

423

NOBANDA EXPLORATION COMPANY, LIMITED

GEOLOGICAL SURVEY

of the

TRANQUIL CREEK PROPERTY

ONE AND ONE HALF MILES WEST

of

NORTH END, DEER BAY, TOPINO INLET

TOPINO, B.C.

49° 125° SOUTHEAST 54

92F/4E

M.M. Mendes, P.Eng.

May - June, 1962

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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 423 MAP

NORANDA EXPLORATION COMPANY, LIMITED

COST OF GEOLOGICAL SURVEY

of the

TRANQUIL CREEK PROPERTY

ONE AND ONE HALF MILES WEST

of

NORTH END, DEER BAY, TOPINO INLET

TOPINO, B.C.

May - June, 1962

All work performed by June 3rd, 1962.

PROFESSIONAL:

SUPERVISORY - 2 days @ \$50.00/day	\$100.00
MAPPING - 8 days @ \$35.00/day	280.00

TECHNICAL:

DRAUGHTING - 3 days @ \$25.00/day	75.00
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LABOR:

LINE CUTTING - 8 days @ \$15.00/day	120.00
SOIL SAMPLING 10 days @ \$15.00/day	150.00

TOTAL	<u>\$725.00</u>
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COST DISTRIBUTION

<u>CLAIM</u>	<u>DISTRIBUTION/CLAIM</u>
H.M. No. 1	\$100.00
H.M. No. 2	100.00
H.M. No. 3	100.00
H.M. No. 4	100.00
H.M. No. 5	100.00
H.M. No. 6	100.00
<u>6 Claims</u>	<u>TOTAL - \$600.00</u>

W. H. King P. Eng.

NORANDA EXPLORATION COMPANY, LIMITED

GEOLOGICAL SURVEY

of the

TRANQUIL CREEK PROPERTY

INTRODUCTION

This report is based on information gained from geological reconnaissance and geochemical prospecting during the last week of May and early June 1962.

The portion of "Tranquil Creek Property" investigated is the six H.M. Claims which lie on a ridge of McCaw Peninsula, about one and a half miles west of the north end of Deer Bay.

In the area around Deer Bay, Tofino Inlet, numerous showings of chalcopyrite, magnetite and pyrrhotite have been investigated over a period of many years. Occurrences of molybdenite, gold, nickel and sphalerite have also been noted and work done on same.

Numerous lenses of chalcopyrite, pyrrhotite and pyrite, and one showing of complex sulphide mineralization containing pyrite, chalcopyrite and nickel minerals were found to the northeast and to the south respectively of the H.M. mineral claims.

Pyrite, magnetite and chalcopyrite showings occur on the "Tranquil Creek Property" and some work was done on them in 1961. An airborne magnetic anomaly was recorded on the H.M. Claim group which forms the southeast portion of the property.

The geological and geophysical conditions reported as a result of previous work were considered favorable and further exploration was thus justified.

A party of two geologists and four assistants were flown from Tofino to the property by helicopter on May 26th, 1962. A camp was set up on a ridge at 3100' elevation, about 700' north from the H.M. claim group. The weather was cloudy with light rain and occasional hail throughout the period of examination.

The H.M. claims are well timbered to the top of the ridge by large fir and hemlock trees. Underbrush is light except at lower elevations.

TOPOGRAPHY

The terrain of the H.M. claim group is rugged and is characterized by a steeply rising north-south trending ridge. A step-like series of sheer cliffs are common on both sides of the ridge. An east-west drainage pattern cuts the ridge in several places.

GEOLOGY

The area consists predominantly of a series of metasediments and volcanic flows, probably of the lower Triassic Vancouver group. The volcanic flows occupies the northern half of H.M. 1 and 2 claims (see geological map). Metasediments cover most of the southern part of the claim group. A few andesitic dikes were observed.

The volcanic flows are dark greenish gray in color and generally aphanitic. A fine grained phase with visible crystals was found in places. The flows are probably of an andesitic composition.

The metasediments are quite thick and consists of impure quartzite, argillite, tuffaceous sediments and limestone. Descriptions of the sedimentary rock types follow.

The quartzite is fine grained and light gray in color. Examination by hand lens shows it to be composed of fine grained quartz and minor amounts of brownish biotite crystals.

Argillite beds are fine grained and light in color. Finely banded structures are common. Silicification gives the rock a cherty appearance in places.

Dark greenish gray tuffaceous sediments are found intercalated with the other members of the sedimentary series. They are massive in appearance, aphanitic in texture, and resemble flows.

Fine grained, light gray limestone occurs on thin beds in the metasediments. The rock is not abundant in the area.

Dark gray andesitic dikes were found in a few places. They probably occupied northwest fractures in the metasediments.

