



FOG MOUNTAIN CLAIM GROUP: SOIL GEOCHEMISTRY  
WHITEHORSE MINING DIVISION

FOG MOUNTAIN 1 to 20 (20 claims)

105E9 and 105F12

61° 42'N 134° 00'W



OWNER/OPERATOR

Amoco Canada Petroleum Company Ltd.,  
Mining Division,  
656 - 409 Granville Street,  
VANCOUVER, B.C.,  
V6C 1T2.

090804

Report Written by:  
Paul Brown,  
February 18, 1981.

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

\$ 4295.43

R. Debecki

A. Rec. Geol

Resident Geologist or  
Resident Mining Engineer

June 1/31

Considered as representation work under  
Section 53 (4) Yukon Quartz Mining Act.

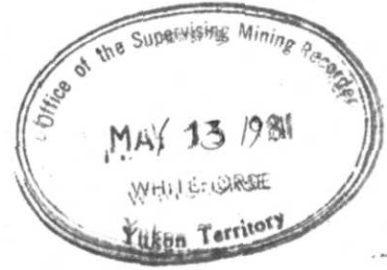
B. R. BAXTER

Supervising Mining Recorder

Commissioner of Yukon Territory

FROM Mining Recorder at *Whitehorse* .....

Supervising Mining Recorder at Whitehorse, Y.T.



FOR ACTION ARE:

NEW APPL'N for PLACER LEASE to PROSPECT: Name:

RENEWAL APPL'N PLACER LEASE to PROSPECT: Name:

Lease No. ....

AFFIDAVIT of EXPENDITURE on PLACER LEASE. Name:

Lease No. ....

ASSIGNMENT of PLACER LEASE No. ....

From: To:

GROUPING APPL'N UNDER SEC. 52(2) PLACER MINING ACT.

Owner:

DIAMOND DRILL LOGS:

Claims:

Claim sheet no:

QUARTZ ASSESSMENT REPORT.

Claims: *Fog Mountain 1-20*

Claim sheet no: *105-E-9, F-12*

Type of report:

*Soil Geochemistry.*

Submitted by: *AMOCO CANADA Petroleum Co. Ltd*

Cls. work performed on:

*Fog Mountain 1-20*

\$ Req. for ren. application

*4295.43*

Signature *[Signature]*

*12 May 1981*

REPLY ACTION:

Date Ret.



Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)



I (Name) PAUL BROWN Occupation Mineral Exploration  
Amoco Canada Petroleum Co. Ltd.  
 (Postal Address) 656-409 Granville St. Vancouver, B.C.

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):

(Here list claims on which work was actually done by number and name)

FOG MOUNTAIN 1 FOG MOUNTAIN 11  
 FOG MOUNTAIN 2 FOG MOUNTAIN 12  
 FOG MOUNTAIN 3 FOG MOUNTAIN 13  
 FOG MOUNTAIN 4 FOG MOUNTAIN 14

situated at 61° 42' N ; 134° 00' W Claim Sheet No. 105E-9; 105E-12

in the Whitehorse Mining District, to the value of at least \$ 1764.30

dollars, since the 7th day of August 19 80,

to represent the following mineral claims under the authority of Grouping Certificate No. 88580

(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA 51073 FOG MOUNTAIN 1 ; YA 51095 FOG MOUNTAIN 11  
YA 51074 FOG MOUNTAIN 2 ; YA 51096 FOG MOUNTAIN 12  
YA 51075 FOG MOUNTAIN 3 ; YA 51097 FOG MOUNTAIN 13  
YA 51076 FOG MOUNTAIN 4 ; YA 51098 FOG MOUNTAIN 14

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

A soil survey conducted on the dates August 8th, 14th and 18th 1980.

Sworn before me at Whitehorse

this 11 day of May 19 81

A. Daulton  
Notary Public

Paul Brown  
Applicant.



Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)



OFFICE DATE STAMP

I (Name) PAUL BROWN Occupation Amoco Canada Petroleum Co. Ltd. Mineral Exploration  
 (Postal Address) 656-409 Granville St. Vancouver, B.C.

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):

(Here list claims on which work was actually done by number and name)

FOG MOUNTAIN 5      FOG MOUNTAIN 9      FOG MOUNTAIN 17  
 FOG MOUNTAIN 6      FOG MOUNTAIN 10      FOG MOUNTAIN 18  
 FOG MOUNTAIN 7      FOG MOUNTAIN 15      FOG MOUNTAIN 19  
 FOG MOUNTAIN 8      FOG MOUNTAIN 16      FOG MOUNTAIN 20

situated at 61° 42' N ; 134° 00' W Claim Sheet No. 105E-9; 105F-12

in the Whitehorse Mining District, to the value of at least \$ 2531.15

dollars, since the 7th day of August 19 80.

to represent the following mineral claims under the authority of Grouping Certificate No. 88540

(List claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

12 Aug 81  
 YA 51077 ✓ FOG MOUNTAIN 5 ; YA 51099 12 Aug 81 2yrs lock FOG MOUNTAIN 15  
 YA 51078 ✓ FOG MOUNTAIN 6 ; YA 51100 ✓ FOG MOUNTAIN 16  
 YA 51079 ✓ FOG MOUNTAIN 7 ; YA 51101 ✓ FOG MOUNTAIN 17  
 YA 51080 ✓ FOG MOUNTAIN 8 ; YA 51102 ✓ FOG MOUNTAIN 18  
 YA 51093 ✓ FOG MOUNTAIN 9 ; YA 51103 ✓ FOG MOUNTAIN 19  
 YA 51094 ✓ FOG MOUNTAIN 10 ; YA 51104 ✓ FOG MOUNTAIN 20

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

A soil sampling survey conducted on the dates August 8th, 14th and 18th 1980.

Sworn before me at Whitehorse  
this 11 day of May 1981

H. Southwick  
Notary Public

Paul Brown  
Applicant.

