GEOCHEMICAL ASSESSMENT REPORT
ON THE
EASTER SEAL MINERAL CLAIM AND ENVIRONS
PINE PROPERTY
FINLAY RIVER AREA, B.C.
94E

57 15'N, 126 40'W
OMINECA MINING DISTRICT

BY
COLIN HARIVEL, P.Geo

DATED: May 21st, 1992
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INTRODUCTION:

This report concerns the Pine Property, in the Toodoggone area of British Columbia. The general location is shown in Fig. 1. The work was done from August 6, 1991 to August 11, 1991 and this report describes sampling and prospecting results from traverses on and in the vicinity of the Easter Seal Mineral Claim. The claim is owned by Dr. John Barakso and is valid until August 8, 1993. A claim map is shown as Fig. 2.

The claim was staked to cover ground believed to be prospective based on geochemical sampling performed by a previous operator. The claim adjoins on the north the previously located Easter and Fin series of claims. The Easter Seal claim straddles the Finlay River which passes north easterly through the west part of the claim.

Access to the claim was via fixed wing charter and scheduled aircraft from Smithers which landed at Sturdee River strip. Casual charter helicopters were then used for the final fifteen kilometer northeasterly trip to the property.

The physiographic relief on the property ranges from about 1000m at the Finlay River to about 1800m on the east boundary of the valley. The mountains above treeline are gullied by relatively well defined watercourses which commonly become ill defined in areas of their respective aluvial delta deposits.

The area investigated is entirely within the Finlay River valley and all samples were collected west of the river. See Fig. 3 for sample locations.
MINERAL CLAIMS:

Ownership:

The Pine Property claims are listed in Table 1, with expiry and ownership as appropriate.

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<th>CLAIM NAME</th>
<th>UNITS</th>
<th>RECORD #</th>
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<td>20</td>
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<td>EASTER 2</td>
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<tr>
<td>EASTER 4</td>
<td>20</td>
<td>11768</td>
</tr>
<tr>
<td>EASTER SEAL</td>
<td>20</td>
<td>303156</td>
</tr>
</tbody>
</table>

REGIONAL GEOLOGY:

Dominant elements of the regional geology are indicated on the Tectonic Assemblage Map of the Canadian Cordillera by J.O. Wheeler and P. McFeely. The oldest rocks in the area which surrounds the property are assigned to Cassiar Terrane. Along a strong northwesterly trend east of the property mainly clastic continental margin sediments which include grits, sandstones, siltstones and shales are exposed.

Moving westerly, a panel of Upper Proterozoic Eagle Bay Group equivalents assigned to Kootenay Terrane and comprised of clastics and volcanics extend westerly along the northwesterly trend to the Finlay Fault. This fault is the east boundary of a fault-bounded panel of predominantly augite porphyry volcanics of Nicola Group equivalents and assigned to Quesnel Terrane. The west bounding fault locus occupies the valley of the Finlay River within the property area.

The contact region between Cassiar and Kootenay terrane rocks is intruded in the property area by mid-Cretaceous quartz monzonite and granodiorite. The intrusives are bounded on the west by the Finlay Fault.

West of the Finlay River, Quesnel Terrane intrusive rocks of Early Jurassic age are prominently exposed. These coarse grained rocks are predominantly quartz monzonites. West of these intrusives, which are bounded by the Kutcho Fault, are Jurassic Hazelton Group volcanic arc rocks assigned to Stikine Terrane.
LOCAL GEOLOGY:

The local geology is dominated by Early Jurassic intrusive rocks and taken from previous assessment work reports. The property geology is depicted in Fig. 4.

Litholav:

On the west side of Finlay River the geology is dominated by quartz mononitic intrusives of assumedly Early Jurassic age. The rocks are generally coarse grained, feldspar porphyries which in fresh specimens range from grey to strongly pink-hued but which generally have a pink cast. In altered specimens the rocks range from pale grey-green to green grey. The fresh to moderately altered rocks are commonly magnetic.

Near the Finlay River and its side channels which pass through the northwest portion of Fin 20, the extreme southeast part of Easter #3 and the western portion of the newly staked easter Seal mineral claims, the intrusive rocks are weakly to strongly fractured and commonly pyritized.

