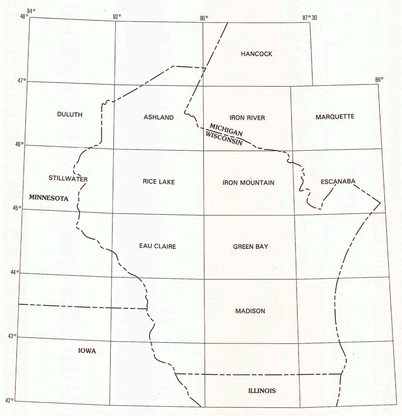
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
WISCONSIN GEOLOGICAL AND NATURAL HISTORY SURVEY

MISCELLANEOUS INVESTIGATIONS SERIES
MAP I-2185 (SHEET 1 OF 2)



INDEX TO PRINCIPAL SOURCES OF GEOLOGIC DATA

PRINCIPAL SOURCES OF GEOLOGIC DATA

Geologic data for the map were derived principally from compilations of 1°×2° quadrangle, which are referenced below. The individual 1°×2° quadrangle maps in turn incorporate geologic data from many other maps, themselves referenced on the 1°×2° quadrangle maps. All these data have been generalized to fit scale requirements of this map, and some have been modified or amplified from sources as indicated below by quadrangle.

1. Hancock quadrangle
   - Reed, R.C., and Daniels, Jennifer, 1987, Bedrock geology of northern Michigan: Department of Natural Resources, Michigan, Geological Survey Division, scale 1:500,000.

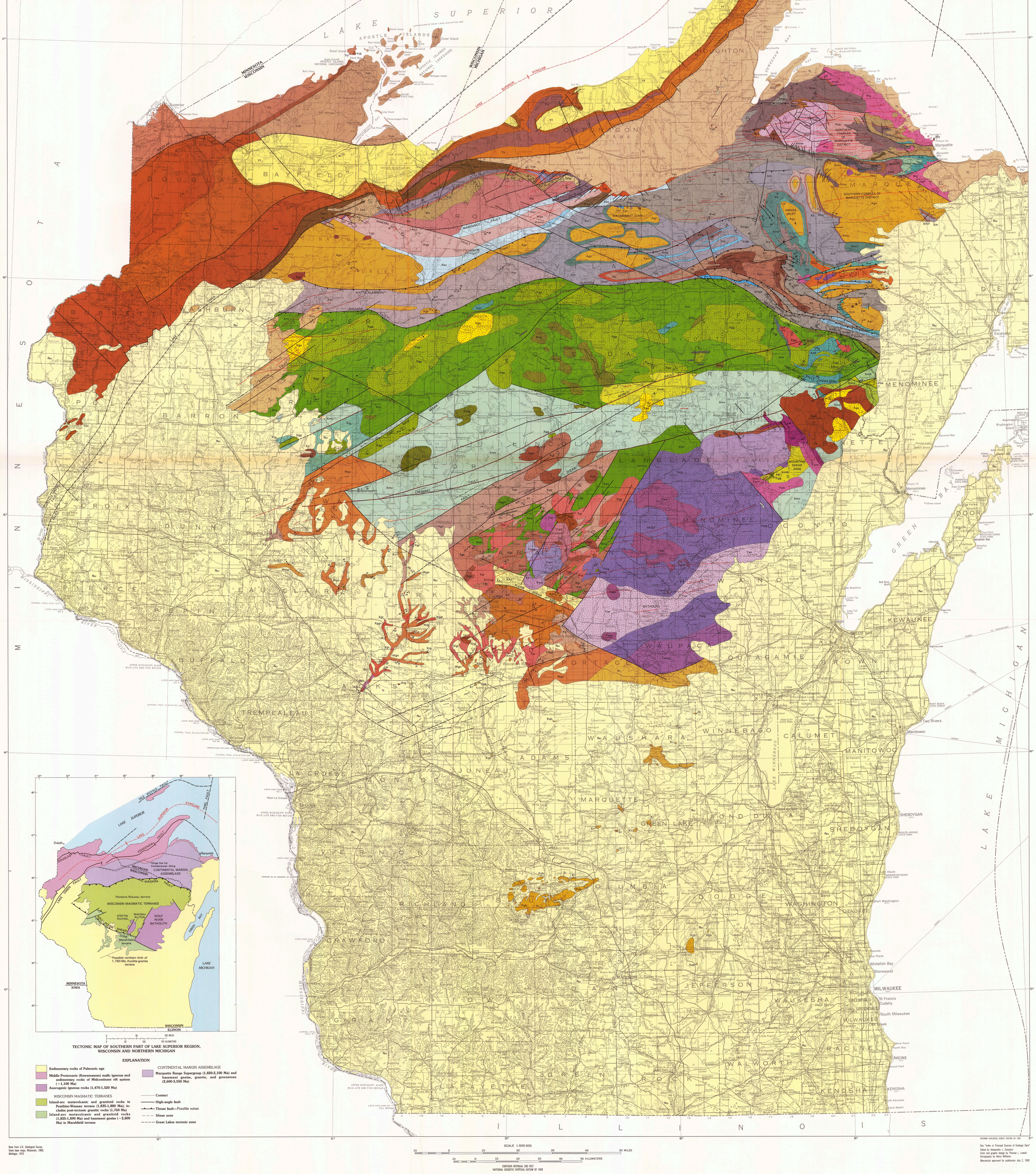
   Supplementary data from:
   - Bornhorst, T.J., Rose, W.I., Jr., and Paces, J.B., 1983, Field guide to the geology of the Keweenawan Peninsula, Michigan: Twenty-ninth Annual Institute on Lake Superior Geology, Michigan Technological University, Houghton, 116 p.
2. Duluth quadrangle
   - Montgomery, W.W., and Craddock, Campbell, 1977, Geologic map of upper Precambrian rocks of northern Wisconsin, east-central Minnesota, and western upper Michigan: Wisconsin Geological and Natural History Survey, unpublished compilation, scale 1:250,000.
   - Mudrey, M.G., Jr., and Brown, B.A., 1988, Summary of field mapping in the Superior map sheet: Wisconsin Geological and Natural History Survey Open File Report 88-7, scale 1:250,000.
3. Ashland quadrangle

