108°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 37 by 47 inches.
- I-1779. Controlled photomosaic of part of the Elysium Mons region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 24 by 38 inches.
- I-1780. Controlled photomosaic of part of the Elysium Mons region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 24 by 38 inches.
- I-1781. Controlled photomosaic of part of the Elysium Mons region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 24 by 38 inches.
- I-1782. Controlled photomosaic of part of the Apollinaris Patera region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 38 inches.
- I-1783. Controlled photomosaic of part of the Apollinaris Patera region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 38 inches.
- I-1784. Controlled photomosaic of part of the Apollinaris Patera region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 38 inches.
- I-1785. Controlled photomosaic of part of the Apollinaris Patera region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 38 inches.
- I-1786. Controlled photomosaic of part of the Kasei Valles region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 25 by 38 inches.
- I-1787. Controlled photomosaic of part of the Kasei Valles region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 26 by 38 inches.
- I-1788. Controlled photomosaic of part of the Kasei Valles region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 26 by 38 inches.
- I-1789. Controlled photomosaic of part of the Kasei Valles region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 26 by 38 inches.
- I-1790. Controlled photomosaic of part of the Kasei Valles region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 25 by 37 inches.
- I-1797-B. COLORADO. Chart showing intertongued units of the Eocene Green River and Uinta formations, northwestern Piceance Creek basin, northwestern Colorado, by W. J. Hail, Jr. 1987. Lat about 40° to about 40°07'30", long about 108°07'30" to about 108°30'. Sheet 28 by 42 inches.
- I-1800. WYOMING. Soils map of the Fremont Lake South Quadrangle, Sublette County, Wyoming, by C. J. Sorenson. 1987. Lat 42°52'30" to 43°, long 109°45' to 109°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 29 by 31 inches.
- I-1801. ALASKA. Quaternary geologic map of the Ugashik, Bristol Bay, and western part of Karluk quadrangles, Alaska, by R. L. Dettnerman, F. H. Wilson, M. E. Yount, and T. P. Miller. 1987. Lat 57° to 58°, long 155° to 158°45'. Scale 1:250,000 (1 inch = about 4 miles). Sheet 32 by 38 inches.
- I-1802-A. Geologic map of the western equatorial region of Mars, by D. H. Scott, and K. L. Tanaka. 1986. Lat -57° to 57°, long 0° to 180°. Scale 1:15,000,000 (1 inch = 240 miles). Sheet 40 by 55 inches.
- I-1808. Shaded relief and surface markings of the Dardanus Sulcus Quadrangle of Ganymede. 1987. Two sheets. Scale 1:5,000,000 (1 inch = about 80 miles). Sheet 1, 28 by 30 inches; sheet 2, 24 by 29 inches.
- I-1809. Controlled photomosaic and shaded relief map of the Amenthes Quadrangle of Mars. 1987. Two sheets. Scale 1:5,000,000 (1 inch = about 80 miles). Sheet 1, 27 by 27 inches; sheet 2, 23 by 24 inches.
- I-1810. Shaded relief and surface markings of the Etana region of Ganymede. 1987. Two sheets. Scale 1:5,000,000 (1 inch = about 80 miles). Sheet 1, 21 by 33 inches; sheet 2, 21 by 26 inches.
- I-1811. Controlled photomosaic of part of the Chasma Boreale region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 23 by 38 inches.
- I-1812. Controlled photomosaic of part of the Chasma Boreale region of Mars. 1986. Two sheets. Scale 1:500,000 (1 mm = 502 m). Sheet 1, 23 by 38 inches; sheet 2, 23 by 34 inches.
- I-1813. ALASKA. Vegetation and land cover, Tetlin National Wildlife Refuge, Alaska. 1987. Lat 62°15' to 63°30', long 141° to 143°30'. Scale 1:250,000 (1 inch = about 4 miles). Sheet 25 by 30 inches.
- I-1814. ALASKA. Reconnaissance geologic map of the Noatak C5, D5, D6 and D7 quadrangles, Alaska, by C. F. Mayfield, Inyo Ellersieck, and I. L. Tailleux. 1987. Lat 67°30' to 68°, long 164° to 165°36'. Scale 1:63,360 (1 inch = 1 mile). Sheet 42 by 58 inches. (Supersedes Open-file report 84-396.)

- I-1816. Shaded relief and surface markings of the Nabu Quadrangle of Ganymede. 1987. Two sheets. Scale 1:5,000,000 (1 inch = about 80 miles). Sheet 1, 30 by 33 inches; sheet 2, 27 by 33 inches.
- I-1817. Shaded relief and surface markings of the Apsu Sulci Quadrangle of Ganymede. 1987. Two sheets. Scale 1:5,000,000 (1 inch = about 80 miles). Sheet 1, 30 by 33 inches; sheet 2, 26 by 33 inches.
- I-1818. Shaded relief and surface markings of the Nun Sulci Quadrangle of Ganymede. 1987. Two sheets. Scale 1:5,000,000 (1 inch = about 80 miles). Sheet 1, 30 by 33 inches; sheet 2, 26 by 33 inches.
- I-1822. Shaded relief and surface markings of Mercury. 1987. Scale 1:10,000,000 (1 inch = about 160 miles). Sheet 30 by 33 inches.
- I-1831. WYOMING, COLORADO. Thermal maturity of hydrocarbon-bearing formations in southwestern Wyoming and northwestern Colorado, by E. A. Merewether, K. B. Krystinik, and M. J. Pawlewicz. 1987. Lat about 40°30' to about 43°, long about 107° to about 111°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 42 by 58 inches.
- I-1834. Controlled photomosaic of part of the Chasma Boreale region of Mars. 1986. Two sheets. Scale 1:500,000 (1 inch = about 8 miles). Each sheet, 25 by 38 inches.
- I-1835. Controlled photomosaic of part of the Chasma Boreale region of Mars. 1986. Two sheets. Scale 1:500,000 (1 inch = about 8 miles). Sheet 1, 23 by 39 inches; sheet 2, 23 by 35 inches.
- I-1836. Controlled photomosaic of part of the Chasma Boreale region of Mars. 1986. Two sheets. Scale 1:500,000 (1 inch = about 8 miles). Sheet 1, 23 by 40 inches; sheet 2, 23 by 33 inches.
- I-1837. Controlled photomosaic of part of the Chasma Boreale region of Mars. 1986. Two sheets. Scale 1:500,000 (1 inch = about 8 miles). Sheet 1, 27 by 39 inches; sheet 2, 25 by 33 inches.
- I-1838. Controlled photomosaic of part of the Planum Australe region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 23 by 38 inches.
- I-1839. Controlled photomosaic of part of the Planum Australe region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 24 by 39 inches.
- I-1840. Controlled photomosaic of part of the Candor Mensa region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 39 inches.
- I-1841. Controlled photomosaic of part of the Candor Mensa region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 38 inches.
- I-1842. Controlled photomosaic of part of the Candor Mensa region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 39 inches.
- I-1843. Controlled photomosaic of part of the Planum Australe region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 39 inches.
- I-1844. Controlled photomosaic of part of the Planum Australe region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 39 inches.
- I-1845. Controlled photomosaic of part of the Planum Australe region of Mars. 1986. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 40 inches.
- I-1855. Indexes of Mars topographic maps published by the U.S. Geological Survey. 1987. Sheet 26 by 37 inches.
- I-1856. Controlled photomosaic of part of the Lunae Planum region of Mars. 1987. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 39 inches.
- I-1857. Controlled photomosaic of part of the Lunae Planum region of Mars. 1987. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 38 inches.
- I-1858. Controlled photomosaic of part of the Planum Australe region of Mars. 1987. Scale 1:500,000 (1 inch = about 8 miles). Sheet 24 by 39 inches.
- I-1859. Controlled photomosaic of part of the Planum Australe region of Mars. 1987. Scale 1:500,000 (1 inch = about 8 miles). Sheet 24 by 39 inches.
- I-1860. Shaded relief and surface markings of the Hathor region of Ganymede. 1987. Two sheets. Scale 1:5,000,000 (1 inch = about 80 miles). Sheet 1, 21 by 33 inches; sheet 2, 21 by 26 inches.
- I-1862. Controlled photomosaic of part of the Lunae Planum region of Mars. 1987. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 38 inches.
- I-1863. Controlled photomosaic of part of the Lunae Planum region of Mars. 1987. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 38 inches.
- I-1864. A-B. Atlas of the U.S. Exclusive Economic Zone, Gulf of Mexico and eastern Caribbean areas. 1987. 162 p., spiral-bound. Scale 1:500,000 (1 inch = about 8 miles). 18 by 22 inches. Chapter A (104 p.), lat about 24° to about 29°, long about 82° to about 96°. Chapter B (58 p.), lat about 15° to about 22°, long about 64° to about 69°.
- I-1865. Mineral resource assessment of the Republic of Costa Rica, by U.S. Geological Survey; Dirección General de Geología, Minas e Hidrocarburos; and Universidad de Costa Rica. 1987. 76 p., spiral-bound. Lat 8° to about 11°15', long 82°30' to 86°. Scale 1:500,000 (1 inch = about 8 miles). 34 by 44 inches.
- I-1868. Controlled photomosaic of part of the Kasei Valles region of Mars. 1987. Scale 1:500,000 (1 inch = about 8 miles). Sheet 26 by 38 inches.
- I-1869. Controlled photomosaic of part of the Kasei Valles region of Mars. 1987. Scale 1:500,000 (1 inch = about 8 miles). Sheet 25 by 38 inches.
- I-1870. Controlled photomosaic of part of the Kasei Valles region of Mars. 1987. Scale 1:500,000 (1 inch = about 8 miles). Sheet 26 by 38 inches.
- I-1872. NEVADA. Map showing surface features induced by underground nuclear explosions at Pahute Mesa, Nevada Test Site, Nye County, Nevada, April 1976 through December 1983, by H. R. Covington. 1987. Lat about 37°08'30" to about 37°23', long 116°15' to about 116°35'30". Scale 1:48,000 (1 inch = 4,000 feet). Sheet 29 by 33 inches.

I-1877. Controlled photomosaic of part of the Planum Australe region of Mars. 1987. Scale 1:500,000 (1 inch = about 8 miles). Sheet 24 by 39 inches.

I-1885. CALIFORNIA. Oblique map showing maximum extent of 20,000-year-old (Tioga) glaciers, Yosemite National Park, central Sierra Nevada, California, by T. R. Alpha, Clyde Wahrhaftig, and N. K. Huber. 1987. Lat about 37°30' to about 38°15', long about 119° to about 120°. Sheet 29 by 40 inches.

