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## Report on

PROSPECTING, GEOLOGY GEOCHEMISTRY and GEOPHYSICS
on the

WEAVER CLAIMS

Fort Steele Mining Division
NTS $82 \mathrm{~F} / 8 \mathrm{E}$

## $25^{1}$ <br> Latitude $49^{\circ}$ N <br> Longitude $116^{\circ} 03^{\prime}, \mathrm{W}$

for
R.T.Banting Engineering

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TABLE OF CONTENTS
Page
1
1.00 SUMMARY
3
2.00 INTRODUCTION ..... 3
2.10 Location and Access ..... 3
2.20 Topography and Climate
3
2.30 Property and Ownership
5
5
2.50 Scope of 1989 Exploration Program ..... 5
3.00 HEAVY MINERAL SAMPLING ..... 8
4.00 PROSPECTING ..... 10
4.10 Ryder Creek ..... 10
4.20 Galway Creek ..... 13
4.30 Weaver 3 Claim ..... 14
4.40 Fall Prospecting, MC2 Shear Area ..... 15
5.00 GEOLOGY ..... 16
5.10 Regional Geology ..... 16
5.20 Property Geology ..... 17
6.00 HILL VEIN ..... 20
7.00 MC2 SHEAR ..... 23
7.10 Soil Geochemistry ..... 24
7.20 Magnetic Survey ..... 24
7.21 Introduction ..... 24
7.22 MC2 Shear South ..... 25
7.23 MC2 Shear North ..... 25
7.30 VLF-EM Survey ..... 26
7.40 Trenching ..... 27
8.00 GALENA VEIN ..... 36
8.10 Geology and Mineralization ..... 36
8.20 Soil Geochemistry ..... 37
8.30 Magnetic Survey ..... 37
9.00 GALWAY CREEK ..... 40
9.10 Soll Geochemistry ..... 40
9.20 Magnetic Survey ..... 40
9.30 Trenching ..... 41
10.00 CONCLUSIONS ..... 42
11.00 RECOMMENDATIONS ..... 43
12.00 REFERENCES ..... 44
13.00 STATEMENT OF QUALIFICATIONS ..... 45
14.00 APPENDICES following page45
14.10 APPENDIX 1 Description of rock samples
14.20 APPENDIX 2 Rock and Heavy Mineralgeochemical analyses
14.30 APPENDIX 3 Soil geochemistry analyses
Page
Figure 1. Weaver property location map ..... 4
Fiqure 2. Weaver claim map ..... 6
Figure 3. Prospecting map
Figure 4. Weaver claims surface geology Figure 5. Hill vein surface geology
Figure 6. MC2 Shear soil geochemistry Au, Zn, Pb Figure 7. NE MC2 Shear area surface geology Figure 8. SW MC2 Shear area surface geology Figure 9. Mag profiles, MC2 Shear north Figure 10. VLF-EM profiles
Figure 11. Trench 89-5 Geology and sampling ..... in pocket
in pocket
after page 20
in pocket
in pocket
in pocket
in pocket
Figure 12. Trench 89-6, Geology and sampling ..... 27
Figure 13. Trench 89-7, Geology and sampling ..... 29
Figure 14. Trench 89-10, Geology and sampling ..... 30
Figure 15. Trench 89-14, Geology and sampling ..... 31
Figure 16. Trench 89-15, Geology and sampling ..... 32
Figure 17. Trench 89-13, Geology and sampling ..... 34
Figure 18. Galena Vein surface geology ..... in pocket
Figure 19. Galena Vein soil geochemistry ..... 38
Figure 20. Galena Vein magnetic profiles ..... 39
Figure 21. Galway Creek surface geology and anomalous gold in soils
Figure 22. Galway Creek magnetic profiles in pocket
Table 1. Weaver Exploration Expenses, July-November, 1989 ..... 7
Table 2. Selected results of Heavy Mineral Sampling ..... 9
Table 3. Selected analyses of prospecting samples ..... 11
Table 4. Formations and lithologic descriptions, Weaver Claims ..... 18
Table 5. Grab samples from the Hill Vein ..... 20

The Weaver property is located 25 kilometers southwest of Cranbrook, in southeastern British Columbia, and is centered on Weaver Creek, one of the more prolific placer gold tributaries of the Moyie River (Figs. 1 and 2).

The property is underlain by Proterozoic Aldridge and Creston Formation rocks which have been locally intruded by precambrian gabbro and diorite sills and dykes as well as Cretaceous or early Tertiary lamprophyric and felsic dykes. Regionally the felsic dykes are known to carry anomalous gold mineralization and they are believed to be part of a Cretaceous / Early Tertiary gold mineralizing event in the Cranbrook area.

In 1989 a very successful program of prospecting, geological mapping, soil geochemistry and trenching was completed on the Weaver claims. Prospecting has shown that widespread gold mineralization is present in bedrock on the property and geological work has established that gold occurs within discrete quartz veins and in altered diorite and metasedimentary rocks within a prominant regional $N E$ oriented shear zone.

Significant gold has been found in bedrock at five major areas of interest on the property, including two where visible gold is present in quartz.

The Hill Vein has a known strike length of more than 500 meters on the Weaver claims and is one of the largest gold-bearing quartz veins known in the placer gold drainages of Perry Creek and the Moyie River. The vein carries irregularly-developed coarse visible gold in association with euhedral pyrite along its entire known length. The shallow dipping nature of the vein makes it amenable to inexpensive open pit mining methods.

Gold in the MC2 Shear is concentrated within late quartz veins which parallel and cross-cut the shearing, with values up to $0.933 \mathrm{oz} / \mathrm{t}$ on across 40 cm , and within a central quartz-sericite schist. zone where gold values exceed 60 PPB across a width of 4 meters. Altered wallrock adjacent to quartz veins and within shear zones is locally anomalous in gold and demonstrates a possibility for larger tonnage, lower grade lode gold deposits.

The Galena Vein is 2.5 km NE of the MC2 Shear and on the same structure. A silicified zone at this locality averages . 108 oz gold/ton across a 1.2 meter width at one of only two sample sites on the structure. The MC2 - Galena Vein shear zone has a strike length of 6 km across the Weaver claims; it has been sampled for gold only at surface and only at very few localities. The shear zone obviously warrants considerable further evaluation.

Gold mineralization in Galway Creek occurs with a magnetic hematite matrix breccia and in a quartz vein matrix breccia within a zone of strong silicification. Steep topography and deep overburden prevented an adequate evaluation of the Galway Creek area in 1989 but it remains a promising exploration target.

Work done to date indicates that any large economic deposit in the area will be structurally controlled. Detailed geologic mapping should be continued to identify and allow projection of the major structures and lithologic units. Subsequent work should include geophysical exploration such as Induced Polarization surveying to define the better zones of sulfide mineralization within the structures. Resulting anomalies should be drilled.

### 2.00 INTRODUCTION

### 2.10 Location and Access

The Weaver claims are located approximately 25 kilometers southwest of Cranbrook, B.C., and are centered on Weaver Creek which is a major east-flowing tributary of the Moyie River (Figs. 1 \& 2). The western portion of the claims straddle part of the Moyie River / Perry Creek divide with a small portion of the claims covering upper Galway Creek on the Perry Creek side.

Access is via highways from Cranbrook or Kimberley, with very good logging roads providing access to all the tributary drainages; presently inactive logging roads that are still in fair condition provide good road access to the major showings that have been developed on the property.

### 2.20 Topography and climate

The Weaver property is part of the Purcell Mountain Range. Elevation on the claim block ranges from 1460 to 2140 meters and topography varies from gentle and moderate wooded slopes to steep rocky slopes. The climate is moderate with temperatures ranging from +35 to -40 ; extreme temperatures are generally short-lived. The period of snow cover is from mid October or early November to about mid May. The property is forested with pine, fir, larch and balsam. Large areas within the claim block have been clear-cut logged within the past 20 years and these are now in various stages of regeneration.
2.30 Property and Ownership

The Weaver claims are privately owned by J.E.Kennelly of Cranbrook, B.C. with a $50 \%$ cost-sharing responsibility by a Calgary group.

The claim block consists of 112 units in 7 claims with the following details:

Claim Name No. of units Record No. Date of Record Date Due

| Weaver 1 | 20 | 2076 | Feb. 17, 1984 | 1993 |
| :--- | ---: | :--- | :--- | :--- | :--- |
| Weaver 2 | 20 | 1411 | May 12, 1981 | 1993 |
| Weaver 3 | 12 | 1412 | May 12, 1981 | 1993 |
| Weaver 4 | 12 | 1414 | May 12, 1981 | 1993 |
| Weaver 5 | 8 | May 12, 1981 | 1993 |  |
| Weaver 7 | 20 | 1456 | June 9, 1981 | 1993 |
| Weaver 8 | 20 | 1457 | June 9, 1981 | 1993 |



Figure 1
WEAVER PROPERTY
LOCATION MAP


### 2.40 History

Considerable placer gold has been extracted from Weaver Creek. During the time of extensive placer gold production in the late 1800 and early to mid 1900's, prospecting for lode gold sources of the placers was widespread. Numerous quartz veins were tested and some found to be auriferous. No significant lode gold production is known from the area of the present Weaver Claims.

Building of logging roads in the Weaver Creek drainage in 1981 exposed gold-bearing quartz veins and the present Weaver claims were staked as a result (Fig. 2). Early exploration on the property consisted of road building and trenching. These early programs apparently are not well documented.

In 1984 a program of prospecting, geological mapping and soil and rock geochemistry was conducted. Very encouraging gold values were obtained by reconnaissance soil sampling in a few areas on the property. In 1987 a program of soil sampling, trenching and diamond drilling further tested these areas (Morris, 1987). Three holes were drilled at the Hill vein, three at the MC2 Shear area and nine at the Galena Vein. This short hole program (depth of the holes ranged from 14.6 m to 54.3 m ) was not very successful at detecting gold in the bedrock and it can be speculated that insufficient geologic control was employed in the layout of holes.

### 2.50 Scope of 1983 Exploration Program

In 1989 private funding by the owners of the Weaver claims supported an exploration program of prospecting, heavy mineral sampling in selected tributary drainages, soil and rock geochemistry, VLF-EM and magnetic geophysical surveying, geological mapping and trenching. Reconnaissance prospecting covered much of the claim area but the other work was focused primarily on the areas previously identified as containing anomalous gold. Prospecting and heavy mineral sampling have identified other areas of interest on the property but these received little further exploration effort in 1989.


Figure 2. Weaver claim map. NTS 82 F/8E. Scale 1:50,000.

## WEAVER EXPLORATION EXPENSES

$$
\text { July - November, } 1989
$$

Prospecting ..... $\$ 4,720.00$
Géology ..... $10,500.00$
Engineering and Supervision ..... $9,457.00$
Geophysics
Technicians ..... $\$ 2,472.00$VLF \& Mag $1,030.00$
$3,502.00$
Laboratory Analysis ..... 7,149.79
Drafting ..... 489.50
Transportation ..... $4,385.00$
Supplies ..... 444.84
Report ..... $5,000.00$
Equipment
Road construction ..... $\$ 6,492.50$Trenching and Reclamation $24,489.50$
Lowbed ..... $1,331.00$ $32,313.00$

### 3.00 HEAVY MINERAL SAMPLING

A program of heavy mineral sampling was done on the Weaver claims to aid in evaluating the ground. The presence of known gold mineralization provides a means of determining the effectiveness of the survey.

Nineteen heavy mineral samples were collected during the course of prospecting the claim block. The results are both interesting and encouraging; combined with what is known of the mineralized zones on the property, they show that heavy mineral sampling is a very effective means of detecting the presence of bedrock sources of anomalous gold and indicator mineralization.

Sample locations are shown on Figure 3 and a summary of some results in Table 2; complete analytical results are in Appendix 2.

The MC2 Shear area was not effectively tested as the sampling in this area was from locations on the upstream, NW side of the MC2 Shear (samples WEA-1 to 5). One significant gold value of 2660 PPB Au in this group should be followed up with upstream sampling and prospecting.

To the NE of the MC2 Shear (and on the same structure) the gold mineralization of the Galena Vein area was effectively detected with WEA-13 ( 9650 PPB Au). Samples WEA-10 to 12 taken upstream of the Galena Vein have no gold and suggest the mineralization does not extend $N W$ of the known mineralized structure in the immediate area. Sample WEA-17 taken about 1 km downstream of WEA-13 has low gold and shows that close sample spacings are essential for effective detection of bedrock mineralization.

Southwest of the MC2 Shear area, samples WEA-7, 8 \& 9 taken above and below the forks in Ryder Creek very effectively demonstrate the presence of anomalous gold and indicator elements in the upper part of Ryder Creek. The highest gold of the survey ( $10,400 \mathrm{PPB}$ ), taken from the west fork of Ryder Creek, is supported by high copper, lead, zinc, silver, arsenic and the highest boron. Nickel and cobalt are also strongest in the Ryder Creek samples. The anomalous gold indicated by the Ryder Creek samples is very probably from the SW extension of the MC2 Shear structure which projects into the upper part of Ryder Creek. A follow-up of detailed heavy mineral sampling, prospecting, soil sampling and trenching is recommended for this area. The anomalous results in Ryder Creek support the possibility that the MC2 Shear and its strike extension is mineralized for much of its 6 km strike length across the Weaver claims.

Three samples in Galway Creek on the west side of the Weaver claims and in the Perry Creek drainage show that anomalous gold and indicator elements are present here too. The three Galway Creek samples, WEA-14, $15 \& 16$, show a decrease in gold values downstream.

The upstream sample WEA-14 has the highest copper, zinc and arsenic of the survey as well as elevated lead, silver and boron. These results support the presence of lode gold mineralization in the upper Galway Creek drainage.

In summary, the heavy mineral sampling results are very encouraging; they both support the significance of known mineralized zones and point to areas where further exploration is definitely warranted. The apparent effectiveness of the technique should be used to advantage by expanding on the 1989 survey with more detailed sampling over the entire claim block because the results could further help to guide exploration on the property.

Sample No. Location Analyses; Au in PPB, others in PPM

| WEA-1 | W of MC2 Shear | 70 | 5 | 60 | 52 | 147 | 144 | 6.3 | 16 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WEA-2 | " | 5 | 1 | 40 | 1 | 57 | 2 | . 1 | 5 |
| WEA-3 | " | 100 | 5 | 57 | 35 | 67 | 11 | . 4 | 5 |
| WEA-4 | " | 2660 | 4 | 55 | 79 | 81 | 22 | . 3 | 10 |
| WEA-5 | " | 40 | 5 | 58 | 44 | 79 | 25 | . 1 | 11 |
| WEA-6 | SE of claims | 5 | 2 | 29 | 11 | 40 | 2 | . 1 | 7 |
| WEA-7 | Ryder W Fork | 10400 | 12 | 171 | 242 | 286 | 1.14 | 2.6 | 309 |
| WEA-8 | Ryder E Fork | 340 | 4. | 69 | 44 | 68 | 47 | . 2 | 13 |
| WEA-9 | Ryder below forks | 920 | 5 | 1.03 | 71 | 126 | 78 | . 4 | 86 |
| WEA-10 | NW of Galena Vein | 5 | 5 | 52 | 61 | 68 | 39 | . 1 | 8 |
| WEA-11 |  | 5 | 6 | 107 | 82 | 116 | 57 | . 2 | 19 |
| WEA-12 | " | 5 | 8 | 71 | 84 | 80 | 73 | . 1 | 13 |
| WEA-13 | Below Galena Vein | 9650 | 6 | 93 | 81 | 96 | 58 | . 7 | 14 |
| WEA-14 | Upper Galway | 2060 | 14 | 251 | 140 | 551 | 400 | 2.9 | 45 |
| WEA-15 | Mid Galway | 560 | 4 | 59 | 208 | 100 | 79 | 1.8 | 17 |
| WEA-16 | Lower Galway | 310 | 4 | 116 | 78 | 143 | 99 | 1.5 | 18 |
| WEA-17 | Lower Weaver Ck | 70 | 4 | 72 | 47 | 76 | 28 | . 1 | 9 |
| WEA-18 | " | 100 | 2 | 50 | 23 | 62 | 28 | . 1 | 8 |
| WEA-19 | Lowest Weaver Ck | 310 | 1 | 43 | 10 | 42 |  | . 1 | 5 |

Table 2. Selected results of Heavy Mineral Sampling. For sample location see Figure 3 ; for complete analyses see Appendix 2.

### 4.00 PROSPECTING

Prospecting on the Weaver claims was conducted during the early summer and late fall. The initial program was a heavy mineral sampling survey covering all the larger streams within the claim block. Prospecting of the stream beds was done in conjunction with the heavy mineral sampling.

Prospecting on the Weaver claims in 1989 was concentrated in areas away from the discoveries which had been made during earlier exploration activity. Rocks collected were analyzed for a multielement ICP package and geochemical gold; Table 3 lists partial analyses and Appendix 2 lists complete geochemical data.

### 4.10 Ryder Creek

The first area prospected was the headwaters of Ryder Creek, the largest northern tributary of North Moyie Creek. Early placer mining on the North Moyie took place from the mouth of Ryder Creek downstream; signs of monitor activity are still visible in the canyon section of the creek. The distribution of placer gold in North Moyie Creek is thus compatible with a lode gold source within the drainage of Ryder Creek.. The 'Baldy Fault' system which hosts gold mineralization at the MC2 Shear area projects across the upper part of the Ryder Creek drainage.

On the northern side of Ryder Creek (on Cominco Ltd. claims) the Baldy Fault system is similar in character to that seen in Weaver Creek. Wide zones of sheared phyllitic rock are seen across widths in excess of 100 meters. Numerous quartz veins of different widths have been seen paralleling and cross-cutting the shear zone. Most quartz veins contain appreciable amounts of pyrite and chlorite and occasional specks of hematite are present (Sample WEA-R-3, 5PPB Au). This area, like much of the Moyie River drainage, has limited bedrock exposure and overburden inhibits thorough prospecting of bedrock even near ridge crests.

Tracing the Baldy Fault system northeast from Cominco's claims onto the Weaver group is difficult because of extensive glacial drift cover in the Ryder Creek valley bottom. Just short of the Weaver property boundary, in the creek bottom, a concentration of angular magnetic diorite float was found (WEA-R-11, 5PPB Au). Epidote, disseminated magnetite and pyrrhotite are common in these float boulders; narrow calcite veining and pyrite are less common while chalcopyrite is rare. Going north up the creek bottom, most of the limited exposed bedrock is bleached and altered with pyrite commonly coating joint surfaces. Disseminated iron sulfide and wisps of chlorite can be seen in silicified sections of the altered sedimentary rocks. Alteration is notably most intense near the bottom of the creek valley, suggesting a structural control; outcrops observed higher up the flanks of the drainage are less altered.

