

MMM CLAIM GROUP: SOIL GEOCHEMISTRY
WHITEHORSE MINING DIVISION

MMM 1 to 20 (20 claims)

105F4 and 105C13

61° 00'N 133° 34'W



OWNER/OPERATOR:

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

090806

Report Written by::

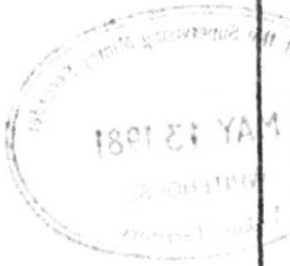
Paul Brown,
February 3, 1981.

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 \$ 2,384.66

R. Dubicki *Acting Reg.*
Resident Geologist or *Geol June 1/81*
Resident Mining Engineer

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

B. R. BAXTER
Supervising Mining Recorder
Commissioner of Yukon Territory



200000

FROM Mining Recorder at Whitehorse

TO 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:

AFFIDAVIT of EXPENDITURE on PLACER LEASE. Name:

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: MMM 1-20 Claim sheet no:

Type of report:
Soil Geochemistry

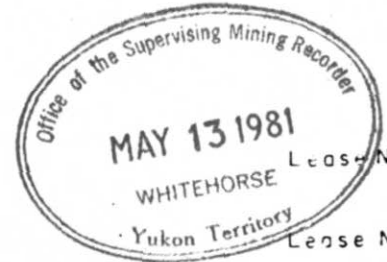
Cls. work performed on:

MMM 1-20

Submitted by:
AMOCO Canada Peter Leung Co. Ltd

\$ Req. for ren. application
\$ 2,384.66

Signature [Signature] Date Ret. 12 May 81



REPLY ACTION.

Signature _____



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)	<u>PAUL BROWN</u>	Occupation	<u>Mineral Exploration</u>
(Postal Address)	<u>656-409 Granville St. Vancouver, B.C.</u>		

OFFICE DATE STAMP

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)

M M M 11 M M M 15 M M M 19
 M M M 12 M M M 16 M M M 20
 M M M 13 M M M 17
 M M M 14 M M M 18

situated at 61°00'N; 133°34'W Claim Sheet No. 105F-4; 105C-13

in the Whitehorse Mining District, to the value of at least \$1100.55

dollars, since the 1st day of August 19 1980.

to represent the following mineral claims under the authority of Grouping Certificate No. 88570

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

YA 51083	M M M 11	12 Aug 81	YA 51088	M M M 16	12 Aug 81
YA 51084	M M M 12	✓	YA 51089	M M M 17	✓
YA 51085	M M M 13	✓	YA 51090	M M M 18	✓
YA 51086	M M M 14	✓	YA 51091	M M M 19	✓
YA 51087	M M M 15	✓	YA 51092	M M M 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 2nd and 3rd 1980.

Sworn before me at Whitehorse
this 11 day of May 1981

J. Sawtuck
Notary Public

Paul Brown
Applicant.

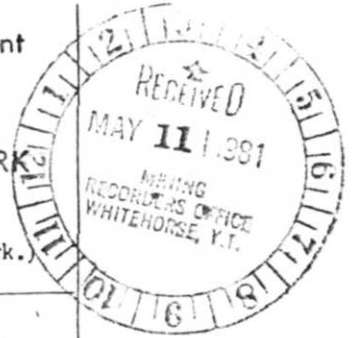


Department of Indian Affairs and Northern Development

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 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.

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)

- MMM 1 MMM 5 MMM 9
- MMM 2 MMM 6 MMM 10
- MMM 3 MMM 7
- MMM 4 MMM 8

situated at 61° 00' N; 133° 34' W Claim Sheet No. 105F-4; 105C-13

in the Whitehorse Mining District, to the value of at least \$ 1196.05

dollars, since the 1st day of August 19 80.

to represent the following mineral claims under the authority of Grouping Certificate No. 88564

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

- | | | | | | |
|----------|---------|-----------|----------|----------|-----------|
| YA 51065 | MMM 1 ✓ | 12 Aug 81 | YA 51070 | MMM 6 ✓ | 12 Aug 81 |
| YA 51066 | MMM 2 ✓ | | YA 51071 | MMM 7 ✓ | |
| YA 51067 | MMM 3 ✓ | | YA 51072 | MMM 8 ✓ | |
| YA 51068 | MMM 4 ✓ | | YA 51081 | MMM 9 ✓ | |
| YA 51069 | MMM 5 ✓ | | YA 51082 | MMM 10 ✓ | |

Amoco Canada Petroleum Co. Ltd.