I-1889. Controlled photomosaic of part of the Planum Australe region of Mars. 1987. Scale 1:500,000 (1 inch = about 8 miles). Sheet 27 by 39 inches.

I-1941. ARIZONA. Landsat and SPOT image display, Phoenix, Arizona area. 1987. Lat about 33°30' to about 33°33', long about 111°45' to about 111°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 34 by 50 inches.

MISCELLANEOUS INVESTIGATIONS SERIES MAPS MARINE GEOLOGY ATLASES

Data gathered from many source on the Continental Shelf are being analyzed, interpreted, and compiled by the Geological Survey. The results are being published as a marine geology atlas which ultimately will include a wide variety of geologic information that can facilitate mineral and petroleum exploration, development, and monitoring, and serve as an aid in coastal State planning.

I-1182-F. ALASKA. Reconnaissance magnetic anomaly map of the Chukchi Sea and adjacent Northwest Alaska, by C. H. Cramer, S. D. May, W. F. Hanna, Arthur Grantz, and M. L. Holmes. 1986. Lat 65° to 74°30', long about 157° to about 175°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 43 by 55 inches.

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

I-1420 (NG-17). FLORIDA. Quaternary geologic map of the Florida Keys 4° by 6° Quadrangle, United States, State compilation by T. M. Scott, M. S. Knapp, and D. L. Weide. Edited and integrated by G. M. Richmond, D. S. Fullerton, and D. L. Weide. 1986. Lat 24° to 28°, long 78° to 84°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 31 by 44 inches.

I-1420 (NH-17). Quaternary geologic map of the Jacksonville 4° by 6° Quadrangle, United States, State compilations by T. M. Scott, M. S. Knapp, M. S. Friddell, and D. L. Weide. Edited and integrated by G. M. Richmond, D. S. Fullerton, and D. L. Weide. 1986. Lat 28° to 32°, long 78° to 84°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 30 by 51 inches.

I-1420 (NI-17). Quaternary geologic map of the Savannah 4° by 6° Quadrangle, United States, State compilation by D. J. Colquhoun, M. S. Friddell, W. H. Wheeler, R. B. Daniels, J. P. Gregory, R. A. Miller, and A. K. Van Nostrand. Edited and integrated by G. M. Richmond, D. S. Fullerton, and D. L. Weide. 1987. Lat 32° to 36°, long 78° to 84°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 30 by 56 inches.

I-1420 (NJ-18). Quaternary geologic map of the Chesapeake Bay 4° by 6° Quadrangle, United States, State compilation by E. T. Cleaves, J. D. Glaser, A. D. Howard, G. H. Johnson, W. H. Wheeler, W. D. Sevon, Sheldon Judson, J. P. Owens and P. C. Peebles. Edited and integrated by G. M. Richmond, D. S. Fullerton and D. L. Weide. 1987. Lat 36° to 40°, long 72° to 78°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 32 by 54 inches.

I-1420 (NL-19). Quaternary geologic map of the Quebec 4° by 6° Quadrangle, United States and Canada, State and province compilations by H. W. Borns, Jr., N. R. Gadd, Pierre LaSalle, Ghismond Martineau, Luc Chauvin, D. S. Fullerton, R. J. Fulton, W. F. Chapman, W. P. Wagner, and D. R. Grant. Edited and integrated by G. M. Richmond and D. S. Fullerton. 1987. Lat 44° to 48°, long 66° to 72°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 31 by 43 inches.

COAL INVESTIGATIONS MAPS

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

C-0094-B. UTAH. Stratigraphic framework and coal resources of the Upper Cretaceous Blackhawk Formation in the Ferron Canyon and Rock Canyon areas of the Wasatch Plateau coal field, Manti 30' by 60' Quadrangle, Emery and Sanpete counties, Utah, by J. D. Sanchez, and T. L. Brown. 1987. Three sheets. Lat 39°07'30" to 39°15', long 111°07'30" to 111°22'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 40 by 55 inches; sheet 2, 41 by 57 inches; sheet 3, 42 by 55 inches.

C-0094-D. UTAH. Stratigraphic framework and coal resources of the Upper Cretaceous Blackhawk Formation in the East Mountain and Gentry Mountain areas of the Wasatch Plateau coal field, Manti 30' by 60' Quadrangle, Emery, Carbon, and Sanpete counties, Utah, by T. L. Brown, J. D. Sanchez, and E. G. Ellis. 1987. Three sheets. Lat 39°22'30" to 39°30', long 111° to 111°15'. Scale 1:24,000 (1 inch = 2,000 feet.) Sheet 1, 42 by 59 inches; sheet 2, 42 by 56 inches; sheet 3, 41 by 58 inches.

C-0105. WYOMING. Surficial geologic map of the Gillette 30' by 60' Quadrangle, Campbell and Crook counties, Wyoming, by M. C. Reheis. 1987. Lat 44° to 44°30', long 105° to 106°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 33 by 44 inches.

C-0106. WYOMING. Surficial geologic map of the Reno Junction 30' by 60' Quadrangle, Campbell and Weston counties, Wyoming, by M. C. Reheis, and D. A. Coates. 1987. Lat 43°30' to 44°, long 105° to 106°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 33 by 48 inches.

C-0109. COLORADO. Geologic map of the Paonia and Gunnison area, Delta and Gunnison counties, Colorado, by M. S. Ellis, D. L. Gaskill, and C. R. Dunrud. 1987. Lat 38°30' to 39°, long 106°50' to 108°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 33 by 43 inches.

C-0111. MONTANA. Structure, coal thickness, and overburden thickness of the Wall Coal Resource Unit, west half of the Birney 30' by 60' Quadrangle, Big Horn and Rosebud counties, Montana, by W. C. Culbertson, and H. I. Saperstone. 1987. Lat 45° to 45°30', long 106°30' to 107°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 34 by 40 inches.

C-0112. MONTANA. Structure, coal thickness, and overburden thickness of the Knobloch Coal Research Unit, Birney area, Big Horn, Rosebud, and Powder River counties, Montana, by W. C. Culbertson, and H. I. Saperstone. 1987. Lat 45° to 45°30', long 106° to 106°45'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 34 by 53 inches.

OIL AND GAS INVESTIGATIONS CHARTS

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

OC-0127. COLORADO. Stratigraphic sections of Middle Jurassic San Rafael Group and related rocks from Uravan to Telluride in southwestern Colorado, by R. B. O'Sullivan. 1986. Sheet 29 by 37 inches.

OC-0129. Migrated seismic-reflection lines, eastern Aleutian Trench, by J. J. Miller, and Roland von Huene. 1987. Three sheets. Lat about 55°40' to about 56°30', long 151°30' to 153°. Sheet 1, 24 by 36 inches; sheet 2, 41 by 41 inches; sheet 3, 41 by 58 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 bed-rock geology in relation to specific mining or mineral-deposit problems; post-1971 maps are preliminary black and white maps on various subjects such as environmental studies or Wilderness mineral investigations.

MF-0856. MASSACHUSETTS. Seismicity map of the State of Massachusetts, by C. W. Stover, L. M. Highland, B. G. Reagor, and S. T. Algermissen. 1987. Lat about 41° to about 43°, long about 70° to about 74°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 27 by 34 inches. (Reprint.)

MF-1005-C. MISSOURI. Industrial mineral resources of the Rolla 1° by 2° Quadrangle, Missouri, by A. W. Rueff, Missouri Department of Natural Resources. 1987. Lat 37° to 38°, long 90° to 92°. Scale about 1:250,000 (1 inch = about 4 miles). Sheet 40 by 46 inches.

MF-1056. FLORIDA. Seismicity map of the State of Florida, by B. G. Reagor, C. W. Stover, and S. T. Algermissen. 1987. Lat about 25° to about 31°, long about 80° to about 85°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 27 by 34 inches. (Reprint.)

MF-1060. GEORGIA. Seismicity map of the State of Georgia, by B. G. Reagor, C. W. Stover, S. T. Algermissen, and L. T. Long. 1987. Lat about 31° to about 35°, long about 81° to about 85°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 26 by 33 inches. (Reprint.)

MF-1081. LOUISIANA. Seismicity map of the State of Louisiana, by C. W. Stover, B. G. Reagor, and S. T. Algermissen. 1987. Lat about 29° to about 33°, long about 89° to about 94°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 23 by 35 inches. (Reprint.)

MF-1114-E. ALASKA. Maps showing aeromagnetic survey and geologic interpretation of the Lake Clark Quadrangle, Alaska, by J. E. Case, and W. H. Nelson. 1986. Two sheets. Lat 60° to 61°, long 153° to 156°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 25 by 29 inches; sheet 2, 36 by 50 inches. (Supersedes Open-file report 78-1086.)

MF-1144. KENTUCKY. Seismicity map of the State of Kentucky, by C. W. Stover, B. G. Reagor, and S. T. Algermissen. 1987. Lat about 37° to about 39°, long about 82° to about 89°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 31 by 35 inches. (Reprint.)

MF-1157. TENNESSEE. Seismicity map of the State of Tennessee, by B. G. Reagor, C. W. Stover, and S. T. Algermissen. 1987. Lat about 35° to about 37°, long about 82° to about 90°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 30 by 41 inches. (Reprint.)

MF-1260. NEW JERSEY. Seismicity map of the State of New Jersey, by C. W. Stover, B. G. Reagor, L. M. Highland, and S. T. Algermissen. 1987. Lat about 39° to about 41°, long about 72° to about 76°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 27 by 33 inches. (Reprint.)

MF-1261. NEW HAMPSHIRE. Seismicity map of the State of New Hampshire, by C. W. Stover, B. G. Reagor, L. M. Highland, and S. T. Algermissen. 1987. Lat about 42°30' to about 45°30', long about 70°30' to about 73°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 25 by 31 inches. (Reprint.)

MF-1280. PENNSYLVANIA. Seismicity map of the State of Pennsylvania, by C. W. Stover, B. G. Reagor, and S. T. Algermissen. 1987. Lat about 39° to about 43°, long about 75° to about 80°30'. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 22 by 38 inches. (Reprint.)

MF-1282. NEW YORK. Seismicity map of the State of New York, by C. W. Stover, B. G. Reagor, L. M. Highland, and S. T. Algermissen. 1987. Lat about 40° to about 71°, long about 71° to about 80°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 35 by 50 inches. (Reprint.)

MF-1361-F. CALIFORNIA, NEVADA. Map showing mines and prospects of the White Mountains Roadless Area, Inyo and Mono counties, California, and Esmeralda and Mineral counties, Nevada, by S. W. Schmauch, U.S. Bureau of Mines. 1986. Lat about 37°25' to about 37°55', long 118° to about 118°25'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 42 by 52 inches. (Accompanied by 27-page text.)

