GEOCHEMICAL REPORT

on

TOSH 1-36 CLAIMS

115-H-10

61°42' / 136°37'

NORANDA EXPLORATION COMPANY LIMITED

(No Personal Liability)

090370
Jesmex Developments - June 15-22, 1978
G. Macdonald - July 14-17, 1978
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 $7,200.00.

Resident Geologist or Resident Mining Engineer

Considered as representation work under Section 53 of the Quartz Mining Act.

G. R. BAXTER
Supervisor Mining Recorder

Commissioner of Yukon Territory
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Figure 1 - Location Map</td>
<td>2</td>
</tr>
<tr>
<td>GEOCHEMICAL SOIL SURVEY AND GRID</td>
<td>3</td>
</tr>
<tr>
<td>CONCLUSIONS AND RECOMMENDATIONS</td>
<td>3</td>
</tr>
<tr>
<td>APPENDIX:</td>
<td></td>
</tr>
<tr>
<td>Statement of Qualifications</td>
<td></td>
</tr>
<tr>
<td>Statement of Costs</td>
<td></td>
</tr>
<tr>
<td>Maps in Pocket</td>
<td></td>
</tr>
<tr>
<td>Claim map and grid</td>
<td>Dwg. No. 1</td>
</tr>
<tr>
<td>Geochemical Results Pb/Zn</td>
<td>Dwg. No. 2</td>
</tr>
<tr>
<td>Geochemical Results Cu/Mo</td>
<td>Dwg. No. 3</td>
</tr>
</tbody>
</table>
INTRODUCTION

The claims referred to in this report are registered in the name of Noranda Exploration Company Limited (No Personal Liability). The claim group consists of 36 TOSH claims (YA 19401 - YA 19436).

The TOSH claims are located approximately 8 miles SW of Little Buffalo Lake and 28 miles SW of Carmacks, Yukon Territory, on claim sheet 115-H-10. Access is by helicopter from Carmacks.

Line-cutting and geochemical soil sampling were conducted during the period June 15-22, 1978 by Jesmex Developments, as contractor, and during July 14-17, 1978 by Noranda Exploration Company Limited.

Survey control is provided by chained and compassed lines 200 m apart with picketed stations every 100 m forming a grid pattern (see Drawing No. 1).
GEOCHEMICAL SOIL SURVEY

All soils were analyzed for copper, lead, zinc and molybdenum in the Noranda Exploration Company Limited laboratory located at 1050 Davie Street, Vancouver, British Columbia. Analyst was Evert Van Leeuwen.

Sampling Method

Samples were obtained by digging holes with a maddock to a depth, if feasible, where the visible B horizon or sub-outcrop was encountered. The B horizon was sampled whenever possible. The samples were placed in "Hi West Strength Kraft 3½ x 6 1/8" Open End" envelopes and the grid station was marked on the envelopes with indelible felt pen.

Laboratory Determination Method

The samples are first placed in a drying cabinet for a period of 24 to 48 hours; the sample material is then screened and sifted to obtain a -80 mesh fraction.

The determination procedure for total copper, lead, zinc and molybdenum is as follows:

0.200 grams of the -80 mesh material is digested in 2 ml of HClO₄ and 0.5 ml of HNO₃ for approximately 4 hours. Following digestion, each sample is diluted to 5 ml with de-mineralized H₂O. A Varian Techtron Model AA-5 Atomic Absorption Spectrophotometer was used to determine the parts per million copper, lead, zinc and molybdenum content in each sample.

The Theory of Atomic Absorption Spectrophotometer is fully described in the literature and will not be elaborated upon in this report.

Presentation of Results

Results of the soil survey are presented in Drawing Nos. 2 and 3 of this report (plan maps, scale 1 cm = 50 m, showing copper-molybdenum and
zinc-lead in parts per million).

**Discussion of Results**

Cu-Mo and Pb-Zn response is generally not coincident and will be discussed separately below.

(i) Pb/Zn:
No samples were considered anomalous in lead. Zn above 200 ppm is considered anomalous. A Zn anomaly from 52+00N - 58+00N @ 60+00W (peak value 2600 ppm) was considered caused by organic precipitation and concentration of background zinc values.

(ii) Cu/Mo:
Only erratic, marginally anomalous Cu values were obtained (48 and 49 W @ L 60+00 N) and these are probably caused by organic action. No anomalous Mo values were determined.

**CONCLUSIONS AND RECOMMENDATIONS**

Soil geochemical response on the TOSH claims is erratic. Additional work should include magnetometer and I.P. surveys.

**SUBMITTED BY:**

G. Macdonald, Geologist.

August 30, 1978.