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GEOLOGICAL, GEOCHEMICAL and GEOPHYSICAL  
ASSESSMENT REPORT

for the

CAT 13,14,15,23 and 24

Mineral Claims

Lat.56° 03'N, Long.125° 22'W

Omineca Mining Division

Operated by: Placer Dome Inc.  
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December, 1992

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**22,722**

**PART 1 OF 2**

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## 1.0 SUMMARY

An exploration program was conducted on the Cat 13, 14, 15, 23 and 24 claims during the period July 27 to August 5, 1992. The Cat property lies near Uslika Lake, just north of Cat Mountain where BP Resources and Lysander Gold Corp. have delineated a large copper-gold porphyry system.

An induced polarization survey was conducted to test the northerly continuity of an open zone of anomalous chargeabilities on the adjacent Cat Mountain property. The survey succeeded in tracing this zone, which extends northwesterly across the Cat 23 claim as a broad zone of high chargeabilities. Anomalous chargeabilities, however, appear to be confined to a narrow structure, traced for 800 m. An area of intense resistivity lying on the west side of the chargeability anomaly may indicate the presence of a small intrusive body in the central grid area.

The VLF-EM survey shows a series of north to northwesterly trending conductors on the Cat 23 claim. The most predominant of these conductors is coincident with the main IP chargeability anomaly, believed to be a fault.

Magnetometer inferred data was generally low in the area surveyed, with depressions over the structure detected by IP and VLF-EM, and moderate spikes on the immediate margins. Magnetic data is generally higher over the area of anomalous IP resistivity, probably indicating a lithologic contrast and further supporting the possibility of an intrusive body underlying the central Cat 23 claim area.

Results of the geochemical survey were generally low with only local, spotty Cu and Au anomalies. Only one area, approximately 500 m wide, at the north end of the IP resistivity and adjacent conductivity and VLF-EM anomalies, sustained high copper (76 to 270 ppm) geochemistry, with a single anomalous gold (100 ppb) sample. Anomalous rock samples were all collected from altered volcanics in contact with intrusive rocks.



## 2.0 CONCLUSIONS AND RECOMMENDATIONS

Outcrop exposure is extremely sparse on the Cat property, especially in the grid area, severely hindering the interpretation of data.

The chargeability anomaly, and the VLF-EM anomalies can be explained by narrow mineralized zones along fault contacts. Rock and soil geochemistry show only marginal copper values with no significant gold values. All anomalous rocks were collected from narrow intrusive contact zones and the only geochemical soil anomaly with any linear extent also appears to be a contact phenomenon.

If there is a significant intrusion in the grid area, as suggested by geophysical data and a small monzonite outcrop, observed alteration does not suggest the presence of an associated porphyry system. Nearby, massive pyrrhotite-arsenopyrite-carbonate veins at Pluto Creek are late stage, fracture controlled, distal porphyry deposit features. In view of these factors, there appears to be minimal potential for a large-tonnage deposit on this property.

### **3.0 INTRODUCTION**

Placer Dome Inc. optioned the Cat claims in March, 1992 from Lysander Gold Corporation. The property's strategic location, abutting the Cat Mountain property on the north, combined with subtle copper geochemical anomalies detected by Lysander in their 1991 reconnaissance exploration program, attracted Placer Dome to the property.

#### **3.1 Objectives**

The primary objective of the 1992 exploration program was to investigate an open chargeability anomaly in the northeastern portion of the BP Resources/Lysander Cat Mountain property which appears to trend toward the Cat 23 claim. The remainder of the claim block was to be evaluated for mineral potential, in particular, for a possible continuation of the Cat Mountain sulphide system.

#### **3.2 Work Performed**

An exploration program was conducted on the Cat claims between July 27 and August 5, 1992. The program consisted of 20 km of grid installation, a 4.4 km reconnaissance contour line, geological mapping, geochemical sampling and various geophysical surveys. Geophysical surveying consisted of 10.3 km of induced polarization, 10.3 km of VLF-EM and 10.8 km of ground magnetics. A total of 323 soil samples, 2 silt samples and 10 rock samples was collected.

### **4.0 DESCRIPTION OF PROPERTY**

#### **4.1 Location and Access**

The Cat claims are located just north of the Osilinka River, 55 km northwest of Germanson Landing and 165 km northwest of MacKenzie, BC. The property straddles Thane Creek, approximately 6 km west of the north end of Uslika Lake. The claims are centered on 56° 03' north latitude and 125° 22" west longitude in the Omenica Mining Division. The NTS location is 94C/3.

Uslika Lake is accessible via the Findlay Forest Service Road, a seasonal two-wheel drive road which originates 1 km south of Windy Point Lodge on Highway 97, north of Prince George, BC. The Pack River

road traverses northwest along the western side of Williston Lake, ending at the 190 km marker, then heads southwesterly where it is renamed Osilinka Mainline, to the Osilinka Forestry Camp on Tenakihi Creek at 48.5 km. The route then veers southerly to the Forestry Recreational Site on Uslika Lake at 61 km. A forestry branch road at the 58 km marker connects to cut blocks located approximately 3 km west of Osilinka Mainline and 3 km east of the eastern boundary of Cat 15.

Direct access to the claims was accomplished by helicopter from Uslika Lake. Helicopter support is also available from Germanson Landing or Johanson Lake, 70 km to the northwest.

Property location is depicted in Figure 1 of this report.

#### 4.2 Physiography

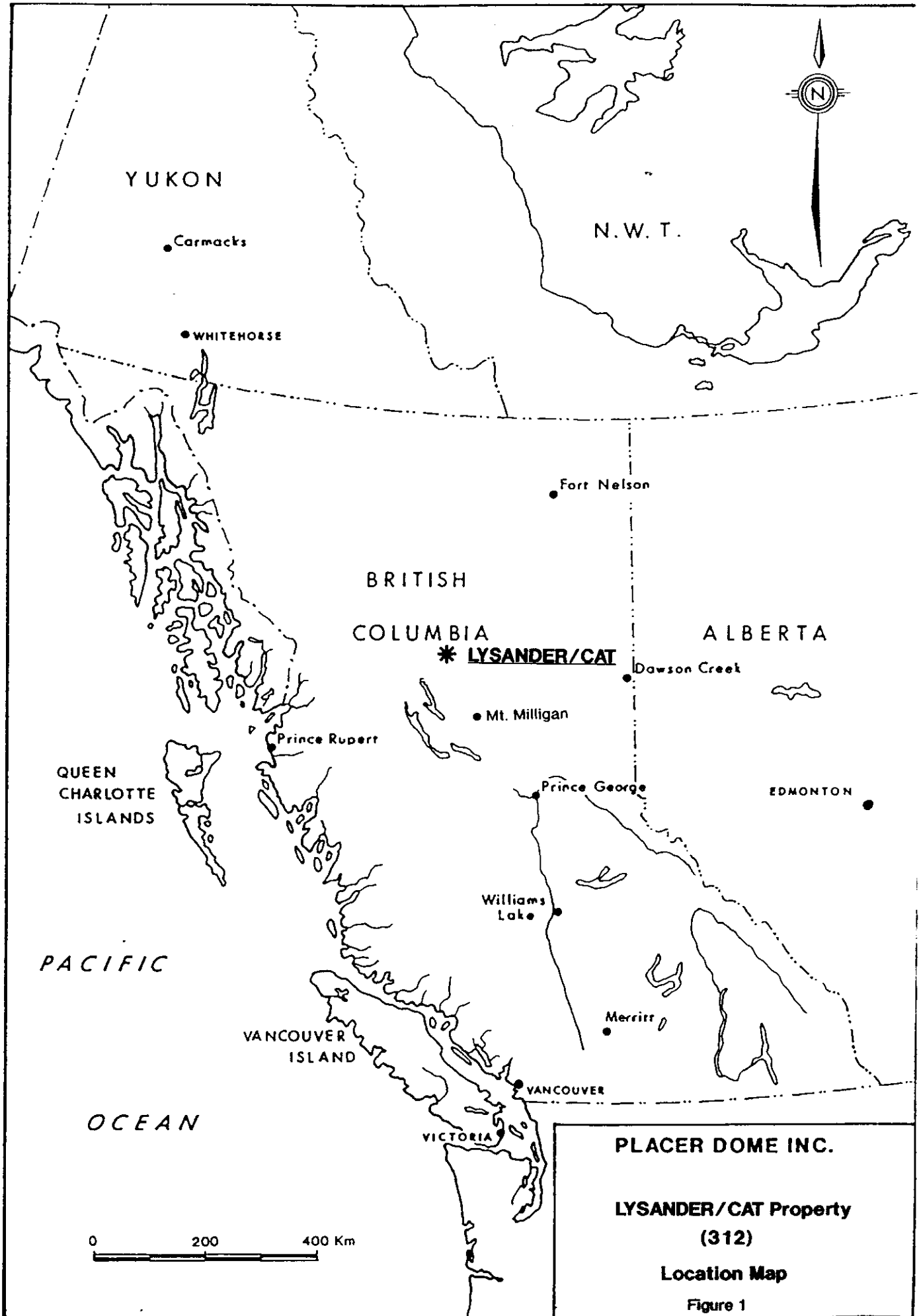
The Cat claims are located in the Osilinka Ranges of the Omenica Mountains, along Thane Creek which transects the Cat 13, 14 and 15 claims.

The northern half of the Cat 13 and 14 claims overlie the south-facing flanks of a moderately to steeply sloped unnamed mountain, while the northern half of Cat 15 lies along the gently, undulating eastern flank of the same mountain and a drift covered valley containing Lou Creek. The western boundary of Cat 13 is marked by a steep gorge containing Pluto Creek. The southern half of these claims covers the steep "V"-shaped valley containing Thane Creek, which is marked by a canyon for 500 m at the confluence with Pluto Creek.

