# GEOLOGICAL, GEOCHEMICAL, GEOPHYSICAL AND DIAMOND DRILL ASSESSMENT REPORT 

Barham, Peak, Volcanic, Key and CM Claims and<br>Barham and Peak Fractions

ATLIN MINING DISTRICT
104N 14W

Longitude $133^{\circ} 25^{\prime}$
Latitude $59^{\circ} 44^{\prime}$

Owned and Operated By:
PLACER DEVELOPMENT LIMITED
R.H. Pinsent

January, 1982

## TABLE OF CONTENTS

Page
1.0 Summary ..... 1
2.0 Introduction ..... 2
2.1 Location and Access ..... 2
2.2 Property History and Ownership ..... 3
3.0 Work Performed ..... 4
3.1 Geology ..... 5
3.2 Soil Geochemistry ..... 6
3.3 Geophysics ..... 11
3.3.1 Magnetic Results ..... 11
3.3.2 VLF Results ..... 12
3.4 Diamond Drill Programe ..... 12
4.0 Conclusions ..... 13
5.0 Statement of Expenditures ..... 15
6.0 Statement of Qualifications ..... 17
Appendices
Appendix I Claim Map and Geology Map; Figs: 3, 5
Appendix II B. - Horizon Soil Analysis
Appendix III Soil Geochemistry Maps
Appendix IV Geophysical Maps; Figs: 16, 17
Appendix V Diamond Dril1 Logs; 81-1, 81-2
List of Tables and Illustrations

Table 1
Table 2
Table 3
Figure 1:
Figure 2:
Figure 3:
Figure 4:
Figure 5:
Figure 6:
Figure 7:
Figure 8:
Figure 9:
Figure 10:
Figure 11:
Figure 12:
Figure 13:
Figure 14:
Figure 15:
Figure 16:
Figure 17:

Standard Extraction and Analytical Methods
Summary of Analytical Results
Diamond Drill Core Assay Results
Claim Location Map, Province of British Columbia
Claim Location Map, 104N/11W, 14W
Mineral Claim Survey Map
Geological Map, Atlin Area (Aitken, 1959)
Geological Map, Claim Area
Soil Geochemistry Map, Mo
Soil Geochemistry Map, F
Soil Geochemistry Map, Cu
Soil Geochemistry Map, Pb
Soil Geochemistry Map, Ag
Soil Geochemistry Map, W
Soil Geochemistry Map, Ni
Soil Geochemistry Map, Co .
Soil Geochemistry Map, Zn
Soil Geochemistry Map, Mn
Ground Magnetics
VLF-EM Profiles

### 1.0 Summary

Placer Development Limited personne1 constructed 23.8 km of compass and chain grid and conducted geological, geochemical and geophysical exploration programmes over the Barham, Peak, Volcanic, Key and C.M. Claims in the Volcanic and Barham Creek drainages, 25 km northeast of Atlin, between 8th and 26th August, 1981. Two $N$ and $B Q$, wireline, diamond drill holes with a combined length of 338 m were subsequently drilled on the Volcanic Creek property between 12th and 22nd September.

The main, Volcanic Creek, grid was constructed over a known molybdenite occurrence in the floor of a cirque. It was constructed with an east-west orientation and a line spacing of 100 m . The cirque floor, which has a pronounced northerly slope, downstream toward the Fourth of July Creek drainage, is cut by a series of minor, subsidiary, cirques below the level of the main valley wall. Mineralization occurs on fractures and in veins cutting gossanous diorite exposed in the cliffs which form the lower, subsidiary, cirques. The sloping grid extends above and below a mineralized cliff.

A total of 367 " $B$ " horizon soil samples, collected on the Volcanic Creek grid at 50 m intervals were analysed for $\mathrm{Mo}, \mathrm{Cu}, \mathrm{Pb}, \mathrm{Zn}, \mathrm{Mn}, \mathrm{Ni}, \mathrm{Co}, \mathrm{W}, \mathrm{F}$, Au and Ag . The data show significant coherent anomalies for Mo and $F$. These anomalies are best developed along the east edge of the soil grid, over hornfelsed sediments and metavolcanics adjacent to the intrusion contact, and in a broad east-west band below the mineralized outcrop in the lower cirque. A total of 94 "B" horizon samples collected on the Key and C.M. claims in the Barham Creek drainage gave no coherent anomalies.

Geophysical data were collected at a 10 m spacing interval over both of the grids. A radem VLF survey defined the northerly trending intrusion contact and additional structures within the diorite. A magnetometer survey also showed the intrusion contact between weakly magnetic metasediment and moderately magnetic diorite. In addition, it reflected the presence of mafic volcanics in the



Figure 2. CLAIM LOCATION MAP $104 \mathrm{~N} / \mathrm{II} \mathrm{W}, 14 \mathrm{~W}$

$$
\text { SCALE } \quad 1: 50,000
$$

metasediment and mafic dykes in the diorite. Highly erratic magnetic data over the gossanous diorite probably reflects the presence of pyrrhotite in the diorite below.

Two drill holes were located to test areas of known surface mineralization. Hole PDL 81-1 ( 170 m ) was drilled to test the main showing, in a gully, at the east end of the lower cirque cliff section. Hole PDL $81-2$ ( 168 m ) was drilled in the diorite at the foot of the gossanous cliff. Neither hole encountered appreciable molybdenite mineralization although both encountered a weak quartz stockwork with appreciable pyrite and pyrrhotite.

The results of the exploration programme show that the gossanous diorite contains widespread, weak, molybdenite mineralization. No economic mineralization has so far been encountered on the property.

### 2.0 Introduction

2.1 Location and Access

The Barham, Peak and Volcanic claims (Figure 1) and the Barham and Peak fractions are located in the $104 \mathrm{~N} / 14 \mathrm{~W}$ map sheet in the Atlin Mining District (Figure 2). The contiguous properties are located approximately 25 km northeast of Atlin at longitude $133^{\circ} 25^{\prime} \mathrm{N}$ and latitude $59^{\circ} 44^{\prime} \mathrm{W}$. The claims adjoin the Adanac Mining and Exploration Limited Key and C.M. claims. The Adanac Molybdenum deposit is located 4 km south of the Volcanic Creek showing.

Figure 3, which was prepared by Placer Development Limited by Underhi11 and Underhill Surveyors Limited, shows the location of the three principal claims at a scale of 1:10,000. It also shows the location of the Vol claim, owned by Cominco Limited. The boundary between the Barham and the Vol claim is inferred as it is governed by the location of an earlier and now superceded claim group, the "G.S.L. Claim Group", which had not been identified on the ground at the time of the survey. The boundary is taken up by the Barham Fraction. The Peak Fraction is located between the Peak and Volcanic Claims (Figure 3).

The claims cover a cirque at the head of the Volcanic Creek drainage into Fourth of July Creek and at the head of the Barham Creek drainage into Ruby Creek (Figure 4). The two drainages are separated by an east-west ridge at an elevation of approximately $5000^{\prime}$ ( 1524 m ). Barham Creek is accessible by road from Atlin, by means of the Adanac property four-wheel drive road system. The Volcanic Creek drainage is not road accessible at the elevation of the claims. A poor quality access road extends a short way up the creek from the Fourth of July Creek road. For practical purposes the Volcanic Creek drainage was accessed by helicopter from Atlin.

### 2.2 Property History and Ownership

The Volcanic Creek molybdenum prospect was originally held jointly by Canyon City Explorations Ltd. (Luck 1-48, Goodlife 1-8, 15-30) and Northern Empire Mines Ltd. (Mo 1-16) as a result of concurrent staking in 1968 and 1969. Archer Cathro and Associates Ltd. conducted an initial soil geochemical and prospecting programme over both properties in 1969 (Assessment Reports 2346 and 2446). The results indicated the presence of scattered molybdenum mineralization in float and outcrop at the head of the Volcanic Creek cirque. In addition, it outlined a sizable molybdenum soil anomaly in the floor of the cirque. Both property interests were optioned to Newmont Mining Corp. of Canada in 1970. $A$ detailed study of the best mineral showing, the "Canyon zone", is described in Assessment Report 2519. Newmont attempted to assess the grade of mineralization exposed in the gully wall and ultimately concluded that the property did not warrant further action. The claims were allowed to lapse.

The showing was restaked as the G.S.L. Claim Group by J.R. Lerner in July 1973. The claims were kept in good standing but no work appears to have been done on the property. The claims lapsed in July 1978, after the Vol claim had been staked.

The Barham Claim (20 units) was staked over the same ground by J. Wallis in January, 1979, on behalf of Placer Development Limited. He also staked the Peak ( 18 units) and Volcanic ( 9 units) claims on behalf of the Company in December 1980. The Peak and Barham Fractions were staked by company personnel in September 1981, following the claim survey by Underhill and Underhill Surveyors Limited (Figure 3).

| Claim | No. of Units | Record No. | Anniversary |
| :---: | :---: | :---: | :---: |
| Barham | 20 | 546 | January 17th |
| Peak | 18 | 1267 | January 12th |
| Volcanic | 9 | 1268 | January 12th |
| Barham Fraction | 1 | 1532 | September 17th |
| Peak Fraction | 1 | 1533 | September 17th |

### 3.0 Work Performed

Placer Development Limited personnel conducted a geological, geochemical and geophysical exploration programme over the claim group between 8th and 26th August and two diamond drill holes were drilled on the Barham Claim between 12th and 22nd September.

A compass and chain grid was constructed over the head waters of the Volcanic Creek drainage. The 19.1 km grid was constructed with an east-west orientation and a line spacing of 100 m . A similar but smaller ( 4.7 km ) grid was also constructed in the Barham Creek drainage.

Both grids were sampled at 50 m intervals and " B " horizon soil samples were shipped to the Placer Development Limited Laboratory in Vancouver. The -80 mesh fraction was subsequently analysed for $\mathrm{Cu}, \mathrm{Mo}, \mathrm{Pb}, \mathrm{Zn}, \mathrm{Ni}, \mathrm{Co}, \mathrm{Mn}, \mathrm{Ag}$, $\mathrm{Au}, \mathrm{W}$ and F .

The grids were also covered by magnetometer and radem VLF geophysical surveys.

Two BQ-NQ diamond drill holes, totalling 338 m in combined depth, were drilled by Caron Diamond Drilling of Whitehorse. The hole locations were tied into the grid. The core is toled at a small lake just north of

$$
D H 81-1
$$

### 3.1 Geology

Figure 4 is a detail from the geological map for the Atlin Area by Aitken (1959). . The figure shows that the property is underlain by two principal geological units: (a) Units 6-8 which are sediments and volcanics belonging to the Pennsylvanian to Permian Cache Creek Group and (b) Unit 12, granitic rocks belonging to the Jurassic, Fourth of July Batholith. Cretaceous quartz monzonites (Unit 13) host the Adanac molybdenum deposit to the south of the property. A tertiary to Quaternary, basaltic, volcanic cone (Unit 16) outcrops to the north of the Barham Claim, in the Volcanic Creek drainage.

The geology of the property and the principal elements of the topography are shown in Figure 5. The figures shows a contact between the Cache Creek Group and intrusive rocks of the Fourth of July Batholith. The contact, which appears to be igneous but tectonically reactivated, runs approximately north-south across the Barham and Volcanic Creek cirques. The Cache Creek country-rock consists of two main units: (a) mafic metavolcanic hornfels and (b) siliceous metasediment. Both contain bodies of chilled quartz-eye, aplite porphyry. The country-rock abuts a large body of weakly altered, medium to coarse grained and locally foliated and mineralized diorite. The Volcanic claim (Figure 5) is underlain by a relatively fresh coarse-grained quartz monzonite which forms the west wall of the Volcanic Creek Cirque. The contact between the quartz monzonite and the diorite is probably a fault which strikes NE-SW and dips steeply to the south.


There is considerable topographic relief in the Volcanic Creek Cirque. Survey point 496 which is located on the ridge between the Barham and Volcanic Creek Cirques, is 420 m above survey point 497, at the head of the Long Lake in the floor of the Volcanic Creek Cirque (Figure 5). The diorite (plagioclase $80 \%$, hornblende $18 \%$, and biotite $2 \%$ ) in the back wall of the cirque is exposed at two levels, above and below the soil sample grid lines. The diorite exposed in the upper level back wall is largely unaltered. At a lower level it is more intensely fractured, more strongly altered, gossanous, and weakly mineralized. The diorite in the lower cliff shows variable alteration to biotite, chlorite and clay. The rock is cormonly weakly deformed and granulated.

The lower level diorite is cut by sporadic veins of quartz and carbonate which are locally mineralized with molybdenite and minor pyrite, pyrrhotite, chalcopyrite and more rarely, sphalerite. The molybdenite occurs as coarse blebs and crystals bordering and within quartz veins, and as fine-grained dusting in some of the quartz veins. The best exposure of mineralized outcrop occurs in an approximately north-south oriented snow filled gully ("Canyon Zone") located to the east of the lower cliff section ( $600 \mathrm{~N}, 400 \mathrm{~W}$, Figure 5). Mineralized veins ( $2-9 \mathrm{~mm}$ ) and fractures are commonly oriented $120^{\circ}$, dip $75^{\circ} \mathrm{W} ; 20^{\circ}-40^{\circ}$ $\operatorname{dip} 90^{\circ}$ and less commonly $0^{\circ} \operatorname{dip} 20^{\circ} \mathrm{W}$ and $90^{\circ} \operatorname{dip} 90^{\circ}$. The fracture and gossan intensity is greatest along a north east-southwest axis defined by a ridge which separates the high level part of the grid located on the Peak claim from the main part on the Barham Claim. Iron post 974 (Figure 5) is located above a highly fractured, gossanous diorite cliff.

