

GEOLOGIC AND WATER-SUPPLY REPORTS AND MAPS

IDAHO
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This list contains reports and maps published by the Geological Survey relating to the geology and mineral and water resources of Idaho. A separate list of bibliographies and publications of general interest is available on request, as are a general catalog of Geological Survey publications (not including topographic maps) and State indexes to topographic mapping.

Bulletins, professional papers, water-supply papers, and other book reports for which a price is stated, including some that have gone out of print at the Government Printing Office, as indicated by an asterisk (*), are for sale by the BRANCH OF DISTRIBUTION, U.S. GEOLOGICAL SURVEY, 1200 SOUTH EADS STREET, ARLINGTON, VA 22202, and from the U.S. Geological Survey, Public Inquiries Offices: Room 504, Customhouse, 555 Battery Street, San Francisco, CA 94111; Room 8102, Federal Building, 125 South State Street, Salt Lake City, UT 84138; and, Room 678, U.S. Courthouse, West 920 Riverside Avenue, Spokane, WA 99201 (authorized agents of Superintendent of Documents). Prepayment is required and should be made by check or money order payable to the U.S. Geological Survey. Numerous libraries and educational institutions throughout the country are depositories for this material, and a list of Idaho depositories is included.

Maps, folios, hydrologic atlases, and charts are sold by the Geological Survey. They may be purchased over the counter or ordered from the BRANCH OF DISTRIBUTION, U.S. GEOLOGICAL SURVEY, BLDG. 41, FEDERAL CENTER, DENVER, CO 80225. Remittances should be made by check or money order payable to U.S. Geological Survey. A discount of 30 percent is allowed on an order of \$300 or more, based on the retail price. No other discount is applicable. Maps may also be purchased *over the counter* at the U.S. Geological Survey offices where books are sold, and at the Survey's Public Inquiries Offices: Geological Survey, Room 1C402, National Center, 12201 Sunrise Valley Drive, Reston, VA; and Room 1028, General Services Building, 19th and F Streets NW., Washington, D.C.

References to geologic information on Idaho may be obtained from the following Geological Survey publications: Geologic Map Index of Idaho, described herein, and from Bibliographies of North American Geology - Bulletins *746 (1785-1918), *747 (1785-1918), *823 (1919-28), *937 (1929-39), *985 (1950), *1025 (1951), *1035 (1952-53), *1049 (1940-49), *1054 (1954), *1065 (1955), *1075 (1956), *1095 (1957), *1115 (1958), *1145 (1959), *1195 (1950-59) set of 4 volumes, *1196 (1960), *1197 (1961), *1232 (1962), *1233 (1963), *1234 (1964), *1235 (1965), 1266 (1966) \$8.25, *1267 (1967), *1268 (1968), 1269 (1969) \$11.35, and 1370 (1970) \$8.70. Bibliographies and indexes of publications relating to ground water are Water-Supply Papers *992 (1879-1945), *1492 (1946-55), *1863 (1963), and *1864 (1964). A water resources investigations folder, available free upon request to the Geological Survey, 420 National Center, 12201 Sunrise Valley Drive, Reston, VA 22092, shows the location of stream-gaging stations, observation wells, quality-of-water sample collection sites, areal hydrologic studies, average annual runoff, average discharge of principal streams, and availability of ground water. A brief text lists the hydrologic network, the areal and Statewide projects, and selected references. Additional information is obtainable from the U.S. Geological Survey, Box 036, Federal Bldg., Rm. 365, 550 West Fort St., Boise, ID 83724, and the Director, Idaho Bureau of Mines and Geology, Moscow, ID 83843.

Information on altitudes in the United States is contained in Bulletins *5, *76, *160, *274, *689, *817, and *1212; information on boundaries and areas of the United States, with historical outlines of boundary changes, is contained in Bulletins *13, *171, *226, *302, *689, *817, *1212, and Professional Paper 909; information on results of primary triangulation and primary traverse from 1894 to 1918 is contained in Bulletins *122, *181, *201, *216, *245, *276, *310, *440, *496, *551,

*644, *709, and Parts 1 of the *18th, *19th, *20th, and *21st Annual Reports. Further information on more recent triangulation, transit traverse, and spirit leveling in Idaho is obtainable upon specific request.

Current publications are announced by means of monthly notices, "New Publications of the Geological Survey." Free on application to the Geological Survey, 329 National Center, 12201 Sunrise Valley Drive, Reston, VA 22092.

ANNUAL REPORTS

- *Twelfth, 1890-91. 1891. Part 1 contains: The Lafayette Formation, by W. J. McGee. p. 347-521.
- *Sixteenth, 1894-95. 1896. Part 2 (1985) contains: A geological reconnaissance across Idaho, by G. H. Eldridge. p. 211-276.
- *Eighteenth, 1896-97. 1897. Part 3 (1898) contains: The mining districts of the Idaho Basin and the Boise Ridge, Idaho, by Waldemar Lindgren, *with a report on The fossils plants of the Payette Formation*, by F. H. Knowlton. p. 617-744.
- *Nineteenth, 1897-98. 1898. Part 5 (1899) contains: Priest River Forest, by J. B. Leiberg. p. 217-252; Bitterroot Forest Reserve, J. B. Leiberg. p. 253-283; Forest conditions of northern Idaho, by J. B. Leiberg. p. 373-386.
- Twentieth, 1898-99. 1899 Part 3 (1900) contains: The gold and silver veins of Silver City, De Lamar, and other mining districts in Idaho, by Waldemar Lindgren. p. 65-256. Part 5 (1900) contains: The Flathead Forest Reserve, by H. B. Ayres. p. 245-316; Bitterroot Forest Reserve, by J. B. Leiberg. p. 317-410.
- *Twenty-second, 1900-01. 1901. Part 3 (1902) contains: Coal fields of the United States, by C. W. Hayes. p. 7-24; The Rocky Mountain coal fields, by L. S. Storrs. p. 415-471.

(Beginning with the twenty-third (1901-2), the annual reports of the Geological Survey contain no technical papers but were published separately until 1933. Since 1933 a condensed form has been included in the annual report of the Secretary of the Interior. For the fiscal years 1936 to 1963, a limited number of copies of the report as it appeared in the annual report of the Secretary were reprinted separately for official use; copies of these may be had free by persons directly interested, insofar as they are in stock.)

MINERAL RESOURCES OF THE UNITED STATES

The annual volumes of Mineral Resources of the United States contain statistics of production by calendar years and matters relating to technology and resources. Some of the chapters deal with a particular mineral or group of minerals, but much of the information is statistical. These volumes are not listed. The volumes of Mineral Resources were issued by the Geological Survey for the years 1882 to 1923. Reports for 1924 and subsequent years are published by the Bureau of Mines, Washington, DC 20240, as Minerals Yearbooks.

