

GEOCHEMICAL

ASSESSMENT REPORT

Mary 4

FORT STEELE M.D.

NTS 82G/5W

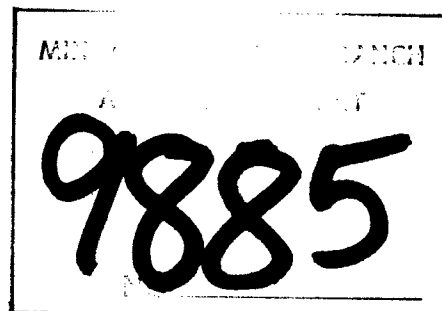
49° 24 N 115° 59 W

Owner: St. Eugene Mining Corporation Limited

Operator : St. Eugene Mining Corporation Limited

Author: John R. Wilson

Date Submitted: December 22, 1981



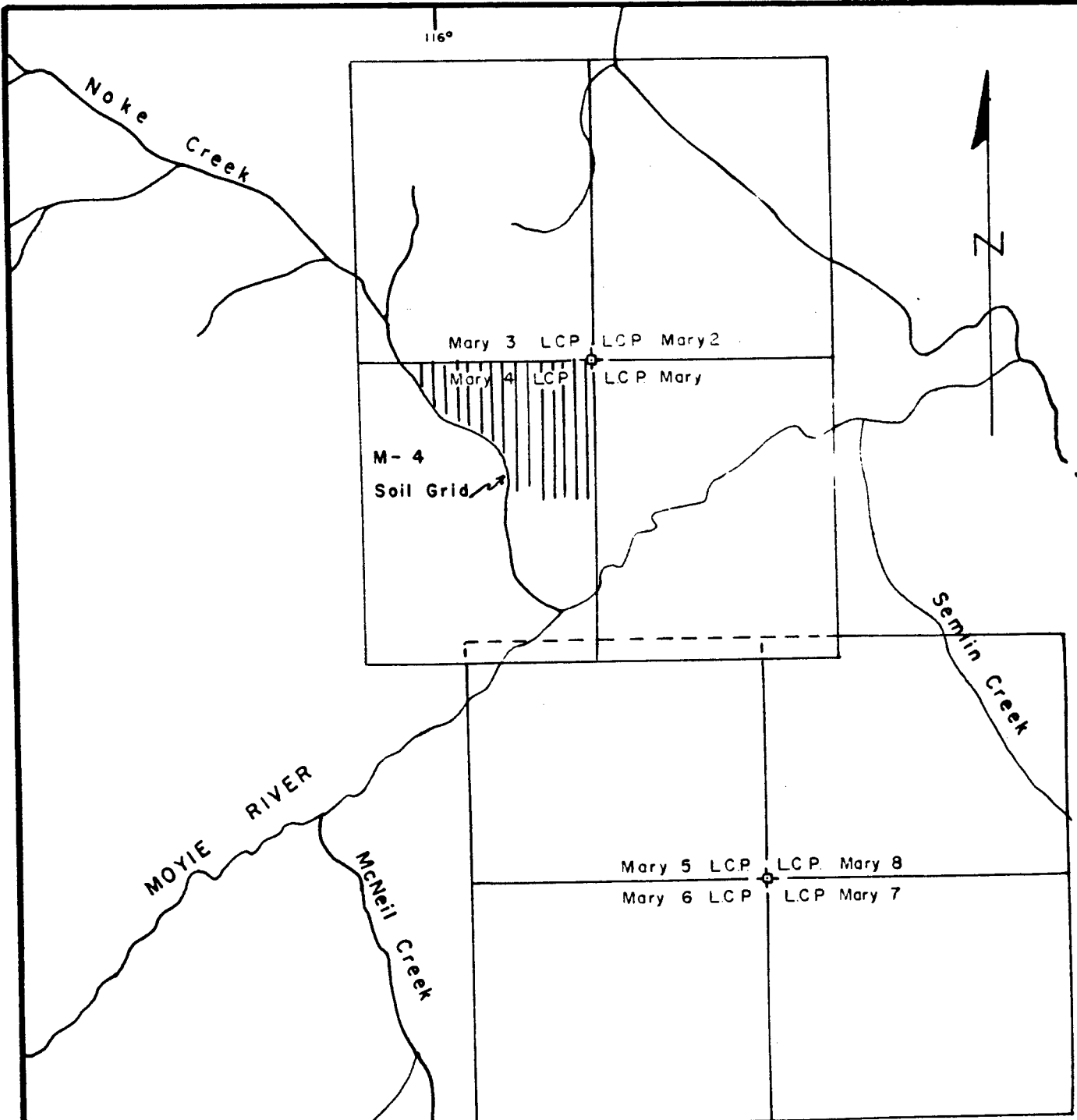
Part 1 of 2

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ST. EUGENE MINING CORP.
 PROPERTY: Mary Claims
 LOCATION: Moyie Area B.C.
 DRAWN BY: G.T. March 1981
 N.T.S.: 82-F-8 & 82-G-5



SCALE: 1:50,000

*claim lines located by
 Topographic map*

FIGURE: 077-81-9

INTRODUCTION

The Mary 4 mineral claim (20 units) was staked in November, 1980 in the Fort Steele Mining Division.

It is situated 17 kilometres southwest from Cranbrook, B. C. and is bisected by the main Moyie River - Lumberton logging road. The claim covers the lower portion of Noke Creek, from its junction with Moyie River at 1219 metres (4000 feet) elevation, to 1432 metres (4700 feet) elevation.

St. Eugene Mining Corporation Limited is the owner and operator. No economic mineralization is known here.