South of Thane Creek, the Cat 23 and 24 lie along the more gentle to locally steep, north and east-facing slopes and ridgetop of an adjacent mountain.

Elevations range from approximately 1045 m along Thane Creek in the southeastern corner of Cat 15 to a maximum of 1780 m along the northern Cat 13 boundary.

Timberline is at approximately 1600 m elevation and forest cover is dominantly coniferous with Engelmann's spruce common above 1400 m and mixed balsam, fir, spruce and lodgepole pine below. Dwarf birch and willow are common in avalanche chutes and along Thane Creek.



The local climate is similar to much of the northern interior, with moderate summers and relatively cold winters. Approximately 500 mm of precipitation falls annually in the Uslika Lake area, approximately one-third to one-half of this as snow during the winter months.

#### 4.3 Claim Status

The Cat property consists of 5 mineral claims totalling 84 units. Claim status, not including this year's assessment, is tabulated below:

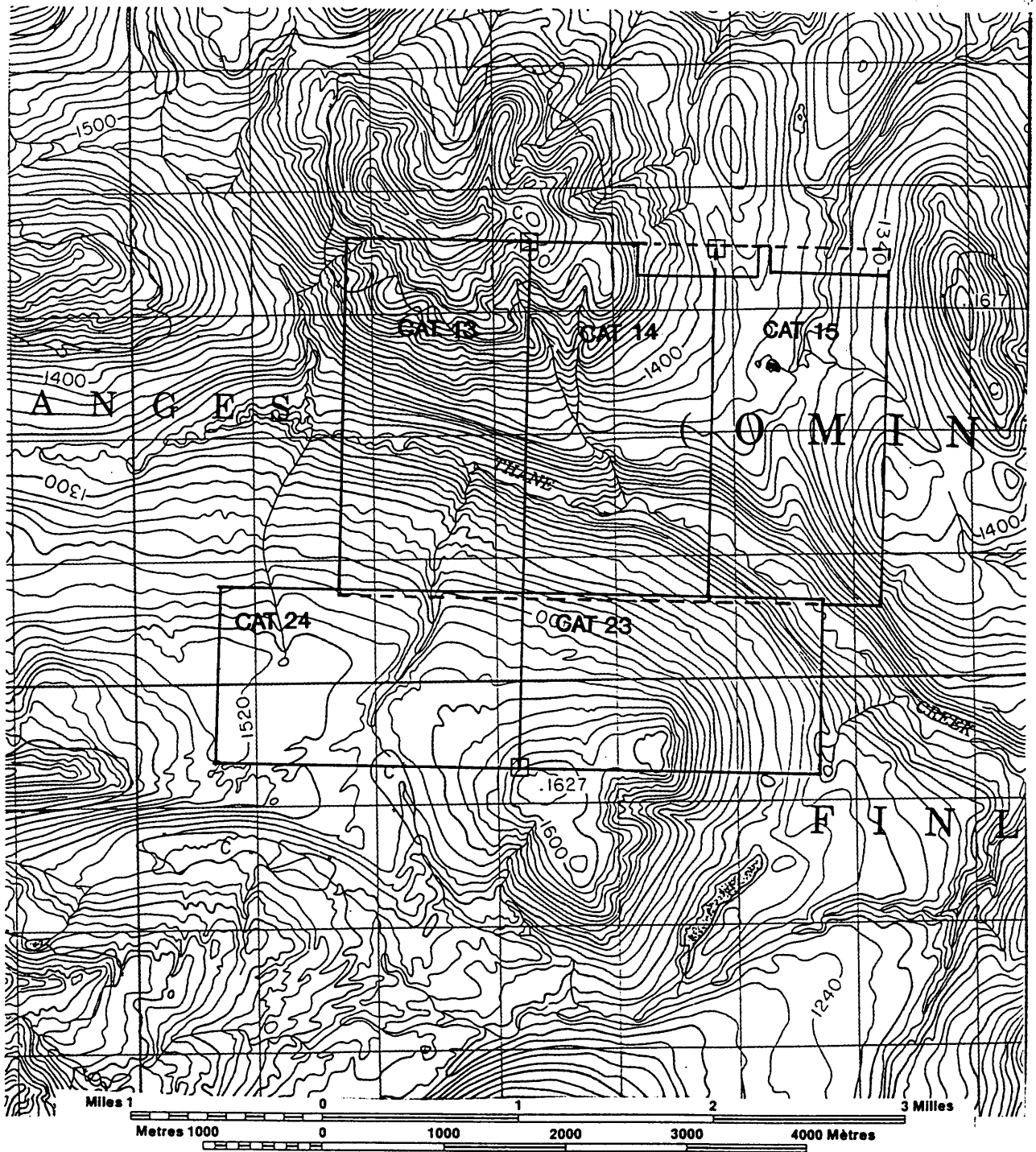
<u>Name</u>	<u>Units</u>	<u>Record #</u>	<u>Expiry Date</u>	<u>Owner</u>
Cat 13	18	241436	1992/11/16	Placer Dome
Cat 14	18	241437	1992/11/16	Placer Dome
Cat 15	18	241438	1992/11/16	Placer Dome
Cat 23	15	310299	1993/06/12	Placer Dome
Cat 24	15	310300	1993/06/12	Placer Dome

Currently, the Cat 13, 14 and 15 claims comprise the "Cats" group under a Notice to Group. The claims are plotted on B.C. Ministry of Energy, Mines and Petroleum Resources Claim Map 94C/3W. The Cat claims are depicted in Figure 2 of this report.

The legal corner post for the Cat 23 and 24 claims was located in the field by D. Dunlop, as an agent for Placer Dome Inc..

#### 4.4 History

Exploration in the Uslika Lake area dates from the 1890's when gold placers were discovered on Vega and Jim May creeks. Bedrock prospecting during the late 1920's to 1940's resulted in the discovery of the Vega, Thane, Pluto, Betty and Lorraine copper-gold occurrences. Although the ground covered by the Cat claims lies amidst a cluster of copper, gold and copper-gold occurrences, there is no recorded exploration on this ground until 1990 when Lysander Gold Corporation conducted reconnaissance-style geologic and geochemical surveys on the Cat 13, 14 and 15 claims.



Scale 1:50 000

<b>PLACER DOME INC.</b>				
<b>LYSANDER-CAT PROPERTY</b>				
<b>CLAIM MAP</b>				
REVISIONS	DATE	BY	DRAWN: cid	DATE: Dec 1992
			TRACED:	SCALE: 1:50 000
			DWS. No.:	
			PROJ.: 312	PLATE: Fig. 2

Lysander failed to locate any economic sulphide mineralization but found that the property geology and alteration were suggestive of a porphyry-style system. Their limited geochemical sampling yielded respectable Cu and As anomalies with weak Au enhancement.

The Cat 23 and 24 claims, staked during 1992, abut BP Resources/Lysander Gold Corp.'s Cat Mountain property. The author knows of no previous work on the area of these claims, although extensive geochemical and geophysical surveys on Cat Mountain extend to the southern boundary of Cat 23 and 24.

#### 4.5 Regional Geology

The Cat property is situated in the north-central portion of the Quesnel Trough, an eastern division of the Intermontaine Belt. The Quesnel Trough is a thick, northwesterly trending sequence of fault bounded upper Triassic and lower Jurassic submarine volcanic and sedimentary rocks of the Takla Group. The trough lies between Paleozoic rocks of the Pinchi Geanticline on the west and the Omineca Geanticline on the east. Regional faults bounding the trough are the Pinchi Fault to the west and the Okanagan-Cariboo Fault system (locally the Swannell Fault) on the east.

A significant feature of the northern Quesnel Trough is the Hogem Batholith, a differentiated, multistage intrusive complex of alkalic and calc-alkalic rocks. The Batholith is in part coeval with and also intrudes the enveloping Takla Group volcanic rocks. Small satellite stocks, dykes and sills are abundant in the Takla Group and late Paleozoic rocks surrounding the Batholith.

The Quesnel Trough is host to several alkalic suite porphyry copper deposits notable for their significant gold content. Examples of this deposit type are Copper Mountain/Ingerbelle Mines near Princeton, Afton near Kamloops, and Cariboo-Bell/Mount Polley located 90 km southeast of Quesnel. The alkaline porphyries are diverse mineralizing systems commonly associated with small, complex dioritic to syenitic plutons which are comagmatic with the enclosing volcanics. Ore is hosted within the intrusions and the wallrocks, occurring in zones of intense structural preparation and hydrothermal alteration, including potash feldspar and biotite and are fringed by propylitic zones.

Two alkalic porphyry deposits are known in the northern portion of the Quesnel Trough. The Lorraine deposit, located 22 km south of the Cat claims, has an indicated potential reserve of 10 Mt grading 0.7% Cu with 0.10 to 0.34 g/t Au. Mt. Milligan, located 150 km southeast of the Cat property, has a drill indicated resource of 302 Mt grading 0.23% Cu and 0.50 g/t Au.

The British Columbia Mineral Inventory indicates that eleven Au or Cu-Au mineral occurrences occur within a radius of 7 km from the Cat claims. A few of the more pertinent occurrences are discussed briefly below. In addition, a mercury occurrence on Thane Creek is believed to be located in the vicinity of the Cat 13/14 claim line. The showing consists of minor cinnabar, hosted in Takla volcanics, within a carbonatized fault zone.