2. 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 2nd and 3rd 1980.

Sworn before me at Whitehorse
this 11 day of May 19 81

W. D. Stewart
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

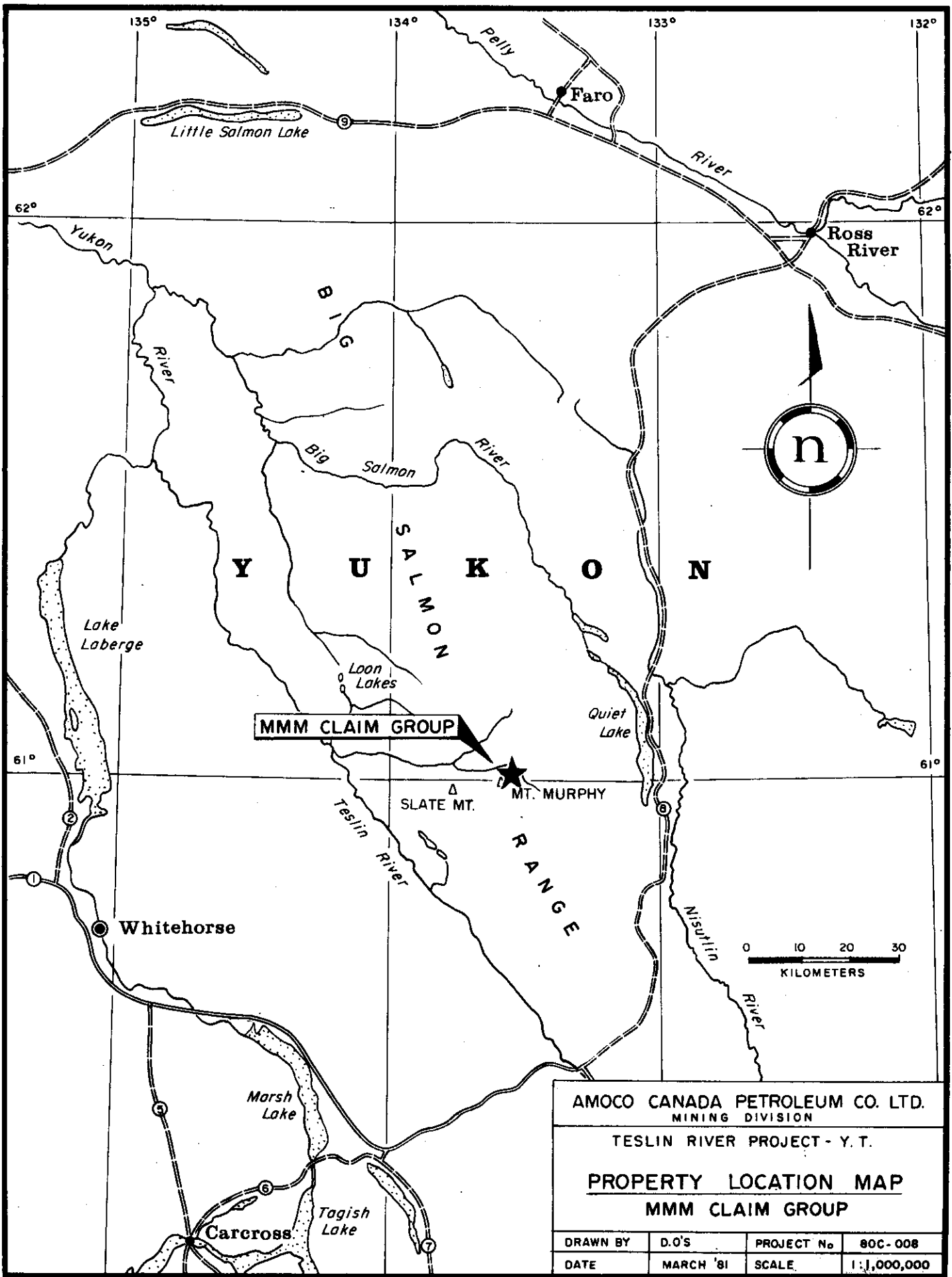
- Property Location Map
- Claim Sketch Map
- Claim Sketch Map with Grid

