ELECTROMAGNETIC SURVEY

on the

Garfield Appraisals & Consultants Limited Property
situated in

Langmuir Township

Porcupine Mining Division, Ontario

INTRODUCTION

A McPhar SS 15 Vertical Loop Electromagnetic Survey, on a frequency of 1,000 c.p.s., was completed during the month of March, 1970 over four (4) unpatented mining claims which are recorded as follows:

P-101204
P-101212 to P-101213
P-101217

These claims are situated near the north east corner of Langmuir Township, Porcupine Mining Division, Ontario.

The survey was performed by Tri-J Mineral Surveys Limited, P.O. Box 820, South Porcupine, Ontario, on behalf of Garfield Appraisals and Consultants Limited, 91 Cedar Street, Timmins, Ontario.

LOCATION AND ACCESSIBILITY

The four (4) claims are situated on and immediately east of Nighthawk Lake, approximately one mile south and one and a half mile west of the northeast corner of Langmuir Township.

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The property is located approximately fifteen (15) miles southeast of South Porcupine, Ontario, and is accessible either by ski or pontoon equipped aircraft which can utilize Nighthawk Lake.

GEOLOGICAL DATA

The claims are underlain by north south trending metavolcanics of early Precambrian Age.

TOTAL NUMBER OF STATIONS ESTABLISHED

The total number of stations established was 203.

TOTAL NUMBER OF LINES PICKETED AND CHAINED

The total number of lines picketed and chained, including the base line was 4.2 miles.

TYPE OF INSTRUMENT USED

McPhar SS-15 Vertical Loop Electromagnetic Unit:

This unit is based on the use of electricity and magnetism. A current of electricity passing through a wire will create a magnetic field in the vicinity of the wire.

An alternating current flowing in a loop of wire suspended above the surface of the earth will cause currents to flow in buried conductors, this process is termed "induction" and occurs in the following steps:--

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(1) The alternating current flowing in the loop creates an alternating "magnetic" field (primary magnetic field) in the vicinity of the loop.

(2) The primary alternating magnetic field will cause currents to flow in a sub surface conductor.

The induced current flowing in the sub surface conductor will then create a magnetic field (secondary magnetic field) which can be measured by a "search coil" connected to a set of earphones. The intensity of the magnetic field is indicated by the amplitude of the signal in the earphones.

The instrument operates on either 1,000 or 5,000 c.p.s. with transmitter power being supplied by a 300 watt generator driven by a 1 1/3 H.P. gasoline engine. In the field operation, the receiver is moved along traverses perpendicular to the assumed geologic strike. Measurements can be made on traverses up to 2,000 feet from the transmitter, and 1,200 feet maximum on each side of the transmitter, therefore it is usually necessary to employ several transmitter locations in order to complete the survey of a property.

The angle between the resultant arrow and the horizontal at any point is termed the "dip angle" and its determination is the fundamental measurement in the search for conductors. Over barren ground, the dip angles are...

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practically zero. The approach to a conductor is marked by increasing dip angles which in turn decrease to zero directly above the conductor, and then increase but in the opposite direction, beyond the conductor, away from the conductor the dip angles return to zero again.

The depth of the exploration is roughly half the distance between transmitter and receiver.

The interpretation of electromagnetic survey data usually is based upon accumulated experience and comparison with results of scale-model experiments.

RESULTS AND CONCLUSIONS

The electromagnetic survey indicated one weak trend on Claim P-101204 from line 0 to 8 south at approximately eight hundred feet east of the baseline.

This zone or trend however appears to be attributed to other causes (overburden or terrain effect) rather than sulphide mineralization.

No further exploration is recommended at this time.

Respectfully submitted,

A. J. O'Donnell, B. Sc.

May 6, 1970
Flin Flon, Manitoba
MAGNETOMETER SURVEY

on the
Garfield Appraisals & Consultants Limited Property
situated in
Langmuir Township
Porcupine Mining Division, Ontario

INTRODUCTION

A Sharpe MF-1 Magnetometer survey was completed during the month of March, 1970 over four (4) unpatented mining claims which are recorded as follows:-

P-101204
P-101212 to P-101213
P-101217

These claims are situated near the north east corner of Langmuir Township, Porcupine Mining Division, Ontario.

The survey was performed by Tri-J Mineral Surveys Limited, P. O. Box 820, South Porcupine, Ontario, on behalf of Garfield Appraisals and Consultants Limited, 91 Cedar Street, Timmins, Ontario.

LOCATION AND ACCESSIBILITY

The four (4) claims are situated on and immediately east of Nighthawk Lake, approximately one mile south and one and a half miles west of the northeast corner of Langmuir Township.
The property is located approximately fifteen (15) miles southeast of South Porcupine, Ontario, and is accessible either by ski or pontoon equipped aircraft which can utilize Nighthawk Lake.

GEOLOGICAL DATA

The claims are underlain by north south trending metavolcanics of early Precambrian Age.

TOTAL NUMBER OF STATIONS ESTABLISHED

The total number of stations established was 202.

TOTAL NUMBER OF LINES PICKETED AND CHAINED

The total number of lines picketed and chained, including the base line, was 4.20 miles.

TYPE OF INSTRUMENT USED AND METHOD EMPLOYED

The survey was completed using the Sharpe MF-1 Fluxgate Magnetometer. This instrument has a maximum sensitivity of 20 gammas and can be read to 5 gammas. The scale range is from 1,000 to 100,000 gammas, with power supplied by 12 "C" type flashlight batteries.

"Base Stations" were established along the base-line to check for any diurnal changes which may occur throughout the survey.

The claims were surveyed on a four hundred (400) foot interval.

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RESULTS AND CONCLUSIONS

The survey outlined a north-south striking magnetic trend from line 0 to 16S situated approximately five hundred (500) feet east of the base line.

This narrow magnetic zone is assumed to be attributed to a minor amount of disseminated magnetite and/or pyrrhotite in the volcanics.

Respectfully submitted,

May 6, 1970
Flin Flon, Manitoba

A. J. O'Donnell, B. Sc.