NTS 31 M/4

GROUND GEOPHYSICAL SURVEYS Magnetometer and VLF-EM Surveys

CRASH LAKE PROPERTY Chambers Township

December 2005

2. 310 499

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1.0 INTRODUCTION:

From December 5 to 16, 2005 a program of linecutting and geophysical surveys was carried out on the Crash Lake Property held by Mobridge Exploration Inc. 13 Bastedo Crescent, Marathon, Ontario POT 2E0. The objective of this work is to gather preliminary information by mapping the geologic units and fault structure as a phase one of the follow-up work recommended by a previous prospecting program by DTE Exploration and Development (S. Jobin-Bevans 1998).

The linecutting was done by McBride Linecutting and Staking, P.O. Box 112, Notre Dame-du-Nord, P.Q. J0Z 3B0. The geophysical work was executed by David Laronde and Robert Sanderson of Meegwich Consultants Inc. P.O. Box 482, Temagami, Ontario POH 2HO.

2.0 PROPERTY:

The 15 unit (240 hectare) property consists of a single mining claim numbered **3016019** situated in central Chambers Township, Sudbury Mining District.

3.0 LOCATION AND ACCESS:

As the crow flies the property is located 18 km northwest of the town of Temagami, Ontario. Access to the claim is by taking the Red Squirrel logging road westward to km 15 at which point a southerly trending road winds its way about 14 km to the property.

4.0 MAGNETOMETER SURVEY:

A total of 12 km was surveyed (983 readings) at 12.5 meter stations on lines spaced at 50 meters.

<u>4.1</u> Instrumentation: A GEM Systems GSM 19 Overhauser Magnetometer, Serial no. 58479 was used for the survey. A base station (Scintrex EDA Omni IV) was set up near the property to monitor and correct for the diurnal variation during the course of the survey. These instruments are micro-processor based and measure the earth's total magnetic field to an accuracy of one-tenth of a gamma.

<u>4.2 Survey Results</u>: The results are presented in contour format on plans at 1:5000 scale.

The survey reveals two northwest trending diabase dikes traversing the surveyed area. The magnetic intensity of these features is moderate although there are some spotty intense readings (magnetite) along the length of the dikes that range up to 2597 nT. The northerly dike is 50 meters wide while its southern relative is only 25-30 meters across.

In the northwest corner of the grid there appears to be a more massive looking high adjoining the dike. This could be a blowout from the diabase or another mafic intrusive, the latter known to occur as gabbro in the area. Readings from this feature range up to 1511 nT but average around 700-800 nT for the most part.

There are a small number of scattered isolated highs. One such high occurs on L850E at 800 S. Very intense values are associated and range up to 4405 nT. These values are consistent with magnetite which is known to the area.

The remainder of the grid or 75% of the total area has a relatively quiet magnetic response with values around background. This is a typical magnetic signature for a volcanic sequence.

5.0 VLF Electromagnetic Survey:

A total of 10.125 km was surveyed for a total of 400 readings taken at 25 meter stations on lines spaced at 50 meters.

5.1 Instrumentation: A Geonics VLF-EM receiver was used for the survey. The VLF transmitter station was Cutler, Maine NAA transmitting at 24.0 kHz. The measured quantities are the inphase and quadrature components of the vertical magnetic field measured as a percentage of horizontal primary field (read to a resolution of +/- 1%). All readings were taken facing north.

5.2 Survey Results: The results of the survey are presented in profile format on plans at 1:5000 scale.

In many cases weak VLF conductors are electrolytic (bedrock shears and fractures, overburden filled bedrock troughs and valleys) or poorly connected metallic grains such as stringer sulphides.

The survey picked up three weak conductors discussed as follows:

Conductor A: This anomaly likely extends further west off the surveyed area but it seems to end abruptly on L 550 E. This is a

good response that is oblique to the trend of the northwest faulting and perhaps worthy of follow-up work.

Conductor B: This is a weak conductor that is masked out by conductive overburden. This conductor occurs along the north flank of a diabase dike. Besides the overburden response the source of the response is likely fault related.

Conductor C: Seemingly insignificant, this response is very weak and short in strike length occurring parallel to Conductor B.

6.0 CONCLUSIONS AND RECOMMENDATIONS:

The surveys were successful in mapping magnetic and electrical features of the property thus identifying areas for further evaluation.

Magnetometer Survey: The survey has outlined an interesting area near in the northwest corner of the grid where a gabbroic intrusive adjoins the main diabase dike. This geology is prospective for Cu-Ni and anomalous metal values have been found in previous prospecting work by Jobin-Bevans 1999. **VLF-EM Survey:** The large amplitudes in the in-phase profiles are caused by flat lying conductive overburden. Fault conductor B however can still be seen and mapped out across the grid. The conductor flanks a dike on the north side indicating a fault structure.

Only Conductor A should be considered for follow-up since it is the only anomaly with a possible metallic source.

Further work:

Future work should consist of geological mapping and lithogeochemistry over the gabbroic intrusive outlined by the magnetometer survey in the northwest corner of the grid. Conductor A should be covered with horizontal loop EM to check for a metallic source.

References

1999 Jobin-Bevans, Scott Prospecting report – Base Metal and Gold Prospects in Chambers Twp. Northeast Temagami Area

CERTIFICATE OF AUTHOR

I, David Laronde of the town of Temagami, Ontario hereby certify:

- That I am a geology engineering technologist and have been engaged the mineral exploration industry for the past 25 years.
- That I am a graduate of Cambrian College in Sudbury with a diploma in Geology Engineering Technology 1979.
- 3. That my knowledge of the property described herein was acquired by field work and documentation.

Dated at Temagami this 16th day of December 2005.

David Laronde