MAPS

- Soil Geochemistry Sample Location Map
- Soil Geochemistry Sample Results (Contoured)

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MMM CLAIM GROUP

AMOCO CANADA PETROLEUM CO. LTD.
MINING DIVISION

TESLIN RIVER PROJECT - Y. T.

**PROPERTY LOCATION MAP
MMM 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 primary objective of the program was to locate porphyry molybdenum mineralization.

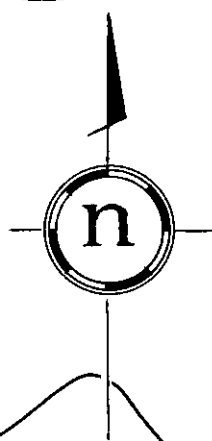
A base camp was established on the southeast shore of North Loon Lake, $61^{\circ} 11'N$, $134^{\circ} 12'W$, and was serviced by float equipped Otter and Beaver type aircraft from Whitehorse, approximately 44 air miles to the southwest. Access to the project area from the base camp was by helicopter.

The MMM Claim Group consists of 20 contiguous claims staked on August 1st, 1980. The claim group is situated on the northeast side of Mt. Murphy $61^{\circ} 00'N$, $133^{\circ} 34'W$. Relief on the claim group is approximately 600 m and is accessible only by helicopter.

The entire MMM Claim Group is underlain by coarse-grained intrusive rocks of the Quiet Lake Batholith. These intrusive rocks consist of coarse-grained gray to brown biotite rich monzonite to granodiorite with disseminated pyrite.

Results of a geochemical soil sampling survey has

indicated the presence of anomalous concentrations of molybdenum in soil on the northeast portion of the MMM Claim Group.



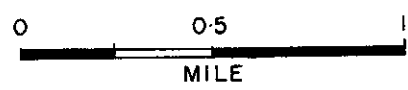
Boswell River

MMM Claim Group

12 YA 51084	11 YA 51083	2 YA 51066	1 YA 51065
14 YA 51086	13 YA 51085	4 YA 51068	2 YA 51067
16 YA 51088	15 YA 51087	6 YA 51070	5 YA 51069
18 YA 51090	17 YA 51089	8 YA 51072	7 YA 51071
20 YA 51092	19 YA 51091	10 YA 51082	9 YA 51081