T A B L E O F C O N T E N T S

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FIGURES

Property Location Map

Claim Sketch Map

Claim Sketch Map with Grid

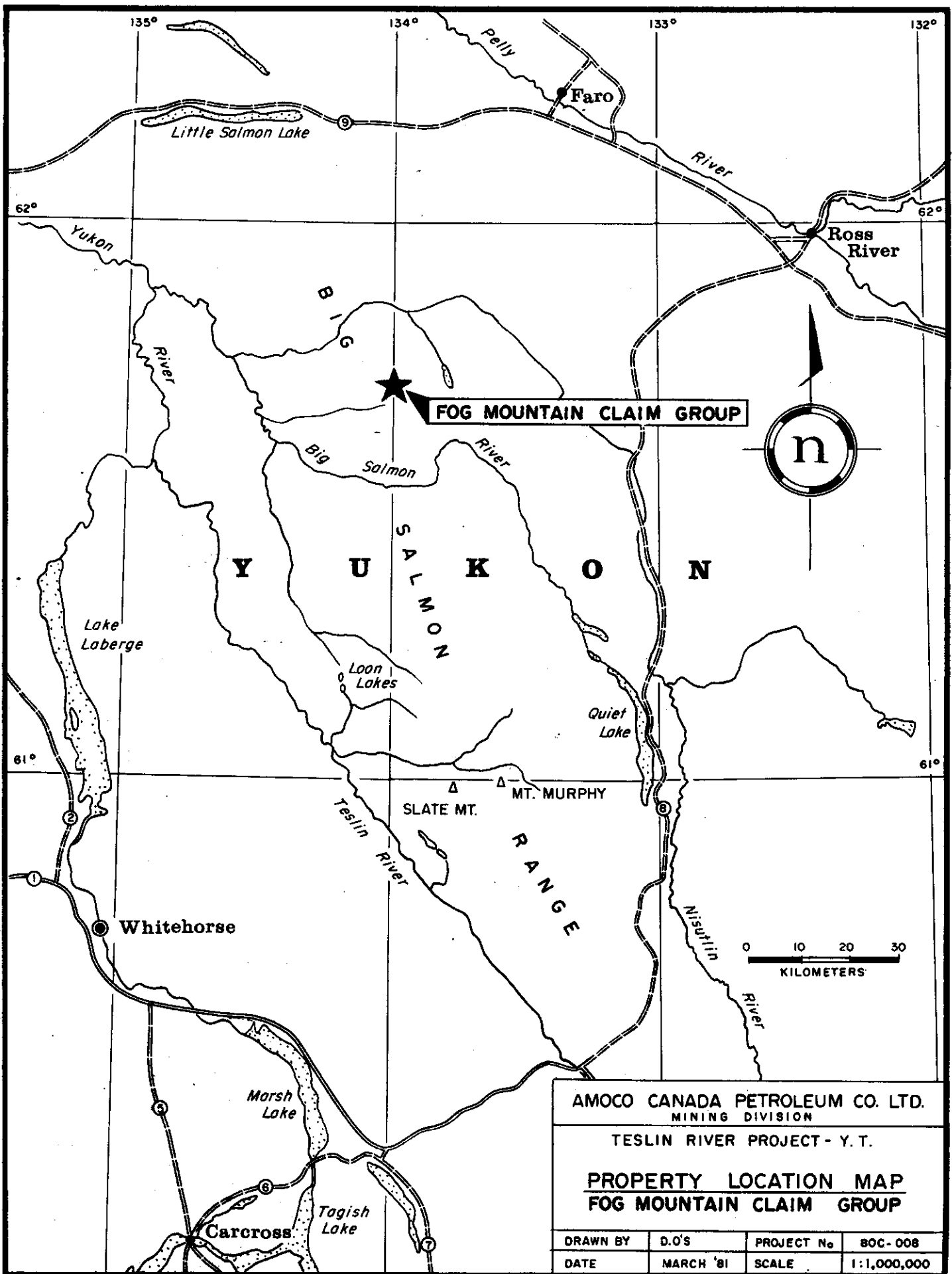
Maps

Soil Geochemistry      Sample Location Map

Soil Geochemistry      Sample Results (Contoured)

LIST OF APPENDICES

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**FOG MOUNTAIN CLAIM GROUP**

**Y U K O N**

SLATE MT.    Δ    MT. MURPHY

**R A N G E**

0    10    20    30  
KILOMETERS

AMOCO CANADA PETROLEUM CO. LTD.  
MINING DIVISION

TESLIN RIVER PROJECT - Y. T.

**PROPERTY LOCATION MAP**  
**FOG MOUNTAIN CLAIM GROUP**

DRAWN BY	D.O'S	PROJECT No	80C-008
DATE	MARCH '81	SCALE	1:1,000,000

## INTRODUCTION

During the 1980 field season Amoco Canada Petroleum Company Limited (Mining Division) conducted a reconnaissance stream sediment sampling and prospecting program over the western portion of the Big Salmon Range in south central Yukon. The main objective of the program was to locate porphyry molybdenum mineralization.

A base camp was established on the southeast shore of North Loon Lake,  $61^{\circ} 11'N$ ,  $134^{\circ} 12'W$ , and was serviced by float equipped Otter and Beaver type aircraft from Whitehorse, approximately 44 air miles to the southwest. Access to the project area from the base camp was by helicopter.

The Fog Mountain Claim Group consists of 20 contiguous claims staked on August 7th, 1980. The claim group is located 6 kms east of Mt. D'Abbadie, at  $61^{\circ} 42'N$ ,  $134^{\circ} 00'W$ . The claim group is only accessible by helicopter and has a relief of approximately 500 m.

