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# Bibliography of North American Geology, 1955

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# Bibliography of North American Geology, 1955

By RUTH REECE KING and others

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*This bibliography represents work done jointly  
by Ruth Reece King, Virginia M. Jussen,  
John S. Pomeroy, Elisabeth S. Loud,  
Georgianna D. Conant, and  
Herbert G. Crandell, Jr.*



**UNITED STATES DEPARTMENT OF THE INTERIOR**

**FRED A. SEATON, *Secretary***

**GEOLOGICAL SURVEY**

**Thomas B. Nolan, *Director***

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# **BIBLIOGRAPHY OF NORTH AMERICAN GEOLOGY**

## **1955**

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By RUTH REECE KING and others<sup>1</sup>

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### **INTRODUCTION**

The current annual volume lists publications that appeared during 1955 concerning the geology of the North American continent, including Greenland, the West Indies, and other adjacent islands, and Hawaii, Guam, and other island possessions, but not the trust territories of the United States. A few articles published before 1955, but not included in previous volumes, are cited also. Articles by American authors published in foreign journals are cited if they deal with North American localities or are of a general nature, but not if they deal with foreign areas. Articles by foreign authors on North America are included regardless of place of publication; those of a general nature are included if they appeared in North American journals.

The citations are listed alphabetically by author, with full title and publication data. There follows a subject index to the papers cited. Geologic names in the index are those used by the individual authors, and their listing here does not imply approval by the Geological Survey.

Assistance of Howard R. Cramer, Jean G. Selby, Yetta C. Millman, Marie Guggisberg, Margaret E. Barcroft, and Lois F. Idleman in the preparation of this volume is gratefully acknowledged.

The following U. S. Geological Survey bulletins comprise the issues of the Bibliography of North American Geology: 746-747 (1785-1918), 823 (1919-28), 937 (1929-39), 938 (1940-41), 949 (1942-43), 952 (1944-45), 958 (1946-47), 968 (1948), 977 (1949), 985 (1950), 1025 (1951), 1035 (1952-53), 1049 (1940-49), and 1054 (1954).

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<sup>1</sup> This bibliography represents work done jointly by Ruth Reece King, Virginia M. Jussen, John S. Pomeroy, Elisabeth S. Loud, Georgianna D. Conant, and Herbert C. Crandell, Jr.



## SERIALS

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The following list gives both the abbreviated citation and the full name of periodicals and serials that have been most commonly cited in this bibliography. A few of the less common ones, whose place of publication appears in the citation within the bibliography proper, have not been included here. Publications that include many articles, such as guidebooks, conferences, congresses, symposiums, etc., will not be found in this list of serials.

- A.I.M.E., Mining Geology Geophysics Div. Ann. Mtg., Abs. Tech. Papers—American Institute of Mining and Metallurgical Engineers, Mining Geology Geophysics Division Annual Meeting, Abstracts of Technical Papers. New York.
- A.I.M.E. Trans.—American Institute of Mining and Metallurgical Engineers Transactions. New York.
- Acad. Nat. Sci. Philadelphia Notulae Naturae—Academy of Natural Sciences of Philadelphia Notulae Naturae. Philadelphia, Pa.
- Acta Crystallographica. Copenhagen.
- Ala. Acad. Sci. Jour.—Alabama Academy of Science Journal. Birmingham, Ala.
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- Alberta Research Council Prelim. Rept.; Rept.—Alberta Research Council, Preliminary Report; Report. Edmonton, Alberta.
- Alberta Soc. Petroleum Geologists Jour.—Alberta Society of Petroleum Geologists Journal. Calgary, Alberta.
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- Am. Midland Naturalist—American Midland Naturalist. Notre Dame, Ind.
- Am. Mineralogist—American Mineralogist. Ann Arbor, Mich.
- Am. Mus. Nat. History Bull.—American Museum of Natural History Bulletin. New York.
- Am. Mus. Novitates—American Museum Novitates. New York.
- Am. Petroleum Inst. Rept. Progress—American Petroleum Institute, Report of Progress. Baltimore, Md.
- Am. Philos. Soc. Yearbook—American Philosophical Society Yearbook. Philadelphia, Pa.
- Am. Soc. Civil Engineers Proc.—American Society of Civil Engineers Proceedings. New York.
- Anal. Chemistry—Analytical Chemistry. Washington, D. C.
- Arctic. Montreal, Quebec.
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- Assoc. Am. Geographers Annals—Association of American Geographers Annals. Lancaster, Pa.
- Assoc. Canadienne-Française Av. Sci. Annales—Association Canadienne-Française pour l'Avancement des Sciences Annales. Montreal, Quebec.
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[A double dagger (‡) indicates material produced by means other than ordinary printing. Super-script letters are used to identify different authors with the same name; as, Maxwell<sup>a</sup>, John Alfred; Maxwell<sup>b</sup>, John Alfred. An analytical citation in which the author or editor name follows *in* refers the reader to the author or editor citation, to be found in this volume, where full title and place of publication are given; but if the title follows *in*, full information is contained within the citation.]

