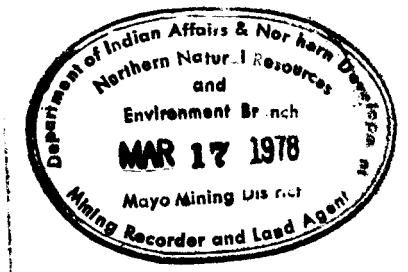



SUMMARY REPORT

on

ROD CLAIMS

106 C/4 & 106 D/1

64°10', 134°

Mayo Mining Division, Y.T.

for

McINTYRE MINES LIMTED

by

R. Arnold

A. Floyd

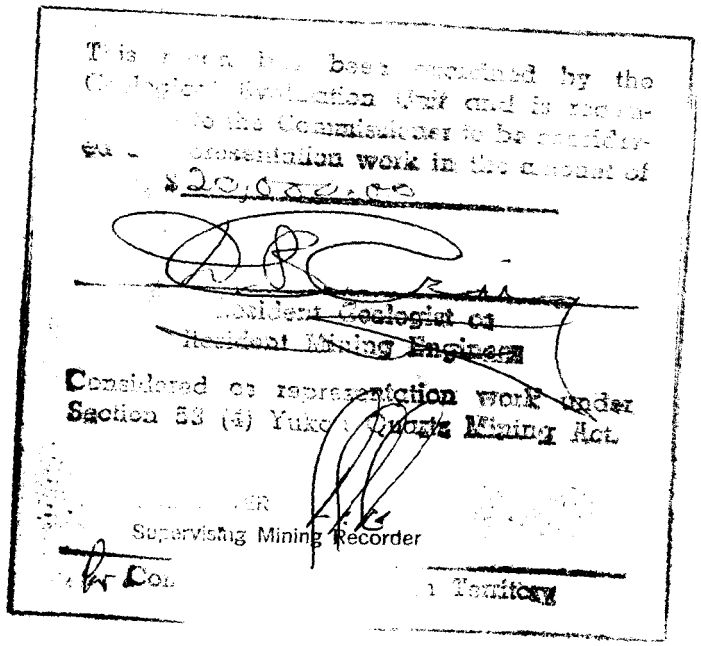
Supervised by A.O. Birkeland

June 15 - Sept. 15, 1977

November, 1977



090306



This report has been considered by the Commissioner [illegible] and is recommended to the Commissioner to be credited as representation work in the amount of $20,000.00

Consultant Geologist or
Resident Mining Engineer

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

Supervising Mining Recorder

for Commissioner of Yukon Territory

TABLE OF CONTENTS

# LIST OF ILLUSTRATIONS

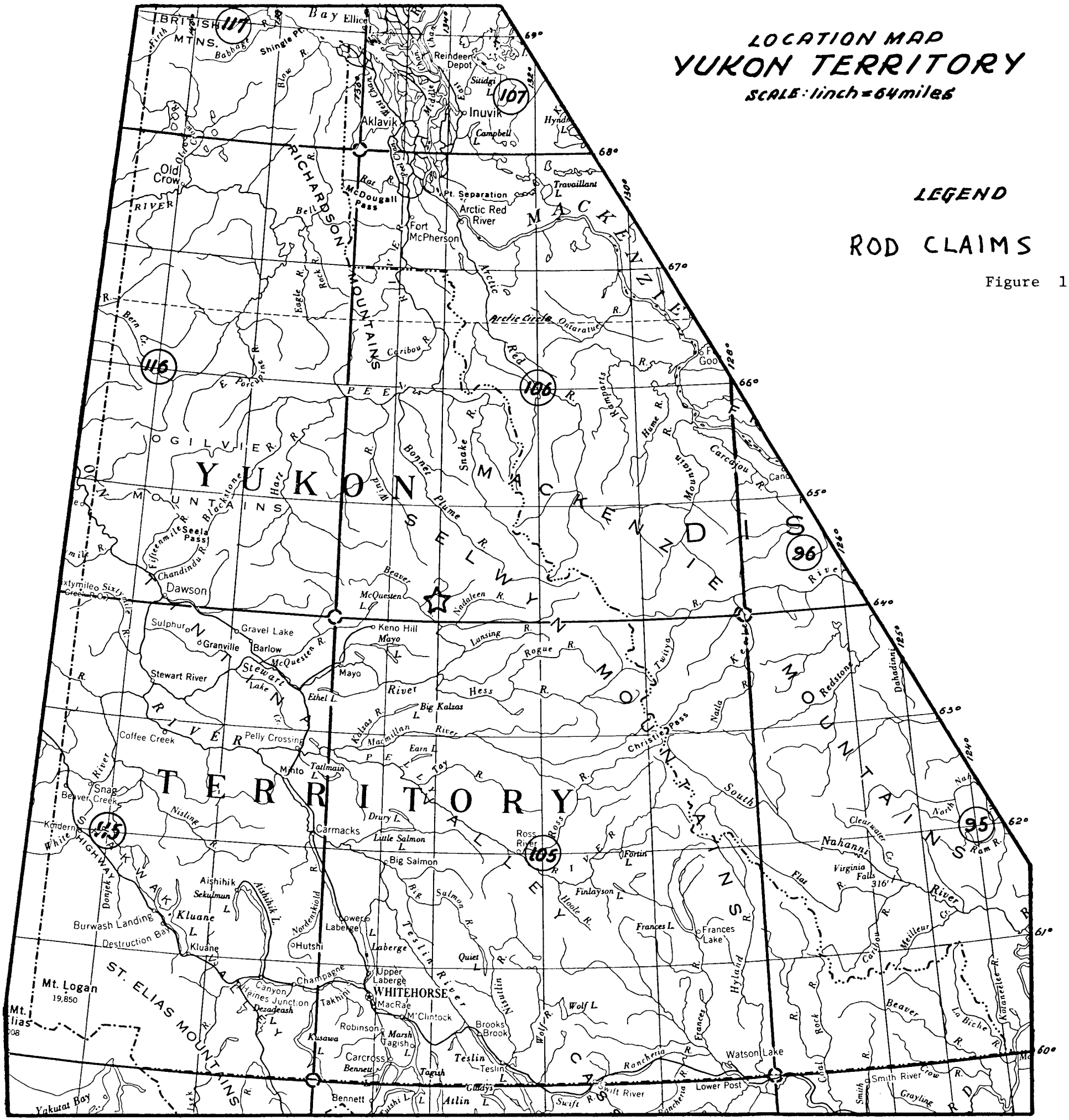
## INTRODUCTION

This property consists of 100 contiguous mineral claims 72 miles north-east of Mayo. It is bounded to the east by the Cooker claims and to the west by the Bag claims. It was staked in mid June 1977 to cover several mineral showings located by prospecting. During the course of the summer the property was geologically mapped at 1000' to the inch, all the ridges were soil sampled, soil anomalies were followed up by detailed prospecting and the main showing was examined by several geophysical techniques.

