

2842

GEOCHEMICAL SURVEY REPORT

ON THE

NITHI MT GROUP

FOR

NITH-EX EXPLORATION, DEVELOPMENT LTD.,

FRASER LAKE, OMINECA M.D.

124° 50' W.

53° 58' N.

BY

A. F. ROBERTS, P.ENG.,

AUGUST 20TH, 1970

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2842 MAP

RECEIVED
NOV. 21 1970

SMITHERS, B. C.

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MAPS:

# 2 CLAIM LOCATION MAP	Follows Page 1
# 1 GENERAL GEOLOGY AND LOCATION MAP	" " 2
# 3 FREQUENCY-DISTRIBUTION CURVE	Pocket, Back Cover.
4 SAMPLING HORIZON MAP	" " "
5 GEOCHEM CONTOUR MAP	" " "
6 GENERAL MAP, TRENCHES, ROADS ETC ...	" " "

REFERENCES:

B.C. Department of Mines and Petroleum Resources,
Minister of Mines Reports, 1964, 1965, M. Carr,
Endako Area.

SUMMARY

Approximately 26 claims of the company's 61 claim group has been covered by a geochemical survey carried out by the company under the writer's direction.

This survey indicated an area 14,000 ft by 6000 ft to be anomalous. Within this area a smaller and stronger anomalous zone 6000 ft by 4000 ft exists.

This anomaly, the geology as known, and the occurrence of mineralization on the property indicate the possibility of finding an economic deposit of molybdenum sulphide on the property.

Therefore, a program of trenching, sampling, and limited diamond drilling is recommended as a Stage I program.

If Stage I is successful, then a major program of property acquisition, further geochemical work, and major diamond drilling will be required.

The other property to be acquired is held by persons friendly to the company, and it should be easy to negotiate terms.

Stage I is estimated to cost \$ 72,250.00

Stage II will cost approximately \$420,000.00

Respectfully submitted,


Roberts, P. Eng.

August 20th 1970.



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ON THE

NITHI MT GROUP

FOR

NITH-EX EXPLORATION, DEVELOPMENT LTD.,

FRASER LAKE, OMINECA, M.D.

124° 50' W.

53° 58' N.

A. F. ROBERTS, P.ENG.

AUGUST 20TH, 1970.

INTRODUCTION:

The writer of this report recommended a geochemical survey of this property in his report of June 12th 1970.

Since then the survey has been completed on the claims lying between the north and south showings, (1) and maps made from the results.

Work on the balance of the claims will be held up pending work on the ground presently covered being completed as recommended in this report, and financing is available.

The June 12th, 1970 report should be read in conjunction with this report, although the geology, and preliminary data is summarized here.

Location, Access: (2)

The property is five miles south of the community of Fraser Lake, on the north, east and south slopes of Nithi Mt. at elevations between 2500 and 3500 ft.

(1) Claim location map, follows page 1

(2) General Geology and Location map, follows page 2.

121°45' W

12

Starn Lake

4a

4a

Fraser Lake

12

Stellako

Fraser Lake

Fort Fraser

Stano
River

Foster Lake

12

54° N

Nithi Mtn

9500

Centre of
Claim Group

NeTchano River

9

12

12

4a

2

11

LEGEND

- 12 Till, Gravel, etc
 - 11 andesite, basalts
 - 10 Rhyolite, dacite, tuff
 - 9 Basalt, andesite
 - 4a Granite, granodiorite
 - 2 Andesite, basaltic flows
- See G.S.C. Map 1131A
NeTchano River
and
Fort Fraser Map 630A



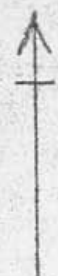
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO 2842 MAP #1

NITHI EXPLORATION LTD
GENERAL GEOLOGY and
CLAIM LOCATION

Date: June 11, 1970
Scale: 1" = 4 miles
Drawn by: *CBR*
From G.S.C. Maps 630A &
1131A

