

A REPORT ON GEOLOGY AND SOIL GEOCHEMICAL SAMPLING  
OF THE  
RED MINERAL CLAIMS

Omineca Mining Division

N.T.S. 93M/4

Latitude: 55°09', Longitude: 127°41'

for

WESTMIN RESOURCES LIMITED

by

DEL W. FERGUSON

DECEMBER, 1981

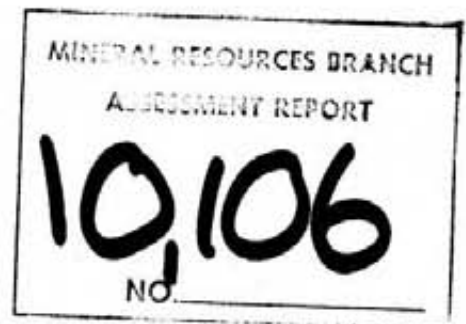


TABLE OF CONTENTS

	<u>PAGE NO.</u>
<u>INTRODUCTION</u>	
1. Location and Access	1
2. Topography and Vegetation	1
3. History	1
4. Regional Geology	1
5. Claim Statistics	4
<u>SUMMER WORK PROGRAM</u>	
1. Grid Location	4
2. Geochemical Survey	4
3. Geological Survey	5
4. Magnetometer Survey	5
5. Conclusions	6
<u>REFERENCE</u>	
<u>ITEMIZED COST STATEMENT</u>	8
<u>COST BREAKDOWN</u>	9
<u>STATEMENT OF QUALIFICATIONS</u>	10
<u>LIST OF FIGURES</u>	
Figure 1 - Location Map	2
Figure 2 - Claim Map	3
Figure 3 - Cu, Mo Geochemistry Map	in pocket
Figure 4 - Zn, Ag Geochemistry Map	"
Figure 5 - Geology Map	"
Figure 6 - Magnetometer Survey Map	"

## INTRODUCTION

### 1. Location and Access

The Red mineral claims are located on the north-western flanks of the Rocher Deboule Range, approximately 10 kilometres southwest of South Hazelton, B.C. Access is attained via a 2.5 kilometre farm road branching off of Yellowhead Highway 16 across from the Carnaby railway crossing (Figure 1).

