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PROPERTY REPORT -- RUSTY GROUP

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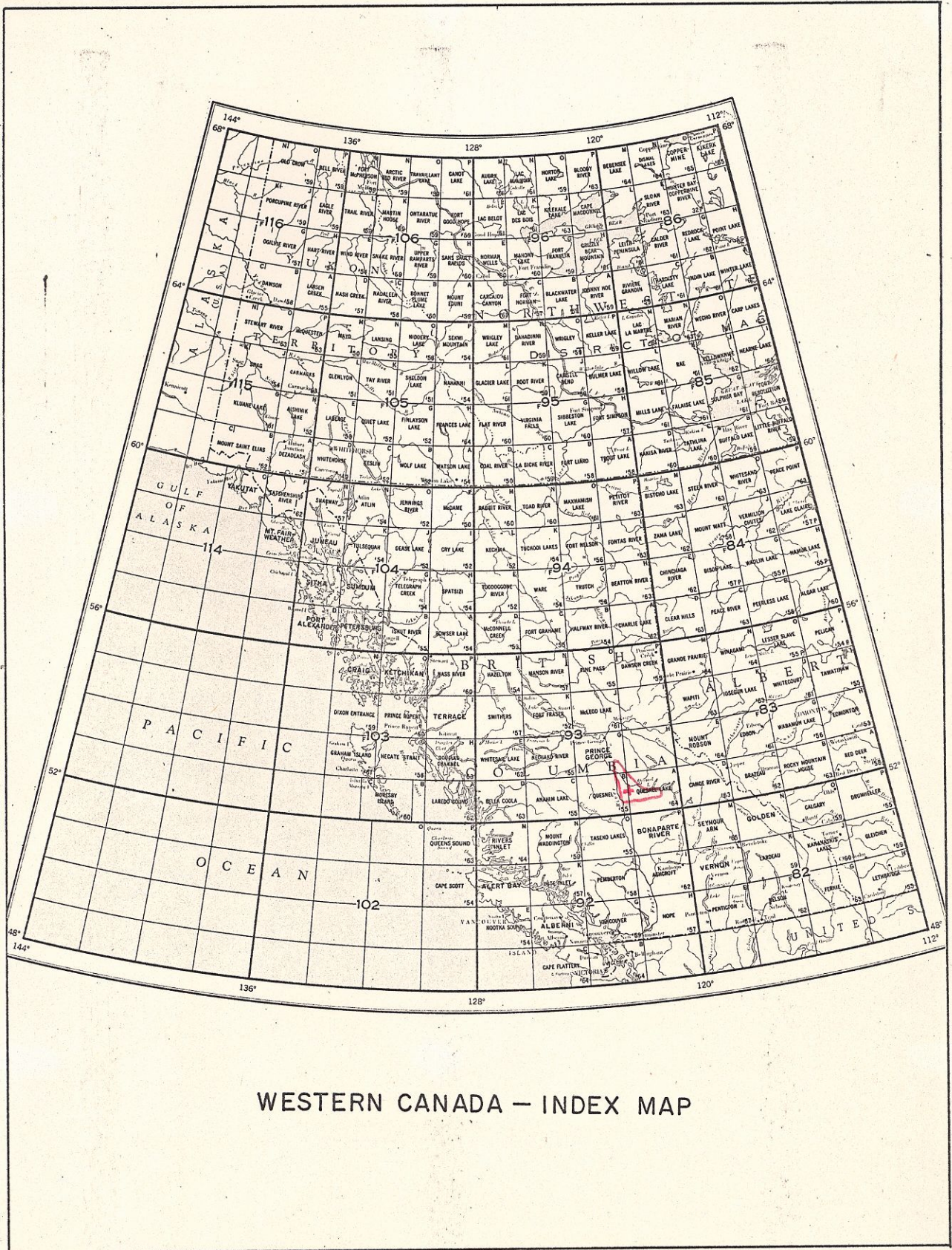
PROPERTY REPORT -- RUSTY GROUP

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WESTERN CANADA - INDEX MAP

PROPERTY REPORT

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LOCATION

The Rusty Group of mineral claims is centred 25 miles southeast of Quesnel, British Columbia, in the Cariboo Mining Division. The mineralization occurs at an elevation of 3200 feet at latitude  $52^{\circ} 46'N$ , longitude  $121^{\circ} 59'W$ .

Crotteau's cabin lies along a branch of Chiaz Creek about one-half mile east of the main trench. A footpath extends from the south end of Nyland Lake to the cabin and a tractor road through the forest extends from the north end of Nyland Lake to his cabin. A light plane can land on Nyland Lake and take off with one passenger. A good logging road joins the north end of Nyland Lake to the Barkerville highway. There are gates along this road but they are generally unlocked.

CLAIMS and OWNERSHIP

Coranex Limited has a group of claims (Rusty 1 to 156 inclusive) under option from Eugene Crotteau of Quesnel, British Columbia. The Rusty 1 to 4 mineral claims were recorded on June 29th, 1962. The Rusty 4 to 40 mineral claims were recorded on July 20th, 1965 and the Rusty 41 to 156 inclusive mineral claims were recorded on October 22nd and October 25th, 1965.