MONOGRAPHS

- *1. Lake Bonneville, by G. K. Gilbert. 1890. 438 p., 1 map.
- *10. Dinocerata, a monograph of an extinct order of gigantic mammals, by O. C. Marsh. 243 p.
- *32. Geology of the Yellowstone National Park—Part 2, by Arnold Hague and others. 1899. 893 p.
*Atlas (27 sheets folio). (Part 1 not published.)
- *51. Cambrian Brachiopoda, by C. D. Walcott. 1912. In two parts. Part 1, 872 p.; part 2, 363 p.
- *54. The Mesozoic and Cenozoic Echinodermata of the United States, by W. B. Clark and M. W. Twitchell. 1915. 341 p.

GEOLOGIC FOLIOS

- *45. Boise, Idaho, by Waldemar Lindgren. 1898. 7 p., 4 maps.
- *103. Nampa, Idaho-Oreg., by Waldemar Lindgren and N. F. Drake. 1904. 5 p., 2 maps.
- *104. Silver City, Idaho, by Waldemar Lindgren and N. F. Drake. 1904. 6 p., 3 maps.

PROFESSIONAL PAPERS

- *27. A geological reconnaissance across the Bitterroot Range and Clearwater Mountains in Montana and Idaho, by Waldemar Lindgren. 1904. 123 p.
- *40. The Triassic cephalopod genera of America, by Alpheus Hyatt and J. P. Smith. 1905. 394 p.

- *62. The geology and ore deposits of the Coeur d'Alene district, Idaho, by F. L. Ransome and F. C. Calkins. 1908. 203 p. (See Professional Papers 445 and 478.)
- *97. Geology and ore deposits of the Mackay region, Idaho, by J. B. Umpleby. 1917. 129 p.
- *98. Shorter contributions to general geology, 1916. 1917. Contains: Revision of the Beckwith and Bear River Formations of southeastern Idaho, by G. R. Mansfield and P. V. Roundy. p. 75-84.
- *120. Shorter contributions to general geology, 1918. 1919. Contains: Relations of late Paleozoic and early Mesozoic formations of southwestern Montana and adjacent parts of Wyoming, by D. D. Condit. p. 111-121.
- *132. Shorter contributions to general geology, 1923-24. 1925. Contains: A new fauna from the Colorado group of southern Montana, by J. B. Reeside, Jr. p. 25-33; Discovery of a Balkan fresh-water fauna in the Idaho formation of Snake River Valley, Idaho, by W. H. Dall. p. 109-115.
- *140. Shorter contributions to general geology, 1925. 1926. Contains: Geology of the Latah Formation in relation to the lavas of the Colubmia Plateau near Spokane, Wash., by J. T. Pardee and Kirk Bryan. p. 1-16; Flora of the Latah Formation of Spokane, Wash., and Coeur d'Alene, Idaho, by F. H. Knowlton. p. 17-81.
- *152. Geography, geology, and mineral resources of part of southeastern Idaho, by G. R. Mansfield, *with descriptions of Carboniferous and Triassic fossils*, by G. H. Girty. 1927. 453 p.
- *154. Shorter contributions to general geology, 1928. 1929. Contains: A revision of the flora of the Latah Formation, by E. W. Berry. p. 225-265.
- *158. Shorter contributions to general geology, 1929. 1930. Contains: Contact metamorphism of the rocks in the Pend Oreille district, northern Idaho, by J. L. Gillson. p. 111-121; Early Pleistocene glaciation in Idaho, by C. P. Ross. p. 123-128.
- *167. Lower Triassic ammonoids of North America, by J. P. Smith. 1932. 199 p.
- *185-E. Miocene plants from Idaho, by E. W. Berry. 1934 (1935). p. 97-125.
- *186-F. American Cretaceous ferns of the genus *Tempskya*, by C. B. Read and R. W. Brown. 1937. p. 105-131.
- *186-J. Additions to some fossil floras of the Western United States, by R. W. Brown. 1937. p. 163-206.
- *202. Geology and ore deposits of the Metaline quadrangle, Washington, by C. F. Park, Jr., and R. S. Cannon, Jr. 1943. 81 p. (See Professional Paper 489.)
- *229. Mica and beryl pegmatites in Idaho and Montana, by W. C. Stoll. 1950 (1951). 64 p.
- *231. Physiography and glacial geology of western Montana and adjacent areas, by W. C. Alden. 1953 (1954). 300 p.
- *238. Geography, geology, and mineral resources of the Ammon and Paradise Valley quadrangles, Idaho, by G. R. Mansfield. 1952 (1953). 92 p.
- *250. American Triassic coiled nautiloids, by Bernhard Kummel. 1953. 104 p.
- *254-H. Triassic stratigraphy of southeastern Idaho and adjacent areas, by Bernhard Kummel. 1954. p. 165-194.
- *272-D. Evaporation from the 17 Western States, by J. S. Meyers, *with a section on Evaporation rates*, by T. J. Nordenson, U.S. Weather Bureau. 1962. p. 71-100.
- *294-A. North American Mesozoic Charophyta, by R. E. Peck. 1957. p. 1-44.
- *294-D. Stromatolites of the Belt Series in Glacier National Park and vicinity, Montana, by Richard Rezak. 1957. p. 127-154.
- *294-L. Brachiopod fauna of Saturday Mountain Formation, southern Lemhi Range, Idaho, by R. J. Ross, Jr. 1959. p. 441-461.
- *313-A. The Phosphoria, Park City, and Shedhorn Formations in the western phosphate field, by V. E. McKelvey and others. 1959. p. 1-47.
- *313-B. Physical stratigraphy and mineral resources of Permian rocks in western Wyoming, by R. P. Sheldon. 1963. p. 49-273.
- *313-C. Stratigraphy and petrology of the Permian rocks of southwestern Montana, by E. R. Cressman and R. W. Swanson. 1964. p. 275-569.
- *313-D. Biostratigraphy of the Phosphoria, Park City, and Shedhorn Formations, by E. L. Yochelson, *with a section on Fish*, by D. H. Van Sickle. 1968. p. 571-660.
- *313-E. Mineral resources in Permian rocks of southwest Montana, by R. W. Swanson. 1970. p. 661-771.