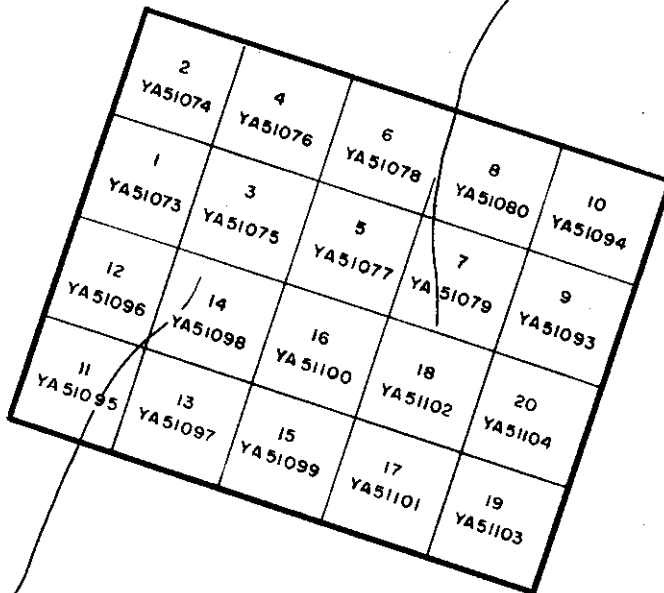
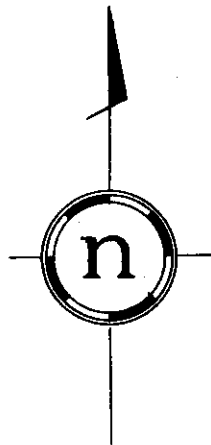
Outcrop on the claim group is restricted to higher elevations and consists of interbedded medium grained gray to brown quartz muscovite schist and recrystallized light gray to pale green argillaceous limestones. These sedimentary rocks strike east-west and dip  $30^{\circ}$  -  $40^{\circ}$  to the south and are host to skarn-like lead-zinc mineralization.

Results of reconnaissance stream sediment sampling conducted in the area indicated several tributaries to be

anomalous in lead-zinc. This anomaly was staked as the FOG MOUNTAIN Claim Group for Amoco Canada Petroleum Company Limited on August 7th, 1980. A geochemical soil survey performed on the FOG MOUNTAIN claims was conducted from the base camp on North Loon Lake.

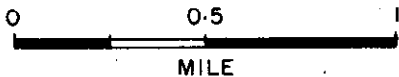
134° 00' W

61° 42' 30" N



Teraktu Ck

Fog Mountain Claim Group



AMOCO CANADA PETROLEUM CO. LTD.			
MINING DIVISION			
TESLIN RIVER PROJECT - Y.T.			
<b>FOG MOUNTAIN CLAIM GROUP</b>			
<b>LOCATION MAP</b>			
DRAWN BY	D.O'S	PROJECT No	80C-008
DATE	MARCH '81	SCALE	1: 31,680