When Eugene Crotteau staked some of the Rusty 5 to 40 mineral claims, he made an unintentional error and ran the claims magnetic north instead of true north. In order to have these claims cover the ground that he had intended and to agree with the affidavit that he had signed in the recorder's office he moved the posts to make the lines run true north. Enquiries from the Gold Commissioner at Quesnel indicated that these claims were probably invalidated. Therefore, prior to having the claims transferred to Coranex Limited, I requested that Crotteau officially abandon and re-stake 16 claims. The claims (Rusty 5 to 8 inclusive and Rusty 13 to 24 inclusive) were abandoned (October 28th, 1965) and re-staked (October 29th, 1965) under the same names but with different tags and different record numbers.

Crotteau transferred the 159 claims to Coranex Limited on October 29th, 1965. Except for the 16 abandoned and re-staked claims, all of the claim records have been received and are on file at Coranex Limited in North Vancouver.

CONDITIONS OF EXAMINATION

On October 3rd, 1965 Mr. Peter Schwerdt got Eugene Crotteau to sign an agreement (post dated to October 4th) optioning the Rusty Group of

claims to Dr. George Gorlich. On October 4th Schwerdt contacted Robert Segsworth who in turn contacted myself. I looked at the specimens that Schwerdt had in his car on October 4th, went to Quesnel on October 5th and examined the property October 6th and 7th. On October 8th at Mr. Rankin's permission based on Schwerdt's verbal agreement, I renegotiated an option with Eugene Crotteau for Coranex Limited. The Gorlich interests were to receive 100 claims (this was later increased to 150 claims at Schwerdt's insistence) plus an interest in the property.

Before going to Quesnel I had received a letter of first refusal written by Mr. Schwerdt and signed by Dr. Gorlich. At Quesnel I received a field agreement signed by Peter Schwerdt as representative for Dr. Gorlich. In this agreement the Gorlich interests were to receive 2-1/2% of the vendors' shares in any company formed on the property, 150 free claims, and field expenses incurred by Schwerdt pertaining to his acquisition of the property. Acting on Schwerdt's advice, Gorlich has refused to sign a final agreement.

The agreement between Coranex Limited and Eugene Crotteau calls for payment of \$41,000 in option payments payable as follows:

- a) \$500 upon signing of the agreement by Crotteau
- b) \$5500 payable on transfer of mining claims to Coranex
- c) \$10,000 on or before November 30th, 1966
- d) \$10,000 payable on or before November 30th, 1967
- e) \$15,000 payable on or before November 30th, 1968

In addition Crotteau is to receive 50,000 shares in a 5-million share company which may be formed to acquire the property and a total of \$500,000 payable at the rate of 5% (of taxable income of the New Company plus the depletion allowance made in determining such taxable income, minus income taxes paid by the New Company). The taxable income will be that determined under the Income Tax Act, excepting that sub-section five of section eighty-three will not be applicable.

Upon transfer of the mineral claims by Crotteau to Coranex Limited, we had to make our second option payment of \$5500.00.

#### EXPLORATION WORK

Mr. Eugene Crotteau who lives with his family in a small cabin along Chiaz Creek, has trapped and hunted in this area for many years. After finding some molybdenite-bearing float along the bed of the westerly branch of Chiaz Creek he prospected the creek bed and dug trenches where the float was most abundant. The float along the main trench, although very impressive in appearance, assays only 0.13% MoS<sub>2</sub>.

Prior to Crotteau's trenching work, several geologists examined and rejected the property and John Ens of Dakota Silver Mines Limited optioned

the property. However no one did any exploration work.

#### REGIONAL GEOLOGY

A triangular area of Mesozoic volcanic, sedimentary and intrusive rocks occurs to the north, east and south of Quesnel, British Columbia. This area, 70 miles in a north-south direction and up to 60 miles in an east-west direction, is bounded on the west and the south by flat-lying Tertiary and Quaternary volcanic rocks. On the north-east, it is separated from a region of Paleozoic sedimentary rocks by a northwesterly striking regional fault. A second northwesterly striking fault, 20 miles to the southwest of the first mentioned fault, cuts diagonally across this area of interest. R. B. Campbell, on his preliminary map of the Quesnel Lake area, states that these faults are probably branches of the Pinchi fault system.

The area between the two Pinchi faults is of particular interest. The patterns on the magnetic and the topographical maps and on aerial photographs indicate that the trend of the volcanic rocks within this area is northwesterly. The area between the faults is characterized by some north-south structures which are reflected by drainage patterns. For convenience, the structures are herein called from west to east the Chiaz Creek structure, the Atis Creek structure, and the Swift River structure. The Chiaz Creek structure contains the molybdenite of the Rusty Group and is the strongest of the north-south structures. It can be traced topographically for a distance of nine miles; three miles further north it can again be picked up and traced for an additional three miles. Thus the structure can be easily picked out of the aerial photographs and topographical maps for an overall distance of 15 miles. It may abut against the Pinchi fault at its southern end.

