



UNION MINIÈRE EXPLORATIONS
AND MINING CORPORATION LIMITED

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ASSESSMENT REPORT
GEOCHEMICAL SOIL SURVEY
ON THE
ID 1-10, 11-16, 17-26, 61-64, 66-67, 69-72
(Record Nos. Y99957-Y99986, YA2292-YA2297)

in the
Dawson Mining District, Yukon
N.T.S. 116B/13
Latitude $64^{\circ}50'N$
Longitude $139^{\circ}45'W$

by
Colin V. Dyson, P.Eng.

Work Done: August 15-20, 1976

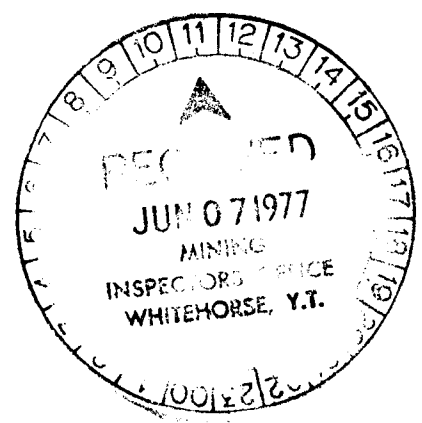
Date: May, 1977

Owner: Union Miniere Explorations and
Mining Corporation Limited



To a report of the Inspector of Mines
and Geology, Whitehorse, Y.T., dated
June 7, 1977, regarding the
proposed expansion of the
mine at Whitehorse, Y.T.
The Inspector of Mines and Geology
has advised that the proposed
expansion of the mine at Whitehorse,
Y.T., is in accordance with the
provisions of the Mining Act and
the regulations thereunder.

090214





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

\$3600.00

~~Resident Geologist or
Resident Mining Engineer~~

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

B. R. BAXTER
Supervising Mining Recorder

~~Commissioner of Yukon Territory~~

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ASSESSMENT REPORT

GEOCHEMICAL SOIL SURVEY ON THE ID 1-26, 61-64, 69-72 MINERAL CLAIMS

INTRODUCTION

During the period August 15 to August 20, 1976 a geochemical soil survey was completed over the ID group of mineral claims in the Dawson Mining District, Yukon. The claims are located approximately 22 miles west of Kit Lake and 12 miles north-northeast of Mount Harper (Figure 1) at latitude $64^{\circ}50'N$ and longitude $139^{\circ}45'W$. The claims cover the western side of a northerly trending mountain ridge where elevations range from 4000 to 6000 feet. Access to the property was via helicopter from a base established at Mile 68 on the Dempster Highway, a distance of approximately 40 miles to the east.

The geochemical soil survey was completed in the field by Mr. H. Holm, Mr. D. Dambrose and Mr. J. Potapoff under the supervision of Mr. R. Tolbert, B.Sc., geologist, who in turn was under the supervision of Mr. C.V. Dyson, P.Eng., who was on the property on August 16 to organize the survey and to study the general claim geology.

PROPERTY

Relevant details of the claim group is as follows:

Claim Name	Grant Number	Expiry Date
ID 1-10	Y99957-Y99966	July 22, 1977
ID 11-16	YA2292-YA2297	August 15, 1977
ID 17-26, 61-64, 66-67, 69-72	Y99967-Y99986	July 22, 1977

The claims are owned by Union Miniere Explorations and Mining Corporation Limited for whom the survey was performed.

GENERAL GEOLOGY

The claims are underlain by a thick sequence of Proterozoic and younger sediments which have been intruded in some areas by dark green basic dykes. The following general sequence appears to be present on the property: - A basal sequence of interbedded purple to maroon shales, siltstones, conglomerates, grey-black-green shales and pink-white dolomite quartzites is overlain by a



FIGURE 1

ID CLAIMS

LOCATION MAP, 1/250,000

N.T.S 116/B 13

C-2700

sequence of black shales, laminated grey-black shale and grey-to-greenish siltstones, and minor dolomitic quartzites. These Proterozoic sediments in turn are overlain in the northern edges of the claim area by a sequence of massive grey silicified dolomites, vuggy, veined, and solution eroded, and blocky orange weathering grey dolomite. The area is faulted and folded.

