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92-F-9W

MICKLE-SAMUELSON OPTION

TEXADA ISLAND, B.C.

P.N. 158

Vancouver, B.C.

April, 1971

R. Wares

MICKLE-SAMUELSON OPTION

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## INTRODUCTION

The M-S Option comprises a group of claims that straddle the contact of a composite granodiorite pluton with a sequence of basic and fragmental volcanics.

A strong shear zone transects the contact of the pluton and is paralleled by a wide zone of strongly developed fracture cleavage. The fractures are commonly coated with pyrite with less amounts of chalcopyrite and molybdenite. The fracture system appears to form a fan shaped zone within which the chalcopyrite and molybdenite are located in the apex of this fracture dome and the pyrite largely in the margins. This mineral zonation is independent of lithology.

Soil geochemical work and I.P. bear out this conclusion. The I.P. anomalies are predominantly in the pyritic envelope. Drilling was initiated to cross section the structural and geochemical targets and revealed low grade copper mineralization in a narrow zone. This mineralization was neither extensive enough or of a high enough grade to warrant further work and the property was dropped.

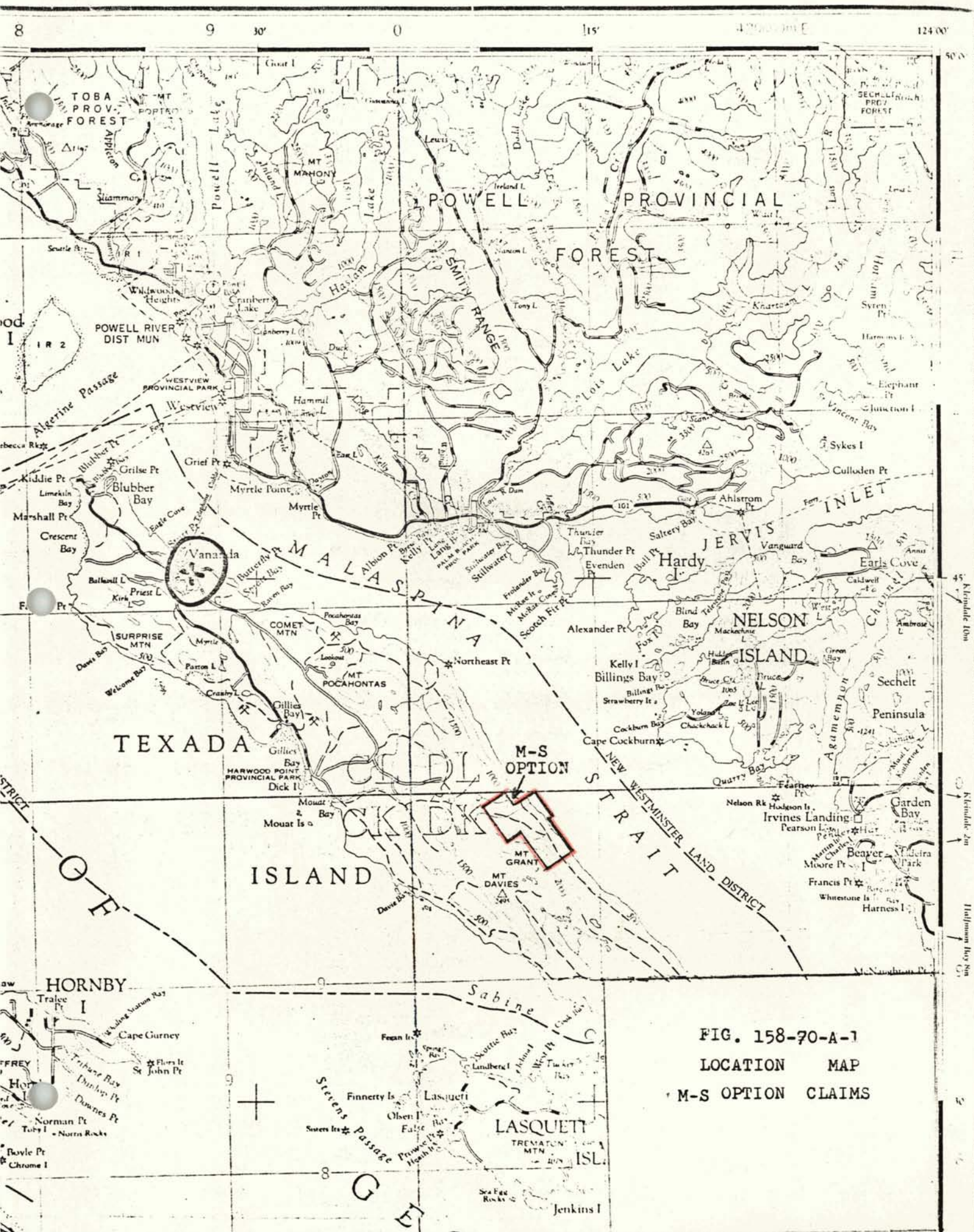


FIG. 158-70-A-1  
 LOCATION MAP  
 M-S OPTION CLAIMS

1:1 LOCATION

The Mickle-Samuelson Option hereafter referred to as the M-S Option, is located on the east coast of Texada Island, B.C. (Fig. 158-70-A-1). It is located about 20 miles south east of Vananda.

1:2 ACCESS

Access to the property is by four-wheel-drive vehicle from Vananda or Blubber Bay. The latter can be reached from Powell River by ferry.

1:3 TOPOGRAPHY

The M-S Option is located on the east coast of Texada Island and ranges in relief from sea level to over 2,000 feet. The property is largely on a bench about 1,500 feet which has a steep slope to sea level.

The greater part of the work was done on the area about 1,500 feet above sea level.

1:4 PREVIOUS WORK

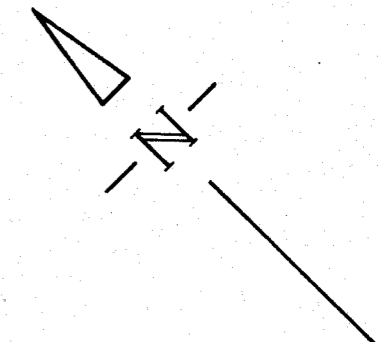
There is evidence that the property has been the object of intermittent prospecting efforts but that nothing of a serious nature in prospecting had been carried out prior to this investigation.

1:5 CLAIM STATUS

The group investigated comprises 66 claims, staked by R. Mickle and R. Samuelson between December 1969 and February 1970. The distribution of the claims is shown in Fig. 158-70-B-1.

Malaspina Strait

Bob 39 30919	Bob 37 30917	Bob 35 30915	Tex 29 30669	Tex 30 30670	Tex 9 30480	Tex 10 30481	Bob 10 30491	Bob 9 30490							
Bob 40 30940	Bob 38 30918	Bob 36 30916	Tex 27 30667	Tex 28 30668	Tex 7 30478	Tex 8 30479	Bob 8 30489	Bob 7 30488	Bob 20 30534	Bob 19 30533	Bob 27 30673	Bob 28 30674	Bob 31 30677	Bob 32 30678	
			Tex 25 30665	Tex 26 30666	Tex 5 30476	Tex 6 30477	Bob 5 30486	Bob 6 30487	Bob 18 30532	Bob 17 30531	Bob 25 30671	Bob 26 30672	Bob 29 30675	Bob 30 30676	
			Tex 23 30520	Tex 24 30521	Tex 3 30474	Tex 4 30475	Bob 3 30484	Bob 4 30485	Bob 16 30530	Bob 15 30529	Bob 24 30538	Bob 23 30537	Bob 33 30679	Bob 34 30680	
			Bob 12 30493	Bob 11 30492	Tex 1 30472	Tex 2 30473	Bob 1 30482	Bob 2 30483	Bob 14 30528	Bob 13 30527	Bob 22 30536	Bob 21 30535			
			Tex 19 30516	Tex 20 30517	Tex 11 30508	Tex 12 30509	Tex 17 30514	Tex 18 30515							
			Tex 21 30518	Tex 22 30519	Tex 13 30510	Tex 14 30511	Tex 15 30512	Tex 16 30513							
			Tex 33 31432	Tex 34 31433	Tex 31 31430	Tex 32 31431									



□ W.P. Witness Post

FALCONBRIDGE NICKEL MINES LTD.

PROPERTY: M-S OPTION

LOCATION: TEXADA ISLAND

TYPE OF MAP: CLAIM

BASED ON: CLAIM MAPS

DATE OF WORK: Dec. 1969, Jan. 1970

DATE: Dec. 1970

DRAWN BY: G.T.



SCALE: 1 INCH TO

Claim Distribution, P.N. 158, Texada Island



2:1 REGIONAL GEOLOGY

The M-S Option is located in and adjacent to a granodiorite intrusion intruded into a suite of basic volcanics.

The geology of Texada Island (Fig. 158-70-G-1) comprises essentially a folded sequence of basic volcanics (termed the Karmutsen volcanics). Texada Island can be likened to a keel of a ship and comprises a gently folded syncline, plunging to the north. The extreme southern portion of the island comprises a late Paleozoic carbonate sequence, unconformably overlain by a thick sequence of basic volcanics (at least 20,000 feet thick).

This sequence of the Karmutsen volcanics is similar in many aspects to that of Vancouver Island. It is predominantly basic in character and consists of intercalated pillowed and massive basaltic flows with intercalated agglomeratic sequences. Interflow sediments are not common though some calcareous units are present in the sequence.

Conformably overlying the basaltic rocks is a thick sequence of calcareous rocks termed the Quatsino formation. These units are exposed at the northern portion of the island and generally comprise limestones and silty limestones.

The basic sequence is cut by a number of granitic intrusions exposed throughout the stratigraphic section. The thick Quatsino formation, however, appears to have acted as a major control in the ascent of the intrusions and few of the intrusions do in fact cut the limestones.

The "throttling" effect of the limestone is a major control of mineral deposition. Principal among these is the Texada magnetite-copper

skarn deposits which are located at and close to the limestone contact where sill complexes exist, caused by the change in PH conditions at the contact. Some copper-molybdenum mineralization is present in some of the stocks in that locality.

One of the granodiorite bodies that cut the Karmutsen volcanics has been dated at  $120 \times 10^6$  yrs. by the G.S.C. This age date is from an intrusion about eight miles north of the M-S Option.

Analysis of topographic linears in Texada Island and the mainland to the east, suggest that there is a strongly developed fracture system trending about  $070^\circ$  that transects the southern part of Texada Island, and which appears on the mainland. It is apparent that Jervis Inlet is a portion of this structural pattern. The M-S Option is located in this structural zone and it is highly probable that the structural pattern on the M-S Option is repeated at several localities along the linear.

## 2:2 REGIONAL GEOCHEMISTRY

A stream silt sediment survey was carried out in the southern portion of Texada Island to delineate target areas.

This survey revealed a number of anomalous areas in Cu., Mo., Ag., though not all three elements exhibit coincidental anomalies. It appears that the area centering on the M-S Option exhibits the most systematic anomalies.

The Karmutsen volcanics appear to give rise to scattered, weakly anomalous copper and silver values which are probably caused by interflow sediments. The Karmutsen series is frequently characterized by altered interflow sediments which carry minor amounts of native copper.

The area of the M-S Option exhibits one consistent anomalous

section east of Bob Lake. This anomalous area appears to comprise part of the shear zone present in the M-S Option and which was investigated by ground prospecting.

### 2:3 REGIONAL GEOPHYSICS

The southern portion of Texada Island was covered by Federal-Provincial aeromagnetic surveys in 1957. The portion of the data applicable to the M-S Option is shown in Fig. 158-70-GP-1.

The Karmutsen volcanics show up as a distinct zone, and, likewise, the granodiorite. The structural pattern trending 070° is not readily apparent in the data. The data is of little relevance to the elucidation of extensions or structural repetitions of the M-S Option mineralization.

### 3:1 GEOLOGY

The M-S Option straddles the contact of the composite granodiorite intrusion with the basic volcanics and fragmentals of the Karmutsen group. The contact is cut by a strong fracture zone which gives rise to a pervasive fracture zone with coatings of pyrite, chalcopyrite and molybdenite along the fractures.

### 3:2 GRANITIC ROCKS

The granitic body that comprises the larger part of the M-S Option is a composite unit (Fig. 158-70-G-1).

The core of the intrusion comprises a medium grained biotite granodiorite which is sparsely porphyritic. The marginal zone, which is gradational from the core consists of a hornblende granodiorite,

medium grained and which possesses a weak igneous lamination. This is characterized by a lamination of platy potash feldspar crystals.

The lamination is steeply dipping to the south west at angles from 60° to vertical. It is interpreted as a flow foliation developed in the marginal zone parallel to the contact of the intrusion. The marginal portion exhibits some low retrograde alteration of hornblende to actinolite with sparse epidotic alteration. There is apparently no significant alteration associated with the widespread fracture zone.

### 3:3 VOLCANIC ROCKS

The volcanic rocks mapped within the central portion of the M-S Option comprise basaltic flows and fragmental rocks altered to low grade regional metamorphic assemblages of albite-epidote.

The flows are locally pillowed and, where mapped, the pillowed units exhibit a consistent "tops" to the southwest attitude. Carbonate amygdules are present on occasion. The basaltic flows are occasionally porphyritic with a streaky foliation of plagioclase phenocrysts present.

The fragmental units are chiefly pillow agglomerates comprising a disaggregated assemblage of broken pillows in a predominantly chloritic matrix. These do not appear to be agglomeratic units with acidic fragments present.

There are apparently gradations in finer grained tuffaceous units but these are not widespread. Within the mapped area, the units have a consistent strike of about 310°.

Several flow units were mapped as andesitic units but they were not differentiated in the map.

Close to the contact of the intrusion there is present a thin zone of amphibolized volcanics. This zone is probably up to 20 - 30 feet in width and is the only clear metamorphic effect of the intrusion on the volcanics.

#### 3:4 DYKE ROCKS

There are present within the area several distinct dykes and sills.

The most prominent unit is a porphyritic dacite that forms sills and cross cutting dykes. The rock comprises hornblende phenocrysts up to 1/2 inches in length in a pale cream sericitic matrix.

Dykes of andesitic affinities cross cut the intrusion and the volcanics and appear to be gradational into a hornblende microdiorite.

The dyke units appear to be affected by the widespread fracturing and locally carry pyrite along the fractures.