133° 31' W

61° 00' N



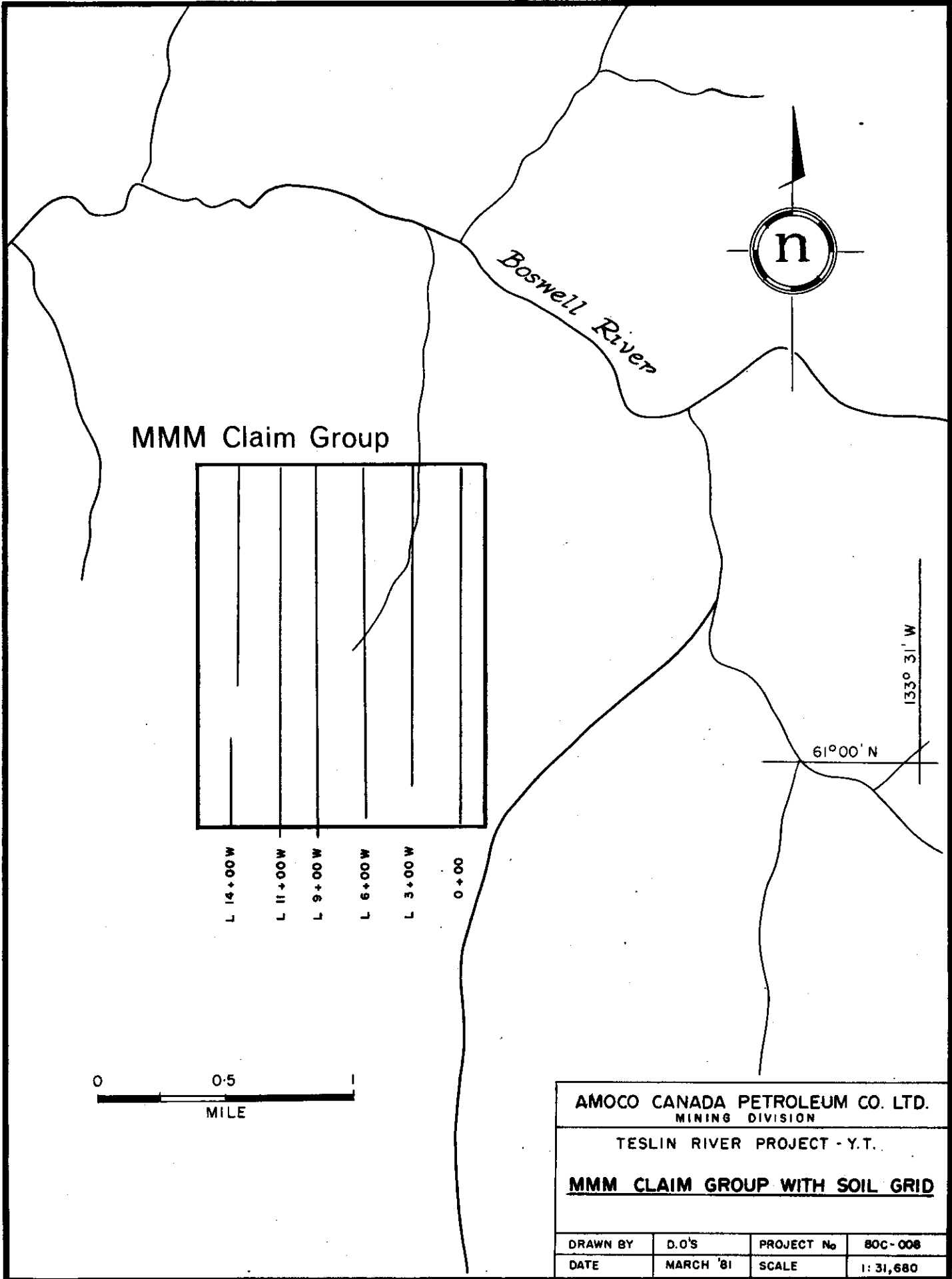
AMOCO CANADA PETROLEUM CO. LTD. MINING DIVISION			
TESLIN RIVER PROJECT - Y.T.			
MMM CLAIM GROUP LOCATION MAP			
DRAWN BY	D.O'S	PROJECT No	80C-008
DATE	MARCH '81	SCALE	1: 31,680

