

GEOCHEMICAL AND GEOLOGICAL REPORT

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DIL CLAIM GROUP

Clinton Mining Division

Latitude 51°16' Longitude 123°15'

N.T.S. 920/3&6

by:

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GEOLOGICAL BRANCH  
ASSESSMENT REPORT

20,462

November 7, 1990

**TABLE OF CONTENTS**

|  | <b><u>Page</u></b> |
|--|--------------------|
| <b>1.0 INTRODUCTION</b>                  |                    |
| <b>1.1 Location .....</b>                | <b>1</b>           |
| <b>1.2 Access and Physiography .....</b> | <b>2</b>           |
| <b>1.3 Previous Work .....</b>           | <b>2</b>           |
| <b>1.4 Ownership .....</b>               | <b>3</b>           |
| <b>2.0 GEOLOGY .....</b>                 | <b>4</b>           |
| <b>2.1 Regional Geology .....</b>        | <b>4</b>           |
| <b>2.2 DIL Property Geology .....</b>    | <b>4</b>           |
| <b>2.3 Mineralization .....</b>          | <b>6</b>           |
| <b>2.4 Vein Geochemistry .....</b>       | <b>7</b>           |
| <b>3.0 DISCUSSION .....</b>              | <b>9</b>           |

## **APPENDICES**

|                     |   |
|---------------------|---|
| <b>APPENDIX I</b>   | <b>SAMPLE DESCRIPTION</b>                   |
| <b>APPENDIX II</b>  | <b>GEOCHEMICAL RESULTS &amp; STATISTICS</b> |
| <b>APPENDIX III</b> | <b>ITEMIZED COST STATEMENT</b>              |
| <b>APPENDIX IV</b>  | <b>STATEMENT OF QUALIFICATIONS</b>          |

## **ILLUSTRATIONS**

|           |           |                            |          |
|-----------|-----------|----------------------------|----------|
| Figure 1  | 1:250,000 | Property Location Map      |          |
| Figure 2  | 1:50,000  | Claim Map                  |          |
| Figure 3  | 1:2,000   | Geology Map                | attached |
| Figure 4  | 1:2,000   | Rock Geochemical Plan Gold | "        |
| Figure 5  | 1:2,000   | " " Silver                 | "        |
| Figure 6  | 1:2,000   | " " Arsenic                | "        |
| Figure 7  | 1:2,000   | " " Antimony               | "        |
| Figure 8  | 1:2,000   | " " Mercury                | "        |
| Figure 9  | 1:2,000   | " " Molybdenum             | "        |
| Figure 10 | 1:2,000   | Rock Sample Location Plan  | "        |

## 1.0 INTRODUCTION

The DIL property is an epithermal gold prospect located in the Clinton Mining Division, 21 kilometres east of Taseko Lake. Previous work on the DIL Property returned significant gold assays (up to 19,320ppb) from grab samples of quartz vein material. The objective of the 1990 program was to confirm these high assays while locating a bedrock source. During the period June 26th to July 13, 1990, a 200 by 25 metre picketed grid was established on the DIL Property while collecting 50 rock samples for geochemical analysis. The author wishes to acknowledge the assistance of the INCO Gold Exploration who provided additional helicopter trips. The results of rock sampling conducted by INCO have also been included in this report. This report compiles all the results of this year's sampling with those of previous surveys.

### 1.1 Location

The DIL property, comprised of the DIL mineral claim group in the Clinton Mining Division, is situated approximately 120 kilometres southwest of the city of Williams Lake, B.C. (Figure 1). More precisely, it is located at 51 degrees, 16 minutes north latitude, and 123 degrees, 15 minutes west longitude (National Topographic System Map 920/3 and 920/6).