#### 3:5 STRUCTURAL GEOLOGY

The essential feature of the structural geology is the persistent fracture pattern that transects the granodiorite contact.

The structural pattern is well demonstrated in the mosaic derived from air photographs (Fig. 158-70-G-2). The major south westerly trending lineaments are the major controlling fracture or fault zones and the close pattern of fractures cutting across the granodiorite contact is evident.

The detailed mapping included a structural analysis of the property. This was carried out by a fracture intensity study on centres at 200 foot intervals along the old geochemical grid.

The intensity of fractures in a 2 ft. x 2 ft. area was measured and plotted with the length of strike proportional to the intensity of the fracturing.

The data is shown in Fig. 158-70-G-1 and the persistent south-westerly striking fracture is clearly the most persistent fracture trend present and greatly predominates over the other fractures present.

#### 4:1 GEOCHEMISTRY

The initial detailed work on the property comprised a detailed geochemical soil grid. The results (Fig. 158-70-E-1) indicate an elongate anomolous area of coincidental Cu-Mo anomalies that transgresses the granodiorite contact and which parallels the major fracture trend.

A comprehensive report is included in the Appendix detailing the analytical techniques and the statistical data. The writer concurs with the interpretation that there is a close correlation of soil anomalies with bedrock mineralization. The drilling data confirms this interpretation.

D.D.H. #1,2,3 were drilled to cross section an I.P. anomaly flanking a geochemical high and revealed fracture controlled pyrite which is replaced by fracture controlled chalcopyrite in the area of the geochemical high, though the grade is not very high.

D.D.H. #4,5 were drilled to check I.P. and geochemical anomalies in the area of the granitic rocks. The I.P. anomalies were attributable to pyrite while the geochemical high is derived from low grade copper mineralization.

Cold extractable copper data was obtained in the central portion of the property. The results indicate that some dispersion has taken place from the anomalous areas.

5:1 GEOPHYSICS

An induced polarization, time domain survey was carried out in the central portion of the property.

The survey was plagued by instrument malfunctions which necessitated a change of equipment when the survey was 70% complete. The data was not strictly comparable because of the different equipment capabilities. The initial instrument used was a Hunttec MK IV receiver which was superceded by a Scintrex MK II unit.

There was a linear relationship between chargeabilities of both instruments, revealed in duplicate surveys. However resistivity data was not related in such a fashion as the instruments differed in their circuits and, because of this, no metal factors were calculable.

The chargeability map (Fig. 158-70-D-2) indicates that there is a crude semi-elliptical distribution of anomalous areas that transgresses the contact of the granodiorite body and is unrelated to the contact.

The drilling data clearly indicates that the anomalies are attributable to pyritic concentrations both along hairline fractures and as dilatant gashes in some movement zones.

The central zone where low chargeabilities are present is coincidental with the soil geochemical anomalies and the drilling indicates that this central zone is pyrite deficient with hairline fractures being coated with chalcopyrite.

The I.P. techniques have not been a direct tool in exploration but rather an indirect tool only revealing the fringes of the viable mineralization. In terms of cost effectiveness, the I.P. is not particularly valuable as there was sufficient geological control to give an idea of areal variation, though not as precise as the I.P.

Some experimental magnetometer and EM-16 traverses were run but their profile characteristics did not reveal information of any value, and, accordingly, were not utilized for a full survey.

#### 6:1 DRILLING

Nearly 1600 feet of AQ wireline drilling was carried out to check both I.P. and geochemical targets revealed by the previous surveys.

The drill core was logged and sampled in 10 foot sections. The core was logged on special drill logs that enable a quantitative estimate to be made of mineral percentages, proportion of alteration and fracture intensity. The precise symbols used are included with the drill logs.

A section was drilled (D.D.H. #1,2,3) to cross section an I.P. anomaly, geochemical anomaly and the contact of the granodiorite intrusion. The results are shown in Fig. 158-70-C-2 which revealed that the I.P. chargeability anomalies are caused by concentrations of pyrite and that, where the geochemical anomaly is present, there is a reduction of the percentage of pyrite and the appearance of chalcopyrite along the fractures. The section (158-70-C-2) transected the granodiorite contact where sparse copper mineralization was found.

The mean value for each drill hole in this section is 0.05% Cu. with individual sections of 10 feet averaging 0.25% Cu. but with no consistent mineralized section.

Hole #4 was collared to intersect an I.P. target in the granodiorite which was shown to be caused by pyrite fractures. No section greater than 0.15% Cu. was observed.



Hole #5 was collared to intersect and cross section a geochemical anomaly. The hole revealed a pyrite-deficient zone with traces of chalcopyrite and molybdenite along the fractures. This drill hole was not assayed but visual estimates did not indicate any section greater than 0.15% Cu.

Hole #6 was abandoned after 80 feet.

#### 7:1 SUMMARY

- A. The M-S Option comprises a strongly fractured zone that transgresses the contact of a composite granodiorite pluton.
- B. The fracture zone comprises a closely spaced network of fractures which carry pyrite with lesser amounts of chalcopyrite and molybdenite.
- C. There is a zonation present with a narrow core of a pyrite-deficient area with chalcopyrite succeeded outwards by the pyritic fringe.
- D. The fracture zone is a portion of a regional system.

#### 8:1 CONCLUSIONS

The M-S Option is a fracture controlled area of mineralization in which the area investigated has a narrow low grade zone of copper mineralization.

The area investigated is at an altitude of about 1500 feet, and there is some potential for the zone to be wide at lower elevations.

The extensive overburden prevents any direct prospecting of this area.

Regional extensions of the M-S Option type of mineralization should be sought and examined on Lasqueti Island, Nelson Island and the Jervis Inlet area.

The property was subsequently dropped.

Vancouver, B.C.

April, 1971

R. Wares

APPENDIX 1

ASSAYS

# CREST LABORATORIES (B.C.) LTD.

1068 HOMER STREET  
VANCOUVER 3, B.C.  
PHONE 688-8586

CREST LABORATORIES LTD.  
7911 ARGYLL ROAD  
EDMONTON 82, ALBERTA  
PHONE 469-2391

## CERTIFICATE OF ASSAY

TO ..... Falconbridge Nickel Mines Ltd. ....  
..... 1112 - West Pender Street .....  
..... VANCOUVER, B.C. ....

April 13, 1970

Lab No. 772

*I hereby certify* THAT THE FOLLOWING ARE THE RESULTS OF ASSAYS MADE BY US UPON THE HEREIN DESCRIBED SAMPLES.

MARKED	GOLD		SILVER	COPPER	MOLYBDENUM						TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent					
20610			trace	0.22	trace						
20611			---	0.04	trace						
20612			trace	0.02	trace						
20613			---	0.04	trace						
20614			---	0.04	trace						
20615			---	0.03	trace						
20616			---	0.06	trace						
20617			---	0.03	trace						
20618			---	0.05	0.01						
20619			---	0.09	trace						
20620			trace	0.09	trace						
20621			---	0.20	0.01						
20622			---	0.04	trace						
20623			---	0.05	trace						
20624			---	0.05	trace						

**NOTE:**

Rejects retained one month.  
Pulps retained three months  
unless otherwise arranged.

Gold calculated at \$..... per ounce

*S. Burgess* 4/14/70  
Registered Assayer, Province of British Columbia

(153)

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April 13, 1970

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MARKED	GOLD		SILVER	COPPER	MOLYBDENUM					TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	
20625			---	0.03	trace					
20626			---	0.03	trace					
20627			---	0.04	trace					
20628			---	0.05	trace					
20629			---	0.09	trace					
20630			---	0.07	trace					
20631			---	0.07	0.01					
20632			---	0.24	0.01					
20633			---	0.07	trace					
20634			---	0.04	0.02					
20635			---	0.08	0.01					
20636			---	0.10	0.01					
20637			---	0.13	0.01					
20638			---	0.15	0.01					
20639			---	0.06	trace					

**NOTE:**

Rejects retained one month.  
Pulps retained three months  
unless otherwise arranged.

Gold calculated at \$..... per ounce

*S. E. Bennett*  
.....  
Registered Assayer, Province of British Columbia

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April 13, 1970

Page 3...

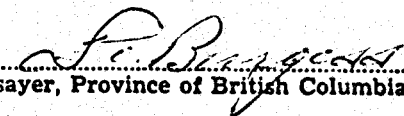
Lab No. 772

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MARKED	GOLD		SILVER	COPPER	MOLYBDENUM					TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	
20640			---	0.05	trace					
20641			---	0.03	trace					

**NOTE:**  
Rejects retained one month.  
Pulps retained three months  
unless otherwise arranged.

Gold calculated at \$..... per ounce

  
 .....  
 Registered Assayer, Province of British Columbia

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..... 1112 - West Pender Street .....  
..... VANCOUVER, B.C. ....

April 1, 1970

Lab No. 729

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MARKED	COPPER	MOLYBDENUM	MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT
	PERCENT	PERCENT						
20453	0.02	trace						
20454	0.02	trace						
20455	0.01	trace						
20456	0.02	trace						
20457	0.01	trace						
20458	0.01	trace						
20459	0.04	trace						
20460	0.01	trace						
20461	0.01	trace						
No Number	0.03	trace						

*Trade Island*  
*P.H. 15D*

NOTE:  
Rejects Retained One Month  
Pulps Retained Three Months  
Unless Otherwise Arranged.

*F. Burgess*  
\_\_\_\_\_  
Registered Assayer; Province of British Columbia

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## CERTIFICATE OF ASSAY

TO Falconbridge Nickel Mines Ltd.

April 1, 1970

1112 - West Pender Street

Lab No. 741

VANCOUVER, B.C. Attn: Mr. Roy Wares:

**I hereby certify** THAT THE FOLLOWING ARE THE RESULTS OF ASSAYS MADE BY US UPON THE HEREIN DESCRIBED SAMPLES.

MARKED	GOLD		SILVER	COPPER	MOLYBDENUM					TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	
20462			---	0.01	trace					
20463			---	0.02	trace					
20464			---	0.02	trace					
20465			---	0.02	trace					
20466			---	0.02	trace					
20467			---	0.02	trace					
20468			---	0.02	trace					
20469			---	0.02	trace					
20470			---	0.04	trace					
20471			---	0.04	trace					
20472			trace	0.05	trace					
20473			---	0.02	trace					
20474			---	0.04	trace					
20475			---	0.02	trace					
20476			---	0.02	trace					

**NOTE:**

Rejects retained one month.  
Pulps retained three months  
unless otherwise arranged.

Gold calculated at \$..... per ounce

*Texador*  
*P.A. 157*  
*(Mr. Wares)*  
*J. B. Burgess*  
.....  
Registered Assayer, Province of British Columbia



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Page 2...

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MARKED	GOLD		SILVER	COPPER	MOLYBDENUM					TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	
20477			---	0.03	trace					
20478			---	0.04	trace					
20479			---	0.01	0.02					
20480			---	0.18	0.06					
20481			---	0.06	0.01					
20482			---	0.05	trace					
20483			trace	0.04	trace					
20484			---	0.05	0.05					
20485			---	0.04	0.01					
20486			---	0.03	trace					
20487			---	0.05	trace					
20488			trace	0.03	trace					

**NOTE:**

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Pulps retained three months  
unless otherwise arranged.

Gold calculated at \$..... per ounce

*S. E. Burgess*  
.....  
Registered Assayer, Province of British Columbia

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PHONE 469-2391

## CERTIFICATE OF ASSAY

TO Salmonbridge Nickel Mines Ltd.  
1112 - West Pender Street  
VANCOUVER, B.C.

April 3, 1970

Lab No. 736

**I hereby certify** THAT THE FOLLOWING ARE THE RESULTS OF ASSAYS MADE BY US UPON THE HEREIN DESCRIBED SAMPLES.

MARKED	COPPER	MOLYBDENUM	MARKED	COPPER	MOLYBDENUM	MARKED	PERCENT	PERCENT
	PERCENT	PERCENT		PERCENT	PERCENT			
20489	0.04	trace	20604	0.16	trace			
20490	0.04	0.01	20605	0.06	trace			
20491	0.10	trace	20606	0.07	trace			
20492	0.07	0.01	20607	0.03	trace			
20493	0.06	trace	20608	0.05	trace			
20494	0.03	trace	20609	0.20	trace			
20495	0.05	trace						
20496	0.05	0.01						
20497	0.04	trace						
20498	0.04	trace						
20499	0.03	trace						
20500	0.04	trace						
20501	0.04	trace						
20602	0.03	trace						
20603	0.10	trace						

*Tennant*  
P.H. 157

*J. M. D.*

*F. B. Gordon*

Registered Assayer, Province of British Columbia

NOTE:  
Rejects Retained One Month  
Pulps Retained Three Months  
Unless Otherwise Arranged.

