

**Geologic Map Index
of
Michigan
1843-1962**

Geological Survey Division Department of Natural Resources

1970

**GEOLOGIC MAP INDEX OF MICHIGAN
1843-1962**

by
Edward A. Kirkby

Lansing, Michigan 1970

STATE OF MICHIGAN
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It shall be the duty of the state geological survey to make or cause to be made, a thorough geological and mineralogical survey of the state, embracing a determination of the succession and arrangement, thickness, and position of all strata and rocks; their mineral character and contents, and their economical uses, ... The investigation of all deposits of brines, coal, marl, clay, gypsum, lime, petroleum, and metals and metallic ores, building stone, marble, gritstone, materials for mortar and cement, mineral paint, and all other productions of the geological world within the limits of this state capable of being converted to the uses of man.

--Act 65 of the public acts of 1869

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FOREWORD

Good maps are valued because they provide an immediate and accurate portrayal of a given area. Geologic maps, in particular, are veritable storehouses of basic information needed in resource planning and management.

This circular is a comprehensive listing of published maps relating to the geology and mineral resources of Michigan. Though primarily intended as a research aid for geologic investigations, this reference report is also useful in other fields. The primary list (commencing on page 9) is supplemented by two indexes: one listed by area (page 1), the other by author (page 51). A brief explanation precedes each. Sources are given on page vi.

The present edition is essentially a reprint of Mr. Kirkby's initial report issued in 1963 in an informal 8½" x 11" mimeographed format. The Survey hopes to issue an updated and revised edition in the future.

Lansing, Michigan
April 1970

Gerald E. Eddy
State Geologist

SOURCES

- Karpinski, Louis C, 1931, Bibliography of the Printed Maps of Michigan, 1804-1880: Mich. Historical Comm.
- Michigan Academy of Science (Annual Reports, and Papers).
- Michigan Geological Survey (Annual Reports, Progress Reports, Publications, Technical Reports, and Volumes).
- Michigan Geological Survey Publication 50, 1956, Index of maps in Michigan Geological Survey publications, p. 97-111.
- U.S. Geological Survey (Annual Reports, Bulletins, Circulars, Field Study Maps, Folios, Geologic Maps, Geophysical Investigations Maps, Monographs, Professional Papers, and Water-Supply Papers).
- U.S. Geological Survey Geologic Map Index of Michigan, 1953.
- American Journal of Science.
- Bulletin of the American Association of Petroleum Geologists.
- Economic Geology.
- Geological Society of America Bulletin.
- Journal of Geology.

ABBREVIATIONS

A.A.P.G. Bull.	- <i>Bulletin of the American Association of Petroleum Geologists</i>
acad.	- <i>academy</i>
agr.	- <i>agriculture</i>
Am. Jour. Sci.	- <i>American Journal of Science</i>
ann.	- <i>annual</i>
approx.	- <i>approximate</i>
assoc.	- <i>association</i>
bull.	- <i>bulletin</i>
circ.	- <i>circular</i>
co.	- <i>company</i>
comm.	- <i>commission</i>
conserve.	- <i>conservation</i>
Cong.	- <i>Congress</i>
dept.	- <i>department</i>
div.	- <i>division</i>
doc.	- <i>document</i>
E	- <i>East</i>
econ.	- <i>economic</i>
Econ. Geology	- <i>Economic Geology</i>
excur.	- <i>excursion</i>
fig.	- <i>figures (s)</i>
ft.	- <i>feet</i>
geol.	- <i>geological</i>
GP	- <i>geophysical investigation</i>
GQ	- <i>geological quadrangle</i>
G.S.A. Bull.	- <i>Geological Society of American Bulletin</i>
Ill.	- <i>Illinois</i>
in.	- <i>inch</i>
inst.	- <i>institute</i>
internat.	- <i>international</i>
inv.	- <i>investigation</i>
jour.	- <i>journal</i>
Jour. Geology	- <i>The Journal of Geology</i>
Lat.	- <i>Latitude</i>
Long.	- <i>Longitude</i>
MF	- <i>minerals investigations field studies</i>
Mich.	- <i>Michigan</i>
Minn.	- <i>Minnesota</i>
mon.	- <i>monograph</i>
mtg.	- <i>meeting</i>
N	- <i>north</i>
natl.	- <i>national</i>
no.	- <i>number</i>
p.	- <i>pages (s)</i>
pl.	- <i>plates (s)</i>

- prelim. - preliminary
- proc. - proceedings
- prof. - professional
- prog. - progress
- pt. - part
- pub. - publication
- R - range
- repr. - reprint
- rept. - report
- S - south
- sci. - science
- sec. - section
- ser. - series
- sess. - session
- soc. - society
- spec. - special
- strat. - stratigraphic
- T - township
- tech. - technical
- U.S.B.M. - United States Bureau of Mines
- U.S.G.S. - United States Geological Survey
- v. - volume
- W - west
- Wis. - Wisconsin
- x-Sec. - cross section (s)

PART I AREA INDEX

This index provides a convenient locator to the complete map listing that follows in Part II. It is divided into the following area categories: Entire State (Michigan), Lower Peninsula, Upper Peninsula, Counties, Areas adjacent to Michigan.

Numbers appearing with all entries refer to map numbers listed chronologically in Part II.

Michigan

Bedrock: 1866-1, 1873-1, 1902-2, 1905-1a, 1916-2, 1933-1b, 1936-2a-b; also see Lower Peninsula, Upper Peninsula, and specific counties.

Bedrock (most of state): 1892-1a.

Surface formations: 1917-3a-b, 1955-4a-b; also see Lower Peninsula, Upper Peninsula, and specific counties.

Surface formations (Wisconsin drift subdivisions): 1929-2c.

Lower Peninsula

Bedrock: 1843-1, 1876-1, 1880-1, 1895-2, 1906-1a, 1912-2b, 1914-1, 1915-1a, 1915-2a, 1916-1, 1917-2b, 1926-1, 1928-1, 1933-1a, 1933-1a, 1936-1, 1936-2a.

Bedrock (part of Lower Peninsula)

Marshall and Coldwater formations: 1948-2.

Northern: 1940-2a, 1948-4b.

Pennsylvanian formations: 1936-4b.

Saginaw and Grand River groups: 1936-4c.

Southeastern: 1915-2b, 1917-1f, 1935-6, 1946-1, 1951-5.

Straits of Mackinac area: 1945-1, 1959-6a.

Also see specific L.P. counties.

Surface formations: 1908-2, 1912-2a, 1915-1a, 1917-3b, 1924-1, 1955-4a.

Surface formations (part of Lower Peninsula)

Central region: 1951-2, 1953-3.

Southeastern: 1908-1, 1951-6b.

Southwestern: 1899-3, 1947-2.

Southern half: 1902-1a.

Straits of Mackinac area: 1959-6b.

Also see specific L.P. counties.

Upper Peninsula

Bedrock: 1847-1, 1851-1a, 1873-2a, 1936-2b, 1947-4b.

Bedrock (part of Upper Peninsula)

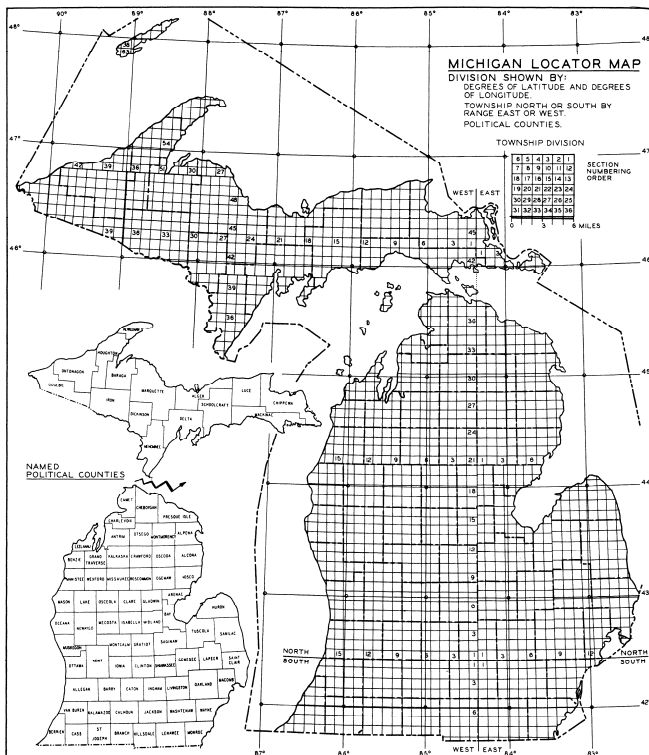
Cambrian: 1958-2a.

Cambrian and Ordovician: 1948-6.

Central region: 1849-1a-b, 1851-1a, 1873-2b, 1912-1, 1915-4b, 1933-2, 1961-1a.

Eastern half: 1948-4b, 1957-1a.

[Index Map]



Eastern two-thirds: 1914-1, 1916-1, 1917-2b, 1926-1.
Most of: 1883-1a, 1883-1a, 1899-2a, 1935-2, 1959-7a.
Straits of Mackinac area: 1945-1, 1959-6a.
Western half: 1890-1a, 1915-3a, 1929-1a, 1956-6c, 1958-1, 1959-5a, 1961-1a.
Also see specific U.P. counties.

Surface formations: 1911-3, 1917-3a, 1929-2a, 1955-4b.

Surface formations (part of Upper Peninsula)
Eastern half: 1948-4a.
Southeastern: 1905-1a.
Straits of Mackinac area: 1959-6b.
Also see specific U.P. counties.

Counties

Alcona
Surface formations (part of county): 1921-1a.

Alger
Bedrock: 1928-2, 1937-3.
Bedrock (part of county): 1958-2b.
Surface formations: 1928-3, 1936-3c-d.
Surface formations (part of county): 1936-6.

Allegan
Bedrock: 1938-1b.
Bedrock (part of county): 1958-5a.
Surface formations: 1938-1a.
Surface formations (part of county): 1958-5a.

Alpena
Bedrock: 1924-2, 1927-5-
Bedrock (part of county): 1937-4.
Surface formations: 1924-3.
Surface formations (part of county): 1921-1a.

Antrim
Bedrock: 1923-1.
Surface formations: 1923-1.
Surface formations (part of county): 1921-1a, 1938-3.

Arenac
Bedrock: 1912-3a, 1937-1a.
Surface formations: 1912-3b, 1937-1a.

Baraga
Bedrock (part of county): 1849-1a, 1849-1a-g, 1849-1j-k, 1873-2c, 1895-1a, 1897-1a-c, 1899-1a, 1899-2b, 1899-2b, 1899-2k-m, 1911-1i, 1911-1k, 1940-3b, 1944-1a, 1945-4b, 1954-12.
Surface formations (part of county): 1929-2b.

Bay
Surface formations: 1906-2a.

Benzie
Surface formations (part of county): 1917-4a-b, 1922-1a-b, 1947-3a-f.

Berrien
Surface formations (part of county): 1955-5.

Charlevoix
Bedrock: 1927-1.
Bedrock (part of county): 1949-3c.
Surface formations: 1927-1, 1938-3.
Surface formations (part of county): 1915-1e, 1921-1a.

Cheboygan
Bedrock (part of county): 1940-2b-c, 1949-3b.
Surface formations (part of county): 1938-3.

Chippewa
Bedrock: 1926-2, 1928-4, 1958-3a.
Bedrock (part of county): 1957-1e-f.
Surface formations: 1926-3, 1958-3b.

Clinton
Bedrock (part of county): 1936-4a.
Surface formations (part of county): 1915-1d, 1962-1.

Crawford
Surface formations: 1927-2.
Surface formations (part of county): 1921-1a-b.

Delta
Bedrock: 1960-2a.
Bedrock (part of county): 1950-1, 1957-1a.
Surface formations: 1960-2b.

Dickinson
Bedrock (part of county): 1873-2d, 1893-1, 1899-1a, 1899-2b, 1899-2g, 1899-2i-m, 1901-1a, 1904-1a-y, 1911-1a, 1933-5, 1936-8, 1938-2a, 1939-1, 1939-2b, 1940-3b, 1941-1, 1942-1, 1942-2a-c, 1943-1a-c, 1950-2b, 1953-1, 1958-2d, 1958-6a-f, 1959-1a, 1961-1a-e, 1961-1g-p.
Surface formations (part of county): 1907-1a.

Eaton
Bedrock (part of county): 1933-3, 1936-4a.

Emmet
Bedrock (part of county): 1949-3c
Surface formations: 1938-3.

Gogebic
Bedrock (part of county): 1849-1a, 1883-1a-d, 1883-2g, 1888-1, 1890-1a, 1892-1b-f, 1901-1a, 1907-1a, 1909-1a, 1911-1a, 1911-2b, 1915-3b-d, 1915-4a, 1917-5, 1929-1b, 1929-1L, 1933-4b-d, 1938-1, 1940-3a, 1951-3a.
Surface formations (part of county): 1951-3b.

Gratiot
Surface formations (part of county): 1915-1d.

Houghton
Bedrock (part of county): 1849-1a, 1849-1e-g, 1849-1i-j, 1873-2, 1883-1a, 1898-2f-g, 1911-1i, 1911-2b-e, 1929-1a, 1929-1a-j, 1933-4b, 1938-5, 1941-2a, 1947-4a, 1951-1, 1953-2, 1955-1, 1956-1-4, 1959-7b.

Surface formations (part of county): 1929-2b.

Huron
 Bedrock: 1900-3a.
 Surface formations: 1900-3b.

Iron
 Bedrock: 1929-3.
 Bedrock (part of county): 1849-1g, 1873-2c-d, 1893-1, 1895-3, 1897-1a-b, 1899-1a-b, 1899-2b-f, 1899-2h, 1899-2k-m, 1910-1a-b, 1911-lg-h, 1940-3b, 1947-1, 1948-1, 1948-5a-b, 1949-4, 1949-5a-c, 1950-2a-b, 1951-4, 1952-1a-b, 1954-12, 1956-6a-b, 1956-6e-f, 1958-6a-b, 1958-6m-o, 1959-1a-d, 1959-1a-g, 1959-2a-b, 1959-5b, 1961-1a.
 Surface formations: 1930-1, 1932-2, 1935-4.
 Surface formations (part of county): 1907-1a, 1929-2b, 1948-3, 1956-6d, 1959-1e.

Kalamazoo
 Surface formations (part of county): 1955-5, 1960-1.

Kalkaska
 Bedrock: 1927-3.
 Surface formations: 1927-3-
 Surface formations (part of county): 1921-1a-b.

Kent
 Bedrock (part of county): 1954-6b.
 Surface formations (part of county): 1954-6a.

Keweenaw
 Bedrock: 1849-1a, 1849-1e, 1849-1i, 1873-2, 1883-1a, 1911-1i, 1911-2b, 1929-1a, 1933-4b, 1947-4a.
 Bedrock (part of county): 1849-1d, 1849-1h, 1851-1a, 1883-1e, 1898-1a-b, 1898-2a-e, 1898-2h-j, 1909-1d, 1911-2a, 1911-2c, 1929-1a-f, 1953-2, 1954-1-5, 1955-1-3, 1959-7b.

Lapeer
 Surface formations: 1902-3.
 Surface formations (part of county): 1953-4.

Lenawee
 Surface formations (part of county): 1902-1a, 1906-1a.

Luce
 Bedrock: 1959-3a.
 Bedrock (part of county): 1957-1d-e.
 Surface formations: 1929-4, 1931-2, 1936-3a, 1936-3d, 1959-3b.

Mackinac
 Bedrock: 1958-4a,
 Bedrock (part of county): 1957-1d-f.
 Surface formations: 1958-4b.

Macomb
 Bedrock (part of county): 1952-2b.
 Surface formations (part of county): 1906-1a, 1906-1a, 1917-1a-b, 1937-2c, 1951-6a, 1952-2a, 1953-4.

Marquette
 Bedrock (part of county): 1849-1a, 1849-1g, 1849-1k, 1873-2c, 1873-2e, 1881-1, 1893-2a-b, 1895-1a-c, 1896-1a-jj, 1897-1a-d, 1898-1a, 1899-1a, 1899-2b, 1899-2h, 1899-2k-m, 1901-1a, 1911-1a-e, 1911-1j, 1914-2, 1914-3, 1915-3e, 1933-4a, 1933-5, 1935-1, 1935-5a-b, 1935-7, 1936-8, 1938-2a-b, 1938-4, 1939-1, 1939-2a, 1940-3b, 1944-1a-e, 1945-2, 1945-4a-b, 1952-3, 1954-12, 1956-5, 1958-2b-c, 1961-2.
 Surface formations (part of county): 1907-1a, 1954-9.

Menominee
 Bedrock: 1925-1.
 Bedrock (part of county): 1904-1v-w, 1933-5, 1936-8, 1938-2a.
 Surface formations: 1925-2.
 Surface formations (part of county): 1907-1a.

Missaukee
 Surface formations (part of county): 1921-1a.

Monroe
 Bedrock: 1900-2a.
 Surface formations: 1900-2b.
 Surface formations (part of county): 1902-1a, 1906-1a, 1917-1c, 1917-1e, 1935-3.

Montmorency
 Bedrock: 1940-1a-b.
 Surface formations: 1931-1, 1940-1a.
 Surface formations (part of county): 1921-1a.

Oakland
 Bedrock: 1954-10b, 1954-11.
 Bedrock (part of county): 1952-2b.
 Surface formations: 1945-3, 1952-2a, 1954-8, 1954-10a.
 Surface formations (part of county): 1906-1a, 1906-1e, 1917-1a, 1917-1d, 1935-8, 1937-2b-c, 1937-7, 1951-6a, 1953-4.

Ogemaw
 Bedrock: 1923-2, 1936-5b.
 Surface formations: 1923-2, 1936-5a.

Ontonagon
 Bedrock (part of county): 1849-1f, 1849-1j, 1863-1, 1883-1a-d, 1906-2b, 1909-1a, 1911-1a, 1911-1i, 1911-2b, 1911-2e-f, 1917-2a, 1929-1a, 1929-1i-L, 1933-4b, 1941-2b, 1961-5.

Oscoda
 Surface formations (part of county): 1921-1a.

Otsego
 Surface formations: 1921-1a.
 Surface formations (part of county): 1938-3.

Ottawa
 Bedrock (part of county): 1958-5a.
 Surface formations (part of county): 1958-5b.

Presque Isle
 Bedrock (part of county): 1937-4, 1940-2d, 1949-3a-b.

Roscommon
 Bedrock: 1925-3.
 Surface formations: 1925-3, 1927-4.
 Surface formations (part of county): 1921-1a.

Saginaw
 Surface formations (part of county): 1915-1d.

Sanilac
 Bedrock: 1900-4.
 Surface formations: 1900-4.
 Surface formations (part of county): 1915-1g.

Schoolcraft
 Bedrock: 1959-4a.
 Bedrock (part of county): 1957-1a-c, 1958-2b.
 Surface formations: 1932-1, 1936-3b, 1936-3d, 1959-4b.

Shiawassee
 Surface formations (part of county): 1915-1d.

St. Clair
 Surface formations (part of county): 1906-1g, 1915-1g-h, 1953-4.

Tuscola
 Bedrock: 1909-1c.
 Surface formations: 1909-1b.

Van Buren
 Surface formations: 1954-7.
 Surface formations (part of county): 1906-1d, 1955-5.

Washtenaw
 Bedrock (part of county): 1952-2b.
 Surface formations (part of county): 1906-1a, 1937-2a, 1949-1, 1952-2a.

Wayne
 Bedrock: 1913-1a, 1952-2b.
 Surface formations: 1913-1a, 1952-2a.
 Surface formations (part of county): 1915-1a, 1915-1i, 1917-1a-e, 1935-3, 1937-2a-b, 1949-1, 1951-6a.

Wexford
 Surface formations: 1949-2.

Bedrock: 1847-1, 1883-1a, 1892-1a, 1899-2a, 1929-1a, 1935-2, 1959-7a, 1961-4.
 Surface formations: 1929-2a.
 Drift age: 1929-2c.

Ohio
 Bedrock (part of state): 1935-6, 1946-1, 1951-5.
 Surface formations: 1902-1a.
 Surface formations (part of state): 1902-1a.
 Drift age: 1929-2c.

Ontario (part of province)
 Bedrock: 1847-1, 1851-1a, 1873-2a, 1883-1a, 1883-1e, 1892-1a, 1899-2a, 1929-1a, 1946-1, 1959-7a, 1961-4.
 Surface formations: 1902-1a, 1915-1a.
 Drift age: 1929-2c.

Pennsylvania (part of state)
 Surface formations: 1902-1a.
 Drift age: 1929-2c.

Wisconsin (part of state)
 Bedrock: 1847-1, 1883-1a, 1883-1d, 1883-1a, 1888-1, 1890-1a, 1892-1a-e, 1899-2a, 1901-1a, 1911-1a, 1911-1h, 1915-3a, 1915-4b, 1929-1a, 1933-4c, 1935-2, 1938-1, 1950-2a-b, 1958-6a, 1958-6m, 1959-7a, 1961-4.
 Surface formations: 1929-2a.
 Drift age: 1929-2c.

#

Areas adjacent to Michigan

Illinois (part of state)
 Surface formations:
 Drift age: 1929-2c.

Indiana (part of state)
 Surface formations: 1902-1a.
 Drift age: 1929-2c.

Lake Erie (part of lake)
 Bedrock: 1946-1.

Lake Huron (part of lake)
 Bedrock: 1961-3.

Minnesota (part of state)

PART II MAP LIST

This part consists of a chronologic listing of published geological maps of Michigan.

Each entry carries a reference number, the first part of which is the year of publication. The digit following the year of publication indicates the order of appearance of that particular publication during the year. Individual maps included in any given publication are grouped together and identified by adding letters of the alphabet.

Component parts of each citation are given in the following order: Title, source, page, author, date, areal coverage, scale, size of map in inches horizontal and vertical. Compiler's remarks follow in parentheses.

- 1843-1. Geologic map of the middle and western states: Natural History of New York, pt. 4, D. Houghton, Albany, N.Y., 1843; Mich. Geol. Survey Pub. 50, map 1, 19560 Coverage: Lower Peninsula. 1 in. to approx. 35 mi.; 9 x 12; color (The map description and measurements were taken from map 1, Pub. 50).
- 1847-1. A geological map of the mineral region from the official plats of the United States Surveys and chart of Lake Superior reduced from the survey and chart of Liet. Byfield (Bayfield) of the R.N. (Royal Navy): J. Farmer, July 1847. Coverage: Upper Peninsula; pt. of Wis., Minn., Lake Superior coast of Ontario. 1 in. to approx. 12 mi.; 42 x 21½. (Many place names are also shown).
- 1849-1a. Geological map of a district of township lines in the Northern Peninsula of Michigan: U. S. 31st Cong., 1st Sess., Senate Exec. Doc. 1; House Exec. Doc. 5, W. A. Burt, 1849. Coverage: T41-42N, R24-35W; T43-50N, R27-35W. 1 in. to approx. 7 mi.; 13 x 11.
- b. Geological map of township lines in the Northern Peninsula of Michigan: *Ibid.*, W. A. Burt. Coverage: T38-47N, R20-23W; T41-48N, R24-26W. 1 in. to approx. 7 mi.; 8 x 12. (Geology of many areas is not shown.)
- c. Geological map of townships in the Northern Peninsula of Michigan subdivided by D. Houghton D.S. in the year 1845: *Ibid.*, D. Houghton. Coverage: T51-59N, R26-34W. 1 in. to approx. 7 mi.; 11 x 10½.
- d. Geological map of Isle Royale, Lake Superior, Michigan: *Ibid.*, J. W. Foster and J. D. Whitney, and others. 1 in. to approx. 2 mi.; 25½ x 21; color.
- e. Geological map of Keweenaw Point, Lake Superior, Michigan: *Ibid.*, J. W. Foster and J. D. Whitney, and others. Coverage: T55-59N, R26-35W. 1 in. to approx. 3 mi.; 23½ x 13½; color.
- f. Geological map of the district between Portage Lake and Montreal River, Lake Superior, Michigan: *Ibid.*, J. W. Foster and J. D. Whitney, and others. Coverage: Sec. 4-9, 16-21, 28-33, T47-50N, R33W; T47-54N, R34-49W. 1 in. to approx. 3 mi.; 38½ x 20; color.
- g. Geological map of the district between Keweenaw Bay and Chocolate River, Lake Superior, Michigan: *Ibid.*, J. W. Foster and J. D. Whitney. Coverage: Sec. 1-24, T46N, R24-33W; T47-53N, R24-33W. 1 in. to approx. 3 mi.; 24 x 20½; color.
- 1849h. Geological map of Isle Royale, Lake Superior: *Ibid.*, C. T. Jackson. 1 in. to approx. 2 mi.; 23½ x 17.
- i. Geological map of Keweenaw Point, Lake Superior: *Ibid.*, C. T. Jackson. Coverage: Sec. 1-12, T54W, R32-33W; sec. 1-5, 8-12, T54N, R34W; sec. 1-5, 8-17, 20-29, 32-36, T55-56N, R34W; T55-59N, R27-33W. 1 in. to approx. 2 mi.; 24 x 15; color.
- j. Geological map of a district, E. & W. of the Ontonagon subdivided by Messrs. Higgins and Hubbard under a contract bearing date April 23, 1846: *Ibid.*, S. E. Higgins and B. Hubbard. Coverage: T51-55N, R34-44W. 1 in. to approx. 3½ mi.; 19½ x 12.
- k. Geological map of the district subdivided by Messrs. Hubbard & Ives under contract bearing date Sept. 7th, 1846: *Ibid.*, B. Hubbard and W. Ives. Coverage: T49-50N, R25-26W; T51-53N, R26-32W. 1 in. to approx. 3½ mi.; 17 x 9.
- 1851-1a. Geological map of the Lake Superior Land District in the State of Michigan: U. S. 32nd Cong., Spec. Sess., Executive Doc. 4, J. W. Foster and J. D. Whitney, 1851. Coverage: Lat. 45° to 49°, Long. 83° 31'; to 92° 30'. 1 in. to approx. 11 mi.; 39 x 28; color. (Upper Peninsula, Isle Royale and other islands, and most of the Lake Superior coastline of Ontario.)