PROFESSIONAL PAPERS-Continued

- 313-F. Geology and phosphate deposits of the Permian rocks in central western Montana, by R. W. Swanson. 1973. p. 779-833. \$3.15. (Includes title page and contents for volume.)
- *318. Occurrence of nonpegmatite beryllium in the United States, by L. A. Warner, W. T. Holser, V. R. Wilmarth, and E. N. Cameron. 1959. 198 p. (See Map MR-35.)
- *344-A. Metasomatic metamorphism in western Clearwater County, Idaho, by Anna Hietanen. 1962. p. A1-A116.
- *344-B. Anorthosite and associated rocks in the Boehls Butte quadrangle and vicinity, Idaho, by Anna Hietanen. 1963. p. B1-B78.
- *344-C. Metamorphism of the Belt series in the Elk River-Clarkia area, Idaho, by Anna Hietanen. 1963 (1964). p. C1-C49.
- *344-D. Idaho batholith near Pierce and Bungalow, Clearwater County, Idaho, by Anna Hietanen. 1963 (1964). p. D1-D42.
- *344-E. Belt series in the region around Snow Peak and Mallard Peak, Idaho, by Anna Hietanen. 1968. p. E1-E34.
- Title page and contents for volume available free on application to the Geological Survey.
- *356-A. Oil yield and uranium content of black shales, by V. E. Swanson. 1970. p. 1-44.
- *356-D. Geology of uranium in coaly carbonaceous rocks, by J. V. Vine. 1962. p. 113-170.
- *366. Ash-flow tuffs: Their origin, geologic relations, and identification, by C. S. Ross and R. L. Smith. 1961. 81 p.
- *374-J. The Bannock thrust zone, southeastern Idaho, by F. C. Armstrong and E. R. Cressman. 1963. p. J1-J22.
- *383-A. Storage of ground water behind subsurface dams in the Columbia River basalt, Washington, Oregon, and Idaho, by R. C. Newcomb. 1961 (1962). p. A1-A15.
- *394. Uppermost Precambrian and lowest Cambrian rocks in southeastern Idaho, by S. S. Oriel and F. C. Armstrong, *with contributions to Early Middle Cambrian faunal zones*, by W. H. Fritz and A. R. Palmer. 1971 (1972). 52 p.
- *400-A. Geological Survey research 1960, Synopsis of geologic results. p. A1-A136.
- *400-B. Short papers in the geological sciences, Articles 1-232. 1960. p. B1-B515. Contains the following articles, which are not available separately.
2. Varieties of supergene zinc deposits on the United States, by A. V. Heyl, Jr., and C. N. Bozian. p. B2.
 13. Tectonic setting of the Coeur d'Alene district, Idaho, by R. E. Wallace, A. B. Griggs, A. B. Campbell, and S. W. Hobbs. p. B25.
 14. Bleaching in the Coeur d'Alene district, Idaho, by P. L. Weis. p. B27.
 15. Origin of the Main period veins, Coeur d'Alene district, Idaho, by V. C. Fryklund, Jr. p. B29.
103. Metamorphism and thrust faulting in the Riggins quadrangle, Idaho, by Warren Hamilton. p. B230.
104. Diverse interfingering Carboniferous strata in the Mackay quadrangle, Idaho, by C. P. Ross. p. B232.
135. Evidence in the Snake River Plain, Idaho, of a catastrophic flood from Pleistocene Lake Bonneville, by H. E. Malde. p. B295.
136. Alkalic lava flow with fluidity of basalt in the Snake River Plain, Idaho, by H. A. Powers. p. B297.
137. A distinctive chemical characteristic of Snake River basalts of Idaho, by H. A. Powers. p. B298.
216. Determination of zinc in basalts and other rocks, by L. F. Rader, W. C. Swadley, H. H. Lipp, and Claude Huffman, Jr. p. B477.
- *417-D. Chemical quality of the surface waters of the Snake River basin, by L. B. Laird. 1964. p. D1-D47.
- *424-A. Geological Survey research 1961, Synopsis of geologic and hydrologic results. 1961. p. A1-A194.
- *424-B. Short papers in the geologic and hydrologic sciences, Articles 1-146. 1961. p. B1-B344. Contains the following articles, which are not available separately.
8. Recent hydrologic trends in the Pacific Northwest, by W. D. Simons. p. B17.
 17. Hydrologic significance of buried valleys in glacial drift, by S. E. Norris and G. W. White. p. B34.

*424-B-Continued

67. Structure of the Clark Fork area, Idaho-Montana, by J. E. Harrison, D. A. Jobin, and Elizabeth King. p. B159.
 68. Pleistocene geology of the central part of the Lemhi Range, Idaho, by E. T. Ruppel and M. H. Hait, Jr. p. B163.
 69. The Michaud delta and Bonneville River near Pocatello, Idaho, by D. E. Trimble and W. J. Carr. p. B164.
 70. Volcanic ash beds as stratigraphic markers in basin deposits near Hagerman and Glens Ferry, Idaho, by H. A. Powers and H. E. Malde. p. B167.
 71. Patterned ground of possible solifluction origin at low altitude in the western Snake River Plain, Idaho, by H. E. Malde. p. B170.
 88. Structural barrier reservoirs of ground water in the Columbia River basalt, by R. C. Newcomb. p. B213.
 99. Corals from Permian rocks of the northern Rocky Mountain region, by Helen Duncan. p. B235.
 100. Occurrences of the Permian gastropod *Omphalotrochus* in Northwestern United States, by E. L. Yochelson. p. B237.
 104. Gravity, volcanism, and crustal deformation in and near Yellowstone National Park, by L. C. Pakiser and H. L. Baldwin, Jr. p. B246.
 105. Gravity, volcanism, and crustal deformation in the Snake River Plain, Idaho, by D. P. Hill, H. L. Baldwin, Jr., and L. C. Pakiser. p. B248.
- *424-C. Short papers in the geologic and hydrologic sciences, Articles 147-292. 1961. p. C1-C398. Contains the following articles, which are not available separately.
195. Proposed classification of ground-water provinces, hydrologic units, and chemical types of ground water in the Upper Colorado River basin, by D. A. Phoenix. p. C125.
 212. A redefinition and restriction of the term Challis Volcanics, by C. P. Ross. p. C177.
 213. Upper Paleozoic rocks in the Deep Creek Mountains, Idaho, by W. J. Carr and D. E. Trimble. p. C181.
 236. Stratigraphic distribution of endothyrid Foraminifera in Carboniferous rocks of the Mackay quadrangle, Idaho, by B. A. L. Skipp. p. C239.
 267. Metal content of some black shales of the Western United States, by D. F. Davidson and H. W. Lakin. p. C329.
- *424-D. Short papers in the geologic and hydrologic sciences, Articles 293-435. 1961. p. D1-D408. Contains the following articles, which are not available separately.
345. Relation between deformation, metamorphism, matasomatism, and intrusion along the northwest border zone of the Idaho batholith, Idaho, by Anna Hietanen. p. D161.
 382. Stratigraphic significance of the Cretaceous fern *Tempskya* in the Western conterminous United States, by C. B. Read and S. R. Ash. p. D250.
 406. Geographic distribution of major constituents in stream waters of the Western conterminous United States, by C. E. Roberson. p. D334.
 420. Hydrology of radioactive-waste disposal at the Idaho Chemical Processing Plant, National Reactor Testing Station, Idaho, by P. H. Jones. p. D374.
- *426. Data on uranium and radium in ground water in the United States, 1954 to 1957, by R. C. Scott and F. B. Barker. 1962. 115 p.
- *436. Metamorphism in the Riggins region, western Idaho, by Warren Hamilton. 1963. 95 p.
- *445. Ore deposits of the Coeur d'Alene district, Shoshone County, Idaho, by V. C. Fryklund, Jr., with a section on The bleached rock in the Coeur d'Alene district, by P. L. Weis. 1964. 103 p. (See Professional Paper 478.)
- *450-A. Geological Survey research 1962, Synopsis of geologic, hydrologic and topographic results. 1962. p. A1-A257.
- *450-B. Short papers in geology, hydrology, and topography, Articles 1-59. 1962. Contains the following articles, which are not available separately.
5. Old metavolcanic rocks of the Big Creek area, central Idaho, by B. F. Leonard. p. B11.