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2342 MAP 42

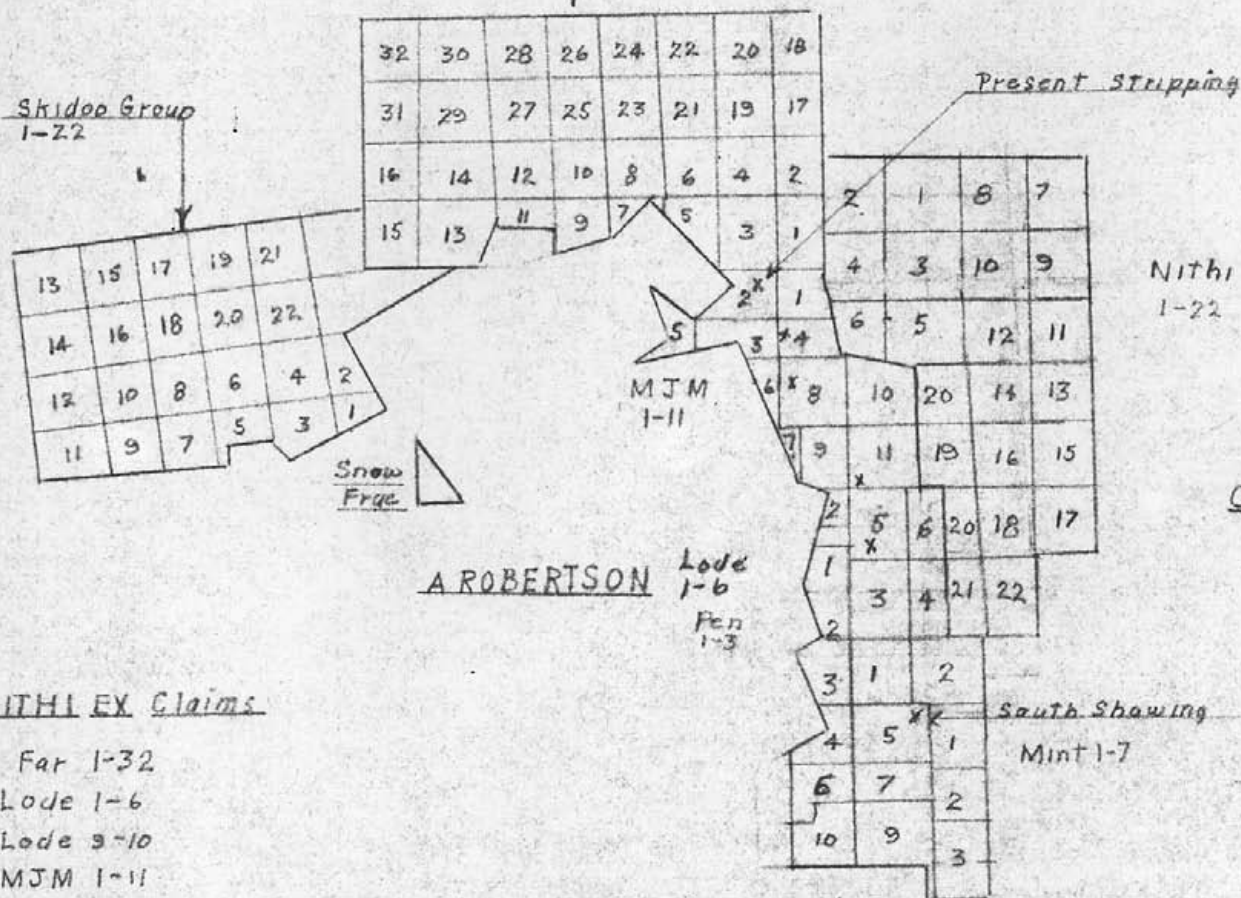


COP RIDGE

Far Group
1-32

Skidoo Group
1-22

Present Striping



Nithi
1-22

CYPRUS
EX

NITHI EX Claims

- Far 1-32
- Lode 1-6
- Lode 9-10
- MJM 1-11
- Pen 1-3
- Mint 1-7

Total 61 Claims + Frac.

X MBS₂ showing

MERCURY EX.

AMAX

NITHI EXPLORATION LTD
ENDAKO, BC

CLAIM LOCATIONS,
Area Ownership
Known Showings

Date: June 9, 1970
Scale: 1" = 1 Mile
Drawn by: WJA

Note: Source - Gov. Claim map
Locations only approximate

Old logging roads make access easy with pickups in the summer, and 4 x 4s the rest of the year.

Geology:

The area of the claim group is underlain by the Casey quartz monzonite. (3)

Within the claim group the area shows alteration from moderate to intense as revealed in outcrops, and in trenched areas.

The mineralization consists of pyrite and molybdenite occurring in fractures from hairline to several inches wide, and which are usually heavily leached at surface, and several feet below surface.

These veinlets are filled with white to smoky quartz often carrying hematite. Those which are mineralized have the following orientation :

70°, Dip 40° - 50°S.

160°, Dip 40° - 50°S.

except on the south showing where the dip is northerly.

There are at least 5 other sets of fractures, none of which have been observed to be mineralized.

Method of Sampling:

The claims sampled in this period were:

M.J.M. 1 - 11

Lode 1 - 6

Pen 1 - 3

Mint 1 & 2, 4 - 7

A N-S base line existed over some of the claims and this line was extended to the north and south through the claim group, and picketed at 200 ft. intervals.