APPENDIX 2

COST STATEMENTS

BRITISH COLUMBIA

Project TEXADA

Location

Budget

PN 158

	CURRENT MONTH				YEAR TO DATE											
	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
<b>PROPERTY ACQUISITION</b>																
Salaries & wages																
Contract payments																
Field Expenses																
Transportation																
Assays																
<b>EXPLORATION &amp; PROSPECTING</b>																
Salaries & wages	-	212	-	(69)									2,394	2,606	2,606	2,537
Contract payments	-	-	-	-									10,149	10,149	10,149	10,149
Field Expenses	-	-	-	-									222	222	222	222
Transportation	-	39	(39)	-									944	983	944	944
Assays	-	-	-	-									932	932	932	932
	-	251	(39)	(69)									14,641	14,892	14,853	14,784
<b>GEOLOGY</b>																
Salaries & wages	-	-	259	461									3,483	3,483	3,742	4,203
Contract payments	-	-	-	-									-	-	-	-
Field Expenses	-	-	-	-									-	-	-	-
Transportation	-	-	-	-									327	327	327	327
Assays	-	-	-	-									-	-	-	-
	-	-	259	461									3,810	3,810	4,069	4,530
<b>GEOPHYSICS</b>																
Salaries & wages	-	-	-	(38)									1,328	1,328	1,328	1,290
Contract payments	40	-	-	-									2,685	2,685	2,685	2,685
Field Expenses	-	-	-	-									-	-	-	-
Transportation	-	-	-	-									74	74	74	74
Assays	-	-	-	-									-	-	-	-
	40	-	-	(38)									4,087	4,087	4,087	4,049
<b>GEOCHEMISTRY</b>																
Salaries & wages	-	-	-	243									-	-	-	243
Contract payments	-	-	-	-									-	-	-	-
Field Expenses	-	-	-	-									-	-	-	-
Transportation	-	-	-	-									35	35	35	35
Analysis - Geochem. Lab.	-	-	-	588									2,309	2,309	2,309	2,897
	-	-	-	831									2,344	2,344	2,344	3,175

BRITISH COLUMBIA

Project TEXADA

Location

Budget

PN 158

	CURRENT MONTH				YEAR TO DATE											
	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
<b>DIAMOND DRILLING</b>																
Salaries & wages	-	-	-	(167)									5,881	5,881	5,881	5,714
Contract payments	-	-	-	-									-	-	-	-
Field Expenses	-	-	-	-									2,712	2,712	2,712	2,712
Transportation	-	-	-	-									182	182	182	182
Assays	-	-	-	-									-	-	-	-
<b>PHYSICAL WORK</b>				(167)									8,775	8,775	8,775	8,608
Salaries & wages	-	-	-	(16)									529	529	529	513
Contract payments	-	-	-	-									-	-	-	-
Field Expenses	-	-	-	-									-	-	-	-
Transportation	-	-	-	-									-	-	-	-
Assays	-	-	-	(16)									529	529	529	513
<b>OPTION PAYMENTS &amp; PARTIC. DRAUGHTING</b>																
PROPERTY MAINTENANCE	-	-	-	11									199	199	199	210
VANCOUVER OFFICE EXPENSE	-	95	116	(422)									50	50	50	50
OTHER EXPENSES	-	-	-	-									6,822	6,917	7,033	6,611
<b>CAMP OPERATION</b>		95	116	(411)									7,071	7,166	7,282	6,871
Salaries & wages	-	-	-	(43)									1,800	1,800	1,800	1,757
Camp Supplies	-	9	-	-									3,157	3,166	3,166	3,166
Hotels & Meals	-	-	-	-									477	477	477	477
<b>TOTAL</b>	40	355	336	548									46,691	47,046	47,382	47,930
<b>TRANSPORTATION</b>																
Company Helicopter	-	-	-	-									-	-	-	-
Air Charter	28	-	-	-									28	28	28	28
Local Transportation	199	39	(39)	-									199	238	199	199
Trans. to/from field	1,335	-	-	-									1,335	1,335	1,335	1,335
	1,562	39	(39)	-									1,562	1,601	1,562	1,562

APPENDIX 3

SOIL SAMPLING PROGRAM

SOIL SAMPLING PROGRAMME ON

TEXADA ISLAND

PRELIMINARY REPORT

LOCATION:

Bob and Tex claims, Texada Island.

DATE OF SURVEY:

November, 1969 - February, 1970.

PURPOSE:

Preliminary evaluation of Cu.-Mo. mineralization found by prospectors Mickle and Samuelson.

METHOD:

A total of 770 soil samples have been collected to date from the Main and Airstrip grids. Samples were taken at intervals of 200 ft. along grid lines spaced at 200 ft.

ANALYSES:

Cu. and Ag. - 10% HNO<sub>3</sub> - A.A.

Mo. - Fusion and dithiol.

CxCu. - Ammonium citrate-hydroxylamine hydrochloride buffer (pH = 4.0) - A.A.

pH - in situ determination with Metrohm - pH meter.

CONCENTRATION LEVELS:

	<u>Regional</u> <u>Bkd.</u>	<u>Local</u> <u>Bkd.</u>	<u>Anom.</u>	<u>Range</u>
(a) <u>Main Grid</u> - Cu.	<50	50-100	>100	5-2014
- Ag.	0.2-0.4	0.4-0.6	>0.6	.02-1.6
- Mo.	2	2-5	>5	< 2-120
- CxCu.	<5	5-10	>10	<1-460

CONCENTRATION LEVELS: (Con't)

	<u>Regional Bkd.</u>	<u>Local Bkd.</u>	<u>Anom.</u>	<u>Range</u>
(b) <u>Airstrip Grid</u> - Cu.	< 50	50-100	> 100	2-1405
- Ag.	0.2-0.4	0.4-0.6	> 0.6	0.2-1.1
- Mo.	< 2	< 2-5	> 5	< 2-30
(c) <u>pH Results:</u>		<u>Range</u>	<u>Mean</u>	
(i) Soils		7.3-7.8	7.5	
(ii) Stream water		8.2-8.4	8.3	
(iii) Ground water		7.4-7.6	7.5	

GENERAL:

The Main and Airstrip grids are located on the steep north-eastern slope of Texada Island. Overburden cover is thin at high elevations and rock exposures are common. The depth of overburden appears to increase rapidly on the lower slopes nearer to the shoreline. Steep slopes and the generally sparse vegetation cover resulting from a recent (1967?) forest fire favours mechanical down-slope dispersion of the soil.

The slightly alkaline soil and groundwater conditions should in theory restrict supergene mobility of Cu. and limit the importance of saline dispersion. The highly pyritic mineralization does however, favour the development of a geochemical expression for Cu. Conversely alkaline conditions theoretically favour saline dispersion of Mo.

INTERPRETATION AND RECOMMENDATIONS:

(a) Main Grid:

The principal feature of the Main Grid is a coincident Mo./Cu. anomaly with maximum dimensions of 4000 ft. (N.-S.) by 2000 ft. (E.-W.). This is enclosed by a broad zone of high back-



ground Cu. and Ag. contents which includes a number of locally anomalous Cu. values.

In detail the principal anomaly consists of a N.-S. trending zone high in both Cu. and Mo. which cuts across topographic features. This zone is parallel to a north-trending bedrock fracture pattern and may therefore be closely related to mineralization. A low order CxCu. anomaly coincides with the high Cu.-Mo. zone. With only three exceptions the CxCu./Cu. ratio is low (generally  $<5\%$ ) indicating that saline dispersion is not a significant factor in the development of the Cu. anomaly. The greater depth of overburden at lower levels of the slope may be responsible for the north-easterly truncation of this anomaly.

The foregoing suggests that the principal anomaly is closely related to bedrock mineralization. The steep slope and sparse vegetation cover favour mechanical downslope dispersion of anomalous soils and it is likely therefore, that the anomaly is displaced north-eastwards from the bedrock source.

(b) Airstrip Grid:

Cu. and Mo. anomalies on the Airstrip Grid show only slight overlap. Cu. shows a broad anomalous zone covering the eastern half of the grid and consisting in detail of three distinct anomalies. The eastern-most of these occurs in the vicinity of mineralized bedrock exposed at the Airstrip showing.

The two principal Mo. anomalies are narrow<sup>and</sup> markedly elongated in the direction of maximum topographic slope. This may be indicative of saline dispersion. The intersection of these Mo. anomalies with the E.-W. trending Cu. anomaly to the S.W. may be an indication of mineralization.

RECOMMENDATIONS:

Geochemical indications from the Main grid are extremely favourable and this area should be given priority.

On the Airstrip grid soil sampling should be extended to completely outline the areas with anomalous Cu. contents.

*R. B. Band*

Vancouver, B. C.

April, 1970

R. B. Band

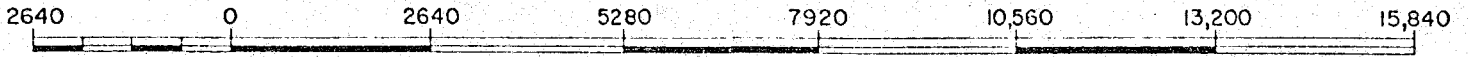
Copies to: J.J. McDougall  
D.H. Brown  
R. Wares  
XF-70-158  
XF-10-702

APPENDIX 4

I.P. SURVEY - KENTING

# TEXADA ISLAND, BRITISH COLUMBIA

SCALE



1 inch to 2640 feet



These rates apply from the day the crew arrives at the property until their departure at the end of the survey work. The stand-by rates apply on days when the crew is unable to work due to reasons beyond Hunttec's control, such as adverse weather conditions, or survey lines not cut.

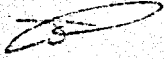
The mobilization fee and 75% of the daily charges will be billable on completion of survey work, and the balance of the contract price will become payable on submission by Hunttec of the final report and maps.

I will be in Vancouver on Monday February 23rd and will call your office at that time. I would like, if possible, to discuss the geology of the property and ascertain the nature of the targets being sought, so that the optimum survey techniques will be used.

If these specifications are to your satisfaction would you please sign the duplicate copy of this letter as our authorization to proceed with the survey work.


Yours truly,

HUNTEC DIVISION  
Kenting Exploration Services Limited



A. R. Dodds  
Senior Geophysicist

Approved and Authorized:



A. H. Brown  
Falconbridge Nickel Mines Limited

ARD:db

original returned Mar. 2/70



**HUNTEC - Earth Sciences Division**

Phone (403) 266-4041, Telex 038-22630  
2nd Floor, 224 - 9th Avenue S.W.  
Calgary 2, Alberta, Canada

February 18, 1970.

Falconbridge Nickel Mines Limited,  
504 - 1112 West Pender Street,  
VANCOUVER 1, B.C.

Attention: Mr. S. N. Charteris

Re: Induced Polarization Survey - Texada Island, B.C.

Dear Mr. Charteris:

This is to confirm the availability of an Induced Polarization crew to cover your property on Texada Island, B.C., starting approximately February 24th. We understand that precut survey lines are spaced at 400 foot intervals and that readings are required at 200 and 400 foot electrode separations, every 200 feet along the survey lines.

The breakdown of responsibilities is as follows:

(a) Hunttec will provide:

- 1 - 2.5 Kilowatt I.P. Unit
- 2 - Operators
- Final maps and interpretation in a formal report

(b) Falconbridge will provide:

- 2 - Helpers
- Vehicle for transportation of the survey crew from Blubber Bay to the property
- Board and lodging for the Hunttec personnel

Our charges for this work will be:

Per working day	\$275.00
Per stand-by day	\$165.00
<b>Mobilization and De-mobilization (flat fee)</b>	<b>\$300.00</b>

APPENDIX 5

DRILL LOGS

LEGEND

Fractures = Number of fractures per foot of drill core

Lithology 1 = fine grained  
 2 = medium grained  
 3 = coarse grained  
 4 = porphyritic  
 5 = granoblastic

- 4a Andesite dyke.
- 4b Porphyritic dacite.
- 4c Hornblende microdiorite.

Alteration Mineralization Quantitative estimates of proportion of minerals or alteration present

- 3a Quartz diorite.
- 3b Quartz monzonite.
- 3c Granodiorite.
- 3d Granite.
- 3e Aplite.

tr. = trace  
 1 = trace to 1/2% by volume  
 2 = 1/2% to 1% by volume  
 3 = 1% to 3%  
 4 = 3% to 5%  
 5 = 5%

- 2a Metabasalt.
- 2b Meta-andesite.
- 2c Meta-tuff.
- 2d Meta agglomerate.
- 2e Pillow breccia.
- 2x Amphibolised volcanics.

(averaged over 10' sections)

Subscripts refer to mode of occurrence

F = fractures  
 D = disseminated  
 F,D = occurring in both fractures

Ep = epidote  
 Cl = chlorite  
 Ca = calcite  
 Q = quartz  
 F = feldspar  
 py = pyrite  
 cpy = chalcopyrite  
 Mo = molybdenite

Example

Example	Fracture	Lithology	Ep	Cl	Ca	Q	F	py	cpy	Mo
2a	10	1,4	2	1				1	tr.	
			F	D				F	F	

Metabasalt, fine grained, porphyritic, with up to 1% epidote along fractures, disseminated chlorite and up to 1% pyrite, trace chalcopyrite along fractures.



# DRILL HOLE RECORD

FALCONBRIDGE NICKEL MINES LIMITED

FN668

Inclination	Bearing	PROPERTY	M-S Option	Length	382'	HOLE No.	70-1
		Location	Texada Island, B.C.	Hor. Comp.	/Vert. Comp.	Sheet	1 of 5
		Elevation	1700'	Bearing	090° at -45°	Logged by	R. Wares
		Coordinates	4+00S N 5+00W E	Began	/Completed	Sampled by	!. Mickle
				Core size	AQW /Recovery	HD	%

FOOTAGE From To	RECOVY Run Core	DESCRIPTION	LITHOLY Fractures	TEXTURE	ALTERATION Eb Cl Co Q F	MINERALIZATION Py Cpy Mo	GRAPHIC	SAMPLES			ASSAYS							
								No.	From	To	Fr.	Cu.	Mo.					
0	15	2a, strongly shattered, poor recovery, heavily oxidised.																
15	25	2a,b,			I I I I F D F F	2 I F F			15	25	10		0.03	tr.				
25	35	2a, porphyritic with sparse quartz stringers 27-32, 1/2% diss. py + cpy			I I I F D F	2 Tr F F			25	35	10		0.02	tr.				
35	45	35' - 42' 2a,b. 42' - 45' 2a,d, probably a pillow breccia, sparse epidotic fractures with py.			I I Tr F F F	2 I FD FD			35	45	10		0.02	tr.				
45	55	45' - 51' 2a,d, 51' - 55' 2a,b, Increase in epidotic alteration.			I I I I F F F F	2 I FD D			45	55	10		0.01	tr.				
55	65	2a,b, fracture network of epidote veinlets with minor sulphides, cross cutting qtz. stringers, sparse cpy. present.			2 I I I FD D F FD	I Tr F F			55	65	10		0.02	tr.				
65	75	2a, metamorphic overgrowths on phenocrysts, epidote pods at 69', 72'. Sulphide content diminished.			2 I Tr I FD D F F	I I F D			65	75	10		0.01	tr.				
75	85	75 - 81 2a 81 - 82 2d 82 - 85 2a Sparse Mo present, fine magnetite at 81			2 2 I 2 FD D F F	I Tr I F D F			75	85	10		0.01	tr.				
85	95	2a, minor silicification present, 1" nyrite pod at 87, epidote stringers up to 1/2" wide			2 2 I 2 FD D F F	I Tr I F D F			85	95	10		0.01	tr.				

