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ASSESSMENT REPORT  
GEOCHEMICAL SOIL SURVEY  
ON THE  
SHAY 1-127, 129-160, 162-171 MINERAL CLAIMS  
(Record Nos. YA5793-YA5852, YA6031-YA6139)

in the  
Mayo Mining District, Yukon  
N.T.S. 116A/12  
Latitude 64°43'N  
Longitude 137°56'W

by  
Colin V. Dyson, P.Eng.

Work Done: August 1 to August 6, 1976; June 2 to July 7, 1977

Date: September, 1977

Owner: Union Miniere Explorations and  
Mining Corporation Limited

090246

Department of Indian Affairs & Northern Development  
 Northern Technical Resources  
 and  
 Environment Branch  
**OCT 7 1977**  
 Mining Division  
 Mining Recorder and Land Agent

Office Of The Supervising Mining Recorder  
**OCT 17 1977**  
 WHITEHORSE  
 Yukon Territory

This report has been examined by the Geological Evaluation Unit and is recommended to the Commission to be considered as representation work in the amount of \$17,231.00

*[Signature]*  
 Resident Geologist or  
 Resident Mining Engineer

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

*[Signature]*  
 B. R. BAXTER  
 Supervising Mining Recorder  
 Commission of Yukon Territory

RECEIVED  
**OCT 19 1977**  
 MINING OFFICE  
 WHITEHORSE, Y.T.

RECEIVED  
**DEC 05 1977**  
 MINING OFFICE  
 INSPECTOR GENERAL  
 WHITEHORSE, Y.T.

Office Of The Supervising Mining Recorder  
**DEC - 5 1977**  
 WHITEHORSE  
 Yukon Territory

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## ASSESSMENT REPORT

### GEOCHEMICAL SOIL SURVEY ON THE SHAY 1-127, 129-160, 162-171 MINERAL CLAIMS

#### INTRODUCTION

During the period August 1 to August 6, 1976 and June 2 to July 7, 1977, a geochemical soil survey was completed over the SHAY mineral claims group in the Mayo Mining District, Yukon. The claims are located approximately fifteen miles southeast of Chapman Lake and sixteen miles east of the Dempster Highway at latitude  $64^{\circ}43'N$  and longitude  $137^{\circ}56'W$  (Figure 1) and are accessible via helicopter.

The geochemical soil survey was performed in the field in 1976 by Mr. A. Gourlay, Mr. R. Joly, and Mr. F. Thrane under the supervision of Mr. D. Sketchley, B.Sc., geologist; and in 1977 by Mr. J. Reid, Mr. H. Holm, and Mr. L. Pettet. Both surveys were under the supervision of Mr. C.V. Dyson, P.Eng. The writer was on the property on August 1, 1976, June 3-4, and July 6, 1977 to organize the survey and to study the general claim geology.

#### PROPERTY

Relevant details of the claim status is as follows:

<u>Claim Name</u>	<u>Grant Numbers</u>	<u>Expiry Date</u>
SHAY 1-50	YA5793-YA5842	July 14, 1977
SHAY 51-127	YA6031-YA6107	July 28, 1977
SHAY 129-130	YA6108-YA6109	July 28, 1977
SHAY 131-140	YA5843-YA5852	July 14, 1977
SHAY 141-160	YA5110-YA6129	July 28, 1977
SHAY 162-171	YA6130-YA6139	July 28, 1977

The claims are owned by Union Miniere Explorations and Mining Corporation Limited for whom the surveys were completed.

#### GENERAL GEOLOGY

Regionally the claim area is mapped by the G.S.C.<sup>1</sup> as underlain by Unit 13 Middle Devonian to Carboniferous black shale, argillite and slate, black platy

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<sup>1</sup>G.S.C. Map 1283A, Geology of Larsen Creek, Memoir 364, Green, 1972.

