

'80-773-8495

MURRAY GROUP - SOIL GEOCHEMISTRY  
NELSON MINING DIVISION

September 1980

8495

MURRAY GROUP - SOIL GEOCHEMISTRY

NELSON MINING DIVISION

82F/6

49<sup>0</sup>22'N 117<sup>0</sup>22'W

Owner/Operator

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

Report Written By:

Bernard MacIsaac  
September, 1980

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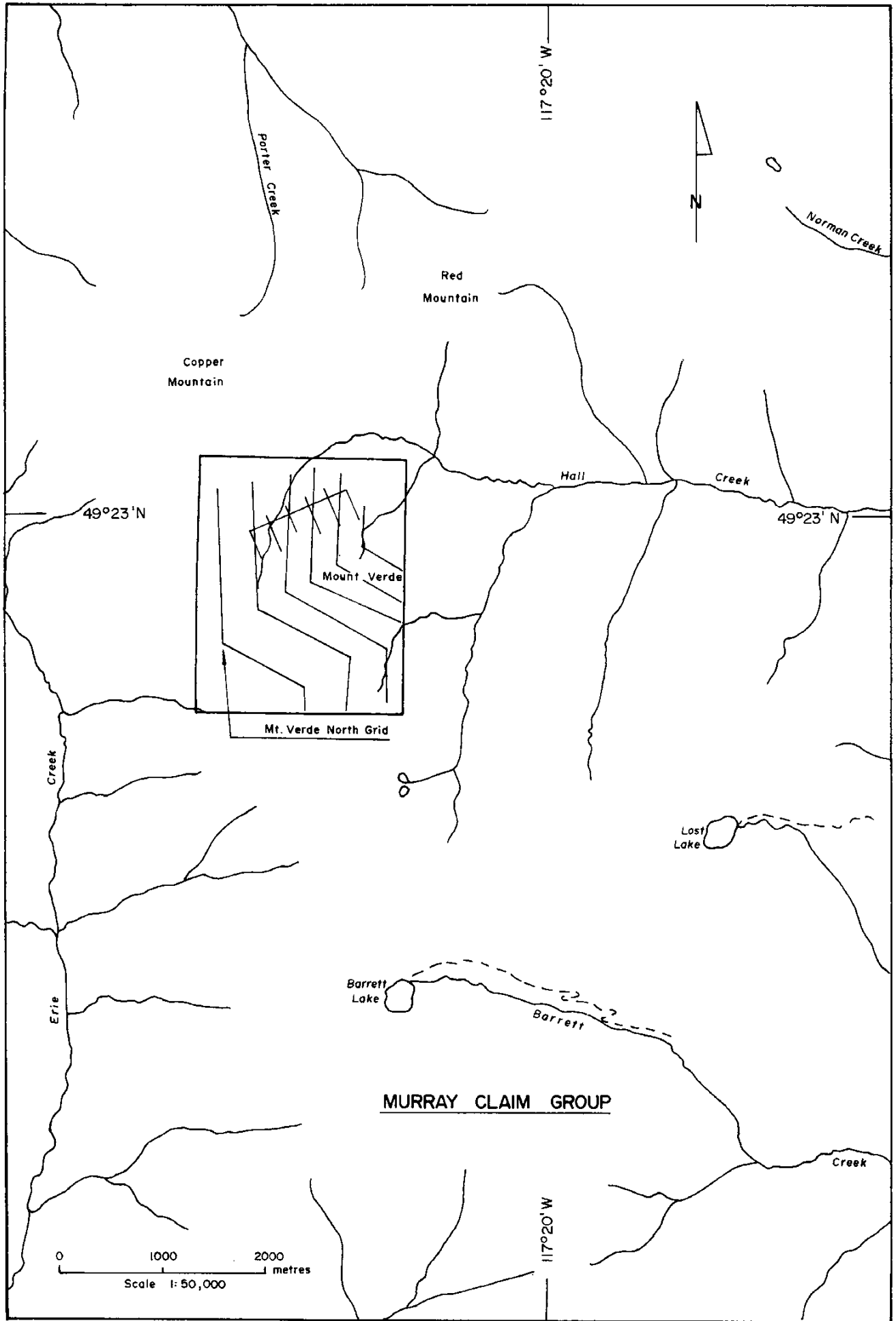
1. Mo, Pb, Zn, Au Soil Geochemistry Murray Group  
(in folder)