MF-1382-E. CALIFORNIA, NEVADA. Bouguer gravity anomaly and isostatic residual gravity maps of the Walker Lake 1° by 2° Quadrangle, California and Nevada, by Donald Plouff. 1987. Two sheets. Lat 38° to 39°, long 118° to 120°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 26 by 31 inches; sheet 2, 30 by 31 inches. (Accompanied by 16-page text.)

MF-1382-F. CALIFORNIA, NEVADA. Maps showing aeromagnetic intensity, flight altitudes, and generalized aeromagnetic intensity of the Walker Lake 1° by 2° Quadrangle, California and Nevada, by Donald Plouff. 1987. Three sheets. Lat 38° to 39°, long 118° to 120°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 27 by 31 inches; sheet 2, 27 by 31 inches; sheet 3, 27 by 36 inches. (Accompanied by 14-page text.)

MF-1391-C. NORTH CAROLINA. Maps showing uranium prospects and mineralization in the Lost Cove and Harper Creek Roadless Areas, Avery and Caldwell counties, North Carolina, by R. B. Ross, Jr., and T. M. Crandall, U.S. Bureau of Mines. 1986. Lat about 35°57'30" to about 36°2'30", long 81°45' to 81°52'30". Scale 1:48,000 (1 inch = 4,000 feet). Sheet 42 by 42 inches.

- MF-1461. CALIFORNIA. Subsurface stratigraphy of the eastern Hollister Valley, California, by C. R. McMasters, D. G. Herd and C. K. Throckmorton, *with pollen analysis* by L. E. Heusser. 1987. Three sheets. Lat 36°45' to 37°, long about 121°20' to about 121°40'. Scale 1:315,000 (1 inch = about 5 miles). Sheet 1, 27 by 33 inches; sheet 2, 24 by 37 inches; sheet 3, 36 by 43 inches.
- MF-1492-D. CALIFORNIA. Mines and prospects of the Andrews Mountain, Mazourka, and Paiute Roadless Areas, Inyo County, California, by S. W. Schmauch, U.S. Bureau of Mines. 1987. Lat 36°45' to 37°10', long about 117°55' to 118°15'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 37 by 48 inches. (Accompanied by 32-page text.)
- MF-1496-D. NEW MEXICO. Surface to subsurface cross sections showing correlation of the Dakota Sandstone, Burro Canyon (?) Formation, and upper part of the Morrison Formation in the Chama-El Vado area, Chama Basin, Rio Arriba County, New Mexico, by J. L. Ridgley. 1987. Two sheets. Sheet 1, 34 by 55 inches; sheet 2, 36 by 53 inches.
- MF-1514. NEVADA. Geologic map of the Goodsprings District, southern Spring Mountains, Clark County, Nevada, by M. D. Carr, and J. C. Pinkston. 1987. Lat about 35°43' to about 35°56', long about 115°28' to about 115°40'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 41 by 57 inches.
- MF-1539-C. ALASKA. Maps and tables showing data and analyses of semiquantitative emission spectrometry and atomic-absorption spectrophotometry of rock samples, Ugashik, Bristol Bay, and part of Karluk quadrangles, Alaska, by F. H. Wilson, and R. M. O'Leary. 1986. Three sheets. Lat 57° to 58°, long 155° to 159°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 39 by 41 inches; sheet 2, 39 by 42 inches; sheet 3, 39 by 45 inches. (Supersedes Open-file reports 81-173 and 82-53.)
- MF-1566-B. UTAH, IDAHO. Geologic map of the Mount Naomi Roadless Area, Cache County, Utah, and Franklin County, Idaho, by J. H. Dover. 1987. Lat about 41°45' to about 42°15', long 111°30' to about 111°45'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 30 by 38 inches.
- MF-1566-D. UTAH, IDAHO. Geochemical map of the Mount Naomi Roadless Area, Cache County, Utah, and Franklin County, Idaho, by J. H. Dover, R. G. McGimsey, and J. B. McHugh. 1987. Two sheets. Lat about 41°40' to about 42°30', long 111°30' to about 111°50'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 39 by 55 inches; sheet 2, 33 by 55 inches.
- MF-1589-C. MONTANA. Geochemical maps of the Ten Lakes Wilderness Study Area, Lincoln County, Montana, by R. W. Leinz, D. F. Siems, and J. W. Whipple. 1987. Lat about 48°50' to 49°, long about 114°50' to about 115°. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 34 by 50 inches.
- MF-1594-C. NEW HAMPSHIRE. Geochemical survey maps of the wildernesses and roadless areas in the White Mountain National Forest, Coos, Grafton, and Carroll counties, New Hampshire, by F. C. Canney, F. H. Howd, J. A. Domenico, and H. M. Nakagawa. 1987. Three sheets. Lat 43°45' to 44°30', long about 71°. Scale 1:125,000 (1 inch = about 2 miles). Sheet 1, 37 by 52 inches; sheet 2, 33 by 41 inches; sheet 3, 33 by 41 inches.
- MF-1594-D. NEW HAMPSHIRE. Bouguer gravity and aeromagnetic maps of the wildernesses and roadless areas of the White Mountain National Forest, Coos, Carroll, and Grafton counties, New Hampshire, by W. A. Bothner and C. E. Jahrling II, U.S. Geological Survey and University of New Hampshire, and R. P. Kucks, U.S. Geological Survey. 1986. Lat about 43°45' to about 44°30', long about 71° to about 72°. Scale 1:125,000 (1 inch = about 2 miles). Sheet 42 by 52 inches. (Accompanied by 6-page text.)
- MF-1602-C. ARIZONA. Mine and prospect map of the Crossman Peak Wilderness Study Area, Mohave County, Arizona, by T. D. Light, U.S. Geological Survey, and J. R. McDonnell, Jr., U.S. Bureau of Mines. 1987. Two sheets. Lat about 34°28' to about 34°38', long about 114° to about 114°22'. Scale 1:48,000 (1 inch = 4,000 feet). Each sheet 41 by 56 inches.
- MF-1625-D. VERMONT. Map showing geochemical data for panned stream sediments from the Bread Loaf Further Planning Area, Addison and Washington counties, Vermont, by A. E. Grosz, P. G. Schruben, and P. J. Atelsek. 1987. Lat 43°55' to 44°06', long 72°47'30" to 73°. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 46 by 47 inches.
- MF-1635-B. COLORADO. Reconnaissance geologic map of the Sangre de Cristo Wilderness Study Area, south-central Colorado, by B. R. Johnson, D. A. Lindsey, R. M. Bruce, and S. J. Soulliere. 1987. Two sheets. Sheet 1, lat 38° to 38°30', long about 105° to 105°52'30"; sheet 2, lat about 38°30' to about 39°, long 105°15' to about 105°45'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 1, 39 by 46 inches; sheet 2, 34 by 36 inches.
- MF-1644-B. ARIZONA. Aeromagnetic map of the Hells Gate Roadless Area, Gila County, Arizona, by R. A. Martin. 1987. Lat about 34° to about 34°22', long about 111° to about 111°22'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 32 by 40 inches.
- MF-1645-G. ALASKA. Geochemical map showing distribution of anomalous element suites in nonmagnetic heavy-mineral concentrates from the Chugach National Forest, Alaska, by R. J. Goldfarb, and S. C. Smith. 1987. Lat about 60° to about 61°, long about 144° to 150°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 35 by 56 inches. (Accompanied by 18-page text.)
- MF-1648-B. TENNESSEE. Geological map of the Pond Mountain and Pond Mountain Addition Roadless Areas, Carter County, Tennessee, by K. A. Duttweiler, W. R. Griffiths, E. F. Cooley, and J. W. Whitlow. 1987. Lat 36°15' to 36°22'30", long 82° to about 82°12'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 37 by 55 inches.
- MF-1712. Estimated maximum regional seismic intensities associated with an ensemble of great earthquakes that might occur along the New Madrid seismic zone, east-central United States, by S. T. Algermissen, and M. G. Hopper. 1984. Lat about 30° to about 45°, long about 80° to about 95°. Sheet 23 by 29 inches. (Reprint.)
- MF-1760-B. VIRGINIA. Geochemical survey of the Rich Hole Roadless Area, Alleghany and Rockbridge counties, Virginia, by F. G. Lesure. 1986. Lat about 37°55', long about 79°37'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 37 by 42 inches.