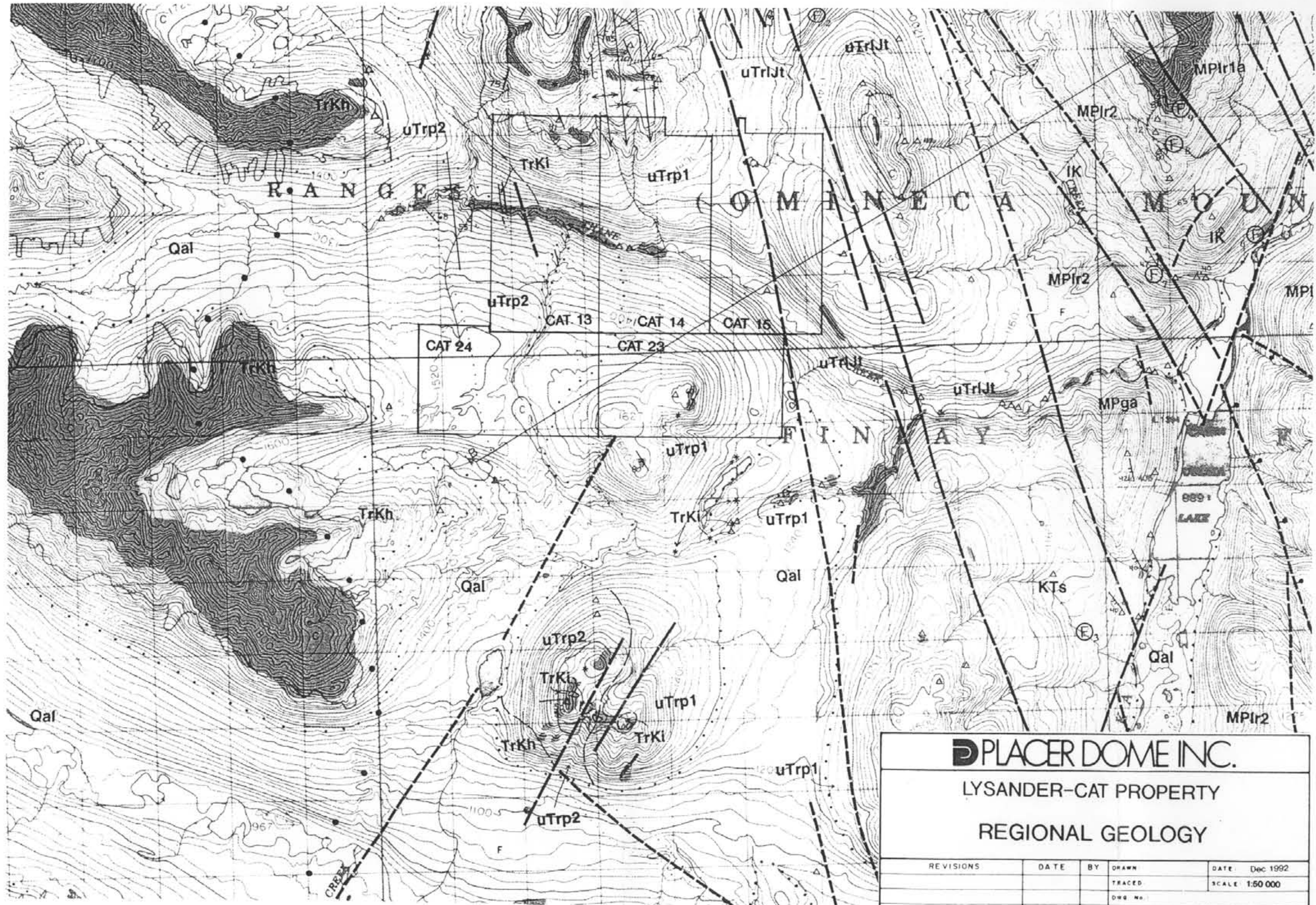
The Pluto showing, located approximately 1 km northwest of Cat 13, contains lenses of pyrrhotite and arsenopyrite, accompanied by intense carbonate alteration, associated with a structurally controlled orthoclase porphyry monzonite dyke.

The Vega property, 2 km north of Cat 15, hosts a large sulphide system with a small, high-grade zone of Cu-Au mineralized breccia associated with syenitic intrusions and potassic alteration. The Vega sulphide system is open to the south and may trend onto the Cat property.

At Cat Mountain, an 11 km<sup>2</sup> sulphide system has been defined by geophysics. Lithologies, alteration, Cu-Au relationships, size and location all indicate this to be an alkaline Cu-Au porphyry system. In the main mineralized area, the Bet Zone, mineralization is restricted to wide ( $\leq 40$  m) fracture zones which are spatially associated with syenites. Potassic feldspar and magnetite are the principal alteration minerals. An apparently separate, incompletely defined sulphide system which has not been drill tested occurs in the northeastern sector of the property, apparently trending onto the Cat 23 claim.

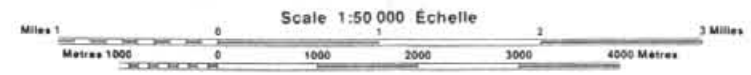
Recent mapping by the Geologic Survey of Canada (Ferri, et al, 1992) indicates that the Cat claims are underlain by Takla Group intermediate to basic volcanic flows, pyroclastic and sedimentary rocks, primarily belonging to the Plughat Mountain Formation. A Strong north-northwesterly trending fault is shown to traverse the Cat 15 claim, separating Plughat Mountain Formation volcanics and sediments from younger Takla basalt flows and pyroclastics on the east. The western third of the Cat 24 claim is believed to be underlain by the eastern edge





**PLACER DOME INC.**  
 LYSANDER-CAT PROPERTY  
 REGIONAL GEOLOGY

REVISIONS	DATE	BY	DRAWN	DATE
				Dec 1992
			TRACED	SCALE 1:50 000
			DWG No.	
			PROJ 312	PLATE Fig. 3



# REGIONAL GEOLOGY LEGEND

## GEOLOGY OF THE USLIKA LAKE AREA, BRITISH COLUMBIA

NTS 94C/3, 4 and 6

FILIPPO FERRI, STEVE DUDKA, CHRIS REES, DAN MELDRUM AND MARCUS WILLSON

CASSIAR LAND DISTRICT  
BRITISH COLUMBIA COLOMBIE-BRITANNIQUE

### LAYERED ROCKS

- CENOZOIC QUATERNARY**  
**Qal** AREA OF THICK GLACIAL DEPOSITS
- CENOZOIC AND MESOZOIC CRETACEOUS AND TERTIARY**  
 Upper Cretaceous to Lower Tertiary  
**SUSTUT GROUP**  
**KTs** SANDSTONE, CONGLOMERATE AND SLTSTONE, GREY-GREEN TO BROWN OR RED BROWN, THIN TO THICKLY BEDDED AND FRABLE, ABUNDANT THIN COALY LENSES
- CRETACEOUS**  
 Lower Cretaceous  
**IK** CONGLOMERATE, PEBBLY, SANDSTONE, GREY-BROWN AND MAROON, NODULAR ARGILLITE, DARK GREY, MAY CONTAIN THIN COAL LENSES
- JURASSIC TO TERTIARY(?)**  
 Lower Jurassic(?) to Lower Tertiary(?)  
**USLIKA FORMATION**  
**JTu** CONGLOMERATE, COARSE PEBBLE TO BOULDER SANDSTONE, GREEN TO GREY-GREEN, MASSIVE TO THICKLY BEDDED
- MESOZOIC TRIASSIC AND JURASSIC**  
 Upper Triassic to Lower Jurassic  
**TAKLA GROUP**  
**uTrJt** BASALT, GREY-BROWN TO MAROON, MASSIVE TO AGGLOMERATIC, APHANITIC, AMYGDALOIDAL TO PLAGIOCLASE, PYROXENE AND OLIVINE(?) PHYRIC, LESSER TUFF AND LAPILLI TUFF CONTAINING MONZONITE CLASTS
- PLUGHAT MOUNTAIN FORMATION**  
**uTrp2** AUGITE AND AUGITE-PLAGIOCLASE PHYRIC BASALTIC AGGLOMERATE, COARSE LAPILLI TUFF AND LESSER MASSIVE FLOWS, TUFF AND TUFFACEOUS SLTSTONE, GREEN, DARK GREEN, GREY TO GREENISH GREY, ARGILLITE, DARK GREY TO GREY
- uTrp1** TUFFS, GREY TO GREENISH, MASSIVE TO THICKLY BEDDED, TUFFACEOUS SLTSTONE, GREY, GREEN TO DARK GREY, THIN TO THICKLY BEDDED, ARGILLITE, DARK GREEN TO GREY, THIN TO MODERATELY BEDDED, RARE ARGILLACEOUS LIMESTONE, DARK GREY, LESSER COARSE LAPILLI TUFF AND AGGLOMERATE AS IN uTrp2
- PALEOZOIC MISSISSIPPIAN TO PERMIAN**  
 Lower Mississippian(?) to Permian  
**LAY RANGE ASSEMBLAGE**  
**MAFC-U, TRAMAFIC UNIT**  
**MPIr1a** BASALT, DARK GREEN, MASSIVE TO FOLIATED AND MAY BE OLIVINE PHYRIC, MINOR CHERT, GREY TO CREAM, GABBRO, FINE TO MEDIUM GRAINED AND RARE SERPENTINE
- MPIr1b** GABBRO, FINE TO VERY COARSE GRAINED, MAY BE FOLIATED TO MYLONITIC
- MPIr1c** SERPENTINE, DARK GREEN, MASSIVE
- MPIr1d** GABBRO, DARK GREEN, FINE TO COARSE GRAINED, AMPHIBOLITE, FOLIATED BASALTS, SERPENTINE
- MAFC TUFF UNIT**  
**MPIr2** TUFF AND TUFFACEOUS SLTSTONE, GREEN, THIN TO THICKLY BEDDED, FINE TO VERY FINE GRAINED, INTERLAYERED WITH GREY TO DARK GREY ARGILLACEOUS SLTSTONE, GREY TO CREAM CHERT AND LIMESTONE, LAPILLI TUFFS AND AGGLOMERATE, CLASTS ARE PYROXENE-PLAGIOCLASE PHYRIC BASALTS, MAROON AND GREEN, BASALT, DARK GREEN, MASSIVE AND AMYGDALOIDAL