### 3.2 Soil Geochemistry

A total of 367 soil samples collected over the Volcanic Creek Grid were analyzed for $\mathrm{Mo}, \mathrm{Cu}, \mathrm{Pb}, \mathrm{Zn}, \mathrm{Mn}, \mathrm{Ni}, \mathrm{Co}, \mathrm{W}, \mathrm{F}, \mathrm{Au}$ and Ag. The analytical methods employed and the limits of detection for each are given in Table I. The analytical data are given in Appendix II and computer contoured maps which illustrate trends in element concentrations are shown in Appendix III. The maps also show the location of survey points and the outlines of the Barham and Peak Claims.

TABLE I
STANDARD EXTRACTION AND ANALYTICAL METHODS

| Element | Units | WT (grams) | Extraction Procedure Attack Used | Time | Analytical Method | Detection Range |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mo | ppm | 0.5 | C $\mathrm{HClO}_{4} / \mathrm{HNO}_{3}$ | 4 hrs . | Atomic Absorption (A.A.) | 1-1000 |
| Cu | ppm | 0.5 | C $\mathrm{HClO}_{4} / \mathrm{HNO}_{3}$ | 4 hrs . | Atomic Absorption | 2-4000 |
| Zn | ppm | 0.5 | C $\mathrm{HClO}_{4} / \mathrm{HNO} 3$ | 4 hrs . | Atomic Absorption | 2-3000 |
| Pb | ppm | 0.5 | C $\mathrm{HClO}_{4} / \mathrm{HNO}_{3}$ | 4 hrs . | A.A. Background Corrected | 2-3000 |
| Ni | ppm | 0.5 | C $\mathrm{HClO}_{4} / \mathrm{HNO}_{3}$ | 4 hrs . | Atomic Absorption | 2-2000 |
| Co | ppm | 0.5 | C $\mathrm{HClO}_{4} / \mathrm{HNO}_{3}$ | 4 hrs . | Atomic Absorption | 2-2000 |
| Mn | ppm | 0.5 | C $\mathrm{HClO}_{4} / \mathrm{HNO}_{3}$ | 4 hrs . | Atomic Absorption | 2-3000 |
| W | ppm | 1.0 | $\underset{\substack{\mathrm{CHCl} / \mathrm{HO}_{2} \mathrm{SO}_{4} \\ \mathrm{HE} / \mathrm{S}_{4}}}{ }$ | 4 hrs . | A.A. Solvent Extraction | 5-500 |
| F | ppm | 0.25 | $\begin{aligned} & \mathrm{Na}_{2} \mathrm{CO} / \mathrm{KNO}_{3} \\ & \text { Fusion } \end{aligned}$ | 30 min . | Specific Ion Electrode | 40-4000 |
| Ag | ppm | 0.5 | C $\mathrm{HNO}_{3}$ | 2 hrs . | A.A. Solvent Extraction | 0.02-4.00 |
| Au | ppm | 3.0 | C $\mathrm{HBr} / \mathrm{Br}$ | 12 hrs . | A.S. Solvent Extraction | 0.02-4.00 |

- 8 -

TABLE 2
SUMMARY OF ANALYTICAL RESULTS

|  | Maximum <br> $(\mathrm{ppm})$ | Minimum <br> $(\mathrm{ppm})$ | Mean <br> $(\mathrm{ppm})$ | Standard <br> Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Mo | 300 | 0.5 | 26.8 | 33.7 |
| Cu | 1050 | 26 | 221.9 | 196.6 |
| Zn | 500 | 24 | 109.7 | 64.8 |
| Pb | 380 | 5 | 30.9 | 33.7 |
| Ni | 161 | 12 | 37.8 | 16.2 |
| Co | 104 | 9 | 28.2 | 11.6 |
| Ag | 4.1 | 0.1 | 0.47 | 0.43 |
| Au | 0.66 | 0.01 | 0.014 | 0.038 |
| W | 224 | 2.5 | 20.0 | 22.6 |
| F | 4000 | 70 | 513 | 332 |
| Mn | 1440 | 2 | 335 | 156 |

Table 2 lists the maximum, minimum, mean and standard deviation of each element population. The soil cover over the grid is thought to be thin and locally derived.

The geochemical data show coherent and essentially coincident soil anomalies for Mo and $F$ and either background or scattered, incoherent, anomalies for all the other elements.

Figures 6 and 7 in Appendix III show that Mo and $F$ anomalies extend in a broad zone over the east half of the grid, particularly over the metasedimentary country-rock east of the diorite contact, and below the gossanous cliff. The absence of anomalies above the cliff is noticeable. Figure 8 shows that Cu is erratic in distribution and that there are no coherent anomalies. Figures 9 and 10 show that scattered high Pb and Ag values are found in the talus below both the upper and lower cirque walls. Similarly, scattered $W$ highs occur below the low cirque wall (Figure 11). The plots for Ni and Co (Figures 12 and 13) show slight enrichment over the metasedimentary and metavolcanic country-rock east of the diorite contact. Figures 14 and 15 show essentially background levels of Zn and Mn with occasional, scattered, high values. The values for Au were below the level of detection and they were not plotted.

A total of 94 samples were collected over a small grid in the Barham Creek drainage (Figure 5). The samples were analyzed for the same elements and the results are listed in Appendix II. The analytical data compares well with that of the Volcanic Creek drainage and background levels appear to be the same. There are no sizeable anomalies but there are weak Mo, $\mathrm{F}, \mathrm{Ag}, \mathrm{Mn}$ and Zn anomalies associated with two geophysical structures crossing the grid.

## TABLE 3

DIAMOND DRILL CORE ASSAY RESULTS

| Samp 1e Number | Hole | Footage | \% MoSp |
| :---: | :---: | :---: | :---: |
| 66751 | 81-2 | 370-380' | 0.02 |
| 66752 | 81-2 | 440-450' | 0.03 |
| 66759 | 81-1 | 110-175' | 0.08 |
| 66760 | 81-1 | 115-120' | 0.07 |
| 66767 | 81-1 | 120-125 ${ }^{\prime}$ | 0.15 |
| 66762 | 81-1 | 125-130 ${ }^{1}$ | 0.02 |
| 66763 | 81-1 | 130-135 | 0.10 |
| 66764 | 81-1 | 135-740' | 0.06 |
| 66765 | 81-1 | 140-145 ${ }^{\text {1 }}$ | 0.01 |
| 66766 | 81-1 | 145-150 ${ }^{1}$ | 0.02 |
| 66767 | 81-1 | 170-175' | 0.48 |
| 66768 | 81-1 | 175-180' | 0.04 |
| 66769 | 81-1 | 180-185' | 0.01 |
| 66770 | 81-1 | 185-190' | 0.02 |
| 66771 | 81-1 | 300-305 ${ }^{1}$ | 0.02 |
| 66772 | 81-1 | 305-310 ${ }^{1}$ | 0.05 |
| 66773 | 81-1 | 310-375' | 0.12 |
| 66774 | 81-1 | 375-320' | 0.01 |
| 66775 | 81-1 | $390-400{ }^{\prime}$ | 0.11 |

## 3.3 <br> Ground Geophysics

A total of 25.1 km of flagged line were surveyed with a proton precision magnetometer (Scintrex MP-2) and a VLF-EM receiver (Crome Radem). The survey was run on lines 100 m apart using a 10 m intersection spacing to allow for data enhancement techniques to be applied during interpretation.

Stacked profiles of the magnetics were generated at a scale of 1:50,000, and smoothed data are shown as dotted lines in Figure 16. The smoothing was accomplished with a 7 point Gaussian filter in order to minimize phase errors. Anomalies caused by sources further than 20 m from sensor do not suffer materially from this level of filtering.

VLF tilt angle data were plotted using a $1 \mathrm{~cm}=10^{\circ}$ vertical scale on a 1:5000 base map. The data were "Fraser" filtered and dotted lines are used to represent the filtered information in Figure 17. Shaded areas in the figure indicate positive results. The data were also calculated using a second, wider, "Fraser" filter, but the results are not included as they duplicate the results given in the first study.

A preliminary analysis has indicated that it is not possible to make a direct correlation between the molybdenite mineralization observed and the geophysical response. There is, however, a very strong magnetic response, due to pyrrhotite to the SW of the area drilled.

### 3.3.1 Magnetic Results

The magnetics show a weak but consistent series of peaks to the east of the baseline. These anomalies are immediately west of a magnetic low which probably signifies the presence of Cache Creek Group sedimentary rock. The sediment, which is about 200 m wide in the south, wedges out at the north end
of the area surveyed. Weakiy magnetic rocks east of the sediment wedge are correlatable from line to line. There appears to be a weak contact response to the east of the sediment. The same weak structure was picked up on the Barham Creek grid where a marked magnetic low is flanked by very weakly magnetic rocks. Flat magnetic results west of the baseline reflect the consistent nature of the diorite over much of the Volcanic Creek grid. Several diabase dikes were encountered while performing the survey. They appear to have very little or no magnetic expression. The reason for the anomaly on line 0 was not resolved.

### 3.3.2 VLF Results

VLF and magnetic data show very little direct correlation except over the intrusive-sedimentary contact, which is a regional fault with a steep dip to the east. The arcuate nature of the geophysical response reflects the intersection of the structure with the topography from line 12 S to 10 N . The presence of this contact is marked by strong "Fraser" filter anomalies. A weaker structure is suggested about 400 meters east but dies out towards line 3 N . Two weak $\mathrm{N} 20^{\circ} \mathrm{E}$ trending structures are evident between the base line and 7 W on Line 8 N . These two structures lie close fo the mineralization found in the main gully exposure.

### 3.4 Diamond Drili Programme

Two diamond drill holes totalling 1,107 ( 337 m ) were drilled to test known molybdenite mineralization (a) underlying the "Canyon Zone" and (b) below the lower cirque wall of gossanous diorite.

Hole PDL 81-1 was collared at grid 700 N and 320 W . The hole was drilled on a bearing due west and at a dip angle of $50^{\circ}$. The hole penetrated 5571 ( 170 m ) of weakly altered, foliated, diorite. The hole was drilled with an NQ bit to a depth of 98 m and with a BQ bit thereafter.

Hole PDL $81-2$ was collared at grid 800 N and 838 W . The hole was drilled on a bearing due east and at a dip angle of $50^{\circ}$. The hole penetrated $550^{\prime}$ ( 168 M ) of similar diorite. The first 12.8 M of core was $N Q$ diameter. There after the hole was reduced to BQ.

Detailed drill logs prepared by E.T. Kimura are located in Appendix IV. Both holes show evidence of a weak quartz and quartz-carbonate vein stockwork. The veins and fractures generally appear to contain only minor amounts of molybdenite with pyrrhotite and pyrite. Trace amounts of chalcopyrite and sphalerite were also observed in some veins.

Selected sections of mineralized drill core were shipped to Vancouver where they were analyzed for Mo. Table 3 lists sampile numbers, footages and $\mathrm{MoS}_{2}$ contents in percent.

### 4.0 Conclusions

The geological, geochemical, geophysical and diamond drill progranme carried out in the Volcanic Creek drainage, due north of the Adanac Molybdenum Deposit, confirmed the presence of molybdenite mineralization in a weak quartz sealed stockwork in dioritic rocks belonging to the Fourth of July Batholith. The diorite which is exposed in the walls of low level cirque in the floor of the main drainage, is fractured and gossanous. The gossan appears to be derived from weak fracture controlled pyrrhotite mineralization. Two drill holes under the gossan stained cliff confirmed the existance of the weak stockwork but failed to show significant amounts of molybdenite mineralization.

Soil samples collected on a grid above and below the gossan stained cliff show geochemical anomalies for Mo and $F$. The anomalies extent in a broad zone west to east below the cliff and north to south over the contact between the diorite and the countryrock Cache Creek Group sediment. Geophysical data
suggests that the contact is tectonic. The fault has been traced in a northsouth direction into the Barham Creek drainage. Several minor structures have been identified by geophysics in the diorite intrusion but they were not identified on the ground. These are commonly oriented $\mathrm{N} 20^{\circ} \mathrm{E}$.

The Volcanic Creek drainage is underlain by weakly altered and mineralized diorite, which is clearly part of a large hydrothermal system. No economic mineralization has so far been encountered on the property.

