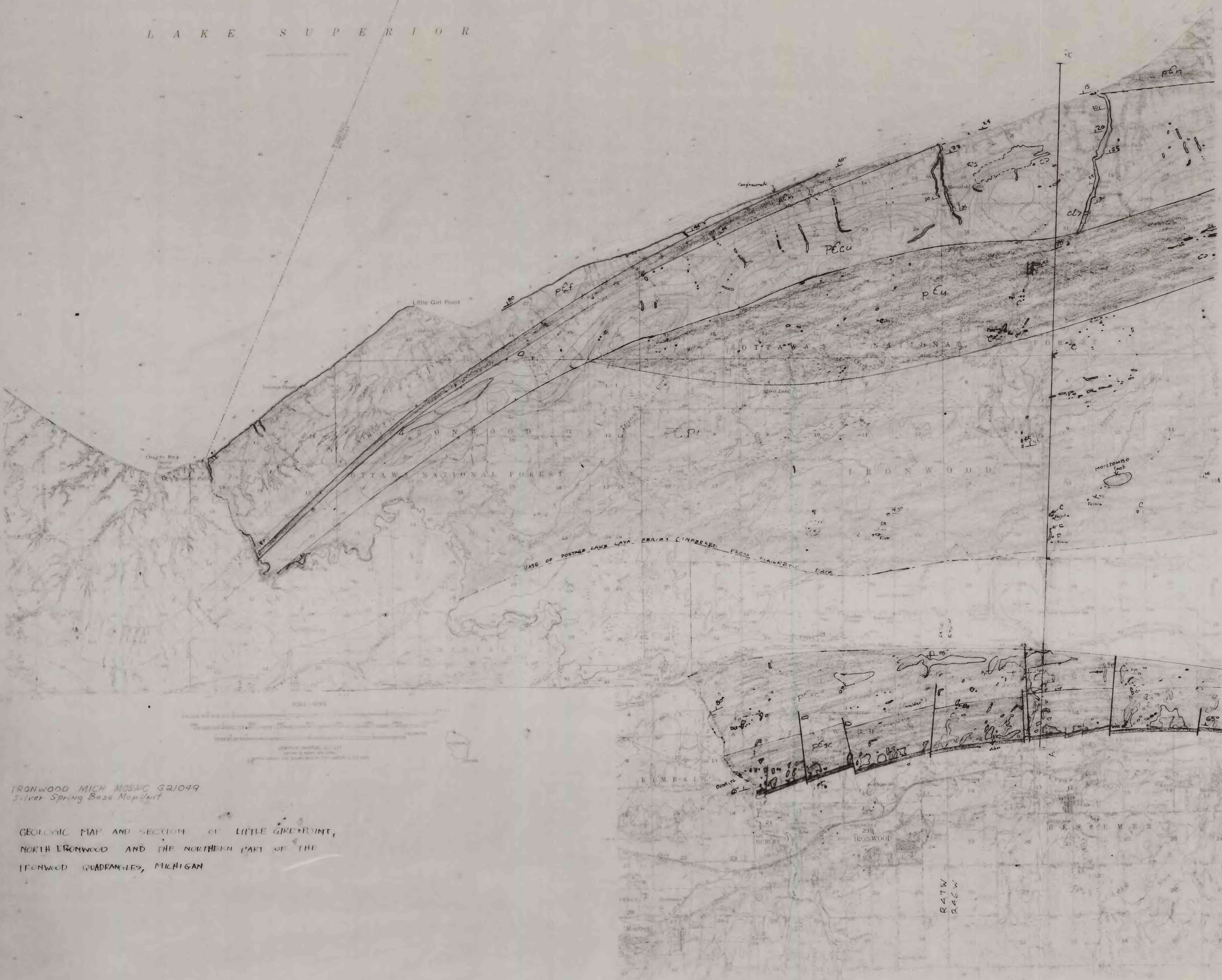


L A K E S U P E R I O R



IRONWOOD MICH MOSAIC G21049  
Silver Spring Base Map Unit

GEOLOGIC MAP AND SECTION OF LITTLE GULL POINT,  
NORTH IRONWOOD AND THE NORTHERN PART OF THE  
IRONWOOD QUADRANGLES, MICHIGAN

Geology by H.A. Hildner, 1965 (171)

Michigan (Little Gull Point, Ironwood quads.). Geol. 1:62,500. 1972.  
cop. 1.

U.S. Geological Survey  
OPEN FILE MAP  
This map is preliminary and has  
not been edited or reviewed for  
conformity with Geological Survey  
standards or nomenclature.

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Feds Formation  
Very fine- to medium-grained, reddish brown sandstone  
with subordinate laminated reddish-brown siltstone;  
most detrital material from metamorphic and volcanic  
rocks.

Massena Formation  
Massive and laminated, dark to reddish-brown siltstone  
with subordinate gray to reddish-brown fine-grained  
sandstone; most detrital material from volcanic and  
metamorphic rocks.

Copper Harbor Conglomerate  
Red to brown boulder conglomerate with subordinate  
amounts of massive conglomerate and beds of sandstone;  
most detrital material is rhyolitic in composition.  
Fragments of intermediate lava are subordinate, and  
fragments of plutonic and metamorphic rocks are im-  
portant. In east, upper part predominantly sandstone.  
Mafic flow units of the formation are designated cl.

Unnamed Formation  
Basalt, andesite, and rhyolitic flows; porphyritic,  
fine grained, equigranular and aphanitic textures;  
conglomerate and sandstone containing rhyolitic  
fragments with subordinate intermediate and mafic  
volcanic rock fragments.

Portage Lake Lava Series  
Olivine basalt and basalt, rhyolitic flows; conglom-  
erate and sandstone like that in Unnamed formation.

Covered interval in Ironwood area  
To west, felsites on strike; to east, folded sandstone  
and conglomerate on strike. Magnetic data suggest  
part of rocks are similar to exposed Kallander Creek  
formation.

Unconformity  
Kallander Creek Formation  
Intermediate aphanitic to fine grained lava flows; base  
flow mafic; very fine conglomerate, most of detrital  
material is intermediate volcanic rock. Sp: spinellite  
flow with prominent phenocrysts.

Unconformity  
Siemens Creek Formation  
Thin mafic lava flows.

Unconformity  
Hewener Sandstone  
Quartzose, silica cemented cross-bedded sandstone.

Unconformity  
conglomerate  
Felsite  
S  
sandstone

INTRUSIVE ROCKS  
D  
Diorite  
Contact  
approximately located  
Fault  
approximately located  
Strike and dip of beds  
Area with outcrops  
Outcrop or small area with outcrops

open file