

Publications of the U.S. Geological Survey, 1986

DEPARTMENT OF THE INTERIOR



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DONALD PAUL HODEL, *Secretary*

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, *Director*

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Publications of the U.S. Geological Survey

This catalog is a list of (1) books and maps¹ that were published during 1986, and (2) articles by Geological Survey personnel in non-Geological Survey journals and books that came to our attention in 1986; it supplements the permanent catalogs "Publications of the Geological Survey, 1879-1961", "Publications of the Geological Survey, 1962-1970", and "Publications of the U.S. Geological Survey, 1971 through 1981." These permanent catalogs, as well as some others, are available under the conditions indicated below from the Books and Open-File Reports Section, Federal Center, Bldg. 41, Box 25425, Denver, CO 80225. The catalogs are also available over the counter at any of the Geological Survey offices that sell books.

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DENVER, Colorado—Federal Bldg., Rm. 169, 1961 Stout St.
DALLAS, Texas—Federal Bldg. Rm. 1C45, 1100 Commerce St.
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Survey maps are also sold by some 2,500 commercial dealers throughout the United States. Dealers are listed in State indexes to topographic maps, which are obtainable free of charge by mail or over the counter from Geological Survey offices listed on this page.

BOOKS

PROFESSIONAL PAPERS

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

P 0560-D. **Geology of the Arabian Peninsula; sedimentary geology of Saudi Arabia**, by R. W. Powers, L. F. Ramirez, C. D. Redmond, and E. L. Elberg, Jr. 1966. p. D1-D147; 10 plates in pocket. (Reprint.)

P 0560-F. **Geology of the Arabian Peninsula; Kuwait**, by D. I. Milton. 1967. p. F1-F7. (Reprint.)

P 0560-G. **Geology of the Arabian Peninsula; southwestern Iraq**, by K. M. Al Naqib, Iraq Petroleum Co. 1967. p. G1-G54; 4 plates in pocket. (Reprint.)

P 1054-C. **WYOMING. Hydrothermal alteration in research drill hole Y-3, Lower Geyser Basin, Yellowstone National Park, Wyoming**, by K. E. Bargar, and M. H. Beeson. 1985. p. C1-C23. (Hydrothermal studies in Yellowstone National Park, Wyoming.)

P 1076-B. **World bauxite resources**, by S. H. Patterson, U.S. Geological Survey, H. F. Kurtz, U.S. Bureau of Mines, and J. C. Olson and C. L. Neeley, U.S. Geological Survey. 1986. p. B1-B151. (Geology and resources of aluminum.)

P 1134-E. **COLORADO. Geochemical variability of soils and biogeochemical variability of plants in the Piceance Basin, Colorado**, by M. L. Tuttle, R. C. Severson, W. E. Dean, U.S. Geological Survey, and R. W. Klusman, Colorado School of Mines. 1986. p. E1-E46. (Geochemical survey of the western energy regions.)

P 1151-H. **KENTUCKY. The geology of Kentucky; a text to accompany the Geologic Map of Kentucky**, edited by R. C. McDowell. 1986. p. H1-H76; 1 plate in pocket. (Contributions to the geology of Kentucky.)

Ordovician System, by E. R. Cressman, and W. L. Peterson. p. H3-H11.

Silurian System, by W. L. Peterson. p. H11-H15.

Devonian System, by R. C. Kefferle. p. H15-H19.

Mississippian System, by G. J. Grabowski, Jr. p. H19-H31.

Pennsylvanian System, by C. L. Rice. p. H31-H44.

Permian System, by R. C. McDowell. p. H44-H46.

Cretaceous and Tertiary systems, by W. W. Olive, and R. C. McDowell. p. H46-H49.

Quaternary System, by R. C. McDowell, and W. L. Newell. p. H49-H53.

Structural geology, by R. C. McDowell. p. H53-H59.

Economic geology, by Preston McGrain. p. H59-H64.

Physiography, by W. L. Newell. p. H64-H68.

P 1177-B. **NORTH CAROLINA. The Outer Banks of North Carolina**, by Robert Dolan, and Harry Lins. 1986. 47 p. (Revision.)

P 1241-D. **The Precambrian of the Rocky Mountain region**, by C. E. Hedge, U.S. Geological Survey; R. S. Houston, University of Wyoming; O. L. Tweto, Z. E. Peterman, and J. E. Harrison, U.S. Geological Survey; and R. R. Reid, University of Idaho. 1986. 17 p.; 1 plate in pocket. (Correlation of Precambrian rocks of the United States and Mexico, edited by J. E. Harrison and Z. E. Peterman.)

P 1258-G. **ALASKA. Bed topography inferred from airborne radio-echo sounding of Columbia Glacier, Alaska**, by C. S. Brown, L. A. Rasmussen, and M. F. Meier. 1986. p. G1-G26. (Studies of Columbia Glacier, Alaska.)

P 1305. **MISSOURI. The ground-water flow system in northern Missouri with emphasis on the Cambrian-Ordovician aquifer**, by J. L. Imes. 1985. 61 p.; 1 plate in pocket.

P 1316. **MONTANA. Geology, earthquake hazards, and land use in the Helena area, Montana; a review**, by R. G. Schmidt. 1986. 64 p.; 3 plates in pocket.

P 1319. **MISSISSIPPI, ALABAMA, GEORGIA. Floods of April 1979, Mississippi, Alabama, and Georgia**, by G. W. Edelen, Jr., K. V. Wilson and J. R. Harkins, U.S. Geological Survey; and J. F. Miller and E. H. Chin, NOAA. 1986. 212 p.

P 1323. **NEVADA. Stratigraphic and volcano-tectonic relations of Crater Flat Tuff and some older volcanic units, Nye County, Nevada**, by W. J. Carr, F. M. Byers, Jr., and P. P. Orkild. 1986. 28 p.

P 1324. **VIRGINIA. Tectonic implications of the Indian Run Formation; a newly recognized sedimentary mélange in the northern Virginia Piedmont**, by A. A. Drake, Jr. 1985. 12 p.; 1 plate in pocket.

P 1325. **NEW YORK. Ground-water hydrology and subsurface migration of radionuclides at a commercial radioactive-waste burial site, West Valley, Cattaraugus County, New York**, by D. E. Prudic. 1986. 83 p.

P 1328. **TEXAS. Stratigraphic studies of a late Quaternary barrier-type coastal complex, Mustang Island-Corpus Christi Bay area, South Texas Gulf Coast**, edited by G. L. Shideler. 1986. 95 p.; 11 plates in pocket.

A. **Stratigraphic studies of a late Quaternary coastal complex, South Texas; introduction and geologic framework**, by G. L. Shideler. p. 1-8.

B. **Seismic and physical stratigraphy of late Quaternary deposits, South Texas coastal complex**, by G. L. Shideler. p. 9-31.

C. **Ostracodes from late Quaternary deposits, South Texas coastal complex**, by T. M. Cronin. p. 33-63.

D. **Petrology and diagenesis of late Quaternary sands, South Texas coastal complex**, by R. M. Flores, and C. W. Keighin. p. 65-81.

E. **Geochemistry and mineralogy of late Quaternary fine-grained sediments, South Texas coastal complex**, by R. M. Flores, and G. L. Shideler. p. 83-95.

P 1329. **NEVADA. Vegetation and climates of the last 45,000 years in the vicinity of the Nevada Test Site, south-central Nevada**, by W. G. Spaulding. 1985. 83 p. (Supersedes Open-file report 83-535.)

P 1335. **WASHINGTON. Observations of the eruptions of July 22 and August 7, 1980, at Mount St. Helens, Washington**, by R. P. Hoblitt. 1986. 44 p.

P 1344. **VIRGINIA. Relationships between geology and engineering characteristics of soils and weathered rocks of Fairfax County and vicinity, Virginia**, by S. F. Obermeier, and W. H. Langer. 1986. 30 p.; 1 plate in pocket. (Supersedes Open-file report 78-78.)

- P 1345. WASHINGTON. The effects of ground water, slope stability, and seismic hazards on the stability of the South Fork Castle Creek blockage in the Mount St. Helens area, Washington, by William Meyer, M. A. Sabol, H. X. Glicken, and Barry Voight. 1985. 42 p. (Supersedes Open-file report 84-624)
- P 1346. VIRGINIA. Stratigraphy and characteristic mollusks of the Pamunkey Group (lower Tertiary) and the Old Church Formation of the Chesapeake Group; Virginia Coastal Plain, by L. W. Ward. 1985. 78 p.
- P 1347. GEORGIA, FLORIDA. Sediment sources and transport in Kings Bay and vicinity, Georgia and Florida, July 8-16, 1982, by D. B. Radtke. 1985. 120 p.
- P 1356. UTAH, COLORADO, WYOMING. Neogene tectonics and geomorphology of the eastern Uinta Mountains in Utah, Colorado, and Wyoming, by W. R. Hansen. 1986. 78 p.
- P 1383. CALIFORNIA. Pliocene volcanic rocks of the Coso Range, Inyo County, California, by S. W. Novak, and C. R. Bacon. 1986. 44 p.
- P 1388 A-C. WYOMING. Chemical and isotopic studies of granitic Archean rocks, Owl Creek Mountains, Wyoming. 1986. 48 p.
- A. Geochemistry and petrogenesis of an Archean granite from the Owl Creek Mountains, Wyoming, by J. S. Stuckless, A. T. Miesch, and D. B. Wenner. p. 1-21.
- B. Geochronology of an Archean granite, Owl Creek Mountains, Wyoming, by C. E. Hedge, K. R. Simmons, and J. S. Stuckless. p. 23-33.
- C. Uranium-thorium-lead systematics of an Archean granite from the Owl Creek Mountains, Wyoming, by J. S. Stuckless, I. T. Nkomo, and K. A. Butt. p. 35-48.
- P 1401-C. CALIFORNIA. Geology of the fresh ground-water basin of the Central Valley, California, with texture maps and sections, by R. W. Page. 1986. p. C1-C54; 5 plates in pocket. (Regional Aquifer-System Analysis.)
- P 1403-B. FLORIDA. Hydrogeologic framework of the Floridan aquifer system in Florida and in parts of Georgia, South Carolina, and Alabama, by J. A. Miller. 1986. p. B1-B91; 33 plates in pocket. (Regional Aquifer-System Analysis.)
- P 1403-F. FLORIDA. Hydrology of the Floridan aquifer system in west-central Florida, by P. D. Ryder. 1985. p. F1-F63; 1 plate in pocket. (Regional Aquifer-System Analysis.)
- C. Geochemical evaluation of mineral resources in the Chama-Southern San Juan Mountains Wilderness Study Area, Colorado, by M. R. Brock, G. J. Neuerberg, and Theodore Botinelly, U.S. Geological Survey. p. 47-78.
- D. Oil and gas potential of the Chama-Southern San Juan Mountains Wilderness Study Area, Colorado, by R. T. Ryder, U.S. Geological Survey. p. 79-121.
- E. Metallic and coal resources of the Chama-Southern San Juan Mountains Wilderness Study Area, Colorado, by A. E. Lindquist, U.S. Bureau of Mines. p. 123-152.
- B 1545. IDAHO. Mineral resources of the eastern part of the Sawtooth National Recreation Area, Custer and Blaine counties, Idaho, by U.S. Geological Survey and U.S. Bureau of Mines. 1986. 472 p.; 5 plates in pocket. (Studies related to wilderness; primitive areas.) (Supersedes Open-file report 74-100.)
- A. Geology of the eastern part of the Sawtooth National Recreation Area, Idaho, by C. M. Tschanz, T. H. Kiilsgaard and D. A. Seeland, U.S. Geological Survey. p. 17-43.
- B. Aeromagnetic survey and tentative interpretation of the eastern part of the Sawtooth National Recreation Area, Idaho, by D. R. Mabey and C. M. Tschanz, U.S. Geological Survey. p. 45-51.
- C. Geologic appraisal of mineral resources of the eastern part of the Sawtooth National Recreation Area, Idaho, by C. M. Tschanz and T. H. Kiilsgaard, U.S. Geological Survey. p. 53-208.
- D. Geochemical and geophysical studies of selected areas of the eastern part of the Sawtooth National Recreation Area, Idaho, by C. M. Tschanz and F. C. Frischknecht, U.S. Geological Survey. p. 209-230.
- E. Economic appraisal of the eastern part of the Sawtooth National Recreation Area, Idaho, by R. M. Van Noy, James Ridenour, N. T. Zilka, F. E. Federspiel, R. K. Evans, E. T. Tuckek and A. B. McMahan, U.S. Bureau of Mines; with sections on Electromagnetic surveys, by F. C. Frischknecht, U.S. Geological Survey. p. 231-472.
- B 1548. ARIZONA. Proterozoic geology of the Brady Butte area, Yavapai County, Arizona, by P. M. Blacet. 1985. 55 p.; 2 plates in pocket.
- B 1555. COLORADO. Summary of the geology, economic aspects, and geochemistry of the Schwartzwalder uranium-bearing area, Ralston Buttes District, Jefferson County, Colorado, by E. J. Young. 1985. 32 p.; 2 plates in pocket.
- B 1560. VIRGINIA. Geology of the Marshall Quadrangle, Fauquier County, Virginia, by G. H. Espenshade. 1986. 60 p.; 1 plate in pocket.
- B 1564. Lexicon of new formal geologic names of the United States, 1976-1980, by G. W. Luttrell, M. L. Hubert, and V. M. Jussen. 1986. 191 p.
- B 1577. UTAH. Geology and mineralogy of the Apex germanium-gallium mine, Washington County, Utah, by L. R. Bernstein. 1986. 9 p. (Supersedes Open-file report 85-511.)
- B 1580. SOUTH DAKOTA, WYOMING. Mineral resource potential and geology of the Black Hills National Forest, South Dakota and Wyoming, by Ed DeWitt, J. A. Redden, A. B. Wilson, and David Buscher, U.S. Geological Survey, with a section on Salable commodities, by J. S. Dersch, U.S. Forest Service. 1986. 135 p.; 4 plates in pocket.

BULLETINS

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

- B 1524. COLORADO. Mineral resources of the Chama-Southern San Juan Mountains Wilderness Study Area, Mineral, Rio Grande, Archuleta, and Conejos counties, Colorado, by U.S. Geological Survey and U.S. Bureau of Mines. 1985. 152 p.; 3 plates in pocket. (Studies related to wilderness; wilderness areas.) (Supersedes Open-file report 77-309.)
- A. Geology of the Chama-Southern San Juan Mountains Wilderness Study Area, Colorado, by M. R. Brock and D. L. Gaskill, U.S. Geological Survey. p. 5-34.
- B. Geophysical investigation of the Chama-Southern San Juan Mountains Wilderness Study Area, Colorado, by J. C. Wynn, U.S. Geological Survey. p. 35-45.

- B 1582. Reference samples in geology and geochemistry, by F. J. Flanagan. 1986. 70 p.
- B 1583. Applications of U.S. Geological Survey digital cartographic products, 1979-1983, by T. R. Loveland, and Ben Ramey. 1986. 44 p.
- B 1584. UTAH. Age and correlation of Cretaceous rocks previously assigned to the Morrison(?) Formation, Sanpete-Sevier Valley area, central Utah, by I. J. Witkind, U.S. Geological Survey; L. A. Standlee, Conoco; and K. F. Maley, Salt Lake City. 1986. 9 p.
- B 1585. CALIFORNIA. Lake Eleanor Quadrangle, central Sierra Nevada, California; analytical data, by F. C. Dodge, and L. C. Calk. 1986. 20 p.
- B 1587. FLORIDA. Geology and mineral-resource potential of Seven Roadless Areas in the Apalachicola National Forest, Liberty County, Florida, by S. H. Patterson and C. C. Cameron, U.S. Geological Survey, and Walter Schmidt, Florida Bureau of Geology. 1986. 21 p.
- B 1588. ALASKA. Engineering geology of the Government Hill area, Anchorage, Alaska, by R. G. Updike, Alaska Division of Geological and Geophysical Surveys, and B. A. Carpenter, Geraghty and Miller, Inc. 1986. 32 p.
- B 1589-B. SOUTH CAROLINA. Soil development and its relation to the ages of morphostratigraphic units in Horry County, South Carolina, by H. W. Markewich, M. J. Pavich, U.S. Geological Survey; M. J. Mausbach, B. N. Stuckey, U.S. Department of Agriculture; R. G. Johnson and Virginia Gonzalez, U.S. Geological Survey. 1986. 61 p. (Pedologic studies in the Eastern United States; relations to geology.)
- B 1593. VERMONT. A study of rock stresses and engineering geology in quarries of the Barre Granite of Vermont, by T. C. Nichols, Jr. 1986. 31 p.
- B 1596. ALASKA. Geologic studies of the lower Cook Inlet COST No. 1 well, Alaska outer continental shelf, edited by L. B. Magoon. 1986. 99 p.
- Introduction, by L. B. Magoon, U.S. Geological Survey. p. 5-9.
- Environmental geology, by A. H. Bouma, Gulf Corp., and M. A. Hampton, U.S. Geological Survey. p. 11-15.
- Stratigraphic units of the COST No. 1 well, by L. B. Magoon, U.S. Geological Survey. p. 17-22.
- Correlation of the COST No. 1 well data and the marine seismic data, by M. A. Fisher, U.S. Geological Survey. p. 23-27.
- Paleontology and biostratigraphy of the COST No. 1 well, by R. F. Turner, U.S. Minerals Management Service. p. 29-31.
- Petroleum geochemistry, by G. E. Claypool, U.S. Geological Survey. p. 33-39.
- Present-day geothermal gradient, by L. B. Magoon, U.S. Geological Survey. p. 41-46.
- Sandstone petrography, by Hugh McLean, U.S. Geological Survey. p. 47-49.
- Sandstone diagenesis, by J. G. Bolm, U.S. Minerals Management Service, and T. H. McCulloh, Mobil Research and Development Corp. p. 51-53.
- Plutonism and provenance; implications for sandstone compositions, by Travis Hudson, Arco Exploration Technology. p. 55-60.
- Petrography, provenance, and tectonic significance of Middle and Upper Jurassic sandstone from Tuxedni Bay, by R. M. Egbert, Sohio Petroleum Co. p. 61-63.
- Framework geology and sandstone composition, by L. B. Magoon, U.S. Geological Survey, and R. M. Egbert, Sohio Petroleum Co. p. 65-90.
- Conclusions, by L. B. Magoon, U.S. Geological Survey. p. 91-99.
- B 1598. ALASKA. Micropaleontology and sedimentology of the PB borehole series, Prudhoe Bay, Alaska, by Kristin McDougall, E. M. Brouwers, and Peggy Smith. 1986. 62 p.
- B 1599. CALIFORNIA, ARIZONA. Tectonic setting and lithology of the Winterhaven Formation; a new Mesozoic stratigraphic unit in southeasternmost California and southwestern Arizona, by G. B. Haxel and R. M. Tosdal, U.S. Geological Survey, and J. T. Dillon, Alaska Division of Geological and Geophysical Surveys. 1985. 19 p.
- B 1605-A. Stratigraphic notes, 1984. 1985. p. A1-A78.
- Revisions in the Tertiary stratigraphy of the east flank of the Diablo Range, Central California, by J. A. Bartow, U.S. Geological Survey. p. A1-A6.
- The Big Island Formation, a Miocene formation in northern Elko County, Nevada, and adjacent Idaho, including a consideration of its composition and petrographic character, by R. R. Coats, U.S. Geological Survey. p. A7-A13.
- Revised Mississippian time scale, Western Interior region, conterminous United States, by W. J. Sando, U.S. Geological Survey. p. A15-A26.
- The Surprise Canyon Formation; an Upper Mississippian and Lower Pennsylvanian(?) rock unit in the Grand Canyon, Arizona, by G. H. Billingsley, U.S. Geological Survey, and S. S. Beus, Northern Arizona University. p. A27-A33.
- Lower and Middle Pennsylvanian nomenclature in the Cumberland overthrust sheet of southeastern Kentucky and eastern Tennessee; a discussion, by R. C. McDowell, C. L. Rice, and W. L. Newell, U.S. Geological Survey. p. A35-A43.
- Correlation and geographic extent of some Middle and Upper Devonian and Lower Mississippian black shales in the Appalachian Basin, by Wallace de Witt, Jr., and J. B. Roen, U.S. Geological Survey. p. A45-A57.
- Stratigraphic nomenclature in the Richard Russell and Helen thrust sheets, Georgia and North Carolina, by A. E. Nelson, U.S. Geological Survey, and K. A. Gillon, AMSELCO Exploration, Inc. p. A59-A62.
- The Ellenton Formation in South Carolina; a revised age designation from Cretaceous to Paleocene, by D. C. Prowell, L. E. Edwards, and N. O. Frederiksen, U.S. Geological Survey. p. A63-A69.
- Revision of some stratigraphic names in central Massachusetts, by Peter Robinson, University of Massachusetts, and G. W. Luttrell, U.S. Geological Survey. p. A71-A78.

- B 1616. JKDIT, a program to control a digitizing board for geologists, written in BASIC for an IBM Personal Computer, by J. O. Kork. 1986. 69 p.
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- Research required in support of a comprehensive earthquake planning and preparedness program for New York, by N. L. Barstow, and P. W. Pomeroy. p. 146-150.
- Appendix A. Preparing for and responding to damaging earthquakes in the Northeastern United States; draft of a 5-year plan for improving earthquake preparedness, by P. W. Pomeroy, and Philip McIntyre. p. A1-A7.