### 2. Topography and Vegetation

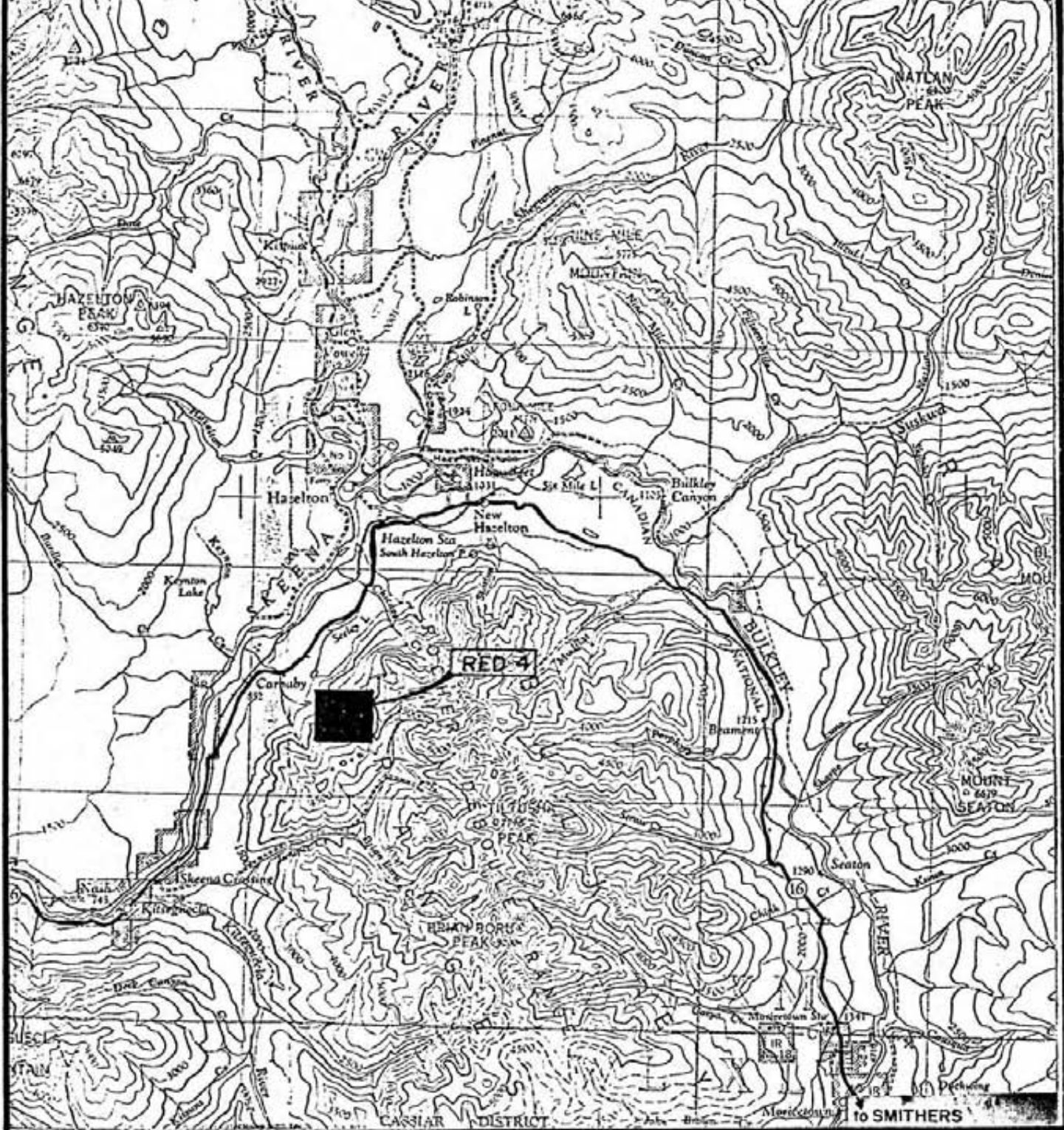
The western half of the original claim block straddles flat to gently sloping agricultural land, at an elevation of 1,000 to 1,500 feet above sea level. Further east, topography steepens rapidly to 4,500 feet a.s.l. Vegetation density along these slopes is variable, consisting of stands of wide-spaced fir and cedar trees alternating with dense, immature forests. Deciduous trees predominate at lower elevations, as does a thick, lush undergrowth of ferns, berry bushes and devil's club.

### 3. History

Little work has been recorded on the immediate area covered by the Red claims. Geology and mineral occurrences of the Rocher Deboule Range has been studied for over 50 years. The claims are surrounded by several old workings and mining operations including the Three Hills copper showing to the west; the Golden Wonder and Cap copper showings to the north; the former Victoria and Rocher Deboule mining operations to the northeast; and the former Red Rose mine to the east.

### 4. Regional Geology

The Rocher Deboule Range forms part of the Hazelton Mountains. It is underlain entirely by rocks of the Hazelton Group and the Rocher Deboule Stock, one of the Bulkley Intrusions (BCDM, Bull. 43, Pg. 7). Only the upper two divisions of the Hazelton Group occur in the area: the Red Rose Formation, a Late Jurassic to Early Cretaceous age sequence