MMM CLAIM GROUP

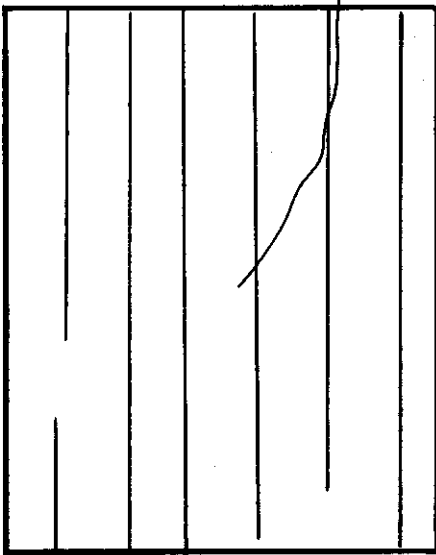
CLAIM	TAG NUMBER
MMM 1	YA 51065
MMM 2	YA 51066
MMM 3	YA 51067
MMM 4	YA 51068
MMM 5	YA 51069
MMM 6	YA 51070
MMM 7	YA 51071
MMM 8	YA 51072
MMM 9	YA 51081
MMM 10	YA 51082
MMM 11	YA 51083
MMM 12	YA 51084
MMM 13	YA 51085
MMM 14	YA 51086
MMM 15	YA 51087
MMM 16	YA 51088
MMM 17	YA 51089
MMM 18	YA 51090
MMM 19	YA 51091
MMM 20	YA 51092

GEOLOGY

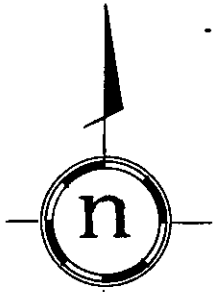
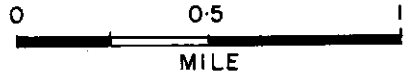
The entire MMM Claim Group is underlain by coarse-grained intrusive rocks of the Quiet Lake Batholith. The Quiet Lake Batholith, located west and northwest of Quiet Lake, is a northwest trending body 40 miles long by 20 miles wide. The Batholith intrudes Palaeozoic ? Yukon Group sedimentary schist and gneiss and has been dated by K-Ar methods at 83.2 million years. This intrusive is predominately coarse-grained to porphyritic biotite granite with a more gneissic border phase. However, in the vicinity of the MMM Claim Group, the intrusive is composed of coarse-grained gray to brown biotite rich monzonite to granodiorite with disseminated pyrite. Many of the outcrops are fractured and gossans are abundant in the northern portion of the Claim Group. No quartz stockwork or felsic dyking were noted, however, one chloritic mafic dyke with a 2-3% pyrite was found.



MMM Claim Group



L 14+00W
 L 11+00W
 L 9+00W
 L 6+00W
 L 3+00W
 0+00



Boswell River

133° 31' W

61°00' N

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

SOIL GEOCHEMISTRY

Introduction

During the period August 2nd and 3rd, 1980, a total of 7 man-days were spent collecting soil samples on a grid covering the MMM Claim Group.

A chained and flagged baseline was established along the north boundary of claims YA 51065, YA 51066, YA 51083 and YT 51084. Six pace and compass traverses at 180° were conducted from this baseline at 300 m intervals. Soil samples were collected every 61 m (200') and a total of 216 soil samples were taken.

Soil samples were collected from depths of 5 cms to 20 cms with a mattock and stored in Kraft paper bags. The B horizon was sampled when present; otherwise, the soil beneath the zone of humus and vegetation was collected.

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

Interpretation

A moderate molybdenum soil anomaly is located on claims YA 51065, YA 51066 and YA 51083 at the northern end of the claim group. The anomaly is 1200 m by 400 m and is

open to the east. Molybdenum values range from 20 ppm to 377 ppm with the majority being in the 50 - 100 ppm range. Background values for molybdenum are in the 3 - 8 ppm range. A small molybdenum anomaly occurs on claim YA 51088. The anomaly is 300 m by 200 m and is open to the west. Molybdenum values are in the 24 to 54 ppm range.

Conclusions and Recommendations:

It appears the soil anomalies are related to the underlying gossaniferous bedrock. The area covering both anomalies should be soil sampled and rock chip sampled in detail to further define the anomalies. The grid covering the anomaly on claims YA 51065, YA 51066 and YA 51083 should be extended further to the northeast and the grid covering the anomaly on claim YA 51088 should be extended further west.

SURVEY COST

Assay Charges:

A total of 216 soil samples were collected on claims YA 51065 to YA 51072 and YA 51081 to YA 51092 and analyzed for Mo, Cu, Pb, Zn @ \$4.60 per sample.

