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REPORT ON  
GEOMAGNETIC SURVEY  
OF  
ORLAC RED LAKE MINES LTD.  
MCARKE TOWNSHIP, ONTARIO.

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REPORT ON  
GEOMAGNETIC SURVEY  
OF  
ORLAC RED LAKE MINES LTD.  
MCARREE TOWNSHIP, ONTARIO  
SUMMARY

Trends in the sediments, and areas of magnetic complexity have been outlined by a geophysical survey of the Orlac property in the Newlund area.

A northeasterly trending fault has been interpreted in the western part of the property, with two areas of possible acidic intrusion in the central section. Between the fault and these possible intrusives, the magnetic picture is locally complex and diamond drilling has been recommended following geological examination after the snow goes. The southeastern third of the property is interpreted to be underlain by gently folded altered sediments.

### INTRODUCTION

A geomagnetic survey of the Orlac property was carried out in March 1951. The property lies between the Windward, Porcupine Peninsula, Consolidated Ansley and Pacemaker properties in the Newlund area. In recent months the surrounding area has become one of the most actively explored regions in Ontario, following underground development at the property of Newlund Mines Limited and the widespread occurrence of new gold finds along the same belt.

### LOCATION & ACCESS

The property lies in the Township of McAree, District of Kenora, Northwestern Ontario. Provincial Highway No. 72, which extends from Sioux Lookout to Dinorwic passes through the claims. The town of Sioux Lookout lies approximately 25 miles to the northeast.

### GENERAL GEOLOGY

Several reports have been published by the Ontario Department of Mines to cover McAree Township and the adjoining areas<sup>1</sup>. These indicate that the property is located within a belt of sedimentary rocks, close to the contact with a series of volcanic rocks lying to the north.

The sedimentary rocks are metamorphosed for the most part to quartz-biotite schist and paragneiss. Iron formation, consisting of sugary quartz and magnetite interbanded with chloritic layers occurs with the sediments; where mineralized, the iron formation contains varying amounts of pyrite in addition to magnetite. Acid pyroclastics, including tuff and agglomerate interfinger with the sedimentary rocks in the vicinity of the volcanic-sedimentary contact.

1. Armstrong, H.E., Geology of Echo Twp. Ont. Dept. Mines Vol. LIX, Pt. 5, 1950.  
Hurst, M.E., Geology of the Sioux Lookout Area, Ont. Dept. Mines Vol. XLI, Pt 6, /32  
Satterly, J., Geology of Dryden-Wabigoon area, Ont. Dept. Mines Vol. L, Pt 2, 1941.  
Chisholm, E.O., Recent Activities in the Sioux Lookout Area, Ont. Dept. Mines  
1951.

3.

Granitic rocks, including granodiorite and quartz porphyry occur as dikes and sills cutting the volcanics and sediments. The granodiorite is of particular importance as the host rock for the ore bodies on the Newlund property.

GEOPHYSICAL SURVEY

North-south picket lines were turned off at 300' intervals from a base line running approximately east-west along the central claim boundary. A land survey of the claims was made previously. Measurements of vertical magnetic intensity were made at 100' intervals along the base line and along the north-south lines. The instrument used for this purpose was an Askania type vertical magnetometer.

GENERAL INTERPRETATION

Magnetic intensity varies between an arbitrarily selected base level of about 400 gammas and 2000 gammas. Trends of the anomalies are generally in a northeast-southwest direction corresponding to regional strike. Numerous local anomalies were found some of which may be due to local effects of bedrock close to the surface, and some to lenticular bodies of iron formation in the altered sediments and tuffs. Two magnetically low areas have been interpreted as possibly due to acidic intrusives. Around one of these (A) there is evidence of hydrothermal alteration with introduced magnetite. Local folding of the sediments between the A body and the fault is suggested by the magnetic pattern.

ECONOMIC CONSIDERATIONS

Gold in the area is associated with porphyries which trend northeast-southwest, and occurs along fractures which trend north-south. There is no evidence to date that faults play an important part in controlling gold deposition, but it is possible that major strike faults near the

volcanic-sediments contact may be the deep-seated control for movement of ore-bearing solutions.

Most of the gold ore has been found in porphyries within the volcanics, and diamond drilling within the sediments has yet to uncover any important gold-bearing deposits. However, porphyries have been found in the sediments, and there is the possibility that gold may have been deposited within these formations under suitable conditions. In this connection iron formation may act as a favourable competent rock. The more magnetic zones on the Orlac property may represent low grade iron formation. There is a possibility of porphyry occurring on claims 10625 to 10628.