#### **INTERACTION EFFECT**

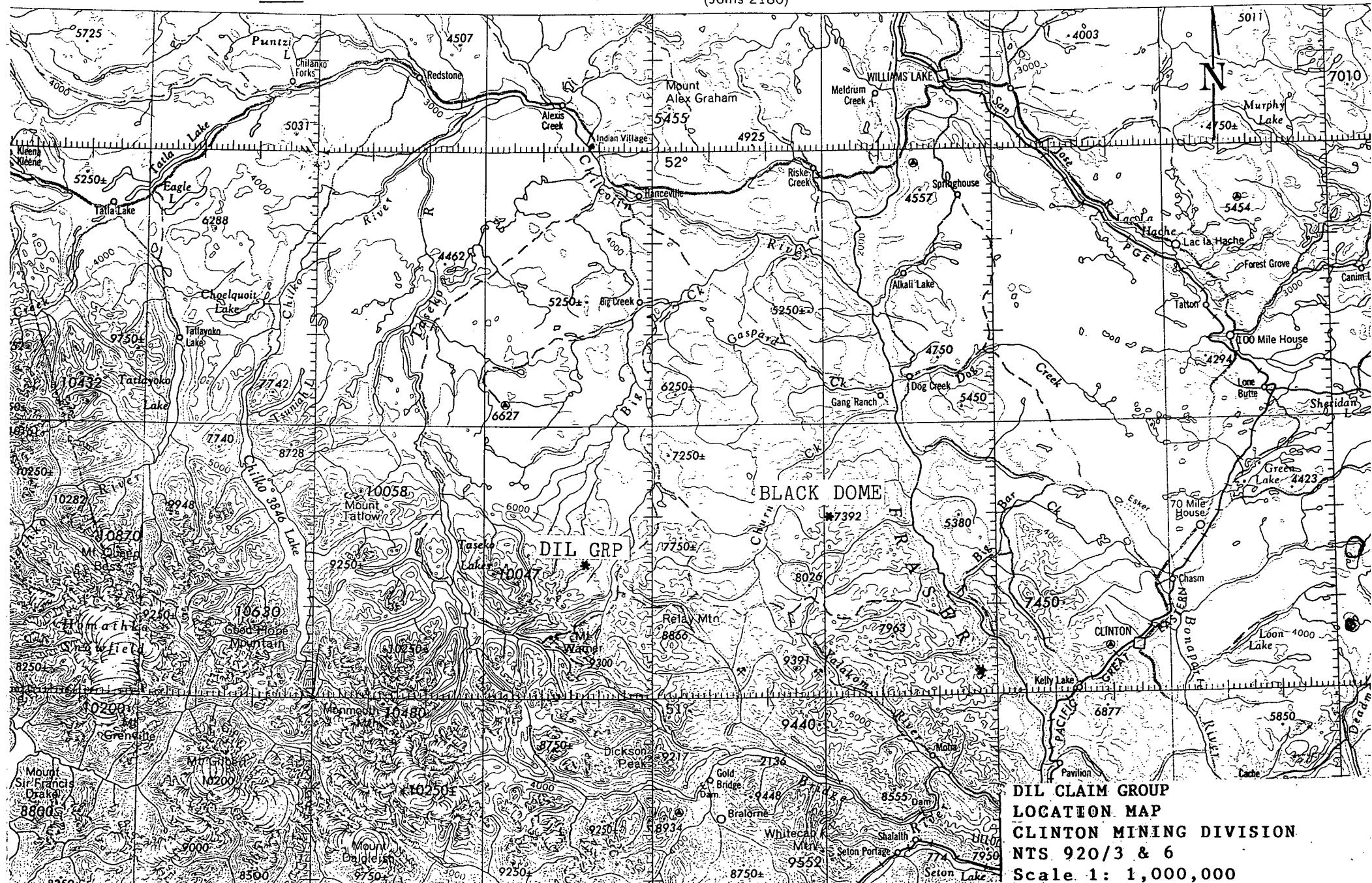
124°

123°

(Joins 2186)

122°

121°



DIL CLAIM GROUP  
LOCATION MAP  
CLINTON MINING DIVISION  
NTS 920/3 & 6  
Scale 1: 1,000,000

## FIGURE 1

## 1.2 Access and Physiography

Access to the property is by helicopter from either Lillooet or Williams Lake. Road access exists to within 10 kilometres to the north and 20 kilometres to the southwest of the claims.

The northern portion of the claims overlie a northwest trending ridge while the southern portion covers a gently northeast sloping plateau. Elevations on the claims range from 1,900 to 2,350 metres above sea level.

Tree line is generally at an elevation of 2,000 metres, hence vegetation over most of the claims is limited to alpine grasses, lichen and mosses. The lower slopes are covered by scrubby alpine spruce and balsam.

## 1.3 History

The DIL 1 and 2 mineral claims were staked in 1987 to acquire an occurrence of auriferous quartz float found by Barrier Reef Resources in 1980. Work carried out in 1980 included reconnaissance geological mapping, limited rock sampling, and soil sampling on a 200 by 500 metre grid. Soil sampling showed large areas of the claims to be anomalous for gold (>90ppb) and rock sampling of quartz float obtained gold values in excess of 2,000ppb. These rock and soil anomalies

were apparently never followed up.

In 1987, after staking the DIL 1 and 2 claims, J. A. McClintock remapped the property. While mapping, quartz float of vuggy, banded epithermal quartz containing minor fine-grained pyrite, lesser arsenopyrite, and stibnite was observed in northeasterly trending boulder trains.

Additional sampling and analyses of samples of the quartz collected from the boulder trains by J. A. McClintock in August 1988 showed them to contain up to 4,600 ppb gold and 16.2 ppm silver with anomalous values in arsenic, antimony and mercury. Follow-up sampling conducted by J. A. McClintock and Giles Peatfield showed one grab sample of quartz float to contain 19,320 ppb gold.

#### 1.4 Ownership

The DIL property, owned by R. Durfeld, is comprised of two contiguous modified grid mineral claims totalling 40 units. The status of these claims is summarized below and the relative claim locations are plotted on Figure 2.

| Claim<br><u>Name</u> | Record<br><u>No.</u> | Record<br><u>Units</u> | Record<br><u>Date</u> |
|----------------------|----------------------|------------------------|-----------------------|
| DIL 1                | 2320                 | 20                     | August 18, 1987       |
| DIL 2                | 2321                 | 20                     | August 18, 1987       |