There were also E-W lines cutting the base line and they were cleared and extended, and picketed, and four new lines cut. These lines are shown with letter designations, (4) and picketed at 200 ft. intervals.

Sampling was carried out between base lines on a 200 ft. grid pattern, and all sample locations marked with a ribbon carrying its grid designation.

In the areas of trenching, on the north and south ends of the area, the grid was cut to 100 ft. x 200 ft. pattern as it was expected that these areas would be of major interest.

The actual sample was taken by clearing off the loose surface material, and using a shovel to dig the hole. Where possible the samples were taken from the B horizon. In a few cases, the A horizon was sampled as either there wasn't a B, or it was too deeply buried where the soil was too thin or non-existent the C horizon was sampled.

When the sample was taken, it was cleaned of rock and rubbish, then placed in a water resistant soil sample bag. These bags were marked with the company name, sample location, and the horizon sampled. A separate record was kept of all samples, and at the same time notes were made of topographic data, which were later mapped.

A total of 1035 samples were taken in this area.

Assaying:

All samples were sent to T.S.L.Laboratories,
325 Howe Street,
Vancouver 1, B.C.

Here the samples were dried, screened through 80 mesh, and the 80 mesh fraction was treated with hot aqua regia. Analysis was colourimetric, reporting in p.p.m.

A batch of 204 samples was sent to:

Warnock Hersey International Ltd.,
124 East 4th Avenue,
Vancouver 10, B. C.

as a check on the T.S.L. work, and as the check was satisfactory, the work was completed by T.S.L.

The Warnock Hersey method is to treat the 80 mesh fraction with $\text{HNO}_3 / \text{H}_2\text{SO}_4 - \text{HCl}$, followed by colourmetric analysis, reporting in p.p.m.

Mapping: (5)

The following maps have been prepared to accompany this report, all on a scale of 1" = 400'.

a) Frequency distribution curve to assist in defining anomalous areas.

b) Sampling horizon map, shows the assay in p.p.m. with horizon sampled marked with a letter under it.

c) Contour map, with base lines, assay in p.p.m. and location of samples, and the anomalous areas enclosed in contours, or envelopes.

d) A base map showing certain surveyed claim boundaries, pit locations, MoS₂ occurrences, some roads, and part of the drainage pattern.

It is intended that by using a light table, the maps may be superimposed on each other for further detail, and avoid a confusion of lines etc. which would occur if all the data was on one sheet.

Analysis of assays:

The frequency distribution curve shows that there is a sharp rise from 0 to 5 p.p.m., and almost as quick a fall to 10 p.p.m., with the curve flattening out between 10 and 30 p.p.m., and a straight line taper from 30 p.p.m. to 120 p.p.m., the highest assay:

The distribution is as follows:

0 - 5 p.p.m.	36.5%
5 - 10 p.p.m.	33.7%
10 - 15 p.p.m.	13.8%
15 - 20 p.p.m.	4.98%
20 plus p.p.m.	11.1%

On this basis and from past experience, the following assumption has been arrived at:

0 - 5 p.p.m.	Back ground
5 - 10 p.p.m.	Weakly anomalous
10 - 15 p.p.m.	Moderately anomalous
15 - 20 p.p.m.	Strongly anomalous
20 plus p.p.m.	Definitely anomalous

For the purpose of mapping, and avoiding lines, 10 & 20 p.p.m. is shown as one unit.

Samples taken on each horizon were as follows:

A Horizon	20 samples	1.9%
B Horizon	595 samples	57.5%
C Horizon	420 samples	40.6%

A check on the map indicates that the A horizon samples are erratic. Therefore as they are few in number they are "fitted" into their surroundings. If their neighbours are highly anomalous, they are taken as given.

If their neighbours are much lower, they are assumed to be in the same order of value.

The B and C horizons correlate well enough so they are used as assayed.

The total anomalous area as shown on the map is 14,000 ft. long, and 6,000 ft. wide.

An area within this major area, comprising the moderate and above anomalous areas is 6,000 ft. long by 4,000 ft. wide.

This "main zone" is a prime target for further work, together with smaller areas to the north and south.

Checking the map again shows that the anomalous areas coarsely parallel the strike of the main mineralized fractures.

In the area of the north and south showings only weakly anomalous areas are indicated by the soil sampling.

It is assumed that leaching must be very severe in this areas.

Two samples taken a foot or so below surface in the highly kaolinized area in June gave:

64 p.p.m. over 26 ft. and
56 p.p.m. over 50 ft.