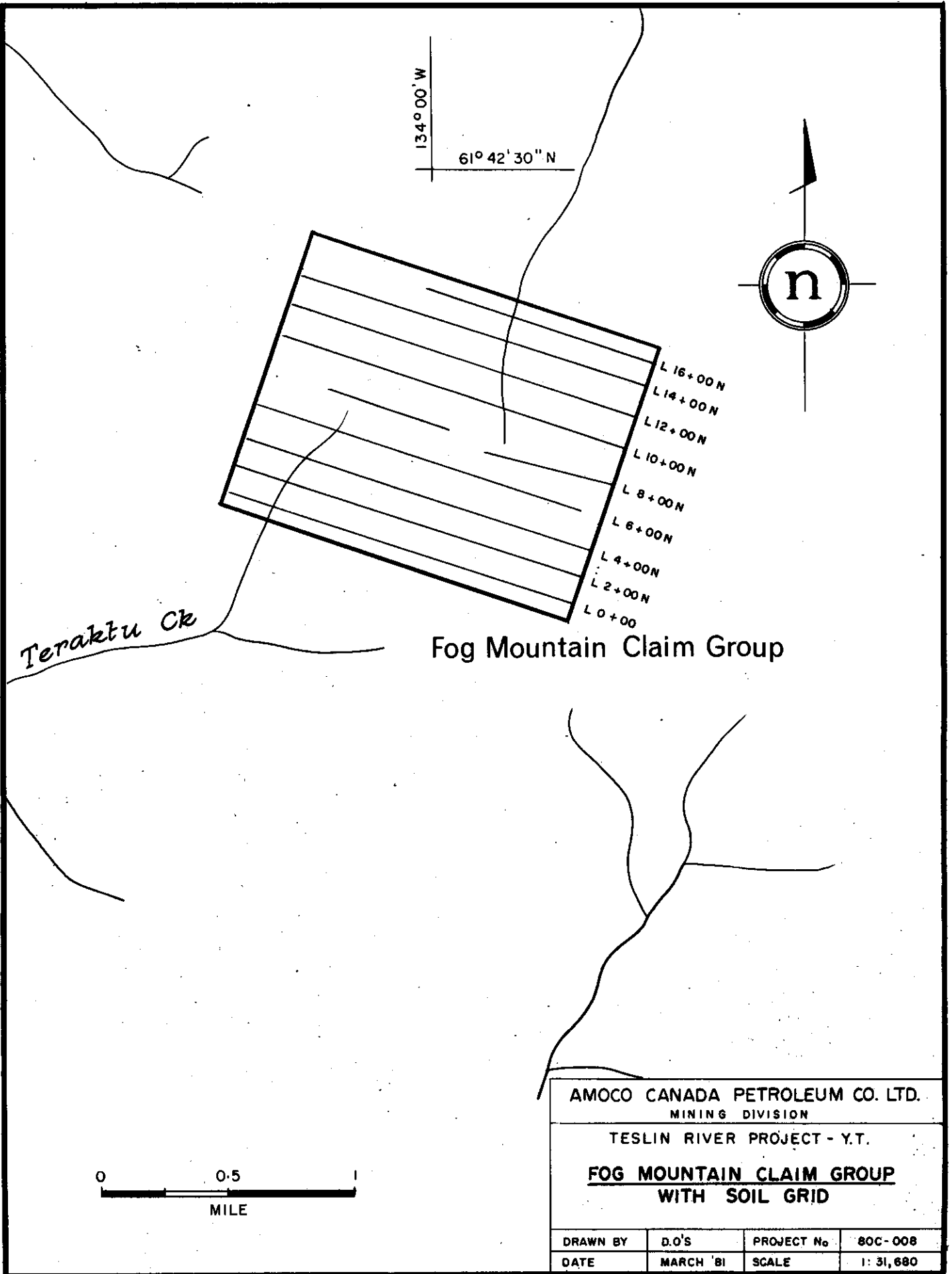
FOG MOUNTAIN CLAIM GROUP

CLAIM		TAG NUMBER
FOG MOUNTAIN	1	YA 51073
FOG MOUNTAIN	2	YA 51074
FOG MOUNTAIN	3	YA 51075
FOG MOUNTAIN	4	YA 51076
FOG MOUNTAIN	5	YA 51077
FOG MOUNTAIN	6	YA 51078
FOG MOUNTAIN	7	YA 51079
FOG MOUNTAIN	8	YA 51080
FOG MOUNTAIN	9	YA 51093
FOG MOUNTAIN	10	YA 51094
FOG MOUNTAIN	11	YA 51095
FOG MOUNTAIN	12	YA 51096
FOG MOUNTAIN	13	YA 51097
FOG MOUNTAIN	14	YA 51098
FOG MOUNTAIN	15	YA 51099
FOG MOUNTAIN	16	YA 51100
FOG MOUNTAIN	17	YA 51101
FOG MOUNTAIN	18	YA 51102
FOG MOUNTAIN	19	YA 51103
FOG MOUNTAIN	20	YA 51104

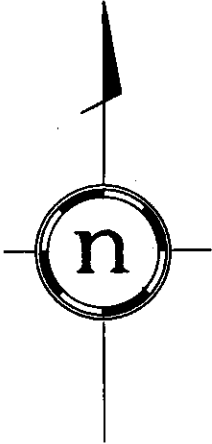
## GEOLOGY

Outcrop on the FOG MOUNTAIN Claim Group is restricted to higher elevations, with talus and glacial deposits covering the remainder of the claim group. The claims are underlain by interbedded medium-grained gray to brown quartz muscovite schist and recrystallized light gray to pale green argillaceous limestones. These sedimentary rocks strike east-west and dip  $30^{\circ}$  -  $40^{\circ}$  to the south. Cutting the sediments in the north central portion of the claim group is a buff coloured fine-grained felsic dyke, probably related to a granodiorite ? stock to the northwest. The dyke has a north trend and appears to be steeply dipping.

The mineralization appears to occur as a skarn-type deposit with lead-zinc mineralization associated with altered limestone units. The lead-zinc mineralization tends to be lens-like or podlike with erratic grades. The best mineralization observed in outcrop is associated with manganese rich sections, which are usually several inches in width and separated by several feet of weakly mineralized to barren limestones. This limestone is often strongly epidotized and chloritized and in the vicinity of mineralization silicified.



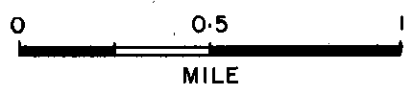
134° 00' W  
61° 42' 30'' N



*Teraktu Ck*

Fog Mountain Claim Group

L 16+00 N  
L 14+00 N  
L 12+00 N  
L 10+00 N  
L 8+00 N  
L 6+00 N  
L 4+00 N  
L 2+00 N  
L 0+00



AMOCO CANADA PETROLEUM CO. LTD.			
MINING DIVISION			
TESLIN RIVER PROJECT - Y.T.			
<b>FOG MOUNTAIN CLAIM GROUP</b>			
<b>WITH SOIL GRID</b>			
DRAWN BY	D.O'S	PROJECT No.	80C-008
DATE	MARCH '81	SCALE	1: 31,680

## SOIL GEOCHEMISTRY

### Introduction

On the dates August 8th, 14 and 18th, 1980 a total of 9 man-days were spent collecting soil samples on a grid covering the FOG MOUNTAIN CLAIM GROUP.

A chained and flagged baseline was established along the north-south (AZ 20<sup>0</sup>) boundary of claims YA 51073, YA 51074, YA 51095 and YA 51096 where possible. Elsewhere, claim posts on the two east-west (AZ 110<sup>0</sup>) claim lines were used for control. Nine pace and compass traverses were conducted along the length of the claim group. Traverse lines were at 200 m intervals and soil samples were collected every 61 m (200'). A total of 297 soil samples were taken.

Soil samples were collected from depths of 5 cms to 30 cms with a mattock and stored in Kraft paper bags. The B horizon was sampled when recognized; otherwise, the soil beneath the zone of humus and vegetation was taken.

The minus 80 mesh fraction of all samples was analyzed for Mo, Cu, Pb and Zn. Every 3rd soil sample was also analyzed for tungsten. Selected samples were also analyzed for Au, Ag and W. All analysis were done by Min-En Laboratories of North Vancouver, B.C.

### Interpretation

Soil sampling on the claim group outlined two anomalous areas of  $>200$  ppm lead and zinc. The zinc anomalies, while being coincident with the lead anomalies, are larger in their extent. The western lead-zinc anomaly is located on claims YA 51075, YA 51077, YA 51098 and YA 51100, is 900 m by 1,000 m; and the eastern lead-zinc anomaly located on claims YA 51079, YA 51080, YA 51093, YA 51094 and YA 51102 is 550 m by 700 m.

These east and west anomalous areas are separated by a steep valley and probably represent the same mineralized horizon cut by glacial erosion or offset by faulting.

### Conclusions and Recommendations

It appears the lead-zinc soil anomaly is directly related to mineralized limestones found on the claim group. The property should be further evaluated to determine the true extent of mineralization. Detailed geological mapping, rock chip sampling, soil sampling and shallow trenching are recommended.

SURVEY COST

## Assay Charges:

A total of 297 soil samples were collected on claims YA 51073 to YA 51080 and YA 51093 to YA 51104, and analyzed for Mo, Cu, Pb, Zn @ \$4.60 per sample.

95 of the above mentioned samples were also analyzed for tungsten @ \$3.75 per sample.

108 of the samples anomalous in lead and zinc were also analyzed for Au, Ag and W @ \$8.75 per sample.