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- OF 79-1154. UTAH. Land use and land cover and associated maps for Manti, Utah. Lat 39° to 39°30', long 111° to 112°. This data set consists of one map keyed to USGS topographic map Manti at 1:100,000 (1 inch = about 1.6 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Manti at 1:100,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 79-1155. UTAH. Land use and land cover and associated maps for Price, Utah. Lat 39° to 40°, long 110° to 111°. This data set consists of one map keyed to USGS topographic map Price at 1:100,000 (1 inch = about 1.6 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Price at 1:100,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 79-1175. CALIFORNIA, ARIZONA. Land use and land cover and associated maps for El Centro, California; Arizona. Lat 32° to 33°, long 114° to 116°. This data set consists of one map keyed to USGS topographic map El Centro at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for El Centro at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 79-1548. UTAH. Land use and land cover and associated maps for Kanab, Utah. Lat 37° to 37°30', long 112° to 113°. This data set consists of one map keyed to USGS topographic map Kanab at 1:100,000 (1 inch = about 1.6 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Kanab at 1:100,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 79-1549. NEW MEXICO. Land use and land cover and associated maps for Chaco Mesa, New Mexico. Lat 35°30' to 36°, long 107° to 108°. This data set consists of one map keyed to USGS topographic map Chaco Mesa at 1:100,000 (1 inch = about 1.6 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Chaco Mesa at 1:100,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 80-0151. NEVADA, CALIFORNIA. Land use and land cover and associated maps for Walker Lake, Nevada; California. Lat 38° to 39°, long 118° to 120°. This data set consists of one map keyed to USGS topographic map Walker Lake at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Walker Lake at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 80-0263. COLORADO. Land use and land cover and associated maps for Trinidad, Colorado. Lat 37° to 38°, long 104° to 106°. This data set consists of one map keyed to USGS topographic map Trinidad at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Trinidad at 1:250,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 80-0270. CALIFORNIA. Land use and land cover and associated maps for Fresno, California. Lat 36° to 37°, long 118° to 120°. This data set consists of one map keyed to USGS topographic map Fresno at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Fresno at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

OF 80-0272. NEVADA, ARIZONA, CALIFORNIA. Land use and land cover and associated maps for Las Vegas, Nevada; Arizona, California. Lat 36° to 37°, long 114° to 116°. This data set consists of one map keyed to USGS topographic map Las Vegas at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Las Vegas at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

OF 80-0627. ARIZONA, NEVADA, CALIFORNIA. Land use and land cover and associated maps for Kingman, Arizona; Nevada, California. Lat 35° to 36°, long 114° to 116°. This data set consists of one map keyed to USGS topographic map Kingman at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Kingman at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

OF 80-0628. CALIFORNIA, NEVADA. Land use and land cover and associated maps for Mariposa, California; Nevada. Lat 37° to 38°, long 118° to 120°. This data set consists of one map keyed to USGS topographic map Mariposa at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Mariposa at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

OF 80-0856. CALIFORNIA, ARIZONA. Land use and land cover and associated maps for Needles, California; Arizona. Lat 34° to 35°, long 114° to 116°. This map set consists of one map keyed to USGS topographic map Needles at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Needles at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

OF 80-0857. CALIFORNIA, ARIZONA. Land use and land cover and associated maps for Salton Sea, California; Arizona. Lat 33° to 34°, long 114° to 116°. This data set consists of one map keyed to USGS topographic map Salton Sea at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Salton Sea at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

OF 80-0859. CALIFORNIA, NEVADA. Land use and land cover and associated maps for Death Valley, California; Nevada. Lat 36° to 37°, long 116° to 118°. This data set consists of one map keyed to USGS topographic map Death Valley at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Death Valley at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

OF 80-2027. NEVADA, CALIFORNIA. Land use and land cover and associated maps for Goldfield, Nevada; California. Lat 37° to 38°, long 116° to 118°. This data set consists of one map keyed to USGS topographic map Goldfield at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Goldfield at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

OF 81-0322. WASHINGTON. Land use and land cover and associated maps for Walla Walla, Washington. Lat 46° to 47°, long 118° to 120°. This data set consists of one map keyed to USGS topographic map Walla Walla at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Walla Walla at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

OF 81-0323. WASHINGTON, IDAHO. Land use and land cover and associated maps for Pullman, Washington; Idaho. Lat 46° to 47°, long 116° to 118°. This data set consists of one map keyed to USGS topographic map Pullman at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Pullman at 1:250,000 (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

OF 81-0866. OREGON, IDAHO, WASHINGTON. Land use and land cover and associated maps for Grangeville, Oregon; Idaho, Washington. Lat 45° to 46°, long 116° to 118°. This data set consists of one map keyed to USGS topographic map Grangeville at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Grangeville at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

OF 81-0867. OREGON, IDAHO. Land use and land cover and associated maps for Baker, Oregon; Idaho. Lat 44° to 45°, long 116° to 118°. This data set consists of one map keyed to USGS topographic map Baker at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Baker at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

- OF 82-0001. IDAHO. Land use and land cover and associated maps for Twin Falls, Idaho. Lat 42° to 43°, long 114° to 116°. This data set consists of one map keyed to USGS topographic map Twin Falls at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Twin Falls at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 82-0002. IDAHO. Land use and land cover and associated maps for Pocatello, Idaho. Lat 42° to 43°, long 112° to 114°. This data set consists of one map keyed to USGS topographic map Pocatello at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Pocatello at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 82-0003. WASHINGTON. Land use and land cover and associated maps for Ritzville, Washington. Lat 47° to 48°, long 118° to 120°. This data set consists of one map keyed to USGS topographic map Ritzville at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Ritzville at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 82-0004. WYOMING, NEBRASKA. Land use and land cover and associated maps for Torrington, Wyoming; Nebraska. Lat 42° to 43°, long 104° to 106°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Torrington at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 82-0006. UTAH. Land use and land cover and associated maps for Delta, Utah. Lat 39° to 40°, long 112° to 114°. This data set consists of one map keyed to USGS topographic map Delta at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Delta at 1:250,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 82-0244. OKLAHOMA. Land use and land cover and associated maps for Woodward, Oklahoma. Lat 36° to 37°, long 98° to 100°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Woodward at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 82-0246. IOWA, NEBRASKA, SOUTH DAKOTA. Land use and land cover and associated maps for Sioux City, Iowa; Nebraska, South Dakota. Lat 42° to 43°, long 96° to 98°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Sioux City at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 82-0248. NEBRASKA, IOWA. Land use and land cover and associated maps for Nebraska; Iowa. Lat 41° to 42°, long 96° to 98°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Fremont at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 82-0805. TEXAS, LOUISIANA. Land use and land cover and associated maps for Tyler, Texas; Louisiana. Lat 32° to 33°, long 94° to 96°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Tyler at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 82-0806. TEXAS, OKLAHOMA, LOUISIANA, ARKANSAS. Land use and land cover and associated maps for Texarkana, Texas; Oklahoma, Louisiana, Arkansas. Lat 33° to 34°, long 94° to 96°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Texarkana at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 83-0105. MICHIGAN. Land use and land cover and associated maps for Marquette, Michigan. Lat 46° to 47°, long 86° to 88°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Marquette at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 83-0106. ARIZONA. Land use and land cover and associated maps for Prescott, Arizona. Lat 34° to 35°, long 112° to 114°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Prescott at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

- OF 83-0107. ARIZONA. Land use and land cover and associated maps for Williams, Arizona. Lat 35° to 36°, long 112° to 114°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Williams at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 83-0108. NEVADA, UTAH. Land use and land cover and associated maps for Wells, Nevada; Utah. Lat 41° to 42°, long 114° to 116°. This data set consists of 4 stable base reproducibles keyed to USGS quadrangle map Wells at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) planimetric base map. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 83-0109. NEVADA, UTAH. Land use and land cover and associated maps for Elko, Nevada; Utah. Lat 40° to 41°, long 114° to 116°. This data set consists of 4 stable base reproducibles keyed to USGS quadrangle map Elko at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) planimetric base map. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 83-0110. NEVADA. Land use and land cover and associated maps for Vya, Nevada. Lat 41° to 42°, long 118° to 120°. This data set consists of 4 stable base reproducibles keyed to USGS quadrangle map Vya at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) planimetric base map. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 83-0111. NEVADA. Land use and land cover and associated maps for Lovelock, Nevada. Lat 40° to 41°, long 118° to 120°. This data set consists of 4 stable base reproducibles keyed to USGS quadrangle map Lovelock at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) planimetric base map. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 83-0112. WYOMING. Land use and land cover and associated maps for Sheridan, Wyoming. Lat 44° to 45°, long 106° to 108°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Sheridan at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 83-0114. MICHIGAN. Land use and land cover and associated maps for Traverse City, Michigan. Lat 44° to 45°, long 84° to 86°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Traverse City at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 83-0115. TEXAS, OKLAHOMA. Land use and land cover and associated maps for Sherman, Texas; Oklahoma. Lat 33° to 34°, long 96° to 98°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Sherman at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 83-0125. MICHIGAN, WISCONSIN. Land use and land cover and associated maps for Escanaba, Michigan; Wisconsin. Lat 45° to 46°, long 86° to 88°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Escanaba at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 83-0551. WISCONSIN, MINNESOTA. Land use and land cover and associated maps for Eau Claire, Wisconsin; Minnesota. Lat 44° to 45°, long 90° to 92°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Eau Claire at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 83-0554. OKLAHOMA, TEXAS. Land use and land cover and associated maps for Ardmore, Oklahoma; Texas. Lat 34° to 35°, long 96° to 98°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Ardmore at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 83-0560. UTAH, WYOMING. Land use and land cover and associated maps for Ogden, Utah; Wyoming. Lat 41° to 42°, long 110° to 112°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Ogden at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 84-0038. UTAH. Land use and land cover and associated maps for Salt Lake City, Utah. Lat 40° to 41°, long 110° to 112°. This data set consists of 4 stable base reproducibles keyed to USGS quadrangle map Salt Lake City at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) planimetric base map. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 84-0039. MONTANA. Land use and land cover and associated maps for Forsyth, Montana. Lat 46° to 47°, long 106° to 108°. This data set consists of 4 stable base reproducibles keyed to USGS quadrangle map Forsyth at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) planimetric base map. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

- OF 84-0042. OREGON. Land use and land cover and associated maps for Burns, Oregon. Lat 43° to 44°, long 118° to 120°. This data set consists of one map keyed to USGS topographic map Burns at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Burns at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 84-0045. NEVADA. Land use and land cover and associated maps for Millett, Nevada. Lat 39° to 40°, long 116° to 118°. This data set consists of four stable base reproducibles keyed to USGS quadrangle map Millett at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) planimetric base map. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 84-0047. NEVADA. Land use and land cover and associated maps for McDermitt, Nevada. Lat 41° to 42°, long 116° to 118°. This data set consists of four stable base reproducibles keyed to USGS quadrangle map McDermitt at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) planimetric base map. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 84-0181. MONTANA, IDAHO. Land use and land cover and associated maps for Hamilton, Montana; Idaho. Lat 46° to 47°, long 114° to 116°. This data set consists of one map keyed to USGS topographic map Hamilton at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Hamilton at 1:250,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 84-0301. Cape Crozier, Ross Island, Antarctica; contour map 1963. 2 over-size sheets; 1 sheet, scale 1:2,400 (1 inch = 200 feet); 1 sheet, scale 1:4,800 (1 inch = 400 feet). Lat 77°27' S to 77°28'S, long 169°12'E to 169°19'E. Sheet 1, 24 by 19 inches; sheet 2, 52 by 40 inches. (†USGS, Eastern Mapping Ctr. (NCIC), 12201 Sunrise Valley Dr., Reston, VA 22092.)
- OF 84-0302. Wright Valley Labyrinth area, Antarctica; contour map, 1965. 1 over-size sheet, scale 1:20,000 (1 inch = 1,667 feet). Lat 77°31'S to 77°35'S, long 160°40'E to 160°59'E. Sheet 18 by 18 inches. (†USGS, Eastern Mapping Ctr. (NCIC), 12201 Sunrise Valley Dr., Reston, VA 22092.)
- OF 84-0303. Ice free valleys, Victoria Land, Antarctica; topographic map, 1962. 2 over-size sheets, scale 1:100,000 (1 inch = about 1.6 miles). Lat 77°15'S to 78°S, long 162°E to 164°E. Sheet 1, 19 by 38 inches; sheet 2, 19 by 38 inches. (†USGS, Eastern Mapping Ctr. (NCIC), 12201 Sunrise Valley Dr., Reston, VA 22092.)
- OF 84-0304. Skelton Glacier, Antarctica; topographic map, 1962. 1 over-size sheet, scale 1:100,000 (1 inch = about 1.6 miles). Lat 78°S to 79°S, long 160°E to 163°E. Sheet 23 by 41 inches. (†USGS, Eastern Mapping Ctr. (NCIC), 12201 Sunrise Valley Dr., Reston, VA 22092.)
- OF 84-0305. Pensacola Mountains, Antarctica; topographic map, 1975. 4 over-size sheets, scale 1:50,000 (1 inch = about 4,200 feet). Sheet 1, lat 82°20'S, long 54°W; 23 by 41 inches. Sheet 2, lat 82°20'S to 82°45'S, long 50°W to 52°W; 23 by 41 inches. Sheet 3, lat 82°S to 83°30'S, long 50°W to 52°W; 21 by 48 inches. Sheet 4, lat 83°S to 83°30'S, long 48°W to 50°W; 21 by 48 inches. (†USGS, Eastern Mapping Ctr. (NCIC), 12201 Sunrise Valley Dr., Reston, VA 22092.)
- OF 84-0306. Berkner Island, Antarctica; satellite image map, 1973-74. 1 over-size sheet, scale 1:1,000,000 (1 inch = about 16 miles). Lat 74°S to 81°S, long 37°W to 58°W. Sheet 31 by 36 inches. (†USGS, Eastern Mapping Ctr. (NCIC), 12201 Sunrise Valley Dr., Reston, VA 22092.)
- OF 84-0307. Filchner Ice Shelf, Antarctica; satellite image map, 1973-74. 1 over-size sheet, scale 1:1,000,000 (1 inch = about 16 miles). Lat 74°S to 81°S, long 16°W to 37°W. Sheet 31 by 36 inches. (†USGS, Eastern Mapping Ctr. (NCIC), 12201 Sunrise Valley Dr., Reston, VA 22092.)
- OF 84-0308. Ronne Ice Shelf, Antarctica; satellite image map, 1973-74. 1 over-size sheet, scale 1:1,000,000 (1 inch = about 16 miles). Lat 74°S to 81°S, long 58°W to 90°W. Sheet 43 by 36 inches. (†USGS, Eastern Mapping Ctr. (NCIC), 12201 Sunrise Valley Dr., Reston, VA 22092.)
- OF 84-0313. MONTANA. Land use and land cover and associated maps for Billings, Montana. Lat 45° to 46°, long 108° to 110°. This data set consists of 5 stable base reproducibles keyed to USGS quadrangle map Billings at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 84-0315. ARIZONA, NEW MEXICO. Land use and land cover and associated maps for Clifton, Arizona; New Mexico. Lat 33° to 34°, long 108° to 110°. This data set consists of four maps keyed to USGS topographic map Clifton at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Clifton at 1:125,000 (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 84-0316. ARIZONA, NEW MEXICO. Land use and land cover and associated maps for Douglas, Arizona; New Mexico. Lat 31° to 32°, long 108° to 110°. This data set consists of four maps keyed to USGS topographic map Douglas at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Douglas at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 84-0317. ARIZONA. Land use and land cover and associated maps for Holbrook, Arizona. Lat 34° to 35°, long 110° to 112°. This data set consists of four maps keyed to USGS topographic map Holbrook at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit,

- (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Holbrook at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 84-0318. NEW MEXICO, ARIZONA. Land use and land cover and associated maps for Silver City, New Mexico; Arizona. Lat 32° to 33°, long 108° to 110°. This data set consists of four maps keyed to USGS topographic map Silver City at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Silver City at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 84-0319. ARIZONA, NEW MEXICO. Land use and land cover and associated maps for Saint Johns, Arizona; New Mexico. Lat 34° to 35°, long 108° to 110°. This data set consists of four maps keyed to USGS topographic map Saint Johns at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Saint Johns at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 84-0323. COLORADO. Land use and land cover and associated maps for Pueblo, Colorado. Lat 38° to 39°, long 104° to 106°. This data set consists of four maps keyed to USGS topographic map Pueblo at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Pueblo at 1:125,000 (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 84-0527. IDAHO. Land use and land cover and associated maps for Dubois, Idaho. Lat 44° to 45°, long 112° to 114°. This data set consists of four maps keyed to USGS topographic map Dubois at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Dubois at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 84-0528. IDAHO. Land use and land cover and associated maps for Idaho Falls, Idaho. Lat 43° to 44°, long 112° to 114°. This data set consists of four maps keyed to USGS topographic map Idaho Falls at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Idaho Falls at 1:125,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 84-0531. NEVADA. Land use and land cover and associated maps for Caliente, Nevada. Lat 37° to 38°, long 114° to 116°. This data set consists of four maps keyed to USGS topographic map Caliente at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Caliente at 1:125,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)
- OF 84-0532. NEW YORK. Land use and land cover and associated maps for Binghamton, New York. Lat 42° to 43°, long 74° to 76°. This data set consists of four maps keyed to USGS topographic map Binghamton at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Binghamton at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 84-0533. NEW YORK. Land use and land cover and associated maps for Utica, New York. Lat 43° to 44°, long 74° to 76°. This data set consists of four maps keyed to USGS topographic map Utica at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Utica at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 84-0542. TEXAS. Land use and land cover and associated maps for McAllen, Texas. Lat 26° to 27°, long 98° to 100°. This data set consists of four maps keyed to USGS topographic map McAllen at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for McAllen at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 84-0544. UTAH. Land use and land cover and associated maps for Escalante, Utah. Lat 37° to 38°, long 110° to 112°. This data set consists of four maps keyed to USGS topographic map Escalante at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Escalante at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 84-0545. WASHINGTON. Land use and land cover and associated maps for Okanogan, Washington. Lat 48° to 49°, long 118° to 120°. This data set consists of four maps keyed to USGS topographic map Okanogan at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Okanogan at 1:125,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

- OF 84-0876. MONTANA. Land use and land cover and associated maps for Wolfpoint, Montana. Lat 48° to 48°30', long 104° to 105°. This data set consists of one map keyed to USGS topographic map Wolfpoint at 1:100,000 (1 inch = about 1.6 miles). This map is coded for statistical data development. The map is (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Wolfpoint at 1:100,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 84-0877. TEXAS. Land use and land cover and associated maps for Beaumont, Texas. Lat 30° to 31°, long 94° to 96°. This data set consists of five stable base reproducibles keyed to USGS quadrangle map Beaumont at 1:250,000 (1 inch = about 4 miles). The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, (4) census county subdivision, and (5) planimetric base map. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 84-0882. NORTH DAKOTA. Land use and land cover and associated maps for Devils Lake, North Dakota. Lat 48° to 49°, long 98° to 100°. This data set consists of four maps keyed to USGS topographic map Devils Lake at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Devils Lake at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 84-0883. NORTH DAKOTA. Land use and land cover and associated maps for Watford City, North Dakota. Lat 47° to 48°, long 102° to 104°. This data set consists of one map keyed to USGS topographic map Watford City at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Watford City at 1:250,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 84-0884. NORTH DAKOTA. Land use and land cover and associated maps for New Rockford, North Dakota. Lat 47° to 48°, long 98° to 100°. This data set consists of one map keyed to USGS topographic map New Rockford at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for New Rockford at 1:250,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 84-0885. NORTH DAKOTA. Land use and land cover and associated maps for Jamestown, North Dakota. Lat 46° to 47°, long 98° to 100°. This data set consists of one map keyed to USGS topographic map Jamestown at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Jamestown at 1:250,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 85-0052. UTAH, COLORADO. Land use and land cover and associated maps for Moab, Utah; Colorado. Lat 38° to 39°, long 108° to 110°. This data set consists of four maps keyed to USGS topographic map Moab at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Moab at 1:125,000 (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 85-0053. COLORADO, UTAH. Land use and land cover and associated maps for Grand Junction, Colorado; Utah. Lat 39° to 40°, long 108° to 110°. This data set consists of four maps keyed to USGS topographic map Grand Junction at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Grand Junction at 1:125,000 (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 85-0054. TEXAS. Land use and land cover and associated maps for Fort Stockton, Texas. Lat 30° to 31°, long 102° to 104°. This data set consists of one map keyed to USGS topographic map Fort Stockton at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Fort Stockton at 1:250,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 85-0055. MICHIGAN. Land use and land cover and associated maps for Hancock, Michigan. Lat 47° to 48°, long 87°30' to 90°. This data set consists of four maps keyed to USGS topographic map Hancock at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Hancock at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)
- OF 85-0056. NEW MEXICO. Land use and land cover and associated maps for Socorro, New Mexico. Lat 34° to 35°, long 106° to 108°. This data set consists of four maps keyed to USGS topographic map Socorro at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Socorro at 1:125,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)
- OF 85-0057. NEW MEXICO, TEXAS. Land use and land cover and associated maps for Las Cruces, New Mexico; Texas. Lat 32° to 33°, long 106° to 108°. This data set consists of four maps keyed to USGS topographic map Las Cruces at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Las Cruces at 1:125,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0058. NEW MEXICO. Land use and land cover and associated maps for Tularosa, New Mexico. Lat 33° to 34°, long 106° to 108°. This data set consists of four maps keyed to USGS topographic map Tularosa at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Tularosa at 1:125,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0060. MONTANA. Land use and land cover and associated maps for Butte, Montana. Lat 46° to 47°, long 112° to 114°. This data set consists of four maps keyed to USGS topographic map Butte at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Butte at 1:125,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0061. MONTANA. Land use and land cover and associated maps for Glasgow, Montana. Lat 48° to 49°, long 106° to 108°. This data set consists of four maps keyed to USGS topographic map Glasgow at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Glasgow at 1:125,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0063. TEXAS. Land use and land cover and associated maps for Big Spring, Texas. Lat 32° to 33°, long 100° to 102°. This data set consists of one map keyed to USGS topographic map Big Spring at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Big Spring at 1:250,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0064. TEXAS. Land use and land cover and associated maps for San Angelo, Texas. Lat 31° to 32°, long 100° to 102°. This data set consists of one map keyed to USGS topographic map San Angelo at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for San Angelo at 1:250,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0065. TEXAS. Land use and land cover and associated maps for Sonora, Texas. Lat 30° to 31°, long 100° to 102°. This data set consists of one map keyed to USGS topographic map Sonora at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Sonora at 1:250,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0066. TEXAS. Land use and land cover and associated maps for Del Rio, Texas. Lat 29° to 30°, long 100° to 102°. This data set consists of one map keyed to USGS topographic map Del Rio at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Del Rio at 1:250,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0067. TEXAS. Land use and land cover and associated maps for Eagle Pass, Texas. Lat 28° to 29°, long 100° to 102°. This data set consists of one map keyed to USGS topographic map Eagle Pass at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Eagle Pass at 1:250,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0068. SOUTH DAKOTA, NORTH DAKOTA. Land use and land cover and associated maps for Aberdeen, South Dakota; North Dakota. Lat 45° to 46°, long 98° to 100°. This data set consists of four maps keyed to USGS topographic map Aberdeen at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Aberdeen at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)

