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

MINERAL INVESTIGATIONS
FIELD STUDIES MAP MF 47

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

Upper Keweenawan

c, cl — 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. Mafic lava flow units of the formation are designated cl.

Middle 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, *Scales Creek flow,* psc, *and Copper City flow,* pcc, *are distinguished on the map. The top of the Osceola, amygdaloid,* po, *is shown. 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, *Wolverine sandstone (No. 9),* pw, *Old Colony sandstone,* poc, *Bohemia conglomerate (No. 8),* pb, *and St. Louis conglomerate of local usage,* ps.

PRECAMBRIAN

Contact
Dashed where approximately located.

Contact
Located by magnetic lines traced with a dip needle.

Fault, showing dip
Dashed where approximately located.

Strike and dip of beds

Horizontal 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: CH, *Calumet & Hecla;* F, *Florida;* L, *Laurium;* LS, *La Salle;* NB, *New Baltic;* O, *Old Colony;* ON, *Oneco;* OS, *Osceola;* SL, *St. Louis;* T, *Tecumseh;* TL, *Torch Lake. Drill holes are projected into line of section on the cross sections.*

Shaft

X-CUT
Crosscut projected vertically to the surface

Area of copper mine stoping and development in amygdaloid and conglomerate

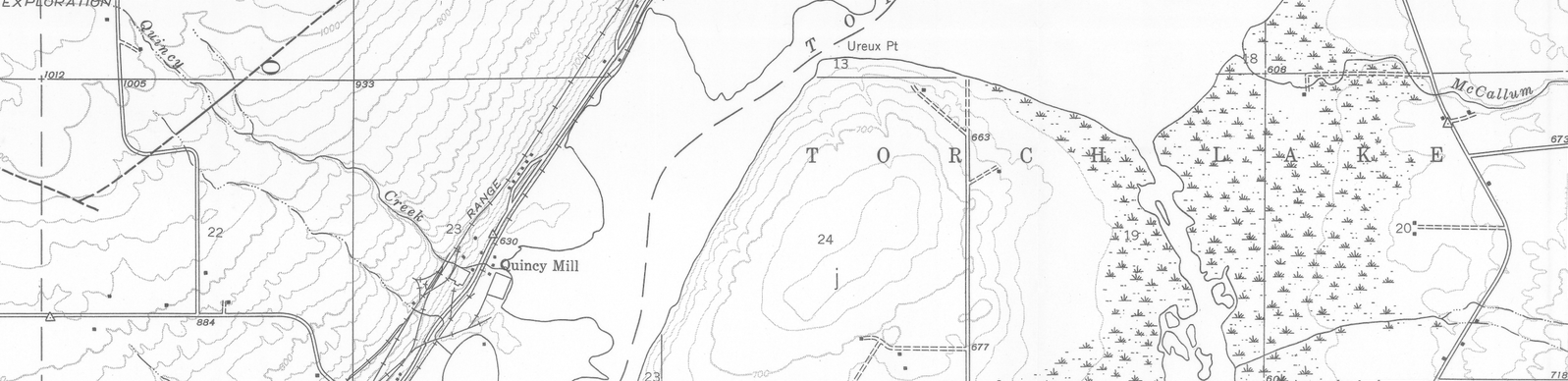
(Note: Copper mines are identified by name and principal shafts by letter or number.)

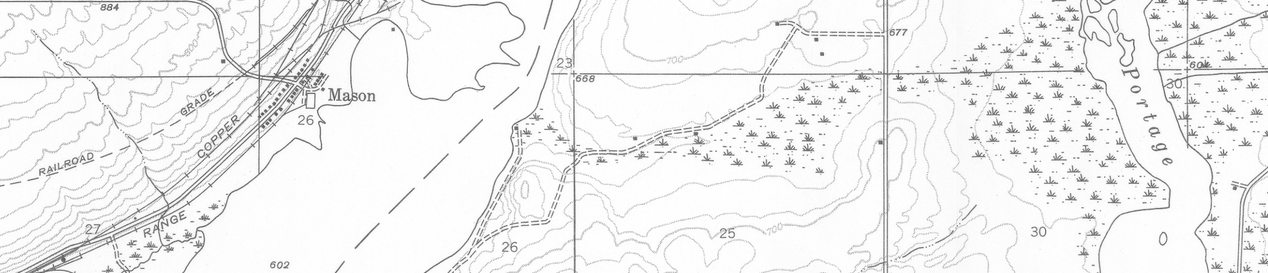
Base map by Topographic Division, U. S. Geological Survey, 1946.

Scale 1:24000
1 ½ 0 1 Mile
Contour interval 20 feet
Datum is mean sea level

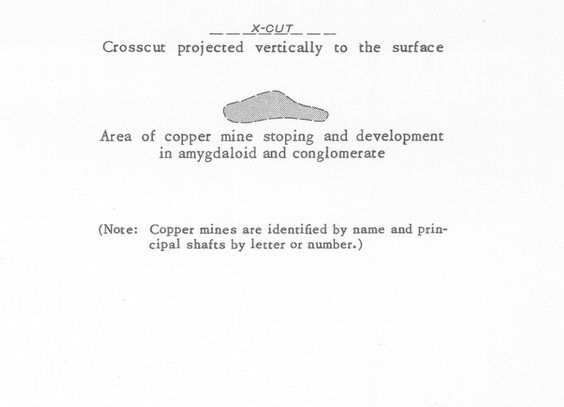
Geology compiled by H. R. Cornwall and J. C. Wright, 1954, from mining company records, U. S. Geological Survey outcrop maps, and unpublished dip-needle maps by the Michigan Geological Survey.

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C., MR 1367





TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1956



INDEX MAP OF THE KEWEENAW PENINSULA, MICHIGAN
SHOWING MAPPED QUADRANGLES

GEOLOGIC MAP
OF THE
LAURIUM QUADRANGLE, MICHIGAN

By
Henry R. Cornwall and James C. Wright

1956

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