   Interim compilation by P.K. Sims from:
   - Aldrich, H.R., 1929, The geology of the Gogebic iron range of Wisconsin: Wisconsin Geological and Natural History Survey Bulletin 71, Economic Series No. 24, 279 p.
   - Montgomery, W.W., and Craddock, Campbell, 1977, Geologic map of upper Precambrian rocks of northern Wisconsin, east-central Minnesota, and western Upper Michigan: Wisconsin Geological and Natural History Survey, unpublished compilation, scale 1:250,000.
   - Mudrey, M.G., Jr., and Brown, B.A., 1988, Summary of field mapping in the Superior map sheet: Wisconsin Geological and Natural History Survey Open File Report 88-7, scale 1:250,000.
   - Sims, P.K., Peterman, Z.E., Zartman, R.E., and Benedict, F.C., 1985, Geology and geochronology of granitoid and metamorphic rocks of Late Archean age in northwestern Wisconsin: U.S. Geological Survey Professional Paper 1292-C, 17 p.
4. Iron River quadrangle
   - Cannon, W.F., 1986, Bedrock geologic map of the Iron River 1°×2° quadrangle, Michigan and Wisconsin: U.S. Geological Survey Miscellaneous Investigations Series Map I-1360-B, scale 1:250,000.

   Supplementary data from:
   - Sims, P.K., 1990, Geologic map of Precambrian rocks, Marenisco, Thayer, and Watersmeet 15-minute quadrangles, Gogebic and Ontonagon Counties, Michigan, and Vilas County, Wisconsin: U.S. Geological Survey Miscellaneous Investigations Series Map I-2093, scale 1:62,500.
5. Marquette quadrangle