- MF-1824. NEVADA. Trench logs from a strand of the Rock Valley fault system, Nevada Test Site, Nye County, Nevada, by J. C. Yount, R. R. Shroba, C. R. McMasters, H. E. Hucins, and E. A. Rodriguez. 1987. Sheet 42 by 58 inches.
- MF-1830-C. MISSOURI. Mines, prospects, and occurrences of metallic minerals and barite, Springfield 1° by 2° Quadrangle, Missouri, by H. M. Wharton, Missouri Department of Natural Resources. 1987. Two sheets. Lat 37° to 38°, long 92° to 94°. Scale 1:250,000 (1 inch = about 2.4 miles). Sheet 1, 26 by 47 inches; sheet 2, 36 by 42 inches.
- MF-1830-D. MISSOURI. Bedrock geologic map of the Springfield 1° by 2° Quadrangle, Missouri, by M. A. Middendorf, Missouri Geological Survey; K. C. Thomson, Missouri State University; G. L. Easson and H. S. Sumner, Missouri Geological Survey. 1987. Lat 37° to 38°, long 92° to 94°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 33 by 35 inches.
- MF-1830-E. MISSOURI. Precambrian basement map of the Springfield 1° by 2° Quadrangle, Missouri, by E. B. Kisvarsanyi, Missouri Geological Survey. 1987. Lat 37° to 38°, long 92° to 94°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 25 by 40 inches.
- MF-1830-F. MISSOURI. Industrial mineral resources of the Springfield 1° by 2° Quadrangle, Missouri, by A. W. Rueff, Missouri Department of Natural Resources. 1987. Lat 37° to 38°, long 92° to 94°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 37 by 40 inches.
- MF-1834-B. ARIZONA. Mineral resource assessment of the Ajo and Lukeville 1° by 2° quadrangles, Arizona, by J. A. Peterson, D. P. Cox, and Floyd Gray. 1987. Three sheets. Lat about 31°45' to 33°, long 112° to 114°. Scale 1:250,000 (1 inch = about 4 miles). Each sheet 26 by 37 inches. (Accompanied by 39-page text.)
- MF-1834-C. ARIZONA. Map showing anomalous copper concentrations in stream sediments and heavy-mineral concentrates from the Ajo and Lukeville 1° by 2° quadrangles, Arizona, by P. K. Theobald, and H. N. Barton. 1987. Lat about 32° to 33°, long 112° to 114°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 32 by 34 inches.
- MF-1835-B. Equivalent freshwater head and dissolved-solids concentration of water in rocks of Cambrian, Ordovician, and Mississippian age in the northern Midcontinent, U.S.A., by D. G. Jorgensen, J. O. Helgesen, R. B. Leonard, and D. C. Signor. 1986. Two sheets. Lat about 36° to 46°, long about 88° to 100°. Scale 1:1,000,000 (1 inch = about 16 miles). Each sheet 42 by 54 inches.
- MF-1835-D. Isopach and lithofacies map of the Sauk Sequence (excluding basal clastics) in the northern Midcontinent, U.S.A., by W. P. Pratt. 1987. Lat about 36° to 40°, long about 88° to 100°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 43 by 54 inches.
- MF-1847. NEVADA. Geologic map of part of the Morey and Fandango Wilderness Study Areas, Nye County, Nevada, compiled by D. A. John. 1987. Lat 38°30' to 38°45', long 116°10' to 116°30'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 30 by 57 inches.
- MF-1874-A. ALASKA. Lithotectonic terrane map of Alaska (west of the 141st meridian), by D. L. Jones, N. J. Silberling, P. J. Coney, and George Plafker. 1987. Lat about 55° to about 70°, long about 120° to about 170°. Scale 1:2,500,000 (1 inch = about 40 miles). Sheet 42 by 49 inches.
- MF-1874-B. ALASKA. Lithotectonic terrane map of Western Canada and southeastern Alaska, by J. W. H. Monger, Geological Survey of Canada, and H. C. Berg, U.S. Geological Survey. 1987. Lat about 50° to about 65°30', long about 110° to about 140°. Scale 1:2,500,000 (1 inch = about 40 miles). Sheet 35 by 45 inches. (Accompanied by 12-page text.)
- MF-1874-C. Lithotectonic terrane map of the western conterminous United States, by N. J. Silberling, D. L. Jones, M. C. Blake, Jr., and D. G. Howell. 1987. Lat about 30° to about 52°, long about 110° to about 125°. Scale 1:2,500,000 (1 inch = about 40 miles). Sheet 29 by 41 inches. (Accompanied by 20-page text.)
- MF-1874-D. Folio of the lithotectonic terrane maps of the North American Cordillera, by P. J. Coney, U.S. Geological Survey and University of Arizona, and M. F. Campa, Petroleos Mexicanos. 1987. Lat about 15° to about 35°, long about 90° to about 115°. Scale 1:10,000,000 (1 inch = about 160 miles). Sheet 40 by 57 inches.
- MF-1875. AMERICAN SAMOA. Map showing locations and statistical parameters of beach and offshore sand samples, Tutuila Island, American Samoa, by J. R. Dingler, D. V. Carlson, and A. H. Sallenger, Jr. 1987. Lat 14°24'S to 14°13'S, long 170°32'W to 170°51'W. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 36 by 51 inches.
- MF-1876. OREGON. Geologic map of the High Steens and Little Blitzen Gorge Wilderness Study Areas, Harney County, Oregon, by S. A. Minor, J. J. Rytuba, M. J. Grubensky, D. B. Vander Meulen, C. A. Goeldner, and K. J. Tegtmeier. 1987. Lat about 42°35' to 42°45', long 118°30' to 118°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 51 inches.
- MF-1877-I. NEVADA. Sample locality map and potassium-argon ages and data for Cenozoic igneous rocks in the Tonopah 1° by 2° quadrangle, central Nevada, by E. H. McKee, and D. A. John. 1987. Lat 38° to 39°, long 116° to 118°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 35 by 47 inches.
- MF-1877-J. NEVADA. Map showing the distribution and characteristics of plutonic rocks in the Tonopah 1° by 2° Quadrangle, central Nevada, by D. A. John. 1987. Lat 38° to 39°, long 116° to 118°. Scale 1:250,000 (1 inch = 4 miles). Sheet 35 by 51 inches.
- MF-1879. FLORIDA. Geology and mineral resource potential of the Billies Bay, Alexander Springs, Little Lake George, and Juniper Prairie Wildernesses, and the Baptist Lake Roadless Area, Lake, Marion, and Putnam counties, Florida, by C. C. Cameron, J. B. Cathcart, and P. G. Schruben. 1987. Lat about 29° to about 29°30', long about 81°38' to about 82°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 38 by 50 inches. (Accompanied by 8-page text.)
- MF-1887. MONTANA, WYOMING. Estimated resources of non-leased Federal coal, Powder River basin, Montana and Wyoming, by V. A. Trent. 1986. Lat about 43° to about 46°, long about 105° to about 107°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 40 by 46 inches. (Accompanied by 21-page text.)

- MF-1888. CALIFORNIA. Sketches of Yosemite National Park, California from Glacier Point, Sentinel Dome, and Mt. Hoffman, by T. R. Alpha. 1987. Sheet 30 by 58 inches.
- MF-1891. Side-looking airborne radar image map showing cross-strike structural discontinuities and lineaments of the Central Appalachians, by C. S. Southworth. 1986. Lat 37° to 41°, long 76° to 82°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 39 by 40 inches. (Accompanied by 14-page text.) (Reprint.)
- MF-1892. MASSACHUSETTS, NEW HAMPSHIRE. Maps and seismic profiles showing geology of the inner continental shelf, Cape Ann, Massachusetts to New Hampshire, by R. N. Oldale, and L. E. Wommack. 1986. Two sheets. Lat about 42°40' to about 42°55', long about 70°20' to about 70°50'. Scale 1:125,000 (1 inch = about 2 miles). Sheet 1, 40 by 40 inches; sheet 2, 42 by 56 inches.
- MF-1896. CALIFORNIA. Structure contour map of the top of the Oligocene to middle Miocene Temblor Formation in the Kettleman Hills and Lost Hills areas, Fresno, Kings, and Kern counties, California, by J. L. Zigler, L. S. Frei, C. M. Wentworth, and J. A. Bartow. 1987. Lat about 35°30' to about 36°15', long about 119°30' to about 120°30'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 33 by 41 inches.
- MF-1898. GEORGIA, SOUTH CAROLINA, NORTH CAROLINA. Generalized tectonic map of the Greenville 1° by 2° Quadrangle, Georgia, South Carolina, and North Carolina, by A. E. Nelson, J. W. Horton, Jr., and J. W. Clarke. 1987. Lat 34° to 35°, long 82° to 84°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 42 by 49 inches.
- MF-1899. MAINE. Map and diagrams showing the distribution, thickness, and textural characteristics of Holocene sediments, Penobscot Bay, Maine, by H. J. Knebel. 1987. Lat 44° to about 44°30', long about 68°40' to 69°10'. Sheet 33 by 42 inches.
- MF-1900. MISSOURI. Geologic map of the Marble Hill Quadrangle, Bollinger County, Missouri, by D. H. Amos. 1987. Lat 37°15' to 37°22'30", long 89°52'30" to 90°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 37 inches.
- MF-1901. OREGON. Geologic map of the Diamond Butte Quadrangle, Malheur County, Oregon, by T. L. Vercoutere, D. B. Vander Meulen, and S. A. Minor. 1987. Lat 43°15' to 43°22'30", long 117°22'30" to 117°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 34 inches.
- MF-1902. OREGON. Geologic map of the Rooster Comb Quadrangle, Malheur County, Oregon, by D. B. Vander Meulen, J. J. Rytuba, T. L. Vercoutere, and S. A. Minor. 1987. Lat 43°15' to 43°22'30", long 117°15' to 117°22'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 32 by 34 inches.
- MF-1903. OREGON. Geologic map of the Bannock Ridge Quadrangle, Malheur County, Oregon, by D. B. Vander Meulen, J. J. Rytuba, M. J. Grubensky, and C. A. Goeldner. 1987. Lat 43°15' to 43°22'30", long 117°07'30" to 117°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 33 inches.
- MF-1904. OREGON. Geologic map of the Pelican Point Quadrangle, Malheur County, Oregon, by D. B. Vander Meulen, J. J. Rytuba, M. J. Grubensky, T. L. Vercoutere, and S. A. Minor. 1987. Lat 43°22'30" to 43°30', long 117°15' to 117°22'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 34 inches.
- MF-1905. MISSOURI. Geologic map of the Friedheim Quadrangle, Cape Girardeau, Bollinger, and Perry counties, Missouri, by D. H. Amos. 1987. Lat 37°30' to 37°37'30", long 89°45' to 89°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 26 by 37 inches.
- MF-1906. WASHINGTON. Physiographic diagrams of Mount St. Helens, Washington, showing changes in its summit crater, 1984, by T. R. Alpha, and Bobbie Myers. 1986. Sheet 35 by 44 inches.
- MF-1907. ALASKA. Regional correlation sections across the North Slope of Alaska, by C. M. Molenaar, K. J. Bird, and T. S. Collett. 1986. Sheet 38 by 47 inches.
- MF-1908-A. GEORGIA. Bedrock geologic map of the Anna Ruby Roadless Area, White County, Georgia, by J. D. Peper, and F. G. Lesure. 1987. Lat about 34°43'30" to about 34°48', long about 83°39' to about 83°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 42 inches.
- MF-1908-B. GEORGIA. Geochemical survey and mineral resource assessment of the Anna Ruby Roadless Area, White County, Georgia, by F. G. Lesure, J. P. D'Agostino, and J. D. Peper. 1987. Lat about 34°42' to about 34°49', long about 83° to about 84°. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 29 by 41 inches.
- MF-1910. MISSOURI. Geologic map of the Scopus Quadrangle, Bollinger County, Missouri, by D. H. Amos. 1987. Lat 37°22'30" to 37°30', long 89°52'30" to 90°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 37 by 38 inches.
- MF-1911. MASSACHUSETTS. Maps showing geology, shallow structure, and bedform morphology of Nantucket Sound, Massachusetts, by C. J. O'Hara, and R. N. Oldale. 1987. Four sheets. Lat 41°15' to about 41°40', long about 70° to 70°40'. Scale 1:125,000 (1 inch = about 2 miles). Sheet 1, 41 by 56 inches; sheet 2, 41 by 51 inches; sheet 3, 40 by 52 inches; sheet 4, 38 by 43 inches.
- MF-1912. ALASKA. Profiles showing models of magnetic structures in accreted terranes of south-central Alaska, by D. L. Campbell. 1987. Two sheets. Lat 62° to 64°, long 141° to 150°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 1, 38 by 57 inches; sheet 2, 38 by 38 inches.
- MF-1913-A. CALIFORNIA. Mineral resource potential map of the South Sierra Wilderness and the South Sierra Roadless Area, Inyo and Tulare counties, California, by M. F. Diggles. 1987. Lat 36° to about 36°15', long about 118° to about 118°15'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 36 by 43 inches.
- MF-1914-A. VIRGINIA. Geologic map of the Barbours Creek and Shawvers Run Wilderness Study Areas, Craig County, Virginia, by F. G. Lesure and J. R. Estabrook, U.S. Geological Survey and M. A. Linden, U.S. Forest Service. 1987. Lat about 37°34'45" to about 37°35'45", long 80°02'30" to about 80°15'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 26 by 36 inches.
- MF-1914-B. VIRGINIA. Geochemical survey of the Barbours Creek and Shawvers Run Wilderness Study Areas, Craig County, Virginia, by F. G. Lesure. 1987. Lat about 37°34'45" to about 37°35'45", long 80°02'30" to about 80°13'30". Scale 1:48,000 (1 inch = 4,000 feet). Sheet 36 by 40 inches.

