GEOCHEMICAL REPORT
on the PETE claims
located about 20 miles SW of Macmillan Pass
Claim sheet 105-0-1, 63°00'N, 130°05'W
by
Clyde L. Smith, Ph.D., P.Eng.
June 17 through 30, 1976

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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 $1400.

W. D. Lenn

[V] 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
I. INTRODUCTION AND GENERAL GEOLOGY

During the period June 17 through June 30, 1976, Ogilvie Joint Venture carried out a geochemical soil sampling survey on the Pete grid. The grid has a total of about 10 line miles consisting of southwest-northeast trending cross lines branching from a northwest-southeast trending base line running through the centre of the property. Soil samples were taken at 100 foot intervals. The geochemical program was conducted to test the possibility of extension from a bedded barite occurrence on the northwest corner of the claims which contain small amounts of lead and zinc. The Pete claims were staked in 1975 to cover the geological extension of the above described barite occurrence as well as anomalous geochemical values obtained by reconnaissance sampling. Outcrop is lacking on the Pete property except for a few exposures of siltstone along the southwest margin. The general geology of the region in the vicinity of the Pete property is shown on the Niddery Lake sheet of the Geological Survey of Canada.

II. LIST OF CLAIMS

<table>
<thead>
<tr>
<th>Claim Name</th>
<th>Holder</th>
<th>Recording Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pete 1-32</td>
<td>British Newfoundland Exploration Limited - In Trust</td>
<td>August 7, 1975</td>
</tr>
</tbody>
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III. TECHNIQUES EMPLOYED AND GEOCHEMICAL WORK

Samples were collected on a grid having a northwest-southeast trending baseline with crosslines at between 500 and 1000 feet running northeast-southwest. Samples were taken at 100 foot intervals along the lines. The upper B horizon was sampled using an iron madock and soil was placed in kraft paper bags. Sample drying and analysis were carried out by Barringer Research Limited of Whitehorse. After being dried and screen 250 mg of -80 mesh material was digested in 4 hours in perchloric acid, the volume diluted to a standard volume and this solution analysed on an atomic absorption spectrometer for Pb and Zn. For barium a 250 mg sample was digested for one hour in EDTA, the volume adjusted and the solution analysed by atomic absorption spectrometer.
IV. RESULTS AND INTERPRETATIONS

Figure 2 is a geochemical soil sample map showing values in the order of lead-zinc-barium. Figure 3 is a zinc contour map showing contours at 200, 400, 1000 and 5000 ppm intervals. A maximum value of 18,000 ppm was obtained along the southern portion of line 20 east in the centre of an anomaly of greater than 2000 feet in strike length which lies downslope from an exposure of bedded barite with minor lead and zinc values on the northwest end of the grid. An additional extensive anomaly occurs to the southeast of the above described and has a maximum value of in excess of 5,000 ppm. It is notable that these two zinc features correspond in a general fashion with a gravity anomaly described in an accompanying geophysical report. Figure 4 is a barium contour map with intervals of 70 and 100 ppm. Again a general correspondence of barium soil anomalies occurs with the above described zinc geochemical features and the gravity anomaly described in an accompanying report. Maximum values in excess of 100 ppm have been obtained from stations close to those giving maximum zinc values.

V. CONCLUSIONS AND RECOMMENDATIONS

The close correspondence of intense zinc and moderate barium geochemical features with a gravity anomaly believed to express the position of a bedded barite deposit outcropping on the northwest edge of the Pete claims requires that the Pete property be regarded as having good potential for lead and zinc mineralization associated with barite. It is recommended that the gravity maxima on line 90 east and perhaps one of the geochemical maxima be diamond drilled.

VI. PERSONNEL EMPLOYED

Jay Fairbank, Geochemical Sampler, General Delivery, Galiano Island
J. Russell, Geochemical Sampler, General Delivery, Ross River, Y.T.
VII. QUALIFICATIONS OF C. L. SMITH, AUTHOR

Education
Carleton College, Northfield, Minn., U.S. - B.A. received 1959
University of B.C., Vancouver, B.C. - M.Sc. received 1962
University of Idaho, Moscow, Idaho, U.S. - Ph.D. received 1966

Employment
1970 - present: Consulting geologist, Vancouver, B.C.
1968 - 1970: Director and Exploration Manager, Spartan Explorations Limited

Professionals
Registered Professional Engineer, Association of Professional Engineers, Province of British Columbia.

