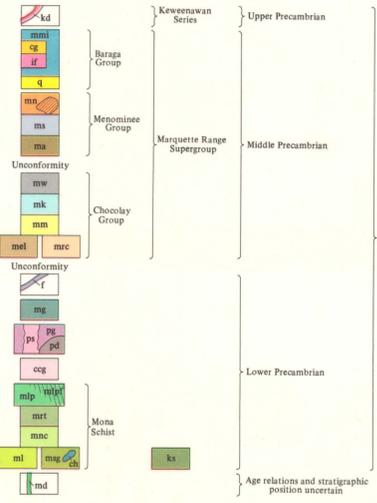


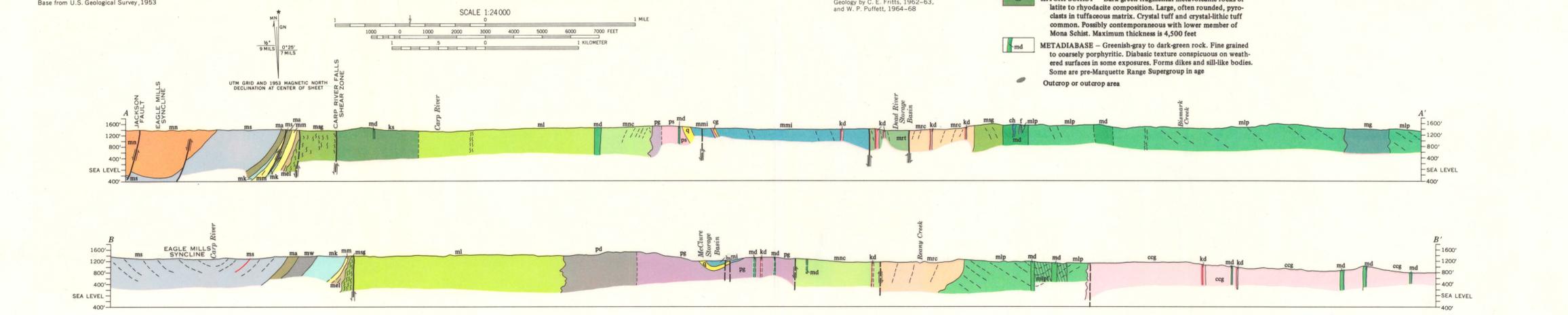
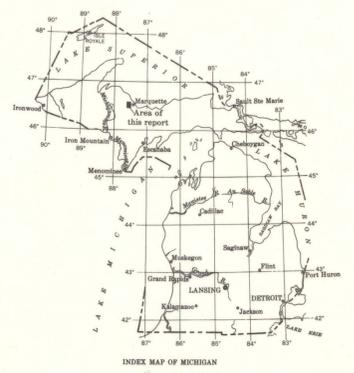
CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