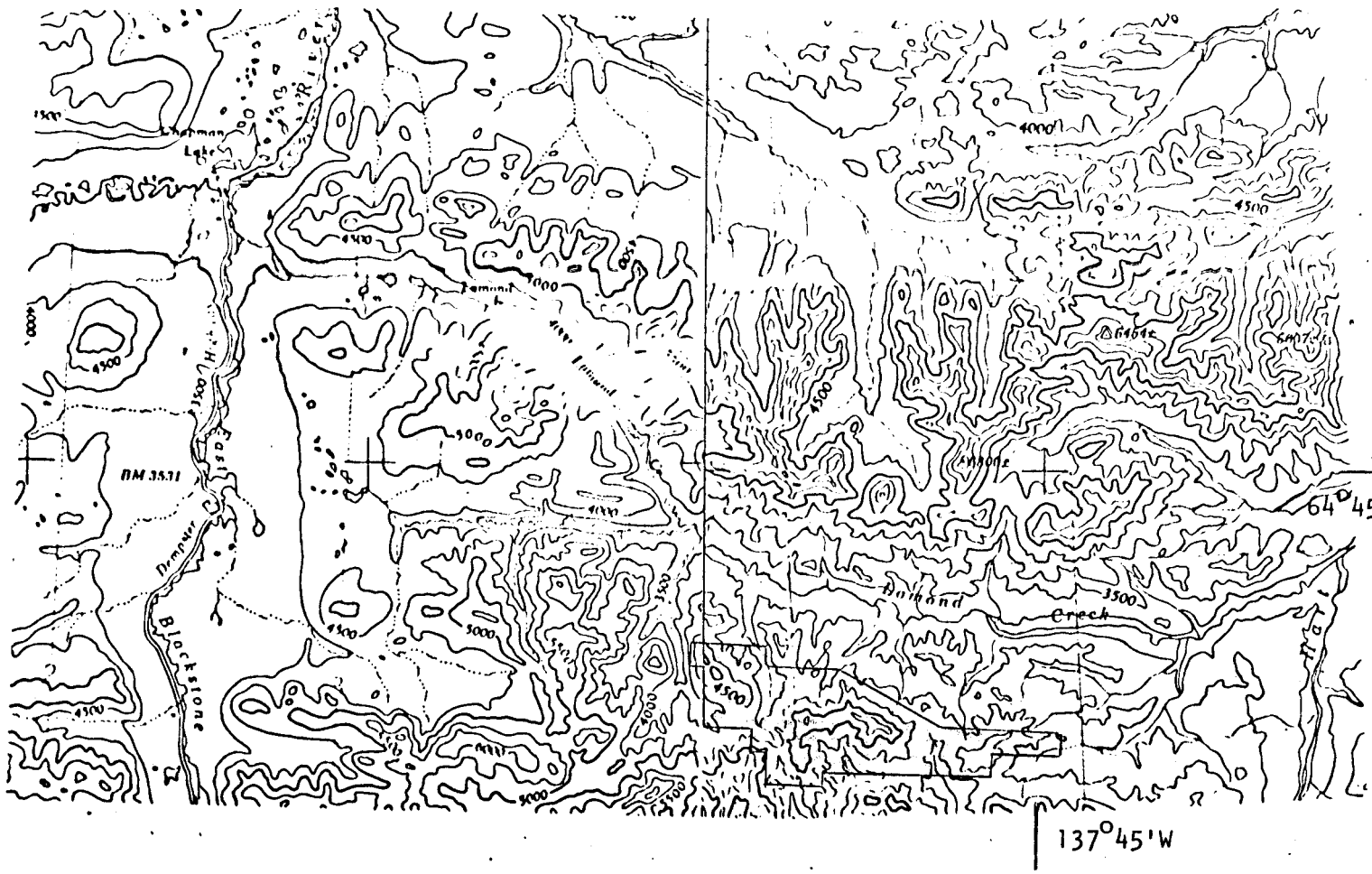


FIGURE 1

LOCATION MAP

SHAY CLAIMS

1/250,000

*[Handwritten signature]*

limestone and chert overthrust by Unit 9 Ordovician-Silurian (Road River Formation) interbedded black chert and black argillite, grey-green, olive-green, and grey chert and grey-green argillite, minor quartzite, and chert pebble conglomerate.