- b. Section and diagram illustrating the geology of the region between the northern shores of Lakes Superior and Michigan: *Ibid.* Approx. coverage: T32-34N, R27W; T34.-38N, R28W; T39N, R29-31W; T40-44N, R31W; T44N, R30W; T45-46N, R29W; T50N, R33W; T51-58N, R32-34W; T64-65N, R35-36W. 1 in. to approx. 5½ mi.; 49 x 8½ ; color.
- 1863-1. Geological map, Rockland and Pewabic townships, Ontonagon County, Michigan: R. L. Barnes, S. H. Broughton, 1863. Coverage: Sec. 1-8, T49N, R40W; sec. 1-22, 29-30, T49N, R41W; sec. 5-7, 18, T50N, R38W; sec. 1-34, T50N, R39W; sec. 11-17, 19-36, T50N, R40W; sec. 24-27, 32-36, T50N, R41W; sec. 22-23, 26-29, 31-36, T51N, R39W. 1 in. to approx. 2,700 ft.; 13½ x 46. (x-Sec. included. Compiled by S. H. Broughton, Sept. 1859. Published and sold by R. L. Barnes.)
- 1863-2. Geological map of trap range of Keweenaw Point, Lake Superior: R. L. Barnes, W. H. Stevens, S. W. Hill, and C. P. Williams, 1863. Approx. coverage: T55-56N, R33-34W; T56N, R32W; T57-58N, R27-33W; T59N, R27-30W. 1 in. to approx. 2 mi.; 50 x 20; color. (x-Sec. included. Published and sold by R. L. Barnes.)
- 1866-1. Geological map of Michigan: S. Geil, A. Winchell, 1866. 1 in. to approx. 25 mi.; 21 x 21; color. (An epitome of the geology of Michigan, mining companies, salt, wells, and county populations are shown in the legend. Published by S. Geil.)
- 1873-1. Map of the State of Michigan, colored to show geological formations: Atlas of the State of Michigan (by H. F. Walling), p. 38-39, A. Winchell, 1873. Coverage: entire State excluding Isle Royale. 1 in. to approx. 25 mi.; 23½ x 17½; color. (This is the 1869 geological map of Michigan prepared by State Geologist Winchell.)
- 1873-2a. Map of the Upper Peninsula: Mich. Geol. Survey v. 1, pt. 1., atlas, pl. 1, C. L. Rominger, R. Fumpelly, and T. B. Brooks, 1873. Approx. coverage: Lat. 45° 20' to 47° 50', Long. 6° 30' to 130 30'. Scale, 1:823,680. 1 in. to 13 mi.; 28 x 22; color. (Longitude west from Washington, D. C.)
- b. Map of the central portion of the Upper Peninsula, Michigan: *Ibid.*, pl. 2, T. B. Brooks. Coverage: T26-52N, R18-35W. 1 in. to 4 mi.; 28 x 34½. (Compiled from U. S. Linear Surveys, the Lake Survey, Farmer's maps, Hulbert's maps, and various railroad surveys.)
- 1873-2c. Map of the Marquette iron region, Upper Peninsula, Michigan: *Ibid.*, pl. 3. T. B. Brooks. Coverage: T45-48N, R30-31W; T46-48N, R29W; T47-48N, R25-28W; T45-46N, R25W; sec. 5-8, 17-20, 29-32, T45N, R29W; sec. 1-4, T46N, R27W; sec. 1-15, 23-26, 35-36, T46N, R26W; sec. 1-2, 11-14, 23-26, 35-36, T45N, R26W. Scale, 1:84,480. 1 in. to 7,040 ft.; 36 x 21½; color. (x-Sec. included. Geology of some areas is not shown.)
- d. Map of Menominee iron region, Upper Peninsula, Michigan: *Ibid.*, pl. 4, T. B. Brooks. Coverage: T39-43N, R28-32W. Scale, 1:84,480. 1 in. to 7,040 ft.; 28 x 26; color. (x-Sec. included. Geology of some areas is not shown.)
- e. Map of Republic mountain and vicinity in secs. 7 and 18, T46N, R29W, Marquette Co., Michigan: *Ibid.*, pl. 6, T. B. Brooks, Scale 1:4,800. 1 in. to 400 ft.; 21½ x 28; color. (x-Sec. included. Geology of some areas is not shown. Map dated 1869.)
- 1876-1. Geological map of the Lower Peninsula: Mich. Geol. Survey v. 3, C. Rominger, 1876. Scale, 1:823,680. 1 in. to 13 mi.; 19½ x 21; color. (Railroads are also shown.)
- 1880-1. Geological map of Lower Peninsula of Michigan: History of Berrien and Van Buren counties, Michigan, pl. 1, F. Ellis, 1880. 1 in. to approx. 32 mi.; 8½ x 10½; color. (Probably a copy of 1876-1, but no credit was given C. Rominger.)
- 1881-1. Geological map of the environs of Marquette, Negaunee and Ishpeming: Michigan Geol. Survey v. 4, pt. 1, C. Rominger, 1881. Coverage: T47-48N, R26-28W; T48N, R25W; Sec. 1-9, T47N, R25W. Scale, 1:42,240. 1 in. to 3,520 ft.; 33 x 21; color.
- 1883-1a. Geological map of the Lake Superior basin: U.S.G.S. Mon. 5, pl. 1, R. D. Irving, 1883. Approx. coverage: Lat. 45° 20' to 49° 10', Long. 84° to 93° 20'. Scale, 1:2,000,000. 1 in. to approx. 32 mi.; 17 x 11½; color.
- b. Geological map of Keweenaw Point, Michigan: *Ibid.*, pl. 17; pl. 18, x-Sec. Coverage: T55-59N, R27-34W. 1 in. to approx. 3 mi.; 19½ x 11½; color.
- c. Geological map of the Porcupine Mountains, Michigan: *Ibid.*, pl. 19; pl. 20, 21, x-Sec. Coverage: T49-51N, R42-45W. Scale, 1:125,000. 1 in. to approx. 2 mi.; 18 x 11½; color.

- d. Geological map of the region between the Ontonagon River, Michigan and Numakagon Lake, Wisconsin: Ibid., pl. 22. Coverage: T45-51N, R41-48W; Wis., pt. of T44- 50N, R6E-6W. Scale, 1:300,000. 1 in. to approx. 5 mi.; 23 x 11½; color.
- e. Geological map of Isle Royale and neighboring mainland (Ontario): Ibid., pl. 27. Scale, 1:875,000. 1 in. to approx. 14 mi.; 11½ x 9; color. (x-Sec. included.)
- f. Map of the Lake Superior basin designed to show the structure and extent of the Keweenaw trough: Ibid., pl. 28. Approx. coverage: Lat. 45° to 49°, Long. 84° to 93°. Scale, 1:2,000,000. 1 in. to approx. 32 mi.; 16½ x 11½; color.
- g. Map of exposures in vicinity of West Branch of Ontonagon River, T46N, R41W, Michigan: Ibid., p. 204, fig. 3. Coverage: sec. 11-14, T46N, R41W. Scale, 1:25,000. 1 in. to approx. 2,080 ft.; 5 x 4.
- h. Map of exposures on upper Carp River, Porcupine Mountains. One inch = 90 paces: Ibid., p. 215, fig. 4. Coverage: Sec. 19, T51N, R42W. Scale, 1:3,246. 1 in. to 270 ft.; 3 x 3½.
- 1888-1. Geological map of the Penokee-Gogebic iron region: U.S.G.S. 7th Ann. Rept. (1885-86), pl. 43, R. D. Irving, 1888. Coverage: T45-47N, R44-47W; Wis., T43-46N, R5E-7W. Scale, 1:507,000, 1 in. to approx. 8 mi.; 11½ x 7½ color. (x-Sec. included.)
- 1890-1a. Preliminary geological map of the northwest: U.S.G.S. 10th Ann. Rept. (1888-89), pt. 1, pl. 20, R. D. Irving and C. R. Van Hise, 1890. Coverage: Lat. 43° to 49°, Long. 87° to 94°. Scale, 1:4,000,000. 1 in. to approx. 64 mi.; 7½ x 11½; color.
- b. General geological map of the Penokee region: Ibid., pl. 21. Coverage: Sec. 4-9, T46N, R42W; sec. 1-12, T46N, R43-47W; sec. 6-8, 17-21, 28-33, T47N, R42W; T47N, R43-47W; Wis., pt. of T44-46N, R3E-5W. Scale, 1:187,500. 1 in. to approx. 3 mi.; 27 x 11½; color. (x-Sec. included. Geology of some areas is not shown.)
- 1892-1a. Preliminary geological map of the northwest: U.S.G.S. Mon. 19, pl. 1, R. D. Irving, 1892. Approx. coverage: Lat. 42° 10' to 50°, Long. 81° to 98°. Scale, 1:4,000,000. 1 in. to approx. 64 mi.; 13 x 9; color.
- 1b. General geological map of the Penokee district: Ibid., pl. 2, R. D. Irving, and C. R. Van Hise. Approx. coverage: Sec. 4-9, T46N, R42W; sec. 1-2, 11-12, T46N, R47W; T47N, R43-47W; Wis., pt. of T43-46N, R2E-7W. 1 in. to approx. 3 mi.; 31½ x 11½; color. (x-Sec. included.)
- c. Reproduction of Whittlesey's geological map of Penokee range and surrounding region: Ibid., pl. 4, R. D. Irving, and C. R. Van Hise. Approx. coverage: T47- 49N, R34-49W; sec. 20-36, T50N, R45W; pt. of Wis. 1 in. to approx. 12 mi.; 11½ x 9. (Geology of some areas is not shown.)
- d. Detailed geology of the Penokee district, sheet 4: Ibid., pl. 10, R. D. Irving, and C. R. Van Hise. Coverage: Sec. 13-36, T47N, R47W; sec. 1-2, 11-13, T46N, R47W; Wis., pt. of T45-46N, R2-3E. 1 in. to approx. 1 mi.; 16½ x 11½. (x-Sec. included. Geology of some areas is not shown.)
- e. Detailed geology of the Penokee district, sheet 5: Ibid., pl. 12, R. D. Irving, and C. R. Van Hise. Coverage: T47N, R45-46W. 1 in. to approx. 1 mi.; 16½ x 11½. (x-Sec. included. Geology of some areas is not shown.)
- f. Detailed geology of the Penokee district, sheet 6: Ibid., pl. 13, R. D. Irving and C. R. Van Hise. Coverage: Sec. 4-9, T46N, R42W; sec. 1-12, T46N, R43-44W; sec. 7-8, 17-21, 28-33, T47N, R42W; sec. 7-36, T47N, R43-44W. 1 in. to approx. 1 mi.; 18½ x 11½. (x-Sec. included. Geology of some areas is not shown.)
- 1893-1. Menominee range east of the Menominee River: Lake Superior Mining Inst. Proc. (1893), p. 19, N. P. Hulst, 1893. Coverage: T39-40N, R28-31W. Scale, 1:125,000. 1 in. to approx. 2 mi.; 17i x 8. (Geology of some areas is not shown.)
- 1893-2a. NW¼ NE¼ sec. 18, T46N, R29W, Mich. The map is from a tracing of a manuscript copy of Brook's map, 1 inch = 200 feet, in the possession of the Republic Iron Co. The area represented, on the large, covers a little more than the NW¼ of the NE¼ of sec. 18, T46N, R29W. The sketch to small scale shows the relation to the trough as a whole (Fig. v.): Jour. Geology, v. 1, p. 260, H. L. Smyth, Apr.-May 1893. Scale, 1:3,600. 1 in. to 300 ft.; 4 x 4.
- b. (Small scale sketch shows the relation to trough as a whole): Ibid., p. 271, fig. 5. Approx. coverage: Sec. 7, 18, T46N, R29W. Scale, 1:31,680. 1 in. to 2,640 ft.; 2 x 2½.

- 1895-1a. General geological map of the Marquette district: U.S.G.S. 15th Ann. Rept. (1893-94), pl. 13, C. R. Van Hise, and W. S. Bayley, 1895; pl. 14, 15, x-Sec. Coverage: Sec. 19-23, 26-36, T48N, R25W; sec. 6-7, T47N, R24W; sec. 1-20, 29-32, T47N, R25W; sec. 19-36, T48N, R26-30W; T47N, R26-30W; sec. 24-25, 36, T48N, R31W; sec. 1, 12-13, 24-25, 36, T47N, R31W; sec. 4-9, 16-18, T46N, R29W; sec. 1-2, 11-14, T46N, R30W. Scale 1:62,500, 1 inch to approx. 1 mi.; 40 x 11½; color.
- b. Geological map of area north of Clarksburg: Ibid., pl. 18. Coverage: Sec. 29-32, T48N, R28W; sec. 25-26, T48N, R29W. Scale, 1:12,000. 1 in. to 1,000 ft.; 17 x 11½; color. (x-Sec. included.)
- c. Geological map of the southern part of the Republic trough: Ibid., pl. 25. Coverage: Sec. 6-7, T46N, R29W; sec. 1, 12, T46N, R30W; sec. 35, T47N, R30W. Scale, 1:21,120. 1 in. to approx. 1,767 ft.; 17 x 11½; color. (x-Sec. included.)
- 1895-2. Lower Michigan: Mich. Geol. Survey v. 5, pt. 2, unnumbered pl., A. C. Lane, 1895. 1 in. to approx. 32 mi.; 20½ x 28. (pl. 67-72, x-Sec. Map dated 1893. Railroads are also shown.)
- 1895-3. Preliminary map of part of the Michigamme district. Scale 1 in. to 4 miles: Jour. Geology, v. 3, p. 803, pl. 1, J. M. Clements, Oct.-Nov. 1895. Coverage: T44-46N, R32-33W. Scale, 1:250,000. 1 in. to approx. 4 mi.; 2½ x 4½. (Geology of some areas is not shown.)
- 1896-1a. General geological map of the Marquette district: U.S.G.S. Mon. 28, atlas, sheet 4, C. R. Van Hise, and W. S. Bayley, 1896. Coverage: Sec. 19-36, T48N, R25-30W; T47N, R26-30W; sec. 1-12, 18-20, 29-32, T47N, R25W; sec. 6-7, T47N, R24W; sec. 4-9, 16-18, T46N, R29W; sec. 1, 12-13, T46N, R30W. Scale, 1:62,500. 1 in. to approx. 1 mi.; 41½ x 22; color. (x-Sec. included.)
- b. The southwest quarter of T48N, R30W: Ibid., sheet 5. (All maps 1896-1a - 1896-1j are scale 1:16,000; 1 in. to 1,320 ft.; 18½ x 22; color, with x-Sec. included and "Detailed Geology" appearing at the top of each sheet.)
- c. The northwest quarter of T47N, R30W: Ibid., sheet 6. (See 1896-1a.)
- d. The southwest quarter of T47N, R30W: Ibid., sheet 7. (See 1896-1b.)
- e. The southeast quarter of T48N, R30W: Ibid., sheet 8. (See 1896-1b.)
- f. The northeast quarter of T47N, R30W: Ibid., sheet 9. (See 1896-1b.)
- g. The southeast quarter of T47N, R30W: Ibid., sheet 10. (See 1896-1b.)
- h. The southern part of the Republic trough: Ibid., sheet 11. Approx. coverage: Sec. 5-8, 17-18, T46N, R29W; sec. 1-2, 11-12, T46N, R30W. (See 1896-1b.)
- i. The southwest quarter of T48N, R29W: Ibid., sheet 12. (See 1896-1b.)
- j. The northwest quarter of T47N, R29W: Ibid., sheet 13. (See 1896-1b.)
- k. The southwest quarter of T47N, R29W: Ibid., sheet 14. (See 1896-1b.)
- l. The southeast quarter of T48N, R29W: Ibid., sheet 15. (See 1896-1b.)
- m. The northeast quarter of T47N, R29W: Ibid., sheet 16. (See 1896-1b.)
- n. The southeast quarter of T47N, R29W: Ibid., sheet 17. (See 1896-1b.)
- o. The southwest quarter of T48N, R28W: Ibid., sheet 18. (See 1896-1b.)
- p. The northwest quarter of T47N, R28W: Ibid., sheet 19. (See 1896-1b.)
- q. The southwest quarter of T47N, R28W: Ibid., sheet 20. (See 1896-1b.)
- r. The southeast quarter of T48N, R28W: Ibid., sheet 21. (See 1896-1b.)
- s. The northeast quarter of T47N, R28W: Ibid., sheet 22. (See 1896-1b.)
- t. The southeast quarter of T47N, R28W: Ibid., sheet 23. (See 1896-1b.)
- u. The southwest quarter of T48N, R27W: Ibid., sheet 24. (See 1896-1b.)
- v. The northwest quarter of T47N, R27W: Ibid., sheet 25. (See 1896-1b.)
- w. The southwest quarter of T47N, R27W: Ibid., sheet 26. (See 1896-1b.)
- x. The southeast quarter of T48N, R27W: Ibid., sheet 27. (See 1896-1b.)
- y. The northeast quarter of T47N, R27W: Ibid., sheet 28. (See 1896-1b.)
- z. The southeast quarter of T47N, R27W: Ibid., sheet 29. (See 1896-1b.)
- aa. The southwest quarter of T48N, R26W: Ibid., sheet 30. (See 1896-1b.)
- bb. The northwest quarter of T47N, R26W: Ibid., sheet 31. (See 1896-1b.)

- cc. The southwest quarter of T47N, R26W: Ibid., sheet 32. (See 1896-1b.)
- dd. The southeast quarter of T48N, R26W: Ibid., sheet 33. (See 1896-1b.)
- ee. The northeast quarter of T47N, R26W: Ibid., sheet 34. (See 1896-1b.)
- ff. The southeast quarter of T47N, R26W: Ibid., sheet 35. (See 1896-1b.)
- gg. The southwest quarter of T48N, R25W: Ibid., sheet 36. (See 1896-1b.)
- hh. The northeast quarter of T47N, R25W: Ibid., sheet 37. (See 1896-1b.)
- ii. The southeast quarter of T48N, R25W: Ibid., sheet 38. (See 1896-1b.)
- jj. The northeast quarter of T47N, R25W: Ibid., sheet 39. (See 1896-1b.)
- 1897-1a. Portions of Burt's, Hubbard's, and Ives' maps of the Upper Peninsula of Michigan; U.S.G.S. Mon. 28, pl. 1, W. S. Bayley, 1897. Coverage: T46-49N, R25-31W. 1 in. to approx. 6 mi.; 11 x 8½. (Geology of many areas is not shown.)
 - b. Portion of Foster and Whitney's map of the Lake Superior land district: Ibid., pl. 2. Coverage: T46-49N, R25-31W. 1 in. to approx. 6 mi.; 11 x 8½.
 - c. Portion of Brooks' map of the Upper Peninsula of Michigan: Ibid., pl. 3, fig. 1. Coverage: T47-49N, R25-31W. 1 in. to approx. 8 mi.; 8½ x 5.
- 1897-1d. Irving's outline map of the Marquette district: Ibid., pl. 3, fig. 2. Approx. coverage: Sec. 1-18, T47N, R25-27W; T48N, R25-27W. 1 in. to approx. 4 mi.; 6 x 8½.
- 1898-1a. Geological map of Isle Royale, Lake Superior, Michigan: Mich. Geol. Survey v. 6, pt. 1, pl. 1, A. C. Lane, 1898. Scale, 1:100,000. 1 in. to approx. 1½ mi.; 37 x 9½; color. (Map dated 1897.)
 - b. Map of Isle Royale, Lake Superior, Michigan, showing some of its geological and vein phenomena: Ibid., pl. 12, S. W. Hill. Scale, 1:250,000. 1 in. to approx. 4 mi.; 13 x 10. (Pl. 13, x-Sec. Map dated 1871.)
 - c. Lighthouse Point, Marquette County, sec. 24, T48N, R25W: Ibid., pl. 15, A. E. Seaman. Scale, 1:1,800. 1 in. to 150 ft.; 10 x 6½.
- 1898-2a. Fish Cove Knob, Keweenaw Point, Michigan: Mich. Geol. Survey v. 6, pt. 2, pl. 1, L. L. Hubbard, and others, 1898. Coverage: Sec. 26, 35, T58N, R28W. Scale, 1:3,000. 1 in. to 250 ft.; 11½ x 9½.
- b. Geological map of a part of Keweenaw Point, Michigan: Ibid., pl. 2, L. L. Hubbard. Coverage: Sec. 26-27, T58N, R28W. Scale, 1:3,000. 1 in. to 250 ft.; 24 x 19; color. (Map dated 1895.)
- c. Sketch map of the end of Keweenaw Point, Michigan showing the boundaries of the principal geological formations: Ibid., pl. 4. Coverage: T58-59N, R27-29W. Scale, 1:62,500. 1 in. to approx. 1 mi.; 18 x 10.
- d. Bare Hill, sec. 29, T58N, R28W, Keweenaw Point, Michigan: Ibid., pl. 5. Scale, 1:9,000. 1 in. to 750 ft.; 10 ½ x 9 ½. (Fig. 6, x-Sec.)
- e. Map of a part of the Allouez Gap area, Keweenaw Point, Michigan, showing the location of some of the principal beds of the Keweenaw series: Ibid., pl. 7. Coverage: Sec. 27-28, 31-34, T57N, R32W; sec. 3-9, T56N, R32W. 1 in. to 2,600 ft.; 10½ x 11½.
- f. Sketch map of a part of the Portage Lake area, Lake Superior, Michigan, showing the position of the principal conglomerate beds: Ibid., pl. 8. Coverage: Sec. 1-5, 7-12, 14-24, 27-34, T55N, R33W; sec. 13, 23-27, 34-36, T55N, R34W; sec. 1-3, T54N, R34W. 1 in. to approx. 2,600 ft.; 21½ x 18. (Geology of some areas is not shown.)
- g. Map of the copper range in T54N, R34W and adjacent parts, Houghton County, Michigan, showing the location of the principal beds: Ibid., pl. 10. Coverage: Sec. 6-7, T54N, R34W; sec. 1-22, 28-33, T54N, R34W; sec. 1, 12-13, 24-25, 36, T54N, R35W; sec. 30, 36, T55N, R33W; sec. 25-28, 32-36, T55N, R34W. 1 in. to approx. 2,600 ft.; 18 x 19. (Geology of some areas is not shown.)
- h. Geological basin of the Bohemia conglomerate, Keweenaw Point, Mich., showing the union of the three conglomerate beds: Ibid., p. 29, fig. 3. Coverage: Sec. 21-22, 26-27, T58N, R28W. Scale, 1:20,000. 1 in. to approx. 1,667 ft.; 10 x 6½.
- i. Sketch map of the Mt. Houghton area, Keweenaw Point: Ibid., p. 40, fig. 4. Coverage: Sec. 23-24, T58N, R29W. Scale, 1:20,000. 1 in. to approx. 1,667 ft.; 6½ x 4½.
- j. Sketch map of the Mt. Bohemia area, Keweenaw Point: Ibid., p. 72, fig. 8. Coverage: Sec. 29-32, T58N, R29W. Scale, 1:36,000. 1 in. to 3,000 ft.; 4 x 3.

