

ASSESSMENT REPORT
GEOCHEMICAL BARIUM SOIL SURVEY
ON THE MINERAL CLAIMS GROUPED AS

I REIN 9, 11-12, 41-42, 49-50, 51-54, 60, 61, 63, 65 and 76 Fraction
(Record Nos. YA5733, YA5735-YA5736, YA5765-YA5766, YA5773-YA5774,
YA6479-YA6482, YA6488, YA37921, YA37923, YA37925, and
YA37920)

II REIN 33-34, 36, 38-39, 40, 55-59, 62, 64, and 66-68
(Record Nos. YA5757-YA5758, YA5760, YA5762-YA5763, YA5764,
YA6483-YA6487, YA37922, YA37924, and YA37926-YA37928)

Mayo Mining District, Yukon

N.T.S. 116B/9

Latitude $64^{\circ}43'N$
Longitude $138^{\circ}11'W$

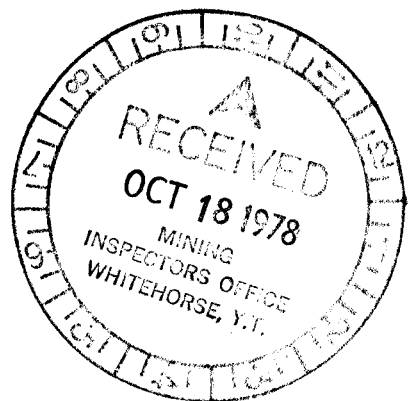
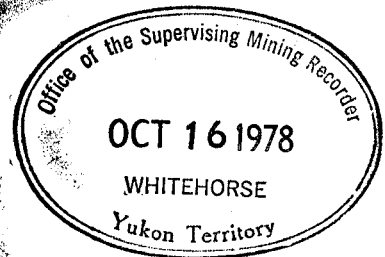
by

A.A. Burgoyne, P.Eng.
R.S. Tolbert, B.Sc.

Work Done: August 2 - August 20, 1978

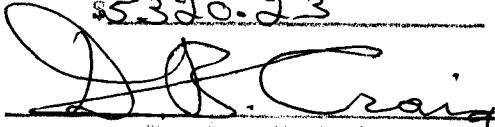
Date: September, 1978

Owner: Union Miniere Explorations and
Mining Corporation Limited



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


\$5320.23



Payroll Geologist or
~~Resident Mining Engineer~~

Considered as representation work under Section 52 (4) Yukon Quartz Mining Act.


B. R. BAXTER
Supervising Mining Recorder



Commissioner of Yukon Territory

Suite 200, 4299 Canada Way, Burnaby, B.C. V5G 1H4
Telephone (604) 437-9491

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Mayo Mining District, Yukon

N.T.S. 116B/9

Latitude $64^{\circ}43'N$
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A.A. Burgoyne, P.Eng.
R.S. Tolbert, B.Sc.

090375
Work Done: August 2 - August 20, 1978

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ASSESSMENT REPORT

GEOCHEMICAL SOIL SURVEY ON THE REIN 40, 50, 59, 60, 61-68 MINERAL CLAIMS

INTRODUCTION

During the period August 2 to August 20, 1978 a geochemical soil survey was completed on the Rein 40, 50, 59, 60 and 61-68 mineral claims in the Mayo Mining District, Yukon. The claims are located approximately six miles south of Lomond Lake and four and one-half miles east of the Dempster Highway at latitude $64^{\circ}43'N$ and longitude $138^{\circ}11'W$ (Figure 1) and are accessible via helicopter.

The geochemical soil survey was completed in the field by Mr. D. Coops and Mr. R. Tolbert, B.Sc., geologist, who also supervised the survey in the field and who in turn was under the supervision of Mr. A. Burgoyne, P.Eng.

PROPERTY AND ASSESSMENT APPLICATION

This report is to cover assessment requirements for the Rein claim groups listed below.

