SOIL GEOCHEMISTRY
IDAHO - ALAMO - QUEEN BESS MINERAL CLAIM GROUP
HOWSON CREEK - IDAHO PEAK AREA
SLOCAN MINING DIVISION
SANDON, B.C.
NTS 82 K/3 E & 82 F/14 W
LATITUDE 49°59'N, LONGITUDE 117°17'W

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,160

Locke B. Goldsmith, P.Eng.
Consulting Geologist

November 20, 1985
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APPENDIX: GEOCHEMICAL ANALYSES

MAP: GEOCHEMISTRY WITH PROJECTED TRACES OF PRODUCTIVE LODE SYSTEMS

(Pocket inside back cover)
SUMMARY

Soil geochemistry across the projected trace of a productive lode has obtained threshold silver and lead values which may have a source in underlying lode systems. Additional geochemical sampling is required. Dependent upon the results of sampling in this sector of the large property, dozer-backhoe trenching and diamond drilling may be required. A cost of $122,000 in three Phases is estimated.
INTRODUCTION

The claim group is located on the northeast side of Idaho Peak approximately 6 km east of the town of New Denver, B.C. Access is via dirt roads northwesterly from Sandon along the Idaho Lookout route and thence on various branches into the Howson Creek basin. The property consists of 34 crown granted claims (10 of which have surface rights), two reverted crown grants, one three-unit staked claim, and three staked fractional claims. Record data of the staked claims are listed below.

<table>
<thead>
<tr>
<th>Claim Name</th>
<th>Number of Units</th>
<th>Record Number</th>
<th>Date of Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friction Fr.</td>
<td>&lt;1</td>
<td>4456(8)</td>
<td>August 17, 1984</td>
</tr>
<tr>
<td>Fraction Fr.</td>
<td>&lt;1</td>
<td>4457(9)</td>
<td>August 15, 1984</td>
</tr>
<tr>
<td>Bess Extension</td>
<td>3</td>
<td>4455(8)</td>
<td>August 17, 1984</td>
</tr>
<tr>
<td>Anaconda Fr.</td>
<td>&lt;1</td>
<td>4529(10)</td>
<td>October 29, 1984</td>
</tr>
</tbody>
</table>

Two productive lode systems, named the Idaho-Queen Bess and Alamo, cross the property. These northeasterly trending lodes are branches of the Standard-Mammoth and Echo lodes which have been mined on the south side of Idaho Peak. Elevations range from 2165 m (7100') on Silver Ridge to 700 m (2300') on Carpenter Creek.

Three former producing mines are situated within the property. MINDEP computer files from the University of British Columbia list the tonnages and grades as shown in the following table. It is known that these figures represent hand-sorted shipments with zinc being excluded, and that additional tonnages have been shipped by lessees. In 1984 the author of this report shipped 11.28 tons grading 12.66% Pb, 19.50% Zn, and 40.00 oz/ton Ag, of which a lead concentrate graded 70.0 oz/ton Ag, from dumps at the Idaho No. 3 level portal.

<table>
<thead>
<tr>
<th>Mine</th>
<th>Short Tons</th>
<th>Ag oz/ton</th>
<th>Au oz/ton</th>
<th>Pb %</th>
<th>Zn %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idaho</td>
<td>21825</td>
<td>73.2</td>
<td>0.0008</td>
<td>11.4</td>
<td>0.549</td>
</tr>
<tr>
<td>Alamo</td>
<td>8659</td>
<td>103.0</td>
<td>0.0012</td>
<td>37.8</td>
<td>11.7</td>
</tr>
<tr>
<td>Queen Bess</td>
<td>18918</td>
<td>76.3</td>
<td>0.0014</td>
<td>49.4</td>
<td>0.166</td>
</tr>
</tbody>
</table>
NOVEMBER 1985

TO ACCOMPANY REPORT BY
LORRE B. GOLDSMITH, P.ENG.,
CONSULTING GEOLOGIST

LOCATION MAP

KILOMETRES
0 24 48 96
IDAH0-ALAMO-QUEEN BESS PROJECT

NEW DENVER AREA, B.C. 82F/14W-82/K3W

SLOCAN MINING DIVISION

CLAIM MAP

NOVEMBER 1985
TO ACCOMPANY REPORT BY
LOCKE B. GOLDSMITH, P.ENG.,
CONSULTING GEOLOGIST
A total of 1 km of grid was established. Lines are 100 m apart with stations at 50 m intervals.