### INTRUSIVE ROCKS

- MESOZOIC TRIASSIC TO CRETACEOUS**  
 Late Triassic to Cretaceous  
**HOGEM INTRUSIVE COMPLEX**  
**TrKh** MONZONITE, MONZONODORITE AND QUARTZ MONZONODORITE, TAN, BROWN, PINKISH, MEGACRYSTIC, HORNBLende, Biotite AND MAGNETITE AS ACCESSORIES, SYENITE, QUARTZ-SYENITE AND ALKALI-FELDSPAR SYENITE, PINK, FINE TO COARSE GRAINED, LOCALLY PORPHYRYTIC AND MAGNETIC
- TrKl** MONZONITE, MONZONODORITE, SYENITE, SMALL STOCKS TO DYKES, GREY, TAN TO GREENISH, MEGACRYSTIC TO CROWNED PORPHYRIES, HORNBLende AS ACCESSORY, MAGNETIC.  
 \* DENOTES SMALL STOCK OR DYKE
- MISSISSIPPIAN TO PERMIAN**  
**MPga** GABBRO, DARK GREEN TO GREEN, FINE TO MEDIUM GRAINED

### SYMBOLS

- Geological boundary (defined, approximate, assumed) .....
- Normal fault (approximate, assumed) .....
- Thrust fault (approximate, assumed) .....
- Fault (approximate, assumed) .....
- Bedding, tops known (inclined, vertical, overturned) .....
- Bedding, tops unknown (inclined, vertical) .....
- F<sub>1</sub> and F<sub>2</sub> foliation (inclined, vertical) .....
- F<sub>1</sub> fold axis .....
- Glacial feature (Drumlin?) .....
- Lineation, mineral .....
- Lineation, bedding-cleavage intersection .....
- Anticlinal fold axis (arrow indicates plunge) .....
- Synclinal fold axis (arrow indicates plunge) .....
- Limit of Quaternary cover .....
- Fossil locality .....
- Cross-section line .....
- Area of rock exposure .....
- Isolated outcrop/station location .....
- Limit of mapped area .....

**PLACER DOME INC.**

**REGIONAL GEOLOGY LEGEND**

TO ACCOMPANY FIGURE 3

REVISIONS	DATE	BY	DRAWN	DATE: DEC 1992

SCALE: \_\_\_\_\_  
 TRACES: \_\_\_\_\_  
 PDS No.: \_\_\_\_\_  
 PDDA: \_\_\_\_\_  
 PLATE 3a

of the Hogem Batholith. Regional mapping indicates a large dyke of alkalic composition crosses Thane Creek near the western edge of the Cat 13 claim.

The Plughat Mountain Formation dips moderately to steeply westward unless folded; two northerly trending anticlines and a syncline are depicted plunging onto the northern Cat 14 claim.

Regional geology is included as Figure 3 of this report.

## 5.0 1992 EXPLORATION PROGRAM

### 5.1 Property Geology

The Cat claims were geologically mapped at a scale of 1:10,000. The property is extensively covered with till of varying thicknesses. Outcrops are primarily restricted to bottoms of deep stream channels, but occasionally occur along the edges of eroded hilltops. Thick glaciofluvial sediments occur along the wide valley now occupied by Thane Creek.

#### Lithologies

From the available outcrop, the Cat property appears to be underlain primarily by andesitic lapilli, crystal and ash tuffs, basalt flows and minor intercalated sediments.

Mafic volcanics, assumed to be basaltic in composition, are exposed along Thane Creek. These are fine grained, locally augite and/or plagioclase porphyritic, with local weak hornfelsing. Where carbonate altered, the basalt is leached to a gray color and exhibits a rusty weathering rind. Andesite lapilli tuff, exposed along Doug Creek, is chloritic and locally carbonate altered and gossanous. Fine grained andesitic ash and crystal tuff is locally bedded and sometimes contains small (<2 mm), altered augite crystals and crystal shards.

Sedimentary lithologies on the Cat claims consist of volcanic sandstone and siltstone, with bedded argillite to graphitic mudstone. Argillite is weakly magnetic and contains local concentrations of up to 1% finely disseminated pyrite. Graded bedding was observed with individual sequences measuring up to 5 m in width.

Volcanic and sedimentary rocks are cut by dykes of dioritic



composition, as well as by three phases of feldspar porphyry monzonite exhibiting either plagioclase, orthoclase or plagioclase-hornblende as dominant phenocrysts. Feldspar phenocrysts up to 1.5 cm in size were observed. Monzonite dykes average 2 m in width and sometimes contain up to 0.5% pyrite along contacts. Dioritic intrusives include coarse hornblende-diorite and fine grained granodiorite. No syenite was observed on the claims.

### Alteration and Mineralization

Exposures near Thane Creek show intense carbonate alteration, with local blebby and fracture controlled pyrite in concentrations up to 5%. Narrow ankerite, calcite and lesser grey chalcedonic quartz veinlets, usually less than 1 cm in width, cut the altered volcanics in several directions. Carbonate-altered zones are also generally highly limonitic. A 25m gossanous stockwork zone along Thane Creek, near the confluence with Doug Creek, contains banded ankerite veinlets (<1 cm wide) with cores of vuggy white calcite (<3 cm wide) hosted in gray, carbonate altered basalt. Downstream approximately 550 m is a breccia zone, 20 cm wide, of carbonate altered basalt, creamy ankerite veinlets 2 mm thick and grey chalcedonic veins.

The volcanics become more heavily chloritized toward Thane Creek, suggesting some structural alteration.

Pyrite was the only sulphide observed on the claims, occurring primarily in volcanics, usually near contacts with intrusive rocks. Pyrite can be disseminated, blebby or fracture controlled, occurring in rare local concentrations up to 5%, however, 0.5 to 1% is more common. Pyrite is also present in minor concentrations in intrusive rocks and finely disseminated within argillite horizons.

### Structure

Major fault directions were identified at 25° and 160°, which are parallel to the structures controlling Cat Mountain. The northwesterly structures appear to control pyrrhotite and arsenopyrite mineralization in the area. Masses of pyrrhotite-arsenopyrite found at the nearby Pluto showing are associated with a structurally controlled orthoclase porphyry monzonite dyke.

Property geology is depicted in Figure 7 of this report.

## 5.2 Soil Geochemical Survey

### Method

A total of 256 soil samples was collected at 50 m intervals along four east-west trending flagged lines, spaced 400 m apart, in the southern claim area. In addition, 67 soil samples were collected from a 4.4 m recce contour line, at 100 m intervals and from two parallel, 500 m long lines oriented at 115°, at 50 m intervals, located north of Thane Creek. A total of 323 soil samples was collected over 19.7 m of grid. Two silt samples were also collected from the southern grid.

The soil samples were collected from the "B" horizon (where developed) using narrow bladed treeplanting shovels on the dry ground, or 5 foot long hand augers in the swampy terrain. This "B" soil horizon generally occurred between 15 to 30 cm depth. Where glaciofluvial sediment cover was too deep to allow sampling of soil, till and occasionally fluvial sediments, were sampled.

Samples were placed in brown kraft paper envelopes, and labelled with line and station numbers for identification. Notes were taken at each sample site regarding site conditions, sample depth, soil composition, grain size and rock fragment composition.

### Preparation and Analysis

Samples were shipped to the Placer Dome Research Centre at 323 Alexander St., Vancouver, BC, for analysis. The samples were dried in a hot air dryer and sieved to extract the -80 mesh sized fraction.

A 0.5 g aliquot was digested in a hot 3 mL HCL-HNO<sub>3</sub>-H<sub>2</sub>O solution for one hour, diluted to 10 mL and then analyzed for 27 elements by the Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES) technique.

Gold was analyzed by digesting a Graphite Furnace in aqua regia and analyzed by Atomic Absorption Spectrometry (FGAAS) following extraction into MIBK. Gold detection limit for soils is 1 ppb by G.F.A.A.S.

### Data Handling

All soil geochemical data was entered into a computer ASCII file. Basic statistics, log histograms and probability plots for gold and copper were then generated and comprise Appendix III of this report.

### Map Preparation

Soil sample locations, streams, swamps, topographic contour lines, claim lines and claim posts have been digitized, using U.T.M. coordinates, into CAD files. The CAD program was used to overlay the topographic base on plots of the soil sample results.

### Results and Interpretation

The soil geochemical results are listed in Appendix II. Figures 8 and 9 are symbol plots for copper and gold, respectively, with the size of the plot symbol scaled to the magnitude of the geochemical value. Raw data values are also posted in these figures.

Gold values ranged from 1 to 100 ppb, with an average of 5 ppb. A probability plot of the data indicates that gold is present in two separate populations. The second, anomalous population occurs at a lower threshold of approximately 16 ppb gold, slightly overlapping the first, background population. Gold values in excess of 28 ppb are considered to be anomalous. It should be noted that there is a low statistical correlation (0.033) between gold and copper.

The highest gold in soil (100 ppb) occurs at 25 100N, 21 550E adjacent to samples containing 41 and 29 ppb Au and an area of high copper in soils. These samples lie at the northern end of an IP resistivity anomaly, thought to represent an intrusive body, and coincident linear IP chargeability and VLF EM anomalies believed to be a fault on the eastern edge of the possible intrusion. A sample containing 68 ppb Au occurs on line 23 900N, at the southern end of the same resistivity anomaly. A second notable cluster occurs at the east end of line 24 300N, with three samples containing 18 to 32 ppb Au adjacent to anomalous copper-bearing soils. A narrow northeasterly-linear trend of gold-bearing soils stretching from 24 300N, 20 250E to 25 500N, 20 800E is probably structurally controlled. Values range from 21 to 77 ppb Au with only background copper content. Other elevated gold values are widely spaced and sporadic.