Since the geochemical survey was completed on the Rein 40, 50, 59, 60, and 61-68 mineral claims in order to apply assessment expenditures over all desired claims, two claim groups have been established as follows:

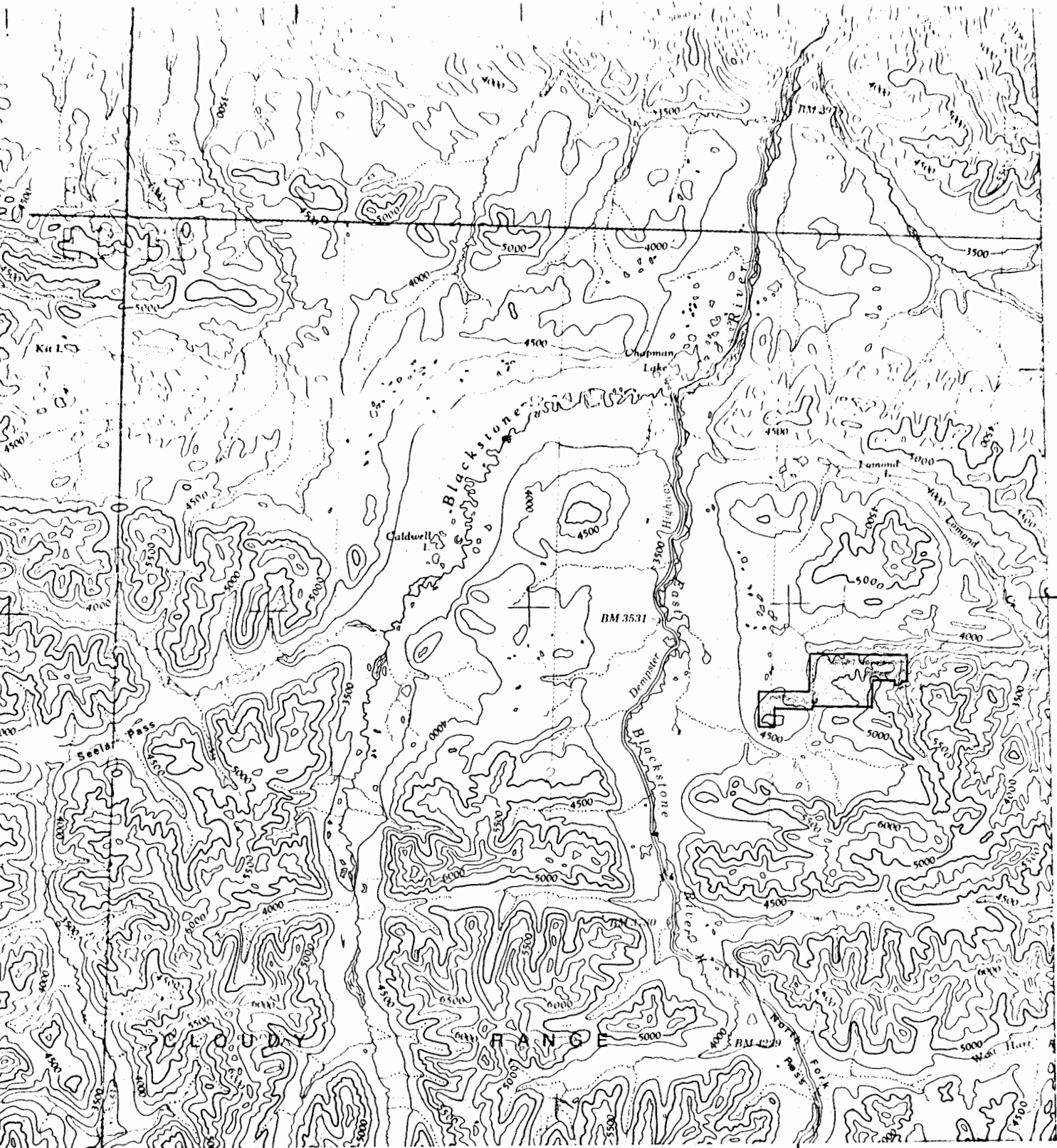
Group I - Rein 9, 11-12, 41-42, 49-50, 51-54, 60, 61, 63, 65, and
76 Fraction

Group II - Rein 33-34, 36, 38-39, 40, 55-59, 62, 64, and 66-68

Note Figure 3 and accompanying inset map.

