

New Sweden, My. claims

CW

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PROPERTY FILE

93B GENERAL - 07

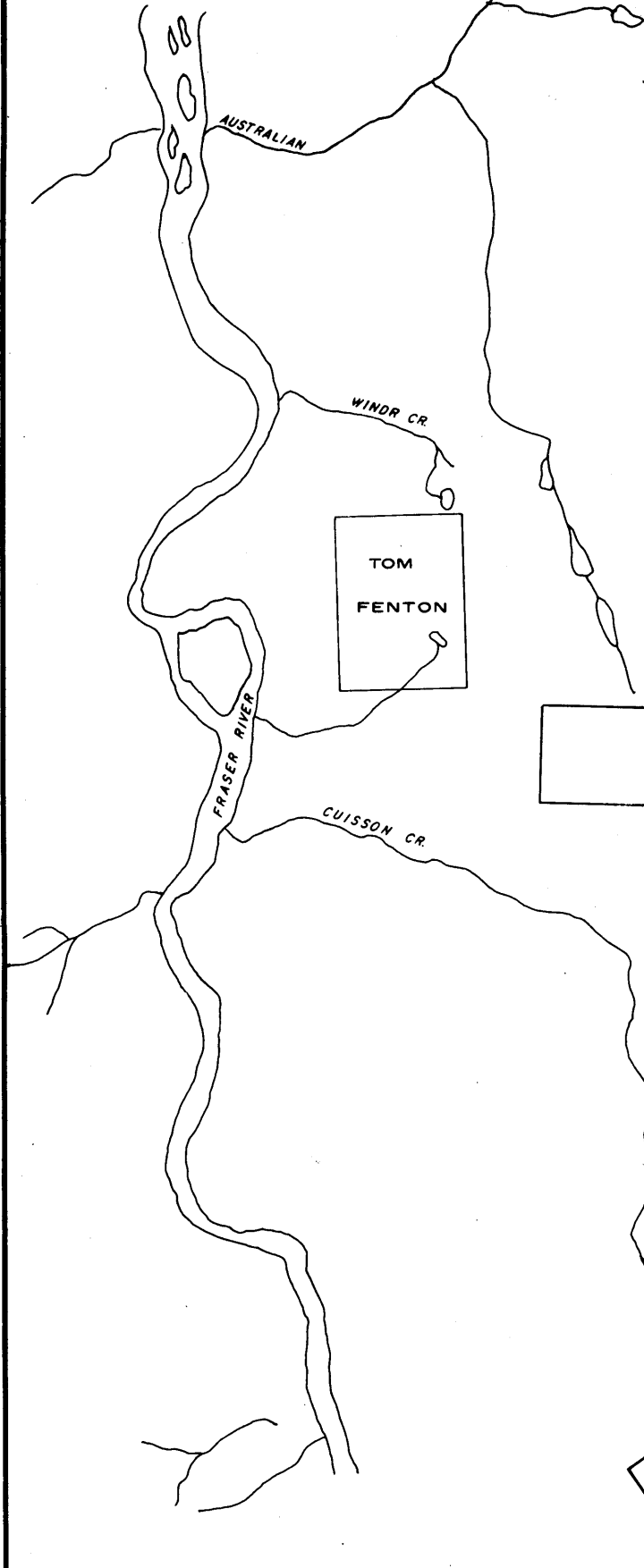
Reep

PRELIMINARY GEOLOGICAL REPORT  
 ON  
 McLEESE LAKE PROPERTY  
 OF  
 PAYCO MINES LTD. (N.P.L.)