Analyses
Gold in PPB; others in PPM

| Sample Number | Au | Mo | Cu | Pb | Zn | As | Ag | B |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WEA-R-1 | 5 | 1 | 24 | 15 | 64 | 5 | 0.1 | 5 |
| WEA-R-2 | 20 | 2 | 16 | 12 | 10 | 9 | 0.2 | 5 |
| WEA-R-3 | 5 | 3 | 12 | 46 | 1 | 19 | 2.0 | 5 |
| WEA-R-4 | 270 | 1 | 6 | 27 | 4 | 15 | 0.5 | 89 |
| WEA-R-5 | 10 | 2 | 3 | 2 | 1 | 4 | 0.1 | 20 |
| WEA-R-6 | 5 | 2 | 42 | 3 | 16 | 2 | 0.4 | 5 |
| WEA-R-7 | 5 | 1 | 2 | 3 | 1 | 10 | 0.5 | 25 |
| WEA-R-8 | 5 | 4 | 6 | 1 | 14 | 2 | 0.5 | 5 |
| WEA-R-9 | 710 | 3 | 1258 | 205 | 14 | 2 | 4.2 | 28 |
| WEA-R-10 | 40 | 3 | 500 | 15 | 5 | 24 | 4.7 | 7 |
| WEA-R-11 | 5 | 1 | 44 | 1 | 83 | 2 | 0.1 | 5 |
| WEA-R-12 | 5 | 1 | 9 | 4 | 218 | 33 | 1.4 | 5 |
| WEA-R-13 | 20 | 1 | 116 | 3 | 45 | 15 | 0.8 | 5 |
| WEA-R-14 | 830 | 1 | 6 | 4 | 49 | 20 | 0.1 | 7 |
| WEA-R-15 | 250 | 1 | 4 | 1 | 44 | 17 | 0.3 | 5 |
| WEA-R-16 | 1500 | 1 | 17 | 21 | 33 | 79 | 0.1 | 19 |
| WEA-R-17 | 5 | 2 | 6 | 59 | 17 | 15 | 2.5 | 81 |
| WEA-R-18 | 20 | 1 | 1 | 1 | 26 | 2 | 0.1 | 675 |
| WEA-R-19 | 5 | 60 | 1785 | 60 | 96 | 10 | 3.4 | 32 |
| WEA-R-20 | 160 | 1 | 27 | 1 | 91 | 4 | 0.3 | 5 |
| WEA-R-21 | 5 | 2 | 6 | 18 | 23 | 18 | 0.9 | 105 |
| WEA-R-22 | 10 | 2 | 10475 | 1069 | 24 | 3 | 1.6 | 481 |
| WEA-R-30 | 5 | 48 | 29 | 236 | 110 | 84 | 0.1 | 5 |
| WEA-R-31 | 5 | 7 | 275 | 317 | 36 | 3 | 0.5 | 5 |
| WEA-R-32 | 5 | 5 | 57 | 67 | 27 | 11 | 0.1 | 5 |
| WEA-R-33 | 5 | 1 | 3 | 9 | 1 | 3 | 0.1 | 5 |
| WEA-R-34 | 5 | 1 | 15 | 7 | 20 | 2 | 0.1 | 5 |
| WEA-R-35 | 20 | 1 | 7 | 3 | 15 | 60 | 0.1 | 163 |
| WEA-R-37 | 47000 | 2 | 334 | 9271 | 26 | 3 | 28.9 | 59 |
| WEA-R-38 | 230 | 1 | 73 | 753 | 20 | 2 | 0.3 | 18 |
| WEA-R-40 | 680 | 1 | 30 | 136 | 46 | 47 | 0.4 | 5 |
| WEA-R-41 | 5 | 1 | 4 | 3 | 9 | 2 | 0.1 | 52 |
| WEA-R-42 | 12100 | 9 | 1751 | 29709 | 1404 | 56 | 10.0 | 841 |
| WEA-R-43 | 430 | 1 | 81 | 1206 | 118 | 2 | 0.3 | 19. |
| WEA-R-44 | 5 | 1 | 49 | 133 | 26 | 38 | 0.1 | 5 |
| WEA-R-45 | 16000 | 4 | 481 | 6322 | 246 | 20 | 7.5 | 125 |

Table 3. Selected analyses of rock samples collected during prospecting. For location see Fig. 3. For complete analysis see Appendix 2.

Approximately 200 meters north of the Weaver property boundary, Ryder Creek divides upstream into two small tributary streams. The west drainage does not extend upstream as far as the map indicates (Fig. 3). A fist sized piece of massive fine-grained pyrite was found in the western tributary just above the intersection of the two drainages (not sampled). Further prospecting along the western edge of the valley bottom was unsuccessful at locating the source of the mineralization or any additional rock like it. Glacial drift cover is rather extensive in this area.

The eastern tributary of Ryder creek is well defined and cuts through considerable bedrock, most of which is strongly sheared. The drainage is well defined above the junction for approximately 500 meters, above which the headwall rock of the upper Ryder basin is approached. A series of overburden-filled gulleys extends below these glaciated headwall rocks which form the south side of the ridge separating Ryder and Weaver Creeks. Scattered fragments of bull quartz and quartz stockwork material can be found in this terrain. The bull quartz tends to be barren of sulfides with only slight iron and manganese staining. The stockwork material is noticeably limonite rich with pyrite common on the margins of narrow quartz veinlets. This stockwork material is quite abundant but no obvious float train could be established, and the headwall rock exposures don't appear to be the source.

Just to the east of this eastern tributary of Ryder Creek, a small fine-grained magnetic diorite dyke strikes slightly west of north with a moderate west dip. Along the exposed margin of the dyke narrow zones of specularite and chlorite occur as small tension crack fillings. This occurrence is in contrast to most rocks in the area which show essentially no rust, chlorite or hematite on fracture surfaces. More alteration is present near the ridge crest north of the dyke, and westerly of this location on the ridge, more iron staining and quartz is evident. The topography of the ridge here is quite broken up for about 250 meters.

One prominant quartz float train was found just below the ridge crest on the Ryder Creek side and quartz was traced for 100 meters in a northeast direction. The quartz float is vuggy iron-stained bull quartz with occasional cubes of oxidized pyrite (WEA-R-20, 160 PPB $A u$ ). The largest piece of quartz found is about 20 cm across.

Further west along this ridge, overlooking the Galway Creek drainage to the north, a series of old workings were discovered on two narrowly-separated bull quartz veins which strike northeasterly. The eastern vein dips easterly while the western vein dips to the west. The veins have been extensively prospected in the past with trenches and at least one short adit (now caved). Most of the quartz is clean, milky, vuggy and coarse-grained with some limonite staining along fractures (WEA-R-1, $2,5 \& 6 ; 5,20,10 \& 5$ PPB Au). Small patches of iron carbonate are present. The sheared gouge contact zones of the veins locally carry hematite and pyrite.

Further to the west along the ridge, approximately on the western boundary line of Weaver 8 , a narrow one meter zone of silicification with fine-grained pyrite was discovered (WEA-R-7, 5PPB Au). The zone strikes in a northeast direction with a westerly dip. Just beyond the silicified zone a number of angular pieces of magnetic diorite float were encountered.

Prospecting of Ryder Creek was completed with a traverse along the ridge adjacent to the southwest corner of the property. One two meter wide zone of badly broken quartz stockwork material was found. This zone has been previously explored with a series of short shallow hand trenches. The material is a mixture of quartz and country rock, heavily iron stained and with traces of pyrite and hematite (WEA-R-4, 270 PPB Au).

## 4. 20 Galway Creek

Galway Creek is a major north-flowing tributary of Perry Creek; it is located immediately north of Ryder Creek on the western edge of the Weaver claim block.

The north-facing aspect results in considerably more dense vegetation cover than is present in Ryder Creek and prospecting is consequently more difficult and less productive. Many of the bedrock exposures in the tight draws of the headwaters area are covered with moss.

From the end of the logging road in the Galway Creek bottom to well up into the east tributary, hematite matrix breccia float is commonly found (WEA-R-18, 20 PPB Au). Sheared metasedimentary rock Eloat with malachite staining and chalcopyrite (WEA-R-19, 5 PPB Au) was found in a talus slope a short distance east of this tributary. Around the small lake which forms the headwaters for the creek numerous pieces of chlorite matrix breccia were seen (WEA-R-17, 5 PPB Au).

Immediately south of this lake, within a brushed-in steep draw, heavily sheared Upper Aldridge siltstone is broken into bands by a wide silicified zone. Within the silicified zone are narrow breccia veins containing hematite and pyrite as well as limonitic and pyritic quartz stockwork zones (WEA-R-16, 1500 PPB Au). Just above and south of the steep draw is a small cirque basin immediately below the ridge separating Galway and Ryder Creeks. At the northeast edge of the basin the remains of an old prospector's cabin was found. Quartz float material of different composition is erratically located along the last talus slope to the ridge. The majority of this material comes from the old workings which explored two adjacent quartz veins (described under Ryder Creek).

A short distance northeast of the lowermost bull quartz, a number of fragments of iron-rich siliceous-altered float were found. This material is strongly limonitic throughout and carries remnant pyrite. Threc samples of this material (WEA-R-13, $14 \& 15$ ) ran 20, 830 and 250 PPB Au. This float trends in a northeast direction and was traced for a distance of about 150 meters. A traverse of the steep slope above the float area did not discover a bedrock source although bedrock is only sparsely exposed here due to a thin cover of overburden and thick buckbrush. A series of contour soil geochem lines should be run across this slope to define the source of the gold-mineralized quartz-limonite float. Bedrock on the slope is iron stained with occasional narrow quartz stringers.

A short distance west of the old cabin site is the largest lake on the Weaver property and the source for the west fork of Galway Creek. Prospecting from this lake north along the western boundary of the Weaver property failed to provide any significant discoveries within the partially exposed bedrock. There are, however, numerous small quartz veins scattered through the terrain; these typically are chloritic and contain minor disseminated pyrite.

The eastern slope of the Galway Creek drainage is well developed with logging roads and bedrock has been relatively newly exposed by the main haulage roads and numerous skid roads. Most exposures are of normal unaltered bedrock. Features of interest include an easterly-trending chlorite matrix breccia (Sample 26664) which ran 10 PPB Au from a grab sample taken off the roadcut (see fig. 3 for location). South of this breccia zone a 20 to 30 cm wide clean white bull quartz vein exists on a parallel trend to the breccia.

In a steep gulley just above the ford across Galway Creek, considerable bedrock has been exposed by erosion. Two narrow zones of pyritic hematite matrix breccia trend northerly and parallel to bedding within this exposure (WEA-R-21, 5 PPB Au). Southeast of this occurrence, just below the ridge crest separating Galway and Weaver Creeks, a number of pieces of angular chlorite matrix breccia float (sample number WEA-R-18, 18 PPB Au) were found. Some of this material carries hematite and pyrite (not sampled).

### 4.30 Weaver 3 Claim

Much of the southeast corner of the Weaver property is covered by overburden with thick forest and alder. A large exposure of gabbro east of the Hill Vein was the only outcrop encountered. The gabbro hosts a number of quartz veins which trend from 105 to 140 degrees and are thus roughly parallel in trend to the $A u-P b-Z n-A g-b e a r i n g$ Vine Vein which occurs east of the north end of Moyie Lake. Two of
the quartz veins which carry iron and chalcopyrite and are faintly stained with malachite have been explored with small hand pits (WEA-R-9 \& $10,710 \& 40$ PPB Au). The largest quartz vein observed is about one meter wide, smokey white and devoid of mineralization except for minor biotite and chlorite.

The gabbro also has a series of narrow easterly-trending shears which have no quartz veins but are heavily Mn-stained and commonly have epidote, hematite and magnetite. On the flat above the main exposure, a large amount of bleached gabbro float is sugar white on weathered surfaces with only a slight green hue along fractures.

West of the Hill Vein in an old logged area, a number of landings and skid trails seem close to exposing bedrock. A number of areas of noticeably iron-stained soil occur with angular fragments of metasedimentary rock. Bull quartz float with vugs and pyrite is also present. Along the top fireguard trail, gabbro float is vuggy and carries epidote and large blebs of magnetite and hematite. Some metasedimentary rock float along this trail has epidote developed along bedding planes. Southwest of this area, over a low divide and close to the gabbro contact, a zone of silicified Middle Aldridge rocks contains fine-grained pyrite. In the same general area a number of pieces of fine-grained punky orange pyritic and limonitic gabbro float were found.

### 4.40 Fall Prospecting, MC2 Shear Area

Late in the autumn of 1989 further prospecting was conducted along the presumed strike of the MC2 Shear showings, in both directions.

Southwest of the showings two quartz zones were found with disseminated pyrite, chalcopyrite and galena. One occurrence consists of two galena-bearing quartz veins in diorite within the shear zone (WEA-R-42, 12,100 PPB Au); the other is a 45 cm wide quartz vein in sheared Aldridge metasedimentary rocks (WEA-R-45, $16,000 \mathrm{PPB} A u)$. The shear was prospected for a distance of approximately 400 meters beyond the MC2 trenches. The shear maintalns the same character as in the trenched area. Narrow diorite dykes occur within the shear zone along with pyritic, chloritic and silicified quartzites and siltstones. Narrow quartz veins are common, trending parallel and sub-parallel to the shear zone.

Northeast of the MC2 Shear area sheared Middle Aldridge bedrock is exposed about 150 meters upslope past the Weaver Middle Fork. Quartz veins with some pyrite occur along the NW margin of the outcrop. No diorite was seen in this area.

The last area prospected was the headwaters of the north fork of Weaver Creek. A moderate sized shear exists at the end of the logging road just below the north Weaver Lake. Pyritic silicified zones mixed with hematite-matrix breccia axe exposed across a width of three meters (WEA-R-35, 20 PPB Au). Northwest of this area, just off the property boundary, a magnetic lamprophyre dyke was discovered. It strikes easterly and heads toward a 1.5 meter wide pyritic quartz vein which has been explored with a short adit and a number of shallow hand trenches.

A final traverse was made along the north boundary of the claims; heavy overburden and thick brush inhibit effective prospecting here and no significant discoveries were made.
5.00 GEOLOGY

### 5.10 Regional Geology

Recent mapping by Reesor (1981), Hoy and Diakow (1982) and Hoy (1984) has developed a good understanding of the geology and structure of the Cranbrook area of southeastern B.C. This area, which includes the Weaver claims, is part of the Purcell Anticlinorium, a geological sub-province which lies between the Rocky Mountain Thrust and Fold Belt to the east and the Kootenay Arc to the west.

The Purcell Supergroup, which occurs within the core of the anticlinorium, includes up to 11 kilometers of dominantly fine-grained clastic and carbonate rocks.

The Weaver claims are underlain by parts of the two lowermost units of the Purcell Supergroup, namely the Aldridge and Creston
Formations. Both formations are fine-grained clastic rocks; the Aldridge is comprised predominantly of a thick succession of impure quartzites and siltstones of turbidite affinity while the Creston Formation is a shallower water sequence of cleaner quartzites but with considerable siltstone and argillite. The Aldridge Formation is cut by a series of gabbro to diorite composition sills and dykes; a few dykes extend into the Creston Formation.

In a broad regional manner, structure of the Cranbrook area is dominated by a series of NNE oriented faults, at least some of which are believed to have been active during sedimentation in the Precambrian and thus have locally modified the type, distribution and thickness of late Proterozoic and Paleozoic rocks (Leech, 1958; Lis and Price, 1976).

The Weaver claims sit within an area of increased structural complexity which is more or less centered on the three prominant placer gold streams in the Cranbrook area, namely Perry Creek and the Moyie and Wildhorse Rivers. A series of NNE to NE oriented shear zones and a series of east to NE oriented transverse faults create the block-faulted structurally complex area within which the placer gold occurs. In the opinion of the author, the block faulted zone and the placer gold are directly related, as lode gold sources are believed structurally controlled.

Cretaceous intrusives of granodiorite to syenite composition are scattered through the general area of placer gold occurrence near Cranbrook. These young rocks are probably the eastern limit of intrusives associated with the Nelson Batholith. Some of the syenite and quartz monzonite stocks carry considerable disseminated pyrite, pyrrhotite and chalcopyrite and tend to be anomalous in gold; it is believed that this intrusive activity is responsible for virtually all of the gold mineralization known in the Cranbrook area.

### 5.20 Property Geology

Regional mapping by federal and provincial geologists provides only a basic framework of the geology of the Weaver claims. The claim block is underlain by rocks of the Aldridge and Creston Formations. Table 4 provides a brief description of the main lithologies.

The only major intrusives in the claim block are Precambrian gabbro and diorite sills and dikes. Minor occurrences of younger, Cretaceous or early Tertiary felsic intrusive activity have been recognized during the 1989 trenching program and Cretaceous lamprophyre dyke float has been recognized at a few localities.
CRETACEOUS
Felsic dykes associated with syenite / monzonite intrusives.
PROTEROZOIC Helikian Purcell Supergroup
Upper Creston Fm. Deep green siltstone, light and dark, thinlylaminated argillite and siltstone; purpleargillite.
Middle Creston Fm. Grey, blocky siltstone and very fine quartzite in beds to 30 cm or more, commonly ripple marked, and commonly purple lined or mottled; black to deep purple argillite and thin-bedded siltstone; white, medium-grained quartzite commonly associated with mud-chip breccias.
Lower creston Fm. Thin-bedded dark argillite and grey siltstone characterized by irregular pinching and swelling of beds, ripple cross-lamination, mud-cracks, minor cut and fill features; green siltstone with thin interbeds of argillite.
Upper Aldridge Fm. Rusty weathering, black argillite and silty argillite, fine, regular white laminae of siltstone.
Middle Aldridge Fm. Light grey weathering, grey quartzite andsiltstone in beds 10 to 70 cm ; interbeds ofdark argillite and thin-bedded alternatingblack argillite and grey siltstone.
Lower Aldridge Fm. Rusty weathering, laminated or cross-beddedquartzite, argillite and silty argillite.(Unit not identified in Grassy Mountain map-area).

Table 4. Formations and lithologic descriptions, Weaver claims. From Reesor, 1981.

Structure of the claim block consists of predominantly west-dipping beds which have been cut by a series of NE to NNE faults and shear zones.

Available geologic mapping of the area is not detailed enough to establish the magnitude of movement along the structural breaks. One major fault juxtaposes Middle Creston rocks and upper Middle Aldridge rocks resulting in a minimum vertical displacement of 1500 meters. Faults which occur entirely within the Middle Aldridge Formation could have displacement of similar magnitude but careful detailed mapping and a knowledge of subtle Aldridge Formation marker stratigraphy are required to effectively resolve such displacement.

Exploration on the Weaver claims in 1989 demonstrated the existence of significant gold mineralization in the NE and NNE oriented shear zones and these structures are therefore a primary exploration target. Mineralization might be further concentrated at or near where other faults intersect these shear zones.

The Weaver claims sit between the Cranbrook and Moyie transverse faults which may also be major controls of gold mineralization. No east-west oriented cross faults are known on the Weaver claims but the prominant east-west oriented linear of Weaver Creek suggests it is structurally controlled. Significant gold values have been returned from E-W and ESE oriented quartz veins on the Weaver property; these may be related to easterly oriented structures and suggest an important role for cross structures in the localization of gold mineralization.

Specific exploration was carried out in the following areas on the property:

1. Hill Vein
2. MC2 Shear
3. Galena Vein
4. Galway Creek

The Hill Vein, MC2 Shear and Galena Vein are previous discoveries which were trenched and drilled in the 1987 program; the 1989 work expanded on the previous work with most of the effort devoted to the MC2 Shear.

### 6.00 HILL VEIN

The Hill Vein is a north-striking, shallow west-dipping quartz vein which is exposed by trenching along a strike length of more than 500 meters. Visible gold is associated with coarse-grained euhedral pyrite along the entire trenched extent of the vein.

The shallow dipping nature of the Hill Vein and the presence of gold mineralization along the entire known strike length of the vein provide open pit mining potential but the Hill Vein has not been sufficiently evaluated to establish any tonnage or grade figures.

Previous work on the Hill Vein consists of extensive shallow trenching. Figure 5 shows the pre-1989 trenching as well as the location of 5 trenches dug in 1989. Unfortunately the old trenches have sloughed in, preventing systematic sampling of the vein and no record of any pre-1989 systematic trench sampling is known to the author. The old trenches were not opened up in 1989.

A series of rock samples collected from the Hill Vein trenches are summarized in Table 5. The selectcd samples are not representative of the vein as a whole, but they do show that significant gold mineralization is present in the vein and adjacent rocks.
Sample No. PPB Au Oz/ton Description
(converted from PPB)

| 7236 | 4260 | .124 | Quartz and pyrite |
| ---: | ---: | :---: | :--- |
| 7237 | 4100 | .120 | Massive vuggy quartz, leached py |
| 7238 | 180 | .005 | Quartz vein, oxidized pyrite |
| 7239 | 32000 | 0.93 | Quartz vein, py, two flecks $v . G$. |
| 7240 | 10 | - | Altered micaceous green diorite |
| 7241 | 360 | .01 | Altered hangingwall siltstones |
| 7242 | 5100 | .149 | Pyritic quartz in gabbro sill |

Table 5. Grab samples from the Hill Vein. For a more complete description and analysis see Appendix 1 \& 2 .

The Hill Vein is hosted by Middle Aldridge quartzites and siltstones; it appears to be between 0.5 and 1.0 meters thick although existing exposures are insufficient to establish an accurate average thickness. Immediately west of the surface exposure of the vein is a large gabbro sill; a near-vertical fault cuts the Hill Vein and has displaced it against the gabbro to the west.


Movement on the fault is unknown. It may be possible to establish the relative movement and amount of displacement on the fault by detalled mapping of the surface geology, as suitable markcr units do exist within Middle Aldridge strata. The fault limits the size potential of the known Hill Vein ; the down-dip extent of the vein between surface and the fault is probably an average of less than 30 meters.

Thus, although the Hill Vein may be of sufficient grade to permit economic open pit mining, structure appears to limit the available tonnage and the real significance of this gold mineralized vein may be what it represents in regard to larger mineralized structures in the area.

Quartz veining with similar attitude and gold mineralization to that of the Hill Vein occurs within the gabbro on the west side of the Hill Vein Fault (Sample 7242, Fig. 5).

The presence of gold-mineralized quartz veins of similar attitude to the Hill Vein but within the gabbro on the west side of the Hill Vein Fault suggests three things:

1. Other gold-mineralized quartz veins than those already known probably occur in the immediate vicinity (these might be successfully prospected for with geophysics).
2. The north-striking Hill Vein Fault may be the structure along which mineralizing fluids migrated to eventually produce the Hill Vein and the gold-bearing quartz veins in the gabbro to the west.
3. The presence of gold-bearing quartz veins in the gabbro provides another parameter for exploration evaluation; some of the gabbro sills in the Middle Aldridge Formation are very thick, in the order of hundreds of meters, and any strongly-developed goldmineralized quartz vein within a thick gabbro sill could be of significant size.