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

216 samples	@	\$4.60/sample	=	\$ 993.60
64 samples	@	\$3.75/sample		\$ 240.00
				<hr/>
		Total Assay Charges	=	\$1,233.60
Salaries:				
Paul Brown	1 man-day	@ \$65.80/day	=	\$ 65.80
Jim Cuttle	2 man-days	@ \$57.40/day	=	\$ 114.80
Bryan Mills	2 man-days	@ \$34.26/day	=	\$ 68.52
Tim Canam	2 man-days	@ \$45.37/day	=	\$ 90.74
				<hr/>
		Total Salaries		\$ 339.86
Meals:	7 man-days	@ \$12.00/man-day	=	\$ 84.00
Transportation:	Helicopter	1.2 hrs @ \$356.00/hr	=	\$ 427.20
Cost of Report Preparation:			=	\$ 300.00
				<hr/>
		TOTAL		\$2,384.66
				<hr/>

APPORTIONMENT OF EXPENSES

The total cost of the survey \$ 2,384.66 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>
MMM 1	YA 51065	\$88.60	\$57.55	\$146.15
" 2	51066	48.05	"	105.60
3	51067	83.15	"	140.70
4	51068	44.30		101.85
5	51069	88.60		146.15
6	51070	43.45		101.00
7	51071	83.15		140.70
8	51072	39.70		97.25
" 9	" 51081	61.85	"	119.40
10	51082	39.70		97.25
11	51083	88.60		146.15
12	51084	35.95		93.50
13	51085	96.10		153.65
14	51086	44.30		101.85
15	51087	75.65		133.20
16	51088	39.70		97.25
17	51089	83.15		140.70
18	51090	9.20		66.75
19	51091	92.35		149.90
" 20	" 51092	48.05	"	105.60

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

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 HNO_3 and 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 CH_2H_2 -Air Flame combination but the Molybdenum determination is carried out by C_2H_2 - N_2O 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 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% SnCl_2 solution before the test is carried out by the Zinc Dithol reagent.

The coloured complex is extracted with Kerosene^e 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.

Tim Canam,
P. O. Box 569,
Pictou, Pictou County, N.S.,
B0K 1H0.