- 1899-1a. Geological map of the Crystal Falls district, Michigan, including a portion of the Marquette district, Michigan: U.S.G.S. 19th Ann. Rept. (1897-98), pt. 3, pl. 2, W. S. Bayley, and others, 1899; pl. 3, 4, x-Sec. Approx. coverage: Lat. 45° 55' to 46°, Long. 87° 45' to 88° 30'. Scale, 1:125,000. 1 in. to approx. 2 mi.; 21 x 21½; color. (Geology of some areas is not shown.)
- b. Ideal structural map and detailed geological map with sections to show the distribution and structure of the Huronian rocks in the vicinity of Crystal Falls, Michigan: U.S.G.S. 19th Ann. Rept. (1897-98), pt. 3, pl. 8, J. M. Clements, and others, 1899; Mon. 36, pl. 14, 1899. Approx. coverage: Sec. 5-8, 17-20, T42N, R31W; sec. 1-24, T42N, R32W; sec. 1, 12-13, 24-25, T42N, R33W; sec. 7-8, 17-22, 29-32, T43N, R31W; sec. 7-36, T43N, R32W; sec. 12-13, 24-25, 36, T43N, R33W. Scale, 1:125,000. 1 in. to approx. 2 mi.; 11½ x 7½.
- 1899-2a. Geologic map of part of the Lake Superior region, showing relative position of the Menominee area with respect to the other Huronian areas: U.S.G.S. Mon. 36, pl. 1, 1899; 19th Ann. Rept. (1897-98), pt. 3, pl. 1, 1899; 21st Ann. Rept. (1899-1900), pt. 3, pl. 40, 1901; Mon. 46, pl. 1, 1904. Approx. coverage: Lat. 44° 20' to 49°, Long. 84° 10' to 93° 40'. 1 in. to approx. 42 mi.; 17 x 11½; color. (A different color scheme is used for the map in 21st Ann. Rept., and Mon. 46.)
- b. Geological map of the Crystal Falls district, Michigan, including a portion of the Marquette district, Michigan: U.S.G.S. Mon. 36, pl. 3, C. R. Van Hise, and others, 1899; pl. 5, 6, x-Sec. Approx. coverage: Lat. 45° 55' to 46° 30', Long. 87° 45' to 88° 55'. Scale, 1:125,000. 1 in. to approx. 2 mi.; 21 x 21; color. (Geology of some areas is not shown.)
- c. Portion of a geological map of the Menominee iron region, by T. B. Brooks and C. E. Wright: *Ibid.*, pl. 4, J. M. Clements. Coverage: T42N, R31-32W. 1 in. to approx. 1½ mi.; 11½ x 8½. (Geology of many areas is not shown.)
- d. Detail geological map of vicinity of Amasa, Michigan: *Ibid.*, pl. 16, J. M. Clements, and H. L. Smyth. Coverage: Sec. 32-34, T45N, R33W; sec. 3-5, 8-10, 15-17, T44N, R33W. Scale, 1:31,680. 1 in. to 2,640 ft.; 8½ x 11½; color.
- e. Detail geological map of the vicinity of Crystal Falls and Mansfield, sheet 1; *Ibid.*, pl. 17, J. M. Clements, and H. L. Smyth. Coverage: Sec. 11-14, 23-26, 35-36, T43N, R33W; sec. 7-36, T43N, R32W; sec. 7-8, 17-20, 29-32, T43N, R31W. 1 in. to approx. 2,640 ft.; 22 x 11½; color.
- f. Detail geological map of the vicinity of Crystal Falls and Mansfield, sheet 2: *Ibid.*, pl. 18, J. M. Clements, and H. L. Smyth. Coverage: Sec. 35-36, T43N, R33W; sec. 31-36, T43N, R32W; sec. 31-32, T43N, R31W; sec. 1-2, 11-14, 23-24, T42N, R33W; sec. 1-24, T42N, R32W; sec. 5-8, 17-20, T42N, R31W. 1 in. to approx. 2,640 ft.; 22 x 11½; color.
- g. Geological map of the Felch Mountain range: *Ibid.*, pl. 49, H. L. Smyth. Coverage: Sec. 31-33, T42N, R28W; sec. 31-36, T42N, R29W; sec. 34-36, T42N, R30W. Scale, 1:31,680. 1 in. to 2,640 ft.; 17 x 11½; color. (x-Sec. included.)
- h. Geological map of a portion of the Crystal Falls district, west of Republic: *Ibid.*, pl. 50, H. L. Smyth. Coverage: Sec. 21-28, 33-36, T47N, R31W; sec. 1-4, 9-16, 21-28, 33-36, T46N, R31W; sec. 1-4, 9-16, T45N, R31W; sec. 19-22, 27-34, T47N, R30W; sec. 3-10, 15-22, 27-34, T46N, R30W; sec. 3-10, 15-18, T45N, R30W. Scale, 1:62,500. 1 in. to approx. 1 mi.; 11½ x 16½; color.
- 1899-2i. Geological map of Sturgeon River tongue: *Ibid.*, pl. 51, W. S. Bayley. Coverage: Sec. 6-7, 18-19, T42N, R27W; sec. 1-24, T42N, R28W; sec. 1-3, 10-15, 22-24, T42N, R29W; sec. 19, 30-31, T43N, R27W; sec. 19-36, T43N, R28W; sec. 22-27, 34-36, T43N, R29W. Scale, 1:62,500. 1 in. to approx. 1 mi.; 17 x 11½; color.
- j. Map of exposures in sec. 7 and in portions of secs. 8, 17, and 18, T42N, R28W, Michigan, vicinity of dam on east branch of Sturgeon River: *Ibid.*, pl. 52, W. S. Bayley. Scale, 1:31,680. 1 in. to 2,640 ft.; 8½ x 11½.
- k. Reproduction of a portion of the geological map of the Upper Peninsula of Michigan by Wm. A. Burt, 1846: *Ibid.*, p. 15, fig. 1, J. M. Clement S. Coverage: T42-47N, R28-33W. 1 in, to approx. 8 mi.; 5 x 5.
- l. Enlarged reproduction of a portion of a map of the Lake Superior land district by Foster and Whitney: *Ibid.*, p. 17, fig. 2, J. M. Clements. Coverage: T42-47N, R28-33W. 1 in. to approx. 8 mi.; 5 x 5.

- m. Enlarged reproduction of portion of a geological map of the Upper Peninsula of Michigan by C. Rominger, T. B. Brooks, and R. Pumpelly, 1873: *Ibid.*, p. 18, fig. 3, J. M. Clements. Coverage: T42-47N, R28-33W. 1 in. to approx. 8 mi.; 5 x 5.
- 1899-3. Pleistocene map of southwestern Michigan: U.S.G.S. Mon. 38, pl. 15, F. Leverett, 1899. Approx. coverage: Lat. 41° 40' to 43°, Long. 85° 20' to 87°. Scale, 1:750,000. 1 in. to approx. 12 mi.; 9 x 11½; color. (Geology of some areas is not shown. Map dated 1898.)
- 1900-1. Economic geology, Menominee special map: U.S.G.S. Folio 62, C. R. Van Hise, W. S. Bayley, and J. M. Clements, 1900, Mich, coverage: Lat. 45° 44' to 45° 55', Long. 87° 44' to 88° 09'. Scale, 1:62,500. 1 in. to approx. 1 mi.; 35 x 22; color. (Bedrock. x-Sec. included. Geology of some areas is not shown.)
- 1900-2a. Bedrock geology (Paleozoic) of Monroe County: Mich. Geol. Survey v. 7, pt. 1, pl. 1, W. H. Sherzer, and others, 1900. Scale, 1:125,000. 1 in. to approx. 2 mi., 18 x 15½. (Map dated 1899.)
- b. Surface geology (Pleistocene) of Monroe County: *Ibid.*, pl. 7. Scale 1:125,000 1 in. to approx. 2 mi.; 17½ x 6½.
- 1900-3a. Bedrock geology (Paleozoic) of Huron County: Mich. Geol. Survey v. 7, pt. 2, pl. 7, A. C. Lane, and others, 1900. Scale, 1:125,000. 1 in. to approx. 2 mi.; 27½ x 23; color. (x-Sec. included. Map dated 1897.)
- b. Surface geology (Pleistocene) of Huron County: *Ibid.*, pl. 8. Scale, 1:125,000. 1 in. to approx. 2 mi.; 27½ x 23; color. (x-Sec. included. Map dated 1897.)
- 1900-4. Sanilac County, Michigan, geology: Mich. Geol. Survey v. 7, pt. 3, pl. 5, C. H. Gordon, 1900. Scale, 1:160,000. 1 in. to approx. 2½ mi.; 16½ x 10½. (Bedrock, and surface formations are shown. Pl. 2, x-Sec. Map dated 1897.)
- 1901-1a. Geological map of part of the Penokee-Gogebic district: U.S.G.S. 21st Ann. Rept. (1899-1900), pt. 3, pl. 49, R. D. Irving, and C. R. Van Hise, 1901. Coverage: T47N, R45-46W; sec. 8-36, T47N, R47W; sec. 1-12, T46N, R45-46W; sec. 1-2, 11-12, T46N, R47W; Wis., pt. of T45-46N, R1-3E. Scale, 1:187,500. 1 in. to approx. 3 mi.; 11½ x 7½; color. (x-Sec. included.)
- b. Geological map of part of the Marquette district: *Ibid.*, pl. 52, C. R. Van Hise, and W. S. Bayley; pl. 53, x-Sec. Coverage: Sec. 27-34, T48N, R26W; sec. 25-36, T48N, R27W; sec. 3-10, 15-22, 27-34, T47N, R26W; T47N, R27W. Scale, 1:62,500. 1 in. to approx. 1 mi.; 14½ x 11½; color.
- 1901-1c. Geological map of a part of the Menominee district: *Ibid.*, pl. 55, C. R. Van Hise, W. S. Bayley, and J. M. Clements. Coverage: Sec. 6-7, 19, T39N, R28W; sec. 1-18, T39N, R29W; sec. 1-15, T39N, R30W; sec. 1-3, 11-12, T39N, R31W; sec. 7-8, 16-22, 25-30, T40N, R29W; sec. 13-36, T40N, R30W; sec. 13-14, 23-27, 33-36, T40N, R31W. Scale, 1:62,500. 1 in. to approx. 1 mi.; 21 x 11½. (x-Sec. included.)
- 1902-1a. Glacial map of area discussed and some outlying districts: U.S.G.S. Mon. 41, pl. 2, F. Leverett and others, 1902. Approx. coverage: Lat. 38° 30' to 44°, Long. 76° to 86° 30'. 1 in. to approx. 45 mi.; 17 x 11½; color. (Geology of some areas is not shown. Map dated 1900.)
- b. Map of the Scioto glacial lobe: *Ibid.*, pl. 13. Approx. coverage: Lat. 38° 50' to 42°, Long. 80° 55' to 84° 05'. Scale, 1:1,250,000. 1 in. to approx. 20 mi.; 11½ x 17; color.
- 1902-2. Geological map of Michigan: Mich. Geol. Survey v. 8, pt. 2, unnumbered pl., A. C. Lane, 1902; Ann. Rept. (1901), unnumbered pl., 1902; Ann. Rept. (1903), pl. 6, 1905. 1 in. to 56 mi.; 8½ x 10; color. (Printed over a base map showing towns, railroads and highways. Map in Ann. Rept. (1901) is 8½ x 9; in Ann. Rept. (1903), 8½ x 10½.)
- 1902-3. Lapeer County, surface deposits: Mich. Geol. Survey Ann. Rept. (1901), pl. 6, F. B. Taylor, 1902. Scale, 1:375,000. 1 in. to approx. 6 mi.; 6 x 9.
- 1904-1a. Portion of geologic map of Menominee iron region, Upper Peninsula, Michigan: U.S.G.S. Mon. 46, pl. 3, T. B. Brooks, 1904. Coverage: T39-40N, R28-31W. 1 in. to approx. 2½ mi.; 11½ x 9; color. (Geology of many areas is not shown. This plate is a reprint, without alteration of data, of Mich. Geol. Survey v. 1, pt. 1, atlas, pl. 14, T. B. Brooks, 1873.)
- b. Portion of geologic map of Menominee iron region: *Ibid.*, pl. 4, T. B. Brooks, and C. E. Wright. Coverage: T38-40N, R28-31W. 1 in. to approx. 2½ mi.; 11½ x 9; color. (Geology of many areas is not shown. This plate is a reprint, without alteration of data, of Atlas of the Geol. Survey of Wis., p. 28, T. B. Brooks, and C. E. Wright, 1879.)

- c. Outline geologic map of the Menominee iron region: Ibid., pl. 5, R. D. Irving. Coverage: T39-40N, R28-30W. Scale, 1:187,500. 1 in. to approx. 3 mi.; 9 x 11½; color. (Compiled by R. D. Irving from maps by T. B. Brooks, C. E. Wright, and C. Rominger, and from original observations. Map dated 1890.)
- d. Geologic map of Menominee iron district, Michigan: Ibid., pl. 9, C. R. Van Hise, W. S. Bayley, and J. M. Clements. Coverage: Lat. 45° 44' to 45° 55', Long. 87° 44' to 88° 09'. Scale, 1:62,500. 1 in. to approx. 1 mi.; 2¼ x 18½; color. (x-Sec. included.)
- e. Sketch map of exposures near the contact between the Sturgeon quartzite and the Archean complex, in T40N, R30W, T41N, R29W: Ibid., pl. 14, W. S. Bayley, Coverage: Sec. 1-3, 10-12, T40N, R30W; sec. 29, 31-32, T41N, R29W. 1 in. to approx. 2,640 ft.; 9 x 11½. (Geology of some areas is not shown.)
- f. Maps showing magnetic observations over strips of country bordering areas of Quinnesec schists and Randville dolomite: Ibid., pl. 18, W. S. Bayley. Coverage (three sheets): (A) Sec. 34-35, T40N, R31W; sec. 1-2, 12, T39N, R31W; sec 5-8, T39N, R30W; (B) sec. 1-3, 10-12, T39N, R29W; (C) sec. 23-24, T40N, R31W; sec. 19-21, 27-30, 34, T40N, R30W. 1 in. to approx. 2,640 ft.; 17 x 11½.
- g. Geologic map of Traders and Cornell mines and vicinity, Michigan, NE¼ of NW¼ sec. 20, T40N, R30W and adjacent portions of same section and of sec. 17: Ibid., pl. 24, W. S. Bayley, 1 in. to approx. 225 ft.; 11½ x 17; color. (Geology of some areas is not shown. Map dated 1903.)
- h. Geologic map of the country adjacent to the Cliffs and Indiana mines, Michigan, secs. 21, 22, 23, 26, 27, and 28, T40N, R30W: Ibid., pl. 25, W. S. Bayley. 1 in. to approx. 1,200 ft.; 17 x 11½ color. (Geology of some areas is not shown. Map dated 1903.)
- 1904-1i. Geologic map of the Chapin-Pewabic folds, Michigan, parts of secs. 29, 30, 31, and 32, T40N, R30W: Ibid., pl. 28, W. S. Bayley. 1 in. to 800 ft.; 17 x 11½; color. (x-Sec. included. Map dated 1903.)
- j. Geologic map and section, SE¼ section 32, and a portion of adjacent section 33, T40N, R30W, Michigan: Ibid., pl. 29, W. S. Bayley. 1 in. to approx. 600 ft.; 81 x 11½; color. (Map dated 1903.)
- k. Geologic map and sections of Quinnesec area, Michigan: Ibid., pl. 30. W. S. Bayley. Coverage: Sec. 3-4, T39N, R.30W; sec. 33-34, T40N, R30W, 1 in. to 500 ft.; 17 x 11½; color. (Geology of some areas is not shown. Map dated 1903.)
- l. Geologic map of Norway and Aragon folds and vicinity, Michigan, parts of secs. 4, 5, 8, and 9, T39N, R29W: Ibid., pl. 31, W. S. Bayley; pl. 32, x-Sec. Scale, 1:7,200. 1 in. to 600 ft.; 17 x 11½; color. (Map dated 1903.)
- m. Geologic map of N½ sec. 9, T39N, R29W, including the West Vulcan, Brier Hill, and Curry mines, Michigan: Ibid., pl. 33, W. S. Bayley. 1 in. to approx. 600 ft.; 11½ x 8½; color. (Fig. 42, x-Sec. Map dated 1903.)
- n. Geologic map of Central Vulcan and portion of West Vulcan areas, Michigan, S½ sec. 10, T49N, R29W; Ibid., pl. 34, W. S. Bayley. 1 in. to approx. 370 ft.; 17 x 11½; color. (Map dated 1903.)
- o. Geologic map of East Vulcan and Verona areas, Michigan, SW¼ and W½ SE¼ Sec. 11, T39N, R29W: Ibid., pl. 35, W. S. Bayley. 1 in. to approx. 370 ft.; 17 x 11½; color. (Map dated 1903.)
- p. Geologic map of the Emmett and Breen mines and vicinity, Waucedah, Michigan, N½ sec. 22, T39N, R28W: Ibid., pl. 36, W. S. Bayley. 1 in. to approx. 600 ft.; 11½ x 8½; color. (Geology of some areas is not shown. Map dated 1903.)
- q. Geologic map of portions of secs. 25, 26, 35, and 36, T40N, R31W, Michigan: Ibid., pl. 37, W. S. Bayley. 1 in. to approx. 650 ft.; 17 x 11½; color. (Map dated 1903.)
- r. Geologic map of S½ sec. 33, T40N, R30W, Michigan: Ibid., pl. 38, W. S. Bayley. 1 in. to approx. 650 ft.; 11½ x 8½; color. (Map dated 1903.)
- s. Geologic map of portions of secs. 1 and 2, T39N, R30W, and secs. 35 and 36, T40N, R30W, Michigan: Ibid., pl. 39, W. S. Bayley. 1 in. to approx. 650 ft.; 17 x 11½; color. (Map dated 1903.)
- t. Geologic map of the SE portion of sec. 6, T39N, R29W, Michigan: Ibid., pl. 40, W. S. Bayley. 1 in. to approx. 600 ft.; 11½ x 8½; color. (Map dated 1903.)
- u. Geologic map of portions of secs. 12 and 13, T49N, R29W, Michigan: Ibid., pl. 41, W. S. Bayley. 1 in. to approx. 1,200 ft.; 8½ x 11½; color. (Map dated 1903.)

- v. Portion of the geological map of the Lake Superior land district in the State of Michigan, after Foster and Whitney, 1851: *Ibid.*, p. 38, fig. 2, W. S. Bayley. Coverage: T37-40N, R28-31W. 1 in. to approx. 4 mi.; 5 x 5.
- w. Portion of geological map of the Upper Peninsula of Michigan, after H. Credner, 1869: *Ibid.*, p. 54, fig. 5, W. S. Bayley. Coverage: T38-40N, R27-30W. 1 in. to approx. 6 mi.; 4½ x 3. (Part of legend is in German.)
- 1904-1x. Sketch map of exposures on Black Creek, in S½ sec. 6, T39N, R28W, showing relation of conglomerate to gneisses: *Ibid.*, p. 194, fig. 14, W. S. Bayley. 1 in. to approx. 1,300 ft.; 4 x 1½.
- y. Sketch map of exposures at and near the Falls of the Sturgeon River, sec. 8, T39N, R28W: *Ibid.*, p. 195, fig. 15, W. S. Bayley. 1 in. to approx. 1,300 ft.; 4 x 3.
- 1905-1a. Geological map of Michigan: Mich. Geol. Survey Ann. Rept. (1904), pl. 3, A. C. Lane, 1905; Ann. Rept. (1906), pl. 2, 1907. 1 in. to 56 mi.; 8½ x 10½; color.
- b. Sketch map showing surface geology about the northern shores of Lakes Huron and Michigan: Mich. Geol. Survey Ann. Rept. (1904), pl. 16, I. C. Russell, 1905. Approx. coverage: Lat. 45° 05' to 46° 05', Long. 83° 30' to 87° 35'. Scale, 1:625,000. 1 in. to approx. 10 mi.; 22 x 8½; color. (Coverage includes only northern shore and inland from northern shores.)
- 1906-1a. Map showing geological formations and contours of rock surface of Southern Peninsula of Michigan. Revised from state reports and unpublished data: U.S.G.S. Water-Supply Paper 182, pl. 2, A. C. Lane, 1906; Water-Supply Paper 183, pl. 2, 1907; Mich. Geol. Survey Ann. Rept. (1907), pl. 6, 1908. Scale, 1:250,000. 1 in. to approx. 20 mi.; 15 x 17½; color. (Map dated 1905.)
- b. Map of Troy flowing-well district, Oakland County, showing topographic features in that and bordering districts: U.S.G.S. Water-Supply Paper 182, pl. 5, F. Leverett, and others, 1906. Coverage: Sec. 6-7, 18-19, 30-31, T1-2N, R12E; T1-2N, R10-11E; sec. 1-2, 11-14, 23-26, 35-36, T1N, R9E; sec. 30-31, T3N, R12E; sec. 25-36, T3N, R11E. 1 in. to approx. 2 mi.; 8½ x 9. (Surface formations.)
- c. Map of York and Milan-Cone flowing-well districts: *Ibid.*, p. 28, fig. 4. Coverage: T4-5S, R5-6E, 1 in. to approx. 3 mi.; 4 x 4. (Surface formations.)
- d. Arlington Township flowing wells, Van Buren County: *Ibid.*, p. 124, fig. 16. Coverage: Sec. 1-3, 10-15, 22-24, T2S, R15W. 1 in. to approx. 1½ mi.; 2 x 2½. (Surface formations.)
- e. Map of Rochester, Oakland County, and vicinity, showing distribution of flowing wells: *Ibid.*, p. 195, fig. 27. Coverage: Sec. 1-4, 9-16, 21-24, T3N, R11E. 1 in. to approx. 1 mi.; 3 x 3. (Surface formations.)
- f. Map showing relation of flowing wells in Washington and Ray townships, Macomb County, to lake beaches and moraine: *Ibid.*, p. 201, fig. 28. Coverage: Sec. 1-4, 9-16, 21-28, 33-36, T4N, R12E; sec. 6-7, 18-19, 30-31, T4N, R13E. 1 in. to approx. 1½ mi.; 4 x 4.
- g. Map showing relations of flowing wells in Clyde Township, St. Clair County. Shaded area represents part of Port Huron moraine standing above the old lake level: *Ibid.*, p. 210, fig. 29. Coverage: T7N, R16E. 1 in. to 1½ mile; 4 x 4. (Surface formations.)
- 1906-2a. Surface geology, Bay County: Mich. Geol. Survey Ann. Rept. (1905), pl. 12, W. F. Cooper, 1906. Scale, 1:125,000. 1 in. to approx. 2 mi.; 13½ x 20.
- b. Geological map of a portion of the Porcupine Mountains, Mich.: *Ibid.*, fig. 1, A. C. Lane. Coverage: T50-51N, R42-44W. 1 in. to approx. 4½ mi.; 4 x 3.
- 1907-1a. Sketch map showing surface geology of portions of Menominee, Dickinson and Iron counties, Michigan: Mich. Geol. Survey Ann. Rept. (1906), pl. 3, I. C. Russell, 1907. Coverage: T32-42N, R25-37W; sec. 19-36, T43N, R25-37W. Scale, 1:375,000. 1 in. to approx. 6 mi.; 14 x 13; color. (Map completed posthumously by C. A. Davis.)
- b. Bessemer and the Black River road, prepared as a base for a geological section of the copper bearing or Keweenaw rocks: *Ibid.*, pl. 32, W. C. Gordon, and others. Coverage: Sec. 3-10, 15-16, T47N, R46W; sec. 3-10, 15-22, 27-34, T48N, R46W; sec. 8-10, 15-22, 27-34, T49N, R46W. Scale, 1:31,680. 1 in. to 2,640 feet; 12 x 33; color. (Pl. 33, x-Sec.)
- 1908-1. Areal geology, Ann Arbor quadrangle: U.S.G.S. Folio 155, I. C. Russell, and F. Leverett, 1908. Coverage: Lat. 42° to 42° 30', Long. 83° 30' to 84°. Scale, 1:125,000. 1 in. to approx. 2 mi.; 18 x 22; color. (Surface formations.) Edition of Dec. 1907, reprinted with field revision changes, Dec. 1914.)