Trench 89-22 at the north end of the Hill Vein exposed a complex association of altered reddish-oxidized gabbro on the west and altered Middle Aldridge sediments to the east. The contact relationships were not well defined in the trench. Two felsic dykes intruding the sediments within the trench occur at attitudes of $099 / 75 \mathrm{~S}$ (sample 26793, 5 PPB Au ) and $015 / 75 \mathrm{~W}$ (sample 26794, 10 PPB $\mathrm{Au})$ i.e. parallel to the orientation of known and inferred faults. These are the only felsic intrusives confidently identified on the Weaver property to date and, although not significantly anomalous in gold, they may serve to link the gold mineralization to felsic intrusive activity.

One of the felsic dykes carries disseminated pyrite, specular hematite and chloritic seams which are a matrix to weak brecciation; a weakly developed chlorite-matrix breccia. This feature has been observed elsewhere in the general area of the Weaver property and strongly suggests that the other chlorite-matrix breccias seen on the Weaver property are products of felsic intrusive activity (eg. at Galway Creek and at the MC2 Shear).

One of the felsic dykes is cut by thin lensey quartz veinlets. This late phase of silicification may be part of the gold mineralizing process.

Middle Aldridge sediments adjacent to the felsic dykes tend to be quite strongly altered with a manganese- and limonite-stained, punky character.

Within Trench 89-22, a 50 cm thick, bedding-parallel quartz vein is oriented at approximately $035 / 25 \mathrm{~W}$; it may be the northern extension of the Hill Vein. The quartz vein contains rusty vugs and minor disseminated pyrite. Altered quartzites on both the hangingwall and footwall of the vein are brecciated with quartz veining and are limonitic with minor pyrite. Sampling of the zone gave:

Hangingwall 50 cm 340 PPB Au (26795, Appendix 2)
Quartz vein 50 cm 1820 PPB Au (26796, Appendix 2)
Footwall 50 cm 270 PPB Au (26797, Appendix 2)
These results show that very interesting gold values exist both within the quartz vein and the altered wallrock; a more extensive evaluation of the zone is warranted. Other limited rock geochemistry completed on the Hill vein shows that altered wallrock elsewhere at the immediate hangingwall and footwall contacts of the quartz vein is anomalous in gold. These results suggest that, at some favourable location along the vein, economic mineralization may extend beyond the actual limits of the Hill Vein itself.

The orientation of the Hill Vein may be another important clue to discovery of a sizeable economic deposit in the area. The Hill Vein and the fault to the west are north-striking. If The Hill Vein Fault was a controlling structure, then exploration along it could lead to discovery of a larger deposit where an intersecting, mineralized structure is encountered. Within the Weaver property, the strongly linear east-west oriented Weaver Creek is a favourable candidate for such an intersecting break. The strongly linear character of Weaver Creek extends westward only to the point where the MC2 Shear / Galena vein structure crosses the creek.

Further work is warranted to follow the Hill Vein Fault north to its intersection with a possible structure in Weaver Creek. Geophysics may be necessary to pursue the structure below possible thick overburden between the Hill Vein and Weaver Creek. Both VLF-EM and IP should be tried over the Hill Vein and then extended to the north if they successfully detect the structure or the disseminated sulfide mineralization of the Hill Vein which occurs proximal to the Hill Vein Fault.

### 7.00 MC2 SHEAR AREA

MC2 is an abbreviation for Weaver Mining Claim No. 2. This 'shear' is one of a series of NE to NNE oriented faults and shear zones that cut bedrock in the area of the Weaver Claims.

Regional mapping of the area by Reesor (1981) provides a good basis for understanding the regional geologic framework of the claim area but is insufficient for understanding the structure in detail. Reesor's map identifies one of the more prominent NE faults as the 'old Baldy Fault'. In the upper Weaver Creek drainage it is a high angle reverse fault which juxtaposes Creston Formation rocks on the west with Aldridge Formation rocks on the east. North of the Weaver Claims the Old Baldy Fault is entirely within the Creston Formation, with an unnamed fault separating Creston and Aldridge Formations some distance to the east (Fig. 4). Reesor's mapping shows a rather complex series of these parallel and sub-parallel fault zones which are perhaps best referred to as the 'old Baldy Fault System'. Individual fault or shear zones within this system can be named separately as detailed mapping identifies the particular structures.

The fault which displaces Middle Aldridge and Creston Formation rocks in the Weaver claims area is referred to as the 'AC Fault' (for Aldridge-Creston) in this report. The MC2 Shear is a paralleltrending, NE oriented structure occurring about 150 meters $S E$ of the AC Fault in the upper Weaver Creek 'MC2 Shear' area. Both structures carry significant gold mineralization in the MC2 Shear area and they provide the best exploration targets presently known on the property. Exploration in the MC2 area in 1989 included geologic mapping, soil geochemistry, VLF-EM and magnetic surveying, and trenching. A few days of late fall prospecting covered the SW extension of the MC2 Shear, beyond the area of the more detailed work.

### 7.10 Soil Geochemistry

An early phase of geologic mapping and rock sampling in the MC2 Shear area established that strong anomalous gold mineralization is present. Gold was detected in both NE and E-W structures and bedrock exposure is relatively sparse in the immediate area thus a detailed soil geochem grid was completed to help define trenching targets.

Line spacing was 20 meters with 20 meter sample spacings (Fig. 6). Samples were analyzed for geochemical gold and a multi-element ICP package. Complete analytical results are given in Appendix 3.

A strong and fairly distinct NE-oriented gold anomaly was successfully defined by the survey. Both lead and zinc tend to correlate with gold.

Much of the trenching done in the MC2 area was a follow-up of anomalous soil geochemistry. Significant bedrock gold mineralization was detected.

The soil geochem grid should be expanded uphill to the south where prospecting has found anomalous gold in bedrock. Some soil geochem is warranted in upper Ryder Creek as well, on strike with the MC2 Shear to the southwest and where stream geochemistry has detected significant anomalous gold and indicator elements.

### 7.20 Magnetic Survey

### 7.21 Introduction

Three magnetic rock types may be associated with gold mineralization or with favourable structural breaks on the Weaver claims.

1. Diorite dykes like the ones within the MC2 Shear zone can be magnetic; they represent structural breaks along which gold-mineralizing fluids may have migrated and their chemistry appears to be favourable for precipitation of gold from hydrothermal solutions.
2. Hematite matrix breccias are believed related to gold-associated felsic intrusive activity. Some are known to be magnetic and some are anomalous in gold. Locating and tracing hematite matrix breccias could aid in discovering bedrock sources of gold mineralization.
3. Magnetic lamprophyre dykes are known to occur in the region and lamprophyre float has been found on the Weaver claims. Lamprophyre dykes appear to be an integral part of mesothermal gold deposits (Rock et al, 1988, 1989) and the presence of lamprophyre dykes in the Weaver claims area suggests a genetic relationship exists here too. Identification of lamprophyre dykes in place could help in locating gold mineralization on the Weaver property.

Because these three magnetic rock types are known regionally and on the property and because they may be favourable for gold mineralization, magnetic surveys were conducted on a reconnaissance scale and on grids at the MC2 Shear, Galena Vein and Galway Creek areas.

### 7.22 MC2 Shear South

One reconnaissance mag line was surveyed along the road which roughly parallels 70 S on the MC2 Shear grid. The line location and mag profile are shown on Fig. 8. The gabbro / diorite on the eastern margin of the MC2 Shear in this area is distinctly magnetic. The Creston Formation - diorite contact here is only weakly anomalous in gold but better mineralization is known just to the NE along what may be the same structural break (Fig. 8). Mag surveying should help to identify the favourable zone for some of the intervening distance.

### 7.23 MC2 Shear North

The intersection of the MC2 Shear and a possible E-W structure in Weaver Creek is considered a favourable exploration target.

Reconnaissance mag lines were run across the northern projection of the MC2 Shear immediately south of Weaver Creek. Anomalous responses were detected and subsequently a grid of 6 lines at 130 degrees, each 30 meters apart was covered by a hip chain and compass controlled mag survey. No diurnal corrections were made but some of the anomalous responses were checked with good reproduceable results and effort was made to repeat readings on lines surveyed earlier. As a consequence the results are considered accurate and the detected anomalies are considered bedrock responses.

Mag profiles are shown on Figure 9 and the grid location is indicated on Figure 4.

The survey area is of generally low relief and is almost entirely overburden covered. A distinct NE-oriented mag anomaly was crossed on all 6 lines with a possible parallel-trending second anomaly on Lines 1 and 2. The anomalies may represent magnetic dioxites which are known to be included in the MC2 Shear. Gold is concentrated at the margins of diorites within the shear to the south and in the Galena Vein area to the north thus these mag anomalies may reflect gold mineralization here as well.

### 7.30 VLF-EM Surveying

A number of reconnaissance VLF-EM survey lines were completed on the Weaver property in 1989 in the hope of detecting structures which would enhance knowledge of the genlogic picture and aid in developing target areas for more detailed exploration. A Sabre Model 27 VLF-EM instrument was used.

Suitable transmitter stations exist only to the east and west of the property and it is thus normally only practical to define VLF-EM conductors which are aligned approximately east-west.

The main NE shear zones may be too wide to provide a distinctive VLF-EM response although diorite-siltstone contacts within the shear typically are faulted with some gouge.

The reconnaissance survey detected only very weak VLF-EM responses (Fig. 10). These were not followed up with additional lines and significant interpretation of the data cannot be made.

### 7.40 Trenching

Figures 7 and 8 show geology and trenches of the MC2 area. More detailed mapping of some individual trenches is given in figures 11 to 17.

Two areas of significant anomalous gold have been defined; the MC2 Shear zone and the AC Fault zone. In the area of the MC2 Shear these sub-parallel trending structures are about 150 meters apart.

Trenches $89-5,6,7,10,12,14$, and 15 crossed the soil geochem anomaly on the MC2 Shear (Fig. 7). Trench 89-9 was dug in the area of an east-west gold-mineralized quartz vein near $275 \mathrm{~N}, 650 \mathrm{E}$ on the MC2 grid. The trench parallels structure, and the cross-cutting vein was not seen.

The MC2 Shear zone is developed within quartzites and siltstones of the Middle Aldridge Formation. Bedding parallels cleavage with NE strike and moderate west dip. Beds are chloritic and silicic altered and commonly disrupted by brecciation and quartz veining. Disseminated pyrite is usually present where more intense silicification exists.


Thin limonitic
Quarter veins in sheared argillites at NW end 1
trench

26675 40 PPS AV Very strongly sheared 40 pos diorite at contact Strong shearing 4 oxidation over 1 meter Diorite is more competent to Nw



Scale 1:200

> Figure II. Trench 89-5. Geology and Sampling For trench location see Fig. 7


Scale 1:200

Figure 12. Trench 89-6. Geology and Sampling For trench location see Fig. 7 .

Sheared thin bedded

M. Aldridge Siltstone : Argillite


Scale 1:200

Figure 13. Trench 89-7. Geology and sampling for trench location see Fig. 7


Scale 1: 200

Figure 14. Trench 89-10. Geology and Sampling For trench location see Fig. 7.



A series of lensey diorite dykes occur within the sheared, silicified and locally brecciated siltstones. These range in character from being quite massive to being strongly foliated. Quartz-carbonate veining can be well developed in the diorites. In trenches 89-14 and 15 a purple-green hued quartz-sericite schist may be intensely deformed diorite. Margins of the diorites typically are small fault zones with less than one meter of fault gouge. Quartz veining is commonly present in these fault zones, often with anomalous gold. The diorite-siltstone contacts appear to be favoured sites for gold mineralization, due to either the competency contrast between the two lithologies which would create dilatent zones during deformation or the favourable mafic chemistry of the diorites which might provide a local reducing environment.

Trench 89-8 (Fig. 7) was started to cross the soil geochem anomaly but a NE-oriented quartz vein was exposed at the beginning of the trench (now the east end of the trench) and the trench was re-oriented to expose this vein along strike. Five chip and grab samples were taken (Samples 26809 to 26812; Fig. 7 and Appendix 1 and 2). Gold values range from 60 to 1470 PPB. These samples are also anomalous in copper, lead and boron with maximum values of 198 , 198 and 240 PPM, respectively. The quartz vein is chloritic, particularly on the footwall contact; it contains fine-grained pyrite and fragments of altered argillaceous wallrock. The vein appears to pinch out to the SW but was not trenched to its extremity on the NE end. During trenching no means was available to effectively clean off bedrock exposures and the rubble cover prohibits accurate detailed mapping. Nevertheless the sampling shows persistent gold mineralization in one of the larger quartz veins exposed by trenching and demonstrates that economic grades might readily be developed in similar situations.

Gold mineralization occurs in a widespread manner within the portion of the MC2 Shear that has been trenched. Economic concentrations of gold might be developed along this zone at depth or on strike of the trenched area. Prospecting late in 1989 identified significant gold mineralization SW of the trenched area and presumably in the same structure. In addition, heavy mineral sampling in upper Ryder Creek, which is further along strike to the $S W$, shows strongly anomalous gold and indicator elements and suggests that better gold minerallzation is developed to the SW.

Gold occurs with the AC Fault at all three locations sampled in the MC2 Shear area. Trench 89-16 (Fig.8) is the southernmost trench crossing the AC Fault; minor gold occurs at the fault contact with a magnetic diorite. A prominant zone of quartz is developed on the contact zone about 75 meters to the SW.

Prospecting below Trench 89-16 had discovered galena-bearing quartz float which ran 69,000 PPB gold ( $2.01 \mathrm{oz} /$ ton) thus trench 89-13 was dug to expose the source. The trench crosses the AC Fault but the

fault was not well defined because of poorly-exposed bedrock, deep overburden and sloughing trench walls. The quartz vein in the trench ( $32,000 \mathrm{PPB}$ or $.933 \mathrm{oz} /$ ton gold across 40 cm ) is presumed at or close to the A-C Fault. Hangingwall and footwall rocks were not well enough exposed in the trench to sample but some adjacent rocks are anomalous in gold (Fig. 17).

Further to the north trench 89-17 (Fig. 7) was dug across an inferred projection of the AC Fault. The trenching did not conclusively define the fault but a prominant silicified zone exposed in the trench ran 3,900 PPB gold ( $0.112 \mathrm{oz} /$ ton) across 60 cm .

More work is required to evaluate the gold potential of the AC Fault zone. About 2.5 km to the $N E$ the $A C$ Fault is exposed in skid roads above the Galena Vein area. Two samples of pyritic quartz veining from the fault zone (Sample 7247) and altered wallrock with disseminated pyrite (Sample 7248) each returned only 5 PPB gold. In the vicinity of this sampling, the AC Fault and the MC2 Shear are separated by about 230 meters. Evidently the AC Fault is better mineralized to the south and proximity to the MC2 Shear zone may be a factor in the mineralizing process.

Surface attitudes of the two structures suggests they will converge to the south and at depth. The AC Fault dips 80 to 85 degrees west while the MC2 Shear zone dips more gently at 55 to 65 degrees west. The southward convergence of the two structures may be part of the reason why both structures host gold mineralization in the MC2 Shear area. If so then the inferred zone of convergence at depth is an important exploration target.

In summary, trenching at the MC2 Shear area has shown that gold is present in two zones and can be anomalous over significant widths, demonstrating a strong mineralizing process. The mineralization is unevenly distributed in the areas tested. An economic build-up of gold could occur almost anywhere within these structures. To effectively evaluate much of the mineralized structures, close-spaced testing by trenching and / or diamond drilling will be necessary unless some technique such as Induced Polarization geophysics is proven effective at guiding drilling.

### 8.00 GALENA VEIN

The Galena Vein area is approximately 3 km NE of the MC2 Shear area and on the same structure (Fig. 4). An intermediate zone of strong silicification with brecciation and pyrite mineralization occurs mid-way between the MC2 Shear and Galena Vein. This intermediate`Red Zone' was trenched prior to the 1989 program and earlier soil sampling shows that anomalous gold mineralization is present. The area was briefly mapped in 1989 but no further evaluation was made.

### 8.10 Geology

Figure 18 shows surface geology of the Galena Vein Area. A prominant diorite dyke is exposed by 3 roads which cross the structure over about 300 meters of strike length. The lower road was built by loggers and led to discovery of the Galena Vein while the two upper, SW roads are the result of earlier trenching on the property.

Gold is associated with the sheared margins of the diorite. The original Galena Vein was apparently exposed on the footwall side of the diorite. A few float specimens of quartz with galena could be found but no quartz was evident in the poor bedrock exposures thus the lower road was trenched again in 1989.

An apparently strong 1.2 meter wide quartz vein zone was exposed at the west side of the diorite, adjacent to a 5 meter wide zone of silicified upper Middle Aldridge siltstones and argillites. Three chip samples were taken:

26817 Southeast 40 cm 3990 PPB Au
26818 Middle $40 \mathrm{~cm} \quad 1560$ PPB Au 26819 Northwest 40 cm 4800 PPB Au

These average 3450 PPB Au which converts to . $108 \mathrm{oz} / \mathrm{ton}$.
Anomalous lead is present in all 3 samples (919 to 5418 PPM) but no galena was noted when the samples were collected.

The SE contact of the diorite was not exposed in this area but soil geochemistry suggests it has anomalous gold mineralization as well (Fig. 19).

The middle road exposure has more extensively developed silicification and abundant fine-grained pyrite. Two of a series of grab samples have over 1000 PPB gold, and boron values are up to 1081 PPM (the highest boron seen in 1989 sampling).

Diorite contacts on the upper road are not well exposed and no sampling was done.

### 8.20 Soil Geochemistry

Soil samples were collected from a grid of 4 lines running roughly parallel to contours in the Galena Vein area. Lines are 50 meters apart and samples were collected at 40 meter intervals along the lines (Fig. 19).

Results show fairly widespread anomalous gold mineralization and suggest that the trenched zone on the NE diorite contact is not the only zone with gold. Overburden is more extensive here than at the MC2 Shear area and the wide anomalous geochem response probably reflects this but the results are compatible with a gold-mineralizad zone being present at the $S E$, hangingwall side of the diorite as well.

The geochem anomaly has not been delineated by the present survey and soil sampling should be expanded to do this.

### 8.30 Magnetic Survey

The 4 soil geochem lines in the Galena Vein area were also surveyed with the magnetometer; profiles are shown on Figure 20.

The results are somewhat unsatisfactory for 2 reasons. Firstly, readings were taken at 40 meter spacings and secondly the survey was completed quite rapidly by an inexperienced operator. These factors may be responsible for the lack of smoothness to the profiles. The grid should be expanded and carefully surveyed in more detail.

The survey does show a number of magnetic anomalies on the lines. Some of the anomalies can be correlated with the known diorite, others cannot. The best known gold mineralization in the Galena Vein area is on the margins of a diorite intrusive and some of the diorites in the area are known to be magnetic thus continued mag surveys in the Galena Vein area could be a help to delineating the mineralized zone(s). Magnetite and epidote occur together in diorite in the Galena Vein area.

Float of magnetic lamprophyre was located in the SW part of the Galena Vein grid, near where elevated gold values were obtained by soil sampling (Fig. 19). Locating and defining any lamprophyre dykes in the area could help in understanding the gold mineralizing process as lamprophyres are commonly present near some types of gold deposits (Rock et al, 1988, 1989) and they may define the favourable structures. Detailed mag surveying could locate buried lamprophyre dykes.

In summary the Galena vein area hosts significant gold mineralization and warrants more detailed evaluation. The prominant diorite dyke or sill in this area appears to be a persistent structure with gold present on its margins. steep topography and local deep overburden may prevent effective systematic trenching. A geophysical approach may be necessary, followed by drilling.


9.00 GALWAY CREEK

Galway Creek is a north-flowing tributary of Perry Creek; its headwaters occur on the western portion of the Weaver claims

Prospecting and Heavy Mineral sampling have shown that anomalous gold and favourable rock types occur in the drainage. Increased silicification and pyritic hematite matrix breccia occur near the base of exposed bedrock in the headwaters region and suggest that alteration is increasing toward the north. The magnetic character of the hematite matrix breccia allowed a means of tracing the structure northward but subsequent trenching was unsuccessful because of deep overburden.

### 9.10 Soil Geochemistry

A series of 3 lines, each 200 meters long and 50 meters apart and oriented at 110 azimuth to cross the local structure, was soil sampled at 20 meter spacings. Of the 36 samples collected, only 4 are anomalous in gold with two at 10 PPB, one at 260 PPB and one at 450 PPB (Fig. 21; complete geochemical analyses are given in Appendix 3).