Claim details are as follows:

| Claim Nos. | Date Staked | Date Recorded | Record Nos. |
|---|---|---|---|
| ROD 1-100 | 12-14th June,1977 | 28th June,1977 | YA15176-15275 |

Access to the property is by helicopter, the nearest lake is Kathleen Lakes, 8 miles to the north-west which in turn is 75 miles north-east of Mayo. All the work in 1977 was carried out from Tara Lake, 32 miles ENE of the property. Surface exploration can be carried out from early June to mid-September and the many creeks crossing the property would provide abundant water for drilling throughout the summer months.




# LOCATION MAP
# YUKON TERRITORY

SCALE: 1 inch = 64 miles

## LEGEND

ROD CLAIMS

Figure 1

GEOLOGY

The Rod claims straddle the Dawson Thrust Fault which separates Hadrynian "grit unit" and Paleozoic shales and carbonates.

Shale content of the "grit unit" decreases away from the fault as carbonates become predominant with quartzitic grits virtually non-existent. In general, the carbonates tend to be limestone near the fault becoming increasingly dolomitic as one moves south.

Just south of the fault, occasional outcrops of volcanic or volcanic related origins were noted. A rusty weathering sub-aerial (?) volcanic agglomerate appears on the initial discovery ridge. Ferrodolomite was mapped on the middle ridge and second most westerly ridge which contained abundant pervasive maraposite, low in copper and gold. These occurrences are typical of ferrodolomite found on the Craig West and Bag claims. On the most westerly ridge a 12 foot thick conglomerate consisting of pebble to boulder sized fragments of dark chert, white quartz, ankeritic dolomite and shale in a rusty weathering volcanic ash was mapped.

In additon to Hadrynian sediments, two dyke-like intrusions were encountered. One, located on the most westerly ridge, is diabasic in composition, the second is of uncertain make-up but contains smithsonite, sphalerite, galena and possibly realgar and orpiment. It occurs on the initial discovery ridge in limestones near the fault.

North of the fault, the sediments consist mainly of black shales with frequent thin to medium bedded dark grey to black argillites and minor bedded (?) dark grey to black chert. These shales are occasionally graphitic and have high zinc-silver background values. Dr. S. Blusson (pers. comm.) indicates that this sequence of silver-white weathering black shales containing bedded chert is possibly equivalent to the Black Clastic (Ord.-Sil.) unit of the Road River Formation.

In the western half of the claims another unit separates the thrust and the Road River (?) shales. These are dark grey to grey-black shales of the Canol(?) formation in probable unconformable contact with the underlying Road River sediments.

Insufficient data has been amassed to ascertain the exact nature of the deposit which may be of the vein and fracture filling stratibound type. Galena mineralization (with possible tetrahedrite) is restricted to the upper member of the Road River sediments, the cherty argillaceous segment. Sphalerite is seen (both red-brown and light green varieties) but smithsonite seems to be the predominant zinc mineralization found in quartz veins and occasionally with minor barite. However, the absence of visible zinc mineralization on surface in the major showings may be attributed to leaching. Soil geochemistry values greater than threshold indicate the presence of zinc in the residual soils of these showings.

Geochemical soil sampling along ridge tops delineated anomalous lead-silver values over 20,000 feet on strike, and varying between 1,000 foot to less than 400 foot widths. Prospecting of these anomalous areas resulted in discovery of mineralized float on each of the six ridges.

Structurally, Hadrynian beds trend east-southeast to east and dip southerly 25° to 35°. Ordovician-Devonian sediments generally follow this trend. However, an attitude on some cherty argillaceous beds, near the northern extent of the claims, gave a reading of 161° strike and 47°S.W. dip. Minor small scale structures were noted (particularly in the Hadrynian) but no attitudes were attained.

SILT GEOCHEMISTRY

Initially all the creeks dissecting the property were sampled. Sample intervals of 1000' were employed and the material after drying and sifting in the field preparation unit was shipped to Chemex Labs in Vancouver and analysed by atomic absorption for lead, zinc and silver. No anomalies were detected in the main creeks but a few small side creeks appeared to be substantially above background and were deemed worthy of follow-up.

Figure 2. illustrates the reason for the lack of anomalies in the major creeks. The headwaters of each of the creeks receive large volumes of unmineralized detritus which dominate the silt content. Further down stream the contribution of the mineralized horizon constitutes such a small percentage that no anomaly would be apparent.

The side creeks on the other hand have their source close to the mineralization. Several of them give values of up to 890ppm Pb, 1940 ppm Zn and 4.4 ppm Ag.