# DRILL HOLE RECORD

FALCONBRIDGE NICKEL MINES LIMITED

Inclination		Bearing		PROPERTY	M-S Option	Length	382'	HOLE No.	70-1
Collar				Location	Texada Island, B.C.	Hor. Comp.	/Vert. Comp.	Sheet	2 / of 5
				Elevation	1700'	Bearing		Logged by	
				Coordinates	4+00 S	N	Begun	/Completed	Sampled by
					5+00 W	E	Core size	AQW /Recovery	%

FOOTAGE		RECOV'Y	DESCRIPTION	LITHOL'Y Fractures	TEXTURE	ALTERATION							MINERALIZATION				GRAPHIC	SAMPLES				ASSAYS		
From	To	Run Core				Eb	Cl	Co	Q	F	Py	Cpy	Mo						No.	From	To	Ft	Cu.	Mo.
95	105		2a, 3" epidote vein at 97 thin calcite stringers present. quartz-pyrite fractures are present.	12	1,4	2	2	1	2	1	Tr					95	105	10	0.01	tr.				
105	115		105 - 108, 2a 108 - 115, 2d  Minor feldspathization present	12	1,4	2	2	1	2	1	Tr	1				105	115	10	0.01	tr.				
115	125		2d, fracture intensity much diminished, chloritization more prominent, traces diss. cpy.	8	1,4	2	3	1	1	1	Tr	Tr				115	125	10	0.01	tr.	-			
125	135		125 - 126 2d, bedding at 70° to C.A. 126 - 135 2a,b, calcite filled amygdales 131', vague, epidotized area. Minor Mo in fractures.	10	1,4	1	2	2	1	1	Tr	Tr				125	135	10	0.02	tr.	-			
135	145		2a, minor carbonate at 142 3a, 138-139			1	1	1	1	1	Tr				135	145	10	0.02	tr.	-				
145	155		2a, sparse carbonate stringers present			2	1	1	1	1					145	155	10	0.02	tr.	-				
155	165		2a, epidotic blebs at 157'			2	1	1	1	1					155	165	10	0.02	tr.	-				
165	175		2a, calcite filled shears at 174, variable epidotization present			1	1	1		2	Tr				165	175	10	0.02	tr.	-				
175	185		2a, 2c, 183-184, epidotic stringers at 70° to C.A. at 170.			1	1	2		2	Tr				175	185	10	0.02	tr.	-				

# DRILL HOLE RECORD

FALCONBRIDGE NICKEL MINES LIMITED

<i>Collar</i>	<i>Inclination</i>	<i>Bearing</i>	PROPERTY M-S Option	Length 382'	HOLE No. 70-1
			Location Texada Island, B.C.	Hor. Comp. /Vert Comp.	Sheet 3 of 5
			Elevation	Bearing 090° at -45°	Logged by R. Wares
			Coordinates 4+00 S N	Begun /Completed	Sampled by H. Mickle
			5+00 W E	Core size AQW /Recovery %	

FOOTAGE <i>From To</i>	RECOVY <i>Run Core</i>	DESCRIPTION	LITHOLY <i>Fractures</i>	TEXTURE	ALTERATION				MINERALIZATION			GRAPHIC	SAMPLES				ASSAYS		
					Eb	Cl	Cd	O	F	Py	Co		Mo	No.	From	To	Ft	Ca.	No.
185	195	2a, calcite veinlets become more prominent towards 191			1	1	2			2	Tr		20469						
					F	D	F			FD	F		185	195	10	0.02	tr.	-	
195	205	2a, variable content of feldspar phenocrysts, sparse epidotic alteration of feldspars			2	1	1			2	Tr		20470						
					F	D	F			FD	F		195	205	10	0.04	tr.	-	
205	215	2a, increase in silicification with increase in epidotization and concomitant increase in pyritic content (disseminated)			3	2	1	2		2	1		20471						
					F	D	F	F		F	F		205	215	10	0.04	tr.	-	
215	225	2a, well broken, close fracture network developed, increase in epidotization and some minor feldspathization.			3	2				1	2	2	20472						
					FD	D				F	FD	F	215	225	10	0.05	tr.	tr.	
225	235	2a, somewhat chloritic with possibly some minor amphibole present, probably close to fault zone.			1	3	1						20473						
					FD	D	F						225	235	10	0.02	tr.	-	
235	245	2a, again chloritic with an almost hornfelsic texture, feldspar phenocrysts and calcitic amygdales are almost entirely absent; diss. py. present											20474						
													235	245	10	0.04	tr.	-	
245	255	245 - 249 2a, 249'-253' - 2c,d. 253 - 255 2a,			1	2	2			2	Tr	Tr	20475						
					F	D	F			FD	F	F	245	255	10	0.02	tr.	-	
255	265	2a, quartz rich zones at 256, 257 dyke at 260' with variable epidotization			1	2	2			2	Tr	Tr	20476						
					F	D	F			FD	F	F	255	265	10	0.02	tr.	-	
265	275	2a, epidotization and pyritic veinlets more prominent and up to 1/4" wide. 15% feldspar phenocrysts.			2	2	1			3	Tr		20477						
					FD	D	F			FD	F		265	275	10	0.03	tr.	-	

# DRILL HOLE RECORD

FALCONBRIDGE NICKEL MINES LIMITED

FNH03

<i>Inclination</i>	<i>Bearing</i>	<b>PROPERTY</b> M-S Option	<b>Length</b> 382'	<b>HOLE No.</b> 70-1
<i>Collar</i>		<b>Location</b> Texada Island, B.C.	<b>Hor. Comp.</b> /Vert Comp.	<b>Sheet</b> 4 of 5
		<b>Elevation</b> 1700'	<b>Bearing</b> 090° at -45°	<b>Logged by</b> R. Wares
		<b>Coordinates</b> 4+00 S N	<b>Begun</b> /Completed	<b>Sampled by</b> M. Wickle
		5+00 W E	<b>Core size</b> AOW /Recovery HD %	

FOOTAGE From To	RECOV'Y Run Core	DESCRIPTION	LITHOLY Fractures	TEXTURE	ALTERATION								MINERALIZATION			GRAPHIC	SAMPLES			ASSAYS		
					Eb	Cl	Ca	Q	F	Py	Cpy	Mo	No.	From	To		Ft	Cu.	Mo.	Ag.		
275	285	2a, increase in chloritization, sparse phenocrysts present calcite filled amygdules, pervasive epidotization	8	1,4	2	3	Tr					3	Tr					275	285	0.04	tr.	-
285	295	2a, extensively sheared and chloritized. 286 - 288 - strongly shattered 289 - 294 - approx. 10% pyrite, veins at specular hematite up to 1"	10	1	2	4	Tr					3	I					285	295	0.01	0.02	-
295	305	2a, epidotic stringers with minor cpy, py, mo in quartz stringers at 304, qtz. vein at 302	8	1,4	2	3					2	2	I	2				295	305	0.18	0.06	-
305	315	2a, 307 - 310, strongly shattered with frequent qtz. stringers with sparse cpy.	12	1	2	2						2	Tr					305	315	0.06	0.01	-
315	325	2a, 316 - 320 2c,d, 50% pyrite over 10" at 323'	12	1	1	2						3	Tr					315	325	0.05	tr.	-
325	335	2a, 2x, thin quartz stringers with cpy, py, trace Mo at 331	8	1	1	3	1	2				2	I	I				325	335	0.04	tr.	tr.
335	345	2x, thin films of Mo along fractures and along quartz stringers	8	1	1	3	1					2	I	I				335	345	0.05	0.05	-
345	355	2a, minor pyrite, variable epidotization	8	1	1	2	1					1	I					345	355	0.04	0.01	-
355	365	2a, traces cpy. in quartz carbonate stringers	8	1	1	1	1					1	I					355	365	0.03	tr.	-



# DRILL HOLE RECORD

FALCONBRIDGE NICKEL MINES LIMITED

FNMB

Inclination		Bearing		PROPERTY	M-S Option	Length	389'		HOLE No.	70-2	
Collar	-45		090	Location	Texada Island, B.C.	Hor. Comp.	270	Vert. Comp.	270	Sheet	1 of 5
	-40		090	Elevation		Bearing	090°		Logged by	R. Wares	
				Coordinates	4+00 S		N	Begun	27/3/70	/Completed	1/4/70
					2+00 W		E	Core size	AQW	/Recovery	ND %
										Sampled by	M. Nickle

FOOTAGE From To	RECOV Y Run Core	DESCRIPTION	LITHOL Y Fractures	TEXTURE	ALTERATION Ep   Cl   Ca   G   F	MINERALIZATION py   cpy   Mo	GRAPHIC	SAMPLES			ASSAYS	
								No.	From To	Ft	Cu	No.
0	15'	2a, leached and oxidized, pyritic stringers present.										
15	25	2a, greyish green, sparse calcite filled amygdules present. 22' to 22.8, 3a, epidotized with quartz stringers and pyritic fractures.	10	1, 4	/ 2 / /	2		15	25	10	0.04	tr
25	35	2a, variably porphyritic, epidotic alteration along pyritic stringers.	8	1, 4	/ 2 / /	2		25	35	10	0.04	tr.
35	45	2a, total pyrite content about 12%, trace Mo and cpy present, blebs of cpy at 38'	12	1, 4	/ 2 / /	3 /		35	45	10	0.10	tr.
45	55	2a, as 35'-45' 46 to 47.5 heavy pyrite mineralization (coarse euhedral) with strong associated chloritic alteration, cpy stringers at 53.5'	10	1, 4	/ 2 / /	3 /		45	55	10	0.07	tr.
55	65	2a, variably porphyritic, quartz stringers with py, cpy and trace Mo present but widely spaced.	8	1, 4	/ 2 / /	3 /		55	65	10	0.06	tr
65	75	2a, total pyrite content much reduced, cpy more prominent	8	1, 4	/ 2 / /	2 /		65	75	10	0.03	tr.
75	85	2a, qtz-calcite fractures with py and cpy present.	12	1, 4	/ 2 / /	1 /		75	85	10	0.05	tr.
85	95	2a, calcite stringer at 87, specks of ferahedrite present, thin quartz stringers present but widely spaced.	15	1, 4	/ / /	1 / /		85	95	10	0.05	0.01

# DRILL HOLE RECORD

FALCONBRIDGE NICKEL MINES LIMITED

FNH68

<i>Inclination</i>	<i>Bearing</i>	<b>PROPERTY</b> M-S Option	<b>Length</b> 389'	<b>HOLE No.</b> 70-2
<i>Collar</i> -45	090	<b>Location</b> Texada Island, B. C.	<b>Hor. Comp</b> 270 / <b>Vert Comp</b> 270	<b>Sheet</b> 2 of 5
		<b>Elevation</b>	<b>Bearing</b> 090°	<b>Logged by</b> R. Wares
		<b>Coordinates</b> 4+00 S N	<b>Begun</b> 27/3/70 / <b>Completed</b> 1/4/70	<b>Sampled by</b> M. Mickle
		2+00 W E	<b>Core size</b> AOW / <b>Recovery</b> ND %	

FOOTAGE From To	RECOVY Run Core	DESCRIPTION	LITHOLY Fractures	TEXTURE	ALTERATION Ep Cl Ca Q F	MINERALIZATION Py Cpy Mo	GRAPHIC	SAMPLES				ASSAYS	
								No.	From	To	Fr.	Cu.	Mo.
95	105	2a, as 85-95. Total pyrite content diminished. Py cpy approx. 2:1, thin calcite filled stringers present	10	1, 4	1 2 1 1 F D F F	2 1 F F		95	105	10		0.04	tr.
105	115	2a, extensively chloritized. Py cpy approx 4:1 pyrite associated with epidotic alteration.	7	1, 4	1 2 tr F D F	2 1 F F		105	115	10		0.04	tr.
115	125	2a, strongly shattered at 122' (prob. fault) Pyrite quite prominent, sparse cpy present.	14	1, 4	2 1 1 F D F	1 tr F		115	125	10		0.08	tr.
125	135	2a, low sulphide content; epidotic stringer at 133' with heavy pyrite.	10	1	2 2 1 F D F	1 1 F F		125	135	10		0.04	tr.
135	145	2a, generally fine grained, with sparse calcitic amygdules, 1/2", cpy and Mo stringer at 144.	10	1	1 2 1 F D F	1 tr tr F F F		135	145	10		0.04	tr.
145	155	2a, sparse pyrite	10	1	1 1 1 F D F	1 F		145	155	10		0.03	tr.
155	165	2a, 4b, from 161.5 to 162. trace cpy at 164.	12	1, 4	1 1 1 F D F	1 tr F F		155	165	10		0.10	tr.
165	175	2a, vein of 3a at 172' with occasional specks of cpy.	10	1, 4	2 1 1 F D F	1 tr F F		165	175	10		0.16	tr.
175	185	2a, sparse pyrite	5	1, 4	2 1 1 F D F	1 F		175	185	10		0.06	tr.