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**LOCATION MAP**

**RED MINERAL CLAIMS**

0 5 10 15 KM  
 0 4 8 MILES  
 SCALE 1:250,000

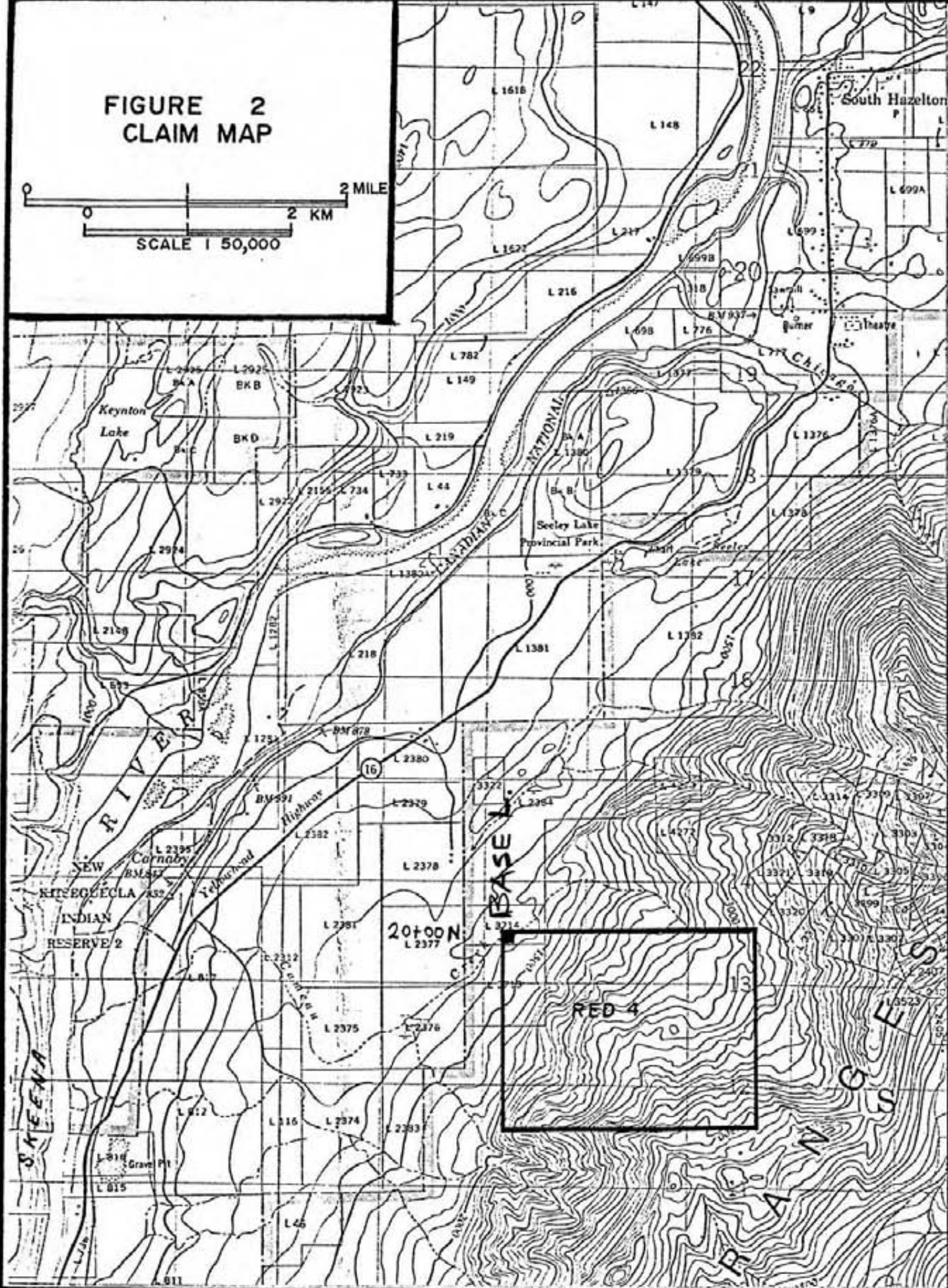
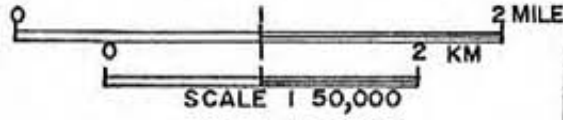
**DRAWN BY:**

**DATE: DEC. 1981**

**FIGURE 1**



# FIGURE 2 CLAIM MAP



RED MINERAL CLAIMS

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DEC. 1981

of marine and non-marine greywackes; the Brian Boru Formation, an Early Cretaceous age sequence of porphyritic andesite breccias and flows (BCDM, Bull. 43, Pg. 7). Rocks of the Hazelton Group have been folded and subsequently intruded by the Rocher Deboule Stock consisting of granodiorite and quartz monzonite of middle to late Cretaceous age.

5. Claim Statistics (Figure 2)

<u>Claim Name</u>	<u>Record No.</u>	<u>No. of Units</u>		<u>Record Date</u>
		<u>original</u>	<u>remaining</u>	
Red 1	3524	4	0	Jan. 21, 1981
Red 3	3526	20	0	Jan. 21, 1981
Red 4	3527	20	20	Jan. 21, 1981
Red 5	3528	20	0	Jan. 21, 1981

SUMMER WORK PROGRAM - July 24 to August 14, 1981

1. Grid Location

A 2.6 kilometre north-south trending baseline was cut and blazed in the vicinity of the RED 3 and 4 common claim boundary. Subsequently, eleven crosslines, 200 metres apart were established to the east of the baseline. These lines have been flagged and tagged at 100 metre intervals. A total of 24.7 line kilometres were completed.