297 samples	@	\$4.60 per sample	=	\$1,366.20
95 samples	@	\$3.75 per sample	=	\$ 356.25
108 samples	@	\$8.75 per sample	=	\$ 945.00
Total Assay Charges			=	\$2,667.45

## Salaries:

Paul Brown	3 man-days @	\$65.80/day	=	197.40
Jim Cuttle	3 man-days @	\$57.40/day	=	172.20
Bryan Mills	3 man-days @	\$34.26/day	=	102.78

Total Salaries \$ 472.38

Meals: 9 man-days @ \$12.00 per man-day = \$ 108.00

Transportation: Helicopter 2.1 hrs @ \$356.00/hr = \$ 747.60

Cost of Report Preparation: = \$ 300.00

TOTAL \$4,295.43

APPORTIONMENT OF EXPENSES

The total cost of the survey \$4,295.43 is to be distributed over the twenty claims as indicated below:

<u>CLAIM NAME</u>	<u>GRANT NUMBER</u>	<u>ASSAY COST</u>	<u>COST OTHER THAN ASSAYS</u>	<u>TOTAL COST APPLICABLE</u>
FOG MTN	1 YA 51073	\$91.80	\$81.40	\$173.20
	2 51074	121.90		203.30
	3 51075	201.90		283.30
	4 51076	224.05		305.45
	5 51077	175.20		256.60
	6 51078	171.20		252.60
	7 51079	131.40		212.80
"	8 " 51080	202.05	"	283.45
	9 51093	110.15		191.55
	10 51094	161.60		243.00
	11 51095	83.15		164.55
	12 51096	114.40		195.80
"	13 " 51097	74.80	"	156.20
	14 51098	201.10		282.50
	15 51099	87.75		169.15
	16 51100	79.40		160.80
	17 51101	35.10		116.50
	18 51102	184.10		265.50
	19 51103	87.75		169.15
"	20 " 51104	128.65	"	210.05

APPENDIX I

Fee Schedule

Geochemical analyses were done by:

Min-En Laboratories Ltd.,  
705 West 15th Street,  
North Vancouver, B.C.,  
V7M 1T2.

Geochemical analyses:

Mo, Cu, Pb, Zn	\$4.00/sample
Sample Preparation	<u>\$0.60/sample</u>
	\$4.60/sample
Tungsten	\$3.75/sample
Gold	\$4.25/sample
Silver	\$0.75/sample

*MIN-EN Laboratories Ltd.*

*Specialists in Mineral Environments*

Corner 15th Street and Bewicke

705 WEST 15th STREET

NORTH VANCOUVER, B.C.

CANADA

ANALYTICAL PROCEDURE REPORTS FOR ASSESSMENT WORK

PROCEDURES FOR: Cu, Mo, Cd, Pb, Mn, Ni, Ag, Zn

Samples are processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

After drying the samples at 95°C soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by jaw crusher and pulverized by ceramic plated pulverizer.

1.0 gram of the samples are digested for 6 hours with  $\text{HNO}_3$  and  $\text{HClO}_4$  mixture.

After cooling the samples are diluted to standard volume. The solutions are analysed by Atomic Absorption Spectrophotometers.

Copper, Lead, Zinc, Silver, Cadmium, Cobalt, Nickel and Manganese are analysed using the  $\text{CH}_2\text{H}_2$ -Air Flame combination but the Molybdenum determination is carried out by  $\text{C}_2\text{H}_2$ - $\text{N}_2\text{O}$  gas mixture directly or indirectly (depending on the sensitivity and detection limit required) on these sample solutions.

Background corrections for Pb, Ag, Cd upon request are completed.

*MIN-EN Laboratories Ltd.*

*Specialists in Mineral Environments*

Corner 15th Street and Bewicke  
705 WEST 15th STREET  
NORTH VANCOUVER, B.C.  
CANADA

ANALYTICAL PROCEDURE REPORTS FOR ASSESSMENT WORK

PROCEDURE FOR GOLD GEOCHEMICAL ANALYSIS.

Geochemical samples for Gold processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

After drying the samples at 95°C soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized by ceramic plated pulverizer.

A suitable sample weight 5.0 or 10.0 grams are pre-treated with  $\text{HNO}_3$  and  $\text{HClO}_4$  mixture.

After pretreatments the samples are digested with Aqua Regia solution, and after digestion the samples are taken up with 25% HCl to suitable volume.

At this stage of the procedure copper, silver and zinc can be analysed from suitable aliquote by Atomic Absorption Spectrophotometric procedure.

Further oxidation and treatment of at least 75% of the original sample solutions are made suitable for extraction of gold with Methyl Iso-Butyl Ketone.

With a set of suitable standard solution gold is analysed by Atomic Absorption instruments. The obtained detection limit is 5 ppb.

APPENDIX II

*MIN-EN Laboratories Ltd.*

*Specialists in Mineral Environments*

Corner 15th Street and Bewicke  
705 WEST 15TH STREET  
NORTH VANCOUVER, B.C.  
CANADA V7M 1T2

ANALYTICAL PROCEDURE FOR ASSESSMENT WORK  
PROCEDURE FOR: TUNGSTEN

0.5 gram of prepared samples are weighed into nickel crucibles and fluxed with 1:4 times with carbonate flux in a temperature controlled furnace.

Samples than are dissolved and suitable aliquots are taken for colorimetric procedures.

The interferring elements are reduced from the solutions by a 10%  $\text{SnCl}_2$  solution before the test is carried out by the Zinc Dithol reagent.

The coloured complex is extracted with Kerosene<sup>e</sup> oil to obtain pure and more easily discriminated blue color.

Samples are measured against a suitable suit of standards which are carried through the same manner as the samples.

APPENDIX III

Names and Addresses of Persons Conducting Work

Paul Brown,  
1504 - 2170 Sherobee Rd.,  
Mississauga, Ontario,  
L5A 3P8.

Jim Cuttle,  
656 - 409 Granville St.,  
Vancouver, B.C.,  
V6C 1T2.

Bryan Mills,  
420 Alberta St.,  
New Westminster, B.C.,  
V3L 3J7.