#### RECOMMENDATIONS

It is recommended that geological outcrops on the property be examined after the snow disappears, and the results interpreted in the light of the present survey. Particular attention should be given to the areas between claim 10624 - 10625 and the northern half of line 48. In the meantime, the most favourable location for a diamond drill is in claims 10627 and 10628, and three drill sections have been indicated on the accompanying map. This part of the property lies between the noses of two (possible) acidic intrusives and a northeasterly trending fault. Local folding of iron formation may present favourable structural conditions for the deposition of ore, and the zone appears to have been hydrothermally altered. It is possible that small bodies of granodiorite might be found in this section.

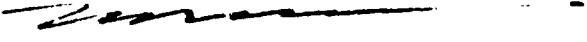
The area immediately west of the interpreted fault in the northern part of the property is also of interest, and it is suggested that owners of

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the adjoining property, Pacemaker Petroleum, Limited, be contacted for possible exchange of information.

Respectfully submitted,

MINING GEOPHYSICS CORPORATION LIMITED



N. B. Keevil

Toronto,  
April 11, 1951.

APPENDIX

Owner: Orlac Red Lake Mines Limited

Claims: Pa 10623 - 10631 inclusive; 429.5 acres

Location: McAree Township, district of Kenora, Patricia Mining Division.

Access: Dinorwic road from Sioux Lookout.

Base line: Middle claim boundary, 10624 -10625 to 10630-10631.

Control: Surveyed claim boundaries

Location of OO: Post 3 claim Pa 10625

Picket Lines: North-south at 300 foot intervals.

Miles of Line: 14                      Stations: 762

Line Cutting: S.L.Spafford, J. Ovenstone, M. Stewart,  
M. Ridgeway  
Feb. 23 - March 9, 1951                      44 man days

Geophysical Survey: S.L.Spafford, and J. Ovenstone  
March 6 - 16, 1951                      22 man days

Calculations & Interpretation: S.L.Spafford, N.B.Keevil  
March 16 - April 10, 1951                      14 man days

Drafting & Typing: R.B.Evis, M.G. Hooper  
April 2 - 10, 1951                      12 man days

Total man days                      92

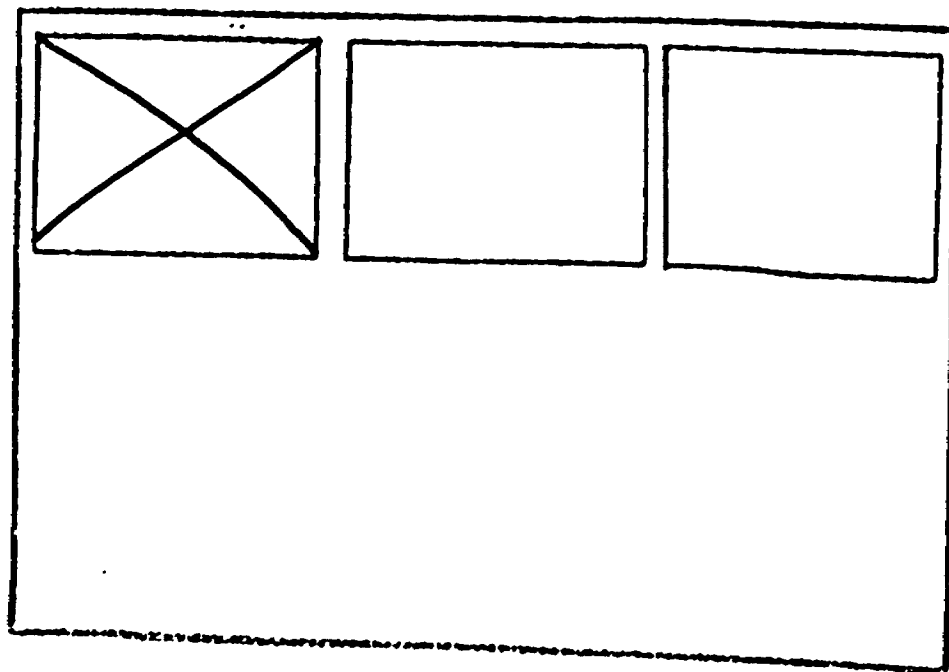
Instrument Used: Askania magnetometer Serial No. 85313.