The expiry date for certain of the above Rein claims have now been extended, with application of this assessment. The expiry dates for the claims in the above groups are:

Claim	Grant Numbers	Expiry Date
Rein 9	YA5733	July 14, 1982
Rein 11	YA5735	July 14, 1982
Rein 12	YA5736	July 14, 1980
Rein 33-34	YA5757-YA5758	July 14, 1980
Rein 36	YA5760	July 14, 1980
Rein 38-39	YA5762-YA5763	July 14, 1980
Rein 40	YA5764	July 14, 1981
Rein 41-42	YA5765-YA5766	July 14, 1979
Rein 51-54	YA6479-YA6482	August 27, 1979
Rein 55-57	YA6483-YA6485	August 27, 1980
Rein 58-59	YA6486-YA6487	August 27, 1982
Rein 61	YA37921	August 14, 1980
Rein 60	YA6488	August 27, 1982



64°45'N

138°15'W

FIGURE 1
 LOCATION MAP, REIN CLAIMS
 1/250,000
 N.T.S. 116B & 116C(E½)

Claim	Grant Numbers	Expiry Date
Rein 62	YA37922	August 14, 1982
Rein 63	YA37923	August 14, 1980
Rein 64	YA37924	August 14, 1982
Rein 65-68	YA37925-YA37928	August 14, 1980
Rein 76 Fraction	YA37920	August 14, 1982

Costs of the surveys are given in Appendix I whereas application of assessment is given in Appendix II.