Conclusions:

The geochemical program has demonstrated that there is an area approximately 6,000 ft. by 4,000 ft. that is anomalous for MoS_2 , with weaker areas surrounding it.

This fact, the geology, and the known mineralization on the property indicate a possibility of an economic deposit of molybdenum ore on the property.

Recommendations:

- 1) Select areas of highest anomalous values and strip them into bed rock. If on examination these show a reasonable degree of mineralization, they should be bulk samples.

- 2) If the surface work is encouraging, then a program of wire line diamond drilling, using mud as a lubricant should be carried out, these holes would be orientated by knowledge of the old showings, and from the new work. A minimum of six 500 ft. holes, 500 ft. apart would be required.

- 3) If this work is successful, then a major drilling program will be required consisting of both fill-in, and step out drilling to indicate a major ore body. At this time it would be reasonable to acquire the Nithi and Skidoo claim groups, and institute further geochemical surveys.

ESTIMATE OF COSTS:Stage I:

Air photo, and 1000 ft/inch contour map (Lockwood Survey)	\$ 1,200.00
Geological mapping	1,000.00
Bulldozer, with rippers 150hrs @ \$35/hr.	5,250.00
Helper, 20 days @ \$35/day	700.00
Board and room, 40 days @ \$20/day	800.00
Move in, move out	500.00
Consultant, Supervision,	2,500.00
Travel, Expenses,	1,000.00
4 x 4 pick-up, rental, expense,	1,000.00
Diamond drilling, 3000 ft @ \$15/ft	45,000.00
Assaying, 300 @ \$5.00	1,500.00
	<hr/>
	\$ 60,250.00
Overhead and contingencies - 20%	12,000.00
	<hr/>
Total :	<u><u>\$ 72,250.00</u></u>

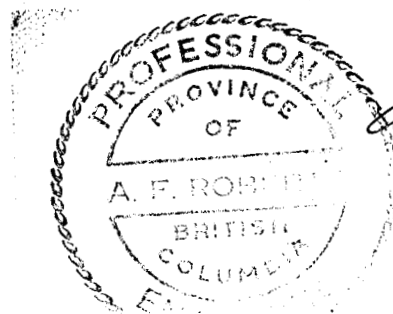
Stage II:

Acquisition of Nithi Group (22 claims @ \$200/claim (?)).	\$ 4,400.00
Acquisition of Skidoo Group (22 claims @ \$200/claim (?)).	4,400.00
Line cutting on above claims and balance of Company claims, 10 miles @ \$125/mile,	1,250.00
Soil sampling on 400' x 200' grid,	4,000.00
Assaying soil samples, estimate 6000 @ \$1.75	10,500.00
Diamond drilling 20,000 ft. @ \$15/ft.	300,000.00
Assaying 2,000 @ \$5.00,	10,000.00
Supervision, and Consultant,	10,000.00

Estimate of Costs - continued.

Travel, Expenses,	2,500.00
Pick up rental, etc.	2,500.00
	<hr/>
	\$349,550.00
Overhead and contingencies, 20%	70,000.00
	<hr/>
Total :	<u><u>\$419,550.00</u></u>

Note: If Stage II has to be broken up to fit financing, then diamond drilling should have priority.



A. F. Roberts

C E R T I F I C A T E

I, A.F. Roberts of 812 Fairbrook Crescent, Richmond, B.C., do hereby certify that:

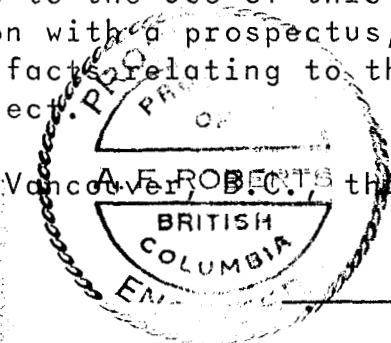
- 1) I am a graduate of the University of British Columbia, (B.Ap.Sc.) in Mining Engineering, 1951.
- 2) I am registered as a Professional Engineer of the Province of British Columbia, and am a member of the Canadian Institute of Mining and Metallurgy.
- 3) I have practiced my profession since 1951 with Quatsino Copper Gold Mines Ltd., Giant Mascot Mines Ltd., Cochenour Willans Gold Mines Ltd., Mogul Mines Ltd., Kerr Addison Gold Mines Ltd., Atlantic Coast Copper Corp.Ltd., Wasamac Mines Ltd., Brenda Mines Ltd., and T.C. Explorations Ltd.

I am Vice-President, and a Director of Bathurst Inlet Mining Corporation Ltd., Vice-President of Bathurst Norsemines Ltd., and a Director of Central Arctic Copper Ltd.

