REPOR
ON
MAGNETOMETER AND E.M. SURVEYS
NORTH HALF, LOTS 5, 6 AND 7, CONCESSION V
LAMARCHE TOWNSHIP, ONTARIO

PROPERTY

Of the three half lots comprising the property, Lot 6 is held as a patented lot with respect to surface and mineral rights; Lot 5 is held as staked claims, Nos. P-52852-53-54-55; Lot 7 is patented with respect to surface rights and held as staked claims, Nos. P-52848-49-50-51, with respect to mineral rights. Total area is about 480 acres, the group being 1-1/2 miles wide east-west by one-half mile north-south.

LOCATION, ACCESS AND GEOLOGY

The location is 2 miles southeast of the town of Cochrane, Ontario. A gravel road starting from Provincial Highway 11 at a point one mile south of Cochrane gives access to and crosses the property.

There is no rock outcrop on the property or near it. Geological mapping in the area indicates that the location is at or near the contact zone of a granite batholith on the north and an area of volcanics and basic intrusives on the south. The contact zone strikes generally east-west.

EXPLORATION

Linecutting

An east-west baseline was cut along the north boundary of the property, a tie line along the south boundary, and picket lines bearing due south at 200-foot intervals across it. Line cut totalled 21.6 miles.

Magnetometer Survey

Magnetometer readings by Askania were taken every 100 feet on all picket lines and the results are shown on the attached plan. The Askania measures the vertical intensity of the magnetic field, and results are accurate at least to 10 gammas. Readings were taken at 50-foot intervals in areas of high magnetic intensity.

A strong magnetic anomaly extends from the southwest to the northeast corner of the property, on a bearing of N 70° E, reaching a maximum intensity of some 4,500 gammas in the central part. It seems likely that this is due to magnetite developed either in a garnet-biotite schist, or in a basic intrusive, in the general area of the granite-volcanic contact. Occurrences of both types are common in this general area. It is possible that sulphides are associated with the magnetite.

E. M. Survey

The E. M. survey was carried out using a Sharpe SE-200 instrument by the broadside technique.

This instrument consists of a battery powered coil of wire 18" in diameter, the transmitter, developing an alternating current of 1,250 cps, and a second 18" coil of wire, the receiver, equipped with earphones and a clinometer by which the tilt of the plane of the coil may be measured. In operation, one man carrying the transmitting coil walks along a picket line, stopping at every station to transmit a signal to the receiver. When transmitting, the coil is held in a vertical plane pointed at the receiver. The man operating the receiver coil walks along a picket line 400 feet away from, and exactly opposite, the transmitter. To take a reading, the receiver coil is held in a horizontal plane and then rotated in either direction from the horizontal until in the earphones a noticeable increase in the sound signal is heard. The mean of the two angles is then the null angle, or point of minimum signal strength, and this is the parameter measured. If the magnetic field is not distorted by a conductive body in its vicinity, the null angle will be zero. If there is a conductive body lying below surface between the transmitter and receiver, and at a depth detectible by the instrument (usually less than 200 feet) the null angle will be deflected away from the conductor on either side of it and zero directly above it. Conductors are thus delineated by zero angles lying between angles of opposite distortion, and the total amplitude of the distortion ("peak-to-peak angle") is a rough measure of the strength of the conductor.

In the Lamarche township survey readings were taken at 50-foot intervals on the lines. Three weak conductors were picked up in the southeastern part of the property, as indicated on the plan. Maximum peak-to-peak angle noted was 9°. A magnetic anomaly of 50 to 100 gammas is coincident with the two most easterly conductors. Indicated overburden depth is on the order of 60 feet.