GEOLOGY

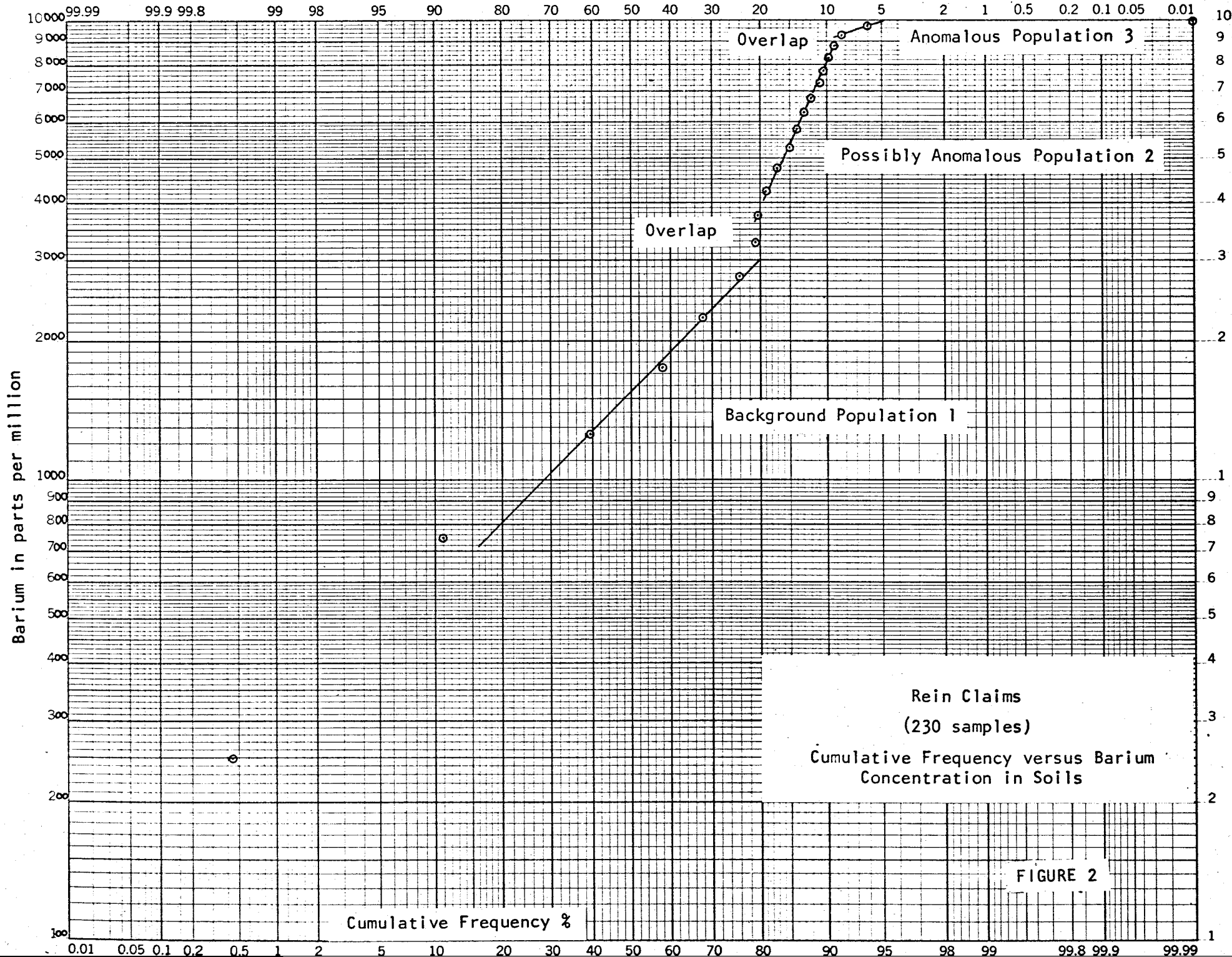
The claims are underlain by a thick, highly thrust, in part folded sequence of buff to olive grey weathering calcareous to non-calcareous shales and black siliceous argillites with minor limestone and chert that range in age from Ordovician to Carboniferous. The Geological Survey of Canada Map 1284A indicates the southern fringes of the claims are underlain by Middle Palaeozoic Unit 9 Road River Formation and the remainder of the claims Upper Palaeozoic Unit 13. The regional trend is east-west with variable dips to the south. Although Map 1284A indicates a single thrust fault dipping to the south on the southern edges of the claims, the whole width of the claim block is in fact a zone of thrusting. Reconnaissance mapping has indicated at least three well defined major east-west thrust fault zones over a north-south distance of 8000 feet that traverse the property in its entirety. These thrusts have brought older strata from the south on and over younger strata, consequently a significant repeat of strata occurs.

GEOCHEMICAL SOIL SURVEY

Methods, Grid Control and Analytical Treatment

A total of 230 soil samples were collected over lines 10E, 5E, 0, 5W, 10W, 15W, 25W, 30W, 40W, 50W, and 60W and base line over 7.16 line miles and subsequently analysed for total barium. At each sample site a hole was excavated with a mattock and 0.5 to 1.5 lbs. of mostly B horizon soil was collected and placed in a Kraft soil sample bag.

The east-west claim line used to stake the Rein 61-68 claims was used as an east-west baseline (Figure 3). North-south cross lines were spaced at 500 foot and 1000 foot intervals, and soil samples were collected every 100 feet or 200 feet depending on the sample density required. Soil sample



stations were marked by coloured flagging at 100 foot intervals along cross lines and base lines although flagging was placed at roughly 25 foot intervals to define the lines. A topofoil chain and compass were used to control distances and direction.