PROFESSIONAL PAPERS—Continued

*450-B—Continued

10. Volcanic rocks of Oligocene age in the southern part of the Madison Range, Montana and Idaho, by Warren Hamilton and E. E. Leopold. p. B26.

*450-C. Short papers in geology and hydrology. Articles 60–119. 1962. p. C1–C146. Contains the following articles, which are not available separately.

83. Staurolite zone near the St. Joe River, Idaho, by Anna Hietanen. p. C69.

85. Metal content of some black shales of the western conterminous United States—Part 2, by D. F. Davidson and H. W. Lakin. p. C74.

106. Hydrology of radioactive-waste disposal in the MTR-ETR area, National Reactor Testing Station, Idaho, by P. H. Jones and Eugene Shuter. p. C113.

*450-D. Short papers in geology, hydrology, and topography, Articles 120–179. 1962. p. D1–D195. Contains the following articles, which are not available separately.

140. Gravity and magnetic anomalies in Gem Valley, Caribou County, Idaho, by D. R. Mabey and F. C. Armstrong. p. D73.

141. Gravity, volcanism, and crustal deformation in the eastern Snake River Plain, Idaho, by T. R. LaFehr and L. C. Pakiser. p. D76.

*450-E. Short papers in geology, hydrology, and topography, Articles 180–239. 1963. p. E1–E189. Contains the following articles, which are not available separately.

204. Syenite complex older than the Idaho batholith, Big Creek quadrangle, central Idaho, by B. F. Leonard. p. E93.

205. Trondhjemite in the Riggins quadrangle, western Idaho, by Warren Hamilton. p. E98.

211. Menan Buttes, cones of glassy basalt tuff in the Snake River Plain, Idaho, by Warren Hamilton and W. B. Myers. p. E114.

*454-E. New data on the isostatic deformation of Lake Bonneville, by M. D. Crittenden, Jr. 1963. p. E1–E31.

*455-A—F. Geology of uranium-bearing veins in the conterminous United States. 1963 (1964). 120 p. Includes the following chapters.

A. Introduction to the geology of uranium-bearing veins in the conterminous United States, *including sections on Geographic distribution and classification of veins*, by G. W. Walker and F. W. Osterwald. p. 1–28.

B. Age of uranium-bearing veins in the conterminous United States, by G. W. Walker. p. 29–35.

C. Host rocks and their alterations as related to uranium-bearing veins in the conterminous United States, by G. W. Walker. p. 73–63.

D. Mineralogy, internal structure and textural characteristics, and paragenesis of uranium-bearing veins in the conterminous United States, by G. W. Walker and J. W. Adams. p. 55–90.

E. Supergene alteration of uranium-bearing veins in the conterminous United States, by G. W. Walker. p. 91–103.

F. Concepts of origin of uranium-bearing veins in the conterminous United States, by G. W. Walker and F. W. Osterwald. p. 105–120.

*455-G. Structural control of uranium-bearing vein deposits and districts in the conterminous United States, by F. W. Osterwald. 1965. p. 121–146. (Includes title page and contents for volume.)

*475-A. Geological Survey research 1963, summary of investigations. 1963. p. A1–A300.

*475-B. Short papers in geology and hydrology, Articles 1–59. 1963. p. B1–B219. Contains the following articles, which are not available separately.

5. Beryllium and fluorine content of some silicic volcanic glasses from Western United States, by W. R. Griffiths and H. A. Powers. p. B18.

6. Some new data on the arsenic content of basalt, by A. J. Bartel, E. J. Fennelly, Claude Huffman, Jr., and L. F. Rader, Jr. p. B20.

23. Age of certain post-Madison rocks in southwestern Montana and western Wyoming, by J. T. Dutro, Jr., and W. J. Sando. p. B93.