VIII. EXPENDITURES

Salaries:
Jay Fairbank $ 500.00
J. Russell 500.00 466.02
Subsistence 400.00
Travel 250.00
Geochemical analysis:
500 samples @ $3.25/sample 1,625.00
Linecutting:
\( \frac{1}{2} \) of 10 miles @ $180.00/mile 900.00

$ 4,175.00
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<th>June 15 - 30/76</th>
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**NAME:** Jay Fairbank

<table>
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<tr>
<th>Wages</th>
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<tr>
<td>Regular</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>Overtime</td>
<td>$</td>
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- **TOTAL WAGES:** $500.00

**DEDUCTIONS FROM WAGES:**

1. Can. Pension Plan - $ 
2. Unemployment Ins. - $ 
3. Comp. Pension Fund - $ 
4. Income Tax - $ 
5. Hospitalization Ins. - $ 
6. Group Insurance - $ 
7. Bonds - $ 
8. - $ 
9. - $ 

- **Total Deductions:** $ 

- **NET WAGES:** $ 

---

**PAY ROLL RECORD**

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**NAME:** John Russell

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<th>Wages</th>
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<tr>
<td>Regular</td>
<td>$</td>
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<tr>
<td>Overtime</td>
<td>$</td>
<td></td>
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- **TOTAL WAGES:** $400.00

**DEDUCTIONS FROM WAGES:**

1. Can. Pension Plan - $ 
2. Unemployment Ins. - $ 
3. Comp. Pension Fund - $ 
4. Income Tax - $ 
5. Hospitalization Ins. - $ 
6. Group Insurance - $ 
7. Bonds - $ 
8. - $ 
9. - $ 

- **Total Deductions:** $ 

- **NET WAGES:** $ 

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<th>REF</th>
<th>PROJECT LINE GRID</th>
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<tr>
<td></td>
<td>WEST JASON 20.8 MILE</td>
</tr>
<tr>
<td></td>
<td>EAST JASON 3.2 MILES</td>
</tr>
<tr>
<td></td>
<td>EAST JASON 1.0 MILE</td>
</tr>
<tr>
<td></td>
<td>PETE GRID 9.0 MILES</td>
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<td>34.0 M</td>
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34.0 M @ 1.00 PER MILE COST $6,120.00

#366
3/3/76

Total Cost $6,120.00
Ogilvie Joint Venture  
c/o Brown, Farris & Jefferson  
1860-200 Granville Street  
VANCOUVER, British Columbia.

DATE: July 19, 1976  
PROJECT: 119.41  
PERIOD COVERED:

TO: GEOCHEMICAL ANALYSIS

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<td>217 HClO samples analyzed for lead</td>
<td>$1.30</td>
<td>282</td>
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<tr>
<td>217 HClO samples analyzed for zinc</td>
<td>$.50</td>
<td>108</td>
<td>108.50</td>
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<tr>
<td>217 EDTA samples analyzed for barium</td>
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<td>217 Soil sample preparation</td>
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DATE: July 9, 1976

PROJECT: 119.41

PERIOD COVERED:

PROGRESS BILLING:

SHIPPING REPORT:

WORK REPORT: #11-A

FED. SALES TAX: N/A

ONT. SALES TAX: N/A

TERMS: NET 30 days

AUTHORITY: C. Smith

TO: GEOCHEMICAL ANALYSIS

233 HClO₄ samples analyzed for lead @1.30 each 302.90
233 HClO₄ samples analyzed for zinc @ .50 each 116.50
233 EDTA samples analyzed for barium @1.30 each 302.90
233 Soil sample preparation @ .35 each 81.55

TOTAL INVOICE $803.85

COPY

INVOICE No. 3590
Ogilvie Joint Venture  
c/o Brown, Farris & Jefferson  
1860-200 Granville Street  
VANCOUVER, British Columbia.

