ASSESSMENT REPORT

GEOCHEMICAL SOIL SURVEY

ON THE

DAS 1 - 42 MINERAL CLAIMS

(Record Nos. YA2304-YA2311, YA2044-YA2065, YA2348-YA2349, YA2312-YA2321)

Claims Grouped as:

(1) DAS 6-8, 10, 29-30, 32, 34-42
   Record Nos. YA2309-YA2311, YA2045, YA2064-YA2065, YA2349, YA2313-YA2321

(2) DAS 19-28
   Record Nos. YA2054-YA2063

(3) DAS 1-5, 9, 11-18, 31, 33
   Record Nos. YA2304-YA2308, YA2044, YA2046-YA2053, YA2348, YA2312

in the

Dawson Mining Division, Yukon

N.T.S. 116B/13

Latitude 64°49'N
Longitude 139°51'W

by

Colin V. Dyson, P.Eng.

Work Done: July 20 - August 10, 1976

Date: September 1976

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 $4200.00.

[Signature]
Geologist or
Mining Engineer

Considered as representation work under Section 80 (4) Maine Quartz Mining Act.

[Signature]
B.R. BAXTER
Supervising Mining Recorder

Commissioner of Maine Territory
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>PROPERTY</td>
<td>1</td>
</tr>
<tr>
<td>GENERAL GEOLOGY</td>
<td>1</td>
</tr>
<tr>
<td>GEOCHEMICAL SOIL SURVEY</td>
<td>2</td>
</tr>
<tr>
<td>Methods</td>
<td>2</td>
</tr>
<tr>
<td>Grid Control</td>
<td>2</td>
</tr>
<tr>
<td>Analytical Treatment of Soil Samples</td>
<td>2</td>
</tr>
<tr>
<td>Results</td>
<td>3</td>
</tr>
<tr>
<td>CONCLUSIONS AND RECOMMENDATIONS</td>
<td>4</td>
</tr>
</tbody>
</table>

### Appendices

- **APPENDIX I** - STATEMENT OF COSTS
- **APPENDIX II** - STATEMENT OF PERSONNEL

### Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIGURE 1</td>
<td>Das Claims, Property Location, 1/250,000</td>
<td>1</td>
</tr>
<tr>
<td>FIGURE 2</td>
<td>Geochemical Statistics for Copper</td>
<td>3</td>
</tr>
<tr>
<td>FIGURE 3</td>
<td>Geochemical Statistics for Cobalt</td>
<td>3</td>
</tr>
<tr>
<td>FIGURE 4</td>
<td>Geochemistry of Copper in Soils</td>
<td>in pocket</td>
</tr>
<tr>
<td>FIGURE 5</td>
<td>Geochemistry of Cobalt in Soils</td>
<td>in pocket</td>
</tr>
<tr>
<td>FIGURE 6</td>
<td>Topography Map, Das Claims, 1&quot;=1000 feet.</td>
<td>in pocket</td>
</tr>
</tbody>
</table>
ASSESSMENT REPORT
GEOCHEMICAL SOIL SURVEY ON THE DAS 1-42 MINERAL CLAIMS

INTRODUCTION

In the period July 20 to August 10, 1976 a geochemical soil survey for total copper and cobalt was completed over the Das 1-42 mineral claims. The claims are located within the Dawson Mining Division, Yukon, at latitude 64°49'N and longitude 139°51'W, and lie approximately ten miles north of Mount Harper (Figure 1). The claims cover a northeasterly trending mountainous ridge which is bisected by a northwesterly trending saddle and valley 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 44 miles to the east of the claims.

Soil sampling in the field was completed by Mr. H. Holm, Mr. J. Potapoff, Mr. D. Dambroise, and Mr. P. Caven, under the supervision of Mr. R. Tolbert, B.Sc. (geologist) who in turn was under the supervision of Mr. C. Dyson, P.Eng.

PROPERTY

Relevant details of the claims are as follows:

<table>
<thead>
<tr>
<th>Claim Name</th>
<th>Grant Numbers</th>
<th>Date Staked</th>
<th>Date Recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAS 1-8</td>
<td>YA2304-YA2311</td>
<td>August 5, 1975</td>
<td>August 19, 1975</td>
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<tr>
<td>DAS 9-16</td>
<td>YA2044-YA2051</td>
<td>July 19, 1975</td>
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</tr>
<tr>
<td>DAS 17-22</td>
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<tr>
<td>DAS 23-30</td>
<td>YA2058-YA2065</td>
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<td>DAS 31-32</td>
<td>YA2348-YA2349</td>
<td>August 14, 1975</td>
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<tr>
<td>DAS 33-42</td>
<td>YA2312-YA2321</td>
<td>August 14, 1975</td>
<td>August 19, 1975</td>
</tr>
</tbody>
</table>

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

GENERAL GEOLOGY

Regionally the claim area is underlain by a thick sequence of Proterozoic sediments described\(^1\) (G.S.C. Unit 2b) as consisting of buff and orange dolomite, dark shale, minor quartzite limestone and conglomerate. Reconnaissance geology by the writer shows the presence of maroon shales and siltstones, maroon to purple pebble/cobble conglomerates, pink cherty-siliceous dolomites, maroon-

\(^1\)Geological Survey of Canada, Map 1284A.
FIGURE 1

DAS CLAIMS
LOCATION MAP, 1/250,000
N.T.S. 116/B
green shales with jasper bands, greyish to greenish argillite, black shales and cherty, sandy dolomite or quartzite. The area appears to have undergone extensive local folding and faulting.