## INTRODUCTION

The Murray Group consists of 20 contiguous units which are located at the head of Hall Creek approximately 13 km. southwest of Nelson and is accessible by helicopter. The upper part of Hall Creek and its north flowing tributaries draining Mount Verde, Territory Peak and Commonwealth Mountain are anomalous in Mo values and was the cause of the original interest in the area.

Amoco Canada Petroleum Company Ltd., Mining Division is the owner and operator of the Murray Group.

The north half of the group is underlain by argillites, siltstones, and quartzite of the Ymir Group and mafic volcanic rocks of the Rosslund Formation. The south half is underlain by granites and granodiorites of the Nelson Batholith. Minor pyrite occurs in non intrusive rocks and sedimentary and tuffaceous interbeds within the Rosslund Formation carry up to 15% py. Minor malachite staining in quartz veins, trace cpy and limonite staining have been observed where three old adits were driven into the flank of the hill.



## Murray Group

<u>Units</u>	<u>Tag No.</u>	<u>Date Staked</u>	<u>Anniversary Date</u>	<u>Record No.</u>
20		Sept.13/79	Sept. 13/80	1210

GEOLOGY

The north half of the group is occupied by sediments and volcanics of the Ymir Group and Rosslund Formation respectively. The south half is occupied by medium grained equigranular granodiorite of the Nelson Plutonic Complex. Rock exposure is restricted to the higher elevations of the property along ridges on mountain tops. The Hall Creek area is long known as a gold camp with gold mineralization being associated with zinc mineralization related to lamprophyre dikes of which one occurs on the property. Minor malachite staining within quartz veins in argillite was observed in the northwestern corner of the grid. A total of three adits have been driven in the mountainside in the vicinity of copper mineralization which seems to be spatially related to the lamprophyre dike. It is unknown whether any metal production came from these showings. One adit has been driven into a felsic tuff unit which contains up to 15% pyrite. Just north of the adits, minor PbS mineralization within argillites was observed.

## SOIL GEOCHEMISTRY

During the period August 24 to August 26, 8 Mandays were spent collecting soil samples along pace and compass lines designed to cover a previous Mo anomaly and to cover the length of the lamprophyre dike. Traverses were conducted at 200m and 150m line spacing with soil samples taken at 50m stations.

Soil samples were collected from depths of 10cm to 30 cm with a mattock and stored in Kraft paper bags. The B horizon was sampled in most instances.

The minus 80 mesh fraction of all samples was analyzed for Mo, Pb, Zn, Cu, Au by Min-En Laboratories of North Vancouver, B.C.

## DISCUSSION OF RESULTS

Geochemical results were inconclusive with gold values being very low and not anomalous. Since the area where the lamprophyre dike is postulated to occur is drift covered and in the bottom of the valley, it is possible that



it has been previously eroded or is unmineralized.

### EVALUATION OF WORK

Soil Sampling - a total of 100 samples were collected

Claims - Murray Group

Work Conducted - Grid soil sampling and prospecting

Dates Conducted - August 24, 25, 26

#### Salaries

Bernard MacIsaac	- 2 Mandays @ 55.55	= \$111.10
Keith Thompson	- 3 Mandays @ 47.50	= 142.50
Rudy Strobl	- 3 Mandays @ 40.00	= 120.00
		\$373.60

Meals - 8 Mandays @ \$15.00/Manday = \$120.00

#### Transportation:

1 Truck at \$34.60/day x 3 days	=	\$103.80
Helicopter 1.7 hours at \$409.91/hr.	=	693.45
		\$797.25

#### Assay Charges:

100 samples analyzed for Mo, Pb, Zn, Cu, Au @ \$8.25/sample	=	\$810.00
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## Credit to Murray Group

