SUMMARY

OF AN

# INDUCED POLARIZATION SURVEY 

ON THE

## TISDALE TOWNSHIP PROPERTY

FOR

BRIAN ELLIS

Prepared by:

R. J. Meikle August 17, 1988

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This summary deals with the results of a "Gradient Array" Induced Polarization survey performed on four patent claims in Tisdale Township for Mr. Brian Ellies. The work was performed on a contract basis by Exsics Exploration Limited, Timmins, Ontario.

The purpose of the I.P. survey was to follow up a previous Magnetometer and VLF-EM survey which indicated two weak conductors in the $S W$ corner of the property.

## LOCATION AND ACCESS

The property consists of 4 patented mining claims located vi RCO.
in Lot 12, Concession $\mathbb{H}^{\boldsymbol{W}}$ Tisdale Township, Porcupine Mining Division, Ontario (Figures 1, 2)

Access to the property is excellent as McLean Drive is the west boundary of the property. Thus the property is acccessable year round by going south off of Algonquin Boulevard on to Mountioy Street North which turns into McLean Drive.

No property ownership status has been ascertained by the author.



PERSONNEL

The following personnel were directly involved with the project:

| Ray Meikle | Timmins, Ontario |
| :--- | :--- |
| Brad Norman | Timmins, Ontario |
| Wayne Pearson | Timmins, Ontario |
| John Grant | Timmins, Ontario |

REGIONAL GEOLOGY

The property is believed to be underlain by Precambrian sediments with a mafic volcanic contact to the south. Detailed geology is beyond the scope of this report. A detailed geological description of the area can be found in O.G.S. Miscellaneous Paper 97 by D. R. Pyke, 1981.

## SURVEY PARAMETERS

The IP method involves appying voltage across two electrodes in a pulsed manner ie. 2 second on, 2 second off. A second "dipole" or electrode pair measures the residual potential or voltage between them after the voltage is shut off or during the 2 second off cycle. The potential is recorded at different times after the shut off. If, for
example, there is sulphide mineralization within the measuring dipoles, they will be polarized or charges set up in the sulphide particles. This polarization gives the zone a capacitor effect, thereby blocking the current delay giving a higher chargeability reading.

A typical signature for many gold showings would be a chargeability high, resistivity high and magnetic low. This would be characteristic of mineralized, highly altered carbonitized and/or silicified zone. However, this is by no means the only geological setting for gold, therefore every IP profile should be looked at individually and correlated with all other geophysical-geological data.

The "gradient electrode array" was chosen for the survey. It was felt that this array would yield the most cost effective data to cover the majority of the grid on a reconaissance basis to outline any drill targets.

In this array, two electrodes (C1 and C2) are placed a fixed distance off each end of a survey line. A voltage is applied across these two electrodes and a continuous 2 second on 2 second off pulse is maintained. A receiver dipole of 25 meters is moved along the Cl C2 line as well as parallel lines. Only the middle third section is surveyed to ensure
that neither Cl or C ( influence the dipole. The ploting point is in the middle of the receiver dipole. This array generates one chargeability reading and one apparent resistivity reading every 25 M along the l ines surveyed. A conductive sulphide zone would yield a high chargeability - low resistivity while a disseminated, silicified altered sulphide zone would have a high chargeability and a high resistivity.

The survey was conducted using the following parameters:

| Method | - Time Domain |
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| Electrode Array | - Gradient |
| C1 - 1200S/400E | C2 - 800N/OE |
| "a" spacing | - 25 meters |
| Pulse Duration | - 2 seconds on, 2 seconds off |
| Delay Time | - 900 ms |
| Integration Time | - 450 ms |
| Receiver | - Scintrex IPR-8 |
| Transmitter | - Scintrex IPC-7 2.5 kw |

## RESULTS

Portions of lines $1 E$ to $7 E$ were surveyed with the Gradient Array IP method. Generally, a sufficient signal was obtained throughout the survey. Potential contacts were excellent due to the wet nature of the area.

The survey outlined three areas of increased chargeability readings described as follows:

1. This anomaly runs from LIE/3+37S to L3E/2+25S. It is open at both ends but does not appear to extend as far as L5E. The anomaly lies in an area of elevated chargeability background in contrast to the NW part of the property. The resistivities are relatively flat except for a resistivity high centered on LIE/237S where the chargeability decreases somewhat.

While this anomaly appears to be within a geological or "rock type" change, there is a definite E-NE trend with the peak response on L2E/250S. This response is coincident with a VLF conductor located in a previous survey which appears to be a shallow, steeply dipping bedrock conductor. There is no coincident magnetic response. The IP anomaly appears to be 25

- 50M wide on this section.

2. This anomaly is parallel to and 50 M north of anomaly \#1. It is similar to 1 and lies within the same elevated chargeability envelope. The peak response is on LlE/187S which is on the north flank of the previously mentioned resistivity high.
3. This anomaly was detected on LSE and 7E but is open on L6E and both ends. It appears to be a broad NW striking feature with a strong chargeability and very low (conductive) resistivities. It lies in the vicinity but not directly coincident with a broad weakly magnetic high on the eastern part of the property. The IP response is probably coincident with a cluster of Airborne EM anomalies shown on Ontario Geological Survey Map 81079.

## RECOMMENDAT IONS

The following recommendations are based on the results of the current I.P. survey:

1. A geological compilation should be done to try to explain the various IP anomalies.
2. Because of the lack of previous work on the property it may be necessary to diamond drill the anomalies to explain them.
3. The priority anomaly would be $\#$. A drill hole is recommended collared at L2E/275S, azimuth 360 Degrees, Dip -45 Degrees, length approximately 70 meters. It should be kept in mind that the hole may collar in the anomaly and therefore any interesting results would dictate stepping back with a second drill hole.
4. Based on the results of recommendation 3, anomaly \#2 should be explained by drilling and or trenching.
5. Anomaly 5 is not well defined by the present survey. Also, it is in a concuctive horizon and may be caused by graphitic sediments. Drilling of this anomaly would be dictated by budget restraints.

Yours Truly,
R. J. Meikle

## CERTIFICATION

I, Raymond Meikle of Timmins, Ontario hereby certify that:

1. I hold a three year Technologist Diploma from the Haileybury School of Mines, Haileybury, Ontario obtained in 1975.
2. I have been practising my profession since 1973 in Ontario, Quebec, NWT, Manitoba, New Brunswick, Nova Scotia for Peck Exploration Ltd., Metallgesilschaft Canada Ltd., Rayon Exploration., Sabina Industries Ltd., and most recently Exsics Exploration Ltd.
3. I have based conclusions and recommendations contained in this report on knowledge of the area, my previous experience, and on the results of the field work conducted on the property during December 1987 to Jan 1988 which was carried out under my overall supervision.
4. I hold no interest, directly or indirectly in this property other than professional fees, nor do I expect to receive any interest in the property or in any companies with an interest in the properties.

Dated this 17 th day of August, 1988 at Timmins, Ontario


APPENDIX A



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