In 1981 a soils geochemical survey was carried out in the northeastern portion of the claim. A total of 127 samples were taken from the B-horizon and 113 soil samples were taken from the A-horizon.

GEOLOGY

The claim is underlain by Aldridge formation sedimentary rocks of the Lower Purcell Supergroup (grey quartzites, wackes, siltstones and argillites). Minor gabbroic sills and dykes are known throughout the area but none were seen on the property. Outcrop are scarce and usually exhibit a gentle 10 - 25° northerly dip. Metamorphism and deformation of lithologies is usually minor in these rocks but a highly altered buff coloured zone is near Noke Creek in the north part of the claim and may represent alteration along a fault zone.

GEOCHEMICAL SURVEY

Soil samples were usually collected at 100 metre intervals on lines 100 metres apart. Samples were obtained by using a mattock. A total of 127 samples were taken from the B-horizon at depths of 5 to 10 cm. and a total of 113 samples were taken from the A-horizon at depths of 1 to 2 cm.

Material was placed in Kraft paper envelopes and was sent to Bondar - Clegg and Company Limited, North Vancouver for geochemical analysis of the -80 mesh fraction of the air dried sample.

Standard chemical analysis procedures were used:

- for Cu, Pb, Zn, Ag and Cd extraction was by hot HNO_3 - HCl and analysis was by atomic absorption,
- for Au, analysis by atomic absorption followed fire assay and aqua regia extraction,
- for Hg, extraction was by controlled aqua regia and analysis was by cold vapour atomic absorption.

Histograms of the geochemical results (Figures 077-81-10 to 16) show that Cu, Pb, Zn, Cd and Ag have single dominant background population while Au and Hg have multimodel background populations.

Plan maps of the geochemical analyses are shown on figures 077-81-17 and 077-81-18.

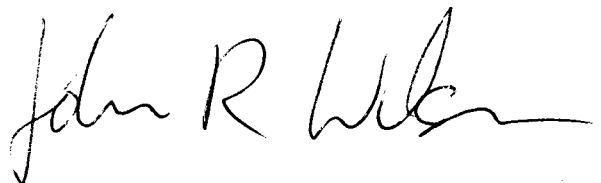
Figure 077-81-17 shows Cu, Pb, Zn and Cd present in B-horizon soils. Anomalous values for each element appear to be erratically distributed throughout the northern two-thirds of the grid and no follow-up is recommended. No anomalous values occur in the southern portion of the map.

Figure 077-81-18 shows Ag, Au and Hg present in A-horizon soils. A lineation of occasional anomalous Ag, Au and Hg values can be discerned passing from the north end of Line 3 & 4 W to the south end of Line 6 west.

Scattered high Au values also occur east of this line and on the Southern half of Line 13 west.

The trend of elevated values is subparallel to the axis of Noke Creek and may reflect mineralized portions of the fault that is suspected here.

Alternatively, the higher gold values may indicated veins associated with gabbroic intrusions. Several such occurrences are known in the district but none has proven extensive. Additional soil sampling should be undertaken to better delineate the gold anomalies.



St. Eugene Mining Corp Ltd

Soil Geochemistry
Copper Histogram B Horizons

Manj 4 Claim
Moyle B.C.

N.T.S. B2 G/SW
1981

N = 127

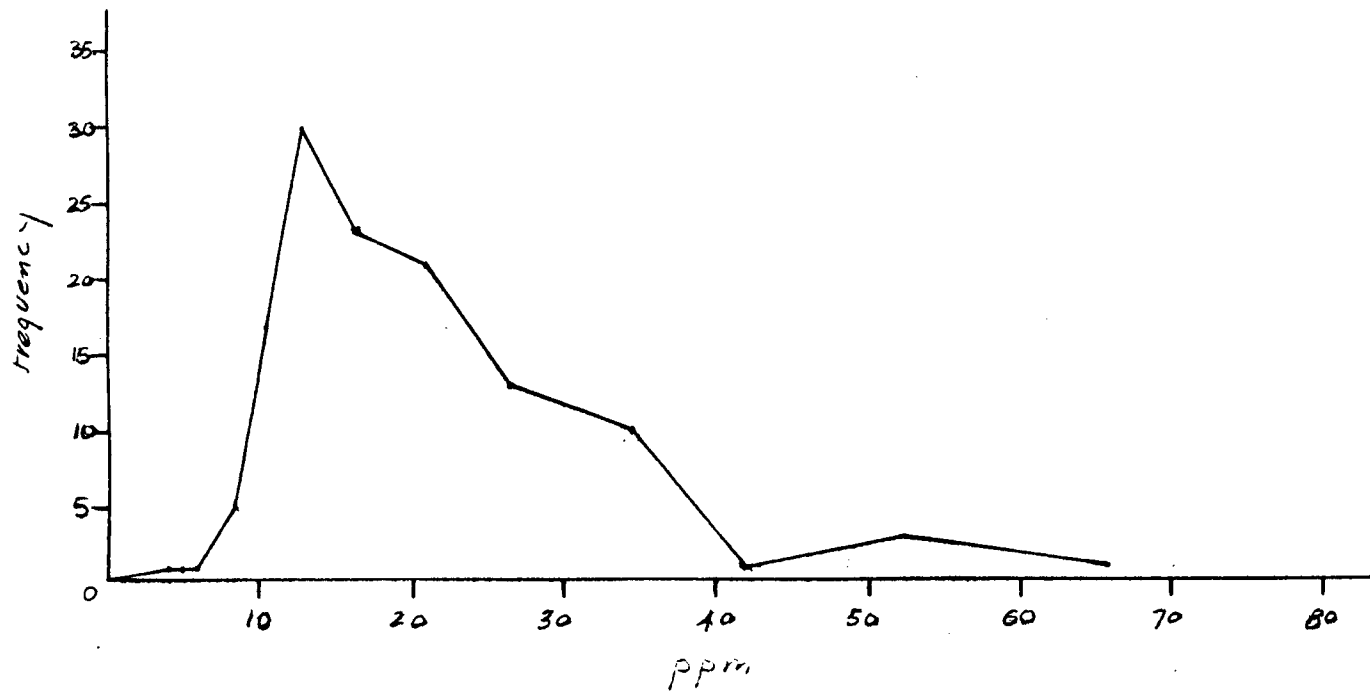


Fig. No. 077-81-10

St. Eugene Mining Corp. Ltd.

