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REPORT ON AN INDUCED POLARIZATION SURVEY

"A" GROUP PROPERTY

McLEESE LAKE AREA, B.C.

FOR

DUSTY Mac MINES LTD.

BY

ATLED EXPLORATION MANAGEMENT LTD.
VANCOUVER, B.C.

CLAIMS:

LOCATION:
Approximately 20 miles east of McLeese Lake, Highway 97, on the Likely Road. Lat. 52°28'N. Long. 121°58'W.

CLAIMS OWNED BY:

DATE: August 1971

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INTRODUCTION

From July 15th to July 26th, 1971, an Induced Polarization Survey was carried out by Atled Exploration Management Ltd. on behalf of Dusty Mac Mines Ltd. over the "A" claim group, approximately 20 miles east of McLeese Lake, B.C. on the Likely Road. A field crew of four men, including a geophysicist-operator, executed the survey over a total of approximately 13 line-miles, taking nine days of actual surveying to complete.

The purpose of the survey was specifically to test copper geochemical soil anomalies delineated by Dusty Mac Mines Ltd. and, in general, to prospect for disseminated sulphides of possible economic significance in a geologically-favourable area almost entirely covered by glacial overburden.

Survey lines consisted of a control grid with flagged, chained and compassed lines 800 feet apart with readings being taken at 200-foot intervals. Line direction was north-south.

LOCATION AND ACCESS

The property is located about 17 miles east of McLeese Lake, which is situated about 30 miles north of Williams Lake, B.C. on Highway 97. The southern half of the property is intersected by the McLeese Lake-Likely Road and Ridge Road, which trends southerly to Big Lake.

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Two jeep roads on the property made for reasonable access to all parts of the grid.

GROUND CONDITIONS

The entire survey grid occurred on flat to gently-sloping overburden-covered terrain, draining generally southerly. Vegetation consisted primarily of stands of spruce, pine and some popular groves, with underbrush being minimal. Electrical contact with the ground was good due to a high ground water level, and the presence of some low swampy areas.

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GEOLOGY

(After R.B. Campbell and H.W. Tipper) The property occurs along the eastern flank of the Pinchi geantocline and is supposed to be underlain primarily by Permian folded and metamorphosed limestones, cherts, argillites, greenstones and greywacke of the Cache Creek Group. Aeromagnetic maps indicate that the claims area is free of Tertiary volcanic cover and the magnetic lows suggest the possibility of younger intrusive bodies occurring in the area. Glacial overburden is likely to be up to 300 feet thick and covers the entire claims area. No outcrop was observed along the I.P. Survey lines.

SURVEY SPECIFICATIONS

A. Induced Polarization Survey:

The Equipment: The Induced Polarization instrument was a 2.5 kw. unit manufactured by Sharpe Instruments Ltd. of Toronto, Ontario, incorporating the Newmont remote-triggering type receiver and a solid state Pulse-Transient control unit.

The following specifications apply:-

Type of Current: Direct current broken at periodic intervals with a pulse duration of two seconds with alternate pulses being of opposite polarity.

Pulse Repetition Rate: Two seconds "current on" and two seconds "current off".

Integrating Time: Area under decay curve (M_a) = 0.65 seconds, area over decay curve (L) = 1.30 seconds. (Delay time before integration = 0.45 seconds)

Maximum power available = 2.5 kw.

Minimum current available = 10 amps. D.C.

Measurements taken in the field were:-

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SURVEY SPECIFICATIONS (cont'd)

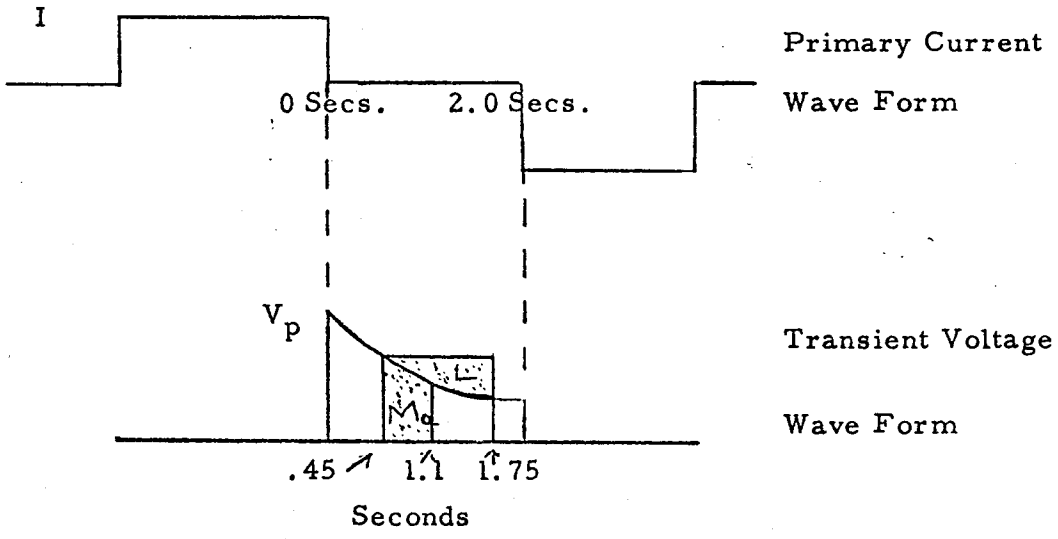
1) The primary voltage Vp between the measuring (Potential) electrodes during "current on".