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- Magnetite and hematite stability, hydrothermal environment: Baker, D. R.
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- Amsden formation, Carboniferous, Wyoming: Shaw, A. B., 4.
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- Blackhawk formation, Cretaceous, Utah, members: Young, R. G.
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- Blockhouse shale, Ordovician, Tennessee, new members: Neuman, R. B., 1.
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- Bopesta formation, Miocene, California: Buwalda, J. P., 1.
- Bridle formation, Precambrian, Arizona: Anderson, C. A., 1.
- Browns Park formation, Miocene-Pliocene (?), Colorado: Carey, B. D., Jr., 2.
- Brush Hollow limestone, Quaternary (?), Colorado, new: Tanner, W. F., Jr., 1.
- Bumpnose member of Crystal River formation, Eocene, Florida: Moore, W. E., 1.
- Butte Falls tuff, Precambrian, Arizona: Anderson, C. A., 1.
- Cairn formation, Devonian, Alberta, new: McLaren, D. J., 1.
- Calaveras formation, Paleozoic, California: Eric, J. H.
- Caney group, Mississippian, Oklahoma: Elias, M. K., 2.
- Cardium formation, Cretaceous, Alberta: Harding, S. R. L., 1, 2.
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- Carimona member of Platteville formation, Ordovician, Minnesota, new: Weiss, M. P.
- Catoclin formation, Cambrian (?), Maryland-Virginia: Whitaker, J. C., 1.
- Precambrian (?), Virginia: Reed, J. C., Jr., 5.
- Chinchaga formation, Devonian, Alberta, new: Law, James 2.
- Chinle formation, Triassic, Utah: Groth, F. A.
- Chota formation, Ordovician, Tennessee, new: Neuman, R. B., 1.
- Clyde series, Precambrian, Baffin Island: Kranck, E. H.
- Cobre formation, Cretaceous (?) -Eocene, Cuba, members: Lewis, G. E.
- Cockfield formation, Tertiary, Louisiana: Treadwell, R. C., 1.
- Cody shale, Cretaceous, Wyoming: members: Hose, R. K.
- Collings Ranch conglomerate, Pennsylvanian, Oklahoma: Dunham, R. J., 2.
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- Cosumnes formation, Jurassic, California: Eric, J. H.
- Crossen trachyte, Eocene, Texas: McAnulty, W. N.
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- Cummingsville member of Galena formation, Ordovician, Minnesota, new: Weiss, M. P.
- Cusseta sand, Cretaceous, Georgia: Eargle, D. H.
- Dakota formation, Cretaceous, Kansas: Plummer, N. V.
- Dakota group, Cretaceous, Colorado: Waagé, K. M.

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- Deese formation, Pennsylvanian, Oklahoma: Dunham, R. J., 2.
- Delia member of Woodbend group, Devonian, Alberta, new: Belyea, H. R., 1.
- Deville formation, pre-Cretaceous (?), Saskatchewan: Brodie, D. R.
- Dubawnt group, Precambrian, Northwest Territories, new: Wright, G. M.
- Elk Point group, Devonian, Alberta, formations: Law, James, 1.
- Williston basin, new: Baillie, A. D.
- Elkhorn Ridge argillite, Permian, Oregon: Taubeneck, W. H., 2.
- Eutan formation, Cretaceous, Georgia: Eargle, D. H.
- Florena shale, Permian, Kansas: Imbrie, J., 1.
- Flume formation, Devonian, Alberta: McLaren, D. J., 1.
- Frenchman formation, Cretaceous, Saskatchewan: Kupsch, W. O., 3.
- Fruitland formation, Cretaceous, Colorado-New Mexico: Reese, V. R.
- Gadsden limestone, Eocene, Florida, new: Moore, W. E., 1.
- Geneva dolomite, Devonian, Illinois: Schwalb, H. R.
- Ghost River formation, Devonian, Alberta: Storey, T. P.
- Gila (?) conglomerate, Tertiary (?) or Pleistocene (?), Arizona: Anderson, C. A., 1.
- Glastonbury formation, Paleozoic, Connecticut: Aitken, J. M.
- Glen Canyon group, Jurassic, Colorado Plateau: Murray, A. N., 2.
- Glendora volcanics, Miocene (?), California, members: Shelton, J. S.
- Gloria formation, Pliocene, Mexico: Wilson, I. F.
- Grayback Mtn. tuff, Cretaceous (?) or Tertiary (?), Arizona: Anderson, C. A., 1.
- Grayburg formation, Permian, New Mexico-Texas: Frenzel, H. N., 1.
- Green River formation, Eocene, Utah: Dane, C. H.; Picard, M. D., 2.
- Greenhorn formation, Cretaceous, South Dakota: Bagan, R. J.
- Habana (?) formation, Cretaceous, Cuba: Lewis, G. E.
- Hebron formation, Paleozoic, Connecticut: Aitken, J. M.
- Helderbergian series, Devonian, New York: Rickard, L. V.
- Hillside mica schist, Precambrian, Arizona: Anderson, C. A., 1.
- Hockingport sandstone, Pennsylvanian (?), Ohio: Martin, W. D.
- Iles formation, Cretaceous, Colorado, members: Bass, N. W., 1.
- Infierno formation, Pliocene, Mexico: Wilson, I. F.
- Jonas Creek formation, Precambrian-Cambrian (?), Alberta, new: Hughes, R. D.