Soil Geochemistry
LEAD, Histogram B Horizon

Mary 4 Claim
Moyie B.C.

N.T.S. 82 G/5W
1981

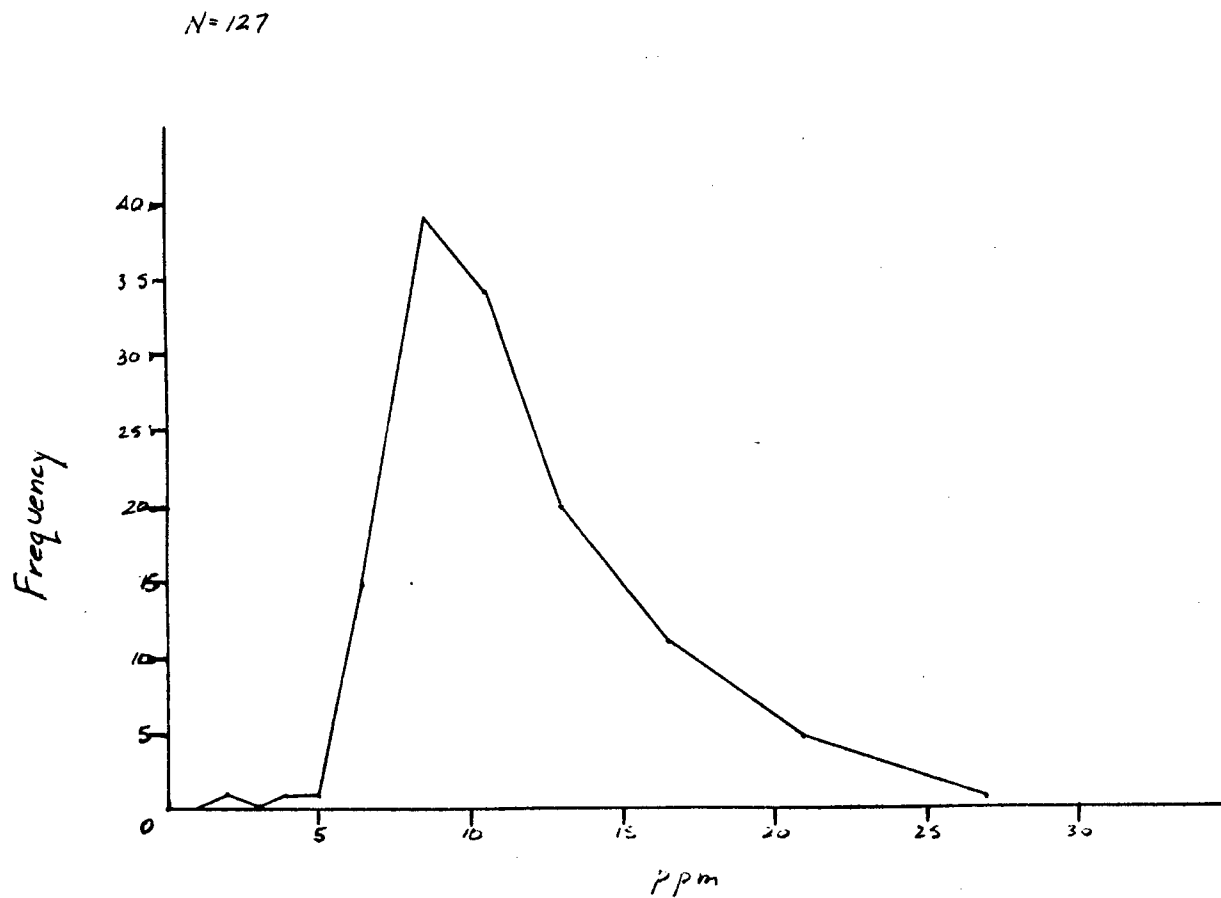


Fig. No. 077-81-11

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Soil Geochemistry
Zinc Histogram B Horizon

Mary 4 Claim
Noyle B.C.

