ASSESSMENT REPORT
GEOCHEMICAL SOIL SURVEY
ON THE
SHYNE 1-100 MINERAL CLAIMS
(Record Nos. YA13399-YA13498)
in the
Mayo Mining District, Yukon
N.T.S. 116B/9
Latitude 64°42'N
Longitude 138°10'W

by
Colin V. Dyson, P.Eng.

Work Done: July 20 to August 25, 1977
Date: September, 1977
Owner: Union Minière Explorations and Mining Corporation Limited
This report has been reviewed by the Geological Evaluation Unit and is recommended in the amount of $10,000.00.

[Signature]
Resident Geologist or Resident Mining Engineer

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

[Signature]
Commissioner of Yukon Territory

OCT 24 1977
WHITEHORSE
Yukon Territory
CONTENTS

INTRODUCTION .............................................. 1
PROPERTY ..................................................... 1
GENERAL GEOLOGY ............................................. 1
GEOCHEMICAL SOIL SURVEY ................................. 2
   Methods .................................................... 2
   Grid Control .............................................. 2
   Analytical Treatment of Soil Samples ................. 2
   Results .................................................... 3
CONCLUSIONS AND RECOMMENDATIONS ..................... 3

Figures

following page

FIGURE 1 - Shyne 1-100 Claims Location Map, 1/250,000. ........ 1
FIGURE 2 - Shyne Claims, Geochemical Statistics for Lead ....... 2
FIGURE 3 - Shyne Claims, Soil Geochemistry, Lead, 1"=1000 ft.. in pocket
FIGURE 4 - Shyne Claims, Topography Base Map, 1"=1000 ft... in pocket

Appendices

APPENDIX I - Statement of Costs

APPENDIX II - Statement of Personnel
ASSESSMENT REPORT
GEOCHEMICAL SOIL SURVEY ON THE SHYNE 1-100 MINERAL CLAIMS

INTRODUCTION

During the period July 20 to August 25, 1977 a geochemical soil survey was completed over the SHYNE 1-100 mineral claims in the Mayo Mining District, Yukon. The claims are located approximately eight miles south-southeast of Lomond Lake and eight miles east of the Dempster Highway at latitude 64°42'N and longitude 138°10'W (Figure 1) and are accessible via helicopter. The geochemical soil survey was completed in the field by Mr. H. Holm, Mr. J. Reid, and Mr. L. Pettet under the supervision of Mr. C.V. Dyson, P.Eng. who was on the property on July 20, 21 and August 14, 15, 1977 to organize the survey and to study the general claim geology and soil development.

PROPERTY

Relevant details of the claim status are as follows:

<table>
<thead>
<tr>
<th>Claim Name</th>
<th>Grant Numbers</th>
<th>Expiry Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHYNE 1-100</td>
<td>YA13399-YA13498</td>
<td>November 2, 1977</td>
</tr>
</tbody>
</table>

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

GENERAL GEOLOGY

The claims are entirely underlain by a thick, folded sequence of Middle Palaeozoic shales and argillites (G.S.C. Units 9 and 13)\(^1\) which are described as consisting of Unit 9 Road River Formation (Ordovician and Silurian) interbedded black chert and black argillite, grey-green, olive green, and grey chert and grey-green argillite; minor quartzite, and chert-pebble conglomerate; and Unit 13 Middle Devonian to Carboniferous black shale, argillite, and slate, black platy limestone, chert; minor chert-pebble conglomerate and quartzite. The regional strike is east-west with medium to steep southerly dips. Regional east-west folding is predominant and expressed by a series of anticlinal and

FIGURE 1

LOCATION MAP

SHYNE CLAIMS
1/250,000
synclinal structures.

The Ordovician to Silurian sediments (G.S.C. Unit 9) are mapped as over-thrust onto the Devonian to Carboniferous sediments (G.S.C. Unit 13).

GEOCHEMICAL SOIL SURVEY

Methods

A total of 1422 soil samples were collected over 5484 miles of line on the claim group and subsequently geochemically 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, was collected and placed in an appropriately labelled high wet-strength Kraft sample bag.

Grid Control

Two 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 and base lines with a picket station every 600 feet or third sample site on these lines. Sample site coordinates were marked on the appropriate flag or picket by felt marker pen. A topofoil chain and compass were used to control distances, directions and to tie-in the grid with existing claim posts and obvious topographic features, and locate the sample sites on a 1" to 1000 foot topographic base map of the claim area prepared by Vancal Reproductions Ltd., Vancouver, B.C.

Analytical Treatment of Soil Samples

The samples were freighted to a mobile laboratory of Acme Analytical Laboratories Ltd. in Dawson City, Yukon. 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, bulked with deionized water, and analysed for lead by atomic absorption.

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 biodegradable thread is cut and abandoned.
SHYNE CLAIMS

Cumulative Frequency Versus Lead Content in Soils (1422 samples)

anomalous population 2

overlap

background population 1

FIGURE 2
Results

Statistical analysis of the lead results (Figure 2) defines at least two populations of 5-30 ppm and +40 ppm lead, with the 30-40 ppm Pb range a zone of overlap. The +40 ppm lead population is interpreted to be anomalous. Contouring of the lead values (Figure 3) defines three concentrations of anomalous values:

Area 1: where up to four adjacent anomalous samples occur on line with several spot high single sample highs close by in the south-central part of the claim area

Area 2: several spot high values occur in a cluster in the northwestern area of the claims

Area 3: a linear anomaly approximately 2000 feet by 200 feet in extent occurs in the southeastern claim area, and is elongated down a steep westerly facing slope

CONCLUSIONS AND RECOMMENDATIONS

(1) A geochemical soil survey completed over the SHYNE 1-100 mineral claims outlined three main areas of anomalous lead values.

(2) "Fill-in" soil sampling is recommended in these anomalous areas to better define and "close-off" all anomalies.

(3) Prospecting and geological mapping is recommended in and peripheral to the areas of anomalous soils.

Respectfully submitted,

C.V. Dyson, P.Eng.