Work Done	\$1290.85
Assay Charges	810.00
Cost of Report Preparation	275.00
	<hr/>
Total	\$2375.85

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	Pb, Zn, Au	\$7.50/sample
Sample Preparation		.60/sample
	Total	<u>\$8.10</u>

100 Samples x \$8.10    =    \$810.00

APPENDIX II

*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<sup>o</sup>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<sub>3</sub> and HClO<sub>4</sub> 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<sub>2</sub>H<sub>2</sub>-Air Flame combination but the Molybdenum determination is carried out by C<sub>2</sub>H<sub>2</sub>-N<sub>2</sub>O gas mixture directly or indirectly (depending<sup>2</sup> on the sensitivity and detection limit required) on these sample solutions.

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

APPENDIX III NAMES AND ADDRESSES OF PEOPLE WHO WORKED  
ON THE PROPERTY

Bernard MacIsaac	112 Sherwood Ave. Toronto, Ontario
Keith Thompson	36 New Street S.E. Calgary, Alberta
Rudy Strobl	R. R. #1 Draton Road Sioux Lookout, Ontario

APPENDIX IV

TRANSPORTATION COSTS

Helicopter:

Bell 206B Casual basis Okanagan Helicopters, Nelson, B.C.

Casual cost       \$380.00

Fuel & Oil  
cost               23.91

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\$407.91

Truck:

1980 Suburban leased from Rentway Canada Ltd., Burnaby, B.C.

Contract cost: \$29.83/day

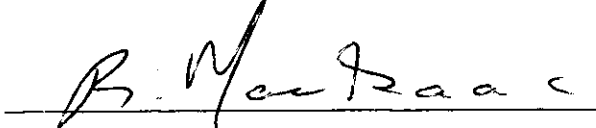
Fuel cost: \$4.77/day (67 km/day   3.5 km/l   .25¢ l)