N.T.S. 82 G/SW
1981

N = 127

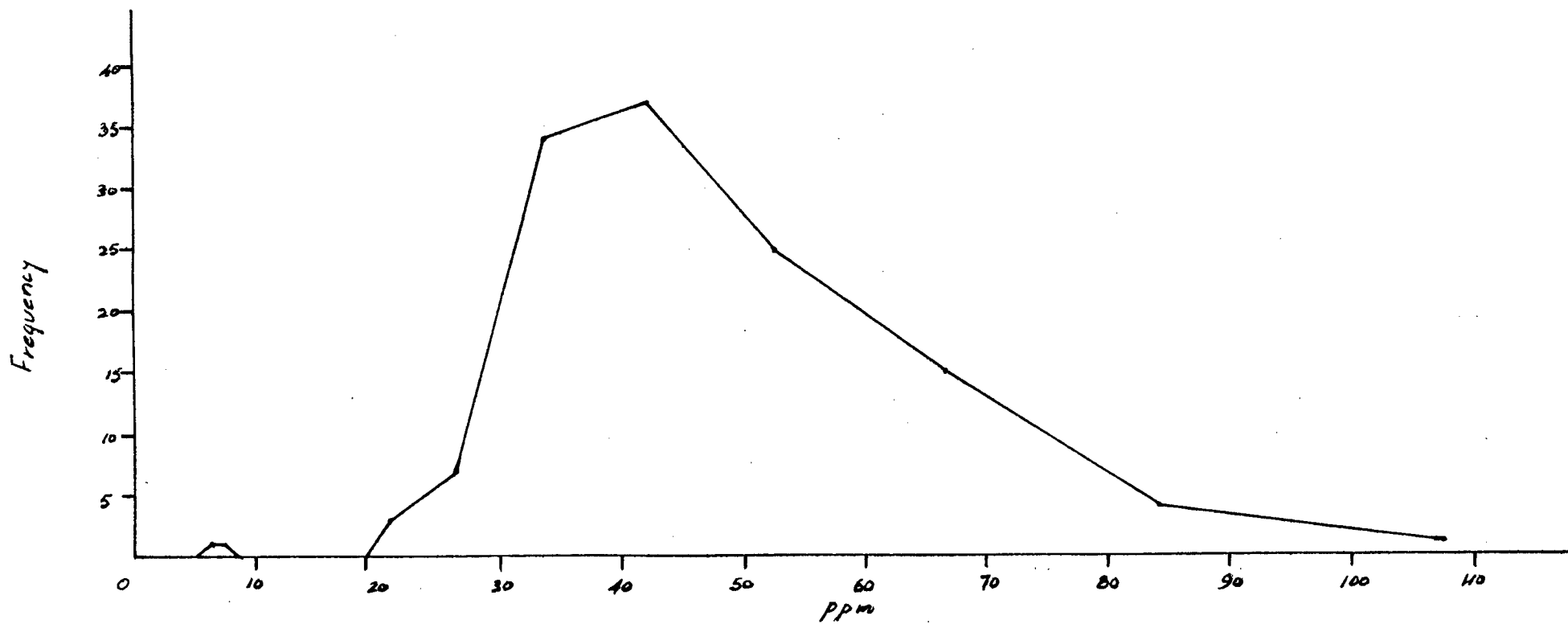
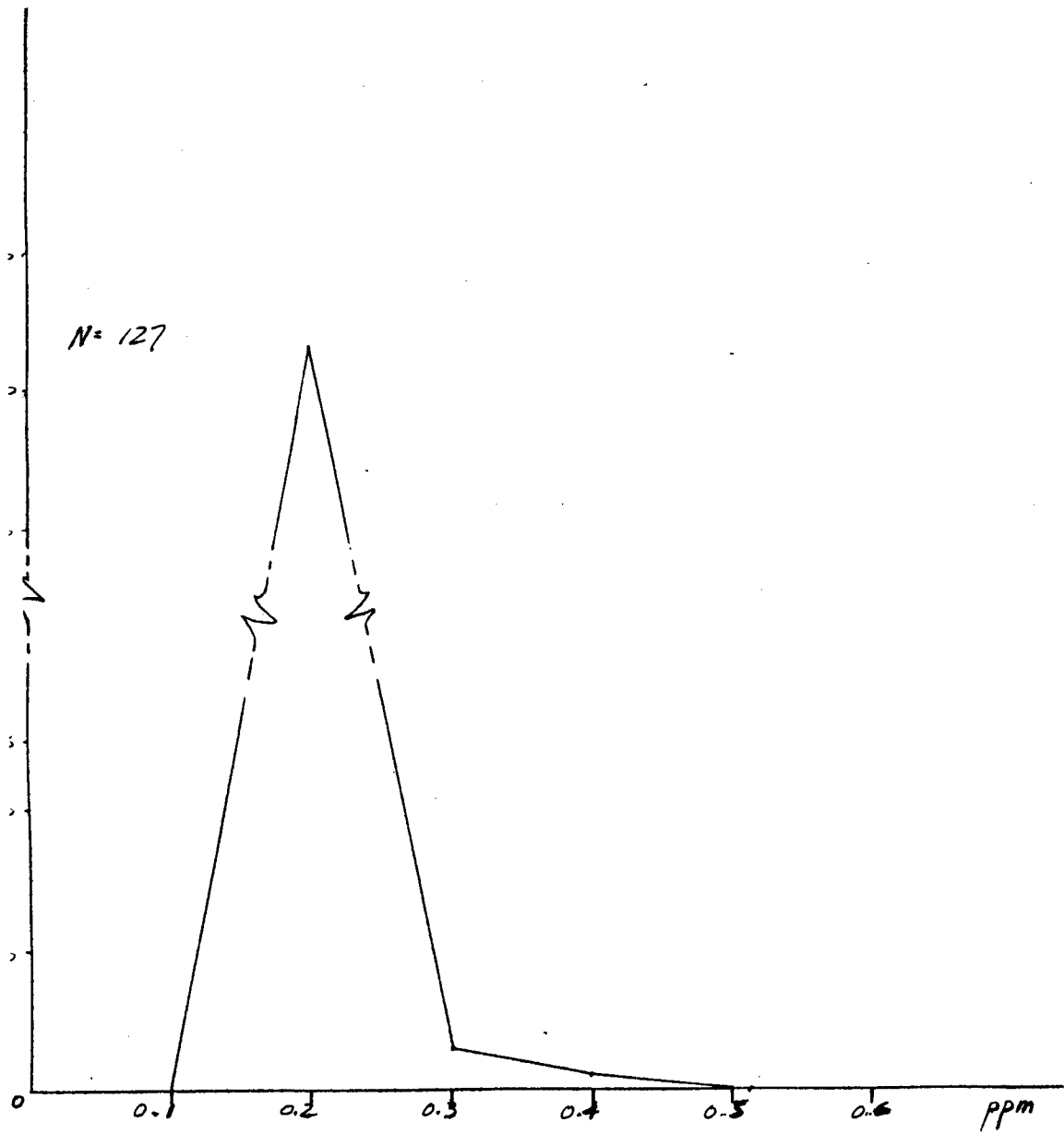


Fig. No. 077-081-12



St. Eugene Mining Corp. Ltd

Soil Geochemistry
Cadmium Histogram B horizon

May 4 Claim
Moyle B.C.