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- Keg River formation, Devonian, Alberta, new: Law, James, 2.
- Kinnick formation, Miocene, California: Buwalda, J. P., 1.
- Kootenai formation, Cretaceous, Montana: Cobban, W. A., 1.
- LaHood formation, Precambrian, Montana, new: Alexander, R. G., Jr.
- Lenoir limestone, Ordovician, Tennessee, members: Neuman, R. B., 1.
- Lias formation, Jurassic, Mexico: Erben, H. K., 2.
- Lodgepole formation, Mississippian, Manitoba: Stanton, M. S.
- Logtown Ridge formation, Jurassic, California: Eric, J. H.
- Loudoun formation, Cambrian, Maryland-Virginia, members: Whitaker, J. C., 1.
- Lukfata sandstone, Cambrian(?), Oklahoma, new: Pitt, W. D.
- McRae formation, Cretaceous-Tertiary, New Mexico: Bushnell, H. P., 2.
- Madison group, Mississippian, Montana: Chamberlain, V. R., 1.
- Wyoming-Montana: Andrichuk, J. M., 2.
- Manitoba group, Devonian, Williston basin, new: Baillie, A. D.
- "Marchand" conglomerate, Pennsylvanian, Oklahoma: Eisner, S. N.
- Mariposa formation, Jurassic, California: Eric, J. H.
- Mississagi formation, Precambrian, Ontario: Hart, R. C.
- Mistassini iron formation, Precambrian, Quebec: Evoy, E. F.
- Moenave formation, Triassic(?), Arizona-Utah, new: Averitt, P.
- Moodys Branch formation, Tertiary, Louisiana: Treadwell, R. C., 1.
- Morrison formation, Jurassic, Colorado Plateau: Craig, L. C.
- Kansas: Merriam, D. F., 5.
- Mt. Hawk formation, Devonian, Alberta: McLaren, D. J., 1.
- Mt. Head formation, Mississippian, Alberta: Raasch, G. O., 1.
- Muskeg formation, Devonian, Alberta, new: Law, James, 2.
- Nesson formation, Jurassic, Montana: Nordquist, J. W.
- Nisku formation of Winterburn group, Devonian, Alberta: Belyea, H. R., 1.
- Ogallala formation, Pliocene, Kansas: Merriam, D. F., 2.
- Ohio River formation, validity disproved, Indiana: Ray, L. L.
- Olmos formation, Cretaceous, Texas: Glover, J. E.
- Payette formation, Cretaceous(?), Idaho: Stearns, H. T., 3.
- Pedlar formation, Precambrian, Virginia, new: Bloomer, R. O.
- Perdrix formation, Devonian, Alberta: McLaren, D. J., 1.

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- Phosphoria formation, Permian, Montana: Cressman, E. R., 2.
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- Pictured Cliffs formation, Cretaceous, Colorado-New Mexico: Reese, V. R.
- Piper formation, Jurassic, Montana: Nordquist, J. W.
- Pocono formation, Mississippian, West Virginia: Dally, J. L.
- Potato Hill andesite, Tertiary, Texas: McAnulty, W. N.
- Price River formation, Cretaceous, Colorado-Utah, facies and members: Young, R. G.
- Providence sand, Cretaceous, Georgia: Eargle, D. H.
- Pruett tuff, Eocene, Texas: McAnulty, W. N.
- Qu'Appelle group, Devonian, Williston basin, new: Baillie, A. D.
- Queen formation, Permian, New Mexico-Texas: Frenzel, H. N., 1.
- Rhododendron formation, Miocene, Oregon: Trimble, D. E.
- Rhyolite Canyon formation, Cenozoic, Arizona: Enlows, H. E.
- Ripley formation, Cretaceous, Georgia: Eargle, D. H.
- Rockville conglomerate, age (?), Iowa: Tuttle, S. D., 1.
- Sage Creek formation, Eocene, Montana: Hough, M. J.
- St. Peter sandstone, Ordovician, United States, central: Dapples, E. C., 1.
- Salt Lake group, new units, Tertiary, Utah: Slentz, L. W.
- San Andres formation, Permian, New Mexico: Boyd, D. W., 2.
- San Luis formation, Eocene, Cuba, members: Lewis, G. E.
- San Rafael group, Jurassic, Colorado Plateau: Murray, A. N., 2.
- Saskatchewan group, Devonian, Williston basin, new: Baillie, A. D.
- Sawtooth formation, Jurassic, Montana: Nordquist, J. W.
- Seminole formation, Pennsylvanian, Oklahoma: Oakes, M. C., 2.
- Senora formation, Pennsylvanian, Oklahoma: Ware, H. E., Jr.
- Sevier formation, Ordovician, Tennessee, members: Neuman, R. B., 1.
- Sharon conglomerate, Pennsylvanian, Ohio: Fuller, J. O.
- Sheep Canyon basalt, Tertiary, Texas: McAnulty, W. N.
- Simpson group, Ordovician, Oklahoma: Dietrich, R. F., Jr.
- United States, central: Dapples, E. C., 1.
- Southesk formation, Devonian, Alberta, new: McLaren, D. J., 1.
- Stoddart formation, upper Paleozoic, British Columbia, new: Rutgers, A. T. C.

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- Storm Creek formation, Pennsylvanian-Permian (?), Alberta, new: Raasch, G. O., 1.
- Sundance formation, Jurassic, South Dakota: Young, R. C.
- Sunwapta Peak formation, Cambrian, Alberta, new: Hughes, R. D.
- Tampa formation, Miocene, Florida: Moore, W. E., 1.
- Tangle Ridge formation, Cambrian, Alberta, new: Hughes, R. D.
- Tellico formation, Ordovician, Tennessee: Neuman, R. B., 1.
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- Timiskaming series, Precambrian, Ontario: McLaughlin, D. B., 2.
- Tongue River formation, Tertiary, North Dakota: Hanson, B. M.
- Tuff series, Cretaceous-Tertiary, Cuba: Butticaz, P. H.
- Tunnel Mtn. formation, Mississippian, Alberta: Raasch, G. O., 1.
- Tuscaloosa formation, Cretaceous, Georgia: Eargle, D. H.
- Uinta formation, Eocene, Utah: Dane, C. H.
- Vanoss formation, Pennsylvanian, Oklahoma: Dunham, R. J., 2.
- Violin breccia, Miocene-Pliocene, California: Crowell, J. C.
- Wasatch formation, Eocene, Wyoming, members: Hose, R. K.
- Waterways formation, Devonian, Alberta: MacDonald, W. D.
- Watt Mtn. formation, Devonian, Alberta, new: Law, James, 2.
- White River group, Oligocene, Nebraska: Schultz, C. B., 2.
- Williams Fork formation, Cretaceous, Colorado, members: Bass, N. W., 1.
- Winnipeg formation, Ordovician, Manitoba: Macauley, G., 1.
- Witnet formation, Miocene, California: Buwalda, J. P., 1.
- Wood River formation, Pennsylvanian-Permian, Idaho: Bostwick, D. A.
- Yavapai series, Precambrian, Arizona: Anderson, C. A., 1.
- Yorktown formation, Miocene, North Carolina: LeGrand, H. E., 2.

