ELECTROMAGNETIC-MAGNETOMETER SURVEY

on the property of

AMAX EXPLORATION INC.

Clergue Township, Larder Lake Mining Division, Ontario

Timmins, Ontario,

October 7, 1969,

R. J. Bradshaw, F.G.A.C.,

Consulting Geologist.

INTRODUCTION

A magnetometer-electromagnetic survey has been carried out on four of the twelve claim group held by AMAX Exploration Inc. in Clergue Township.

The linecutting was completed in August, and the geophysical survey in September, 1969.

PROPERTY, LOCATION AND ACCESS

The property consists of 12 contiguous unpatented mining claims designated 215843 to 215854 inclusive. Only claims 215847 to 215850 were surveyed.

The claims are located in Lots 9, 10 and 11, Concession IV, Clergue Township, Larder Lake Mining Division, as shown on the accompanying plan.

Highways 101 and 67 from Timmins, approximately 25 miles southwest provide easy access to the property.

PREVIOUS WORK

The writer is not aware of any previous work that has been done on the property.

GEOLOGY

The general geology of the area is shown on Map 2046.

In Clergue and the adjecent Township, Dundonald, are a number of basic to ultrabasic intrusives. Nickel is associated with the intrusives as exemplified by the small high-grade deposit mined by Noranda (Alexo Mine) located at a peroditite contact about a mile southwest of the AMAX holdings.

The basic to ultrabasic masses are generally conformable to

the east-west striking volcanic assemblage composed of mafic to felsic numbers.

MAGNETOMETER-ELECTROMAGNETIC SURVEY RESULTS AND INTERPRETATION

The magnetometer and electromagnetic survey data are shown on accompanying maps at a scale of one inch to two hundred feet. Survey method and instrument specifications are described in the Appendix to this report.

The magnetic gradient varies from less than 1200 gammas to more than 8000 gammas. The general east-west trend of the isomagnetics conforms to the expected strike.

Obviously the magnetic highs represent basic to ultrabasic masses. The most prominent magnetic high is present in the south half of claim 215848. Here a change in the magnetic gradient occurs near the 3000 gamma isomagnetic, the probable location of the intrusive contact. Apparent length of this mass, therefore, is almost three quarters of a mile measured along the south boundary of the area surveyed.

A much smaller, but well defined, magnetic high is present in the centre of claim 215850 which may represent the top of a deep-seated basic or ultrabasic intrusive.

Several very weak crossovers occur on the three west claims. With amplitudes of less than 2 degrees in intensity, these crossovers have little if any significance.

CONCLUSIONS AND RECOMMENDATIONS

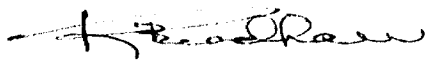
A basic or ultrabasic intrusive mass is indicated by the

magnetic data to be present on the south half of claim 215848. This mass appears to be at least three quarters of a mile long, striking generally east-west, probably intruding volcanic rocks.

The very weak indications of conductivity appear to be insignificant.

It is proposed that a deep penetrating vertical loop electromagnetic survey be considered for the west three claims of the area surveyed to determine if conductive zones are present along the probable intrusive contact.

Respectfully submitted,
SHIELD GEOPHYSICS LIMITED,



R. J. Bradshaw, F.G.A.C.,
Consulting Geologist.

Timmins, Ontario,
October 7, 1969.

C E R T I F I C A T E

I, Ronald J. Bradshaw, residing at 480 Howard Street, Timmins, Ontario, a consulting geologist with office at 26 Pine Street South, Timmins, Ontario, do hereby certify that:

I attended Queen's University, Kingston, Ontario, and graduated with an Honours B.A. degree in Geological Sciences in 1958.

I am a Fellow of the Geological Association of Canada, a Member of the Canadian Institute of Mining and Metallurgy and qualified for membership in the Association of Professional Engineers of the Province of Manitoba in 1959.

I have no interest either directly or indirectly in the shares or securities of Amax Exploration Inc.

R. J. Bradshaw, F.G.A.C.,
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Timmins, Ontario,
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A P P E N D I X

Survey Method and Instrument Data

ELECTROMAGNETIC SURVEY

The "Radem" unit is essentially a specially designed radio receiver which receives very low frequency radio signals from transmitters located at various points throughout the world.

The receiving unit is used to measure the direction of the magnetic component of the transmitted field.

The normal VLF magnetic field is horizontal, however, the field is distorted by the presence of a conductive body. The presence of a conductive body can, therefore, be determined by measuring the dip angle of the resultant field at regular intervals.

The instrument is so designed that when in the position of minimum coupling, the arrow on instrument points towards the conductive body. The axis of the body will be located at the zero or "cross-over" point between sets of dip angles which point towards the zero point.

The magnitude of the dip angle and the direction in which the arrow points are recorded at each field station.

The direction of the magnetic component of the field from a VLF transmitting station is horizontal and perpendicular to the line between the operator and the transmitting station.

For best results, a station is selected so that the magnetic field is perpendicular to the suspected strike of possible conductive bodies.

The unit is turned on and the volume control knob adjusted

so that the signal is clearly heard. The unit is then held in a horizontal position and rotated until an audio null is obtained. The unit is then aligned parallel to the field direction. The receiver is then rotated into the vertical position and rotated about a vertical axis until an audio null is heard. The dip angle is then noted as well as the direction in which the arrow points.

If, when reading a station to the south, a dip angle of 20 degrees is obtained and the arrow points to the east the conductor is located to the east.

MAGNETOMETER SURVEY

A Sharpe M.F.-1 fluxgate magnetometer was used in the magnetic survey. This instrument measures the vertical component of the earth's magnetic field in gammas. Base stations for determining the magnetic diurnal variations were established along the main base line at 100 foot intervals. Magnetic readings were taken at 50 foot intervals, along the cross lines.

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