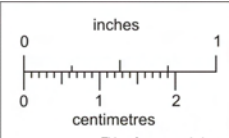
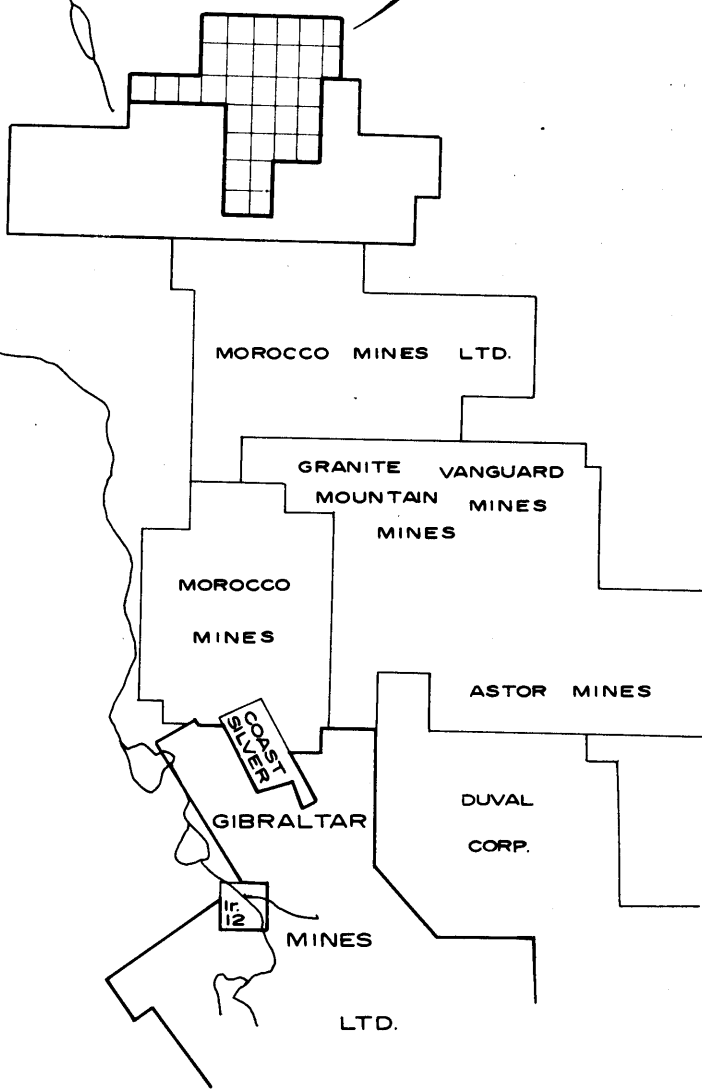
Wm. Howard Myers

February 13, 1970

93B. Numbered area  
No. in file #



PAYCO MINES LTD.



This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.



PAYCO MINES LTD.

# CLAIM MAP

MCLEESE LAKE AREA, B. C.



W. HOWARD MYERS

3815 7th St. S.W.,  
Calgary, Alberta, Canada.

February 6, 1970.

Payco Mines Ltd., (N.P.L.),  
1163 Pendrell Street,  
Vancouver, B.C.

Dear Sirs:

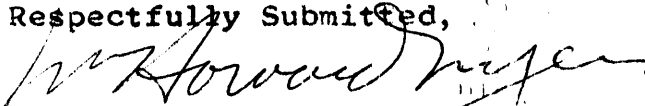
Re: Exploration work on McLeese Lake claims  
under option to Payco Mines Ltd. (N.P.L.)  
(32 claims) SWEDE 1, 3, 17-21 incl., 33 -  
40 incl., 42, 44, 46 and 48, MY 41-52 incl.

Exploration work on the above group of claims during the period March 1 - 20 1969 and December 13, 1969 to February 4, 1970 consisted of building access roads to the property, diamond drill stations and areas of stripping together with diamond drilling and stripping work. During the exploration work geological mapping and correlation of the results were carried out by the writer. The monies expended on the above work are as follows:

Diamond Drilling, Road work and Stripping	\$8,129.00
Geological mapping and supervision of Exploration work	5,050.00
	<hr/>
Total monies spent	<u>\$ 13,179.00</u>

All exploration work was under my direct supervision.

Respectfully Submitted,

  
Wm. HOWARD MYERS, P. Eng. (B.C.)  
P. Geol. (Alberta)  
Consultant.

February 6, 1970.

PRELIMINARY GEOLOGICAL REPORT

on

MCLEESE LAKE PROPERTY

of

PAYCO MINES LTD. (N.P.L.)

Located Mineral Claims (32)

CARIBOO MINING DIVISION, BRITISH COLUMBIA.