OF 85-0069. SOUTH DAKOTA, MINNESOTA, NORTH DAKOTA. Land use and land cover and associated maps for Milbank, South Dakota; Minnesota, North Dakota. Lat 45° to 46°, long 96° to 98°. This data set consists of four maps keyed to USGS topographic map Milbank at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Milbank at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)

OF 85-0070. SOUTH DAKOTA. Land use and land cover and associated maps for Pierre, South Dakota. Lat 44° to 45°, long 100° to 102°. This data set consists of one map keyed to USGS topographic map Pierre at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Pierre at 1:250,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)

OF 85-0071. SOUTH DAKOTA. Land use and land cover and associated maps for Huron, South Dakota. Lat 44° to 45°, long 98° to 100°. This data set consists of four maps keyed to USGS topographic map Huron at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Huron at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)

OF 85-0072. SOUTH DAKOTA, MINNESOTA. Land use and land cover and associated maps for Watertown, South Dakota; Minnesota. Lat 44° to 45°, long 96° to 98°. This data set consists of four maps keyed to USGS topographic map Watertown at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Watertown at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)

OF 85-0073. SOUTH DAKOTA. Land use and land cover and associated maps for Mitchell, South Dakota. Lat 43° to 44°, long 98° to 100°. This data set consists of four maps keyed to USGS topographic map Mitchell at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Mitchell at 1:125,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)

OF 85-0074. SOUTH DAKOTA, IOWA, MINNESOTA. Land use and land cover and associated maps for Sioux Falls, South Dakota; Iowa, Minnesota. Lat 43° to 44°, long 96° to 98°. This data set consists of four maps keyed to USGS topographic map Sioux Falls at 1:250,000 (1 inch = about 4 miles). These maps are coded for statistical data development. The maps are (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Sioux Falls at 1:125,000 (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)

OF 85-0075. NORTH DAKOTA. Land use and land cover and associated maps for Minot, North Dakota. Lat 48° to 49°, long 100° to 102°. This data set consists of one map keyed to USGS topographic map Minot at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Minot at 1:250,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)

OF 85-0301. NORTH DAKOTA, MINNESOTA. Land use and land cover and associated maps for Fargo, North Dakota; Minnesota. Lat 46° to 47°, long 96° to 98°. This data set consists of one map keyed to USGS topographic map Fargo at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Fargo at 1:250,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)

OF 85-0308. MONTANA. Land use and land cover and associated maps for Cutbank, Montana, U.S.; Alberta, Canada. Lat 48° to 49°, long 112° to 114°. This data set consists of one map keyed to USGS topographic map Cutbank at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county

subdivision. Also included is one positive of the cultural base for Cutbank at 1:250,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0309. MONTANA. Land use and land cover and associated maps for Choteau, Montana. Lat 47° to 48°, long 112° to 114°. This data set consists of one map keyed to USGS topographic map Choteau at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Choteau at 1:250,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0310. MONTANA. Land use and land cover and associated maps for Great Falls, Montana. Lat 47° to 48°, long 110° to 112°. This data set consists of one map keyed to USGS topographic map Great Falls at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Great Falls at 1:250,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0311. MONTANA, IDAHO. Land use and land cover and associated maps for Dillon, Montana; Idaho. Lat 45° to 46°, long 112° to 114°. This data set consists of one map keyed to USGS topographic map Dillon at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Dillon at 1:250,000 (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0312. IDAHO, MONTANA. Land use and land cover and associated maps for Elk City, Idaho; Montana. Lat 45° to 46°, long 114° to 116°. This data set consists of one map keyed to USGS topographic map Elk City at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Elk City at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

OF 85-0313. IDAHO. Land use and land cover and associated maps for Hailey, Idaho. Lat 43° to 44°, long 114° to 116°. This data set consists of one map keyed to USGS topographic map Hailey at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Hailey at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

OF 85-0315. MONTANA. Land use and land cover and associated maps for Roundup, Montana. Lat 46° to 47°, long 108° to 110°. This data set consists of one map keyed to USGS topographic map Roundup at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3)

hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Roundup at 1:250,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0317. UTAH. Land use and land cover and associated maps for Tooele, Utah. Lat 40° to 41°, long 112° to 114°. This data set consists of one map keyed to USGS topographic map Tooele at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Tooele at 1:250,000. (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0319. IDAHO. Land use and land cover and associated maps for Challis, Idaho. Lat 44° to 45°, long 114° to 116°. This data set consists of one map keyed to USGS topographic map Challis at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Challis at 1:250,000. (†USGS, Western Mapping Ctr. (NCIC-W), 345 Middlefield Rd., Menlo Park, CA 94025.)

OF 85-0320. MONTANA. Land use and land cover and associated maps for Lewistown, Montana. Lat 47° to 48°, long 108° to 110°. This data set consists of one map keyed to USGS topographic map Lewistown at 1:250,000 (1 inch = about 4 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Lewistown at 1:250,000 (†USGS, Rocky Mountain Mapping Ctr. (NCIC-R), Box 25046, Federal Center, Denver, CO 80225.)

OF 85-0321. OKLAHOMA. Land use and land cover and associated maps for McAlester, Oklahoma. Lat 34°30' to 35°, long 95° to 96°. This data set consists of one map keyed to USGS topographic map McAlester at 1:100,000 (1 inch = about 1.6 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for McAlester at 1:100,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)

OF 85-0322. OKLAHOMA. Land use and land cover and associated maps for Antlers, Oklahoma. Lat 34° to 34°30', long 95° to 96°. This data set consists of one map keyed to USGS topographic map Antlers at 1:100,000 (1 inch = about 1.6 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Antlers at 1:100,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)

OF 85-0323. ARKANSAS, OKLAHOMA. Land use and land cover and associated maps for De Queen, Arkansas; Oklahoma. Lat 34° to 34°30', long 94° to 95°. This data set consists of one map keyed to USGS topographic map De Queen at 1:100,000 (1 inch = about 1.6 miles). This map is coded for statistical data development. The map is (1) land use and land

cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for De Queen at 1:100,000 (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)

OF 85-0324. ARKANSAS, OKLAHOMA. Land use and land cover and associated maps for Mena, Arkansas; Oklahoma. Lat 34°30' to 35°, long 94° to 95°. This data set consists of one map keyed to USGS topographic map Mena at 1:100,000 (1 inch = about 1.6 miles). This map is coded for statistical data development. The map is (1) land use and land cover, (2) political unit, (3) hydrological units, and (4) census county subdivision. Also included is one positive of the cultural base for Mena at 1:100,000. (†USGS, Mid-Continent Mapping Ctr. (NCIC-M), 1400 Independence Rd., Rolla, MO 65401.)

OF 86-0004. Standard for digital elevation models. 46 p. (Da, M, NC.) (†A limited number of copies of this report are available from USGS, National Cartographic Information Ctr., User Services Sect., 507 National Center, Reston, VA 22092.)

OF 86-0006. Space remote sensing developments of cartographic importance, by A. P. Colvocoresses. 6 p. (F, Da, M, NC.) (†USGS, EROS Cartography, National Ctr., Mail Stop 520, Reston, VA 22092.)

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 81-0345. PUERTO RICO. Flood of September 16, 1975 in the Añasco area, Puerto Rico, by K. C. Johnson, and Vicente Quiñones-Aponte. 17 p. (NC; USGS, WRD, Bldg. 652, Ft. Buchanan, PR 00936.) †USGS, WRD, G.P.O. Box 4424, San Juan, PR 00936. (Water-Resources Investigations.)

OF 81-0346. PUERTO RICO. Floods of October 9, 1970 and September 16, 1975 at Jayuya, Puerto Rico, by K. C. Johnson, and R. A. Carrasquillo. (NC; USGS, WRD, Bldg. 652, Ft. Buchanan, PR 00936.) †USGS, WRD, G.P.O. Box 4424, San Juan, PR 00936. (Water-Resources Investigations.)

OF 81-0550. MISSISSIPPI. Characterization of aquifers designated as potential drinking-water sources in Mississippi, by L. A. Gandl. †USGS, WRD, Suite 710, Federal Bldg., 100 West Capitol St., Jackson, MS 39269. (Water-Resources Investigations.)

OF 81-0906. ARIZONA. Annual summary of ground-water conditions in Arizona; spring 1979 to spring 1980. 2 p. (NC; Arizona Dep. of Water Resources, 99 East Virginia, Phoenix, AZ; USGS, WRD, 2255 North Gemini Drive, Flagstaff, AZ 86001; Room 5-A Federal Bldg., 301 West Congress St., Tucson, AZ 85701; Suite 1880, Valley Center, Phoenix, AZ 85073; and 1940 South 3rd Ave., Yuma, AZ 85364.) †USGS, WRD, Room 5-A Federal Bldg., 301 West Congress St., Tucson, AZ 85701. (Water-Resources Investigations.)

OF 81-1123. MISSISSIPPI. Water-level map of the Mississippi Delta alluvium in northwestern Mississippi, April 1981, by Daphne Darden. †USGS, WRD, Suite 710, Federal Bldg., 100 West Capitol St., Jackson, MS 39269. (Water-Resources Investigations.)

- OF 84-0428. ARIZONA. Annual summary of ground-water conditions in Arizona, spring 1982 to spring 1983. 2 sheets. (NC, Da, M, Wb; USGS, WRD, Room 5-A Federal Bldg., 301 West Congress St., Tucson, AZ 85701; Suite 1880, Valley Ctr., Phoenix, AZ 85073; 2255 North Gemini Dr., Flagstaff, AZ 86001; and 1940 South 3rd Ave., Yuma, AZ 85364.) †USGS, WRD, Federal Bldg., FB-44, 301 West Congress St., Tucson, AZ 85701. (Water-Resources Investigations.)
- OF 84-0721. VIRGIN ISLANDS. Estimated water use in St. Thomas, Virgin Islands, July 1983-June 1984, by Heriberto Torres-Sierra, and Rafael Dacosta. 1 over-size sheet. (NC, Da, M, Wb; USGS, WRD, GSA Ctr., Bldg. 652, Highway 28, Pueblo Viejo, San Juan, PR 00936.) †USGS, WRD, GPO Box 4424, San Juan PR 00936.
- OF 85-0291. Cooperative research in the geosciences between the U.S. Geological Survey and the Central Office of Geology, Hungary, during 1978-84; proceedings of a joint conference, October 1-3, 1984, Budapest, Hungary, edited by P. G. Teleki, U.S. Geological Survey; Oszkar Adam, Kozponti Foldtani Hivatal; and Eva Kilenyi, Eotvos Lorand Geophysical Institute. 336 p. (NC, Da, M.) †A limited number of copies of this report are available from USGS, National Center, Mail Stop 915, Reston, VA 22092.
- Seismic stratigraphy of the Pannonian Basin in southeastern Hungary, by R. E. Mattick, U.S. Geological Survey; Janos Rumpler, Geophysical Exploration Co.; and R. L. Phillips, U.S. Geological Survey. p. 13-54.
- Processes and depositional environments within Neogene deltaic-lacustrine sediments, Pannonian Basin, Southeast Hungary, by Istvan Berczi, Hungarian Hydrocarbon Institute; and R. L. Phillips, U.S. Geological Survey. p. 55-74.
- Magnetostratigraphy of Neogene strata penetrated in two deep core holes in the Pannonian Basin; preliminary results, by D. P. Elston, U.S. Geological Survey; Geza Hamor, Aron Jambor, Miklos Lantos, and Andras Ronai, Hungarian Geological Survey. p. 75-88.
- Contribution to the determination of the Plio-Pleistocene boundary in sediments of the Pannonian Basin, by A. E. Grosz, U.S. Geological Survey; Andras Ronai, Hungarian Geological Survey; and Ricardo Lopez, U.S. Geological Survey. p. 89-99.
- Contrasting types of nearshore sands and gravels from semi-protected Miocene coasts, northern Hungary, by H. E. Clifton, U.S. Geological Survey; Margit Bohn-Havas and Pal Muller, Hungarian Geological Survey. p. 101-129.
- Lithologic characteristics and paleogeographic significance of resedimented conglomerate of Late Cretaceous age in northern Hungary, by H. E. Clifton, U.S. Geological Survey; Karoly Brezsnysanszky, Central Office of Geology; and Janos Haas, Hungarian Geological Survey. p. 131-155.
- Economic heavy minerals of the Danube River floodplain sediments and fluviolacustrine deposits of northwestern and central Hungary, by A. E. Grosz, U.S. Geological Survey; Ferenc Sikhegyi and U. P. Fugedi, Hungarian Geological Survey. p. 157-167.
- Details of a Pleistocene coastal succession, Golden Gate National Recreation Area, California, by Geza Csaszar, Hungarian Geological Survey; H. E. Clifton and R. E. Hunter, U.S. Geological Survey. p. 169-189.
- Geochemical analyses of 12 Hungarian coal samples, by L. G. Somos, Hungarian Geological Survey; Peter Zubovic and F. O. Simon, U.S. Geological Survey. p. 191-203.
- Estimation of kerogene-type by time-temperature pyrolysis method, by Ivan Fisch and Istvan Koncz, Hungarian Hydrocarbon Institute. p. 205-216.
- Structural rotations from paleomagnetic directions of some Permo-Triassic red beds, Hungary, by Emo Marton, Eotvos Lorand Geophysical Institute; and D. P. Elston, U.S. Geological Survey. p. 217-230.
- Seismic modeling in a complex tectonic environment, by J. J. Miller, M. W. Lee, U.S. Geological Survey; Eva Kilenyi, Ilona Petrovics, Laszlo Braun, and Gabor Korvin, Eotvos Lorand Geophysical Institute. p. 231-255.
- High resolution interval velocities, by Istvan Kesmarky, Geophysical Exploration Co. p. 257-268.
- Measurement and processing of short-offset vertical seismic profile data, by M. W. Lee, J. J. Miller, U.S. Geological Survey; and Gabor Goncz, Geophysical Exploration Co. p. 269-293.
- Transient electromagnetic soundings; development of interpretation methods and application to bauxite exploration, by Kristof Kakas, Eotvos Lorand Geophysical Institute; F. C. Frischknecht, U.S. Geological Survey; Jozsef Ujszaszi, Eotvos Lorand Geophysical Institute; W. L. Anderson, U.S. Geological Survey; and Erno Pracser, Eotvos Lorand Geophysical Institute. p. 295-310.
- Comparison of interpretation methods for time-domain spectral induced polarization data, by Laszlo Vero, Eotvos Lorand Geophysical Institute; B. D. Smith, W. L. Anderson, U.S. Geological Survey; and Jozsef Csorgei, Eotvos Lorand Geophysical Institute. p. 311-330.
- Application of the Geological Retrieval and Synopsis (GRASP) Program at the Eotvos Lorand Geophysical Institute of Hungary, by R. W. Bowen, U.S. Geological Survey; Ferenc Csersik, and Laszlo Zilahi-Sebess, Eotvos Lorand Geophysical Institute. p. 331-335.
- OF 85-0304. Research, investigations and technical developments; National Mapping Program 1983-84. 118 p. (F, Da, M, NC.) †A limited number of copies of this report are available from USGS, Office of Geographic and Cartographic Research, 521 National Ctr., Reston, VA 22092.
- OF 85-0477. SOUTH CAROLINA. Hydrologic and micrometeorologic data from an unsaturated zone study at a low-level radioactive waste burial site near Barnwell, South Carolina, by K. F. Dennehy, and P. B. McMahon. Magnetic tape (referred to on p. 1, 4, 8-10 of Open-file report 85-476). †Available from USGS, WRD, 1835 Assembly St., Suite 658, Columbia, SC 29201, telephone 803-765-5966.
- OF 86-0001. New papers related to space image mapping, by A. P. Colvocoresses. 55 p. (F, Da, M, NC.) †A limited number of copies of this report are available from USGS, EROS Cartography, Mail Stop 520, Reston, VA 22092.
- OF 86-0415-W. Characteristics and use of Helley-Smith type bedload samplers, by D. W. Hubbell, H. H. Stevens, Jr., J. V. Skinner, and J. P. Beverage. Videotape. †Tape can be viewed at USGS Training Ctr., Denver Federal Ctr., Mail Stop 414, Bldg. 53, Lakewood, CO 80225.

MAPS

ANTARCTIC GEOLOGIC MAPS

A-0013. Reconnaissance geologic map of the Ohio Range, Transantarctic Mountains, Antarctica, by Lucy McCartan, U.S. Geological Survey, M. A. Bradshaw, Canterbury Museum, New Zealand, and K. S. Kellogg, U.S. Geological Survey. 1986. Lat about 84°50'S to about 84°45'S, long about 113°W to about 116°W. Scale approximately 1:50,000 (1 inch = about 4,200 feet). Sheet 30 by 41 inches.

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-0437. CALIFORNIA. Geologic map of the Devils Postpile Quadrangle, Sierra Nevada, California, by N. K. Huber, and C. D. Rinehart. 1965. Lat 37°30' to 37°45', long 119° to 119°15'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 28 by 41 inches. (Reprint.)

GQ-1575. CONNECTICUT. Bedrock geologic map of the Jewett City Quadrangle, New London County, Connecticut, by H. R. Dixon, and J. K. Felmlee. 1986. Lat 41°30' to 41°37'30", long 71°52'30" to 72°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 43 inches.

GQ-1580. COLORADO. Geologic map of the Crested Butte Quadrangle, Gunnison County, Colorado, by D. L. Gaskill, S. M. Colman, J. E. DeLong, Jr., and C. H. Robinson. 1986. Lat 38°45' to 38°52'30", long 106°52'30" to 107°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 34 by 50 inches.

GQ-1585. NEW JERSEY. Geologic map of the Blairstown Quadrangle, Warren County, New Jersey, by A. A. Drake, Jr., and P. T. Lyttle. 1985. Lat 40°52'30" to 41°, long 74°52'30" to 75°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 34 by 44 inches.

GQ-1586. CALIFORNIA. Geologic map of the Mariposa Quadrangle, Mariposa and Madera counties, California, by K. B. Krauskopf. 1985. Lat 37°15' to 37°30', long 119°45' to 120°. Scale 1:62,500 (1 inch = about 1 mile). Sheet 29 by 38 inches.

GQ-1587. NEVADA, CALIFORNIA. Geologic map of the Magruder Mountain Quadrangle, Esmeralda County, Nevada, and Inyo County, California, by E. H. McKee. 1985. Lat 37°15' to 37°30', long 117°30' to 117°45'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 28 by 32 inches.

GQ-1588. ARIZONA, NEW MEXICO. Geologic map of the Hunters Point Quadrangle, Apache County, Arizona, and McKinley County, New Mexico, by S. M. Condon. 1986. Lat 35°30' to 35°37'30", long 109° to 109°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 30 by 44 inches.

GQ-1589. UTAH. Geologic map of the Greenwich Quadrangle, Piute County, Utah, by P. D. Rowley, P. L. Williams, and A. M. Kaplan. 1986. Lat 38°22'30" to 38°30', long 111°52'30" to 112°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 36 inches.

GQ-1590. UTAH. Geologic map of the Koosharem Quadrangle, Sevier and Piute counties, Utah, by P. D. Rowley, P. L. Williams, and A. M. Kaplan. 1986. Lat 38°30' to 38°37'30", long 111°52'30" to 112°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 32 by 35 inches.

GQ-1591. NEW MEXICO. Geologic map of the Pine Buttes Quadrangle, Colfax County, New Mexico, by M. H. Staatz. 1986. Lat 36°30' to 36°37'30", long 104°07'30" to 104°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 32 by 34 inches.

GQ-1596. NEW MEXICO. Geologic map of the Crownpoint Quadrangle, McKinley County, New Mexico, by J. F. Robertson. 1986. Lat 35°37'30" to 35°45', long 108°07'30" to 108°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 36 inches. (Supersedes Open-file report 78-713.)

GQ-1600. VIRGINIA. Geologic map of the Fairfax Quadrangle, Fairfax County, Virginia, by A. A. Drake, Jr. 1986. Lat 38°45' to 38°52'30", long 77°15' to 77°22'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 34 by 44 inches.

GQ-1601. VIRGINIA. Geologic map of the Annandale Quadrangle, Fairfax and Arlington counties, and Alexandria City, Virginia, by A. A. Drake, Jr., and A. J. Froelich. 1986. Lat 38°45' to 38°52'30", long 77°07'30" to 77°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 44 inches.