APPENDIX IV

Cost per Hour for Helicopter, 1980

Bell 206B, Contract Rate, Shirley Helicopters,  
Whitehorse, Yukon

Contract Rate	\$325.00/hr
Fuel and Oil Cost	<u>\$ 31.00/hr</u>
Total	<u>\$356.00/hr</u>

APPENDIX V

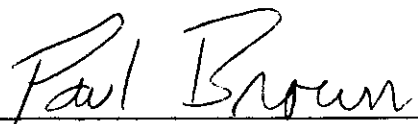
Qualifications of Paul Brown

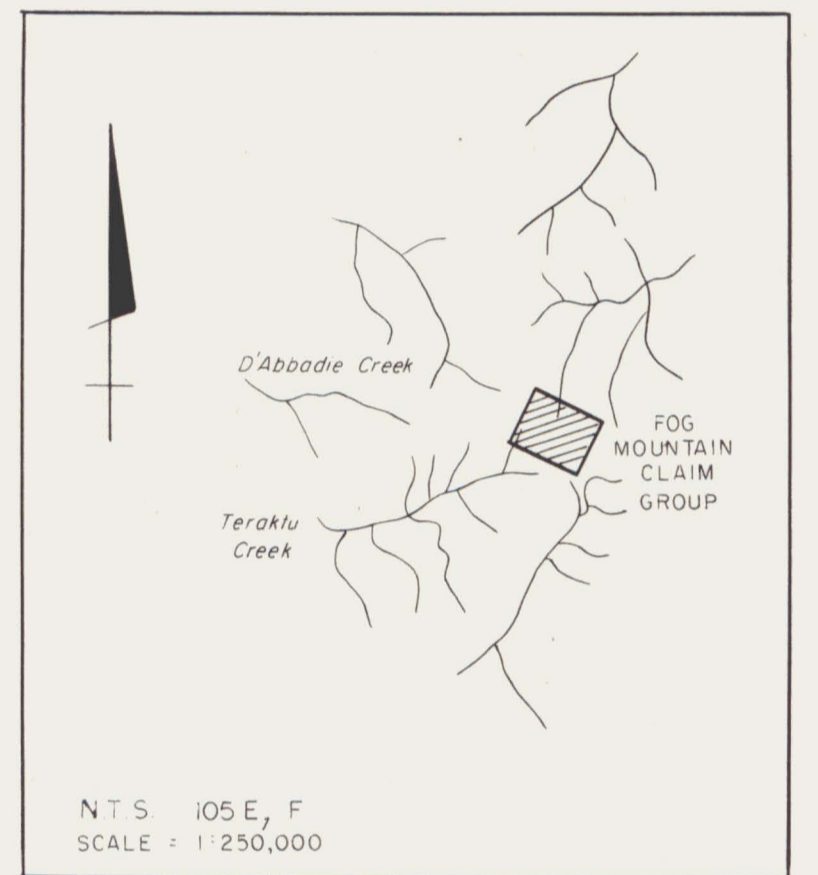
B.Sc. Geology, Memorial University of Newfoundland, 1974

Continuously employed in the mineral exploration industry since graduation and with Amoco Canada Petroleum Company Ltd. since April, 1975.

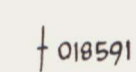

Member of the Geological Association of Canada and the Canadian Institute of Mining and Metallurgy.

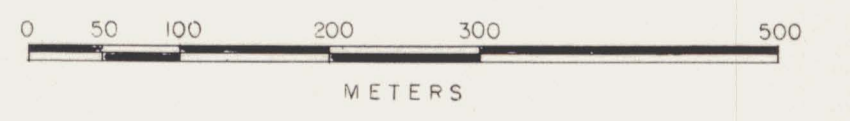
Toronto, Ontario  
February 18, 1981

  
\_\_\_\_\_  
Paul Brown, B.Sc.



LEGEND

-  SOIL SAMPLE LOCATION AND NUMBER
-  CLAIM POST



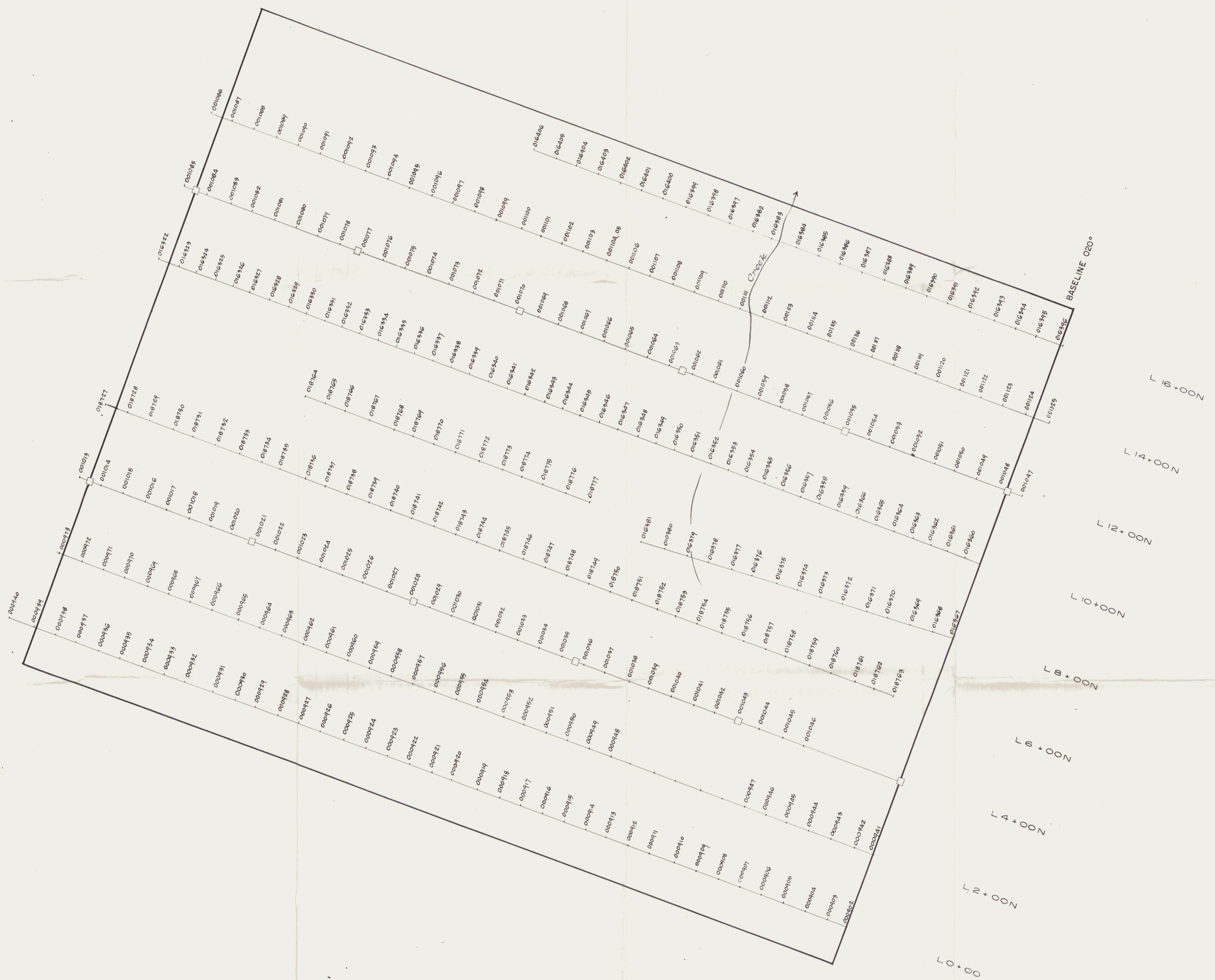
AMOCO CANADA PETROLEUM CO. LTD.

