

# CYPRUS EXPLORATION CORPORATION LTD. VANCOUVER OFFICE

Tile

Date:September 18, 1968

To:

Mr. J. B. Paul Sawyer

From:

Mr. D. W. Tully

Subject:

LITTLE PINE TEX MINING CORP. LTD.

The attached report by Fred Hemsworth and submitted by Harold Quinn is for your consideration.

Please contact Ab Ablett at 376-7490 - Kamloops who will show you around.

DWT/jel

Attachment

Per(Miso) Polavigne

#### MAJOR NEW COPPER DISCOVERY

# HIGHLAND VALLEY, B. C.

In April and May, 1968, exploration crews of Cominco Ltd. drilled 17 percussion holes on a blind I.P. anomaly on property of <u>Valley Copper Mines Ltd.</u> near Divide Lake, between Bethlehem and Lornex copper mines. All of these recconaissance holes, drilled 600 feet apart, found ore containing more than  $\frac{1}{2}\%$  copper in a body whose limits have not yet been determined.

Because the ore extends off the property, 6 more claims were obtained from Bethlehem Copper Corporation and 40 claims from Arlington Silver Mines.

The claims are now being surveyed by a B.C. Land Surveyor. On August 1, 1968 an expanded program of percussion and diamond drilling will begin. Results to date, however, indicate that an important new copper mine of major size has been found.

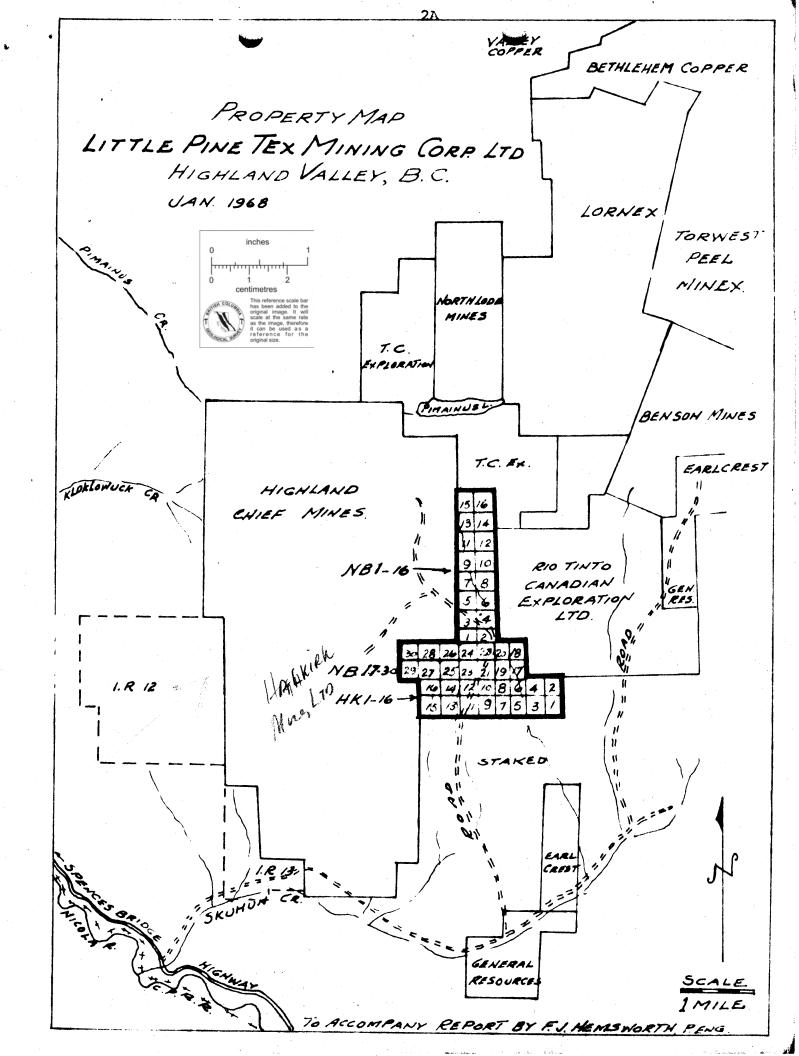
Shareholders of Valley Copper Mines Ltd. are Cominco, Bethex Explorations, Buttle Lake Mining, Trojan Consolidated Mines, and Northwest Ventures.