PLACER DEVELOPMENT LIMITED

### 5.0 Statement of Expenditures <br> COST STATEMENT <br> Volcanic Creek Property 1981

## Staff Salaries

E. Kimura (Senior Geologist), period Sept. 1lth - 24th \& Oct 13-14 \& 16th. Total days $=17$ @ $\$ 305.00 /$ day
$=\$ 5,185.00$
R. Pinsent (Project Geologist), period Aug. 6-22nd, 24-25th Total days $=17$ @ \$245/day $=\$ 4,655.00$
M. Allen (Field Assistant), period Aug. 6-22nd, 24-25th Total days = 19 @ \$95.00/day
$=\$ 1,805.00$
B. Mulvaney (Field Assistand), period Aug. 6-23ra Total days $=18$ @ $\$ 95.00 /$ day $=\$ 1,710.00$
B. Ott (Technician), Period Aug. 24-28, Sept. 1, 4-5th, 11-14, 17 \& 19th; Total days $=14 @ \$ 185.00 /$ day $=\$ 2,590.00$
J. Thornton (Geophysicist) period Aug. 24 ~ 28th, Sept. 1,4 -5th Total days $=8$ @ $\$ 190.00 /$ day $=\$ 1,520.00$
K. Kanashiro (Cook) period Sept. 11 - 24th Total days $=14$ @ $\$ 170.00 /$ day $=\$ 2,380.00$
\$19,845.00
Camp Operation
Camp Construction as per McCory invoice \#4017 \$10,434.36
1,667.11
784.00
$\$ 12,885.47$
Analysis
Drill hold Sample Cost: 19 Samples Analyzed for (MOS, assay @ $\$ 7.00$, Geochem $\mathrm{Pb}, \mathrm{Zn} \& \mathrm{Cu} @ 0.75 \mathrm{ea} . \mathrm{Ag} @ 2.50$, W @ 4.00 F @ 3.75 and sample preparation @ $\$ 2.85=\$ 22.35 /$ sample) Total is $19 \times \$ 22.35=\$ 424.65$

Soil Samples: 367 Samples Geochem for ( $\mathrm{MO}, \mathrm{Cu}, \mathrm{Zn}, \mathrm{Pb}, \mathrm{Ni}, \mathrm{CO}, \& \mathrm{Mn} @ \$ 0.75 \mathrm{ea}$.
Ag @ @.50, Au @ 4.00, W @ 4.00, F @ $3.75 \&$ Sample preparation @ $\$ 1.40$
$=\$ 20.90 /$ sample) Total is $367 \times \$ 20.90 \quad \$ 7,670.30$

Drilling
Caron Diamond Drilling Invoice \#1073
covering DDH 81 -1 $557^{\prime}$ \& DDH 81-2 550' $=\$ 39,998.71$
Core Boxes: Whalley \& Son invoice \#4050 = \$292.20
$\$ 40,290.91$
Helicopter
Keystone Helicopter (Hughes 500) Billing for August \& Sept. for the Volcanic Creek project $\$ 4,811.00$
Company Helicopter (A Star GH-VHMS) Billing for September for Volcanic Creek project $\$ 16,858.00$
$\$ 21,669.00$
Claim Survey
Underhill \& Underhill Invoice \#4622
$\$ 5,762.59$
Vehicle Expense
Tilden Invoice \#73228
$\$ 552.59$

TOTAL
$\$ 109,100.83$

## 6.0 <br> Statement of Qualifications

I, Robert H. Pinsent of 108-2080 Maple Street, Vancouver, British Columbia (V6J 4P9), do hereby certify that:

1. I am a geologist employed by Placer Development Ltd., of 1200-1055 Dunsmuir Street, Vancouver, B.C. (V7X 1P1)
2. I am a geology graduate of the following Universities:

Aberdeen University, B. Sc., Hon., (1968)
University of Alberta, M. Sc. (1971)
Durham University, PhD. (1975)
3. I have been engaged in the practice of geology since graduation in 1968.
4. I have supervised and carried out the fieldwork, and interpreted the data from the exploration programme on the Barham, Peak, Volcanic, Key and CM Claims (Latitude $59^{\circ} 44^{\prime}$, Longitude $133^{\circ}$ $25^{\prime}$ ) in the Atlin Mining District.

Respectfully submitted,

R.H. Pinsent

RHP/cs

1. Volcanic Creek Grid
2. Barham Creek Grid

| 1 |  | 10 | CU | 214 | D6 | NI | Co | MN | A G | AU | W | $F$ | 11.88 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | UDE | 77 | 161 | 103 | 22 | 35 | 21 | 200 | 0.4 | $<0.02$ | 14 | 460 | vC 500n |
| 3 | 50 E | 15 | 152 | 70 | 14 | 37 | 19 | 340 | $<0.2$ | $<0.02$ | 14 | 480 |  |
| 4 | $10^{\text {ne }}$ | 22 | 63 | 44 | 14 | 26 | 14 | 133 | $<0.2$ | $<0.02$ | －17 | NSS |  |
| 5 | 15ne | 12 | 26 | 43 | 10 | 22 | 1 U | $13 n$ | ＜0． | ＜u． 02 | 11 | NSS |  |
| 0 | 209t | 52 | 93 | 88 | 27 | 37 | 20 | 230 | $<0.2$ | $<0.02$ | 15 | 460 |  |
| 7 | 250E | 30 | 83 | 94 | 15 | 43 | 21 | 192 | ＜0．2 | ＜0．02 | 13 | 580 |  |
| 8 | $30 \cap \mathrm{E}$ | 51 | $18 \%$ | 130 | 40 | 43 | 24 | 290 | 0.2 | $<0.02$ | 31 | 369 |  |
| 9 | 350 E | 63 | 307 | 230 | 40 | 70 | 70 | 230 | 0.5 | $<0.02$ | 22 | 380 |  |
| 10 | 400 E | 50 | 79 | 76 | 15 | 36 | 21 | 270 | 0.2 | $<0.02$ | 17 | 580 |  |
| 11 | $40 \cap \mathrm{E}$ | 50 | 80 | 75 | 13 | 29 | 19 | 370 | 0.2 | $<0.02$ | 16 | 767 |  |
| 12 | Ung | 18 | 66 | 73 | 17 | 30 | 17 | 200 | 0.2 | $<0.02$ | 46 | 600 | VC1000N |
| 13 | 5ne | 27 | 104 | 57 | 11 | 24 | 18 | $15^{\circ}$ | 0.4 | $<0.02$ | 46 | 520 |  |
| 14 | 10ne | 31 | 177 | 14\％ | 34 | 52 | 75 | 340 | ก． 5 | $<0.02$ | 25 |  |  |
| 15 | 200 E | 22 | 255 | 104 | 56 | 44 | 28 | 284 | 0.9 | $<0.02$ | 16 | NSS |  |
| 16 | UOE | 18 | 0 | $\cdots 2$ | 20 | 33 | 17 | 163 | 0.4 | $<0.02$ | 10 | 520 | VC 900N |
| 17 | $5 n^{\text {E }}$ | 14 | 83 | $\bigcirc$ | 35 | 35 | 18 | 172 | 0.4 | $<0.02$ | 14 | 387 |  |
| 1\％ | 100E | 24 | 77 | 06 | 20 | 33 | 21 | 210 | $0 . ?$ | ＜0．02 | 20 | 400 |  |
| 79 | 150 E | 43 | 143 | 122 | 23 | 50 | 26 | 240 | 0.4 | $<0.02$ | 49 | \％ 30 |  |
| 20 | 20ne | 22 | 234 | 106 | 52 | 47 | 31 | 480 | 0.8 | $<0.02$ | 15 | 700 |  |
| 21 | 9\％\％ | 5 | 401 | 112 | 16 | 23 | 44 | 790 | 0．3 | $<0.02$ | NSS | NSS | vc 100 s |
| 22 | 900 w | 3 | 19： | 96 | 14 | 23 | 30 | 330 | 0.5 | ＜0．02 | 18 | $42 \%$ |  |
| 23 | 8504 | 2 | 154 | 76 | 24 | $? 1$ | 21 | 217 | 0.4 | $<0.02$ | 16 | 240 |  |
| 24 | 950N | 3 | 216 | 100 | 29 | 20 | 29 | 320 | 0.0 | $<0.02$ | 14 | 300 |  |
| 25 | 70 Ch | 5 | 690 | 2ち3 | ＋2 | 34 | 61 | 250 | 1.6 | ＜0．02 | 12 | 260 |  |
| 26 | 64 CW | 3 | 102 | $14 \%$ | \％ 9 | 20 | 24 | $\cdots 20$ | 0.6 | ＜0．02 | 14 | 267 |  |
| 27 | 600 m | 5 | 600 | 215 | 45 | 30 | 69 | 580 | 0.8 | $<0.02$ | 17 | 320 |  |
| 28 | 12500 | 4 | 510 | 146 | 24 | 2 | $\underline{7}$ | 530 | 1.0 | ＜0．02 | 18 | 340 | VC $200 N$ |
| 29 | 1400 m | 3 | 386 | 127 | 26 | 26 | 40 | 510 | 1．0 | 0.03 | 20 | 400 |  |
| 30 | 1400W＊ | $?$ | 350 | 124 | 25 | 27 | 39 | 480 | 1．0 | 0.02 | 18 | 360 |  |
| 31 | 1450 w | $?$ | 212 | 101 | 16 | 19 | 28 | 330 | 0.3 | ＜0．02 | 11 | 340 |  |
| 32 | 150 m | 1 | 98 | ： 5 | 17 | 22 | 21 | 330 | 0.5 | ＜0．02 | 7 | 300 |  |
| 73 | 1550 m | 1 | 83 | 119 | 25 | 22 | 25 | 397 | R． 2 | $<0.02$ | 5 | 320 |  |
| 34 | 1600w | 2 | 73 | 105 | 22 | 22 | 23 | 370 | ？．？ | $<0.02$ | 6 | 300 |  |
| 35 | 1650 m | 1 | 98 | 106 | 16 | $\bigcirc$ | 20 | 460 | 0.4 | $<0.02$ | 5 | z00 |  |
| \％ 0 | 17 Un\％ | 1 | 67 | 98 | 12 | 23 | 22 | マ30 | ＜0．2 | $<0.02$ | 5 | 300 |  |
| ？ 7 | $175 \mathrm{n}_{4}$ | 1 | 93 | 114 | 14 | 21 | 22 | 290 | n． 7 | $<0.02$ | 7 | 280 |  |
| 3 c | $1{ }^{\text {cun }}$ | $\bigcirc 1$ | 64 | 27 | 14 | 20 | 19 | 310 | 0.7 | $<0.02$ | 5 | 320 |  |
| 39 | 1850w | 1 | 29 | 40 | 11 | 12 | 12 | 330 | 0.3 | $<0.02$ | NSS | NSS |  |
| 40 | 10 Und | 1 | 45 | 69 | 14 | 15 | 20 | 390 | $<0.2$ | $<0.02$ | ＜ 5 | 220 |  |
| 41 | 50\％ | 46 | 271 | 131 | 40 | 35 | 32 | 340 | 0.4 | ＜0．U2 | ？ 3 | 280 | vc 300n |
| 4. | 100w | 18 | $22^{\circ}$ | 37 | 10 | 36 | 25 | 300 | 0.3 | $<0.02$ | 20 | 220 |  |
| 43 | 15 OH | $\bigcirc 0$ | 238 | 118 | 33 | 30 | 37 | 365 | ก．7 | ＜0．0） | 27 | 220 |  |
| 44 | $\geq 0^{n}$ | 21 | 256 | 116 | $2 \%$ | 42 | 41 | 490 | ก． 4 | $<0.02$ | 43 | 200 |  |
| 45 | 35 Fm | 13 | $15 ?$ | 70 | 14. | 44 | 37 | $\pm 30$ | 0.3 | $<0.02$ | 40 | 220 |  |
| 46 | －60\％ | 11 | 80 | 70 | 13 | 26 | 75 | 240 | ก．4 | $<0.02$ | 28 | 200 |  |
| 47 | 350 | 6 | 104 | 77 | 12 | 27 | 2 1 | 330 | ＜0．2 | $<0.02$ | 24 | 2 Co |  |
| 45 | 40 O | 14 | 215 | 10\％ | 15 | 45 | 3） | 400 | 0.2 | $<0.02$ | 20 | 720 |  |
| 45 | $45^{7} \mathrm{H}$ | ＊ | 147 | 10 t | 22 | 38 | 35 | 330 | 0.7 | $<0.02$ | 13 | 780 |  |
| 50 | $500{ }^{\circ}$ | 57 | 109 | 84 | マ 7 | 10 | 26 | 450 | $<0.2$ | $<0.02$ | 15 | 260 |  |
| 51 | $550 \%$ | 5 | 48 | 58 | 12 | 20 | 15 | 240 | $<0.2$ | $<0.02$ | 13 | 200 |  |
| 52 | $\mathrm{Lun}_{6}$ | 5 | 47 | 52 | 7 | 22 | 16 | $18^{\circ}$ | ＜0．2 | ＜0．0？ | 14 | 176 |  |
| 53 | 65 nk | 4 | 62 | 51 | 11 | $? 0$ | 17 | 230 | 9.2 | $<0.02$ | 13 | 18t |  |
| 54 | $70{ }^{\text {m }}$ | 4 | 75 | 54 | 12 | 18 | 10 | T3n | ก．4 | $<0.02$ | 23 | 280 |  |
| 55 | Qunin | 5 | $10^{6}$ | 55 | 14 | 16 | 17 | 171 | n．？ | ＜ 4.02 | 16 | 780 |  |
| 50 | cunn | 2 | 129 | 66 | 13 | 10 | 21 | 330 | n． 2 | $<0.02$ | 14 | 340 |  |