Copper content of soils ranged from 22 to 388 ppm with an average of 78 ppm. Copper is also present in two distinct populations. The anomalous population, occurring at a lower threshold of approximately 160 ppm, overlaps the background population which has an upper threshold of 220 ppm.

Anomalous copper occurs in a northeasterly convex arc stretching from the easterly end of line 24 300N to the westerly end of line 25 500N, however, with no outcrop or mapped structures in this area the value of this observation is questionable. Four samples containing 168 to 294 ppm Cu were taken over a 400 m area immediately east of the anomalous gold on line 25 100N. Two anomalous samples, containing 388 and 377 ppm Cu, lie together on the eastern edge of line 24 300N, coincident with an area containing elevated gold in soil and a magnetic high. There are five elevated to anomalous copper values on line 25 500N. Neither IP nor EM data were collected on this line and there is no outcrop. It should also be noted that this line is downslope of the others and elevated geochemical values on the eastern portion of the line could be the result of downhill dispersion from the area of the coincident gold-copper anomaly.

Two silt samples collected from line 25 500N contained 73 and 74 ppm Cu with 8 and 10 ppb Au, respectively.

Ten rock samples were collected from the property. Copper values ranged from 4 to 373 ppm with three of the samples containing in excess of 200 ppm. The samples were all from limonitically altered volcanics in contact with intrusive dykes. Two of the samples were pyritic, however, no other sulphides were noted. Sample #24830, containing 299 ppm Cu occurs on a northwesterly trending fault mapped by the GSC between Thane and Doug Creeks. Samples 24831 and 4951, with 217 and 373 ppm Cu respectively were collected within 400 m of the same fault.

Gold in rocks ranged from 1 to 53 ppb, with only a single sample exceeding 10 ppb. The 53 ppb Au sample (#24826), from a limonitic carbonate-altered tuff near the head of Doug Creek, contained only 63 ppm Cu. It should be noted that rock samples taken in this area contain arsenic, with values ranging from 240 to 920 ppm.

### 5.3 Induced Polarization Survey

The induced polarization survey was conducted over the Cat 23 claim in an attempt to trace the open ended anomaly detected by BP Resources/Lysander Gold Corp. on the adjacent Cat 10 claim. A single IP line (L 25 100N) was extended across the northern Cat 24 claim for reconnaissance purposes (see addendum report by Lloyd Geophysics for survey specifications, maps and data).

#### Results and Interpretation

A broad zone of chargeabilities  $\geq 10$  msec, 1.3 km wide, trending northwesterly across the geophysical grid, delineates the continuation of the Cat Mountain anomaly. The higher (20 ms) chargeabilities in the Cat Mountain anomaly, however, are continued onto the Cat 23 only along a single, narrow (100 m) linear zone. These chargeabilities peak at 29.8 msec ( $n = 1$ ) on line 23 900N at 21 750E but rapidly decrease to 16.4 msec on line 24 300N, continuing to 24 700N, 21 650E at 16.6 msec. This anomaly is coincident with a linear VLF-EM conductor and most likely represents mineralization along a fault zone. Pyritic argillites, which have been mapped on surface within 250 m of the anomaly, may be in part responsible for the IP anomaly.

In the northwestern corner of the IP grid, chargeabilities begin increasing, slightly exceeding 17 msec ( $n = 1$ ) over a 250 m width along line 25 100N, between 20 350E and 20 600E. This low intensity anomaly is open ended.

Chargeabilities on the Cat 24 IP survey line were generally low, with a peak of 13.1 msec.

Resistivity contours, which form a bullseye pattern with a northerly trending tail, peaking at 1622  $\Omega\text{m}$  ( $n = 1$ ) on line 24 700N at 21 550E. The area of high resistivity may signify an intrusive body, which appears to cut-off the fault delineated by the chargeability anomaly. A small outcrop of porphyritic monzonite is mapped at 24 100N, 21 300E, on the southwestern edge of the resistivity anomaly.

In the vicinity of the second chargeability anomaly, resistivities are low, ranging between 200 and 531  $\Omega\text{m}$ .



## 5.4 VLF EM Survey

### Method

A VLF-EM survey was conducted over 4 grid lines and a portion of a tie-line on the Cat 23 claim. The survey utilized 25 meter stations, for a total of 10.3 km surveyed. Grid lines were spaced 400 m apart.

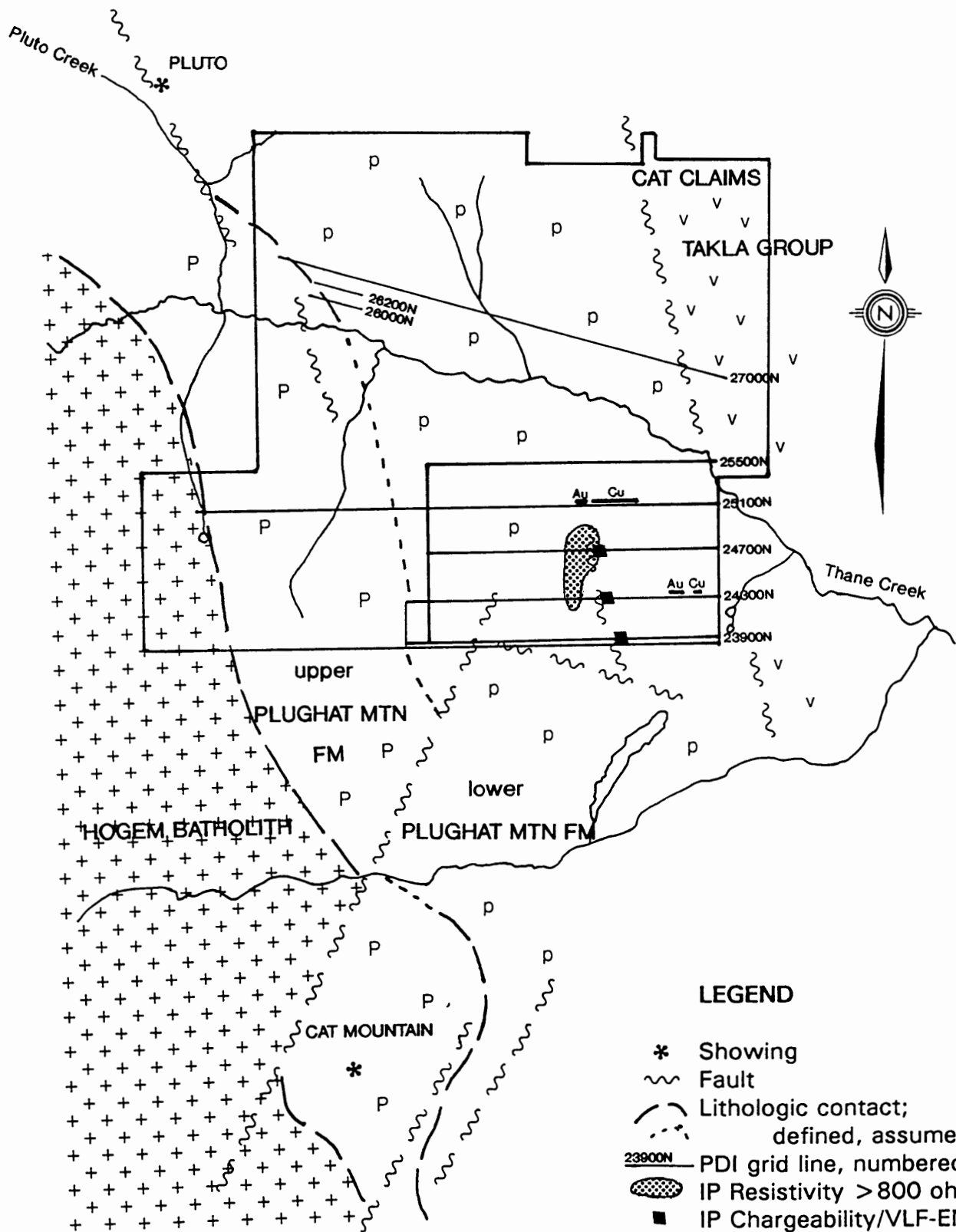
The survey employed a Geonics EM-16 which utilized the Seattle (NLK, 24.8 kHz) transmitting station. VLF readings were entered onto disk in a portable computer and plots were made of the In-phase, Quadrature and Fraser Filtered data. The stored data was transferred to a Sun Microsystems work station for final plotting and processing.

VLF-EM profiles, plotted at 1:10 000 scale, are presented as Figure 4 of this report. Raw data is compiled in Appendix III.

### Results and Interpretation

The VLF-EM data is erratic with numerous conductors. As grid lines were widely spaced (400 m apart), it is difficult to isolate and trace individual linear conductors from line to line and be certain of their orientation. As the claim area is underlain, at least in part, by interbedded, northeasterly trending sedimentary rocks, including pyritic argillite, it can be assumed that many of the electromagnetic variances can be attributed to contrasting lithologies.

Strong Crossovers outline a northwesterly trend crossing lines 23 900N to 24 700N, coincident with the IP chargeability anomaly, indicating the possibility of structurally controlled mineralization along a fault zone. VLF EM data is also high over the area of the IP resistivity high on line 24 300N.