- MF-1915. OREGON. Geologic map of the Wildhorse Lake Quadrangle, Harney County, Oregon, by S. A. Minor, J. J. Rytuba, D. B. Vander Meulen, M. J. Grubensky, and K. J. Tegtmeier. 1987. Lat 42°37'30" to 42°45', long 118°30' to 118°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 32 inches.
- MF-1916. OREGON. Geologic map of the Alvord Hot Springs Quadrangle, Harney County, Oregon, by S. A. Minor, J. J. Rytuba, C. A. Goeldner, and K. J. Tegtmeier. 1987. Lat 42°30' to 42°37'30", long 118°30' to 118°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 32 inches.
- MF-1917. NEVADA. Geologic map of the South Pahroc Range, Lincoln County, Nevada, by B. C. Moring. 1987. Lat about 37°20' to about 37°40', long 114°55' to about 115°10'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 28 by 30 inches.
- MF-1918. ARIZONA. Geologic map of the Black Rock Wilderness Study Area, Graham County, Arizona, by F. S. Simons. 1987. Lat 32°52'30" to about 32°57'30", long about 110°07'30" to about 110°12'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 27 by 39 inches.
- MF-1919. ARIZONA. Geologic map of the Fishhooks Wilderness Study Area, Graham County, Arizona, by F. S. Simons. 1987. Lat about 33°10' to about 33°15', long about 109°57'30" to about 110°02'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 30 by 44 inches.
- MF-1920. CALIFORNIA. Seismic reflection profile across the Coast Ranges of Central California; Morro Bay to the San Andreas Fault, by A. M. Trehu, and W. H. Wheeler, IV. 1987. Lat about 34° to about 38°, long about 118° to about 124°. Sheet 42 by 56 inches.
- MF-1922. NEVADA. Geologic map of the Weepah Spring Wilderness Study Area, Lincoln and Nye counties, Nevada, by E. A. du Bray, D. O. Hurtubise, and C. A. Bannister. 1987. Lat about 37°45' to 38°07'30", long 114°55' to 115°12'30". Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 21 by 40 inches.
- MF-1923. MASSACHUSETTS. Maps and seismic profiles showing geology of the inner continental shelf, Massachusetts Bay, Massachusetts, by R. N. Oldale, and Jennifer Bick. 1987. Four sheets. Lat about 42°05' to 42°40', long 70°20' to about 70°52'. Scale 1:125,000 (1 inch = about 2 miles). Sheet 1, 42 by 56 inches; sheet 2, 36 by 52 inches; sheet 3, 36 by 52 inches; sheet 4, 34 by 42 inches.
- MF-1926. OREGON. Geologic map of the Owyhee Canyon Wilderness Study Area, Malheur County, Oregon, by J. G. Evans. 1987. Lat 42°05' to 42°50', long 117° to 117°35'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 36 by 58 inches.
- MF-1927-A. CALIFORNIA. Geologic map of the Owens Peak and Little Lake Canyon Wilderness Study Areas, Inyo and Kern counties, California, by M. F. Diggles, D. A. Dellinger, and J. E. Conrad. 1987. Lat 35°35' to about 36°05', long about 117°50' to 118°05'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 38 by 56 inches.
- MF-1928. MONTANA, WYOMING. Landslide deposits in the Lodge Grass 30' by 60' Quadrangle, Montana and Wyoming, by S. S. Agard, R. B. Colton, and S. P. Kanizay. 1987. Lat 45° to 45°30', long 107° to 108°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 26 by 41 inches.
- MF-1929. WYOMING. Sedimentologic and stratigraphic framework of the upper part of the Fort Union Formation, western Powder River basin, Wyoming, by J. N. Weaver, and R. M. Flores. 1987. Lat 43°52'30", long 106°35' to 106°40'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 37 by 50 inches.
- MF-1930. MONTANA. Geologic map of the Pine Hill Quadrangle, Beaverhead and Deer Lodge counties, Montana, by D. L. Hanneman. 1987. Lat 45°45' to 45°52'30", long 113°15' to 113°22'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 23 by 27 inches.
- MF-1931. MONTANA. Geologic map of the Pintlar Lake Quadrangle, Beaverhead and Deer Lodge counties, Montana, by D. L. Hanneman. 1987. Lat 45°45' to 45°52'30", long 113°22'30" to 113°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 23 by 26 inches.
- MF-1932. NEVADA. Geologic map of the Bluebell and Goshute Peak Wilderness Study Areas, Elko County, Nevada, by W. C. Day, Maya Elrick, K. B. Ketner, and M. K. Vaag. 1987. Lat about 40°22' to about 40°48', long about 114°10' to about 114°22'30". Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 28 by 49 inches.
- MF-1933. UTAH, COLORADO. Preliminary geologic map of the Davis Canyon Quadrangle, Uintah County, Utah, and Garfield and Rio Blanco counties, Colorado, by M. P. Pantea. 1987. Lat 39°37'30" to 39°45', long 109° to 109°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 35 inches.
- MF-1934. ALASKA. Surficial geologic map of the northwestern quarter of the Tyonek A-4 Quadrangle, south-central Alaska, by H. R. Schmoll, and L. A. Yehle. 1987. Lat 61°07'30" to 61°15', long 151°18'45" to 151°30'. Scale 1:31,680 (1 inch = about 2,653 feet). Sheet 38 by 51 inches.
- MF-1935. MISSOURI. Geologic map of the Jackson Quadrangle, Cape Girardeau County, Missouri, by D. H. Amos. 1987. Lat 37°22'30" to 37°30', long 89°37'30" to 89°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 35 by 44 inches.
- MF-1937. WYOMING, COLORADO. Surface-subsurface correlations of the Mesaverde Group and associated Upper Cretaceous formations, Rock Springs, Wyoming, to Mount Harris, Colorado, by H. W. Roehler. 1987. Sheet 30 by 38 inches.
- MF-1938. NEVADA. Geologic map of the Mount Grafton Wilderness Study Area, Lincoln and White Pine counties, Nevada, by R. E. Van Loenen. 1987. Lat about 38°35' to about 38°50', long about 114°40' to about 114°50'. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 29 by 31 inches.
- MF-1939-A. Map showing the stratigraphic framework and Quaternary geologic history of eastern Long Island Sound, by R. S. Lewis, Connecticut Geological and Natural History Survey, and S. W. Needell, U.S. Geological Survey. 1987. Three sheets. Lat about 41° to 41°20', long 72°03' to about 72°40'. Scale 1:125,000 (1 inch = about 2 miles). Sheet 1, 42 by 52 inches; sheet 2, 38 by 49 inches; sheet 3, 36 by 39 inches. (Accompanied by 7-page text.)
- MF-1940. OREGON. Geologic map of the Dry Creek Bench Quadrangle, Malheur County, Oregon, by J. A. Peterson, and K. J. Tegtmeier. 1987. Lat 42°15' to 42°22'30", long 118° to 118°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 26 by 30 inches.