*N.B.Keevil*  
N.B.Keevil

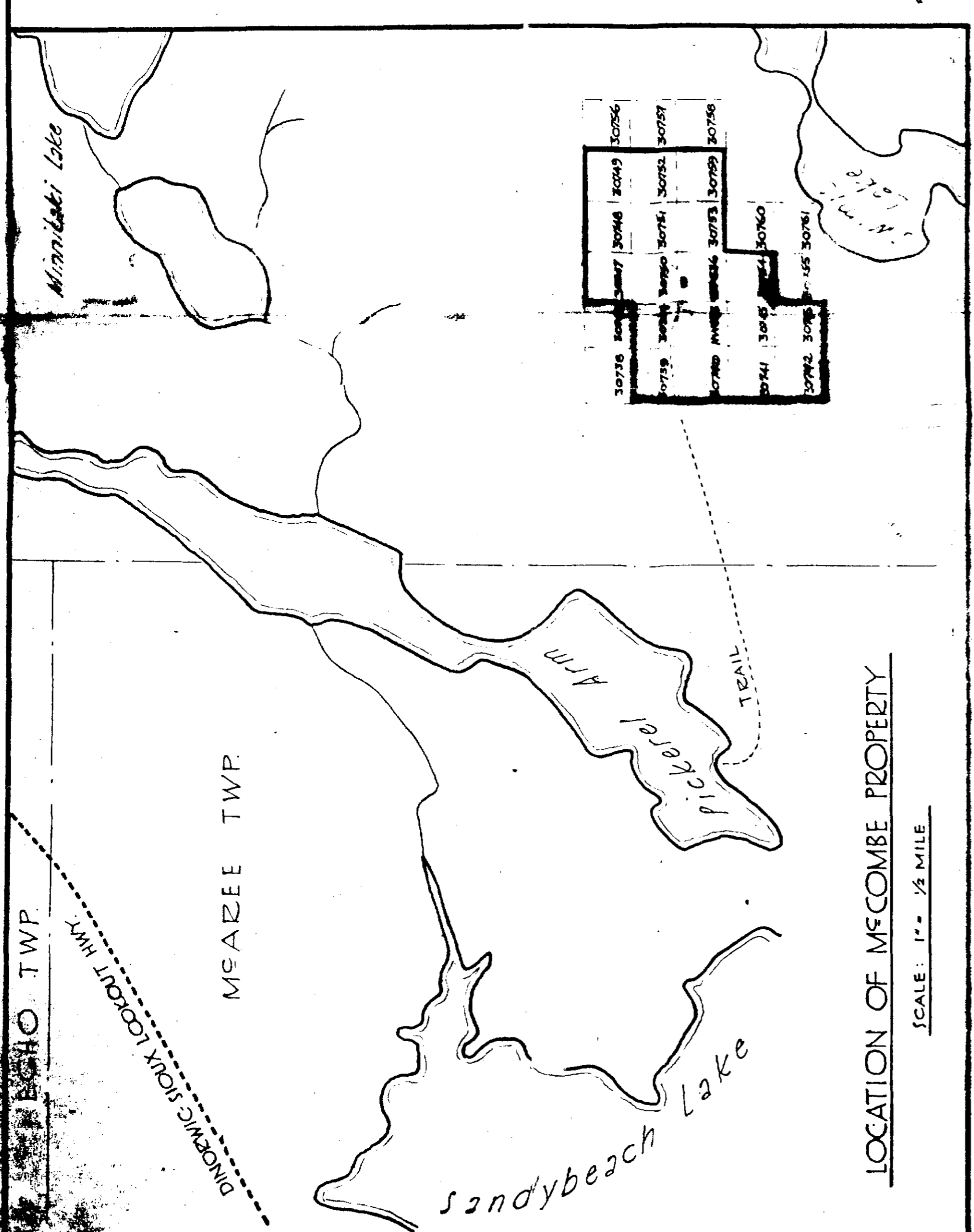
92  
+  
9 | 368.  
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SEE ACCOMPANYING  
MAP(S) IDENTIFIED AS  
52 F/16 SW-0031-A1, #1

LOCATED IN THE MAP  
CHANNEL IN THE FOLLOWING  
SEQUENCE (X)