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

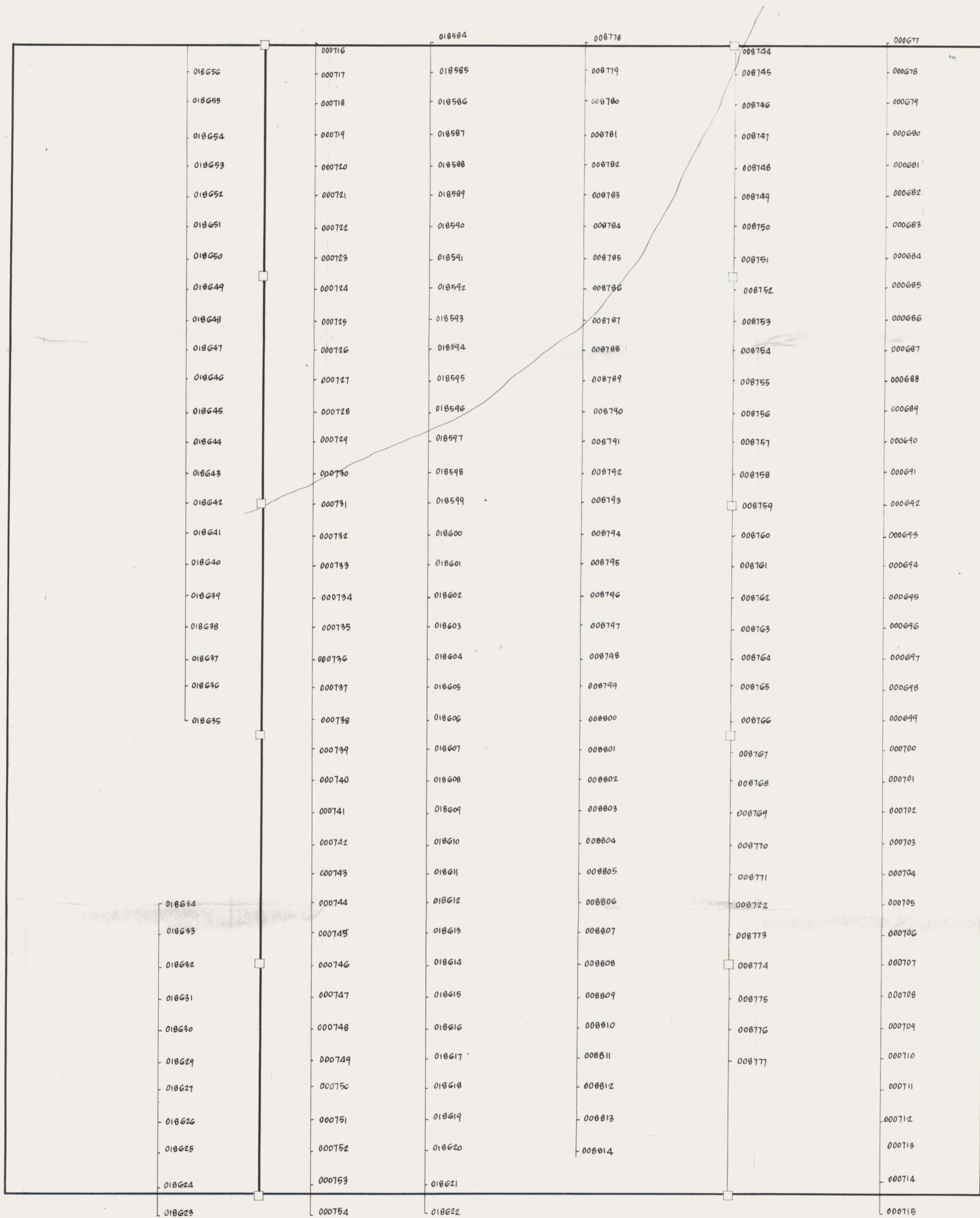
B.Sc. Geology, Memorial University of Newfoundland, 1974

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

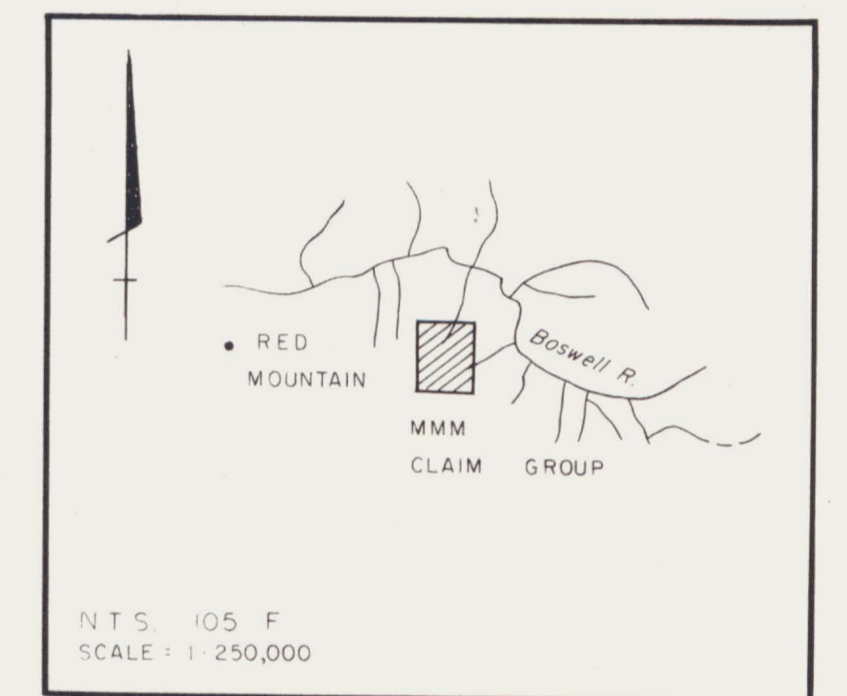
Member of the Geological Association of Canada and the Canadian Institute of Mining and Metallurgy.