GEOCHEMICAL SOIL SURVEY

Methods

In the course of the survey a total of 244 soil samples were collected along 9.24 miles of line, and subsequently analysed for copper and cobalt. The survey constituted an extension and fill-in to a soil survey completed on the ID No. 1 and No. 2 Group of Mineral Claims in 1975¹. At each sampling site a hole was dug with a mattock and 4-6 ounces of "B" horizon soil (where available) was taken and placed in a high, wet-strength Kraft sample bag and appropriately marked.

The writer was in the field on August 16 to organize the survey and to study the geology of the claims. The soil sampling was performed by Mr. H. Holm, D. Dambrose, and J. Potapoff in the period August 15 to August 20, 1976.

Grid Control

A north-south base line was established on the claims with east-west cross-lines spaced approximately 500 feet apart, and with samples taken at 200 foot spacings along these lines. "Topofoil chain"² and compass were used to control distances and direction, with sample sites marked with coloured flagging at 200 foot spacings along the lines. The station coordinates were marked on the flagging by felt marker pen. The grid was tied into the claim

¹Assessment Report, December, 1976: Geochemical Soil Survey on the ID No. 1 and ID No. 2 Group of Mineral Claims in the Dawson Mining District, by Colin V. Dyson, P.Eng.; work done July 10-15, 1975.

²The topofoil chain is a "lost" thread measuring device in which a counter accurately records in feet from 0 to 15,000 feet the length of thread unreeling from the unit when measuring a length or distance covered. The operator attaches the end of the thread to a fixed point, the counter is set at zero and the operator moves on foot carrying the topofoil chain. As the thread unwinds, the counter records the length. The counter readout is accurate to +0.2%; on completion of a measurement the counter is reset at zero. The bio-degradeable thread is cut and abandoned.

posts and obvious topographic features.

Analytical Treatment of Soil Samples

The soil samples were analysed by Acme Analytical Laboratories in Dawson City for copper and cobalt. The samples were dried at 75°C overnight and sieved to -80 mesh through a nylon screen. 0.5 gram samples of the prepared samples were digested with diluted aqua regia in hot water bath for one hour and diluted to 10 mls with demineralized water, and analysed by atomic absorption.

Results

Statistical analysis of the copper results from both 1975¹ and 1976 soil surveys (Figure 2) defines three populations of 10-50 ppm; 50-200 ppm; and +210 ppm Cu; the 200-210 ppm Cu range is a zone of overlap. The +210 ppm Cu population is interpreted to be anomalous. Statistical analysis of the cobalt results (Figure 3) defined two populations of 10-90 ppm and +100 ppm Co, the 90-100 ppm Co range is a zone of overlap. The +100 ppm Co population is interpreted to be anomalous.

Contouring of the copper results defines four main anomalous areas (Figure 4).

- Anomaly 1: covers an area of approximately 1200 feet by 600 feet across and down very steep north and east facing hillsides which are underlain by brecciated Proterozoic rocks and basic dykes.
- Anomaly 2: covers an irregular area of approximately 2000 feet by 1200 feet down a very steep northeasterly facing hillside underlain by green and maroon shales.
- Anomaly 3: covers an area of approximately 1500 feet by 1000 feet across and down a steep southeasterly facing slope.
- Anomaly 4: covers an area of approximately 2000 feet by 300 feet elongated across easterly facing hillsides and cirques.

The cobalt results define several widespread spot high anomalous values (Figure 5).

CONCLUSIONS AND RECOMMENDATIONS

- 1) A geochemical soil survey on the ID claims defines four main anomalous areas for copper and several widespread spot high anomalous cobalt values.