GQ-1602. UTAH, ARIZONA. Geologic map of the Johnson Quadrangle, Kane County, Utah, and Coconino County, Arizona, by K. A. Sargent, and B. C. Philpott. 1985. Lat 37° to 37°15', long 112°15' to 112°30'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 24 by 29 inches.

GQ-1607. WYOMING. Geologic map of the Kappes Canyon Quadrangle, Sweetwater County, Wyoming, by M. A. Kirschbaum. 1986. Lat 41°22'30" to 41°30', long 109°07'30" to 109°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 29 by 31 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-0957. NORTH CAROLINA. Aeromagnetic map of North Carolina, by Isidore Zietz, F. E. Riggle, and F. P. Gilbert. 1984. Lat about 34° to about 36°, long about 76° to about 84°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 28 by 66 inches. (Available unfolded only.)

GP-0963. OHIO. Gravity anomaly maps of Ohio, by T. G. Hildenbrand. 1986. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 42 by 57 inches.

GP-0965. MISSOURI. Magnetic anomaly map of Missouri, by Isidore Zietz, K. R. Bond, and F. E. Riggle. 1985. Lat 36° to about 40°, long about 90° to about 95°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 43 by 47 inches. (Available unfolded only.)

GP-0969. IDAHO, OREGON. Compilation of selected geophysical references for the Snake River plain, Idaho and eastern Oregon, by R. L. Whitehead. 1986. Lat 41°30' to 45°15', long 109°45' to 118°30'. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 36 by 52 inches. (Supersedes Open-file report 84-587.)

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-0427. CALIFORNIA. Geologic map of the Ord Mountains Quadrangle, San Bernardino County, California, by T. W. Dibblee, Jr. 1964. Lat 34°30' to 34°45', long 116°45' to 117°. Scale 1:62,500 (1 inch = about 1 mile). Sheet 26 by 33 inches. (Accompanied by 6-page text.) (Reprint.)
- I-0493. OREGON. Reconnaissance geologic map of the east half of the Crescent Quadrangle, Lake, Deschutes, and Crook counties, Oregon, by G. W. Walker, N. V. Peterson, and R. C. Greene. 1967. Lat 43° to 44°, long 120° to 121°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 26 by 38 inches. (Reprint.)
- I-0843-E. ARIZONA. Delineation of flood hazards in the Ruelas Canyon Quadrangle, Pima County, Arizona, by R. M. Myrick, and B. N. Aldridge. 1986. Lat 32°22'30" to 32°30', long 111° to 111°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 28 by 43 inches.
- I-0997. ARIZONA. Geologic map and sections of the Rincon Valley Quadrangle, Pima County, Arizona, by Harald Drewes. 1977. Lat 32° to 32°15', long 110°30' to 110°45'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 36 by 53 inches. (Reprint.)
- I-1033-L. UTAH. Surficial geologic map of the Kaiparowits coal-basin area, Utah, by V. S. Williams. 1985. Lat 37° to 38°, long 111° to 112°. Scale 1:125,000 (1 inch = about 4 miles). Sheet 41 by 58 inches.
- I-1198-C. WASHINGTON. Map showing relative slope stability in the Port Townsend 30' by 60' Quadrangle, Puget Sound region, Washington, by R. D. Miller, S. A. Safioles, and Fred Pessl, Jr. 1985. Lat 48° to 48°30', long 122° to 123°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 39 by 44 inches.
- I-1251-F. NORTH CAROLINA, SOUTH CAROLINA. Mineral production maps of the Charlotte 1° by 2° Quadrangle, North Carolina and South Carolina, by J. H. DeYoung, Jr., M. P. Lee, and J. P. Dorian. 1985. Three sheets. Sheet 1, lat 35° to 36°, long 80° to 82°. Scale 1:375,000 (1 inch = about 6 miles). Sheet 1, 33 by 42 inches; sheet 2, 32 by 38 inches; sheet 3, 33 by 38 inches. (Accompanied by 8-page text.)
- I-1251-G. NORTH CAROLINA, SOUTH CAROLINA. Mineral resource potential for copper, lead, zinc and combined base metals in the Charlotte 1° by 2° Quadrangle, North Carolina and South Carolina, by J. E. Gair, and W. R. Griffiths. 1986. Two sheets. Lat 35° to 36°, long 80° to 82°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 42 by 45 inches; sheet 2, 36 by 44 inches. (Supersedes Open-file reports 82-1074-A and 82-1074-B.)
- I-1251-H. NORTH CAROLINA, SOUTH CAROLINA. Mineral resource potential for gold in the Charlotte 1° by 2° Quadrangle, North Carolina and South Carolina, by J. E. Gair, and J. P. D'Agostino. 1986. Lat 35° to 36°, long 80° to 82°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 30 by 45 inches.
- I-1251-I. NORTH CAROLINA, SOUTH CAROLINA. Mineral resource potential for tin and tungsten 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 42 by 45 inches.
- I-1251-L. NORTH CAROLINA, SOUTH CAROLINA. Mineral resource potential for uranium and thorium 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 27 by 45 inches.
- I-1251-M. NORTH CAROLINA, SOUTH CAROLINA. Resource potential for crushed stone, sand and gravel, and clay in the Charlotte 1° by 2° Quadrangle, North Carolina and South Carolina, by Richard Goldsmith, J. W. Horton, Jr., D. J. Milton, J. E. Gair, and J. P. D'Agostino. 1986. Two sheets. Lat 35° to 36°, long 80° to 82°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 27 by 45 inches; sheet 2, 35 by 44 inches.
- I-1257-F. CALIFORNIA. Map showing faults and earthquake epicenters in San Mateo County, California, by E. E. Brabb, and J. A. Olson. 1986. Two sheets. Sheet 1, lat 37°06' to 37°43', long 122°04'30" to 122°33'15". Scale 1:62,500 (1 inch = about 1 mile). Sheet 1, 42 by 57 inches; sheet 2, 27 by 42 inches.
- I-1310-F. NEW MEXICO, ARIZONA. Maps showing mineral resource assessment of the Silver City 1° by 2° Quadrangle, New Mexico and Arizona, by D. H. Richter, W. N. Sharp, K. C. Watts, G. L. Raines, B. B. Houser, and D. P. Klein. 1986. Lat 32° to 33°, long 108° to 110°. Scale 1:1,150,000 (1 inch = about 18 miles). Sheet 28 by 42 inches. (Accompanied by 24-page text.)
- I-1313-F. VIRGINIA, MARYLAND. Ground-water resources of the Culpeper Basin, Virginia and Maryland, by R. J. Lacznia, and Chester Zenone. 1985. Two sheets. Sheet 1, lat about 38°15' to about 39°15', long about 77°15' to about 78°. Scale 1:125,000 (1 inch = about 2 miles). Sheet 1, 42 by 49 inches; sheet 2, 39 by 40 inches.
- I-1329. CALIFORNIA. Map showing recently active breaks along the Elsinore and associated faults, California, between Lake Henshaw and Mexico, by M. M. Clark. 1982. Two sheets. Lat 33°07'30" to 33°15', long about 115°52'30" to about 116°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 38 by 50 inches; sheet 2, 39 by 50 inches. (Reprint.)
- I-1360-A. MICHIGAN, WISCONSIN. Mineral-resources map of the Iron River 1° by 2° Quadrangle, Michigan and Wisconsin, by W. F. Cannon. 1985. Lat 46° to 47°, long 88° to 90°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 33 by 39 inches.
- I-1360-B. MICHIGAN, WISCONSIN. Bedrock geologic map of the Iron River 1° by 2° Quadrangle, Michigan and Wisconsin, by W. F. Cannon. 1986. Lat 46° to 47°, long 88° to 90°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 38 by 41 inches.
- I-1360-C. MICHIGAN, WISCONSIN. Surficial geologic map of the Iron River 1° by 2° Quadrangle, Michigan and Wisconsin, by W. L. Peterson. 1985. Lat 46° to 47°, long 88° to 90°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 41 by 49 inches. (Supersedes Open-File report 82-301.)

- I-1360-D. MICHIGAN, WISCONSIN. Structural and tectonic map of the Iron River 1° by 2° Quadrangle, Michigan and Wisconsin, by W. F. Cannon. 1986. Lat 46° to 47°, long 88° to 90°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 23 by 41 inches.
- I-1360-G. MICHIGAN, WISCONSIN. Metamorphic map of the Iron River 1° by 2° Quadrangle, Michigan and Wisconsin, by Karen Wier. 1986. Lat 46° to 47°, long 88° to 90°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 23 by 38 inches.
- I-1423. VIRGINIA. Folio of geologic and hydrologic maps for land-use planning in the coastal plain of Fairfax County and vicinity, Virginia, by A. J. Froelich. 1985. Five sheets. Lat about 38°37'30" to about 38°52'30", long about 77°07'30" to about 77°15'. Sheets 1-4, scale 1:100,000 (1 inch = about 1.6 miles); sheet 5, scale 1:48,000 (1 inch = 4,000 feet). Sheet 1, 34 by 44 inches; sheet 2, 37 by 41 inches; sheet 3, 34 by 40 inches; sheet 4, 34 by 41 inches; sheet 5, 34 by 44 inches.
- I-1472. SOUTH CAROLINA. Geologic map of the area between Charleston and Orangeburg, South Carolina, by Lucy McCartan, E. M. Lemon, Jr., and R. E. Weems. 1984. Two sheets. Sheet 1, lat about 32°15' to 33°30', long about 79° to about 81°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 39 by 52 inches; sheet 2, 27 by 37 inches. (Reprint.)
- I-1509-A. MONTANA, IDAHO. Geologic and structure maps of the Wallace 1° by 2° Quadrangle, Montana and Idaho, by J. E. Harrison, A. B. Griggs, and J. D. Wells. 1986. Two sheets. Lat 47° to 48°, long 114° to 116°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 38 by 48 inches; sheet 2, 29 by 37 inches. (Supersedes Open-file reports 74-37 and 77-33.)
- I-1509-B. MONTANA, IDAHO. Geochemical map showing distribution of samples of nonmagnetic heavy-mineral concentrates that contain anomalous concentrations of antimony, arsenic, copper, lead, silver, and zinc in the Wallace 1° by 2° Quadrangle, Montana and Idaho, by D. L. Leach, and J. A. Domenico. 1986. Lat 47° to 48°, long 114° to 116°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 24 by 37 inches. (Accompanied by 6-page text.)
- I-1509-C. MONTANA, IDAHO. Geochemical map showing distribution of stream-sediment samples that contain anomalous concentrations of antimony, bismuth, cadmium, copper, lead, silver, and zinc in the Wallace 1° by 2° Quadrangle, Montana and Idaho, by D. L. Leach, and D. M. Hopkins. 1986. Lat 47° to 48°, long 114° to 116°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 24 by 37 inches. (Accompanied by 6-page text.)
- I-1509-D. MONTANA, IDAHO. Geochemical map showing distribution of stream-sediment samples that contain anomalous concentrations of partially-extractable antimony, bismuth, copper, lead, silver, and zinc in the Wallace 1° by 2° Quadrangle, Montana and Idaho, by D. L. Leach, and D. M. Hopkins. 1986. Lat 47° to 48°, long 114° to 116°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 24 by 37 inches. (Accompanied by 6-page text.)
- I-1509-E. MONTANA, IDAHO. Resource appraisal map for placer gold in the Wallace 1° by 2° Quadrangle, Montana and Idaho, by J. E. Harrison, J. A. Domenico, and D. L. Leach. 1986. Lat 47° to 48°, long 114° to 116°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 23 by 38 inches. (Supersedes Open-file report 82-581.)
- I-1509-F. MONTANA, IDAHO. Resource appraisal map for stratabound copper-silver deposits in the Wallace 1° by 2° Quadrangle, Montana and Idaho, by J. E. Harrison, J. A. Domenico, and D. L. Leach. 1986. Lat 47° to 48°, long 114° to 116°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 23 by 41 inches. (Accompanied by 4-page text.) (Supersedes Open-file report 82-581.)
- I-1509-G. MONTANA, IDAHO. Resource appraisal map for Sullivan-type stratabound lead-zinc-silver deposits in the Wallace 1° by 2° Quadrangle, Montana and Idaho, by J. E. Harrison, E. R. Cressman, C. L. Long, D. L. Leach, and J. A. Domenico. 1986. Lat 47° to 48°, long 114° to 116°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 24 by 42 inches. (Accompanied by 4-page text.) (Supersedes Open-file report 82-581.)
- I-1509-H. MONTANA, IDAHO. Resource appraisal map for porphyry molybdenum-tungsten, platinum-group metals, and epithermal silver deposits in the Wallace 1° by 2° Quadrangle, Montana and Idaho, by J. E. Harrison, D. L. Leach, M. D. Kleinkopf, and C. L. Long. 1986. Lat 47° to 48°, long 114° to 116°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 24 by 42 inches. (Accompanied by 4-page text.) (Supersedes Open-file report 82-581.)
- I-1509-I. MONTANA, IDAHO. Resource appraisal maps for mesothermal base- and precious-metal veins in the Wallace 1° by 2° Quadrangle, Montana and Idaho, by J. E. Harrison, D. L. Leach, and M. D. Kleinkopf. 1986. Two sheets, Lat 47° to 48°, long 114° to 116°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 35 by 46 inches; sheet 2, 38 by 46 inches. (Accompanied by 4-page text.) (Supersedes Open-file report 82-581.)
- I-1509-J. MONTANA, IDAHO. Summary map of resource potential for metallic minerals in the Wallace 1° by 2° Quadrangle, Montana and Idaho, by J. E. Harrison, D. L. Leach, M. D. Kleinkopf, E. R. Cressman, C. L. Long, and J. A. Domenico. 1986. Lat 47° to 48°, long 114° to 116°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 23 by 36 inches. (Accompanied by 4-page text.) (Supersedes Open-file report 82-581.)
- I-1519. NEVADA. Geologic map of the Jackass Flats area, Nye County, Nevada, compiled by Florian Maldonado. 1985. Lat 36°37'30" to 37°, long 116°07'30" to 116°30'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 40 by 52 inches.
- I-1535. Shaded relief and surface markings of the eastern and western regions of Mars. 1985. Two sheets. Scale 1:15,000,000 (1 mm = 15 km). Sheet 1, 30 by 34 inches; sheet 2, 30 by 34 inches.
- I-1560. VERMONT. Geologic map of the Belvidere Mountain area, Eden and Lowell, Vermont, by M. H. Gale. 1986. Lat 44°42'30" to 44°47'30", long 72°30' to 72°35'. Scale 1:20,000 (1 inch = about 1,667 feet). Sheet 28 by 31 inches.
- I-1565. Shaded relief and surface markings of the Philus Sulcus Quadrangle of Ganymede. 1985. Two sheets. Scale 1:5,000,000 (1 mm = 5 km). Sheet 1, 29 by 33 inches; sheet 2, 26 by 32 inches.

- I-1567. NEW MEXICO. Geologic map of the Becker SW and Cerro Montoso quadrangles, Socorro County, New Mexico, by D. A. Myers, J. A. Sharps, and E. J. McKay. 1986. Lat 34°15' to 34°22'30", long 106°30' to 106°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 34 by 58 inches.
- I-1569. ARIZONA. Geologic map and structure sections of the Simmons Peak Quadrangle, Cochise County, Arizona, by Harald Drewes. 1986. Lat 32°07'30" to 32°15', long 109°37'30" to 109°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 33 inches.
- I-1575. NEW MEXICO. Geologic map and cross section of the Sapello River area, Sangre de Cristo Mountains, Mora and San Miguel counties, New Mexico, by E. H. Baltz, and J. M. O'Neill. 1986. Two sheets. Sheet 1, lat 35°45' to 35°52'30", long 105°12'30" to 105°32'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 36 by 59 inches; sheet 2, 32 by 51 inches. (Supersedes Open-File report 80-398.)
- I-1576. NEVADA. Geologic map of the Murphys Well, Pilot Cone, Copper Mountain, and Poinsettia Spring quadrangles, Mineral County, Nevada, by E. B. Ekren, and F. M. Byers, Jr. 1986. Lat 38°45' to 39°, long 118°15' to 118°30'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 31 by 37 inches. (Supersedes Open-file report 78-916.)
- I-1580. MASSACHUSETTS. Geologic map of Nantucket and nearby islands, Massachusetts, by R. N. Oldale. 1985. Lat 41°12'30" to 41°27'30", long 69°57'30" to 70°20'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 35 by 51 inches.
- I-1595. NEW MEXICO. Geologic map of El Malpais lava field and surrounding areas, Cibola County, New Mexico, by C. H. Maxwell. 1986. Lat 34°37'30" to 35°07'30", long 107°45' to 108°15'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 41 by 42 inches.
- I-1610. ALASKA. Engineering geologic maps of the Government Hill area, Anchorage, Alaska, by R. G. Updike. 1986. Scale 1:4,800 (1 inch = 400 feet). Sheet 42 by 52 inches.
- I-1613. WASHINGTON. Seismotectonic map of the Puget Sound region, Washington, by H. D. Gower, J. C. Yount, and R. S. Crosson. 1985. Lat 46°37'30" to 49°, long 121° to 123°30'. Scale 1:250,000 (1 inch = about 4 miles). Sheet 42 by 58 inches. (Accompanied by 15-page text.)
- I-1617. ARIZONA. Geologic map of the Safford Quadrangle, Graham County, Arizona, by B. B. Houser, D. H. Richter, and M. Shafiqullah. 1985. Lat 32°45' to 33°, long 109°30' to 109°45'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 34 by 46 inches.
- I-1618. Shaded relief maps of the eastern, western, and polar regions of Mars. 1985. Three sheets. Scale 1:9,203,425 (1 mm = 9.2 km). Sheet 1, 26 by 40 inches; sheet 2, 30 by 34 inches; sheet 3, 31 by 34 inches.
- I-1626. COLORADO. Map showing late Eocene erosion surface, Oligocene-Miocene paleovalleys, and Tertiary deposits in the Pueblo, Denver, and Greeley 1° by 2° quadrangles, Colorado, by G. R. Scott, and R. B. Taylor. 1986. Lat 38° to 41°, long 104°30' to 106°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 38 by 45 inches.
- I-1627. COLORADO. Geologic and biostratigraphic map of the Pierre Shale in the Colorado Springs-Pueblo area, Colorado, by G. R. Scott, and W. A. Cobban. 1986. Lat about 38° to about 39°, long about 104° to about 104°52'30". Scale 1:100,000 (1 inch = about 16 miles). Sheet 41 by 49 inches.
- I-1640. Geologic map of the Boreum area of Mars, by A. L. Dial, Jr. 1984. Scale 1:4,290,000 (1 inch = about 68 miles). Sheet 38 by 54 inches.
- I-1641. NEW MEXICO, COLORADO. Historic trail maps of the Raton and Springer 30' by 60' quadrangles, New Mexico and Colorado, by G. R. Scott. 1986. 10 p.
- I-1644. ARIZONA. Geologic map of the Coconino Point and Grandview Point quadrangles, Coconino County, Arizona, by G. H. Billingsley, C. W. Barnes, and G. E. Ulrich. 1985. Lat 35°45' to 36°, long 111°30' to 112°. Scale 1:62,500 (1 inch = about 1 mile). Sheet 30 by 41 inches.
- I-1656. CALIFORNIA. Geologic map of the east flank of the Diablo Range from Hospital Creek to Poverty Flat, San Joaquin, Stanislaus, Merced counties, California, by J. A. Bartow, W. R. Lettis, H. S. Sonneman, and J. R. Switzer, Jr. 1985. Lat 37°15' to 37°37'30", long 121° to 121°22'30". Scale 1:62,500 (1 inch = about 1 mile). Sheet 32 by 44 inches.
- I-1658. Geologic map of the Discovery Quadrangle of Mercury, by N. J. Trask, and Daniel Dzurisin. 1984. Scale 1:5,000,000 (1 inch = about 80 miles). Sheet 29 by 41 inches.
- I-1659. Geologic map of the Michelangelo Quadrangle of Mercury. 1984. Scale 1:4,623,000 (1 inch = about 73 miles). Sheet 32 by 45 inches.
- I-1660. Geologic map of the Borealis region of Mercury, by M. J. Grolier, and J. M. Boyce. 1984. Scale 1:4,290,000 (1 inch = about 70 miles). Sheet 32 by 40 inches.
- I-1664. Controlled photomosaic of part of the Mangala Valles region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 27 by 37 inches.
- I-1665. Controlled photomosaic of part of the Mangala Valles region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 27 by 37 inches.
- I-1666. Controlled photomosaic of part of the Mangala Valles region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 27 by 37 inches.
- I-1684. Topographic map of the Tharsis Northwest Quadrangle of Mars. 1986. Scale 1:2,000,000 (1 inch = about 32 miles). Sheet 26 by 34 inches.
- I-1686. NEW MEXICO. Geologic map of the northern part of the Animas Mountains, Hidalgo County, New Mexico, by Harald Drewes. 1986. Lat 31°48'31" to 31°55'30", long 108°37'30" to about 108°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 34 inches.
- I-1688. IOWA. Bedrock topography of west-central Iowa, by R. E. Hansen, and D. L. Runkle. 1986. Two sheets. Sheet 1, lat about 41°30' to about 42°30', long about 94°15' to about 95°15'; sheet 2, lat about 41°30' to about 42°30', long about 95°15' to about 96°15'. Scale 1:125,000 (1 inch = about 2 miles). Sheet 1, 33 by 42 inches; sheet 2, 33 by 42 inches. (Supersedes Open-file report 84-0731.)