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Kuskokwim region, central: Cady, W. M.

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Pembina area, Devonian-Tertiary, cross section: Parsons, H. E., 2.

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 Sturgeon Lake oil fields, Precambrian-Cretaceous: Humphries, R. G.  
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- Appalachians, Pennsylvania-New Jersey: Pittsburgh Geol. Soc.  
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## Arizona, Bagdad area, cross sections: Anderson, C. A., 1.

- Chiricahua National Monument: Enlows, H. E.  
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## Arkansas: Moody, C. L., 2.

- Chicot County, Cretaceous-Quaternary: Onellion, F. E.  
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## British Columbia, Cardium formation, Cretaceous: Stelek, C. R., 2.

## Hasler Creek-Pine River area: McKech-nie, N. D.

## Hazelton - Smithers areas, Jurassic-Quaternary: Kindle, E. D., 1.

## California, Bowerbank gas field, Tertiary-Quaternary: Crowder, R. E.

- Folsom Dam area: Kiersch, G. A., 3.  
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## Mt. Diablo region, Cretaceous-Pliocene, correlation: Am. Assoc. Petroleum Geologists.

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## Pleasant Creek gas field, Cretaceous-Quaternary: Hunter, G. W., 3.

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## Wheeler Ridge oil field, Tertiary: Carls, J. M.

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## Colorado, Animas River valley: Kilgore, L. W.

## Atkinson Creek quadrangle: McKay, E. J., 2.

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- United States, eastern interior basin, Pennsylvanian: Wanless, H. R., 2.
- Utah, Book Cliffs, Upper Cretaceous facies, detailed: Young, R. G.
- Cache Valley, Tertiary: Adamson, R. D.
- Clay basin-Browns Park area, Precambrian, cross sections: Hansen, W. R., 2.
- Dinosaur National Monument: Blackwelder, R. E.
- East-central, Eocene: Dane, C. H.
- Flaming Gorge quadrangle: Hansen, W. R., 1.
- Green River basin area, Precambrian, lithology: Crittenden, M. D., Jr.
- South and west margins, Cambrian: Lochman-Balk, C.

## Geologic formations, lists, etc.—Continued

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- Green River basin area—Continued
- West side, Ordovician-Pennsylvanian: Williams, J. Stewart.
- Happy Jack mine, San Juan County, Permian-Jurassic(?): Trites, A. F., Jr., 1.
- Lakeside Mts.: Young, J. C.
- Mesozoic, correlation: Stokes, W. L., 4.
- Ogden area, Pleistocene: Feth, J. H.
- Ogden Valley, Tertiary-Quaternary: Lofgren, B. E.
- Paradox salt basin, Pennsylvanian: Wengerd, S. A., 1.
- San Juan Canyon, Pennsylvanian: Wengerd, S. A., 2.
- Southeastern: Cater, F. W., Jr., 22.
- Uinta Basin, Green River formation, Eocene: Picard, M. D., 2.
- Uinta Mts., Carboniferous, correlation: Sadlick, W.
- Eastern, Jurassic-Cretaceous: Bradley, W. A.
- Uinta River-Brush Creek area, Duchesne-Uintah Counties: Kinney, D. M.
- Wasatch Plateau gas fields, Permian-Cretaceous: Walton, P. T.
- Virginia, central, Blue Ridge, Precambrian-Cambrian: Bloomer, R. O.
- Fredericksburg district, pre-Cretaceous-Quaternary: Subitzky, S.
- Washington, Penawawa quadrangle: Waldron, H. H.
- Yelm area, Vashon drift, Pleistocene: Mundorff, M. J., 1.
- West Indies, Greater Antilles, Tertiary: Mitchell, R. C., 2.
- West Virginia, Marshall-Wetzel-Tyler Counties, Silurian-Permian: Haught, O. L., 2.
- Williston basin, Devonian, section: Baillie, A. D.
- Jurassic, pre-Rierdon: Nordquist, J. W.
- Permian(?)—Jurassic(?) red beds, correlation: Ziegler, D. L., 2.
- Regional correlation chart: N. Dak. Geol. Soc.
- Wisconsin, Sinsinawa River area, Ordovician: Allingham, J. W.
- Wisconsin-Illinois-Iowa zinc-lead district, Middle Ordovician: Agnew, A. F., 1.
- Wyoming, Amsden formation, Carboniferous, Wind River Mts.: Shaw, A. B., 4.
- Beaver Creek field, Cambrian-Eocene: Ewing, D. J.
- Bighorn Canyon-Hardin area: Richards, P. W.
- Black Hills district, northern, Cretaceous-Quaternary: Knechtel, M. M.
- Correlation charts: McGrew, L. W.; Wyo. Geol. Assoc.
- Crazy Woman Creek area: Hose, R. K.