The samples were flown by helicopter to Dawson City, Yukon and then air freighted to Vancouver, B.C. where they were analysed by Chemex Labs Ltd., 212 Brooksbank Avenue, North Vancouver, B.C. The samples were dried in their respective sample bags at a temperature of 60°C, then sieved to -80 mesh through a nylon or stainless steel screen, digested for 1-1½ hours in HF-HClO₄-HNO₃ bulked with deionized water, and analysed by atomic absorption. The barium values in parts per million were then plotted onto a modified topographic map (Figure 3), the original of which was prepared by Pacific Survey Corp., Vancouver, B.C. (Figure 4).

Results

Statistical analysis of the barium results (Figure 2) defines at least three populations of 250-2900 ppm, 4000-8500 and +9100 ppm barium with the 2900-4000 and the 8500-9100 ppm barium ranges as zones of overlap. The 4000-8500 and the +9100 populations are interpreted to be possibly anomalous and anomalous populations, respectively.

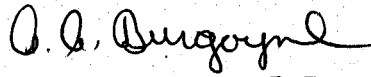
Contouring of the barium results (Figure 3) defines two areas of possibly anomalous and anomalous values and one possibly anomalous area.

Area A (Figure 3) is coincident with suboutcrop and outcrop of baritic limestone. Areas B and C have yet to be examined.

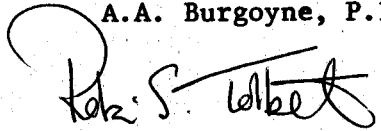
CONCLUSIONS AND RECOMMENDATIONS

- 1) A geochemical soil survey completed on the Rein 40, 50, 59, 60, and 61-68 mineral claims outlined three areas of possibly anomalous and anomalous barium values.
- 2) Detailed geologic mapping and prospecting is recommended in the anomalous areas B and C to establish an explanation for the barium values.
- 3) The possibility for base metal mineralization associated with the anomalous barium should be investigated by prospecting.