- I-1689. Topographic map of the Phoenicis Lacus Northeast Quadrangle of Mars. 1986. Scale 1:2,000,000 (1 inch = about 32 miles). Sheet 26 by 34 inches.
- I-1690. CONNECTICUT. Depth to bedrock, depth to the water table, and classification of unconsolidated materials above the water table in stratified-drift areas of the Pomperaug River valley, Southbury and Woodbury, Connecticut, by D. L. Mazzaferro. 1986. Lat about 41°27'30" to 41°35', long 73°10' to 73°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 34 by 39 inches.
- I-1691. CONNECTICUT. Depth to bedrock, depth to the water table, and classification of unconsolidated materials above the water table in stratified-drift areas of part of the Farmington River valley, Farmington, Connecticut, by D. K. McKeegan. 1986. Lat about 41°45', long about 72°48'15" to about 72°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 27 by 44 inches.
- I-1702. CONNECTICUT. Depth to bedrock and classification of unconsolidated materials above the water table in stratified-drift areas of part of the Pootatuck River valley, Newtown, Connecticut, by D. K. McKeegan. 1986. Lat 41°22' to 41°26', long 73°15' to 73°17'30". Scale 1:12,000 (1 inch = 1,000 feet). Sheet 26 by 34 inches.
- I-1703. Controlled photomosaic of the Mare Boreum A and B regions of Mars. 1985. Scale 1:2,000,000 (1 inch = about 32 miles). Sheet 31 by 42 inches.
- I-1704. Controlled photomosaic and revised shaded relief of the Syrtis Major Quadrangle of Mars. 1985. Two sheets. Scale 1:5,000,000 (1 mm = 5 km). Sheet 1, 26 by 34 inches; sheet 2, 24 by 34 inches.
- I-1708. Topographic map of the Amazonis Southwest Quadrangle of Mars. 1986. Scale 1:2,000,000 (1 inch = about 32 miles). Sheet 26 by 34 inches.
- I-1709. Topographic map of the Memnonia Northeast Quadrangle of Mars. 1986. Scale 1:2,000,000 (1 inch = about 32 miles). Sheet 26 by 34 inches.
- I-1710. Topographic map of the Memnonia Northwest Quadrangle of Mars. 1986. Scale 1:2,000,000 (1 inch = about 32 miles). Sheet 26 by 34 inches.
- I-1711. Topographic map of the Phoenicis Lacus Northwest Quadrangle of Mars. 1986. Scale 1:2,000,000 (1 inch = about 32 miles). Sheet 26 by 34 inches.
- I-1712. Topographic map of the Coprates Northwest Quadrangle of Mars. 1986. Scale 1:2,000,000 (1 inch = about 32 miles). Sheet 26 by 34 inches.
- I-1726. IOWA. Bedrock topography of Northwest Iowa, by R. E. Hansen. 1986. Two sheets. Sheet 1, lat about 42°30' to 43°30', long about 94°30' to 95°30'; sheet 2, lat about 42°30' to 43°30', long 95°30' to about 96°30'. Scale 1:125,000 (1 inch = about 2 miles). Sheet 1, 33 by 38 inches; sheet 2, 31 by 38 inches. (Supersedes Open-file report 85-97.)
- I-1727-B. KENTUCKY. Generalized fence diagram showing principal coal and key marine beds of Pennsylvanian age in the Hazard 30' by 60' Quadrangle, eastern Kentucky, by J. W. Kradyna, and C. L. Rice. 1986. Sheet 31 by 50 inches.
- I-1732. Controlled photomosaic of part of the Maja Valles region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 26 by 38 inches.
- I-1733. Controlled photomosaic of part of the Alba Patera region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 23 by 38 inches.
- I-1734. Controlled photomosaic of part of the Alba Patera region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 23 by 38 inches.
- I-1735. Controlled photomosaic of part of the Alba Patera region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 23 by 38 inches.
- I-1736. Controlled photomosaic of part of the Alba Patera region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 23 by 38 inches.
- I-1737. Controlled photomosaic of part of the Alba Patera region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 22 by 38 inches.
- I-1738. Controlled photomosaic of part of the Alba Patera region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 22 by 38 inches.
- I-1739. Controlled photomosaic of part of the Alba Patera region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 22 by 38 inches.
- I-1740. Controlled photomosaic of part of the Alba Patera region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 22 by 38 inches.
- I-1741. Controlled photomosaic of part of the Alba Patera region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 21 by 38 inches.
- I-1742. Controlled photomosaic of part of the Alba Patera region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 21 by 38 inches.
- I-1743. Controlled photomosaic of part of the Alba Patera region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 21 by 38 inches.
- I-1744. Controlled photomosaic of part of the Alba Patera region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 21 by 38 inches.
- I-1746. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 26 by 38 inches.
- I-1747. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 25 by 38 inches.
- I-1748. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 26 by 38 inches.
- I-1749. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 25 by 38 inches.
- I-1750. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 23 by 38 inches.

- I-1751. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 26 by 38 inches.
- I-1752. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 25 by 38 inches.
- I-1753. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 26 by 37 inches.
- I-1754. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 25 by 38 inches.
- I-1755. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 23 by 38 inches.
- I-1756. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 26 by 38 inches.
- I-1757. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 25 by 38 inches.
- I-1758. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 25 by 38 inches.
- I-1759. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 24 by 38 inches.
- I-1760. Controlled photomosaics of the Sidon Flexus region of Europa. 1985. Two sheets. Scale 1:500,000 (1 mm = 5 km). Sheet 1, 23 by 31 inches; sheet 2, 23 by 31 inches.
- I-1761. Controlled photomosaics of the Pelorus Linea region of Europa. 1985. Two sheets. Scale 1:5,000,000 (1 inch = about 80 miles). Sheet 1, 29 by 35 inches; sheet 2, 28 by 35 inches.
- I-1763. MASSACHUSETTS. Geologic map of Cape Cod and the islands, Massachusetts, by R. N. Oldale, and R. A. Barlow. 1986. Lat 41°13' to 42°06', long 69°53' to 71°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 40 by 42 inches. (Supersedes Open-file report 76-765.)
- I-1770. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 22 by 38 inches.
- I-1771. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 24 by 38 inches.
- I-1772. Controlled photomosaic of part of the Elysium Mons region of Mars. 1985. Scale 1:502,000 (1 mm = 502 m). Sheet 24 by 38 inches.
- I-1791. ALASKA. Geologic map of the Demarcation Point, Mt. Michelson, Flaxman Island, and Barter Island quadrangles, northeastern Alaska, compiled by J. W. Bader, and K. J. Bird. 1986. Lat 69° to 70°45', long 141° to 147°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 40 by 51 inches. (Supersedes Open-file report 84-569.)

- I-1792. Atlas of the Exclusive Economic Zone, western continental United States, by EEZ Scan 84 Scientific Staff. 1986. 152 p. Scale 1:500,000 (1 inch = about 8 miles).

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

- I-1420 (NI-18). Quaternary geologic map of the Hatteras 4° by 6° Quadrangle, United States, State compilation by G. H. Johnson and P. C. Peebles. Edited and integrated by G. M. Richmond, D. S. Fullerton, and D. L. Weide. 1986. Lat 32° to 36°, long 72° to 78°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 30 by 44 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-C. UTAH. Stratigraphic framework and coal resources of the Upper Cretaceous Blackhawk Formation in the Trail Mountain and East Mountain areas of the Wasatch Plateau coal field, Manti 30' by 60' Quadrangle, Emery County, Utah, by J. D. Sanchez, and T. L. Brown. 1986. Three sheets. Lat 39°15' to 39°22'30", long 111°02'30" to 111°17'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 33 by 42 inches; sheet 2, 42 by 48 inches; sheet 3, 42 by 54 inches.
- C-0098. MARYLAND. Coal geology of the Castleman coal field, Garrett County, Maryland, by P. C. Lyons, E. F. Jacobsen, and B. K. Scott. 1985. Lat about 39°32'30" to about 39°42'30", long about 79°05' to about 79°20'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 52 inches.
- C-0102. WYOMING. Surficial materials map of the Kemmerer 30' by 60' Quadrangle, Lincoln, Uinta, and Sweetwater counties, Wyoming, by A. B. Gibbons. 1986. Lat 41°30' to 42°, long 110° to 111°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 32 by 54 inches.
- C-0103. WYOMING. Surficial materials map of the Evanston 30' by 60' Quadrangle, Uinta and Sweetwater counties, Wyoming, by A. B. Gibbons. 1986. Lat 41° to 41°30', long 110° to 111°. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 35 by 55 inches.
- C-0107. WYOMING. Fence diagram showing coal bed correlations within the upper part of the Fort Union Formation, in and adjacent to the eastern part of the Kaycee 30' by 60' Quadrangle, Johnson and Campbell counties, Wyoming, by J. K. Hardie, and B. S. Van Gosen. 1986. Sheet 40 by 42 inches.

OIL AND GAS INVESTIGATIONS CHARTS

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

- OC-0128-A. Stratigraphic cross sections showing correlations of subsurface Upper Cretaceous and Cenozoic rocks in the Baltimore Canyon trough, United States Mid-Atlantic outer continental shelf, by Jan Libby-French. 1986. Two sheets. Sheet 1, 26 by 49 inches; sheet 2, 42 by 43 inches.
- OC-0128-B. Stratigraphic cross sections showing correlations of subsurface Upper Jurassic and Lower Cretaceous rocks in the Baltimore Canyon trough, United States Mid-Atlantic outer continental shelf, by Jan Libby-French. 1986. Three sheets. Sheet 1, 33 by 44 inches; sheet 2, 32 by 43 inches; sheet 3, 30 by 33 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-0574. CALIFORNIA. Preliminary geologic map of Marin and San Francisco counties and parts of Alameda, Contra Costa and Sonoma counties, California, by M. C. Blake, Jr., J. A. Bartow, V. A. Frizzell, Jr., J. Schlocker, D. Sorg, C. M. Wentworth, and R. H. Wright. 1974. Two sheets. Sheet 1, lat about 37°45', long about 123°. Scale 1:63,360 (1 inch = 1 mile). Sheet 1, 41 by 49 inches; sheet 2, 22 by 32 inches. (Reprint.)

MF-0647. NEVADA. Geologic map of the Gold Acres-Tenabo area, Shoshone Range, Lander County, Nevada, by C. T. Wrucke. 1974. Two sheets. Sheet 1, lat about 40°15' to about 40°20', long about 116°40' to about 116°45'. Scale 1:15,840 (1 inch = 1,320 feet). Sheet 1, 36 by 52 inches; sheet 2, 24 by 30 inches. (Reprint.)

MF-0655-K. ALASKA. Mineral resources map of the Nabesna Quadrangle, Alaska, by D. H. Richter, D. A. Singer, and D. P. Cox. 1975. Lat 62° to 63°, long 141° to 144°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 37 by 49 inches. (Reprint.)

MF-0709. CALIFORNIA. Maps showing maximum earthquake intensity predicted in the southern San Francisco Bay region, California, for large earthquakes on the San Andreas and Hayward faults, by R. D. Borchardt, J. F. Gibbs, and K. R. Lajoie. 1975. Three sheets. Sheet 1, lat about 37°15' to 37°52'30", long about 121°45' to about 122°30'; sheet 2, lat about 37° to 37°52'30", long about 121°30' to 122°37'30"; sheet 3, lat about 37° to 37°52'30", long about 121°30' to 122°30'. Scale 1:125,000 (1 inch = about 2 miles). Sheet 1, 26 by 33 inches; sheet 2, 38 by 40 inches; sheet 3, 37 by 38 inches. (Accompanied by 11-page text.) (Reprint.)

MF-0838. CALIFORNIA. Map showing Holocene surface expression of the Brawley Fault, Imperial County, California, by R. V. Sharp. 1977. Lat 32°57'30", long 115°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 32 by 38 inches. (Reprint.)

MF-1057. ALASKA. Geologic map of the northwest side of the Kodiak and adjacent islands, Alaska, by William Connelly, and J. C. Moore. 1979. Two sheets. Sheet 1, lat 57° to 59°, long about 152° to about 155°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 42 by 42 inches; sheet 2, 42 by 49 inches. (Reprint.)

MF-1152. UTAH. Geologic map of the Sawtooth Peak Quadrangle, Beaver County, Utah, by L. F. Hintze, and M. G. Best. 1980. Lat 38°22'30" to 38°30', long 113°45' to 113°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 36 by 36 inches. (Reprint.)

MF-1153. UTAH. Preliminary geologic map of the Halfway Summit Quadrangle, Millard and Beaver counties, Utah, by M. G. Best, and L. F. Hintze. 1980. Lat 38°30' to 38°37'30", long 113°45' to 113°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 36 by 36 inches. (Reprint.)

MF-1183-A. NEW MEXICO, ARIZONA. Geochemical maps showing distribution and abundance of lead in two fractions of stream-sediment concentrates, Silver City 1° by 2° Quadrangle, New Mexico and Arizona, by K. C. Watts, J. R. Hassemer, C. L. Forn, and D. F. Siems. 1986. Lat 32° to 33°, long 108° to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 38 by 44 inches.

MF-1183-B. NEW MEXICO, ARIZONA. Geochemical maps showing distribution and abundance of copper in two fractions of stream-sediment concentrates, Silver City 1° by 2° Quadrangle, New Mexico and Arizona, by K. C. Watts, J. R. Hassemer, C. L. Forn, and D. F. Siems. 1986. Lat 32° to 33°, long 108° to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 38 by 44 inches.

MF-1183-D. NEW MEXICO, ARIZONA. Geochemical maps showing distribution and abundance of zinc in two fractions of stream-sediment concentrates, Silver City 1° by 2° Quadrangle, New Mexico and Arizona, by K. C. Watts, J. R. Hassemer, C. L. Forn, and D. F. Siems. 1986. Lat 32° to 33°, long 108° to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 38 by 44 inches.

MF-1183-E. NEW MEXICO, ARIZONA. Geochemical maps showing distribution and abundance of molybdenum in two fractions of stream-sediment concentrates, Silver City 1° by 2° Quadrangle, New Mexico and Arizona, by K. C. Watts, J. R. Hassemer, C. L. Forn, and D. F. Siems. 1986. Lat 32° to 33°, long 108° to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 38 by 44 inches.

MF-1183-F. NEW MEXICO, ARIZONA. Geochemical maps showing distribution and abundance of silver in two fractions of stream-sediment concentrates, Silver City 1° by 2° Quadrangle, New Mexico and Arizona, by K. C. Watts, J. R. Hassemer, C. L. Forn, and D. F. Siems. 1986. Lat 32° to 33°, long 108° to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 38 by 44 inches.

MF-1183-G. NEW MEXICO, ARIZONA. Geochemical maps showing distribution and abundance of tungsten in two fractions of stream-sediment concentrates, Silver City 1° by 2° Quadrangle, New Mexico and Arizona, by K. C. Watts, J. R. Hassemer, C. L. Forn, and D. F. Siems. 1986. Lat 32° to 33°, long 108° to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 38 by 44 inches.

MF-1183-H. NEW MEXICO, ARIZONA. Geochemical maps showing distribution and abundance of bismuth and beryllium in the nonmagnetic fraction of stream-sediment concentrates, Silver City 1° by 2° Quadrangle, New Mexico and Arizona, by K. C. Watts, J. R. Hassemer, C. L. Forn, and D. F. Siems. 1986. Lat 32° to 33°, long 108° to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 38 by 44 inches.

MF-1183-I. NEW MEXICO, ARIZONA. Geochemical maps showing distribution and abundance of tin in two fractions of stream-sediment concentrates, Silver City 1° by 2° Quadrangle, New Mexico and Arizona, by K. C. Watts, J. R. Hassemer, C. L. Forn, and D. F. Siems. 1986. Lat 32° to 33°, long 108° to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 38 by 44 inches.

- MF-1183-J. NEW MEXICO, ARIZONA. Geochemical maps showing distribution and abundance of manganese in two fractions of stream-sediment concentrates, Silver City 1° by 2° Quadrangle, New Mexico and Arizona, by K. C. Watts, J. R. Hassemer, C. L. Forn, and D. F. Siems. 1986. Lat 32° to 33°, long 108° to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 38 by 44 inches.
- MF-1183-K. NEW MEXICO, ARIZONA. Geochemical maps showing distribution and abundance of barium in two fractions of stream-sediment concentrates, Silver City 1° by 2° Quadrangle, New Mexico and Arizona, by K. C. Watts, J. R. Hassemer, C. L. Forn, and D. F. Siems. 1986. Lat 32° to 33°, long 108° to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 38 by 44 inches.
- MF-1221. COLORADO, UTAH. Lineaments and geologic structure of the northern Paradox Basin, Colorado and Utah, by J. D. Friedman, and S. L. Simpson. 1980. Two sheets. Sheet 1, lat 38° to about 39°45', long 108° to 110°; sheet 2, lat 38° to 39°45', long about 108°30' to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 30 by 37 inches; sheet 2, 34 by 40 inches. (Reprint.)
- MF-1235-B. MONTANA. Complete Bouguer gravity and aeromagnetic maps of the Rattlesnake Roadless Area, Missoula County, Montana, by D. M. Kulik. 1986. Lat 46°52'30" to 47°07'30", long 113°45' to 114°. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 32 by 50 inches.
- MF-1322-D. CALIFORNIA. Summary geochemical map for samples of rock, stream sediment, and nonmagnetic heavy-mineral concentrate, Freel and Dardanelles Roadless Areas, Alpine and El Dorado counties, California, by M. A. Chaffee. 1985. Lat 38°40' to 38°55', long 119°50' to 120°10'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 25 by 45 inches.
- MF-1338-B. TENNESSEE. Geochemical survey of the Little Frog Roadless Area, Polk County, Tennessee, by E. R. Force, and D. F. Siems. 1986. Lat about 35°02'30" to about 35°05', long 84°22'30" to about 84°27'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 50 inches.
- MF-1346. VIRGINIA. Seismicity map of the State of Virginia, by B. G. Reagor, C. W. Stover, and S. T. Algermissen. 1983. Lat about 37° to about 39°, long 76° to about 83°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 26 by 43 inches. (Reprint.)
- MF-1347-C. GEORGIA. Maps showing mines, prospects, and mineral sites in the Tray Mountain Roadless Area and vicinity, northern Georgia, by M. L. Chatman, U.S. Bureau of Mines. 1985. Lat 34°45' to about 34°57'30", long about 83°32'30" to 83°45'. Scale 1:30,000 (1 inch = 2,500 feet). Sheet 43 by 54 inches.
- MF-1348-C. KENTUCKY. Maps showing mines, prospects, and exposures in the Beaver Creek Wilderness, McCreary County, Kentucky, by R. W. Hammack, U.S. Bureau of Mines. 1986. Lat 36°50' to 36°57', long 84°22'30" to 84°30'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 28 by 33 inches.
- MF-1354-H. IDAHO, MONTANA. Map showing analysis of linear features in the Wallace 1° by 2° Quadrangle, Idaho-Montana, by L. C. Rowan, and T. L. Purdy. 1985. Lat 47° to 48°, long 114° to 116°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 25 by 27 inches. (Accompanied by 28-page text.)
- MF-1358-C. VIRGINIA. Maps showing mines, prospects, and mineral localities in and near the Dolly Ann Roadless Area, Alleghany County, Virginia, by J. G. Jones, U.S. Bureau of Mines. 1986. Sheet 33 by 43 inches.
- MF-1365-D. CALIFORNIA. Summary geochemical maps for samples of rock, stream sediment, and nonmagnetic heavy-mineral concentrate, east part of the Raymond Peak Roadless Area, Alpine County, California, by M. A. Chaffee. 1986. Lat about 38°35' to about 38°45', long about 119°45' to about 119°55'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 40 by 40 inches.
- MF-1380-D. WASHINGTON. Geochemical maps of the Eagle Rock and Glacier Peak Roadless Areas, Snohomish and King counties, Washington, by S. E. Church, J. G. Frisken, E. L. Mosier, and W. R. Willson. 1985. Two sheets. Sheet 1, about 47°45' to about 48°05', long about 121°10' to about 121°30'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 41 by 49 inches; sheet 2, 27 by 35 inches.
- MF-1380-E. WASHINGTON. Mines and prospects map of the Glacier Peak Roadless Area, Snohomish County, Washington, by F. L. Johnson, D. K. Denton, S. R. Iverson, R. B. McCulloch, S. A. Stebbins, and R. B. Stotelmeyer, U.S. Bureau of Mines. 1985. Two sheets. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 1, 34 by 42 inches; sheet 2, 26 by 43 inches.
- MF-1382-N. CALIFORNIA, NEVADA. Maps showing isotopic dating in the Walker Lake 1° by 2° Quadrangle, California and Nevada, by A. C. Robinson, and R. W. Kistler. 1986. Three sheets. Sheet 1, lat 38° to 39°, long 118° to 120°; sheet 2, lat 38° to 39°, long 118° to 120°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 26 by 43 inches; sheet 2, 26 by 36 inches; sheet 3, 24 by 30 inches. (Accompanied by 49-page text.)
- MF-1383-B. OREGON, CALIFORNIA. Maps showing aeromagnetic data and interpretation of the Medford 1° by 2° Quadrangle, Oregon-California, by R. J. Blakely. 1986. Two sheets. Lat 42° to 43°, long 122° to 124°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 30 by 44 inches; sheet 2, 28 by 40 inches.
- MF-1395-C. CALIFORNIA. Map showing distribution of anomalous concentrations of trace elements in the nonmagnetic fraction of heavy-mineral concentrates and of uranium in the less-than-0.180-millimeter fraction of selected stream sediments, Domeland Wilderness and contiguous roadless areas, Kern and Tulare counties, California, by W. R. Miller, J. B. McHugh, and J. M. Motooka. 1985. Lat 35°40' to 36°05', long 118°05' to 118°25'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 38 by 53 inches.
- MF-1395-D. CALIFORNIA. Map showing distribution of anomalous concentrations of trace elements in the magnetic fraction of heavy-mineral concentrates, Domeland Wilderness and contiguous roadless areas, Kern and Tulare counties, California, by W. R. Miller, J. B. McHugh, and J. M. Motooka. 1985. Lat 35°40' to 36°05', long 118°05' to 118°25'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 39 by 51 inches.