Toronto, Ontario
February 3, 1981


Paul Brown, B. Sc.

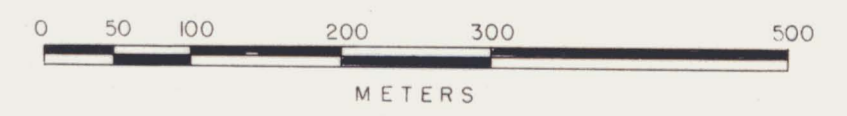


L14+00
L11+00
L9+00
L6+00
L3+00
L+00



LEGEND

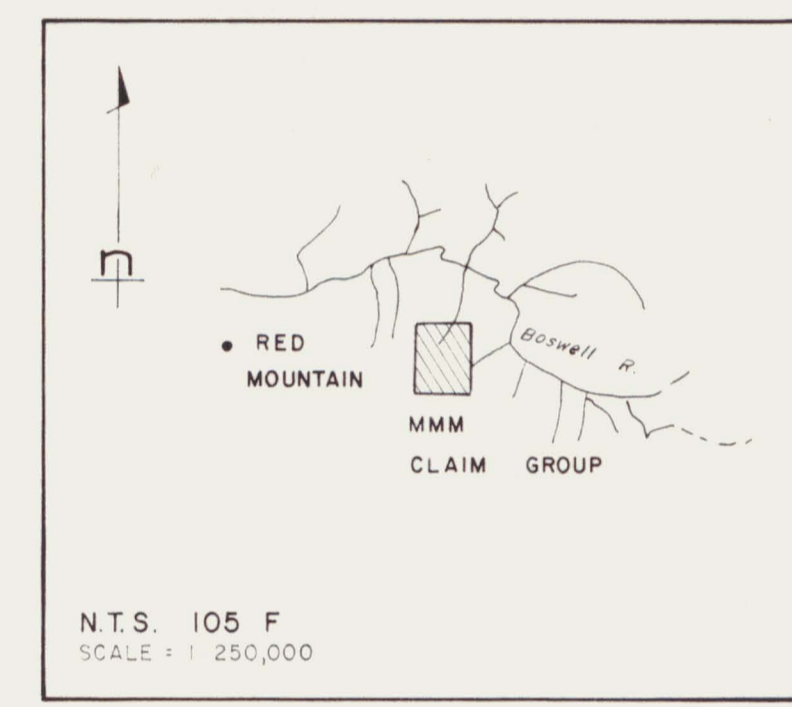
- | 018591 SOIL SAMPLE LOCATION AND NUMBER
- CLAIM POST



AMOCO CANADA PETROLEUM CO. LTD.
MINING DIVISION

TESLIN PROJECT
MMM CLAIM GROUP
SAMPLE LOCATION MAP

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



Mo RESULTS

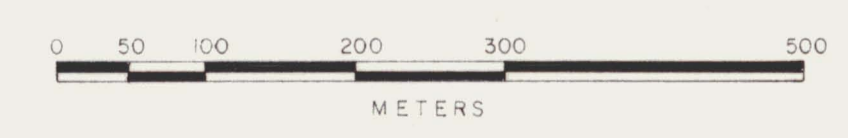
- ≥ 20 ppm
- ≥ 40 ppm
- ≥ 100 ppm

LEGEND

SOIL SAMPLE RESULTS

30, 50, 20, 70, 130
Mo, Cu, Pb, Zn, WO₃ (ppm)

□ CLAIM POST



00
+
14
└─┘

00
+
11
└─┘

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+
0
└─┘

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AMOCO CANADA PETROLEUM CO. LTD.



MINING DIVISION

TESLIN PROJECT
MMM CLAIM GROUP
GEOCHEMISTRY RESULTS
Mo, Cu, Pb, Zn, WO₃ (ppm)

Drawn By	m. j. jamshedji	Scale	1:5,000
Date	October 1980	Project No.	80C-008