# DRILL HOLE RECORD

FALCONBRIDGE NICKEL MINES LIMITED

FNMB

<i>Inclination</i>	<i>Bearing</i>	<b>PROPERTY</b>	M-S Option	<b>Length</b>	389'	<b>HOLE No.</b>	70-2
<i>Callor</i>	=45	080	080	<b>Location</b>	Texada Island, B.C.	<b>Hor. Comp</b>	270 / <b>Vert. Comp</b> 270
				<b>Elevation</b>		<b>Bearing</b>	090°
				<b>Coordinates</b>	4+00 S N	<b>Begun</b>	27/3/70 / <b>Completed</b> 1/4/70
					2+00 W E	<b>Core size</b>	AQW / <b>Recovery</b> Nd %
							<b>Logged by</b> R. Wares
							<b>Sampled by</b> M. Mickle

FOOTAGE From To	RECOVY Run Core	DESCRIPTION	LITHOLY Fractures	TEXTURE	ALTERATION	MINERALIZATION	GRAPHIC	SAMPLES			ASSAYS		
								No.	From	To	Ft.	Cu	Mo
185	195	2a, dyke of 3a at 194	10	1, 4	1 2 1 F D F	tr tr F F		185	195	10	0.07	tr	
195	205	2a, slight increase in fractures intensity with py coating.	8	1, 4	1 2 1 F D F	1 tr F F		195	205	10	0.03	tr.	
205	215	2a, somewhat paler and less chloritized. Calcite and actinolite in stringers at 211.	12	1	1 1 1 F D F	1 tr F F		205	215	10	0.05	tr.	
215	225	2a, increase in epidotization, minor cpy and Mo. present. 1/2" blebs of cpy present with minor specularite.	15	1	2 1 1 1 F D F F	2 1 tr F F F		215	225	10	0.20	tr.	
225	235	2a, highly fractured, marked increase in calcitic fractures.	17	1, 4	2 1 2 1 F D F F	2 1 tr F F F		225	235	10	0.22	tr.	tr.
235	245	2a, py-cpy approx. 4:1, increase in total sulphide content.	15	1	2 1 2 1 F D F F	2 1 tr F F F		235	245	10	0.04	tr.	-
245	255	2a, decrease in sulphide content, much core lost.	17	1	2 1 2 F D F	2 1 tr F F F		245	255	10	0.02	tr.	tr.
255	265	256-261, calcite filled breccia zone 261-265, 2a, strongly chloritized with marked epidotization.	21	1	2 2 1 1 F D F F	1 tr F F		255	265	10	0.04	tr.	-
265	275	3" dyke of 3a at 267' 2a, with less sulphide content than 255-265.	18	1	1 2 1 F D F	1 tr F F		265	275	10	0.04	tr.	-



# DRILL HOLE RECORD

FALCONBRIDGE NICKEL MINES LIMITED

FNN88

<i>Inclination</i>	<i>Bearing</i>	PROPERTY	M-S Option	Length	389'	HOLE No.	70-2
48	090	Location	Texada Island	Hor. Comp.	270	Sheet	4 of 5
		Elevation		Bearing	090°	Logged by	R. Wares
		Coordinates	4+00 S N	Begun	27/3/70	/Completed	1/4/70
			2+00 W E	Core size	AQW	/Recovery	ND %

FOOTAGE From To	RECOVY Run Core	DESCRIPTION	LITHOLY Fractures	TEXTURE	ALTERATION	MINERALIZATION	GRAPHIC	SAMPLES			ASSAYS		
								No.	From	To	Ft	Cu	Mo.
275	285	2a, thin calcite filled fractures present, minor amphibole present.	15	1, 4	tr 2 1 F D F	tr tr F F		275	285	10	0.03	tr.	-
285	295	2a, sparse epidotic alteration with minor cpy and py.	8	1	1 2 1 F D F	tr 1 F F		285	295	10	0.06	tr.	-
295	305	2a, sulphide content diminished	8	1	1 2 1 1 F D F F	1 tr F F		295	305	10	0.03	tr.	-
305	315	2a, vague increase in pyrite content insignificant alteration.	8	1	1 2 F D	1 tr F F		305	315	10	0.05	0.01	-
315	325	2a, fracture intensity much increased with concomitant increase in sulphides.	12	1	tr 1 2 1 F D F F	2 tr F F		315	325	10	0.09	tr.	-
325	335	2a, as 315-325.	12	1	tr 1 2 1 F D F F	2 tr F F		325	335	10	0.09	tr.	tr.
335	345	2a, composite quartz-calcite vein present	6	1	tr 1 2 1 F D F F	2 tr F F		335	345	10	0.20	0.01	-
345	355	2x, actinolitic amphibole present	10	1	1 2 1 F D F	1 tr F F		345	355	10	0.04	tr.	-
355	365	2x, broken core (probable fault).	17	1	1 1 F D	1 tr F F		355	365	10	0.05	tr.	-





# DRILL HOLE RECORD

FALCONBRIDGE NICKEL MINES LIMITED

FN 008

<i>Inclination</i> Callor	-45°	<i>Bearing</i> 090°	PROPERTY M-S Option	Length 243'	HOLE No. 70-3
			Location Texada Island, B.C.	Hor. Comp.	Sheet 2 of 3
			Elevation 1500'	Bearing 090°	Logged by P. Wares
			Coordinates 4+00 S	Begin	Sampled by M. Mickle
			2+50 E	N E	/Completed
				Core size AQ	/Recovery %

FOOTAGE From To	RECOV'Y Run Core	DESCRIPTION	LITHOL'Y Fractures	TEXTURE	ALTERATION E C Ca Q F	MINERALIZATION Py Cpy Mo	GRAPHIC	SAMPLES			ASSAYS		
								No.	From	To	Ft	Cu.	Mo.
90	100	3a,b, increase in amount of silicification and "bleaching" of feldspars	6		I I 2 FD D F F F F	I I Tr		90	100	10	0.08	0.01	-
100	110	3a,b, minor fractures with coatings of py & cpy present (py:cpy 2:1). Thin quartz stringers present with trace Mo.	6		I I FD D F F F F	I I Tr		100	110	10	0.10	0.01	-
110	120	3a,b, possibly minor feldspathization present, strongly broken core from 118' to 120'	8		2 I FD D F F F F	I I I Tr Tr		110	120	10	0.13	0.01	-
120	130	3a, somewhat bleached and granulated with noticeable increase in epidotization and silicification	10		2 I FD D F F F F	I I I I Tr		120	130	10	0.15	0.01	-
130	140	3a, granulated, epidotized with sparse Qtz. stringers	11		I I FD D F F F F	I I Tr Tr		130	140	10	0.06	tr.	-
140	150	3a,b, minor granulation present, bleaching of K-spar, total sulphide content low	8		I I FD D F F F F	I I Tr Tr		140	150	10	0.05	tr.	-
150	160	3a,b, as 140-150, low sulphide content	10		I I FD D F F	I I		150	160	10	0.03	tr.	-
160	170	3a,b, strongly granulated with fresh tectonic xenoliths present. Sulphide content low.	14		I 3 F D F F F F	I I Tr Tr		160	170	10	0.1	est.	-
170	180	170-171' shattered, broken zone 171-180' granulated 3a,b as 160-170			Tr 3 F D F F F F	I I Tr Tr		170	180	10	0.1	est.	-













PROPERTY M-S Option

HOLE NUMBER 158-70-PS-2

# DIAMOND DRILL RECORD

SHEET NUMBER 1

SECTION FROM 0 TO 70'

LOCATION: LAT. 12+00 N  
DEP. 15+00 W  
ELEVATION OF COLLAR 1800' (est.)  
DATUM \_\_\_\_\_  
DIRECTION AT START: BEARING \_\_\_\_\_  
DIP \_\_\_\_\_

STARTED \_\_\_\_\_  
COMPLETED \_\_\_\_\_  
ULTIMATE DEPTH \_\_\_\_\_  
PROPOSED DEPTH \_\_\_\_\_

DEPTH FEET	FORMATION	FROM	TO	WIDTH OF SAMPLE			
0 - 80'	3a, medium grained, with minor quartz veins with trace molybdenite present. Sparse pyrite present in widely scattered fractures. Recovery about 70%.						
	80' - <u>END OF HOLE.</u>						

PROPERTY M-S Option

HOLE NUMBER 158-70-PS-1

SHEET NUMBER \_\_\_\_\_

## DIAMOND DRILL RECORD

SECTION FROM \_\_\_\_\_ TO \_\_\_\_\_

LOCATION: LAT 0+20 S

DEP 8+40 W

ELEVATION OF COLLAR 1700' (est.)

DATUM 0

DIRECTION AT START: BEARING 270°  
DIP -80°

STARTED \_\_\_\_\_

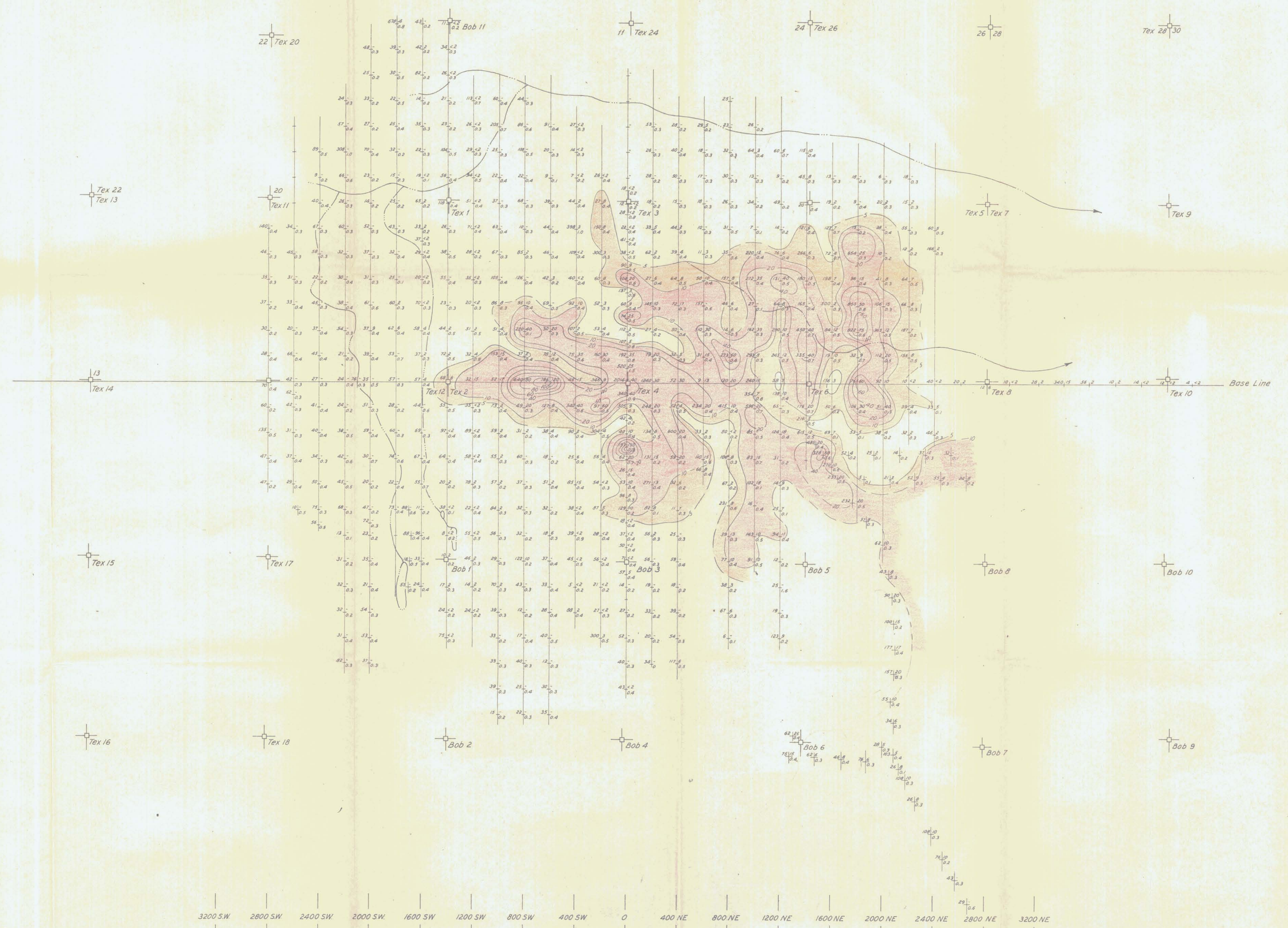
COMPLETED \_\_\_\_\_

ULTIMATE DEPTH \_\_\_\_\_

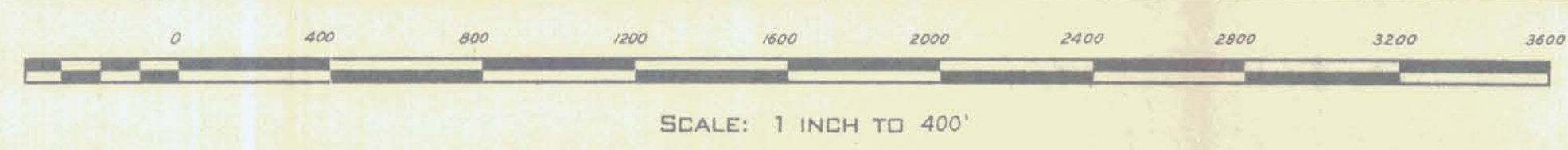
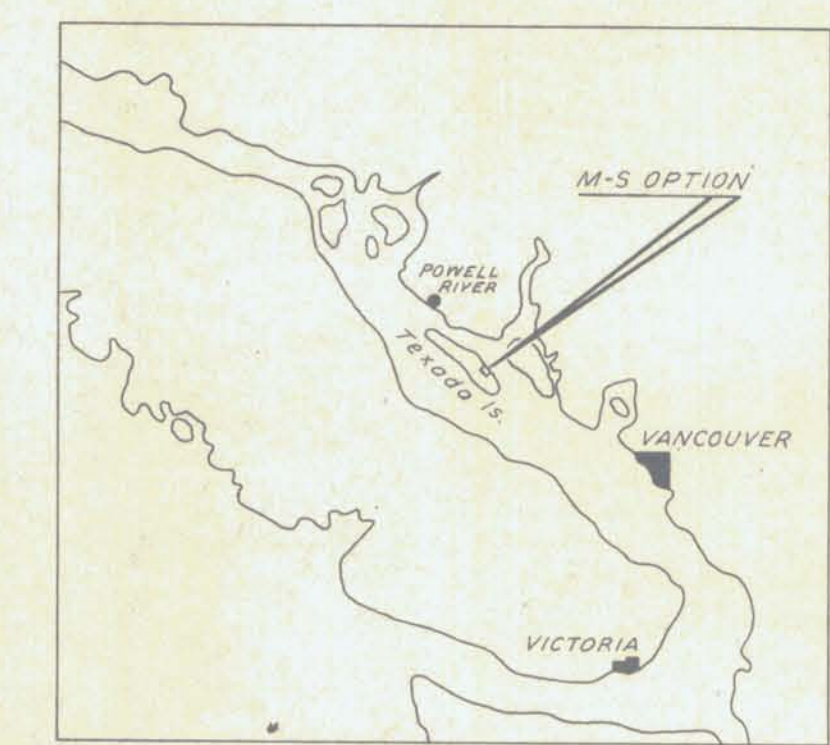
PROPOSED DEPTH \_\_\_\_\_

DEPTH FEET	FORMATION	FROM	TO	WIDTH OF SAMPLE				
0 - 70'	2a, greyish, green, fine grained, strongly fractured with pyritic fillings along the fractures. Recovery about 75%.							