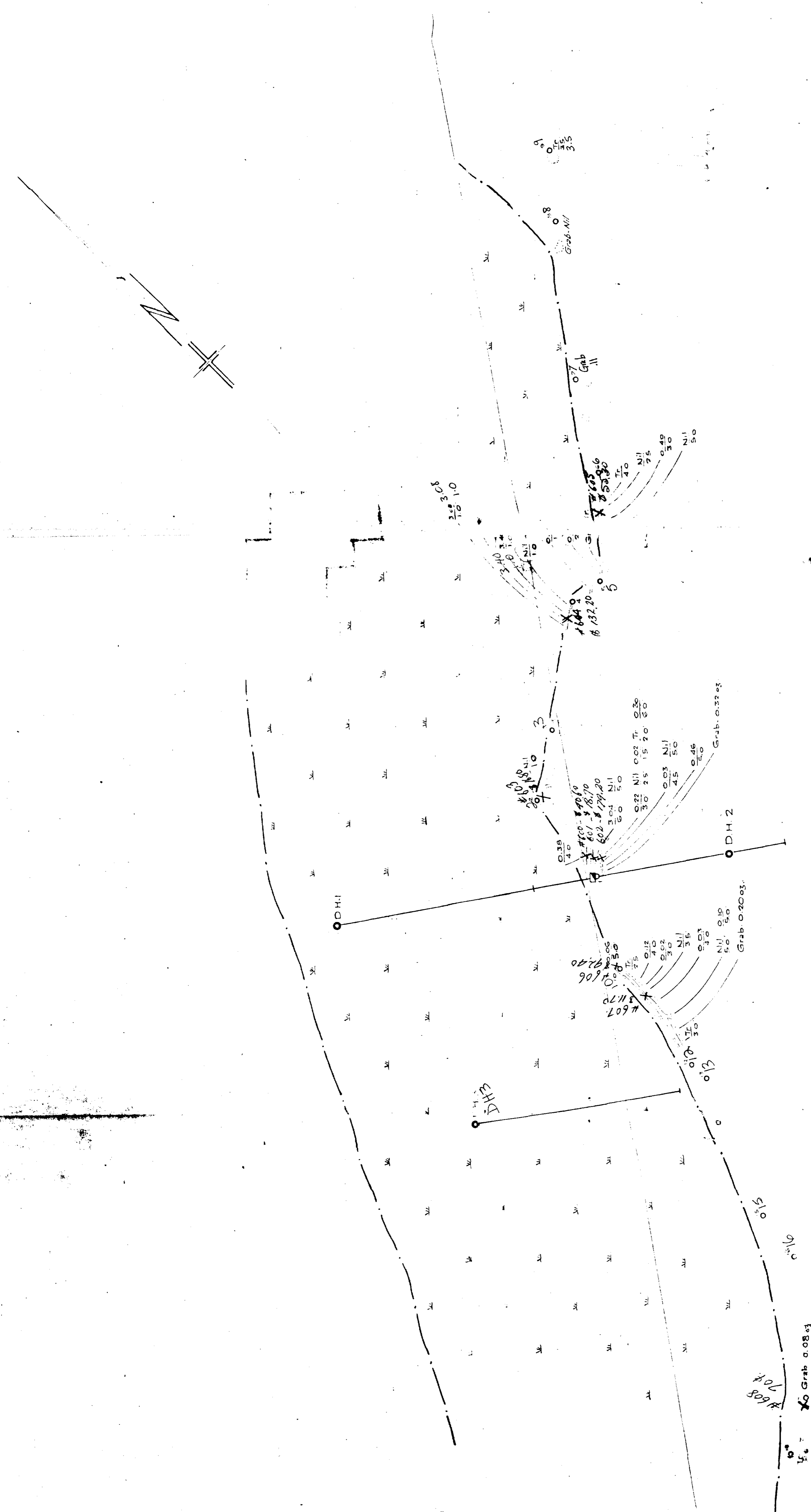






LOCATION OF MCOMBE PROPERTY

SCALE: 1" = 1/2 MILE



- |  |                   |  |                          |
|--|-------------------|--|--------------------------|
|  | Quartz vein       |  | Swamp                    |
|  | Quartz porphyry   |  | Trench on outcrop        |
|  | Feldspar porphyry |  | Shaft                    |
|  | Agglomerate       |  | Survey station           |
|  | Volcanic flows    |  | Samples - Grab - W200-70 |

PLAN OF SURFACE WORKINGS  
**MCOMBE PROPERTY**  
 MINNITAKI LAKE AREA - RED LAKE MINING DIVISION

SCALE: 1" = 50'

52 F/16 SW - 0031 - B1, #1  
 0031-B1, #1