PAYCO MINES LTD. (N.P.L.)

1163 Pendrell St.,  
Vancouver, B.C.

Wm. HOWARD MYERS, P. Eng. (B.C.)  
P. Geol. (Alberta)

Consultant,  
3815 - 7th Street S.W.,  
Calgary, Alberta.

February 13, 1970.

# PRELIMINARY GEOLOGICAL REPORT MCLEESE LAKE PROPERTY

PAYCO MINES LTD. (N.P.L.)

## SUMMARY:

Payco Mines Ltd. (N.P.L.) holds an option to acquire a block of thirty two (32) located mineral claims in the McLeese Lake Area, Cariboo Mining Division of British Columbia. The claims are all contiguous and are in good standing with the assessment work completed and recorded. The claims are located approximately seven (7) miles north northeast of the development drilling programme of Canex Aerial Exploration Ltd. on the four mineralized zones in the area.

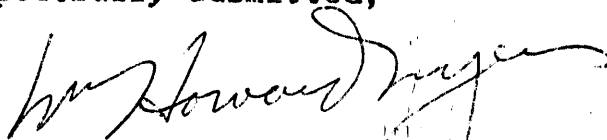
The claims are very well located geologically. The Aeromagnetic maps of the general McLeese Lake Area outline a very pronounced and continuous system of north-south trending minimums or lows, which could be interpreted as a fault system or lines of weakness in the bedrock. Throughout the McLeese Lake map area, where bedrock is exposed, the Geological Survey of Canada (Map 12 - 1959) has mapped numerous northeast and northwest trending faults. The intersection of these two major structural is considered favourable. The claim block is located immediately east of the major north-south structural trend outlined on the Aeromagnetic map. The presence of possible cross structural trends are also indicated on the property by topographic relief and encised streams.

Exploration work to date on the property has produced very significant and potential geological data. Diamond drill cores of bedrock, taken in the southern portion of the claim block indicate an intrusive type rock underlies this portion of the area. Bedrock depths varied from 12 to 20 feet below the surface. The intrusive rock obtained in the core is very similar to the granodiorite of the Granite Mountain batholith mapped to the south. The cores of the granitic bedrock are highly altered and in most instances mineralized. Pyrite and possibly chalcopyrite and molybdenite are visible in the core in the form of disseminations in the altered rock and along quartz rich vertical fractures. Oxidation along some of the fractures has produced oxides of copper (azurite and malachite) as well as iron oxide. The core has not yet been assayed. Polished sections of the core on preliminary examination appear very similar both in rock type and mineralization

to the ore zone now being developed on the west side of Granite Mountain batholith by Canex Aerial Exploration Ltd. to the south.

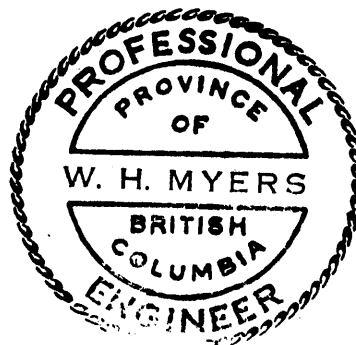
The expenditure of monies for further exploration work on the property is strongly recommended. Additional diamond drilling should be carried out along with an induced polarization survey of the property. Estimated costs of this first stage of work, as detailed in the report, would be approximately \$14,000.00.

Respectfully Submitted,



Wm. Howard Meyers, P. Eng. (B.C.)  
P. Geol. (Alberta)  
Consultant.

February 13, 1970.



Expiry Date: June 16, 1970



SWEDE -  
 2 48608 (B)  
 4 48610 (B)  
 5 48611 B  
 6  
 7  
 8  
 9  
 10  
 11  
 12  
 13  
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 16 48622 B  
 22 48628 B  
 24 30 B  
 25 31  
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 28 34  
 29 35  
 30 36  
 41 45  
 43 47  
 45 49  
 47 51 B

48754  
 MY 1 → 52  
 48607.  
 Sweede → 48

FEB 10/1922

Sweede 1 → 52  
 EXPIRE FEB 24/1922

MY 1 → 36  
 EXPIRE MARCH 6/1922

~~MY 37 → 52~~

MY 37 - EXPIRE MARCH 6/1922

MY 38 → 52 EXPIRE  
 MARCH 20/1922





The property is accessible by improved logging road from McLeese Lake or from the town of Marguerite some 10 miles further north on Highway #97.