#### REGIONAL MINERALIZATION

The triangular area of interest received attention in the past because of its copper mineralization. At least four interesting areas of copper mineralization have been explored:

1. Copper mineralization at Mouse Mountain, about 13 miles east of Quesnel, occurs in volcanic rocks and has been partly explored by diamond drilling. About 8000 feet of core can be seen on the property.
2. The copper mineralization at McLeese Lake is well known, has been investigated by several companies and is reportedly under investigation at the present.
3. South of Quesnel Lake between Keno Lake and Hen Ingram Lake, Helcon Explorations Limited discovered copper mineralization in 1964. They staked a large block of claims on the showings and staked additional claims in 1965. Eugene Crotteau was working for the company at that time and is a co-discoverer of the property. He reports that the discovery was made by silt-sampling around a target which was picked by air photo interpretation. He reports that the mineralization is in diorite.

4. An interesting low grade of deposit of copper occurs at Bootjack Lake about 22 miles southeast of the Rusty Group. This prospect is controlled by the Springer interests. The mineralization occurs along fractures in syenite.

The molybdenite mineralization of the Rusty property occurs along one of the north-south faults of the Chiaz structure. Boss Mountain, 60 miles to the southeast, is the closest significant deposit of molybdenite.

#### AEROMAGNETIC DATA

Aeromagnetic maps cover most of the triangular area of Mesozoic rock. The patterns indicate that the rocks (probably Mesozoic volcanics) between the two regional faults have a northwesterly trend. Several outstanding magnetic anomalies occur between the two faults. The most conspicuous anomaly coincides with the syenite intrusive at Bootjack Lake. A topographical high coincides with the magnetic anomaly at Bootjack Lake and may contribute to the relief of the anomaly. Some of the other syenite intrusions mapped by the Geological Survey also have magnetic highs.

A row of five small magnetic peaks occurs along the north part of the Chiaz structure. These peaks serve to emphasize the structure and are probably a rock-type effect. However, because their source is not positively known, they should be checked geochemically\*.

The intense hydrothermal alteration associated with large porphyry copper and stockwork molybdenite deposits is generally accompanied by the introduction of considerable sulphur which forms pyrite at the expense of other iron-bearing minerals. Thus many of the hydrothermally-altered zones would form magnetic lows. However this is not always the case. The stocks associated with some of these deposits could have magnetite at their contacts and late magnetite is known in some hydrothermally-altered zones.

The deposit at Bootjack Lake presumably has associated magnetite and some of the breccia pipes at Boss Mountain have erratically distributed magnetite.

#### THE RUSTY MOLYBDENITE PROPERTY

##### Rock Types

The main rock type at the area of molybdenite mineralization is diorite containing some interstitial quartz and some interstitial carbonate. In addition some quartz porphyry occurs on the property.

Some Tertiary volcanic rock appears to overlay the diorite in the vicinity of molybdenite mineralization and volcanic rock of unknown age underlies much of the northwest portion of the Rusty claim group.

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\*Some of these small anomalies are on Gorlich's claims.

In the northern part of the Rusty Group, one can find pebbles of dark rock cut by white veinlets. This dark rock is limestone cut by white calcite veinlets.

#### Mineralization

The molybdenite mineralization occurs along slips in the sheared altered diorite. A few quartz veinlets are present but these are quite rare. Abundant pyrite occurs throughout the rock with the mineralization. The material piled beside the main trench contains conspicuous molybdenite but the molybdenite has been made more conspicuous by post-mineralization shearing which has smeared it out. Two grab samples from the material beside the trench assayed 0.13% MoS<sub>2</sub>. In addition to the mineralization in the main trench, traces of molybdenite have been found downstream for about 100 feet and in places upstream for about 1000 feet.

#### Hydrothermal Alteration

The diorite at the main trench on Chiaz Creek or at the places where traces of molybdenite have been observed is intensely altered. The diorite has been converted to a greenish rock because of intense sericitization of the plagioclases. This is possibly accompanied by some clay alteration (not confirmed by thin-section work). The diorite is also converted to a greyish-white rock which consists largely of carbonate. At the main trench both the sericitization and the carbonate alteration are present. Four hundred feet to the southwest there is an irregular small lens of white rock within the diorite. This rock is largely carbonate. The hydrothermal alteration is very restricted laterally and even at the main trench unaltered rock may be observed in the banks of the creek less than 20 feet away from the trench.

Intense sericitization is often characteristic of the hydrothermal alteration associated with molybdenum deposits. However, the carbonate content within the alteration zones is generally very low.

#### Geochemistry

Mr. Meyer collected a few silt samples during our initial examination of the property and ran them for molybdenum by field methods. The results showed a low molybdenum anomaly below the main trench in the mineralized creek and a second anomaly (about twice as high as the first) coming from a low, somewhat swampy area, about one mile to the north. Subsequent check analysis in the laboratory showed the anomalies disappointingly low; the anomaly in the mineralized creek is 7 ppm and that anomaly one mile to the north is 10 ppm.

As with the first anomaly, the north anomaly may also be due to mineralization in a narrow, shear zone along the creek bed. However it may be due to more extensive mineralization under a beaver pond and swamp a short distance upstream. A silt sample about 200 feet upstream and below the swampy beaver ponds yielded a small anomaly of 5 ppm.

Soil sampling on this property may be helpful or it may be misleading. Part of the region could be called a glaciated peneplane. The



Mesozoic rocks are overlain by some remnants of Tertiary volcanics and by glacial till. If there is a large deposit in the area, debris from the deposit should be scattered throughout the till and the geochemical values should be anomalous. Such was the case at Endako. However clay deposits are not expected to yield an anomaly.