| 114 | 140 e | 26 | 303 | 101 | 26 | 54 | 27 | 320 | 0.5 | $<0.02$ | 13 | 580 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 115 | 150E | 24 | 104 | 41 | 10 | 26 | 13 | 108 | $0 . ?$ | ＜6．02 | 7 | 440 |  |
| 116 | 20ne | 33 | 124 | 50 | $\bigcirc$ | 32 | 18 | 172 | 0.2 | ＜0．02 | 7 | 800 |  |
| 117 | 250E | 10 | 41 | 45 | $\rho$ | 27 | 16 | 143 | 0.2 | $<0.02$ | 9 | 700 |  |
| 118 | T．OEE | 38 | 141 | 万2 | 14 | 37 | 21 | 174 | ＜0．2 | $<6.02$ | 18 | 880 |  |
| 119 | 35ne | 43 | 146 | 50 | 15 | 29 | 20 | 143 | 0.7 | $<0.02$ | 19 | 020 |  |
| 120 | 4008 | 74 | 170 | 85 | 17 | 26 | 23 | 248 | ＜0．2 | ＜0．02 | 5 | 1560 |  |
| 121 | 450 E | 27 | 155 | 88 | 23 | 44 | 25 | 272 | $0 . ?$ | ＜0．02 | C1 | 900 |  |
| 122 | 500 E | 55 | 113 | 90 | 17 | 38 | 22 | 173 | 0.2 | $<0.02$ | 16 | 640 |  |
| 123 | $55 n_{t}$ | 28 | 153 | 114 | 21 | 53 | 31 | 797 | ＜0．2 | ＜0．0？ | 14 | 880 |  |
| 124 | UOE | 35 | 590 | 320 | ${ }^{2}$ | 59 | 42 | 689 | 1．${ }^{\text {\％}}$ | $<0.02$ | 11 | 060 | VC 300 N |
| 125 | 50 E | 22 | 84 | 64 | 13 | 29 | 17 | 185 | 0.2 | $<0.02$ | 7 | 380 |  |
| 126 | 10 EE | 40 | 70 | 46 | $\rho$ | 27 | 12 | 488 | $0 . ?$ | $<0.02$ | 9 | 1040 |  |
| 127 | 150 E | 18 | 56 | 41 | 9 | 24 | 12 | 140 | ＜0． 2 | $<0.02$ | 6 | 720 |  |
| 128 | 209 E | 13 | 41 | 44 | 7 | 27 | 15 | 139 | ＜0．2 | $<0.02$ | 5 | 760 |  |
| 129 | 2505 | 37 | 117 | ＋8 | 13 | 37 | 21 | 206 | $<0.2$ | $<0.02$ | 15 | 960 |  |
| 170 | 3une | 41 | 21 | 87 | 19 | 31 | 21 | 250 | ＜0．2 | $<0.02$ | 32 | 1040 |  |
| 121 | T50E | 53 | 214 | 81 | 20 | 36 | 24 | 208 | 0.3 | $<0.02$ | ＜ 5 | 1080 |  |
| 132 | ¢UOE | 86 | 116 | 70 | 13 | 31 | 24 | 290 | $<0.2$ | ＜0．02 | 14 | 1二80 |  |
| 133 | 450 E | 50 | 440 | 260 | 24 | 115 | 104 | 860 | 0.3 | $<0.02$ | 7 | 1400 |  |
| 134 | 45nを＊ | 49 | 440 | 260 | ？ 0 | 112 | 102 | 200 | 0.3 | $<0.02$ | 4 | 1280 |  |
| 135 | sune | 73 | 79 | 66 | 14 | 36 | 21 | 175 | $<0.2$ | $<0.02$ | ？ | 1080 |  |
| $1 \geq 6$ | OCE | 43 | 257 | 164 | 44 | 39 | 26 | 360 | 0.4 | $<0.02$ | 17 | 10 O | VC 400 N |
| 137 | 50E | 72 | 113 | 68 | 20 | 26 | 21 | 180 | 0.3 | $<0.02$ | 14 | 780 |  |
| $1^{7} 5$ | $10^{\text {une }}$ | 15 | 57 | 48 | 12 | 26 | 15 | 166 | $<0.2$ | $<0.02$ | 12 | 1000 |  |
| 139 | 15 EL | 14 | 49 | 42 | 11 | 25 | 12 | 225 | 0.2 | $<0.02$ | 10 | 967 |  |
| 140 | 20ne | 17 | 73 | 52 | 16 | 29 | 13 | 173 | $<0.2$ | $<0.02$ | 7 | 1000 |  |
| 141 | 240 E | 117 | 5un | 300 | 65 | 140 | 42 | 460 | 0.6 | $<0.02$ | 16 | ＞4000 |  |
| 142 | $30 \cap \mathrm{E}$ | 24 | 132 | 71 | 36 | 37 | 23 | 102 | 0.7 | 9． 08 | 20 | 960 |  |
| 143 | \％OUE＊ | 26 | 134 | 73 | ？ 6 | 38 | 25 | 181 | 0.3 | $0 . \cap 7$ | 22 | 920 |  |
| 144 | 350 E | 75 | ？ 02 | 155 | 73 | 53 | 26 | 270 | 0.4 | $<0.02$ | 13 | 800 |  |
| 145 | $40{ }^{\prime} \mathrm{E}$ | 15 | 137 | 120 | 23 | 60 | 32 | 240 | 0.7 | ก．09 | 12 | 860 |  |
| 140 | 45 Ce | － 33 | 92 | 93 | 22 | 43 | 25 | 237 | 0.7 | $<0.02$ | 14 | 1040 |  |
| 147 | sone | 34 | 67 | 56 | 31 | 28 | 20 | 147 | 0.3 | $<0.02$ | 12 | 1480 |  |
| 148 | $5{ }^{0}$ | 43 | 116 | 82 | 32 | $\underline{2}$ | 19 | 260 | 0.4 | $<0.02$ | 29 | 1160 | vc 700 N |
| 149 | $100 \%$ | 127 | 218 | 12＊ | 49 | 37 | 28 | 280 | 1.3 | $<0.02$ | 25 | 1220 |  |
| 158 | $15 n^{\prime \prime}$ | 21 | 44 | 50 | 16 | 23 | 18 | 193 | ＜0．2 | $<0.02$ | 18 | 900 |  |
| 151 | ？ 0 W | 25 | 83 | 68 | 19 | 72 | 18 | 173 | 0.7 | $<0.02$ | 36 | 860 |  |
| 152 | $25 n_{\text {w }}$ | 20 | 74 | 71 | 19 | 29 | 17 | 197 | 0.5 | $<0.02$ | 14 | $\bigcirc 40$ |  |
| 153 | $3 \mathrm{OH}_{4}$ | 58 | 231 | 160 | 21 | 24 | 35 | 467 | 0.7 | $<0.02$ | 48 | 1360 |  |
| 154 | $350 \%$ | 8 S | 271 | 127 | マ | 25 | 36 | 530 | 0.9 | $<0.02$ | 42 | $\bigcirc 00$ |  |
| 155 | 4000 | 200 | 740 | 152 | $\bigcirc 7$ | 29 | 30 | 560 | 2．7 | $<0.02$ | 51 | 900 |  |
| 156 | 450 w | 92 | 352 | 157 | 37 | 27 | 37 | 580 | 0.9 | $<0.02$ | 83 | 8.60 |  |
| 157 | $550 \%$ | ₹ 1 | 112 | 107 | 17 | 2\％ | 21 | 179 | D．？ | $<0.02$ | 25 | 600 |  |
| 158 | $600 \%$ | 32 | 124 | 36 | 22 | 34 | 22 | 130 | 0.2 | $<0.02$ | 21 | 680 |  |
| 159 | 457 m | 16 | 125 | $7{ }^{\circ}$ | 10 | 30 | 20 | 237 | －．？ | ＜c． 02 | 14 | hdn |  |
| 150 | 750 m | 47 | 030 | 430 | 71 | 49 | 51 | 550 | 1.0 | 0.02 | 17 | 567 |  |
| 161 | 90 Cw | 13 | 350 | 172 | 57 | 23 | 47 | $70^{\circ}$ | 1.7 | $<0.02$ | 61 | 720 |  |
| $1 \in 2$ | $5 n_{i}$ | $1{ }^{\circ}$ | 02 | 77 | 70 | 35 | 20 | 270 | 0.2 | $<0.02$ | 27 | 1240 | ve 8 OUN |
| 1ヶ3 | 10n＊＊ | 23 | 64 | 65 | ？ 0 | 23 | 15 | 160 | 7.2 | $<0.02$ | 14 | 840 |  |
| 164 | 15 M | \％ 3 | $\bigcirc 1$ | 95 | 19 | 29 | 17 | 230 | ＜0．2 | $<0.02$ | 1\％ | 880 |  |
| 165 | $2 \mathrm{UnW}^{\text {c }}$ | 45 | 99 | $\bigcirc$ | 23 | 26 | 19 | 250 | 0.5 | $<0.02$ | 24 | 867 |  |
| 166 | $25 n_{n}$ | 79 | 146 | 107 | 71 | 25 | 19 | 750 | 0.8 | $<0.02$ | 27 | 240 |  |
| 167 | $45{ }^{\circ}$ | 27 | 349 | 1 ¢ | 45 | 30 | 76 | 5001 | 1.2 | $<0.02$ | 20 | 660 |  |
| 168 | $500_{\text {w }}$ | 21 | 8.2 | ${ }^{\circ} 0$ | 10 | 22 | 16 | 219 | 0.7 | $<0.02$ | 26 | 840 |  |
| 1＊9 | S¢Cum | 51 | 108 | ${ }^{1} \iota^{\circ}$ | 50 | 34 | 24 | ？90 | 9.9 | $<0.02$ | 25 | 1290 |  |
| 17 | cuns | 21 | 146 | $\mathrm{A}_{4}$ | ＞ 1 | $\geq 4$ | 19 | 181 | n． 5 | ＜0．0？ | 22 | qun |  |


