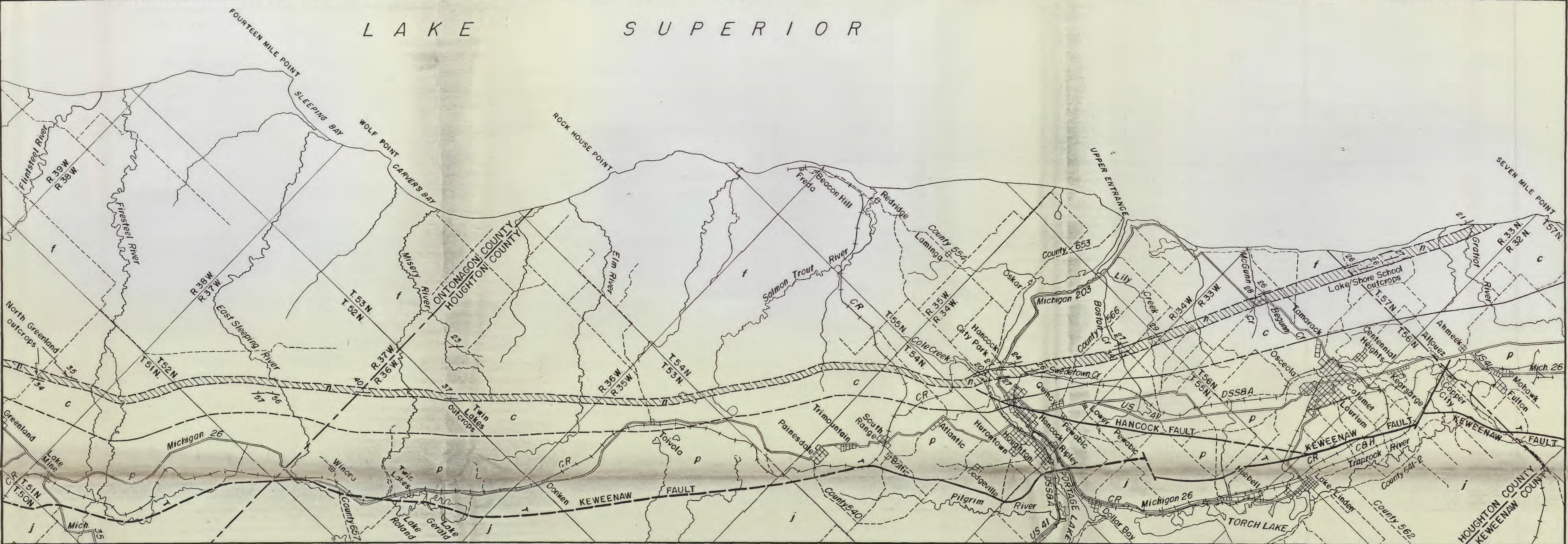


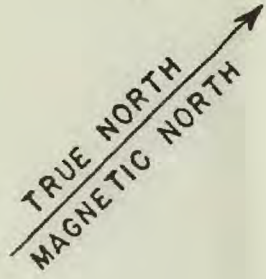
This map is preliminary and has not
been edited for conformity with Geological
Survey format and nomenclature.



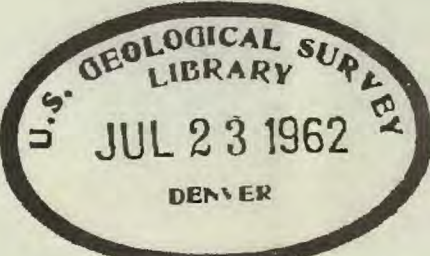
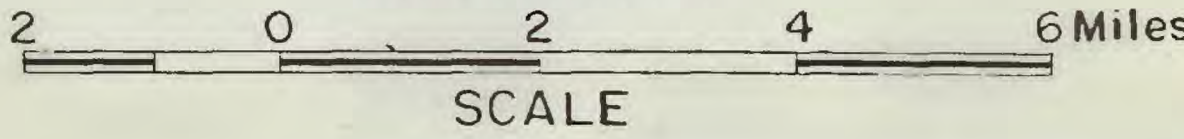
EXPLANATION

- Upper Keweenaw or Cambrian
- Upper Keweenaw
- Middle Keweenaw
- PRE-CAMBRIAN
- J Jacobsville sandstone
 - f Freda sandstone
 - n Nonesuch shale
 - c Copper Harbor conglomerate
 - p Portage Lake lava series