The entire sedimentary sequence dips uniformly to the south and is interpreted to lie on the southern limb of a large regional east-west trending anticline.

## GEOCHEMICAL SOIL SURVEY

### Methods

A total of 2007 soil samples were collected over 80.28 miles of line and subsequently analysed for total lead. At each sample site a hole was dug with a mattock and 4-6 ounces of "B" horizon soil (where available) collected and placed in a pre-labelled high wet-strength Kraft sample bag.

### Grid Control

East-west base lines were established on the claims with north-south cross lines run at 1000 foot spacings along the base lines. Sample site stations were marked by coloured flagging at 200 foot spacings along the cross lines, with a picket station every 600 feet or third sample site on the lines. Sample sites were similarly spaced and marked along the base line. Sample site coordinates were marked on the appropriate flag or picket by felt marker pen. A topofoil chain<sup>2</sup> and compass were used to control distances, directions and to tie-in the grid with existing claim posts and obvious topographic features.

### Analytical Treatment of Soil Samples

The samples were freighted to Dawson City, Yukon and analysed at a mobile laboratory of Acme Analytical Laboratories Ltd. 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 aqua regia,

<sup>2</sup>The 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 biodegradable thread is cut and abandoned.

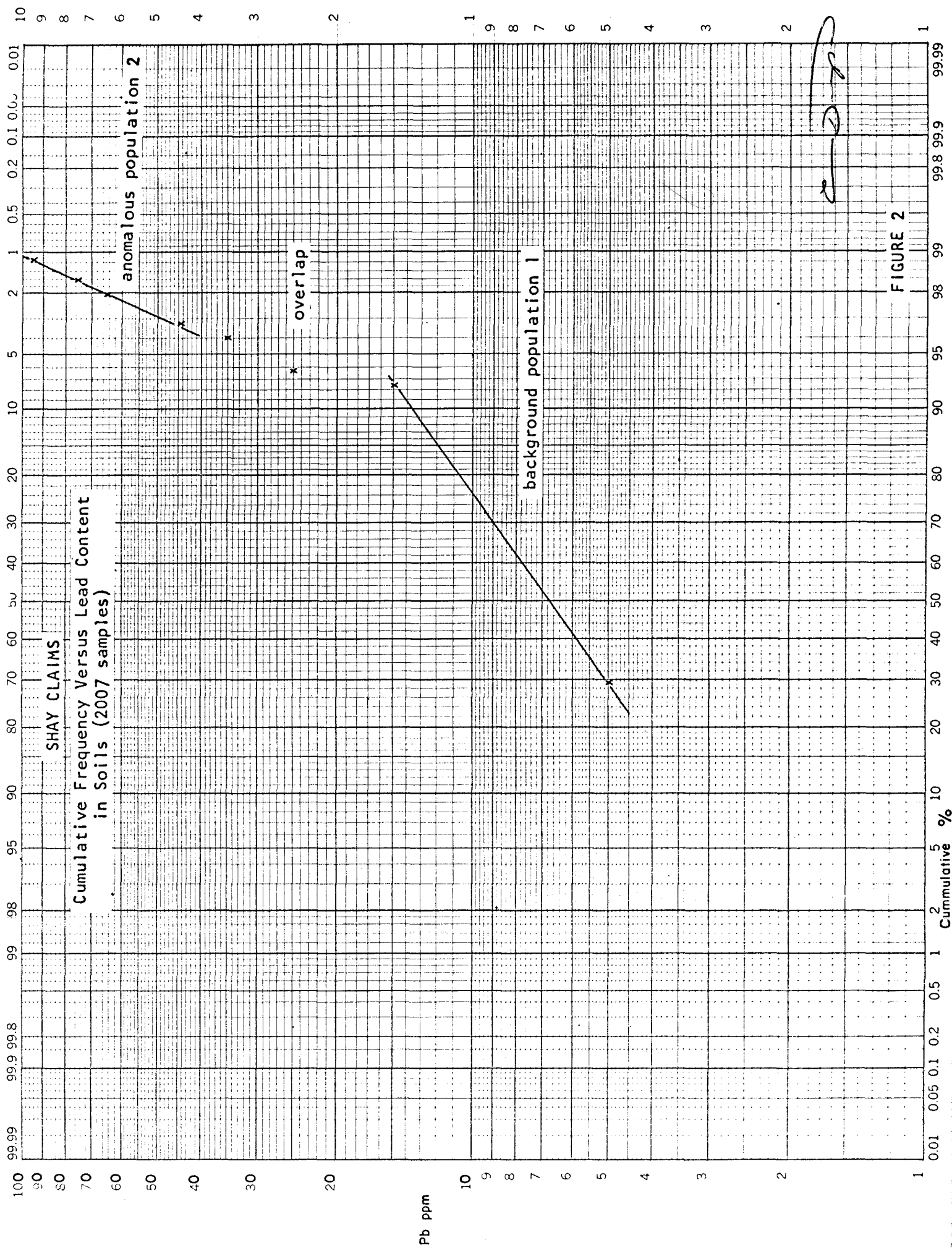


FIGURE 2

*[Handwritten signature]*

bulked with deionized water, and analysed for lead by atomic absorption.

### Results

Statistical analysis of the lead results (Figure 2) defines at least two populations of 5-20 ppm and +40 ppm lead with the 20-40 ppm range a zone of overlap. The +40 ppm population (lead) is interpreted to be anomalous. Contouring of the lead values defines four anomalous areas (Figure 3).

- Anomaly 1: covers an area of approximately 3000 feet by 1000 feet (extrapolation between sample lines 1500 feet apart) and is "open". It covers steep easterly and westerly facing hillsides bisected by a north-south trending valley.
- Anomaly 2: covers an area of approximately 4500 feet by 1000 feet (average) across a southerly facing hillside and east-west drainage system.
- Anomaly 3: covers an area of approximately 1500 feet by 400 feet across two adjacent sample lines.
- Anomaly 4: covers an area of approximately 1500 feet by 400 feet across two adjacent sample lines.