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- Wyoming—Continued  
 Du Noir area: Keefer, W. R.  
 Great Divide basin, Tertiary, members and tongues: Pipiringos, G. N.  
 Green River basin area, south and west margins, Cambrian: Lochman-Balk, C.  
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 Laramie Mts. to Black Hills, South Dakota, Pennsylvanian-Permian: Bates, R. L., 1.  
 Madison group, Mississippian: Andrichuk, J. M., 2.  
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 Rattlesnake Hills, northwest of, Tertiary: Van Houten, F. B., 2.  
 Rock Springs coal field, Cretaceous-Eocene: Yourston, R. E.  
 Salt Wells gas field, Jurassic-Cretaceous: House, R. E.  
 Shotgun Butte area, Triassic-Tertiary, composite section: Troyer, M. L.  
 Southwestern, Cambrian: Shaw, A. B., 1.  
 Sussex and Meadow Creek oil fields: Horn, G. H.  
 Tabernacle Butte area, Eocene: McGrew, P. O.  
 Tip Top field, Sublette County, cross section: Howe, R. A.  
 Torrington area, Oligocene: Schultz, C. B., 2.  
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 Vermilion Creek basin area, Jurassic-Tertiary: Gras, V. B.  
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 Kuskokwim region, central: Cady, W. M.  
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 Trinity Islands, Cretaceous-Recent: Kirschner, C. E.  
 Alberta, oil and gas migration, Devonian-Cretaceous: Gussow, W. C., 2.  
 Sunwapta-Southesk area: Hughes, R. D.  
 Arizona, Cane Wash, Monument Valley, Recent: Hunt, C. B., 2.  
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 California, Folsom Dam area: Kiersch, G. A., 3.  
 San Joaquin County, Jurassic-Recent: Clark, W. B.

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- Colorado, Atkinson Creek quadrangle, structural: McKay, E. J., 2.  
 Dinosaur National Monument, popular: Blackwelder, R. E.  
 Gateway quadrangle, structural: Cater, F. W., Jr., 1.  
 Louisville quadrangle, pre-Wisconsin-Recent: Malde, H. E.  
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 Sand Wash basin, Paleocene-Eocene: Ritzma, H. R., 1.  
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 Costa Rica, Cordillera de Talamanca: Weyl, R., 7, 8.  
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 Gulf Coastal Plain, central, Quaternary: Le Blanc, R. J.  
 Hawaii, Oahu, Koolau Range: Palmer, H. S.  
 Illinois, Danville area, Pleistocene: Ekblaw, G. E.  
 Indiana, Miami County: Thornbury, W. D., 1.  
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 Kansas, Cowley County, Paleozoic: Smith, E. W.  
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 Gravelly Range area: Mann, J. A.  
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 Quad Creek area, Beartooth Mts.: Eckelmann, F. D.  
 Whitehall area: Alexander, R. G., Jr.  
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 Nebraska, Loup Rivers area, Pleistocene-Recent: Miller, R. D.  
 Nevada, northeastern, Mississippian-Permian: Dott, R. H., Jr., 1.

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- New Hampshire, Gilmanton quadrangle, popular: Heald, M. T., 1.
- New Mexico, Barker dome-Fruitland area, Cretaceous-Recent: Hayes, P. T.
- Costilla and Latir Peak quadrangles: McKinlay, P. F.
- Fra Cristobal Range, summary: Thompson, S., 3d, 1.
- Permian basin, elementary: West Texas Geol. Soc. Comm.
- Sierra Cucillo area: Jahns, R. H., 3.
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- Trinidad-Raton basin: Osborne, H. W.
- New York, Chautauqua County, Devonian and Pleistocene: Tesmer, I. H., 1.
- North America, continental growth: Lehmann, U.
- Oceans, growth, cf. other planets: Revelle, R. R. D., 3.
- Oklahoma, Canadian County, Paleozoic: Kimberlin, Z. G., Jr.
- Garber area, Garfield County, Cambrian-Permian: Cary, L. W.
- Kay County, Paleozoic: Smith, E. W.
- Lincoln-Payne Counties, Paleozoic: Graves, J. M.
- Noble County, Cambrian-Permian: Page, K. G.
- Senora formation, Pennsylvanian: Ware, H. E., Jr.
- Simpson group, Anadarko basin, Ordovician: Dietrich, R. F., Jr.
- Puerto Rico: Picó, R.
- Jurassic (?)—Quaternary: Mitchell, R. C., 1.
- Quebec, Eastern Townships, Cambrian: Cooke, Harold C.
- St. Jean-Boloeil area: Clark, T. H., 1.
- South Dakota, Black Hills: Gries, J. P.
- Texas, Cathedral Mtn. quadrangle, Permian-Quaternary: McNulty, W. N.
- Panhandle, Cambrian-Triassic: Roth, R. I.
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- Sierra Diablo Mts., Permian: Stehli, F. G., 1.
- West-central, tectonic: Holmquest, H. J., Jr.
- Wilshire Ellenburger field, Midland basin: Colligan, M. A.
- United States, western, geologic-climatic dating: Antevis, E. V., 3.
- Utah, Canyon Range: Christiansen, F. W.
- Dinosaur National Monument, popular: Blackwelder, R. E.
- Lakeside Mts.: Young, J. C.
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- Paradox salt basin, Pennsylvanian: Wengerd, S. A., 1.
- Salt anticlines, structural: Cater, F. W., Jr., 22.
- Salt Lake group, Tertiary, lower Jordan Valley: Slentz, L. W.