- MF-1942. COLORADO. Geologic map and sections of the Valley View Hot Springs Quadrangle, Custer and Saguache counties, Colorado, by D. A. Lindsey, and S. J. Soulliere. 1987. Lat 38°07'30" to 38°15', long 105°45' to 105°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 44 inches.
- MF-1944. NEVADA. Geologic map of the Desatoya Mountains Wilderness Study Area, Churchill and Lander counties, Nevada, by E. H. McKee, and J. E. Conrad. 1987. Lat about 39°15' to about 39°28', long about 117°42' to about 117°50'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 23 by 27 inches.
- MF-1945. CALIFORNIA. Geologic map of the Tunnison Mountain Wilderness Study Area, Lassen County, California, by J. A. Peterson, and C. A. Goeldner. 1987. Lat about 40°29' to about 40°35', long 120°25' to 120°35'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 18 by 34 inches.
- MF-1947. FLORIDA. Geology and mineral assessment of the Impassable Bay Roadless Area, Columbia County, Florida, by J. B. Cathcart, C. C. Cameron, and S. H. Patterson. 1987. Lat about 30°22'15" to about 30°22'45", long about 82°29'45" to about 82°30'15". Sheet 42 by 56 inches.
- MF-1948-A. VIRGINIA. Quaternary geology of the southern Virginia part of the Chesapeake Bay, by S. M. Colman, U.S. Geological Survey, and C. H. Hobbs, III, Virginia Institute of Marine Science. 1987. Two sheets. Lat about 36°50' to about 37°25', long 75°50' to about 76°25'. Sheet 1, 41 by 42 inches; sheet 2, 39 by 39 inches.
- MF-1949. COLORADO. Geologic, alteration, and vein maps of the Redcloud Peak (Lake City Caldera) and Handies Peak Wilderness Study Areas, Hinsdale County, Colorado, by Ken Hon. 1987. Two sheets. Lat 37°53'51" to 38°02'30", long 107°15'51" to 107°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 40 by 50 inches; sheet 2, 33 by 56 inches. (Accompanied by 11-page text.)
- MF-1950. UTAH, NEVADA. Geologic map of the Mountain Home Pass and Miller Wash quadrangles, Millard and Beaver counties, Utah, and Lincoln County, Nevada, by L. F. Hintze and M. G. Best, Brigham Young University. 1987. Lat 38°30' to 38°37'30", long 113°52'30" to 114°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 38 by 50 inches. (Supersedes Open-file report 85-361.)
- MF-1951. ARIZONA. Geologic map of the Table Top Mountain Wilderness Study Area, Pinal and Maricopa counties, Arizona, by J. A. Peterson, R. M. Tosdal, and M. I. Hornberger. 1987. Lat 32°42'30" to 32°50', long 112°02'30" to about 112°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 32 by 39 inches.
- MF-1952. OREGON. Geologic map of the Three Sisters Wilderness, Deschutes, Lane, and Linn counties, Oregon, by E. M. Taylor, N. S. MacLeod, D. R. Sherrod, and G. W. Walker. 1987. Lat about 43°49' to about 44°18', long about 121°38' to 122°15'. Scale 1:63,360 (1 inch = 1 mile). Sheet 39 by 45 inches.
- MF-1953. COLORADO. Preliminary geologic map of the Forked Gulch Quadrangle, Garfield County, Colorado, by R. B. O'Sullivan, and W. J. Hail, Jr. 1987. Lat 39°30' to 39°37'30", long 108° to 108°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 25 by 36 inches.
- MF-1954. ALABAMA. Preliminary map showing landslides in Alabama, by K. F. Rheams, E. E. Brabb, and Fred Taylor. 1987. Lat about 30°30' to 35°, long 85° to about 88°30'. Scale 1:500,000 (1 inch = about 8 miles). Sheet 31 by 50 inches.
- MF-1956. ARIZONA. Geologic map of the SP Mountain part of the San Francisco volcanic field, north-central Arizona, by G. E. Ulrich, and N. G. Bailey. 1987. Two sheets. Lat 35°30' to 35°45', long 111°30' to 111°45'. Scale 1:50,000 (1 inch = about 4,200 feet.) Sheet 1, 38 by 45 inches; sheet 2, 41 by 42 inches.
- MF-1957. ARIZONA. Geologic map of the northwest part of the San Francisco volcanic field, north-central Arizona, by E. W. Wolfe, G. E. Ulrich, and C. G. Newhall. 1987. Two sheets. Lat 35°30' to about 35°50', long 111°45' to about 112°15'. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 1, 40 by 55 inches; sheet 2, 40 by 49 inches.
- MF-1958. ARIZONA. Geologic map of the southwest part of the San Francisco volcanic field, north-central Arizona, by C. G. Newhall, G. E. Ulrich, and E. W. Wolfe. 1987. Two sheets. Lat about 35°08' to 35°30', long 112° to 112°25'. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 1, 33 by 52 inches; sheet 2, 33 by 44 inches. (Accompanied by 58-page text.)
- MF-1959. ARIZONA. Geologic map of the central part of the San Francisco volcanic field, north-central Arizona, by E. W. Wolfe, G. E. Ulrich, R. F. Holm, R. B. Moore, and C. G. Newhall. 1987. Two sheets. Lat about 35°05' to 35°30', long about 111°32' to 112°. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 1, 42 by 58 inches; sheet 2, 36 by 51 inches. (Accompanied by 86-page text.)
- MF-1960. ARIZONA. Geologic map of the east part of the San Francisco volcanic field, north-central Arizona, by R. B. Moore, and E. W. Wolfe. 1987. Two sheets. Lat about 35°08' to about 35°37'30", long about 111°07'30" to about 111°37'30". Scale 1:50,000 (1 inch = 4,200 feet). Sheet 1, 39 by 58 inches; sheet 2, 39 by 50 inches. (Accompanied by 46-page text.)
- MF-1961. MONTANA. Geologic map of the Sayle Quadrangle, Powder River County, Montana, by M. W. McLellan, and L. H. Biewick. 1987. Lat 45°07'30" to 45°15', long 105°52'30" to 106°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 27 by 28 inches.
- MF-1962. MONTANA, WYOMING. Geologic map of the Bradshaw Creek Quadrangle, Powder River County, Montana and Campbell County, Wyoming, by M. W. McLellan, and L. H. Biewick. 1987. Lat 45° to 45°07'30", long 105°52'30" to 106°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 27 by 28 inches.
- MF-1963. NEVADA. Bedrock geologic map of the Goldyke Quadrangle, Nye County, Nevada, by D. A. John, and P. C. Kelleher. 1987. Lat 38°37'30" to 38°45', long 117°45' to 117°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 26 by 31 inches.
- MF-1965. COLORADO. Geologic map of the Housetop Mountain Quadrangle, Garfield and Mesa counties, Colorado, by J. R. Donnell, W. E. Yeend, and M. C. Smith. 1987. Lat 39°15' to 39°22'30", long 108° to 108°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 34 inches.

- MF-1966. MONTANA. Photogeologic and reconnaissance geologic map of the Beebe SW Quadrangle, Custer County, Montana, by S. J. Luft. 1987. Lat 46° to $46^{\circ}07'30''$, long $105^{\circ}37'30''$ to $105^{\circ}45'$. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 28 by 29 inches.
- MF-1967. MONTANA. Photogeologic and reconnaissance geologic map of the Beebe Quadrangle, Custer County, Montana, by S. J. Luft, and D. H. Meier. 1987. Lat 46° to $46^{\circ}07'30''$, long $105^{\circ}30'$ to $105^{\circ}37'30''$. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 28 by 29 inches.
- MF-1968. MONTANA. Photogeologic and reconnaissance geologic map of the Miles City Creek Quadrangle, Custer County, Montana, by S. J. Luft, and E. L. Heffern. 1987. Lat 46° to $46^{\circ}07'30''$, long $105^{\circ}22'30''$ to $105^{\circ}30'$. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 28 by 28 inches.
- MF-1969. MONTANA. Photogeologic and reconnaissance geologic map of the Forty Creek Quadrangle, Custer County, Montana, by S. J. Luft, and D. H. Meier. 1987. Lat 46° to $46^{\circ}07'30''$, long $105^{\circ}15'$ to $105^{\circ}22'30''$. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 28 by 30 inches.
- MF-1971. NEVADA. Preliminary geologic map of the northern Wilson Creek Range, Lincoln County, Nevada, by J. B. Willis, M. G. Best, B. J. Kowallis, and V. C. Best. 1987. Lat $38^{\circ}15'$ to $38^{\circ}30'$, long $114^{\circ}15'$ to $114^{\circ}30'$. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 28 by 46 inches.
- MF-1972. WYOMING. Geologic map of part of the Dickie Springs and Pacific Springs quadrangles, Fremont County, Wyoming, by J. S. Loen. 1987. Lat about $42^{\circ}15'$ to $42^{\circ}22'30''$, long $108^{\circ}45'$ to 109° . Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 41 inches.
- MF-1973. WYOMING. Stratigraphic and sedimentologic framework of Paleocene rocks, southwest flank of the Rock Springs Uplift, Sweetwater County, Wyoming, by M. A. Kirschbaum. 1987. Two sheets. Lat about $41^{\circ}22'30''$, long about $109^{\circ}15'$. Sheet 1, 31 by 48 inches; sheet 2, 36 by 56 inches.
- MF-1974. INDIANA. Seismicity map of the State of Indiana, by C. W. Stover, B. G. Reagor, and S. T. Algermissen. 1987. Lat about 38° to about 42° , long about 85° to about 88° . Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 21 by 35 inches. (Supersedes MF-1145.)
- MF-1975. OHIO. Seismicity map of the State of Ohio, by C. W. Stover, B. G. Reagor, and S. T. Algermissen. 1987. Lat about 39° to about 42° , long about 81° to about 84° . Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 26 by 39 inches. (Supersedes MF-1142.)
- MF-1976. NEW MEXICO. Geologic map of the O Bar O Canyon East Quadrangle, Catron County, New Mexico, by D. H. Richter. 1987. Lat $33^{\circ}30'$ to $33^{\circ}37'30''$, long $108^{\circ}07'30''$ to $108^{\circ}15'$. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 26 by 39 inches.
- MF-1977. SOUTH CAROLINA. Geology, geochemistry, and mineral resource assessment of the Long Cane Roadless Area, Abbeville County, South Carolina, by Henry Bell, III. 1987. Lat about $34^{\circ}03'$ to about $34^{\circ}09'$, long $82^{\circ}17'30''$ to $82^{\circ}22'30''$. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 40 inches.
- MF-1980. Preliminary geologic map of the Cerro Cobachi area, Sonora, Mexico, by K. B. Ketner, and J. H. Noll, Jr. 1987. Lat about $28^{\circ}49'$ to about $28^{\circ}53'$, long about $109^{\circ}07'30''$ to about $110^{\circ}13'$. Scale 1:20,000 (1 inch = about 1,667 feet). Sheet 26 by 34 inches.
- MF-1981. CALIFORNIA. Oblique map of the northern Sierra Nevada, California, showing location of gold-bearing areas, by T. R. Alpha, F. C. Dodge, and J. D. Bliss. 1987. Lat about 36° to about 40° , long about 118° to about 123° . Sheet 36 by 47 inches.
- MF-1982. COLORADO, NEBRASKA, WYOMING. Median-porosity contour maps of the J Sandstone, Dakota Group, in the Denver Basin, Colorado, Nebraska, and Wyoming, by D. K. Higley, and D. L. Gautier. 1987. Lat about 39° to about $41^{\circ}30'$, long about 103° to about 105° . Scale 1:500,000 (1 inch = about 8 miles). Sheet 36 by 37 inches.
- MF-1983. GEORGIA. Geology, geochemistry and mineral resource assessment of the Rand Mountain Roadless Area, Rabun County, Georgia, by Henry Bell, III. 1987. Lat $34^{\circ}52'30''$ to 35° , long $83^{\circ}05'$ to $83^{\circ}12'30''$. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 35 by 40 inches.
- MF-1986. COLORADO. Chart showing correlation of selected parts of the Eocene Uinta and Green River formations, southeastern Piceance Creek basin, Colorado, by R. B. O'Sullivan. 1987. Lat about $39^{\circ}27'$ to about $39^{\circ}48'$, long about $107^{\circ}52'$ to about $108^{\circ}09'$. Sheet 30 by 43 inches.
- MF-1987. VERMONT. Seismicity map of the State of Vermont, by C. W. Stover, B. G. Reagor, L. M. Highland, and S. T. Algermissen. 1987. Lat about $42^{\circ}30'$ to about $45^{\circ}30'$, long about 71° to about $73^{\circ}30'$. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 18 by 32 inches. (Supersedes MF-1262.)
- MF-1988. NORTH CAROLINA. Seismicity map of the State of North Carolina, by B. G. Reagor, C. W. Stover, and S. T. Algermissen. 1987. Lat about 34° to about 37° , long about $75^{\circ}30'$ to about 84° . Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 33 by 34 inches. (Supersedes MF-1224.)
- MF-1989. COLORADO. Preliminary geologic map of the No-Name Ridge Quadrangle, Rio Blanco County, Colorado, by R. B. O'Sullivan. 1987. Lat $39^{\circ}45'$ to $39^{\circ}52'30''$, long 108° to $108^{\circ}07'30''$. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 32 by 34 inches.
- MF-1998. CALIFORNIA. Geologic map of the El Portal Quadrangle, west-central Sierra Nevada, California, by P. C. Bate-man, and K. B. Krauskopf. 1987. Lat $37^{\circ}30'$ to $37^{\circ}45'$, long $119^{\circ}45'$ to 120° . Scale 1:62,500 (1 inch = about 1 mile). Sheet 24 by 34 inches.
- MF-2003. COLORADO. Reconnaissance geologic map of the Colona Quadrangle, Montrose and Ouray counties, Colorado, by W. J. Hail, Jr. 1987. Lat $38^{\circ}15'$ to $38^{\circ}22'30''$, long $107^{\circ}45'$ to $107^{\circ}52'30''$. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 25 by 28 inches.
- MF-2005. MONTANA. Geologic map of the west flank of the Whitefish Range, Stillwater State Forest, Montana, by J. W. Whipple, and J. E. Harrison. 1987. Lat about $48^{\circ}25'$ to about $48^{\circ}47'$, long about $114^{\circ}23'$ to about $114^{\circ}48'$. Scale 1:63,360 (1 inch = 1 mile). Sheet 33 by 40 inches.