Alteration and Mineralization:

Alteration of intrusive quartz monzonite varies from weak propylitic (weak chloritized mafics, weakly epidotized feldspars) to strongly propylitic with local sulfateric alteration on shear zones. Epidotization is locally strongly evidenced as fracture coatings and in veining. In areas of weak propylitic alteration primary magnetite has not been converted (completely) to hematite.

Pyritized rock was noted in outcrop along or near the Finlay River (samples Ch 113-116 and 105-108). Sulfaterically altered rock in the hanging wall of a small fault zone was sampled (see CH 111, 112). Pyrite commonly occurs as fine frains and in veinlets.

Chalcopyrite as fine grains was locally associated with disseminated pyrite.
GEOCHEMICAL RESULTS AND INTERPRETATION:

Stream sediment sampling was concentrated in the areas adjacent to the west bank of the Finlay River and its westernmost side channels. Sampling by previous operators had indicated a zone of copper anomalous samples at or below the break of slope to the river course.

Stream sediments taken were from 0.4 to 1.5 kg in weight of -80 mesh sieved material from which organic matter had been substantially removed. Many of the watercourses sampled had low water levels.

The results gave only weak support to earlier results. The previous sampling was for heavy metals and results reflect mechanically derived material. These recent stream sediment samples, are biased to the fine sized fraction in bed material and the results suggest that the elevated and anomalous samples are caused by seepage from nearby elevated groundwater sources, the ionic metal components of which were electrically adsorbed by clay particles.

One sample, PS139, gave anomalous results for gold at 246ppb. The remainder of the analysed elements gave no significant support to this result however, suggestive of particle effect.

The stream sediment sample values for copper range from a high of 227 ppm to a low of 28 ppm with average results in the order of 45 ppm (the number of sample taken is too low for rigorous statistical treatment). Sample CH104, which returned the clearly anomalous result of 227 ppm also gave 11 ppm Mo which is supporting evidence for porphyry copper type mineralization as a source.

The rock chip samples gave little encouragement. The highest value in copper was 193 ppm and the lowest, 9 ppm. The high values for sample PS135(F) are worthy of note. This sample ran anomalously in Cu (193ppm), Zn (29,566ppm), Ba (1081ppm), Cd (325ppm), and Pb (214ppm). Sample PS143 ran anomalously in Zn (539ppm), Pb (777ppm) and Ba (2926ppm) while Cu was weakly anomalous at 91 ppm. Sample PS142 returned the highest value in Au at 40ppb but was supported in the analytical results by few other elements in anomalous amounts.

All results are included in Appendix A and the Copper values are included on Fig. 4; the gold results appear on Fig. 5. The sample descriptions are included in APPENDIX C.
PINE PROPERTY
EASTER SEAL CLAIM
AREA
COPPER RESULTS
IN PPM

FIGURE 4

SAMPLED BY
P. SURATT & C. HARMEL

DATE
AUGUST, 1991

MAP 
94E/2E.7E
FINLAY RIVER

LEGEND
- Stream sediment site
- Rock chip site

SCALE
2 KM

PINE PROPERTY
EASTER SEAL CLAIM AREA
GOLD RESULTS IN PPB

SAMPLED BY  DATE  MAP \\
P. SURATT & C. HARMEL  AUGUST, 1991  94E/2E,7E
CONCLUSION & RECOMMENDATIONS:

The sampling programme did not provide any strong evidence for a well mineralized, near surface copper porphyry system lying just west of the Finlay River in the Easter Seal mineral claim. Elevated sample results in copper and gold in this area, while not clearly indicative of mineralization, suggest that work to the north and west may be warranted.

The differences between older sampling and the most current work suggests that groundwater seepages with elevated levels of dissolved metals account for the anomalous and elevated results in current stream sediments for copper and other base metals.

