DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
W. E. WRATHER, DIRECTOR

MINERAL INVESTIGATIONS
FIELD STUDIES MAP MF 43

GEOLOGIC MAP OF THE CHASSELL QUADRANGLE, MICHIGAN

By
Walter S. White
1956

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EXPLANATION

j — Jacobsville sandstone
Light-red to brown, medium-grained sandstone with subordinate amounts of fine-grained sandstone, shale, and thin conglomerate beds.

PRECAMBRIAN OR CAMBRIAN

n — Nonesuch shale
Massive and laminated, dark- to reddish-gray siltstone and shale with interbedded gray to reddish-gray, fine-grained sandstone.

c — Copper Harbor conglomerate
Red to brown boulder conglomerate with subordinate amounts of pebble conglomerate and beds of arkosic sandstone; most of detrital material is rhyolitic in composition; fragments of mafic lava are subordinate.

Upper Keweenawan

p — Portage Lake lava series
Basalt and andesite flows, with ophitic, glomeroporphyritic, porphyritic, or fine-grained equigranular texture in middle and lower parts, and amygdaloidal tops; beds of conglomerate and sandstone, containing predominantly rhyolitic fragments, occur between a few of the flows. The Greenstone flow, pg, Kearsarge flow, pk, and Scales Creek flow, psc, are distinguished on map. The following sedimentary rocks are identified: Hancock conglomerate (No. 17), phc, Pewabic West conglomerate (No. 16), pp, Allouez conglomerate (No. 15), pa, Calumet and Hecla conglomerate (No. 13), pc, Kingston conglomerate (No. 12), pkc, National sandstone, pn, Wolverine sandstone (No. 9), pw, Bohemia conglomerate (No. 8), pb, St. Louis conglomerate of local usage, ps, Baltic conglomerate (No. 3), pbc, and unnamed conglomerate, pu.

Middle Keweenawan

PRECAMBRIAN

Contact
Dashed where approximately located; dotted where concealed.

Fault, showing dip
Dashed where approximately located; dotted where concealed.

Strike and dip of beds

Diamond drill hole
Dashed line represents hole projected up the dip of bedding to surface; letters and numbers identify drill holes; letters are abbreviations of property names as follows: A, Atlantic; DH, Dakota Heights; H, Houghton; IR, Isle Royale; N, Naumkeag; S, Section 12. Drill holes are projected into line of section on the cross sections.

Shaft

Area of copper mine stoping and development in amygdaloid and conglomerate

(Note: Copper mines are identified by name and principal shafts by letter or number.)

Geologic quadrangle map series
Mineral Investigations Field Studies map series
Area of this map

INDEX MAP OF THE KEWEENAW PENINSULA, MICHIGAN
SHOWING MAPPED QUADRANGLES

Base map by Topographic Division,
U. S. Geological Survey, 1948.

Scale 1:24000
1 ½ 0 1 Mile

Geology compiled by Walter S. White, 1954,
from mining company records and
U. S. Geological Survey outcrop maps.

APPROXIMATE MEAN DECLINATION, 1956

SECTION ALONG LINE A-A′

SECTION ALONG LINE B-B′

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