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NTS 31 M/5



**GROUND GEOPHYSICAL SURVEYS Magnetometer and Horizontal Loop EM** 

Clear Lake Property Coleman Tp.

NEW INVERNESS EXPLORATIONS INC. April 4, 2006

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#### 1.0 **SUMMARY:**

From February 1, to March 31, 2006, a program of linecutting and geophysical surveying was carried out on the Clear Lake Property held by New Inverness Explorations Inc. P.O. Box 1185, Manitouwadge, Ontario POT 2CO. The purpose of the work was to delineate future drill targets and map the magnetic and conductive characteristics of the property. The work was done by Tom Von Cardinal, Kevin Picard and David Laronde on behalf of Meegwich Consultants Inc. 73 Lakeshore Drive, Temagami, Ontario POH 2HO. Laronde was the field supervisor and author of the report. A total of 10.4 km of line was cut and surveyed with magnetometer and HLEM.

#### 2.0 PROPERTY:

The property consists of one 9 unit claim situated in Coleman Tp.

Claim no.: 4203309

due date: April 25, 2007

Legal description: N1/2NW1/4 Lot9 Conc.5, S1/2 Lot8 Conc.6 et al.

Coleman Tp.

Larder Lake Mining Division

NTS 31 M/5

#### 3.0 LOCATION AND ACCESS:

The property is located at the south end of the town of Cobalt immediately west of Hwy 11B and has a road cutting the middle of the property providing excellent access.

#### **4.0 MAGNETOMETER SURVEY:**

4.1 Instrumentation: A Gem Systems GSM-19 overhauser magnetometer serial no. 58479 was used for the survey in mobile mode. These units have an accuracy of +/- 1/100th of a gamma. Readings were taken at 12.5 meter intervals. An EDA Omni IV base station was used to monitor and correct for the diurnal variation during the course of the survey. This instrument reads to 1/10<sup>th</sup> of a gamma resolution. The base station cycled at 20 second intervals.

4.1 Survey Results: The results are presented in contour format on plans at 1:2500 scale. Quality control was accomplished by surveying the baseline and then comparing the readings at the same station when the cross lines were surveyed. This cross-referencing technique confirms good data and checked out well on this survey.

The results are discussed as follows:

The overall picture from the magnetic survey is one of two subtle backgrounds with high readings confined to isolated areas. The northwestern section of the grid has a quiet background range of 440-500 nT while the eastern part of the grid has a background range of 370-440 nT. The difference levels of

background likely mean that the underlying rock types are different. Perhaps a volcanic to the west and a sediment to the east would explain the contrasting levels.

The southwestern part of the grid has isolated highs ranging up to 1371 nT. These highs might be explained by concentrations of magnetite within diabase that is known to occur in abundance in the area. The same explanation could apply to highs occurring in the northeast part of the grid.

A linear, low intensity dike can be seen trending northeast from 100E, 140N to 475E, 0N. The width peters out at the west end and the dike continues off the grid to the north.

#### 5.0 HLEM Survey:

5.1 Instrumentation: An Apex Maxmin I unit (ser. no. 5309) was used for the horizontal loop EM survey. Three frequencies were read, 440, 1760 and 3520 Hz, measuring the in-phase and quadrature components of the secondary field. The receiver was supported by a MMC (maxmin computer) that stores digital data and computes corrections for coil tilt and separation. The reference cable was 150 meters long.

5.2 Survey Results: The results of the survey are presented in profile form on plans at 1:2500 scale. Conductor axis is indicated on the plans.

The results yielded four conductors trending east west discussed as follows:

Conductor A: Conductor A runs along the southern property limits resulting in partial HLEM coverage since the lines stop at the boundary. Another 150-200 meters of line to the south of the property would give full HLEM coverage.

However the conductor axis can still be approximated. This is a moderately strong conductor with good conductivity and possibly has a bedrock source as compared to an overburden response a little further north along the north shore of Clear Lake.

Conductor B: This anomaly is a weak response that may be related to conductive overburden. The conductor could be terminated by north south faulting between 500 and 600 E.

Conductor C: The anomaly is weakly conductive and coincident with magnetic highs. The underlying geology could be diabase and the conductivity may possibly be related to magnetite.

Conductor D: A very weak and narrow conductive horizon that looks like a fault.

#### **6.0 CONCLUSIONS AND RECOMMENDATIONS:**

Magnetometer survey: The survey has mapped the geology by the different backgrounds and outlined areas of diabase.

HLEM Survey: The HLEM technique seems to work well in this environment picking up four anomalies that are more or less a part of a common trend containing a fault zone and possible metallic mineralization.

Since the conductors are weak in nature an I.P. survey is warranted to get a more defined drill target in terms of pinpointing disseminated sulphides and poorly connected metallic mineral grain stringers. It should be noted that to cover Conductor A the lines should be extended south a minimum distance of 200 meters.

# References

OGS Geologic Compilation Series Sudbury-Cobalt Map 2361 1in to 4 miles

## CERTIFICATE OF AUTHOR

- I, David Laronde of the town of Temagami, Ontario hereby certify:
  - That I am a geology technologist and have been engaged in mineral exploration for the past 26 years.
  - That I am a graduate of Cambrian College in Sudbury acquiring a diploma in Geology Engineering Technology 1979.
  - That my knowledge of the property described herein was acquired by field work and documentation.

Dated at Temagami this 4th day of April 2006.

David Laronde