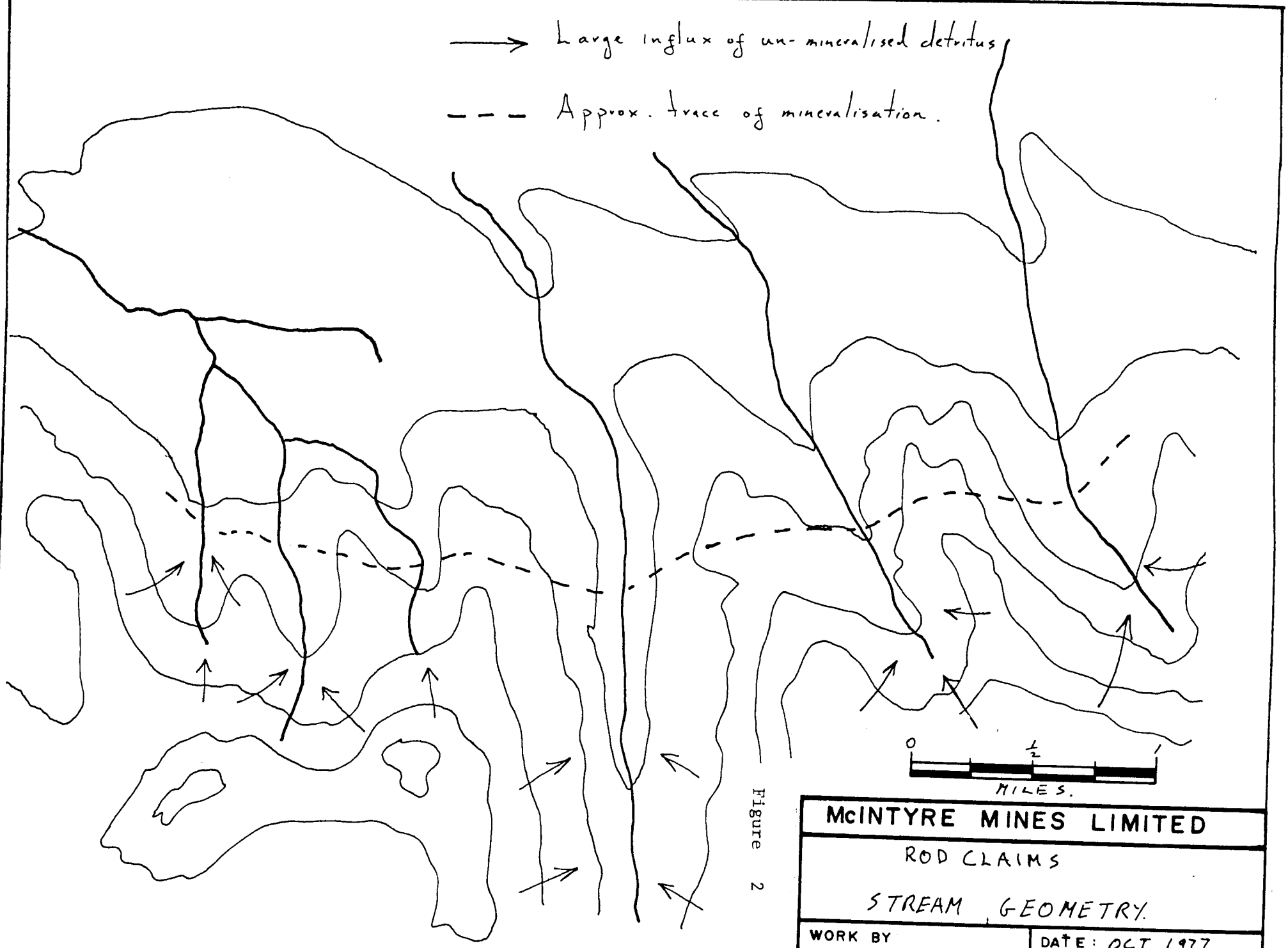



Figure 2

| McINTYRE MINES LIMITED | |
|---|---|
| ROD CLAIMS<br>STREAM GEOMETRY. | |
| WORK BY | DATE: OCT 1977 |
| DRAWN BY F | N.T.S.: 106 D1, 106 C4. |

## SOIL GEOCHEMISTRY

Geological reconnaissance indicated that the shale host of the initial showing area extended over the length of the property, so ridge soil lines were run across the critical part of the section using a 200' sample interval.

The samples were dried and sifted in the field preparation unit and shipped to Vancouver for analysis by atomic absorption for lead, zinc and silver. The results were plotted on a histogram (Figure 3.) to determine the background population and threshold values for the anomalies. One or more anomalous areas were indicated on each ridge and these were followed up by detailed prospecting.

Mineralization was located close to several strong lead, zinc and silver anomalies but in places where only a strong zinc and silver anomaly was present barren shales were found. This situation is due to the presence of shales which assay up to 1% zinc and 1.4 oz. silver/ton.

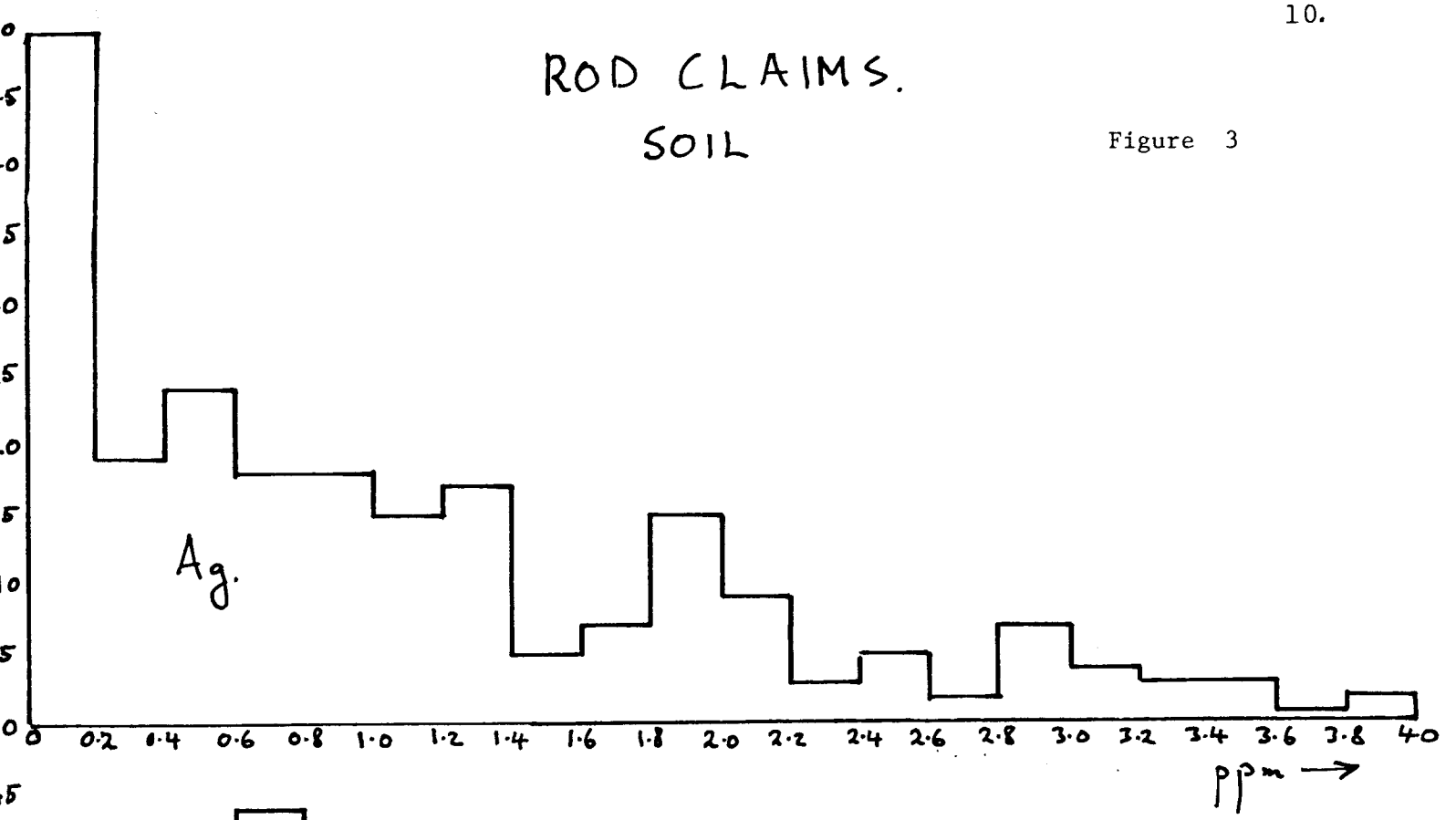
Overall, soil geochemistry proved to be more useful in this environment than silt geochemistry and provided a quick and easy method of locating the mineralization on each ridge. Combined soil geochemistry data and geological mapping information made down dip follow-up prospecting, into the valley areas, fairly straight forward.

