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MINING LANDS SECTION

REPORT ON
MAGNETOMETER SURVEY
LINCOLN NIPISSING PROJECT
SKEAD TOWNSHIP, ONTARIO
by
R.A. MacGregor, P. Eng.
July 21, 1980

I. INTRODUCTION

Linecutting followed by a magnetometer survey was carried out on a block of 28 claims in Skead township. The linecutting commenced in May, 1979 and the instrument work was completed end of February 1980. Results are plotted on the enclosed map.

II. LOCATION, ACCESS AND OWNERSHIP

The property is located in lots 6, 7, 8, and 9 Concessions 5 and 6, Skead Township, Ontario. There are 28 claims covered by the survey numbered L396274-396277, L396281, L396283-396287, L442043-442046, L442049, L442054, L442056, L442058, L442060 to 442061, L467147, L523059 to 523064 inclusive and L531555. The claims are recorded in the name of Superior Northwest Inc., Box 1110, Sault Ste. Marie, Ontario.

A paved secondary highway No. 624 passes just to the west of the claims about 9 miles south of Larder Lake, Ontario. Old logging roads useable by four wheel drive vehicles cross the north and south part of the claims.

III. PREVIOUS EXPLORATION

Gold was discovered during or before the 1920's and exploration carried out at that time and into the 1930's. A large number of old pits, trenches, and drill casing is still in evidence from this work. A shaft was sunk on claim L341838 to a reported depth of 500 feet with lateral work on the 215 and 415 foot levels. Little information is now available on this work,

III. PREVIOUS EXPLORATION (Continued)

although there is reference to some spectacular gold showings in Ontario Department of Mines reports from that period. More recently the claims have been surveyed by magnetometer, VLF-EM and soil sampling survey. Some surface trenching has also been carried out.

IV. TOPOGRAPHY

The major part of the property is covered by Pleistocene drift, gravel and swamp. Rocky hills up to 20 feet above the surrounding area with fair to good rock exposure occur in a few areas of basalt and ultramafic outcrop. A large part of the claims are covered with drift, swamp or beaver ponds with scattered very small outcrops in some of the higher areas. The property is covered with a dense second growth of poplar, birch, alder and wild cherry with black spruce in the more swampy parts. With this is a thick growth of underbrush which makes the location of small outcrops difficult. A number of beaver ponds, or now dry beaver meadows cover many of the stream courses.

V. GEOLOGY

The property is underlain by a volcanic sequence of rocks, mostly mafic volcanics with narrow felsic volcanic bands. Through the central part of the claims lies a belt of ultramafic rocks, largely drift covered but traced by the magnetometer survey. North of the baseline there is a possible second ultramafic band, with sediments further to the north.

VI. SURVEY PROCEDURE

A baseline was laid out 3 kilometers in length at an azimuth of 112° on the approximate strike of the volcanics. Cross lines were run at 100 meter intervals perpendicular to the baselines north-east and south-west to the claim boundaries. All lines were chained and picketed ever 25 meters.

Magnetometer readings were taken with a Barringer GM-122 Proton Precession Magnetometer at 25 meter intervals along all lines. The looping method was used for control of diurnal variation. In this method a base station is selected, and readings taken along lines describing a loop, arriving back at the starting base station in less than two hours. A second loop is then started using either the same base station or another which is tied to the previous loop. Readings are then corrected for diurnal variation by assuming the time between readings is the same and distributing any variation equally among the intervening readings. No correction was applied less than the accuracy of the base station readings.

VII. DISCUSSION OF RESULTS

The magnetometer survey outlines an area of high magnetics underlain by ultramafic rocks. The highest magnetics occurs south of the baseline and in a narrow band north of the baseline. The south area is known to be ultramafics. The north band is drift covered but is probably also a band of ultramafic rocks. The magnetic low areas in the north-east are underlain by sediments. The central magnetic low by syenite intrusions and carbonatized rocks.

VIII. CONCLUSIONS

The magnetic survey has outlined the areas underlain by ultramafic rocks as having a high and variable magnetic intensity. The sharp changes in intensity are probably due to variably magnetite concentrations. The central band of syenite and carbonatized rocks have a relatively flat magnetic profile, as do the sediments in the north east.

The magnetic survey will be useful in extending geological mapping over drift covered areas which are extensive on the claims.

Respectfully submitted



July 21, 1980

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TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Magnetometer

Township or Area Skead

Claim Holder(s) SUPERIOR NORTHWEST INC.

Survey Company Colex Explorations Inc.

Author of Report R.A. MacGregor

Address of Author 134 Palace Dr. Sault Ste. Marie, Ont.

Covering Dates of Survey May - July, 1980 (linecutting to office)

Total Miles of Line Cut

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS per claim

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

- Geophysical
-Electromagnetic
-Magnetometer see List
-Radiometric
-Other
Geological
Geochemical

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer Electromagnetic Radiometric (enter days per claim)

DATE: July 21, 1980 SIGNATURE: [Signature] Author of Report or Agent

Res. Geol. Qualifications 2.1102

Previous Surveys

Table with 4 columns: File No., Type, Date, Claim Holder. Row 1: L.D.

TOTAL CLAIMS 11

If space insufficient, attach list

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS -- If more than one survey, specify data for each type of survey

Number of Stations 589 Number of Readings 589
Station interval 25 Metres Line spacing 100 metres
Profile scale
Contour interval 1,000 gammas

MAGNETIC

Instrument Barringer, GM-122
Accuracy - Scale constant 1 gamma
Diurnal correction method looping method
Base Station check-in interval (hours) 2 hours or less
Base Station location and value various along baseline

NOTE: Extension of survey previously submitted -- see 2.3252

ELECTROMAGNETIC

Instrument
Coil configuration
Coil separation
Accuracy
Method: [] Fixed transmitter [] Shoot back [] In line [] Parallel line
Frequency (specify V.L.F. station)
Parameters measured

GRAVITY

Instrument
Scale constant
Corrections made
Base station value and location
Elevation accuracy

INDUCED POLARIZATION RESISTIVITY

Instrument
Method [] Time Domain [] Frequency Domain
Parameters - On time Frequency
- Off time Range
- Delay time
- Integration time
Power
Electrode array
Electrode spacing
Type of electrode

LIST OF CLAIMS

	L523059	20 days	excluding linecutting	3/4
	L523060	20 days	" "	3/4
A	L523061	20 days	" "	✓ 3/4
	L523062	20 days	" "	1/4
	L523063	20 days	" "	✓
	L523064	20 days	" "	✓
	L442061	39 days	including linecutting	✓
	L442060	39 days	" "	✓
B	L442058	39 days	" "	1/2
	L396276	6 days	" "	1/4
	L396274	6 days	" "	✓

11

Group A = 6 claims x 20 = 120 days
 areas not covered = 2 1/2 claims
 $\therefore \frac{120}{6 + 2.5} = 14$ days per cl.

Group B = 5 claims x 40 = 200 days
 areas not covered = 3 1/4 claims
 $\therefore \frac{200}{5 + 3.75} = 35$ days per cl.

Dec 17/80 JWM