The soil lines were run below the lower limit of outcrop but it is questionable whether the few anomalies are a reflection of the known bedrock mineralization because subsequent trenching established that overburden in the vicinity of the anomalous soils is quite deep.

### 9.20 Magnetic Survey

Prospecting in the Galway Creek drainage has encountered only 2 magnetic rock types, pyritic hematite matrix breccia and lamprophyre float. No magnetic diorites or diorite float have been seen. A sample of the hematite matrix breccia ran 190 PPB gold and a sample of nearby pyritic quartz vein breccia ran 670 PPB gold (Samples 26659 and 26663, Fig. 21, Appendix 1 and 2).

The soll geochem grid was surveyed with the magnetometer and this grid was expanded and lines surveyed to the north. The intent of the survey was to trace the magnetic hematite matrix breccia to the north under overburden. The hematite matrix breccia apparently was not detected by the mag survey (the outcrop occurs between two survey lines at about 535N 355W on the Galway grid; Fig. 21). The pyritic quartz vein breccia which is more anomalous in gold does, however, appear to be associated with a mag high at about 300 W on Line 500 N (Fig. 22). This mag high appears relatively weak on Line 500 N where the 670 PPB gold sample was taken but the anomaly
persists to the north at least to Line 800 N . The anomaly is stronger on Lines $700 \mathrm{~N}, 750 \mathrm{~N}$ and 800 N . I,ines 1300 N and 1350 N may have picked up the same zone since the mag profiles are similar to the southern lines.

This detailed mag survey in Galway Creek has traced a mag anomaly that may be associated with gold. Further evaluation is warranted to determine if the zone carries gold mineralization along some or all of its length. Because disseminated pyrite is present with the known gold mineralization, Induced Polarization may be an effective technique for establishing drill targets once the preliminary data has been obtained.

It appears that magnetometer surveying can be an effective way of tracing zones of interest on the Weaver claims and it should be an integral part of further exploration in Galway Creek and in other parts of the claim block.

The spike detected on Line 750 N at 460 W was repeated by surveying one week after the original survey and it is definitely real but appears to be a local near-surface phenomena. Two parallel-trending lines were surveyed 10 meters on either side of Line 750 N in this vicinity. No obvious trend to the mag high was established but an adjacent survey station read more than 6,000 gammas lower than the peak reading on Line 750 N .

## Trenching

Trenching at Galway Creek was intended to evaluate the mag anomalies and the soil geochem anomalies. Overburden was surprisingly deep on the moderately steep slopes present and the trenching effort was generally quité unsuccessful. No significant features were exposed although the deep overburden probably explains the poor soil geochem results. The experience at Galway Creek, as at the Galena Vein, indicates that soil geochemistry will only be successful where overburden is relatively thin.

### 10.00 CONCLUSIONS

1. The 1989 exploration program on the Weaver claims established that significant gold mineralization is present at a number of localities. Prospecting and stream geochemistry have further shown that the upper Ryder Creek drainage also hosts significant gold mineralization.
2. The work done to date suggests that economic gold mineralization will be structurally controlled and may occur on the property in three possible ways:
3. In tension gash quartz veins, within or marginal to major structural breaks. Gold may be concentrated at the intersections of fault zones where increased dilatency has allowed introduction of sulfide- and gold-bearing quartz.
4. Disseminated within shear zones, either in zones of alteration (eg. silicification or quartz-sericite schists) or within favourable lithologies.
5. As stockworks of thin quartz veins in association with structural breaks. These may be best developed at lithologic contacts where the competency contrast has provided a favourable structural or chemical site for deposition of gold (for example on the margins of diorite dykes)
6. Relatively little of the gold-mineralized structures on the Weaver claims has been evaluated but a number of near "economic grade / mining width" situations have been identified. Considerable work will probably be necessary to effectively test for economic gold mineralization on the property but the results obtained to date certainly warrant continued work.
7. Most of the exploration techniques utilized in 1989 have proven to be very effective and, properly carried out, they should continue to provide useful results.
8. Much of the strike length of known gold-mineralized structures on the Weaver claims is buried by overburden. If economic concentrations of gold do exist, they may well be below deep overburden. Ongoing exploration must be cognizant of these probable buried targets and work toward identifying and testing them.
11.00 RECOMMENDATIONS
9. The significant occurrences of known gold mineralization on the Weaver claims should continue to be evaluated, with an emphasis on developing drill targets. These areas include the Hill Vein, the MC2 Shear and adjacent AC Fault, and the Galena Vein area.
10. The upper Ryder Creek area, which appears to have significant bedrock gold mineralization, should be systematically evaluated using the successful methods employed in 1989.
11. More detailed stream geochemistry should be done to evaluate all of the Weaver claims. The technique apparently works very well and should be used in detail across as much of the claim block as possible.
12. Work to date has identified considerable bedrock gold including some "near-economic" occurrences. Although work should be continued to evaluate these occurrences, considerable effort should also be put into identifying and evaluating possible "larger tonnage type" situations such as might exist at favourable fault intersections. In this sense, known zone's of gold mineralization should be tested with Induced polarization geophysics to see if it is an effective technique. If successful then it can be used to test the more "blind" type of targets that are found.

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As the main author of this report $I$, Peter Klewchuk, certify that:

1. I am an independent consulting geologist with offices at 246 Moyie Street, Kimberley, British Columbia.
2. I am a graduate geologist with a BSC Degree (1969) from the University of British Columbia and an MS Degree (1972) from the University of Calgary.
3. I am a Fellow in good standing of the Geological Association of Canada.
4. I have been actively involved in mining and exploration geology in western Canada for the past 18 years.
5. I have been employed by major mining companies and provincial government geological departments.

# Descriptions of Rock Samples <br> 1989 Exploration Program <br> Weaver Claims 

## Sample Number

Description
7236 Hill Vein. Trench at 640 N 280 E . Quartz vein rubble; no bedrock exposed. Massive white quartz with limonite-coated fractures. Oxidized pyrite with small flakes of visible gold. Sample is a grab of a number of pieces of quartz; visible gold not included.

7237 Hill Vein. Trench at 900N 280E. Massive to vuggy quartz; pyrite is essentially all leached. Grab sample of more limonitic material.

7238 Hill Vein. 915N 285E. Quartz vein exposed in road. Minor oxidized fine to coarse grained pyrite. Grab sample.

7239 Hill Vein. Trench at 1050N 280E. Grab sample of quartz vein with better pyrite and two small specks of visible gold.

7240 Hill Vein. North end of trench at 1040 N 280 E . Orange to brown weathering, fine-grained micaceous green diorite, non-magnetic. Grab sample to evaluate geochemical signature of alteration.

7241 Hill Vein. Trench at 1030N 280E. Grab sample of altered hangingwall siltstones immediately above Hill Vein. Siltstone is brownish-green discolored, pyritic.

7242 West of Hill Vein; 12 m NNE of 1030 N 190E. Vuggy, limonitic quartz vein with fresh and oxidized pyrite, hosted by gabbro. Vein is north striking with a moderate west dip, generally parallel to the Hill Vein.

7243 MC2 Shear. 290N 660E. Grab sample of quartz vein float. Contains disseminated medium-grained euhedral pyrite and minor galena.

MC2 Shear. 290N 650E. 086/84N Quartz vein crosses the NW-oriented MC2 Shear. Grab sample from bedrock of quartz vein with minor disseminated pyrite.

MC2 Shear. 290N 640E. Narrow fault zone exposed in road cut; $123 / 32 \mathrm{~N}$. Grab sample of fault gouge - orange-brown clay with quartz fragments.

Site of 7245. Grab sample of massive white quartz with disseminated pyrite and chlorite veins, developed in footwall of fault zone.

7247 South of Galena Vein, south of l190E 1370N. Grab of chips of vuggy quartz with disseminated pyrite from fault zone which juxtaposes Middle Aldridge and Middle Creston Formation rocks. much of the pyrite is weathered out. Fault zone is $20-30 \mathrm{~cm}$ wide but pinches and swells.

Site of 7247. Grab sample of chips of altered, sheared Creston Fm. argillites on HW (west) side of fault. Abundant euhedral pyrite occurs both disseminated through the rock and as clusters of grains.

South MC2 Shear area. Quartz vein float; massive quartz with abundant galena. Grab sample of material with better galena. Vein occurs in place just above sample site and is at or near the fault which separates Middle Creston and Middle Aldridge Formations.

Upper Galway Creek, north side of ridge separating Ryder and Galway Creeks. Grab sample of chips of quartz veining at area of old trench and adits.

Galway Creek. Hematite matrix breccia with quartz and disseminated pyrite, within silicified zone, near west edge of zone. Magnetic.

Galway Creek. Approx. 15m SE of 26659. Quartz vein matrix breccia with disseminated pyrite in thin quartz veins (this is generally similar to samples WEA-R-14 \& 15).

Galway Creek. Approx. two km north of previous two samples. Chlorite matrix breccia within altered Creston Formation. Breccia trends at approx. 140 azimuth.

Unknown
MC2 Shear. 240N 755E. Silicified rusty oxidized zone (carbonate?) with disseminated pyrite; part of a chlorite matrix breccia within chloritized Middlc Aldridge siltstones. Grab sample.

Galena Vein. Silicified zone above main 'Galena Vein' showing. Grab sample of silicified zone which is apparently brecciated quartz flooded siltstones or quartzites (not quartz veining). Disseminated fine euhedral pyrite is present.

Galena Vein; site of 26667. Grab sample of lighter gray more densely silicified material.

Near 26667 and 68. Quartz vein within sheared gabbro near contact with strong silicified zone. Considerable fine and medium-grained disseminated pyrite. Vuggy and very strongly limonitic, possibly from oxidation of siderite.

26670 North Hill Vein, Trench 89-3. Grab sample of sheared gabbro in Hill Vein Fault. Fault trends approx. 177/35W.

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Site of 26670. Grab sample of quartz veining within Hill Vein Fault. Quartz is vuggy with oxidized limonitic patches.

West of Hill Vein, Trench 89-4, in gabbro at site of sample 7242. Grab sample of 20 cm thick quartz vein within $70-80 \mathrm{~cm}$ wide shear zone. Quartz vein trends 172/39W (approx. parallel to Hill Vein). Quartz is massive to vuggy with pyrite on margins; locally there is strong limonite developed.

MC2 Shear, Trench 89-5. Grab sample of thin quartz veins with pyrite and limonite.

Trench 89-5. Grab sample of $3-4 \mathrm{~cm}$ wide lensey, limonitic quartz vein at sediment - gabbro contact. Minor disseminated medium-grained 'fresh' pyrite is present.

Trench 89-5. Site of 26674. Very strongly sheared and oxidized gabbro at contact with sediments.

Trench 89-5. Grab sample of lensey pods of light gray, vuggy and strongly limonitic quartz within sheared sediments.

MC2 Shear, Trench 89-6. One meter wide chip sample across footwall zone of sheared, limonitic gabbro.

Trench 89-6. Chip sample across 20 cm of quartz vein matrix breccia. Sample is mostly silicified siltstone and quartzite with about $20 \%$ limonitic quartz veins.

Trench 89-6. 60 cm wide chip sample across sheared gabbro on hangingwall (west) side. Sample includes minor light gray quartz veining at the gabbro - sediment contact.

Trench 89-6. Grab sample of brecciated siltstone adjacent to gabbro of sample 26679.

Trench 89-6. Selected sample of three bedding- and shearingparallel guartz veins up to 6 cm wide. Veins are typically vuggy, strongly limonitic and Mn stained. Minor pyrite is present; most of the pyrite has been leached out.

Trench 89-6. Brecciated quartzite with stockwork of thin quartz veinlets up to 1.5 cm wide. Quartz is vuggy and Mn stained, some with limonite. Developed adjacent to sample 26683.

Trench 89-6. Grab sample from 10 cm wide shear zone. Clay gouge with narrow 1-2 cm wide rusty, lensey quartz veins.

26684 Trench 89-6. Brecciated and chloritized siltstone and quartzite, quartz vein matrix, greenish disseminated pyrite. Grab sample.

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26694 Trench 89-6. 3 cm wide vuggy, rusty quartz vein on footwall side of fault zone.

26695 Trench 89-13. Chip sample across 50 to 100 cm wide limonitic fault zone. Minor included quartz veining.

26696 Trench 89-13. Grab sample of chloritic and silicified quartzite with considerable pyrite.

26697 Trench 89-13. Band of silicified quartzites; greenish, chloritic, with considerable pyrite which is both disseminated and aligned in bands parallel to cleavage.

26698 Trench 89-13. 40 cm wide quartz vein. Few included slivers of sediments. Entire width of vein carries sulfides; pyrite, chalcopyrite, galena and possibly chalcocite. 048/63W; looks bedding and cleavage parallel. (Note: $29,000 \mathrm{PPB}$ gold but with low copper and lead thus the sample did not high-grade the sulfides and gold may not be restricted to the sulfides. Visible gold was later noted in the surface exposure of this vein above the trench. Also, only the vein itself was well exposed in the trench; adjacent wallrock was not sampled because, of lack of exposure.)

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Trench 89-13. Silicified zone with chlorite, disseminated pyrite.
Trench 89-13. Selected more pyritic portion of a 1.5 m wide zone of blue-gray-black siliceous argillite. Pyrite is fine-grained, coarser on fractures. Chloritic.

Trench 89-13. 150/58W quartz vein, $1-3 \mathrm{~cm}$ wide, exposed for 80 cm. Chloritic with minor limonite.

Trench 89-16. 120/88S chloritic quartz vein breccia zone. oxidized pyrite, some patches of dense, dark green chlorite.

Trench 89-16. N-S/70W lensey quartz vein, thickens downward from 6 to 15 cm in 1 meter. Massive white with irregular veinlets of chlorite, minor disseminated fine to medium-grained pyrite, some rusty fractures and vuggy patches.

Trench 89-16. Chip sample across 1.3 m of sheared, partly rusty diorite in footwall of fault zone.

Trench 89-16. Fault gouge. Limonitic clay with vuggy quartz veins, slightly chloritic.

Trench 89-16. Siliceous siltstone with quartz veins and minor rusty pyrite in vugs and on fractures. Pyrite originally made up about $4 \%$ of the rock, now mainly weathered out.

Trench 89-16. Grab of quartz vein. Originally with about 5\% pyrite, now mostly weathered out.

Trench 89-14. Poorly representative chip across 60 cm of silicified Middle Aldridge quartzites; chloritic with disseminated pyrite and minor quartz vein matrix breccia.

Trench 89-14. Bedding-parallel quartz lens in medium thick siltstone about 1.5 m SE of 26758. Vuggy, rusty and chloritic.

26760 Trench 89-14. Chip across 3 silicified pale greenish-gray argillaceous bed tops; they pinch and swell from 1 to 10 cm wide and carry disseminated pyrite, chlorite and thin quartz veins which are rusty and vuggy and may have had carbonate in them.

26761 Trench 89-17. Inferred fault contact between Creston and Aldridge Formations. Chip sample across 60 cm of quartz vein matrix breccia in siltstone. Est. 4\% pyrite disseminated through the quartz veins and silicified siltstones. Probable siderite. Note: trench does not provide very good exposure and it is not clear if the quartz veining is right at the inferred fault zone.

26762 Galena Vein grid at ~960N 1320E. Quartz vein float about 4 cm wide with $15-20 \%$ relatively fresh pyrite, medium to coarse-grained and weathering reddish rusty.

26763 Trench 89-7. Sample across about 6 cm of mixed quartz veining and Mn and limonite-altered siltstone.

26764 Trench 89-7. Chip sample across 70 cm of brecciated siltstone, sheared phyllitic, sericitic argillite with rusty, vuggy quartz veins (possible weathered out Fe-carbonate).
26765. Trench 89-7. Non-representative chips of quartz veining and phyllitic argillite across 3 m of trench wall.
26766. Trench 89-7. 057/63W quartz vein 20 cm wide parallel to cleavage. Fairly white with $2 \%$ disseminated pyrite and rusty vags.
26767. Trench 89-14. 046/45NW quartz vein 1 to 3 cm wide. Pinches and swells and contains chlorite, siderite and $3 \%$ very fresh looking disseminated euhedral medium and fine-grained pyrite.
26768. Trench 89-14. 050/43NW 3-4cm wide quartz vein. Mn-stained, $2 \%$ fine-grained, disseminated pyrite.

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Trench 89-14. Chip sample across 1.1 m of sericite schist with very minor quartz veining. Est. $\langle 5 \%$ Q.V. in the sample. The zone is silicified; this band of schist forms the highest elevation hump in the trench.

Trench 89-14. Chip sample across $1.5 m$ of similar schist.
Trench 89-14. Two 3 cm wide quartz veins within 12 cm of each other, pyritic with $35 \%$ siderite.

Trench 89-14. Chip across 1.2 m quartz-sericite schist. Chloritic, limonitic (oxidized pyrite or sericite), pale purplish-green color; may be strongly altered diorite.

26773 Trench 89-14. Massive siderite vein 4 to 1.2 cm wide. Brown-weathering in trench walls, cream colored in fresher pieces out of trench floor. About $20 \%$ quartz veining occurs in central part of vein. Quite chloritic on margins with associated pyrite.

26774 Trench 89-14. Chip sample across 1.3 m of quartz-sericite schist with very minor quartz veining.

26775 Trench 89-14. Chip sample across 1.3m of more mafic quartzsericite schist. Looks more like sheared diorite. Orangelimonitic weathered.

26776 Trench 89-14. 052/23W Relatively flat-lying quartz vein and minor shear zone. Sample includes quartz and fault gouge.

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26781 Trench 89-14. Chips of limonitic zones in altered siltstones within zone of sample 26780.

26782 Trench 89-14. Grab of fault breccia, minor quartz veining in a cross-cutting (presumed late) $N-S$, vertical shear.

26783 Trench 89-15. Fault gouge, $045 / 57 \mathrm{~W}$, with some quartz veining.
26784 Trench 89-15. Fault zone with quartz veining up to 20 cm wide. Quartz is rusty, vuggy and chloritic; adjacent altered siltstones are greenish (chloritic) and sericitic with disseminated pyrite.

26785 to 26789 represent a continuous chip sample across a quartz-sericite-chlorite schist with minor quartz veining. Color is purplishgreen and interpretation is altered sediments rather than diorite.

26785 Trench 89-15. Chip across 1.5 m . Est. $15 \%$ quartz veining, with minor pyrite. More quartz and shearing at the NW end, adjacent to fault zone.

Trench 89-15. Chip across 1.5 m . Est. 5\% quartz veins.

26787 Trench 89-15. Chip across 1.5m. Est. 5\% quartz veins.
26788 Trench 89-15. Chip across 1.5m.
26789 Trench 89-15. Chip across 1.3m. Strong shearing, 20\% quartz veining, diorite footwall.

Trench 89-15. 3 cm wide quartz vein at diorite-sediment contact. Light gray quartz with chloritic margins, strong limonitic patches, no fresh sulfides noted.

Trench 89-15. Chip across about 50 cm of a quartz vein breccia fault zone. Quartz is about $20 \%$ of the zone.

Trench 89-15. Chip across 40 cm wide rusty quartz vein zone in fault. Includes about 60\% altered siltstone.

Trench 89-22 (Hill Vein). Lens of felsic dyke material. Very light gray to yellowish, brecciated with veinlets of gray quartz.

Minor sericite. 099/75s.
Trench 89-22. Felsic dyke. 015/75W. Specular hematite is present in thin wavy veinlets with chlorite seams (a weak chloritematrix breccia) and oxidized pyrite. Thin lensey gray quartz veinlets cut the intrusive.

Trench 89-22. Chip sample across 50 cm of hangingwall brecciated quartzites. Limonitic with pyrite and quartz veins.

Trench 89-22. Chip sample across 50 cm wide quartz vein with oxidized, disseminated pyrite and a few rusty vugs.

Trench 89-22. Chip sample across 50 cm of footwall altered quartzites. Limonitic, pyritic, brecciated with quartz veining.

Trench 89-16. Upper MC2 Shear area. Rusty silicified siltstone, est. 3\% rusted out pyrite.

Trench 89-16. Chip sample across 70 cm quartz-rich zone. Hematitic, oxidized vugs.

Trench 89-16. Pale blue-green colored silicified siltstone. Minor brecciation with quartz veining.

Trench at Galway Creek, near 650N, 400 W on grid. Pyritic Lower Creston laminated argillites.

Trench 89-10. Chip sample across $40 \mathrm{~cm} .40 \%$ vuggy, rusty quartz veins, 60\% bleached soft siltstone and argillite wallrock. Quartz carries fresh pyrite and galena.

26803 Trench 89-10. Rough chip sample across 2 meters. Chloritic zone with some chlorite matrix breccia with reticulate texture. More intense shearing is centered in this zone.

Trench 89-10. Grab sample of narrow quartz vein which is parallel to bedding and crosses at shallow angles. Quartz is very rusty and may be within a narrow shear zone.