2. Geochemical Survey

A total of 234 soil samples were collected over the established grid at 100 metre interval locations along crosslines and 50 metre interval sample sites along the baseline (Figures 3 & 4). Approximately 84 stream sediment samples and 168 corresponding stream bank soil samples were taken along creeks draining the northwest flanks of the Rocher Deboule Range. All soil and stream sediment samples and twenty-two rock samples were sieved to minus 80 mesh and analysed for Cu, Mo, Zn, Ag, using the nitric, perchloric digestion-atomic absorption method at Min-En Laboratories Ltd., North Vancouver, B.C.

The area examined generally shows only weakly anomalous values of Cu, Mo, Zn and Ag in soil and stream sediment samples. Anomalous values for each element are arbitrarily considered as follows: Cu  $\geq$  30 ppm, Mo  $\geq$  4 ppm, Zn  $\geq$  200 ppm, Ag  $\geq$  1 ppm.

The strongest anomalous zone, exhibiting coincidental Cu, Mo, Zn, Ag highs, occurs at the extreme north end of the RED 4 claim. Values attained here are on the order of +50 ppm Cu, +6 ppm Mo, +400 ppm Zn and +2 ppm Ag. Isolated patches of weak Cu, Mo values are present in the central map area (2+00N to 14+00N). A broad interpretation reveals weak Zn, Ag anomalies peripheral to a central Cu, Mo anomalous zone. A large zone of weakly anomalous Ag is present from 2+00N to 10+00N. An isolated area exhibiting weakly anomalous Cu, Mo and Ag values occurs in the extreme south of the map area and remains open to the south.

### 3. Geological Survey

Only one stratigraphic unit, the Brian Boru Formation, is exposed over the Red claims (Figure 5). This unit strikes generally north and dips 20 to 30 degrees east. It consists of purple to grey-green porphyritic andesite flows and breccias and minor tuffs. Feldspar phenocrysts generally make up 20 to 40% of the rock. Hornblende porphyritic varieties are also present to a lesser extent. Locally, andesites are strongly bleached, silicified and pyritized and weathered to form prominent gossans. A large gossan zone, 300 to 400 metres wide, trends north-south through the claims. It is exposed in the south along creek cliffs (0+00 to 6+00S - 6+00 to 10+00E), centrally as a slide scar (12+00N - 7+00E to 11+00E), and in the north along the access road to the Victoria prospect. These pyritized zones are not particularly anomalous in Cu, Mo, Zn or Ag.

### 4. Magnetometer Survey

A magnetometer survey was conducted over the Comeau Creek basin using a McPhar fluxgate magnetometer. It was conducted along lines 8+00N to 20+00N and from the

baseline to 12+00E (Figure 6). All measurements were taken while facing east. Diurnal variation and instrument drift were corrected by returning to check stations chosen at convenient locations. Average drift per minute was calculated and then applied to measured data to give the results plotted on Figure 6. "Magnetic highs" are arbitrarily chosen as being values greater than 100 gammas.

Two prominent "magnetic highs" trend north and northeast along either side of a wide bleached zone extending from 10+00N to 14+00N and 6+00E to 11+00E. The two anomalies merge in the vicinity of 8+00N - 6+50E. A moderate magnetic anomaly trends north through the centre of the bleached gossan zone between 12+00N and 14+00N.

Low Cu anomalies, on the order of 30 to 60 ppm, correspond with magnetic "highs" in the gossan scarp area from 8+00N to 14+00N, 4+00E to 12+00E. The linear magnetic highs expressed over the map area parallel the strike of the underlying volcanic flows, and may be reflecting remnant flow magnetism. Alternatively, linear highs may indicate north-striking dykes or shear-fault zones. Surface geology and soil geochemistry do not support evidence for dyking or faulting in the area.

