

### INTRODUCTION

During the period from February 8 to April 5, 1966
three separate surveys were carried out on a group of claims in
Wilhelmina and Geary townships. The surveys were conducted by
Mespi Mines Limited of 1705 Victory Building, 80 Richmond Street,
West, Toronto, Ontario.

## LOCATION AND ACCESS

The claim group is comprised of fourty-four contiguous claims located in central Wilhelmina and Geary townships, twenty miles northwest of Timmins, Ontario.

The claims are accessible by an all weather gravel road built and maintained by Abitibi Power and Paper Company. The road terminals are Smooth Rock Falls, Ontario at the north and the Geary-Thorburn township line.

## PREVIOUS WORK

The area was covered by a combined magnetic and electromagnetic airborne survey conducted by Canadian Aero Mineral Surveys Limited in Marks, 1965.

Some 31 line miles of date were acquired along lines oriented approximately N 10 deg. E and nominally spaced 1/8 mile apart.

Three conductive zones were outlines. All three zones are related to a continuous magnetic high and are assumed to be formational conductors.

# INSTRUMENTS USED AND SURVEY METHOD

The entire group of claims was surveyed using a Crone dual frequency (1800 c.p.s., 480 c.p.s.) vertical loop unit.

The in-line method was employed and the coil separation was maintained at 300 feet. The angles shown on the plan are resultant dip angles plotted at the mid-point between the coils.

Subsequently the central portion of the area was surveyed with a Fluxgate MF-1 magnetometer and stations were established at 100 foot intervals.

The central portion of the area was again surveyed using a high powered Crone, dual frequency (450 c.p.s., 1800 c.p.s.)

Fixed unit and the dixed transmitter method.

#### SURVEY RESULTS

The dip angles obtained using the in-line method are indicative of conductive overburden. The response is almost entirely high frequency.

The magnetic survey indicated the presence of a sinuous linear feature of relatively high magnetic susceptibility.

The feature has an easterly strike and steep southerly dip.

A number of small oval shaped relative highs occur on both the north and south flanks of the magnetic highs. These are probably due to local concentrations of magnetite.

The dual frequency, fixed transmitter survey indicated two strong conductors, one coinciding with and one flanking the magnetic anomaly.

The most easterly conductor extends from line 40 E to line 20 E. At 20 E, the conductor splits and become two separate and distinct conductors.

The conductor strength and unusually good ratios lead one to suspect that they were due to graphite associated with iron formation or pyrrhotite.

Two holes were drilled on this property. Hole W.G. #1 was collared at 300 south on line 16 E and hole two was collared at 700 south on line 44 W.

Hole # 1 intersected two graphitic conductive zones containing pyrite and pyrrhotite mineralization thus confirming the original interpretation.

Hole # 2 intersected a pyrite pyrrhotite-graphite horizon in a meta-sedimentary-volcanic complex.

CONCLUSIONS AND RECOMMENDATIONS

The airborne conductors were confirmed by one of the E.M. surveys and the conductors were adequately explained by subsequent drilling.

No further work is recommended at this time.

Respectfully submitted

JES/jf

Mteers. Geologist





LTD.

80 RICHMOND ST. WEST

TORONTO 1. ONTARIO

July 27th, 1966.

Mr. R. V. Scott, Director, Mining Lands Branch, Department of Mines, Parliament Buildings, Toronto 2, Ontario.

Dear Mr. Scott:

Enclosed is a report and plan in duplicate covering a combined magnetic and electromagnetic survey performed on this Company's claims located in Wilhelmina and Geary Townships, Porcupine Mining Division, as listed below:

Claim Nos.	Work Recorded
P-67899 to P-67912 incl., P-69906 to P-69927 incl., P-77789 to P-77796 incl.,	15 days' geophysical
P-67899 to P-67912 incl., P-69906 to P-69920 incl., P-69925 to P-69927 incl., P-77789	6 days' geophysical
P-69909 to P-69911 incl., P-69913 to P-69915 incl., P-67899 to P-67902 incl., P-67906 - 7	7.5 days¹ geophysical

The enclosed report and plans are in support of 3 work reports filed with the Mining Recorder in Timmins on June 2nd, 1966. The reports of work were acknowledged to you by Mr. C. D. Egerton with his three letters dated June 3rd, 1966, copies of which are attached.

Mespi Mines Limited is the recorded holder of all of the above mentioned claims.

Yours very truly, MESPI MINES LIMITED; Edward A. Pigulshi Treasurer.

Treasurer.

E.A.Pigulski/rb Encl.