Special attention was paid to float found in the area. Large angular boulders of medium grained diorite were noted in places. Boulders and gravels originating from the argillaceous and arenaceous members of the metasediments and pyroclastic flow fragments are common.

STRUCTURE

Well bedded and finely banded structures are the characteristic features of the metasediments.

Volcanic flows and tuffaceous sediments generally are thick and massive in appearance.

The metasediments strike north 35° west on the average and dip northeasterly at angles varying from 30° to 70° .

The rocks are not strongly fractured. The most common set of fractures observed in the metasediments strikes in a northeasterly direction and dips steeply to the northwest.

The rock structure of the H.M. Claim group is quite simple. Local changes of strike are possibly due to minor drag folding.

No direct contact between the volcanics and the metasediments was observed but probably the former conformably overlies the latter.

ROCK ALTERATION AND METAMORPHISM

The rocks appear to be only moderately altered. Yellowish brown, rusty weathered surfaces were observed on outcrops of the metasediments. The color is due to oxidation of pyrite sparsely disseminated in the rock. A thinly bedded rock approaching a sericite-quartz schist was found in a creek on the H.M. 3 claim. Brownish biotite and micaceous minerals occur in the metasediments. The grade of metamorphism in the rock is low and possibly belongs to the green schist facies which corresponds to the chlorite and biotite grade of Harker.

GEOCHEMISTRY

A systematic soil survey with samples checked for soluble copper content was carried out, for the purpose of detecting any concentration of sulphide mineralization. It was considered probable that nickel or other sulphides would be accompanied by copper, thus making one test valid for all metals.

A grid consisting of three lines, each 4500' long and 1000' apart, were run parallel to the N.M. claim line by tape and compass. The zero baseline coincided with the claim line and the crest of the ridge. The 10 West and 10 East section lines lie on the west and east sides of the ridge respectively.

Soil samples were taken below the humus zone every 100' along each base line. In all, 135 samples were checked in the field for soluble copper using the acid extraction method of Coast Eldridge Ltd., the suppliers of the sampling kit used in the survey.

A soil sample map has been prepared and accompanies this report showing copper values in parts per million.

The values of soluble copper were very low and suggest a paucity of copper and other sulphide mineralization in the area sampled.

ECONOMIC GEOLOGY

The rocks of the property appear barren of sulphide mineralization. A few unmineralized quartz veins cut the metasediments. Pyrite crystals are sparsely disseminated in the rocks. Floats of medium grained, dark colored diorite are light in weight and not attracted by the magnet.

The contact between the flows and the metasediments was prospected. Contact metamorphism appears absent. The thin beds of limestone in the metasediments are unaltered.

Traverses were run in the area where an airborne magnetic high was recorded. An unmineralized bluff of well bedded metasediments coincides with the magnetic anomaly.

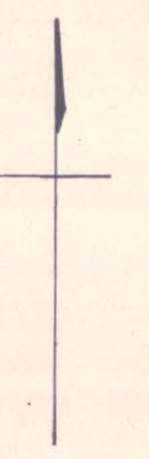
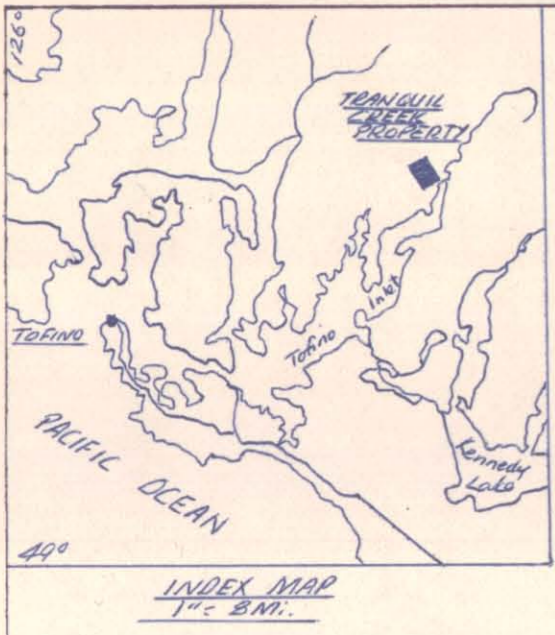
Structural features do not appear to be particularly favorable for the

deposition of metallic ores as the rocks are generally massive and only slightly fractured. Intrusive rocks are absent except for a few minor andesitic dikes.