##### 5. Conclusions

The zone of most interest on the property lies between 8+00N to 14+00N and 4+00E to 12+00E. It is expressed in outcrop as a strongly, bleached, silicified and pyritized unit exposed for the most part as a prominent gossan-cliff south of Comeau Creek. Corresponding magnetic and Cu soil geochemistry "highs" lie within, or immediately peripheral to, this area. The bleached silicified and pyritized zone exposed along the access road north of Comeau Creek may be expressed at the north end of the property as prominent soil and silt geochemical and magnetic "highs".



Neither geological, geochemical nor magnetometer surveys established to date over these claims offer a suitable target on which to conduct further exploratory work at this time.

REFERENCE

Brown, A. Sutherland, 1960, Geology of the Rocher Deboule Range,  
BCDM, Bulletin No. 43.

ITEMIZED COST STATEMENT

(for work period July 24 to August 14, 1981)

Geochemical

486 soil & silt samples @ \$5.55/sample	\$ 2,697.30
22 rock samples at \$10.14/sample	223.08
Sample Shipping	<u>41.12</u>
Sub Total	2,961.50

Labour

1 geologist & 3 assistants for 22 days	5,788.00
Report Preparation	<u>909.18</u>
	6,697.18

Transportation

Equipment Rental - Truck & Trailer for 22 days	1,174.00
Fuel Costs	627.76
To and From Site Transportation	<u>389.05</u>
	2,190.81

Food

22 days x \$40/day	880.00
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Miscellaneous Field Costs (i.e supplies)

308.95

TOTAL COSTS \$13,038.44

COST BREAKDOWN

Red 4 - 20 units x \$100/unit x 3 years = \$6,000

Total     \$6,000

Amount applied to P.A.C. Account     = \$7,038.44

\*Subsequently Red 4 claim will be in good standing up to  
January 21, 1985.

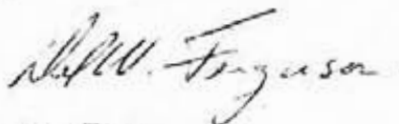


STATEMENT OF QUALIFICATIONS

I, DEL W. FERGUSON, of #501 - 1330 Bute Street, Vancouver, B.C. do hereby certify that:

- 1) I am a geologist with office address at Suite 904, 1055 Dunsmuir Street, P.O. Box 49066, Four Bentall Centre, Vancouver, B.C., V7X 1C4.
- 2) I am a graduate of the University of Western Ontario with an Honours Bachelor of Science Degree in Geology (1979).
- 3) I have had greater than two years of geological experience in various phases of mineral exploration in B.C.
- 4) I have supervised the 1981 field program of the Red claims, referred to herein.