GEOLOGY

The claims are underlain by argillite, quartzite, and limestone of the Upper Triassic to Lower Jurassic Slocan Group. Strike of bedding is usually north to northwest; dips range from steep easterly through flat to steep westerly. It is not always possible to determine tops of bedding. One small argillite outcrop was noted at 0+00E 4+05 S.

Two major lode systems trend northeasterly and dip approximately 40°-50° southerly, although local variations between 20° and 70° have been measured. Numerous places along these faults contain silver-lead-zinc mineralization, but shoots of economic proportions are localized in zones of dilatancy between competent wallrocks. Other mineralized zones are known on and near the property; these may be hosted in narrow fractures or joints which are either in a regional pattern or are transverse between major fault-fissures.

SOIL GEOCHEMISTRY

A total of 20 soil samples was collected with a narrow, elongate spade from 30-45 cm below organic debris. The area of sampling is a flat-topped ridge with very little outcrop. Material is usually rusty-brown silt. Exceptions occur at 1+00E 4+00S and 4+50S, where the silt is olive to grey-brown in colour; south ends of the lines were extended to cover an area where mineralization is known and this is reflected in the high silver values. Coarse granitic sand was noted at 1+00E 3+00S where metal quantities are low.

The following table displays statistical data concerning metal abundance derived from lognormal probability plots. Years of soil sampling results over Slocan Group rocks have been compiled into this information.
Background
Threshold
Anomalous

<table>
<thead>
<tr>
<th></th>
<th>Ag ppm</th>
<th>Pb ppm</th>
<th>Zn ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background</td>
<td>&lt; 2.3</td>
<td>&lt; 38</td>
<td>} Possibly two populations</td>
</tr>
<tr>
<td>Threshold</td>
<td>2.3 to 4.9</td>
<td>38 to 150</td>
<td></td>
</tr>
<tr>
<td>Anomalous</td>
<td>&gt; 4.9</td>
<td>&gt; 150</td>
<td>&gt; 980</td>
</tr>
</tbody>
</table>

Threshold values of silver at 0+00E 0+50S, 0+00E 2+00S, 0+00E 3+50S, and 1+00E 2+50S, and lead at 0+00E 0+00S, 0+00E 3+50S, and 1+00E, 2+50S may mark the trace of lodes.

CONCLUSIONS

Lodes which cross the claims have hosted important deposits of high-grade silver-lead-zinc. Geochemical results suggest that a lode or lodes may cross the 2nd Extension Fraction claim. Exploration should continue where lodes can be inferred to be concealed by soil cover.

RECOMMENDATIONS

Phase 1

Soil sampling, both reconnaissance and follow-up with detail, should be completed along the ridge from L 215 to L 6803. The Queen Bess lode will be crossed with this coverage, thus providing additional geochemical signatures above an economic deposit.

Phase 2

Dozer-backhoe trenching should be considered after the geochemical results are evaluated.
Phase 3

Diamond drilling to probe portions of lodes where favourable lithological and structural conditions may be anticipated may be required. Budget for 1000 metres of discovery drilling should be available.

COST ESTIMATE

Phase 1

Geochemical sampling, with analyses, support, supervision  $12,000

Phase 2

Dozer-backhoe trenching, with supervision 10,000

Phase 3

Diamond drilling, 1000 m, including supervision, analyses, support, allow 100,000

Total, Phases 1, 2 & 3  $122,000

Results of each Phase should be compiled into an engineering report; continuation to the subsequent Phase should be contingent upon receiving favourable conclusions and recommendations from an Engineer.

Respectfully submitted,

Locke B. Goldsmith, P.Eng.
Consulting Geologist

Vancouver, B.C.
November 20, 1985
ENGINEER'S CERTIFICATE

LOCKE B. GOLDSMITH

1. I, Locke B. Goldsmith, am a Registered Professional Engineer in the Province of Ontario and the Northwest Territories, and a Registered Professional Geologist in the State of Oregon. My address is 301, 1855 Balsam Street, Vancouver, B.C.

2. I have a B.Sc. (Honours) degree in Geology from Michigan Technological University, a M.Sc. degree in Geology from the University of British Columbia, and have done postgraduate study in Geology at Michigan Tech and the University of Nevada. I am a graduate of the Haileybury School of Mines, and am a Certified Mining Technician. I am a Member of the Society of Economic Geologists, the AIME, and the Australasian Institute of Mining and Metallurgy, and a Fellow of the Geological Association of Canada.

3. I have been engaged in mining exploration for the past 27 years.

4. I have authored the report entitled, "Soil Geochemistry, Idaho-Alamo-Queen Bess Mineral Claim Group, Howson Creek - Idaho Peak Area, Slocan Mining Division, Sandon, B.C.", dated November 20, 1985. The report is based upon fieldwork and research supervised by the author.