   Interim compilation by P.K. Sims from:
   - Boyum, B.H., 1964, The Marquette mineral district, Michigan: Institute on Lake Superior Geology, Ishpeming, Mich.
   - Cannon, W.F., 1974, Bedrock geologic map of the Greenwood quadrangle, Marquette County, Michigan: U.S. Geological Survey Geologic Quadrangle Map GQ-1168, scale 1:24,000.
   - Cannon, W.F., 1977, Map showing Precambrian geology in parts of the Baraga, Dead River, and Clark Creek basins, Marquette and Baraga Counties, Michigan: U.S. Geological Survey Open-File Report 77-467, scale 1:62,500.
   - Cannon, W.F., and Simmons, G.C., 1973, Geology of part of the southern complex, Marquette district, Michigan: U.S. Geological Survey Journal of Research, v. 1, no. 2, p. 165–172.
   - Case, J.E., and Gair, J.E., 1965, Aeromagnetic map of parts of Marquette, Dickinson, Baraga, Alger, and Schoolcraft Counties, Michigan, and its geologic interpretation: U.S. Geological Survey Geophysical Investigations Map GP-467, scale 1:62,500.
   - Clark, L.D., Cannon, W.F., and Klasner, J.S., 1975, Geologic map of the Negaunee SW quadrangle, Marquette County, Michigan: U.S. Geological Survey Geologic Quadrangle Map GQ-1126, scale 1:24,000.
   - Gair, J.E., 1975, Bedrock geology and ore deposits of the Palmer quadrangle, Marquette County, quadrangle, Marquette County, Michigan: U.S. Geological Survey Professional Paper 769, 159 p.
   - Gair, J.E., and Thaden, R.E., 1968, Geology of the Marquette and Sands quadrangles, Marquette County, Michigan: U.S. Geological Survey Professional Paper 397, 77 p.
   - Puffett, W.P., 1974, Geology of the Negaunee quadrangle, Marquette County, Michigan: U.S. Geological Survey Professional Paper 788, 53 p.
   - Simmons, G.C., 1975, Bedrock geologic map of the Ishpeming quadrangle, Marquette County, Michigan: U.S. Geological Survey Geologic Quadrangle Map GQ-1130, scale 1:24,000.
6. Stillwater quadrangle
   - Mudrey, M.G., Jr., LaBerge, G.L., and Cordua, W.S., 1987, Northwest sheet, regional map series, Bedrock geology of Wisconsin: Wisconsin Geological and Natural History Survey, scale 1:250,000.
7. Rice Lake quadrangle
   - Mudrey, M.G., Jr., LaBerge, G.L., and Cordua, W.S., 1987, Northwest sheet, regional map series, Bedrock geology of Wisconsin: Wisconsin Geological and Natural History Survey, scale 1:250,000.
   - Sims, P.K., 1989, Geologic map of Precambrian rocks of Rice Lake 1°×2° quadrangle, northern Wisconsin: U.S. Geological Survey Miscellaneous Investigations Series Map I-1924, scale 1:250,000.
8. Iron Mountain quadrangle
   - Sims, P.K., 1990, Geologic map of Precambrian rocks of Iron Mountain and Escanaba 1°×2° quadrangles, northeastern Wisconsin and Michigan: U.S. Geological Survey Miscellaneous Investigations Series Map I-2056, scale 1:250,000.
9. Escanaba quadrangle
   - Sims, P.K., 1990, Geologic map of Precambrian rocks of Iron Mountain and Escanaba 1°×2° quadrangles, northeastern Wisconsin and Michigan: U.S. Geological Survey Miscellaneous Investigations Series Map I-2056, scale 1:250,000.
10. Eau Claire quadrangle
    - Sims, P.K., 1990, Geologic map of Precambrian rocks of Eau Claire and Green Bay 1°×2° quadrangles, central Wisconsin: U.S. Geological Survey Miscellaneous Investigations Series Map I-1925, scale 1:250,000.
11. Green Bay quadrangle
    - Sims, P.K., 1990, Geologic map of Precambrian rocks of Eau Claire and Green Bay 1°×2° quadrangles, central Wisconsin: U.S. Geological Survey Miscellaneous Investigations Series Map I-1925, scale 1:250,000.
12. Madison quadrangle

    Interim compilation by P.K. Sims from:
    - Dalziel, I.W.D., and Dott, R.H., Jr., 1970, Geology of the Baraboo district, Wisconsin: Wisconsin Geological and Natural History Survey Information Circular 14, 164 p.
    - Greenberg, J.K., Brown, B.A., Medaris, L.G., and Anderson, J.L., 1986, The Wolf River batholith and Baraboo interval in central Wisconsin: Wisconsin Geological and Natural History Survey Field Trip Guide Book No. 12, 56 p.
    - Paull, R.K., Paull, R.A., and Smith, E.I., 1978, Precambrian inliers in south-central Wisconsin: Wisconsin Geological and Natural History Survey Field Trip Guide Book No. 2, 89 p.
    - Smith, E.I., 1978, Introduction to Precambrian rocks of south-central Wisconsin: Geoscience Wisconsin, v. 2, p. 1–17.



TECTONIC MAP OF SOUTHERN PART OF LAKE SUPERIOR REGION, WISCONSIN AND NORTHERN MICHIGAN

EXPLANATION

- Sedimentary rocks of Paleozoic age
- Middle Proterozoic (Keweenawan) mafic igneous and sedimentary rocks of Midcontinent rift system (~1,100 Ma)
- Anorogenic igneous rocks (1,470-1,520 Ma)

WISCONSIN MAGMATIC TERRANES

- Island-arc metavolcanic and granitoid rocks in Pembine-Wausau terrane (1,835-1,880 Ma); includes post-tectonic granitic rocks (1,760 Ma)
- Island-arc metavolcanic and granitoid rocks (1,835-1,890 Ma) and basement gneiss (~2,800 Ma) in Marshfield terrane

CONTINENTAL MARGIN ASSEMBLAGE

- Marquette Range Supergroup (1,820-2,100 Ma) and basement gneiss, granite, and greenstone (2,600-3,550 Ma)

- Contact
- High-angle fault
- Thrust fault—Possible suture
- Shear zone
- Great Lakes tectonic zone

Base from U.S. Geological Survey State base maps, Wisconsin, 1968, Michigan, 1970

SCALE 1:500 000

10 0 10 20 30 40 50 MILES

10 0 10 20 30 40 50 KILOMETERS

CONTOUR INTERVAL 200 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

GEOLOGIC MAP OF PRECAMBRIAN ROCKS, SOUTHERN LAKE SUPERIOR REGION, WISCONSIN AND NORTHERN MICHIGAN

Compiled by
P.K. Sims

1992

INTERIOR—GEOLOGICAL SURVEY, RESTON, VA—1992

See "Index to Principal Sources of Geologic Data"
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