

800418

PROPERTY REPORT

ON THE

LLEWELLYN MINING CO. LTD (NPL)

GROUP OF CLAIMS

GOAT 25-48

BEAR 80-98

in the

ATLIN MINING DIVISION

of

BRITISH COLUMBIA

July 20, 1973

MANNY CONSULTANTS LTD

E. Amendolagine, P.Eng.,

TABLE OF CONTENTS

	Page
SUMMARY	
INTRODUCTION	1
PROPERTY.....	1
LOCATION.....	1
ACCESS.....	2
GEOLOGY.....	2
PROPERTY GECLOGY.....	4
CONCLUSIONS.....	6
RECOMMENDATIONS.....	6
STAGE I	7
STAGE II	7
STAGE III	7
CERTIFICATE.....	8

SUMMARY

The claims held by Llewellyn Mining Co. Ltd., lie some 30 miles south of Atlin, British Columbia, in the Atlin Mining Division of British Columbia.

The claims are located in a favourable geological and mineralogical environment. There are numerous mineral showings of copper, molybdenum, gold, silver, lead and nickel within a range of some 13 miles to the north and east. The Hoboe Creek Mines Ltd (NPL) Laverdiere property adjoining to the east with the Bear claims in a wedge of the Hoboe Creek claims, has a possible copper-molybdenum porphyry deposit. These factors, plus the presence of the Jurassic Coast Intrusives on the property, justify an exploration program to search for a commercial mineral deposit. The exploration program should be carried out in three stages. The first stage would consist of establishing a grid and where possible to complete a geochemical rock chip sample survey, magnetometer survey and reconnaissance geological prospecting. This phase would require some \$40,000.00. The second phase would consist of an induced polarization survey, and the third phase would be diamond drilling, if required.

INTRODUCTION

An examination of the Llewellyn Mining Co. Ltd (NPL) property was made on October 19, 1971. The property consists of claims Goat 25-48 and Bear 80-98, located in the Atlin Mining Division, Province of British Columbia.

PROPERTY

The property consists of 42 mineral claims as follows:

GOAT 25-48

BEAR 90-98

The claims were located in the Atlin Mining Division of British Columbia.

LOCATION

The property is located at 59° 12' N latitude, 134° 13' W longitude, and lies some 31 miles southwesterly of the town of Atlin, British Columbia. It is located south of the western end of Willison Bay of Atlin Lake, and west of Hoboe Creek in the Atlin Mining Division, Province of British Columbia.

ACCESS

Access from Atlin, British Columbia is either by water or air transportation. Water transportation would be some 30 miles via crossing Atlin Lake then following Torres Channel to the western end of Willison Bay. Air transportation would be by helicopter from Whitehorse, Y.T., or by request from Atlin, British Columbia. Whitehorse is serviced by rail and air daily.

GEOLOGY

The general geology of the area consists of rocks ranging from early Palaeozoic to Genozoic in age. These include the Jurassic Coast Intrusives.

LEGENDCENOZOIC

Cretaceous or Later: Rhyolite, trachyte, andesite flows, breccias, felsite, feldspathic tuffs.

MESOZOIC

Jurassic or Later: Coast Intrusions - Granodiorite, quartz diorite, granite, gabbroic and hybrid of various and uncertain age.

Laberge Group - Greywacke, siltstone, argillite, slate, conglomerate, limestone

PALAEOZOIC

<u>Pennsylvanian:</u>	Andesite, basalt, tuff, breccia, volcanic conglomerate, greywacke, arkose, slate.
<u>Permian:</u>	Limestone, chert, andesite, basalt.
<u>Pre-Permian:</u>	Porphyritic granodiorite.

PALAEOZOIC

<u>Pre-Permian:</u>	Metamorphic rocks of uncertain age; quartzite, gneiss, schist, limestone, chlorite schist, feldspar- chlorite gneiss, amphibole gneiss, limestone.
---------------------	--

The rocks in this area generally occur in belts with a northwest trend conforming with that of the folds and the regional structural trend.