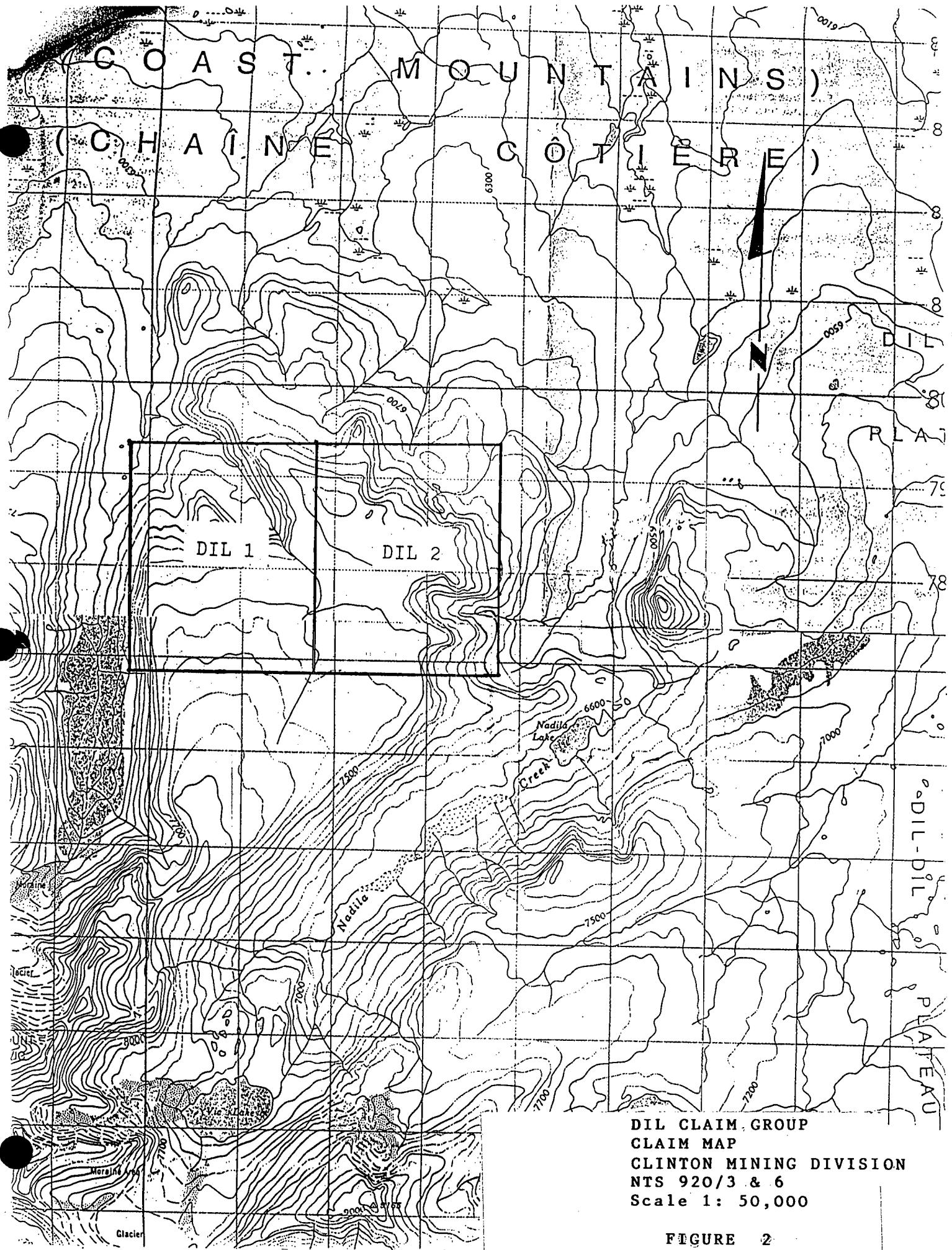


FIGURE 2

## 2.0 GEOLOGY

### 2.1 Regional Geology

The vicinity of the DIL property has been mapped by H.W. Tipper of the Geological Survey of Canada (92/0, Open File 534). Tipper shows the claim area to be underlain by Mesozoic - Age clastic sedimentary and volcanic rocks of the Taylor Creek and Kingsvale groups. These Mesozoic-age rocks have been intruded by Eocene-age stocks and dyke-swarms of feldspar porphyry. Capping these older rocks, are flat-lying basalt flows of Miocene-age.

### 2.2 DIL Property Geology

Geological mapping of the DIL claims by J. A. McClintock was carried out in 1987. The 1990 mapping concurred with this initial interpretation, while defining contact and veined areas more closely.

The oldest rocks on the claims are lower Cretaceous grey to black, thinly bedded siltstone, argillite and lesser greywacke of the Taylor Creek group (Unit K<sub>T</sub>). These rocks are pyritic and hornfelsed where intruded by feldspar porphyry dykes. Rocks of the Upper Cretaceous Kingsvale group occur in the west and south central areas of the claims. The contact between the Kingsvale and Taylor Creek

groups is not exposed on the property, but has been mapped by H. W. Tipper as an unconformity.

On the claim, the Kingsvale group (not shown on Figure 3) is divisible into a sedimentary unit (Ks) and a volcanic unit (Krd). The sedimentary unit consists of grey to reddish-brown greywacke, siltstone and lesser shale. The volcanic unit consists of tuffs, breccias, and ash-flow tuffs of rhyodacitic composition.

Feldspar porphyry occurs as dykes and irregular masses up to 300 metres thick that occupy a 600-metre wide, northwesterly trending zone in the northern portion of the claims (Unit Ep). The dykes cut siltstone and argillites of the Taylor Creek group at shallow angles to the bedding. The feldspar porphyries are light tan to grey colored and range in texture from a sparse to crowded porphyry comprised of subhedral phenocrysts of feldspar, minor hornblende and, less commonly, rounded "eyes" of quartz in a fine grained felsic group mass. In the southwest corner of the geology map the feldspar porphyry also contains distinct, hexagonal, porphyritic biotite grains. Everywhere, the feldspar porphyry is weakly to moderately sericitized, chloritized and pyritized.

Most of the southern claim area is underlain by flat lying Miocene-age columnar jointed and vesicular basalt flows (Unit Mc). These younger rocks cap the Kingsvale Group sedimentary rocks.

The dominant structures on the claims are west to northwest trending, steep-angle normal fault which down drop the Miocene basalts against the feldspar porphyry dyke swarms and the Taylor Creek rocks.

Weaker vertical to steep dipping faults and joints were noted on northeasterly and northerly trends. The three quartz veined bedrock locations were controlled by vertical joints on this northeast (50 to 60 degree) trend.

### 2.3 Mineralization

Of primary interest on the DIL claims is quartz vein material that occurs as northeasterly trending veins and forms northeasterly trending boulder trains in areas of frost-heaved felsenmeer of feldspar porphyry and hornfelsed pyritic siltstone. The vein material is multiple banded, vuggy and chalcedonic epithermal quartz suggesting several stages of emplacement. Quartz locally forms pseudomorphs after calcite, a characteristic common to an epithermal system.

Sulphides forms less than 1% of the vein material and consist of a fine to very fine grained pyrite with lesser amounts of arsenopyrite stibnite and chalcopyrite.

Four prominent northeasterly trending quartz boulder trains are present and are referred to as the Spur, Western, Eastern

and Stibnite zones. Although the style of quartz vein material and the relative abundance of sulphides is variable all four float trains show banded, chalcedonic and vuggy textures characteristic of development as an epithermal system.

#### 2.4 Vein Geochemistry

Appendix I, compiles the geochemical results of all the known vein locations and a brief description of samples collected as this program. All of these geochemical results were merged into a data base for statistical analysis and computer assisted drafting. The statistics are summarized as appendix II and the results are plotted for gold, silver, arsenic, antimony, mercury and molybdenum as figures 4 to 9. To assist in the definition of geochemically anomalous zones values below a defined threshold for individual elements were not plotted and the data points were sized relative to absolute value.

Gold shows anomalous to highly anomalous samples from all zones, with the east zone having the highest values (up to 16,000 ppb gold and also covering the area of G. Peatfields 19,320 ppb sample) followed by the west, stibnite and spur zones respectively. A single sample at the north zone showed 15,997 ppb gold from a quartz, pyrite, chalcopyrite vein.

The relative abundance of the other plotted elements was

visually graded as weak, moderate and strong for the individual zones and is compiled in table format below:

| ZONE      | GOLD   | SILVER | ARSENIC | ANTIMONY | MERCURY | MOLYBDENUM |
|-----------|--------|--------|---------|----------|---------|------------|
| WEST      | mod    | mod    | mod     | mod      | strong  | strong     |
| SPUR      | weak   | mod    | mod     | weak     | weak    | strong     |
| STIB-NITE | weak   | mod    | mod     | strong   | weak    | strong     |
| EAST      | strong | weak   | weak    | weak     | strong  | strong     |
| NORTH     | strong | strong | mod     | weak     |         | weak       |

The above table suggests that all the zones except the east zone have a strong silver and arsenic association. The stibnite and west zones show an antimony association. While the east and west zones, with the strongest gold values, show the highest mercury values. The mercury response for the north zone is not known, as samples were not analyzed for mercury. The molybdenum values were found to be high in all the zones except for the north zone.

The above described chemical patterns, although based on limited sampling, can be explained by vertical and lateral zonation in an epithermal system. The most obvious of these patterns is the high antimony values in the Stibnite and West zones that occur at the same elevation. All of the vein zones show multiple quartz veining and individual stages would also contribute to these zonation patterns.