Total:       \$34.60

QUALIFICATIONS OF BERNARD MACISAAC

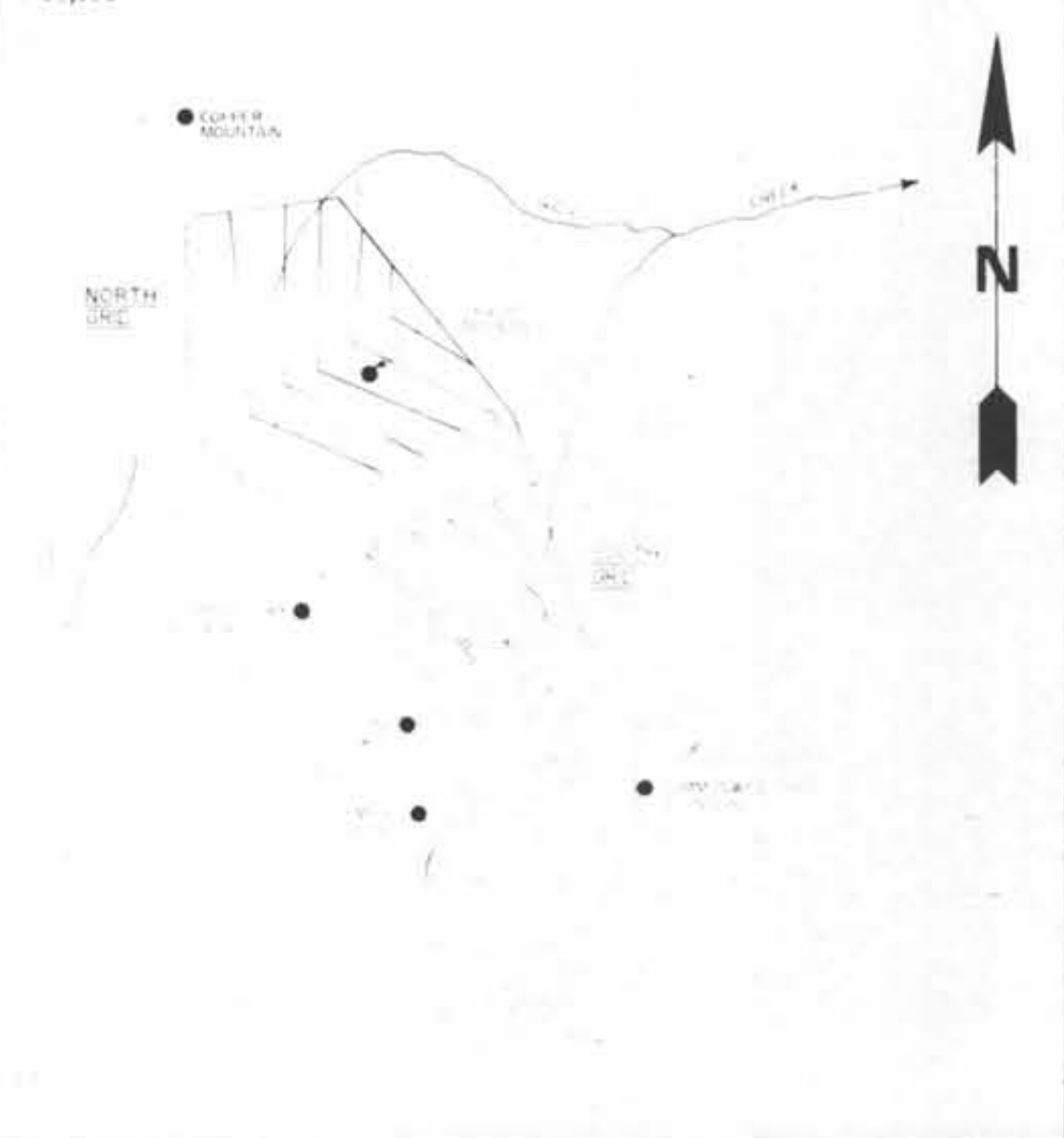
B.Sc. Major    St. Francis Xavier University  
                  Antigonish, Nova Scotia  
                  Graduated 1977

I have been working for Amoco Canada Petroleum Company in both Eastern and Western Canada since May, 1977.