- 1908-2. Surface (Pleistocene) geology: Mich. Geol. Survey Ann. Rept. (1907), pl. 12, J. F. Nellist, 1908. Coverage: Lower Peninsula. Scale, 1:375,000. 1 in. to approx. 6 mi.; 42 x 50; color. (Two sheets.)
- 1909-1a. Preliminary geological map of the Porcupine Mountains, and vicinity: Mich. Geol. Survey Ann. Rept. (1908), pl. 1, F. E. Wright and A. C. Lane, 1909; Pub. 24, fig. 1, 1917. Coverage: Sec. 7-8, 17-20, 29-32, T51N, R40W; sec. 3-10, 15-22, 27-34, T49-50N, R41W; sec. 3-10, T48N, R41W; sec. 1-12, T48N, R42-45W; T51N, R41W; T49-51N, R42-45W. 1 in. to approx. 2 mi.; 15½ x 13½.
- b. Map of the surface geology of Tuscola County, Michigan, shows also the general distribution of the soils in the county: Mich. Geol. Survey Ann. Rept. (1908), pl. 5, C. A. Davis, 1909. Scale, 1:125,000. 1 in. to approx. 2 mi.; 16 x 18½.
- c. Map of Tuscola County showing places where coal was reported in well records, the probable extent of the Paleozoic formations, rock surface, flowing well areas, and areas of salty waters: Ibid., pl. 6, C. A. Davis. Scale, 1:125,000. 1 in. to approx. 2 mi.; 16 x 18½.
- d. Map of Mt. Bohemia, Ibid., pl. 8, F. E. Wright. Coverage: Sec. 29, 32, T58N, R29W. Scale, 1:12,000. 1 in. to 1,000 ft.; 6 x 9. (Bedrock. Sketch map.)
- 1910-1a. Geologic map of Iron River district, Michigan: Mich. Geol. Survey Pub. 3, pl. 1, R. C. Allen, 1910. Coverage: T42-44N, R34-35W; sec. 1, 12-13, 24-25, 36, T42-44N, R36W; sec. 1-6, T45N, R34-35W; sec. 1, T45N, R36W. Scale, 1:31,680. 1 in. to 2,640 ft.; 25 x 37½. (Geology of many areas is not shown.)
- b. Geologic section and plat of outcrops near Atkinson: Ibid., p. 93, fig. 15. Coverage: Sec. 3-5, 7-9, 18, T44N, R35W. 1 in. to approx. 1,300 ft.; 19 x 6.
- 1911-1a. Geologic map of the Penokee-Gogebic district, Wisconsin-Michigan: U.S.G.S. Mon. 52, pl. 16, C. R. Van Hise, and R. D. Irving, 1911. Coverage: Sec. 1-2, 11-12, T46N, R47W; sec. 3-9, T46N, R46W; sec. 1-6, T48N, R43-45W; T47N, R43-46W; sec. 13-36, T47N, R47W; sec. 7-8, 17-21, 28-33, T47N, R42W; sec. 6, T48N, R42W; Wis., pt. of T44-46N, R6W-3E. Scale, 1:90,000. 1 in. to approx. 1½ mi.; 55 x 11½; color. (Revised to Jan. 1, 1909.)
- b. Map of Carp River fault, Michigan: Ibid., pl. 18, W. N. Smith. Coverage: Sec. 4-6, T47N, R25W. Scale, 1:16,000. 1 in. to approx. 1,300 ft.; 11½ x 8½; color. (Geology of some areas is not shown. Map dated 1909.)
- 1911-1c. Detailed map of quartzite ridges of Teal Lake, Michigan, showing faulting and unconformity of Ajibik quartzite and Mesnard quartzite: Ibid., pl. 19, A. E. Seaman. Coverage: Sec. 31-33, T48N, R27W. Scale, 1:8,400. 1 in. to 700 ft.; 23½ x 11½; color. (Geology of many areas is not shown. Map dated 1909.)
- d. Geologic map of Dead River area, Michigan: Ibid., pl. 20, A. E. Seaman. Coverage: Sec. 33-34, T50N, R28W; sec. 1, 9-15, T49N, R29W; sec. 3-10, 15-36, T49N, R28W; sec. 1-5, 9-14, 23-25, T48N, R28W; sec. 29-34, T49N, R27W; sec. 1-24, 29-30, T48N, R27W; sec. 6-9, 15-18, T48N, R26W. Scale, 1:62,500. 1 in. to approx. 1 mi.; 21 x 14½. (Map dated 1910.)
- e. Map of Perch Lake district, showing distribution of outcrops: Ibid., pl. 21, C. R. Van Hise and others. Coverage: Lat. 46° 15', to 46° 30', Long. 88° 30' to 88° 45'. Scale, 1:62,500. 1 in. to approx. 1 mi.; 15 x 20.
- f. Geologic map of the Calumet district, Michigan: Ibid., pl. 23, C. K. Leith. Coverage: T41N, R27-30W. Scale, 1:90,000. 1 in. to approx. 1½ mi.; 19½ x 11½; color. (Map dated 1909.)
- g. Geologic map of Iron River district, Michigan: Ibid., pl. 24, R. C. Allen. Approx. coverage: Lat. 45° 58' to 46° 15', Long. 88° 30' to 88° 45'. Scale, 1:45,000. 1 in. to 3,750 ft.; 19 x 28½ color. (Formations undetermined in many areas. Map dated 1909.)
- h. Outcrop maps of the Florence iron district, Wisconsin: Ibid., pl. 25, C. R. Van Hise, and others. Coverage: Sec. 13-18, 22-25, T41N, R31W; Wis., pt. of T38-40N, R17-19E. Scale, 1:62,500. 1 in. to approx. 1 mi.; 19½ x 17. (Outcrops superimposed on geologic map of this area by W. N. Merriam, 1904, partly revised by W. O. Hotchkiss, 1910. Map dated 1910.)
- i. Geologic map of Keweenaw Point copper district, Michigan: Ibid., pl. 28, A. E. Seaman. Coverage: T51-58N, R27-44W. Scale, 1:250,000. 1 in. to approx. 4 mi.; 27½ x 14½; color. (Map revised by A. E. Seaman. Map dated 1909.)

- j. Outcrop map of Swanzy district, Michigan. Compiled from information furnished by Cleveland-Cliffs Iron Company and others: Ibid., p. 284, fig. 41, C. R. Van Hise, and others. Coverage: Sec. 17-20, T45N, R24W; sec. 13-36, T45N, R25W. Scale, 1:62,500. 1 in. to approx. 1 mi.; 8½ x 4½.
- k. Geologic map of west end of Marquette district, Michigan: Ibid., p. 289, fig. 42, W. N. Merriam and M. H. Newman. Coverage: Sec. 2-11, 14-24, 26-36, T48N, R31W. Scale, 1:93,750. 1 in. to approx. 1 mi.; 5 x 4½.
- 1911-2a. Geological map of Isle Royale, Lake Superior, Michigan: Mich. Geol. Survey Pub. 6, v. 1, pl. 1, A. C. Lane, 1911. Scale, 1:100,000. 1 in. to approx. 1½ mi.; 37 x 12½; color. (Bedrock. Map dated 1897. Pub. 6, v. 1, is part of Ann. Rept. (1909). All the maps in Pub. 6, v. 1, are marked Ann. Rept. for 1909.)
- b. Keweenaw copper range: Ibid., pl. 8, A. C. Lane. Approx. coverage: T46N, R46W; T47N, R44-47W; T48N, R42-48W; T49N, R40-47W; T50N, R39-45W; T51N, R36-43W; T52N, R34-39W; T53-59N, R27-38W. Scale, 1:250,000. 1 in. to approx. 4 mi.; 41½ x 9. (Geology of some areas is not shown. Second edition. Also an index map. Mines, mills and smelters are shown.)
- c. Calumet: Ibid., pl. 9, A. H. Meuche, and others. Approx. coverage: Lat. 47° 09' to 47° 22', Long. 88° 18' to 88° 37'. Scale, 1:62,500. 1 in. to approx. 1 mi.; 18 x 18½. (Bedrock.)
- 1911-2d. Map of the copper range in T54N, R34W and adjacent parts, Houghton County, Michigan, showing the location of the principal beds: Ibid., pl. 10, L. L. Hubbard. Coverage: Sec. 6-7, T54N, R33W; sec. 1-22, 28-33, T54N, R34W; sec. 1, 12-13, 24-25, 36, T54N, R35W; sec. 30-31, T55N, R33W; sec. 25-28, 32-36, T55N, R34W. Scale, 1:31,680. 1 in. to 2,640 ft.; 19½ x 20. (Geology of some areas is not shown. Map dated 1898.)
- e. Map of the copper range in T51N, R37W and adjacent parts, Ontonagon County, Michigan, showing the location of the mines and principal beds: Ibid., pl. 13, A. H. Meuche, and others. Coverage: Sec. 25, T50N, R30W; sec. 6-7, 18-19, T51N, R36W; sec. 1-24, 27-34, T51N, R37W; sec. 1, 12-13, 24-25, 36, T51N, R38W; sec. 31, T52N, R36W; sec. 31-36, T52N, R37W; sec. 36, T52N, R38W. Scale, 1:31,680. 1 in. to 2,640 ft.; 19½ x 19½. (Geology of some areas is not shown.)
- f. Map of the copper range in T50N, R39W, and adjacent parts, Ontonagon County, Michigan, showing the location of the mines and principal beds: Ibid., pl. 14, A. H. Meuche, and others. Coverage: Sec. 4-9, 18, T50N, R38W; sec. 1-24, 26-32, T50N, R39W; sec. 30-31, T51N, R37W; sec. 25-28, 33-36, T51N, R38W. Scale, 1:31,680. 1 in. to 2,640 ft.; 22½ x 19.
- 1911-3. Map of the surface formations of the Northern Peninsula of Michigan: Mich. Geol. Survey Pub. 7, pl. 1, F. Leverett, 1911. Scale, 1:380,160. 1 in. to 6 mi.; 59 x 31½; color.
- 1912-1. Sketch map of Menominee ranges showing distribution of iron formation: Mich. Geol. Survey Pub. 8, p. 146, fig. 5, R. C. Allen, 1912. Coverage: T39-45N, R27-39W. Scale, 1:375,000. 1 in. to approx. 6 mi.; 15 x 8½.
- 1912-2a. Map of the surface formations of the Southern Peninsula of Michigan: Mich. Geol. Survey Pub. 9, pl. 1, F. Leverett, 1912. Scale, 1:1,000,000. 1 in. to approx. 16 miles; 16½ x 24; color. (Map dated 1911.)
- b. Geological formations and rock contours of Southern Peninsula of Michigan: Ibid., pl. 2, A. C. Lane. 1 in. to approx. 20 mi.; 14½ x 17.
- 1912-3a. Geological map of the Paleozoic formations of Arenac County, Michigan: Mich. Geol. Survey Pub. 11, pl. 1, W. M. Gregory, and others, 1912. Scale, 1:62,500. 1 in. to approx. 1 mi.; 34 x 20. (Fig. 4, x-Sec.)
- b. Map of Arenac County showing artesian well area, former beach line and soils; Ibid., pl. 2, W. M. Gregory. 1 in. to approx. 2 mi.; 19 x 13.
- 1913-1a. Map of Wayne County, Michigan, showing surface features: Mich. Geol. Survey Pub. 12, pl. 10, W. H. Sherzer, 1913. Scale, 1:62,500. 1 in. to approx. 1 mi.; 40½ x 33; color.
- b. Map of Wayne County, Michigan, showing hard rock and artesian well conditions; Ibid., pl. 25. Scale, 1:62,500. 1 in. to approx. 1 mi.; 40 x 33; color.
- 1914-1. Outline geological map of Michigan showing Paleozoic formations and the location of deep borings: Mich. Geol. Survey Pub. 14, p. 21, fig. 2, R. A. Smith, 1914. Coverage: T9S-52N, R13E-30W. 1 in. to approx. 40 mi.; 9½ x 14. (Fig. 1, x-Sec. from Manistee to Port Rowan, Ontario.)

- 1914-2. Geological map of the Pre-Cambrian formations of the Gwinn iron bearing district of Michigan: Jour. Geology, v. 22, no. 6, p. 566, R. C. Allen, and O. R. Hamilton, Sept.-Oct. 1914. Coverage: Sec. 17-22, 27-36, T45N, R25W; sec. 1-6, T44N, R25W. Scale, 1:42,240. 1 in. to 3,520 ft. (x-Sec. included. Geology of some areas is not shown.)
- 1914-3. Plat of outcrops in T45N, R24W, near Little Lake Michigan: Jour. Geology, v. 22, no. 6, p. 577, R. C. Allen, and L. P. Barrett, Sept.-Oct. 1914. Coverage: Sec. 18-19, T45N, R24W. Scale, 1:4,800. 1 in. to 400 ft.; 6 x 4. (x-Sec. included.)
- 1915-1a. Geologic map of the Southern Peninsula of Michigan, showing contours of bedrock surface: U.S.G.S. Mon. 53, pl. 2, F. Leverett, and F. B. Taylor, 1915. Scale, 1:1,000,000. 1 in. to approx. 16 mi.; 17 x 22½; color. (After maps by A. C. Lane, 1905, with modification of geologic names. Map dated 1914.)
- b. Glacial map of Southern Peninsula of Michigan: *Ibid.*, pl. 7, F. Leverett, and F. B. Taylor. Scale, 1:1,000,000. 1 in. to approx. 16 mi.; 17 x 22½ color. (Map dated 1914.)
- c. Map of the distributaries of Detroit River: *Ibid.*, pl. 31, F. B. Taylor. Approx. coverage: Lat. 42° 01' to 42° 13', Long. 83° 03' to 83° 14'. Scale, 1:62,500. 1 in. to approx. 1 mi.; 11½ x 18½; color. (Map dated 1914.)
- d. Map showing relation of Flint and Owosso moraines to the Grand River channel: *Ibid.*, p. 258, fig. 1, F. Leverett. Approx. coverage: Sec. 4-9, 16-21, 28-33, T7-10N, R1E; T7-10N, R1-3W; sec. 1-2, 11-14, 23-26, 35-36, T7-10N, R4W; sec. 28-33, T11N, R1E; sec. 25-36, T11N, R1-3W; sec. 25-26, 35-36, T11N, R4W. Scale, 1:250,000. 1 in. to approx. 4 mi.; 6 x 5½. (Geology of some areas is not shown.)
- e. Map of part of drumlin area south and east of Charlevoix, Mich.: *Ibid.*, p. 311, fig. 2, F. B. Taylor. Coverage: T32-33N, R7-9W; sec. 25-30, 32-36, T34N, R7W; sec. 26-28, 31-35, T34N, R8W. Scale, 1:187,500. 1 in. to approx. 3 mi.; 6 x 5½.
- f. Drumlins in T33N, R7W, Charlevoix County, Mich.: *Ibid.*, p. 312, fig. 3, F. B. Taylor. Scale, 1:62,500. 1 in. to approx. 1 mi.; 5½ x 5. (Algonquin beaches are also shown.)
- g. Map showing relations of Whittlesey, Arkona, and Warren beaches to one another and to the Port Huron morainic system: *Ibid.*, p. 366, fig. 5, F. B. Taylor. Approx. coverage: Sec. 1, 12-13, 24-25, 36, T6-10N, R14E; T6-10N, R15-17E; sec. 1-2, 11-14, 23-26, 35-36, TUN, R14E; T11N, R15-16E. Scale, 1:250,000. 1 in. to approx. 4 mi.; 4½ x 8½.
- h. Map of the distributaries, gravelly river bars, the St. Clair esker, and other features near St. Clair, Mich. The river occupied both sides of the esker, but the space between the esker and the Canadian bank of the river is not now swampy and shows evidence of such occupation only in the gravelly bars south of St. Clair: *Ibid.*, p. 474, fig. 10, F. B. Taylor. Approx. coverage: T3-5N, R16E. Scale, 1:187,500. 1 in. to approx. 3 mi.; 3 x 7½. (Geology of some areas is not shown.)
- i. Map showing distributaries of Detroit River and delta in Lake Rouge: *Ibid.*, p. 485, fig. 13, F. B. Taylor. Approx. coverage: Sec. 1-12, T3W, R11E; T2S, R11-13E; adjacent Ontario area. Scale, 1:160,000. 1 in. to approx. 2½ mi.; 6 x 4. (Geology of some areas is not shown.)
- 1915-2a. Geologic map of the Southern Peninsula of Michigan: U.S.G.S. Folio 155, p. 2, fig. 4, I. C. Russell and F. Leverett, 1915; x-Sec., fig. 5. 1 in. to approx. 58 mi.; 7½ x 6½.
- b. Geologic sketch map of the Ann Arbor quadrangle, showing the outcrop of the Paleozoic formations beneath the drift and altitudes of the surface of the bedrock: *Ibid.*, p. 3, fig. 7. Approx. coverage: T5S-1N, R4-7E; sec. 5-8, 17-20, 29-32, T5S-1N, R8E. 1 in. to approx. 6 mi.; 5 x 7. (Bedrock)
- 1915-3a. Geologic map of a part of Michigan and Wisconsin: Mich. Geol. Survey Pub. 18, p. 17, fig. 1, R. C. Allen, 1915. Coverage: T39-48N, R25-49W; Wis., T41-47N, R1W-16E. Scale, 1:500,000. 1 in. to approx. 8 mi.; 20 x 8. (Geology of some areas is not shown.)
- b. Geological map of the east end of the Gogebic iron range, Michigan: *Ibid.*, p. 43, fig. 2A, R. C. Allen, and L. P. Barrett. Coverage: Sec. 7-36, T47N, R43-44W; sec. 7-8, 17-21, 28-33, T47N, R42W. Scale, 1:62,500. 1 in. to approx. 1 mi.; 16 x 7½ (x-Sec. included. Geology of some areas is not shown.)

- c. Map of the east end of the Gogebic iron range, Michigan, showing outcrops, drill holes, explorations, etc.: Ibid., p. 45, fig. 2B, R. C. Allen, and L. P. Barrett. Coverage: Same area as 1915-3b. Scale, 1:62,500. 1 in. to approx. 1 mi.; 15½ x 7. (x-Sec. included).
 - d. Geological plat and cross section, Banner Location, SE¼ sec. 1, T45N, R43W, Mich.: Ibid., p. 103, fig. 8, R. C. Allen and L. P. Barrett. 1 in. to approx. 325 ft.; 4 x 4.
 - e. Geological map of the Pre-Cambrian formations of the Gwinn iron bearing district of Michigan: Ibid., p. 146, fig. 9, R. C. Allen. Coverage: Sec. 17-22, 27-36, T45N, R25W. Scale, 1:42,240. 1 in. to approx. 4,000 ft.; 9 x 7. (x-Sec. included.)
- 1915-4a. Geologic map of a part of the east end of the Gogebic Iron range, Michigan: Jour. Geology, v. 23, no. 8, p. 694, fig. 1, R. C. Allen, and L. P. Barrett, Nov.-Dec. 1915; fig. 2, x-Sec. Coverage: Sec. 13-30, T47N, R43W; sec. 13, 24-25, T47N, R44W. Scale, 1:62,500. 1 in. to approx. 1 mi.; 6 x 4.
- b. Geologic map of parts of Michigan and Wisconsin: Ibid., p. 712, fig. 3. C. K. Leith, and R. C. Allen. Coverage: T38-48N, R25-36W; Wis., T37-41N, R14-21E. Scale, 1:625,000. 1 in. to approx. 10 mi.; 8 x 6½.
- 1916-1. Map of Paleozoic formations of Michigan and location of limestone quarries: Mich. Geol. Survey Pub. 21, p. 149, fig. 9, R. A. Smith, 1916. Coverage: T9S-52N, R13E-30W. 1 in. to approx. 25 mi.; 12 x 17.
- 1916-2. Geological map of Michigan: Mich. Geol. Survey Pub. 23, R. C. Allen, R. A. Smith, and L. P. Barrett, 1916. Scale, 1:750,000. 1 in. to approx. 12 mi.; 36 x 43; color.
- 1917-1a. Areal geology, Detroit quadrangle: U.S.G.S. Folio 205, W. H. Sherzer, 1917, Coverage: Mich., Lat. 42° 15' to 42° 30', Long. 83° to 83° 15'. Scale, 1:62,500. 1 in. to approx. 1 mi.; 18 x 22; color. (Surface formations.)
- b. Areal geology, Grosse Point quadrangle: Ibid. Coverage: Mich., Lat 42° 15' to 42° 30', Long. 82° 45' to 83°. Scale, 1:62,500. 1 in. to approx. 1 mi.; 18 x 20; color. (Surface formations.)
- 1917-1c. Areal geology, Romulus quadrangle: Ibid. Coverage: Lat. 42° to 42° 15', Long. 83° 15' to 83° 30'. Scale, 1:62,500. 1 in. to approx. 1 mi.; 18 x 22; color. (Surface formations.)
- d. Areal geology, Wayne quadrangle: Ibid. Coverage: Lat. 42° 15' to 42° 30', Long. 83° 15' to 83° 30'. Scale, 1:62,500. 1 in. to approx. 1 mi.; 18 x 22; color. (Surface formations.)
 - e. Areal geology, Wyandotte quadrangle: Ibid. Coverage: Mich., Lat. 42 to 42 15', Long. 83° to 83° 15'. Scale, 1:62,500. 1 in. to approx. 1 mi.; 18 x 22; color. (Surface formations.)
 - f. Bedrock geology, Detroit district: Ibid. Coverage: Lat. 42° to 42° 30', Approx. Long. 82° 50' to 83° 30'. 1 in. to 4 mi.; 18 x 9½ color.
- 1917-2a. Geologic map of area between White Pine mine and Lake Superior, Ontonagon County, Mich.: Mich. Geol. Survey Pub. 24, p. 21, fig. 2, C. S. Longyear, 1917. Coverage: Sec. 2-6, T50N, R42W; sec. 1, T50N, R43W; sec. 7-9, 16-21, 28-33, T51N, R41W; sec. 12-16, 21-28, 33-36, T51N, R42N. Scale, 1:62,500. 1 in. to approx. 1 mi.; 8½ x 12.
- b. Geological map showing location of Portland cement plants and principle areas in which occur deposits of limestone and shale suitable for use in making Portland cement: Ibid., p. 126, fig. 4, R. A. Smith. Coverage: T9S-52N, R13E-30W. 1 in. to approx. 70 mi.; 5 x 6.
- 1917-3a. Map of the surface formations of the Northern Peninsula of Michigan: Mich. Geol. Survey Pub. 25, pl. 1, F. Leverett, 1917. Scale, 1:1,000,000. 1 in. to approx. 16 mi.; 22½ x 11½; color. (Map dated 1911.)
- b. Map of the surface formations of the Southern Peninsula of Michigan: Ibid., pl. 7. Scale, 1:1,000,000. 1 in. to approx. 16 mi.; 16 x 23; color. (Map dated 1911.)
- 1917-4a. Geography of N.W. corner of Benzie County, Michigan: Mich. Acad. Sci. 19th Ann. Rept. (1917), p. 197, fig. 9, W. G. Waterman, 1917. Approx. coverage: Sec. 6-7, 18-19, 30-31, T26N, R14W; sec. 1-30, 34-36, T26N, R15W; sec. 1-28, 35-36, T26N, R16W; sec. 18-19, 30-31, T27N, R14W; sec. 25-36, T27N, R15W; sec. 25-36, T27N, R16W. 1 in. to approx. 3 mi.; 4 x 4. (Surface formations.)
- b. Geology of the Crystal Lake bar region: Ibid., p. 198, fig. 10. Approx. coverage: Sec. 33-34, T27N, R16W; sec. 3-4, 9, 15-16, T26N, R16W. 1 in. to approx. 1 mi.; 2½ x 5½. (Surface formations.)