Additional geochemical sampling would define the overall zonation patterns on the DIL property and where the indivi-

dual zones fit with respect to economic gold mineralization and the overall epithermal system.

### 3.0 DISCUSSION

Geological mapping shows the map area to be underlain by Cretaceous Age Taylor Creek sediments that are cut by irregular porphyritic dykes sills.

The previous petrographic study by J. A. McClintock concluded that:

"Although the petrographic study is not complete, in conjunction with surface mapping, some conclusions can be drawn. It appears that an initial stage of alteration consisting of a central area of phyllitic alteration and a peripheral zone of propylitic alteration occurred either during emplacement of the feldspar porphyry or shortly after. During this alteration episode, rocks over a broad area of the of the claims were sericitized, chloritized, and pyritized. Minor numbers of widely spaced 1-3mm quartz and calcite veins were formed either contemporaneously or subsequently to the pervasive alteration.

At some time after the phyllitic alteration, both the feldspar porphyry and sedimentary rocks were fractured and brecciated along northeast trending structures. Hydrothermal fluids,

using these structures as channelways, altered the host rock to clay and sequentially deposited quartz and carbonate. Limonite, which is the final mineral introduced to the rock, appears to be related to a late stage of oxidation caused by either surface weathering or as a result of boiling of the hydrothermal fluids. These alteration products and associated cockscomb textures, and pseudomorphs alter calcite observed in quartz on the megascopic scale are typically of alteration and quartz deposition found in epithermal precious metal vein systems."

This years additional rock sampling has located northeasterly trending bedrock vein exposures, which suggest the northeasterly trending boulder trains mimic a bedrock structure. The compilation of the geochemical results from this and previous surveys shows significant gold values (16,000 ppb to 19,320 ppb) and associated anomalous silver, arsenic, antimony, mercury and molybdenum which are often associated with epithermal systems. Due to the limited bedrock exposure chip samples represent grabs of vein material and the thickness of the vein structure, the wall rock and intervening shear or contact were not assessed. At the Blackdome Mine the gold grades are carried in both the vein and sheared vein zones.

The encouraging results of the 1990 work fully justify ongoing exploration on the DIL property. A program of excavator trenching with a small excavator would provide an

effective evaluation of a bedrock source in the east, spur and stibnite zones. Multielement analysis of all samples, particularly gold, silver, arsenic, antimony, mercury and molybdenum will assist in definition of the chemical zonation of the DIL property.

**APPENDIX I**

**SAMPLE DESCRIPTIONS**

## POINT DATA ASSAY REPORT

13-Oct-90

Page: 2

| Sampl<br>Nbr | East | North | AU<br>PPB | AG<br>PPM | AS<br>PPM | CU<br>PPM | MO<br>PPM | PB<br>PPM | SB<br>PPM | ZN<br>PPM | HG<br>PPB | Geological Description                                       |
|--------------|------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| 34611        | 4644 | 4634  | 78        | 1.1       | 123       | 22        | 148       | 84        | 1076      | 20        | 1290      | - Mv, xal vugs, bladed xal casts, no sulphides, strong lim.  |
| 34612        | 4999 | 4612  | 158       | 1.6       | 32        | 13        | 250       |           | 22        |           | 1285      | - Mv, xal vugs, sulphides <0.5%, py, lim.                    |
| 34613        | 4753 | 4998  | 528       | 11.2      | 30        | 27        | 1400      |           | 91        |           | 3570      | - Mv, xal vugs, bladed xal casts, sulphides 1%, py, lim.     |
| 34614        | 4751 | 4998  | 232       | 4.1       | 77        | 27        | 3000      |           | 52        |           | 3995      | - Mv, rusty xal vugs, sulphides <0.5%, py, lim.              |
| 34615        | 4752 | 4998  | 118       | 2.0       | 67        | 23        | 1020      |           | 17        |           | 2250      | - Mv, rusty vugs, sulphides <1%, py, jar, tet(?), lim.       |
| 34616        | 4680 | 5174  | 59        | 2.4       | 12        | 276       | 476       |           | 1         |           | 715       | - angular, strong, arg alt frags in rusty carb matrix.       |
| 34617        | 4721 | 5100  | 120       | 1.6       | 28        | 47        | 120       |           | 17        |           | 545       | - Mv, rusty xal vugs, sulphides <<1%, py, lim.               |
| 34618        | 4783 | 4478  | 23        | 1.8       | 583       | 647       | 105       |           | 260       |           | 1670      | - rusty, gossanous siltstone (dear contact with Fp).         |
| 34619        | 4777 | 4479  | 42        | .8        | 110       | 15        | 33        |           | 40        |           | 1540      | - Mv, rusty xal vugs, sulphides <1%, py, lim.                |
| 34651        | 4775 | 4575  | 145       | .2        | 718       | 67        | 21        | 25        | 1021      | 71        | 3625      | - silicified & veinleated siltstone, grey to olive green.    |
| 34652        | 4776 | 4575  | 465       | 2.4       | 281       | 60        | 136       | 92        | 29467     | 81        | 7000      | - Mv, rusty vugs, sulphide <1%, py, lim.                     |
| 34653        | 4777 | 4575  | 278       | .3        | 701       | 65        | 58        | 26        | 1825      | 78        | 4125      | - silicified & veinleated siltstone, grey to green           |
| 34654        | 4770 | 4606  | 1400      | 2.7       | 356       | 39        | 137       | 67        | 199       | 22        | 2750      | - Mv, xal vugs, sulphide <1%, py, lim.                       |
| 34655        | 4633 | 4627  | 795       | 10.1      | 65        | 8         | 685       | 799       | 187       | 48        | 2375      | - Mv, xal vugs, no sulphide noted, lim.                      |
| 34701        | 4837 | 4969  | 422       | 14.2      | 113       | 25        | 1781      | 337       | 72        | 23        | 4875      | - Mv, xal vugs, no sulphide noted, minor lim.                |
| 34702        | 4827 | 4965  | 220       | 5.6       | 55        | 6         | 334       | 171       | 27        | 62        | 2750      | - Mv, rusty xal casts, bladed xal casts, no sulphide, lim.   |
| 34703        | 4748 | 4932  | 119       | .7        | 153       | 8         | 30        | 42        | 42        | 7         | 2125      | - Sv, several phases, no sulphides, minor lim.               |
| 34704        | 4758 | 4584  | 320       | 1.9       | 150       | 67        | 84        | 189       | 414       | 80        | 2500      | - Mv, rusty xal vugs, no sulphides noted, lim.               |
| 34705        | 4762 | 4626  | 78        | 1.0       | 208       | 32        | 57        | 79        | 120       | 16        | 1875      | - as for sample 34704.                                       |
| 34706        | 4746 | 4632  | 200       | 4.4       | 80        | 20        | 477       | 206       | 33        | 27        | 3500      | - Mv, rusty xal vugs, bladed xal casts, sulphides <1%, m py. |
| 34707        | 4675 | 4660  | 1100      | 8.6       | 98        | 11        | 702       | 558       | 190       | 79        | 3875      | - Mv, rusty xal vugs, sulphides <<1%, py, lim.               |
| 47206        | 4762 | 4550  | 87        | .4        | 125       | 19        | 55        | 57        | 124       | 17        |           |  |
| 47222        | 5000 | 5650  | 175       | 4.5       | 313       | 623       | 1         | 2         | 3         |           | 51        |  |
| 47223        | 5000 | 5650  | 18        | .2        | 60        | 11        | 1         | 11        | 5         |           | 46        |  |
| 47224        | 5000 | 5650  | 15997     | 73.0      | 39        | 32        | 1         | 32        | 2         |           | 293       |  |
| 47225        | 5000 | 5650  | 48        | 3.1       | 12        | 26        | 152       | 76        | 8         |           | 31        |  |
| 47230        | 4468 | 4651  | 461       | 15.0      | 76        | 13        | 1740      | 302       | 60        |           | 20        |  |
| 47231        | 4474 | 4665  | 580       | 7.5       | 93        | 15        | 2024      | 124       | 49        |           | 6         |  |
| 47232        | 4474 | 4665  | 6725      | 16.0      | 787       | 288       | 151       | 238       | 44        |           | 161       |  |
| 47233        | 4473 | 4663  | 624       | 6.3       | 3064      | 57        | 1137      | 152       | 93        |           | 72        |  |
| 47234        | 4489 | 4686  | 3805      | 10.8      | 986       | 279       | 129       | 778       | 39        |           | 118       |  |
| 47235        | 4489 | 4685  | 2891      | 19.6      | 1485      | 318       | 133       | 1494      | 45        |           | 420       |  |
| 47236        | 4490 | 4686  | 2423      | 16.7      | 1632      | 191       | 236       | 1264      | 61        |           | 180       |  |
| 47237        | 4490 | 4685  | 4587      | 14.0      | 1089      | 147       | 186       | 1062      | 45        |           | 169       |  |
| 47238        | 4487 | 4690  | 842       | 3.3       | 680       | 429       | 44        | 115       | 14        |           | 48        |  |
| 47239        | 4472 | 4690  | 297       | 2.6       | 288       | 134       | 108       | 197       | 19        |           | 30        |  |
| 47240        | 4477 | 4661  | 1592      | 8.8       | 395       | 459       | 12        | 918       | 10        |           | 405       |  |
| 47241        | 4781 | 4578  | 831       | 1.8       | 532       | 51        | 76        | 19        | 509       |           | 121       |  |
| 47242        | 4560 | 4766  | 406       | .9        | 329       | 49        | 92        | 56        | 248       |           | 118       |  |
| 47243        | 4560 | 4766  | 106       | .5        | 64        | 22        | 32        | 89        | 71        |           | 27        |  |