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- Utah—Continued
- Uinta Mts., Boy Scout Camp Steiner area, popular: Jones, D. John, 2.
- Washington, Olympic National Park, popular: Danner, W. R., 1.
- West Indies, Cayman Islands, Cretaceous-Recent: Richards, H. G., 6.
- Greater Antilles, Tertiary: Mitchell, R. C., 2.
- Wyoming, Quad Creek area, Beartooth Mts.: Eckelmann, F. D.
- Wind River Mts., southern, Cretaceous-Miocene, deformation: Bell, W. G.
- Geologic mapping. *See also* Cartography: Technique, *Mapping*.
- Alaska, index, status: U.S.G.S., 1.
- Photogeologic: Fischer, W. A.
- Angle prism, utilization: Peters, W. C.
- Canada, western, surface mapping in petroleum exploration: Hunt, C. W.
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- Facies, composite end members, distance function: Krumbein, W. C., 3.
- Fold structures, Archean rocks, indirect method: Gross, W. H.
- Georgia, new map, evolution: Lester, J. G.
- Glacial till, permeable zones, method: Ward, P. E.
- Greenland, mineral deposits: Sørensen, H., 2.
- Magnetic declination demonstrator: Ryan, J. D.
- Oklahoma, status: Branson, C. C., 3.
- Photogeology, instruments and techniques, U. S. Geological Survey: Davidson, J. I.
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- Geologic maps. *See also* subheading *Geologic maps* under the states and countries.
- Alabama, Epes quadrangle, northwestern, Cretaceous-Quaternary: Monroe, W. H., 1.
- Quitman fault zone: Tourtelot, H. A., 1.
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- Alaska, Cooper, Grant, Crescent, and Ptarmigan Lakes, Kenai Peninsula, Mesozoic-Recent: Plafker, G.
- Ear Mtn., Seward Peninsula, sketch: Killeen, P. L.
- Great Sitkin Island: Simons, F. S.
- Hyder district: West, W. S.
- Jarvis Creek coal field: Wahrhaftig, C. A.
- Kuskokwim region, central: Cady, W. M.
- Pavlof Volcano area: Kennedy, G. C., 1.
- Alberta, Adams Lookout area: Irish, E. J. W.
- Copton Creek area, Cretaceous: Canada G. S., 52.

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- Coronation district, glacial geology: Gravenor, C. P., 1.
- Pincher Creek area: Gallup, W. B., 1.
- Pocahontas-Moosehorn Creek coal basin, Cambrian-Cretaceous: MacKay, B. R.
- Rocky Mts., Fairholme group, Devonian: McLaren, D. J., 1.
- St. Ann area, glacial: Collins, G. A.
- Sunwapta-Southesk area, Precambrian-Devonian: Hughes, R. D.
- Two Lakes area, Cretaceous-Paleocene (?): Greiner, H. R.
- Appalachians, southern: King, P. B., 1.
- Arctic America, Ellef Ringnes Island, Isachsen dome, Devonian (?)—Cretaceous, sketch: Heywood, W. W.
- Arizona, Bagdad area and mines: Anderson, C. A., 1.
- Cane Wash, Monument Valley, Recent, sketch: Hunt, C. B., 2.
- Chiricahua National Monument: Enlows, H. E.
- Davis Dam area: U. S. Bur. Reclamation.
- Douglas basin: Coates, D. R.
- Helvetia mining district: Creasey, S. C.
- Navajo country: Kiersch, G. A., 1.
- Southeastern part: Kiersch, G. A., 5.
- Northwest Carrizo area, sketch: Chenoweth, W. L.
- Silver Bell district, Pima County: Richard, K. E.
- Toh Atin anticline, Northwest Carrizo area: Chenoweth, W. L.
- Arkansas, Magnet Cove igneous area: Shreveport Geol. Soc., 1.
- Ouachita Mts. region: Shreveport Geol. Soc., 1.
- British Columbia, Atlin area: Aitken, J. D., 1.
- Cowichan Lake area, Vancouver Island: Fyles, J. T.
- Kemano-Tahtsa area, Alcan tunnel, sketch: Stuart, R. A.
- McDame area, Cassiar district: Gabrielse, H.
- Mineral deposits, sketch: British Columbia Dept. Mines, 1.
- Nechako River, Coast district: Tipper, H. W.
- California, Angels Camp quadrangle: Eric, J. H.
- Bakersfield sheet: Kundert, C. J., 1.
- Bidwell Bar region, Bald Rock batholith: Compton, R. R.
- Cucamonga Canyon—San Antonio Canyon area, San Gabriel Mts.: Hsu, K. J., 2.
- Death Valley sheet: Kundert, C. J., 2.
- Folsom Dam area: Kiersch, G. A., 3.
- Glass Mtn. area, Siskiyou County, sketch: Chesterman, C. W., 2.
- Glendora volcanic area, Cretaceous-Recent: Shelton, J. S.