- MF-1395-E. CALIFORNIA. Map showing distribution of anomalous concentrations of elements in water, Domeland Wilderness and contiguous roadless areas, Kern and Tulare counties, California, by W. R. Miller, and J. B. McHugh. 1985. Lat 35°40' to 36°05', long 118°05' to 118°25'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 39 by 51 inches.
- MF-1416-C. CALIFORNIA. Summary geochemical maps for samples of rock, stream sediment, and nonmagnetic heavy-mineral concentrate, Carson-Iceberg and Leavitt Lake Roadless Areas, Alpine, Mono, and Tuolumne counties, California, by M. A. Chaffee. 1986. Two sheets. Lat 38°15' to 38°40', long 119°30' to 120°05'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 1, 34 by 55 inches; sheet 2, 34 by 40 inches.
- MF-1453-C. CALIFORNIA. Summary geochemical maps for samples of rock, stream sediment, and nonmagnetic heavy-mineral concentrate, Horse Meadow, Log Cabin-Saddlebag, and Tioga Lake Roadless Areas and Hall Natural Area, Mono County, California, by M. A. Chaffee. 1986. Lat about 37°50' to about 38°, long 119°05' to about 119°20'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 31 by 52 inches.
- MF-1464-D. NEW MEXICO. Mine and prospect map of the Manzano Wilderness, Torrance and Valencia counties, New Mexico, by T. D. Light, U.S. Bureau of Mines. 1986. Lat about 34°32'30" to about 34°50', long about 106°19'30" to about 106°33'. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 32 by 42 inches.
- MF-1465-C. ARIZONA, NEW MEXICO. Map showing Quaternary and Pliocene faults in the Silver City 1° by 2° Quadrangle and the Douglas 1° by 2° Quadrangle, southeastern Arizona and southwestern New Mexico, by M. N. Machette and S. F. Personius, U.S. Geological Survey; C. M. Menges, University of New Mexico; and P. A. Pearthree, University of Arizona and Arizona Bureau of Mines and Mineral Technology. 1986. Lat about 31°30' to 33°, long 108° to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 37 by 42 inches. (Accompanied by 20-page text.)
- MF-1466-E. IDAHO. Geologic and geochemical map of the Jerry Peak West and Boulder Creek Wilderness Study Areas, Custer County, Idaho, by D. H. McIntyre, S. W. Hobbs, J. F. Callahan, and G. D. May. 1984. Lat 44° to 44°15', long 114°07'30" to 114°30'. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 28 by 33 inches.
- MF-1500-D. IDAHO. Gravity and magnetic anomaly maps of the Tenmile West Roadless Area, Boise and Elmore counties, Idaho, by D. R. Mabey. 1986. Lat 43°52'30" to about 44°07'30", long 115°07'30" to 115°30'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 32 by 42 inches.
- MF-1523-D. NEW MEXICO. Geochemical map of the Chama River Canyon Wilderness and contiguous roadless area, Rio Arriba County, New Mexico, by J. L. Ridgley. 1986. Two sheets. Lat 36°10' to 36°35', long 106°30' to 106°55'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 1, 40 by 55 inches; sheet 2, 30 by 53 inches.
- MF-1524. CONNECTICUT. Surficial geologic map of the Botsford Quadrangle, Connecticut, by J. R. Stone, and E. H. London. 1985. Lat 41°15' to 41°22'30", long 73°15' to 73°22'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 38 inches.
- MF-1527-C. VIRGINIA. Maps showing mines and prospects in the southern Massanutten Roadless Area, Page and Rockingham counties, Virginia, by M. L. Chatman and P. T. Behum, U.S. Bureau of Mines. 1986. Lat 38°22'30" to 38°37'30", long 78°37'30" to 78°45'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 28 by 38 inches.
- MF-1532-B. CALIFORNIA. Summary geochemical maps for samples of rock, stream sediment, and nonmagnetic heavy-mineral concentrates, Cypress Roadless Area, Kern County, California, by M. A. Chaffee, D. L. Fey, R. H. Hill, and S. J. Sutley. 1986. Lat 35°30' to about 35°35', long about 118°25' to about 118°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 34 by 38 inches.
- MF-1534-C. MONTANA. Geophysical maps of the Mount Henry Roadless Area, Lincoln County, Montana, by Viki Bankey, M. D. Kleinkopf, and Donald Hoover. 1986. Lat 48°48'28" to 48°57'04", long 115°24'44" to 115°40'07". Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 29 by 36 inches.
- MF-1535-C. CALIFORNIA, NEVADA. Summary geochemical maps for samples of rock, stream sediment, and nonmagnetic heavy-mineral concentrate, Sweetwater Roadless Area, Mono County, California and Lyon and Douglas counties, Nevada, by M. A. Chaffee. 1986. Two sheets. Lat 38°15' to about 38°30', long about 119°15' to 119°30'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 1, 33 by 51 inches; sheet 2, 33 by 48 inches.
- MF-1558-C. ARIZONA. Aeromagnetic map of the Wet Beaver Roadless Area, Yavapai and Coconino counties, Arizona, by R. A. Martin. 1986. Lat about 34°38' to about 34°42', long 111°30' to about 111°41'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 25 by 34 inches.
- MF-1567-C. ARIZONA. Aeromagnetic map of the Rattlesnake Roadless Area, Coconino and Yavapai counties, Arizona, by R. A. Martin. 1986. Lat 34°40' to 34°52'30", long 111°37'30" to 111°47'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 37 by 41 inches.
- MF-1570-C. NEW MEXICO. Aeromagnetic maps of the Latir Peak and Wheeler Peak Wildernesses and the Columbine-Hondo Wilderness Study Area, Taos County, New Mexico, by C. K. Moss, and G. A. Abrams. 1985. Two sheets. Lat 36°30' to 36°52'30", long about 105°22'30" to 105°37'30". Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 1, 37 by 56 inches; sheet 2, 23 by 28 inches.
- MF-1572-C. FLORIDA. Mineral resource assessment map of the Big Gum Swamp Roadless Area, Columbia and Baker counties, Florida, by J. B. Cathcart, C. C. Cameron, and S. H. Patterson. 1986. Lat about 30° to about 30°30', long 82°22'30" to about 82°30'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 40 by 42 inches.
- MF-1573-B. ARIZONA. Aeromagnetic maps of the Mazatzal Wilderness and contiguous roadless areas, Gila, Maricopa, and Yavapai counties, Arizona, by C. K. Moss, and G. A. Abrams. 1985. Two sheets. Sheet 1, lat about 33°55' to about 34°20', long about 111°25' to about 111°45'; sheet 2, lat about 34° to about 34°15', long about 111°30' to about 111°45'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 1, 37 by 49 inches; sheet 2, 27 by 29 inches.

- MF-1581-B. OREGON.** Geochemical map of the North Fork John Day River Roadless Area, Grant County, Oregon, by J. G. Evans. 1986. Lat 44°50' to 45°, long about 118°25' to about 118°40'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 27 by 37 inches.
- MF-1581-C. OREGON.** Geologic map of the North Fork John Day River Roadless Area, Grant County, Oregon, by J. G. Evans. 1986. Lat about 44°45' to 45°, long about 118°25' to about 118°40'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 31 by 48 inches.
- MF-1587-A. NORTH CAROLINA.** Geologic map of the Snowbird Roadless Area, Graham County, North Carolina, by F. G. Lesure. 1986. Lat about 35°15' to about 35°17'30", long about 83°55' to about 84°02'30". Scale 1:48,000 (1 inch = 4,000 feet). Sheet 24 by 30 inches.
- MF-1587-B. NORTH CAROLINA.** Geochemical survey of the Snowbird Roadless Area, Graham County, North Carolina, by F. G. Lesure. 1986. Lat about 35°15' to about 35°17'30", long about 83°55' to about 84°. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 42 by 56 inches.
- MF-1588-G. COLORADO.** Geochemical maps showing the distribution and abundance of selected elements in heavy-mineral concentrates of stream sediments from Vasquez Peak Wilderness Study Area and the Williams Fork and St. Louis Peak Roadless Areas, Clear Creek, Grand, and Summit counties, Colorado, by H. N. Barton. 1985. Two sheets. Lat 39°38' to 39°57', long 105°45' to 106°08'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 35 by 54 inches; sheet 2, 30 by 37 inches.
- MF-1588-H. COLORADO.** Geochemical maps showing the distribution and abundance of selected elements in heavy-mineral concentrates derived from stream sediments and ridgetop soils from the upper Keyser Creek basin in the St. Louis Peak Roadless Area, Grand County, Colorado, by H. N. Barton. 1985. Lat 39°51' to 39°55', long 105°55' to 106°. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 31 by 32 inches.
- MF-1588-I. COLORADO.** Geochemical maps showing the distribution and abundance of selected elements in heavy-mineral concentrates from ridgetop soils from the Williams Fork Roadless Area, Clear Creek, Grand, and Summit counties, Colorado, by H. N. Barton. 1985. Lat 39°40' to 39°47'30", long 105°52'30" to 106°. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 40 by 53 inches.
- MF-1602-B. ARIZONA.** Aeromagnetic and isostatic gravity maps of the Crossman Peak Wilderness Study Area, Mohave County, Arizona, by R. W. Simpson, T. B. Gage, and R. E. Bracken. 1986. Three sheets. Lat 34°22'30" to 34°45', long 114° to 114°22'30". Scale 1:48,000 (1 inch = 4,000 feet). Sheet 1, 31 by 42 inches; sheet 2, 32 by 43 inches; sheet 3, 32 by 43 inches.
- MF-1605-B. MONTANA.** Geologic map of the Madison Roadless Area, Gallatin and Madison counties, Montana, by R. G. Tysdal, and F. S. Simons. 1985. Lat about 45° to about 45°30', long about 111°15' to about 111°30'. Scale 1:96,000 (1 inch = 8,000 feet). Sheet 38 by 42 inches.
- MF-1609-B. VERMONT.** Geochemical survey of the Lye Brook Wilderness, Bennington and Windham counties, Vermont, by R. A. Ayuso, and G. W. Day. 1985. Lat 43° to about 43°07'30", long about 72°57'30" to 73°07'30". Scale 1:48,000 (1 inch = 4,000 feet). Sheet 38 by 56 inches.
- MF-1610-A. NORTH CAROLINA.** Geologic and geochemical maps of the Linville Gorge Wilderness and proposed extensions, Burke and McDowell counties, North Carolina, by J. P. D'Agostino, J. W. Whitlow, and D. F. Siems. 1986. Lat 35°48' to 35°58'15", long 81°51'30" to 81°56'30". Scale 1:48,000 (1 inch = 4,000 feet). Sheet 33 by 44 inches.
- MF-1612-A. OREGON.** Geologic map of the Homestead, Lake Fork, and Lick Creek Roadless Areas, Baker and Wallowa counties, Oregon, by J. G. Evans. 1986. Lat about 45° to about 45°05', long about 116°50' to about 117°05'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 32 by 35 inches.
- MF-1612-B. OREGON.** Geochemical map of the Homestead, Lake Fork, and Lick Creek Roadless Areas, Baker and Wallowa counties, Oregon, by J. G. Evans. 1986. Lat about 45° to about 45°05', long about 116°50' to about 117°05'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 27 by 32 inches.
- MF-1613-A. CALIFORNIA.** Mineral resources and potential map of the East Yuba and West Yuba Roadless Areas, Plumas and Sierra counties, California, by J. R. Bergquist, Andrew Griscom, and S. S. Page, U.S. Geological Survey, and W. W. White III and D. F. Scott, U.S. Bureau of Mines. 1986. Lat 39°32'30" to 39°47'30", long 120°37'30" to 120°57'30". Scale 1:48,000 (1 inch = 4,000 feet). Sheet 34 by 42 inches. (Accompanied by 20-page text.)
- MF-1613-B. CALIFORNIA.** Geochemical anomaly map of the East Yuba and West Yuba Roadless Areas, Plumas and Sierra counties, California, by S. S. Page-Nedell, and J. R. Bergquist. 1986. Lat 39°32'30" to 39°47'30", long 120°37'30" to 120°57'30". Scale 1:48,000 (1 inch = 4,000 feet). Sheet 30 by 37 inches.
- MF-1616-B. CALIFORNIA.** Summary geochemical maps for samples of rock, stream sediments, and nonmagnetic heavy-mineral concentrate, Pyramid Roadless Area, El Dorado County, California, by M. A. Chaffee. 1986. Lat 38°45' to about 39°, long 120° to about 120°30'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 36 by 51 inches.
- MF-1618-B. GEORGIA, NORTH CAROLINA.** Geologic map of the Overflow Roadless Area, Rabun County, Georgia, and Macon County, North Carolina, by A. E. Nelson, and R. P. Koeppen. 1986. Lat about 34°57'30" to about 35°, long about 83° to about 83°15'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 26 by 33 inches.
- MF-1619-A. IDAHO, WYOMING.** Mineral resource potential map of the West and East Palisades Roadless Areas, Idaho and Wyoming, by S. S. Oriel, J. C. Antweiler, and D. W. Moore, U.S. Geological Survey, and J. R. Benham, U.S. Bureau of Mines, *with contributions* by D. R. Mabey, U.S. Geological Survey. 1985. Two sheets. Sheet 1, lat 43°07'30" to 43°37'30", long 110°45' to 111°22'30". Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 1, 40 by 53 inches; sheet 2, 24 by 34 inches. (Accompanied by 13-page text.)

- MF-1619-B. IDAHO, WYOMING. Geologic map of the West and East Palisades Roadless Areas, Idaho and Wyoming, by S. S. Oriel, and D. W. Moore. 1985. Two sheets. Sheet 1, lat 43°07'30" to 43°37'30", long 110°45' to 111°22'30"; sheet 2, lat about 43°15' to about 43°30', long about 111° to about 111°15'. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 1, 40 by 53 inches; sheet 2, 25 by 36 inches.
- MF-1622-D. COLORADO. Stratigraphic sections, depositional environment, and metal content of the upper part of the Middle Pennsylvanian Minturn Formation, northern Sangre de Cristo Range, Custer and Saguache counties, Colorado, by R. F. Clark, and D. M. Walz. 1985. Two sheets. Sheet 1, 40 by 48 inches; sheet 2, 36 by 44 inches.
- MF-1628-E. COLORADO. Maps showing water geochemistry of the Buffalo Peaks Wilderness Study Area, Lake, Park, and Chaffee counties, Colorado, by G. A. Nowlan, W. H. Ficklin, and R. A. Dover. 1985. Two sheets. Sheet 1, lat about 39°07'30", long to about 106°15'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 42 by 58 inches; sheet 2, 26 by 27 inches.
- MF-1633-A. MONTANA. Mineral resource potential map of the Anaconda-Pintlar Wilderness and contiguous roadless area, Granite, Deer Lodge, Beaverhead, and Ravalli counties, Montana, by J. E. Elliott, C. A. Wallace, J. M. O'Neill, W. F. Hanna, L. C. Rowan, D. B. Segal, D. R. Zimbelman, and R. C. Pearson, U.S. Geological Survey, and T. J. Close, F. E. Federspiel, J. D. Causey, S. L. Willett, R. W. Morris, and J. R. Huffsmith, U.S. Bureau of Mines. 1985. Lat 45°45' to 46°07'30", long 113°07'30" to 113°52'30". Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 40 by 54 inches. (Accompanied by 34-page text.)
- MF-1633-B. MONTANA. Geochemical maps of the Anaconda-Pintlar Wilderness, Granite, Deer Lodge, Beaverhead, and Ravalli counties, Montana, by D. R. Zimbelman. 1986. Two sheets. Sheet 1, 35 by 47 inches; sheet 2, 32 by 50 inches.
- MF-1636-B. WYOMING. Geologic map of the Bridger Wilderness and the Green-Sweetwater Roadless Area, Sublette and Fremont counties, Wyoming, by R. G. Worl, M. E. Koesterer, and T. P. Hulsebosch. 1986. Lat 42°15' to 43°30', long 108°30' to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 26 by 46 inches.
- MF-1645-B. ALASKA. Geologic map of the Chugach National Forest, Alaska, by S. W. Nelson, J. A. Dumoulin, and M. L. Miller. 1985. Lat about 60° to about 61°30', long about 144° to 150°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 38 by 58 inches. (Accompanied by 16-page text.)
- MF-1655-A. CALIFORNIA. Geologic map of roadless areas and the Santa Lucia Wilderness in the Los Padres National Forest, southwestern California, by V. A. Frizzell, Jr., and J. G. Vedder. 1986. Lat 34°15' to 35°30', long 118°30' to 120°45'. Scale 1:250,000 (1 inch = about 4 miles). Sheet 35 by 55 inches.
- MF-1655-F. CALIFORNIA. Map showing thermal-alteration indices in roadless areas and the Santa Lucia Wilderness in the Los Padres National Forest, southwestern California, by N. O. Frederiksen. 1985. Lat 34°15' to 35°30', long 118°30' to 120°45'. Scale 1:250,000 (1 inch = about 4 miles). Sheet 36 by 46 inches.
- MF-1714. ALASKA. Maps showing aeromagnetic survey and geologic interpretation of the Valdez Quadrangle, Alaska, by J. E. Case, L. E. Burns, and G. R. Winkler. 1986. Two sheets. Sheet 1, lat 61° to 62°, long 144° to 147°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 29 by 46 inches; sheet 2, 36 by 49 inches.
- MF-1717. UTAH. Geologic map of the Agency Draw NW Quadrangle, Uintah County, Utah, by W. B. Cashion. 1984. Lat 39°37'30" to 39°45', long 109°37'30" to 109°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 32 by 32 inches. (Reprint.)
- MF-1718. ALASKA. Preliminary geologic interpretation of the aeromagnetic map of Afognak and Shuyak islands, Alaska, by J. E. Case, M. A. Fisher, G. W. Moore, and S. W. Nelson. 1986. Lat 58° to 58°45', long 151°30' to 153°30'. Scale 1:250,000 (1 inch = about 4 miles). Sheet 33 by 38 inches. (Supercedes Open-file report 80-57.)
- MF-1719. CALIFORNIA. Maps showing locations of selected pre-Quaternary rock samples from 34°30' North latitude to 42° North latitude, California continental margin, by D. S. McCulloch, P. A. Utter, and J. S. Menack. 1985. Four sheets. Sheet 1, lat about 34°30' to 36°, long 120° to 122°; sheet 2, lat 36° to 38°10', long 121°30' to 123°45'; sheet 3, lat 38° to 40°, long 122°50' to 124°45'; sheet 4, lat 40° to 42°, long 124° to 126°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 31 by 38 inches; sheet 2, 34 by 48 inches; sheet 3, 28 by 46 inches; sheet 4, 29 by 46 inches. (Accompanied by 38-page text.)
- MF-1728. Free-air gravity anomaly map of the Bering Sea, by J. R. Childs, H. W. Magistrale, and A. K. Cooper. 1985. Lat 50°N to 66°N, long 158°W to 158°E. Scale 1:2,500,000 (1 inch = about 40 miles). Sheet 40 by 58 inches.
- MF-1730. VIRGINIA, WEST VIRGINIA. Maps showing coal resources of the Amonate Quadrangle, Buchanan and Tazewell counties, Virginia and McDowell County, West Virginia, by J. F. Windolph, Jr. 1986. Lat 37°07'30" to 37°15', long 81°37'30" to 81°45'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 43 by 48 inches.
- MF-1735. OREGON. Reconnaissance geologic map of the Marial Quadrangle, southwestern Oregon, by Len Ramp, and Barry Moring. 1986. Lat 42°30' to 42°45', long 123°45' to 124°. Scale 1:62,500 (1 inch = about 1 mile). Sheet 24 by 26 inches.
- MF-1737. GEORGIA, SOUTH CAROLINA. Geologic section of the updip coastal plain from central Georgia to western South Carolina, by D. C. Prowell, R. A. Christopher, L. E. Edwards, L. M. Bybell, and H. E. Gill. 1985. Sheet 33 by 57 inches. (Accompanied by 10-page text.)
- MF-1753. CALIFORNIA. Potassium-argon and fission-track ages of the Sonoma Volcanics in an area north of San Pablo Bay, California, by K. F. Fox, Jr., R. J. Fleck, G. H. Curtis, and C. E. Meyer. 1985. Lat 37°52'30" to 38°52'30", long 122° to 123°. Scale 1:125,000 (1 inch = about 2 miles). Sheet 36 by 42 inches. (Accompanied by 9-page text.)
- MF-1756-A. UTAH. Mineral resource potential map of the Mt. Ellen-Blue Hills Wilderness Study Area and Bull Mountain Study Area, Garfield and Wayne counties, Utah, by R. F. Dubiel, C. S. Bromfield, S. E. Church, W. M. Kemp, M. J. Larson, and Fred Peterson, U.S. Geological Survey, and D. D. Gese, U.S. Bureau of Mines. 1985. Lat about 38°20', long 110°35' to about 111°. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 31 by 41 inches. (Accompanied by 8-page text.)