32. Paleocology of the Permian Phosphoria Formation and related rocks, by E. L. Yochelson. p. B123.

- *475-C. Short papers in geology and hydrology. Articles 60-121. 1963. Contains the following articles, which are not available separately.
80. Petrology of rhyolite and basalt, northwestern Yellowstone Plateau, by Warren Hamilton. p. C78.
82. Modal composition of the Idaho batholith, by C. P. Ross. p. C86.
- *475-D. Short papers in geology and hydrology. Articles 122-172. 1964. p. D1-D223. Contains the following articles, which are not available separately.
122. Comparison of late Paleozoic depositional history of northern Nevada and central Idaho, by R. J. Roberts and M. R. Thomasson. p. D1.
162. Relation of percent sodium to source and movement of ground water, National Reactor Testing Station, Idaho, by F. H. Olmsted. p. D186.
- *478. Geology of the Coeur d'Alene district, Shoshone County, Idaho, by S. W. Hobbs, A. B. Griggs, R. E. Wallace, and A. B. Campbell. 1965. 139 p.
- *483-D. Upper Jurassic mollusks from eastern Oregon and western Idaho, by R. W. Imlay. 1964. p. D1-D21.
- *489. Geology and ore deposits of the Metaline zinc-lead district, Pend Oreille County, Wash., by McC. G. Dings and D. H. Whitebread. 1965. 109 p.
- *491-A. Introduction, spread, and areal extent of saltcedar (*Tamarix*) in the Western United States, by T. W. Robinson. 1965. p. A1-A12.
- *492. Thermal springs of the United States and other countries of the world—A summary, by G. A. Waring, revised by R. R. Blankenship and Ray Bentall. 1965. 383 p.
- *501-A. Geological Survey research 1964. 1964. p. A1-A367.
- *501-C. Geological Survey research 1964. 1964. p. C1-C197. Contains the following article, which is not available separately.
Strike-slip faulting and broken basin-ranges in east-central Idaho and adjacent Montana, by E. T. Ruppel. p. C14.
- *503-E. Revision of some Paleozoic coral species from the Western United States, by W. J. Sando. 1965. p. E1-E38.
- *504-C. Geology and petrogenesis of the Island Park caldera of rhyolite and basalt, eastern Idaho, by Warren Hamilton. 1965. p. C1-C37.
- *525-A. Geological Survey research 1965. 1965 (1966). p. A1-A376.
- *525-B. Geological Survey research 1965. 1965. p. B1-B195. Contains the following article, which is not available separately.
Mercury-bearing antimony deposit between Big Creek and Yellow Pine, central Idaho, by B. F. Leonard. p. B23.
- *525-C. Geological Survey research 1965. 1965. p. C1-C219. Contains the following articles, which are not available separately.
Stratigraphic data bearing inferred pull-apart origin of Gem Valley, Idaho, by S. S. Oriel, D. R. Mabey, and F. C. Armstrong. p. C1.
Seismic-refraction measurements of crustal structure between American Falls Reservoir, Idaho, and Flaming Gorge Reservoir, Utah, by Ronald Willden. p. C44.
Maximum extent of late Pleistocene Cordilleran glaciation in northeastern Washington and northern Idaho, by P. L. Weis and G. M. Richmond. p. C128.
- *530. The geologic occurrence of monazite, by W. C. Overstreet. 1967. 327 p.
- *538. Geology of epigenetic uranium deposits in sandstone in the United States, by W. I. Finch. 1967. 121 p.
- *540. Twin Creek Limestone (Jurassic) in the western interior of the United States, by R. W. Imlay. 1967. 105 p.
- *544-C. Hydrologic effects of the earthquake of March 27, 1964, outside Alaska, by R. C. Vorhis, E. E. Rexin, and R. W. Coble. 1967. p. C1-C54.
- *550-A. Geological Survey research 1966. 1966 (1967). p. A1-A385.
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Information on the water levels and artesian pressure in observation wells											
1935	*777		1944	*1020		1950	*1169		1956-60	*1760	
1939	*886		1945	*1027		1951	*1195		1961-65	*1845	
1940	*910		1946	*1075		1952	*1225		1966-70	*1980	\$2.35
1941	*940		1947	*1100		1953	*1269				
1942	*948		1948	*1130		1954	*1325				
1943	*990		1949	*1160		1955	*1408				
Information on the quality of the surface water ("a" indicates data on quality of water for irrigation)											
1947	*1102		1954(a)	*1430		1960	*1745		1965(a)	*1967	
1948	*1133		1955	*1403		(a)	*1746		1966	*1995	
1949	*1163		(a)	*1465		1961	*1885			*1996	
1950	*1189		1956	*1453		(a)	*1886	\$1.00	1967	*2015	\$5.65
1951	*1200		(a)			1962	*1945			*2016	3.85
(a)	*1264		1957	*1523		(a)	*1946		1968	2100	3.05
1952	*1253		(a)	*1524		1963	*1951		1969	2148	2.65
(a)	*1362		1958	*1574		(a)	*1952			2150	3.50
1953	*1293		(a)	*1575		1964	*1959		1970	2158	3.40
(a)	*1380		1959	*1645		(a)	*1960			2160	4.70
1954	*1353		(a)	*1699		1965	*1966				
Stream measurements in the years mentioned											
1897	*16		1917	*462		1929	*693		1941	*930	
1898	*28			*463		1930	*705			*932	
1899	*38		1918	*480			*707			*933	
1900	*51			*482			*708		1942	*960	
1902	*85			*483		1931	*720			*962	
1903	*100		1919-20	*510			*722			*963	
1904	*133			*512			*723		1943	*980	
	*135			*513		1932	*735			*982	
1905	*176		1921	*530			*737			*983	
	*178			*532			*738		1944	*1010	
1906	*212			*533		1933	*750			*1012	
	*214		1922	*550			*752			*1013	
1907-8	*250			*552			*753		1945	*1040	
	*252			*553		1934	*765			*1042	
1909	*270		1923	*570			*767			*1043	
	*272			*572			*768		1946	*1060	
1910	*290			*573		1935	*790			*1062	
	*292			*590			*792			*1063	
1911	*310		1923	*592			*793		1947	*1090	
	*312			*593		1936	*810			*1092	
1912	*330		1925	*610			*812			*1093	
	*332			*612			*813		1948	*1120	
1913	*360			*613		1937	*830			*1122	
	*362		1926	*630			*832			*1123	
1914	*390			*632			*833		1949	*1150	
	*392			*633		1938	*860			*1152	
	*393		1927	*650			*862			*1153	
1915	*410			*652			*863		1950	*1180	
	*412			*653		1939	*880			*1182	
	*413		1928	*670			*882			*1183	
1916	*440			*672			*883		1951	*1214	
	*442			*673		1940	*900			*1216	
	*443		1929	*690			*902			*1217	
1917	*460			*692			*903		1952	*1244	

Year	WSP	Price	Year	WSP	Price	Year	WSP	Price	Year	WSP	Price
Stream measurements in the years mentioned—Continued											
1952	*1246		1955	*1394		1957	*1517		1960	*1716	
	*1247			*1396		1958	*1564			*1717	
1953	*1284			*1397			*1566		1961-65	*1927	
	*1286		1956	*1444			*1567			*1933	
	*1287			*1446		1959	*1634			*1934	\$7.25
1954	*1344			*1447			*1363		1966-70	2127	7.35
	*1346		1957	*1514			*1637			2133	5.50
	*1347			*1516		1960	*1714			2134	5.50

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HA-573. Teton Dam flood of June 1976, Lewisville quadrangle, Idaho, by H. A. Ray and B. B. Bigelow. 1976. Lat 43° 37'30" to 43° 45', long 112° to 112° 07'30". Scale 1:24,000. \$1.75.