2) The current flowing through the current electrodes C_1 and C_2.

3) The apparent chargeability M_a which is the integrating time of the area under the transient curve measured by the receiver.

4) The time integral of the area over the transient curve called L. The ratio of L/M_a can be of assistance in defining the shape of the transient curve and hence the interpretation of the chargeability response is enhanced.

Apparent resistivity ρa is calculated by dividing Vp by the applied current and multiplying by a factor appropriate to the geometry of the electrode array used and the Ohm-meter units desired.



Electrode Configuration: A 3-electrode array was used whereby the current electrode C_1 and two potential electrodes,

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SURVEY SPECIFICATIONS (cont'd)

Electrode Configuration: (cont'd)

P1 and P2, were separated by a distance "a" from each other and moved in unison along the survey lines taking measurements at regular intervals. The second current electrode C_2 is fixed at "infinity" (∞) which is a minimum distance of 6_a to the nearest station measured.

The entire grid was surveyed using an "a" spacing of 400 feet at 200-foot intervals. 200-foot and 400-foot "a" spacings were used at various stations throughout the grid to assure that bedrock was being sampled

The station location is halfway between C_1, the moving current electrode and P_1, the nearest measuring or potential electrode. C_1 was kept to the south of the potential electrodes for the duration of the entire survey.

Data Presentation: As no anomalies, save a one-station high reading of ten milliseconds, were encountered, L and M profiles are omitted in this report. Two contour maps illustrating apparent chargeability and apparent resistivity values and contours, claim boundaries, roads and creeks, are included in the map pocket.

RESULTS AND INTERPRETATION

A. Apparent Chargeability Map

An average apparent chargeability of about four milliseconds is observed to represent the underlying rock type(s) between Lines O and 32 west inclusive, as well as the southern half of lines 8E to 24E inclusive. The five-millisecond contour in the northern quadrant of the grid is interpreted as the approximate western boundary of a limestone unit observed outcropping east of the grid. This rock unit appears to have a background apparent chargeability of six milliseconds.

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RESULTS AND INTERPRETATION (cont'd)

A. Apparent Chargeability Map (cont'd)

Only one I.P. reading, possibly related to sulphide mineralization, was encountered on Line 16W, S tation 18N. This reading occurs coincident with a copper geochemical soil anomaly which was trenched, and uncovered some copper mineralization in the form of malachite and azurite, but neither primary sulphides nor bedrock was encountered. Because no anomalous chargeability responses were observed on adjacent lines, no detail was carried out. It was assumed that the cause of this single, high chargeability value, would be of no economic importance.

B. Apparent Resistivity Map

The apparent resistivity values are fairly constant varying from 80 to 670 ohm-meters with an average of about 200 ohm-meters representing the sub-surface to a depth of 400 feet. Two populations appear to be present, each probably representing a certain rock type, although the variations within the southern portion of the grid are thought due primarily to changes in topography and ground water levels. The "low" of less than 200 ohm-meters coincident with the only anomalous apparent chargeability value of ten milllseconds on Line 16W at Station 18N could be related to sulphide mineralization but, as mentioned above, is not considered economically significant.

There is a good correlation between the higher apparent resistivity and apparent chargeability values in the northeastern quadrant of the grid and this is further evidence that the slightly-higher chargeability values are due to a change in rock type.

CONCLUSIONS AND RECOMMENDATIONS

The Induced Polarization Survey has indicated that the presence of economically-important sulphides on the property is highly improbable.

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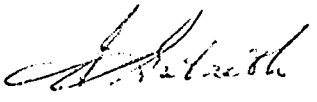
CONCLUSIONS AND RECOMMENDATIONS (cont'd)

Only one anomalous value was observed in an area of coincident copper soil anomalies and cat trenching where bedrock was not reached. Other copper geochemical anomalies were not explained or corroborated by this survey, suggesting the likelihood that these copper "highs" were due to concentrations of copper ions in swamps and flat-lying areas of clayey overburden and not due to sufficient concentrations of copper-bearing sulphides in situ within the area tested.

It is recommended that further geophysical work is not warranted within the confines of this grid.

A study of the surrounding claims was not made by the writer of this report.

Respectfully submitted,



Gordon C. Gutrath, P. Eng.
ATLED EXPLORATION MANAGEMENT LTD.

August 1971,
Vancouver, British Columbia.

APPENDIX NO. ONE

Engineer's Certificate

I, Gordon C. Gutrath, of 5550 Rugby Street, in the Municipality of Burnaby, in the Province of British Columbia, do hereby certify:-

1. that I am a consulting geologist with a business address of 508-850 West Hastings Street, Vancouver 1, British Columbia,

2. that I am a graduate of the University of British Columbia where I obtained my B.Sc. in geological science in 1960,

3. that I am a Registered Professional Engineer in the Geological Section of the Association of Professional Engineers in the Province of British Columbia,

4. that I have practised my profession as a geologist for the past ten years, and

5. I have no interest, direct or indirect, in the property with which this report is concerned, nor do I expect to receive any such interest; and I have no direct or indirect interest in the securities of Dusty Mac Mines Ltd.

Gordon C. Gutrath, B.Sc., P.Eng.

August 1971 - Vancouver, British Columbia.