GEOCHEMICAL SOIL SURVEY

Methods

In the course of the survey a total of 645 soil samples were collected over 24.6 miles of line and subsequently analysed for total copper and cobalt. At each sample site a hole was dug with a mattock, and 4-6 ounces of "B" horizon soil (where available) was collected. The soil sample was placed in a high, wet strength Kraft sample bag and appropriately labelled. The writer was on the claims on July 20 and 21, 1976 to organize the survey and to study the general geology of the claims.

Grid Control

An east-west base line was established on the claims with north-south cross lines over (where possible because of topography) 500 foot spacings from the base line. Sample site stations were marked by coloured flagging at 200 foot spacings along the cross lines and base line, with a picket station established every 600 feet or third sample site along the lines. Sample site coordinates were marked on the appropriate flag or picket by felt marker pen. A topofoil chain and compass was used to control distances and direction and to tie-in the grid with a detailed topography control map constructed by Pacific Survey Corporation (Figure 6).

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

2 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.
mesh through a nylon or stainless steel screen, digested for 1-1½ hours in
aqua regia, bulked with deionized water, and analysed by atomic absorption.

Results

Statistical plots of cumulative frequency versus concentration were
completed for the copper and cobalt results (Figures 2 and 3, respectively). Statistical analysis of the copper results (Figure 2) defines at least five populations of 10-90 ppm, 90-190 ppm, 210-280 ppm, 290-450 ppm, and +480 ppm copper; the 190-210 ppm, 280-290 ppm, and 450-480 ppm copper ranges are zones of overlap. Copper values in the 290-450 ppm population are considered to be possibly anomalous. Definitely anomalous copper values are considered to be those of the +480 ppm population.

Statistical analysis of the cobalt results (Figure 3) defines at least three populations of 10-50 ppm, 60-100 ppm, and +110 ppm cobalt; the 50-60 ppm and 100-110 ppm ranges are zones of overlap. Anomalous cobalt values are considered to be those of the +110 ppm population. The copper results defines seven main areas of anomalous values (Figure 4).

Anomaly A extends over an area of approximately 800 feet by 800 feet across and down a steeply dipping southeast facing slope.

Anomaly area B consists of two east-westerly trending anomalies both elongated down a steep westerly facing hillside. The largest anomaly is branched and covers an area of approximately 2500 feet by 500 to 1000 feet (northern limb) and 2500 feet by 400 feet (average) southern limb. An adjacent small anomaly represents the trace of single anomalous values across three parallel sample lines.

Anomaly C consists of a north-south trending anomaly over an area of 1400 feet by 400 feet down a steeply sloping south facing hillside.

Anomaly D covers a large irregular shaped area extending down southeasterly and southwesterly facing steep hillsides. The precipitous nature of the topography in parts of this anomalous area probably contributes greatly to the irregular nature and size of the anomaly.

Anomaly E covers an area of approximately 1400 feet by 200-600 feet down a steep easterly facing hillside.

Anomaly F covers an area of approximately 1000 feet by 1000 feet down a northeasterly facing hillside.

Anomaly G covers an area of approximately 1000 feet by 800-1000 feet across
Cumulative Percent Versus Copper Content in Soils (645 samples)

- Anomalous Population 5
- Possible Anomalous Population 4
- Background Population 3
- Background Population 2
- Background Population 1

Figure 2
DAS CLAIMS
Cumulative Percent Versus Cobalt Content in Soils (645 samples)

Anomalous Population 3
Overlap
Background Population 2
Overlap
Background Population 1

Figure 3
and down a steep south and southeasterly facing hillside. It is "open" to both east and west.

The cobalt results defines one main area of anomalous values (Figure 5) in addition to scattered single sample spot high values. In nearly every case the anomalous cobalt value is coincident with an anomalous copper value (Figure 4). In the northeastern part of the claim area several small cobalt anomalies are present (Figure 5). Their distribution is irregular and they occur on both northeasterly and southwesterly facing hillsides. The largest covers an area of approximately 600 feet by 200-400 feet and consists of three adjacent anomalous results spread over two parallel sample lines.

CONCLUSIONS AND RECOMMENDATIONS

(1) A geochemical soil survey completed over parts of the Das 1-42 mineral claims outlines several areas of anomalous copper values with occasional very small coincident cobalt anomalies.

(2) Further soil sampling is warranted in order to "close" off some of the copper anomalies and to detail possible source areas within the broader anomalies.

(3) Detailed geological mapping and prospecting is recommended in all detailed "target" areas defined by the present geochemical survey and by any future closer spaced sampling extensions of the current survey grid.

Respectfully submitted,

Colin V. Dyson, P.Eng.