| 171 | 45 CW | 0 | 52 | 81 | 19 | 27 | 16 | 151 | ก． 3 | $<0.02$ | 5 | 780 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 172 | 650\％＊ | \＆ | 54 | 57 | 20 | 24 | 16 | 145 | 0.7 | $<0.02$ | 4 | 780 |  |
| 173 | 70ワ＊ | 26 | 69 | 60 | 17 | 23 | 18 | 145 | 0.5 | $<0.02$ | 22 | 680 |  |
| 174 | 75 NW | 13 | 33 | 40 | 16 | 34 | 17 | 133 | 0.5 | $<0.02$ | $<5$ | 1100 |  |
| 175 | ${ }^{0} \mathrm{OH}_{\mathrm{w}}$ | 7 5 | 42 | 45 | 21 | 17 | 14 | 154 | 0.3 | $<0.02$ | 20 | 840 |  |
| 176 | 230 w | 94 | 640 | 275 | $1 ¢^{\circ}$ | 29 | 57 | 960 | 0.7 | $<0.02$ | 15 | 760 |  |
| 177 | $85^{\circ}$ | 27 | 295 | 21？ | 48 | ？ 7 | 47 | 620 | 0.7 | $<0.02$ | 22 | 869 |  |
| 176 | $\mathrm{O}_{0}{ }_{\sim}$ | 35 | 01 | 80 | 54 | 20 | 10 | 2 90 | 0.8 | $<0.02$ | 75 | 460 |  |
| 179 | 1010\％ | 200 | 720 | 192 | 410 | 28 | $\geq 7$ | 480 | 0.5 | $<0.02$ | 224 | 920 |  |
| 18 C | 17596 | 116 | 920 | 230 | 4.50 | ？ 2 |  | 400 | 2.3 | ＜0．02 | 201 | 1040 |  |
| 181 | 110¢\％ | 170 | 490 | 1えも | 2.40 | र2 | 3.4 | 440 | 1.0 | $<0.02$ | 221 | $10^{\circ} 0$ |  |
| 182 | 11 Unw＊ | 180 | 490 | 129 | 240 | 32 | It | 440 | 2.3 | $<0.02$ | 217 | 1040 |  |
| 183 | 1150 w | 29 | 600 | 152 | 45 | 29 | 39 | 440 | 1.4 | $<0.02$ | 74 | 740 |  |
| 184 | $120{ }^{\text {\％}}$ | 28 | 1050 | 179 | 58 | 31 | 30 | $44 \%$ | 1.2 | $<0.02$ | 21 | 700 |  |
| 185 | 1240 W | 24 | 690 | ＇745 | 73 | 34 | 55 | 780 | 1．${ }^{\text {\％}}$ | $<0.02$ | 16 | 700 |  |
| 186 | 13 U \％ | 5 | $3<3$ | 109 | 2 C | 21 | 26 | 390 | 0.9 | $<0.02$ | 7 | 520 |  |
| 187 | 1250m | 2 | 250 | 132 | 20 | 18 | 23 | 340 | 0.6 | ＜0．02 | $<5$ | 600 |  |
| 188 | 140 NW | 2 | 136 | 08 | 14 | 20 | 25 | 357 | 0.5 | ＜0．02 | $<5$ | 540 |  |
| 189 | ODE | 20 | 54 | 50 | 16 | 23 | 14 | 164 | 0.7 | $<0.02$ | 28 | R40 | vc 700N |
| 100 | 50E | 10 | 87 | 65 | 10 | 31 | 18 | 155 | 0.6 | ＜0．0？ | 12 | 700 |  |
| 191 | 109E | 15 | 60 | 81 | 18 | 23 | 18 | 220 | 0.5 | ＜0．02 | $<5$ | ${ }^{2} 00$ |  |
| 102 | 15 SE | 38 | 205 | 260 | 45 | 55 | 29 | $\times 50$ | $<0.2$ | 0.03 | 18 | 600 |  |
| 103 | 200 E | 22 | 162 | 05 | 35 | 42 | 22 | 19\％ | $<0.2$ | 0.03 | 14 | 740 |  |
| 104 | $30 \cap \mathrm{E}$ | 16 | 242 | 130 | 43 | 54 | 25 | 290 | 0.5 | 0.03 | 5 | 747 |  |
| 105 | ODE | 54 | 73 | 65 | 20 | 27 | 18 | 169 | $<0.2$ | $<0.02$ | 44 | 580 | Vc 800N |
| 100 | 508 | 17 | 85 | 02 | 24 | 35 | 22 | 510 | $<0.2$ | $<0.02$ | 9 | 720 |  |
| 197 | 1 U0E | 12 | 40 | 70 | 16 | 27 | 10 | 161 | $<0.2$ | ＜0．02 | 3 | 540 |  |
| 108 | 150 E | 21 | 100 | 84 | 24 | 48 | 26 | 200 | $<0.2$ | $<0.02$ | 15 | 660 |  |
| 199 | 200 E | 25 | 148 | 115 | 29 | 45 | 26 | 250 | ＜0．2 | $<0.02$ | 16 | 780 |  |
| 200 | 250 E | 27 | 370 | 213 | 45 | 63 | $\underline{3}$ | 290 | 0.2 | $<0.02$ | 11 | 640 |  |
| 201 | フ5nE＊ | 30 | 390 | 216 | 51 | 63 | $\pm 1$ | 290 | 0.4 | $<0.02$ | － |  |  |
| 202 | gne | 36 | 146 | 80 | 25 | 37 | 21 | 250 | 0.5 | $<0.02$ | 12 | 300 | vc 600 N |
| 205 | 5ne | 70 | 101 | 68 | マ ${ }^{0}$ | 36 | 21 | 169 | 0.5 | $<0.02$ | 5 | 469 |  |
| 204 | 10ne | 25 | 106 | 78 | 70 | 36 | 19 | 220 | 0.5 | $<0.02$ | 7 | 300 |  |
| ¢05 | 150E | 35 | 135 | 98 | 36 | 49 | 23 | 270 | 0.2 | $<0.02$ | 7 | 360 |  |
| 206 | 20ne | 300 | 1020 | 500 | 141 | 161 | 51 | 530 | 0.6 | ＜0．02 | 20 | 680 |  |
| 207 | ？ 3 のE | 180 | 400 | $25 t$ | 49 | $10^{n}$ | 35 | ？ 60 | 0.5 | $<0.02$ | 17 | 520 |  |
| 203 |  | 64 | 224 | 18？ | $\underline{8}$ | 59 | 31 | 550 | 0.8 | $<0.02$ | 14 | 720 |  |
| 207 | 2508 | ？ 5 | 420 | 250 | 47 | 69 | 35 | 620 | 1．n | $<0.02$ | 15 | 500 |  |
| 210 | 35気 | 22 | 429 | 250 | $4 \%$ | 70 | 42 | 630 | 1.0 | 0.05 | 13 | 480 |  |
| 211 | Onw | 27 | 257 | $\bigcirc 1$ | 16 | 37 | 28 | 310 | 0.5 | ＜0．02 | 20 | 440 | VC 00 |
| 212 | 10 Cm | 15 | 6u0 | 16？ | 79 | 44 | 49 | 540 | 0.9 | $<0.02$ | 17 | 360 |  |
| 213 | $15 \mathrm{r}_{\mathrm{w}}$ | 7 | 450 | 300 | 75 | 42 | 46 | 510 | 1．？ | $<0.02$ | 24 | 300 |  |
| 214 | $200 \%$ | $\bigcirc$ | 420 | 210 | 78 | 35 | 45 | 390 | 1.4 | ＜0．02 | 11 | 400 |  |
| 215 | $25^{\circ} \mathrm{F}$ | 15 | 500 | 330 | 113 | 42 | 40 | 500 | 1．？ | $<0.02$ | 14 | $42 \%$ |  |
| 210 | 700 w | 9 | 530 | 117 | 23 | 35 | 44 | 375 | 1.1 | ＜0．02 | 12 | 560 |  |
| 217 | $400^{*}$ | $\square$ | 580 | 200 | 9.4 | 20 | 43 | 500 | 1.7 | $<0.02$ | 16 | 300 |  |
| 216 | $46{ }^{\circ} \mathrm{W}$ | 5 | 467 | 109 | 20 | 32 | 42 | 510 | 1.0 | ＜0．02 | 10 | 287 |  |
| 219 | $50{ }^{\text {k }}$ | 6 | 240 | 105 | 19 | 27 | 31 | \％ 0 | 9．c | $<0.02$ | 14 | 149 |  |
| 220 | 550 w | $\bigcirc$ | 500 | 201 | Su | ${ }^{2} 0$ | 40 | 567 | 1.1 | $<0.02$ | 11 | 250 |  |
| 221 | 600w | 5 | $40 \%$ | 159 | $4{ }_{4}$ | 25 | 32 | 719 | 1.0 | $<0.02$ | $\bigcirc$ | 250 |  |
| 222 | 65 nm | 6 | $\geq 52$ | 117 | 30 | 28 | ？ 0 | 350 | 0.9 | ＜ 0.02 | 9 | $10^{\circ}$ |  |
| 223 | $70{ }^{6}$ | \％ | 116 | ho | 19 | 23 | 75 | マun | 0.5 | $<0.02$ | $\bigcirc$ | 320 |  |
| 274 | 75 nc | 7 | 05 | 67 | 19 | 10 | 20 | 470 | 9．？ | $<0.02$ | 7 | 280 |  |
| C25 | ？．09\％ | 3 | 35. | 60 | 10 | 17 | 17 | 290 | 9．？ | $<0.02$ | 5 | 260 |  |
| 220 | $25 \mathrm{n}_{\mathrm{k}}$ | 3 | 121 | 61 | 14 | 71 | 23 | 280 | 0.2 | $<0.02$ | 11 | 290 |  |
| ci 7 | POn＊ | 2 | 145 | 76 | 12 | 24 | 25 | 207 | $n .4$ | $<0.02$ | 9 | 220 |  |


| 278 | 9504 | 3 | 270 | 77 | 13 | 23 | 30 | 340 | 0.6 | 9． 27 | 14 | 340 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 229 | 1007 w | 6 | 540 | 96 | 10 | 33 | 39 | 290 | 0.7 | 9.03 | 10 | 500 |  |
| 230 | $10^{\prime \prime} n_{\text {in }}$ | 3 | 283 | $\bigcirc 9$ | 17 | 37 | 41 | 470 | 1.0 | $<0.02$ | ＜ 5 | 240 |  |
| 231 | 1100 W | 4 | 870 | 166 | 2 C | 3.3 | 45 | 290 | 1.0 | 0.05 | 18 | 200 |  |
| 222 | $\mathrm{CO}_{5}$ | 15 | 470 | 121 | 40 | 33 | 33 | 360 | 1．${ }^{\text {\％}}$ | $<0.02$ | 19 | 250 | VC 100N |
| 233 | 50 N | 13 | 341 | 119 | マ 1 | 47 | 3.9 | 480 | 1．n | ＜0．02 | 28 | 260 |  |
| 224 | 10 nw | 13 | 355 | 120 | 73 | 36 | 34 | 360 | 1.9 | ก．03 | 35 | 440 |  |
| 235 | $15 n_{w}$ | 17 | 354 | 215 | 46 | 35 | 43 | 470 | 0.0 | $<0.02$ | ？ 3 | 400 |  |
| 236 | 709w | 13 | 338 | 14.9 | 43 | 30 | $\times 5$ | 370 | 0．＊ | ＜0．02 | 27 | 320 |  |
| 237 | $250 \%$ | 13 | 328 | 217 | Q ${ }^{\text {a }}$ | 27 | 43 | 530 | 0.8 | $<0.02$ | 23 | 440 |  |
| 238 | $300 \%$ | 5 | $\bigcirc 9$ | 53 | 18 | 19 | 24 | 250 | 0.5 | $<0.02$ | 6 | 330 |  |
| 279 | 200w＊ | 5 | 107 | 63 | 14 | 19 | 21 | 750 | 0.3 | $<0.02$ | 5 | \％ 20 |  |
| 240 | 350 m | 10 | 710 | 270 | 53 | 30 | 49 | 550 | 1．4 | $<0.02$ | 9 | 370 |  |
| 241 | $40 \mathrm{nH}_{6}$ | 5 | 140 | 87 | 19 | 31 | 31 | 290 | 0.7 | $<0.02$ | ＜ 5 | 300 |  |
| 24. | 450 w | 3 | 126 | 96 | 15 | 20 | 23 | 290 | 0.5 | $<0.02$ | $<5$ | 400 |  |
| 243 | $50^{\circ} \mathrm{W}$ | 2 | 157 | 104 | 24 | 30 | 31 | 460 | 0.5 | ＜0．02 | $\varepsilon$ | 320 |  |
| 244 | 553w | 1 | 78 | 61 | 13 | 21 | 20 | 240 | 0.6 | $<0.02$ | 9 | 188 |  |
| 245 | corim | 2 | 166 | 92 | 17 | 24 | 21 | 360 | 0.3 | $<0.02$ | ＜ 5 | 210 |  |
| 240 | 350 W | 2 | 74 | 51 | 15 | 22 | 18 | 183 | 0.5 | ＜0．02 | $<5$ | 180 |  |
| 247 | 70.76 | 3 | 44 | 42 | 12 | 22 | 17 | 156 | 0.3 | $<0.02$ | ＜ 5 | 192 |  |
| 248 | 750 N | 2 | 75 | 84 | 13 | 32 | 21 | 330 | 0.6 | $<0.02$ | 7 | 250 |  |
| 249 | 750w＊ | 2 | 77 | 85 | 19 | 31 | 23 | 337 | 0.6 | $<0.02$ | $\bigcirc$ | 230 |  |
| 250 | $30{ }^{3}$ | 5 | 159 | 114 | 23 | 21 | 27 | 330 | 0.6 | $<0.02$ | 13 | 350 |  |
| $<51$ | 85 nW | \％ | 115 | 58 | 12 | 15 | 24 | 797 | 0.2 | $<0.02$ | 15 | 280 |  |
| 252 | －Gnisis | 3 | 149 | 66 | 14 | 19 | 23 | 310 | 0.5 | $<0.02$ | 20 | 220 |  |
| ＜53 | 950 | 3 | 365 | 03 | 14 | 26 | 34 | 280 | 0.5 | $<0.02$ | 15 | マ20 |  |
| 254 | $1000 \%$ | 5 | 450 | 75 | 17 | 23 | 36 | 250 | 3.5 | ＜0．02 | 33 | 380 |  |
| 255 | $105 n^{*}$ | 3 | 219 | 61 | $1 \overline{1}$ | 28 | 26 | 270 | 0.3 | $<0.02$ | 8 | 280 |  |
| 256 | 1100 m | 2 | 146 | 56 | 12 | 23 | 23 | 250 | 0.2 | $<0.02$ | 8 | 240 |  |
| 257 | 00n | 16 | 490 | 145 | 51 | 36 | 38 | 500 | 0.7 | $<0.02$ | 15 | 600 | vc 200 N |
| く58 | 50w | 27 | 301 | 135 | 24 | 48 | 33 | 290 | 0.5 | $<0.02$ | 15 | 800 |  |
| 259 | 100 w | R1 | 560 | 192 | 49 | 32 | 42 | 550 | 1.2 | $<0.02$ | 80 | 1000 |  |
| 200 | 150 N | 13 | 237 | 181 | 44 | 31 | 37 | 427 | 0.4 | $<0.02$ | 16 | 920 |  |
| 261 | 20 n | 10 | 144 | $10^{\circ}$ | 24 | 29 | 36 | 430 | 0.2 | $<0.02$ | 16 | 860 |  |
| 262 | 250 w | 7 | 39 | 55 | 21 | 25 | 36 | 867 | 0.2 | $<0.02$ | 7 | 240 |  |
| 263 | 350 － | 5 | 148 | 107 | 17 | 41 | \％ 2 | 400 | ＜0．2 | $<0.02$ | 18 | 700 |  |
| 264 | $40 \% 10$ | 12 | 730 | 290 | 51 | 32 | 52 | 530 | 1．？ | $<0.02$ | 18 | 540 |  |
| 265 | 450 m | 4 | 185 | 116 | 23 | 30 | 34 | 460 | 0.7 | $<0.02$ | 10 | 440 |  |
| 266 | 50 NW | 3 | 187 | 96 | 21 | 24 | 27 | 330 | 0.7 | $<0.02$ | 8 | 460 |  |
| 267 | 5506 | 2 | 67 | 58 | 13 | 21 | 18 | 210 | $<0.2$ | $<0.02$ | $<5$ | 360 |  |
| 268 | 605\％ | 1 | 50 | 60 | 5 | 20 | 15 | 164 | $<0.2$ | $<0.02$ | ＜ 5 | 196 |  |
| 169 | $650{ }^{\prime \prime}$ | 7 | 70 | 56 | 7 | 17 | 10 | 178 | $<0.2$ | $<0.02$ | 32 | 260 |  |
| 270 | 70 M | 3 | 123： | 76 | 15 | 28 | 24 | 299 | $<0.2$ | $<0.02$ | 15 | 260 |  |
| 271 | 750 w | 3 | 99 | 79 | 17 | ？ 2 | 22 | 250 | $<0.2$ | $<0.02$ | 19 | 240 |  |
| 278 | 300 w | 2 | 54 | 46 | 10 | 17 | 11 | 240 | $<0.2$ | $<0.02$ | $<5$ | 230 |  |
| ¢ 73 | 950＊ | 1 | 143 | 74 | 14 | 19 | 21 | 390 | ＜0．2 | $<0.02$ | 9 | 220 |  |
| 274 | 900 w | $?$ | 108 | 79 | 1 L | 23 | 20 | 290 | $<0.2$ | $<0.02$ | 20 | 440 |  |
| 275 | $059 /$ | 1 | 301 | $\bigcirc 0$ | 10 | 3.4 | 31 | 300 | $<0.2$ | $<0.02$ | 31 | 520 |  |
| 276 | 1000w | 1 | 190 | 6 | 9 | 24 | 24 | 230 | ＜úl 2 | ＜u．0？ | 32 | 320 |  |
| 277 | 195n | 6 | 550 | 68 | 11 | 27 | 27 | 245 | 9.6 | ＜0．02 | 28 | $\bigcirc 8$ |  |
| 278 | $\mathrm{SO}_{\mathrm{i}}$ | 41 | 109 | 07 | 76 | 23 | 19 | 250 | 0.4 | ＜0．02 | 33 | 520 | VC GOON |
| 279 | $10 \mathrm{On}^{1}$ | 27 | 76 | 71 | 19 | 24 | 17 | 200 | 0.3 | $<0.02$ | 52 | 460 |  |
| 280 | $150{ }_{W}$ | 30 | 157 | 97 | 23 | $? 1$ | 18 | 240 | 0.7 | ＜0．02 | 41 | 520 |  |
| $<^{81}$ | $20{ }^{0}$ | 31 | 04 | 80 | 16 | 30 | 21 | 230 | 0.4 | $<0.02$ | 15 | $64 \%$ |  |
| $2^{9} 2$ | 2506 | 29 | 02 | 75 | $1{ }_{c}$ | 35 | 22 | 270 | 0.7 | $<0.02$ | 28 | $\bigcirc 0$ |  |
| 2 R 3 | $300 \%$ | 26 | 90 | 72 | is | 25 | 19 | $25^{\circ}$ | 0.5 | ＜0．02 | 23 | 730 |  |
| $\mathrm{CR}_{4}$ | \％ 50 | 15 | 50 | 52 | 14 | 23 | 14 | 300 | $0 . ?$ | $<0.02$ | 10 | 600 |  |