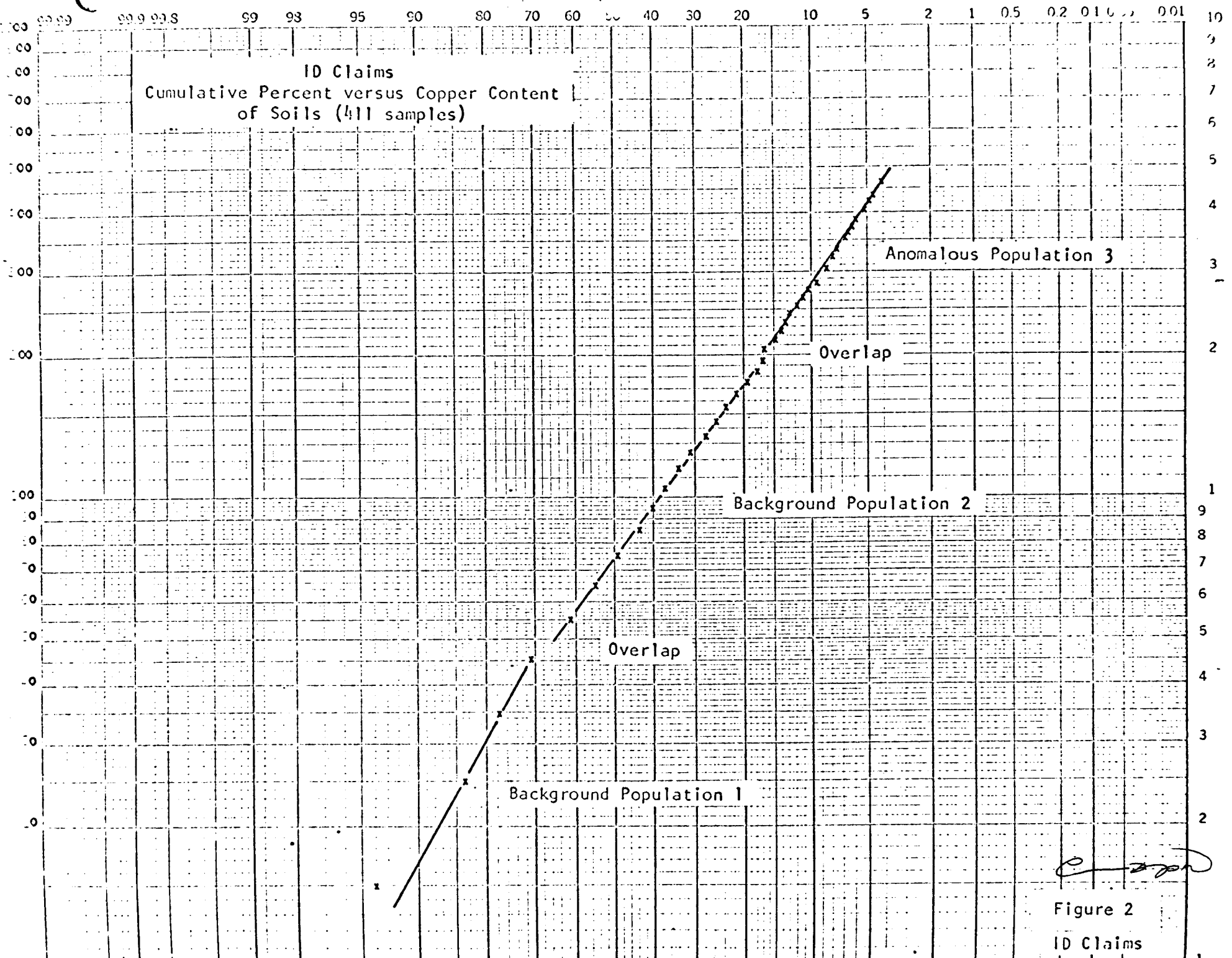
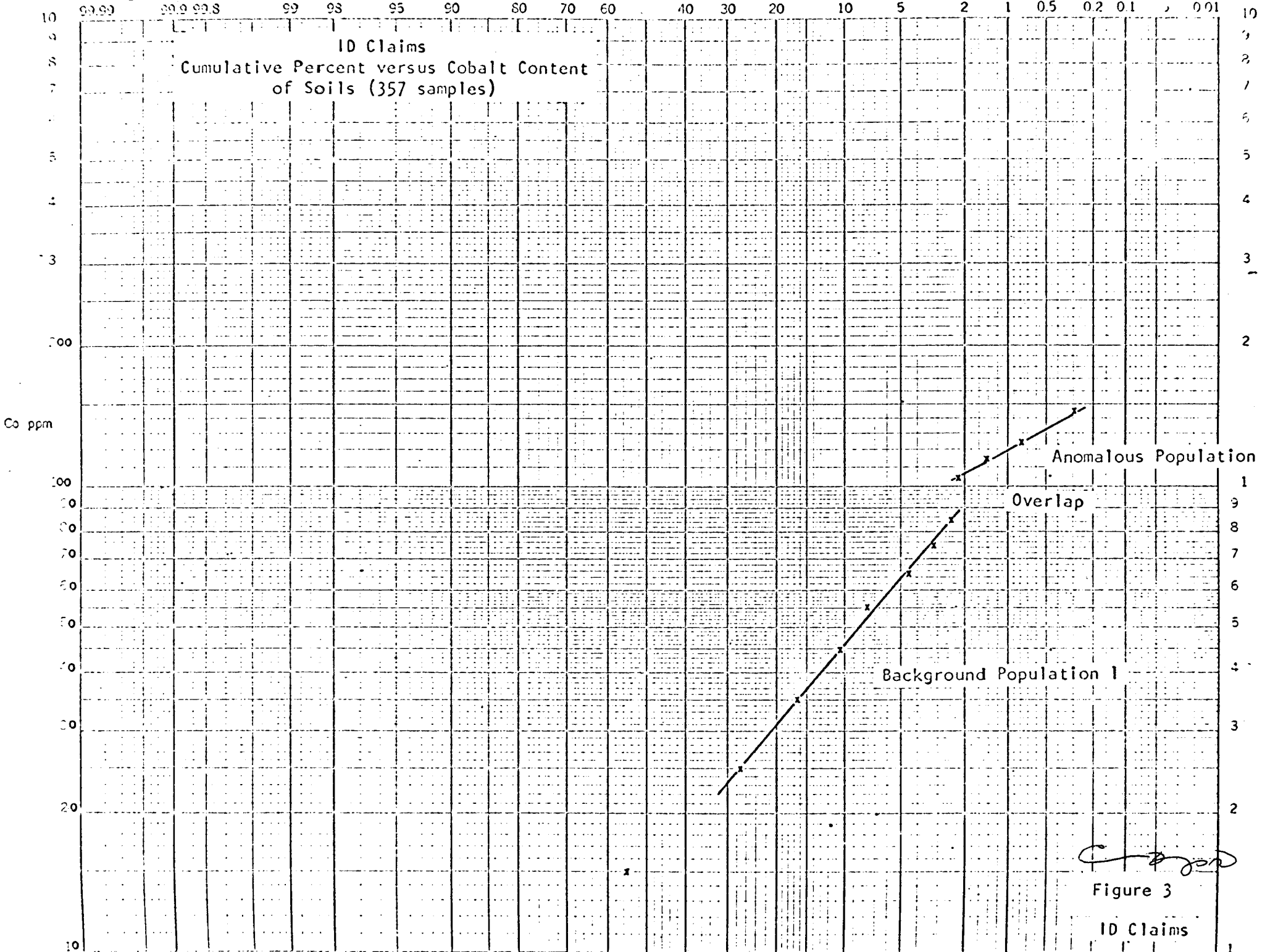