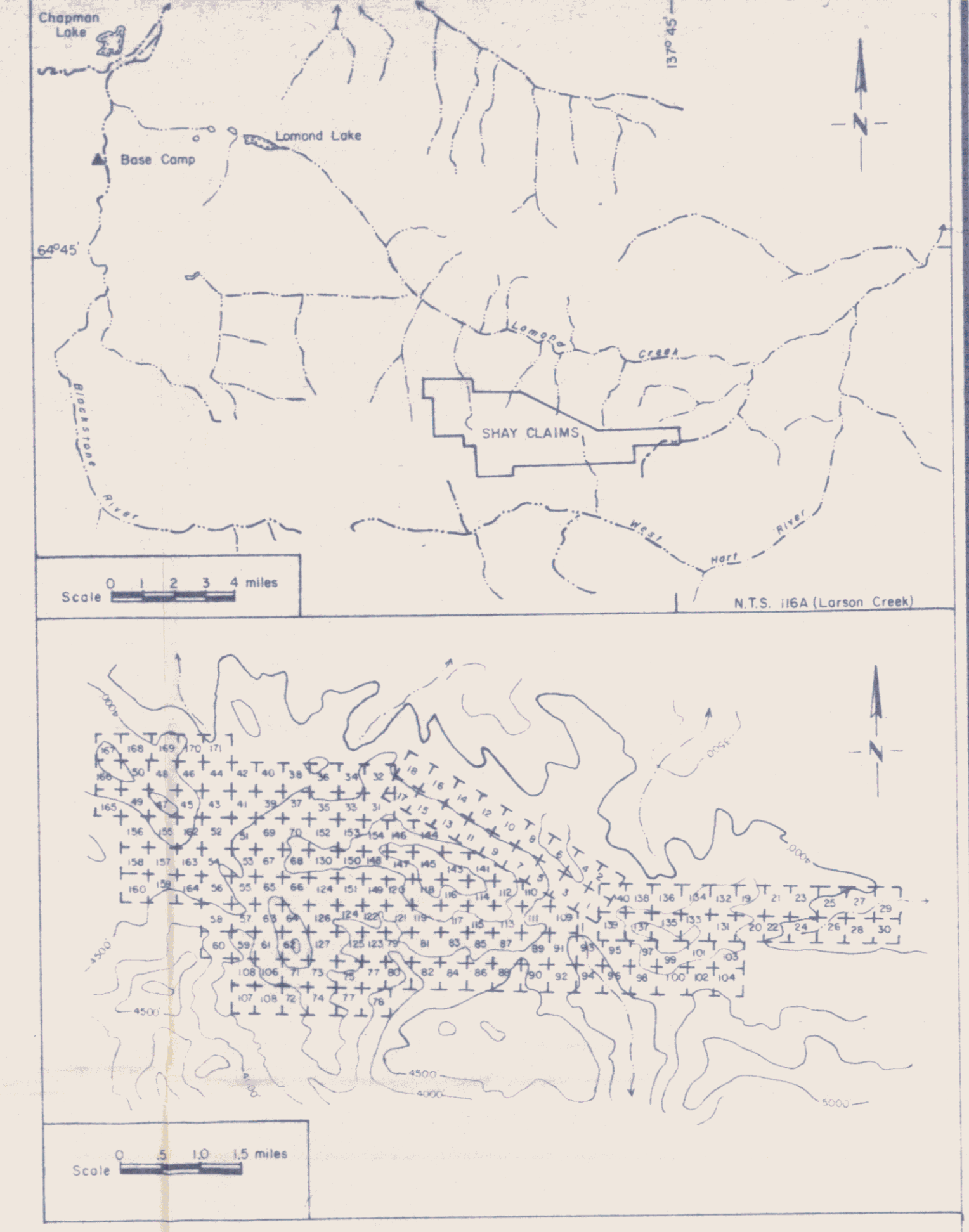