Respectfully submitted



Del W. Ferguson  
Project Geologist



Cu Contour Interval

- 30-49 ppm
- ≥ 50 ppm

Mo Contour Interval

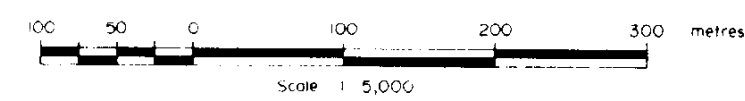
- - - ≥ 4 ppm

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COMEAU PROPERTY

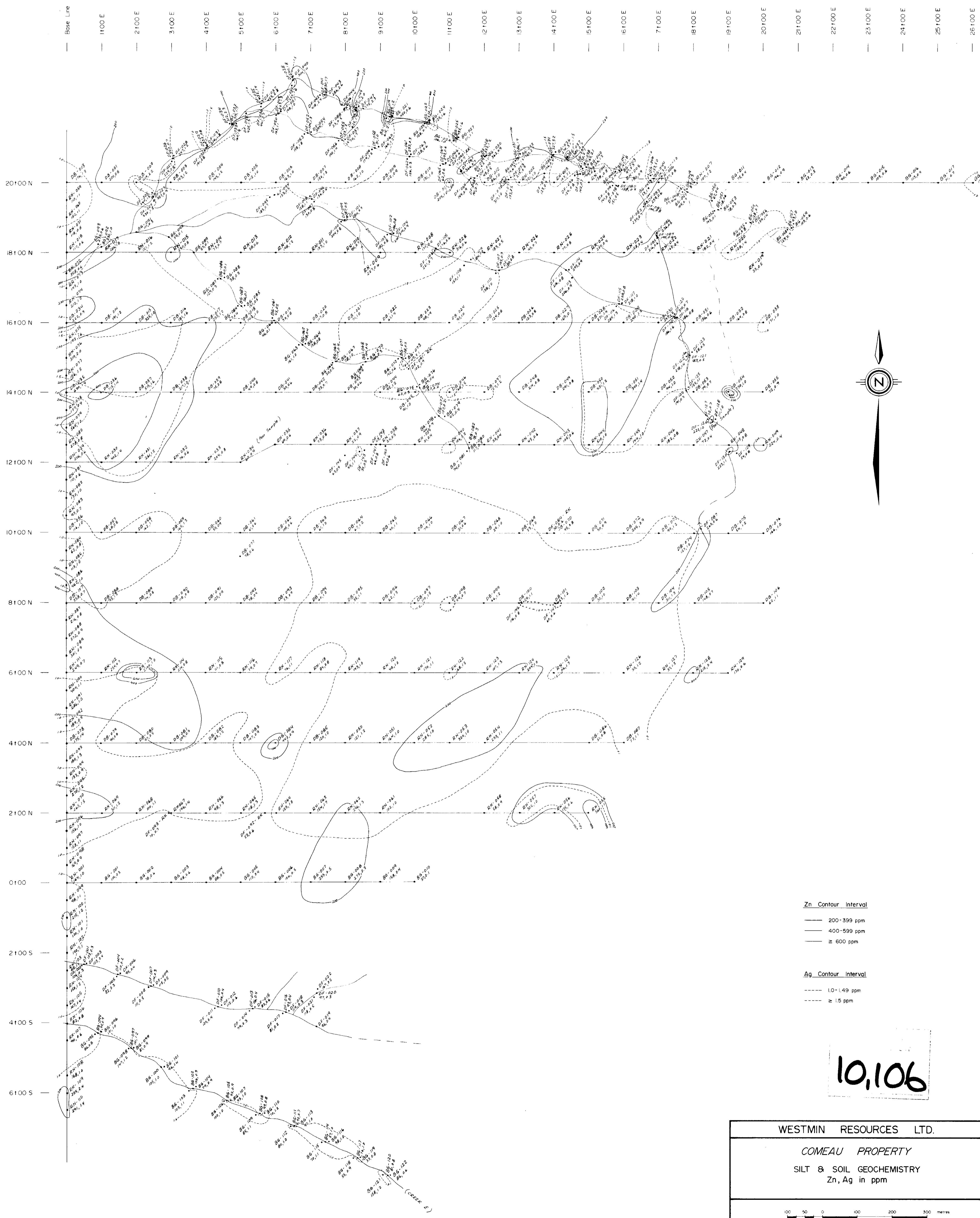
SILT & SOIL GEOCHEMISTRY  
Cu, Mo in ppm