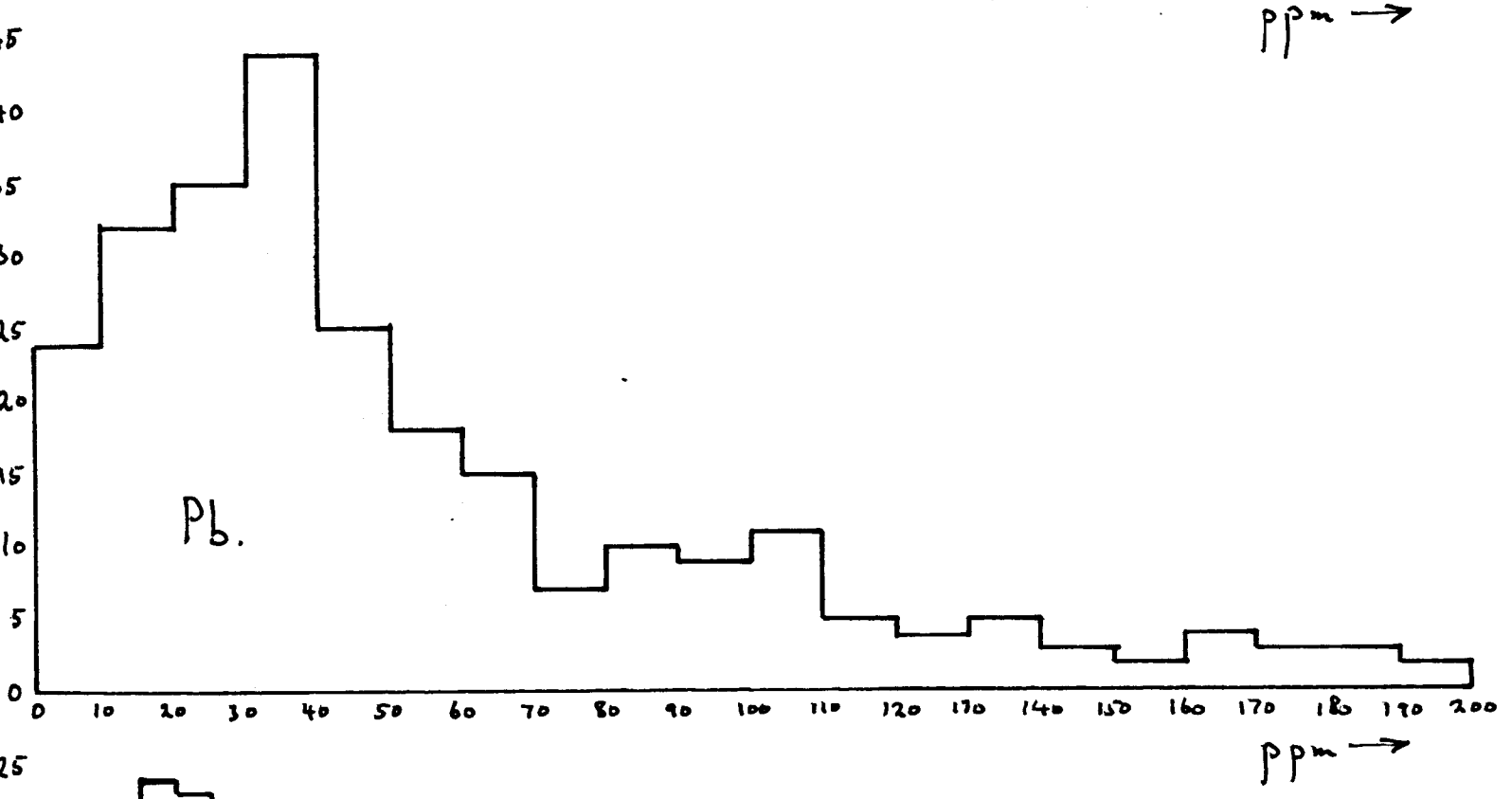
Further evaluation of the property would require a complete soil grid along the strike of the known showings to accurately trace the mineralized horizon.

# ROD CLAIMS.

## SOIL

Figure 3




## CONCLUSIONS AND RECOMMENDATIONS

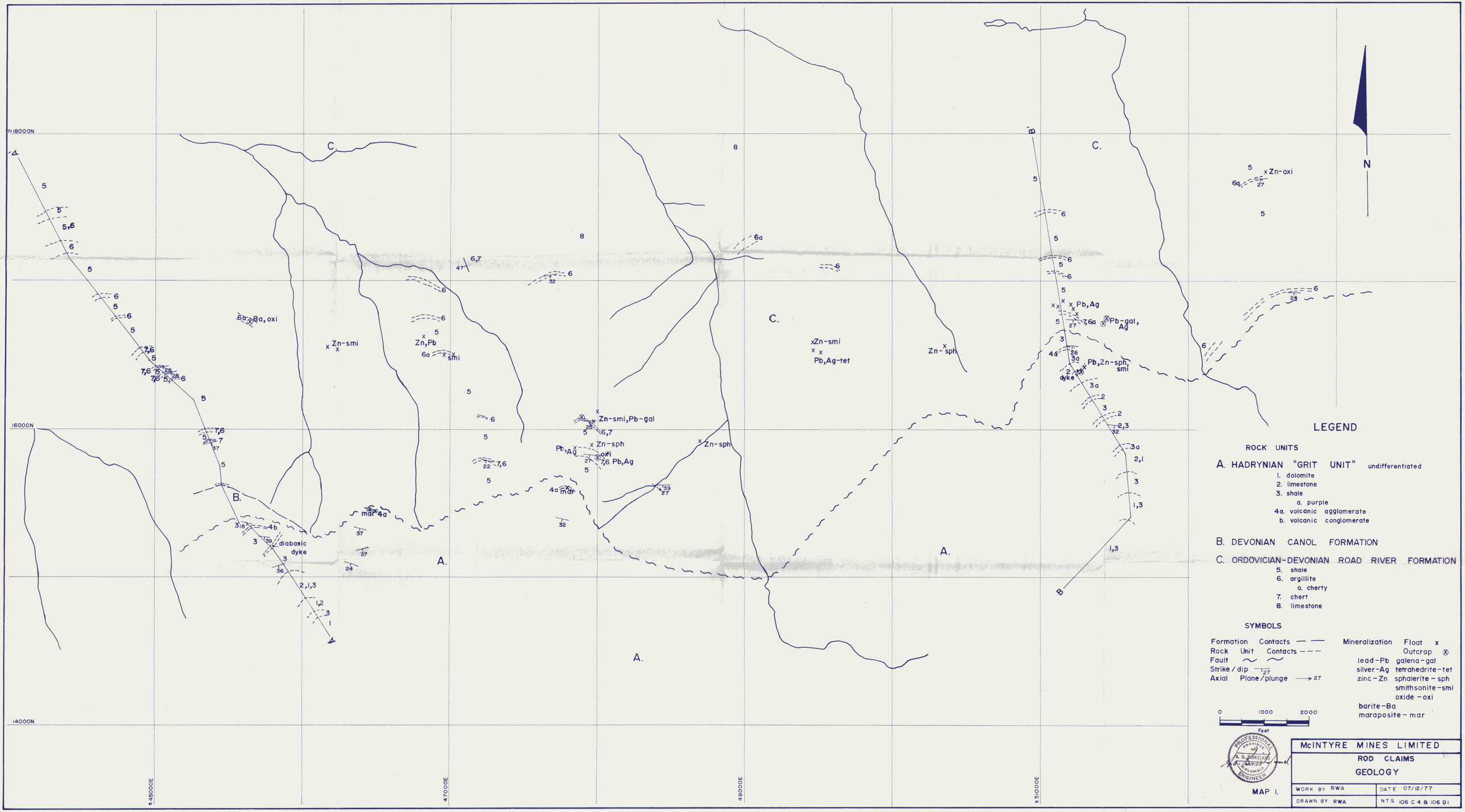
High grade lead-silver mineralization was discovered in an upper cherty argillaceous member of a predominantly black shale sequence equated to the Road River Formation (Ordovician-Devonian). Ridge top soil geochemistry attained anomalous values and resulted in the extension of the intial discovery over 5 additional westward ridges, covering in excess of 20,000 feet along strike with varying widths from 400 to 1000 feet. Prospecting these interesting areas located abundant mineralized float, mostly in "kill zones", and occasional outcropping occurrences.