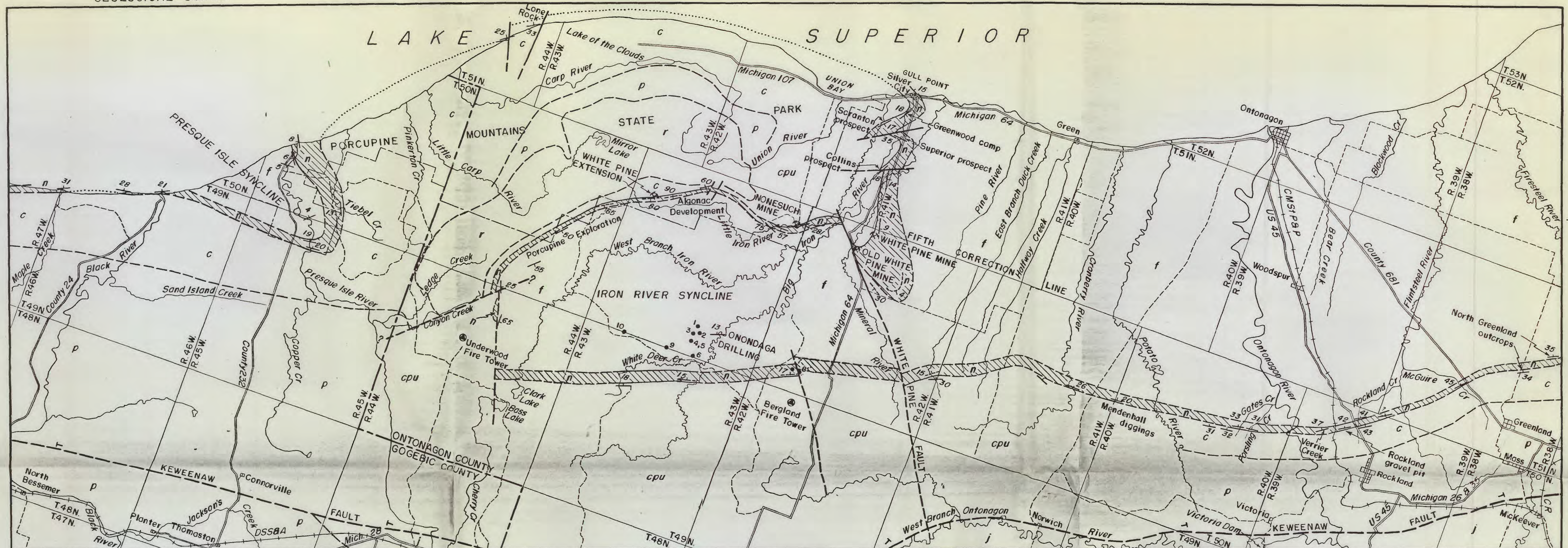
- Geologic contact
Dashed where approximately located
- Fault
Dashed where approximately located
Indicates upthrown side of reverse fault
- Strike and dip of beds



GEOLOGIC MAP SHOWING OUTCROP OF THE NONESUCH SHALE
FROM CALUMET TO GREENLAND,
MICHIGAN



Geologic boundaries of Nonesuch shale by W.S. White and J.C. Wright;
other boundaries modified from U.S. Geological Survey Professional
Papers 144 and 184.



Upper Keweenaw or Upper Cambrian	J	Jacobsville sandstone	CAMBRIAN?
Middle Keweenaw or Upper Cambrian	r	Rhyolite	
Upper Keweenaw	f	Freda sandstone	
Upper Keweenaw	n	Nonesuch shale	
Upper Keweenaw	c	Copper Harbor conglomerate	PRE-CAMBRIAN
Middle Keweenaw	cpu	Copper Harbor conglomerate and Portage Lake lava series Undifferentiated	
Middle and Upper Keweenaw	p	Portage Lake lava series	

EXPLANATION

Geologic contact
Dashed where approximately located

Outcrop of base of Nonesuch shale
off shore of Lake Superior
Approximately located

Fault
Dashed where approximately located
^ Indicates upthrown side of reverse fault

Strike and dip of beds

Strike and dip of overturned beds

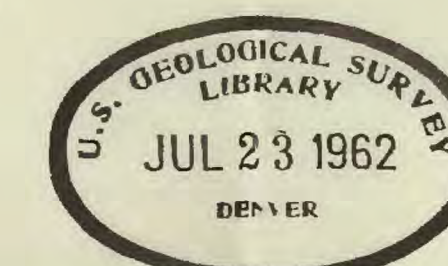
Strike and dip of beds
Computed from subsurface data

Strike of vertical beds
Computed from subsurface data

Vertical diamond drill hole
Exploration by Onondaga Copper Company

GEOLOGIC MAP SHOWING OUTCROP OF THE NONESUCH SHALE
FROM GREENLAND TO BLACK RIVER,
MICHIGAN

2 0 2 4 6 Miles
SCALE



Geologic boundaries of Nonesuch shale by W. S. White and J. C. Wright;
other boundaries modified from U. S. Geological Survey Professional
Papers 144 and 184.