I gathered soil samples along two short lines during my visits to the property. The one running across and westerly from the main showing was mostly in glacial till and yielded no anomalous molybdenum values. A second short profile in a southeasterly direction crossed the creek of the north anomaly about 200 feet above the sample site. The soil samples consisted of glacial till or clay and the geochemical results showed no anomalous molybdenum values.

### CONCLUSIONS

Generally, stockwork molybdenite deposits, especially those occurring in the mountainous areas are genetically and geometrically associated with Tertiary intrusive stocks. However the Endako deposit is an exception. It occurs within the Topley batholith and appears to be controlled by east-west structures. Some small porphyry dikes are present, but intrusive stocks are known.

Because of a lack of outcrops on the Rusty property, one cannot make definite conclusions about the control or the extent of mineralization. No intrusive stock is exposed and the known mineralization appears to be structurally controlled by the Chiaz Creek structure. The high temperature type of mineralization (fine-grained molybdenite and associated pyrite) that is exposed in the trenches along Chiaz Creek makes one think that the limited pods presently exposed may be in the vicinity of a much larger covered deposit.

The Chiaz Creek structure, up to a mile and one-half wide and about 15 miles long, is a zone that warrants detailed geochemical prospecting. Of particular interest within this zone is the area near Crotteau's molybdenite showings, the small magnetic anomalies to the north of these showings, and intersections with cross structures.

Molybdenite showings worthy of any exploration are quite scarce. And the discovery of any worthwhile showing involves a considerable outlay of money. Therefore, although the known showings on the Crotteau ground are obviously not orebodies, the property was worth tying up under an option agreement. Unfortunately, because we had to re-negotiate an unworkable agreement drawn up by Schwerdt at a time when Noranda geologists were expressing interest in the property and because Schwerdt has re-neged on his verbal agreements causing us considerable further expense, the cost is becoming excessive when one considers the merits of the property.

### RECOMMENDATIONS

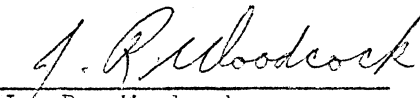
- (1) Before doing any exploration work on the property we must have an agreement signed by Gorlich and we will also need a

small agreement signed by Retan\*.

- (2) Exploration work on the property should include detailed sampling of all streams. Both silt samples and water samples should be tested for molybdenum. Soil sampling should be done in the vicinity of any stream anomalies, probably followed by some bulldozer stripping. If possible, some packsack drill holes should be placed in the main trench to check on the extent and grade of the molybdenite mineralization.
- (3) Whether or not we complete our option on Crotteau's property, the Chiaz structure north and south of the Rusty Group should be investigated by silt sampling.

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\*Retan acted as an agent for Crotteau in contacting Schwerdt and receives a 10% share in any proceeds received from sale of the claims. In the first agreement drawn up by Schwerdt for Retan and Crotteau, the share is expressed as 10% interest in the claims. Retan claims that in a subsequent agreement drawn up by a lawyer the terminology was changed; however, I have not checked into this.