- 1917-5. Geological map, Wakefield area, sections 7, 8, 9, 10, 16, 17, 18, T47N, R45W, sections 12, 13, T47N, R46W, Gogebic range, Michigan: The Iron Ores of Lake Superior, Crowell and Murray, 3rd. ed., p. 96, M. C. Lake, 1917. Scale, 1:20,000. 1 in. to 1,667 ft.; 18½ x 8½; color. (Two x-Sec. on unnumbered plates following this map.)
- 1921-1a. Map showing the distribution of glacial formations in the vicinity of Houghton and Higgins Lakes: Mich. Geol. Survey Pub. 30, p. 210, fig. 68, I. D. Scott, 1921. Approx. coverage: Sec. 19-36, T25N, R2-5W; T22-24N, R2-5W. Scale, 1:375,000. 1 in. to approx. 6 mi.; 4 x 3½.
- b. Map of the glacial formations in the vicinity of Otsego Lake. Solid black indicates moraine. Lined areas are outwash: ibid., p. 228, fig. 72. Approx. coverage: T26-32N, R1E-6W. Scale, 1:1,000,000. 1 in. to approx. 16 mi.; 2½ x 2½.
- 1921-1a. Map of the glacial formations in the vicinity of Hubbard Lake: ibid., p. 235, fig. 74. Approx. coverage: T27-29N, R6-8E. Scale, 1:375,000. 1 in. to approx. 6 mi.; 3 x 3.
- 1922-1a. Geography of NW corner of Benzie County, Michigan: Forests and Dunes from Point Betsie to Sleeping Bear, Benzie and Leelanau counties, Michigan, p. 1, fig. 1, W. G. Waterman, 1922. Approx. coverage: Sec. 5-8, 17-20, 29-32, T26N, R14W; sec. 6-28, 34-36, T26N, R15W; sec. 1-26, 35-36, T26N, R16W; sec. 17-20, 29-32, T27N, R14W; sec. 13-36, T27N, R15W; sec. 25-36, T27N, R16W. 1 in. to approx. 4 mi.; 4 x 4. (Surface formations.)
- b. Geology of Crystal Lake bar: ibid., p. 4, fig. 3. Approx. coverage: Sec. 27, 33-34, T27N, R16W; sec. 3-4, 9, 15, 16, T26N, R16W. 1 in. to approx. 1 mi.; 2 x 5½. (Surface formations.)
- 1923-1. Geological map showing surface formations of Antrim County: Mich. Land Econ. Survey, F. Leverett, 1923. 1 in. to approx. 1 mi.; 26 x 33. (Bedrock formations are also shown. Map does not have legend.)
- 1923-2. Geological map showing surface formations of Ogemaw County: Mich. Land Econ. Survey, F. Leverett, 1923. 1 in. to approx. 1 mi.; 21 x 24. (Bedrock formations are also shown.)
- 1924-1. Map of the surface formations of the Southern Peninsula of Michigan: Mich. Geol. Survey, F. Leverett, 1924. Scale, 1:750,000. 1 in. to approx. 12 mi.; 24 x 32; color. (Edition published in cooperation with State Dept. of Agr.)
- 1924-2. Geological map showing hard rock formations of Alpena County: Mich. Land Econ. Survey, W. A. Ver Wiebe, 1924. 1 in. to approx. 2 mi.; 27½ x 17½.
- 1924-3. Geological map showing surface formations of Alpena County: Mich. Land Econ. Survey, W. A. Ver Wiebe, 1924. 1 in. to approx. 1 mi.; 34½ x 19½.
- 1925-1. Geological map showing hard rock formations of Menominee County: Mich. Land Econ. Survey, W. A. Ver Wiebe, 1925. 1 in. to approx. 2½ mi.; 23½ x 26.
- 1925-2. Geology map showing surface formations of Menominee County: Mich. Land Econ. Survey, W. A. Ver Wiebe, 1925. 1 in. to approx. 1 mi.; 24½ x 29.
- 1925-3. Geological map showing surface formations of Roscommon County: Mich. Land Econ. Survey, W. A. Ver Wiebe, 1925. 1 in. to approx. 1½ mi.; 22½ x 26. (Bedrock formations are also shown.)
- 1926-1. Sketch map showing the distribution of hard rock formations and the areas (solid black) in which exposures of shale occur: Mich. Geol. Survey Pub. 36, p. 192, fig. 68, G. G. Brown, 1926. Coverage: T9S-52N, R13E-29W. 1 in. to approx. 54 mi.; 4½ x 6½.
- 1926-2. Geological map showing hard rock formations of Chippewa County: Mich. Land Econ. Survey, W. A. Ver Wiebe, 1926. 1 in. to approx. 4 mi.; 25 x 19½. (Bedrock of some islands is shown.)
- 1926-3. Geological map showing surface formations of Chippewa County: Mich. Land Econ. Survey, W. A. Ver Wiebe, 1926. 1 in. to approx. 2 mi.; 51½ x 34½. (Surface formations of some islands is shown.)
- 1927-1. Surface geology of Charlevoix County: Mich. Land Econ. Survey, W. A. Ver Wiebe, 1927. 1 in. to approx. 1 mi.; 28½ x 25½. (Bedrock formations are also shown. Big Beaver islands are included. Legend, author, and date are not shown on map.)
- 1927-2. Surface and hard rock formations of Crawford County: Mich. Land Econ. Survey, W. A. Ver Wiebe, 1927. 1 in. to approx. 1 mi.; 34½ x 28. (Hard rock formations are not shown.)

- 1927-3. Surface and hard rock formations of Kalkaska County: Mich. Land Econ. Survey, W. A. Ver Wiebe, 1927. 1 in. to approx. 1 mi.; 35 x 28.
- 1927-4. Geological map of Roscommon County, Michigan: Mich. Acad. Sci. Papers (1926), v. 7, p. 160, map 5, W. A. Ver Wiebe, 1927. Scale, 1:437,500. 1 in. to approx. 7 mi.; 6 x 4 (Surface formations.)
- 1927-5. Areal geology and outcrops in Alpena County, Michigan: Mich. Acad. Sci. Papers (1926), v. 7, p. 183, map 6, W. A. Ver Wiebe, 1927. 1 in. to approx. 6 mi.; 9 x 6.
- 1928-1. Outline areal geological map of the Southern Peninsula of Michigan: Mich. Geol. Survey Pub. 37, p. 163, fig. 5, R. B. Newcombe, 1928. 1 in. to approx. 48 mi.; 4½ x 5½. (Bedrock)
- 1928-2. Geological map showing hard rock of Alger County: Mich. Land Econ. Survey, S. G. Bergquist, 1928. 1 in. to approx. 2½ mi.; 24 x 17. (Includes Grand, Williams, Wood and Au Train islands.)
- 1928-3. Geological map showing surface formations of Alger County: Mich. Land Econ. Survey, S. G. Bergquist, 1928. 1 in. to approx. 1 mi.; 60½ x 39. (Includes Grand, Williams, Wood, and Au Train islands.)
- 1928-4. Areal geology of Chippewa County: Mich. Acad. Sci. Papers (1927), v. 8, p. 329, fig. 27, W. A. Ver Wiebe, 1928. 1 in. to approx. 15 mi.; 6½ x 5. (Bedrock)
- 1929-1a. General geologic map and sections of the Keweenaw and associated rocks in the Lake Superior copper district: U.S.G.S. Prof. Paper 144, pl. 2, B. S. Butler and W. S. Burbank, 1929. Coverage: Lat. 45° to 49°, Long. 87° to 93°. Scale, 1:1,000,000. 1 in. to approx. 16 mi.; 22½ x 24; color.
- b. Map of copper range of Michigan: *Ibid.*, pl. 3. Coverage: T49-50N, R39-48W; T51-54N, R36-44W; T52-56N, R34-40W; T53-59N, R27-34W. 1 in. to 8 mi.; 20 x 11. (Includes x-Sec.)
- c. Geologic map of copper range from end of Keweenaw Point to Mount Houghton, Michigan: *Ibid.*, pl. 5. Coverage: Sec. 7-30, T58N, R27W; sec. 1-30, T58N, R28W; sec. 1, 12-13, 24-25, T58N, R29W. Scale, 1:12,000. 1 in. to 1,000 ft.; 61½ x 30.
- d. Geologic map of copper range from Mount Houghton to Delaware, Michigan: *Ibid.*, pl. 6. Coverage: Sec. 1-34, T58N, R29W; T58N, R30W. Scale, 1:12,000. 1 in. to 1,000 ft., 64 x 33½.
- e. Geologic map of copper range from Copper Falls to Gratiot, Michigan: *Ibid.*, pl. 7. Coverage: Sec. 7, 18-20, 29-33, T58N, R30W; sec. 4-7, T57N, R30W; sec. 1, 11-17, 19-36, T58N, R31W; sec. 1-22, 29-31, T57N, R31W; sec. 24-26, 33-36, T58N, R32W; sec. 1-4, 9-15, 23-26, 36, T57N, R32W. Scale, 1:12,000. 1 in. to 1,000 ft.; 64 x 32.
- 1929-1f. Geologic map of copper range from Gratiot to LaSalle, Michigan: *Ibid.*, pl. 8. Coverage: Sec. 15-16, 20-35, T57N, R32W; sec. 3-9, 16-20, T56N, R32W; sec. 1, 11-15, 21-28, 34-36, T56N, R33W; sec. 2, T55N, R33W. Scale, 1:12,000. 1 in. to 1,000 ft.; 63 x 26.
- g. Geologic map of copper range from LaSalle to Atlantic, Michigan: *Ibid.*, pl. 9. Coverage: Sec. 28, 32-34, T56N, R33W; sec. 2-5, 7-11, 14-22, 28-32, T55N, R33W; sec. 13, 23-27, 33-36, T55N, R34W; sec. 1-5, 9-12, 14-15, 23, T54, R34W. Scale, 1:12,000. 1 in. to 1,000 ft.; 63 x 25½.
- h. Geologic map of copper range from Atlantic to Challenge, Michigan: *Ibid.*, pl. 10. Coverage: Sec. 5, 7-9, 15-22, 28-32, T54, R34W; sec. 13, 23-27, 33-36, T54W, R35W; sec. 6, T53N, R34W; sec. 1-5, 7-12, 14-18, 20-22, 28, T53N, R35W. Scale, 1:12,000. 1 in. to 1,000 ft.; 61½ x 23½.
- i. Geologic map of copper range from Challenge to Winona, Michigan: *Ibid.*, pl. 11. Coverage: Sec. 18-20, 28-33, T53N, R35W; sec. 24-26, 34-34, T53N, R36W; sec. 5-7, T52N, R35W; sec. 1-4, 8-23, 27-33, T52N, R36W; sec. 24-25, T52N, R37W. Scale, 1:12,000. 1 in. to 1,000 ft.; 62½ x 23.
- j. Geologic map of copper range from Winona to Adventure, Michigan: *Ibid.*, pl. 12. Coverage: Sec. 25-26, 34-36, T52N, R37W; sec. 31, T52N, R36W; sec. 5-7, T51N, R36W; sec. 1-4, 8-23, 27-33, T51N, R37W; sec. 24-26, 35-36, T51N, R38W; sec. 3-4, T50N, R38W. Scale, 1:12,000. 1 in. to 1,000 ft.; 57 x 23½.
- k. Geologic map of copper range from Adventure to Victoria, Michigan: *Ibid.*, pl. 13. Coverage: Sec. 26-27, 32-36, T51N, R38W; sec. 4-9, 18, T50N, R38W; sec. 1-4, 7-23, 28-31, T50N, R39W; sec. 13-14, 23-25, 36, T50N, R40W. Scale, 1:12,000. 1 in. to 1,000 ft.; 59 x 23½.
- l. General geologic map from Presque Isle River to Victoria mine, Michigan: *Ibid.*, pl. 14. Coverage: T49-52N, R40-45W. Scale, 1:125,000. 1 in. to approx. 2 mi.; 20½ x 14. (Geology of some areas is not shown.)

- 1929-2a. Map of surficial deposits of the Lake Superior region: U.S.G.S. Prof. Paper 154-A, pl. 1, F. Leverett, 1929. Coverage: Lat. 44° to 49°, Long. 84° to 95°. Scale, 1:1,000,000. 1 in. to approx. 16 mi.; 40½ x 25½; color. (Upper-Peninsula, and pt. of Wis. and Minn.)
- b. Geologic map of part of Perch Lake quadrangle, Michigan: *Ibid.*, pl. 5. Approx. coverage: Lat. 46° 24' to 46° 30', Long. 88° 38' to 88° 45'. Scale, 1:62,500. 1 in. to approx. 1 mi.; 9 x 11½; color. (Surface formations.)
- c. Map of drifts in the northern United States, showing subdivision of the Wisconsin drift. Crosses indicate outlying erratic boulders and patches of till. A small area of Illinoian drift south of St. Paul Is Indicated In solid black: *Ibid.*, p. 19, fig. 5; Jour. Geology, v. 66, no. 3, p. 292, fig. 2, May 1958. Approx. coverage: Lat. 38° 15' to 49°, Long. 81° to 97° 40'. 1 in. to approx. 140 mi.; 6 x 6. (Map in Jour. Geology is 1 in. to approx. 160 mi.; 5 x 5.)
- 1929-3. Geological map of Iron County: Mich. Geol. Survey, L. P. Barrett, F. G. Pardee and W. Osgood, 1929; Mich. Acad. Sci. 9th Ann. Field Excur. Guidebook, 1939. Scale, 1:125,000. 1 in. to approx. 2 mi.; 24 x 20; color.
- 1929-4. Geological map showing surface formations of Luce County: Mich. Land Econ. Survey, S. G. Bergquist, 1929. 1 in. to 1 mi.; 34 x 43.
- 1930-1. Geological map showing surface formations of Iron County: Mich. Land Econ. Survey, S. G. Bergquist, 1930. 1 in. to approx. 1 mi.; 35 x 35½.
- 1931-1. Surface and hard rock formations of Montmorency County: Mich. Land Econ. Survey, S. G. Bergquist, 1931. 1 in. to 1 mi.; 35½ x 28½. (Hard rock formations are not shown.)
- 1931-2. Geological map showing surface formations of Luce County: Mich. Acad. Sci. Papers (1930), v. 14, map 44, S. G. Bergquist, 1931. Scale, 1:312,500. 1 in. to approx. 5 mi.; 9 x 10½.
- 1932-1. Geological map showing surface formations of Schoolcraft County: Mich. Land Econ. Survey, S. G. Bergquist, 1932. 1 in. to 1 mi.; 39½ x 60.
- 1932-2. Geological map showing surface formations of Iron County: Mich. Acad. Sci. Papers (1931), v. 16, map 40, S. G. Bergquist, 1932. Scale, 1:375,000. 1 in. to approx. 6 mi.; 9 x 9. (Negative photo reproduction.)
- 1933-1a. Areal geology of Michigan, Southern Peninsula: Mich. Geol. Survey Pub. 38, pl. 2, R. B. Newcombe, 1933. Scale, 1:1,000,000. 1 in. to approx. 16 mi.; 15½ x 20½. ("Red beds" are also shown. Map dated 1932.)
- b. Geological map showing the area which comprises the Michigan basin province: *Ibid.*, p. 8, fig. 1. Approx. coverage: Lat. 36° to 48°, Long. 80° to 90°. 1 in. to approx. 150 mi.; 4½ x 6½.
- c. Rock exposures in Southern Peninsula of Michigan: *Ibid.*, p. 8, fig. 2. 1 in. to approx. 32 mi.; 8 x 10. ("Red beds" are also shown. Map dated 1931.)
- 1933-2. Outline map showing the location of the Marquette and Crystal Falls districts and the general areal geology: Mich. Acad. Sci. Papers (1932), v. 18, map 53, J. Zinn, 1933. Approx. coverage: T39-48N, R24-35W. Scale, 1:1,000,000. 1 in. to approx. 16 mi.; 6 x 6½.
- 1933-3. Map of area near Grand Ledge, Mich, showing members of Saginaw and Woodville formations: Mich. Acad. Sci. Field Excur. Guidebook for 1933, pl. 2, W. A. Kelly, 1933. Approx. coverage: Sec. 2-3, T4N, R4W. 1 in. to 600 ft.; 11 x 8. (Most of geology shown is near the Grand River and its tributaries in this area. Map dated 1931.)
- 1933-4a. Geologic map and cross sections of the Marquette range: Internat. Geol. Cong., 16th Sess., Guidebook 27, Excur. C-4, pl. 1, W. O. Hotchkiss, 1933. Coverage: T47N, R25-29W; sec. 19-36, T48N, R25-29W; sec. 6-7, 18-19, 30-31, T47N, R2W. 1 in. to approx. 20 mi.; 15 x 8½.
- b. Map of copper range: *Ibid.*, p. 30, fig. 6. Approx. coverage: T47N, R44-45W; T48N, R42-46W; T49-51N, R41-46W; T51N, R36-W; T52-59N, R27-39W. 1 in. to approx. 20 mi.; 6 x 3½.
- c. Geologic map of part of Gogebic range: *Ibid.*, p. 51, fig. 10. Approx. coverage: Sec. 1-12, T46N, R45-47W; T47N, R45W; sec. 1-2, 7-36, T47N, R46W; sec. 10-36, T47N, R47W; pt. of Wis. 1 in. to approx. 3 mi.; 6 x 5.
- d. Map of region of Sunday Lake fault: *Ibid.*, p. 58, fig. 13. Coverage: Sec. 7-9, 16-18, T47N, R45W; sec. 12-13, T47N, R46W. 1 in. to approx. 1 mi.; 5 x 2½.

- 1933-5. Map showing the general geology of the area described. After Allen and Barrett, modified: Jour. Geology, v. 41, no. 5, p. 488, fig. 2, C. A. Lamey, July-Aug. 1933. Coverage: T41-48N, R25-30W. Scale, 1:1,000,000. 1 in. to approx. 16 mi.; 2½ x 3.
- 1935-1. Map showing intrusion of granite in Middle Huronian formations. The area mapped is in section 26, south of the Tilden mine (see Fig. 2), and is part of the original Palmer gneiss belt: G.S.A. Bull., v. 46, no. 7, p. 1143, fig. 3, C. A. Lamey, July 1935. Coverage: Sec. 26, T47N, R27W. Scale, 1:2,000. 1 in. to approx. 167 ft.; 4 x 3½.
- 1935-2. Geologic map of the Lake Superior region and structure sections: U.S.G.S. Prof. Paper 184, pl. 1, C. K. Leith, R. J. Lund, and A. Leith, 1935. Coverage: Lat. 44° to 49°, Long. 84° to 95°. Scale, 1:1,000,000. 1 in. to approx. 16 mi.; 42 x 29; color.
- 1935-3. Huron River valley lower lake plain section: Mich. Acad. Sci. Papers (1934), v. 20, map 35, J. W. Bay, 1935. Approx. coverage: Sec. 1-2, 11-14, 23-26, 35-36, T4S, R9E; T4-5S, R10E. 1 in. to 1 mi.; 15½ x 14.
- 1935-4. Geological map showing surface formations of Iron County: Mich. Acad. Sci. Papers (1934), v. 20, map 36, S. G. Bergquist, 1935. Scale, 1:375,000. 1 in. to approx. 6 mi.; 9½ x 9. (Valley trains and glacial striae are also shown.)
- 1935-5a. Areal geology of the North Lake district: Jour. Geology, v. 43, no. 2, pl. 1, J. L. Adler and A. N. Macintosh, Feb.-Mar. 1935. Coverage: Sec. 5-6, T47N, R27W. Scale, 1:9,600. 1 in. to 800 ft.; 9 x 13.
- b. Areal geology of Blueberry district: *Ibid.*, pl. 3; pl. 4, x-Sec. Coverage: Sec. 3-4, T47N, R28W. Scale, 1:9,600. 1 in. to 800 ft.; 9 x 13.
- 1935-6. Tentative geologic map of Lucas and Monroe counties: Mich. Acad. Sci. 5th Ann. Field Excur. Guidebook, G. M. Ehlers, and others, May 1935. Approx. coverage: T1-2S, R6-13E; T3-8S, R4-10E; Lucas Co., Ohio. 1 in. to approx. 8 mi.; 10 x 13½ (x-Sec. included. Blue print map.)
- 1935-7. Revised geological map of the Palmer area. No changes have been made in Huronian formations younger than the Ajibik quartzite. Compiled from field notes by the writer and from geological maps in United States Geological Survey Monographs 28 and 52. Culture from air survey mosaic prepared by Michigan Geological Survey: G.S.A. Bull., v. 46, no. 7, p. 1156, fig. 7, C. A. Lamey, July 1935. Coverage: Sec. 22-23, 26-35, T47N, R26W. Scale, 1:48,000. 1 in. to 4,000 ft.; 6 x 4.
- 1935-8. Sketch map showing the glacial features of the region and the location (in the center of the map) where the Bloomfield mastodon was found: Cranbrook Inst. Sci. Bull. 4, p. 4, E. C. Case and G. M. Stanley, Oct. 1935. Coverage: Sec. 13-15, 22-27, T2N, R10E; sec. 18-19, 30, T2N, R11E. Scale, 1:48,000. 1 in. to 4,000 ft.; 5 x 4.
- 1936-1. Map of areal geology of Michigan, Southern Peninsula: U.S.B.M. Rept. Inv. 3313, pl. 1, H. M. Martin, 1936. 1 in. to approx. 22 mi.; 13½ x 16½. (Bedrock)
- 1936-2a. The Centennial geological map of the Southern Peninsula of Michigan: Mich. Geol. Survey Pub. 39, H. M. Martin, 1936, Scale, 1:500,000. 1 in. to approx. 8 mi.; 41½ x 47; color. (x-Sec. included. Part of Ann. Rept. (1936). Compiled by H. M. Martin.)
- 1936-2b. The Centennial geological map of the Northern Peninsula of Michigan: *Ibid.* Scale, 1:500,000. 1 in. to approx. 8 mi.; 54 x 34; color. (x-Sec. included. Part of Ann. Rept. (1936). Compiled by H. M. Martin.)
- 1936-3a. Geological map showing surface formations of Luce County: Mich. Geol. Survey Pub. 40, pt. 1, p. 53, fig. 12, S. G. Bergquist, 1936. Scale, 1:250,000. 1 in. to approx. 4 mi.; 9 x 11. (Map dated 1929.)
- b. Geological map showing surface formations of Schoolcraft County: *Ibid.*, p. 58, fig. 13. Scale, 1:250,000. 1 in. to approx. 4 mi.; 10 x 15½. (Map dated 1932.)
- c. Geological map showing surface formations of Alger County: *Ibid.*, p. 64, fig. 14. Scale, 1:250,000. 1 in. to approx. 4 mi.; 15½ x 11. (Map dated 1928.)
- d. Geological map showing surface formations of the Tahquamenon and Manistique drainage basins including Alger, Luce, and Schoolcraft counties: *Ibid.*, p. 137, fig. 15. Scale, 1:250,000. 1 in. to approx. 4 mi.; 22½ x 18. (Same as 1936-3a-c placed together.)