| 225 | 357x＋ | 13 | 50 | 49 | 6 | 33 | 14 | 340 | $<0.2$ | $<0.02$ | 7 | 547 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 286 | $400^{\circ}$ | 3.4 | ${ }^{2} 4$ | 76 | 0 | 14 | 10 | 156 | ๆ．${ }^{\text {a }}$ | $<0.02$ | 5 | 347 |  |
| 287 | $450 \%$ | 7 5 | 22 | 149 | $\geq 1$ | 23 | 23 | 390 | ＜0． 2 | $<0.02$ | 15 | \％ 80 |  |
| 288 | $50{ }^{\circ}$ | 41 | 236 | 11 ？ | 49 | 31 | T 4 | 420 | 0.5 | $<0.02$ | 50 | 580 |  |
| 289 | 5504. | 41 | 158 | ${ }^{0}$ | 44 | 21 | 30 | 389 | 0.6 | $<0.02$ | 35 | 1020 |  |
| 290 | $60{ }^{\circ}$ | 34 | 124 | 64 | 38 | 23 | 24 | 270 | 0.4 | $<0.02$ | 38 | 660 |  |
| 201 | 65nn | 44 | 146 | 65 | 32 | 19 | 23 | 317 | 0.3 | ＜0．02 | 45 | 700 |  |
| 292 | 700w | 41 | 58 | 22 | 40 | 34 | 23 | 270 | 0.2 | $<0.02$ | 20 | 620 |  |
| 403 | 75 nk | 9 | 26 | 24 | 6 | 13 | 9 | 65 | $<0.2$ | $<0.02$ | 5 | 220 |  |
| 204 | Qun＊ | 72 | 96 | ． 54 | 13 | 30 | 20 | 145 | 0.7 | $<0.02$ | 18 | 500 |  |
| 295 | Qu゚＊＊ | 22 | 83 | 55 | 14 | 30 | 21 | 153 | 0.5 | $<0.02$ | 20 | 500 |  |
| 206 | $\square_{5} \mathrm{n}_{n}$ | 34 | 41 | 48 | 31 | 23 | 17 | 300 | 0.7 | $<0.02$ | 27 | 467 |  |
| 227 | 903\％ | 29 | 192 | 130 | 55 | 30 | ？ 8 | 350 | 0.7 | $<0.02$ | 33 | $60 \%$ |  |
| 208 | 05 Dn | 48 | 200 | 175 | 84 | 35 | 35 | 490 | 9.3 | $<0.02$ | 52 | 680 |  |
| 299 | $1000{ }^{10}$ | 59 | 810 | 420 | $12^{\circ}$ | 37 | 67 | 740 | 0.2 | $<0.02$ | 20 | 547 |  |
| 300 | 1070 w | 110 | 670 | 26 C | 700 | 37 | 51 | 690 | 0.5 | $<0.02$ | 65 | 640 |  |
| 501 | 1150 w | 6 | 450 | 13 A | 20 | 25 | 36 | 300 | 0.5 | $<0.02$ | 10 | 327 |  |
| 304 | 120n＇s | 2 | 360 | 126 | 27 | 20 | 24 | 390 | 0.18 | $<0.02$ | 5 | 300 |  |
| 303 | 1250 m | ＜1 | 176 | 12？ | 23 | 18 | 27 | 380 | 0.4 | $<0.02$ | $<5$ | 340 |  |
| 304 | 1300w | $<1$ | 159 | 108 | 17 | 18 | 24 | 300 | ＜0．2 | 0.03 | ＜ 5 | 240 |  |
| 375 | 1357 w | 7 | 108 | 111 | 15 | 20 | 25 | ＜ 19 | 0.2 | $<0.02$ | 15 | 220 |  |
| 306 | 5 nW | 37 | 152 | 81 | 27 | 29 | 20 | 350 | 0.2 | $<0.02$ | 17 | 267 | vc1000N |
| $3!7$ | $10^{\circ} \mathrm{w}$ | 10 | T3 | 50 | 14 | $\geq 5$ | 15 | 138 | ＜0．2 | $<0.02$ | 13 | 220 |  |
| 308 | 150 \％ | 21 | 54 | 50 | 14 | 20 | 16 | 183 | ＜0．2 | $<0.02$ | 54 | 400 |  |
| 309 | 200 N | 23 | 101 | 82 | 32 | $\times 0$ | $? 1$ | 290 | $<0.2$ | $<0.02$ | 17 | 380 |  |
| 310 | 250 W | 24 | 8.2 | 67 | 21 | 24 | 21 | 260 | $<0.2$ | $<0.02$ | 42 | 340 |  |
| 311 | 300 w | 29 | 69 | 54 | 15 | 27 | 17 | 240 | ＜0．2 | $<0.02$ | 18 | 300 |  |
| 312 | 250\％ | 18 | 29 | 37 | 13 | 21 | 14 | 190 | $<0.2$ | ＜0．02 | 13 | 260 |  |
| 313 | 4004 | 16 | 50 | 53 | 15 | 22 | 15 | 180 | $<0.2$ | $<0.02$ | 20 | 347 |  |
| 314 | 409\％＊ | 14 | 55 | 53 | 14 | 21 | 16 | 175 | ＜0．2 | $<0.02$ | 16 | 400 |  |
| 315 | $450 \%$ | 25 | 00 | 62 | 21 | 21 | 20 | 195 | ＜0．2 | $<0.02$ | 20 | 260 |  |
| 316 | 5 COW | 64 | 450 | 186 | 49 | 32 | 40 | 465 | 0.2 | ＜0．02 | 20 | 220 |  |
| 317 | 55 nh | 73 | 295 | 79 | ＋9 | 20 | 29 | 350 | 0.6 | $<0.02$ | 48 | 500 |  |
| 318 | 6u\％＊ | 50 | 272 | 126 | 9 | 25 | 35 | 520 | 0.2 | $<0.02$ | 38 | 320 |  |
| 319 | $65^{\circ} \mathrm{w}$ | 36 | 181 | 90 | 71 | 20 | 27 | 330 | 0.2 | $<0.02$ | 37 | 480 |  |
| 320 | $7 \mathrm{On}_{\text {\％}}$ | 21 | 53 | 121 | 58 | 32 | 40 | 570 | 0.7 | ＜0．0？ | 12 | 280 |  |
| 321 | 759 m | 27 | 112 | 63 | 25 | 37 | 23 | 150 | 0.7 | $<0.02$ | 17 | 280 |  |
| 3こく | ROn＊＊ | 15 | 70 | 59 | 29 | 29 | 20 | 180 | 0.3 | $<0.02$ | 4 | 220 |  |
| 323 | 9501 | 36 | 147 | 93 | 73 | 23 | 26 | $\times 20$ | 0.2 | $<0.02$ | 26 | 380 |  |
| 324 | १57W＊ | 34 | 150 | 04 | 76 | 23 | 25 | $\times 20$ | 0.3 | $<0.62$ | 23 | ${ }^{2} 00$ |  |
| 325 | $00^{\circ} \mathrm{O}$ | 47 | 206 | 151 | 102 | ？ 8 | ？ 8 | 530 | 0.4 | $<0.02$ | 41 | 300 |  |
| 376 | $75^{\text {\％w }}$ | 45 | 147 | 140 | 70 | 30 | 31 | 629 | 9.4 | $<0.02$ | 40 | 380 |  |
| 327 | 1ヵロが | 16 | 37 | 62 | 33 | 21 | 18 | 220 | ＜0．2 | ＜ 0.02 | 14 | 400 |  |
| 320 | 1750 | 33 | $t<0$ | 197 | 74 | 25 | ₹ 1 | 360 | 1.0 | ＜0．02 | $\bigcirc$ | 220 |  |
| 329 | 11 Und | 7 | 157 | 114 | 26 | 17 | 24 | 347 | n． 6 | $<0.02$ | $<5$ | 200 |  |
| 330 | $1150 \times$ | 1 | 134 | 110 | 35 | 20 | 3.5 | 350 | $<0.2$ | $<0.02$ | ＜ 5 | 240 |  |
| 371 | $1200 \%$ | 25 | 217 | 33 | 71 | 15 | 22 | 240 | 1.0 | $<0.02$ | 6 | 240 |  |
| 332 | 1フ5nd | 7 | 1 i 0 | 129 | 74 | 21 | 21 | 320 | $<0.2$ | $<0.02$ | ＜ 5 | \％ 00 |  |
| 333 | $470^{*}$ | 54 | 40 C | 19？ | 45 | 31 | 45 | 520 | 9．8 | $<0.02$ | 16 | 380 | VE 900n |
| 334 | 1257 | 4 | 210 | 125 | 27 | 18 | 27 | 360 | 0．7 | $<0.02$ | 7 | 200 |  |
| 375 | 850\％ | 65 | 790 | ${ }^{7} 0^{7}$ | $10 \%$ | 28 | 41 | 630 | 1.2 | $<0.02$ | 28 | 160 | VC 800 ON |
| 330 | 1055＊ | $\bigcirc$ | 750 | $16^{\circ}$ | 40 | 21 | 35 | 440 | 2．t | $<0.02$ | 5 | 170 | VCTOOON |
| 337 | $5 \mathrm{C}_{6}$ | 51 | 200 | 117 | 37 | 29 | 30 | ？57 | 0.7 | ＜G． 02 | 71 | 190 | VC 4 DUN |
| $5 \times 8$ | 16n＊ | 4と | 301 | 120 | ${ }^{7}$ | 41 | 7 | 530 | 9.7 | 60.02 | 26 | 380 |  |
| 329 | $15{ }^{\circ}$ | 19 | 136 | 90 | 17 | 34 | ？ 8 | マ40 | ？．6 | $<0.02$ | 18 | 440 |  |
| 340 | $20 n^{2}$ | 46 | 17\％ | 73 | 20 | 30 | 27 | 230 | $<0.2$ | $<0.02$ | 47 | 460 |  |
| 3.41 | 75 CH | 75 | $1 y^{\circ}$ | 74 | 10 | 30 | 72 | 409 | 0.3 | $<0.02$ | 39 | 600 |  |