CONCLUSIONS

- (1) An examination was justified by the presence of a magnetic anomaly in an area of wide spread mineral occurrences.
- (2) The magnetic anomaly is of low intensity with a background of 56,600 gammas and a peak of 57,260 gammas. It appears to be an expression of the north-south trending ridge, the most prominent topographic feature of the property. Any relationship with deeply buried ore deposits is considered remote.
- (3) Geochemical results, rock lithology and structural features of the H.H. group of claims all suggest that the finding of economic mineral deposits is highly improbable.
- (4) Known copper-iron deposits of the "Tranquil Creek Property" have been examined repeatedly by competent engineers. A further examination of these deposits was not considered justified by records of earlier exploration work or by the absence of significant magnetic anomalies over the mineralized areas.
- (5) While the presence of an economic sulphide deposit on the "Tranquil Creek Property" cannot be entirely ruled out it is virtually certain that an economic iron deposit would have been detected by the airborne magnetic survey made by Pegasus Explorations.
- (6) Further work by Noranda Exploration Company, Limited cannot be justified at this time.

Respectfully submitted,
N. M. Lindsay
Norris M. Lindsay, P. Eng.
Assistant Western Superintendent



LEGEND

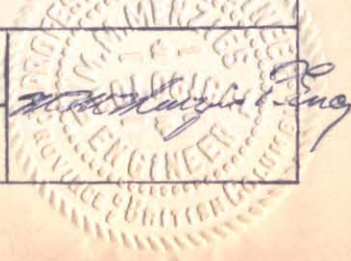
- 2** Volcanic flows of Intermediate Composition
- 1** Undifferentiated Metasediments: Impure fine grained Quartzite, Argillite, Tuffaceous sediments, Thin limestone beds.
- Strike and dip of the bedding
- Fracturing
- Inferred Geological boundary
- Approximate location of the Outcrop
- Claim Boundary

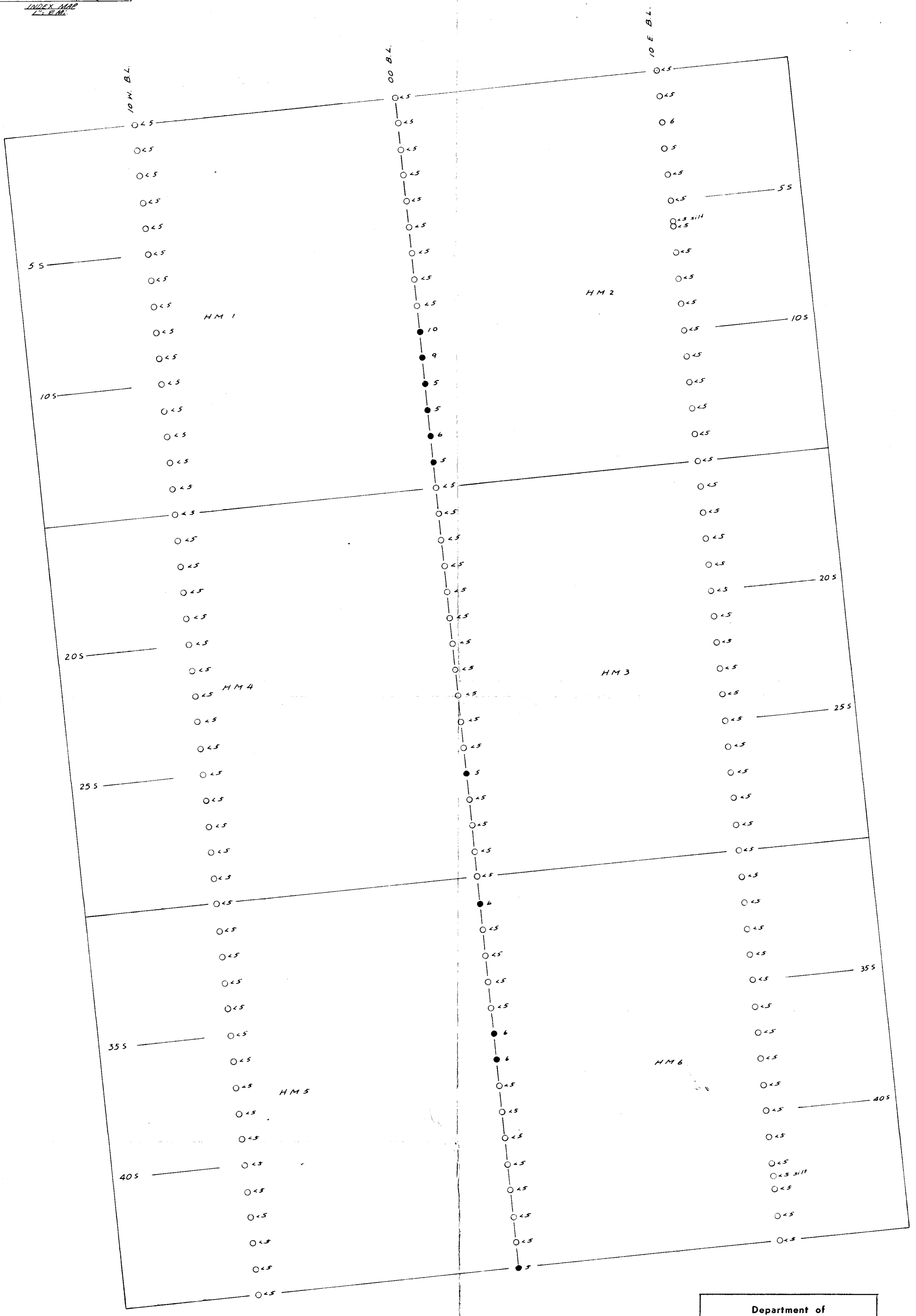
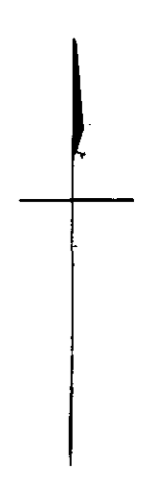
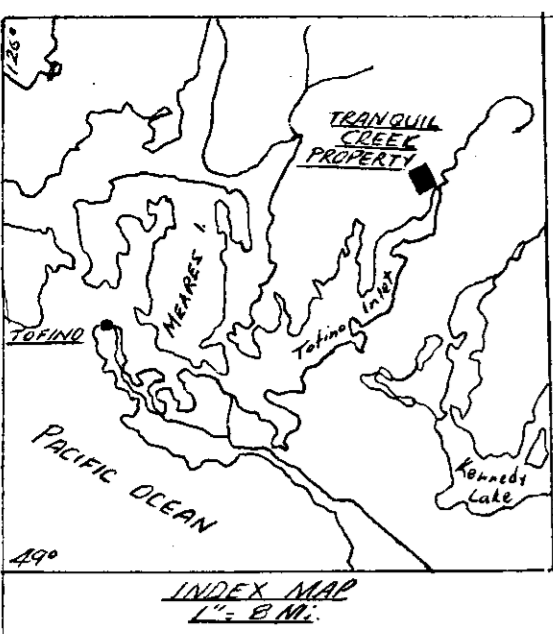
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ASSESSMENT REPORT
NO. **423** MAP **1**