However, the exact nature of the mineralization is uncertain. To this end a program of additional geological mapping, grid soil geochemistry on strike and trenching of the major showings should be undertaken to commence the 1978 field season. A 2000 foot diamond drilling program would follow about mid-season thus allowing time for a more accurate mineral assessment and aiding in drill hole placement.

# APPENDIX 1

## QUANTITATIVE GEOCHEMICAL ANALYSIS

| | Background Mode (ppm) | Weakly Anomalous (ppm) | Strongly Anomalous (ppm) |
|---|---|---|---|
| Zn | | | |
| Recce Silts | 150 | 250 - 500 | >500 |
| Craig West Soil | 100 | 250 - 500 | >500 |
| Rod Soils | 70 | 350 - 500 | >500 |
| Jam Soils | 110 | 250 - 500 | >500 |
| Pb | | | |
| Recce Silts | 5 | 50 - 100 | >100 |
| Craig West Soils | 15 | 50 - 100 | >100 |
| Rod Soils | 35 | 100 - 200 | >200 |
| Jam Soils | 15 | 50 - 100 | >100 |
| Ag | | | |
| Recce Silts | 0.1 | 1.0 - 2.0 | >2.0 |
| Craig West Soils | 0.1 | 1.0 - 2.0 | >2.0 |
| Rod Soils | 0.1 | 2 - 4 | >2.0 |
| Jam Soils | 0.1 | 1 - 2 | >2.0 |




## LEGEND

### ROCK UNITS

**A. HADRYNIAN "GRIT UNIT"** undifferentiated

1. dolomite
2. limestone
3. shale
   - a. purple
4. a. volcanic agglomerate
   - b. volcanic conglomerate

**B. DEVONIAN CANOL FORMATION**

**C. ORDOVICIAN-DEVONIAN ROAD RIVER FORMATION**

5. shale
6. argillite
   - a. cherty
7. chert
8. limestone

### SYMBOLS

Formation Contacts —— ——
Rock Unit Contacts – – –
Fault ~~~ ~~~
Strike / dip 27
Axial Plane / plunge ⟶ 27

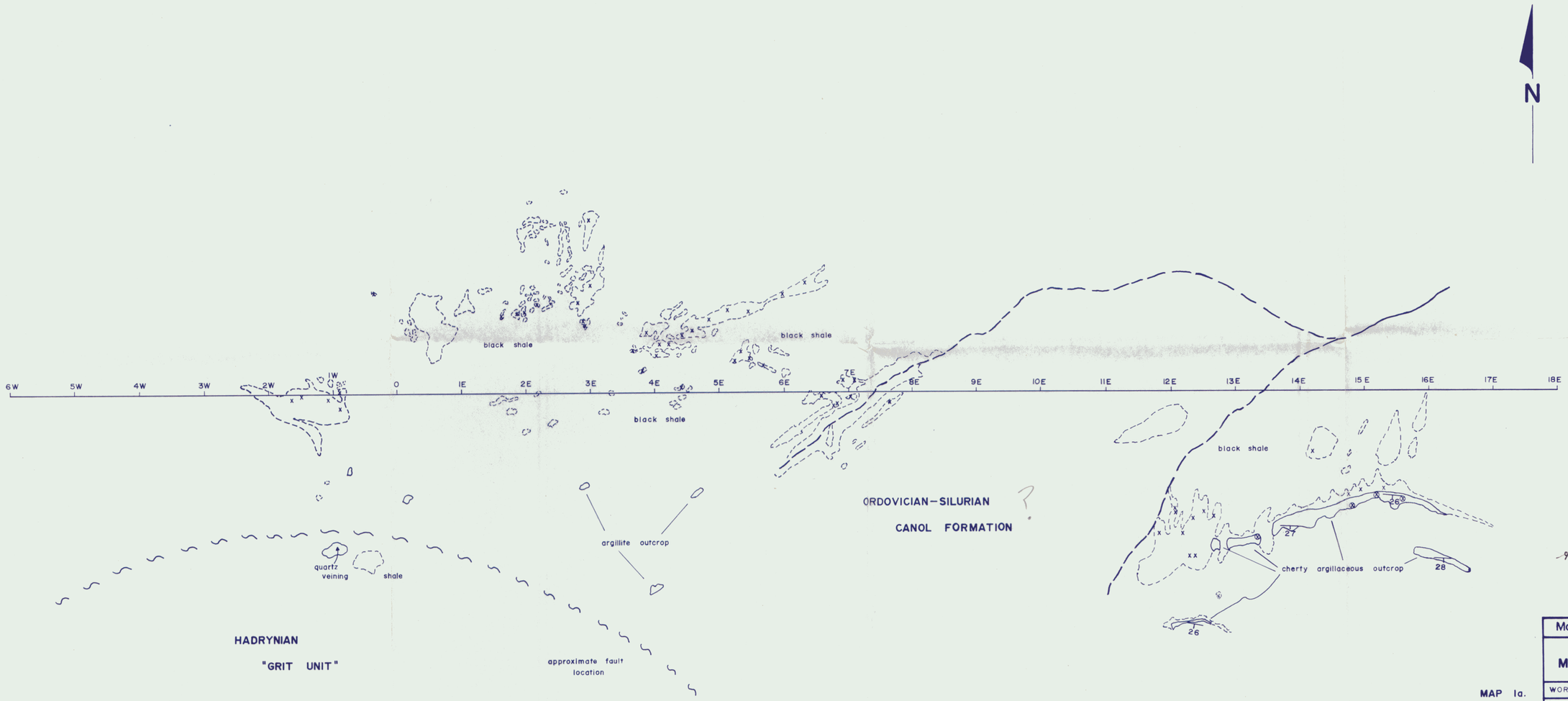
Mineralization Float x
Outcrop ⊗
lead-Pb galena-gal
silver-Ag tetrahedrite-tet
zinc-Zn sphalerite-sph
smithsonite-smi
oxide-oxi
barite-Ba
maraposite-mar