H. a. Quinn

Harold A. Quinn, Mining Geologist, Bentall Centre, Vancouver, B. C. July 20, 1968.

to see claims arrange with AB ABLETT.
376-7490 Kamloops

11 SUL 22 1868



# FRED J. HEMSWORTH MINING ENGINEER

TELL HONE MUTUAL 4-7734

616 CREDIT FONCIER BLDG. 850 WEST HASTINGS STREET VANCOUVER 1, B.C.

REPORT

on the

LITTLE PINE TEX PROPERTY

HIGHLAND VALLEY

SPENCES BRIDGE, B.C.

January 25, 1968.

F.J. Hemsworth, P.Eng., Consulting Mining Engineer.

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REPORT

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LITTLE PINE TEX PROPERTY

HIGHLAND VALLEY

SPENCES BRIDGE, B.C.

#### INTRODUCTION

This report is prepared at the request of Mr. M.J. Campbell for Little Pine Tex Mining Corp. Ltd. (MPL), \$56 Howe Street, Vancouver 1, B.C. It purports to assess the company's group of 46 mineral claims, situated in the southern part of the Highland Valley copper camp, and to make recommendations for a program of preliminary exploration.

During the last ten years, the writer, Fred J. Hemsworth, P.Eng., has directed field work on several properties in the area and has examined all the major mineral occurrences. A personal examination was made of the Little Pine Tex property on June 10, 1966. No work has been done on the property since that time.

#### PROPERTY

The mineral claims are the M.B. Nos. 1-30, record numbers 67031 to 67060; and the H.K. Nos. 1-16, record numbers 67061 to 67076. The claims were recorded in the Kamloops Mining Division on November 16, 1967. Title to the property was not investigated.

At the time of my examination of the Little Pine Tex property, I inspected several of the claim posts and the claim location lines. The staking that was examined was in all respects in accordance with the requirements of the Mineral Act.

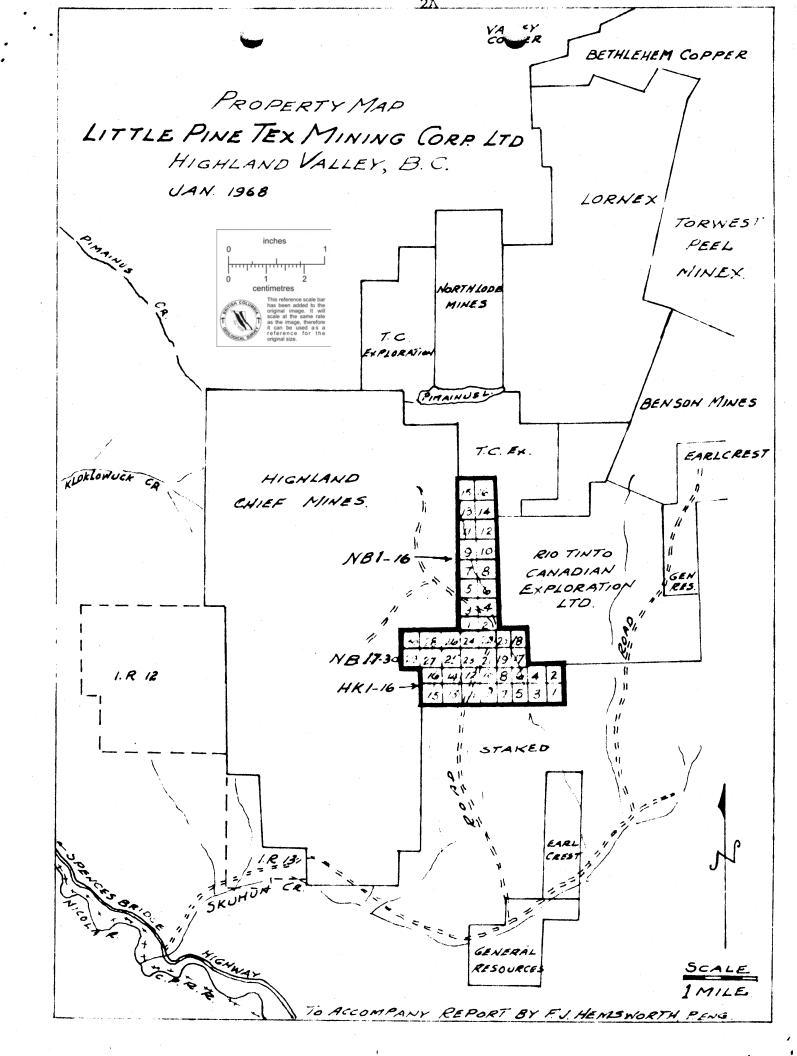
A sketch, showing the location of the property, is attached to this report.