- 1936-4a. Areal geology of Grand Ledge and vicinity: Mich. Geol. Survey Pub. 40, pt. 2, p. 178, fig. 3, W. A. Kelly, 1936. Coverage: Sec. 2-3, 10-11, T4N, RW; sec. 33-34, T5N, R4W. Scale, 1:20,000. 1 in. to approx. 1,667 ft.; 11½ x 10. (Only bedrock geology near the Grand River and its tributaries in this area is shown.)
- 1936-4b. Pennsylvanian formations: *Ibid.*, pl. 2, R. B. Newcombe. Coverage: Lower Peninsula. 1 in. to 32 mi.; 9 x 13. (The "red beds" are also shown. Map dated 1932.)
- c. Map showing significant outcrops and mine localities of the Saginaw and Grand River Groups of Michigan. Boundaries of formations after Martin. Letters refer to the vertical columns of the floral list Table 2, and numbers to the faunal list: *Ibid.*, p. 165, fig. 2, W. A. Kelly, 1 in. to approx. 32 mi.; 7½ x 9½.
- 1936-5a. Map of Ogemaw County showing glacial features: Mich. Geol. Survey Prog. Rept. 2, pl. 1, E. A. Newman, 1936. Scale, 1:168,960, 1 in. to approx. 2½ mi.; 11 x 10½.
- b. Map of Ogemaw County showing areal geology: *Ibid.*, pl. 2. 1 in. to approx. 3½ mi.; 8 x 10½. (Pl. 4, x-Sec.)
- 1936-6. Map showing location of Grand Sable dunes: Mich. Acad. Sci. Papers (1935), v. 21, p. 430, map 33, S. G. Bergquist, 1936. Coverage: Sec. 2, 11-14, 23-26, 35-36, T49N, R14W; sec. 1-2, T48N, R15W; T49N, R14W; sec. 1-6, T48N, R14W; sec. 5-8, 17-20, 29-32, T49N, R13W; sec. 5-6, T48N, R13W. Scale, 1:125,000. 1 in. to approx. 2 mi.; 6 x 6.
- 1936-7. Geological map of surface formations of Cranbrook area: Cranbrook Inst. Sci. Bull. 6, G. M. Stanley, Mar. 1936. Coverage: Sec. 1, 12, T1N, R8E; sec. 1-12, T1N, R9-11E; sec. 1, 12-13, 24-25, 36, T2N, R8E; T2N, R9-11E; sec. 36, T3N, R8E; sec. 31-36, T3N, R9-10E. Scale, 1:84,480. 1 in. to approx. 1½ mi.; 14½ x 8.
- 1936-8. The southern complex and associated rocks: Jour. Geology, v. 44, no. 3, p. 320, fig. 1, R. M. Dickey, Apr.-May 1936. Coverage: T41-48N, R25-30W. Scale, 1:625,000. 1 in. to approx. 10 mi.; 3½ x 6.
- 1937-1a. Surface geology of Arenac County: Mich. Geol. Survey Prog. Rept. 3, pl. 1, G. M. Pringle, 1937. Scale, 1:125,000. 1 in. to approx. 2 mi.; 18 x 13.
- b. Areal geology of Arenac County: *Ibid.*, pl. 2; pl. 5, x-Sec. Scale, 1:125,000. 1 in. to approx. 2 mi.; 18 x 13.
- 1937-2a. Huron River valley, upper lake plain section: Mich. Acad. Sci. Papers (1936), v. 22, map 35, J. W. Bay, 1937. Approx. coverage: Sec. 4-9, 16-18, T4S, R9E; sec. 1-18, T4S, R7-8E; sec. 4-9, 16-21, 28-33, T2-3S, R9E; T2-3S, R7-8E. Scale, 1:62,500. 1 in. to approx. 1 mi.; 14½ x 15.
- b. River Rouge valley, upper lake plain-moraine section: *Ibid.*, map 36. Approx. coverage: Sec. 1-4, 9-12, T2S, R8E; sec. 1-12, T2S, R9E; sec. 1-4, 9-16, 21-28, 33-36, T1S, R8E; T1S-1N, R9E; sec. 3-10, 15-22, T1S, R10E; sec. 1-3, 10-15, 22-28, 33-36, T1N, R8E; sec. 3-10, 15-22, 27-34, T1N, R10E; sec. 22-27, 34-36, T2N, R8E; sec. 19-36, T2N, R9E; sec. 19-22, 27-34, T2N, R10E. Scale, 1:62,500. 1 in. to approx. 1 mi.; 14 x 8.
- c. Clinton River valley upper lake plain-moraine section: *Ibid.*, map 37. Approx. coverage: Sec. 7-36, T3N, R11-12E; sec. 1-30, T2N, R11-12E. Scale, 1:62,500. 1 in. to approx. 1 mi.; 14½ x 11.
- 1937-3. Geological map showing hard rock formations of Alger County: Mich. Acad. Sci. Papers (1936), v. 22, map 39, S. G. Bergquist, 1937. Scale, 1:375,000. 1 in. to approx. 6 mi.; 12 x 9. (Map dated 1928.)
- 1937-4. Route map, field excursion of the Michigan Academy of Science: Mich. Acad. Sci. 7th Ann. Field Excur. Guidebook, unnumbered pl., R. A. Smith, G. M. Ehlers, and S. G. Bergquist, May 1937. Approx. coverage: T30-35N, R5-8E. 1 in. to approx. 3½ mi.; 10½ x 15. (Bedrock. Blue print map.)
- 1938-1a. Surface geology of Allegan County: Mich. Geol. Survey Prog. Rept. 4, pl. 1, C. H. Riggs, 1938. Scale, 1:125,000. 1 in. to approx. 2 mi.; 21 x 15.
- b. Areal geology of Allegan County, thickness of Marshall formation: *Ibid.*, pl. 2, C. H. Riggs and H. M. Martin. Scale, 1:125,000. 1 in. to approx. 2 mi.; 21½ x 14. (Pl. 8, x-Sec.)
- 1938-1. Geologic map of a portion of the Gogebic iron range, Michigan and Wisconsin: G.S.A. Bull., v. 49, no. 2, p. 154, fig. 1, G. I. Atwater, Feb. 1938. Coverage: T47N, R43-47W; Wis., T46N, R2E. Scale, 1:312,500. 1 in. to approx. 5 mi.; 7 x 3. (Geology of some areas is not shown.)
- 1938-2a. The southern complex: Jour. Geology, v. 46, no. 3, pt. 1, p. 323, fig. 1, R. M. Dickey, Apr.-May 1938. Approx. coverage: T41-48N, R25-30W. Scale, 1:562,500. 1 in. to approx. 9 mi.; 4 x 6.

- b. The Floodwood exposures: *Ibid.*, p. 325, fig. 2. Coverage: Sec. 19-20, 29-30, T44N, R29W. Scale, 1:14,400. 1 in. to 1,200 ft.; 8½ x 4½.
- 1938-3. Route map, 8th Annual Field Excursion, Michigan Academy of Science, Arts & Letters, Section of Geology and Mineralogy, May 29-30, 1938: Mich. Acad. Sci. 8th Ann. Field Excur. Guidebook, unnumbered pl., S. G. Bergquist and G. M. Ehlers, May 1938. Approx. coverage: T31N, R7-8W; T32-39N, R1-9W. 1 in. to approx. 5 mi.; 15 x 10½. (Surface formations. Geology of some areas is not shown.)
- 1938-4. Map of an area near Beacon showing the contact between the Middle Huronian formations and the Republic granite. Note the quartzite engulfed by the granite: Jour. Geology, v. 41, no. 5, p. 490, fig. 5, C. A. Lamey, July-Aug. 1938. Coverage: Probably in sec. 31, T48N, R29W. Scale, 1:16,000. 1 in. to 1,333 ft.; 4 x 1½.
- 1938-5. Geologic map of the Toivola-Challenge mine area, Michigan. Basic flows indicated by rhomb pattern, conglomerate by elliptical, sandstones by diagonal lines, and shattered zones by broken horizontal lines. Broken, heavy lines indicate faults and fault boundaries of shattered zones; long and short dashes indicate a transmission line; circles, section corners: Econ. Geology, v. 33, no. 6, p. 636, fig. 1, C. A. Lamey, Sept.-Oct. 1938. Coverage: Sec. 3-4, 8-10, 15-17, 20-22, T53N, R35W. Scale, 1:48,000. 1 in. to 4,000 ft.; 4 x 5.
- 1939-1. Geologic map of the PreCambrian formations of a part of Menominee iron range, Michigan: Mich. Geol. Survey Prog. Rept. 5, unnumbered pl., C. E. Dutton and C. A. Lamey, 1939. Coverage: Sec. 34, T40N, R30W; sec. 1-3, T39N, R30W; sec. 4-6, 8-9, T39N, R29W. Scale, 1:9,600. 1 in. to 800 ft.; 36½ x 11. (Geology of some areas is not shown. Blue print map.)
- 1939-2a. Geologic and road map of Marquette district: Mich. Acad. Sci. 9th Ann. Field Excur. Guidebook, unnumbered pl., J. Zinn, May 1939. Coverage: T47-48N, R25-30W; sec. 1-12, T46N, R25-30W; sec. 4-9, 16-21, 28-33, T47N, R24W; sec. 4-9, T46N, R24W. 1 in. to approx. 1½ mi.; 34½ x 10½. (Geology of some areas is not shown. Blue print map.)
- b. Geologic map of Menominee district: *Ibid.*, C. E. Dutton. Approx. coverage: T39-40N, R28-30W. 1 in. to 1 mi.; 21½ x 10½. (Blue print map.)
- 1940-1a. Surface and hard rock formations of Montmorency County: Mich. Acad. Sci. Papers (1939), v. 25, p. 460, fig. 7, S. G. Bergquist, 1940. Scale, 1:250,000. 1 in. to approx. 4 mi.; 8½ x 6½. (Fig. 3-6, origin of surface geology. Map dated 1931.)
- b. Areal distribution of formations in Montmorency County (after the Centennial Geologic Map of the Michigan Geological Survey): *Ibid.*, p. 462, fig. 8, 1 in. to approx. 10 mi.; 3 x 3.
- 1940-2a. Key map: Mich. Acad. Sci. 10th Ann. Geol. Excur. Guidebook, unnumbered pl., W. A. Kelly, May 1940. Approx. coverage: T26-46N, R16W-9E. 1 in. to approx. 18 mi.; 11 x 8. (Bedrock. Only northern Lower Peninsula geology is shown.)
- b. Afton area: *Ibid.*, map 1. Coverage: Sec. 2-11, 14-23, T34N, T1W; sec. 1-4, 9-16, 21-24, T34N, R2W; sec. 14-23, 26-35, T35N, R1W; sec. 13-16, 21-28, 33-36, T35N, R2W. 1 in. to 1 mi.; 11 x 8. (Maps 1940-2b-d show bedrock with the geology of some areas not shown.)
- c. Black River area: *Ibid.*, map 2. Coverage: Sec. 1-2, 11-14, 23-24, T34N, R1W; sec. 1-24, T34N, R1E; sec. 1-2, 11-14, 23-26, 35-36, T35N, R1W; sec. 3-36, T35N, R1E. 1 in. to 1 mi.; 8 x 11. (See 1940-2b annotation.)
- d. Rainy River - Ocqueoc area: *Ibid.*, map 3. Coverage: Sec. 1-5, 7-18, T34N, R2E; Sec. 1-18, T34N, R3E; sec. 7-36, T35N, R2E; T35N, R3E. 1 in. to 1 mi.; 11 x 8.
- 1940-3a. Map of a portion of the Penokee-Gogebic district: G.S.A. Bull., v. 51, p. 1445, fig. 2, S. A. Tyler and R. W. Marsden, Oct. 1940. Coverage: Sec. 3-9, T46N, R46W; sec. 1-2, 11-12, T46N, R47W; sec. 7-36, T47N, R46W; sec. 9-16, 21-27, 35-36, T47N, R47W. Scale, 1:168,960. 1 in. to approx. 2½ mi.; 4 x 5.
- b. Map of Marquette and associated areas of Michigan: *Ibid.*, p. 1446, fig. 3. Coverage: T41-42N, R28-33W; T43-49N, R25-33W. Scale, 1:750,000. 1 in. to approx. 12 mi.; 4½ x 4.
- 1941-1. Geologic map of Pre-Cambrian formations of a part of the Menominee iron range, Michigan: Mich. Geol. Survey Prog. Rept. 6, unnumbered pl., C. E. Dutton and C. A. Lamey, Mar. 1941. Coverage: Sec. 30-34, T40N, R30W; sec. 23, 25-26, T40N, R31W. Scale, 1:9,600. 1 in. to 800 ft.; 36½ x 19. (Blue print map dated 1940.)

- 1941-2a. Dip needle survey of Wyandotte-Winona area, Houghton County, Michigan: Mich. Geol. Survey Prog. Rept. 7, unnumbered pl., K. Spiroff. July 1941. Coverage: Sec. 10-17, 19-21, 28-31, T52N, R36W. Scale, 1:12,000. 1 in. to 1,000 ft.; 38 x 19½. (Blue print map dated 1940.)
- b. Dip needle survey of Cherokee area, Ontonagon County, Michigan: Ibid. Coverage: Sec. 2-4, 8-11, 15-17, T51N, R37W; sec. 30, T52N, R36W; sec. 24-26, 34-36, T52N, R37W. Scale, 1:12,000. 1 in. to 1,000 ft.; 40 x 20½. (Blue print map dated 1940.)
- 1942-1. Geologic map of Pre-Cambrian formations of a part of the Menominee iron range, Michigan: Mich. Geol. Survey Prog. Rept. 8, unnumbered pl., C. A. Lamey and C. E. Dutton, Apr. 1942. Coverage: Sec. 23-26, T40N, R31W; sec. 30-34, T40N, R30W; sec. 1-4, T39N, R30W; sec. 4-6, 8-11, 13-14, T39N, R29W; sec. 15-18, 21-22, T39N, R28W. Scale, 1:30,000. 1 in. to 2,500 ft.; 34½ x 12. (Blue print map.)
- 1942-2a. Geologic map and section of the Quinnesec area, Menominee iron range, Dickinson County, Michigan: Mich. Geol. Survey Prog. Rept. 9, pl. 1, C. E. Dutton, Nov. 1942. Approx. coverage: Sec. 3, T40N, R30W; sec. 34, T39N, R30W. Scale, 1:2,400. 1 in. to 200 ft.; 15½ x 27. (Blue print map.)
- b. Geologic map and sections of the Green-Cyclops area, Menominee iron range, Dickinson County, Michigan: Ibid., pl. 2. Approx. coverage: Sec. 4-5, T39N, R29W. Scale, 1:1,200. 1 in. to 100 ft.; 22½ x 26½. (Blue print map.)
- c. Geologic map and section of the southwest Loretto area, Menominee iron range, Dickinson County, Michigan: Ibid., pl. 3. Coverage: Sec. 18, T39N, R28W; sec. 13, T39N, R29W. Scale, 1:2,400. 1 in. to 200 ft.; 22 x 16½. (Blue print map.)
- 1943-1a. Outcrop map, Fern Creek area, Dickinson County, Mich., sec. 27 & 34, T40N, R29W: Jour. Geology, v. 51, no. 6, p. 389, fig. 2, F. A. Hildebrand and F. J. Pettijohn, Aug.-Sept. 1943. Coverage: Sec. 27-28, 33-34, T40N, R29W. Scale, 1:12,000. 1 in. to 1,000 ft.; 5 x 3½.
- b. Outcrop map, Black Creek area, Dickinson County, Mich., sec. 6, T39N, R28W: Ibid., p. 393, fig. 3, E. T. Oehler and F. J. Pettijohn. Coverage: Sec. 6-7, T39N, R28W; sec. 1, 12, T39N, R29W. Scale, 1:12,000. 1 in. to 1,000 ft.; 5 x 4.
- c. Outcrop map, Browning Creek area, Dickinson County, Mich., sec. 20, T41N, R30W: Ibid., p. 396, fig. 4, F. J. Pettijohn. Scale, 1:18,000. 1 in. to 1,500 ft.; 4 x 5½.
- 1944-1a. General geological map of Lake Michigan area: Mich. Geol. Survey Prog. Rept. 10, pl. 2, W. A. and A. J. Seaman, 1944. Coverage: Sec. 3-10, 15-18, T47N, R29W; WN, R30W; sec. 1, 12-13, 24-25, 36, T47N, R31W; sec. 19-23, 27-34, T48N, R29W; sec. 19-36, T48N, R30W; sec. 24-25, 36, T48N, R31W. Scale, 1:93,750. 1 in. to approx. 1½ mi.; 10½ x 7½. (Geology of some areas is not shown.)
- b. Geological map, Republic: Ibid., pl. 3, V. L. Ayres. Coverage: Sec. 5-8, 17-18, T46N, R29W; sec. 1, 12, T46N, R30W, Scale, 1:20,000. 1 in. to 1,667 ft.; 7½ x 10½. (Geology of some areas is not shown.)
- c. Geological map, Pegmatite Knob, Republic: Ibid., p. 36, fig. 2, V. L. Ayres. Coverage: Probably in Sec. 6, T46N, R29W. 1 in. to 10 ft.; 6 x 5.
- d. Geological map, NE corner Sec. 7, T46N, R29W: Ibid., p. 38, fig. 3, V. L. Ayres. and C. E. Kemp. 1 in. to approx. 65 ft.; 6 x 5.
- e. Geological map and sections, Grummet prospect: Ibid., p. 52, fig. 5, A. K. Snelgrove. Coverage: NE¼ NW¼, Sec. 36, T48N, R28W. 1 in. to approx. 50 ft.; 6 x 2. (Geology of some areas is not shown. After W. B. Loring.)
- 1945-1. Geologic map of the Mackinac Straits area of Michigan: Mich. Geol. Survey Pub. 44, fig. 2, K. K. Landes and G. M. Ehlers, 1945. Approx. coverage: Sec. 1-18, T34N, R7W-6E; T35-43N, R14W-6E. Scale, 1:250,000. 1 in. to approx. 4 mi.; 32 x 15. (Geology of some areas is not shown.)
- 1945-2. Geological map of the Ropes mine area, S½ of NW¼ sec. 29, T48N, R27W, Marquette Co., Michigan: Econ. Geology, v. 40, no. 2, p. 120, fig. 1, T. M. Broderick, Mar.-Apr. 1945. Scale, 1:7,200. 1 in. to 600 ft.; 4½ x 2½.
- 1945-3. Surface formations of Oakland County, Michigan: Cranbrook Inst. Sci. Bull. 22, M. T. Bingham, May 1945. Scale, 1:125,000. 1 in. to approx. 2 mi.; 16 x 18½.

- 1945-4a. Peshekee River area (south part): Mich. Geol. Survey Prog. Rept. 11, unnumbered pl., W. A. Seaman, Sept. 1945. Coverage: Sec. 6-7, 18-19, 30, T48N, R29W; sec. 1-4, 9-14, 21-28, T48N, R30W; sec. 19, 30-31, T49N, R29W; sec. 21-28, 33-36, T49N, R30W. Scale, 1:62,500. 1 in. to approx. 1 mi.; 6 x 9½. (Maps 1945-4a-b are bedrock; geology of most of the area is not shown. Maps dated 1944.)
- b. Spruce River area: *Ibid.* Coverage: Sec. 4-9, 16-21, 28-33, T47N, R30W; sec. 1-2, 11-17, 20-29, 32-36, T47N, R31W; sec. 19-21, 28-33, T48N, R30W; sec. 20-29, 32-36, T48N, R31W. Scale, 1:62,500. 1 in. to approx. 1 mi.; 7 x 9. (See 1945-4a annotation.)
- 1946-1. Geologic map of the region around the west end of Lake Erie showing the relation of the island belts to the lithology and relative resistance of the rock units: Ohio Jour. Sci., v. 46, no. 5, p. 281, fig. 35, J. E. Carman, 1946; Ohio Geol. Survey Repr. Ser. 3, 1947. Approx. coverage: T1-8S, R5-13E; pt. of Lake Erie bedrock surface, Ohio, and Ontario. Scale, 1:1,000,000. 1 in. to approx. 16 mi.; 5 x 4½.
- 1947-1. Map of magnetic anomalies and inferred geology of Ice Lake-Chicagon Creek area, Iron County: U.S.G.S. Prelim. Rept. 3-213, pl. 6, H. L. James, L. D. Clark, and L. E. Smith, 1947. Coverage: Sec. 30-31, T43N, R33W; sec. 25-46, T43N, R34W. Scale, 1:12,000. 1 in. to 1,000 ft.; 42 x 22. (Geology of some areas is not shown.)
- 1947-2. Surface geology of southwestern Michigan: Mich. Geol. Survey Pub. 45, pt. 1, p. 6, fig. 2, G. C. Tague, 1947. Coverage: T1-8S, R9-21W. Scale, 1:750,000. 1 in. to approx. 12 mi.; 7 x 4. (Surface deposits of the Lake Michigan and Saginaw glacial lobes are differentiated.)
- 1947-3a. Northwestern Benzie County, Michigan: Mich. Geol. Survey Pub. 45, pt. 2, pl. 2, J. L. Calver, 1947. Approx. coverage: T26-27N, R14-16W. Scale, 1:93,750. 1 in. to approx. 1½ mi.; 11 x 8. (Surface formations. Geology of some areas is not shown.)
- b. Round Lake basin: *Ibid.*, p. 22, fig. 1. Approx. coverage: Sec. 6, T26N, R15W; sec. 1, T26N, R16W; sec. 31, T27N, R15W; sec. 36, T27N, R16W. Scale, 1:31,250. 1 in. to approx. 2,600 ft.; 4½ x 5. (Surface formations.)
- c. Crystal Lake bar-present stage: *Ibid.*, p. 38, fig. 6. Approx. coverage: Sec. 3-4, 9, T26N, R16W; sec. 33-34, T27N, R16W. Scale, 1:31,250. 1 in. to approx. 2,600 ft.; 4 x 6. (Fig. 3-5, origin of Crystal Lake bar.)
- d. The western part of the Platte Lake depression: *Ibid.*, p. 52, fig. 7. Approx. coverage: Probably sec. 25-27, T27N, R16W. Scale, 1:31,250. 1 in. to approx. 2,600 ft.; 4½ x 2½. (Surface formations.)
- e. Platte River Point: *Ibid.*, p. 35, fig. 8. Approx. coverage: Sec. 19-21, T27N, R15W. Scale, 1:31,250. 1 in. to approx. 2,600 ft.; 4½ x 2. (Surface formations.)
- f. The northeastern part of the Platte Lake depression: *Ibid.*, p. 60, fig. 9. Approx. coverage: Sec. 1, 12-14, T27N, R15W. Scale, 1:31,250. 1 in. to approx. 2,600 ft.; 4 x 5. (Surface formations.)
- 1947-4a. Generalized geologic map of a part of the Keweenaw Peninsula, Michigan: Mich. Acad. Sci. and Mich. Geol. Soc. Ann. Geol. Excur. Guidebook, map 3, G. E. Eddy, and others, June 1947. Approx. coverage: T53N, R33-34W; T54-59N, R27-34W. 1 in. to 2 mi.; 30 x 11.
- b. Map showing points of geologic interest on route to and from the copper country: *Ibid.*, map 5. Coverage: Upper Peninsula. 1 in. to 16 mi.; 21½ x 11. (Bedrock)
- 1948-1. Map of generalized geology and magnetic anomalies, Crystal Falls-Alpha area showing location of basic data plates: U.S.G.S. Prelim. Map 3-181, pl. 1, F. J. Pettijohn, 1948. Coverage: Sec. 5-8, 17-20, 29, T42N, R32W; sec. 1-2, 11-14, 23-26, T42N, R33W; sec. 29-32, T43N, R32W; sec. 25-26, 35-36, T43N, R33W. Scale, 1:12,000. 1 in. to 1,000 ft., 50 x 38. (Geology of some areas is not shown.)
- 1948-2. Bedrock map of Marshall formation: A.A.P.G. Bull., v. 32, no. 4, p. 632, fig. 2, V. B. Monnett, Apr. 1948. Coverage: Lower Peninsula. 1 in. to approx. 40 mi.; 6 x 8. (Only the Marshall, and Coldwater formations are shown.)
- 1948-3. Glacial deposits in Iron River district: Mich. Geol. Survey Tech. Rept. 2, fig. 4, G. M. Stanley, June 1948. Coverage: Sec. 13-17, 20-29, 32-36, T43N, R35W; sec. 14-23, 26-35, T43N, R34W; sec. 1-5, 8-17, T42N, R35W; sec. 2-11, 17-18, T42N, R34W. Scale, 1:48,000. 1 in. to 4,000 ft.; 16½ x 10½.