Trench 89-10. Grab sample of one 3 cm wide rusty quartz vein.
Trench 89-10. Chip sample across 1 meter of phyllitic, weakly pyritic quartz sericite schist, developed adjacent to a silicifled zone.

Trench 89-10. Chip across 20 cm wide quartz vein trending 115/32N.
Trench 89-10. Grab sample of a series of quartz veins in sheared, silicified and chloritic quartzites.

Trench 89-8. Chip across 40 cm ( 30 cm quartz, 10 cm wallrock). Quartz vein is vuggy, slightly rusty, with disseminated, coarse-grained euhedral pyrite.

Trench 89-8. Chip sample across 30 cm quartz vein with coarse pyrite, vugs. Few cm of altered wallrock with dissem. pyrite included.

Trench 89-8. Chip sample across 60 cm exposure of quartz vein. Chloritic and pyritic, minor quartz veining on footwall contact.

Trench 89-8. Chips of hangingwall quartz veinlets over about 15 cm . Chloritic and pyritic.

26813 Trench 89-8. Chip across 40 cm quartz vein. Quartz is chloritic, particularly on $F W$ contact, contains fragments of altered siltstone and minor pyrite.

Trench 89-12. Grab sample of silicified, chloritic material (argillite?) with disseminated pyrite and minor white quartz veins.

Trench 89-12. Grab over 30 cm of quartz vein zone on hangingwall side of 26814. Quartz is chloritic, sericitic, limonitic and pyritic.

Galena Vein, main road. Chip sample across 40 cm of silicified diorite. Quite limonitic, numerous small quartz veins, possible weathered out siderite.

26817 Galena Vein. Footwall 40 cm of quartz vein zone. Minor fault gouge at contact, 20 cm of quartz vein, 20 cm of sheared limonitic argillite (?) with $20 \%$ quartz veins.

26818 Galena Vein. Central 40 cm of quartz vein zone. Mainly quartz with pyrite, minor included sheared argilljte or diorite; silver-purple colored 'quartz-sericite schist'.

26819 Galena Vein. Hangingwall 40 cm of quartz vein zone. Silicified and sheared material, very limonitic and pyritic with some quartz veining.

26820 Galena Vein. 60 cm chip sample of quartz-chlorite zone. Quartz is patchy limonitic, possibly from weathered siderite. Parts of the zone resemble guartz matrix breccia.

26821 ' Galena Vein. 50 cm chip across sheared, pyritic, chloritic and silicified argillite. Few remnant slivers of chloritic argillite.

26822 Galena Vein. Grab sample of mostly quartz and silicified chlorite matrix breccia with pyrite disseminated and in lensey streaks parallel to cleavage.

26823 Galena Vein, middle road. Grab of strongly silicified sitstone with abundant disseminated pyrite. Chloritic, some quartz veining.

26824 Galena vein. Grab of silicified siltstone with disseminated pyrite, veins of quartz and siderite.

26825 Galena Vein. Grab of chips of quartz veins within diorite siltstone contact zone. Chlorite, siderite and sericite are present, similar to quartz-sericite schist.

26826 Galena vein. Shear zone in diorite with quartz veining, sericite, siderite and $2 \%$ disseminated pyrite. Chloritic and similar to quartz-sericite schist.

26827 Galena Vein. Grab of quartz vein, up to 20 cm wide. Chlorite, pyrite, sericite and possible siderite.

Sample Number
Description
The following samples were collected by R.T.Banting
900 Trench 89-10. 2 meter chip of hangingwall (east) side of diorite including 35 cm quartz veins.

901 Trench 89-10. One meter chip sample of diorite.
902 Trench 89-10. 2 meter chip sample. Footwall (west) of diorite
903 Trench 89-10. Same as 902
904 Trench 89-10. Fault gouge, west side of diorite.
905 Trench 89-18. Vuggy limonitic quartz.
906 Pre-1989 trench below Trench 89-13, possible extension of quartz vein in Trench 89-13 (A-C Fault?). Limonitic quartz.
14.20 APPENDIX 2

Rock and Heavy Mineral geochemical analyses

ROSSEACHER LABORATGRY, LTD -

## certificate of analys is

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CERTIFICATE OF ANALYSIS
2225 5. Spriager Are., Surnaty, British Colanbla, Cas. 758 311 Ph: (689)299-6910 Tax:299-6252

TO : F.T.BANTING ENGINEERING LTD., 901 INDUSTFIAL. KD. \#2, CRANEROOK, E.C.
PROJECT :
TYPE OF ANALYSIS : ICP

CERTIFICATE : 89243
INVOICE : 90426
DATE ENTERED : 89-08-94
FILE NAME : FTEB9243.I
PAGE \# : 1

| PRE <br> fix | SAMFLE MAME | PPM no | PPF <br> Cu | PPI | $\begin{gathered} \text { PPH } \\ \text { IN } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { AG } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { MI } \end{gathered}$ | $\begin{array}{r} \text { PPH } \\ \text { CD } \end{array}$ | PPM 界 | $\begin{gathered} \mathrm{I} \\ \mathrm{FE} \end{gathered}$ | $\begin{array}{r} \text { PPM } \\ \text { AS } \end{array}$ | $\begin{gathered} \text { PPM } \\ U \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { al } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ H 6 \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { SR } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ C D \end{gathered}$ | $\begin{array}{r} \text { PPM } \\ 58 \end{array}$ | $\begin{array}{r} \text { PPM } \\ 81 \end{array}$ | $\begin{array}{r} \text { PPH } \\ V \end{array}$ | $\begin{aligned} & 2 \\ & C A \end{aligned}$ | $\begin{aligned} & 1 \\ & p \end{aligned}$ | PPh | $\begin{gathered} \text { PPM } \\ \text { CR } \end{gathered}$ | $\begin{array}{r} 2 \\ 4 \end{array}$ | $\begin{gathered} \text { PPH } \\ B A \end{gathered}$ | $\begin{array}{r} \text { I } \end{array}$ | PPA | $\mathbf{A}_{\mathbf{A}}^{1}$ | $\begin{gathered} \mathbf{Z} \\ \text { MA } \end{gathered}$ | $\begin{array}{r} 1 \\ 5 I \end{array}$ | PPM |  | $\begin{gathered} P P B \\ A \cup A A \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | WEA-FII | 1 | 24 | 15 | 64 | 0.1 | 15 | 1 | 903 | 4.20 | 5 | 5 | No | ND | 2 | 1 | 2 | 2 | 5 | 0.01 | 0.01 | 1 | 163 | 0.03 | 1 | 0.01 | 5 | 0.05 | 0.01 | 0.01 | 1 | 1 | 5 |
|  | WEA-K2 | 2 | 16 | 12 | 10 | 0.2 | 9 | 3 | 71 | 1.17 | 9 | 5 | N0 | MD | 3 | 1 | 2 | 4 | 4 | 0.01 | 0.01 | 5 | 137 | 0.01 | 6 | 0.01 | 5 | 0.14 | 0.01 | 0.01 | 1 | 1 | 20 |
|  | MEA-R3 | 3 | 12 | 46 | 1 | 2.0 | 15 | 19 | 90 | 1.68 | 19 | 5 | W | HD | 3 | 1 | 3 | 24 | 6 | 0.01 | 0.02 | 9 | 194 | 0.01 | 1 | 0.01 | 5 | 0.10 | 0.01 | 0.01 | 4 | 1 | 5 |
|  | HEA-R4 | 1 | - | 27 | 4 | 0.5 | 7 | 2 | 65 | 2.30 | 15 | 5 | N0 | ND | 1 | 1 | 2 | 6 | 3 | 0.02 | 0.02 | 3 | 61 | 0.01 | 1 | 0.01 | 89 | 0.18 | 0.01 | 0.01 | 1 | 1 | 270 |
|  | UEA-RS | 2 | 3 | 2 | 1 | 0.1 | 8 | 2 | 49 | 1.17 | 4 | 5 | ND | ND | 2 | 1 | 2 | 2 | 7 | 0.01 | 0.01 | 2 | 142 | 0.07 | 1 | 0.01 | 20 | 0.11 | 0.01 | 0.01 | 1. | 1 | 10 |
|  | \#EA-86 | 2 | 12 | 3 | 16 | 0.4 | 12 | 1 | 185 | 2.06 | 2 | 5 | ND | ND | 2 | 1 | 2 | 2 | 5 | 0.01 | 0.01 | 2 | 231 | 0.01 | 1 | 0.01 | 5 | 0.06 | 0.01 | 0.01 | 2 | 1 | 5 |
|  | HEA-81 | 1 | 2 | J | 1 | 0.5 | 10 | 8 | 48 | 1.5? | 10 | 5 | ND | ND | 6 | 1 | 2 | 10 | 10. | 0.01 | 0.02 | 37 | 71 | 0.04 | 1 | 0.01 | 25 | 0.22 | 0.01 | 0.01 | 1 | 1 | 5 |
|  | WEA-F6 | 4 | - | 1 | 14 | 0.5 | 12 | 1 | 1025 | 5.42 | $?$ | 5 | * ${ }^{\text {d }}$ | H0 | 1 | 1 | 2 | 2 | 6 | 0.01 | 0.05 | 1 | 158 | 0.04 | 6 | 0.01 | 5 | 0.07 | 0.01 | 0.01 | 1 | 1 | 5 |
|  | HEA-ry | 3 | 1258 | 205 | 14 | 4.2 | 38 | 5 | 96 | 5.16 | 2 | 5 | nd | ND | 3 | 1 | 2 | 2 | 6 | 0.01 | 0.02 | 6 | 195 | 0.01 | 159 | 0.01 | 29 | 0.13 | 0.01 | 0.01 | 1 | 1 | 110 |
|  | UEA- 810 | 3 | 500 | 15 | 5 | 4.7 | 39 | 27 | 69 | 2.69 | 24 | 5 | MD | ND | 1 | 1 | 2 | 22 | 17 | 0.01 | 0.02 | 3 | 161 | 0.16 | 1 | 0.01 | 7 | 0.22 | 0.01 | 0.01 | 5 | 1 | 10 |
|  | HEA-2:1 | 1 | 44 | 1 | 83 | 0.1 | 88 | 17 | 1323 | 1.31 | 2 | 5 | ND | ND | 29. | 1 | 2 | 2 | 240 | 2.15 | 0.09 | 1 | 230 | 4.15 | 20 | 0.10 | 5 | 3.46 | 0.01 | 0.01 | 1 | 3 | 5 |
|  | HEF-R12 | 1 | 9 | 4 | 218 | 1.4 | 44 | 1 | 1822 | 14.63 | 33 | 5 | ND | HD | 3 | 1 | 2 | 12 | 68 | 0.01 | 0.04 | 1 | 202 | 0.06 | 50 | 0.01 |  | 0.18 | 0.01 | 0.01 | 1 | 2 | 5 |
|  | HEA-RI3 | 1 | 116 | 3 | 45 | 0.8 | 9 | 3 | 184 | 4.12 | 15 | 5 | H0 | * ${ }^{\text {d }}$ | 8 | 1 | 2 | 2 | 2 | 0.01 | 0.03 | 37 | 104 | 0.03 | 17 | 0.01 | 5 | 0.33 | 0.01 | 0.01 | 1 | 1 | 20 |
|  | MEA-R14 | 1 | 6 | 4 | 49 | 0.1 | 9 | 9 | 243 | 3.50 | 20 | 5 | N0 | HD | 3 | 1 | 2 | 2 | 1 | 0.01 | 0.03 | 9 | 111 | 0.02 | 19 | 0.01 | 7 | 0.19 | 0.01 | 0.01 | 1 | 1 | 830 |
|  | MEA-R15 | 1 | 4 | 1 | 14 | 0.3 | 5 | 3 | 177 | 3.01 | 17 | 5 | WD | no | 2 | 1 | 2 | 2 | 1 | 0.01 | 0.02 | 8 | 85 | 0.02 | 20 | 0.01 | 5 | 0.24 | 0.01 | 0.01 | 1 | 1 | 250 |
|  | WEA-RI6 | 1 | 17 | 21 | 33 | 0.1 | 2 | 1 | 66 | 2.74 | 79 | 5 | N0 | ND | 4 | 1 | 2 | 2 | 1 | 0.02 | 0.03 | 6 | 70 | 0.01 | 23 | 0.01 | 19 | 0.14 | 0.01 | 0.01 | 1 | 1 | 1500 |
|  | mea-ril | 2 | 6 | 59 | 17 | 2.5 | 22 | 18 | 204 | 3.64 | 15 | 5 | N0 | ND | 15 | 1 | 2 | 10 | 5 | 0.47 | 0.02 | 12 | 80 | 0.24 | 41 | 0.01 | 81 | 0.31 | 0.01 | 0.01 | 1 | 1 | 5 |
|  | WEA-RIS | 1 | 1 | 1 | 26 | 0.1 | 55 | 154 | 93 | 17.82 | 2 | 5 | MO | ND | 2 | 2 | 2 | 2 | 76 | 0.01 | 0.03 | 1 | 163 | 0.03 | 20 | 0.05 | 675 | 0.10 | 0.01 | 0.01 | 1 | 1 | 20 |
|  | WEA-819 | 60 | 1785 | 60 | 46 | 3.4 | 17 | 33 | 479 | 3.98 | 10 | 5 | w 0 | ND | 8 | 1 | 2 | 2 | 13 | 0.13 | 0.03 | 1 | 120 | 0.13 | 23 | 0.01 | 32 | 1.29 | 0.01 | 0.01 | 1 | 1 | 5 |
|  | HEA-R20 | 1 | 27 | 1 | 91 | 0.3 | 23 | 2 | 343 | 5.42 | 1 | 5 | ND | ND | 2 | 1 | 2 | 2 | 5 | 0.01 | 0.02 | 1 | 113 | 0.69 | 15 | 0.01 | 5 | 1.18 | 0.01 | 0.01 | 1 | 1 | 160 |
|  | UEA-R21 | 2 | 6 | 18 | 23 | 0.9 | 16 | 23 | 329 | 4.01 | 18 | 5 | ND | ND | 15 | 1 | 2 | 27 | 39 | 0.55 | 0.02 | 8 | 98 | 0.13 | 22 | 0.02 | 105 | 0.27 | 0.01 | 0.01 | 4 | 4 | 5 |
|  | 7236 | 5 | 133 | 278 | 59 | 2.4 | 10 | 5 | 34 | 2.34 | 17 | 5 | 6 | ND | 1 | 2 | 2 | 35 | 30 | 0.01 | 0.01 | 3 | 111 | 0.01 | 16 | 0.01 | 7 | 0.09 | 0.01 | 0.01 | 4 | 1 | 4260 |
|  | 7237 | 3 | 12 | 319 | 31 | 50.3 | 9 | 6 | 41 | 1.65 | 16 | 5 | 7 | ND | 1 | 3 | 2 | 33 | 6 | 0.01 | 0.02 | 1 | 142 | 0.01 | 27 | 0.01 | 9 | 0.05 | 0.01 | 0.01 | 3 | 1 | 4100 |
|  | 1238 | 2 | 58 | 69 | 39 | 0.1 | 6 | 6 | 121 | 1.21 | 16 | 5 | NO | N0 | 3 | 2 | 2 | 6 | 5 | 0.01 | 0.02 | 23 | 100 | 0.01 | 69 | 0.01 | 7 | 0.24 | 0.01 | 0.01 | 1 | 1 | 180 |
|  | 7239 | 2 | 355 | 37 | 46 | 0.6 | 15 | 6 | 46 | 2.08 | 17 | 5 | 34 | ND | 1 | 2 | 2 | 2 | 3 | 0.01 | 0.01 | 1 | 163 | 0.01 | 21 | 0.01 | 24 | 0.02 | 0.01 | 0.01 | 1 |  | 32000 |
|  | 7240 | 1 | 99 | 18 | 155 | 0.1 | 57 | 29 | 1007 | 5.33 | 18 | 5 | W 0 | ND | 14 | 2 | 2 | 5 | 142 | 0.36 | 0.06 | 40 | 173 | 2.08 | 126 | 0.32 | 5 | 2.67 | 0.01 | 0.01 | 1 | 4 | 10 |
|  | 1241 | 3 | 56 | 39 | 43 | 0.9 | 6 | 5 | 48 | 2.23 | 16 | 5 | NO | no | 8 | 2 | , | 8 | 12 | 0.01 | 0.03 | 35 | 80 | 0.03 | 106 | 0.01 | 13 | 0.54 | 0.01 | 0.01 | 2 | 1 | 360 |
|  | 7242 | 2 | 413 | 185 | 36 | 0.4 | 18 | 9 | 108 | 5.95 | 35 | 5 | N0 | ND | 6 | 1 | 2 | 2 | 42 | 0.01 | 0.03 | 1 | 181 | 0.02 | 17 | 0.01 | 65 | 0.19 | 0.01 | 0.01 | 1 | 1 | 5100 |
|  | 7243 | 3 | 13 | 1895 | 16 | 26.5 | 9 | 1 | 79 | 2.66 | 18 | 5 | 8 | no | 2 | 1 | 2 | 46 | 3 | 0.01 | 0.01 | 1 | 154 | 0.02 | 8 | 0.01 | 188 | 0.07 | 0.01 | 0.01 | 1 |  | 14500 |
|  | 7244 | 3 | 11 | 81 | 23 | 2.8 | 17 | 6 | 155 | 3.18 | 21 | 5 | 11 | ND | 3 | 1 | 3 | 14 | 8 | 0.63 | 0.02 | 16 | 128 | 0.05 | 23 | 0.01 | 69 | 0.30 | 0.01 | 0.01 | 3 | 1 | 6000 |
|  | 7245 | 1 | 14 | 125 | 23 | 0.1 | 12 | 6 | 46 | 2.16 | 14 | 5 | no. | N0 | 3 | 1 | 2 | 2 | 5 | 0.03 | 0.02 | 1 | 102 | 0.08 | 37 | 0.01 | 7 | 0.54 | 0.01 | 0.01 | 1 | 1 | 490 |
|  | 1245 | 3 | 5 | 291 | 28 | 5.1 | 11 | 7 | 99 | 3.12 | 1 | 5 | ND | NO | 2 | 1 | 2 | 17 |  | 0.01 | 0.02 | 1 | 114 | 0.01 | 19 | 0.01 | 62 | 0.11 | 0.01 | 0.01 | 1 | , | 6600 |
|  | 7241 | 2 | 5 | 54 | 38 | 0.3 | 14 | 14 | 46 | 5.29 | 19 | 5 | N0 | ND | 4 | 2 | 2 | 2 | 9 | 0.01 | 0.04 | 57 | 128 | 0.24 | 37 | 0.01 | 100 | 0.34 | 0.01 | 0.01 | 1 | 1 | 5 |
|  | 1248 | 1 | 5 | 25 | 63 | 0.1 | 22 | 15 | 102 | 3.15 | 21 | 5 | M0 | N0 | 1 | 3 | 2 | 2 | 16 | 0.01 | 0.05 | 6 | 68 | 2.09 | 69 | 0.01 | 109 | 1.94 | 0.01 | 0.01 | 1 | 1 | 5 |