- MF-1760-A. VIRGINIA. Geologic map of the Rich Hole Roadless Area, Alleghany and Rockbridge counties, Virginia, by F. G. Lesure, and S. W. Nicholson. 1985. Lat about 39°52'30", long about 79°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 33 by 36 inches.
- MF-1770. CALIFORNIA, NEVADA. Reconnaissance surficial geologic map of northern Death Valley, California and Nevada, by Barry Moring. 1986. Lat 37° to 37°20', long 117°15' to 117°45'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 32 by 36 inches.
- MF-1773. IDAHO. Complete Bouguer gravity anomaly map of Idaho, by Viki Bankey, Michael Webring, D. R. Mabey, and M. D. Kleinkopf, U.S. Geological Survey, and E. H. Bennett, Idaho Geological Survey. 1985. Lat 42° to 49°, long about 111° to about 117°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 41 by 65 inches. (Reprint.)
- MF-1775. MONTANA. Stratigraphic framework of coal beds underlying the northeast part of the Fort Peck Indian Reservation, Montana, by J. K. Hardie, and B. S. Van Gosen. 1986. Lat about 48°30', long about 104°30' to about 105°15'. Scale 1:125,000 (1 inch = about 2 miles). Sheet 31 by 40 inches.
- MF-1776-B. UTAH. Geologic map of the Little Rockies Wilderness Study Area and the Mt. Hillers and Mt. Pennell Study Areas and vicinity, Garfield County, Utah, by M. J. Larson, C. S. Bromfield, R. F. Dubiel, C. G. Patterson, and Fred Peterson. 1985. Lat 37°40'45" to about 38°15', long 110°25' to about 111°. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 36 by 55 inches.
- MF-1781. NEW JERSEY. Attitude, movement history, and structure of cataclastic rocks of the Flemington Fault; results of core drilling near Oldwick, New Jersey, by W. C. Burton, and N. M. Ratcliffe. 1985. Sheet 35 by 42 inches.
- MF-1790. CALIFORNIA. Geologic map of the late Cenozoic deposits of the Sacramento Valley and northern Sierran foothills, California, by E. J. Helley, and D. S. Harwood. 1985. Five sheets. Sheet 1, lat 38°15' to 38°45', long 121°15' to 122°15'; sheet 2, lat 38°45' to 39°15', long 121°15' to 122°15'; sheet 3, lat 39°15' to 39°45', long 121°30' to 122°30'; sheet 4, lat 39°45' to 40°15', long 121°45' to 122°45'; sheet 5, lat 40°15' to 40°45', long 121°45' to 122°45'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 1, 42 by 57 inches; sheet 2, 42 by 57 inches; sheet 3, 42 by 56 inches; sheet 4, 42 by 56 inches; sheet 5, 42 by 56 inches. (Accompanied by 24-page text.)
- MF-1793. NORTH CAROLINA, SOUTH CAROLINA. Mineral occurrences of the Charlotte 1° by 2° Quadrangle, North Carolina and South Carolina, by J. P. D'Agostino, and W. D. Rowe, Jr. 1986. Two sheets. Sheet 1, 35° to 36°, long 80° to 82°; sheet 2, lat 35° to 36°, long 80° to 82°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 43 by 48 inches; sheet 2, 43 by 48 inches.
- MF-1794. PENNSYLVANIA. Map showing slope movements in the Oak Forest Quadrangle, Greene County, southwestern Pennsylvania, by J. S. Pomeroy. 1986. Lat 39°45' to 39°52'30", long 80°07'30" to 80°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 56 inches.
- MF-1795. CALIFORNIA. Maps and interpretation of geochemical anomalies, Chuckwalla Mountains Wilderness Study Area, Riverside County, California, by K. C. Watts. 1986. Lat about 33°15' to 33°45', long about 115° to about 115°30'. Sheet 40 by 52 inches.
- MF-1797. CALIFORNIA. Geologic map of the Penn Mine, Calaveras County, California, by J. A. Peterson. 1985. Two sheets. Sheet 1, about 38°14', long about 120°52'30"; sheet 2, long about 120°52'30". Scale 1:1,200 (1 inch = 100 feet). Sheet 1, 45 by 46 inches; sheet 2, 27 by 34 inches.
- MF-1801. ILLINOIS. Geologic, geochemical, and mineral resource assessment maps of the Garden of the Gods Roadless Area, Gallatin, Hardin, Pope, and Saline counties, Illinois, by J. S. Klasner, and G. W. Day. 1986. Lat about 37°35' to about 37°37'30", long about 88°22'30" to about 88°25'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 44 by 48 inches.
- MF-1802. CALIFORNIA. Contour map showing minimum depth to ground water, upper Santa Ana River valley, California, 1973-1979, by S. E. Carson, and J. C. Matti. 1985. Two sheets. Sheet 1, lat about 34°, long 117° to about 117°22'30"; sheet 2, lat 33°52'30" to about 34°07'30", long about 117°22'30" to about 117°45'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 1, 42 by 56 inches; sheet 2, 38 by 49 inches. (Accompanied by 22-page text.)
- MF-1803. MISSOURI. Geologic map of the Scott City Quadrangle and part of the Thebes Quadrangle, Scott and Cape Girardeau counties, Missouri, by W. D. Johnson, Jr. 1985. Two sheets. Sheet 1, lat 37°07'30" to 37°15', long 89°22'30" to 89°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 31 by 53 inches; sheet 2, 24 by 31 inches.
- MF-1804. MISSOURI. Geologic map of the Oran Quadrangle, Scott and Stoddard counties, Missouri, by W. D. Johnson, Jr. 1985. Lat 37° to 37°07'30", long 89°37'30" to 89°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 28 by 35 inches.
- MF-1805. MISSOURI. Geologic map of the Morley Quadrangle, Scott County, Missouri, by W. D. Johnson, Jr. 1985. Lat 37° to 37°07'30", long 89°30' to 89°37'30". Scale 1:24,000 (1 inch = 2,000 feet.) Sheet 30 by 35 inches.
- MF-1807. Free-air gravity anomaly map of the Long Island Platform, by D. R. Hutchinson, W. D. Leeds, and J. A. Grow, U.S. Geological Survey, and Robin Bell, Lamont-Doherty Geological Observatory. 1986. Lat 39° to 42°, long 69° to 75°. Scale 1:492,250 (1 inch = about 8 miles). Sheet 34 by 50 inches.
- MF-1810-A. CALIFORNIA. Mineral resource potential map of the Tunnel Ridge Wilderness Study Area, Klamath Mountains, California, by G. L. Kennedy and M. F. Diggles, U.S. Geological Survey, and R. S. Gaps, U.S. Bureau of Mines. 1985. Lat about 40°45' to about 40°50', long about 123° to 123°05'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 25 by 34 inches. (Accompanied by 7-page text.)
- MF-1810-B. CALIFORNIA. Geologic and geochemical-anomaly map of the Tunnel Ridge Wilderness Study Area, Klamath Mountains, California, by M. F. Diggles, and G. L. Kennedy. 1986. Lat 40°42'30" to 40°52'30", long 122°57'30" to 123°05'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 32 by 43 inches.

- MF-1811. VIRGINIA. Maps showing geology, geochemistry, and mineral resource assessment of the Rough Mountain Roadless Area, Alleghany and Bath counties, Virginia, by F. G. Lesure, and S. W. Nicholson. 1986. Lat about 37°52'30" to about 37°57'30", long about 79°40' to 79°45'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 37 by 38 inches.
- MF-1815. NEVADA. Geologic map of the North Fork of the Little Humboldt River Wilderness Study Area, Humboldt County, Nevada, by J. A. Peterson, and George Wong. 1986. Lat 41°30' to about 41°40', long about 117°05' to about 117°12' 30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 30 by 38 inches.
- MF-1817. NORTH CAROLINA. Preliminary map showing the occurrence of siliceous rocks in central North Carolina derived from enhanced principal component Landsat images, by R. G. Schmidt, and M. H. Koslow. 1986. Lat 36° to 37°, long about 78°30' to 79°30'. Scale 1:250,000 (1 inch = about 4 miles). Sheet 33 by 41 inches.
- MF-1820. ARIZONA. Reconnaissance geologic map of the Mount Ajo and part of the Pisinimo quadrangles, Pima County, Arizona, by R. M. Tosdal, D. W. Peterson, D. J. May, R. A. LeVeque, and R. J. Miller. 1986. Lat 32° to 32°15', long about 112°30' to 112°45'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 26 by 45 inches.
- MF-1821. COLORADO, UTAH, WYOMING. Generalized geologic map showing distribution and basal configuration of the Browns Park Formation and Bishop Conglomerate in northwestern Colorado, northeastern Utah, and southern Wyoming, by S. J. Luft. 1985. Lat about 40° to about 41°30', long about 106°30' to 110°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 39 by 54 inches.
- MF-1822. MONTANA, WYOMING. Preliminary geologic map of the Lodge Grass area, northwestern Powder River basin, Montana and Wyoming, by S. P. Kanizay. 1986. Lat 45° to 45°30', long 107° to 107°30'. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 40 by 47 inches.
- MF-1823. MISSOURI. Geologic map of the Gordonville Quadrangle, Cape Girardeau County, Missouri, by D. H. Amos. 1985. Lat 37°15' to 37°22'30", long 89°37'30" to 89°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 38 inches.
- MF-1825. COLORADO. Preliminary geologic map of the Collbran Quadrangle, Mesa County, Colorado, by J. R. Donnell, W. E. Yeend, and M. C. Smith. 1985. Lat 39°07'30" to 39°15', long 107°52'30" to 108°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 31 inches.
- MF-1826. UTAH, COLORADO. Structure contour map of the top of the Castlegate Sandstone, eastern part of the Uinta Basin and the western part of the Piceance Creek basin, Utah and Colorado, by R. C. Johnson. 1986. Two sheets. Sheet 1, lat about 39° to about 40°45', long about 107°45' to about 111°. Scale 1:253,440 (1 inch = 4 miles). Sheet 1, 31 by 40 inches; sheet 2, 40 by 55 inches.
- MF-1827. CALIFORNIA. Geologic map of the El Paso Mountains Wilderness Study Area, Kern County, California, by B. F. Cox, and M. F. Diggles. 1986. Lat about 35°27'30" to about 35°34', long about 117°47'30" to 117°55'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 39 by 39 inches. (Accompanied by 13-page text.)
- MF-1828. WYOMING. Electric log correlations of Upper Cretaceous rocks in the Mesaverde Group Shale and equivalent units across the Great Divide Basin in Southwest Wyoming, by H. W. Roehler. 1986. Sheet 21 by 34 inches.
- MF-1829. NEVADA. Geologic map of the South Jackson Mountains Wilderness Study Area, Humboldt County, Nevada, by M. L. Sorenson. 1986. Lat 41°10' to 41°20', long about 118°25' to about 118°35'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 23 by 32 inches.
- MF-1830-B. MISSOURI. Surficial materials map of the Springfield 1° by 2° Quadrangle, Missouri, by J. W. Whitfield. 1986. Lat 37° to 38°, long 92° to 94°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 31 by 36 inches.
- MF-1831. COLORADO, NEW MEXICO. Isopach map of interval between top of the Pictured Cliffs Sandstone and the Huerfano Bentonite Bed of the Lewis Shale, La Plata County, Colorado, and Rio Arriba and San Juan counties, New Mexico, by D. T. Sandberg. 1986. Two sheets. Sheet 1, lat about 36°45' to about 37°15', long 107°30' to about 108°30'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 1, 39 by 41 inches; sheet 2, 37 by 50 inches.
- MF-1832. OREGON. Maps showing the distribution of the platinum-group elements and gold in rocks from the western half of the Medford and part of the adjacent Coos Bay 1° by 2° quadrangles, southwestern Oregon, by C. A. Carlson, N. J. Page, and R. R. Carlson. 1986. Two sheets. Lat 42° to 43°, long about 123° to about 124°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 1, 42 by 50 inches; sheet 2, 42 by 57 inches.
- MF-1833. CALIFORNIA. Geologic map of the Owens Peak Wilderness Study Area, Tulare and Kern counties, California, by M. F. Diggles, and D. E. Clemens. 1986. Lat about 35°35' to about 35°50', long about 118° to about 118°05'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 26 by 28 inches.
- MF-1834-A. ARIZONA. Mineral occurrence map and tabulation of geologic, commodity, and production data, Ajo and Lukeville 1° by 2° quadrangles, southwestern Arizona, by J. A. Peterson, and R. M. Tosdal. 1986. Lat about 31°45' to 33°, long 112° to 114°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 30 by 54 inches.
- MF-1835-A. Map showing availability of data for selected deep drill holes in northern Midcontinent, U.S.A., compiled by D. N. Mugel. 1986. Lat about 36° to 46°, long about 88° to 100°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 42 by 55 inches.
- MF-1837. COLORADO, NEBRASKA, WYOMING. Median-permeability contour maps of the J Sandstone, Dakota Group, in the Denver Basin, Colorado, Nebraska, and Wyoming, by D. K. Higley, and D. L. Gautier. 1986. Lat about 39°30' to about 41°, long about 103° to about 105°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 34 by 34 inches.
- MF-1838-A. ALASKA. Surficial geologic map of the Solomon, Bendeleben, and southern part of the Kotzebue quadrangles, western Alaska, by D. S. Kaufman. 1986. Lat about 64°15' to about 66°, long 162° to 165°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 37 by 42 inches.

- MF-1839. UTAH. Preliminary geologic map of the Wolf Point Quadrangle, Uintah County, Utah, by R. W. Scott, Jr., and M. P. Pantea. 1986. Lat 39°30' to 39°37'30", long 109°30' to 109°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 25 by 38 inches.
- MF-1841-A. COLORADO. Geologic map of the Holy Cross Wilderness, Eagle, Pitkin, and Lake counties, Colorado, by A. R. Wallace, M. J. Blaskowski, and R. C. Pearson. 1986. Lat 39°15' to about 39°37', long about 106°22'30" to about 106°37'30". Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 35 by 50 inches.
- MF-1841-B. COLORADO. Aeromagnetic map of the Holy Cross Wilderness Area, Eagle, Lake, and Pitkin counties, Colorado, by D. L. Campbell, and A. R. Wallace. 1986. Lat 39°15' to about 39°37'30", long about 106°22'30" to about 106°37'30". Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 30 by 36 inches.
- MF-1842. UTAH. Thermal maturity map of the lower part of the Upper Cretaceous Mesaverde Group, Uinta Basin, Utah, by V. F. Nuccio, and R. C. Johnson. 1986. Lat about 39° to about 40°15', long about 109° to about 111°. Scale 1:250,000 (1 inch = about 4 miles). Sheet 39 by 48 inches.
- MF-1843. CALIFORNIA. Structure contour map of the tops of the Kreyenhagen Formation and Cretaceous strata in the Coalinga area, Fresno and King counties, California, by J. L. Zigler, C. M. Wentworth, and J. A. Bartow. 1986. Lat about 35°45' to about 36°30', long about 119°45' to about 120°30'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 41 by 43 inches.
- MF-1844. NEVADA. Geologic map of the Roberts Wilderness Study Area, Eureka County, Nevada, by E. H. McKee. 1986. Lat about 39°48' to about 39°59', long about 116°18' to about 116°23'. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 24 by 36 inches.
- MF-1845-A. HAWAII. Aeromagnetic map of the rift systems of Kilauea and Mauna Loa volcanoes, Island of Hawaii, Hawaii, by V. J. Flanagan, C. L. Long, Donald Rohret, and Pamela Mohr. 1986. Lat about 19° to about 19°40', long about 154°50' to about 155°45'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 36 by 54 inches.
- MF-1845-B. HAWAII. Apparent-resistivity map of the rift systems of Kilauea and Mauna Loa volcanoes, Island of Hawaii, Hawaii, by V. J. Flanagan, C. L. Long, Donald Rohret, and Pamela Mohr. 1986. Lat about 19° to about 19°40', long about 154°50' to about 155°45'. Scale 1:100,000 (1 inch = about 1.6 miles). Sheet 37 by 44 inches.
- MF-1846. NEVADA. Geologic map of the Spruce Mountain 4 Quadrangle, Elko County, Nevada, by G. D. Fraser, K. B. Ketner, and M. C. Smith. 1986. Lat 40°30' to 40°45', long 114°30' to 114°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 37 by 49 inches.
- MF-1848. NEW MEXICO. Correlation of coal beds in the Fruitland Formation as interpreted from geophysical logs, east-central San Juan County, New Mexico, by D. T. Sandberg. 1986. Two sheets. Sheet 1, lat about 36°15' to about 36°30', long 107°45' to 108°22'30".
- MF-1849. NEW MEXICO. Geologic map of the Indian Peaks West Quadrangle, Catron County, New Mexico, by V. A. Lawrence, and D. H. Richter. 1986. Lat 33°30' to 33°37'30", long 108° to 108°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 27 by 38 inches.
- MF-1850. NEW MEXICO. Geologic map of the Indian Peaks East Quadrangle, Catron County, New Mexico, by D. H. Richter, V. A. Lawrence, and W. A. Duffield. 1986. Lat 33°30' to 33°37'30", long 107°52'30" to 108°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 27 by 40 inches.
- MF-1851. ARIZONA. Geophysical maps of the Winchester Roadless Area, Cochise County, Arizona, by R. A. Martin. 1986. Lat about 32°20' to about 32°25', long about 110°05' to 110°10'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 37 by 55 inches.
- MF-1852. ARIZONA. Seismicity map of the State of Arizona, by C. W. Stover, B. G. Reagor, and S. T. Algermissen. 1986. Lat about 31° to about 37°, long about 109° to about 115°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 35 by 47 inches.
- MF-1853-A. NEW MEXICO. Metallogenic map of volcanogenic massive-sulfide occurrences in New Mexico, by J. M. Robertson, New Mexico Bureau of Mines and Mineral Resources; M. S. Fulp, Santa Fe Mining, Inc.; and M. D. Daggett III, Noranda Exploration, Inc. (Volcanic massive-sulfide map series, edited by R. L. Earhart). 1986. Lat about 31° to about 37°, long about 103° to about 109°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 29 by 46 inches.
- MF-1854. IDAHO. Geologic map of the Stevens Peak and Buckskin Basin areas, Bingham and Bannock counties, Idaho, by K. S. Kellogg, and G. F. Embree. 1986. Lat 43° to about 43°10', long 112°15' to about 112°22'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 28 by 42 inches.
- MF-1855. CALIFORNIA. Map showing areas of visible land disturbances caused by two military training operations in the Mojave Desert, California, by D. V. Prose. 1986. Lat about 32°45' to about 35°30', long 114° to 116°. Scale 1:750,000 (1 inch = about 12 miles). Sheet 30 by 43 inches.
- MF-1856. UTAH. Seismicity map of the State of Utah, by C. W. Stover, B. G. Reagor, and S. T. Algermissen. 1986. Lat about 37° to about 42°, long about 109° to about 114°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 39 by 57 inches.
- MF-1857. IDAHO. Seismicity map of the State of Idaho, by C. W. Stover, B. G. Reagor, and S. T. Algermissen. 1986. Lat about 42° to about 49°, long about 111° to about 117°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 43 by 56 inches.
- MF-1858. ARKANSAS. Log of an exploratory trench in the New Madrid seismic zone near Blytheville, Arkansas, by K. M. Haller, and A. J. Crone. 1986. Sheet 39 by 52 inches.
- MF-1859. MONTANA. Maps showing the coal geology of the Sarpy Creek area, Big Horn and Treasure counties, Montana, by L. N. Robinson, and B. S. Van Gosen. 1986. Lat about 45°47'30" to 46°, long 107° to about 107°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 42 by 58 inches.

