

ASSESSMENT REPORT

1979 GEOPHYSICAL SURVEY PROGRAM UNDERTAKEN ON THE

TERMINUS CLAIM

STEWART, BRITISH COLUMBIA

- CLAIMS INVOLVED : TERMINUS
- MINING DIVISION : SKEENA
- NTS LOCATION : MAP 104 BIE
- LATITUDE AND LONGITUDE : 56°05'N ; 130°00'W
- OWNER OF CLAIMS : TOURNIGAN MINING EXPLORATIONS LTD.
 - : WESTERN MINES LIMITED
 - : SHAUN M. DYKES PROJECT GEOLOGIST WESTERN MINES LIMITED

DATE

OPERATOR

AUTHOR

: APRIL 16, 1980





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Fig. 5 MAGNETOMETER SURVEY CONTOUR MAP (back pocket)

INTRODUCTION

The Big Missouri Property is located 25 kilometres north of the town of Stewart, B. C. and situated between the Silbak Premier and Granduc Mines in northwestern British Columbia (Fig. 1).

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The property is accessible by road during snow-free months by way of the Granduc road from Stewart to Premier; and then by the Big Missouri road into Joker Flats and the claims areas (Fig. 1 and Fig. 2).

The Big Missouri Mine was discovered in 1904, and was subsequently put in production between 1938 and 1942 by Consolidated Mining and Smelting Co. (Cominco). Subsequent to the mine closure in 1942, there have been several attempts by various mining companies to re-evaluate the mineral potential in the area. This includes :

- work by Hecla Mining
- geological work by Falconbridge in 1966
- geological and geochemical work by El Paso in 1970
- extensive underground sampling by Aetna Mines in late 1960's and early 1970's

and - diamond drilling by Giant Mascot Mines in 1974.

Since the fall of 1973, Tournigan Mining Explorations Ltd. has held title to the property. In 1979 Tournigan and Western Mines Ltd. entered into agreement whereby Western Mines Ltd. by fullfilling certain obligations, could earn an interest in the property. It is in conjunction with this agreement that the 1979 diamond drilling program was undertaken.



Geology and Mineralization: -

The volcanic sequence consists of agglomerates, tuffs and flows of andesitic composition intercalated with cherty tuff bands. The sequence is cross-cut by andesitic and granitic dykes, and truncated by numerous faults of several ages. The mineralization observed consists of fine grained disseminated pyrite with or without sphalerite and galena contained mainly in the cherty tuff horizons or as small sulphide stringers and veinlets within the andesite. Gold and silver values are erratic. Better intersections are commonly in the 0.10 to 0.15 oz/T Au and 0.5 to 1.0 oz/T Ag range. Lead and zinc values greater than 1% are present locally. Nature and control of the gold and silver distribution is as yet unknown.

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Sericitization and silicification are the predominant alteration types within the mineralized zones. Sericitization is the most pervasive and widespread, while silicification is found locally in relationship to the mineralized horizons.

The preliminary interpretation of the geological environment is that the mineralization occurs in narrow stratabound interflow siliceous exhalative horizons.

Description

An electromagnetic (E.M.) and magnetometer survey was carried out on the small Terminus Grid at the south end of the Propertv between September 30, 1979 and October 7, 1979 (Fig. 2). Readings were taken at 15 m intervals on lines 30 m apart by T. Maurer.

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The E.M. survey was accomplished using a crone radem unit utilizing transmissions from Seattle, Washington. Both the dip angle and the percent field strength were measured. These results were then plotted on contour and profile maps (Fig. 3 & 4).

The magnetometer survey was undertaken utilizing a Scintrex flex-gate magnetometer measuring the total intensity of the magnetic field and the results where plotted on a contour map (Fig. 5).

Purpose

The survey was designed to examine the possible uses of radem and magnetometer surveys in delineating mineralized horizons.

Results

Radem Survey:

The field strength contour map (Fig. 3) defines an anomaly situated at the Terminus Tunnel. It continues for 60 m to the west and has a width of approximately 90 m, a dip is 30⁰ north-east and a strike of southeast-northwest. The remaining parts of the grid are relatively non-amomalous especially around some of the main trenches (Fig. 3). A similar conclusion is evident from the profiles (Fig. 4).

Magnetometer Survey:

The magnetometer survey defines an anomaly with length 40 m and with 10 m centered over the Terminus Tunnel. The anomaly strikes NE-SW. As with the E.M. survey, areas of known mineralization are nonamomalous as defined by the magnetometer survey.

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CONCLUSIONS

The non-continuous nature and the lack of a significant response over areas of known mineralization indicates that this method of outlining mineralized horizons is of little use for this type of mineralization.

ITEMIZED COST STATEMENT

Dates:	September 30 - October 7									
Wages:	Survey & grid setup	7	man	days	0	\$60.80/day	\$	425.60		
	Data compilation & plotting	1	man	day	0	\$60.80/day		60.80		
	Board & lodging	8	man	days	0	\$14.00/day		112.00		
Equipment	Cost									
Renta	Rental radem unit (crone geophysics)									
Shipp	Shipping radem unit									
Magne	Magnetometer cost @ \$60.00/survey									
Equipment for grid setup. Flagging, etc.										
Cost	of report preparation	1	man	day	0	\$96/day		125.00		

\$1,174.65

STATEMENT OF QUALIFICATIONS: T. MAURER

- UNIVERSITY EDUCATION : Attended British Columbia Institute of Technology taking courses in surveying, photogrammetry and geophysics, September, 1976 - December, 1977.
- PRACTICAL EXPERIENCE : 2 summers experience in British Colubmbia on geophysical crews.

STATEMENT OF QUALIFICATIONS

- UNIVERSITY EDUCATION : 1976 graduated with B.Sc (eng.) degree in Geology from Queen's University, Kingston, Ontario.
 - : 1979 graduated with M.Sc (eng.) degree in
 Geology from Queen's University, Kingston,
 Ontario.
 - : Courses taken based on mineral exploration, igneous petrology, and mineral economics.
- PRACTICAL EXPERIENCE : 4 summers experience in northern Ontario and northeastern British Columbia.
 - Summer 1979 began work for Western Mines Ltd.
 on Big Missouri property.

Respectively submitted

BOykes

Shaun M. Dykes

Supervised by Bruce E. Spencer, P.Eng.