0

| 342 | 3uOw | 13 | $12^{8}$ | 58 | 12 | 33 | 7 J | 778 | $<0.2$ | $<0.02$ | 30 | 460 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 343 | 250n | 34 | 162 | 102 | 76 | 26 | 23 | $\times 30$ | 0.2 | $<0.02$ | 29 | 300 |  |
| 344 | $400 \%$ | 12 | 92 | 70 | 17 | 28 | 25 | 270 | 9.7 | $<0.02$ | 14 | 340 |  |
| 345 | 5unw | 34 | 112 | 56 | 19 | 18 | 26 | 490 | 0.4 | $<0.02$ | 15 | 270 |  |
| 346 | 550 | 54 | 142 | 71 | 21 | 24 | 32 | 370 | 0.4 | $<0.02$ | 14 | 280 |  |
| 347 | 6000 | 86 | 77 | 53 | $? 1$ | 20 | 21 | 205 | 0.2 | $<0.02$ | 53 | 420 |  |
| 348 | 650． | 36 | $\underline{2} 06$ | $10^{\circ}$ | 13 | 45 | 68 | $\bigcirc 00$ | 0.4 | $<0.02$ | 18 | 320 |  |
| 349 | ${ }^{\circ} \mathrm{OH}$ | 23 | 104 | 70 | ？ 0 | 30 | 23 | 270 | ＜0． 2 | $<0.02$ | 10 | 260 |  |
| 350 | 050 w | 6 | 92 | 41 | 14 | 15 | 18 | 230 | $<0.2$ | $<0.02$ | 27 | 192 |  |
| 351 | 1000＊ | 3 | 273 | 83 | 26 | 20 | 37 | 340 | 0.2 | $<0.02$ | 17 | 160 |  |
| 352 | 1500．d | 3 | 145 | 86 | 20 | 25 | 28 | 330 | $<0.2$ | $<0.02$ | 10 | 320 |  |
| 353 | 1550 m | 1 | 104 | 53 | 12 | 23 | 19 | 250 | ＜0．2 | $<0.02$ | 5 | $16 \%$ |  |
| 354 | 1 160ワ | $?$ | 182 | 65 | 16 | 20 | 26 | 280 | 0.0 | $<0.02$ | 32 | 70 |  |
| 355 | 165？6 | $?$ | 75 | 64 | 16 | 17 | 19 | 260 | $<0.2$ | $<0.02$ | 27 | 152 |  |
| 356 | $170{ }^{\text {n }}$ | 1 | 70 | 90 | 14 | 22 | 24 | $28 \%$ | $<0.2$ | ＜ 4.02 | 5 | 188 |  |
| 357 | 175ワ | 1 | 57 | 64 | 14 | 21 | 22 | 260 | 0.4 | $<0.02$ | $<5$ | 16\％ |  |
| 350 | 19004 | 1 | 53 | 57 | 10 | 19 | 21 | 235 | 0.7 | $<0.02$ | $<5$ | 176 |  |
| 359 | 1850 W | 1 | 70 | 69 | 1J | $\geq 1$ | 24 | 290 | ＜0．2 | $<0.02$ | $<5$ | 140 |  |
| 360 | 100 W | 1 | 123 | 146 | 19 | 21 | 31 | 350 | 0.4 | $<0.02$ | ＜ 5 | 280 |  |
| 361 | 1957w | 1 | 113 | 130 | 25 | 24 | 21 | 330 | 0.5 | $<0.02$ | 7 | 124 |  |
| 362 | $2000 \%$ | 1 | 47 | 88 | 17 | 22 | 13 | 290 | 0.7 | $<0.02$ | 8 | 300 |  |
| 363 | 50 m | 37 | 63 | 47 | 11 | 29 | 15 | 175 | 0.4 | $<0.02$ | 13 | $82^{\prime}$ | vc 500N |
| 364 | $100^{1}$ | 77 | 145 | 33 | 18 | 33 | 25 | 560 | 0.2 | $<0.02$ | 14 | 620 |  |
| 365 | 150 w | 95 | 265 | 74 | 75 | 26 | 29 | 297 | 0.3 | $<0.02$ | 32 | 580 |  |
| 366 | 200\％ | 66 | 295 | 97 | 20 | 33 | 46 | 530 | 0.6 | $<0.02$ | ？ 1 | 1160 |  |
| 367 | 250＊ | 35 | 216 | 79 | 22 | 27 | 27 | 387 | 0.4 | ＜0．02 | 18 | 480 |  |
| jヶ6 | $30^{\circ}$ | 70 | 154 | 65 | 20 | 26 | 31 | 290 | 0.2 | ＜0．07 | 19 | 360 |  |
| 359 | ＜ $50{ }_{\text {\％}}$ | 44 | ？¢ 6 | 115 | 32 | 25 | 39 | 500 | 0.3 | $<0.002$ | 18 | 580 |  |
| 370 | $350{ }^{\text {m }}$＊ | 42 | 224 | 11 z | 33 | 25 | 38 | 500 | 0． 2 | ＜0．02 | 18 |  |  |
| 371 | $40^{0}{ }^{\text {w }}$ | 11 | 145 | 06 | 20 | 27 | 26 | 330 | 0.3 | $<0.02$ | 11 | 487 |  |
| 376 | 450 m | 10 | 93 | 51 | 18 | 17 | 17 | 155 | 0.7 | $<0.02$ | $\bigcirc$ | 380 |  |
| 373 | 55 m | 48 | 206 | 230 | 44 | 29 | 41 | 520 | 9.8 | $<0.02$ | 29 | 480 |  |
| 374 | 1800 w | 1 | 161 | 159 | 31 | 21 | 20 | 430 | 1.1 | $<0.02$ | 6 | 400 |  |
| 375 | 1850＊ | 1 | 155 | 105 | 36 | 20 | 25 | 390 | 1.1 | $<0.02$ | 6 | 347 |  |
| 376 | 1900 w | 1 | 115 | 21 | 24 | 22 | 19 | 270 | 0．A | $<0.02$ | 6 | 100 |  |
| 377 | 10504 | 1 | 65 | 82 | 27 | 18 | 19 | 370 | 0.5 | $<0.02$ | 5 | 250 |  |
| 378 | 2000 w | 1 | 58 | 67 | 23 | 17 | 22 | 330 | 0.4 | $<0.02$ | 5 | 160 |  |
| 379 | 5 OW | 23 | 83 | 57 | $? 0$ | 30 | 18 | 153 | 0.2 | ＜0．02 | 19 | 380 | vc 600 N |
| $3{ }^{90}$ | 50\％＊ | 20 | 85 | 59 | 22 | \％ 0 | 19 | 151 | 0.2 | $<0.02$ | 16 | 420 |  |
| 381 | 100w | 58 | $13 n$ | 72 | 27 | $? 7$ | 21 | 761 | 0.4 | $<0.02$ | 20 | 740 |  |
| 382 | 150 w | 63 | 234 | 115 | 42 | 41 | 31 | 530 | 0.3 | $<0.02$ | 17 | 620 |  |
| 383 | $200{ }^{\prime}$ | 20 | 275 | 76 | T2 | 26 | 26 | 317 | 0.4 | $<0.02$ | 37 | 460 |  |
| 384 | $25 \Gamma^{\circ}$ | 9 | 332 | 228 | 85 | 33 | 50 | 560 | 1．7 | $<0.02$ | 17 | 640 |  |
| 385 | 300＊ | 27 | 123 | 80 | 35 | 21 | 31 | 400 | ＜0．2 | $<0.02$ | 41 | 360 |  |
| 386 | 35 CN | 50 | 390 | 132 | 27 | 36 | 34 | \＄ 20 | 0.4 | ＜U． 02 | 24 | 480 |  |
| 387 | $400 \%$ | － 140 | 271 | 67 | 16 | 30 | $\bigcirc$ | 187 | 0.7 | $<0.02$ | 18 | 400 |  |
| s9s | 450 W | $10^{5}$ | 334 | 99 | 25 | ？ 7 | 33 | 289 | 0.6 | $<0.02$ | 70 | 500 |  |
| 39. | 450 m ＊ | 107 | 350 | 07 | 22 | 25 | 32 | 387 | 9． 5 | $<0.02$ | 60 | 400 |  |
| 370 | STO AU |  |  |  |  |  |  |  |  | 1.10 |  |  |  |
| 301 | STD AU |  |  |  |  |  |  |  |  | 1.77 |  |  |  |
| 392 | STD AU |  |  |  |  |  |  |  |  | 1.16 |  |  |  |
| 303 | STD AU |  |  |  |  |  |  |  |  | 1.04 |  |  |  |
| 304 | Stt AU |  |  |  |  |  |  |  |  | 1.70 |  |  |  |
| 305 | STD AU |  |  |  |  |  |  |  |  | 1．21 |  |  |  |
| $50^{\circ}$ | STO A | 76 | 132 | 0.9 | ？ 5 | 16 | 16 | 127 | ？． |  |  |  |  |
| 397 | STEA | 75 | $14 \%$ | 85 | 72 | 17 | 15 | 115 | 0.4 |  |  |  |  |
| 303 | STDA | 76 | 140 | 03 | 33 | 21 | 17 | $10^{\circ}$ | 7.4 |  |  |  |  |

LIST OT GEOCHEMICAL DATA FROM ATLIN
R. PINSENT

| NTS | SAMPLE | PROJECT | no | CO | 2N | PE | NI | CO | A G | AU | W | F | MN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| bar 8005 | 00 | 1203 | 3 | 178 | 96 | 17 | 32 | 24 | 0.3 | 0.03 | 10 | 340 | 273 |
| GAR 3005 | 50E | 1203 | 5 | 530 | 159 | 30 | 40 | 35 | 0.6 | 0.10 | 9 | 420 | 304 |
| SAR 800S | 150 E | 120 | 6 | 510 | 150 | 38 | 41 | 35 | 1.0 | 0.06 | 11 | 400 | 271 |
| BAR 800S | 100E* | 1203 | $t$ | 610 | 133 | 38 | 42 | 36 | 2.0 |  | 13 | 420 | 270 |
| BAR 8005 | 150 E | 1203 | 3 | 265 | 88 | 11 | 38 | 33 | 0.3 | $<0.02$ | 10 | 200 | 340 |
| BAR EOOS | 200 E | 1203 | 4 | 206 | 149 | 23 | 57 | 46 | 0.4 | $<0.02$ | < 5 | 260 | 660 |
| BAR 800 S | 250 E | 1203 | 3 | 130 | 59 | 8 | 23 | 20 | 0.3 | <0.02 | < 5 | 200 | 219 |
| BAR 800S | 300 E | 1203 | 3 | 104 | 119 | 40 | 44 | 35 | 0.6 | <0.02 | 14 | 360 | 330 |
| OAR 800S | 350 E | 1203 | 8 | 283 | 132 | 23 | 64 | 39 | 0.4 | $<0.02$ | NSS | NSS | 310 |
| GAR 800S | 400 E | 1253 | 27 | 382 | 130 | 15 | 69 | 41 | 0.3 | $<0.02$ | 11 | 260 | 270 |
| BAR 8005 | 450 E | 1203 | 9 | 121 | 112 | 25 | 51 | 31 | <0.2 | <0.02 | 5 | 260 | 260 |
| 3AR 800S | 500 E | 1203 | 15 | 156 | 126 | 28 | 59 | 37 | 0.2 | 0.03 | 7 | 200 | 330 |
| BAR 800S | 550 E | 1203 | NS S | NSS | NSS | NSS | NSS | NSS | NSS | <0.02 | NSS | NSS | NSS |
| PAR 900 S | 600E | 1203 | 24 | 128 | 153 | 47 | 63 | 36 | 0.3 | $<0.02$ | 7 | 220 | 340 |
| BAR 2005 | 50 H | 1203 | 3 | 203 | 82 | 14 | 22 | 23 | 0.3 | 0.09 | $<5$ | 320 | 250 |
| bAR 800S | 100 W | 1203 | 3 | 200 | 86 | 9 | 20 | 30 | 0.2 | 0.03 | 5 | 320 | 270 |
| 3AR 800S | 150 W | 1203 | 3 | 233 | 69 | 11 | 20 | 27 | 0.4 | 0.08 | 11 | 300 | 309 |
| GAR 900S | 50 | 12 J | 5 | 190 | 71 | 36 | 43 | 29 | 0.8 | <0.02 | $<5$ | 90 | 269 |
| BAR 900S | 50E* | 1203 | 6 | 530 | 166 | 42 | 45 | 32 | 0.5 |  | 12 | 320 | 300 |
| BAR 9005 | 50 E | 1203 | 6 | 540 | 169 | 49 | 46 | 34 | 1.0 | $<0.02$ | 10 | 300 | 320 |
| BAR 900S | 100 E | 1203 | 7 | 610 | 172 | 121 | 42 | 35 | 2.8 | $<0.02$ | 11 | 270 | 280 |
| EAR 900s | 150 E | 1203 | 6 | 540 | 180 | 50 | 43 | 34 | 0.3 | 0.02 | 8 | 240 | 300 |
| BAR 9005 | 200 E | 1203 | 5 | 290 | 125 | 27 | 53 | 39 | $<0.2$ | <0.02 | 9 | 220 | 470 |
| BAR 900S | 250 E | 1203 | 6 | 344 | 169 | 26 | 76 | 47 | 0.4 | NSS | 14 | NSS | 540 |
| bar 900s | 300 E | 1203 | 6 | 365 | 171 | 32 | 73 | 46 | 0.5 | $<0.02$ | 17 | 500 | 490 |
| FAR 900S | 350 E | 1203 | 7 | 295 | 193 | 47 | 76 | 41 | 0.4 | $<0.02$ | 8 | 470 | 410 |
| EAR 900S | 400E | 1203 | 29 | 280 | 187 | 40 | 86 | 63 | 0.3 | NSS | 19 | 580 | 840 |
| bar 9005 | 450 E | 1203 | 16 | 335 | 235 | 49 | 82 | 47 | 0.2 | NSS | 10 | 520 | 520 |
| SAR 900S | S00E* | 1203 | 5 | 62 | 124 | 40 | 34 | 24 | $<0.2$ | $<0.02$ | 6 | 300 | 350 |
| BAR 900 S | 500 E | 1203 | 5 | 63 | 124 | 40 | 37 | 26 | <0.2 | $<0.02$ | 8 | 340 | 360 |
| GAR 900S | 550 E | 1203 | 5 | 66 | 133 | 43 | 61 | 31 | 0.4 | $<0.02$ | 5 | 280 | 310 |
| 3AR 900S | 600E | 1203 | 2 | 38 | 106 | 18 | 48 | 20 | $<0.2$ | $<0.02$ | 17 | 340 | 210 |
| BAR 900S | 50W | 1203 | 7 | 355 | 73 | 14 | 21 | 31 | 0.9 | $<0.02$ | 12 | 220 | 340 |
| GAR 9005 | 100 W | 1203 | 3 | 213 | 73 | 14 | 23 | 26 | 0.2 | $<0.02$ | 5 | 185 | 226 |
| GAR 900S | 150 W | 1203 | 5 | 185 | 72 | 11 | 21 | 27 | 0.2 | $<0.02$ | $<5$ | 190 | 270 |
| BAR 900 S | 200w | 1203 | 4 | 272 | 98 | 13 | 26 | 30 | 0.7 | $<0.02$ | 5 | 200 | 430 |
| GAR 900S | 250w | 1203 | 2 | 244 | 84 | 13 | 23 | 25 | 0.6 | $<0.02$ | $<5$ | 160 | 330 |
| RAR 700S | 300 W | 1203 | 3 | 193 | 88 | 21 | 22 | 22 | 0.2 | $<0.02$ | $<5$ | 160 | 264 |
| BAR1000S | 00 | 1203 | 3 | 167 | 102 | 15 | 28 | 25 | $<0.2$ | $<0.02$ | $<5$ | 260 | 320 |
| BAR1000S | 50 E | 1203 | 3 | 96 | 151 | 26 | 27 | 27 | $<0.2$ | $<0.02$ | 6 | 320 | 350 |
| EAR1000S | 100 E | 1203 | 4 | 140 | 190 | 40 | 39 | 32 | 0.3 | $<0.92$ | 5 | 460 | 370 |
| BAR1000S | 150E | 1203 | 3 | 105 | 183 | 27 | 45 | 31 | $<0.2$ | $<0.02$ | 6 | 500 | 390 |
| 3AR1J00S | 250 E | 1203 | 3 | 134 | 171 | 34 | 31 | 32 | $<0.2$ | $<0.02$ | 7 | 400 | 330 |
| ZAR1J00S | 250 E | 1203 | 3 | 147 | 216 | 39 | 35 | 36 | 0.4 | NSS | 6 | NSS | 490 |
| BAR1000S | 300 E | 1203 | 3 | 85 | 125 | 25 | 21 | 23 | 0.3 | $<0.02$ | 7 | 400 | 236 |
| BAR1000s | 350 E | 1203 | 4 | 140 | 204 | 39 | 33 | 32 | $<0.2$ | $<0.02$ | 8 | 380 | 370 |
| EAR1000S | 400 E | 1203 | 5 | 149 | 222 | 44 | 38 | 36 | 0.7 | $<0.02$ | 9 | 420 | 480 |
| EAR1000S | 450 E | 1203 | 3 | 103 | 154 | 45 | 46 | 28 | 0.4 | $<0.02$ | $<5$ | 180 | 330 |
| EAR1000S | 500 F | 1233 | $\bar{z}$ | 64 | 158 | 47 | 52 | 29 | 0.2 | $<0.02$ | 5 | 170 | 310 |
| BAR1000S | 550 E | 120? | 6 | 81 | 184 | 60 | 53 | 40 | 0.2 | $<9.02$ | 5 | N5S | 1850 |
| Par1Jods | SOOE | 1207 | 2 | 53 | 112 | 20 | 28 | 18 | $<0.2$ | $<0.02$ | 5 | 195 | 165 |
| BAR1000S | 50w | 1203 | 4 | 202 | 182 | 31 | 35 | 31 | 0.2 | $<0.02$ | $<5$ | 380 | 340 |
| BAR1900S | 130w | 1203 | 3 | 161 | 196 | 24 | 36 | 31 | 0.5 | $<0.02$ | $<5$ | 280 | 310 |
| GAR1000S | 150 W | 1203 | 3 | 10 E | 201 | 31 | 33 | 31 | $<0.2$ | $<0.02$ | 5 | 340 | 390 |
| FAR1000S | 200W | 1207 | 3 | 132 | 195 | 33 | 29 | 30 | $<0.2$ | 0.19 | 6 | 200 | 410 |
| GAR10005 | 250 w | 1203 | 2 | 102 | 175 | ${ }^{2} \mathrm{C}$ | 30 | 29 | <0.2 | $<9.02$ | 5 | 440 | 390 |
| Ear1000S | 3004 | 120? | 2 | 93 | 196 | 27 | 24 | 27 | $<0.2$ | 0.03 | $<5$ | 560 | 390 |
| GAR1000S | 350 w | 1203 | 2 | 77 | 148 | 25 | 21 | 24 | 0.2 | $<2.02$ | 5 | 300 | 340 |
| aAR11005 | 00 | 1703 | 1 | 06 | 154 | 27 | 24 | 23 | 1.0 | $<0.02$ | 9 | 310 | 300 |
| BAR110GS | soe | 120]? | 2 | 101 | 127 | 49 | 49 | 33 | 1.0 | $<3.92$ | 5 | 240 | 370 |