MF-2008-A. COLORADO. Cross sections showing stratigraphic framework of Upper Cretaceous Dakota Sandstone, Mancos Shale, Mesaverde Group, and Mesaverde Formation, and lower Tertiary Wasatch Formation, west-central Piceance Basin, Garfield County, Colorado, by M. S. Ellis, U.S. Geological Survey, and B. S. Kelso, Colorado Geological Survey. 1987. Two sheets. Lat 39°15' to 39°30', long 108° to 109°. Sheet 1, 41 by 47 inches; sheet 2, 36 by 52 inches.

MF-2009. MONTANA. Photogeologic and reconnaissance geologic map of the Finch NE Quadrangle, Rosebud County, Montana, by R. B. Colton, J. L. Klockenbrink, M. A. Grout, U.S. Geological Survey; E. L. Heffern, and P. R. Bierbach, U.S. Bureau of Land Management. 1987. Lat 46°22'30" to 46°30', long 106°45' to 106°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 23 by 28 inches.

MF-2010. MONTANA. Photogeologic and reconnaissance geologic map of the Donleys Reservoir Quadrangle, Rosebud County, Montana, by R. B. Colton, J. L. Klockenbrink, M. A. Grout, U.S. Geological Survey; and P. R. Bierbach, U.S. Bureau of Land Management. 1987. Lat 46°22'30" to 46°30', long 106°52'30" to 107°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 23 by 28 inches.

MF-2011. MONTANA. Photogeologic and reconnaissance geologic map of the Black Coulee Quadrangle, Rosebud County, Montana, by R. B. Colton, J. L. Klockenbrink, M. A. Grout, U.S. Geological Survey; E. L. Heffern, and P. R. Bierbach, U.S. Bureau of Land Management. 1987. Lat 46°22'30" to 46°30', long 106°37'30" to 106°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 22 by 29 inches.

MF-2012. MONTANA. Photogeologic and reconnaissance geologic map of the Miller Creek SW Quadrangle, Custer and Rosebud counties, Montana, by R. B. Colton, J. L. Klockenbrink, S. L. Durst, M. A. Grout, U.S. Geological Survey; E. L. Heffern, and P. R. Bierbach, U.S. Bureau of Land Management. 1987. Lat 46° to 46°07'30", long 106°07'30" to 106°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 23 by 28 inches.

MF-2013. MONTANA. Photogeologic and reconnaissance geologic map of the Miller Creek Quadrangle, Custer and Rosebud counties, Montana, by R. B. Colton, J. L. Klockenbrink, S. L. Durst, M. A. Grout, U.S. Geological Survey; E. L. Heffern, and P. R. Bierbach, U.S. Bureau of Land Management. 1987. Lat 46° to 46°07'30", long 106° to 106°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 23 by 28 inches.

MF-2014. MONTANA. Photogeologic and reconnaissance geologic map of the Miller Creek NW Quadrangle, Custer and Rosebud counties, Montana, by R. B. Colton, J. L. Klockenbrink, U.S. Geological Survey; E. L. Heffern, and P. R. Bierbach, U.S. Bureau of Land Management. 1987. Lat 46°07'30" to 46°15', long 106°07'30" to 106°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 22 by 28 inches.

MF-2015. MONTANA. Photogeologic and reconnaissance geologic map of the Moon Creek School Quadrangle, Custer County, Montana, by R. B. Colton, J. L. Klockenbrink, S. L. Durst, U.S. Geological Survey; E. L. Heffern, and P. R. Bierbach, U.S. Bureau of Land Management. 1987. Lat 46°07'30" to 46°15', long 106° to 106°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 23 by 28 inches.

MF-2026. COLORADO. Geologic map of the Hawxhurst Creek Quadrangle, Garfield and Mesa counties, Colorado, by J. R. Donnell, W. E. Yeend, and M. C. Smith. 1988. Lat 39°15' to 39°22'30", long 107°52'30" to 108°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 30 by 34 inches.

MINERAL INVESTIGATIONS RESOURCES MAPS

Mineral distribution and classification maps; scales from 1:250,000 to 1:5,000,000; show geographic distribution and grade of mineral-resource commodities. Brief accompanying text may include a general description of the geologic occurrences, a locality index, and a bibliography.

MR-0094. ARIZONA. Metallic mineral and mineral-fuel resource potential map of Arizona showing major mineral deposits, by H. M. Beikman, J. A. Peterson, D. F. Huber, and W. C. Butler. 1986. Lat about 31° to 37°, long about 109° to about 114°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 31 by 32 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; principal scale 1:24,000 or 1:48,000, regional studies at 1:250,000 scale or smaller.

HA-0682. MASSACHUSETTS. Water resources of the Blackstone River basin, Massachusetts, by E. H. Walker, and B. E. Krejmas. 1986. Two sheets. Lat 41°48'45" to 42°21'02", long 71°21'14" to 71°55'44". Scale 1:48,000 (1 inch = 4,000 feet). Sheet 1, 35 by 42 inches; sheet 2, 39 by 44 inches. (Supersedes Open-file report 83-700.)

HA-0688. Flow characteristics for selected springs and streams in the Ozark subregion, Arkansas, Kansas, Missouri, and Oklahoma, by E. R. Hedman, John Skelton, and D. A. Freiwald. 1987. Four sheets. Lat about 34° to about 40°, long about 89° to about 97°. Scale 1:750,000 (1 inch = about 12 miles). Sheet 1, 39 by 41 inches; sheet 2, 39 by 50 inches; sheet 3, 39 by 41 inches; sheet 4, 39 by 41 inches.

HA-0689. MISSOURI. Floods of December 1982 in southeastern Missouri, by L. A. Waite, and T. W. Alexander. 1987. Lat 36° to about 39°, long about 89° to about 92°30'. Scale 1:750,000 (1 inch = about 12 miles). Sheet 33 by 43 inches.

HA-0690. IDAHO, OREGON. Water withdrawn for irrigation in 1980 on the Snake River plain, Idaho and eastern Oregon, by B. B. Bigelow, S. A. Goodell, and G. D. Newton. 1987. Two sheets. Lat about 42°15' to about 44°30', long about 111°30' to about 117°15'. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 1, 38 by 49 inches; sheet 2, 38 by 45 inches. (Supersedes Open-file report 84-434.)

HA-0691. IDAHO, OREGON. Irrigated acreage and other land uses on the Snake River plain, Idaho and eastern Oregon, by G. F. Lindholm, and S. A. Goodell. 1986. Lat 42° to 44°30', long 111°30' to 117°15'. Scale 1:500,000 (1 inch = about 8 miles). Sheet 34 by 44 inches. (Supersedes Open-file report 84-452.)

HA-0692. MASSACHUSETTS. Ground-water resources of Cape Cod, Massachusetts, by D. R. LeBlanc, J. H. Guswa, M. H. Frimpter, and C. J. Londquist. 1986. Four sheets. Lat 42°06' to 41°32', long 69°55' to 70°42'. Scale 1:48,000 (1 inch = 4,000 feet) and smaller. Each sheet 30 by 44 inches.

HA-0693. MASSACHUSETTS. Water resources of the Chicopee River basin, Massachusetts, by B. E. Krejmas, and Anthony Maevsky. 1986. Four sheets. Lat 42°17'30" to about 42°30', long 71°52' to 72°40'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 1, 32 by 42 inches; sheet 2, 31 by 42 inches; sheet 3, 31 by 42 inches; sheet 4, 32 by 42 inches.

HA-0694-B. NEVADA, UTAH. Ground-water levels in the Great Basin region of Nevada, Utah, and adjacent states, by J. M. Thomas and J. L. Mason, U.S. Geological Survey; and J. D. Crabtree, Ertec Western, Inc. 1986. Two sheets. Lat about 36° to about 42°, long about 112° to about 120°. Scale 1:1,000,000 (1 inch = about 16 miles). Each sheet 33 by 42 inches.

HA-0696. IDAHO, OREGON. Solute distribution in ground and surface water in the Snake River basin, Idaho and eastern Oregon, by W. H. Low. 1987. Two sheets. Sheet 1, lat about 41° to about 45°, long about 110° to about 118°; sheet 2, lat about 42° to about 44°, long about 112° to about 117°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 1, 29 by 42 inches; sheet 2, 27 by 39 inches. (Supersedes Open-file report 85-167.)

HA-0704. TEXAS. Approximate potentiometric surfaces for the aquifers of the Texas coastal uplands system, 1980, by Sergio Garza, B. D. Jones, and E. T. Baker, Jr. 1987. Lat about 26° to about 34°, long about 94° to about 100°. Scale 1:1,500,000 (1 inch = about 24 miles). Sheet 35 by 51 inches.

HYDROLOGIC UNIT MAPS

ALASKA. Hydrologic unit map. 1987. State of Alaska. Lat about 54° to about 70°, long about 130° to about 168°. Scale 1:2,500,000 (1 inch = about 40 miles). Sheet 35 by 49 inches. (Revision.)

LAND USE AND LAND COVER MAPS

L-0207. ALASKA. Arctic, Alaska, vegetation and land cover, 1981, by U.S. Geological Survey in cooperation with the U.S. Fish and Wildlife Service. 1987. Lat 68° to 69°, long 144° to 147°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 23 by 30 inches.