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HYDROLOGIC INVESTIGATIONS ATLASES-Continued

- HA-575. Teton Dam flood of June 1976, Idaho Falls South quadrangle, Idaho, by H. A. Ray and H. F. Matthai. 1976. Lat 43° 22'30" to 43° 30', long 112° to 112° 07'30". Scale 1:24,000. \$1.75.
- HA-576. Teton Dam flood of June 1976, Woodville quadrangle, Idaho, by H. F. Matthai and H. A. Ray. 1976. Lat 43° 22'30" to 43° 30', long 112° 07'30" to 112° 15'. Scale 1:24,000. \$1.75.
- HA-577. Teton Dam flood of June 1976, Firth quadrangle, Idaho, by L. L. Hubbard and J. H. Bartells. 1976. Lat 43° 15' to 43° 22'30", long 112° 07'30" to 112° 15'. Scale 1:24,000. \$1.75.
- HA-578. Teton Dam flood of June 1976, Rose quadrangle, Idaho, by J. H. Bartells and L. L. Hubbard, 1976. Lat 43° 15' to 43° 22'30", long 112° 15' to 112° 22'30". Scale 1:24,000. \$1.75.
- HA-579. Teton Dam flood of June 1976, Blackfoot quadrangle, Idaho, by J. H. Bartells and L. L. Hubbard. 1976. Lat 43° 07'30" to 43° 15', long 112° 15' to 112° 22'30". Scale 1:24,000. \$1.75.
- HA-580. Teton Dam flood of June 1976, Moreland quadrangle, Idaho, by L. L. Hubbard and J. H. Bartells. 1976. Lat 43° 07'30" to 43° 15', long 112° 22'30" to 112° 30'. Scale 1:24,000. \$1.75.
- HA-581. Teton Dam flood of June 1976, Pingree quadrangle, Idaho, by L. L. Hubbard and J. H. Bartells. 1976. Lat 43° to 43° 07'30", long 112° 30' to 112° 37'30". Scale 1:24,000. \$1.75.

IDAHO STATE HYDROLOGIC UNIT MAP. 1974. An overprint of the 1:500,000-scale State base map. Shows counties, location and names of all cities and towns and most of the smaller settlements, railroads, and township and range lines in black; water features in blue; hydrologic boundaries and codes in red; county codes in green. No contours. 1964 base. \$1.25.

***INTERPRETING GEOLOGIC MAPS FOR ENGINEERING PURPOSES.** 1953 (1954). Six maps of the Hollidaysburg, Pa., quadrangle. Scale 1:62,500.

MISCELLANEOUS FIELD STUDIES MAPS

- MF-41. Preliminary geologic map of the Paris-Bloomington vanadium area, Bear Lake County, Idaho, by V. E. McKelvey and J. D. Strobell, Jr. 1955. Scales 1:12,000 and 1:4,800. 4 sheets. \$3 per set.
- *MF-118. Preliminary geologic map of the Snowdrift Mountain quadrangle, Caribou County, Idaho, by E. R. Cressman. 1957. Lat 42° 30' to 42° 37'30", long 111° 07'30" to 111° 15'. Scale 1:24,000. (See Bulletin 1153.)
- *MF-120. Uranium deposits and principal ore-bearing formations of the central Cordilleran foreland region, by T. L. Fennell and I. S. Parrish. 1958. 2 sheets; sheet 1 (map), scale 1:750,000. Sheet 2 (table and text).
- MF-262. Preliminary geologic map of the Garns Mountain SE quadrangle, Bonneville and Teton Counties, Idaho, by M. H. Staatz and H. F. Albee. 1963. Lat 43° 30' to 43° 37'30", long 111° 15' to 111° 22'30". Scale 1:24,000. 75c.
- MF-274. Preliminary geologic map of the Garns Mountain NE quadrangle, Teton County, Idaho, by H. F. Albee. 1964. Lat 43° 37'30" to 43° 45', long 111° 15' to 111° 22'30". Scale 1:24,000 75c.
- MF-277. Geology of the Conant Valley quadrangle, Bonneville County, Idaho, by D. A. Jobin and M. L. Schroeder. 1964. Lat 43° 22'30" to 43° 30', long 111° 22'30" to 111° 30'. Scale 1:24,000. \$1.50. (Reprinted 1975.)
- MF-284. Geologic map of the Thompson Peak quadrangle, Bonneville County, Idaho, by D. A. Jobin and P. E. Soister. 1964. Lat 43° 22'30" to 43° 30', long 111° 07'30" to 111° 15'. Scale 1:24,000. 75c.
- MF-287. Geology of the Irwin quadrangle, Bonneville County, Idaho, by D. A. Jobin and M. L. Schroeder. 1964. Lat 43° 22'30" to 43° 30', long 111° 15' to 111° 22'30". Scale 1:24,000 \$1.25.
- MF-299. Preliminary geologic map of the SW¼ of the Bancroft quadrangle, Bannock and Caribou Counties, Idaho, by S. S. Oriol. 1965. Lat 42° 30' to 42° 37'30", long 111° 52'30" to 112°. Scale 1:24,000. \$1.25.
- MF-300. Geologic map of the Driggs quadrangle, Bonneville and Teton Counties, Idaho, and Teton County, Wyo., by E. H. Pampeyan, M. L. Schroeder, E. M. Schell, and E. R. Cressman. 1967. Lat 43° 30' to 43° 45', long 111° to 111° 15'. Scale 1:31,680. \$1.50.
- MF-546. Preliminary geologic map and section of the Hawley Mountain quadrangle, Custer, Butte, and Lemhi Counties, Idaho, by W. J. Mapel and K. L. Shrophshire. 1973 (1974). Lat 44° to 44° 15', long 113° 15' to 113° 30'. Scale 1:62,500. 75c.

- MF-627. Bouguer gravity map of part of the northern Lake Bonneville basin, Utah and Idaho, by D. L. Peterson. 1974. Lat 41° to 42° 30', long 111° 45' to 113° 15'. Scale 1:250,000. 75c.
- MF-745. Reconnaissance geologic map of the Weiser geothermal area, Washington County, Idaho, by D. H. McIntyre. 1976. Lat 44° 15' to 44° 25', long 116° 40' to 117° 15'. Scale 1:62,500. 75c.
- MF-786. Preliminary overview map of volcanic hazards in the 48 conterminous United States, by D. R. Mullineaux. 1976. Lat about 25° to about 50°, long about 65° to about 125°. Scale 1:7,500,000. 75c.

MINERAL INVESTIGATIONS RESOURCE MAPS

The following maps cover the resources indicated for the United States exclusive of Alaska and Hawaii. All are printed at a scale of 1:3,168,000 and are sold at \$1.25 each, unless otherwise indicated.