Date: Jan. 1982

Drawn By: R. Ivány

FIGURE 3



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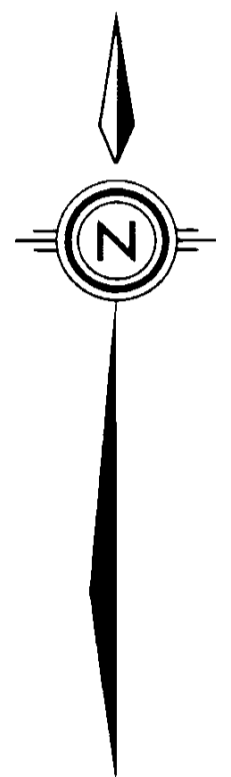
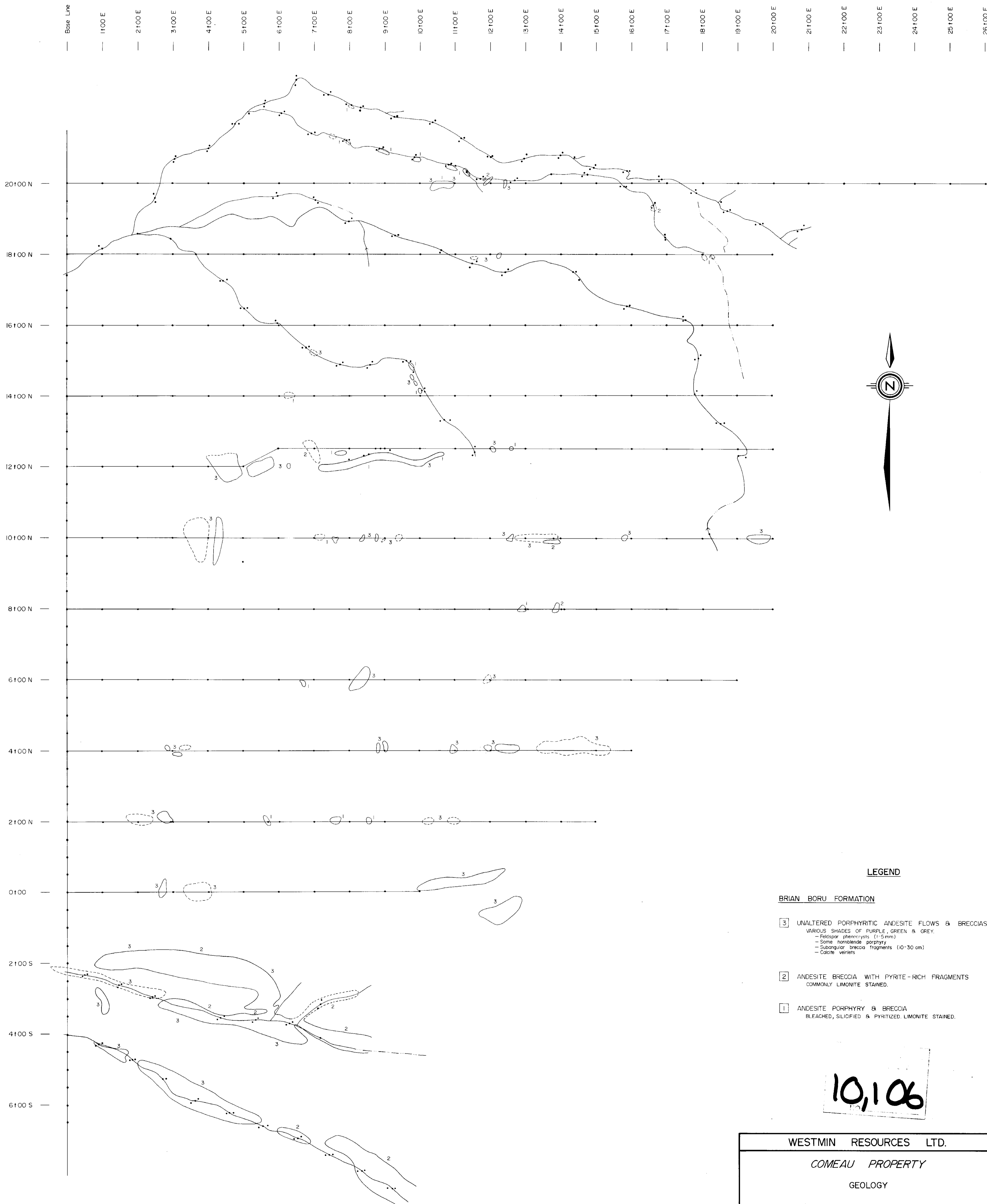
Zn Contour Interval

- 200-399 ppm
- 400-599 ppm
- ≥ 600 ppm

Ag Contour Interval

- - - 1.0-1.49 ppm
- - - ≥ 1.5 ppm

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COMEAU PROPERTY		
SILT & SOIL GEOCHEMISTRY		
Zn, Ag in ppm		
Date: Jan. 1982	Drawn By: R. Ivany	FIGURE: 4