**LEGEND**

- \* Showing
- ~ Fault
- - Lithologic contact; defined, assumed
- 23900N PDI grid line, numbered
- ◻ IP Resistivity > 800 ohm-m
- IP Chargeability/VLF-EM anomaly
- Cu Au Area of anomalous Au or Cu geochemistry, element noted

<b>PLACER DOME INC.</b>					
<b>CAT PROPERTY COMPILATION MAP</b>					
REVISIONS	DATE	BY	DRAWN	CID	DATE DEC 1992
			TRACER		SCALE 1:50000
				312	PLATE Figure 10

## 6.0 STATEMENT OF EXPENDITURES

### Field personnel (geol, geochem, mag, VLF):

D. Sketchley, geologist, 9 days @\$380/day	3420.00
P. Turnbull, geologist, 11 days @\$325/day	3575.00
D. Dunlop, geologist, 6 days @ 380/day	2280.00
C. Woolverton, geotech, 20 days @\$325/day	6500.00
B. Kahlert, student, 12 days @\$215/day	2580.00

### Contractors (IP survey):

Lloyd Geophysics Inc.: IP Survey	13,100.00
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### Geochemical analyses:

323 Soil Samples @ \$16.25	5248.00
2 Silt Samples @ \$16.00	32.00
10 Rock Samples @ \$20.00	200.00

Accommodation, 78 man days	3537.00
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Meals	1240.00
-------	---------

Communication	326.00
---------------	--------

Truck Expenses, gas	1604.00
---------------------	---------

Helicopter	9939.00
------------	---------

Freight	69.00
---------	-------

Report, misc. supplies	3800.00
------------------------	---------

<b>TOTAL</b>	<b>\$ 57450.00</b>
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## 7.0 STATEMENT OF QUALIFICATIONS

I, Carol I. Ditson, of #202-1910 West Sixth Avenue, Vancouver, British Columbia, do hereby certify that:

1. I graduated from the University of British Columbia, with a Bachelor of Science degree in Geology, in April, 1985.
2. I have been involved in mineral exploration in British Columbia, the Northwest Territories and the western United States since 1979.
3. I am an independant geologist, under contract to Placer Dome Inc. for the purpose of compiling this Assessment Report.
4. I have compiled the information presented in this report from data obtained by a Placer Dome Inc. field crew between the dates of July 11 and 23, 1992 and from other public and private information.

Respectfully submitted,  
Placer Dome Inc.



Carol I. Ditson, B.Sc.  
Geologist

Date: Dec 30, 1992

## 8.0 REFERENCES

Geology of the Uslika Lake Area; F. Ferri et al; GSC Open File 1992-11.

Lysander Gold Corporation; M.D. Bradley & S.J. Hoffman; An Assessment Report on the 1990 Reconnaissance Program of Geological Mapping Geochemical Survey on the Cat 13, 14, 15 Mineral Claims; February, 1991.

Lysander Gold Corporation; S.J. Hoffman & D. Perkins; Geology, Geochemistry, Geophysics and Drill Exploration Report on the Cat and Betty Mineral Claims; April, 1990.

Lysander Gold Corporation News Releases dated Sept. 4, Oct. 12, Nov. 14, 1990 and Jan. 23, Mar. 4, Apr. 3, Apr. 15, May 2, 1991.

The International Investor, Special Bulletin, May 8, 1991, pp. 3 and 4.

**Appendix 1**  
**Rock Sample Descriptions**

## ROCK SAMPLE DESCRIPTIONS

<u>Sample No.</u>	<u>Sample Description</u>
4951	Rusty weathered, weakly hornfelsed, aphanitic mafic volcanic with blebby and fracture controlled pyrite, locally up to 5%.
4952	Rusty weathered, grey carbonate-altered mafic volcanic with ankeritic veins and fragments of grey chalcedonic quartz veins. Trace disseminated pyrite in wallrock.
4953	Breccia of carbonate-altered mafic volcanic with creamy ankerite veins and grey chalcedonic quartz veins.
4954	Brown weathered, fine grained granodiorite with trace disseminated pyrite.
24826	Intense rust in carbonate-altered andesite tuff. Random calcite veinlets near major brecciated vein.
24827	Rusty zone, associated with hornblende monzonite dyke(?) contains 1% disseminated pyrite as 3 mm blebs.
24828	Rusty patch in carbonate-chlorite altered andesite with blebby, disseminated pyrite, locally up to 0.5% and 1 cm wide calcite veinlets. Sample taken adjacent to a megacrystic K-feldspar porphyry (syenite ?) dyke striking roughly north-south.
24829	Intense iron-carbonate altered andesite which is leached to a grey color is possibly a plagiocase porphyry. Contains up to 1% disseminated pyrite and spotty pyrite blebs.
24830	Gossanous green lapilli tuff with 1% disseminated pyrite concentrated in east-west trending rusty contact zone.
24831	Strange xenolithic monzonite(?) or felsic lehar(?) is plagiocase porphyritic and contains slight foliation or crenulation cleavage.

**Appendix II**  
**Geochemical Analytical Certificates**





# SOIL GEOCHEMICAL RESULTS

Project/Venture: V312  
 Area: CAT 94C3  
 Remarks:

Lab Project No.: D2507

Date Received: AUG 11, 1992  
 Date Completed: SEPT 2, 1992

Page 1 of 7  
 Attn: D SKETCHLEY  
 G LUSTIG  
 E KIMURA

Au - 10.0 g sample digested with Aqua Regia and determined by Graphite Furnace A.A. (D.L. 1 PPD)  
 ICP - 0.5 g sample digested with 4 ml Aqua Regia at 100 Deg. C for 2 hours.  
 N.B. The major oxide elements, Ba, Be, Cr, La and W are rarely dissolved completely with this acid dissolution method