N.T.S. 82 G/S W
1981

Fig No. 077-81-13

St. Eugene Mining Corp Ltd.

Soil Geochemistry
Silver Histogram A Horizon

Mary 4 Claim
Moyle B.C.

N.T.S. 82 S/GW
1981

N = 110

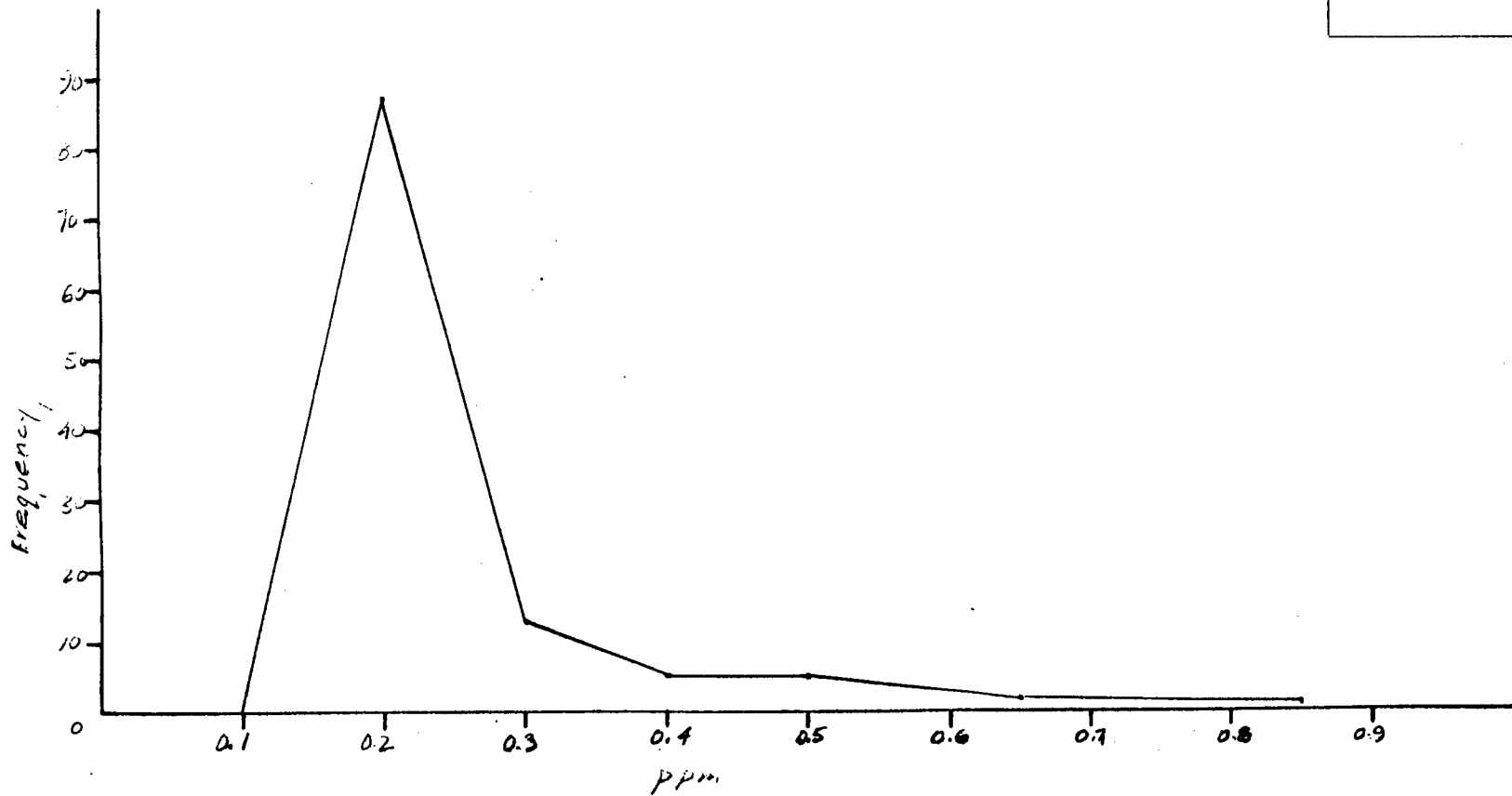


Fig No. 077-81-14

St. Eugene Mining Corp. Ltd
Soil Geochemistry
Mercury Histogram A Horizon
Mary 4 Claim
Noye B. C.
N.T.S. 82 G/5W
1981