**LEGEND**

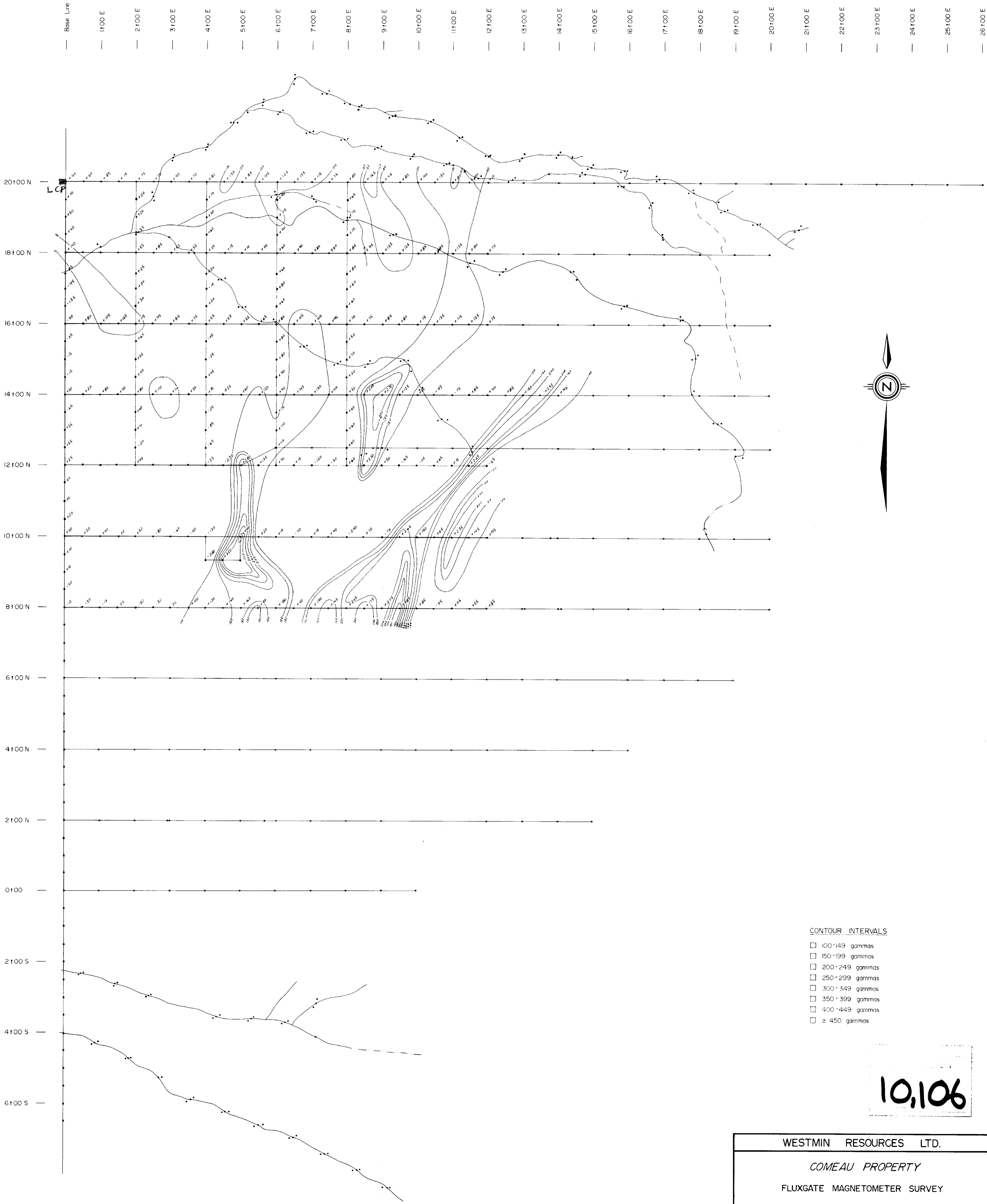
**BRIAN BORU FORMATION**

- 3** UNALTERED PORPHYRITIC ANDESITE FLOWS & BRECCIAS  
VARIOUS SHADES OF PURPLE, GREEN & GREY.  
- Feldspar phenocrysts (1-5mm)  
- Some hornblende porphyry  
- Subangular breccia fragments (10-30 cm)  
- Calcite veinlets
- 2** ANDESITE BRECCIA WITH PYRITE-RICH FRAGMENTS  
COMMONLY LIMONITE STAINED.
- 1** ANDESITE PORPHYRY & BRECCIA  
BLEACHED, SILICIFIED & PYRITIZED LIMONITE STAINED.

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COMEAU PROPERTY		
GEOLOGY		
Date: JAN 1982	Drawn By: R. Ivany	FIGURE: 5





- CONTOUR INTERVALS
- 100-149 gammas
  - 150-199 gammas
  - 200-249 gammas
  - 250-299 gammas
  - 300-349 gammas
  - 350-399 gammas
  - 400-449 gammas
  - ≥ 450 gammas

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<i>COMEAU PROPERTY</i>		
FLUXGATE MAGNETOMETER SURVEY		
Date: Jan 1982	Drawn By: R. Ivany	FIGURE: 6