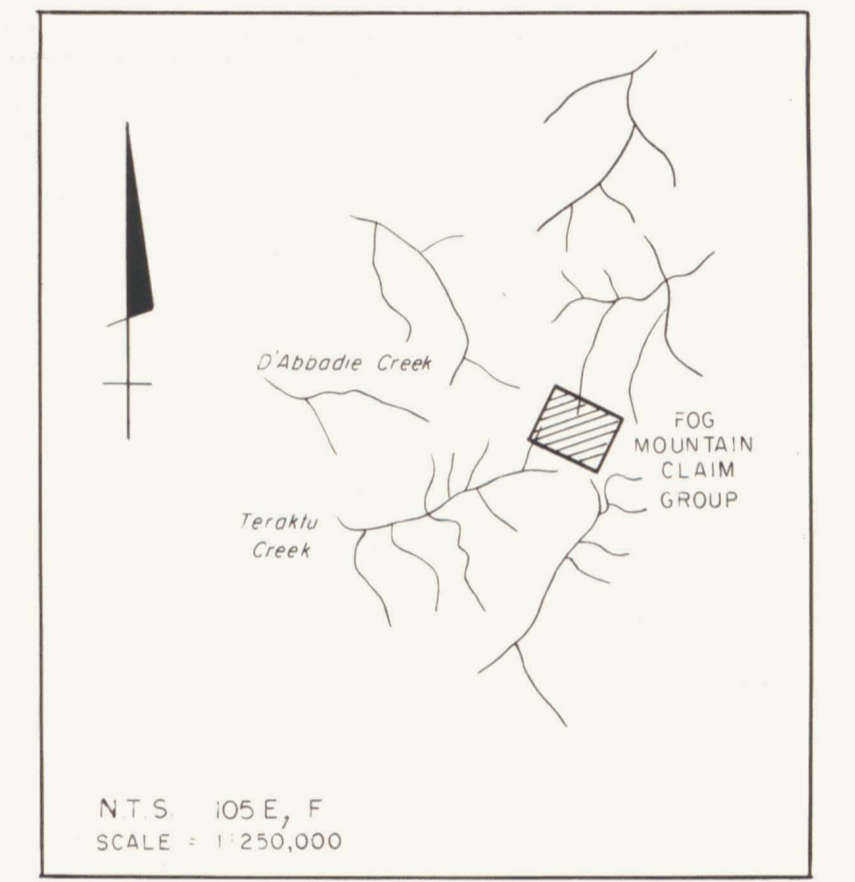
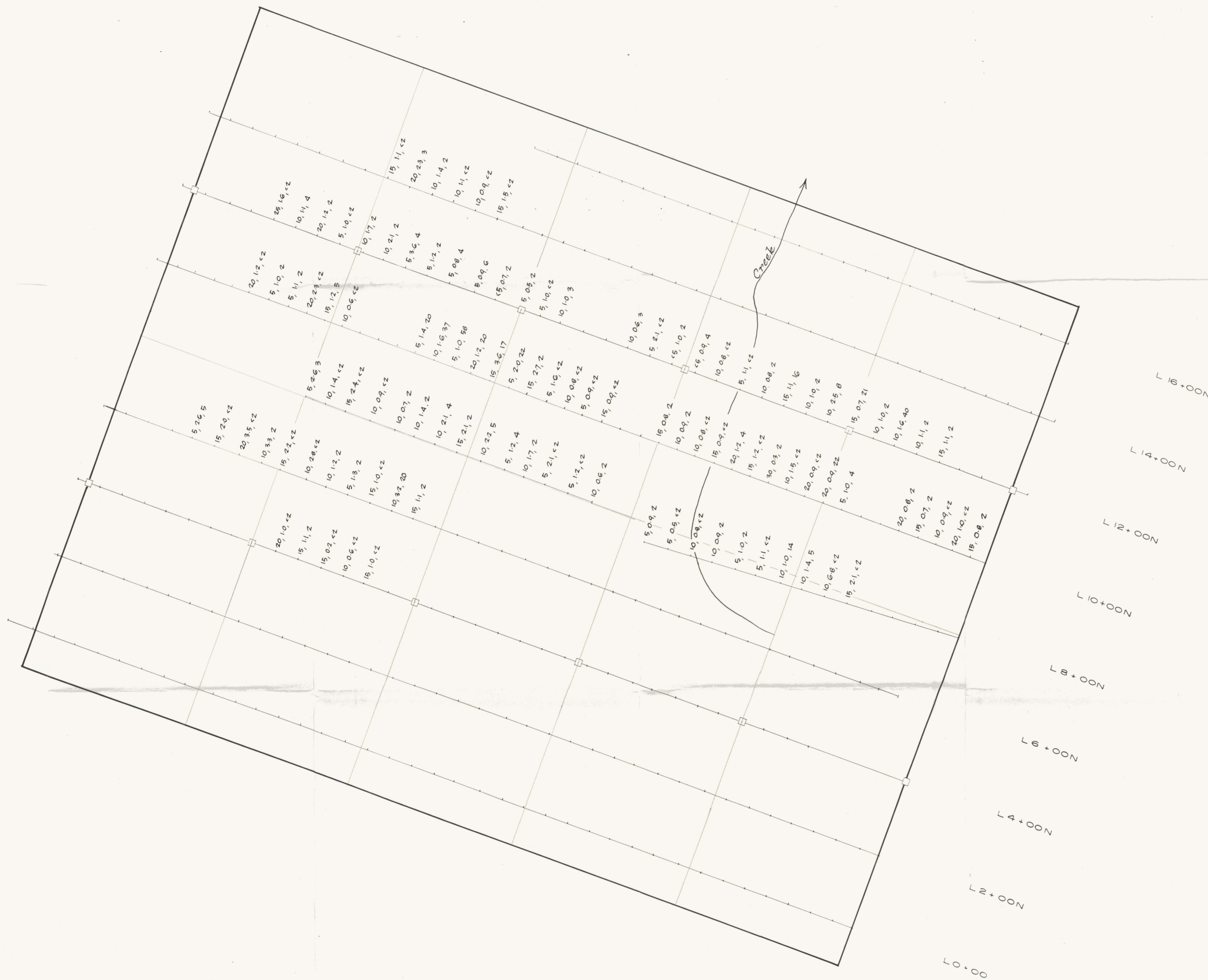