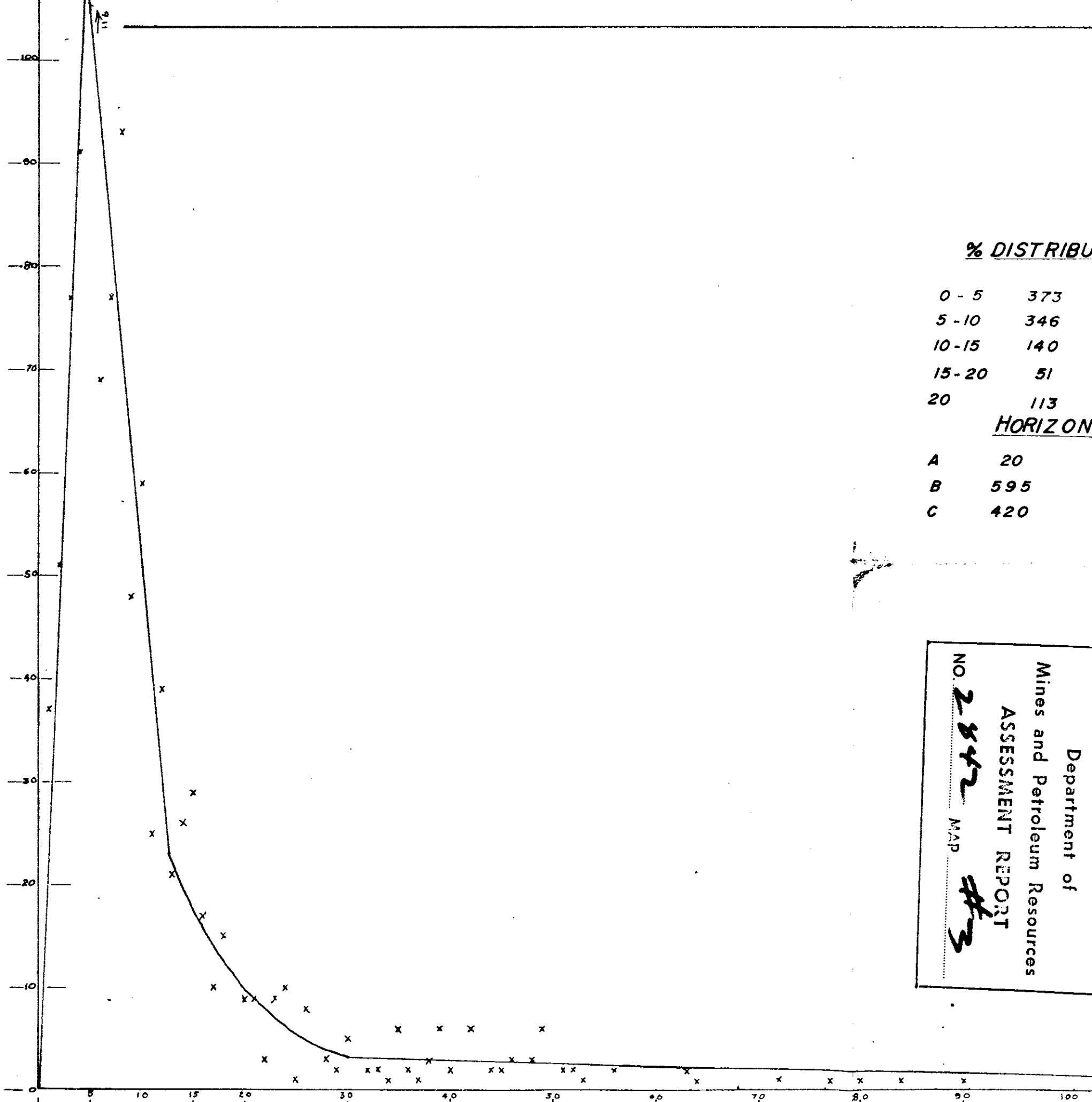
Previous to University I had worked underground as a miner.

- 4) The accompanying report is based on work laid out and directed by me, and is based on my personal knowledge of the property gained by an examination in September 1969, and a further detailed examination between June 2nd and June 10th 1970.
- 5) I have not, nor do I expect to receive, any interest, directly or indirectly in these properties, or any of their securities.
- 6) I consent to the use of this report in, or in connection with a prospectus, or a statement of material facts relating to the raising of funds for this project.

DATED at Vancouver, B.C., this 20th day of August 1970.



A.F. Roberts
A. F. Roberts, P.Eng.



