



## INTRODUCTION

A magnetometer survey of claims P-28868, P-28803 and P-28806 was carried out during the latter part of April, 1947. The survey was carried out on the instructions of Mr. George Darby of Timmins.

The purpose of the survey was to expand the geological information obtained from Diamond Drill Holes 1 and 2. As the overburden in this area is extremely heavy, it was felt that location of the contact phase with the volcanics to the south could be carried out at much less expense than by cross-section diamond drilling.

## LOCATION AND ACCESSIBILITY

The property lies astride the Tatachickapika (Redsucker) River and is accessible by means of a truck road, approximately twenty miles southwest of the Town of Timmins.

## TOPOGRAPHY

The area surveyed consists primarily of gently rolling land with second growth jack-pine and some spruce and balsam. A cedar and alder swamp occupies the south part of claim P-28868. Water is obtainable from a small creek flowing in a north, easterly direction across this claim. The Tatachikapika River crosses the northwest corner of the claim.

## REGIONAL GEOLOGY

The entire northern part of the Township of Thornloe is underlain by Timiskaming conglomerate, greywacke, slate and minor areas of arkose, impure quartzites and iron formation. Small quartz veins and lenses, minor porphyries and quartz diabase are the intrusives within the sedimentary area. Alteration by shearing, carbonatization and the development of chlorite and sericite is prevalent throughout the sedimentary area. Gold is present in the quartz veins and lenses.

Contacting the sediments on the south are Keewatin volcanics consisting chiefly of andesites, basalts, basic intrusives, agglomerates and tuffs. Intercalated sediments are also present. The basic lavas have been locally metamorphosed to serpentine and carbonate and chlorite schists. Gold deposition is most likely to occur in shear zones, quartz veining or as irregular-shaped sulphide bodies representing replacements in Keewatin greenstones and sediments.

The regional strike is slightly north of east and the dip steeply north.

Medium to very heavy overburden covers most of Thornloe Township.

## GEOMAGNETIC FIELD WORK

The geomagnetic survey was conducted on North - South picket lines turned off an East - West base line at 300 foot intervals. Check readings of vertical magnetic intensity were obtained at 100

foot stations along these lines and along the base line. All readings were corrected for diurnal change, being tied into main and secondary base stations.

#### GEOPHYSICAL INTERPRETATION

A geomagnetic contour map of the surveyed claims, with geological interpretation, accompanies this report.

A very high degree of magnetic relief was encountered, with readings varying from 400 gammas to off scale positive.

Geomagnetic anomalies may be described as areas of abnormal readings. These are areas of rock change or structural irregularity which are generally the most favorable locations for prospecting. It must be stated that where outcrops are scarce, the geomagnetic work is difficult to interpret accurately. Further additions and revision of interpretation may be required as diamond drilling progresses.

Three strong anomalies have been indicated by the survey and these can be described as follows:

1. An area on increasingly high readings traverses the north boundary of claim P-28868. and the south section of claim P-28867. This anomaly strikes East - West and is quite definitely a band of iron formation in the sediments. This iron formation

consists of impure magnetite and silica and is not considered of economic importance in this area.

2. An area of medium intensity, to a peak of 2110 gammas, traverses the central portion of the surveyed area in a northwesterly direction. This anomaly was not completely delineated by the survey and cannot be definitely interpreted at this time. However the anomaly is considered sufficiently interesting to warrant further work.
3. An area of medium to high magnetic intensity traverses the south portion of claim P-28806 in a general northwesterly direction, but with considerable irregularity. This has been tentatively interpreted as the sheared contact zone between sediments and volcanics, with probable chlorite schist development in the latter.

The remainder of the surveyed area is very flat and uniform and from the examination of cores from Diamond Drill holes 1 and 2, the horizontal projections of which are shown on the accompanying map, is underlain by uniform sediments with minor porphyritic intrusions. It is this uniformity of readings which focuses the magnetic relief of the three anomalies encountered in the surveyed area.

#### RECOMMENDATIONS AND CONCLUSIONS

The geomagnetic survey of the three Gertie Gold Syndecate claims, P-28868, P-28803 and P-28806,

has indicated the volcanic - sedimentary contact, which can only be delineated and proved by more extensive geomagnetic work and diamond drilling. Since this contact is the chief structural feature of the area and, as it <sup>has</sup> not been previously tested, it is suggested that the initial drill hole be placed to traverse the strongest irregularity in this anomaly.

The following two diamond drill holes are recommended:

D. D.H. #1. 70 feet East of Station 1500 south on Line E.

Bearing South 20 degrees West.

Dip -60 degrees.

Length 650 feet.

D.D.H. #2. 150 feet East of 150 feet north on Line C.

Bearing South 35 degrees West.

Dip -60 degrees.

Length 740 feet.

In conjunction with the drilling of the above two holes, it is recommended that further geomagnetic work be undertaken South and West of the present surveyed area. The iron formation indicated in Anomaly 1, will serve as an excellent horizon marker for further geomagnetic.

The following comprises the information required by the Ontario Department of Mines for submission of this survey for assessment credit.

Line cutters five men employed for two twelve hour days

George Darby, Timmins, Ontario. Line cutting contractor employing the following men; Fred Vezina, Frank McCharles, Frank McCharles Jr. George McCharles all of Timmins. (Includes chaining and picketing) Credit for 15 days ✓

Instrument operator Peter H. Bromley of Timmins and one assistant for three twelve hour days. Credit for 9 days ✓

Consultants (i) field work Peter H. Bromley.  
(ii) office work R. B. Taylor of Timmins.  
Credit for 2 days  
Draftsman Peter H. Bromley, Time included in above.

Number of stations established - 146  
Number of feet of lines cut - 16,525

Type of instrument - Wolfson magnetometer (vertical comp.)

Sensitivity - 38.9 Helmholtz coil - 27.2

Total number of days equals 26.  
For assessment credit 4 days are allowed for each man necessarily employed on the survey. The number of days for this survey would be  $26 \times 4 = 104$  or 34 days per claim } No!