- MR-1. Geologic environment map of alumina resources of the Columbia Basin, by I. G. Sohn. 1952. Scale 1:1,500,000. \$1.50.
- MR-2. The uranium deposits, compiled by R. W. Schnabel. 1955. Scale 1:5,000,000. \$1.75.
- MR-3. Potash occurrences, by M. F. Byrd. 1955. Scale 1:5,000,000.
- MR-13. Copper, by A. R. Kinkle, Jr., and N. P. Peterson. 1962.
- MR-14. Borates, by W. C. Smith. 1962.
- MR-15. Lead, by E. T. McKnight, W. L. Newman, and A. V. Heyl, Jr. 1962.
- MR-16. Vanadium, by R. P. Fischer. 1962.
- MR-17. Asbestos, by A. H. Chidester and A. F. Shride. 1962.
- MR-18. Pyrophyllite and kyanite and related minerals, by G. H. Espenshade. 1962.
- MR-19. Zinc, by E. T. McKnight, W. L. Newman, and A. V. Heyl, Jr. 1962.
- MR-20. Antimony, by D. E. White. 1962.
- MR-21. Epigenetic uranium deposits, by A. P. Butler, Jr., W. I. Finch, and W. S. Twenhofel. 1962.
- MR-22. Bismuth, by J. R. Cooper. 1962.
- MR-23. Manganese, by M. D. Crittenden and Louis Pavlides. 1962.
- *MR-24. Gold, by A. H. Koschmann and M. H. Bergendahl. 1962.
- MR-25. Tungsten, by D. M. Lemmon and O. L. Tweto. 1962.
- MR-26. Chromite, by T. P. Thayer and M. H. Miller. 1962.
- MR-27. Magnesite and brucite, by Benjamin Gildersleeve. 1962.
- MR-28. Thorium and rare earths, by J. C. Olson and J. W. Adams. 1962.
- MR-29. Titanium, by C. L. Rogers and M. C. Jaster. 1962.
- MR-30. Mercury, by E. H. Bailey. 1962.
- MR-31. Talc and soapstone, by A. H. Chidester and H. W. Worthington. 1962.
- MR-33. Gypsum and anhydrite, by C. F. Withington. 1962.
- *MR-34. Silver, by E. T. McKnight, W. L. Newman, Harry Klemic, and A. V. Heyl, Jr. 1962.
- MR-35. Beryllium, by W. R. Griffiths, D. M. Larrabee, and J. J. Norton. 1962.
- MR-36. Niobium and tantalum, by R. L. Parker. 1963.
- MR-37. High-alumina kaolinic clay, by Helen Mark. 1963.
- MR-43. Barite, by D. A. Brobst. 1965.
- MR-44. Tin, by P. L. Killeen and W. L. Newman. 1965.
- MR-51. Iron, by M. S. Carr, P. W. Guild, and W. B. Wright. 1967. Accompanied by 20-page text.
- MR-55. Molybdenum, by R. U. King. 1970. Accompanied by 20-page text.
- MR-60. Flouirite in the United States, exclusive of Hawaii, compiled by R. G. Worl, R. E. Van Alstine, and A. V. Heyl. 1974.

MINERAL INVESTIGATIONS (STRATEGIC) MAPS

- *3-198. Map of Permian phosphate deposits of Montana, Wyoming, Idaho, and Utah, by P. S. Clabaugh. 1946. Scale 1:1,000,000.
- *3-212. Iron-ore deposits of the Western United States, by C. E. Dutton and M. S. Carr. 1947. Scale 1:5,000,000. (See Bulletin 1082-C and Map MR-51.)
- *Surface geology of the Pine Creek area, Coeur d'Alene region, Shoshone County, Idaho, by V. E. Nelson, J. F. Smith, Jr., G. A. Duell, and R. M. Hutchinson. 1945. Scale 1:12,000.
- *Zinc-lead mines of the Pine Creek area, Coeur d'Alene region, Shoshone County, Idaho, by J. D. Forrester. 1944.
- *Geologic map of the Yellow Pine area, Valley County, Idaho, by D. E. White. 1945. Scale 1:48,000.