- MF-1860-A. ARIZONA. Mineral resource potential map of the Pigeon Canyon, Nevershine Mesa, and Snap Point Wilderness Study Areas, Mohave County, Arizona, by G. H. Billingsley, J. C. Antweiler, L. S. Beard, and Ivo Lucchitta, U.S. Geological Survey, and M. E. Lane, U.S. Bureau of Mines. 1986. Lat 36°07'30" to 36°22'30", long 113°42'30" to 113°57'30". Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 28 by 35 inches. (Accompanied by 10-page text.)
- MF-1860-B. ARIZONA. Geologic map of the Pigeon Canyon, Nevershine Mesa, and Snap Point Wilderness Study Areas, Mohave County, Arizona, by Ivo Lucchitta, L. S. Beard, and H. J. Rieck. 1986. Lat 36°07'30" to 36°22'30", long 113°42'30" to 113°57'30". Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 27 by 40 inches.
- MF-1861. MONTANA. Preliminary geologic map of the Crow Agency area, northwestern Powder River basin, Montana, by S. P. Kanizay. 1986. Lat 45°30' to 46°, long 107° to 107°30'. Scale 1:50,000 (1 inch = about 4,200 feet). Sheet 39 by 55 inches.
- MF-1862. OHIO. Preliminary map showing the thickness of glacial deposits in Ohio, by D. R. Soller. 1986. Lat about 38° to about 42°, long about 81° to about 85°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 38 by 44 inches.
- MF-1863. MISSOURI. Seismic-reflection profiles of the New Madrid seismic zone; data along the Mississippi River near Caruthersville, Missouri, by A. J. Crone, S. T. Harding, D. P. Russ, and K. M. Shedlock. 1986. Four sheets. Sheet 1, 39 by 56 inches; sheet 2, 38 by 40 inches; sheet 3, 38 by 39 inches; sheet 4, 39 by 40 inches.
- MF-1864. NEW MEXICO. Preliminary geologic map of the Tanner Lake Quadrangle, San Juan County, New Mexico, by R. B. O'Sullivan, J. W. Mytton, J. D. Strobell, Jr., G. R. Scott, and M. F. Erpenbeck. 1986. Two sheets. Lat 36°07'30" to 36°15', long 108°07'30" to 108°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 1, 26 by 45 inches; sheet 2, 29 by 36 inches.
- MF-1865. UTAH. Geologic map of the Bonanza Quadrangle, Uintah County, Utah, by W. B. Cashion. 1986. Lat 40° to 40°07'30", long 109°07'30" to 109°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 26 by 30 inches.
- MF-1866. UTAH. Preliminary geologic map of the Flat Rock Mesa Quadrangle, Uinta County, Utah, by M. P. Pantea, and R. W. Scott, Jr. 1986. Lat 39°30" to 39°37'30", long 109°37'30" to 109°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 27 by 30 inches.
- MF-1867. CALIFORNIA. Map showing landslides in California that have caused fatalities or at least \$1,000,000 in damages from 1906 to 1984, by Fred Taylor, and E. E. Brabb. 1986. Lat about 33° to 42°, long about 115° to about 124°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 41 by 51 inches.
- MF-1868. COLORADO. Map showing areas of limonitic hydrothermal alteration in the Lake City Caldera area, western San Juan Mountains, Colorado, by Keenan Lee. 1986. Lat 37°52'30" to 38°05', long 107°15' to 107°37'30". Scale 1:48,000 (1 inch = 4,000 feet). Sheet 30 by 40 inches.
- MF-1869. Station maps of the world ocean-ferromanganese-crust data base, by C. M. Lane, F. T. Manheim, J. C. Hathaway, and T. H. Ling. 1986. Two sheets. Sheet 1, lat about 70°S to about 70°N, long about 20°E to about 40°E; sheet 2, lat about 18°S to about 30°N, long 150°W to 170°E. Scale 1:30,000,000 (1 inch = approximately 411 nautical miles). Sheet 1, 35 by 55 inches; sheet 2, 38 by 52 inches. (Accompanied by 4-page text.)
- MF-1870. MONTANA. Photogeologic and reconnaissance geologic map of the First Creek Quadrangle, Custer County, Montana, by S. J. Luft, and E. L. Heffern. 1986. Lat 46°07'30" to 46°15', long 105°30' to 105°37'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 23 by 34 inches.
- MF-1871. MONTANA. Photogeologic and reconnaissance geologic map of the Horse Creek Quadrangle, Custer County, Montana, by S. J. Luft. 1986. Lat 46°07'30" to 46°15', long 105°37'30" to 105°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 22 by 34 inches.
- MF-1872. UTAH, NEVADA. Geologic map of the Mormon Gap and Tweedy Wash quadrangles, Millard County, Utah, and Lincoln and White Pine counties, Nevada, by L. F. Hintze. 1986. Lat 38°37'30" to 38°45', long 113°52'30" to 114°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 37 by 51 inches.
- MF-1873-A. ARIZONA. Geophysical maps of the Dos Cabezas Mountains Wilderness Study Area, Cochise County, Arizona, by G. A. Abrams. 1986. Lat about 32°15', long about 109°30' to about 109°35'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 54 inches.
- MF-1878. COLORADO. Geologic map of the Beck Mountain, Crestone Peak, and Crestone quadrangles, Custer, Huerfano, and Saguache counties, Colorado, by D. A. Lindsey, B. R. Johnson, S. J. Soulliere, R. M. Bruce, and Katrin Hafner. 1986. Lat 37°52' to 38°, long 105°22'30" to 105°45'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 40 by 55 inches.
- MF-1880. IDAHO. Geologic map of the Leesburg Quadrangle, Lemhi County, Idaho, by J. J. Connor, and K. V. Evans. 1986. Lat 45° to 45°15', long 114° to 114°15'. Scale 1:62,500 (1 inch = about 1 mile). Sheet 25 by 31 inches.
- MF-1881. MONTANA. Geologic map of the Yaak River area, Lincoln County, Northwest Montana, by E. R. Cressman, and J. E. Harrison. 1986. Lat 48°30' to 49°, long 115°45' to 116°. Scale 1:48,000 (1 inch = 4,000 feet). Sheet 34 by 47 inches.
- MF-1882. COLORADO. Preliminary geologic map of the Anvil Points Quadrangle, Garfield County, Colorado, by R. B. O'Sullivan. 1986. Lat 39°30' to 39°37'30", long 107°52'30" to 108°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 26 by 29 inches.
- MF-1883. COLORADO. Preliminary geologic map of the Grand Valley Quadrangle, Garfield County, Colorado, by J. R. Donnell, W. E. Yeend, and M. C. Smith. 1986. Lat 39°22'30" to 39°30', long 108° to 108°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 32 by 34 inches.
- MF-1884. MONTANA. Preliminary geologic map of the Peyote Point Quadrangle, Big Horn County, Montana, by S. S. Agard. 1986. Lat 45°07'30" to 45°15', long 107°52'30" to 108°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 26 by 26 inches.

MF-1885. MONTANA, WYOMING. Preliminary geologic map of the Bear Hole Quadrangle, Big Horn County, Montana, and Big Horn and Sheridan counties, Wyoming, by S. S. Agard. 1986. Lat 45° to 45°07'30", long 107°52'30" to 108°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 27 by 27 inches.

MF-1886. MONTANA, WYOMING. Preliminary geologic map of the Red Springs Quadrangle, Big Horn County, Montana, and Sheridan County, Wyoming, by S. S. Agard. 1986. Lat 45° to 45°07'30", long 107°45' to 107°52'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 27 by 27 inches.

MF-1889. IDAHO. Geologic map of the Spring Creek Basin Quadrangle, Owyhee County, Idaho, by J. A. Ach. 1986. Lat 42°07'30" to 42°15', long 116°52'30" to 117°. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 31 by 40 inches.

MF-1890. WYOMING, COLORADO, UTAH. Thermal maturity map showing subsurface elevation of 0.8 percent vitrinite reflectance in the greater Green River basin of Wyoming, Colorado, and Utah, by M. J. Pawlewicz, M. R. Lickus, B. E. Law, W. W. Dickinson, and C. S. Barclay. 1986. Lat about 40° to about 44°, long 107° to 111°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 31 by 40 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.)

MF-1893. MONTANA. Photogeologic and reconnaissance geologic map of the Pennock Creek Quadrangle, Custer County, Montana, by S. J. Luft. 1986. Lat 46°07'30" to 46°15', long 105°07'30" to 105°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 27 by 28 inches.

MF-1894. MONTANA. Photogeologic and reconnaissance geologic map of the Bear Jaw Creek Quadrangle, Custer County, Montana, by S. J. Luft, and D. H. Meier. 1986. Lat 46° to 46°07'30", long 105°07'30" to 105°15'. Scale 1:24,000 (1 inch = 2,000 feet). Sheet 27 by 28 inches.

MF-1895. MONTANA. Photogeologic and reconnaissance geologic map of the Tepee Butte Quadrangle, Custer County, Montana, by S. J. Luft. 1986. Lat 46° to 46°07'30", long 105° to 105°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 27 by 28 inches.

MF-1897. NEVADA. Logs of trenches across the Beatty Scarp, Nye County, Nevada, by W. C. Swadley, U.S. Geological Survey; H. E. Huckins, Fenix and Scisson; and E. M. Taylor, U.S. Geological Survey. 1986. Sheet 38 by 39 inches.

MF-1909. NEW MEXICO. Geologic map of the Wall Lake Quadrangle, Catron County, New Mexico, by D. H. Richter, T. L. Eggleston, and W. A. Duffield. 1986. Lat 33°15' to 33°22'30", long 108° to 108°07'30". Scale 1:24,000 (1 inch = 2,000 feet). Sheet 30 by 41 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-0093. ALASKA. Map showing occurrences of antimony minerals in Alaska, compiled by E. L. Cruz, and E. H. Cobb. 1986. Lat about 54° to about 68°, long about 114°W to about 174°E. Scale 1:2,500,000 (1 inch = about 40 miles). Sheet 37 by 48 inches. (Accompanied by 5-page text.) (Supersedes MR-52.)

SPECIAL GEOLOGIC MAPS

Tectonic map of North America, compiled by P. B. King. 1969. Two sheets. Scale 1:5,000,000 (1 inch = about 80 miles). Sheet 1, 39 by 63 inches; sheet 2, 39 by 63 inches. (Available unfolded only.) (Reprint.)

GEOLOGIC MAP INDEXES

NEBRASKA. Geologic map index of Nebraska, revised and updated by H. K. Fuller, 1986, from original compilation by W. L. McIntosh and M. F. Eister. 1977.

NORTH DAKOTA. Geologic map index of North Dakota, revised and updated by H. K. Fuller, 1986, from original compilation by W. L. McIntosh and M. F. Eister. 1977.

SOUTH CAROLINA. Geologic map index of South Carolina, revised and updated by H. K. Fuller, 1986, from original compilation by W. L. McIntosh and M. F. Eister. 1977.

WEST VIRGINIA. Geologic map index of West Virginia, revised and updated by H. K. Fuller, 1986, from original compilation by W. L. McIntosh and M. F. Eister. 1977.

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, regional studies at 1:250,000 scale or smaller.

HA-0663. ARIZONA, CALIFORNIA, NEW MEXICO. Description and generalized distribution of aquifer materials in the alluvial basins of Arizona and adjacent parts of California and New Mexico, by G. W. Freethy, D. R. Pool, T. W. Anderson, and Patrick Tucci. 1986. Four sheets. Sheets 1-3, lat 31°31' to 36°, long 108° to 115°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 1, 34 by 43 inches; sheet 2, 34 by 42 inches; sheet 3, 35 by 43 inches; sheet 4, 34 by 44 inches.

HA-0664. ARIZONA, CALIFORNIA, NEW MEXICO. Predevelopment hydrologic conditions in the alluvial basins of Arizona and adjacent parts of California and New Mexico, by G. W. Freethy, and T. W. Anderson. 1986. Three sheets. Lat 31°31' to 36°, long 108° to 115°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 1, 34 by 44 inches; sheet 2, 34 by 44 inches; sheet 3, 34 by 44 inches.

HA-0677. MINNESOTA. Hydrogeologic framework and properties of regional aquifers in the Hollandale Embayment, southeastern Minnesota, by D. G. Woodward. 1986. Two sheets. Lat 43°30'10" to 46°45'57", long 91° to 95°37'53". Scales 1:1,000,000 (1 inch = about 16 miles) and 1:2,000,000 (1 inch = about 32 miles). Sheet 1, 42 by 55 inches; sheet 2, 42 by 55 inches.

HA-0678. Hydrologic characteristics of soils in parts of Arkansas, Colorado, Kansas, Missouri, Nebraska, New Mexico, Oklahoma, South Dakota, and Texas, by J. T. Dugan. 1986. Lat about 34° to about 43°, long about 90° to 105°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 41 by 44 inches.

HA-0680. IDAHO, OREGON. Flow characteristics of the Snake River and water budget for the Snake River plain, Idaho and eastern Oregon, by L. C. Kjelstrom. 1986. Two sheets. Lat about 42° to about 45°, long about 110° to about 118°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 1, 39 by 49 inches; sheet 2, 39 by 49 inches.

HA-0681. IDAHO, OREGON. Geohydrologic framework of the Snake River plain, Idaho and eastern Oregon, by R. L. Whitehead. 1986. Three sheets. Sheet 1, Lat about 42° to about 45°, long about 110° to about 118°. Scale 1:1,000,000 (1 inch = about 16 miles). Sheet 1, 31 by 37 inches; sheet 2, 31 by 42 inches; sheet 3, 31 by 40 inches. (Supersedes Open-file report 84-51.)

HA-0687. Hydrogeologic framework of the upper Colorado River basin—excluding the San Juan Basin—Colorado, Utah, Wyoming, and Arizona, by O. J. Taylor, J. W. Hood, and E. A. Zimmerman. 1986. Two sheets. Sheet 1, lat 35°48' to 43°27', long 105°36' to 112°18'. Scale 1:3,000,000 (1 inch = about 48 miles). Sheet 1, 41 by 44 inches; sheet 2, 31 by 34 inches.

HA-0697. PENNSYLVANIA, DELAWARE. Distribution of bottom sediments and effect of proposed dredging in the ship channel of the Delaware River between Northeast Philadelphia, Pennsylvania and Wilmington, Delaware, 1984, by P. B. Duran. 1986. Lat 39°41'30" to 40°02'30", long 74°57'30" to 75°31'13". Scale 1:48,000 (1 inch = 4,000 feet). Sheet 28 by 29 inches.

HA-0699. WYOMING. Flood of August 1, 1985, in Cheyenne, Wyoming, by S. A. Druse, M. E. Cooley, S. L. Green, and H. W. Lowham. 1986. Two sheets. Sheet 1, lat about 41°07'30" to about 41°10', long about 104°42'30" to 104°51'30". Scale 1:48,000 (1 inch = 4,000 feet). Sheet 1, 37 by 51 inches; sheet 2, 37 by 51 inches.

HYDROLOGIC UNIT MAPS

NEW MEXICO. Hydrologic unit map. 1974. State of New Mexico. Lat 31° to 37°, long 103° to 109°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 49 by 57 inches. (Reprint.)

NORTH CAROLINA. Hydrologic unit map. 1974. State of North Carolina. Lat about 34° to about 37°, long about 76° to about 84°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 28 by 66 inches. (Reprint.)

MARYLAND, DELAWARE. Hydrologic unit map. 1974. States of Maryland and Delaware. Lat about 38° to about 40°, long about 75° to about 79°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 22 by 35 inches. (Reprint.)

OUTSIDE PUBLICATIONS

ARTICLES AND REPORTS

Articles by Geological Survey personnel in non-Geological Survey publications that came to our attention in 1986. 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. D. H. Abbott*, J. L. Morton and M. L. Holmes. Heat flow measurements on a hydrothermally-active, slow-spreading ridge; the Escanaba Trough. *Geophysical Research Letters*, v. 13, no. 7, July 1986. p. 678-680.

OP-2. D. P. Adam. CALIFORNIA. Quaternary pollen records from California, in *Pollen records of late-Quaternary North American sediments* (V. M. Bryant, editor and others). Amer. Assoc. Stratigr. Palynologists Found., 1985. p. 125-140.

OP-3. T. A. Ager and L. B. Brubaker*. ALASKA. Quaternary palynology and vegetational history of Alaska, in *Pollen records of late-Quaternary North American sediments* (V. M. Bryant, editor and others). Amer. Assoc. Stratigr. Palynologists Found., 1985. p. 353-384.

OP-4. G. R. Aiken. Isolation and concentration techniques for aquatic humic substances, in *Humic substances in soil, sediment, and water; geochemistry, isolation, and characterization* (G. R. Aiken, editor and others). New York, NY: John Wiley & Sons, 1985. p. 363-385.

OP-5. G. R. Aiken, editor, D. M. McKnight, editor, R. L. Wershaw, editor and Patrick MacCarthy, editor*. *Humic substances in soil, sediment, and water; geochemistry, isolation, and characterization*. New York, NY: John Wiley & Sons, 1985. 692 p.

OP-6. G. R. Aiken, D. M. McKnight, R. L. Wershaw and Patrick MacCarthy*. An introduction to humic substances in soil, sediment, and water, in *Humic substances in soil, sediment, and water; geochemistry, isolation, and characterization* (G. R. Aiken, editor and others). New York, NY: John Wiley & Sons, 1985. p. 1-9.

OP-7. J. N. Aleinikoff, Cynthia Dusel-Bacon and H. L. Foster. ALASKA. Geochronology of augen gneiss and related rocks, Yukon-Tanana Terrane, east-central Alaska. *Geological Society of America Bulletin*, v. 97, no. 5, May 1986. p. 626-637.

OP-8. Claudia Alexander. 2-D gravity and magnetic modeling of subsurface domical structure 11/14, in *Geology and offshore resources of Pacific island arcs; Tonga region* (D. W. Scholl, editor and others). Houston, TX: Circum-Pac. Council. Energy and Miner. Resour., v. 2, 1985. p. 197-202.

OP-9. G. H. Allcott and C. G. Cunningham. At the U.S. Geological Survey; Finding ore with map, lab, computer. *Geotimes*, v. 31, no. 8, August 1986. p. 8-11.

OP-10. L. R. Alldredge. Reflections on geomagnetic reversals. *Journal of Geomagnetism and Geoelectricity*, v. 37, no. 11, 1985. p. 1017-1033.

OP-11. L. R. Alldredge. Long wavelength components in high degree spherical harmonics. *Journal of Geomagnetism and Geoelectricity*, v. 34, no. 9, 1982. p. 547-550.

OP-12. L. R. Alldredge and E. R. Benton. Alternate forms of the associated Legendre functions for use in geomagnetic modeling. *Journal of Geomagnetism and Geoelectricity*, v. 38, no. 6, 1986. p. 599-609.

OP-13. W. M. Alley. Regression approximations for transport model constraint sets in combined aquifer simulation-optimization studies. *Water Resources Research*, v. 22, no. 4, April 1986. p. 581-586.

- OP-14. W. M. Alley and P. A. Emery. NEBRASKA. Ground-water model of the Blue River basin, Nebraska; twenty years later. *Journal of Hydrology*, v. 85, no. 3-4, July 30, 1986. p. 225-249.
- OP-15. Belén Alonso*, K. A. Kastens*, Andrés Maldonado*, Alberto Malinverno*, C. H. Nelson, Suzanne O'Connell*, Alberto Palanques* and W. B. Ryan*. Morphology of the Ebro Fan valleys from SeaMARC and sea beam profiles. *Geo-Marine Letters*, v. 5, no. 3, 1985. p. 141-148.
- OP-16. T. R. Alpha. Perspective physiographic diagram of Tonga Ridge, in *Geology and offshore resources of Pacific island arcs; Tonga region* (D. W. Scholl, editor and others). Houston, TX: Circum-Pac. Council. Energy and Mineral Resources, v. 2, 1985. p. 17-20.
- OP-17. D. E. Anders, J. D. King and C. Lubeck. ALASKA. Correlation of oils and source rocks from the Alaskan North Slope. *AAPG Studies in Geology*, v. 20, 1985. p. 281-303.
- OP-18. J. J. Anderson. UTAH. Geologic map of the Fremont Pass Quadrangle, Iron and Garfield counties, Utah. Map - Utah Geological and Mineral Survey, v. 81, 1986. 6 p., 1 sheet.
- OP-19. J. J. Anderson. UTAH. Geologic map of the Circleville Mountain Quadrangle, Beaver, Piute, Iron, and Garfield counties, Utah. Map - Utah Geological and Mineral Survey, v. 80, 1986. 6 p., 1 sheet.
- OP-20. J. J. Anderson and P. D. Rowley. UTAH. Geologic map of the Circleville Quadrangle, Beaver, Piute, Iron, and Garfield counties, Utah. Map - Utah Geological and Mineral Survey, v. 82, 1986. 5 p., 1 sheet.
- OP-21. K. E. Anderson, R. W. Marx* and Gerard Keffer*. A prospective case for a national land data system; ten years later, in *Seventh international symposium on computer assisted cartography; Digital representations of spatial knowledge*. Falls Church, VA: Am. Soc. Photogrammetry, Falls Church, VA: Am. Cong. Survey and Mapping, 1985. p. 1-10.
- OP-22. R. E. Anderson and T. P. Barnhard. UTAH. Genetic relationship between faults and folds and determination of Laramide and neotectonic paleostress, western Colorado Plateau-transition zone, central Utah. *Tectonics*, v. 5, no. 2, April 1986. p. 335-357.
- OP-23. T. W. Anderson. ARIZONA. Hydrologic setting, objectives, and approach of the Southwest Alluvial Basins, RASA study. *AWRA Monograph Series*, v. 7, 1986. p. 5-16.
- OP-24. T. W. Anderson. ARIZONA. Geohydrology of the Southwest Alluvial Basins, Arizona. *AWRA Monograph Series*, v. 7, 1986. p. 99-111.
- OP-25. T. W. Anderson, editor and A. I. Johnson, editor*. ARIZONA. Regional aquifer systems of the United States; Southwest Alluvial Basins of Arizona. *AWRA Monograph Series*, v. 7, 1986. 116 p.
- OP-26. D. J. Andrews. Dynamic plane-strain shear rupture with a slip-weakening friction law calculated by a boundary integral method. *Bulletin of the Seismological Society of America*, v. 75, no. 1, February 1985. p. 1-21.
- OP-27. E. D. Andrews. COLORADO, UTAH. Downstream effects of Flaming Gorge Reservoir on the Green River, Colorado and Utah. *Geological Society of America Bulletin*, v. 97, no. 8, August 1986. p. 1012-1023.
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ABSTRACTS

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INDEX

This is an index of Geological Survey publications issued in 1986 and articles by Geological Survey personnel in non-Geological Survey publications that came to our attention in 1986 divided into a general index, including subjects and areas, and an author index.

ABBREVIATIONS USED

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

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

GENERAL

A

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absolute age—dates

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Terman, M. J.	OP-2627	Todd, V. R.	OP-1225	Tucker, R. E.	OF 86-0086, 86-0113, 86-0297	U. S. Geological Survey	B 1524, 1545, 1605-A; C 0970, 1010; CAT; EIB; HUM; I-1535, 1565, 1618, 1659, 1664, 1665, 1666, 1684, 1689, 1703, 1704, 1708, 1709, 1710, 1711, 1712, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753, 1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1770, 1771, 1772; OF 79-0350, 79-0910, 79-1153, 79-1154, 79-1155, 79-1175, 79-1548, 79-1549, 80-0151, 80-0263, 80-0270, 80-0272, 80-0627,
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Thatcher, Wayne	OF 86-0092, 86-0365; OP-1056, 1166, 1213, 1214, 2471, 2583, 2628, 2629	Tolman, A. L.	OP-1211, 1227	Turk, J. T.	WRI 85-4244	U. S. Geological Survey	B 1524, 1545, 1605-A; C 0970, 1010; CAT; EIB; HUM; I-1535, 1565, 1618, 1659, 1664, 1665, 1666, 1684, 1689, 1703, 1704, 1708, 1709, 1710, 1711, 1712, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753, 1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1770, 1771, 1772; OF 79-0350, 79-0910, 79-1153, 79-1154, 79-1155, 79-1175, 79-1548, 79-1549, 80-0151, 80-0263, 80-0270, 80-0272, 80-0627,
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