## FOSEBARHEV LABGRATCRY LTD-

CERTIEICATE OE ANALYSIS

## 2225 S. Springer Ive., Duraby, <br> British Colusbia, Can. ISB 311

 Ph: (604)298-6910 las:299-6252TO : F.T.EANTING ENGINEEFING LTD., 901 INDUSTRIAL FD. \#2, CRANEFODK: B.C.
PROJECT :
TYPE OF ANALYSIS : ICP
MCZ
CRTIFICATE : 89332 G
INVDICE : 40526
DATE ENTERED : 89-09-19
FILE NAME: RTEB9332.I
PAGE = 1

| PRE FII | SAMPLE MAME | $\begin{gathered} \text { PP\% } \\ \text { Hig } \end{gathered}$ | $\begin{aligned} & \text { PPM } \\ & \text { CU } \end{aligned}$ | $\begin{gathered} \text { PPM } \\ \text { PB } \end{gathered}$ | $\begin{gathered} \text { PP! } \\ \text { In } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { AE } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { WI } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ C D \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { HM } \end{gathered}$ | $\begin{gathered} \mathbf{Z} \\ \mathrm{FE} \end{gathered}$ | $\begin{array}{r} \text { PPM } \\ \text { AS } \end{array}$ | $\begin{array}{r} \text { PPY } \\ \text { U } \end{array}$ | $\begin{gathered} \text { PPM } \\ \text { All } \end{gathered}$ | $\begin{gathered} P P M \\ H G \end{gathered}$ | $\begin{gathered} \text { PPM } \\ S R \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { CD } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { SB } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ B 1 \end{gathered}$ | $\begin{array}{r} \text { PPM } \\ V \end{array}$ | $\begin{aligned} & 1 \\ & \mathrm{CA} \end{aligned}$ | $\begin{aligned} & 1 \\ & p \end{aligned}$ | $\begin{gathered} P P M \\ L A \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { CR } \end{gathered}$ | $\begin{array}{r} 1 \\ 66 \end{array}$ | $\begin{gathered} P P M \\ B A \end{gathered}$ | $\begin{array}{r} 11 \\ 11 \end{array}$ | PPM | $\begin{aligned} & 1 \\ & M \end{aligned}$ | $\begin{aligned} & 2 \\ & M A \end{aligned}$ | $\begin{array}{r} 2 \\ 51 \end{array}$ | $\begin{array}{r} \text { PPM } \\ y \end{array}$ | $\begin{gathered} \text { PPM } \\ \text { BE } \end{gathered}$ | $\begin{gathered} \text { PPB } \\ \text { An AA } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | MC 0001 | 1 | 32 | 1 | 24 | 0.7 | 8 | 14 | 278 | 1.26 | 11 | 5. | ND | NO | 1 | 1 | 1 | 2 | 66 | 1.45 | 0.09 | 3 | 47 | 0.44 | 37 | 0.18 | 5 | 1.53 | 0.01 | 0.01 | 5 | 1 | 5 |
| A | 2349 | 1 | 544 | 30336 | 37 | 53.1 | 1 | 1 | 26 | 0.51 | 2 | 5 | 73 | H0 | 4 | 1 | 2 | 10 | 1 | 0.01 | 0.01 | 1 | 204 | 0.01 | 1 | 0.01 | 135 | 0.04 | 0.01 | 0.01 | 1 |  | 69300 |
| A | 2350 | 1 | 11 | 172 | 39 | 0.5 | 10 | 6 | 358 | 2.11 | 3 | 5 | ND | ND | 3 | 1 | 2 | 2 | 3 | 0.01 | 0.01 | 11 | 106 | 0.03 | 11 | 0.01 | 5 | 0.13 | 0.01 | 0.01 | 1 | 1 | 380 |
| A | 26659 | 2 | 24 | 99 | 10 | 0.3 | 16 | 13 | 63 | 5.38 | 18 | 5 | NO | ND | 5 | 1 | 2 | 2 | 89 | 0.08 | 0.04 | 1 | 148 | 0.02 | 8 | 0.03 | 135 | 0.09 | 0.01 | 0.01 | 3 | 1 | 190 |
| A | 20665 | 1 | 23 | 12 | 15 | 0.1 | 1 | 5 | 75 | 2.83 | 7 | 5 | ND | N0 | 3 | 1 | 2 | 2 | 5 | 0.01 | 0.01 | 17 | 㫙 | 0.02 | 74 | 0.01 | 32 | 0.14 | 0.01 | 0.01 | 1. | 1 | 670 |
| A | 26664 | 2 | 8 | 16 | 74 | 0.1 | 19 | 22 | 683 | 2.83 | 3 | 5 | HD | HD | 5 | 1 | 5 | 2 | 11 | 0.03 | 0.02 | 33 | 161 | 0.45 | 84 | 0.01 | 5 | 1.31 | 0.01 | 0.01 | 2 | 1 | 10 |
| A. | 26665 | 1 | 127 | 6 | 10 | 0.1 | 4 | 15 | 104 | 2.63 | 2 | 5 | HO | ND | 2 | 1 | 2 | 2 | 58 | 0.01 | 0.03 | 1 | 147 | 0.37 | 1 | 0.01 | 5 | 0.56 | 0.01 | 0.01 | 2 | 1 | 5 |
| A | 26866 | 2 | 26 | 11 | 12 | 0.1 | 13 | 13 | 64 | 3.63 | 6 | 5 | WD | NO | 2 | 1 | 5 | 2 | 12 | 0.01 | 0.02 | 12 | 158 | 0.57 | 26 | 0.01 | 213 | 0.67 | 0.01 | 0.01 | 2 | 1 | 5 |

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# ROSSBACHER LABORATOFY LTD- 

## 225 S. Springer Ive., Buraby, British Coluabla, Can. V5B 311

 Pl: (604)299-6010 lax:299-6252
## CERTIFICATE OF anALYSIS

TO: R.T. BANTING ENGINEERING LTD.,
ЯGI INDUSTRIAL FD. \#2,
CRANBROOK, E.C.
PROJECT : WEAVER MC-2
TYFE DF ANALYSIS : ICF

## CERTIFICATE : 99385

INVOICE \# : 10044
DATE ENTERED : $89-10-12$
FILE NAME: FTE89385.I
PAGE * : 1

| PRE <br> FII | SAMPLE MAME | $\begin{gathered} \text { PPM } \\ \text { NO } \end{gathered}$ | PPM cu | $\begin{gathered} \text { PPY } \\ P \mathrm{P} \end{gathered}$ | $\begin{gathered} \text { PPN } \\ 11 \end{gathered}$ | $\begin{gathered} P P M \\ \hline \mathbf{A S} \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { MI } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { CO } \end{gathered}$ | PPM NH | $\begin{gathered} \mathbf{Z} \\ \mathbf{F E} \end{gathered}$ | $\begin{array}{r} P P K \\ \text { AS } \end{array}$ | $\begin{array}{r} \text { PPK } \\ U \end{array}$ | $\begin{gathered} \text { PPK } \\ \text { AU } \end{gathered}$ | $\begin{gathered} P P H \\ H 6 \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { SR } \end{gathered}$ | $\begin{array}{r} \text { PPM } \\ \text { CD } \end{array}$ | $\begin{gathered} \text { PPM } \\ 58 \end{gathered}$ | $\begin{gathered} \text { PPIK } \\ \text { QI } \end{gathered}$ | $\begin{gathered} \text { PPH } \\ V \end{gathered}$ | $\stackrel{1}{C A}$ | $\begin{aligned} & 1 \\ & p \end{aligned}$ | $\begin{gathered} \text { PPM } \\ \text { LA } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { CR } \end{gathered}$ | $\begin{array}{r} \boldsymbol{Z} \\ \boldsymbol{H} \end{array}$ | $\begin{gathered} \text { PPM } \\ B A \end{gathered}$ | $\begin{gathered} I \\ \text { II } \end{gathered}$ | PPM B | I | $\begin{aligned} & 1 \\ & \text { MA } \end{aligned}$ | $\begin{array}{r} \mathbf{I} \\ \text { SI } \end{array}$ | $\begin{array}{r} \text { PPM } \\ \end{array}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| a Prosp. a Rock | P. WEA-R-j0 <br> K $B E-R-31$ | 48 | 29 275 | 236 317 | 110 36 | 0.1 | 81 25 | 117 16 | 45 | 18.92 1.69 | 84 3 | 5 | MD | ND | 5 | 1 | 2 | 2 | 25 | 0.01 0.01 | 0.15 0.01 | 25 | 67 146 | 0.04 0.02 | 41 165 | 0.01 0.01 | 5 | 0.09 0.01 | 0.04 0.01 | 0.01 0.02 | 1 | 1 | 5 |
| A |  | 5 | 57 | 67 | 27 | 0.1 | 282 | 359 | 12 | 9.56 | 11 | 5 | ND | ND | 1 | 1 | 2 | 2 | 2 | 0.02 | 0.01 | 14 | 99 | 0.09 | 335 | 0.01 | 5 | 0.14 | 0.01 | 0.02 | 1 | 1 | 5 |
| A | HEA-R-33 | 1 | 3 | 8 | 1 | 0.1 | 5 | 1 | 41 | 1.41 | 3 | 5 | no | No | 3 | 1 | 2 | 2 | 1 | 0.01 | 0.01 | 1 | 81 | 0.01 | 8 | 0.01 | 5 | 0.10 | 0.01 | 0.01 | 1 | 1 | 5 |
| A | HEA-R-34 | 1 | 15 | 1 | 20 | 0.1 | 11 | 1 | 322 | 1.68 | 2 | 5 | no | HD | 2 | 1 | 2 | 2 | 3 | 0.01 | 0.02 | 10 | 134 | 0.02 | 75 | 0.01 | 5 | 0.11 | 0.01 | 0.02 | 1 | 1 | 5 |
| A | W $=A-R-35$ | 1 | 7 | 3 | 15 | 0.1 | 14 | 14 | 68 | 2.28 | 60 | 5 | MD | HD | 2 | 1 | 2 | 2 | 5 | 0.01 | 0.01 | 10 | 96 | 0.13 | 16 | 0.01 | 163 | 0.42 | 0.02 | 0.02 | 1 | 1 | 20 |
| A | LEA-R-37 | 2 | 334 | 9271 | 26 | 28.9 | 5 | 1 | 34 | 1.21 | 3 | 5 | 41 | No | 1 | 1 | 2 | 35 | 3 | 0.01 | 0.01 | 1 | 168 | 0.01 | 5 | 0.01 | 59 | 0.06 | 0.01 | 0.01 | 1 | 1 | 47000 |
| A | WEA-R-38 | 1 | 73 | 753 | 20 | 0.3 | 13 | 10 | 401 | 1.44 | 2 | 5 | Mid | HD | 6 | 1 | 2 | 6 | 5 | 0.07 | 0.03 | 12 | 125 | 0.18 | 330 | 0.01 | 18 | 0.30 | 0.02 | 0.02 | 1 | 1 | 230 |
| н |  | 1 | 30 | 136 | 46 | 0.4 | 9 | 4 | 219 | 2.42 | 17 | 5 | M ${ }^{\text {d }}$ | No | 1 | 1 | 5 | 2 | 4 | 0.01 | 0.01 | 30 | 130 | 0.02 | 11 | 0.01 | 5 | 0.26 | 0.01 | 0.02 | 1 | 1 | 350 |
| н | HEf-R-11 | 1 | 1 | 3 | 9 | 0.1 | 11 | 60 | 69 | 2.57 | 2 | 5 | H ${ }^{\text {d }}$ | HD | 1 | 1 | 2 | 2 |  | 0.01 | 0.01 | 14 | 122 | 0.08 | 11 | 0.01 | 52 | 0.23 | 0.01 | 0.02 | 1 | 1 | 5 |
| A | WEA-R-42 | 9 | 1751 | 29709 | 1404 | 10.0 | 15 | 12 | 549 | 3.45 | 56 | 5 | ND | 6 | 23 | 11 | 11 | 2 | 1 | 0.31 | 0.03 | 1 | 144 | 0.17 | 7 | 0.01 | 841 | 0.10 | 0.01 | 0.02 | 1 | 1 | 12100 |
| A | WEA-A-43 | 1 | 81 | 1206 | 118 | 0.3 | 8 | 1 | 102 | 2.31 | 2 | 5 | ND | ND | 6 | , | 2 | 2 | 3 | 0.02 | 0.03 | 12 | 132 | 0.04 | 12 | 0.01 | 19 | 0.24 | 0.01 | 0.02 | 1 | 1 | 130 |
| A | WEA-R-14 | 1 | 49 | 133 | 26 | 0.1 | 7 | 4 | 151 | 3.92 | 38 | 5 | M | ND | 7 | , | 2 | 2 | 10 | 0.01 | 0.02 | 15 | 124 | 0.28 | 11 | 0.05 |  | 0.71 | 0.09 | 0.03 | , | 1 | 5 |
| A | HEA-R-45 | 4 | 481 | 6322 | 246 | 7.5 | 1 | 1 | 13 | 1.78 | 20 | 5 | 9 | NO | 2 | 1 | 6 | 2 | 1 | 0.01 | 0.01 | 8 | 89 | 0.01 | 1 | 0.01 | 125 | 0.12 | 0.09 | 0.01 | 1 |  | 16000 |
| A | 26670 | 1 | 250 | 1072 | 139 | 0.2 | 36 | 41 | 1327 | 5.86 | 24 | 5 | W | ND | 6 | 1 | 2 | 2 | 21 | 0.04 | 0.05 | 10 | 51 | 0.10 | 69 | 0.01 | 8 | 0.83 | 0.01 | 0.01 | 1 | 2 | 100 |
| A | 26671 | 1 | 53 | 34 | 51 | 0.1 | 21 | 16 | 757 | 3.84 | 14 | 5 | N0 | ND | 5 | 1 | 3 | 2 | 26 | 0.03 | 0.03 | 2 | 148 | 0.10 | 45 | 0.01 | 5 | 0.36 | 0.01 | 0.02 | 1 | 1 | 10 |
| A | 26672 | 1 | 258 | 17 | 34 | 4.9 | 21 | 15 | 1175 | 3.29 | 33 | 5 | $n 0$ | ND | 4 | 1 | 2 | 2 | 34 | 0.02 | 0.02 | 1 | 179 | 0.05 | 31 | 0.01 | 5 | 0.30 | 0.01 | 0.02 | 1 | 1 | 1300 |
| A | 26673 | 1 | 31 | 174 | 44 | 0.2 | 12 | 5 | -256 | 1.90 | 2 | 5 | N0 | ND | 2 | 1 | 2 | 2 | 6 | 0.02 | 0.02 | 11 | 128 | 0.08 | 16 | 0.01 | 5 | 0.32 | 0.05 | 0.02 | 1 | 1 | 550 |
| A | 26674 | 1 | 227 | 1818 | 223 | 0.7 | 13 | 10 | 1399 | 3.82 | 13 | 5 | MD | ND | 1 | 1 | , | 2 | 5 | 0.01 | 0.03 | 17 | 134 | 0.05 | 13 | 0.01 | 5 | 0.27 | 0.01 | 0.02 | 1 | 1 | 960 |
| A | $24 \div 75$ | 3 | 580 | 6214 | 775 | 0.7 | 43 | 55 | 2658 | 7.73 | 14 | 5 | H | ND | 5 | $\underline{1}$ | 6 | 2 | 4 | 0.15 | 0.20 | 22 | 34 | 0.30 | 19 | 0.01 | 5 | 0.83 | 0.01 | 0.02 | 1 | 2 | 40 |
| A | 26676 | 1 | 46 | 465 | 251 | 0.2 | 15 | 1 | 492 | 3.30 | 2 | 5 | ND | ND | 2 | 1 | 2 | 2 | 4 | 0.03 | 0.04 | 9 | 134 | 0.06 | 16 | 0.01 | 5 | 0.21 | 0.06 | 0.02 | 1 | 1 | 5 |
| A | 26677 | 1 | 64 | 32 | 100 | 0.1 | 42 | 48 | 386 | 1.00 | 4 | 5 | ND | ND | 4 | 3 | 5 | 2 | 103 | 0.14 | 0.16 | 7 | 40 | 2.64 | 17 | 0.01 | 5 | 2.92 | 0.01 | 0.02 | 1 | 2 | 5 |
| A | 26678 | 1 | 9 | 1 | 26 | 0.2 | 18 | 13 | 155 | 2.06 | 2 | 5 | ND | ND | 5 | 1 | 2 | 2 | 10 | 0.01 | 0.04 | 20 | 41 | 0.38 | 8 | 0.01 | 5 | 0.80 | 0.10 | 0.02 | 1 | 1 | 5 |
| A | 25679 | 1 | 38 | 51 | 4 | 0.1 | 15 | 27 | 311 | 3.04 | 2 | 5 | No | ND | 4 | 1 | 3 | 2 | 27 | 0.12 | 0.01 | 7 | 20 | 0.69 | 1 | 0.01 | 5 | 0.85 | 0.01 | 0.01 | , | 1 | 340 |
| $\dot{H}$ | 26686 | 1 | 27 | 30 | 30 | 0.3 | 12 | 18 | 646 | 2.87 | 2 | 5 | HD | H | 4 | 1 | 2 | 2 | 17 | 0.10 | 0.04 | 12 | 75 | 0.46 | 8 | 0.01 | 5 | 0.87 | 0.01 | 0.01 | 1 | 1 | 20 |
| A | 26681 | 1 | 14 | 241 | 11 | 0.1 | 16 | 13 | 548 | 2.83 | 2 | 5 | no | ND | 8 | 1 | 2 | 2 | 1 | 0.17 | 0.08 | 21 | 65 | 0.24 | 24 | 0.01 | 7 | 0.87 | 0.01 | 0.02 | 1 | 1 | 120 |
| A | 26582 | 1 | 5 | 32 | 24 | 0.1 | 11 | 9 | 165 | 1.47 | 4 | 5 | N0 | N0 | 3 | 1 | 2 | 2 | 5 | 0.06 | 0.03 | 17 | 97 | 0.12 | 22 | 0.01 | 1 | 0.60 | 0.01 | 0.01 | 1 | 1 | 5 |
| A | 26083 | 1 | 35 | 60 | 87 | 0.1 | 15 | 14 | 375 | 2.55 | 8 | 5 | nd | N0 | 3 | 1 | 2 | 2 | 10 | 0.05 | 0.04 | 13 | 92 | 0.08 | 20 | 0.01 | 5 | 0.41 | 0.09 | 0.02 | 1 | 1 | 220 |
| A | 26684 | 2 |  | 9 | 42 | 0.1 | 33 | 11 | 148 | 1.64 | 6 | 5 | ND | ND | 5 | 1 | 2 | 2 | 5 | 0.13 | 0.03 | 13 | 130 | 0.16 | 14 | 0.01 | 122 | 0.43 | 0.05 | 0.02 | 1 | 1 | 20 |
| $\dot{H}$ | 26665 | 2 | 14 | 230 | 93 | 0.3 | 11 | 5 | 344 | 1.58 | 5 | 5 | 0 | N0 | 3 | 1 | 2 | 2 | 6 | 0.06 | 0.02 | 12 | 108 | 0.13 | 12 | 0.01 | 30 | 0.52 | 0.05 | 0.02 | 1 | 1 | 240 |
| A | 26686 | 32 | 150 | 31134 | 1048 | 51.5 | 5 | 1 | 89 | 2.74 | 57 | 5 | No | 9 | 11 | 7 | 27 | 2 | 6 | 0.02 | 0.02 | 3 | 134 | 0.04 | 7 | 0.01 | 472 | 0.21 | 0.07 | 0.02 | 1 | 1 | 2800 |
| A | 25687 | 1 | 24 | 3915 | 406 | 0.8 | 10 | 9 | 209 | 2.00 | 11 | 5 | no | ND | 4 | 1 | 5 | $?$ | 5 | 0.05 | 0.02 | 14 | 82 | 0.25 | 20 | 0.01 | 48 | 0.75 | 0.07 | 0.02 | 1 | 1 | 40 |
| A | 26688 | 3 | $B$ | 280 | 186 | 0.3 | 13 | 16 | 241 | 2.41 | 14 | 5 | 10 | N0 | 2 | 1 | 2 | 2 | 6 | 0.03 | 0.03 | 25 | 106 | 0.14 | 20 | 0.01 | 5 | 0.44 | 0.06 | 0.01 | 1 | 1 | 30 |
| A | 26689 | 1 | 7 | 55 | 56 | 0.1 | 9 | 3 | 273 | 1.11 | 2 | 5 | W0 | N0 | 2 | 1 | 2 | 2 | ? | 0.02 | 0.02 | 20 | 10 | 0.04 | 15 | 0.01 | 5 | 0.20 | 0.01 | 0.01 | 1 | 1 | 110 |



## ROSSBACHEF LABDRATORY LTD - <br> CERTIEICATE OF ANALYS IS <br> 225 S. Spriager dre., Buraaby british Coluabla, Cas. Y5B J!

TO : F.T. BANTING ENGINEERING LTD.
qOI INDUSTFIAL FD. \#2,
CFANEROOK, E.G.
PROJECT : WEAVEK MC-1
TYPE OF ANALYSIS : ICF

CERTIFICATE \# : 89374<br>INVOICE \# : 10028<br>DATE ENTERED : 87-10-05<br>FILE NAME : RTE89374.I

PASE \# : 1


# FOSEBACHER LABDPATGRY LTD - <br> CERTIEICATR OE ANALYSIS <br> 2255 S. Sprineer Are., Buraby, Britisl Colnabla, Cas. ISB JII <br> Ph: (684)299-6910 Jas:299-6252 

TO: K.T. EANTING ENGINEERING LTD., 901 INDUSTRIAL RD. \#2,
CRANBROOK:, B.C.
PROJECT : WEAVER
TYPE DF ANALYSIS : ICP

```
CERTIFICATE : 8940.3
INVOICE : 210059
DATE ENTERED : 89-10-18
FILE NAME: RTb日9403.I
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PAGE \# : 1


FOESBACHER LABQRATORY LTD-
CEATIRICATB OR ANALYSIS
1225 8. Sprimeor Ave., Puruitr
Irltish Colusbia, Gas. 158311
Pl: (601)299-6911 Fax: 299-6252
TO : R.T.EANTING ENGINEERING LTD., OII INDUSTRIAL RD. \#2, CRANBRODK, E.C.