MISCELLANEOUS INVESTIGATIONS SERIES

- I-175. Paleotectonic maps of the Jurassic System, by E. D. McKee, S. S. Oriol, V. E. Swanson, J. E. MacLachlan, J. C. MacLachlan, K. B. Ketner, J. W. Goldsmith, R. Y. Bell, and D. J. Jameson, *with a separate section on Paleogeography*, by R. W. Imlay. 1956. Scales 1:2,500,000 and 1:5,000,000. \$15.
- I-299. Epigenetic uranium deposits in the United States, by W. I. Finch, I. S. Parrish, and G. W. Walker. 1959. Scale 1:5,000,000. 3 sheets. \$4.25 per set.
- I-300. Paleotectonic maps of the Triassic System, by E. D. McKee, S. S. Oriol, K. B. Ketner, M. E. MacLachlan, J. W. Goldsmith, J. C. MacLachlan, and M. R. Mudge. 1959. Scale 1:5,000,000. \$15.
- I-332. Geologic map of a part of southwestern Wyoming and adjacent States, by W. H. Bradley. 1961. Scale 1:250,000. \$1.25.
- I-373. Reconnaissance geologic map of west-central Snake River Plain, Idaho, by H. E. Malde, H. A. Powers, and C. H. Marshall. 1963. Scale 1:125,000. \$1.50.
- I-387. Fluoride content of ground water in the conterminous United States (maximum reported value for each county), by Michael Fleischer. 1962. Scale 1:5,000,000. \$1.25.
- I-450. Paleotectonic maps of the Permian System, by E. D. McKee, S. S. Oriol, and others. 1967. \$38.
- I-464. Reconnaissance geologic map of the west half of the Spokane quadrangle, Washington and Idaho, by A. B. Griggs. 1966. Lat 47° to 48°, long 117° to 118°. Scale 1:125,000. \$1.25.
- I-557. Geologic map of the Soda Springs quadrangle, southeastern Idaho, by F. C. Armstrong. 1969. Lat 42° 30' to 42° 45', long 111° 30' to 111° 45'. Scale 1:48,000. 2 sheets. \$3 per set.
- I-579. Reconnaissance geologic map of the Riggins quadrangle, west-central Idaho, by Warren Hamilton. 1969. Lat 45° to 45° 30', long 116° to 116° 30'. Scale 1:125,000. \$1.75.
- I-580. Geologic map of the Mackay quadrangle, south-central Idaho, by W. H. Nelson and C. P. Ross. 1969 (1970). Lat 43° 30' to 44°, long 113° 30' to 114°. Scale 1:125,000. \$1.75.
- I-587. Tectonic structure of the main part of the basalt of the Columbia River Group, Washington, Oregon, and Idaho, by R. C. Newcomb. 1970. Lat 44° to 48°, long 116° to 122°. Scale 1:500,000. \$1.50.
- I-645. Surficial geologic map of the Warm River Butte quadrangle, Yellowstone National Park and adjoining area, Idaho and Wyoming, by G. M. Richmond. 1973 (1974). Lat 44° to 44° 15', long 110° 45' to 111°. Scale 1:62,500. \$1.75.
- I-648. Surficial geologic map of the West Yellowstone quadrangle, Yellowstone National Park and adjoining area, Montana, Wyoming, and Idaho, by H. A. Waldrop. 1975. Lat 44° 30' to 44° 45', long 111° to 111° 15'. Scale 1:62,500. \$1.50.
- I-665. Geologic map of the Owyhee quadrangle, Nevada-Idaho, by R. R. Coats. 1971. Lat 41° 45' to 42°, long 116° to 116° 15'. Scale 1:48,000. Accompanied by 2-page text. \$1.50.
- I-672. Geologic map of Yost quadrangle, Box Elder County, Utah, and Cassia County, Idaho (sections to accompany), by R. R. Compton. 1972. 2 sheets. Lat 41° 45' to 42°, long 113° 30' to 113° 45'. Scale 1:31,680. Accompanied by 7-page text. \$3 per set.
- I-688. Generalized tectonic map of North America, by P. B. King and G. J. Edmonston. 1972. Scale 1:15,000,000. \$1.75.
- I-696. Geologic map of the Glenns Ferry-Hagerman area, west-central Snake River Plain, Idaho, by H. E. Malde and H. A. Powers. 1972. 2 sheets. Sheet 1, lat 42° 45' to 43° 07'30", long 115° to 115° 30'; sheet 2, lat 42° 37'30" to 43°, long 114° 45' to 115°. Scale 1:48,000. \$3 per set.
- I-710. Surficial geologic map of Yellowstone National Park. 1972. Lat 44° 08' to 45° 07', long 109° 48' to 111° 10'. Scale 1:125,000. \$1.75.
- I-711. Geologic map of Yellowstone National Park. 1972. Lat 44° 08' to 45° 07', long 109° 48' to 111° 10'. Scale 1:125,000. \$1.50.
- I-730. Geologic block diagram and tectonic history of the Teton region, Wyoming-Idaho, by J. D. Love, J. C. Reed, Jr., R. L. Christiansen, and J. R. Stacy. 1973. Lat about 43° 25' to 44° 05', long about 110° 25' to 111° 05'. \$1.75.
- I-768. Geologic map of the Spokane quadrangle, Washington, Idaho, and Montana, by A. B. Griggs. 1973 (1974). Lat 47° to 48°, long 116° to 118°. Scale 1:250,000. \$1.50.
- I-781-A. Geologic map of the Henrys Lake quadrangle, Idaho and Montana, by I. J. Witkind. 1972. 2 sheets. Lat 44° 30' to 44° 45', long 111° 15' to 111° 30'. Scale 1:62,500. \$3.25 per set.
- I-781-B. Generalized slope map of the Henrys Lake quadrangle, Idaho and Montana, by I. J. Witkind. 1972. Lat 44° 30' to 44° 45', long 111° 15' to 111° 30'. Scale 1:62,500. \$1.50.

- I-781-C. Map showing seiche, rockslide, rockfall, and earthflow hazards in the Henrys Lake quadrangle, Idaho and Montana, by I. J. Witkind. 1972. Lat 44° 30' to 44° 45', long 111° 15' to 111° 30'. Scale 1:62,500. \$1.50.
- I-781-D. Map showing faults and ground-breakage hazards in the Henrys Lake quadrangle, Idaho and Montana, by I. J. Witkind. 1972. Lat 44° 30' to 44° 45', long 111° 15' to 111° 30'. Scale 1:62,500. \$1.50.
- I-781-E. Earthquake hazard map of the Henrys Lake quadrangle, Idaho and Montana, by I. J. Witkind. 1972. Lat 44° 30' to 44° 45', long 111° 15' to 111° 30'. Scale 1:62,500. \$1.50.
- I-781-F. Map showing construction materials in the Henrys Lake quadrangle, Idaho and Montana, by I. J. Witkind. 1972. Lat 44° 30' to 44° 45', long 111° 15' to 111° 30'. Scale 1:62,500. \$1.50.
- I-781-G. Map showing relative ease of excavation of geologic units in the Henrys Lake quadrangle, Idaho and Montana, by I. J. Witkind. 1972 (1973). Lat 44° 30' to 44° 45', long 111° 15' to 111° 30'. Scale 1:62,500. \$1.50.
- I-781-H. Map showing geologic constraints on the placement of sanitary landfills in the Henrys Lake quadrangle, Idaho and Montana, by I. J. Witkind. 1972 (1973). Lat 44° 30' to 44° 45', long 111° 15' to 111° 30'. Scale 1:62,500. \$1.25.
- I-781-I. Map showing snow avalanche probabilities in the Henrys Lake quadrangle, Idaho and Montana, by I. J. Witkind, P. A. Hoskins, V. L. Lindsey, and E. L. Mitchell. 1972 (1974). Lat 44° 30' to 44° 45', long 111° 15' to 111° 30'. Scale 1:62,500. \$1.25.
- I-818. Geologic map of Smith Prairie, Elmore County, Idaho, by K. A. Howard and J. W. Shervais. 1973 (1974). Lat 43° 23'30" to 43° 35', long 115° 25' to 115° 45'. Scale 1:24,000. \$1.50.
- I-873. Geologic map of the Park Valley quadrangle, Box Elder County, Utah, and Cassia County, Idaho, by R. R. Compton. 1975 (1976). Lat 41° 45' to 42°, long 113° 15' to 113° 30'. Scale 1:31,680. \$1.50.
- I-890. Geology of a strip along the Centennial fault, southwestern Montana and adjacent Idaho, by I. J. Witkind. 1975. Lat about 44° 33' to 44° 42'30", long 111° 15' to 112° 15'. Scale 1:62,500. \$1.50.
- I-911. Magnetic declination in the United States—Epoch 1975.0, by E. B. Fabiano. 1975. Scale 1:5,000,000. \$3.
- I-943. Geologic map of the southern part of the Upper Red Rock Lake quadrangle, southwestern Montana and adjacent Idaho, by I. J. Witkind. 1976. Lat 44° 30' to 44° 45', long 111° 30' to 111° 45'. Scale 1:62,500. \$1.50.

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REFERENCE LIBRARIES

Many of the publications listed herein may be consulted in the following libraries in Idaho:

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Boise State College Library.
Idaho State Library.
Public.

CALDWELL:

Strahorn Memorial.

MOSCOW:

Idaho Bureau of Mines and Geology.
University of Idaho.

POCATELLO:

Idaho State University.

REXBURG:

Ricks College.