Figure 2
ID Claims

ID Claims Cumulative Percent versus Cobalt Content of Soils (357 samples)



[Handwritten Signature]

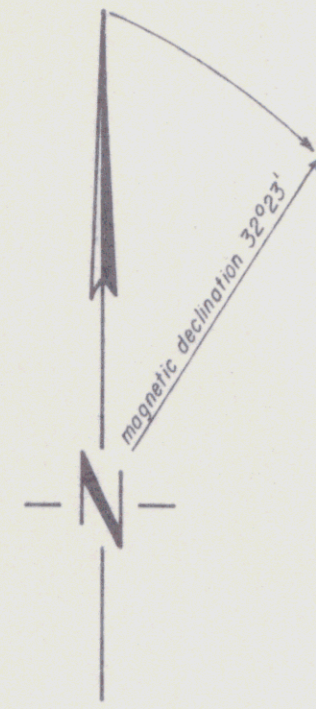
Figure 3
ID Claims

- 2) Detailed geological mapping and prospecting is recommended in the anomalous areas to better define or locate a source of these values.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'C.V. Dyson', with a stylized flourish at the end.

C.V. Dyson, P.Eng.



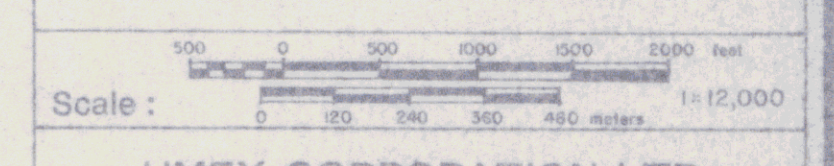
LEGEND

- Cu Soil sample location with copper values in ppm.
- RC Sample consisted of rock chips.
- ▨ Area with copper greater than 210ppm.
- ~ Stream
- Lake