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- Long Beach sheet: Kundert, C. J., 3.
- Los Angeles sheet: Kundert, C. J., 4.
- Marin County: Ver Planck, W. E., Jr.
- Northwestern: U.S.G.S., 3.
- Oakland-Mt. Diablo area, Tertiary, sketch: Geol. Soc. America, Cordilleran Sec.
- Placer County, western, pre-Cretaceous-Quaternary: Calif. State Water Res. Bd., 2.
- Rock Corral area: Moxham, R. M.
- Sacramento County: Carlson, D. W.
- San Joaquin County, Jurassic-Recent: Clark, W. B.
- San Joaquin Valley, southeastern: Diblee, T. W., Jr.
- San Luis Obispo sheet: Kundert, C. J., 5.
- San Mateo County, mineral deposits: Davis, F. F.
- Santa Ana sheet: Kundert, C. J., 6.
- Santa Clara valley, Jurassic-Recent: Calif. State Water Res. Bd., 1.
- Santa Maria sheet: Kundert, C. J., 7.
- Sonoma-Petaluma area, Tertiary, sketch: Chesterman, C. W., 1.
- Sonora quadrangle: Eric, J. H.
- Temecula region, Riverside County: Mann, J. F., Jr.
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- Ubehebe Peak quadrangle mining areas: McAllister, J. F.
- Canada: Canada G. S., 55.
- Colorado, Anderson Mesa quadrangle: Cater, F. W., Jr., 11, 16.
- Atkinson Creek quadrangle: McKay, E. J., 2.
- Baca County: McLaughlin, T. G., 1.
- Calamity Mesa quadrangle: Cater, F. W., Jr., 4, 21.
- Clay basin—Browns Park area, Precambrian: Hansen, W. R., 2.
- Cross Mtn. anticline: Kanizay, S. P.
- Crystal Mtn. district, pegmatites: Thurston, W. R.
- Davis Mesa quadrangle: Cater, F. W., Jr., 10, 20.
- Eagle River anticline area, sketch: Benson, J. C.
- Egnar quadrangle: Cater, F. W., Jr., 8, 17.
- Eureka Gulch area, Central City district: Sims, P. K., 1.
- Front Range, Denver area: Rocky Mtn. Assoc. Geologists.
- Gateway quadrangle: Cater, F. W., Jr., 1.
- Green River basin area: Wyo. Geol. Assoc.
- Gypsum Gap quadrangle: Cater, F. W., Jr., 2.
- Hahns Peak, north area: Hunter, J. M.
- South area: Barnwell, W. W.

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- Hamm Canyon quadrangle: Cater, F. W., Jr., 9, 14.  
 Horse Range Mesa quadrangle: Cater, F. W., Jr., 5.  
 Joe Davis Hill quadrangle: Cater, F. W., Jr., 7, 18.  
 Juanita Arch quadrangle: Shoemaker, E. M., 1, 3.  
 Juniper Mtn. area: Abrassart, C. P.  
 La Veta area: Panhandle Geol. Soc.  
 Louisville quadrangle, surficial: Malde, H. E.  
 McKinley Mtn. area, Precambrian: Singewald, Q. D., 1.  
 Naturita NW quadrangle: Cater, F. W., Jr., 6, 19.  
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 Pine Mtn. quadrangle: Cater, F. W., Jr., 3, 18.  
 Plains area: Finley, E. A.  
 Quartz Creek pegmatite district, Gunnison County: Staatz, M. H., 1.  
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 Routt-Moffat Counties, Cretaceous-Quaternary(?): Bass, N. W., 1.  
 Stonewall-Tercio area: Panhandle Geol. Soc.  
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 Ilopango Lake area: Williams, H., 1.  
 Southern, volcanic areas: Williams, H., 5.  
 Florida, Jackson County, Tertiary: Moore, W. E., 1.  
 Southern, Tertiary-Quaternary: Parker, G. G., 2.

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- Georgia, Cretaceous, outcropping: Eargle, D. H.  
 Mineral Bluff quadrangle, Precambrian-Cambrian: Hurst, V. J., 1.  
 Greenland, Atanikerdruk area, Cretaceous-Tertiary: Koch, B. E., 1.  
 Eastern, Central Metamorphic Complex: Haller, J., 1.  
 Granite series, Caledonian orogeny: Haller, J., 2.  
 Geographical Society Ø area, sketch: Donovan, D. T., 2.  
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 Kap Oswald area, Ella Ø, Precambrian(?): Schaub-Wild, H. P.  
 Kronprins Christians Land, Precambrian-Silurian: Fränkl, E. J., 1.  
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 Idaho, Dry Valley quadrangle: Cressman, E. R., 1.  
 Paris-Bloomington vanadium area: McKelvey, V. E., 2.  
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 Indiana, Miami County: Thornbury, W. D., 1.  
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 Iowa, Couler Valley area: Brown, C. E.  
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 Jamaica: Hill, V. G.  
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 Osage County, Pennsylvanian-Quaternary: O'Connor, H. G., 1.  
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 Cannel City quadrangle, Pennsylvanian, Recent: Englund, K. J.  
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 Paintsville SE quadrangle, Pennsylvanian, Quaternary: Baker, J. A.  
 Labrador, Atlantic coast north of Davis Inlet: Wheeler, E. P., 2d.  
 Horseshoe Rapids area: Podolsky, T.  
 Louisiana, southeastern, Tertiary-Quaternary: Taylor, R. E.  
 Maine, Newry Hill area: Shalin, V. E.  
 Manitoba, Bird Lake area: Davies, J. F., 1.