13-Oct-90

## POINT DATA ASSAY REPORT

Page: 1

| Sampl<br>Nbr | East | North | AU<br>PPB | AS<br>PPM | AS<br>PPM | CU<br>PPM | MO<br>PPM | PB<br>PPM | SB<br>PPM | ZN<br>PPM | HG<br>PPB   | Geological Description   |
|--------------|------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---|--|
| 1001         | 4573 | 4906  | 141       | 1.0       | 77        | 22        |           | 180       | 23        | 58        | 765   |  |
| 1002         | 4577 | 4926  | 17        | 1.1       | 58        | 59        |           | 107       | 26        | 33        | 915   |  |
| 1003         | 4579 | 4957  | 176       | 5.4       | 131       | 29        |           | 214       | 45        | 84        | 2125  |  |
| 1004         | 4545 | 4979  | 18        | 2.4       | 63        | 18        |           | 74        | 24        | 11        | 1405  |  |
| 1005         | 4525 | 4958  | 3         | 2.0       | 72        | 18        |           | 57        | 29        | 8         | 1190  |  |
| 1006         | 4542 | 4935  | 2         | 1.8       | 122       | 16        |           | 51        | 27        | 17        | 2500  |  |
| 1007         | 4545 | 4915  | 16        | 2.0       | 98        | 24        |           | 117       | 27        | 21        | 565   |  |
| 1008         | 4494 | 4916  | 1         | 1.0       | 102       | 26        |           | 124       | 29        | 29        | 1625  |  |
| 1009         | 4495 | 4965  | 2         | 1.5       | 62        | 16        |           | 107       | 31        | 7         | 950   |  |
| 1010         | 4486 | 4986  | 79        | 1.2       | 158       | 55        |           | 275       | 35        | 85        | 1275  |  |
| 1011         | 4491 | 5006  | 1580      | 12.3      | 89        | 57        |           | 218       | 66        | 87        | 2375  |  |
| 1252         | 4762 | 4550  | 1567      | 26.9      | 273       | 48        | 3193      | 560       | 718       | 44        |   |  |
| 2903         | 4850 | 4880  | 16000     | 3.7       | 833       | 280       | 400       |           | 200       | 92875     | - Mv, rusty xal vugs, sulphides 1%, py, lim.                  |  |
| 2904         | 4850 | 4882  | 1750      | 3.2       | 168       | 96        | 760       |           | 70        | 7000      | - as for sample 02903   |  |
| 2905         | 4850 | 4876  | 1000      | 5.0       | 105       | 58        | 360       |           | 40        | 11000     | - Mv, rusty xal vugs, sulphides <1%, py, lim.                 |  |
| 2906         | 4846 | 4886  | 600       | 9.3       | 83        | 30        | 720       |           | 50        | 18125     | - Mv, rusty xal vugs, bladed xal casts, no sulphide, jar.     |  |
| 2907         | 4848 | 4884  | 12000     | 5.4       | 85        | 42        | 440       |           | 58        | 24625     | - Mv, xal vugs, sulphides 2%, py, tet(?), lim.                |  |
| 2908         | 4836 | 4881  | 2530      | 7.2       | 133       | 86        | 480       |           | 116       | 16750     | - Mv, rusty xal vugs, no sulphides noted, lim.                |  |
| 2909         | 4838 | 4879  | 448       | 9.0       | 38        | 12        | 820       |           | 32        | 8500      | - as for sample 02908   |  |
| 2910         | 4941 | 4874  | 162       | 1.0       | 15        | 27        | 37        |           | 1         | 1000      | - medium grey silicicous, hornfelsed siltstone with fg py..   |  |
| 2912         | 4835 | 4885  | 335       | 3.6       | 73        | 25        | 320       |           | 50        | 13750     | - Mv, rusty xal vugs, no sulphides noted, lim.                |  |
| 2913         | 4425 | 4625  | 570       | 9.5       | 93        | 53        | 1220      |           | 19        | 11750     | - Mv, xal vugs, sulphides <1%, py, jar, blue min (no ID).     |  |
| 2914         | 4751 | 4498  | 198       | 1.0       | 150       | 22        | 30        |           | 54        | 23875     | - Mv, xal vugs, inclusions dark grey seds, trace py, lim.     |  |
| 2915         | 4620 | 4500  | 622       | .3        | 875       | 161       | 14        |           | 30        | 10625     | - very strongly altered intrusive, may be deuteritic from py. |  |
| 2916         | 4550 | 4500  | 536       | 1.1       | 875       | 170       | 6         |           | 23        | 7625      | - strongly clay altered intrusive with minor quartz vein.     |  |
| 2917         | 4550 | 4505  | 690       | 2.5       | 52        | 12        | 300       |           | 60        | 11250     | - Mv, xal vugs & cockscomb textures, no sulphides noted, py.  |  |
| 2918         | 4520 | 4500  | 6600      | 2.9       | 152       | 52        | 100       |           | 560       | 4375      | - Mv, rusty vugs, sulphides <1%, py, lim.                     |  |