The terrain in the area of the claims is moderate and located at an elevation between 2500 and 3500 feet above sea level. The area is relatively flat with a few small incised streams or creeks cutting the claim block.

The property is located in a belt of moderate to light snow fall and moderate temperature. The temperature in this area can drop down below zero but it generally doesn't last too long. The heavier snows and lower temperatures occur in January and February.

The information for this report is from published and unpublished reports and maps of the general McLeese Lake area together with my field work on the property during the following period:

March 1 - 20 inclusive, 1969

December 13, 1969 to February 4, 1970.

My work on the property during these periods consisted checking claim posts, logging cores from the diamond drilling, general geological mapping as well as correlating data from the stripping and trenching on the claim block. Published maps of the general area which have been used are as follows:

Geological Survey of Canada Map 12-1959 Sheet 93B

Department of National Defence

National Topographic Series Sheet 93B/West Half

Province of British Columbia Dept. of Mines  
Aeromagnetic Series Map 1539 G; Map 1538 G;  
and Map 1577 G.

## GEOLOGY

### STRATIGRAPHY:

In the general McLeese Lake Area, rock outcrops are very scarce. Bedrock outcrops over less than 5% of the general map area. The area of the claim block is covered with a thin mantle of Glacial Drift and recent alluvium. In the north-eastern and north western portions of the general McLeese Lake area Tertiary Basalts are present on the surface or very near the surface. The central portion of the area, in the vicinity of the claim block, has low relief and contains a thin mantle of Glacial Drift and recent alluvium. The thickness of the mantle of overburden varies from 12 to 20 feet in the southern portion of the claim block to over 60 feet in the northern portion of the area. The eastern portion of the claim block has more topographic relief with a divide just east of the claim block. Outcrops do occur along this divide to the north and south of the property. The low relief near the center of the claim block is probably due to a large north-south trending fault or line of weakness in the bedrock.

From the geological map of the area (Map 12 - 1959) it would appear that a portion of the claim block area is probably underlain with chert, argillite, limestone and greenstone of the Cache Creek Group of Palaeozoic Age. These rocks outcrop and are mapped south and southeast of the property. Intrusive rocks composed of granodiorite, granite, gneissic granite, quartz diorite and diorite of Mesozoic Age, outcrop some three miles south southeast of the property. Granite Mountain is located some 8 miles south southeast of the claims. The intrusive body mapped in this area appears to have a north-south elongation. Intrusive rocks are also mapped west of the property approximately 10 miles. Recent diamond drilling on the claim block has established the presence of intrusive rocks in the southern portion of the claim block. Diamond drilling in the northern portion of the area failed to find bedrock to a depth of 57 feet below the surface.

#### STRUCTURE

Structural conditions throughout the map area are very complex. In the general area northeast and northwest trending faults are shown on Map 12 - 1959 by the Geological Survey of Canada. The Aeromagnetic maps of the general area show a very pronounced and continuous series of north-south trending minimums or lows which could be interpreted as faults or lines of weakness in the bedrock. The intersection of

these two pronounced structural trends, south of the claim block, shows copper mineralization. One of the more pronounced and continuous north-south trending magnetic lows shown on the Aeromagnetic Map is located immediately west of the claim block. Possible cross structures, in the area of the claim block, are indicated by the encised small streams cutting the area from northeast to southwest.

#### MINERALIZATION

Copper mineralization has been mapped in the general McLeese Lake area by the Geological Survey of Canada on Map 12 - 1959. Copper mineralization in the Cache Creek Group of sediments and located along a fault has been mapped near the lake. Further north the copper mineralization occurs in the intrusive rocks on the west side of Granite Mountain. Diamond drilling in this area over the past several years has shown quite a wide spread copper and molybdenum mineralization. To date several million tons of low grade copper ore have been outlined by the drilling. The discovery has been classified as a major porphyry copper deposit. (World Mining, December 1969, pp33).