- 1948-4a. Generalized map showing glacial features of the eastern half of the Northern Peninsula of Michigan: Mich. Acad. Sci. and Mich. Geol. Soc. Ann. Geol. Excur. Guidebook, unnumbered pl., S. G. Bergquist and G. M. Ehlers, June 1948. Approx. Upper Peninsula coverage: T38-50N, R22W-7E. 1 in. to approx. 20 mi.; 11 x 8.
- 1948-4b. Geological map of the eastern part of the Northern Peninsula of Michigan: *Ibid.* Approx. coverage: Lower Peninsula, T32-39N, R6W-9E; Upper Peninsula, T38-50N, R22W-7E. 1 in. to approx. 20 mi.; 11 x 8. (Bedrock)
- 1948-5a. Maps showing magnetic data and inferred geology in the eastern part of the Iron River district, Iron County, Michigan: U.S.G.S. Circ. 26, pl. 1, H. L. James, July 1948. Coverage: Sec. 24-25, 36, T43N, R35W. Scale, 1:6,000. 1 in. to 500 ft.; 40 x 30. (Pl. 4, x-Sec. Geology of some areas is not shown.)
- b. Map showing inferred geology in the southeastern part of the Iron River district, Iron County, Michigan: *Ibid.*, pl. 3. Coverage: Sec. 5-9, T42N, R34W; sec. 1, 12, T42N, R35W. Scale, 1:6,000. 1 in. to 500 ft.; 41 x 26½. (Pl. 4, x-Sec. Geology of some areas is not shown.)
- 1948-6. Outcrop areas of Cambrian and Ordovician rocks, and major structural features around the Michigan basin. Areas of oil and gas production from the Trenton limestone and older rocks are also shown: A.A.P.G. Bull., v. 32, no. 8, p. 1418, fig. 1, G. V. Cohee, Aug. 1948. Approx. coverage: Lower Peninsula and eastern 2/3 of Upper Peninsula; pt. of Wis., Ill., Ind., Ohio, and Ontario. 1 in. to approx. 112 mi.; 6 x 5. (In Michigan the Cambrian and Ordovician outcrop areas are located in the U.P.)
- 1949-1. Map showing surface formations and shore lines of glacial lakes in the Ypsilanti-Ann Arbor area, Michigan: U.S.G.S. Water-Supply Paper 1078, pl. 1, C. L. McGuinness, O. F. Poindexter, and E. G. Otton, 1949. Approx. coverage: T1-4S, R6-7E; sec. 5-8, 17-20, 29-32, T1-4S, R8E. Scale, 1:125,000. 1 in. to approx. 2 mi.; 9½ x 14.
- 1949-2. Map of surface geology, Wexford County, Michigan: Mich. Acad. Sci. Papers (1947), v. 33, p. 234, fig. 1, D. P. Stewart, 1949. Scale, 1:220,000. 1 in. to approx. 3½ mi.; 8½ x 10½.
- 1949-3a. Areal distribution of the Traverse group in the Onaway-Ocqueoc area: Mich. Geol. Soc. Ann. Geol. Excur. Guidebook, map 2, W. A. Kelly, June 1949. Approx. coverage: Sec. 1-18, T34N, R2-3E; sec. 13-36, T35N, R2-3E. Scale, 1:48,000. 1 in. to 4,000 ft.; 16½ x 11. (Geology of some areas is not shown.)
- b. Areal geologic map of Afton-Onaway area of Presque Isle and Cheboygan counties, Michigan, with inset map of Lower Peninsula of Michigan: A.A.P.G. Bull., v. 31, no. 3, p. 448, fig. 1, W. A. Kelly and G. W. Smith, Mar. 1947; *Ibid.*, map 3. Coverage: Sec. 5-8, 17-18, T34N, R2E; sec. 1-18, T34N, R1W-1E; sec. 1-3, 10-15, T34N, R2W; sec. 7-8, 17-20, 29-32, T35N, R2E; T35N, R1W-1E; sec. 22-27, 34-36, T35N, R2W. Scale, 1:125,000. 1 in. to approx. 2 mi.; 9 x 6. (Bedrock. Geology of some areas is not shown. Map in Guidebook is 16½ x 11; 1 in. to approx. 1 mi. Map dated 1946.)
- c. Areal map of Traverse formations for Charlevoix and Emmet counties: *Ibid.*, map 4. 1 in. to approx. 2 mi.; 16½ x 11. (Only the Traverse formations geology near the Lake Michigan shore in this area is shown.)
- 1949-4. Geologic map of the Stager area, Iron County, Michigan: U.S.G.S. Circ. 45, pl. 1, S. E. Good and F. J. Pettijohn, Aug. 1949. Approx. coverage: Sec. 24-25, 36, T42N, R33W; sec. 19, 30-31, T42N, R32W. Scale, 1:12,000. 1 in. to 1,000 ft.; 10 x 17.
- 1949-5a. Map of geology at bedrock surface in south-central part of Iron River district, Iron County, Michigan: U.S.G.S. Circ. 43, pl. 1, C. E. Dutton, Nov. 1949; pl. 3, x-Sec. Coverage: Sec. 35-36, T43N, R35W; sec. 1-2, T42N, R35W. Scale, 1:4,800. 1 in. to 400 ft.; 19 x 16. (Geology of some areas is not shown.)
- b. Map and structure sections showing geology in north-central part of Iron River district, Iron County, Michigan: *Ibid.*, pl. 4. Coverage: Sec. 25, 36, T43N, R35W. Scale, 1:4,800. 1 in. to 400 ft.; 19 x 16. (Geology of some areas is not shown.)
- c. Map and structure sections showing geology in central part of Iron River district, Iron County, Michigan: *Ibid.*, pl. 6. Coverage: Sec. 26-27, 33-35, T43N, R35W. 1 in. to 1,000 ft., 19 x 16. (Geology of some areas is not shown.)
- 1950-1. W½ Delta Co.: Mich. Geol. Soc. Ann. Geol. Excur. Guidebook, unnumbered pl., R. C. Hussey, June 1950. Coverage: T37-43N, R21-24W. 1 in. to 3 mi.; 11 x 15. (Bedrock)

- 1950-2a. Preliminary geologic map of Iron River-Crystal Falls district, Michigan and part of Florence County, Wisconsin: U.S.G.S. Circ. 84, pl. 1, C. E. Dutton, and others, Sept. 1950. Coverage: Sec. 5-8, 17-18, T41N, R31W; sec. 5-8, 17-20, 29-32, T42-43N, R31W; T42-43N, R32-35W; Wis., pt. of T39-41N, R17-18E. Scale, 1:93,750. 1 in. to approx. 1½ mi.; 20 x 17. (Geology of some areas is not shown.)
- b. Preliminary geologic map of part of Menominee and Felch Mountain districts, Michigan, and Florence County, Wisconsin: *Ibid.*, pl. 2. Coverage: T39-41N, R28-30W; sec. 1-4, 9-16, 22-25, T41N, R31W; sec. 19-36, T42N, R28-30W; sec. 21-28, 33-36, T42N, R31W; Wis., pt. of T39-40N, R18-19E. Scale, 1:93,750. 1 in. to approx. 1½ mi.; 20 x 17.
- 1951-1. Geologic map and section of a pegmatitic lava flow at South Range quarry, Houghton County, Michigan: G.S.A. Bull., v. 62, p. 4, H. R. Cornwall and A. A. Stromquist, Feb. 1951. Coverage: Sec. 17, T54, R34W. Scale, 1:4,800. 1 in. to 400 ft.; 10½ x 10.
- 1951-2. Features near the head of glacial Grand River: *Jour. Geology*, v. 59, no. 3. p. 246, fig. 1, J. H. Bretz, May 1951. Approx. coverage: Sec. 1-18, T5N, R6W-2E; T6-10N, R6W-2E; sec. 19-36, T11N, R6W-2E. 1 in. to approx. 7 mi.; 7 x 4½.
- 1951-3a. Bedrock geology in the Bessemer area, Gogebic County, Michigan: *Mich. Geol. Survey Prog. Rept.* 14, fig. 2, E. A. Brown and W. T. Stuart, June 1951. Coverage: Sec. 3-6, T46N, R46W; sec. 1-2, T46N, R47W; sec. 3-10, 15-22, 27-34, T47N, R45W; T47N, R46W; sec. 1-2, 11-14, 23-26, 35-36, T47N, R47W. Scale, 1:125,000. 1 in. to approx. 2 mi.; 9 x 6½.
- b. Map of Bessemer area, Gogebic County, Michigan, showing surface geology and location of wells, test borings, and springs: *Ibid.*, fig. 3, E. A. Brown. Coverage: Sec. 3-10, 15-22, 27-30, T47N, R45W; sec. 1-10, T46N, R46W; sec. 1-2, 11-12, T46N, R47W; T47N, R46W; sec. 1-2, 11-14, 23-26, 35-36, T47N, R47W; sec. 15-22, 27-34, T48N, R45W; sec. 13-36, T48N, R46W; sec. 13-14, 23-26, 35-36, T48N, R47W. Scale, 1:48,000. 1 in. to 4,000 ft.; 15½ x 16.
- 1951-4. Generalized geologic map of the northern part of the Iron River district, Iron County, Michigan: U.S.G.S. Circ. 120, pl. 1, H. L. James and C. E. Dutton, Sept. 1951. Coverage: Sec. 13-16, 21-24, 25-28, T43N, R35W; sec. 18-19, 30, T43N, R34W. Scale, 1:19,200. 1 in. to 1,600 ft.; 20 x 19. (x-Sec. included. Geology of some areas is not shown.)
- 1951-5. Areal geologic map showing distribution of Devonian rocks, underlying Silurian and overlying Mississippian strata in parts of southeastern Michigan and northeastern Ohio: G.S.A. Strat. Field Trip, Detroit Mtg., Nov. 1951; *Mich. Geol. Soc. Ann. Geol. Excur. Guidebook*, map 1, G. M. Ehlers, E. C. Stumm and R. V. Kesling, June 1952. Approx. coverage: T1-2S, R6-13E; T3-8S, R4-10E; Lucas Co., Ohio. 1 in. to approx. 9 mi.; 8½ x 11.
- 1951-6a. Surface geology of portions of the Detroit, Wayne, Pontiac, and Rochester quadrangles of Michigan: *Guidebook to the Study of Pleistocene Features of the Huron-Saginaw Ice Lobes in Mich.* (G.S.A. Glacial Field Trip), unnumbered pl., S. G. Bergquist and D. C. MacLachlan, Nov. 1951. Approx. coverage: Sec. 31-35, T3N, R12E; sec. 31-36, T3N, R8-11E; sec. 2-11, 14-23, 26-35, T1S-2N, R12E; sec. 1-6, T2S, R8-11E; sec. 2-6, T2S, R12E; T1S-2N, R8-11E. 1 in. to approx. 2 mi.; 18½ x 16.
- b. Southeastern Michigan glacial moraines and shores: *Ibid.*, A. D. Perejda. Approx. coverage: sec. 1-3, 10-15, 22-27, 34-36, T8S-21N, RW; T8S-21N, R3W-16E. 1 in. to 10 mi.; 14 x 18½. (Map dated Aug. 1951.)
- 1952-1a. Geology of the northern Crystal Falls area, Iron County, Michigan: U.S.G.S. Circ. 153, pl. 1, F. J. Pettijohn, 1952. Coverage: Sec. 15-22, T43N, R32W; sec. 13, 24, T43N, R33W. Scale, 1:16,000. 1 in. to approx. 1,333 ft.; 30 x 16.
- b. The Paint River outcrop area, SE¼ sec. 20, T43N, R32W, Iron County, Michigan: *Ibid.*, pl. 2. 1 in. to 250 ft.; 20 x 16.
- 1952-2a. Map of Detroit area showing the distribution and water-bearing properties of the alluvium and glacial deposits: U.S.G.S. Circ. 183, pl. 2, C. O. Wisler, G. J. Stramel, and L. B. Laird, 1952. Coverage: T1-4S, R5-13E; T1-3N, R7-14E. Scale, 1:250,000. 1 in. to approx. 4 mi.; 22 x 17.

- b. Geologic map of the Detroit area showing bedrock formations and approximate thickness of drift: *Ibid.*, pl. 3. Coverage: Same as 1952-2a. Scale, 1:250,000. 1 in. to approx. 4 mi.; 22 x 17,
- 1952-3. Geology of the Palmer area as revised by Tyler and Twenhofel: *Am. Jour. Sci.*, v. 250, p. 121, fig. 5, S. A. Tyler and W. H. Twenhofel, Feb. 1952. Coverage: Sec. 14-23, 26-35, T47N, R26W. Scale, 1:62,500. 1 in. to approx. 1 mi.; 7 x 4.
- 1953-1. Aeromagnetic survey of part of Dickinson County, Michigan, with preliminary geologic interpretation: U.S.G.S. GP 115, K. L. Wier, J. R. Balsley, and W.P. Pratt, 1953. Coverage: T39-44N, R28-30W. 1 in. to 2 mi.; 41 x 54. (Bedrock)
- 1953-2. Geologic map of the Ahmeek quadrangle, Michigan: U.S.G.S. GQ 27, W. S. White, H. R. Cornwall, and R. W. Swanson, 1953. Coverage: Lat. 47° 15' to 47° 22' 30", Long. 88° 22' 30" to 88° 30'. Scale, 1:24,000. 1 in. to 2,000 ft.; 25 x 30; color. (x-Sec. and text included.)
- 1953-3. Glacial features of a portion of south central Michigan (modified from Leverett and Taylor): *Mich. Acad. Sci. Papers* (1952), v. 38, p. 360, fig. 1, J. H. Bretz, 1953. Approx. coverage: T4-13N, R11E-16W; sec. 1-3, 10-15, 22-27, 34-36, T4-13N, R17W. 1 in. to approx. 8 mi.; 19½ x 7.
- 1953-4. Clinton River basin surface geology: *Mich. Water Resources Comm. Rept. on the Water Resources of the Clinton River Basin*, map 1, J. Slaughter, 1953. Approx. coverage: T1-5N, R11-14E; sec. 1-2, 11-14, 23-26, 35-36, T1N, R10E; T2-4, R10E; sec. 1-24, T2N, R9E; T3N, R9E; sec. 2-3, 10-14, 23-26, 35-36, T4N, R8E; sec. 1-3, 10-36, T4N, R9E; sec. 13-14, 23-26, 35-36, T5N, R9E; sec. 13-36, T5N, R10E; sec. 36, T6N, R11E; sec. 21-29, 31-36, T6N, R12E; sec. 19, 21-23, 25-36, T6N, R13E. 1 in. to approx. 3 mi.; 20 x 14.
- 1954-1. Geologic map of the Phoenix quadrangle, Michigan, bedrock geology: U.S.G.S. GQ 34, H. R. Cornwall, 1954. Coverage: Lat. 47° 22' 30" to 47° 30', Long 88° 15' to 88° 25'. Scale, 1:24,000. 1 in. to 2,000 ft.; 25 x 30; color. (x-Sec. and text included.)
- 1954-2. Geologic map of the Bruneau Creek quadrangle, Michigan, bedrock geology: U.S.G.S. GQ 35, J. C. Wright and H. R. Cornwall, 1954. Coverage: Lat. 47° 15' to 47° 22' 30", Long. 88° 07' 30" to 88° 15'. Scale, 1:24,000. 1 in. to 2,000 ft.; 25 x 30; color. (x-Sec. and text included.)
- 1954-3. Geologic map of the Eagle Harbor quadrangle, Michigan, bedrock geology: U.S.G.S. GQ 36, H. R. Cornwall, and J. C. Wright, 1954. Coverage: Lat. 47° 22' 30" to 47° 30', Long. 88° 07' 30" to 88° 15'. Scale, 1:24,000. 1 in. to 2,000 ft.; 25 x 30; color. (x-Sec. and text included.)
- 1954-4. Geologic map of the Delaware quadrangle, Michigan, bedrock geology: U.S.G.S. GQ 51, H. R. Cornwall, 1954. Coverage: Lat. 47° 22' 30" to 47° 30', Long. 88° to 88° 07' 30". Scale, 1:24,000. 1 in. to 2,000 ft.; 25 x 30; color. (x-Sec. and text included.)
- 1954-5. Geologic map of the Lake Medora quadrangle, Michigan, bedrock geology: U.S.G.S. GQ 52, H. R. Cornwall, 1954. Coverage: Lat. 47° 22' 30" to 47° 30', Long. 87° 52' 30" to 88°. Scale, 1:24,000. 1 in. to 2,000 ft.; 25 x 30; color. (x-Sec. and text included.)
- 1954-6a. Map of Grand Rapids area showing glacial deposits and their water-bearing properties: U.S.G.S. Circ. 323, pl. 2, G. J. Stramel, C. O. Wisler, and L. B. Laird, 1954. Coverage: T5-8N, R10-12W. 1 in. to 2 mi.; 13 x 14½.
- b. Geologic map of the Grand Rapids area showing bedrock formations: *Ibid.*, pl. 3. Coverage: T5-8N, R10-12W. 1 in. to 2 mi.; 13 x 14½.
- 1954-7. Glacial geology of Van Buren County, Michigan: *Mich. Geol. Survey Pub.* 48, pt. 1, pl. 1, F. W. Terwilliger, 1954. 1 in. to 2 mi.; 17 x 13½. (Fig. 9-19, 23, origin of surface formations. Map dated 1950.)
- 1954-8. Surficial geology and drift-thickness map of Oakland County, Mich.: *Mich. Geol. Survey Pub.* 48, pt. 2, p. 114, fig. 2, A. J. Mozola, 1954. 1 in. to approx. 7 mi.; 4½ x 6.
- 1954-9. Marquette district, map showing surficial geology: *Mich. Geol. Survey Tech. Rept.* 3, fig. 4, E. C. Rhodehamel and E. A. Brown, 1954. Coverage: T47N, R26W; sec. 31-36, T48N, R26-28W; sec. 1-29, T47N, R27W; sec. 1-18, 21-24, T47N, R28W; sec. 1-3, 10-13, T47N, R29W; sec. 34-36, T48N, R29W. 1 in. to approx. 2,600 ft.; 44 x 16. (Geology of some areas is not shown.)
- 1954-10a. Map of the surface geology of southeastern Oakland County, Michigan: *Mich. Geol. Survey Prog. Rept.* 16, pl. 1, J. G. Ferris, and others, 1954. Coverage: All of Oakland County. 1 in. to approx. 3 mi.; 11 x 8.

- b. Geologic map of southeastern Oakland County showing areal extent of bedrock formations: *Ibid.*, p. 20, fig. 6. Coverage: All of Oakland County. 1 in. to approx. 2 mi.; 6 x 6½.
- 1954-11 Geologic and bedrock contour map of Oakland County, Mich.: Mich. Acad. Sci. Papers (1953), v. 39, p. 368, fig. 1, A. J. Mozola, 1954. 1 in. to approx. 8 mi.; 4 x 5½.
- 1954-12. The Cleveland-Cliffs Iron Company, Marquette iron range: Minn. Univ. Center for Continuation Study, 4th Mining Geology Symposium, fig. 2, B. H. Boyum, Apr. 1954. Coverage: T45N, R25W; sec. 2-11, 14-23, 26-35, T46N, R26W; T46-48W, R27-31W; sec. 1-30, T47N, R25W; sec. 1-35, T47N, R26W; T48N, R25-26W. 1 in. to approx. 2 mi.; 21½ x 10½. (Fig. 3-10, x-Sec.)
- 1955-1. Geologic map of the Mohawk quadrangle, Michigan, bedrock geology: U.S.G.S. GQ 54, E. S. Davidson, and others, 1955. Coverage: Lat. 47° 15' to 47° 22' 30", Long. 88° 15' to 88° 22' 30". Scale, 1:24,000. 1 in. to 2,000 ft.; 25 x 30; color. (x-Sec. and text included.)
- 1955-2. Geologic map of the Manitou Island quadrangle, Michigan, bedrock geology: U.S.G.S. GQ 73, H.R. Cornwall, and W. S. White, 1955. Coverage: Lat. 47° 22' 30" to 47° 30', Long. 87° 35' to 87° 45'. Scale, 1:24,000. 1 in. to 2,000 ft.; 25 x 30; color. (x-Sec. and text included.)
- 1955-3. Geologic map of the Fort Wilkins quadrangle, Michigan, bedrock geology: U.S.G.S. GQ 74, H. R. Cornwall, 1955. Coverage: Lat. 47° 22' 30" to 47° 30', Long. 87° 45' to 87° 52' 30". Scale, 1:24,000. 1 in. to 2,000 ft.; 25 x 30; color. (x-Sec. and text included.)
- 1955-4a. Map of the surface formations of the Southern Peninsula of Michigan: Mich. Geol. Survey Pub. 49, H. M. Martin, and others, 1955. Scale, 1:500,000. 1 in. to approx. 8 mi.; 41 x 42½ color. (A 4 x 5 bedrock inset map of this area is also shown.)
- b. Map of the surface formations of the Northern Peninsula of Michigan: *Ibid.*, 1957. Scale, 1:500,000. 1 in. to approx. 8 mi.; 51 x 33½; color. (A 6 x 4 bedrock inset map of this area is also shown. Compiled by H. M. Martin.)
- 1955-5. Paw Paw River drainage basin surface geology: Mich. Water Resources Comm. Rept. on Water Resource Conditions and Uses in the Paw Paw River Basin, map 2, 1955. Approx. coverage: Sec. 1-2, 5-8, 10, 17-20, 29-30, T4S, R13W; sec. 1-6, 9-16, 21-24, T4S, R14W; sec. 1-11, T4N, R15W; sec. 1-22, T4N, R16W; sec. 1-21, 23-24, 28-30, T4S, R17W; sec. 1-18, 21-27, 34-35, T4S, R18W; sec. 4-7, 18-19, 28-32, T3S, R12W; T3S, R13-18W; sec. 5-8, 18-19, 28-33, T2S, R12W; T2S, R13W; sec. 1-5, 9-16, 19-36, T2S, R14W; sec. 25-36, T2S, R15W; sec. 27-36, T2S, R16W; sec. 25-27, 34-36, T2S, R17W; sec. 14-15, 22-36, T1S, R13W; sec. 22-29, 32-36, T1S, R14W. 1 in. to approx. 2½ mi.; 20 x 14.
- 1955-6. Generalized geologic map of Northern Michigan, showing metamorphic zones: G.S.A. Bull., v. 66, no. 12, pt. 1, pl. 1, H. L. James, Dec. 1955. Approx. coverage: T39-59N, R24-49W. 1 in. to approx. 16 mi.; 12 x 9½. (Also see 1961-1f.)
- 1956-1. Geologic map of the Chassell quadrangle, Michigan: U.S.G.S. MF 43, W. S. White, 1956. Coverage: Lat. 47° to 47° 07' 30", Long. 88° 30' to 88° 37' 30". Scale, 1:24,000. 1 in. to 2,000 ft.; 25 x 30. (x-Sec. included.)
- 1956-2. Geologic map of the Hancock quadrangle, Michigan: U.S.G.S. MF 46, H. R. Cornwall, and J. C. Wright, 1956. Coverage: Lat. 47° 07' 30" to 47° 15', Long. 88° 30' to 88° 37' 30". Scale, 1:24,000. 1 in. to 2,000 ft.; 25 x 30. (x-Sec. included.)
- 1956-3. Geologic map of the Laurium quadrangle, Michigan: U.S.G.S. MF 47, H. R. Cornwall, and J. C. Wright, 1956. Coverage: Lat. 47° 07' 30" to 47° 15', Long. 88° 22' 30" to 88° 30'. Scale, 1:24,000. 1 in. to 2,000 ft.; 25 x 30. (x-Sec. included.)
- 1956-4. Geologic map of the South Range quadrangle, Michigan: U.S.G.S. MF 48, W. S. White, and J. C. Wright, 1956. Coverage: Lat. 47° to 47° 07' 30", Long. 88° 37' 30" to 88° 45'. Scale, 1:24,000. 1 in. to 2,000 ft.; 25 x 30. (x-Sec. included.)
- 1956-5. Geologic map of the Palmer area, Marquette County, Michigan: U.S.G.S. Bull. 1030, pl. 9, R. C. Vickers, 1956. Coverage: Sec. 27-34, T47N, R26W. 1 in. to 1,320 ft.; 18½ x 18½.