(M)

NORANDA EXPLORATION COMPANY LTD
TRANQUIL CREEK PROPERTY
GEOLOGICAL MAP
SCALE 1" = 200'
MAY 1962

423



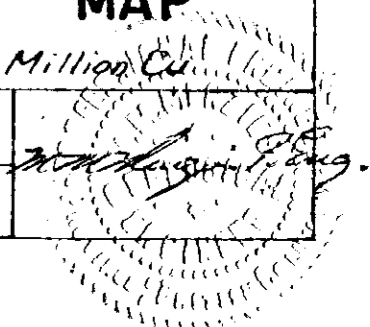


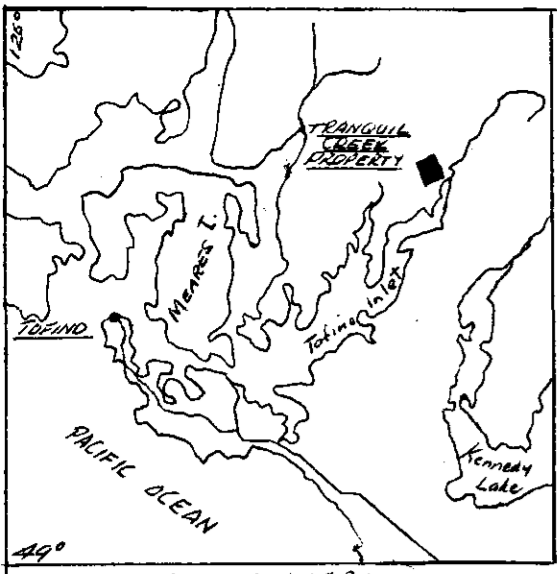
○ <5 Less than 5 parts per Million Cu
 ● 5 - 10 parts per Million Cu

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NORANDA EXPLORATION COMPANY LTD	
TRANQUIL CREEK PROPERTY	
GEOCHEMICAL MAP	
Units: parts per Million Cu	
SCALE 1" = 200'	
MAY 1962	





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(Map after Chapman, Wood and Griswold)
Airborn Geophysical Survey 1"=50000 scale

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NORANDA EXPLORATION COMPANY LTD
TRANQUIL CREEK PROPERTY
MAGNETOMETRIC MAP
SCALE 1" = 200'
MAY 1962