Recent diamond drilling on the southern portion of the claim block indicates considerable alteration and mineralization in the intrusive rocks underlying this portion of the claim block. Cores obtained from three vertical diamond drill

holes on this portion of the claim block all showed extensive alteration of the granodiorite bedrock. Mineralization consisting of pyrite, possible chalcopyrite and molybdenite appeared both as disseminations in the altered rock and in the quartz rich vertical fractures. Oxidized zones along some of the fractures contained the oxides of copper (Azurite and Malachite) as well as iron oxide staining. The cores have not yet been assayed but polished sections, prepared normal to the vertical fractures, shows disseminated metal as well as the more massive distribution along the quartz rich fracture filling. A semi-quantitative spectrographic analysis has been ordered in order to obtain the relative percentages of elements in the mineralized core. Polished sections of the core, on preliminary study, appear very similar in both alteration and mineralization to the ore zones now being developed on the west side of Granite Mountain batholith by Canex Aerial Exploration Ltd. to the south. This area on the west side of Granite Mountain batholith has now been classified as a major porphyry copper discovery. (World-Mining, December 1969, pp33).

#### CONCLUSIONS

The claim block is located in a favourable geological setting. Favourable structural conditions are interpreted from the Aeromagnetic maps. Local topographic relief and

encised streams on the property may well reflect northeast and northwest fault trends mapped in other portions of the general McLeese Lake Area. Results of the recent exploration work on the claim block are considered very favourable for the following reasons:

1. Very little overburden in the southern portion of the claim block area. Depth to bedrock varied from 12 to 20 feet in the area of diamond drilling.

2. Bedrock obtained in the cores was an intrusive type rock. It appears to be the same as the granite or granodiorite of the Granite Mountain.

3. In all the holes drilled bedrock was highly altered. The alteration continued throughout the core which penetrated up to 25 feet of bedrock.

4. Mineralization was also found in each of the core holes. Mineralization occurs both as disseminated pyrite, possible chalcopyrite and molybdenite and also massive deposition along quartz rich fracture filling.

5. Oxidation along some of the fractures has produced copper oxide minerals (Azurite and Malachite) as well as iron oxide staining.

#### RECOMMENDATIONS

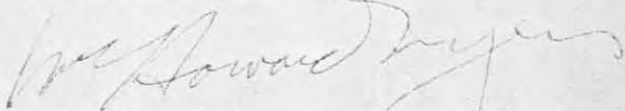
The results of the exploration work to date are considered very favourable and further exploration work is

justified and hereby recommended. The following work is recommended together with a cost estimate for the next phase.

1. Deeper Diamond Drilling in the areas of favourable results. The drilling of angle holes is recommended since vertical fracturing was encountered in the previous drilling. Deeper holes will be required in the northern portion of the claim block to ascertain bedrock depth and composition. Approximately 750 feet @ \$8.00/foot	\$6,000.00
2. Induced Polarization survey over the claim block	5,000.00
3. Engineering, Supervision and correlation of the results of the drilling and geophysical survey	1,500.00
4. Assaying and Laboratory studies	500.00
5. Contingencies (including support)	1,000.00
Total	<u>\$14,000.00</u>

This is considered to be a worthwhile mining venture with a good chance of success and worthy of the expenditure of monies to carry out the recommended exploration work.

Respectfully Submitted,

  
Wm. HOWARD MYERS, P. Eng. (B.C.)  
P. Geol. (Alberta)  
Consultant.



Expiry Date: June 16, 1970

February 13, 1970.



CERTIFICATE

I, WILLIAM HOWARD MYERS, do hereby certify that I am an independent geological-geophysical consultant with offices in Calgary, Alberta, Canada. I am a professional geologist (P. Geol.), a member of the Alberta Society of Professional Engineers. I hold a non-resident licence (P. Eng.) in the Professional Engineers of British Columbia, valid until June 16, 1970.