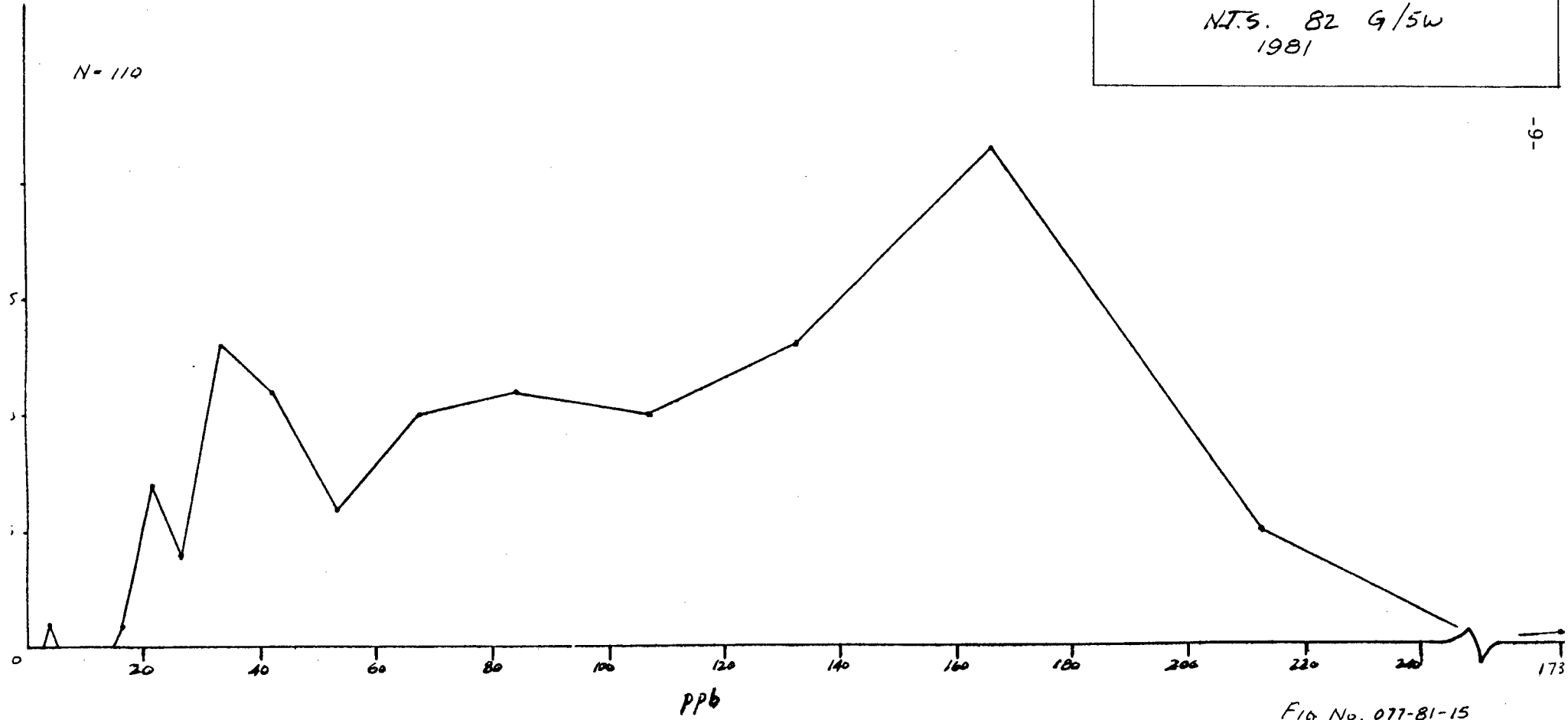


Fig No. 077-81-15

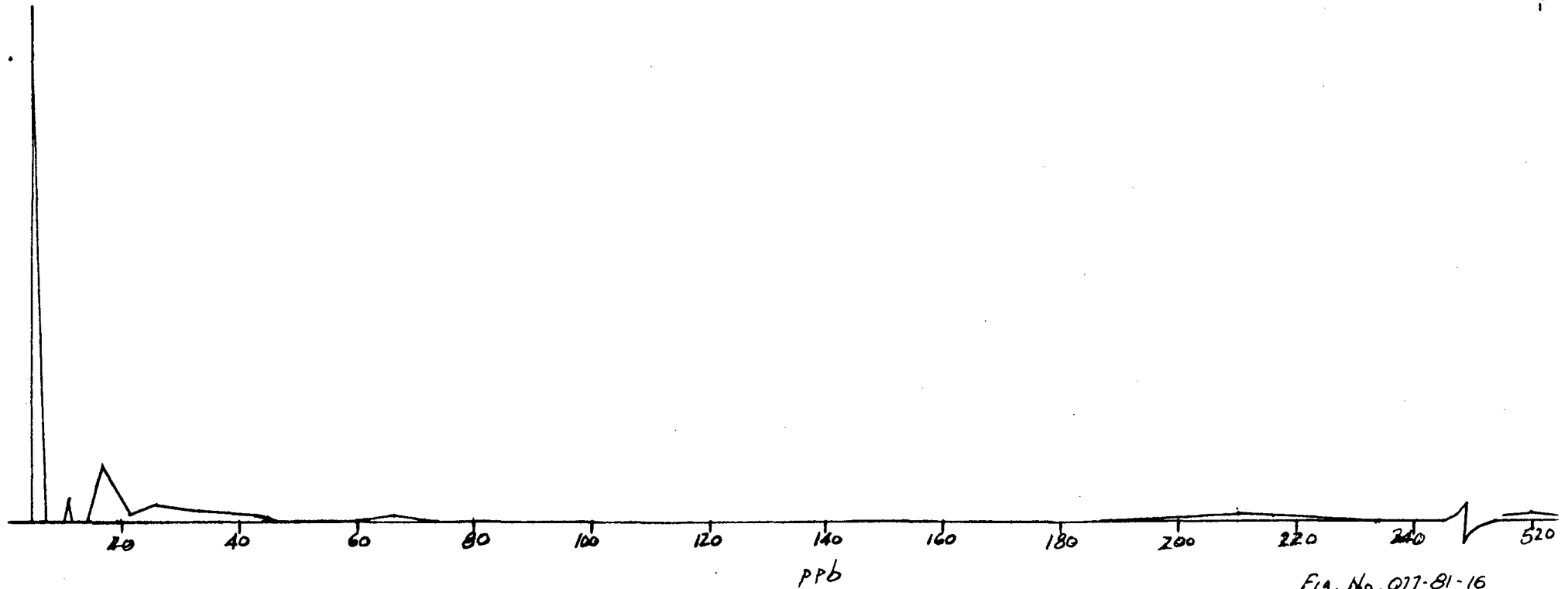
St Eugene Mining Corp Ltd.

