

ABSTRACT

A ground electromagnetic survey was made in January 1959 using a long ground cable to produce the exciting field. The lines of traverse were north-south at 300 foot intervals.

Eight and three quarters miles of line were surveyed.

Six electrical conducting bodies were outlined.

The results are described in a three page report with accompanying map on a scale of 200 feet to 1 inch.

ELECTROMAGNETIC SURVEY

BY

THE LONG WIRE METHOD

NET LAKE PROPERTY

STRATHY TOWNSHIP, ONTARIO

Summary

A number of electromagnetic anomalies were outlined. One anomaly coincided with an aeromagnetic anomaly.

The anomalies have been interpreted as being due to six separate conducting bodies. The order of testing the anomalies has been suggested.

Introduction

Since the long wire method of electromagnetic survey had been successfully tested over the Temagami Mine orebodies it was used to outline in
detail the airborne electromagnetic anomaly detected by Electromagnetic Surveys

Ltd. during the previous year.

Location and Access

The property is situated four miles north of Temagami, Ontario. It lies immediately west of No. 11 Highway and is practically all covered by the western section of Net Lake.

Geophysical Survey

The electromagnetic survey was made using a technique in which a long

insulated wire was laid along a road south of the extreme boundary of the property. The wire which was approximately east-west was grounded at both ends and fed with 1000 cycle alternating current.

Measurements of the horizontal component of the alternating magnetic field were made with a coil held with its plane vertical, its axis horizontal and pointing north-south. The voltage generated in the coil at various stations were measured and were the values plotted on the map. Hence the map values are proportional to the alternating magnetic field values.

General Interpretation

A very irregular shaped anomaly occupies the southern half of the lake.

A study of the profiles indicate that the anomaly is caused by at least six conducting zones which have been numbered for easy reference.

Conductors 1, 2 and 3 occupy an area over which a very strong aeromagnetic anomaly was outlined. Conductor 2 produces the strongest electromagnetic anomaly and may be caused by pyrrhotite. International Nickel did
drilling somewhere in this area and encountered massive pyrrhotite with little
commercial value. Conductors 4, 5 and 6 are outside the main magnetic
anomaly. All the conductors causing the anomalies trend in a north-east
direction.

Depth calculations indicate the tops of the conductors to be 70 feet below lake level.

The anomalies in the S.E. and S.W. portions of the area require extension before conclusions can be drawn.

Recommendations

If conductor 2 has not been tested by previous drilling it should be tested where it intersects line 9 + 00W.

Since conductors 5 and 6 are not markedly magnetic they could be caused by chalcopyrite in sufficient concentrations to be valuable and hence should be tested by diamond drilling.

Respectfully submitted,

GEOPHYSICAL ENGINEERING & SURVEYS LTD.

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