| 2919         | 4380 | 4500  | 492       | 7.0       | 417       | 130       | 255       |           | 60        | 11625     | 8 Mv, rusty vugs, no sulphides noted, lim.                    |  |
| 2920         | 4185 | 4385  | 2         | 1.8       | 13        | 8         | 22        |           | 2         | 2000      | - Feldspar-biotite porphyry, phenac's .5cm in fg grey matrix. |  |
| 2921         | 4420 | 4500  | 735       | 13.1      | 148       | 33        | 2000      |           | 64        | 19875     | - Mv, rusty vugs, sulphides <0.5%, py, jar, lim.              |  |
| 34601        | 4725 | 5064  | 1040      | 9.0       | 43        | 20        | 638       | 925       | 91        | 17        | 2050  | - Mv, rusty vugs, <<1% sulphide, py, jar, lim.                 |
| 34602        | 4726 | 5052  | 234       | 4.3       | 106       | 55        | 610       | 443       | 45        | 64        | 1660  | - Mv, vein bx, rusty xal vugs, sulphides 0.5%, py, lim.        |
| 34603        | 4738 | 5014  | 275       | 7.3       | 127       | 12        | 1008      | 625       | 82        | 25        | 4500  | - Mv, xal vugs, bladed xal casts, sulphides <1%, py, tet, jar. |
| 34604        | 4727 | 5012  | 397       | 12.4      | 135       | 13        | 727       | 948       | 123       | 28        | 4250  | - Mv, rusty vugs, cockscomb texture, no sulphides noted, lim   |
| 34605        | 4729 | 5002  | 136       | 1.6       | 100       | 14        | 142       | 153       | 29        | 26        | 1130  | - Mv, rusty xal vugs, bladed xal casts, sulphides 0.5%, py.    |
| 34606        | 4748 | 4988  | 293       | 6.5       | 108       | 12        | 574       | 477       | 63        | 25        | 2000  | - Mv, rusty xal vugs, sulphides 0.5%, py, jar, lim.            |
| 34607        | 4756 | 4975  | 100       | 1.3       | 105       | 19        | 96        | 148       | 25        | 19        | 1240  | - Mv, rusty xal vugs, bladed xal casts, no sulphides, lim.     |
| 34608        | 4747 | 4942  | 35        | .9        | 55        | 8         | 21        | 37        | 25        | 9         | 330   | - Sv, several phases, no sulphides, minor lim.                 |
| 34609        | 4525 | 5029  | 1370      | 12.4      | 90        | 37        | 1061      | 103       | 25        | 21        | 3000  | - Mv, bladed xal casts, sulphides 1%, py(1cm bleb), jar, tet   |
| 34610        | 4508 | 5077  | 595       | 12.4      | 59        | 17        | 743       | 147       | 27        | 101       | 2000  | - Mv, xal vugs, sulphides 2%, py(0.5cm bleb), jar, tet, lim.   |

## POINT DATA ASSAY REPORT

13-Oct-90

Page: 3

| Smpl<br>Nbr | East | North | AU<br>PPB | AG<br>PPM | AS<br>PPM | CU<br>PPM | MO<br>PPM | PB<br>PPM | SB<br>PPM | ZN<br>PPM | HG<br>PPB |
|-------------|------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 47244       | 4560 | 4766  | 166       | .5        | 296       | 35        | 32        | 154       | 206       | 42        |           |
| 47244       | 4560 | 4766  | 166       | .5        | 296       | 35        | 32        | 154       | 206       | 42        |           |

## **APPENDIX II**

### **GEOCHEMICAL RESULTS AND STATISTICS**

08:57:06

DILROCK/AU

10/04/90

**PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS**

Data File Name = DILPROAU.DAT

Variable = AU P Unit = PB N = 153  
N CI = 22

Transform = Logarithmic Number of Populations = 3

# of Missing Observations = 0.

### Users Visual Parameter Estimates

| Population | Mean    | Std Dev                 | Percentage |
|------------|---------|-------------------------|------------|
| 1          | 6.552   | - 2.953<br>+ 14.536     | 30.00      |
| 2          | 75.519  | - 38.145<br>+ 149.510   | 20.00      |
| 3          | 763.065 | - 236.463<br>+ 2462.403 | 50.00      |

### **Default Thresholds.**

Standard Deviation Multiplier = 2.0

| Pop. | Thresholds |        |
|------|------------|--------|
| 1    | 1.331      | 32.0   |
| 2    | 19.267     | 295.0  |
| 3    | 73.277     | 7946.0 |

09:25:16

DILROCK/AG

10/04/90

#####
#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = DILPROAG.DAT

Variable = AG      P      Unit =      PM      N = 153.  
N CI = 22

Transform = Logarithmic      Number of Populations = 3

# of Missing Observations = 0.

=====  
Users Visual Parameter Estimates

| Population | Mean   | Std Dev | Percentage |
|------------|--------|---------|------------|
| 1          | 0.706  | -       | 0.201      |
|            |        | +       | 2.480      |
| 2          | 8.772  | -       | 6.284      |
|            |        | +       | 12.245     |
| 3          | 24.755 | -       | 13.167     |
|            |        | +       | 46.538     |

=====  
Default Thresholds.