- 1956-6a. Geologic map and sections of the Kiernan quadrangle, Iron County, Michigan: U.S. G.S. Bull. 1044, pl. 1, J. E. Gair and K. L. Wier, 1956. Coverage: Late 46° 07' 30" to 46° 15', Long. 88° 07' 30" to 88° 15'. Scale, 1:24,000. 1 in. to 2,000 ft.; 23½ x 29; color. (Pl. 3-4; x-Sec, pl. 5; total aero-magnetic profiles.)
- b. Map showing relation of magnetic data to geology in vicinity of Michigamme Mountain, Iron County, Michigan: Ibid., pl. 2, K. L. Wier, J. E. Gair, and J. D. Hume. Coverage: Sec. 2-4, 9-11, 14-16, T43N, R31W; sec. 26-28, 33-35, T44N, R31W. 1 in. to 600 ft.; 30 x 38. (Geology of some areas is not shown.)
- c. Map of the western part of the Northern Peninsula of Michigan showing the Kiernan quadrangle in relation to the principal geologic features: Ibid., p. 5, fig. 2, J. E. Gair and K. L. Wier. Approx. coverage: T39-59N, R23-49W. 1 in. to approx. 35 mi.; 5 x 4.
- d. Distribution of glacial deposits in the Kiernan quadrangle. Modified from Bergquist, 1935, map 36: Ibid., p. 8, fig. 3, J. E. Gair and K. L. Wier. Coverage: Lat. 46° 07' 30" to 46° 15', Long. 88° 07' 30" to 88° 15'. 1 in. to approx. 1½ mi.; 3½ x 5½.
- e. Sketch map showing the relationship of magnetic anomaly caused by the Fence River formation to outcrops of Hemlock formation and quartz-biotite schist (Probable Michigamme slate) in sec. 15, T44N, R31W: Ibid., p. 60, fig. 18, K. L. Wier. 1 in. to approx. 800 ft.; 4½ x 5.
- f. Diagrammatic plan view showing relationships of granitic rock basic dikes, quartz veins, and inferred fault in the southwestern part of the NE¼ NW¼ sec. 20, T44N, R31W; Ibid., p. 72, fig. 20, J. E. Gair and K. L. Wier. 1 in. to approx. 160 ft.; 4½ x 4½.
- 1957-1a. Geologic map showing distribution of Silurian rocks of the Northern Peninsula of Michigan: Mich. Geol. Soc. Ann. Geol. Excur. Guidebook, map 1, G. M. Ehlers and R. V. Kesling, June 1957. Approx. Upper Peninsula coverage: T37-44N, R20W-7E. 1 in. to approx. 8 mi.; 22 x 11; color. (Non-Silurian rock is not shown. Hand colored.)
- 1957-1b. Geologic map of parts of Delta and Schoolcraft counties, showing Stops 1 to 6 on the Annual Geological Excursion and small inset maps of Stops 4 and 5: Ibid., map 2. Coverage: T37-41N, R17-19W. 1 in. to 3 mi.; 8½ x 11.
- c. Geologic map of part of Schoolcraft County, showing Stops 7 to 11 on the Annual Geological Excursion: Ibid., map 3. Coverage: T41-44N, R13-15W; sec. 1-3, 10-15, 23-27, 34-36, T41-44N, R16W; sec. 19-36, T45N, R13-15W; sec. 23-27, 34-36, T45N, R16W. 1 in. to 3 mi.; 8½ x 11.
- d. Geologic map of parts of Mackinac and Luce counties, showing Stops 12 and 13 on the Annual Geological Excursion: Ibid., map 4. Coverage: T42-45N, R10-12W; sec. 4-9, 16-21, 30-33, T43-45N, R9W; sec. 31-33, T46N, R9W; sec. 31-36, T46N, R10-12W. 1 in. to 3 mi.; 8½ x 11.
- e. Geologic map of parts of Mackinac, Luce, and Chippewa counties, showing Stop 14 on the Annual Geological Excursion: Ibid., map 5. Coverage: T42-45N, R6-8W; sec. 1-3, 10-15, 23-27, 34-36, T42-45N, R9W; sec. 25-36, T46N, R6-8W; sec. 25-27, 34-36, T46N, R9W. 1 in. to 3 mi.; 8½ x 11.
- f. Geologic map of parts of Mackinac and Chippewa counties, showing Stops 15 to 22 on the Annual Geological Excursion: Ibid., map 6. Coverage: Sec. 4-9, 16-21, 28-33, T42-43N, R2W; T40-43N, R3-5W; sec. 16-21, 28-33, T44N, R2W; sec. 13-36, T44N, R3-5W. 1 in. to 3 mi.; 8½ x 11.
- 1958-1. Geologic sketch map of Northern Michigan: U.S.G.S. Prof. Paper 314-C, p. 28, fig. 2, H. L. James, 1958. Coverage: T39-59N, R24-48W. 1 in. to approx. 22 mi.; 7 x 5½.
- 1958-2a. Geologic map showing the distribution of Cambrian rocks in Northern Michigan: Mich. Geol. Survey Pub. 51, pl. 1, W. K. Hamblin, 1958. Coverage: Upper Peninsula. 1 in. to approx. 30 mi.; 15 x 9.
- b. Geologic map of portions of Marquette and Alger counties, Michigan: Ibid., pl. 2. Coverage: Sec. 1-6, T45N, R17-23W; T46-48N, R17-23W. 1 in. to 3 mi.; 15½ x 9.
- c. Geologic map of the coast of Lake Superior between Big Bay and Marquette: Ibid., pl. 3. 1 in. to approx. 3 mi.; 13 x 9.
- d. Geologic map showing the distribution of the Cambrian sandstones in the Felch area, Dickinson County: Ibid., pl. 4. Coverage: Sec. 25-36, T42N, R28-29W; sec. 25, 36, T42N, R30W. 1 in. to approx. 3,900 ft.; 17 x 9.
- 1958-3a. Geologic map of Chippewa County, Michigan, showing bedrock formations beneath surficial deposits: Mich. Geol. Survey Prog. Rept. 17, pl. 2, K. E. Vanlier and M. Deutsch, 1958. 1 in. to approx. 7 mi.; 16 x 11.

- b. Map of the surficial deposits of Chippewa County, Michigan: Ibid., pl. 3. 1 in. to approx. 7 mi.; 16 x 11.
- 1958-4a. Bedrock geology of Mackinac County: Mich. Geol. Survey Prog. Rept. 19, pl. 2, K. E. Vanlier and M. Deutsch, 1958. 1 in. to approx. 6 mi.; 16 x 11.
- b. Surface geology of Mackinac County: Ibid., pl. 5- 1 in. to approx. 6 mi.; 16 x 11.
- 1958-5a. Bedrock geology of the Holland area: Mich. Geol. Survey Prog. Rept. 20, p. 20, fig. 4, M. Deutsch, E. M. Burt, and K. E. Vanlier, 1958. Coverage: Sec. 2-11, T4N, R15W; sec. 1-4, 9-12, T4N, R16W; sec. 14-23, 26-35, T5N, R15W; sec. 13-36, T5N, R16W. 1 in. to approx. 1 mi.; 8 x 5½.
- 1958-5b. Map of surficial deposits of the Holland area: Ibid., p. 23, fig. 5. Coverage: Same as 1958-5a. 1 in. to approx. 1½ mi.; 7 x 4½.
- 1958-6a. Map showing generalized Precambrian geology of parts of northern Michigan and Wisconsin: Mich. Basin Geol. Soc. Ann. Geol. Excur. Guidebook, p. 3, fig. 1, C. E. Dutton, June 1958. Approx. coverage: T42-43N, R28-35W; pt. of Wis. 1 in. to 5 mi.; 9½ x 5½. (Mich. Basin Geol. Soc. was known as the Mich. Geol. Soc., 1936-1957.)
- b. Map showing generalized surficial geology of parts of Dickinson and Iron counties, Michigan: Ibid., p. 4, fig. 2. Approx. coverage: T39-40N, R28-31W; sec. 5-8, 17-20, 29-32, T41-42, R27W; sec. 19-20, 29-32, T43N, R27W; T41-42N, R28-32W, T42N, R33-34W; sec. 1-2, 11-14, 23-26, 35-36, T42N, R35W; sec. 25-36, T43N, R28-34W; sec. 25-26, 35-36, T43N, R35W. 1 in. to 5 mi.; 11 x 7.
- c. Map showing generalized geology in southern Dickinson County, Michigan: Ibid., p. 7, fig. 3. Approx. coverage: Sec. 4-9, 16-21, 28-33, T39-40N, R28W; T39- 40N, R29-30W; sec. 26-35, T41N, R28W; sec. 25-36, T41N, R29-30W. 1 in. to 2 mi.; 9 x 6. (Bedrock.)
- d. Geologic map of Sturgeon Falls dam area, about 2 miles northeast of Loretto: Ibid., p. 9, fig. 4. Coverage: Sec. 8, T39N, R28W. 1 in. to approx. 140 ft.; 4½ x 7½.
- e. Geologic map of Norway area: Ibid., p. 10, fig. 5. Approx. coverage: Sec. 4-5, 8-9, T39N, R29W. 1 in. to 1,000 ft.; 5½ x 5. Approx. coverage: Sec. 4-5, 8-9, T39N, R29W. 1 in. to 1,000 ft.; 5½ x 4.
- f. Geologic map of Quinnesec mine area: Ibid., p. 11, fig. 6. Coverage: Sec. 2-3, T39N, R30W; sec. 34-35, T40N, R30W. 1 in. to 1,000 ft.; 4½ x 3.
- g. Geologic map of Traders mine area: Ibid., p. 12, fig. 7. Coverage: Sec. 17-20, T40N, R30W. 1 in. to 1,000 ft.; 4 x 3.
- h. Geologic map of Chapin mine area: Ibid., p. 14, fig. 8. Coverage: Sec. 30-31, T40N, R30W; sec. 25-36, T40N, R31W. 1 in. to 1,000 ft.; 4 x 4½. (Geology of some areas is not shown.)
- i. Map showing generalized geology in central Dickinson County, Michigan: Ibid., p. 19, fig. 10. Coverage: T41-43N, R28-30W. 1 in. to 2 mi.; 9 x 6.
- j. Geologic map of Felch area: Ibid., p. 20, fig. 11. Coverage: Sec. 28-29, 32-33, T42N, R28W. 1 in. to approx. 1,600 ft.; 6½ x 6.
- k. Geologic map of an area north of Felch: Ibid., p. 21, fig. 12. Coverage: Sec. 7-9, 16-21, T42N, R28W. 1 in. to approx. 1,600 ft.; 5 x 6.
- l. Detailed geologic map of exposures of the East Branch arkose, about 3½ miles north of Felch: Ibid., p. 22, fig. 13. Coverage: Sec. 17, T42N, R28W. 1 in. to approx. 225 ft.; 7 x 5½.
- m. Map showing generalized geology in the vicinity of Crystal Falls, Michigan, and Florence, Wisconsin: Ibid., p. 25, fig. 14. Approx. coverage: T41-43N, R31-32W; pt. of Wis. 1 in. to 2 mi.; 6½ x 9.
- n. Paint River outcrop area: Ibid., p. 28, fig. 15. Approx. coverage: Sec. 30, T43N, R32W. 1 in. to approx. 250 ft.; 7½ x 6½.
- 1958-60. Structural map of iron-formation outcrop at Paint River dam, NW¼ SE¼ Sec. 20, T43N, R32W, Iron County, Michigan: Ibid., p. 30, fig. 16. 1 in. to approx. 20 ft.; 9½ x 6½.
- 1959-1a. Geologic map and structure sections of the Lake Mary quadrangle, Michigan: U.S.G.S. Bull. 1077, pl. 1, R. W. Bayley, 1959. Coverage: Lat. 46° to 46° 07' 30", Long. 88° 07' 30" to 88° 15'. Scale, 1:24,000. 1 in. to 2,000 ft.; 21 x 27; color.
- b. Geologic and magnetic map of northeastern part of Lake Mary quadrangle, Iron County and adjacent area in Dickinson County, Michigan: Ibid., pl. 2, K. L. Wier and R. W. Bayley, Coverage: Sec. 18-19,30, T43N, R30W; sec. 13-14, 23-26, T43N, R31W. 1 in. to 500 ft.; 31½ x 30½. (Geology of some areas is not shown. Section numbers 13 and 14 should be interposed.)

- c. Magnetic survey of sec. 1 and 12, T42N, R32W, and secs. 6-8, and 16-18, T42N, R31W, Iron County, Michigan: Ibid., pl. 3, (R. W. Bayley and G. Thompson. 1 in. to 500 ft.; 39 x 34.
- d. Map of outcrop area around Glidden and Scadden exploration. Parts of secs. 31 and 32, T43N, R31W, and secs. 5 and 6, T42N, R31W, Iron County, Michigan: Ibid., pl. 5, R. W. Bayley. 1 in. to 200 ft.; 26½ x 28.
- e. A sketch map showing the distribution of glacial deposits in Lake Mary quadrangle. Modified from Bergquist's map (1932): Ibid., p. 7, fig. 3, R. W. Bayley. Coverage: Lat. 46° to 46° 07' 30", Long. 88° 07' 30" to 88° 15'. 1 in. to approx. 1½ mi.; 4 x 5½.
- f. Maps showing three stages of geologic interpretation of the rocks of the Lake Mary quadrangle: Ibid., p. 9, fig. 4, R. W. Bayley. Coverage: Lat. 46° to 46° 07' 30", Long. 88° 07' 30" to 88° 15'. 1 in. to approx. 2½ mi.; 7 x 3½.
- g. Map showing the distribution of the igneous rock types in the Peavy Pond complex, T42N, R31W, the Lake Mary quadrangle, Iron County, Michigan: Ibid., p. 80, fig. 28, R. W. Bayley. Coverage: Sec. 14-23, 26-30, T42N, R31W. 1 in. to approx. 1 mi.; 4½ x 2½.
- 1959-2a. Bedrock geology, geologic map of Iron River-Crystal Falls district, Iron County, Michigan: U.S.G.S. MF 225, sheet 1, H. L. James and others, 1959. Approx. coverage: Lat. 46° to 46° 09' 30", Long. 88° 30' to 88° 45'. Scale, 1:24,000. 1 in. to 2,000 ft.; 36 x 35. (Legend on Sheet 3.)
- b. Bedrock geology, geologic map of the Iron River-Crystal Falls district, Iron County, Michigan: Ibid., sheet 2. Approx. coverage: Lat. 45° 57' 30" to 46° 07' 30", Long. 88° 15' to 88° 30'; Lat. 46° 07' 30" to 46° 09' 30", Long. 88° 22' 30" to 88° 30'. Scale, 1:24,000. 1 in. to 2,000 ft.; 36 x 44. (Legend on Sheet 3.)
- 1959-3a. Geologic map of Luce County showing bedrock formations beneath surficial deposits: Mich. Geol. Survey Prog. Rept. 21, pl. 1, K. E. Vanlier, 1959; fig. 5, x-Sec. 1 in. to approx. 4 mi.; 16 x 11.
- b. Map of surficial deposits in Luce County: Ibid., pl. 2. 1 in. to approx. 14 mi.; 16½ x 11.
- 1959-4a. Bedrock geology of Schoolcraft County: Mich. Geol. Survey Prog. Rept. 22, p. 15, fig. 3, W. C. Sinclair, 1959. 1 in. to approx. 4½ mi.; 12 x 8. (Fig. 4-5, x-Sec.)
- 1959-4b. Surface geology of Schoolcraft County: Ibid., p. 37, fig. 7. 1 in. to approx. 6½ mi.; 5½ x 8.
- 1959-5a. Map of the western part of the Upper Peninsula of Michigan showing the location of the Kiernan sills with respect to the principal geologic features: Am. Jour. Sci., v. 257, no. 6, p. 409, fig. 1, R. W. Bayley, June 1959. Approx. coverage: T48-53N, R24-47W. 1 in. to approx. 32 mi.; 4½ x 3.
- b. Geologic map of part of the West Kiernan sill, Iron County, Michigan: Ibid., p. 410, fig. 2. Coverage: Sec. 4-9, 16-21, 28-29, 32-33, T43N, R31W; sec. 1, 12-13, 24, T43N, R32W; sec. 31-33, T44N, R31W; sec. 36, T44N, R32W. 1 in. to approx. 1 mi.; 3 x 5½.
- 1959-6a. Geologic map of Mackinac Straits area: Mich. Basin Geol. Soc. Ann. Geol. Excur. Guidebook, fig. 1, F. D. Shelden, and others, June 1959. Approx., coverage: T34-42N, R11W-5E. 1 in. to approx. 12 mi.; 9½ x 6.
- b. Pleistocene geology of the Mackinac Straits region: Ibid., p. 60, fig. 1. Approx. coverage: Same as 1959-6a. 1 in. to approx. 12 mi.; 9½ x 6.
- 1959-7a. Index map of the Lake Superior region: Econ. Geology, v. 54, no. 7, p. 1252, fig. 1, R. E. Stoiber and E. S. Davidson, Nov. 1959. Approx. coverage: Lat. 45° 35' to 49°, Long. 84° 30' to 94°. 1 in. to approx. 100 mi.; 4½ x 4½.
- b. Distribution of epidote and prehnite in amygdaloidal flow tops of the Portage Lake lava series in Townships 56 and 57 North: Ibid., p. 1259, fig. 5. Approx. coverage: Sec. 4-8, 17-19, 30, T56N, R32W; sec. 1, 12-14, 23-27, 34-36, T56N, R33W; sec. 6-8, 16-21, 29-31, T57N, R31W; T57N, R32W; sec. 36, T57N, R33W; sec. 33-36, T58N, R32W. 1 in. to approx. 3 mi.; 5 x 3. (Geology outside this area is not shown. Fig. 6, same area showing relationship of mines to distribution of copper, quartz, and microcline.)
- 1960-1. Surface geology of the Kalamazoo area: Mich. Geol. Survey Prog. Rept. 23, fig. 5, M. Deutsch, K. E. Vanlier, and P. R. Giroux, 1960. Coverage: Sec. 19-20, 29-32, T1S, R10W; sec. 19-35, T1S, R11W; sec. 23-26, 35-36, T1S, R12W; sec. 5-8, 17-20, 29-32, T2-3S, R10W; T2-3S, R11W; sec. 1-2, 11-14, 23-27, 33-36, T2-3S, R12W. 1 in. to approx. 2 mi.; 5 x 7.
- 1960-2a. Bedrock geology of Delta County: Mich. Geol. Survey Prog. Rept. 24, p. 14, fig. 3, W. C. Sinclair, 1960. 1 in. to approx. 7 mi.; 6 x 6. (Fig. 4, x-Sec.)

- b. Surface geology of Delta County: Ibid., p. 35, fig. 5. 1 in. to approx. 7 mi.; 6 x 6.
- 1961-1a. Generalized geologic map of a part of Northern Michigan: U.S.G.S. Prof. Paper 310, pl. 1, H. L. James, and others, 1961. Coverage: T39-48N, R25-37W. 1 in. to approx. 6 mi.; 14½ x 12½.
- b. Precambrian geology of central Dickinson County, Michigan: Ibid., pl. 2, L. D. Clark, and others. Coverage: Sec. 5-8, 17-20, 29-32, T41N, R27W; T41-42N, R28-30W; sec. 1, 12-13, 24-25, T41N, R31W; sec. 5-8, 17-20, 29-32, T42N, R27W; sec. 1, 12-13, 24-25, 36, T42N, R31W; sec. 31-32, T43N, R27W; sec. 31-36, T43N, R28-30W; sec. 36, T43N, R31W. Scale, 1:24,000. 1 in. to 2,000 ft.; 77½ x 43, color. (Two sheets; east half and west half. x-Sec. included.)
- 1961-1c. Geologic map and section in the Rian quarry area, section 33, T43N, R28W, Dickinson County, Michigan: Ibid., pl. 3, R. W. Bayley and K. L. Wier. 1 in. to 200 ft.; 23½ x 17½; color.
- d. Geologic and magnetic maps and sections of part of Dickinson County, Michigan: Ibid., pl. 4, J. Freedman, H. L. James, and M. A. Hanna Co. Coverage: Sec. 7-9, T41N, R28W; sec. 10-12, 14-15, T41N, R29W. 1 in. to 400 ft.; 44½ x 30.
- e. Geologic map of a part of the banded gray gneiss in secs. 20, 29, and 30, T42N, R28W, Dickinson County, Michigan: Ibid., pl. 5, R. E. Lehner. 1 in. to 200 ft.; 25 x 18½; color.
- f. Generalized geologic map of Northern Michigan, showing metamorphic zones: Ibid., pl. 6, H. L. James. Coverage: T39-59N, R24-49W. Scale, 1:1,000,000. 1 in. to approx. 16 mi.; 11 x 10. (More detail is shown than in 1955-6.)
- g. Geologic map of the east branch arkose belt, Dickinson County, Michigan: Ibid., pl. 9, L. D. Clark. Coverage: Sec. 6-7, 18, T42N, R27W; sec. 1-18, T42N, R28W; sec. 1-5, 8-17, T42N, R29W. Scale, 1:24,000. 1 in. to 2,000 ft.; 33 x 14. (Geology of some areas is not shown.)
- h. Geologic and topographic map of parts of sections 7, 8, 17, and 18, T42N, R28W, Dickinson County, Michigan: Ibid., pl. 10, L. D. Clark. 1 in. to 200 ft.; 18 x 13.
- i. Map of magnetic data in the vicinity of the Deerhunt exploration, Dickinson County, Michigan: Ibid., pl. 11, L. D. Clark and E. R. Jacobus. Coverage: Sec. 1-4, T42N, R29W; sec. 33-35, T43N, R29W. 1 in. to approx. 600 ft.; 32 x 15½.
- j. Outcrop map of an area of granitic complex in the southern part of the Felch Mountain district, Michigan: Ibid., pl. 12, E. H. Roseboom. Coverage: Sec. 31-32, T42N, R28W. 1 in. to 200 ft.; 32 x 13½; color. (Geology of some areas is not shown.)
- k. Map showing distribution of strata of Paleozoic age in central Dickinson County: Ibid., p. 11, fig. 2, H. L. James, and F. J. Pettijohn. Coverage: Sec. 6-7, 18-19, 30, T41N, R27W; sec. 1-30, T41N, R28-29W; sec. 1-5, 8-17, 20-29, T41N, R30W; sec. 30-31, T42N, R27W; T42N, R28-29W; sec. 1-5, 8-17, 20-29, 32-36, T42N, R30W; sec. 31, T43N, R27W; sec. 31-36, T43N, R28-29W; sec. 32-36, T43N, R30W. 1 in. to approx. 2 mi.; 9 x 6.
- l. Three field sketches illustrating occurrences of amphibolite dikes in sec. 28, T42N, R30W: Ibid., p. 30, fig. 26, H. L. James and F. J. Pettijohn. 1 in. to approx. 40 ft.; 6½ x 7½.
- m. Geologic and magnetic data in the Hancock exploration area: Ibid., p. 52, fig. 60, K. L. Wier. Coverage: Sec. 30-31, T41N, R27W. 1 in. to approx. 750 ft.; 7 x 7.
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- o. Sketch of outcrop near the north quarter corner, sec. 2, T41N, R28W, showing post Animikie pegmatite (peg) cutting pre-Animikie amphibolite (am) and granite gneiss (gn) and in turn being cut by Keweenawan diabase (db): Ibid., p. 58, fig. 72, H. L. James and F. J. Pettijohn. 1 in. to approx. 125 ft.; 3½ x 3.
- 1961-1p. Geologic and magnetic map of parts of secs. 1 and 2, T42N, R29W, showing slate within the Randville dolomite: Ibid., p. 108, fig. 94, L. D. Clark. 1 in. to approx. 400 ft.; 6½ x 6½.
- 1961-2. Map of Precambrian geology near east end of Marquette iron range, Michigan: U.S.G.S. Prof. Paper 424-C, p. C-77, fig. 178.1, J. E. Gair, R. E. Thaden, and B. G. Jones, 1961. Coverage: Sec. 1-12, 15-22, T47N, R25W; sec. 26-36, T48N, R25W; sec. 1, 12-13, 24, T47N, R26W; sec. 25, 36, T48N, R26W. 1 in. to approx. 1 mi.; 8½ x 6. (Geology of some areas is not shown.)
- 1961-3. Bedrock geology of Lake Huron: Great Lakes Research Div. Pub. 7, Inst. Sci. and Technology, Univ. Mich., p. 131, fig. 2, A. M. Cvanara and J. C. Melik, 1961. 1 in. to approx. 40 mi.; 5½ x 6½. (Map includes bedrock of Lake Huron basin. Fig. 3-4; x-Sec. with profiles across Lake Huron basin.)

- 1961-4. Geologic map of the Lake Superior region: Jour. Geology, v. 69, no. 2, p. 205, fig. 1, W. K. Hamblin, and W. J. Horner, Mar. 1961. Approx. coverage: T39-59N, R25-49W; pt. of Wis., Minn., and Ontario. 1 in. to approx. 80 mi.; 5 x 4½.
- 1961-5. District geology, White Pine area, Michigan: Mich. Basin Geol. Soc. Ann. Geol. Excur. Guidebook, p. 22-23, fig. H, White Pine Copper Co., May 1961. Approx. coverage: Sec. 1-8, 17-19, 30, T49N, R40W; T49-50N, R41-44W; T50N, R40W; T51N, R41-43W; sec. 24-36, 35-36, T51N, R44W. 1 in. to approx. 2½ mi.; 15 x 9.
- 1962-1. Surficial geology of the Elsie area: Mich. Geol. Survey Prog. Rept. 25, p. 18, fig. 5, K. E. Vanlier, 1962. Coverage: T8N, R1W. 1 in. to approx. 1 mi.; 6 x 6.

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