- kd** **DIABASE** - Massive black dike rock with diabasic texture; weathers to dull brown. Not metamorphosed. Can be traced between outcrops in many areas, as it creates a sharp negative magnetic anomaly.
- mmi** **MICHIGAMME SLATE** - Thin-bedded graywacke with local carbonaceous beds, and sericitic, chloritic, carbonaceous, and pyritic metasilite and slate. Unconformable against Dead River pluton and Nealy Creek Member of Mona Schist. Thin magnetite argillite unit causes magnetic anomaly in lower part of formation. Greater than 5,000 feet thick.
- cg** **Conglomerate composed of angular chert clasts in coarse-grained graywacke matrix.**
- q** **Chert-goethite-hematite iron-formation.**
- me** **NEGAUNEE IRON-FORMATION** - Dark-brown thin-bedded chert-hematite-goethite iron-formation. Red and gray jaspilite near west border of quadrangle. Poorly exposed. Contains important iron ore deposits. Mined areas shown by ruled pattern. Greater than 2,000 feet thick.
- ms** **SIAMO SLATE** - Dark-gray thin-bedded slate, weathers gray to brown. Beds of massive graywacke; some containing abundant mud chips; as much as 10 feet thick in some exposures. Rusty-brown-weathering seams mark carbonate-rich beds. Magnetic unit in lower part (Goose Lake Member?) not exposed but indicated by magnetic anomaly. Conglomerate beds in upper part. Chert dikes conspicuous in some exposures. Upper contact gradational. 1,500 to 2,000 feet thick.
- ma** **AJIBIK QUARTZITE** - Gray to white vitreous quartzite; sericitic slate and graywacke near base. Locally iron stained pink to purple. Ripple marks and crossbeds common. Marker bed containing pink chert granules near base. Overlaps older formations near Teal Lake. Averaging 150 feet thick.
- mw** **WEWE SLATE** - Not exposed in quadrangle; projected from Marquette quadrangle, where it is gray and greenish-gray laminated and massive sericitic-chlorite-quartz slate.
- mk** **KONA DOLOMITE** - Pinkish-gray fine- to medium-grained crystalline dolomite, locally cherty, and thin beds of purplish-gray argillite and argillaceous dolomite near Morgan Pond. Light-gray to white quartzite, interbedded with purplish-gray ferruginous, sericitic slate and chert breccia west of Negaunee Cemetery. 800 to 1,200 feet thick.
- mm** **MESNARD QUARTZITE** - Gray to pink vitreous thick-bedded quartzite; lenticular; ripple marks common. Maximum thickness 200 feet.
- md** **ENCHANTMENT LAKE FORMATION** - Conglomerate, graywacke, arkose, sericitic quartzite, and sericitic slate. Unconformably overlies Mona Schist on north limb of Eagle Mills syncline. Lenticular; maximum thickness 150 feet.
- mrc** **REANY CREEK FORMATION** - Conglomerate, chloritic slate, some containing widely dispersed boulders of granite and intracasts of arkose, fine-grained gray feldspathic quartzite, and pink arkose. In part of glacial origin. Unconformably overlies Mona Schist north of Dead River. Age in doubt, might be pre-Marquette Range Supergroup. 1,500 to 3,500 feet thick.
- FELSIC METAVOLCANIC ROCK** - Gray porphyritic felsic rock, quartz phenocrysts common; amphibole and pyroxene phenocrysts are weathers light gray to near white. Cataclastically deformed; locally mylonitized. Mainly volcanic rock, but includes some possible intrusive rock. Some crystal tuff. Occurs as dikes or sills(?) and as irregular-shaped bodies of uncertain orientation. Common along boundaries of thick coarse-grained metabasite. Indicated only by (f) where outcrops are too small to map. Hornblende-syenite shown by (hs).
- mg** **METAGABBRO** - Dark-gray to green medium-grained rock. Mineralogically identical to the metabasite (md). Forms two intrusive bodies in northwest part of quadrangle.
- pd** **DEAD RIVER PLUTON** - Massive nonfoliated porphyritic rock; pink to red on weathered surface. Age uncertain, possibly late early Precambrian.
- ps** **Hornblende diorite.**
- ps** **Porphyritic syenite containing large and abundant perthite phenocrysts.**
- pp** **Granodiorite porphyry.**
- cm** **COMPEAU CREEK GNEISS** - Light-gray to light-pink foliated medium- to coarse-grained tonalitic gneiss. Stippling indicates zone of intense silicification.
- mip** **LIGHTHOUSE POINT MEMBER** - Dark-green fine-grained layered amphibolite; near contact with Compeau Creek Gneiss less distinctly layered and streaked with light-gray felsic material. At least 6,500 feet thick.
- mrt** **Felsic augen zone.**
- mrt** **SHEARED RHYOLITE TUFF MEMBER** - Pink to greenish-gray strongly sheared rhyolitic rock; glassy quartz phenocrysts common. Bright green wafers of clay, probably altered lapilli, are conspicuous locally. 1,300 to 3,000 feet thick.
- mnc** **NEALY CREEK MEMBER** - Dark-gray to gray-green quartz-feldspar-sericitic-chlorite schist. Biotite present near Dead River pluton. Possibly a metamorphosed tuff of intermediate composition. 2,000 to 3,000 feet thick.
- ml** **LOWER MEMBER** - Dark-green massive metabasite. Large pillow structures common. About 10,000 feet thick.
- mg** **UNDIFFERENTIATED GREENSTONE** - South of the Carp River Falls shear zone unit generally sheared and includes sheared felsic rock; possibly Kitchi Schist in part. North of Dead River unit mainly fine-grained massive metabasite containing abundant intrusions of felsic rock and coarse-grained metabasite.
- ch** **Chert beds, locally contain magnetite, sphalerite, and chalcopyrite.**
- ks** **KITCHI SCHIST** - Dark-green fragmental metavolcanic rocks of latite to rhyodacite composition. Large, often rounded, pyroclasts in tuffaceous matrix. Crystal tuff and crystal-lithic tuff common. Possibly contemporaneous with lower member of Mona Schist. Maximum thickness is 4,500 feet.
- md** **METADIABASE** - Greenish-gray to dark-green rock. Fine grained to coarsely porphyritic. Diabasic texture conspicuous on weathered surfaces in some exposures. Forms dikes and sill-like bodies. Some are pre-Marquette Range Supergroup in age.
- Outcrop or outcrop area**

- Contact** - Queried where uncertain; dotted where concealed. Outcrops indicate degree of accuracy of location.
- Fault** - Dashed where approximately located; queried where uncertain; dotted where concealed. U, upthrown side; D, downthrown side.
- Shear zone** - Not shown where a known fault is shown.
- Vein** - Commonly quartz-carbonate.
- Syncline** - Showing trace of axial plane and direction of plunge. Bearing and direction of plunge of minor anticline - Value of plunge given where known.
- Overturned syncline** - Showing trace of axial plane. Bearing and direction of plunge of minor anticline - Value of plunge given where known.
- Strike and dip of beds** - (p) indicates strike and dip of pillow structures in greenstone.
- Inclined** - Value of dip given where known.
- Overturned**
- Strike and dip of foliation** - Includes layering in Lighthouse Point Member of Mona Schist.
- Inclined** - Value of dip given where known.
- Vertical**
- Strike and dip of cleavage**
- Inclined**
- Vertical**
- Strike and dip of joint** - Value given where known.
- Bearing and plunge of lineation**
- Plunging**
- Vertical**
- Prospect pit**
- Gravel pit**
- Active**
- Inactive**
- Shaft**
- Diamond-drill hole**
- Py** **Abundant pyrite.**
- Pb, Zn, Cu** **Areas containing lead, zinc, or copper sulfides.**
- Crest of magnetic anomaly from ground-magnetometer survey**



BEDROCK GEOLOGIC MAP AND SECTIONS OF THE NEGAUNEE QUADRANGLE, MARQUETTE COUNTY, MICHIGAN