Standard Deviation Multiplier = 2.0

| Pop. | Thresholds        |
|------|-------------------|
| 1    | 0.057      8.720  |
| 2    | 4.502      17.092 |
| 3    | 7.004      87.491 |

#####
#####

09:07:56

DILROCK/AS

10/04/90

#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = DILPROAS.DAT

Variable = AS      P      Unit =      PM      N =      153  
                      N CI =      22

Transform = Logarithmic      Number of Populations = 3

# of Missing Observations = 0.

=====

Users Visual Parameter Estimates

| Population | Mean    | Std Dev                 | Percentage |
|------------|---------|-------------------------|------------|
| 1          | 18.325  | - 7.454<br>+ 45.052     | 40.00      |
| 2          | 89.955  | - 71.062<br>+ 113.871   | 30.00      |
| 3          | 415.110 | - 171.256<br>+ 1006.187 | 30.00      |

=====

Default Thresholds.

Standard Deviation Multiplier = 3.0

| Pop. | Thresholds |          |
|------|------------|----------|
| 1    | 3.032      | 110.763  |
| 2    | 56.136     | 144.147  |
| 3    | 70.653     | 2438.903 |

#####

08:22:37

DILROCK/SB

10/04/90

#####
#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = DILPROBS.DAT

Variable = SB                          Unit = PPM                          N = 153  
    N CI = 22

Transform = Logarithmic              Number of Populations = 5

# of Missing Observations = 0.

=====

Users Visual Parameter Estimates

| Population | Mean      | Std Dev     | Percentage |
|------------|-----------|-------------|------------|
| 1          | 2.031     | - 1.457     | 15.00      |
|            |           | + 2.830     |            |
| 2          | 5.750     | - 3.298     | 10.00      |
|            |           | + 10.027    |            |
| 3          | 35.507    | - 22.554    | 45.00      |
|            |           | + 55.899    |            |
| 4          | 232.724   | - 82.527    | 26.00      |
|            |           | + 656.280   |            |
| 5          | 11837.313 | - 3886.030  | 4.00       |
|            |           | + 36057.880 |            |

=====

Default Thresholds.

Standard Deviation Multiplier = 2.0

| Pop. | Thresholds |            |
|------|------------|------------|
| 1    | 1.046      | 3.944      |
| 2    | 1.891      | 17.483     |
| 3    | 14.326     | 88.003     |
| 4    | 29.265     | 1850.702   |
| 5    | 1275.731   | 109836.636 |

#####
#####

08:52:04

DILROCK/HG

10/04/90

#####
#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = DILPROBH.DAT

Variable = HG      PP      Unit =      B      N =      67  
N CI =      19

Transform = Logarithmic      Number of Populations = 5

# of Missing Observations = 0.

=====

Users Visual Parameter Estimates

| Population | Mean      | Std Dev                     | Percentage |
|------------|-----------|-----------------------------|------------|
| 1          | 1389.560  | - 870.031<br>+ 2219.318     | 50.00      |
| 2          | 3158.452  | - 2541.594<br>+ 3925.025    | 20.00      |
| 3          | 7192.331  | - 4876.588<br>+ 10607.748   | 17.00      |
| 4          | 15581.018 | - 11412.966<br>+ 21271.254  | 11.00      |
| 5          | 47823.079 | - 18705.723<br>+ 122264.553 | 2.00       |

=====

Default Thresholds.

Standard Deviation Multiplier = 2.0

| Pop. | Thresholds |            |
|------|------------|------------|
| 1    | 544.744    | 3544.555   |
| 2    | 2045.210   | 4877.649   |
| 3    | 3306.454   | 15645.043  |
| 4    | 8359.903   | 29039.583  |
| 5    | 7316.636   | 312581.734 |

#####
#####

08:01:19

DILROCK/MO

10/04/90

#####
#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = DILPROBM.DAT

Variable = MO PPM      Unit =      N = 135  
N CI = 22

Transform = Logarithmic      Number of Populations = 2

# of Missing Observations = 0.

=====
=====

Users Visual Parameter Estimates

| Population | Mean    | Std Dev | Percentage |
|------------|---------|---------|------------|
| 1          | 2.234   | -       | 31.00      |
|            |         | +       | 4.555      |
| 2          | 167.951 | -       | 69.00      |
|            |         | +       | 779.108    |

=====
=====

Default Thresholds.

Standard Deviation Multiplier = 2.0

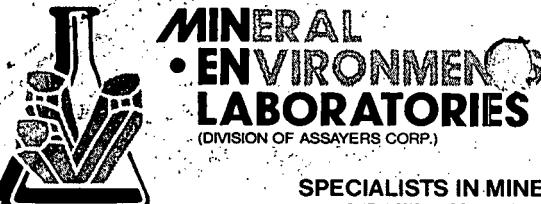
| Pop. | Thresholds          |
|------|---------------------|
| 1    | 0.538      9.284    |
| 2    | 7.805      3614.208 |

#####
#####

**COMP: DURFELD GEOLOGICAL MANAG.LTD.**  
**PROJ:**  
**ATTN: B.DURFELD**

**MIN-EN LABS — ICP REPORT**  
705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2  
(604)980-5814 OR (604)988-4524

FILE NO: OV-0794-RJ2  
DATE: 90/07/06  
\* ROCK \* (ACT:F31)



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FAX (604) 980-9621

**THUNDER BAY LAB.:**

TELEPHONE (807) 622-8958  
FAX (807) 623-5931

**SMITHERS LAB.:**

TELEPHONE/FAX (604) 847-3004

**Geochemical Analysis Certificate**

OV-0945-XG1

Company: DURFELD GEOLOGICAL  
Project:  
Attn: R.DURFELD

Date: AUG-15-90

Copy 1. DURFELD GEOLOGICAL, WILLIAMS LAKE, B.C.