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J. R. Woodcock

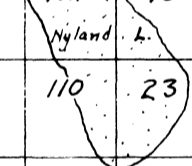
December 30th, 1965

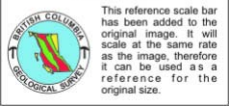
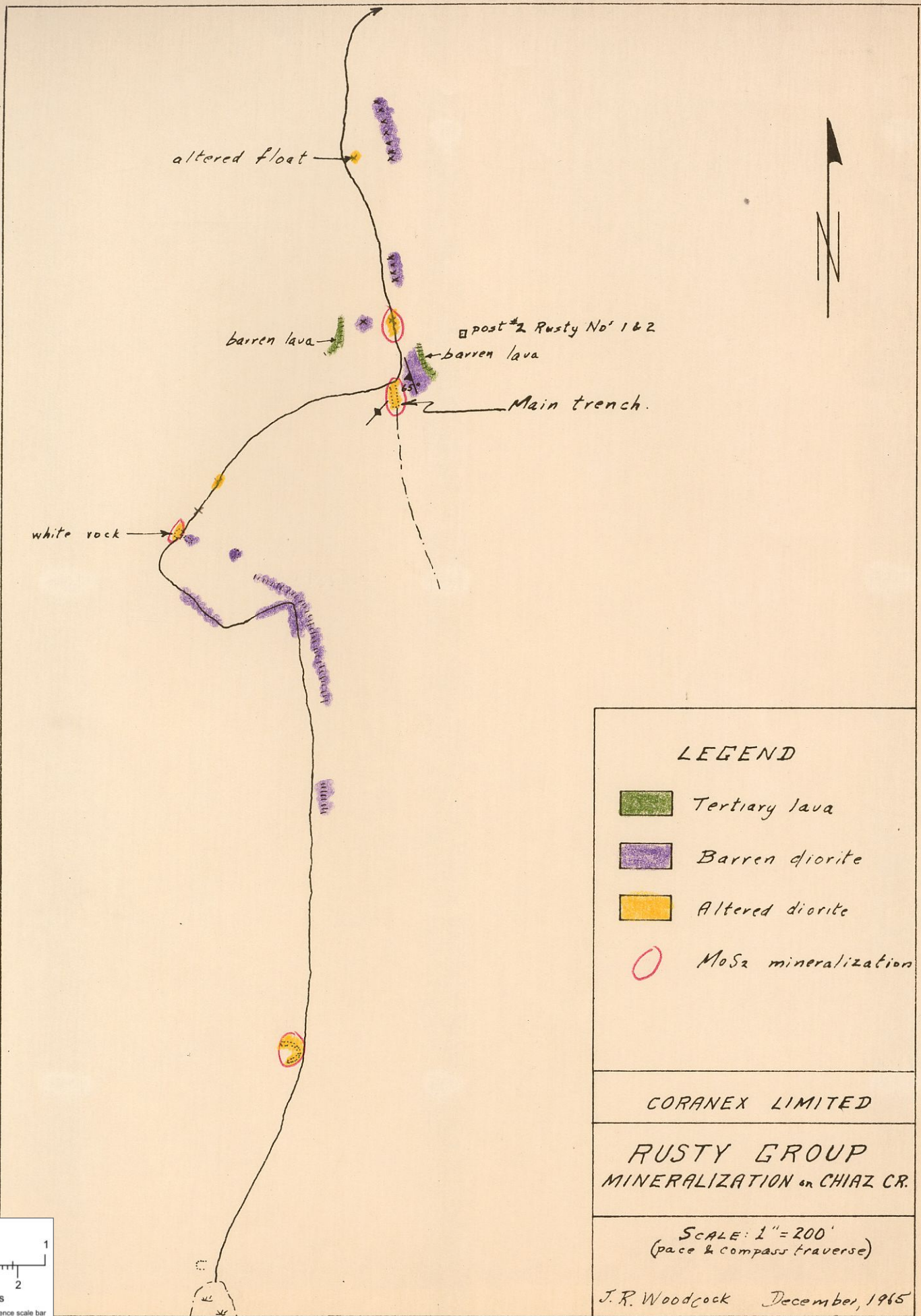
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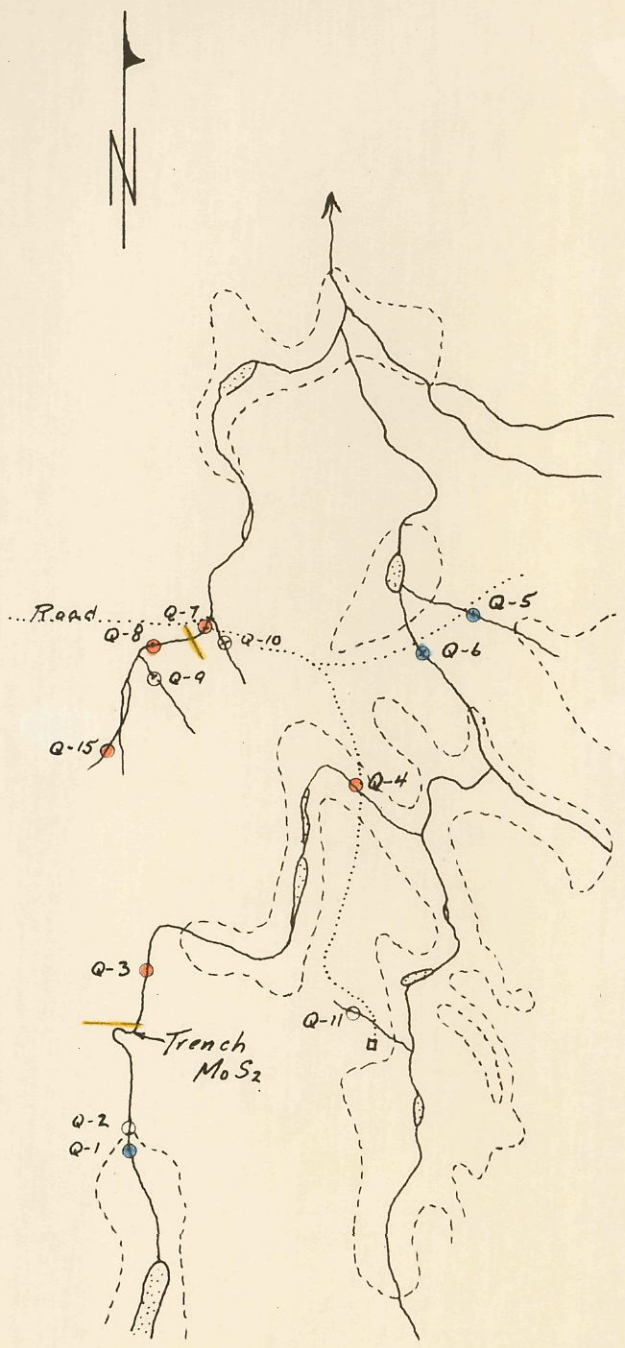
GEO GROUP

RUSTY GROUP

GEO GROUP







LEGEND

- Q-8 ♂ Sample Site
- Small
- Anomalous Value
- Background Value
- - - Boundary of Swamp
- ☉ Lake
- Soil Sample line

Molybdenum Results (ppm)