Based on work to date, the most prospective ground lies to the southeast of the Easter Seal Claim, on the East of the Finlay River.
## STATEMENT OF COSTS

### Personnel:
1. C. Harivel; Geologist  
   - 6 days @ $300/day (incl. 1 prep. day)  
   - Amount: $1800.00  
2. P. Suratt; Prospector  
   - 6 days @ $250/day (incl. 1 prep. day)  
   - Dates: August 6-11th, 1992 + August 4, 1992  
   - Amount: $1500.00

### Transportation:
3. Fixed Wing in: Sched. flight + XS baggage ($363 + $154)  
   - Amount: $518.30  
4. Helicopter: 1.2 hrs; move in and recce. south of river  
   - Amount: $921.65  
5. Helicopter out: 1.8 (work sth. of Finlay River; demobe)  
   - Amount: $1382.48  
6. Fixed wing out: charter 206 (50% split)  
   - Amount: $397.25

### Food:
7. Super Valu docket  
   - Amount: $209.44

### Radio Rentals:
8. CP34 SSB (Trio Enterprises Invoice)  
   - Amount: $107.00  
9. Hand held portables  
   - Amount: $74.90

### Expended Supplies:
10. Thread, sample bags, flagging, flares, tags  
    - Amount: $100.00  
11. Telephone, Fax:  
    - Amount: $48.00  
12. Camp Gear: charged at $30/man/day; 12 mandays  
    - Amount: $360.00  
13. Freight etc.  
    - Amount: $48.50  
14. Report:  
    - Two days @ $300/day  
    - Amount: $600.00

### TOTAL OF EXPENSES ..........................................................  
- Amount: $8,067.52
STATEMENT OF QUALIFICATIONS

I, Colin Harivel, of business address P.O. Box 233, Smithers, B.C., VOJ 2N0, do hereby state:

1. I am a graduate geologist and have practised my profession in Canada, Australia and the United States, as a mineral exploration specialist since graduation from the University of British Columbia in 1972 (BSc);

2. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia;

3. I have searched for mineral deposits of the type that may reasonably be expected to occur on the ground which is the subject of this report and have substantial applicable experience;

4. I visited the Pine Property in August, 1991, and this report is based on a literature survey of the area, on my observations, on the notes and observations of those under my supervision and on discussions with previous operators of the claims area.

Signed:

Colin Harivel, P.Geo

Dated: May 21, 1992
APPENDIX A
| SAMPLE NUMBER | AG (PPM) | AL (PPM) | AS (PPM) | B (PPM) | BA (PPM) | BE (PPM) | BI (PPM) | CA (PPM) | CD (PPM) | CO (PPM) | CU (PPM) | FE (PPM) | K (PPM) | LI (PPM) | MG (PPM) | MN (PPM) | NO (PPM) | NA (PPM) | NI (PPM) | P (PPM) | PB (PPM) | SB (PPM) | SR (PPM) | TH (PPM) | TI (PPM) | V (PPM) | ZN (PPM) | GA (PPM) | SM (PPM) | W (PPM) | CR (PPM) | AU-FIRE (PPM) |
|---------------|----------|----------|----------|--------|---------|---------|---------|---------|---------|---------|---------|---------|--------|-------|---------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|-------|--------|---------|--------|--------|--------|--------|---------|
| SAMPLE NUMBER | AG  | AL  | AS  | B   | BA  | BE  | BI  | CA  | CO  | COO | FE  | K   | LI  | MG  | MO  | NO  | NA  | NI  | P   | PB  | SB  | SR  | TH  | TI  | V   | ZN  | GA  | SW  | W   | CR  | AU-FIRE | HM | %   |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 91CH 1003     | 0.3 | 11.880 | 24 | 7 | 59 | 1 | 12 | 14910 | .1 | 20 | 46 | 76300 | 300 | 10 | 6330 | 805 | 1 | 50 | 1 | 2670 | 41 | 2 | 62 | 1 | 2145 | 198.9 | 265 | 1 | 1 | 3 | 26 | 12 | 2.69 |
| 91CH 1004     | 0.3 | 16.740 | 7 | 4 | 117 | .1 | 31 | 14670 | .1 | 26 | 227 | 94550 | 380 | 10 | 5480 | 2498 | 11 | 60 | 1 | 1740 | 71 | 1 | 111 | 1 | 2689 | 107.8 | 787 | 1 | 1 | 1 | 4 | 7 | 3.17 |
| PS/1445/91    | 1.5 | 11510 | 8 | 1 | 173 | .1 | 11 | 15080 | .6 | 9 | 56 | 25910 | 300 | 3 | 3090 | 963 | 1 | 20 | 1 | 780 | 55 | 2 | 105 | 1 | 2140 | 52.4 | 150 | 1 | 1 | 1 | 2 | 39 | 1.35 |
| PS/1465/91    | 1.3 | 18910 | 9 | 1 | 305 | .2 | 11 | 16600 | .1 | 11 | 44 | 38080 | 620 | 7 | 2630 | 1234 | 5 | 80 | 1 | 740 | 131 | 6 | 136 | 1 | 1907 | 72.4 | 215 | 1 | 1 | 2 | 3 | 17 | 1.71 |
| PS/13655/91   | 2.7 | 17040 | 1 | 1 | 117 | .1 | 27 | 27120 | .1 | 20 | 65 | 66600 | 610 | 7 | 6200 | 1002 | 1 | 100 | 1 | 6450 | 35 | 1 | 134 | 12 | 5641 | 184.0 | 122 | 1 | 3 | 4 | 29 | 24 | 2.66 |
| PS/13555/91   | 2.0 | 14500 | 1 | 1 | 88 | .1 | 24 | 19620 | .1 | 18 | 36 | 68240 | 370 | 5 | 4790 | 1006 | 1 | 60 | 1 | 1870 | 26 | 1 | 114 | 1 | 5239 | 196.5 | 143 | 1 | 2 | 4 | 21 | 10 | 3.13 |
| PS/13555/91   | 2.2 | 13810 | 1 | 1 | 95 | .1 | 21 | 18570 | .1 | 17 | 40 | 70610 | 320 | 5 | 4680 | 1036 | 1 | 50 | 1 | 2030 | 26 | 1 | 113 | 1 | 4465 | 204.2 | 175 | 1 | 2 | 4 | 18 | 2 | 3.67 |
| PS/13555/91   | 1.7 | 14200 | 1 | 1 | 105 | .1 | 21 | 18140 | .1 | 17 | 28 | 70770 | 350 | 4 | 4600 | 1051 | 1 | 50 | 1 | 1440 | 29 | 1 | 118 | 1 | 4535 | 200.3 | 123 | 1 | 2 | 4 | 16 | 246 | 4.31 |
| PS/14055/91   | 1.8 | 13630 | 1 | 1 | 81 | .1 | 19 | 19610 | .1 | 13 | 35 | 52990 | 370 | 4 | 4510 | 947 | 1 | 50 | 1 | 2920 | 24 | 1 | 122 | 1 | 3905 | 152.2 | 155 | 1 | 2 | 3 | 15 | 64 | 4.49 |
| PS/14155/91   | 1.5 | 15110 | 1 | 1 | 87 | .1 | 17 | 17450 | .1 | 17 | 51 | 62980 | 320 | 5 | 5850 | 934 | 1 | 60 | 1 | 1880 | 37 | 2 | 111 | 1 | 3774 | 168.3 | 179 | 1 | 1 | 3 | 17 | 42 | 3.86 |
| PS/14505/91   | 1.2 | 14070 | 3 | 1 | 265 | .1 | 10 | 15130 | .1 | 14 | 23 | 39300 | 380 | 5 | 2620 | 2163 | 3 | 110 | 1 | 550 | 97 | 3 | 121 | 1 | 1896 | 67.9 | 238 | 1 | 1 | 2 | 2 | 16 | 1.54 |
APPENDIX B

SAMPLING METHODS:

Rock-Chip Samples:

These samples, intended generally for geochemical, multi-element analysis, were taken from the outcrops or float boulders. Representative samples of between 0.3 and 2.5 kg were selected and comprised chips of between 50 and 200 g in weight. They were placed in previously labelled kraft paper bags and shipped for analysis.