## LOCATION and ACCESS

The property is situated on the south slopes of Spaist Mountain, north of Skuhun Creek, and about 20 miles by road from Spences Bridge, B.C. Access is by Highway No. 8 from Spences Bridge for 14 miles, then by gravel road up Skuhun Creek for four miles to the junction with a jeep road which has recently been cleaned out and repaired. The jeep road runs north for three miles to the center of the Little Pine Tex property. This road continues north through the Highland Chief Nines property to Pimainus Lake, Highland Valley Lodge, and the highway from Bethlehem Copper to Ashcroft.

#### TOPOGRAPHY

The claims lie along the southern slopes of Spaist Mountain between elevations of 4,000 to 5,500 feet above sea level. The geographic position is latitude 50°20' north and longitude 121°05' west. The slopes are wooded with a moderate growth of pine and fir timber. The area is park-like, with little or no underbrush, and travel is relatively easy except where tributaries of Skuhun creek have incised south-trending gullies.



#### ADJACENT PROPERTIES

The Little Pine Tex group lies east of a large group of claims under exploration by Highland Chief Mines, adjoins T.C. Explorations on the south, and Rio Tinto Canadian Exploration on the west. Other adjacent properties under exploration include General Resources, Earlcrest, Benson Mines, Morthlode, Stellako, Lornex, and Valley Copper (Cominco).

#### GEOLOGY

The claims are underlain by igneous rocks of the Guichon Creek Batholith of Jurassic Age. The rocks vary in composition from diorites to monzonites. Several different types of granitic rocks were observed with compositions varying from typical "Skeena" rocks to "Bethsaida" type rocks.

Excens rocks are typically blue-grey quartz diorites to granodiorites with a medium to coarse equigranular texture. Quartz is present in visible amounts and occurs interstitially to the feldspar and ferromagnesian minerals mainly hornblende, but biotite may occur.

Bethsaida rocks are more acid, porphyritic textured, light-colored, medium to coarse-grained granodiorites to quartz monzonites. Large, rounded "eyes" of clear quartz are a prominent feature. There are less ferromagnesian minerals (biotite) and these may be absent.

These rocks are favorable host rocks for copper mineralization but no mineral occurrences are known on the claims. Rock outcrops are few and the area of outcrop is probably not more than five percent of the total area. Most of the ground is covered by varying depths of glacial till which may bear little or no relationship to the underlying rocks.

An interesting structural feature of the Highland Valley is the porphyry-filled, south-trending fracture zones in which copper orebodies have been developed at Bethlehem Copper and again at Lornex. If this fracture system occurs again or continues to the south, it may be contained in the Little Pine Tex ground, and may be represented by the south-trending cullies.