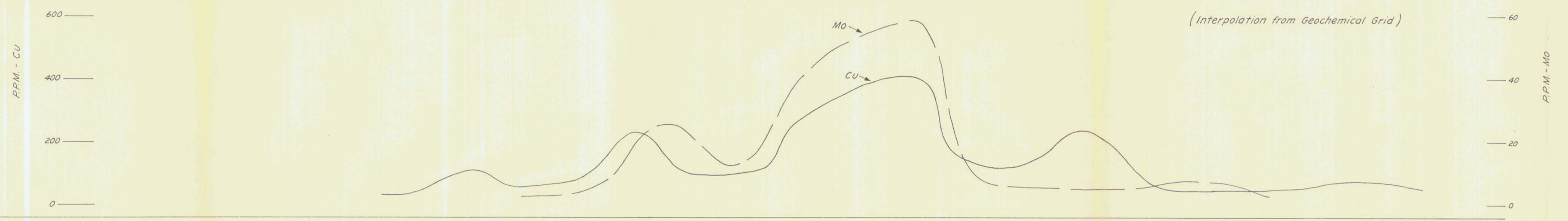
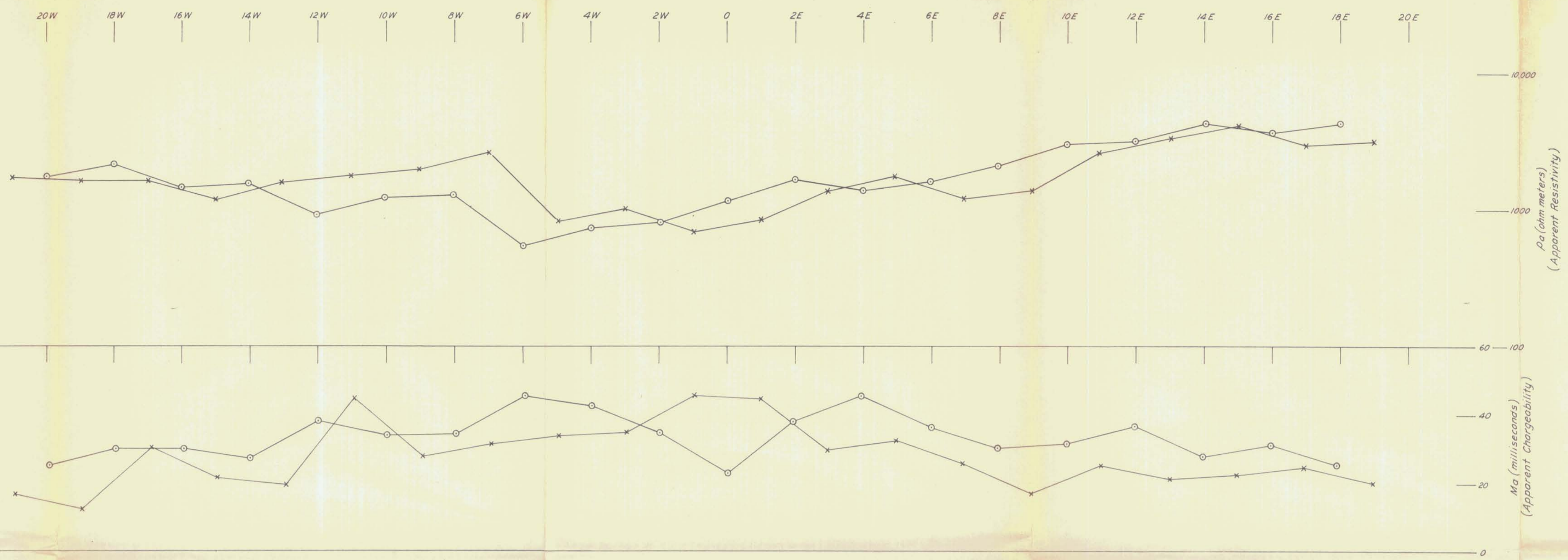
MOLYBDENUM VALUES - M-S OPTION (in.p.p.m.)  
 ≥ 50 p.p.m. - Possibly anomalous  
 ≥ 100 p.p.m. - Anomalous



COMPANY . . FALCONBRIDGE NICKEL MINES LTD.  
 PROPERTY . . M-S OPTION  
 LOCATION . . TEXADA ISLAND, B.C.

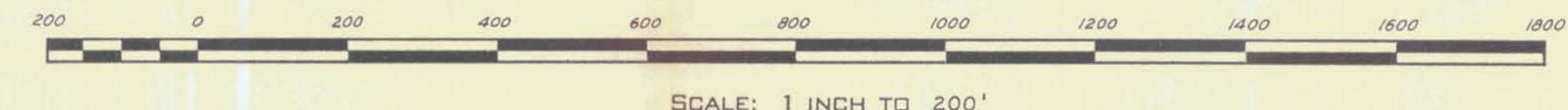
WORKING PLACE . .  
 TYPE OF MAP . . GEOCHEMISTRY  
 BASED ON . . Sampling by Samuelson and Mickie

DATE . . March 1971  
 DRAWN BY . . H.G.T.  
 DATE OF WORK . .



Section 4+00 S

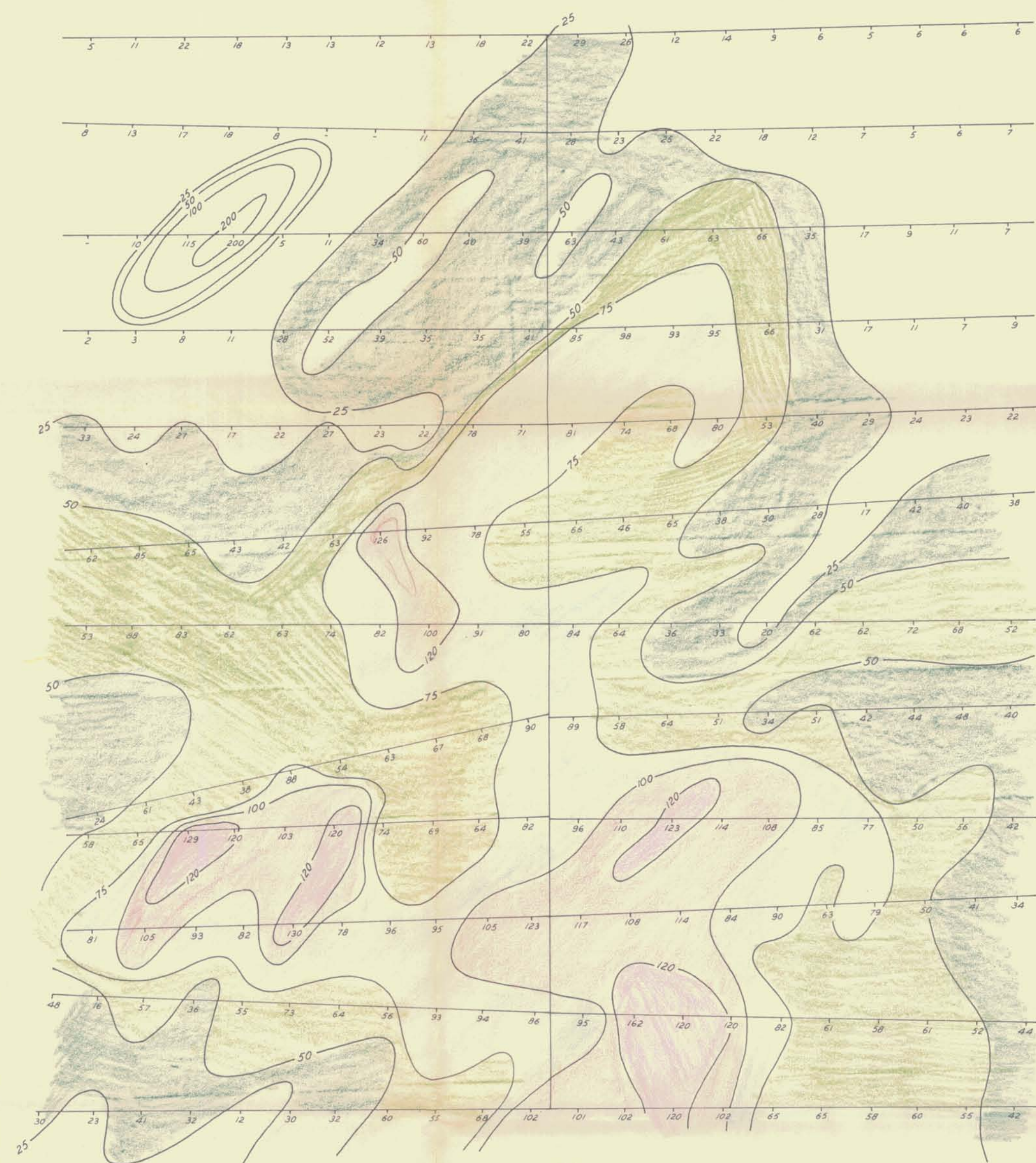
- 2a: METABASALT
- 2x: AMPHIBOLITIZED VOLCS.
- 3a: QUARTZ DIORITE
- 3b: QUARTZ MONZONITE



COMPANY . . . FALCONBRIDGE NICKEL MINES LTD.  
PROPERTY . . . M-S OPTION  
LOCATION . . . TEXADA ISLAND, B.C.

WORKING PLACE . . . Tex Group of Claims  
TYPE OF MAP . . . Section 4+00 S  
BASED ON . . . I.P., Geochemistry, Drilling

DATE . . . December 1970  
DRAWN BY . . . H.G.T.  
DATE OF WORK . . . April 1970



24N  
20N  
16N  
12N  
8N  
4N  
0  
4S  
8S  
12S  
16S  
20S



py  
cpy Sulphide isopleth  
2 Granodiorite contact  
Fault

*Interpretation of I.P. Data*  
A Plan of chargeability values for a = 200'  
B Geological interpretation showing sulphide isopleths and structural dislocation

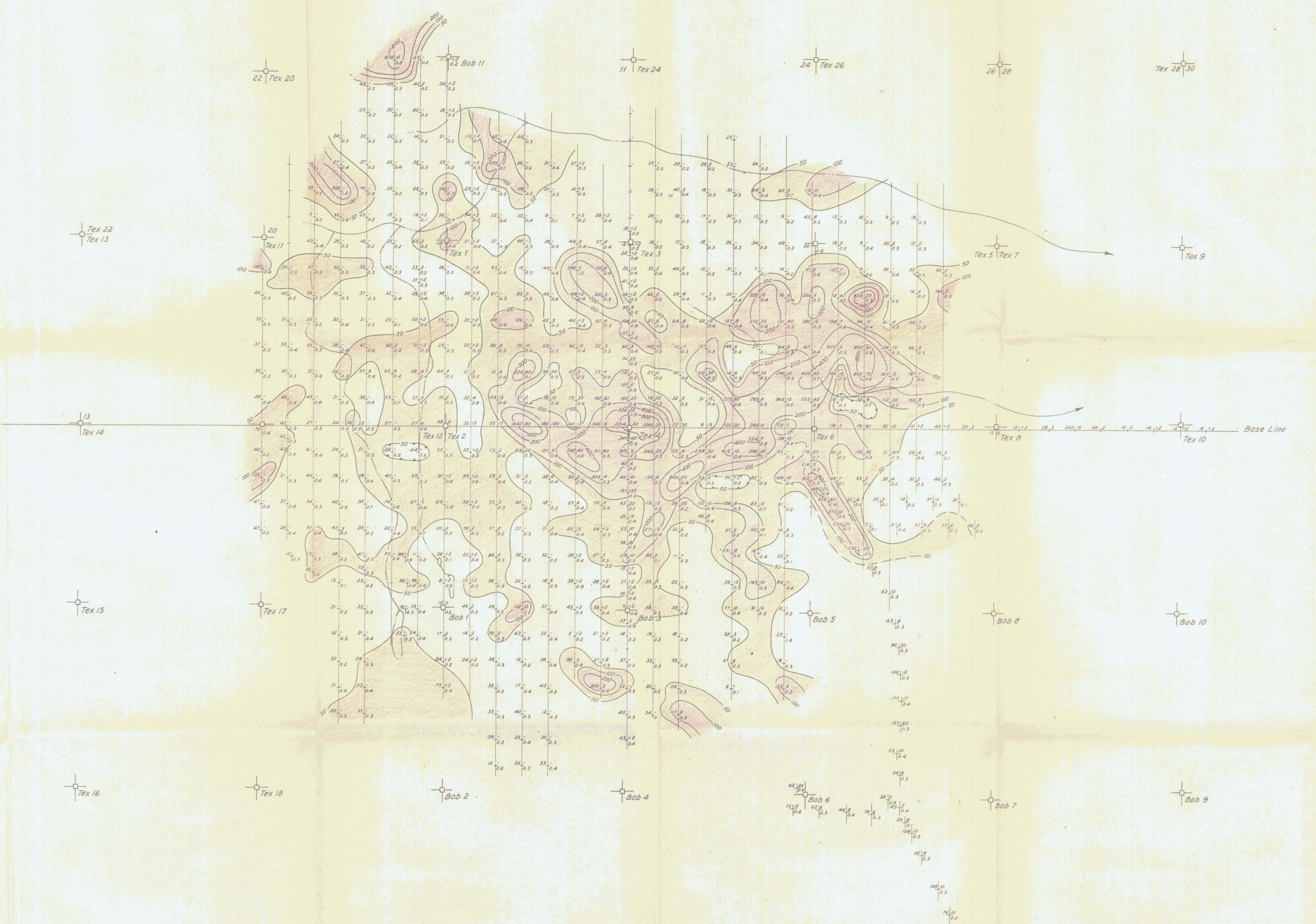


SCALE: 1 INCH TO 400'

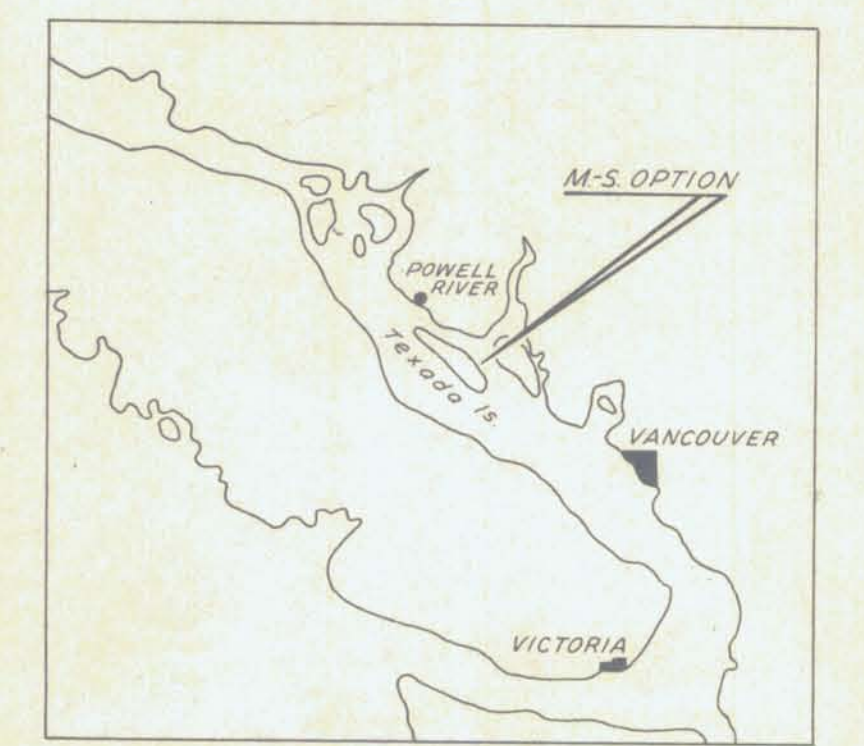
COMPANY . . . FALCONBRIDGE NICKEL MINES LTD.  
PROPERTY . . . M-S OPTION  
LOCATION . . . TEXADA ISLAND, B.C.