% DISTRIBUTION

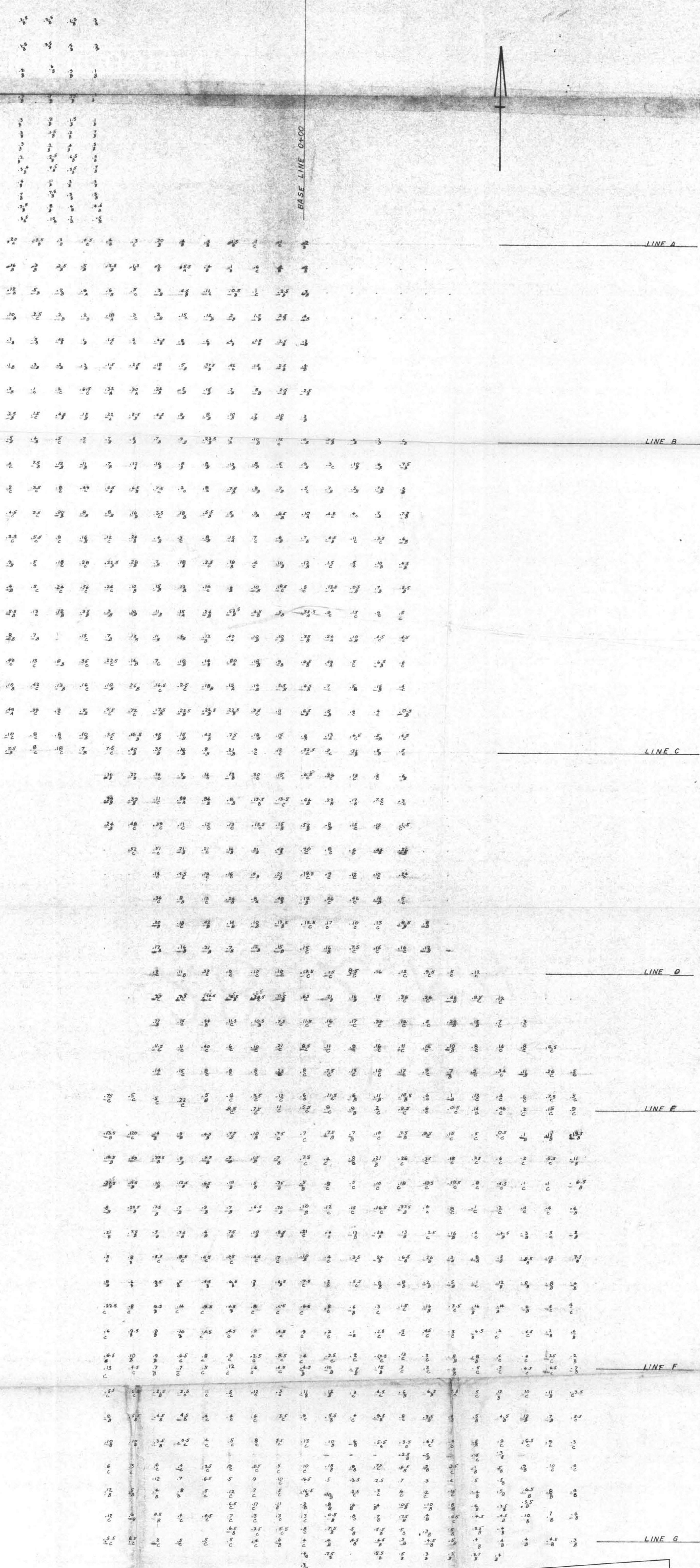
0 - 5	373	36.5 %
5 - 10	346	33.7 %
10 - 15	140	13.8 %
15 - 20	51	4.98 %
20	113	11.1 %
<u>HORIZON</u>		
A	20	1.9 %
B	595	57.5 %
C	420	40.6 %

M-3

2842

Department of
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 NO. 2842
 MAP *AKS*

NITHI EXPLORATION and DEVELOPMENT LTD.
 ENDAKO, B.C.
 DISTRIBUTION CURVE OF
 GEOCHEMICAL SURVEY
 DRAWN BY *WFR*
 SCALE VERT. 10 counts per 1"
 HORIZ. 1" = 10 ppm
 DATE: AUG. 20, 1970
 TO ACCOMPANY GEOCHEMICAL REPORT BY A. F. ROBERTS, P. ENG.,
 ON THE NITH MT. GROUP OF NITHI EXP. and DEV. LTD.
 OMINCA M.D.