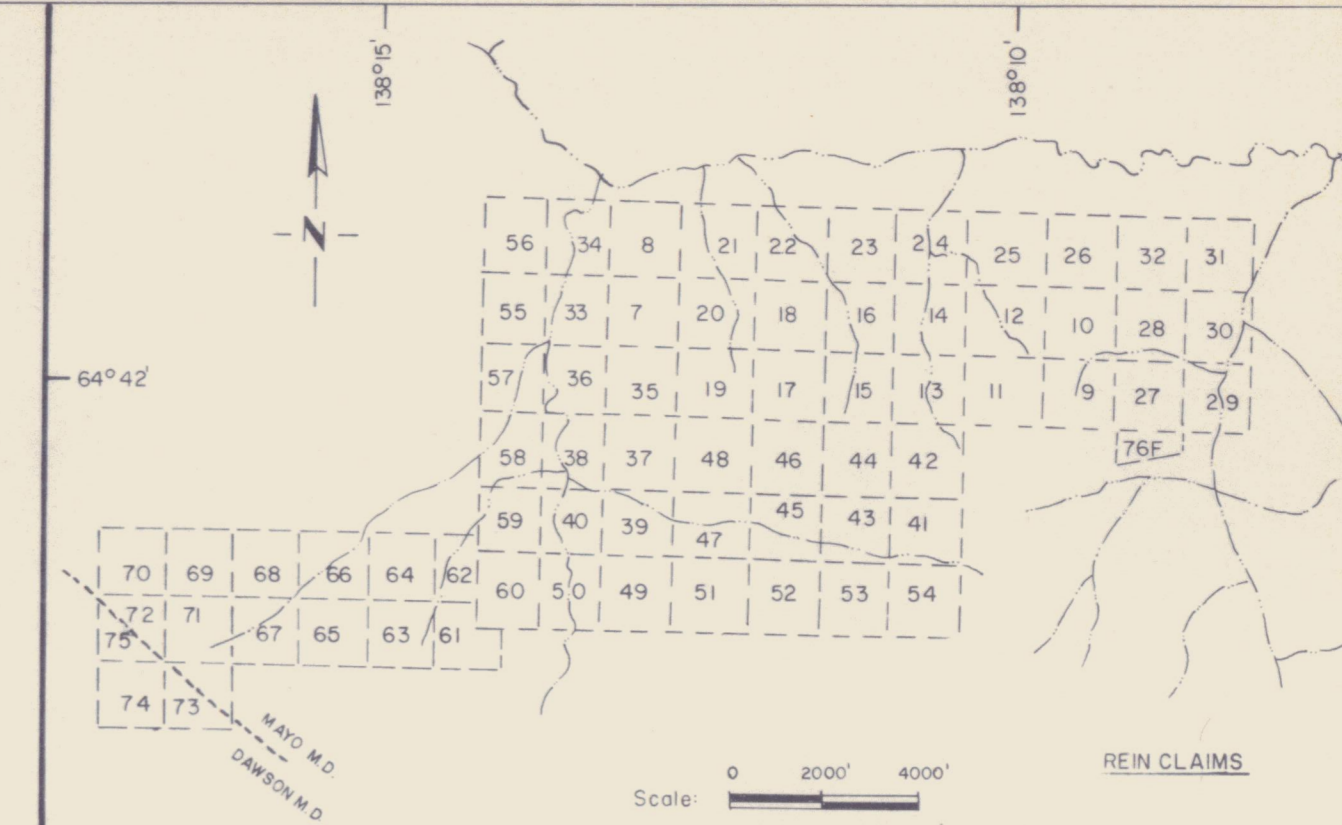
Respectfully submitted,



A.A. Burgoyne, P.Eng.



R.S. Tolbert, B.Sc.



LEGEND

- Stream
- Lake
- External claim boundary
- Soil samples with > 3500 ppm Ba
- " " " " > 9000 ppm Ba

To accompany the assessment report on the geochemical survey for barium on the Rein mineral claims, dated September, 1978, by A.A. Burgoyne, P.Eng. and R.S. Tolbert, B.Sc.

R.S. Tolbert
A.A. Burgoyne

Figure No. 3

BLACKSTONE PROJECT 1978

REIN CLAIMS

GEOCHEMISTRY OF BARIUM

NTS 1:66 (Dawson)

Scale: 0 1000 2000 feet

UMEX CORPORATION LTD.

DRAWN BY: R.S.T.
DATE: September, 1978
SURVEYED BY: R.S.T., D.C.

DWG. No.