```
CERTIFICATE : 89446
INVOICE : 10129
DATE ENTERED : 89-11-10
FILE NAME : RTBB9446.I
```

PROJECT : WEAVER
TYPE DF ANALYSIS : ICP
PAGE : 1

| $\begin{aligned} & \text { PRE } \\ & \text { fII } \end{aligned}$ | SAMPLE MAME | $\begin{gathered} \text { PPM } \\ M O \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { c। } \end{gathered}$ | $\begin{gathered} P P M \\ P B \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { In } \end{gathered}$ | $\begin{array}{r} \text { PPH } \\ \text { A6 } \end{array}$ | $\begin{gathered} \text { PPM } \\ \text { MI } \end{gathered}$ | $\begin{gathered} \text { PPH } \\ \text { COU } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { Hit } \end{gathered}$ | $\begin{gathered} \mathbf{I} \\ \mathrm{FE} \end{gathered}$ | $\begin{array}{r} \text { PPM } \\ \text { AS } \end{array}$ | $\begin{array}{r} \text { PPM } \\ \mathbf{U} \end{array}$ | $\begin{gathered} \text { PPM } \\ \text { AU } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { H5 } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ 5 R \end{gathered}$ | $\begin{gathered} \text { PPY } \\ C D \end{gathered}$ | $\begin{gathered} \text { PPM } \\ 5 \$ \end{gathered}$ | $\begin{gathered} \text { PPM } \\ 0 I \end{gathered}$ | $\begin{array}{r} \text { PPM } \\ V \end{array}$ | $\begin{aligned} & 2 \\ & c_{i}^{2} \end{aligned}$ | $\begin{aligned} & 1 \\ & p \end{aligned}$ | $\begin{gathered} \text { PPM } \\ L A \end{gathered}$ | PPY CR | $\begin{array}{r} \mathbf{I} \\ \boldsymbol{W I} \end{array}$ | $\begin{gathered} \text { PPM } \\ P A \end{gathered}$ | $\begin{gathered} 8 \\ 11 \end{gathered}$ | $\begin{array}{r} \text { PPM } \\ \hline \end{array}$ | $\begin{aligned} & 2 \\ & N(2) \end{aligned}$ | $\begin{aligned} & 1 \\ & m \end{aligned}$ | $\begin{array}{r} 1 \\ 51 \end{array}$ | PPM. $y$ |  | $\begin{array}{r} P P B \\ A \cup A A \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 26798 | 1 | 9 | 1 | 23 | 0.2 | 3 | 12 | 13 | 2.12 | 5 | 5 | M | ND | 1 | 1 | 2 | 2 | 4 | 0.01 | 0.01 | 10 | 47 | 0.18 | 20 | 0.01 | 5 | 0.42 | 0.09 | 0.02 | 3 | 1 | 5 |
| A | 26799 | 2 | 4 | 1 | 14 | 0.1 | 3 | 3 | 19 | 0.82 | 2 | 5 | N0 | vi | 1 | 1 | 2 | 2 | 3 | 0.01 | 0.01 | 1 | 133 | 0.06 | 5 | 0.01 | 5 | 0.19 | 0.08 | 0.02 | 3 | 1 | 5 |
| A | 26800 | 1 | 3 | 1 | 18 | 0.1 | 15 | 24 | 13 | 2.99 | 3 | 5 | ND | ND | 1 | 1 | 3 | 2 | 10 | 0.01 | 0.01 | 1 | 49 | 1.43 | 18 | 0.01 | 340 | 1.81 | 0.08 | 0.02 | 3 | 1 | 5 |
| A | 28801 | 2 | 30 | 24 | 92 | 0.3 | 22 | 21 | 233 | 3.57 | 40 | 5 | 0 | ND | 3 | 1 | 2 | 2 | 13 | 0.01 | 0.03 | 6 | 37 | 0.62 | 39 | 0.01 | 291 | 1.48 | 0.07 | 0.02 | 1 | 1 | 5 |
| A | 26802 | 12 | 189 | 7271 | 815 | 10.6 | 3 | 14 | 23 | 3.07 | 95 | 5 | 8 | ND | 4 | 3 | 2 | 2 | 2 | 0.01 | 0.02 | 7 | 68 | 0.02 | 353 | 0.01 | 121 | 0.30 | 0.07 | 0.02 | 20 |  | 12700 |
| A | 26803 | 2 | 25 | 123 | 139 | 0.2 | 24 | 10 | 121 | 3.12 | 2 | 5 | ND | ND | 1 | 1 | 2 | 2 | 22 | 0.03 | 0.06 | 16 | 55 | 2.48 | 28 | 0.01 | 5 | 2.82 | 0.01 | 0.02 | 2 | 1 | 80 |
| A | 26804 | 2 | 110 | 619 | 211 | 1.4 | 14 | 29 | 146 | 3.40 | 18 | 5 | \#0 | Mo | 4 | 1 | 2 | 2 | 8 | 0.01 | 0.04 | 1 | 120 | 0.09 | 11 | 0.01 | 123 | 0.25 | 0.01 | 0.03 | 4 | 1 | 2080 |
| A | 26805 | 3 | 47 | 351 | 573 | 0.2 | 17 | 31 | 686 | 3.93 | 2 | 5 | W0 | ND | 6 | 3 | 2 | 2 | 9 | 0.12 | 0.05 | 16 | 84 | 0.24 | 21 | 0.01 | 70 | 0.53 | 0.02 | 0.02 | 5 | 1 | 400 |
| A | 28806 | 1 | 4 | 95 | 56 | 0.1 | 10 | 15 | 267 | 1.19 | 2 | 5 | N0 | N0 | 7 | 1 | 5 | 2 | 8 | 0.35 | 0.02 | 23 | 70 | 0.46 | 21 | 0.01 | 25 | 0.45 | 0.01 | 0.02 | 6 | 1 | 50 |
| A | 26807 | 2 | 3 | 16 | 14 | 0.1 | 8 | 6 | 18 | 0.67 | 2 | 5 | N0 | ND | 1 | 1 | 7 | 2 | 1 | 0.01 | 0.01 | 1 | 172 | 0.12 | 3 | 0.01 | 5 | 0.13 | 0.01 | 0.02 | 4 | 1 | 5 |
| A | 26808 | 2 | 4 | 16 | 11 | 0.2 | 14 | 20 | 128 | 2.01 | 2 | 5 | * 0 | \% 0 | 2 | 1 | 5 | 2 | 1 | 0.02 | 0.01 | 12 | 100 | 0.20 | 12 | 0.01 | 30 | 0.32 | 0.01 | 0.02 | 3 | 1 | 30 |
| 4 | 26809 | 1 | 198 | 124 | 1 | 1.1 | 6 | 5 | 1 | 1.59 | 2 | 5 | W9 | ND | 1 | 1 | 2 | 2 | 3 | 0.01 | 0.01 | 6 | 151 | 0.01 | 8 | 0.01 | 27 | 0.13 | 0.01 | 0.01 | 1 | 1 | 60 |
| A | 26810 | 1 | 17 | 54 | 1 | 0.3 | 1 | 3 | 1 | 0.90 | 2 | 5 | MD | W | 1 |  | 2 | 2 | 3 | 0.01 | 0.01 | 2 | 131 | 0.01 | 1 | 0.01 | 78 | 0.03 | 0.01 | 0.01 | 2 | 1 | 390 |
| A | 26811 | 2 | 16 | 198 | 31 | 0.7 | 9 | 16 | 63 | 1.91 | 2 | 5 | W | ND | 1 | 1 | 7 | 2 | 3 | 0.01 | 0.01 | 13 | 109 | 0.08 | 14 | 0.01 | 18 | 0.43 | 0.03 | 0.02 | 5 | 1 | 950 |
| A | 26812 | 1 | 59. | 132 | 11 | 0.7 | 9 | 12 | 14 | 1.89 | 2 | 5 | WD | ND | 2 | 1 | 2 | 2 | 3. | 0.01 | 0.01 | 10 | 108 | 0.02 | 10 | 0.01 | 240 | 0.17 | 0.01 | 0.01 | 2 | 1 | 1470 |
| A | 26813 | 1 | 16 | 110 | 18 | 0.3 | 12 | 21 | 153 | 2.67 | 2 | 5 | WD | HD | 2 | 1 | 2 | 2 | 5 | 0.01 | 0.02 | 10 | 118 | 0.04 | 16 | 0.01 | 57 | 0.34 | 0.01 | 0.02 | 1 | 1 | 400 |
| A | 26814 | 2 | 116 | 17 | 58 | 0.3 | 12 | 16 | 181 | 2.10 | 9 | 5 | no | ND | 10 | 1 | 5 | 2 | 1 | 0.18 | 0.02 | 12 | 62 | 0.25 | 28 | 0.01 | 250 | 0.26 | 0.01 | 0.02 | 5 | 1 | 8600 |
| A | 26815 | 2 | 11 | 22 | 107. | 0.3 | 17 | 18 | 249 | 2.28 | 11 | 5 | HD | no | 20 | 1 | 10 | 3 | 4 | 0.57 | 0.03 |  | 115 | 1.04 | 15 | 0.01 | 148 | 0.20 | 0.08 | 0.02 | 5 | 1 | 70 |
| A | 26816 | 4 | 192 | 251 | 90 | 0.8 | 14 | 71 | 943 | 6.98 | 16 | 5 | ND | ND | 31 | 3 | 20 | 3 | 84 | 1.04 | 0.07 | 3 | 22 | 1.53 | 229 | 0.01 | 121 | 1.57 | 0.01 | 0.02 | 10 | 2 | 360 |
| a | 26817 | 1 | 138 | 919 | 97 | 3.4 | 30 | 58 | 674 | 5.94 | 5 | 5 | MD | HD | 1 | 1 | 3 | 2 | 29 | 0.06 | 0.04 | 1 | 98 | 0.23 | 121 | 0.01 | 494 | 0.43 | 0.01 | 0.03 | 5 | 1 | 3790 |
| A | 26818 | 1 | 105 | 2034 | 109 | 3.4 | 34 | 85 | 881 | 6.20 | 8 | 5 | ND | HD | 5 | 1 | 2 | 2 | 18 | 0.04 | 0.05 | 3 | 66 | 0.15 | 164 | 0.01 | 194 | 0.48 | 0.04 | 0.02 | 4 | 1 | 1560 |
| A | 26819 | 14 | 83 | 5418 | 19 | 20.7 | 23 | 51 | 609 | 6.12 | 2 | 5 | HD | MD | 12 | 1 | 2 | 19 | 18 | 0.03 | 0.05 | 11 | 98 | 0.09 | 270 | 0.01 | 249 | 0.43 | 0.10 | 0.03 | 1 | 1 | 4500 |
| A | 26820 | 1 | 6 | 72 | 18 | 0.4 | 12 | 22 | 174 | 1.79 | 3 | 5 | W0 | ND | 3 | 1 | 10 | 2 | 8 | 0.03 | 0.01 | 4 | 93 | 0.57 | 12 | 0.01 | 66 | 0.70 | 0.11 | 0.02 | 3 | 1 | 40 |
| A | 26821 | 1 | 1 | 17 | 26 | 0.3 | 17 | 26 | 71 | 2.19 | 9 | 5 | WD | No | 2 | 1 | 2 | 2 | 8 | 0.02 | 0.02 | 9 | 66 | 0.65 | 20 | 0.01 | 280 | 0.91 | 0.01 | 0.02 | 1 | 1 | 20 |
| A | 26622 | 1 | 9 | 1 | 29 | 0.2 | 16 | 30 | 101 | 2.87 | 4 | 5 | ND | HD | 3 | 1 | 2 | 2 | 5 | 0.04 | 0.04 | 12 | 46 | 0.17 | 13 | 0.01 | 214 | 0.42 | 0.06 | 0.02 | 1 | 1 | 100 |
| A | 26823 | 1 | 9 | 3 | 22 | 0.2 | 24 | 107 | 15 | 4.64 | 7 | 5 | ND | ND | 1 | 1 | 2 | 2 | 3 | 0.01 | 0.03 | 3 | 59 | 0.01 | 19 | 0.01 | 1081 | 0.21 | 0.03 | 0.01 | 1 | 1 | 240 |
| A | 26821 | 1 | 4 | 1 | 22 | 0.1 | 9 | 21 | 232 | 1.81 | 2 | 5 | NO | HD | 1 | 1 | 2 | 2 | 3 | 0.01 | 0.02 | 6 | 53 | 0.32 | 13 | 0.01 | 183 | 0.20 | 0.01 | 0.01 | 1 | 1 | 10 |
| A | 26825 | 3 | 1 | 11 | 1 | 0.1 | 19 | 39 | 346 | 3.19 | 3 | 5. | ND | WI | 2 | 1 | 5 | 5 | 14 | 0.04 | 0.02 | 1 | 121 | 1.43 | 14 | 0.01 | 273 | 0.24 | 0.01 | 0.02 | 7 | 1 | 1080 |
| A | 26826 | 4 | 11 | 23 | 40 | 1.1 | 25 | 19 | 519 | 3.94 | 2 | 5 | NI | N0 | 8 | 1 | 8 | 2 | 21 | 0.19 | 0.04 | 2 | 91 | 0.64 | 17 | 0.01 | 130 | 0.35 | 0.01 | 0.02 | 8 | 1 | 1000 |
| A | 26927 | 3 | 3 | 9 | 1 | 0.2 | 14 | 21 | 134 | 1.80 | 2 | 5 | W0 | MD | is | 1 | 10 | 5 | 4 | 0.28 | 0.01 | 10 | 111 | 0.18 | 15 | 0.01 | 118 | 0.18 | 0.01 | 0.02 | 9 | 1 | 100 |



### 14.30 APPENDIX 3

Soil Geochemistry Analyses
: R.T. 日ANTING ENGINEERING LTD. 901 INDUSTRIAL FD. \#2. CRANBROOK, B.C.
JECT :
E OF ANALYSIS : GEOCHEMICAL
$\mathrm{MC}_{2}$

2225 S. Spriager Are., Burabby, British Colunbia, Can. V5B $^{3}$ 3R1
Ph: (604)299-6910 Pax: 299-6252

CERTIFICATE \# : 893326
INVOICE \# : 90526
DATE ENTERED : 89-09-19
FILE NAME : RTE日9332.G
PAGE \# : 1

| SAMPLE | NMME | $\begin{aligned} & \mathrm{PPB} \\ & \mathrm{Au} \end{aligned}$ | $\begin{aligned} & \text { PRE } \\ & \text { FIX } \end{aligned}$ | SAMPLE | NOME | $\begin{gathered} \text { FFM } \\ \text { Pb } \end{gathered}$ | $\begin{gathered} \text { FPM } \\ \mathrm{Zn} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 ON | 430E | 50. | A | $50 \times 1$ | 430E | 12 | 10 |
| 50 N | 4SCE | 30 | A | SON | 450E | 10 | 30 |
| 5 CN | 470E | 10 | A | 50 | 470E | 16 | 64 |
| 50 N | 4905 | 50 | A | 50 N | 490E | 6 | \% |
| 50 N | 5105 | 180 | A | 5 ON | 510 | 230) | 94 |
| 50 N | STOE | 520 | A | 5 CN | Sxat | 20 | 52 |
| 504 | SECE | 80 | A | Eck | SEE | 20 | 68 |
| 50 N | 570E | 20 | A | 5 | STGE | 12 | 34 |
| 501 | 5905 | 10 | 5 | EON | SgOE | 8 | 28 |
| 70 N | 4505 | 20 | 5 | TON | 450E | 12 | 62 |
| 70 N | 470 E | 50 | 5 | 7 CN | 47CE | 20 | 312 |
| 7 ON | 490. | 60 | 5 | 7 CN | 496E | 210 | 108 |
| 70 N | $510 E$ | 10 | 5 | 704 | $510 E$ | 1.4 | 3 |
| 70 N | SSCE | 360 | 5 | 701 | GICE | 14 | 46 |
| 70N | 트의 | 100 |  | 70N | SECE | 12 | 14 |
| 70N | 5706 | 10 | ( | 70 N | STCE | 20 | 30 |
| $70 N$ | SYOE | 20 | 5 | 7 CN | S9CE | 12 | 40 |
| 700 | 610E | 100 | 5 | 7 ON | GICE | 10 | 2 |
| 90 N | 470E | 50 | 5 | 90 N | 470E | 34 | 288 |
| 9 ON | 49 CE | 40 | 5 | ON | 49GE | 108 | 120 |
| 90 N | 510 E | 50 | S | 90 N | 510.0 | 8 | 16 |
| 9 CN | STE | 30 | 5 | CON | ESE | 24 | 52 |
| 90 N | SEOE | 30 | 5 | 9, | 5EOE | 12 | 2 |
| 90 N | 5702 | 50 | 5 | 9 O | 5 CE | $\infty$ | 26 |
| gON | 5705 | 90 | 5 | 90 N | 590 | 2 | x |
| 90 N | 610E | 80 | 5 | 9 ON | GIOE | 10 | 54 |
| 90 N | 6308 | 70 | 5 | gon | GTOE | 12 | 28 |
| 110 N | 490E | 50 | 5 | 110 N | 490E | 218 | 146 |
| 110 N | Stoe | 130 | 5 | 110 N | SIOE | 8 | 32 |
| 110 N | SOE | 60 | 5 | 110 N | $5 \times 5$ | 8 | 20 |
| 110 N | SEOE | 60 | 5 | 11 ON | 5EOE | 6 | 42 |
| 110 N | 57CE | 290 | 5 | 110 N | 5TCE | 10 | 30 |
| 110 N | 590E | 50 | 5 | 110 N | STCE | 34 | 56 |
| 110 N | 610E | 200 | 5 | 110 N | 610E | 10 | 70 |
| 110 N | GTOE | 60 | 5 | 110 N | 6 CE | 14 | 44 |
| 110 N | GEOE | 70 | 5 | 110 N | GECE | 10 | 30 |
| 150 N | S1OE | 70 | 5 | 13 ON | $510 E$ | 8 | 14 |
| 130 N | Sce | 50 | 5 | 130 N | Ege | 4 | 18 |
| 15 ON | SEOE | 30 | 5 | 1 ION | EECE | 12 | 3 |
| 130 N | STOE | 100 | 5 | 1 ON | STCE | 16 | 2 |

## CERTIFICATE OF ANALYSIS

TO : R.T.EANTING ENGINEERING LTD.. 901 INDUSTRIAL RD. \#2, CRANBROOK: B.C.
PROJECT :
TYPE OF ANALYSIS : GEDCHEMICAL

2225 S. Springer Ape., Burnaby, British Coluabia, Can. 75B 3 H1 $\mathrm{Ph}:(604) 299-6910$ Pax:299-6252

CERTIFICATE \# : 89.32 S
INVOICE \# : 90526
DATE ENTERED : 89-09-17
File NAME : FTG87352.g
PAGE \# : 2

| $\begin{aligned} & \text { PREE } \\ & \text { FII } \end{aligned}$ | SAMPLE | NAME | $\begin{aligned} & \text { FPB } \\ & \text { AL } \end{aligned}$ | $\begin{aligned} & \text { PRE } \\ & \text { FIX } \end{aligned}$ | SAMPLE | NAME | $\begin{gathered} \text { PPM } \\ \text { Pb } \end{gathered}$ | $\begin{gathered} \mathrm{FPM} \\ \mathrm{Zn} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 13 ON | SFOE | 50 | 5 | 1 CON | SFCE | 41 | 46 |
| 5 | 13 ON | 6105 | 100 | 5 | 1 BON | G1OE | 8 | 30 |
| 5 | 13 ON | GX0E | 20 | 5 | 1 ON | GSCE | 40 | 64 |
| 5 | 13 ON | $6 E 0$ | 5 | 5 | 1 BN | 6EOE | 12 | 26 |
| 5 | $1 . \mathrm{ON}$ | 67CE | 3 | 5 | 13 OW | 670E | 30 | 60 |
| 5 | 150 N | $5 \times 15$ | 20 | 5 | 1EON | 5 SOE | 18 | E |
| 5 | 150 N | SECE | 210 | 5 | $150 N$ | EECE | 16 | 20 |
| 5 | 150 N | 570E | 40 | 5 | 150N | 570E | 12 | \% |
| 5 | 150 N | 590E | 40 | 5 | 150N | GTCE | 10 | 26 |
| 5 | 150 N | 6105 | 1180 | 5 | 150 N | 6105 | 8 | 3 |
| 5 | 150 N | 6xCE | 30 | s | 150, | 6305 | 30 | 58 |
| 5 | 150N | 650 | 70 | 5 | 150 N | ESOE | 18 | $\underline{2}$ |
|  | 150 N | 6705 | 90 | 5 | 1504 | 670E | 16 | 2 |
|  | 150 N | 690E | 30 | 5 | 150N | 690E | 8 | 16 |
|  | 17 ON | SEOE | 5 |  | 170 N | 돚C | 14 | $\underline{4}$ |
| - | 170 N | STCE | 40 | ( | 17 CN | 5TCE | 16 | 48 |
| 5 | 17 ON | 590E | 10 | 5 | 17 ON | 5POE | 12 | 24 |