L-0209. ALASKA. Valdez, Alaska, vegetation and land cover, by U.S. Geological Survey in cooperation with the Alaska Department of Natural Resources. 1987. Lat 61° to 62°, long 144° to 147°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 23 by 39 inches.

L-0211. ALASKA. Beechey Point, Alaska, vegetation and land cover, by U.S. Geological Survey in cooperation with the U.S. Army Cold Regions Research and Engineering Laboratory. 1987. Lat 70° to 71°, long 147° to 150°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 24 by 26 inches.

OUTSIDE PUBLICATIONS

ARTICLES AND REPORTS

Articles by Geological Survey personnel in non-Geological Survey publications that came to our attention in 1987. Non-Geological Survey personnel who share authorship in articles with U.S. Geological Survey personnel are indicated by an asterisk (*) immediately following the name. These publications are not available from the U.S. Geological Survey.

OP-1. J. A. Ach and F. H. Wilson. Potassium-argon ages of volcanic rocks from near Ankara, central Turkey. *Isochron/West*, v. 47, December 1986. p. 15-17.

OP-2. Ulrich Achauer, Lizbeth Greene, J. R. Evans and H. M. Iyer. CALIFORNIA. Nature of the magma chamber underlying the Mono Craters area, eastern California, as determined from teleseismic travel time residuals. *Journal of Geophysical Research, B, Solid Earth and Planets*, v. 91, no. 14, December 10, 1986. p. 13,873-13,891.

OP-3. W. O. Addicott, compiler. Geodynamic map of the Circum-Pacific region; Pacific Basin sheet. Circum-Pac. Council. Energy and Miner. Resour., 1985. 1 sheet.

OP-4. G. R. Aiken and R. L. Malcolm. Molecular weight of aquatic fulvic acids by vapor pressure osmometry. *Geochimica et Cosmochimica Acta*, v. 51, no. 8, August 1987. p. 2177-2184.

OP-5. N. R. Albert, W. R. Evitt* and J. A. Stein*. CALIFORNIA, ALASKA. *Lacrymodinium*, n. gen., a gonyaulacoid dinoflagellate with intercalary archeopyle from the Jurassic and Early Cretaceous of California and Alaska. *Micropaleontology*, v. 32, no. 4, 1986. p. 303-316.

OP-6. J. N. Aleinikoff. COLORADO, WYOMING. U-Th-Pb systematics of zircon inclusions in rock-forming minerals; a study of armoring against isotopic loss using the Sherman Granite of Colorado-Wyoming, USA. *Contributions to Mineralogy and Petrology*, v. 83, no. 3-4, 1983. p. 259-269.

OP-7. J. N. Aleinikoff, Cynthia Dusel-Bacon, H. L. Foster and W. J. Nokleberg. ALASKA. Lead isotopic fingerprinting of tectono-stratigraphic terranes, east-central Alaska. *Canadian Journal of Earth Sciences = Journal Canadien des Sciences de la Terre*, v. 24, no. 10, October 1987. p. 2089-2098.

OP-8. J. N. Aleinikoff and J. W. Green*. NEW HAMPSHIRE. The Massabesic gneiss complex and Permian granite near Milford, south-central New Hampshire, in *Northeastern section of the Geological Society of America; centennial field guide* (D. C. Roy, editor). Boulder, CO: Geol. Soc. Am., v. 5, 1987. p. 269-272.

OP-9. L. R. Alldredge. Localized sudden changes in the geomagnetic secular variation. *Journal of Geomagnetism and Geoelectricity*, v. 39, no. 2, 1987. p. 111-118.

OP-10. L. R. Alldredge. On predicting changes in the geomagnetic field. *Journal of Geophysical Research, B, Solid Earth and Planets*, v. 92, no. 7, June 10, 1987. p. 6331-6338.

OP-11. L. R. Alldredge. Current loops fitted geomagnetic model spherical harmonic coefficients. *Journal of Geomagnetism and Geoelectricity*, v. 39, no. 5, 1987. p. 271-296.

OP-12. L. R. Alldredge and E. R. Benton*. Fourier power spectra of the geomagnetic field for circular paths on the Earth's surface. *Journal of Geomagnetism and Geoelectricity*, v. 38, no. 8, 1986. p. 807-821.

OP-13. W. M. Alley and J. E. Scheffer. External effects of irrigators' pumping decisions, High Plains Aquifer. *Water Resources Research*, v. 23, no. 7, July 1987. p. 1123-1130.

- OP-14. Bernard Amadei* and W. Z. Savage. Gravitational stresses in regularly jointed rock masses; a keynote lecture, *in* Proceedings of the International symposium on fundamentals of rock joints (Ove Stephansson, editor). Lulea: CENTEK Publ., 1985. p. 463-473.
- OP-15. Bernard Amadei*, W. Z. Savage and H. S. Swolfs. Gravitational stresses in anisotropic rock masses. *International Journal of Rock Mechanics and Mining Sciences & Geomechanics Abstracts*, v. 24, no. 1, February 1987. p. 5-14.
- OP-16. D. E. Anders and L. B. Magoon. ALASKA. Oil-source correlation study in northeastern Alaska. *Organic Geochemistry*, v. 10, no. 1-3, 1986. p. 407-415.
- OP-17. R. Y. Anderson*, Eileen Hemphill-Haley and J. V. Gardner. CALIFORNIA. Persistent late Pleistocene-Holocene seasonal upwelling and varves off the coast of California. *Quaternary Research* (New York), v. 28, no. 2, September 1987. p. 307-313.
- OP-18. D. J. Andrews. Objective determination of source parameters and similarity of earthquakes of different size. *Geophysical Monograph*, v. 37, 1986. p. 259-267.
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INDEX

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ABBREVIATIONS USED

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

Outside journals and books are not available from the U.S. Geological Survey.

GENERAL

A

absolute age *see also* geochronology; isotopes

absolute age—applications

metallageny: $^{40}\text{Ar}/^{39}\text{Ar}$ thermochronology of mineral deposits; information on age, duration, number of episodes, and temperature of mineralization C 0995

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- ground water:** Bibliography of selected papers on geophysical techniques in searching for ground water OF 87-0003

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- fuel resources:** Fortran sorting program to code hydrocarbon production and show data using well data from Petroleum Information's well history control system OF 86-0437

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McCarthy, J. H., Jr.	OF 86-0461; OP-699	McLellan, M. W.	MF-1961, 1962	Mesko, T. O.	OP-1982	Miller, R. B.	OP-540
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McFadden, L. D.	OP-702, 1232, 1967	Meier, A. L.	C 0995; OF 86 0594; OP-647, 2409	Middleton, Roy	OP-1433, 2113	Ming, C. O.	OF 86-0248
McGarr, A. F.	OP-623, 703, 704, 1390	Meier, D. H.	MF-1967, 1969	Miesch, A. T.	OF 87-0411-A, 87-0411-B, 87-0411-C; OP-925	Minkin, J. A.	OP-1466; P 1314 A-L
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Moon, B. J.	OF 85-0660-I,	Morris, E. M.	P 1435	B 1578		2052	
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Moore, J. G.	B 1760;	Moss, M. E.	OP-1050			1958, 1959; OP-784, 981, 1143,	
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Moore, J. R.	OP-828;	P 1350				Newton, C. R.	P 1435
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Moore, M. A.	OF 87-0203	884, 889, 890; OP-888				OP-787	
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Moore, R. B.	MF-1959,	Moyle, W. R., Jr.	OF 84-0726,			2001; WRI 87-4009	
1960; OF 86-0270; OP-491,		85-0695, 86-0498				Nichols, D. J.	B 1665;
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Patton, F. D.	OF 86-0505		1775; P 1435		OP-1303		C 0995; OF 86-0556, 87-0403;
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	987		OP-1007	Scarborough, J. L. ...	OF 86-0477,	890; OP-888	
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Rucker, S. J., IV	WRI 82-4003		1011; OP-1009	Schaefer, D. H.	I-1701	Schroeder, E. E.	P 1332
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Schroeder, R. A.	OP-724	Seekins, B. A.	OF 86-0333-B;	Sherman, D. M.	C 0995	Silverman, S. A.	OP-1816
Schruben, P. G.	C 0858-C;	Seeland, David	OP-1467	Sherrard, Mark	OF 86-0326,	Silverstein, Barry	B 1639
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Schultz, D. L.	OP-642	Seeley, R. L.	OF 87-0332	Sherrod, D. R.	B 1711-A;	85-4165	
Schultz, K.	OP-2438	Segall, Paul	OF 86-0451,	Sherwood, J. M.	MF-1952	Simmons, K. R.	OF 86-0555;
Schultz, L. G.	OP-2256	86-0630, 87-0192; OP-446, 590,		Sherwood, K. W.	WRI 86-4197	OP-660, 1701	
Schultz, P. H.	OP-2257,	898, 1056, 1344, 1345, 1346,		Shevenell, Lisa	OF 86-0396	Simmons, W. B.	OP-1601
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Schulz, Erhard	C 0989	Seiders, V. M.	OP-1057,	1178		OP-508, 1087, 1088, 1089,	
Schulz, K. J.	C 0995;	1058		Shew, N. B.	C 0998;	1784, 2292	
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Schulz, S. S.	B 1639;	OP-1201, 1202		Shideler, G. L.	OP-1070,	1091	
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86-0570-B; OP-2098		Selner, G. I.	C 0995;	Shoemaker, C. S.	OP-2284,	1919	
Schuster, R. L.	I-1699;	OF 86-0446-A, 86-0446-B,		2285		Simons, K. R.	OP-1928
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Schwab, W. C.	C 0961,	Sembera, Eugene	B 1639;	Sholar, C. J.	WRI 85-4052,	GP-0953-B, 0975; OP-947,	
0995; OF 86-0333-B, 86-0433;		OP-248, 1669, 1695, 2407		86-4171		1397, 2293	
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Schwarz, L. J.	OF 87-0057;	87-0352, 87-0354; OP-70		Shulters, Jacqueline ..	OP-1645	Richard	OP-960
OP-1049		Sevon, W. D.	I-1420 (NJ-18)	Shurr, G. W.	OP-1075,	Singer, D. A.	C 0995;
Scotese, C. R.	OP-839	Seyfried, W. E., Jr. ..	C 0995;	1076		OF 86-0467, 87-0272-C	
Scott, A. G.	OP-1050	OP-1060		Shuster, R. D.	OP-2481	OP-795,	
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Scott, K. M.	C 0953;	Sharp, R. P.	P 1350	Siems, D. F.	MF-1589-C;	Sisson, V. B.	OP-2303
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