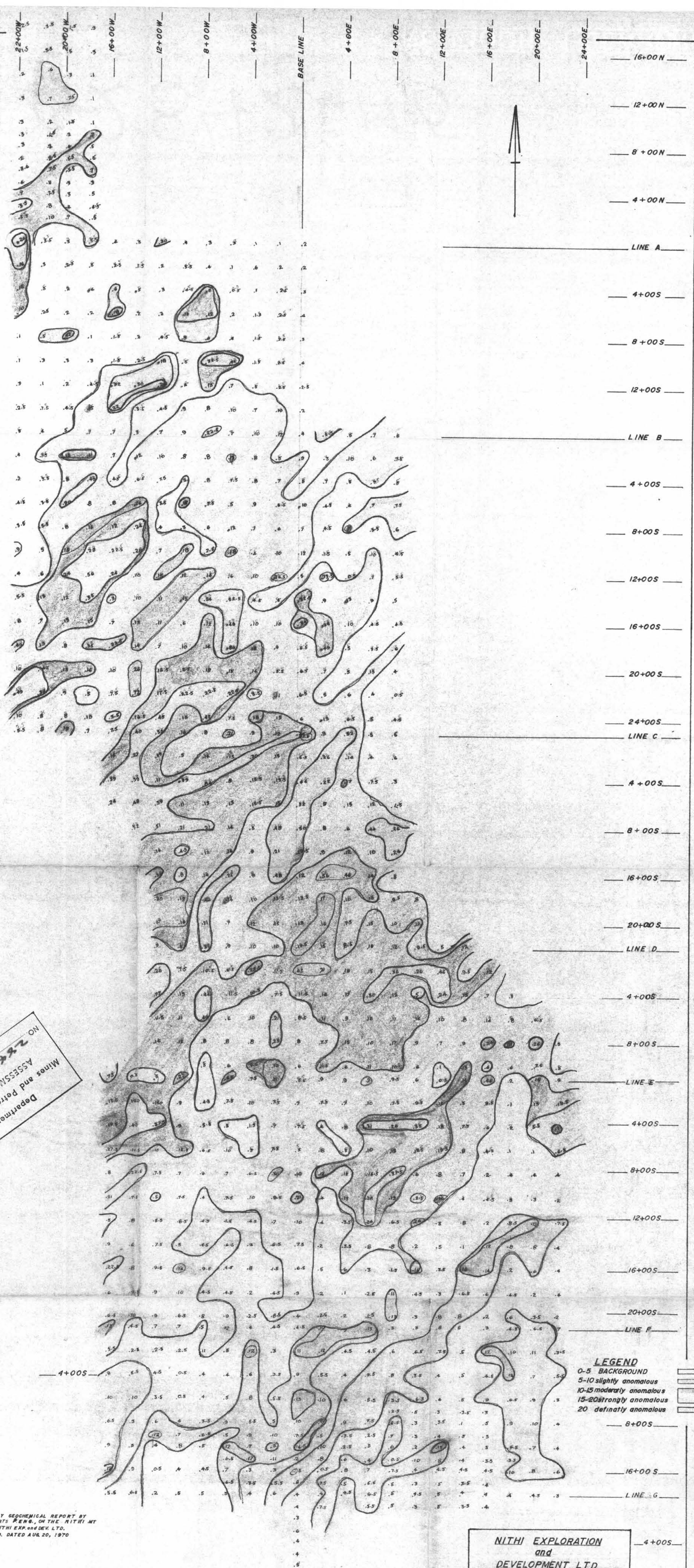
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2842 MAP #4

NITHI EXPLORATION
and
DEVELOPMENT LTD.
ENDAKO, B.C.
SAMPLING HORIZON MAP
DRAWN BY:
SCALE: 1" = 400'
DATE: AUG 20, 1970
A, B, C, SAMPLE HORIZON
FIGURES: MoS In ppm

To Accompany Geochemical Report by
A.F. Roberts, P.Eng. on the Nithi Mt.
Group of Nithi Exp. and Dev. Ltd.
Omineca M.D., dated Aug. 20, 1970