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- Bird River area, sketch: Davies, J. F., 2.  
 Elbow Lake area: McGlynn, J. C.  
 Heming Lake area: McGlynn, J. C.  
 Knee Lake area, sketch: Quinn, H. A., 2.  
 Lynn Lake area: Ruttan, G. D.  
 Nelson House area: Quinn, H. A., 1.  
 Maryland, Brandywine area, Eocene-Recent: Hack, J. T.  
 Catoctin Mtn.: Whitaker, J. C., 1.  
 Massachusetts, Colrain quadrangle, surficial: Segerstrom, K., 2.  
 Williamsburg quadrangle, surficial: Segerstrom, K., 1.  
 Mexico, Basin of Mexico, sketch: Carreño, A. de la O.  
 Boleo copper district, Baja California, Tertiary-Quaternary: Wilson, I. F.  
 Eastern: Guzmán Jiménez, E. J., 1.  
 Guanajuato area: Fries, C., Jr.  
 Guanajuato district: Edwards, J. D.  
 Huasteca Canyon, Nuevo León: Corpus Christi Geol. Soc., 2.  
 Huayacocotla area, Veracruz, Jurassic: Erben, H. K., 2.  
 Interior basins: Carreño, A. de la O.  
 Monterrey-Saltito-Monclova area, sketch: South Texas Geol. Soc., 4.  
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 Papaloapan, Veracruz, Cretaceous-Quaternary, sketch: Lozano Romen, F.  
 Taxco district: Edwards, J. D.  
 Watershed areas, Gulf and Caribbean: Carreño, A. de la O.  
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 Michigan, Fort Wilkins quadrangle: Cornwall, H. R., 2.  
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 Northern, metamorphic zones: James, H. L., 2.  
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 Missouri, Fulton quadrangle: Unklesbay, A. G., 1.  
 Lebanon quadrangle, Ordovician: Seagriff, T. K.  
 Mississippi embayment: Grohskopf, J. G.  
 Montana, Bighorn Canyon-Hardin area: Richards, P. W.  
 Black Hills district, northern, Cretaceous-Quaternary: Knechtel, M. M., 1.

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- Boulder batholith area: Jarrard, L. D.  
 Bridger Range: McMannis, W. J.  
 Ekalaka Hills, Cretaceous-Recent: Denison, N. M., 1.  
 Girard coal field, northern part, Paleocene-Pleistocene: Prichard, G. E.  
 Glacier County, Cretaceous-Tertiary, sketch: Honkala, F. S., 1.  
 Gravelly Range area: Mann, J. A.  
 Index: Boardman, L., 1.  
 Lima region: Scholten, R.  
 Missouri River valley, surficial: Swenson, F. A.  
 Stillwater complex, central part: Howland, A. L., 1.  
 Two Medicine-Badger Creek area: Weimer, R. J.  
 Whitehall area: Alexander, R. G., Jr.  
 Wolf Point quadrangle: Colton, R. B., 1.  
 Nevada, Buena Vista Hills: Reeves, R. G.  
 Carlin Canyon, Elko County: Dott, R. H., Jr., 1.  
 Davis Dam area: U. S. Bur. Reclamation.  
 Diamond Range, northern, Eureka-White Pine Counties: Dott, R. H., Jr., 1.  
 Dutch Flat placer area, Humboldt County, sketch: Willden, C. R., 2.  
 Grindstone Mtn. region, Elko County: Dott, R. H., Jr., 1.  
 Index: Boardman, L., 2.  
 New Brunswick, Edmundston area, Quaternary: Lee, H. A.  
 New Hampshire, Gilmanton quadrangle: Heald, M. T., 1.  
 Hanover quadrangle, Ordovician (?) - Devonian: Lyons, J. B.  
 Precambrian-Mississippian: Billings, M. P.  
 New Mexico, Barker dome-Fruitland area: Hayes, P. T.  
 Caballo Mts.: Kelley, V. C., 2.  
 Capitan quadrangle: Roswell Geol. Soc.  
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 Costilla and Latir Peak quadrangles: McKinlay, P. F.  
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- Manitou Island quadrangle, Precambrian: Cornwall, H. R., 1.
- Marquette iron range, Precambrian: Boyum, B. H., 1.
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- Paw Paw River basin, surficial: Mich. Water Res. Comm.
- Southern peninsula, surface formations, Quaternary: Martin, H. M. M.

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- Oakland County: Mozola, A. J., 2.
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*Mineralogy.*

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- South Dakota, Black Hills: DeLong, J. M.
- United States, northeastern, popular: Convery, J. N.
- Virginia, localities: Dietrich, R. V., 1.
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- Alabama, Talladega County, hematite-magnetite: Pallister, H. D., 1.
- Alaska, Cache Creek area, radioactive, placers: Robinson, G. D.
- Ear Mtn., Seward Peninsula, radioactive: Killen, P. L.
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- Popular: Raymond, L.
- West Shasta district, copper-zinc, origin: Kinkel, A. R., Jr.
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## Colorado—Continued

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- Red Canyon quadrangle, uranium-vanadium: McKay, E. J., 3.
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- Iowa, Couler Valley area, zinc-lead: Brown, C. E.
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- Types and occurrence: Percival, F. G.
- Jamaica, bauxite: Hill, V. G.
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- Mississippi Valley, upper district, lead-zinc-copper: Heyl, A. V., Jr.
- Montana, Black Hills district, bentonite: Knechtel, M. M.



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Fall River County, uranium: Bell, H., 3d.

Gould mine, Black Hills, uranium: Bright, J. H.

## Mineral deposits—Continued

## South Dakota—Continued

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Marble area, dolomite: Deiss, C. F.

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Black Hills, uranium, structural control: King, J. W., 2.

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## Mineral deposits—Continued

## Wyoming—Continued

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Fremont County, Wind River formation, uranium: Grant, S. C.

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- Sedimentary rocks, calcium-magnesium ratios: Boardman, D. C.
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- Silicate analyses, conversion factors: Green, J., 2.
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