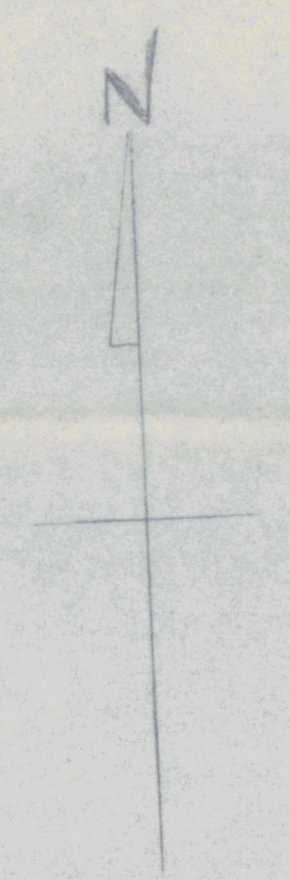
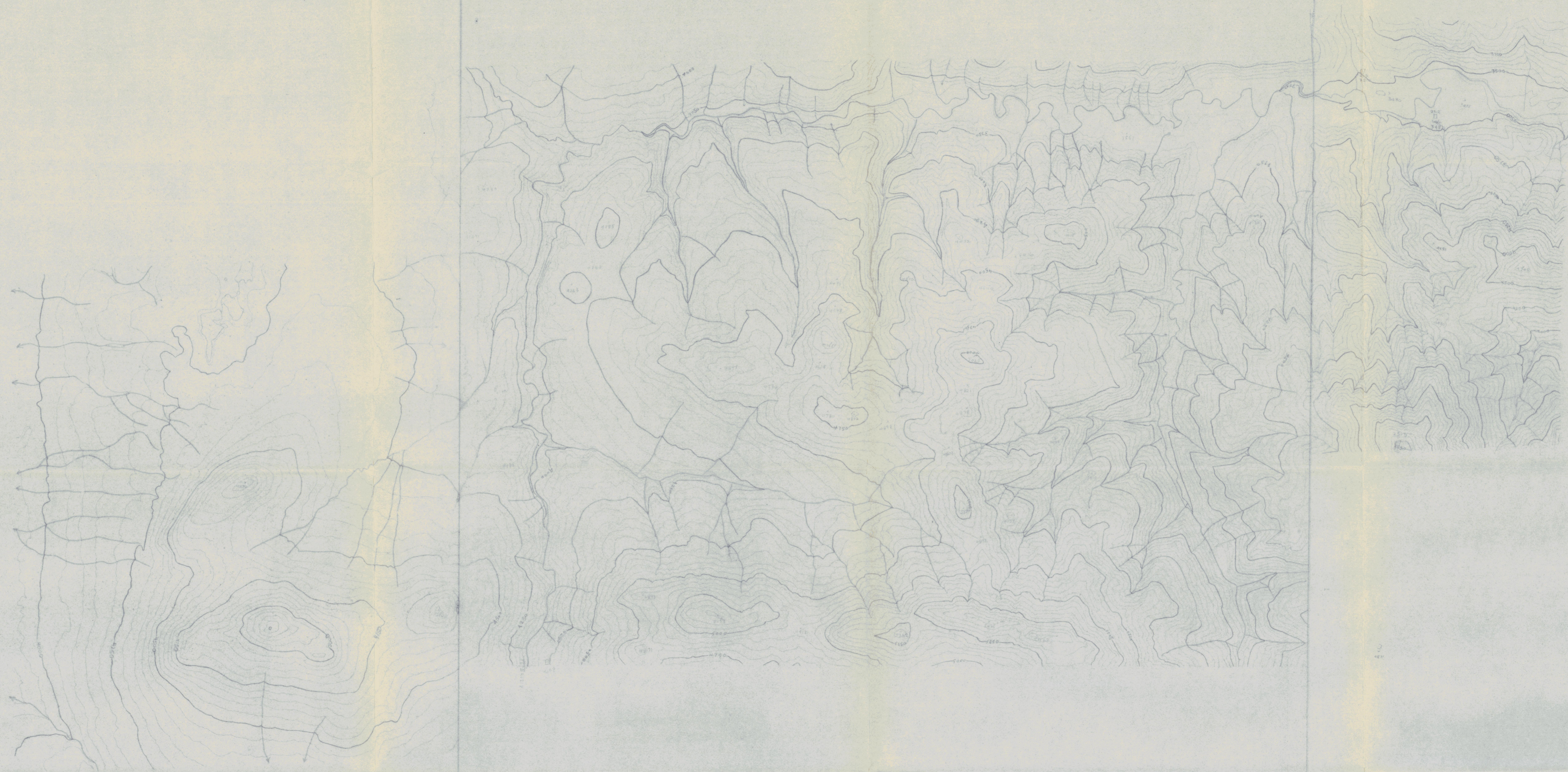


Figure No. 4

To accompany the assessment report on the geochemical survey for barium on the Rein mineral claims, dated September, 1978, by A.A. Burgoyne, P.Eng. and R.S. Tolbert, B.Sc.

R.S. Tolbert
A.A. Burgoyne

UNION MINIERE EXPLORATION & MINING CORP.		
REIN AREA, YUKON.		
SCALE: 1" = 1000'	CONTOUR INTERVAL: 50'	MAP REFERENCE 116 B/1
DATE OF PHOTOGRAPHY: FEDERAL GOV. 1151		
DATUM: G.S.C. (APPROX)		SHEET 1 OF 1
PENCIL MANUSCRIPT - RECONNAISSANCE MAP		
	PACIFIC SURVEY CORPORATION	77-74 & 78-110