T-Sk-688-3504
NITHI

2842 M-4

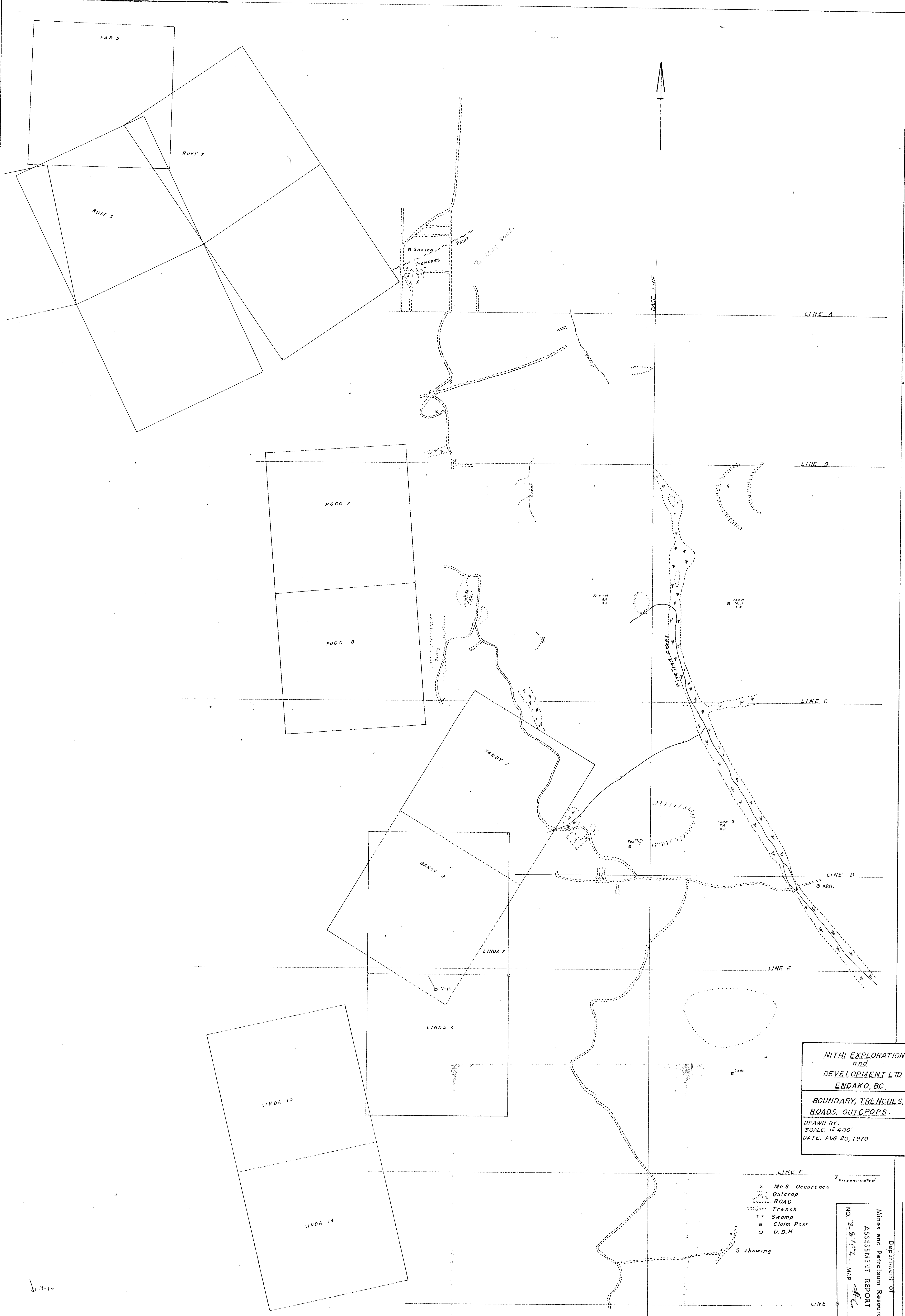


Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT #5
 2842
 NO. 2842
 M.P.

FRACOMPANY GEOCHEMICAL REPORT BY
 A. P. ROBERTS, SENIOR, ON THE NITHI MT
 GROUP OF NITHI EXP. AND DEV. LTD.
 OMINICA N.D. DATED AUG. 20, 1970

**NITHI EXPLORATION
 and
 DEVELOPMENT LTD**
ENDAKO, B.C.
GEO-CHEM CONTOURS
 DRAWN BY: *awd*
 SCALE: 1" = 400'
 DATE: AUG. 20, 1970
 FIGURES: Mo S₂ in ppm

2842 M-5



NITHI EXPLORATION
and
DEVELOPMENT LTD
ENDAKO, BC.

BOUNDARY, TRENCHES,
ROADS, OUTCROPS.

DRAWN BY:
SCALE: 1" = 400'
DATE: AUG 20, 1970

- X Mo S Occurrence
- Outcrop
- ROAD
- Trench
- Swamp
- Claim Post
- D.D.H
- S. showing

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2842 MAP #6

To accompany Geochemical Report by
A. F. Roberts, P. Eng. on the Nithi Mt
Group of Nithi Exp and Dev. Ltd.
Omineca M.D. dated Aug. 20, 1970

2842 M-6

N-14