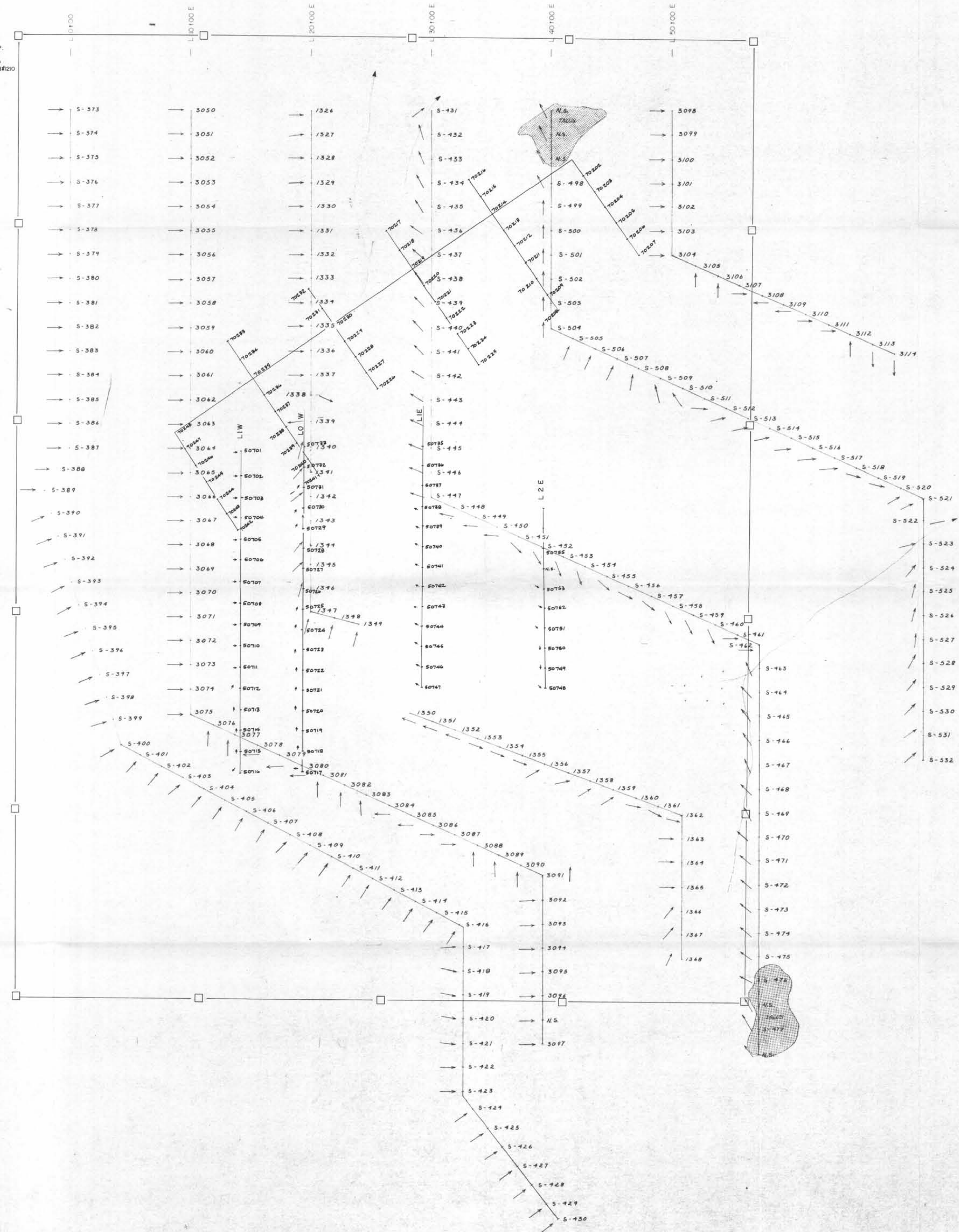
  
Bernard MacIsaac



LOCATION MAP  
1:50,000



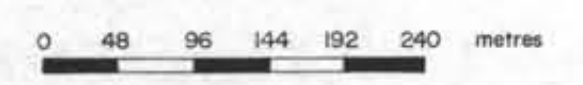
L.C.P.  
Tag #  
40530  
Record #210



- LEGEND:**
- 1342 - SOIL SAMPLE LOCATION
  - SLOPE
  - TALUS
  - STREAM
  - SWAMP

**NOTE:**  
ALL LINES RUN BY PACE AND COMPASS METHODS.  
NTS - 82 - F - 6

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**8495**  
NO.