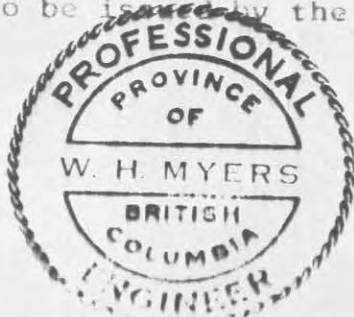
I reside at 3815 - 7th Street, S.W., Calgary, Alberta, Canada. I have been an independent geological-geophysical consultant in oil and mining for the past eighteen years. I have been active in exploration work in both oil and mining during this period.

I am a graduate of Fresno State College, Fresno, California, with a B. Sc. degree in geology in 1939; with graduate work at Stanford University, Stanford, California for M. Sc. degree in geology in 1941.

The information for this report on the claim Block in the McLeese Lake area was obtained from my work on the property from March 1 to 20, inclusive 1969, and December 13, 1969 to February 4, 1970. Information was also obtained from published and unpublished reports and maps of the general area. Published maps of the general area which were used are as follows: Geological Survey of Canada map 12 - 1959 sheet 93 B; Department of National Defence First Edition Canada sheet 93B/9 West Half; Province of British Columbia Department of Mines Aeromagnetic Series, Map 1538G and Map 1577 G; National Topographic Series sheet 93B/West Half.

The claim posts are all in position and the claims are in good standing with assessment work completed and recorded until March 1971.

I further certify that I have no interest in the property described herein or the securities of the company or securities to be issued by the company, as a result of writing this report.



*Wm. Howard Myers*  
Wm. HOWARD MYERS, P. Geol. (Alberta)  
P. Eng. (B.C.)

February 13, 1970.

Expiry Date: June 16, 1970

Work Order: 10706

Material: *acc*

Plate No: 3819

Client: W. H. LIVERS

Date: Feb. 19/70

Sample Identification # P-8

Aluminum	<i>major</i>	<i>Feldspars</i>
Antimony	<i>ND</i>	<i>-</i>
Arsenic	<i>*</i>	<i>iron pyrite</i>
Barium	<i>0.05</i>	<i>Feldspars</i>
Beryllium	<i>40.001</i>	<i>quartz</i>
Bismuth	<i>ND</i>	<i>-</i>
Boron	<i>0.001</i>	<i>-</i>
Cadmium	<i>ND</i>	<i>-</i>
Calcium	<i>2.0</i>	<i>Feldspars</i>
Chromium	<i>40.001</i>	<i>Oxides or sulphides</i>
Cobalt	<i>0.005</i>	<i>oxides</i>
Copper	<i>0.1</i>	<i>chalcopyrite</i>
Gallium	<i>ND</i>	<i>-</i>
Gold	<i>trace</i>	<i>in Sulphides or free</i>
Iron	<i>major</i>	<i>part. to a Hornblende sulphides</i>
Lead	<i>0.03</i>	<i>Feldspars</i>
Magnesium	<i>1.5</i>	<i>Altered hornblende</i>
Manganese	<i>0.05</i>	<i>Sulphides</i>
Molybdenum	<i>0.001</i>	<i>-</i>
Columbium	<i>ND</i>	<i>-</i>
Nickel	<i>*</i>	<i>pyrobitite</i>
Silicon	<i>major</i>	<i>quartz</i>
Silver	<i>40.001</i>	<i>Sulphides</i>
Strontium	<i>0.01</i>	<i>complex pyrite or oxides</i>
Sodium	<i>*</i>	<i>Feldspars</i>
Tin	<i>40.01</i>	<i>oxide</i>
Titanium	<i>0.6</i>	<i>pyrite &amp; sulphides</i>
Tungsten	<i>ND</i>	<i>-</i>
Vanadium	<i>0.01</i>	<i>complex pyrite or oxides</i>
Zinc	<i>40.1</i>	<i>Sulphides</i>