The major portion of mineralization known to date is associated with minor quartz veins and replacement deposits occurring near and at the contact of the Coast Intrusions. Two associations of metallic minerals are common in the quartz veins. They are:

1. gold-pyrite, occasionally with arsenopyrite and chalcopyrite.
2. gold-pyrite-chalcopyrite, galena-sphalerite

with some tetrahedrite occasionally present.

Other minerals include antimony and molybdenite, Ref. G.S.C. R.L. Christie, Bennet Sheet, Cassiar District, British Columbia, Map 19-1957.

PROPERTY GEOLOGY

The property is underlain by Coast Intrusive rocks of Jurassic Age and by possibly Pre-Permian to Pre-Cambrian Age rocks. The Jurassic Coast Intrusives rock formations underlie the major portion of the property with the remainder of the property being underlain by the Pre-Permian to Pre-Cambrian Age rocks, Ref: G.S.C.

The property was examined by the writer on October 19, 1971. There was a light cover of snow on the ground leaving a minimal amount of outcrops exposed for observation. Traverses were made up the slope from the valley to the helicopter landing. A large boulder of porphyritic float was seen with visible chalcopyrite. There were also an assortment of boulders. The snow was deep in this valley but outcrops were visited on both sides of the valley.

The property is located in an area that could be of mineralogical significance. This is borne out by the indications expressed on the geological map of G.S.C. by R. L. Christie, Bennet Sheet, Cassiar District of British Columbia, Map 19, 1957. The property is located

to the south of Willison Bay of Atlin Lake. To the east of the property are the copper, gold, silver and molybdenum showings of Hoboe Creek, to the north lie the silver-lead showing on the south end of Nelson Lake and some 15 miles to the north at Taku Arm Lake lie the copper, nickel, gold, silver and lead showings. The mineralization on Hoboe Creek to the east on the Laverdiere property of Hoboe Creek Mines Ltd., and on the Molly group of claims has been seen by the author. The drilling by Hoboe Creek Mines Ltd has yielded some \pm 2% copper values with molybdenum, gold and silver across widths of 45 feet in the limestone overlying a granite. The drilling in the granite underlying the limestone has intersected copper and molybdenum mineralization for the total 216 feet drilled. Values in copper and molybdenite ranging in sections to a maximum of 0.50% Cu and 0.58% Mo. The "Molly Group" of claims has drill core in racks which has disseminated chalcopyrite in a granitic type rock. The true location where the core came from is not known but this core has to be from the immediate area and indicates copper mineralization being present to the north of the property. The mineralization to the north were not seen but is indicated on the G.S.C. Map of the area.

CONCLUSIONS

The property is located in an area which has numerous mineral indications. There are copper, molybdenite, gold, silver, lead and nickel mineral showings to the north and to the east. To the west and the south lie the glacier fields.

The property lies in a mineralogical area that could be of major significance.

The numerous mineral showings in the area, the mineral development of a possible porphyry copper deposit on the Hoboe Creek Mines Ltd., property to the east and the presence of the Jurassic Coast Intrusions on the property indicate that the property lies in a favourable mineralogical environment and should be explored for an economic mineral deposit.

RECOMMENDATIONS

On the basis that the property lies in a favourable geological and mineralogical environment and should be explored for an economic mineral deposit, it is recommended that the following programme be carried out in a minimum of three stages.

STAGE I

1.	Establish a grid system for control	\$4,000.00
2.	Combined geochemical and rock chip sampling	6,000.00
3.	Magnetometer survey	3,000.00
4.	Reconnaissance Geological and Prospecting	4,000.00
5.	Topographic Map	2,000.00
6.	Camp Set-up	3,500.00
7.	Consulting and Engineering	4,000.00
8.	Allowance for rock trenching	2,000.00
9.	Room and Board	3,000.00
10.	Transportation & Communication	5,000.00
11.	Contingencies	3,500.00
		<hr/>
	TOTAL STAGE I	\$42,000.00
		<hr/> <hr/>

STAGE II

Induced polarization, Consulting and Engineering	\$25,000.00
	<hr/> <hr/>

STAGE III

Drilling if necessary with a minimum of 3,000 feet and engineering

Respectfully submitted,
MANN CONSULTANTS LTD.
E. Amodeo, P. Eng.,
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA

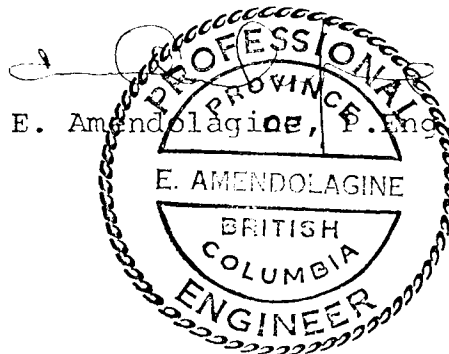
July 20, 1973

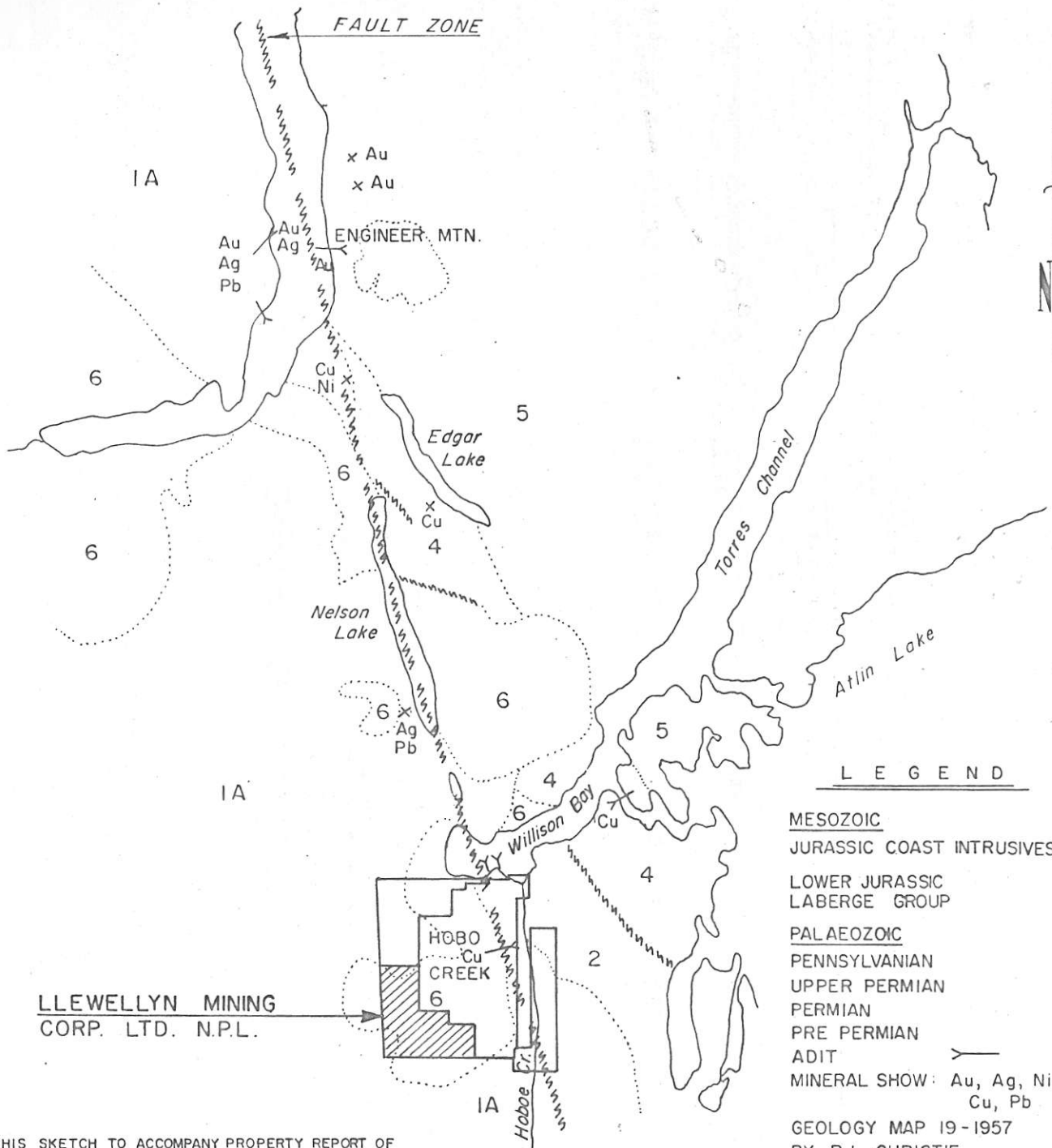
CERTIFICATE

I, EMANUEL AMENDOLAGINE, of the City of Vancouver, in the Province of British Columbia, hereby certify:

1. That I am a geologist and reside in Vancouver, British Columbia.
2. That I am a graduate of Hunter College, of the City of New York, and Columbia University, with a B.A. and M.A. respectively, and that I have been practising my profession as a geologist for 20 years.
3. That I am registered as a Professional Engineer in the Province of British Columbia.
4. That this report is based on a visit to the property of Llewellyn Mining Co. Ltd (NPL) on October 19, 1971 and on information obtained from the G.S.C. reports of the area and knowledge of the immediate area of Hoboe Creek.
5. That the writer does not have, nor does he expect to receive, either directly or indirectly, any interest in the named property and Company.
6. That this report may be used for the purpose of a Prospectus if so desired.

Dated at Vancouver, British Columbia, this 20th day of July, 1973.





LLEWELLYN MINING
CORP. LTD. N.P.L.

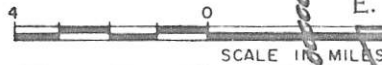
THIS SKETCH TO ACCOMPANY PROPERTY REPORT OF
LLEWELLYN MINING CORP. LTD. BY E. AMENDOLAGINE P. Eng.



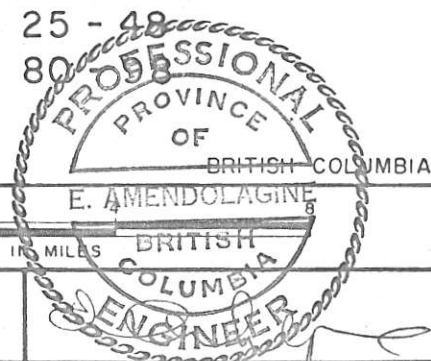
LLEWELLYN MINING CORP. LTD. N.P.L.

GOAT 25 - 48
BEAR 80

ATLIN AREA



July 20, 1973





PHONE: (604) 6-4111
 TELEX: 04-2-33
 CABLE ADDRESS:
 ELDRICO

R.A.F. Engineering Corporation (2)

Certificate of Assay

WARNOCK HERSEY INTERNATIONAL LIMITED
 COAST ELDRIDGE PROFESSIONAL SERVICES DIVISION

125 EAST 4TH AVE. VANCOUVER 10, B.C., CANADA

FILE NO. 461 - 14340

DATE June 16, 1971

We Hereby Certify that the following are the results of assays made by us upon submitted Drill CORE samples

MARKED	GOLD		SILVER	Copper (Cu) PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.
	OUNCES PER TON	VALUE PER TON	OUNCES PER TON					
		\$						
41241	0.01	0.35	0.7	2.56				
41242	0.01	0.35	0.8	3.55				
41243	Trace	-	0.2	0.66				
41244	0.01	0.35	0.9	3.95				
41245	Trace	-	0.2	0.51.05				
41246	0.01	0.35	1.0	2.94				
41247	0.01	0.35	0.6	0.71				
41248	0.01	0.35	0.5	1.62				
41249	0.01	0.35	0.2	0.51				
41250	0.01	0.35	0.6	3.09				
41251	0.01	0.35	0.3	0.08				
41252	0.02	0.70	0.8	3.98				

Note. Rejects retained one week.
 Pulps retained one month.
 Pulps and rejects may be stored for a maximum of one year by special arrangement.

Unless it is specifically stated otherwise, gold and silver values reported on these sheets have not been adjusted to compensate for losses and gain inherent in the fire assay process.

Gold calculated at \$ _____ per ounce

[Handwritten Signature]

Provincial Assayer



PHONE: (604) 76-4111
 TELEX: 04-50353
 CABLE ADDRESS:
 ELDRICO

R.A.F. Engineering Corporation

2502 - 1177 West Hastings Street

Vancouver, B.C.