We hereby certify the following Geochemical Analysis of 26 PULP samples submitted JUL-18-90 by R.DURFELD.

| Sample Number | MO<br>PPM |
|---------------|-----------|
| 34612         | 250       |
| 34613         | 1400      |
| 34614         | 3000      |
| 34615         | 1020      |
| 34616         | 476       |
| 34617         | 120       |
| 34618         | 105       |
| 34619         | 33        |
| 02903         | 400       |
| 02904         | 760       |
| 02905         | 360       |
| 02906         | 720       |
| 02907         | 440       |
| 02908         | 480       |
| 02909         | 820       |
| 02910         | 37        |
| 02912         | 320       |
| 02913         | 1220      |
| 02914         | 30        |
| 02915         | 14        |
| 02916         | 6         |
| 02917         | 300       |
| 02918         | 100       |
| 02919         | 255       |
| 02920         | 22        |
| 02921         | 2000      |

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TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

**TIMMINS OFFICE:**

33 EAST IROQUOIS ROAD  
P.O. BOX 867  
TIMMINS, ONTARIO CANADA P4N 7G7  
TELEPHONE: (705) 264-9996

*Geochemical Analysis Certificate*

OV-0945-RG1

Company: DURFELD GEOLOGICAL

Date: JUL 27-90

Project:

Copy 1. DURFELD GEOLOGICAL, WILLIAMS LAKE, B.C.

Attn: R DURFELD

**I hereby certify the following Geochemical Analysis of 27 ROCK samples submitted JUL-18-90 by R.DURFELD.**

| Sample Number | AU-FIRE PPB | AG PPM | AS PPM | CU PPM | MO PPM | SB PPM | HG PPB |
|---------------|-------------|--------|--------|--------|--------|--------|--------|
| 34612         | 158         | 1.6    | 32     | 13     |        | 22     | 1285   |
| 34613         | 528         | 11.2   | 30     | 27     |        | 91     | 3570   |
| 34614         | 232         | 4.1    | 77     | 27     |        | 52     | 3995   |
| 34615         | 118         | 2.0    | 67     | 23     |        | 17     | 2250   |
| 34616         | 59          | 2.4    | 12     | 276    |        | 1      | 715    |
| 34617         | 120         | 1.6    | 28     | 47     |        | 17     | 545    |
| 34618         | 23          | 1.9    | 583    | 647    |        | 260    | 1670   |
| 34619         | 42          | 0.8    | 110    | 15     |        | 40     | 1540   |
| 02903         | 16000       | 3.7    | 833    | 280    |        | 200    | 92875  |
| 02904         | 1750        | 3.2    | 168    | 96     |        | 70     | 7000   |
| 02905         | 1000        | 5.0    | 105    | 58     |        | 40     | 11000  |
| 02906         | 600         | 9.3    | 83     | 30     |        | 50     | 18125  |
| 02907         | 12000       | 5.4    | 85     | 42     |        | 58     | 24625  |
| 02908         | 2530        | 7.2    | 133    | 86     |        | 116    | 16750  |
| 02909         | 448         | 9.0    | 38     | 12     |        | 32     | 8500   |
| 02910         | 162         | 1.0    | 15     | 27     |        | 1      | 1000   |
| 02912         | 335         | 3.6    | 73     | 25     |        | 50     | 13750  |
| 02913         | 570         | 9.5    | 93     | 53     |        | 19     | 11750  |
| 02914         | 198         | 1.0    | 150    | 22     |        | 54     | 23875  |
| 02915         | 622         | 0.3    | 875    | 161    |        | 30     | 10625  |
| 02916         | 536         | 1.1    | 875    | 170    |        | 23     | 7625   |
| 02917         | 690         | 2.5    | 52     | 12     |        | 60     | 11250  |
| 02918         | 6600        | 2.9    | 152    | 52     |        | 560    | 4375   |
| 02919         | 492         | 7.0    | 417    | 130    |        | 60     | 11625  |
| 02920         | 2           | 1.8    | 13     | 8      |        | 2      | 2000   |
| 02921         | 735         | 13.1   | 148    | 33     |        | 64     | 19875  |
| 34572         | 9           | 0.8    | 30     | 286    | 2      |        |        |

Certified by

*R. Durfeld* MIN-EN LABORATORIES



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TELEPHONE (604) 980-5814 OR (604) 988-4524  
TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

**TIMMINS OFFICE:**

33 EAST IROQUOIS ROAD  
P.O. BOX 867  
TIMMINS, ONTARIO CANADA P4N 7G7  
TELEPHONE: (705) 264-9996

**Assay Certificate**

OV-0945-RA1

Company: DURFELD GEOLOGICAL

Project:

Attn: R.DURFELD

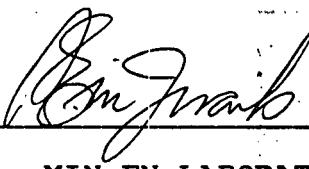
Date: JUL-27-90

Copy 1. DURFELD GEOLOGICAL, WILLIAMS LAKE, B.C.

We hereby certify the following Assay of 6 ROCK samples  
submitted JUL-18-90 by R.DURFELD.

| Sample Number | AU g/tonne | AU oz/ton |
|---------------|------------|-----------|
| 02903         | 17.30      | .505      |
| 02904         | 1.64       | .048      |
| 02905         | 1.02       | .030      |
| 02907         | 16.20      | .473      |
| 02908         | 2.74       | .080      |
| 02918         | 6.42       | .187      |

Certified by



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## APPENDIX III

### COST STATEMENT

**Geochemical Analyses** \$1,293.49

#### **Technical Staff**

**Geologist - R. M. Durfeld**

3 man days at \$350 1,050.00

**Geologist Assistant - A. Hamilton**

8 man days at \$150 1,200.00

**Sampler - C. G. Klyne**

1 man day at \$130 130.00

#### **Transportation**

**Helicopter Charter** 1,035.00

**Report Preparation and Drafting** 600.00

**Total Cost of Program** \$5,308.49

Field costs incurred during period June 26 to July 13, 1990.



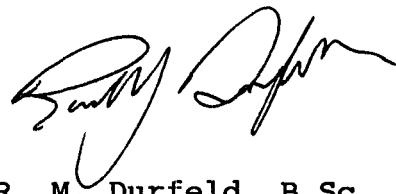
R. M. Durfeld B.Sc.

(Geologist)

**APPENDIX IV**  
**STATEMENT OF QUALIFICATIONS**

I Rudolf M. Durfeld, do hereby certify:

- 1.) That I am a geologist with offices at 180 Yorston Street, Williams Lake, B.C.
- 2.) That I am a graduate of the University of British Columbia, B. Sc. Geology 1972, and have practice my profession with various mining and/ or exploration companies and as an independent geologist consultant since graduation.
- 3.) That I am a Fellow of the Geological Association of Canada (Member No: F3025), and am a member of The British Columbia and Yukon Chamber of Mines and the Canadian Institute of Mining and Metallurgy.
- 4.) That this report is based on geochemical rock sampling and grid preparation geological mapping conducted under my supervision on the DIL property during the period June 26th to July 13th, 1990.



R. M. Durfeld, B.Sc.

(Geologist)