| NTS | SAMPLE | PROJECT | MO | CU | 7N | $P 9$ | N I | co | AG | AU | W | F | MN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BAR1100S | 100 E | 1203 | 1 | t8 | 156 | 37 | 37 | 27 | $<0.2$ | $<0.02$ | $<5$ | 190 | 310 |
| BAR1100S | 150 E | 1203 | 2 | 50 | 133 | 37 | 34 | 26 | $<0.2$ | <0.02 | $<5$ | 250 | 420 |
| bar1100S | 200 F | 1203 | 3 | 71 | 157 | 53 | 45 | 36 | $<0.2$ | $<0.02$ | $<5$ | 380 | 640 |
| GAR1100S | 250 E | 1203 | 2 | 59 | 133 | 41 | 34 | 25 | <0.2 | $<0.02$ | 14 | 350 | 254 |
| gar 1100 S | 3 J0E | 1203 | 4 | 123 | 225 | 45 | 37 | 38 | $<0.2$ | $<0.02$ | 5 | 560 | 960 |
| GAR1100S | 350 E | 1203 | 3 | 75 | 256 | 60 | 52 | 29 | $<0.2$ | <0.02 | 5 | 340 | 350 |
| BAR11005 | 400 E | 1203 | 3 | 53 | 127 | 49 | 39 | 27 | 0.5 | $<0.02$ | $<5$ | 350 | 380 |
| bar1100S | 450 E | 1203 | 2 | 76 | 146 | 37 | 32 | 22 | 0.6 | $<0.02$ | $<5$ | 300 | 210 |
| GAR1100S | 500 E | 1203 | 1 | 65 | 153 | 41 | 49 | 25 | $<0.2$ | $<0.02$ | $<5$ | 170 | 250 |
| BAR1100S | 550 E | 1203 | 1 | 54 | 119 | 33 | 36 | 20 | <0.2 | $<0.02$ | $<5$ | 280 | 190 |
| BAR1100S | COOE | 1203 | 2 | 75 | 152 | 38 | 42 | 21 | 0.2 | $<0.02$ | $<5$ | 280 | 250 |
| SAR1100S | 50 W | 1203 | 2 | 83 | 160 | 41 | 47 | 30 | 0.3 | $<0.02$ | $<5$ | 320 | 350 |
| gar 1100 S | 100W | 1203 | 2 | 60 | 132 | 36 | 31 | 25 | $<0.2$ | $<0.02$ | 5 | NSS | 340 |
| SAR1100S | 150 W | 1203 | 1 | 93 | 187 | 39 | 72 | 33 | 0.7 | $<0.02$ | 6 | NSS | 380 |
| BAR1100S | 200w | 1203 | 1 | 119 | 199 | 37 | 31 | 33 | $<0.2$ | $<0.02$ | 6 | 260 | 410 |
| BAR1100S | 250 W | 1203 | 1 | 103 | 194 | 31 | 33 | 31 | 0.6 | $<0.02$ | 6 | NSS | 410 |
| BAR1100S | 300 W | 1203 | 1 | 102 | 169 | 34 | 30 | 30 | 0.3 | $<0.02$ | $<5$ | 165 | 370 |
| BAR1100S | 3504 | 1203 | 1 | 93 | 162 | 24 | 24 | 28 | 0.2 | $<0.02$ | $<5$ | 280 | 390 |
| BAR1200S | 50 | 1203 | 2 | 107 | 201 | 43 | 33 | 34 | 0.2 | $<0.02$ | $<5$ | 460 | 400 |
| BAR12005 | 50 E | 1203 | 1 | 102 | 178 | 49 | 40 | 36 | 0.5 | $<0.02$ | $<5$ | 540 | 460 |
| EAR 1200 S | 1 10F | 1203 | 5 | 73 | 177 | 45 | 33 | 30 | 0.5 | <0.02 | $<5$ | 400 | 340 |
| 3AR1200S | 150 E | 1203 | 2 | 94 | 173 | 44 | 35 | 31 | $<0.2$ | $<0.02$ | $<5$ | 360 | 360 |
| gar 12005 | 200 E | 1203 | 1 | 96 | 182 | 39 | 31 | 26 | $<0.2$ | $<0.02$ | 6 | 540 | 360 |
| BAR1200S | 250 E | 1203 | 1 | 60 | 147 | 35 | 33 | 24 | 0.2 | $<0.02$ | $<5$ | 460 | 390 |
| BAR1200S | 250E* | 1203 | 2 | 58 | 147 | 36 | 31 | 23 | 0.3 | $<0.02$ | $<5$ | 400 | 390 |
| gar1200S | 3008 | 1203 | 3 | 87 | 181 | 47 | 46 | 31 | 0.3 | $<0.02$ | 6 | 170 | 400 |
| BAR 12005 | 350 E | 1203 | 3 | 70 | 162 | 35 | 31 | 27 | $<0.2$ | $<0.02$ | 8 | 200 | 350 |
| EAR1200S | 400 E | $120 \%$ | 3 | 79 | 160 | 41 | 47 | 29 | $<0.2$ | $<0.02$ | $<5$ | 300 | 410 |
| garizoos | 450 E | 1203 | 3 | 101 | 201 | 72 | 65 | 38 | 0.8 | <0.02 | 5 | 200 | 410 |
| BAR1209S | 500 E | 1203 | 2 | 74 | 173 | 49 | 59 | 31 | $<0.2$ | $<0.02$ | $<5$ | 90 | 380 |
| BAR1200S | 550 E | 1203 | 1 | 75 | 111 | 42 | 35 | 20 | 0.3 | $<0.02$ | < 5 | 125 | 180 |
| GAR1200S | 600E | 1203 | 1 | 93. | 330 | 94 | 71 | 32 | 0.6 | $<0.02$ | 6 | 110 | 320 |
| BAR1200S | 600E* | 1203 | 2 | 94 | 341 | 97 | 72 | 33 | 0.6 | $<0.02$ | 6 | 145 | 320 |
| GAR1200S | 50N | 1203 | 6 | 97 | 173 | 46 | 47 | 30 | 0.6 | $<0.02$ | $<5$ | 210 | 330 |
| BAR1200S | 150 W | 1203 | 2 | 48 | 111 | 27 | 29 | 20 | 0.2 | $<0.02$ | $<5$ | 195 | 170 |
| GAR1200s | 150 W | 1203 | 2 | 57 | 117 | 37 | 36 | 23 | $<0.2$ | $<0.02$ | 7 | 500 | 218 |
| SAR1200S | 200W* | 1203 | 1 | 56 | 126 | 42 | 41 | 24 | $<0.2$ | $<0.02$ | $<5$ | 300 | 248 |
| BAR120Js | 250 W | 12 C 3 | 1 | 56 | 127 | 42 | 41 | 25 | $<0.2$ | $<0.02$ | $<5$ | 340 | 251 |
| 3AR1200S | 250w | $120{ }^{\text {a }}$ | 1 | 58 | 177 | 44 | 38 | 24 | $<0.2$ | $<0.02$ | $<5$ | 400 | 242 |
| AAR1>OnS | 3กกเ | $1>03$ | 7 | 78 | 163 | 56 | 50 | 31 | <3.? | <0.02 | $<5$ | 220 | 330 |


$10134$
$10134$









lattitude departure:
elevation:
ELEVATION:


core she: NQW to $42^{\prime}$ RQW/42-550iogatd br: ET.K scale of log: $1^{\prime \prime}=10^{\prime}$ date: 21-23, September 19 Location: $125^{\prime}$ west a $260^{\circ}$ az from 80ON beARING: $90^{\circ}$ az date coliareo: l9 Sept $1981+800$ W dATE COMPLETED: 22 Sept 1981 dIp: $-50^{\circ}$
$\square$ rek 2W42-55









NOTE: INSTRUMENT CRONE RADEM
INSTRUMENT CRONE RADEM
STATION NLK (SEATTE)
STATION : NLK ( SEAT
SCALE: $1 \mathrm{~cm}=10^{\circ}$



LINE $8+00$

LINE $9+00 \mathrm{~s}$
LINE $10+00 \mathrm{~S}$
LINE $11+00 \mathrm{~S}$

LINE $12+00$


10134

Figure 1

PLACER DEVELOPMENT LIMITED DRAWN JMT VOLCANIC CREEK-BARHAM CREEK | SCHLLE: $: 5000$ |
| :--- |
| DATE $82 / 0 / 20$ |





$10134$