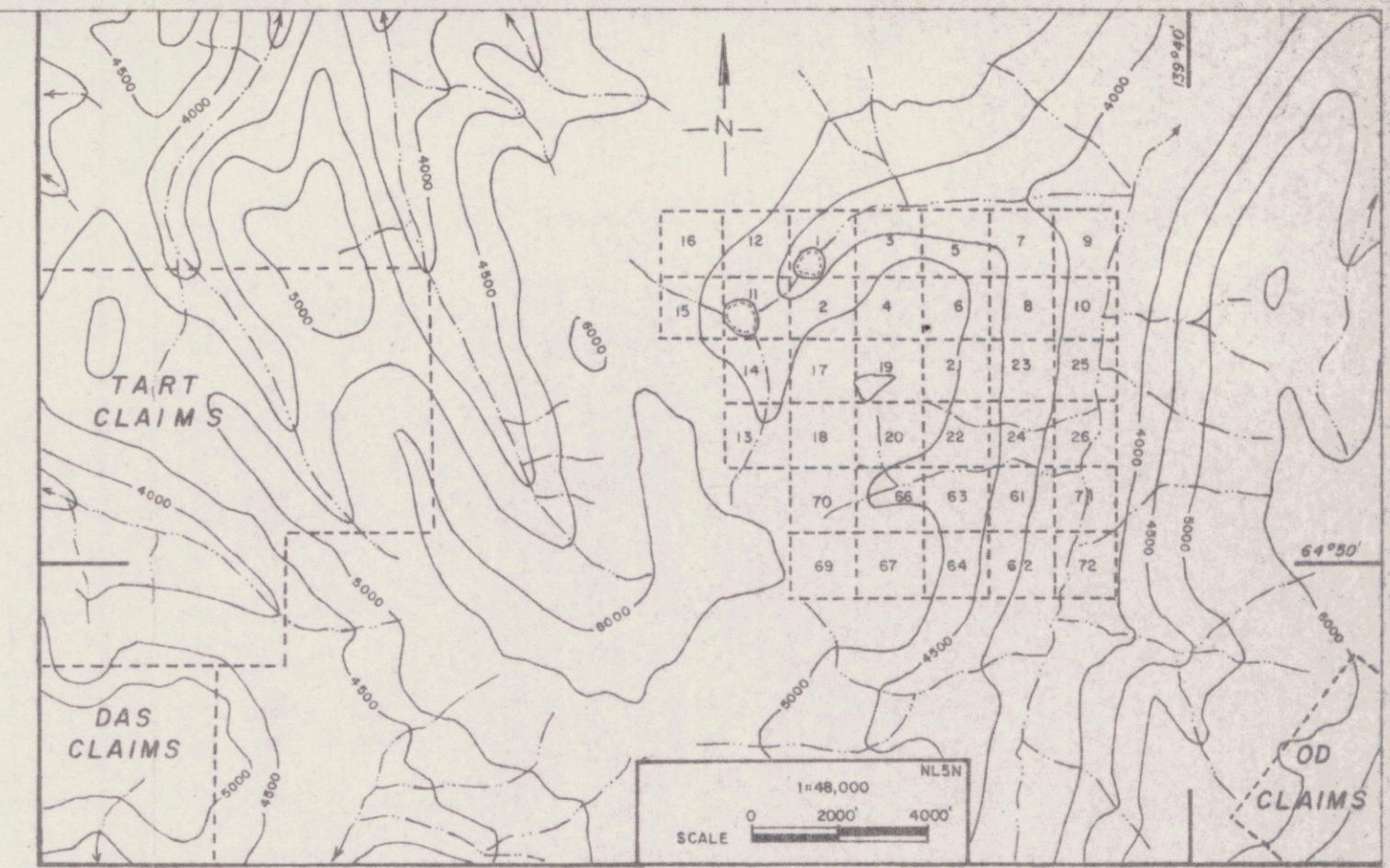
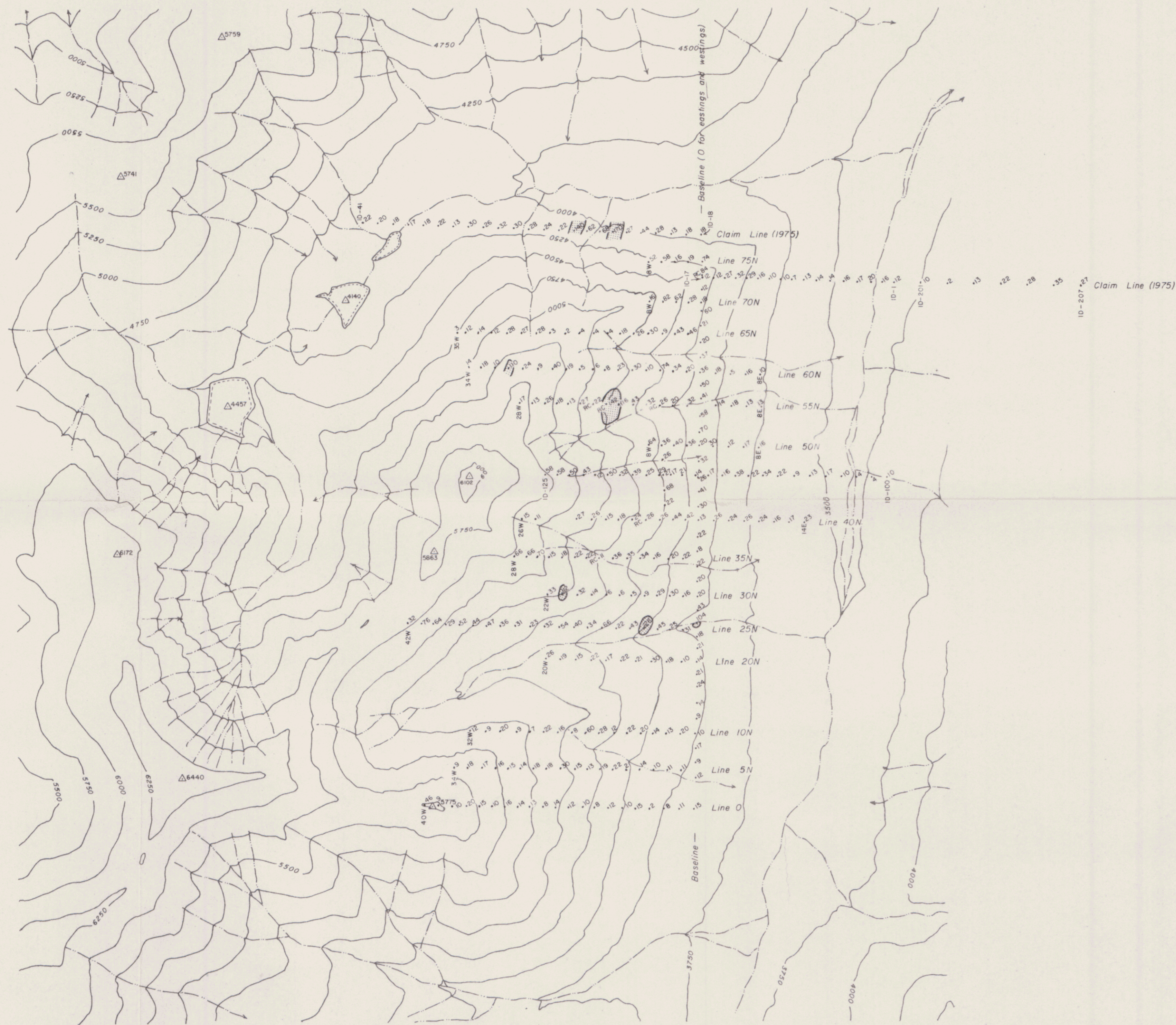
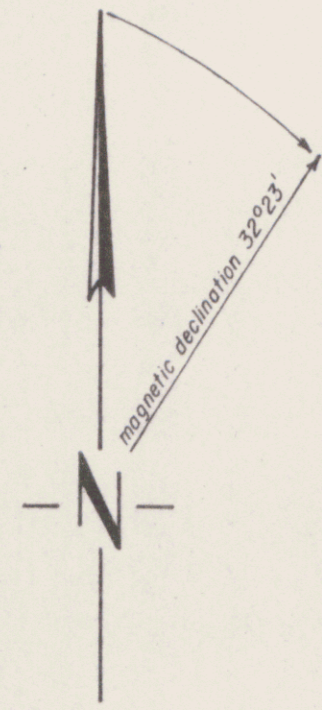
To accompany a report on a Geochemical Soil Survey of the ID 1-26, 61-64, 69-72 Mineral Claims, by Colin V. Dyson, P.Eng., dated May, 1977.