Stream Sediment Samples:

The samples were taken from areas of active sediment transport. A 20 cm diameter sieve was filled and washed through a number of times to produce at least 400 g of -80 mesh sample. The sample was transferred to numbered kraft paper bags and delivered to the lab for analysis.

The analytical procedure is summarized on the results sheet which is included as Appendix A.
## APPENDIX C

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<thead>
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<th>Sample No.</th>
<th>Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>CH 1001</td>
<td>RK-FLOAT</td>
<td>Monzonite; med-crse grained, pink alt’d f’spar porphyry INTRUSIVE; weakly magnetic mafics; chloritized</td>
</tr>
<tr>
<td>CH 1002</td>
<td>RK-FLOAT</td>
<td>Qtz. Monzonite; m. grained, pink-stained INTRUSIVE; wkly magnetic; epid. veinlets &amp; fract-coatings + diss. epid; chlor’zed</td>
</tr>
<tr>
<td>CH 1003</td>
<td>STREAM SED</td>
<td>Diorite(?); grey, pink w’ring; med. gr; mod. mag. mafics; wkly chlor. h’blende</td>
</tr>
<tr>
<td>CH 1004</td>
<td>STREAM SED</td>
<td>Monz.(?); grey-green w’ring; equigran.; med. gr; mod-str. magnetic.</td>
</tr>
<tr>
<td>CH 1005</td>
<td>RK. CHIP</td>
<td>INTRUSIVE; green and pink altered; obl. text.; qtz-epid.-pyrite veinlets and fract. coatings</td>
</tr>
<tr>
<td>CH 1006</td>
<td>RK. CHIP</td>
<td>INTRUSIVE; grey-green alt’d; fine-med.gr.; monzonite?; not magnetic; chloritized mafics; diss py.</td>
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<td>CH 1007</td>
<td>RK. CHIP</td>
<td>Monzonite -&gt; qtz. monz.; pink and green altered; med. - f.gr.; not magnetic</td>
</tr>
<tr>
<td>CH 1009A</td>
<td>RK. CHIP</td>
<td>Monzonite; pnk- w’ring; coarse f’spar porphyry; chloritize mafics; h’bl -&gt; biot; 12-15% mafic</td>
</tr>
<tr>
<td>CH 1010</td>
<td>RK. CHIP</td>
<td>Altered rock in vicinity fault zone; pyritic</td>
</tr>
<tr>
<td>CH 1011</td>
<td>RK. CHIP</td>
<td>Altered rock in fault zone; bleached, grey; pyritic</td>
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<tr>
<td>CH 1012</td>
<td>RK. CHIP</td>
<td>Grey, pyritic intrusive; obl. text.</td>
</tr>
<tr>
<td>CH 1013</td>
<td>RK. CHIP</td>
<td>Qtz. monz.; pinlk and greenish w’ring; med-coarse grained; weakly magnetic; chlor’zed mafics</td>
</tr>
<tr>
<td>CH 1014</td>
<td>RK. CHIP</td>
<td>Pyrite fractures and veinlets in above</td>
</tr>
<tr>
<td>CH 1015</td>
<td>RK. CHIP</td>
<td>Qtz. monz.; strongly pyritized as diss. and fracts; mafics chlor’ized;</td>
</tr>
<tr>
<td>CH 1015A</td>
<td>RK. CHIP</td>
<td>Qtz. monz.; biot after h’bl; epid. fracts; magnetite grains in qtz grains; mod-str. magnetic</td>
</tr>
<tr>
<td>CH 1016</td>
<td>RK. CHIP</td>
<td>Qtz. monz.; pink and greenish w’ring; med-crse gr.; diss pyrite assoc w. mafics; 10% pyrite; str. py fracts.</td>
</tr>
</tbody>
</table>
RK. CHIP (FLT) Intrusive - monz.?

STREAM SED.
STREAM SED.
STREAM SED.
STREAM SED.
STREAM SED.

Pink intrusive + epidote; no veining; minor py; wkly limonitic.

RK. CHIP (FLT) F. gr. intrusive; py + barite + hem + chlorite; some xtalline qtz.

Common intrusive

Intrusive