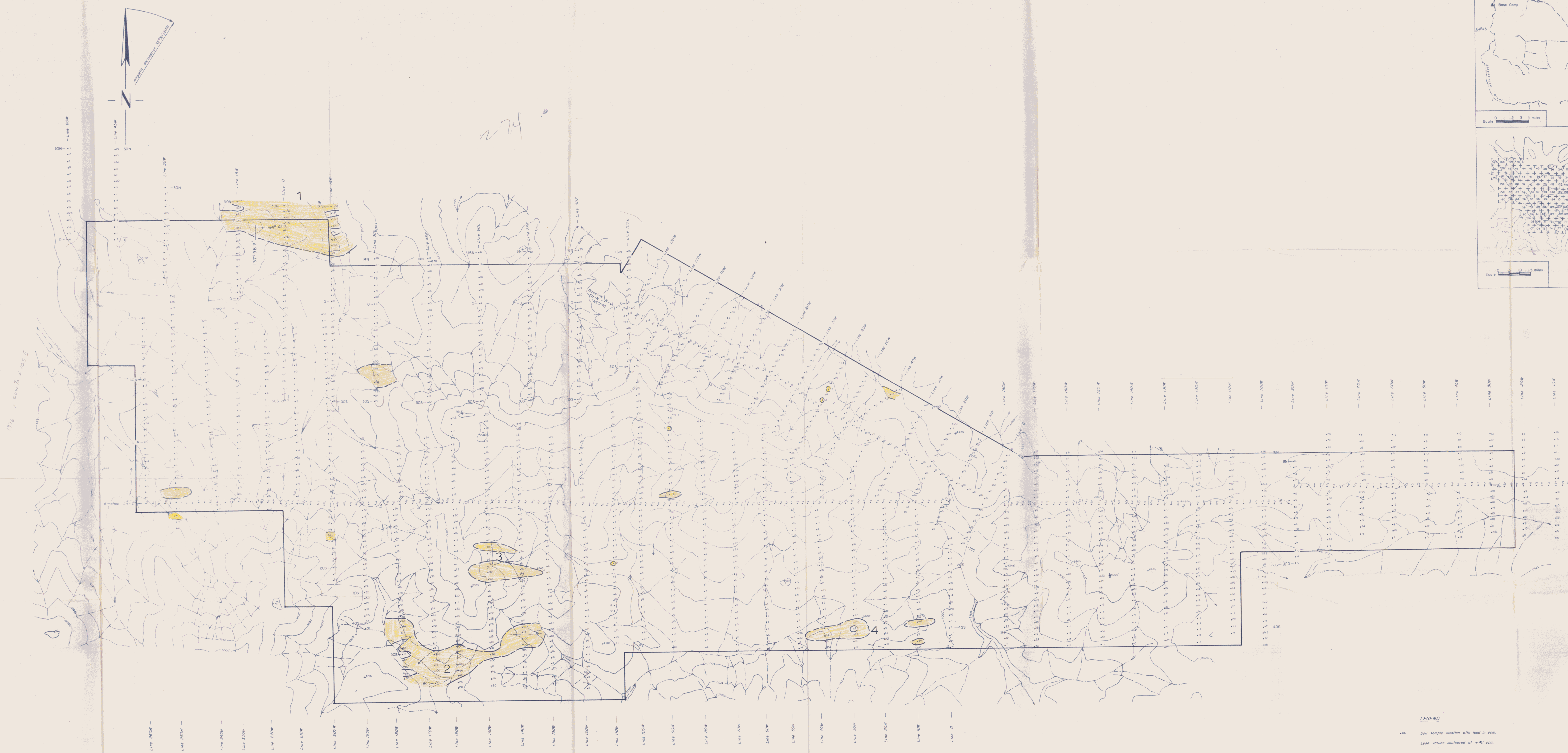
### CONCLUSIONS AND RECOMMENDATIONS