WORKING PLACE . . . Tex group of claims  
TYPE OF MAP . . . Interpretative  
BASED ON . . . I.P., Geochemistry

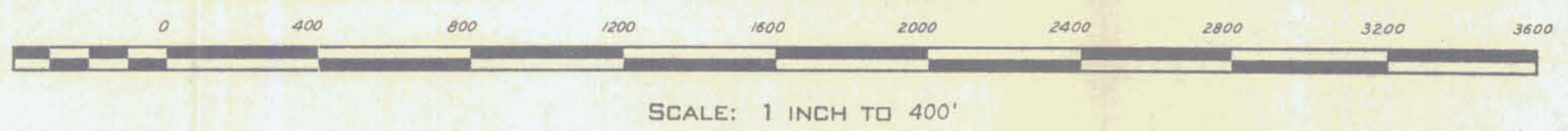
DATE . . . December, 1970  
DRAWN BY . . . H.G.T.  
DATE OF WORK . . . April, 1970



**COPPER VALUES - M-S OPTION (in ppm)**  
 50-100 p.p.m. - Possibly anomalous  
 > 100 p.p.m. - Anomalous



3200 SW 2800 SW 2400 SW 2000 SW 1600 SW 1200 SW 800 SW 400 SW 0 400 NE 800 NE 1200 NE 1600 NE 2000 NE 2400 NE 2800 NE 3200 NE

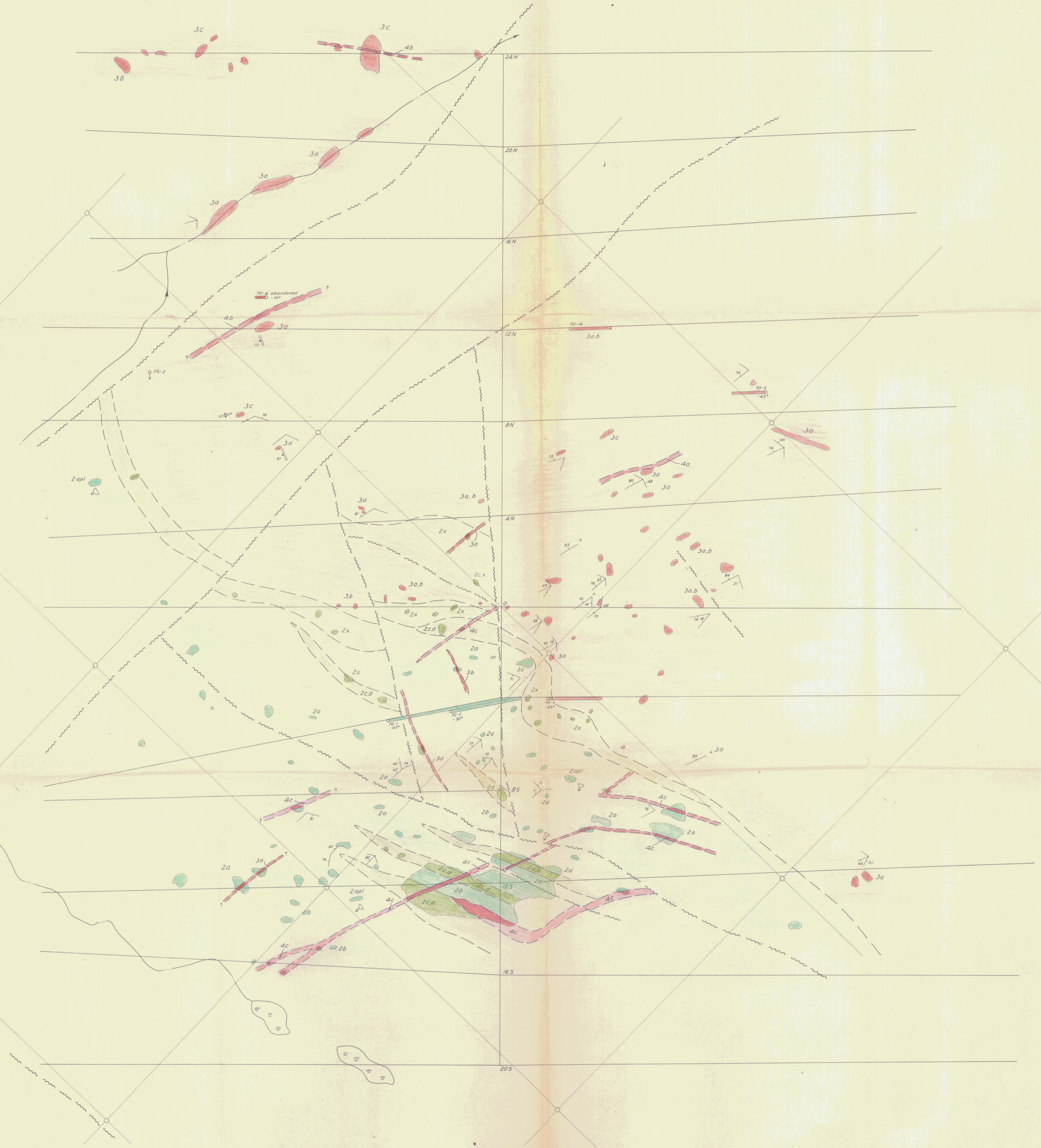


COMPANY . . . FALCONBRIDGE NICKEL MINES LTD.  
 PROPERTY . . . M-S OPTION  
 LOCATION . . . TEXADA ISLAND, B.C.

WORKING PLACE . . .  
 TYPE OF MAP . . . GEOCHEMISTRY  
 BASED ON . . . Sampling by Samvelson and Mickie

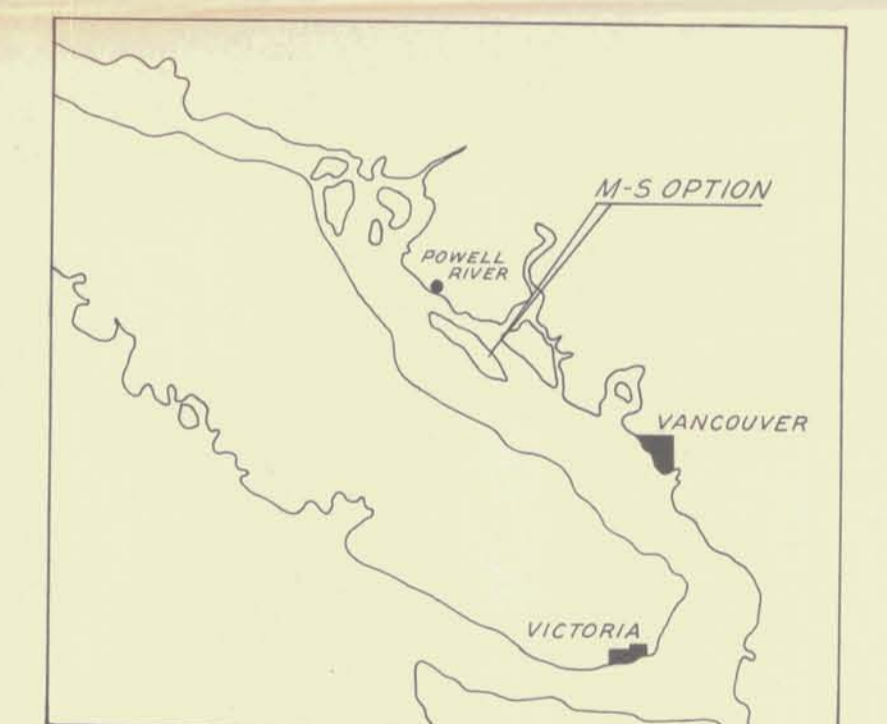
DATE . . . March 1971  
 DRAWN BY . . . H.G.T.  
 DATE OF WORK . . .





- LEGEND**
- - - Fault defined, assumed
  - - - Geological boundary, assumed
  - Outcrop boundary
  - Small outcrop
  - ⊕ Claim post
  - ⊞ Igneous foliation
  - ↔ "Direction" of pillows
  - ⊠ Diamond drill hole
  - Packer hole
  - ⊞ Fracture intensity  
(Length of strike proportional to intensity of fractures in area 2'x2', oriented NE/SW)

- 4a Andesite dyke
- 4b Porphyritic dacite
- 4c Hornblende microdiorite
- 3a Quartz diorite
- 3b Quartz monzonite
- 3c Granodiorite
- 3d Granite
- 3e Aplite
- 2a Metabasalt
- 2b Meta-andesite
- 2c Meta-tuff
- 2d Meta-agglomerate
- 2e Pillow breccia
- 2x Amphibolised volcanics



0 50 100 150 200 400 600 800  
Scale: 1 inch to

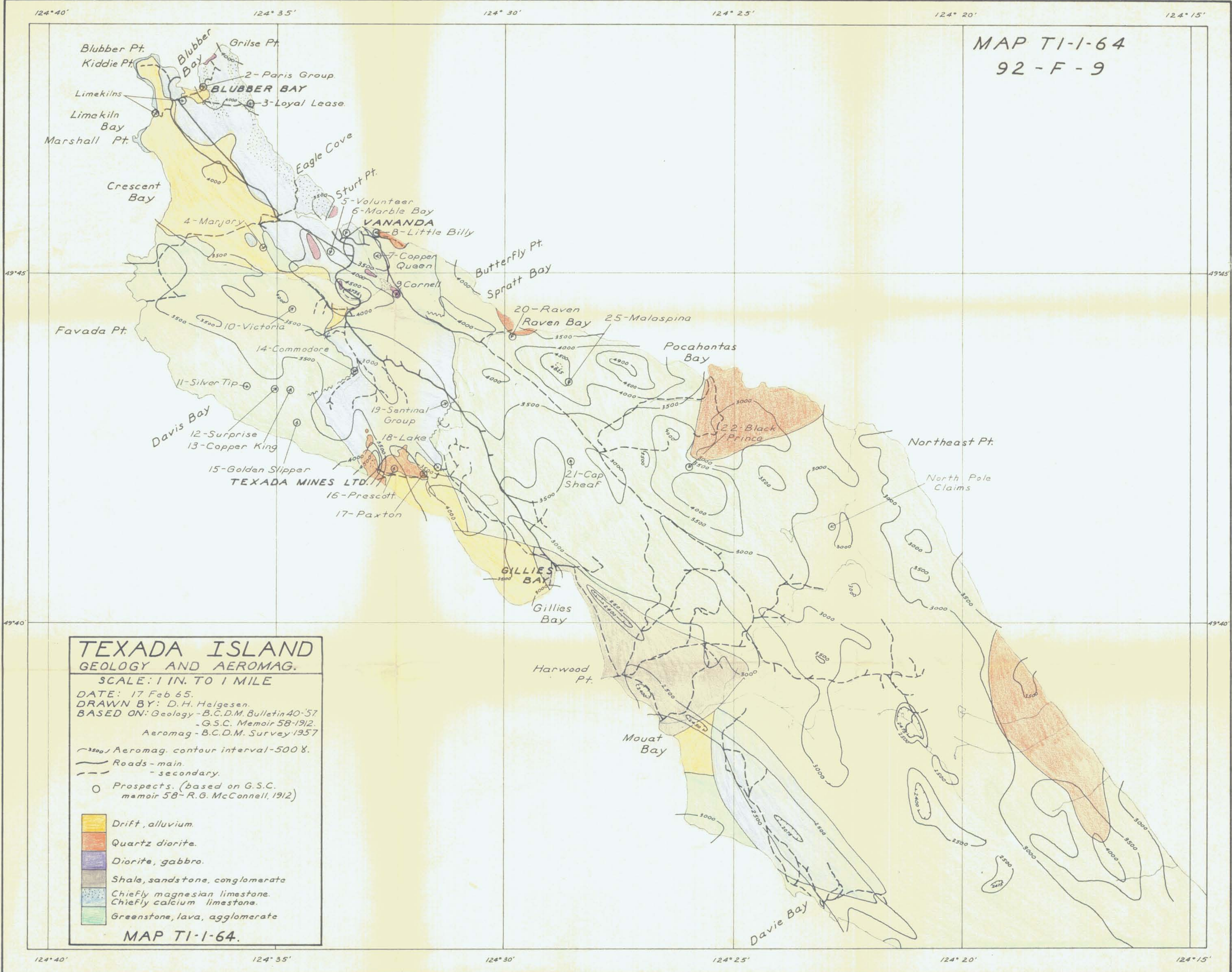
FALCONBRIDGE NICKEL MINES LIMITED  
M-S OPTION - PN 158  
Texada Island, B.C.  
**GEOLOGY**

WORKING PLACE: Tex group of claims  
BASED ON: Field work by R. Wares  
DATE OF WORK: March, 1970  
DRAWN BY: H.G.T.  
DATE: March, 1971