| 5 | 170 N | 61CE | 20 | 5 | 17 CN | SIOE | 42 | 54 |
| 5 | 170N | 6 COE | 400 | 5 | 170才 | 6SIE | 6 | 148 |
| 5 | 170 N | GE0E | 90 | 5 | 17 ON | 6ECE | 20 | 42 |
| 5 | 170 N | 670E | 70 | 5 | 17 ON | 670E | 26 | 56 |
| 5 | 170 N | 690E | 50 | 5 | 17 ON | 6705 | 12 | 20 |
| 5 | 170N | 710E | 120 | 5 | 17 N | 710E | 10 | 20 |

## ROSSBACHER LABQRATORY LTD- <br> CERTIRICATB OF ANALYS IS <br> 2225 5. Sarlater Ire. . Buraby, <br> British Coloabla; Can. PS8 311 <br> P): (601)299-6910 Inx:299-6252




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PROJECT:

$$
\text { INVOICE \# }=90478
$$

CERTIFICATE \# : 892926
DATE ENTERED : 89-08-31
FILE NAME : FTEB9292.I 以 Nacenfic

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## SSBACHER LABOFATGRY LTD -

CERTIFICATE OF ANALYSIS
TO : R.T.BANTING ENGINEERING LTD., 901 INDUSTRIAL RD. \#2, CFANEROOK, E.C.
PROJECT :
TYPE OF ANALYSIS : GEOCHEMICAL

CERTIFICATE \# : 89292G<br>INVOICE \# : 90478<br>DATE ENTERED : 89-08-31<br>FILE NAME : RTBB9292.G<br>Weaven/ MC ${ }^{2}$<br>PAGE \# : 1

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2225 S. Spriager Ave., Burnaby, British Colunbia, Can. P5B 3H1
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        901 INDUSTRIAL RD. #2.
        CRANEROOK, E.C.
PROJECT :
TYPE OF ANALYSIS : GEOCHEMICAL
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    CERTIFICATE # : 89292G
        INVOICE # : 90478
DATE ENTERED : 89-08-31
GRID#1 FILE NAME : RTB89292.G
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ROSSBACHER LABORATDRY LTD シ
CERTIEICATE OF ANALYSIS
TO : R.T. BANTING ENGINEERING LTD., 901 INDUSTRIAL FD. \#2, CRANBROOK, B.C.
TYPE OF ANALYSIS : ICF
GALENA VEIN

2225 S. Sprinet Ive., Rurnaby, Brilish Coluabla, Can. WEB 3ll Ph: (604)299-6918 Iax:299-6252

CERTIFICATE : 893391
INVOICE \# : 90-308 90538
DATE ENTERED : 89-09-15
FILE NAME : RTE89339.I
PAGE \# : 1

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2225 S. Spriager dre., Burasby Britisa Colambla, Cas. PSB 311 Pb: (604)298-6910 Ia土:299-6252

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CERTIFICATE \# : 893391
INVOICE : 90370
DATE ENTERED : 89-09-19
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PROJECT :
FILE NAME : FTE893:9. I
TYPE OF ANALYSIS : ICP
GALENJA VEIN
PAGE : 2

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TO: R.T.GANTING ENGINEEFING LTD.,
    9O1 INDUSTKIAL RD. #2,
        CRANBROOK, E.C.
PROJECT :
TYPE OF ANALYSIS : ICP
TYPE OF ANALYSIS : ICP
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Ga luren
CERTIFICATE \# : 893326
INVOICE : 90526
DATE ENTERED : 89-09-19
FILE NAME : FTGB9332. I
PAGE \# : 2

| $\begin{aligned} & \text { PRE } \\ & \text { FII } \end{aligned}$ | SATPLE MASE | $\begin{gathered} \text { PPH } \\ \text { HO } \end{gathered}$ | PPM <br> Cl | $\begin{gathered} \text { PPM } \\ \text { PB } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { ZII } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ A 6 \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { MI } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { CO } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { MM } \end{gathered}$ | $\begin{gathered} \boldsymbol{1} \\ \mathrm{FE} \end{gathered}$ | $\begin{gathered} \text { PPM } \\ \text { AS } \end{gathered}$ | $\begin{array}{r} \text { PPM } \\ \text { U } \end{array}$ | $\begin{gathered} \text { PPM } \\ A U \end{gathered}$ | $\begin{gathered} \text { PPM } \\ H 6 \end{gathered}$ | $\begin{gathered} \text { PPM } \\ 58 \end{gathered}$ | $\begin{gathered} \text { PPN } \\ \text { CD } \end{gathered}$ | $\begin{array}{r} \text { PPM } \\ 5 D \end{array}$ | $\begin{gathered} \text { PPM } \\ \text { DI } \end{gathered}$ | $\begin{gathered} \text { PPM } \\ V \end{gathered}$ | ${ }^{2}$ | ? | PPY | $\begin{gathered} P P Y \\ C R \end{gathered}$ | $\begin{gathered} 2 \\ M 6 \end{gathered}$ | $\begin{gathered} P P M \\ B A \end{gathered}$ | $\begin{aligned} & 1 \\ & \text { HI } \end{aligned}$ | $\begin{array}{r} \text { PPM } \\ \hline \end{array}$ | $\begin{gathered} 2 \\ A^{2} \end{gathered}$ | $\begin{gathered} 2 \\ M A \end{gathered}$ | $\begin{array}{r} 1 \\ 51 \end{array}$ | PPM |  | $\begin{array}{r} \text { PPB } \\ \text { Au AA } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 6001 280\% | 1 | 17 | 1 | 38 | 0.4 | 5 | 8 | 309 | 3.44 | 2 | 5 | N0 | *D | 5 | 1 | 2 | 2 | 50 | 0.02 | 0.03 | 17 | 3 | 0.19 | 56 | 0.12 | 5 | 1.29 | 0.01 | 0.01 | 1 | 1 | 5 |
| S | 600N 300\% | 2 | 22 | 25 | 63 | 0.2 | 14 | 19 | 334 | 3.92 | 24 | 5 | ND | ND | 5 | 1 | 6 | 2 | 24 | 0.02 | 0.10 | 31 | 1 | 0.31 | 54 | 0.05 | 5 | 1.42 | 0.01 | 0.01 | 2 | 1 | 5 |
| S | 600\% 3204 | 1 | 10 | 21 | 32 | 0.2 | 6 | 12 | 112 | 2.70 | 9 | 5 | ND | WD | 5 | 1 | 5 | 2 | 31 | 0.03 | 0.05 | 21 | 7 | 0.15 | 44 | 0.05 | 5 | 1.57 | 0.01 | 0.01 | 2 | 1 | 5 |
| S | 60013104 | 1 | 11 | 27 | 20 | 0.3 | 3 | 15 | 48 | 1.66 | 7 | 5 | N0 | ND. | 5 | 1 | 16 | 2 | 34 | 0.03 | 0.05 | 1 | 8 | 0.05 | 31 | 0.13 | 5 | 3.53 | 0.01 | 0.05 | 8 | 1 | 5 |
| 5 | 600 H 360 H | 2 | 10 | 12 | 34 | 0.3 | 6 | 9 | 152 | 2.48 | 11 | 5 | N0 | ND | 4 | 1 | 5 | 2 | 34 | 0.02 | 0.05 | 28 | 6 | 0.17 | 33 | 0.06 | 5 | 0.95 | 0.01 | 0.01 | 4 | 1 | 5 |
| 5 | $600 \mathrm{~N} 380 \%$ | 2 | 25 | 1 | 50 | 0.2 | 5 | 8 | 198 | 4.18 | 9 | 5 | N | ND | 3 | 1 | 2 | 2 | 21 | 0.01 | 0.06 | 26 | 1 | 0.28 | 29 | 0.03 | 5 | 1.26 | 0.01 | 0.01 | 1 | 1 | 5 |
| 5 | 600N 100\% | 4 | 22 | 37 | 65 | 0.6 | 11 | 17 | 457 | 5.96 | 27 | 5 | NO | ND | 5 | 2 | 11 | 2 | 50 | 0.02 | 0.12 | 15 | 9 | 0.19 | 60 | 0.17 | 5 | 2.57 | 0.01 | 0.02 | 6 | 1 | 5 |
| S | 600 N 4201 | 4 | 25 | 64 | 70 | 0.5 | 13 | 25 | 721 | 4.45 | 115 | 5 | ND | ND | 6 | 1 | 4 | 2 | 48 | 0.03 | 0.06 | 33 | 6 | 0.22 | 52 | 0.07 | 5 | 1.36 | 0.01 | 0.01 | 3 | 1 | 5 |
| S | b00n 410 W | 2 | 13 | 22 | 46 | 0.5 | 8 | 14 | 140 | 3.03 | 21 | 5 | ND | N0 | 3 | 1 | 7 | , | 41 | 0.02 | 0.03 | 27 | 6 | 0.20 | 11 | 0.08 | 5 | 1.39 | 0.01 | 0.01 | 6 | 1 | 5 |
| 5 | 6001 4601 | 2 | 38 | 100 | 60 | 0.4 | 11 | 17 | 280 | 3.88 | 41 | 5 | NO | HD | 1 | 1 | 5 | 2 | 47 | 0.02 | 0.04 | 18 | 7 | 0.20 | 50 | 0.07 | 5 | 1.82 | 0.01 | 0.01 | 3 | 1 | 5 |
| 5 | 650N 240 | 1 | 21 | 1 | 58 | 0.3 | 7 | 11 | 623 | 2.63 | 11 | 5 | MD | SD | 9 | 1 | 2 | 2 | 19 | 0.07 | 0.04 | 20 | 3 | 0.23 | 118 | 0.04 |  | 1.19 | 0.01 | 0.01 | 1 | 1 | 5 |
| 5 | 650 26014 | 1 | 32 | 25 | 78 | 0.3 | 10 | 24 | 1347 | 2.27 | 10 | 5 | ND | no | 27 | 1 | 2 | 2 | 14 | 0.24 | 0.06 | 26 | 6 | 0.32 | 339 | 0.03 | 5 | 2.23 | 0.01 | 0.01 | 1 | 1 | 5 |
| 5 | 6501 2801 H | 1 | 6 | 1 | 24 | 0.3 | 1 | 3 | 189 | 1.65 | 2 | 5 | M ${ }^{\text {d }}$ | ND | 8 | 1 | 2 | 2 | 28 | 0.11 | 0.04 | 12 | 2 | 0.09 | 52 | 0.10 | 5 | 0.74 | 0.01 | 0.01 | 1 | 1 | 10 |
| 5 | 6501 3000 | 1 | 9 | 20 | 36 | 0.1 | 5 | 9 | 1091 | 1.16 | 5 | 5 | HI | ND | 14 | 1 | 3 | 2 | 21 | 0.12 | 0.03 | 17 | 6 | 0.13 | 128 | 0.08 | 5 | 0.84 | 0.01 | 0.01 | 2 | 1 | 5 |
| 5 | 650 N 320 H | 1 | 5 | 12 | 17 | 0.1 | 2 | 6 | 39 | 1.07 | 2 | 5 | HD | ND | 1 | 1 | 4 | 2 | 29 | 0.03 | 0.03 | 21 | 4 | 0.06 | 22 | 0.06 | 5 | 0.85 | 0.01 | 0.01 | 2 | 1 | 5 |
| 5 | 650\% 340 | 2 | 13 | 16 | 35 | 0.2 | 6 | 14 | 165 | 3.25 | 15 | 5 | HD | H0 | 4 | 1 | 8. | 2 | 41 | 0.02 | 0.05 | 21 | 6 | 0.17 | 43 | 0.09 | 5 | 2.27 | 0.01 | 0.03 | 5 | 1 | 5 |
| 5 | 650N 360\% | 1 | 14 | , | 41 | 0.1 | 4 | 8 | 144 | 3.27 | 25 | 5 | ND | No | 3 | 1 | 2 | 2 | 21 | 0.02 | 0.05 | 31 | 1 | 0.26 | 23 | 0.02 | 5 | 1.04 | 0.01 | 0.01 | 1 | 1 | 5 |
| S | 650\% 380\% | 1 | 11 | 18 | 40 | 0.1 | 6 | 12 | 146 | 3.36 | 14 | 5 | KD | MD | 5 | 1 | 1 | 2 | 51 | 0.02 | 0.04 | 27 | 6 | 0.17 | 52 | 0.08 | 5 | 1.17 | 0.01 | 0.01 | 1 | 1 | 5 |
| S | 650\% 4001 | 2 | 14 | 33 | 54 | 0.6 | 6 | 17 | 153 | 4.11 | 18 | 5 | 10 | no | 3 | , | 8 | 2 | 38 | 0.02 | 0.06 | 13 | 8 | 0.15 | 48 | 0.10 | 5 | 3.22 | 0.01 | 0.04 | 6 | 1 | 5 |
| 5 | 650 Na 42 N | 1 | 12 | 1 | 33 | 0.7 | 1 | 11 | 169 | 2.53 | 2 | 5 | HD | MD | 4 | 1 | 2 | 2 | 22 | 0.02 | 0.05 | 1 | 4 | 0.11 | 36 | 0.09 | 5 | 3.22 | 0.01 | 0.05 | 1 | 1 | 5 |
| 5 | 650 N 4011 | 1 | 15 | 1 | 31 | 0.6 | 1 | 10 | 78 | 2.84 | 2 | 5 | HD | HD | 3 | 1 | 2 | 2 | 29 | 0.01 | 0.04 | 8 | 2 | 0.12 | 35 | 0.09 | 5 | 2.69 | 0.01 | 0.04 | 1 | 1 | 5 |
| 5 | 650h 460\% | 1 | 14 | 1 | 29 | 0.9 | 1 | 11 | 67 | 1.98 | 2 | 5 | ND | H0 | 4 | 1 | 2 | 2 | 20 | 0.02 | 0.04 | 2 | 4 | 0.11 | 37 | 0.11 | 5 | 3.90 | 0.01 | 0.02 | 1 | 1 | 5 |
| 5 | 700N 2401 | 6 | 54 | 64 | 92 | 0.5 | 14 | 43 | 5994 | 2.32 | 13 | 5 | WD | no | 35 | 1 | 9 | 2 | 30 | 0.27 | 0.10 | 29 | 9 | 0.24 | 239 | 0.09 | 12 | 2.07 | 0.01 | 0.01 | 6 | 2 | 5 |
| 5 | 70ÜH 260I | 1 | 16 | 6 | 19 | 0.1 | 6 | 13 | 1588 | 1.96 | 9 | 5 | No | No | 19 | 1 | 2 | 2 | 30 | 0.22 | 0.06 | 11 | 6 | 0.17 | 234 | 0.09 | 5 | 1.22 | 0.01 | 0.01 | 1 | 1 | 5 |
| 5 | 700H 2804 | 3 | 20 | 30 | 53 | 0.3 | 11. | 31 | 1328 | 2.51 | 21 | 5 | MO | 10 | 11 | 1 | 6 | 2 | 25 | 0.07 | 0.05 | 33 | 7 | 0.25 | 135 | 0.04 | 5 | 1.45 | 0.01 | 0.01 | 4 | 1 | 5 |
| 5 | 700 3004 | 1 | 16 | 21 | 53 | 0.2 | 5 | 12 | 551 | 2.16 | 12 | 5 | ND | ND | 11 | 1 | 2 | 2 | 21 | 0.09 | 0.01 | 13 | 6 | 0.20 | 92 | 0.07 | 5 | 1.87 | 0.01 | 0.03 | 1 | 1 | 5 |
| 5 | 7004 3204 | 1 | 8 | 2 | 36 | 0.3 | 2 | 3 | 71 | 0.99 | 2 | 5 | ND | ND | 1 | 1 | 2 | 2 | 31 | 0.07 | 0.03 | 9 | 4 | 0.07 | 39 | 0.08 | 5 | 0.63 | 0.01 | 0.01 | 1 | 1 | 5 |
| 5 | 700\% 340w. | 3 | 23 | 31 | 91 | 0.3 | 16 | 19 | 179 | 3.68 | 30 | 5 | Nio | M0 | 3 | 1 | 9 | 2. | 30 | 0.01 | 0.05 | 35 | 10 | 0.39 | 50. | 0.03 | 5 | 2.04 | 0.01 | 0.01 | 6 | 1 | 5 |
| 5 | 700\% 350\% | 2 | 33 | 32 | 76 | 0.2 | 19 | 17 | 208 | 2.95 | 40 | 5 | Hio | No | 3 | 1 | 5 | 2 | 14 | 0.01 | 0.05 | 40 | 8 | 0.44 | 32 | 0.01 | 5 | 1.22 | 0.01 | 0.01 | 3 | 1 | 450 |
| 5 | 700N 3600 | 2 | 25 | 35 | 12 | 0.1 | 16 | 16 | 211 | 3.79 | 52 | 5 | ND | ND | 3 | 1 | 9 | 2 | 13 | 0.01 | 0.06 | 44 | 6 | 0.45 | 29 | 0.01 | 5 | 1.13 | 0.01 | 0.01 | 4 | 1 | 10 |
| 5 | 700 N 40016 | 2 | 28 | 43 | 81 | 0.2 | 17 | 17 | 211 | 3.46 | 34 | 5 | ND | HD | 4 | 1 | 8 | 2 | 12 | 0.05 | 0.05 | 11 | 6 | 0.45 | 31 | 0.01 | 5 | 1.32 | 0.01 | 0.01 | 5 | 1 | 5 |
| 5 | 700N 42304 | 2 | 26 | 30 | 12 | 0. | 16 | 18 | 409 | 3.12 | 29 | 5 | NO | ND | 4 | 1 | 8 | 2 | 12 | 0.03 | 0.04 | 43 | 7 | 0.41 | 59 | 0.01 | 5 | 1.29 | 0.01 | 0.01 | 5 | 1 | 260 |
| 5 | 700 N 440 H | 3 | 21 | 41 | 66 | 0.2 | 14 | 16 | 176 | 5.07 | 35 | 5 | ND | ND | 1 | 1 | 8 | 2 | 34 | 0.05 | 0.05 | 26 | 9 | 0.24 | i8 | 0.05 | 5 | 1.80 | 0.01 | 0.01 | 6 | 1 | 5 |
| 5 | 300N 46031 | 1 | 26 | 11 | 93 | 0.3 | 10 | 22 | 3594 | 2.62 | 7. | 5 | N0 | H0 | 11 | 1 | 2 | 2 | 31 | 0.11 | 0.08 | 12 | + | 0.18 | 130 | 0.01 | 5 | 1.98 | 0.01 | 0.01 | 1 | , | 5 |
| S | 1003 4601 | 1 | 21 | 22 | 85 | 0.1 | 10 | 15 | 346 | 4.38 | 20 | 5 | N0 | $N D$ | 1 | 1 | 2 | 2. | 42 | 0.01 | 0.04 | 15 | 5 | 0.26 | 84 | 0.10 | 5 | 2.76 | 0.01 | 0.02 | 1 | 1 | 5 |
| 5 | 700\% 5001 | 2 | 15 | 33 | 68 | 0.1 | 10 | 16 | 118 | 2.52 | 9 | 5 | NO | N0 | 6 | 1 | 6 | 2 | 51 | 0.02 | 0.04 | 21 | 11 | 0.11 | 101 | 0.15 | 5 | 1.19 | 0.01 | 0.01 | 4 | 1 | 5 |







GEOLOGICALBRANCH ASSESSMENTREORT 20,013

| LEGEND |  |
| :---: | :---: |
| F Bedding | inclined, vertical |
| Foliation, Cleovage | inclined, vertical |
| $\underset{\sim}{\sigma}$ Quariz Vein | inclined, verrical |
| $\bigcirc$ Bedrock Exposure |  |
| Diorite |  |
| $\subsetneq 1989$ Trench |  |
| ©90Au Soil somple a ppb | Gold |
| $\Delta \Delta \Delta$ Brecciation |  |
| WEAVER CLAIMS |  |
| GALWAY CREEK SURFACE GEOLOGY |  |
| $\xrightarrow[20]{20}$ |  |
| Date: Mar /90 | Figure: 21 |
| Designed by: PK | Drown by : RD |




GEOLOGICALERANCH

## Note $A u=p p b$ $Z n=$ ppm <br> $A U=p p b$ $Z n=p p m$ $P b=p p m$ <br> $\mathrm{Pb}=\mathrm{ppm}$

| WEAVER CLAIMS |  |
| :---: | :---: |
| MC2 SHEAR AREA GEOCHEMISTRY (SOILS) |  |
| $\stackrel{20}{10}$ | 1:1000 |
| DATE: MAR./90 | FIGURE 6 |
| DESIINED Qr: PK | drawn by: R |