0 1000 2000
Feet

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. W. ARMSTRONG

MAP 1.

| McINTYRE MINES LIMITED | |
|---|---|
| ROD CLAIMS | |
| GEOLOGY | |
| WORK BY RWA | DATE 07/12/77 |
| DRAWN BY RWA | N.T.S. 106 C 4 & 106 D1 |



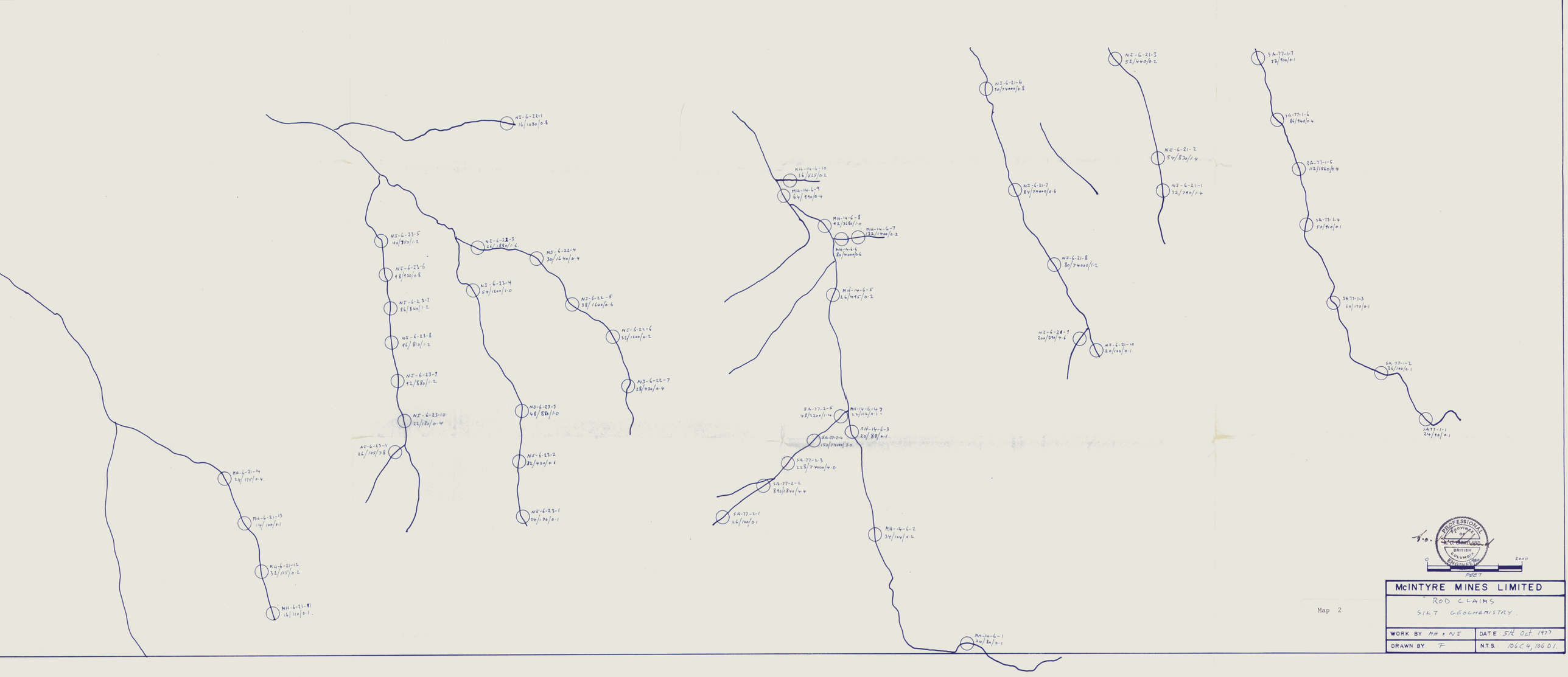

McINTYRE MINES LIMITED

ROD CLAIMS

MAIN SHOWING – GEOLOGY

| | |
|---|---|
| WORK BY RWA | DATE 07/12/77 |
| DRAWN BY RWA | N.T.S. 106 C 4 |

MAP 1a.




PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA

Map 2

McINTYRE MINES LIMITED

ROD CLAIMS

SILT GEOCHEMISTRY

| | |
|---|---|
| WORK BY MH & NJ | DATE 5th Oct. 1977 |
| DRAWN BY F | N.T.S. 106C4, 106D1. |

n

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. O. BIBIKAR

# ROD CLAIMS
# RECCONAISSANCE SOIL GEOCHEM
# LEAD (Pb)

Map 3a

Scale: 1 inch = 1000 feet

Aug. 1977

B.R. Gunther

n

ROD CLAIMS

# RECCONAISSANCE SOIL GEOCHEMISTRY

## ZINC (Zn)

Map 3b

Scale: 1 inch = 1000 feet

Aug. 1977

A. D. BIRKELAND

n

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA A. D. BIRKELAND

# ROD CLAIMS

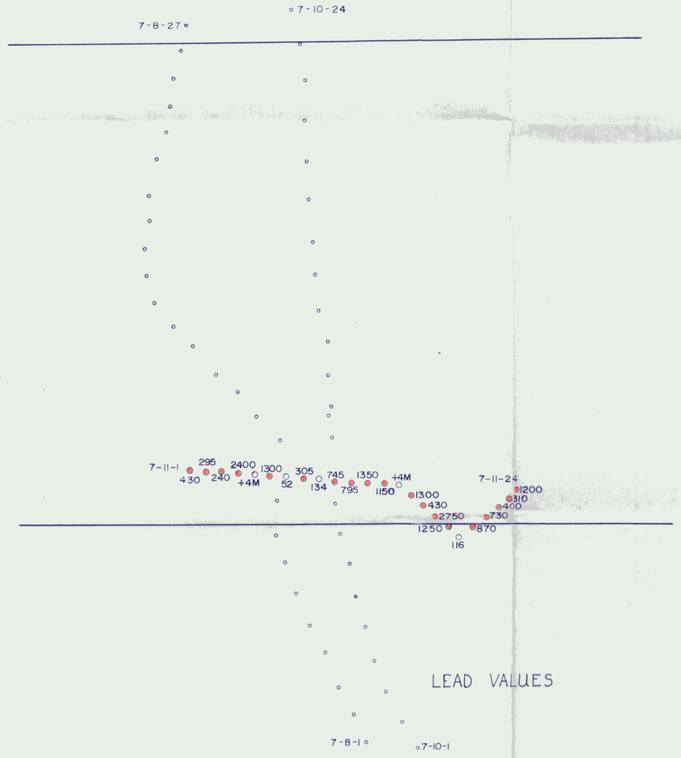
## RECCONAISSANCE SOIL GEOCHEMISTRY

## SILVER (Ag)

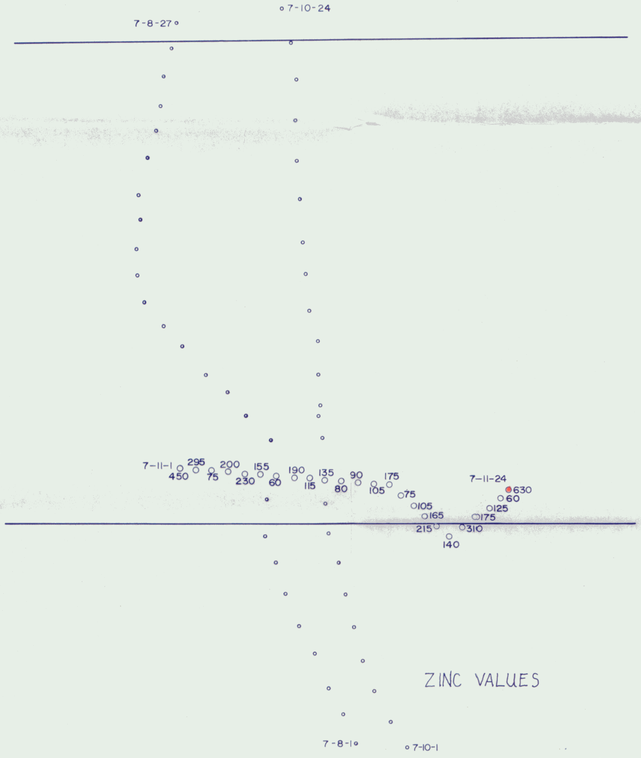
Scale: 1 inch = 1000 feet

Map 3c

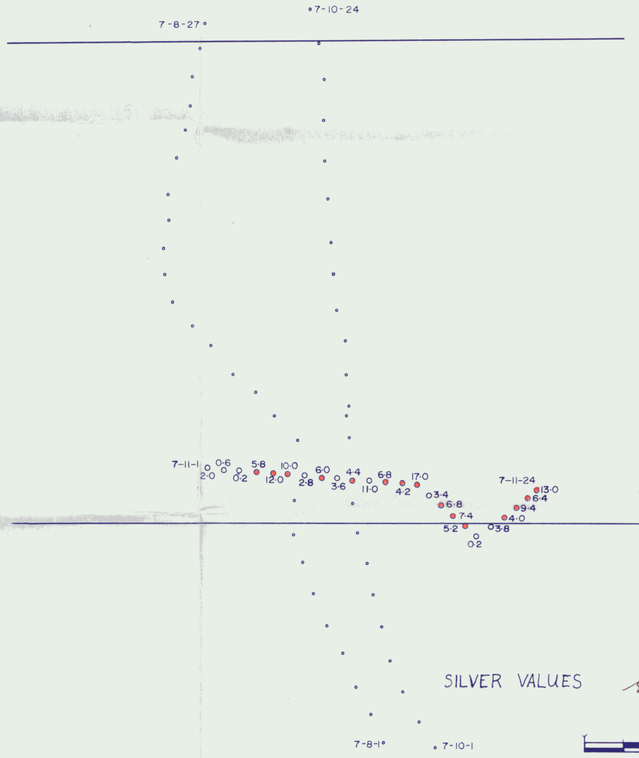
Aug. 1977




LEAD VALUES




ZINC VALUES




SILVER VALUES

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. O. BIRKELAND

FEET

MAP 3d.

| McINTYRE MINES LIMITED | |
|---|---|
| ROD CLAIMS<br>Soil Geochemistry - Main Showing<br>Lead, Zinc, Silver | |
| WORK BY N.J. | DATE Nov 28, 1977 |
| DRAWN BY R.W.A. | NTS 106 C 4 |

SSE

A

NNW

A'

5500 –

5000 –

4500 –

4000 –

3500 –

3000 –

dolomite
shale
interbedded limestone & dolomite
interbedded limestone, dolomite & shale
shale
diabasic intrusion
shale
volcanic conglomerate
fault
grey shale
cherty argillite
shale
chert & argillite
shale
argillite
shale
chert & argillite
shale
chert & argillite
shale
argillite
shale
argillite
shale
argillite minor shale
interbedded shale & argillite
ferruginous shale
shale

HADRYNIAN

"GRIT UNIT"

DEVONIAN

CANOL FORMATION

ORDOVICIAN – DEVONIAN

ROAD RIVER FORMATION

MOST WESTERN RIDGE

SSE

B

NNW

B'

6000 –

5500 –

5000 –

4500 –

4000 –

3500 –

interbedded dolomite & shale
dolomite & minor shale
oolitic bed
shale minor limestone & dolomite
interbedded limestone & dolomite
minor shale
purple shale
interbedded limestone & shale
limestone minor grit
limestone
purple shale
shale
intrusive dyke Pb, Zn, Ag.
limestone minor sphalerite & galena
purple shale
volcanic agglomerate
shale
fault
black graphitic shale
cherty argillite
main showing (kill zones) Pb, Ag, minor Zn
black shale
argillite
shale
argillite
shale minor black argillite
argillite
kill zone
shale minor argillite

HADRYNIAN

"GRIT UNIT"