Assay for  
Au Ag  
Cu Fe NiOS.  
Ti

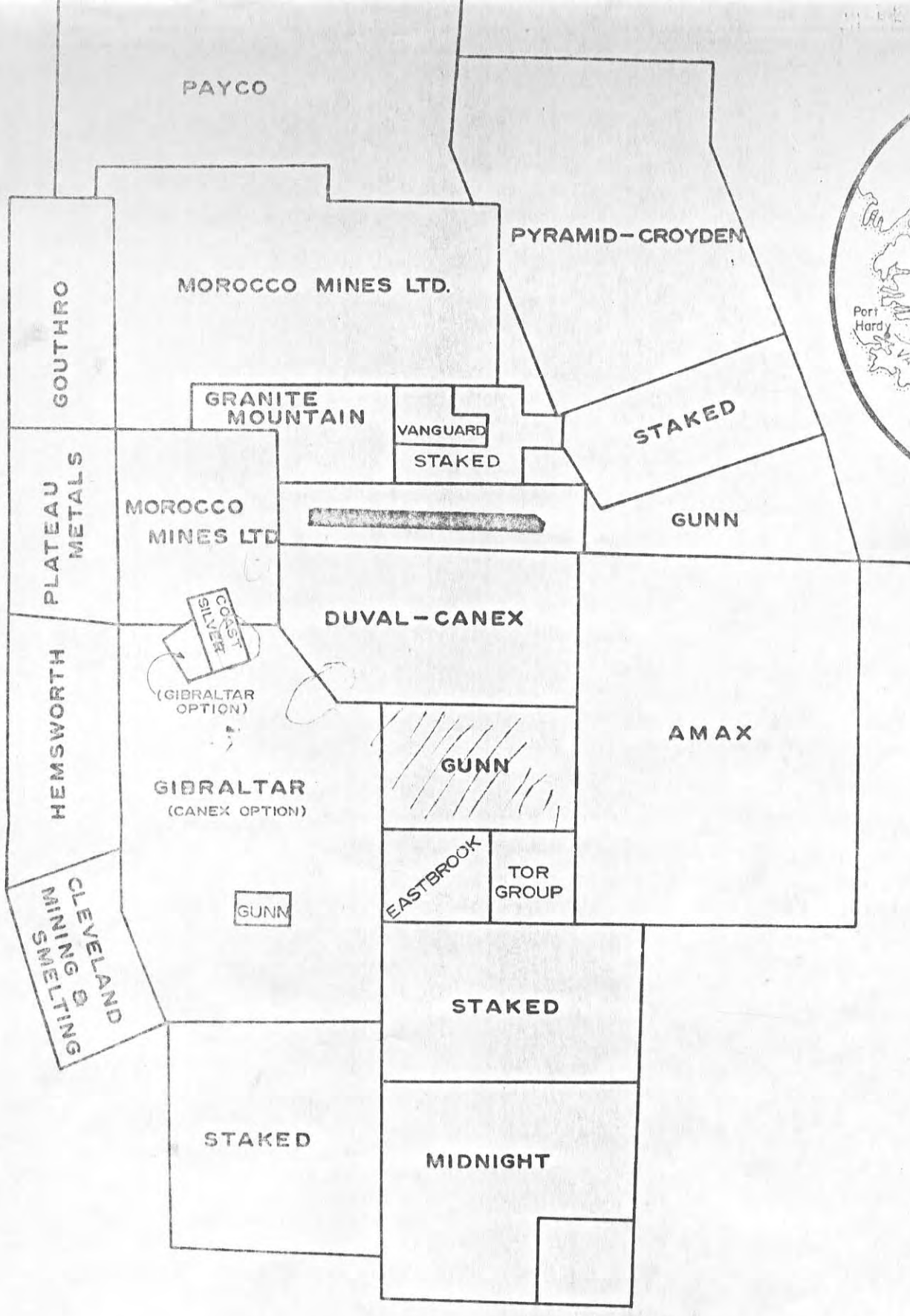
All results are expressed as percent by weight / parts per million -  
Matrix: Major constituent

Major: above normal spectrographic range

\* : greater than 0.1 percent

N.D.: not detected

*Assay for fine assay for gold if analysis is critical.*



LOCATION  
SCALE: 1"=15'

**Mc LEESE LAKE /  
CARIBOO MINING D  
DIAGRAMMATIC CLAIM**

NOT TO SCALE