Sample No.	Field	Laboratory
Q-1	-	-
2	45	4
3	10	7
4	5	5
5	5	-
6	<5	2.5
7	20-30	10
8		5
9		
10		
11		
12		
13		
14		
15		5
3 check		10

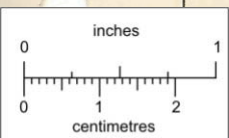
} too much organic

CORANEX LIMITED

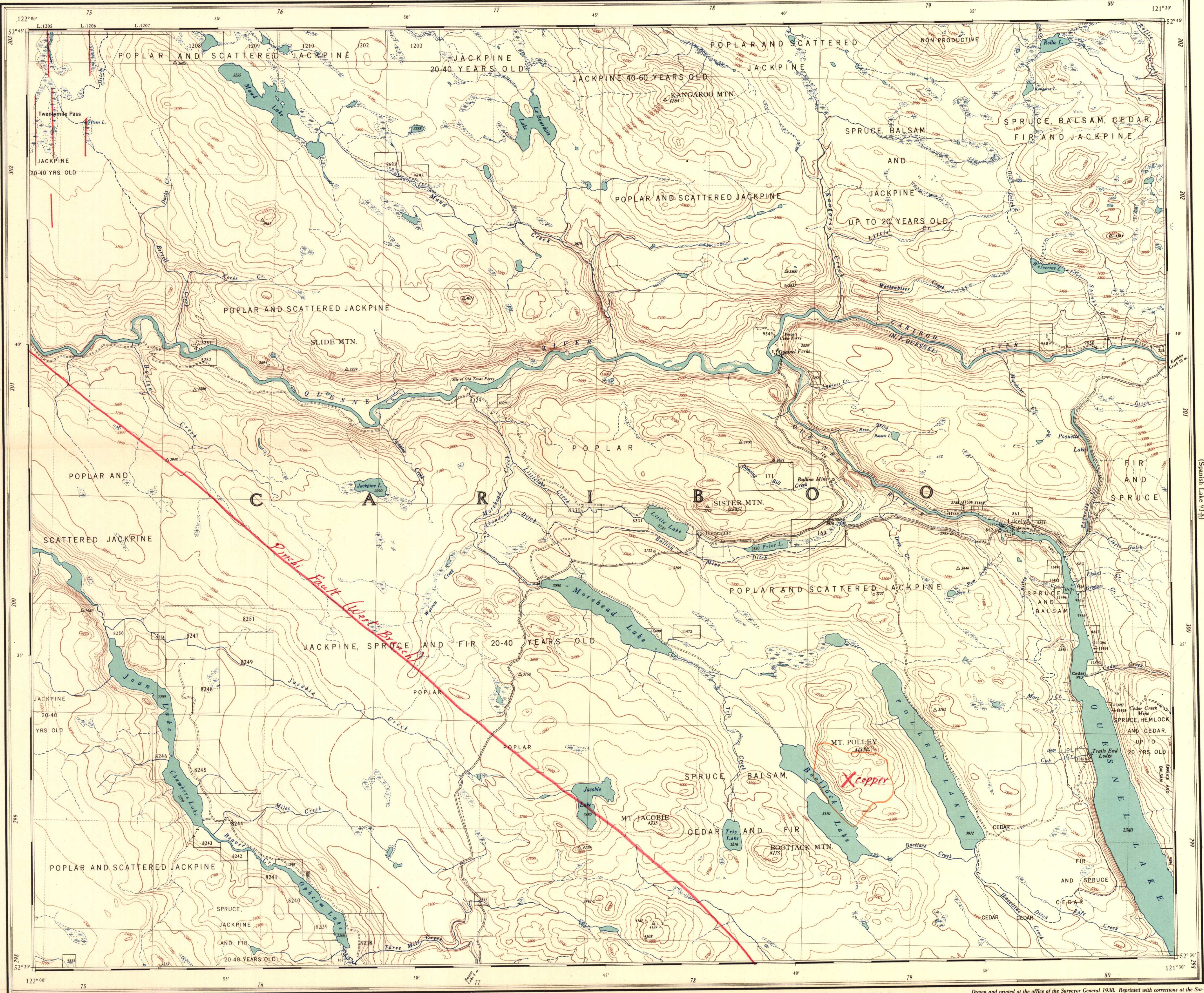
RUSTY GROUP  
SILT GEOCHEMISTRY

SCALE: 1" = 1/2 mile

Data By: W.T. Meyer  
Dec. 1965



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.

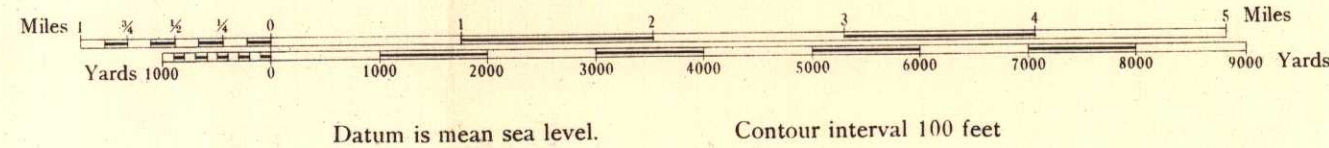


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 The magnetic declination for 1949 is approximately 26° east of true north and is based on observations made at magnetic stations adjacent to the area. The declination is decreasing 4 minutes annually.