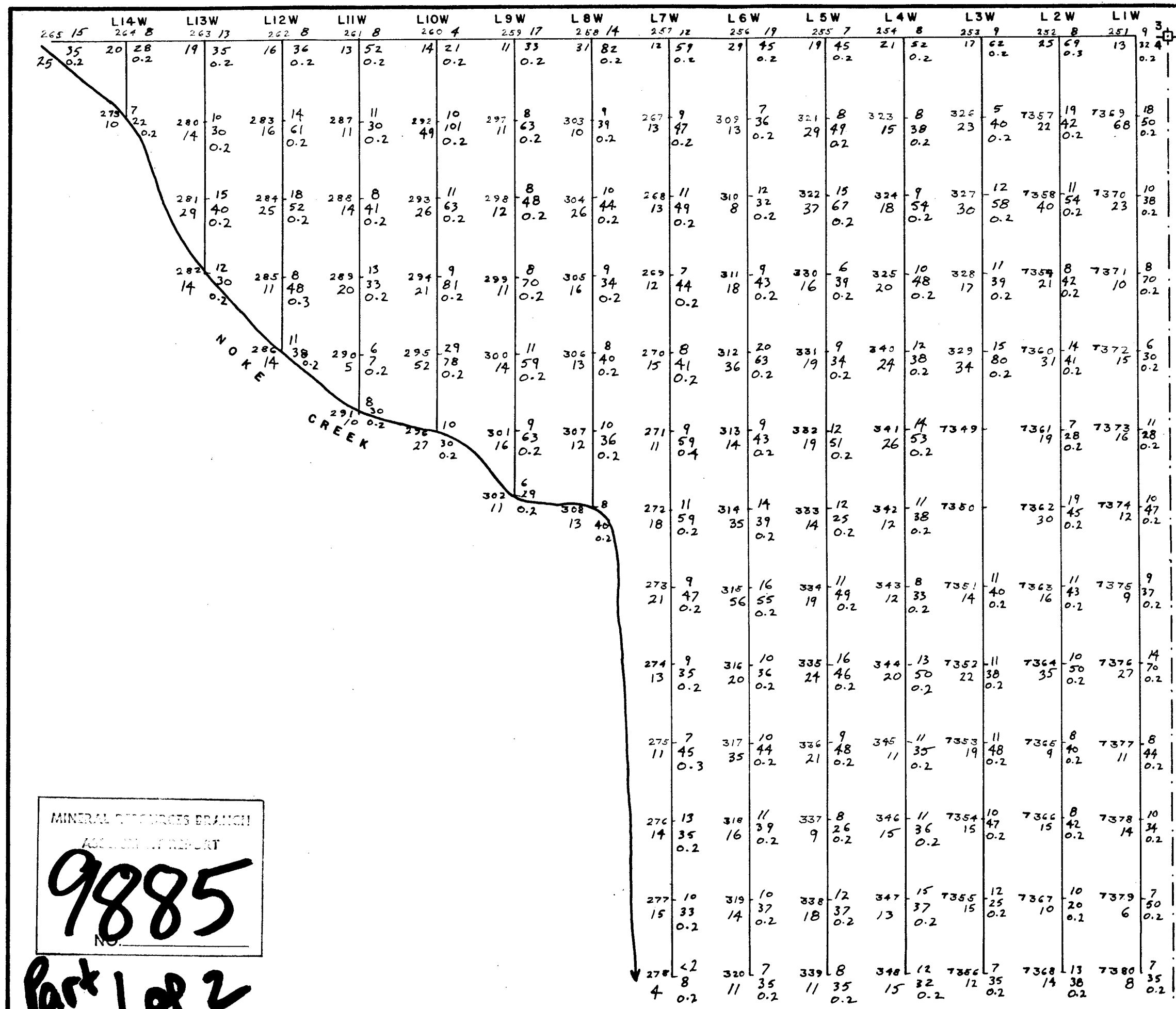
Soil Geochemistry
Gold Histogram A Horizon

Maxy 4 Claim
Mayic B.C.

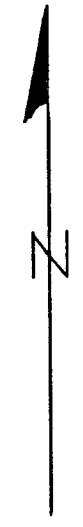
NTS 82 S/GW
1981

N=110





L.C.P. Mary Claims



LEGEND

(4) 7349(F) or
Sample No. (45) 379(F) | 10 Pb.
Cu. 150 | 270 Zn
0.2 Cd.

Values in ppm.