ORDOVICIAN – DEVONIAN

ROAD RIVER FORMATION

DISCOVERY RIDGE

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. O. BIRKELAND

Vertical 0 500 1000
Horizontal 0 1000 2000
Feet

# IDEALIZED GEOLOGICAL CROSS SECTIONS

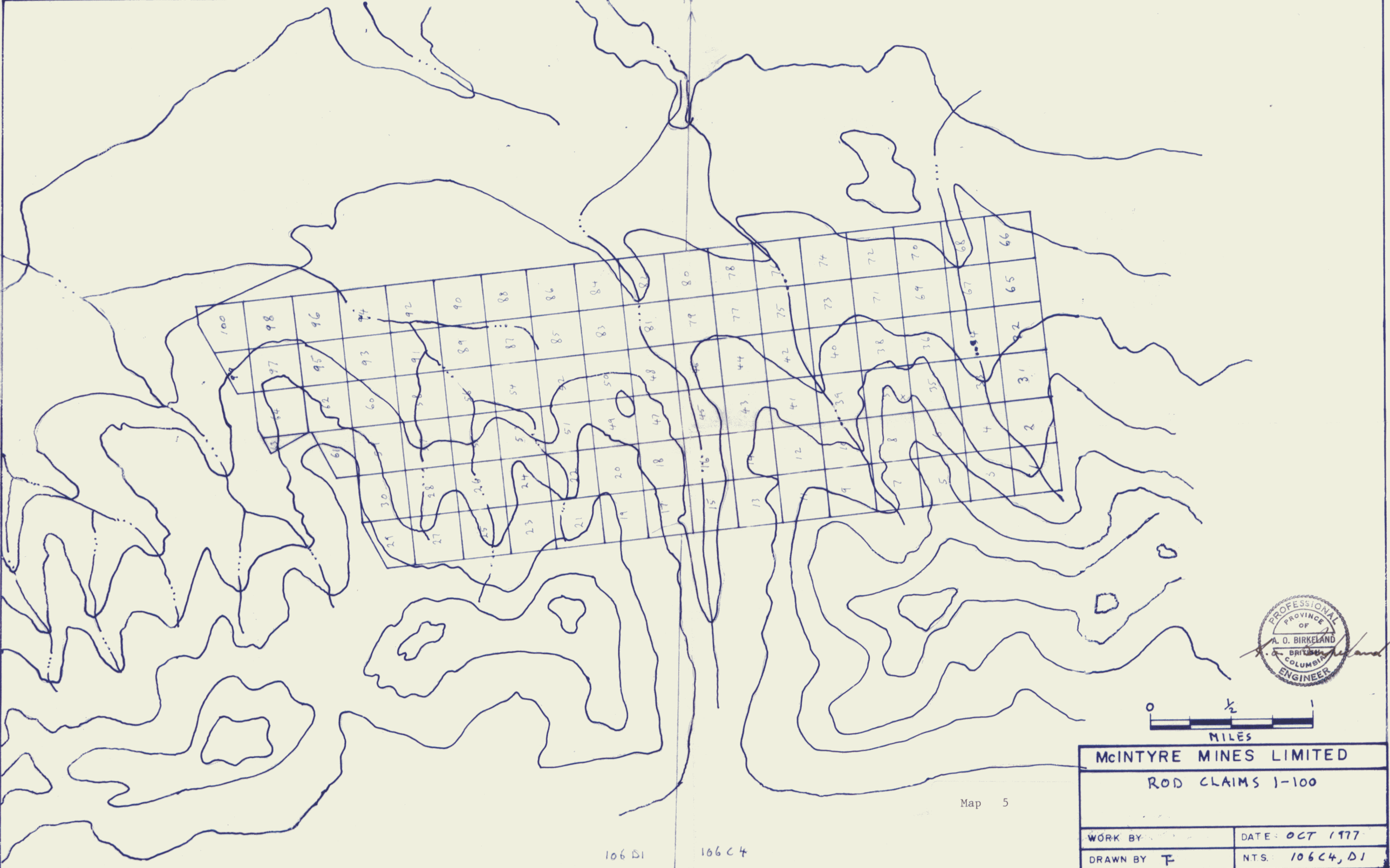
MAP 4.

McINTYRE MINES LIMITED

ROD CLAIMS

GEOLOGICAL CROSS SECTIONS – 2

| | |
|---|---|
| WORK BY RWArnold | DATE: 07/12/77 |
| DRAWN BY RWArnold | N.T.S. 106 C 4 & 106 D 1 |




Map 5

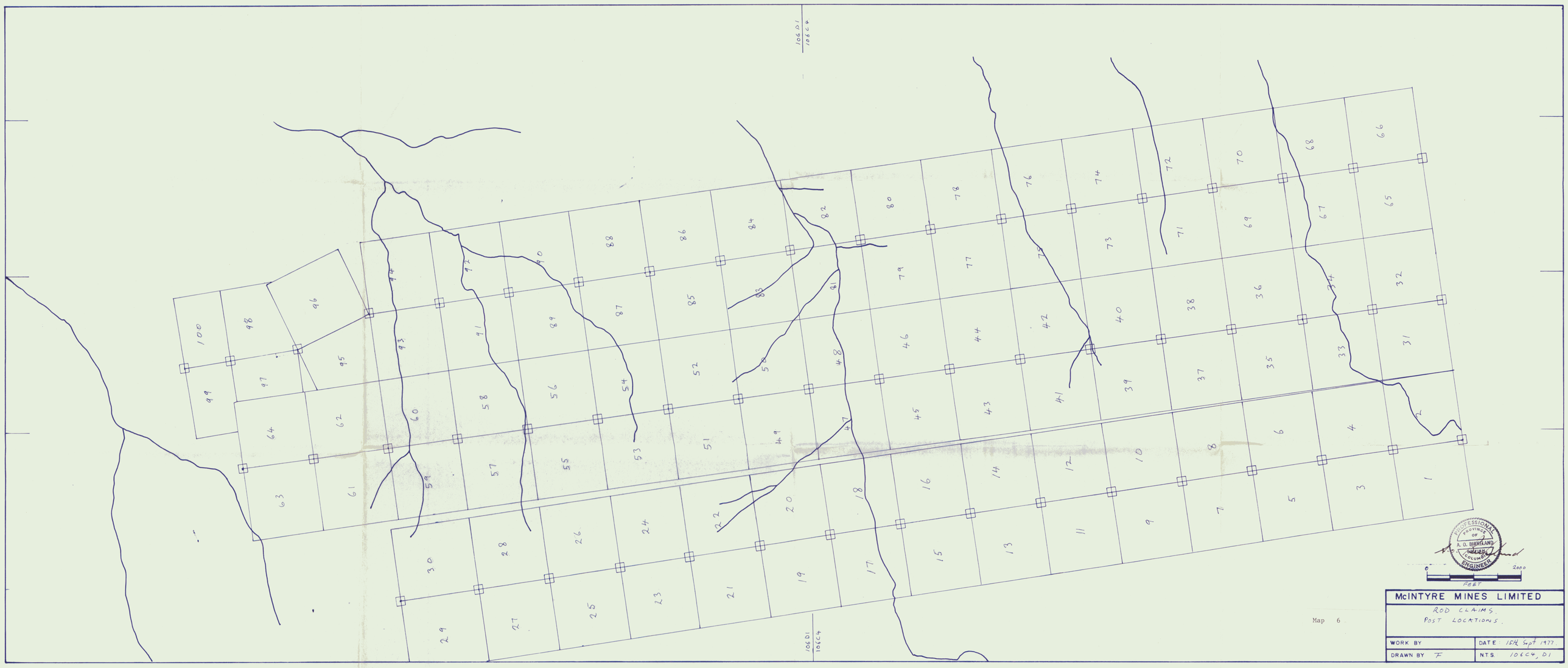
106 D1

106 C 4

McINTYRE MINES LIMITED

ROD CLAIMS 1-100

| | |
|---|---|
| WORK BY | DATE: OCT 1977 |
| DRAWN BY T | N.T.S. 106C4, D1 |




Map 6

McINTYRE MINES LIMITED

ROD CLAIMS

POST LOCATIONS

| | |
|---|---|
| WORK BY | DATE 15th Sept 1977 |
| DRAWN BY F | N.T.S. 106C4, D1 |