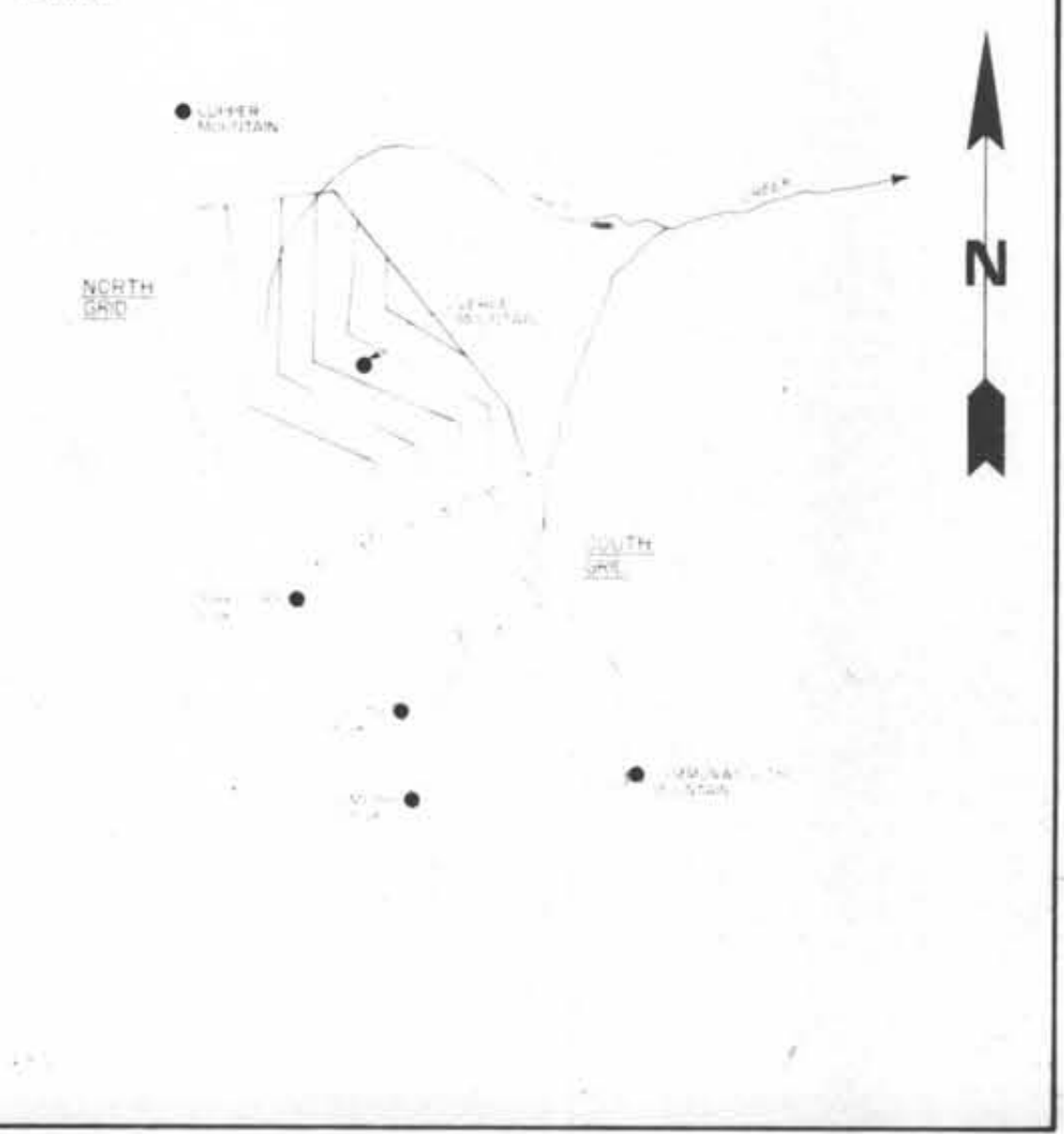
**AMOCO CANADA PETROLEUM CO. LTD.**  
MINING DIVISION

NELSON PROJECT - B.C.  
**SAMPLE LOCATION MAP**  
MOUNT VERDE GRID (NORTH)