- (1) A geochemical soil survey completed over the SHAY 1-127, 129-160, 162-171 mineral claims outlined four main areas of anomalous lead values.
- (2) A topographic base map was constructed by Pacific Survey Corporation Ltd. to give ground control to this and other proposed surveys.
- (3) "Fill-in" soil sampling is recommended in all anomalous areas to better define and "close-off" the anomalies.
- (4) Geological mapping and prospecting is warranted and recommended for the anomalous areas.

Respectfully submitted,



C.V. Dyson, P.Eng.



**LEGEND**

- Soil sample location with lead in ppm
- Lead values contoured at +40 ppm
- The Shay geochemistry was done on four grids, the 80% grid located on the northwestern region of the claim group, the Sh-E grid on Baseline Sh-C, the Sh-N grid on Baseline Sh-W, and the Sh-C grid on Baseline Sh-E
- Stream
- Topographical contours every 250 feet of elevation

To accompany an Assessment Report of a Geochemical Soil Survey on the SHAY 1-127, 129-160, 162-171 Mineral Claims, in the Mayo Mining District, dated September, 1977, by Colin V. Dyson, P. Eng.

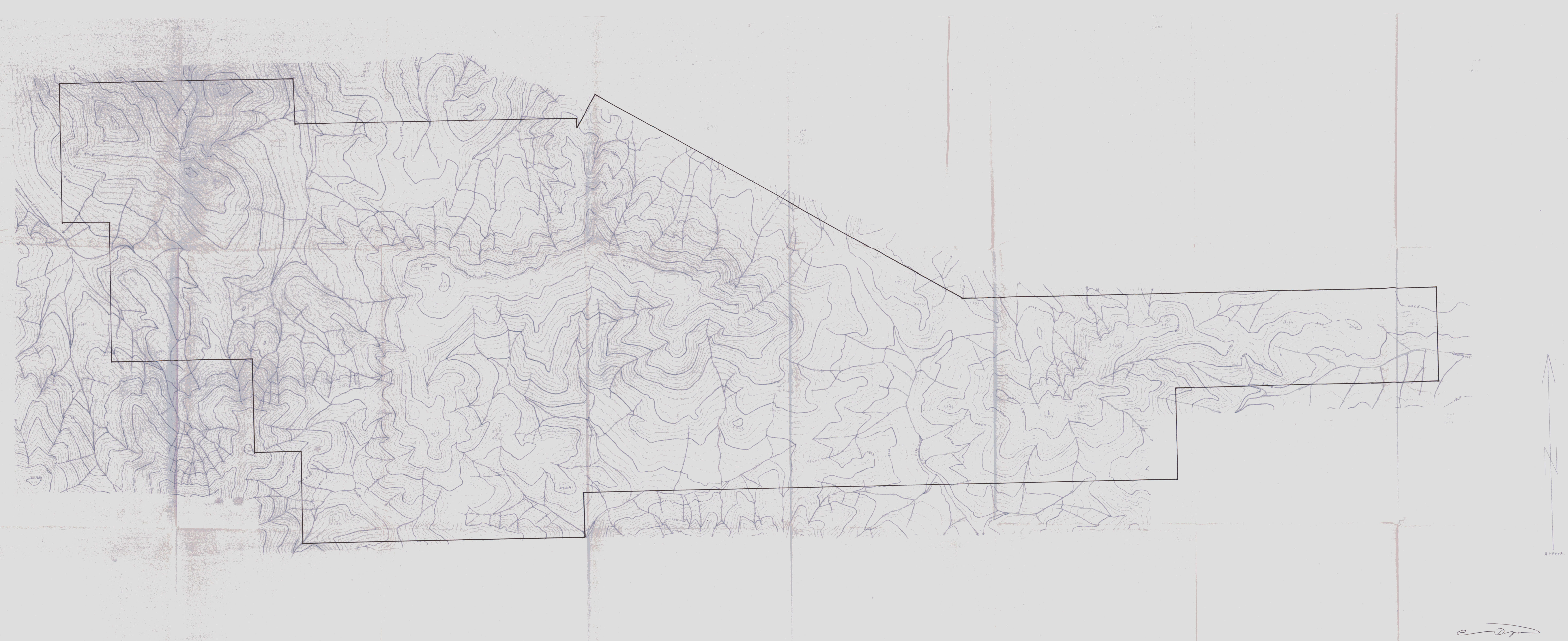
Figure No. 3.

**BLACKSTONE PROJECT - 1977**  
**SHAY CLAIMS**  
**GEOCHEMISTRY OF**  
**LEAD IN SOILS**

Scale: 500 0 500 1000 1500 2000 Feet


UMEX CORPORATION LTD.

DRAWN BY: H. Hoan	DWG. No.
DATE: September, 1977	
SUPERVISED BY: J.M.L.P.H.H.	



To accompany an Assessment Report of a Geochemical  
 Soil Survey on the SHAY 1-127, 129-160, 162-171  
 Mineral Claims, in the Mayo Mining District,  
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Figure No. 4

UNION MINIERE EXPLORATION & MINING CORP.		
SHAY AREA, YUKON.		
SCALE: 1:1000	CONTOUR INTERVAL 50'	MAP REFERENCE 16 A/2-84
DATE OF PHOTOGRAPHY: FEDERAL GOV. 1951		
DATUM: G.S.C. (Approx)	SHEET 1 OF 1	
PENCIL MANUSCRIPT - RECONNAISSANCE MAP		
 PACIFIC SURVEY CORPORATION		77-74