

**L. J. MANNING & ASSOCIATES LTD.**  
CONSULTING MINING ENGINEERS

610-890 WEST PENDER STREET VANCOUVER 1, B.C.

*File TROY SILVER PROSPECTUS 92 I+P*

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July 1, 1970

President and Director,  
Troy Silver Mines Ltd. (NPL),  
Vancouver 1, B. C.

Dear Sirs:

TROY SILVER MINES LTD - MERV & L.H. CLAIMS, CANIM LAKE, B. C.  
AND CHALCO CLAIMS, HIGHLAND VALLEY, B. C.

INTRODUCTION AND SUMMARY

The writer has reviewed the above two claim areas. Both groups present potential for locating copper deposits, and a phased program is recommended for exploration.

MERV & L.H. CLAIMS - CANIM LAKE, B. C.

Phase I	-	\$ 56,400
Phase II	-	57,000
TOTAL		\$113,400

CHALCO CLAIMS - HIGHLAND VALLEY, B. C.

Phase I	-	\$ 71,900
Phase II	-	45,000
TOTAL		\$116,900

MERV & L.H. CLAIMS - CANIM LAKE, B. C.

Location

These claims are along the North shore of Canim Lake around Christmas Lake. Canim Lake is twenty-five miles East of 100 Mile House in central British Columbia.

CLAIMS - CLINTON MINING DIVISION

<u>Claim Name</u>	<u>Record No.</u>	<u>Expiry Date</u>	<u>Ownership</u>
MERV 3-6	16279-82	Dec. 4/70	Troy Silver Mines
" 23-30	17412-19	Dec. 4/70	" " "
" 45-48	17434-37	Dec. 4/70	" " "
L.H. 1-98	20615-712	April 30/71	Leo Halton

History

The Merv claims were originally staked because of chalco-pyrite mineralization uncovered by skid roads for logging operations. Several trenches were dug over an area 3000 feet square. An induced

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polarization survey was run over an area 3600 feet X 4400 feet, and diamond drilling is near in progress.

The writer was on the property June 27 & 28, 1970.

GENERAL GEOLOGY

The property is underlain by Lower Jurassic Andesitic Arenite, Siltstone, Grit and Breccia, Conglomerate and minor Upper Triassic Nicola Volcanics and Sediments. The area near being explored is underlain by Andesitic Tuffs and Agglomerates.

A regional fault structure N 50° E transacts the North-West boundary of the property. (Geological survey Map 3-1966 - Bonaparte River). Aeromagnetic sheet 5231G - Canim Lake - indicates N 35° W magnetic linears transecting the property (R. Crosby - Seigel & Associates interpretation).

Outcrops are scarce, but many areas have only a thin covering of over burden.

WORK PERFORMED TO DATE

Trenching - Several trenches over an area 3000 feet X 3000 feet indicate pyritic volcanics with minor hornblende porphyry and calcareous tuff. Occasionally minor pyrrhotite with a trace of chalcopyrite was observed.

Several fracture and shear patterns were observed which are sub-parallel to the indicated regional structural pattern.

Induced Polarization Survey - Seigel Associates Limited performed eight line miles of survey over the property in the area of the trenches. Their work indicated several areas of increased chargeability of considerable areal extent which may contain up to 3% sulfides by volume. They recommended three drill holes to test the anomalies.

DIAMOND DRILLING

DDH #1 was collared to test part of an I.P. anomaly. This hole to 310 feet was in andesitic tuffs and agglomerates (silicified and calcareous in part) with fair disseminated and fracture filling pyrite. Minor pyrrhotite blebs with associated chalcopyrite occur throughout the hole, mainly associated with fractures, but also as disseminations. The pyritic fracture pattern is both parallel and opposing to the pyrrhotite pattern. At 198 feet there occurs a 1/16 inch wide fracture containing minor galena and

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sphalerite.

DDH #2 was collared to test part of an I.P. anomaly. This hole to 140 feet was in serpentized volcanics with thin tuff interbeds and chert bands. Pyrite is associated with the tuffaceous interbeds. To 140 feet, there are not sufficient sulfides to be the causative effect of the anomaly.

CONCLUSIONS

Work performed to date has indicated an area of pyritic volcanics with the introduction of pyrrhotite and associated chalcopryite. Although the writer assumes that the occurrence of pyrite is deuteric, the possibility of it representing a halo around an intrusive can not be overlooked. The occurrence of pyrrhotite with chalcopryite, although minor, is widespread and therefore indicative of hydrothermal activity over an extensive area.

Geological survey mapping and aeromagnetic interpretations indicate an area of structural complexity which presents a good environment for localizing mineralization. To date, no intrusives have been mapped on the property. It is postulated that a structural control in the vicinity of or in a host intrusive on good structural control in the volcanics will present a good target for exploration. Areas of more intense fracturing will provide better structural conditions for the introduction of pyrrhotite and chalcopryite. The occurrence of a veinlet of sphalerite and galena in DDH #2 suggests that lead and zinc may also be a target.

A small (eight claims) part of the 114 claims have been examined to date. Approximately a total of ten full claims would underlie Canim Lake.

RECOMMENDATIONS

The following two phase program is recommended:

PHASE I

Continue drilling the I.P. anomalies  
1000' AX @ \$15/ft (includes supervision &  
assaying)

\$ 15,000

Extend the present 400' line spacing grid to  
three claim lengths beyond the present grid.  
Grid the remaining property at 800' line  
spacing.

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## Phase I (Continued)

50 claims @ 400' spacing + 42 claims @ 800'  
spacing = 75 line Miles @\$125/mile \$ 10,000

Geological mapping and prospecting - all claims  
Geologist, prospector, helper - one month  
(including room & board, and transportation) 6,000  
Geochemical soil sampling - 92 miles @\$100/mile 9,200  
Magnetic survey - 50 claims - 50 line miles  
@\$80/mile 4,000

N.B. The geochemical survey and magnetic survey should be started at once over the induced polarization survey area. The geochemical survey may outline anomalous copper areas within the I.P. anomaly, and the magnetic survey may outline high anomalous areas which may be indicative of pyrrhotite (with associated chalcopyrite) mineralization.

Fill in grid lines, geochemical and magnetic survey.

Allow 20% of the 800' line spacing area  
8 line miles @\$305/mile 2,500

Bulldozer trenching of anomalous areas  
Allow 40 hrs. @ \$30/hr 1,200

Engineering - program preparation, compilation  
of data, etc. 1,500

15% Contingencies 7,000

\$ 56,400

## PHASE II

Induced polarization survey - follow up for  
geochemical and magnetic surveys  
Allow 20 line miles @\$600/line mile 12,000

Diamond Drilling  
Allow 3000' of AX drilling at \$15/ft 45,000  
(includes roads, supervision and assaying)

TOTAL - Phase I and II \$113,400

PAOL

Geological sketches & essays.  
might be of general interest  
to you, but these occurrences  
are not the sort of thing  
I think we should get  
too involved with.

The whole Harquest area has  
a large number of Pb-Zn shows  
often very high grade. It might  
yet prove some producers if  
someone could find the key

Thompson