MAP REF. NO.: 158-70-G-1  
N.T.S. NO.: 92-F-9

FIG. NO.  
G-1

MAP TI-1-64  
92-F-9

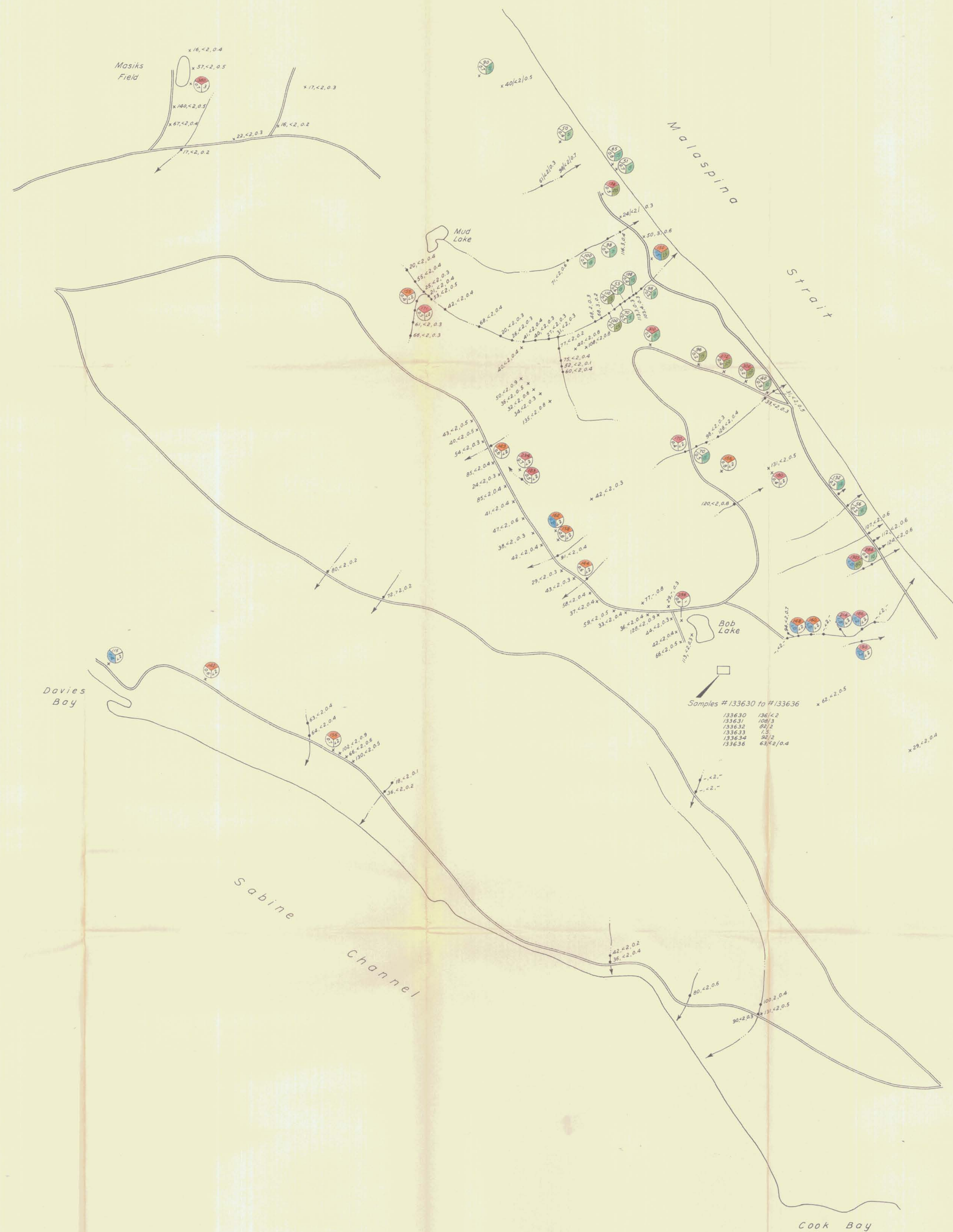
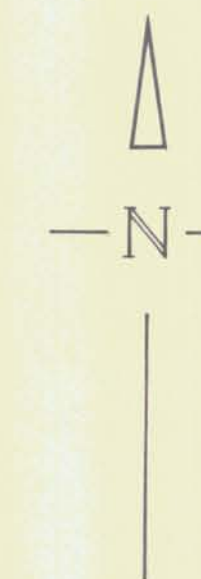


**TEXADA ISLAND**  
GEOLOGY AND AEROMAG.  
SCALE: 1 IN. TO 1 MILE  
DATE: 17 Feb 65.  
DRAWN BY: D.H. Helgesen.  
BASED ON: Geology - B.C.D.M. Bulletin 40-57  
          - G.S.C. Memoir 58-1912.  
          Aeromag - B.C.D.M. Survey 1957

— 500' Aeromag. contour interval - 500'.  
— Roads - main.  
      - secondary.  
○ Prospects. (based on G.S.C. memoir 58 - R.G. McConnell, 1912)

	Drift, alluvium.
	Quartz diorite.
	Diorite, gabbro.
	Shale, sandstone, conglomerate
	Chiefly magnesian limestone.
	Chiefly calcium limestone.
	Greenstone, lava, agglomerate

MAP TI-1-64.



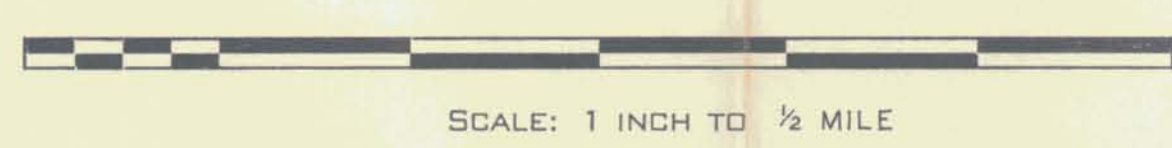
\* no. s, t, z Values for Cu, Mo, and Ag  
 Cu (p.p.m.)  
 Ag (p.p.m.) / Mo (p.p.m.)

Cu 141-170 p.p.m. probably anomalous  
>170 p.p.m. anomalous  
Mo 5-10 p.p.m. possibly anomalous  
>10 p.p.m. probably anomalous  
Ag >1 p.p.m. probably anomalous

→ silt sample  
 \* soil sample  
 --- creek  
 — road

Samples # 133630 to # 133636

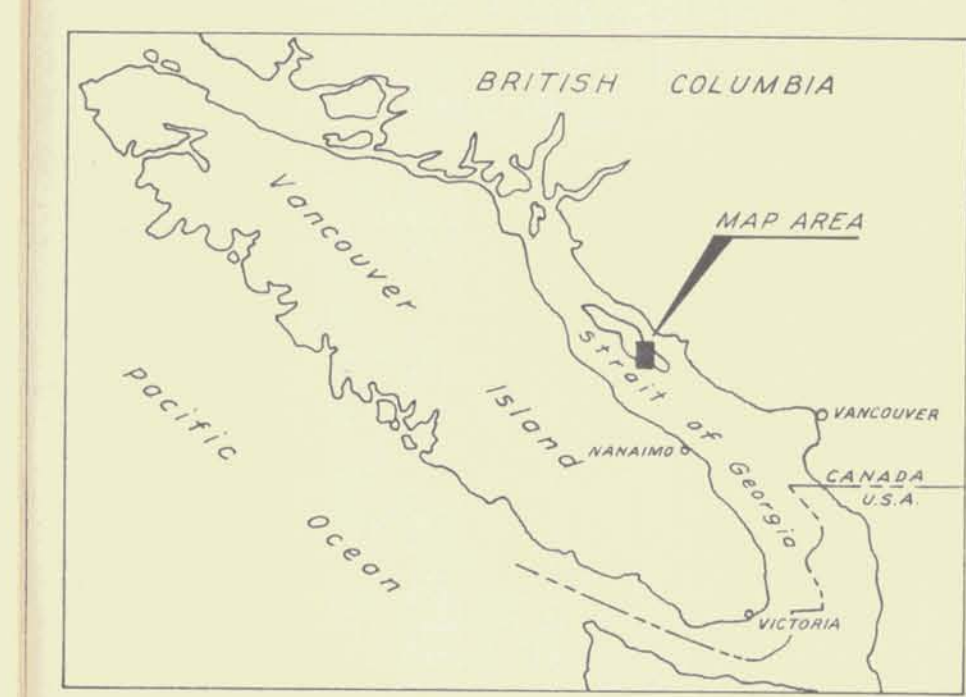
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133634	82/2
133635	83(2)/0.4

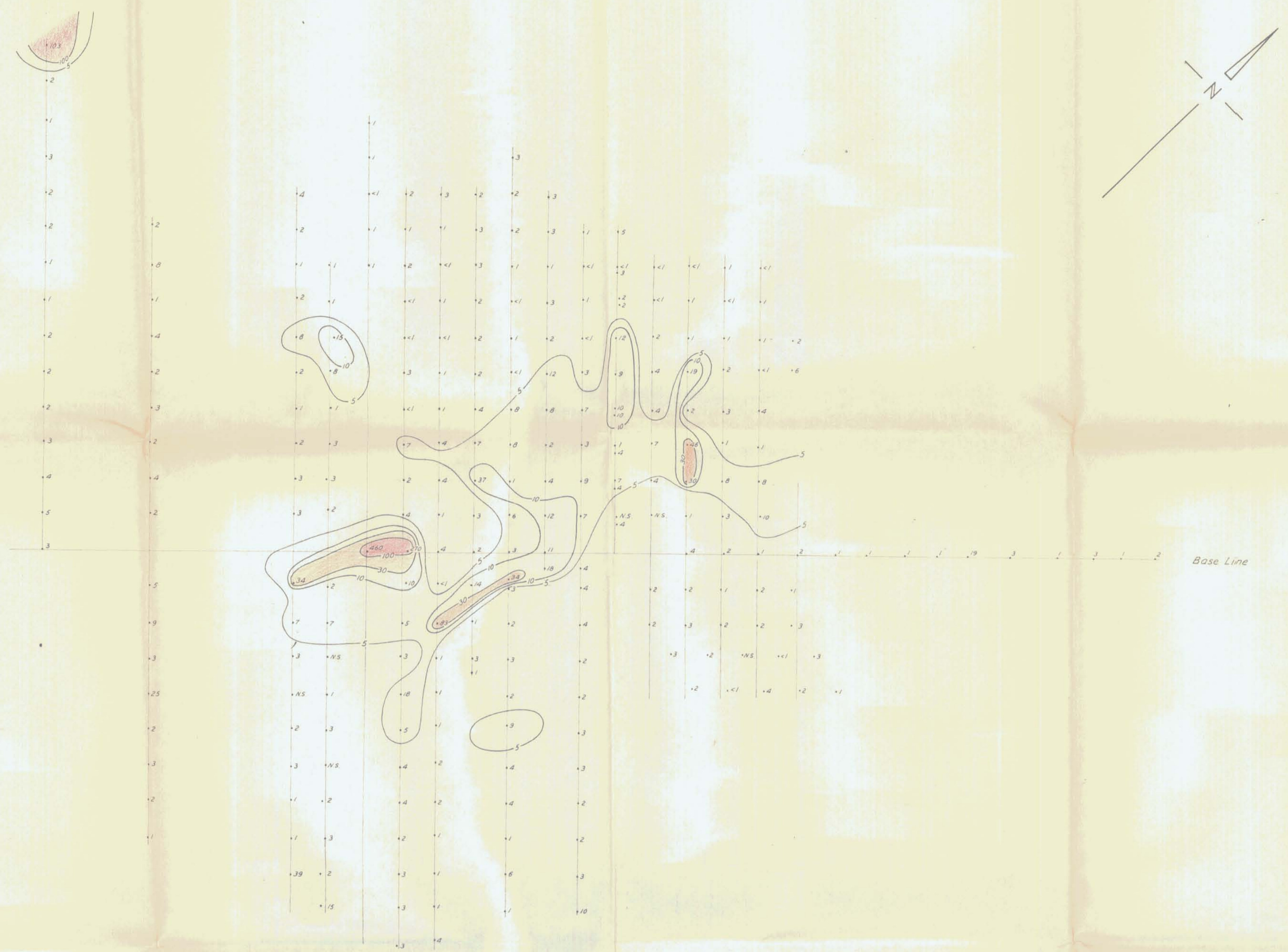


COMPANY . . . FALCONBRIDGE NICKEL MINES LTD.  
 PROPERTY . . . M-S OPTION  
 LOCATION . . . TEXADA ISLAND

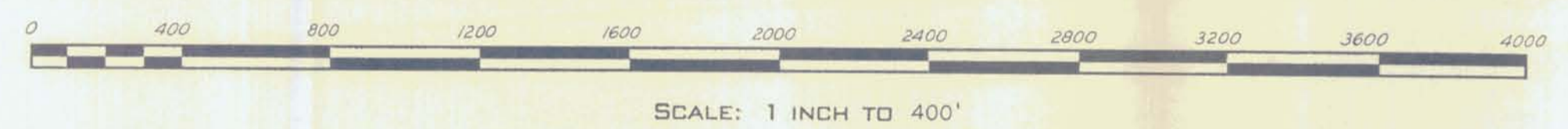
WORKING PLACE . . . Bob & Tex Claims  
 TYPE OF MAP . . . REGIONAL GEOCHEMISTRY  
 BASED ON . . . Soil and Silt Samples

DATE . . . November 1970  
 DRAWN BY . . . G.T.  
 DATE OF WORK . . . Jan-Feb 1970





2400 S.W. 2000 S.W. 1600 S.W. 1200 S.W. 800 S.W. 400 S.W. 0 400 N.E. 800 N.E. 1200 N.E. 1600 N.E. 2000 N.E. 2400 N.E. 2800 N.E. 3200 N.E. 3600 N.E. 4000 N.E.



COMPANY . . . FALCONBRIDGE NICKEL MINES LTD.  
PROPERTY . . . M-S OPTION  
LOCATION . . . TEXADA ISLAND, B.C.

WORKING PLACE . . . Tex Group  
TYPE OF MAP . . . GEOCHEMICAL  
BASED ON . . . Soil Samples

DATE . . . March 1971  
DRAWN BY . . . H.G.T.  
DATE OF WORK . . .

COLD EXTRACTABLE COPPER  
TEXADA ISLAND MAIN GRID  
(NORTHERN HALF)

Copper values in p.p.m.