#### WORK PROGRAM

As far as is known, there has been no previous work done on these claims. Some cursory prospecting may have been conducted by Kennco in 1957 as part of a general reconnaissance of the Guichon Batholith.

Preliminary to the exploration program the aerial photographs should be obtained, a mosaic made, and a photo-geologic interpretation done. This will outline the structural lineations as a guide to possible fracture zones and faults, which are favorable areas for copper mineralization in the Highland Valley.

The present jeep road provides access to the center of the property. However, additional branch roads should be constructed to provide easy access to all sections. Road building constitutes excellent prospecting, as malachite (copper carbonate) stain, uncovered by buildozer, may lead to an important discovery of copper mineralization.

Survey baselines, with Brunton compass and chain, along the location lines of the claims, marking stations at 400-foot horizontal distances, and tie in all claim posts to these surveys. Stake any appreciable fractions found. At each station, run sidelines at right angles to the baselines, and take soil samples and magnetometer readings at 200-foot intervals, out to the claim boundaries. The nature of all rock outcrops should be noted during the course of this work so that a geological map may be prepared. It is further suggested that all soil samples be sent to a laboratory for chemical analyses in parts per million of copper. The results have been found to be much more satisfactory than approximations made with field kits.

Plot the mineral claims, vertical magnetic intensities in gammas, and parts per million copper content of the soil on maps on a scale of 400 feet to one inch. Contouring of the magnetic intensity map will assist in outlining magnetic medium-lows similar to those readings taken over the Bethlehem Copper orebodies. The magnetometer readings will also assist in plotting geologic boundaries masked by overburden.

Similarly, maps should be prepared showing the various copper contents determined in the soil samples. Areas of positive copper content and even areas showing erratic highs should be investigated by trenching, provided that the overburden is shallow.

ravorable areas, indicated by magnetic and geochemical surveys, should be gridded, and tested by Induced Polarization surveys. I.P. surveys have proved valuable, in outlining areas and depths of disseminated copper mineralization, at the adjacent Lornex property.

#### COST ESTIMATES

Photo-geology	\$ 1,500.00
Tent camp	1,500.00
Road construction	7,000.00
Claim surveys and baselines	3,000.00
Magnetometer survey	4,000.00
Geochemical survey	5,000.00
Geological mapping	3,000.00
Stripping and Trenching	4,000.00
I.P. survey of selected areas	12,000.00
Supervision and Engineering	4,000.00
Administration and General	5,000.00
Total	\$50,000.00

It is estimated that \$50,000 will be required to carry out the initial stage of the exploration program. This estimate is based on the field work being completed during the May to October months to take advantage of the better working conditions during the summer and fall seasons.

It should be noted that drilling costs have not been included. If favorable results are obtained, additional funds will be required for drilling, but the amount and type will depend on the discoveries made and cannot be predicted at this stage.

# **CONCLUSION**

Because of the favorable results presently being reported by other companies exploring mineral groups in the Highland Valley copper camp, and the similarity in geological conditions to the Bethlehem and Lornex properties, the expenditures as outlined are justified and are recommended.

Respectfully submitted,

January 25, 1968.

J. J. Nemberth.
F.J. Hensworth, P. Eng.,
Consulting Mining Engineer.

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## CERTIFICATE

I, Fred J. Hemsworth, 4606 West 9th Avenue, Vancouver 8, B.C., am a graduate in Mining Engineering of the University of British Columbia, and a member of the Association of Professional Engineers since 1947. I have practiced as a Consulting Mining Engineer with an office at 850 West Hastings Street since 1951.

A personal examination of the Little Pine Tex mineral claims, Highland Valley, Spences Bridge, B.C., was made on June 10, 1966.

I do not own any shares, directly or indirectly, in the company. I have no interest in the property, and have not been promised any.

January 25, 1968.

F.J. Hemsworth, P.Eng., Consulting Mining Engineer.