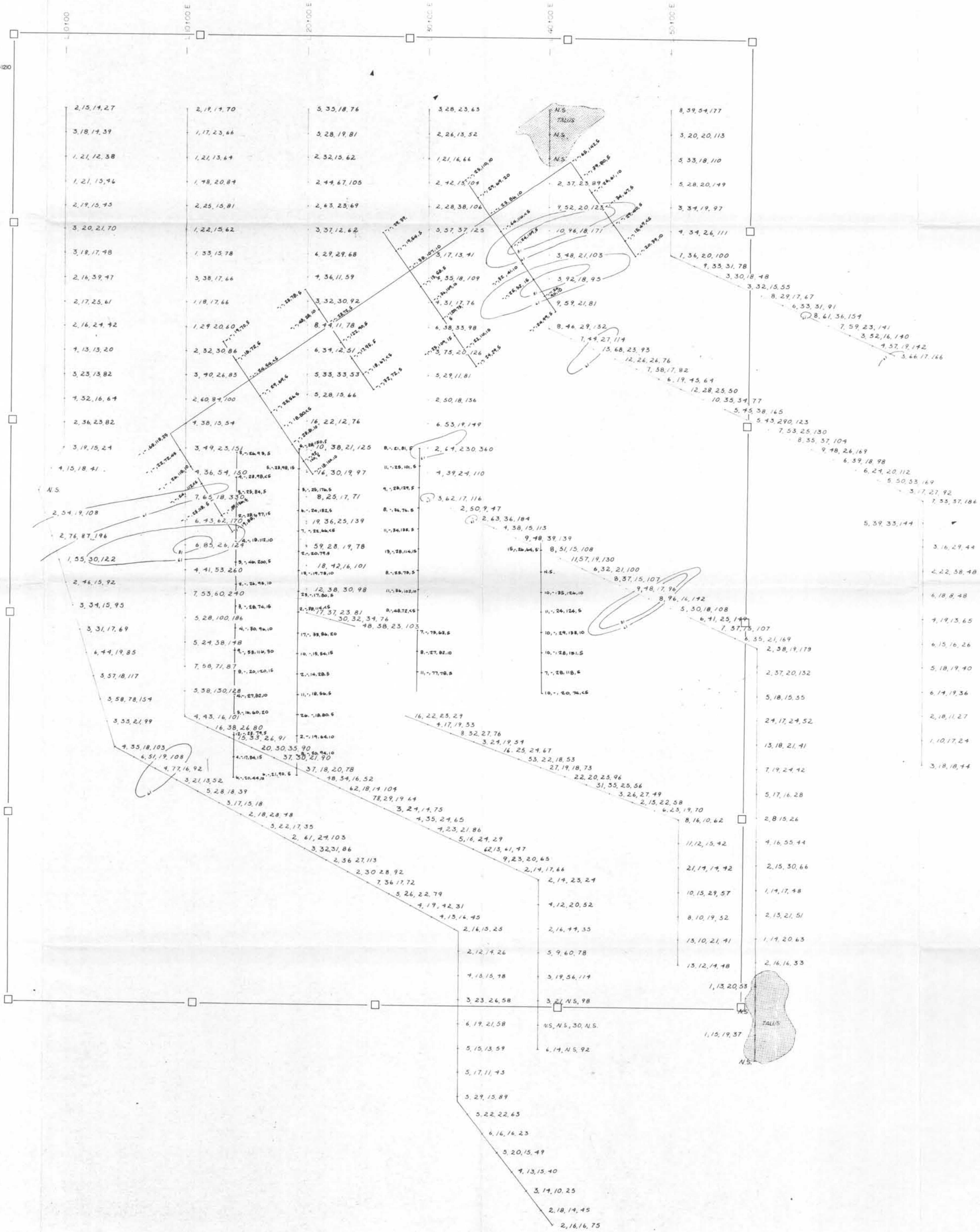
Drawn By	A. S. DONSON	Scale	1:4800
Date	Dec. 1979	Project No.	79C-003



LOCATION MAP  
1:50,000



L.C.P.  
Tag #  
40250  
Record #120



LEGEND

- 3,19,66,101 - SOIL SAMPLE RESULTS: Mo, Cu, Pb, Zn (ppm), Au (ppb)
- TALUS
- STREAM
- SWAMP
- NS - NO SAMPLE

CU RESULTS:

- 61-80 ppm
- > 81 ppm

NOTE:

ALL LINES RUN BY PACE AND COMPASS METHODS.

NTS - B2 - F-6

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**8495**  
NO

0 40 80 160 240 metres

AMOCO CANADA PETROLEUM CO. LTD.  
MINING DIVISION

NELSON PROJECT - B.C.  
**GEOCHEMISTRY RESULTS**  
MOUNT VERDE GRID (NORTH)

Drawn By	A. S. DONSON	Scale	1:4800
Date	Dec. 1979	Project No	79C-003