ATTENTION: Mr. B. Pierre

Certificate of Assay

WARNOCK HERSEY INTERNATIONAL LIMITED

COAST ELDRIDGE PROFESSIONAL SERVICES DIVISION

125 EAST 4TH AVE. VANCOUVER 10, B.C., CANADA

FILE NO. 461 - 14340

DATE June 16, 1971

We Hereby Certify that the following are the results of assays made by us upon submitted DRILL CORE samples

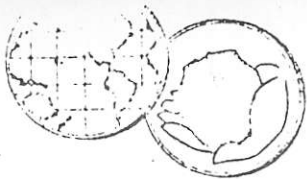
MARKED	GOLD		SILVER	Copper (Cu)	PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.
	OUNCES PER TON	VALUE PER TON	OUNCES PER TON	PER CENT.					
10' <i>10' section</i>		\$							
41226 C	0.01	0.35	0.4	0.05					
41227	0.01	0.35	0.4	1.29					
41228	0.01	0.35	0.5	0.96					
41229	0.01	0.35	0.3	0.15					
41230	0.01	0.35	0.2	0.03					
41231	0.02	0.70	0.4	1.67					
41232	0.01	0.35	1.0	4.51					
41233	0.01	0.35	0.4	1.19					
41234	0.01	0.35	0.4	0.89					
41235	0.01	0.35	0.6	2.08					
41236	0.01	0.35	0.6	2.23					
41237	0.01	0.35	0.8	1.93					
41238	0.02	0.70	0.6	2.28					
41239	0.01	0.35	0.5	1.77					
41240	0.01	0.35	0.3	0.96					

Note. Rejects retained one week.
 Pulps retained one month.
 Pulps and rejects may be stored for a maximum of one year by special arrangement.

Unless it is specifically stated otherwise, gold and silver values reported on these sheets have not been adjusted to compensate for losses and gain inherent in the fire assay process.

Gold calculated at \$ per ounce

..... Provincial Assayer



RAF ENGINEERING CORPORATION LTD.

Mineral Exploration Services

2502 - 1177 WEST HASTINGS STREET, VANCOUVER, B.C. TELEPHONE 604-684-7521

*Árpád Füstös B.Sc. / For Eng. B.Sc.
Geologist*

*William Pierre B.Sc.
Mining Engineer*

July 12th, 1971

Mr. Terry M. Bunyan, President
Hobo Creek Coppermines Ltd. (N. P. L.)
308-540 Burrard Street
Vancouver, B. C.

Dear Mr. Bunyan:

RE: Laverdiere Property, Atlin Mining Division

As requested, the following is an attempt to explain, in a non-technical language, the current status of the Laverdiere property currently held under option by Hobo Creek Copper Mines Ltd. Included are discussions on the results of the recently completed diamond drilling program, its significance, and the proposed exploration program. All information contained herein is based upon a field examination made by myself on June 8-9, 1971, two reports dated August 25, 1969 and July 7, 1971 by Mr. Wm. White, P. Eng. and Mr. Arpad Fustos, Geologist, RAF Engineering Corp. Ltd.

GENERAL GEOLOGY

The Laverdiere property is a typical contact-metamorphic deposit. The deposit is comprised of sedimentary rocks, limestone and siltstone, in contact with a granitic intrusion to the west. These beds strike parallel with the Hobo Creek Valley and their contact with the granite appears to dip to the west. Along this contact extensive mineralization has occurred with copper values ranging as high as 15% Cu. The copper is contained, for the most part, within a magnetite which also carries trace quantities of gold and silver. The magnetite appears to have been formed in two stages - one being coarse grained and the other fine grained. All significant copper values are contained within this coarse grained stage.

EXPLORATION TO DATE

All exploration efforts to-date have been an attempt to delineate this highgrade ore zone along its contact with the granite. Results of the recently completed diamond drilling program, in an attempt to establish the extent of this ore zone to the south, show that disseminated copper occurs within the granite. This was unsuspected and completely alters the economic potential of this property. Of prime consideration at this stage is the fact that there exists the potential of developing a large tonnage disseminated type orebody rather than a low tonnage high-grade ore zone.