SAMPLE No.	Au ppb	Ag ppm	Mo ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Cd ppm	Ni ppm	Co ppm	Mn ppm	Bi ppm	Cr ppm	V ppm	Ba ppm	W ppm	Be ppm	La ppm	Sr ppm	Tl %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
239N-20200E	3	0.6	2	56	11	79	6	8	<0.1	39	15	750	△	83	162	54	<5	0.4	8	24	0.13	2.24	0.29	6.18	1.32	0.08	0.02	0.15
239N-20250E	16	0.3	3	84	12	68	11	<5	<0.1	46	19	522	△	92	168	44	<5	0.4	7	22	0.10	2.57	0.25	6.77	1.50	0.06	0.02	0.15
239N-20300E	5	0.4	1	68	14	73	10	<5	<0.1	40	17	681	△	87	165	53	<5	0.4	7	18	0.09	2.47	0.23	6.24	1.41	0.07	0.02	0.12
239N-20350E	4	0.7	2	63	17	63	9	<5	<0.1	38	15	584	△	78	139	48	<5	0.4	5	18	0.04	2.73	0.20	5.77	1.49	0.07	0.01	0.12
239N-20400E	7	0.1	2	58	17	55	5	<5	<0.1	36	11	482	△	72	115	43	<5	0.3	7	25	0.05	2.51	0.23	4.67	1.19	0.08	0.02	0.12
239N-20450E	7	0.4	2	68	17	70	11	<5	<0.1	38	14	658	△	80	150	61	<5	0.4	8	26	0.06	2.49	0.22	5.80	1.22	0.08	0.02	0.16
239N-20500E	8	0.9	1	75	19	85	24	<5	<0.1	39	18	793	△	74	172	77	<5	0.4	6	27	0.02	3.27	0.16	6.86	1.54	0.06	0.01	0.15
239N-20550E	2	0.7	4	66	22	95	24	<5	<0.1	38	14	689	△	72	146	63	<5	0.4	6	18	0.03	2.19	0.18	5.96	1.06	0.07	0.01	0.14
239N-20600E	8	0.3	2	87	14	80	23	<5	<0.1	33	12	685	△	53	140	66	<5	0.4	7	12	0.01	2.10	0.08	6.27	0.71	0.05	0.01	0.15
239N-20600E*	4	0.4	1	85	8	78	20	<5	<0.1	33	12	660	△	53	134	64	<5	0.4	6	11	0.01	2.02	0.07	6.10	0.68	0.05	0.01	0.15
239N-20650E	6	0.5	<1	103	4	83	33	<5	<0.1	31	11	601	△	42	141	51	<5	0.4	6	11	<0.01	1.68	0.05	6.84	0.25	0.03	<0.01	0.14
239N-20700E	1	0.4	<1	55	<1	79	20	<5	<0.1	27	7	298	△	38	113	28	<5	0.2	1	7	0.02	1.39	0.03	6.15	0.26	0.02	<0.01	0.13
239N-20750E	5	0.4	<1	77	7	72	10	<5	<0.1	24	8	282	△	36	100	60	<5	0.3	4	11	0.01	2.24	0.08	5.05	0.38	0.03	<0.01	0.15
239N-20800E	3	0.5	<1	90	2	92	19	<5	<0.1	34	12	460	△	44	136	55	<5	0.3	4	8	0.02	2.15	0.05	6.60	0.43	0.03	<0.01	0.16
239N-20850E	3	0.4	2	57	7	34	<5	<5	0.3	10	3	124	△	21	66	59	<5	0.1	4	9	0.06	1.51	0.12	2.17	0.34	0.04	<0.01	0.05
239N-20900E	17	0.3	<1	72	6	94	<5	<5	<0.1	25	9	421	△	36	99	138	<5	0.3	3	29	0.01	2.34	0.28	4.84	0.56	0.03	<0.01	0.10
239N-20950E	3	0.4	<1	105	9	93	7	<5	<0.1	36	11	439	△	44	108	92	<5	0.4	2	19	0.02	3.30	0.10	5.79	0.72	0.03	<0.01	0.21
239N-21000E	7	0.3	<1	62	3	83	<5	<5	<0.1	22	8	1156	△	34	93	114	<5	0.3	2	22	<0.01	1.80	0.23	4.85	0.35	0.06	<0.01	0.24
239N-21050E	5	0.5	<1	69	7	65	8	<5	<0.1	22	9	414	△	36	95	66	<5	0.3	3	13	0.02	2.27	0.07	4.50	0.42	0.03	<0.01	0.10
239N-21050E*	11	0.5	<1	71	9	66	<5	<5	<0.1	22	9	425	△	35	96	64	<5	0.3	3	12	0.02	2.29	0.07	4.56	0.42	0.03	<0.01	0.10
239N-21100E	3	0.4	<1	54	3	79	<5	<5	<0.1	22	8	347	△	34	87	85	<5	0.3	4	15	0.02	2.06	0.11	4.46	0.40	0.05	<0.01	0.12
239N-21150E	19	0.4	2	91	10	135	<5	<5	<0.1	30	12	377	△	40	98	84	<5	0.4	3	13	0.03	3.33	0.09	5.32	0.57	0.04	<0.01	0.18
239N-21200E	11	0.4	<1	71	4	94	<5	<5	<0.1	27	12	498	△	38	100	113	<5	0.4	5	16	0.02	2.26	0.12	4.87	0.49	0.05	<0.01	0.14
239N-21250E	9	0.3	1	78	5	86	25	<5	<0.1	38	17	470	△	45	101	74	<5	0.4	4	37	0.03	2.70	0.21	4.95	0.83	0.04	<0.01	0.06
239N-21300E	2	0.2	2	82	8	92	15	<5	<0.1	38	19	1076	△	54	105	116	<5	0.5	4	39	0.06	2.69	0.24	5.02	0.82	0.07	<0.01	0.08
239N-21350E	2	0.6	2	111	8	104	9	<5	<0.1	42	20	686	△	48	110	102	<5	0.5	3	22	0.03	3.45	0.12	6.00	0.80	0.05	<0.01	0.08
239N-21400E	3	0.4	2	80	25	209	<5	<5	<0.1	37	21	1423	△	42	111	80	<5	0.5	2	35	0.03	2.81	0.42	5.83	0.74	0.05	<0.01	0.09
239N-21450E	66	0.8	1	107	12	146	<5	<5	0.1	46	35	3105	△	41	131	119	<5	1.0	3	30	0.08	3.36	0.45	5.90	0.69	0.08	<0.01	0.17
239N-21500E	8	0.7	<1	48	5	88	<5	<5	<0.1	26	10	388	△	36	98	80	<5	0.3	1	18	0.03	1.99	0.15	4.58	0.54	0.04	<0.01	0.08
239N-21500E*	4	0.6	1	47	3	87	<5	<5	<0.1	26	11	390	△	37	97	79	<5	0.3	1	17	0.03	1.96	0.15	4.55	0.54	0.04	<0.01	0.08
239N-21550E	2	0.2	<1	40	3	74	<5	<5	<0.1	27	8	583	△	36	90	89	<5	0.3	3	16	0.03	1.85	0.19	3.96	0.48	0.03	<0.01	0.07
239N-21600E	4	0.4	<1	47	4	75	7	<5	<0.1	24	10	258	△	38	117	65	<5	0.4	5	17	0.04	2.04	0.13	4.77	0.46	0.05	<0.01	0.09
239N-21650E	5	0.6	<1	59	6	83	<5	<5	<0.1	30	12	376	△	40	125	73	<5	0.4	4	21	0.03	2.56	0.38	5.26	0.69	0.04	<0.01	0.07
239N-21700E	2	0.5	<1	43	1	83	<5	<5	<0.1	26	10	304	△	42	121	82	<5	0.3	4	20	0.04	2.36	0.14	4.85	0.68	0.05	<0.01	0.06
239N-21750E	1	0.7	2	23	2	90	<5	<5	<0.1	16	6	226	△	32	92	86	<5	0.3	3	24	0.03	1.70	0.37	3.64	0.35	0.04	<0.01	0.07
239N-21800E	3	0.6	1	31	4	96	<5	<5	<0.1	21	13	1034	△	33	99	71	<5	0.3	2	31	0.02	2.07	0.96	4.33	0.57	0.03	0.01	0.07
239N-21850E	3	0.2	2	30	<1	56	<5	<5	<0.1	15	6	203	△	27	97	88	<5	0.2	3	24	0.04	1.51	0.27	3.62	0.35	0.04	<0.01	0.06
239N-21900E	1	0.4	1	43	<1	77	<5	<5	<0.1	20	11	866	△	33	91	88	<5	0.3	3	34	0.03	1.97	1.09	4.03	0.61	0.03	0.01	0.06
239N-21950E	2	0.6	4	60	2	93	12	<5	0.2	34	17	1248	△	54	85	62	<5	0.4	4	41	0.03	1.97	1.44	4.36	0.74	0.03	0.01	0.07
STD-SPK-P1	53	0.2	65	26	48	148	19	<5	0.4	35	6	576	△	117	38	177	<5	0.4	7	84	0.11	1.11	0.95	2.42	0.85	0.35	0.06	0.08

PLACER DOME RESEARCH CENTRE  
Geochemical Analysis

Project/Venture: V312  
Area: CAT 94C3  
Remarks:

Goal: D SKETCHLEY  
Lab Project No.: D2507

Date Received: AUG 11, 1992  
Date Completed: SEPT 2, 1992

Page 2 of 7  
Attn: D SKETCHLEY  
G LUSTIG  
E KIMURA

Au - 10.0 g sample digested with Aqua Regia and determined by Graphite Furnace A.A. (D.L. 1 PPB)

ICP - 0.5 g sample digested with 4 ml Aqua Regia at 100 Deg. C for 2 hours.

N.B. The major oxide elements, Ba, Be, Cr, La and W are rarely dissolved completely with this acid dissolution method