# HYDRAULIC

## BRITISH COLUMBIA

Scale 1 mile to 1 inch or 1:63,360

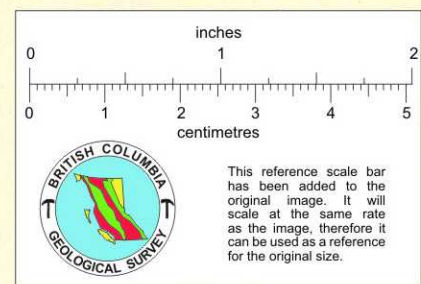


NOTE: The grid squares provide a ready method of referring to or locating features. They are four miles in side and subdivided into quarters by dotted lines. The east and west sides of the squares are not true north and south lines, but have a deflection to the east varying from 1° 59' on the east side of the map to 1° 35' on the west side. Any square is identified by the numbers along the outer border, for example: Likely will be found in the northeast quarter of square 79-300.

Price 25 cents

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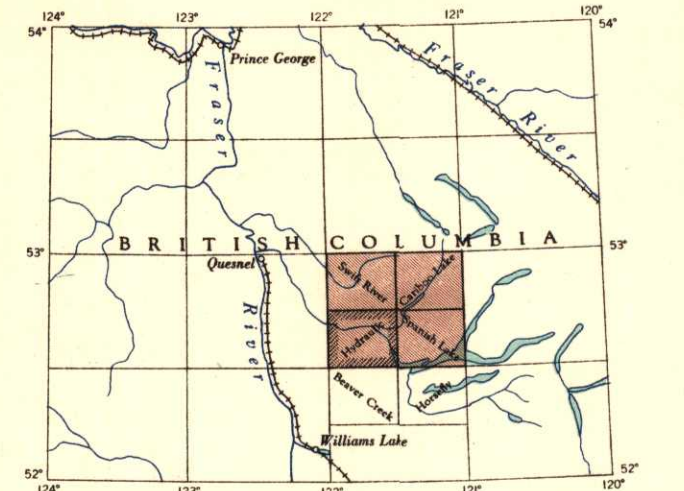


REFERENCE		REFERENCE	
Road: well travelled	.....	Non-perennial stream	.....
slightly travelled	.....	Building	.....
Telephone line	.....	Post office	.....
Surveyed line	.....	Lot number	.....
Pack trail or path	.....	Triangulation station	.....
Ditch	.....	Camera station	.....
Marsh, bog or open muskeg	.....	Height in feet	.....
Shoal, sand or gravel	.....		.....
Wharf	.....		.....
Contours	.....		.....

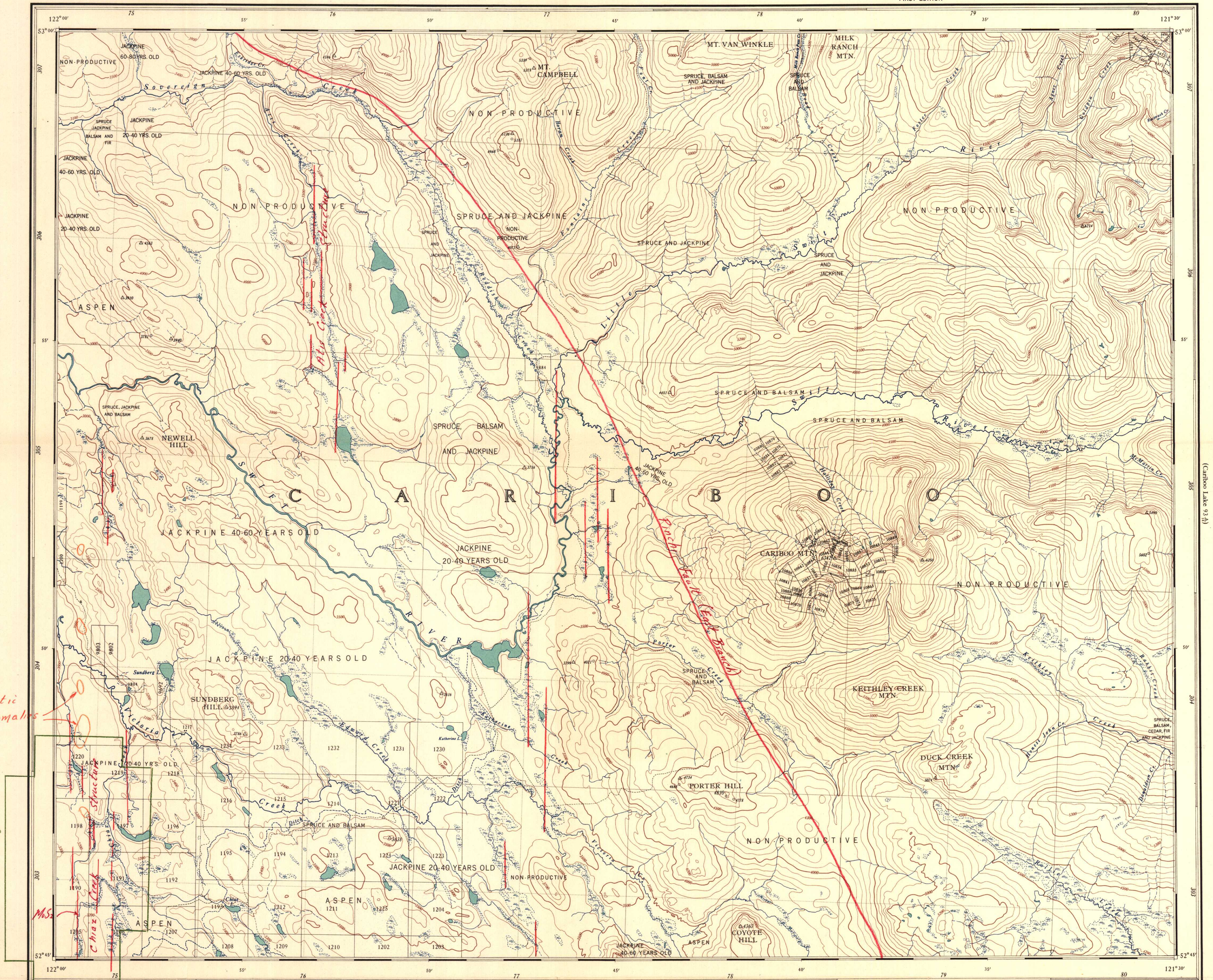
The area included in this sheet is generally wooded. For details regarding woods see Forest Cover Edition.