Figure 4

BLACKSTONE PROJECT 1976
ID CLAIMS
GEOCHEMISTRY OF COPPER
IN B-HORIZON SOILS



Scale: 1:12,000
UMEX CORPORATION LTD.
 DRAWN BY: H. Holm
 DATE: March, 1977
 SURVEYED BY: R.T.H.H., J.P.C.Z. DWG. No.



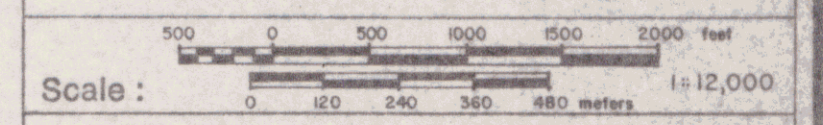
LEGEND

- Co Soil sample location with cobalt values in ppm.
- RC Sample consisted of rock chips.
- ▨ Area with cobalt greater than 100 ppm.
- Stream
- Lake

To accompany a report on a Geochemical Soil Survey on the ID 1-26, 61-64, 69-72 Mineral Claims, by Colin V. Dyson, P.Eng., dated May, 1977.

Figure 5

BLACKSTONE PROJECT 1976
ID CLAIMS
 GEOCHEMISTRY OF COBALT
 IN B-HORIZON SOILS



UMEX CORPORATION LTD.

DRAWN BY: H. Holm
 DATE: March, 1977
 SURVEYED BY: RT, HH, JP, PC, Z.H.

DWG. No.