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Soils Geochemistry B. Horizon

Mary 4 Claim

M.T.S. NO.: 82-6.5W

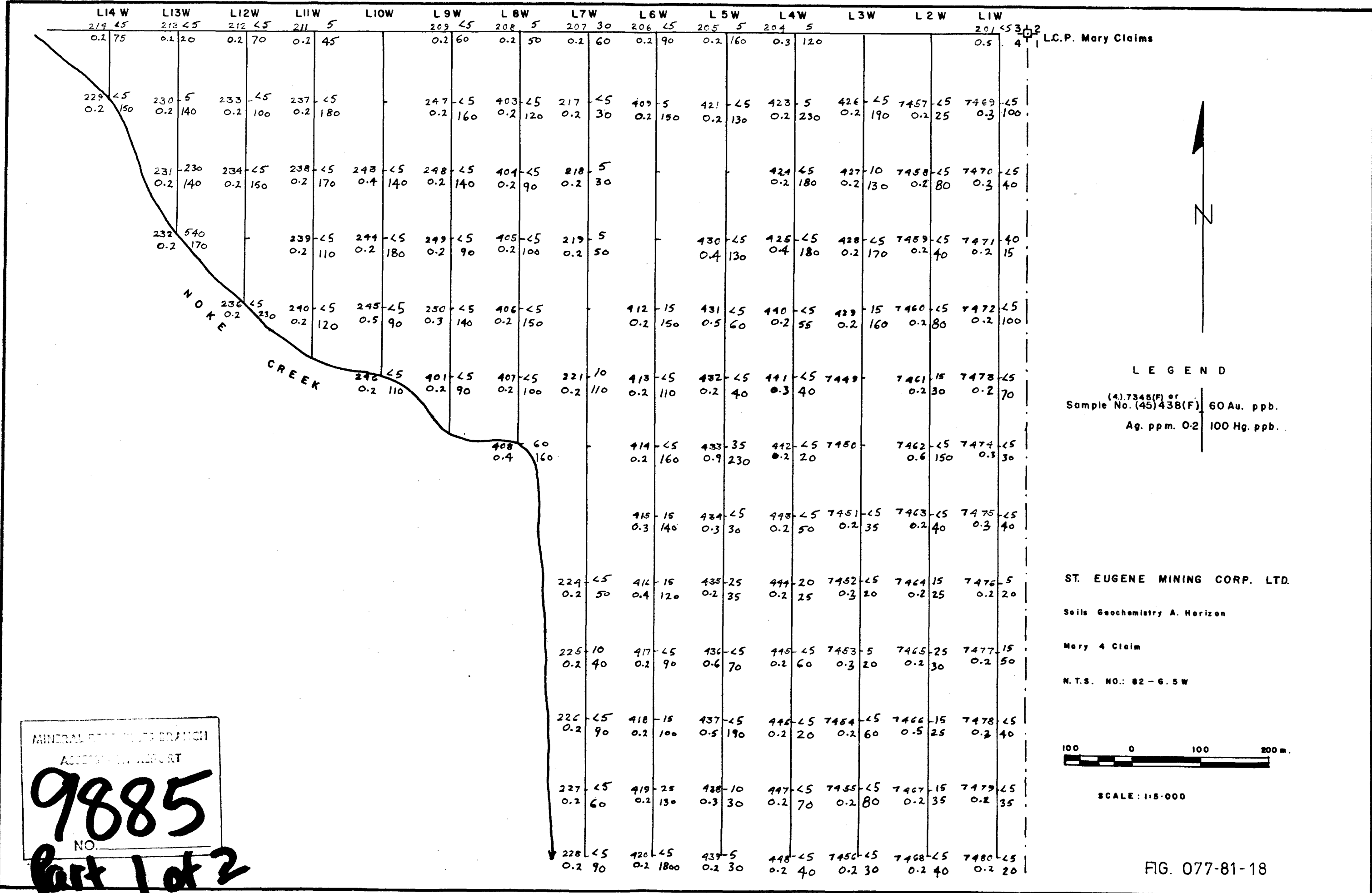


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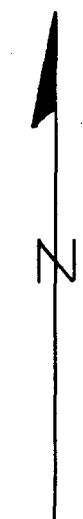
MINERAL RESOURCES BRANCH
ANALYSIS REPORT
9885
NO.

Part 1 of 2

FIG. 077-81-17



L.C.P. Mary Claims



LEGEND

(4) 7345(F) or
Sample No. (45) 438(F) 60 Au. ppb.
Ag. ppm. 0.2 100 Hg. ppb.

ST. EUGENE MINING CORP. LTD.

Soils Geochemistry A. Horizon

Mary 4 Claim

N.T.S. NO.: 82-6.5W



SCALE: 1:15,000

MINERAL RESEARCH BRANCH
ACCESSORY REPORT

9885
NO.

Part 1 of 2

FIG. 077-81-18

STATEMENT OF COSTS

Collecting samples:

1 man 4 days (June 8, 9, 10,11) @ \$75.00/day	\$300.00
1 man 1 day (June 12) @ \$55.00/day	55.00
1 man 1 day (June 8) @ \$80.00/day	80.00

Room and Board:

2 man-days (June 8 and 12) @ \$20.00/day	40.00
2 days Truck expenses (June 8 and 12) @ \$20.00/day	40.00

Analysis:

240 sample preparations @ \$0.60/sp1	144.00
240 samples - handling @ \$0.20/sp1	48.00
112 analyses for Ag, Au, Hg @ \$9.48/sp1	1061.76
1 analyses for Ag, Au @ \$5.98/sp1	5.98
127 analyses for Cu, Pb, Zn, Cd @ \$4.00/sp1	508.00
Data analysis, report writing 2 days @ \$110.00/day	220.00
Typing, drafting, copying 1 day @ \$80.00/day	80.00

Total	<u>\$2582.74</u>
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FALCONBRIDGE NICKEL MINES LIMITED

6415 - 64th Street, Delta, B.C., Canada V4K 4E2

Tel. (604) 946-0441

Telex 04-357583

December 22, 1981

STATEMENT OF QUALIFICATIONS

I, Mr. John R. Wilson graduated from the University of British Columbia in 1972 with a B. Sc. (honours geology) and have worked for Falconbridge Nickel Mines Limited since graduation as an exploration geologist.

Yours truly,

A handwritten signature in black ink, appearing to read "John R. Wilson". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

John R. Wilson

JRW:ik