5. I control 100% interest in the property.

6. I consent to the use of this report in a prospectus, or in a statement of material facts related to the raising of funds.

Respectfully submitted,

Locke B. Goldsmith, P.Eng.
Consulting Geologist

Vancouver, B.C.

November 20, 1985
REFERENCES


Hedley, M.S. 1952. Geology and ore deposits of the Sandon area, Slocan Mining Camp, B.C. BCDM Bull. No. 29.


MINDEP Computer Files. University of British Columbia.
COST STATEMENT, 1985 PROGRAMME

1. Personnel

L.B. Goldsmith, 1 Sept. 23, Oct. 8,
total 1½ days @ $400/day $ 600.00

2. Accommodation, Food

$34.00 ÷ 1.5 man days = $22.67/man/day 34.00

3. Travel

4x4 vehicle, 1 day @ $45/day $45.00
70 km @ $0.30/km 21.00
Gas 7.00
$73.00 73.00

4. Analyses

20 soil samples cost $132.00 = $6.60/sample 132.00

5. Report

Drafting, prints, typing, photocopying,
report materials 343.70

Total $1,182.70
Gold F.A.-A.A. Combo Method ppb:

For low grade samples and geochemical materials, 10 gram samples are fused in litharge, carbonate and siliceous flux with the addition of 10 mg of Au-free Ag metal and cupelled. The silver bead is parted with dilute HNO3 and then treated with aqua regia. The salts are dissolved in dilute HCl and analyzed for Au on an atomic absorption spectrophotometer.

Detection limit: 5 ppb

Copper, Lead, Zinc, Silver ppm:

1.0 gm sample is digested with perchloric-nitric acid (HClO4-HNO3) for approximately 2 hours. The digested sample is cooled and made up to 25 ml with distilled water. The solution is mixed and solids are allowed to settle. Copper, lead, zinc and silver are determined by atomic absorption techniques. Silver and lead are corrected for background absorption.

Detection limit: Copper, Zinc - 1 ppm
               Silver - 0.2 ppm
               Lead - 2 ppm

Arsenic ppm:

A 1.0 gm sample is digested with a mixture of perchloric and nitric acid to strong fumes of perchloric acid. The digested solution is diluted to volume and mixed. An aliquot of the digest is acidified, reduced with KI and mixed. A portion of the reduced solution is converted to arsine with NaBH4 and the arsenic content determined using flameless atomic absorption.

Detection limit: 1 ppm
<table>
<thead>
<tr>
<th>Sample</th>
<th>Prep code</th>
<th>Po ppm</th>
<th>Zn ppm</th>
<th>Ag ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>BESS 0+0OE 0+00S 201</td>
<td>40</td>
<td>97</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>BESS 0+0OE 0+50S 201</td>
<td>19</td>
<td>178</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>BESS 0+0OE 1+00S 201</td>
<td>30</td>
<td>61</td>
<td>0.9</td>
<td></td>
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<td>33</td>
<td>0.6</td>
<td></td>
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<tr>
<td>BESS 0+0OE 2+00S 201</td>
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<td>50</td>
<td>3.4</td>
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<tr>
<td>BESS 0+0OE 2+50S 201</td>
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<td>72</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>BESS 0+0OE 3+00S 201</td>
<td>27</td>
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<td></td>
</tr>
<tr>
<td>BESS 0+0OE 3+50S 201</td>
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<td>98</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>BESS 0+0OE 4+00S 201</td>
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<td>850</td>
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<tr>
<td>BESS 0+0OE 4+50S 201</td>
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<td>0.6</td>
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<tr>
<td>BESS 1+00E 0+00S 201</td>
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<td>100</td>
<td>1.5</td>
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<td>BESS 1+00E 0+50S 201</td>
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<td>105</td>
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<tr>
<td>BESS 1+00E 1+00S 201</td>
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<td>78</td>
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<tr>
<td>BESS 1+00E 1+50S 201</td>
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<td>178</td>
<td>1.7</td>
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<tr>
<td>BESS 1+00E 2+00S 201</td>
<td>17</td>
<td>24</td>
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<tr>
<td>BESS 1+00E 2+50S 201</td>
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<td>4.7</td>
<td></td>
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<tr>
<td>BESS 1+00E 3+00S 201</td>
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<td>72</td>
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<td></td>
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<td>BESS 1+00E 3+50S 201</td>
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<tr>
<td>BESS 1+00E 4+00S 201</td>
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<td>BESS 1+00E 4+50S 201</td>
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<td>300</td>
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