Disseminated copper was first discovered after drill hole HC-2 intersected the granite beyond the limestone contact. As a result, all succeeding drill holes were allowed to penetrate beyond the same contact for considerable distance and all encountered disseminated copper within the granite. The largest intersection was 216 feet in drill hole HC-5. Copper and molybdenite values ranged to maximums of 0.50% Cu and 0.58% Mo respectively. The fact that the granite is mineralized to this extent as well as being disseminated is strongly suggestive of this being a porphyry type copper deposit.

CHARACTERISTICS OF PORPHYRY COPPER DEPOSITS

A clear understanding of porphyry copper deposits is necessary to fully understand the significance of these drilling results.

Whenever copper sulfides occur in a disseminated state and are near igneous rocks it is commonly called a porphyry copper deposit. Most of these deposits consist of an intrusive complex that has intruded sedimentary or volcanic rocks of relatively recent age.

Generally a distinguishing factor of these deposits is their alteration halo which for most, is attributable to the presence of iron sulfides. During weathering processes oxidation of the iron releases sulfuric acid which then attacks the enclosing rocks. This causes the formation of clays and the characteristic iron oxide minerals. Quite often the only indicators are leached outcrops. Generally within this halo there exists a zone whereby the host rocks have been highly altered to potash feldspar and associated clay minerals. The presence of these minerals, though not necessarily, are usually associated and indicative of nearby copper mineralization.

Structures within porphyry copper deposits are quite important, in that they are indicative of zones of weakness. They are usually favored hosts of sulfide mineralization or were providing channelways at the time

the mineralization occurred. Their quantity (fracture density), strength (size and mutual correlation), and directional qualities (fracture patterns) are extremely important properties which should be investigated at a relatively early stage in a porphyry exploration project.

The mineralization within porphyry type mineral deposits occurs either as fracture fillings or disseminated interstitially within the rock itself. In extremely fortunate cases both types exist together. When disseminated mineralization occurs the minerals are usually minute specs of chalcopyrite or in some cases bornite. When fracture fillings occur at depth the mineralization is usually of the quartz-sulfide type and quite often found within these fractures is molybdenite.

Since neither of these mineralization types offer a grade high enough which would cause significant surficial mineral anomalies, exploration efforts should be concentrated on petrological and structural phases which are favorable hosts within the general granitic body.

IS THE LAVERDIERE PROPERTY A PORPHYRY DEPOSIT?

When one keeps in mind the above discussed characteristics of porphyry copper deposits several analogies are suggestive regarding the Laverdiere property.

First, the presence of potash feldspars, epidote, and quartz-filled fractures found within the drill core are suggestive of this being a porphyry deposit. Secondly, the presence of disseminated copper and molybdenite on fracture surfaces is highly indicative. Also, outcrop samples taken from west of the French Adit Area (approximately 4500 ft. slope distance) show that this type of mineralization could be distributed over a considerable area.

SUMMARY

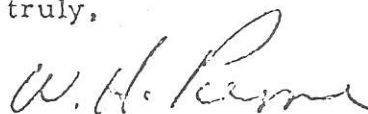
In summary there exists a strong possibility that this property does in fact have the potential of a porphyry copper deposit. However, to determine it's economic significance and size will require considerable amounts of money and time. The detailed exploration program outlined below will hopefully confirm these deductions and make the property more attractive for a major company with available financing to further evaluate it.

RECOMMENDED PROGRAM

ESTIMATED COSTS

I. Trenching and sampling to establish surficial extent of mineralization and grade.	\$ 25,000.00
II. Geological Mapping of entire claim group to establish alteration and fracture patterns etc.	7,000.00
III. Topographical Map (Lockwood Survey Corporation)	1,500.00
IV. Surveying to establish exact drill hole locations, adits, and other topographical features to correlate points I and II with III.	1,500.00
V. Diamond drilling (EX) to establish continuity of disseminated mineralization and establish extent of highgrade zones established from the above.	<u>15,000.00</u>
	\$ 50,000.00

Yours truly,



W. H. Pierre, P. Eng.

WHP/mab