MINING DIVISION

TESLIN PROJECT  
FOG MOUNTAIN CLAIM GROUP  
SAMPLE LOCATION MAP

Drawn By	d os / set.	Scale	1 : 5,000
Date	January 1981.	Project No.	80C-008





NTS 1:50,000  
SCALE = 1:250,000

LEGEND

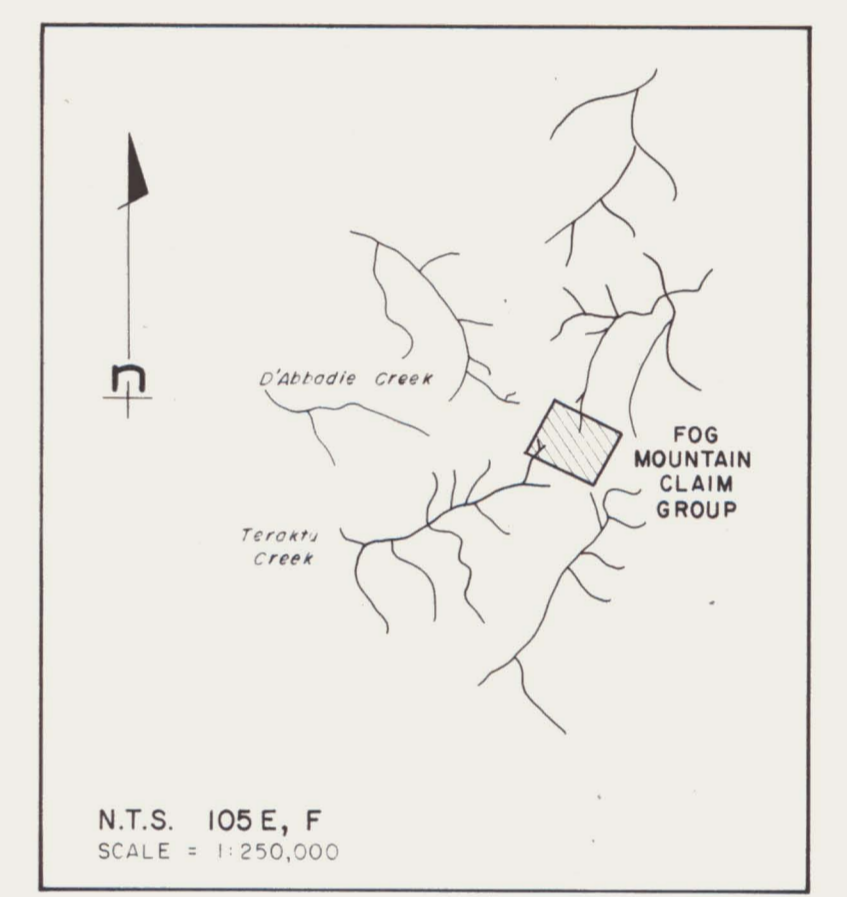
- 10, 11, <2  
 Au (ppb), Ag (ppm), W (ppm)
- CLAIM POST



**AMOCO CANADA PETROLEUM CO. LTD.**  
MINING DIVISION

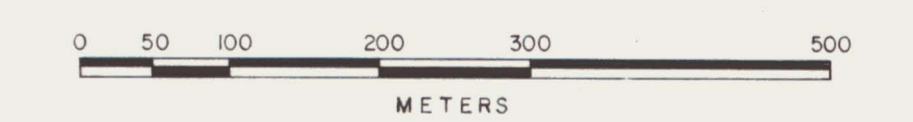
TESLIN PROJECT  
**FOG MOUNTAIN CLAIM GROUP**  
**GEOCHEMICAL RESULTS**  
Au (ppb), Ag (ppm), W (ppm)

Drawn By	dgs/sef	Scale	1:5,000
Date	January 1981	Project No.	80C-008



### Zn RESULTS

- $\geq 200$  ppm
- $\geq 400$  ppm
- $\geq 1000$  ppm
- $\geq 2000$  ppm



**LEGEND**  
 SOIL SAMPLE RESULTS  
 30, 50, 20, 70, 130  
 Mo, Cu, Pb, Zn, WO<sub>3</sub> (ppm)  
 CLAIM POST

<b>AMOCO CANADA PETROLEUM CO. LTD.</b>			
<small>MINING DIVISION</small>			
<b>TESLIN PROJECT</b>			
<b>FOG MOUNTAIN CLAIM GROUP</b>			
<b>GEOCHEMISTRY RESULTS</b>			
<small>Mo, Cu, Pb, Zn, WO<sub>3</sub> (ppm)</small>			
Drawn By	m. j. jamshedji	Scale	1 : 5,000
Date	October 1980	Project No.	80C-008