**GEOCHEMICAL ANALYSIS**

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<td>327 HClO₄ samples analyzed for zinc</td>
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<td>425.10</td>
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<td>327 Soil sample preparation</td>
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DATE: July 19, 1976

PROJECT: 119.41

PERIOD COVERED:

PROGRESS BILLING:

SHIPPING REPORT:

WORK REPORT: #16-A

FED. SALES TAX: N/A

ONT. SALES TAX: N/A

TERMS: NET 30 days

AUTHORITY: TO: GEOCHEMICAL ANALYSIS

INVOICE No 3647
OGILVIE JOINT VENTURE
c/o Brown, Farris & Jefferson
1860-200 Granville Street
VANCOUVER, British Columbia.

**Date:** July 19, 1976  
**Project:** 119.41  
**Period Covered:**

**Progress Billing:**
**Shipping Report:**
**Work Report:** #15-A

**Terms:** Net 30 days

**Authority:** C. Smith

**To:** GEOCHEMICAL ANALYSIS

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<th>Quantity</th>
<th>Amount</th>
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<td>127 HCLO$_4$ samples analyzed for lead</td>
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**Total Invoice:** $438.15
DATE: July 31, 1976

PROJECT: 119.41

PERIOD COVERED:

PROGRESS BILLING:

SHIPPING REPORT:

WORK REPORT: #23-A

FED. SALES TAX: N/A

ONT. SALES TAX: N/A

TERMS: NET 30 days

AUTHORITY: C. Smith

TO: GEOCHEMICAL ANALYSIS

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<th>Description</th>
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<th>Amount</th>
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<tr>
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<td>146 Soil sample preparation</td>
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TOTAL INVOICE: $503.70

COPY

INVOICE № 3729
DATE: July 30, 1976

PROJECT: 119.41

PERIOD COVERED:

PROGRESS BILLING:

SHIPPING REPORT: #27-A

WORK REPORT: 165 H2O Soluable Barium @ 1.30 each 214.50

TOTAL INVOICE $214.50

AUTHORITY: C. Smith

TO: GEOCHEMICAL ANALYSIS

165 H2O Soluable Barium @ 1.30 each 214.50

TOTAL INVOICE $214.50

COPY

INVOICE № 3733
DATE: July 30, 1976

TO: GEOCHEMICAL ANALYSIS

<table>
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<td>71 HCLO₄ samples analyzed for zinc</td>
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<tr>
<td>71 CxHCl samples analyzed for lead</td>
<td>@1.30</td>
<td>92.30</td>
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<tr>
<td>71 CxHCl samples analyzed for zinc</td>
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<td>35.50</td>
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<tr>
<td>71 EDTA Barium samples</td>
<td>@1.30</td>
<td>92.30</td>
<td></td>
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<tr>
<td>71 H₂O Barium samples</td>
<td>@1.30</td>
<td>92.30</td>
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<tr>
<td>71 Soil sample preparation</td>
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TOTAL INVOICE $465.05
Ogilvie Joint Venture
c/o Brown, Farris & Jefferson
1860-200 Granville Street
VANCOUVER, British Columbia

DATE: July 31, 1976
PROJECT: 119.41
PERIOD COVERED:

PROGRESS BILLING:  
SHIPPING REPORT:  
WORK REPORT: #29-A
FED. SALES TAX: N/A
ONT. SALES TAX: N/A

TERMS: NET 30 days

AUTHORITY: C. Smith

TO: GEOCHEMICAL ANALYSIS

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<td>63 HClO₄ samples analyzed for zinc</td>
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<td>31.50</td>
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INVOICE No. 3735

COPY
Ogilvie Joint Venture  
c/o Brown, Farris & Jefferson  
1860-200 Granville Street  
VANCOUVER, British Columbia.

DATE: July 30, 1976  
PROJECT: 119.41  

PERIOD COVERED:  

PROGRESS BILLING:  

SHIPPING REPORT:  

WORK REPORT: #21-A  

FED. SALES TAX: N/A  

ONT. SALES TAX: N/A  

TERMS: NET 30 days  

AUTHORITY: C. Smith  

TO: GEOCHEMICAL ANALYSIS

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<th>Description</th>
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<th>Amount</th>
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<td>245 Soil sample preparation</td>
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TOTAL INVOICE $843.95