CONCLUSION

The exploration completed on the Lamarche property has indicated

two features of interest:

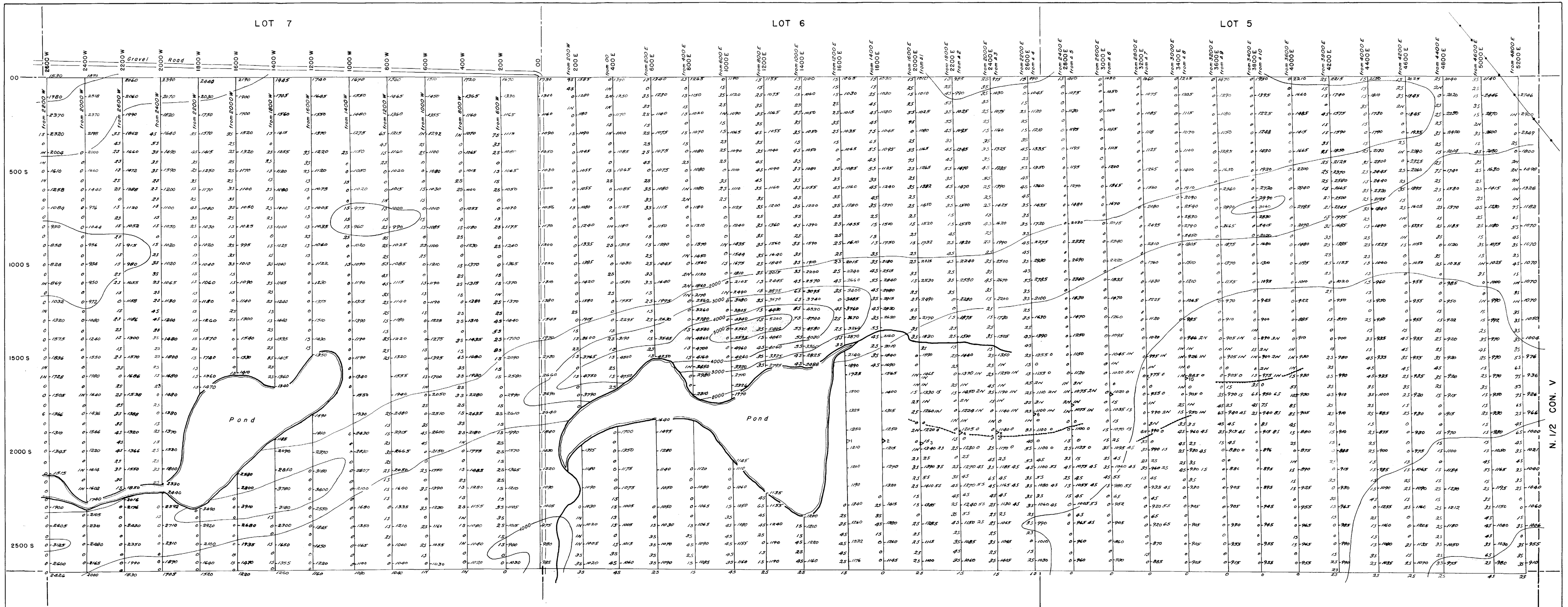
1) A continuous strong magnetic anomaly striking N 70° E, extending across the property and no doubt due to a magnetite content in the bedrock which could have associated sulphides.

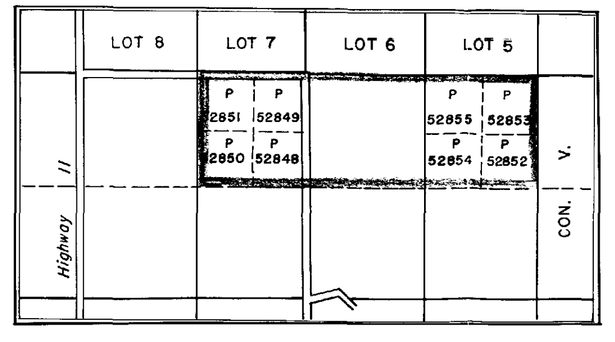
2) Three weak E.M. conductors in the southeastern quarter of the property, two of which show a 50 to 100-gamma magnetic correlation.

The cause of these magnetic and E.M. anomalies can best be determined by diamond drilling.

Reported Philip Eckman
Philip Eckman

Toronto, Ontario,
September 23, 1964





KEY MAP - LAMARCHE TWP.

Scale 1" = 1/2 mile Property outlined in red

Instruments: Askania magnetometer
Sharpe S.E. 200 E.M.

E.M. Conductor

Magnetic contour interval 1000 gammas

THE PATINO MINING CORPORATION

MAGNETOMETER & E.M. SURVEY

N.1/2 LOTS 5, 6 & 7 CON. V LAMARCHE TWP.
ONTARIO

Scale 1" = 200'

Date Sept 29/64

63.1314

200