### FOREST COVER EDITION

REFERENCE	
Mature timber	.....
Immature timber	.....
Logged and burned areas	.....
Scrub	.....



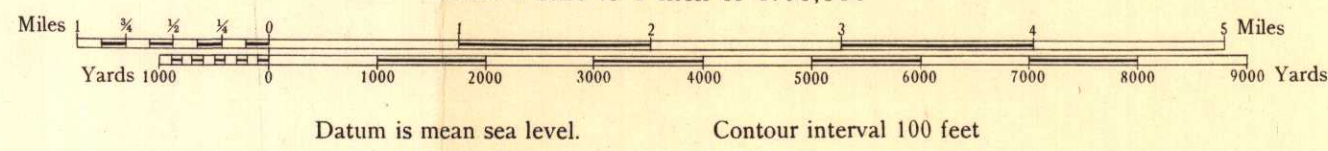
NOTE: On the above index the sheets published are shown tinted brown.



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 The magnetic declination for 1949 is approximately 26° east of true north and is based on observations made at magnetic stations adjacent to the area. The declination is decreasing 4 minutes annually.

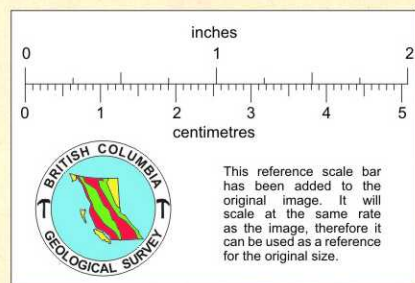
(Hydraulic 93 A)  
**SWIFT RIVER**  
 BRITISH COLUMBIA

Scale 1 mile to 1 inch or 1:63,360



Copies may be obtained from the Map Distribution Office, Department of Mines and Resources, Ottawa, or from the Surveyor General, Department of Lands and Forests, Victoria, B.C.

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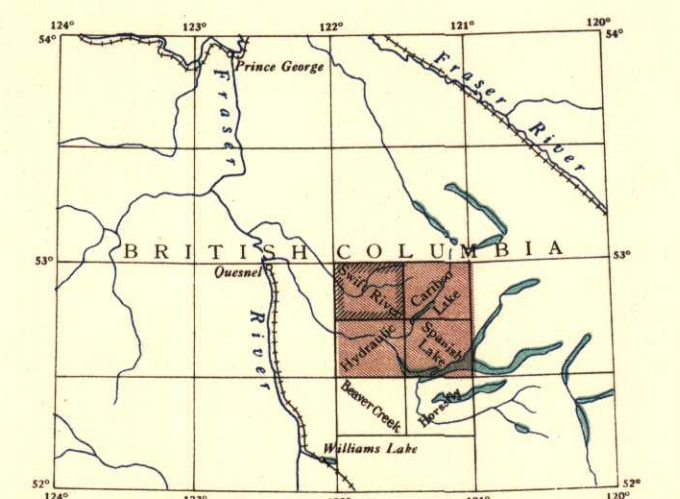
REFERENCE

Surveyed line	Building
Pack trail or path	Lot number
Ditch	Triangulation station
Marsh, bog or open muskeg	Camera station
Contours	Height in feet
Non-perennial stream	

FOREST COVER EDITION

REFERENCE

Mature timber	
Immature timber	
Logged and burned areas	
Scrub	
Barren surface	UNCOLOURED



NOTE: The grid squares provide a ready method of referring to or locating features. They are four miles in a side and subdivided into quarters by dotted lines. The east and west sides of the squares are not true north and south lines, but have a deflection to the east varying from 1° 30' on the west side of the map to 1° 35' on the east side. Any square is identified by the numbers along the outer border, for example: Katherine Lake will be found in the southwest quarter of square 77-304.

Price 25 cents