SAMPLE No.	Au ppb	Ag ppm	Mo ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Cd ppm	Ni ppm	Co ppm	Mn ppm	Bi ppm	Cr ppm	V ppm	Ba ppm	W ppm	Be ppm	La ppm	Sr ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
239N-22000E	<1	0.7	2	46	<1	110	<5	<5	0.6	29	16	2038	<2	46	76	65	<5	0.5	6	35	0.02	1.94	1.24	3.92	0.64	0.02	<0.01	0.06
239N-22050E	1	0.3	2	30	<1	95	<5	<5	<0.1	49	14	984	<2	63	105	62	<5	0.3	<1	20	0.06	2.41	0.72	4.61	0.98	0.02	<0.01	0.06
239N-22100E	1	0.5	4	75	1	58	<5	<5	<0.1	35	14	367	<2	40	104	94	<5	0.4	2	22	0.04	2.47	0.21	4.90	0.81	0.02	<0.01	0.07
239N-22150E	24	<0.1	2	86	<1	64	<5	<5	<0.1	70	16	789	<2	81	102	58	<5	0.5	5	34	0.06	2.03	1.20	4.24	1.05	0.02	0.02	0.07
239N-22200E	2	0.4	2	83	<1	70	<5	<5	<0.1	27	12	527	<2	37	152	47	<5	0.5	9	29	0.07	1.88	1.29	5.54	0.68	0.04	0.02	0.06
239N-22250E	1	0.4	2	35	<1	47	<5	<5	<0.1	15	6	238	<2	31	139	36	<5	0.3	3	11	0.06	2.01	0.17	4.90	0.40	0.03	<0.01	0.12
239N-22300E	5	0.5	2	36	2	114	<5	<5	<0.1	21	6	223	<2	33	125	59	<5	0.4	4	12	0.05	2.11	0.17	4.30	0.39	0.03	<0.01	0.08
239N-22350E	6	0.7	1	40	<1	87	<5	<5	<0.1	27	11	431	<2	41	132	120	<5	0.3	3	25	0.05	2.24	0.23	5.48	0.86	0.04	<0.01	0.13
239N-22400E	5	0.5	<1	30	<1	55	<5	<5	<0.1	13	6	455	<2	19	128	65	<5	0.3	3	16	0.04	1.14	0.24	3.96	0.29	0.05	<0.01	0.09
239N-22400E*	2	0.5	2	29	<1	53	<5	<5	<0.1	11	6	448	<2	18	123	65	<5	0.3	3	16	0.03	1.08	0.23	3.81	0.27	0.05	<0.01	0.09
239N-22450E	<1	0.3	<1	48	2	35	<5	<5	<0.1	10	4	171	<2	23	90	27	<5	0.3	5	17	0.03	0.84	0.33	3.13	0.21	0.04	<0.01	0.05
239N-22500E	2	0.1	2	22	1	22	<5	<5	<0.1	9	2	116	<2	19	138	33	<5	0.1	1	9	0.08	0.84	0.07	3.20	0.15	0.02	<0.01	0.02
239N-22550E	<1	<0.1	4	51	2	45	5	<5	<0.1	17	9	356	<2	26	179	55	<5	0.4	6	31	0.05	1.28	1.07	5.53	0.36	0.03	<0.01	0.03
239N-22600E	<1	0.2	2	100	1	48	<5	<5	<0.1	13	5	258	<2	22	130	60	<5	0.4	5	40	0.04	1.12	1.76	3.96	0.27	0.04	<0.01	0.05
239N-22650E	9	0.2	5	30	1	47	<5	<5	<0.1	11	4	199	<2	18	159	58	<5	0.3	3	27	0.06	0.84	0.89	4.26	0.21	0.05	<0.01	0.03
239N-22700E	1	0.3	5	62	1	52	<5	<5	<0.1	18	7	310	<2	21	274	59	<5	0.5	6	15	0.05	1.83	0.29	7.18	0.39	0.04	<0.01	0.18
243N-20200E	<1	0.4	<1	63	3	42	<5	<5	<0.1	26	8	172	<2	52	70	37	<5	0.3	3	22	0.02	1.26	0.32	3.27	0.54	0.04	<0.01	0.07
243N-20250E	41	0.1	<1	97	10	119	<5	<5	<0.1	16	10	973	<2	26	94	81	<5	0.8	8	31	0.02	1.71	0.93	4.54	0.71	0.07	<0.01	0.15
243N-20300E	5	<0.1	2	69	3	89	<5	<5	<0.1	51	17	504	<2	78	119	40	<5	0.6	4	29	0.05	2.23	0.65	4.91	1.25	0.05	0.01	0.09
243N-20300E*	15	<0.1	5	87	4	88	<5	<5	<0.1	48	15	500	<2	73	108	39	<5	0.5	4	27	0.04	2.19	0.59	4.81	1.17	0.04	<0.01	0.09
243N-20350E	1	0.2	1	78	2	71	<5	<5	<0.1	27	12	607	<2	47	120	45	<5	0.4	7	14	0.06	2.11	0.24	5.45	0.90	0.07	<0.01	0.20
243N-20400E	7	0.2	1	85	<1	96	<5	<5	<0.1	33	16	1227	<2	59	122	48	<5	0.4	3	23	0.05	1.99	0.37	5.05	1.11	0.06	<0.01	0.10
243N-20450E	4	0.2	<1	41	<1	91	<5	<5	<0.1	29	13	928	<2	57	120	79	<5	0.3	3	23	0.07	1.79	0.62	4.60	1.03	0.05	0.01	0.09
243N-20500E	1	0.3	<1	45	<1	52	<5	<5	<0.1	38	14	571	<2	78	134	37	<5	0.3	<1	11	0.09	1.93	0.26	5.98	1.07	0.09	<0.01	0.23
243N-20550E	<1	0.5	3	57	3	54	<5	<5	<0.1	25	10	387	<2	63	115	55	<5	0.5	5	18	0.06	2.18	0.18	4.63	0.74	0.06	<0.01	0.14
243N-20600E	3	0.6	<1	41	1	51	<5	<5	<0.1	24	9	297	<2	59	124	40	<5	0.3	4	14	0.07	2.05	0.17	5.01	0.71	0.06	0.01	0.13
243N-20650E	1	0.4	<1	73	<1	75	<5	<5	<0.1	35	16	928	<2	72	140	112	<5	0.4	3	22	0.02	2.21	0.68	5.84	0.87	0.05	0.01	0.09
243N-20700E	1	0.3	2	75	<1	70	<5	<5	<0.1	34	15	886	<2	75	141	58	<5	0.3	3	14	0.05	1.87	0.14	6.58	0.95	0.07	0.01	0.20
243N-20750E	12	0.5	3	71	1	86	<5	<5	<0.1	25	11	583	<2	39	122	52	<5	0.3	2	8	0.01	2.27	0.07	6.36	0.52	0.04	<0.01	0.22
STD-SPK-P1	59	0.3	63	27	49	149	19	<5	0.3	33	5	598	<2	110	37	166	<5	0.4	7	78	0.10	1.08	0.82	2.49	0.82	0.34	0.06	0.09
243N-20800E	4	0.5	1	64	3	88	<5	<5	<0.1	22	10	543	<2	37	100	79	<5	0.4	4	12	<0.01	2.25	0.13	4.97	0.56	0.05	<0.01	0.10
243N-20850E	3	0.7	<1	61	<1	60	<5	<5	<0.1	20	10	419	<2	39	98	36	<5	0.2	2	9	<0.01	1.53	0.09	4.97	0.48	0.02	<0.01	0.14
243N-20900E	7	0.5	2	59	<1	60	<5	<5	<0.1	28	10	347	<2	55	125	39	<5	0.3	1	10	0.03	2.27	0.12	5.98	0.83	0.04	<0.01	0.15
243N-20950E	5	0.4	3	83	2	83	<5	<5	<0.1	33	13	716	<2	62	131	62	<5	0.4	2	10	0.01	2.43	0.12	6.16	0.88	0.04	<0.01	0.19
243N-21000E	1	0.6	2	78	3	76	13	<5	<0.1	37	13	476	<2	76	145	49	<5	0.3	3	12	0.06	2.24	0.18	6.48	0.99	0.06	<0.01	0.12
243N-21050E	5	0.6	3	108	2	81	12	<5	<0.1	26	9	360	<2	39	108	65	<5	0.4	3	9	<0.01	2.41	0.06	6.10	0.44	0.02	<0.01	0.20
243N-21100E	6	0.4	1	86	<1	95	16	<5	<0.1	27	8	504	<2	36	113	48	<5	0.3	3	6	<0.01	2.11	0.03	6.70	0.36	0.02	<0.01	0.19
243N-21150E	4	0.6	1	71	3	89	<5	<5	<0.1	22	8	360	<2	34	95	56	<5	0.3	3	8	<0.01	2.32	0.04	5.21	0.42	0.03	<0.01	0.16
243N-21200E	2	0.2	2	87	<1	97	14	<5	<0.1	32	10	514	<2	41	133	53	<5	0.4	3	8	<0.01	2.17	0.03	7.27	0.37	0.02	<0.01	0.15
243N-21200E*	<1	0.3	2	89	<1	97	14	<5	<0.1	33	11	507	<2	42	133	54	<5	0.4	3	7	<0.01	2.17	0.02	7.27	0.37	0.02	<0.01	0.15

PLACER DOME RESEARCH CENTRE  
Geochemical Analysis

Project/Venture:

V312

Geol:

D SKETCHLEY

Date Received:

AUG 11, 1992

Page 3 of 7

Area:

CAT 94C3

Lab Project No.:

D:507

Date Completed:

SEPT 2, 1992

Attn: D SKETCHLEY

Remarks:

Au - 10.0 g sample digested with Aqua Regia and determined by Graphite Furnace A.A. (D.L. 1 PPB)

ICP - 0.5 g sample digested with 4 ml Aqua Regia at 100 Deg. C for 2 hours.

G LUSTIG

E KIMURA

N.B. The major oxide elements, Ba, Be, Cr, La and W are rarely dissolved completely with this acid dissolution method

SAMPLE No.	Au ppb	Ag ppm	Mo ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Cd ppm	Ni ppm	Co ppm	Mn ppm	Bi ppm	Cr ppm	V ppm	Ba ppm	W ppm	Be ppm	La ppm	Sr ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
243N-21250E	6	0.3	2	129	6	98	12	6	<0.1	38	14	477	<2	47	117	122	<5	0.5	3	17	0.02	3.37	0.08	6.17	0.60	0.03	<0.01	0.14
243N-21300E	5	0.4	1	81	8	109	6	<5	<0.1	27	10	347	<2	38	100	70	<5	0.3	3	10	0.02	2.41	0.07	5.10	0.48	0.02	<0.01	0.16
243N-21350E	5	0.2	<1	87	11	85	10	11	<0.1	32	11	347	<2	40	94	82	<5	0.3	<1	11	0.02	3.24	0.07	4.99	0.61	0.02	<0.01	0.12
243N-21400E	2	0.3	2	96	6	87	9	<5	<0.1	33	12	452	<2	42	115	63	<5	0.4	2	7	0.01	2.99	0.06	5.58	0.65	0.03	<0.01	0.18
243N-21450E	4	0.2	3	77	4	93	<5	<5	<0.1	29	10	359	<2	39	105	69	<5	0.3	2	9	0.02	2.42	0.06	5.52	0.55	0.02	<0.01	0.17
243N-21500E	4	0.4	<1	61	8	92	<5	<5	<0.1	36	11	389	<2	51	117	58	<5	0.4	2	10	0.04	2.73	0.07	5.59	0.68	0.04	<0.01	0.10
243N-21550E	8	0.7	2	77	7	96	10	<5	<0.1	29	12	305	<2	40	102	64	<5	0.4	2	11	0.02	2.69	0.09	5.46	0.49	0.03	<0.01	0.12
243N-21600E	13	<0.1	<1	75	6	80	7	<5	<0.1	28	11	321	2	41	120	64	<5	0.3	3	12	0.02	2.11	0.07	5.61	0.43	0.03	<0.01	0.09
243N-21650E	1	0.2	2	86	7	71	11	<5	<0.1	35	15	2498	<2	53	142	61	<5	0.5	3	38	0.02	2.21	1.24	4.74	0.55	0.03	<0.01	0.08
243N-21650E*	1	0.3	2	87	7	72	12	<5	<0.1	36	15	2525	<2	55	144	62	<5	0.5	3	39	0.02	2.23	1.27	4.73	0.58	0.02	0.01	0.08
243N-21700E	<1	0.4	<1	59	4	65	<5	<5	<0.1	21	7	141	<2	33	84	63	<5	0.3	3	15	0.02	1.73	0.05	3.96	0.36	0.02	<0.01	0.07
243N-21750E	3	0.2	<1	39	3	62	<5	<5	<0.1	20	7	126	<2	32	95	51	<5	0.2	2	10	0.03	1.60	0.05	4.21	0.34	0.03	<0.01	0.10
243N-21800E	2	0.2	<1	54	4	74	<5	<5	<0.1	25	10	253	<2	38	94	57	<5	0.4	4	13	0.02	1.93	0.07	4.79	0.40	0.04	<0.01	0.14
243N-21850E	3	0.2	2	59	10	118	10	6	<0.1	46	13	348	4	61	140	59	<5	0.4	3	19	0.07	3.37	0.09	6.49	1.00	0.03	<0.01	0.19
243N-21900E	<1	0.1	<1	39	10	126	7	5	<0.1	31	9	266	<2	44	110	67	<5	0.3	3	17	0.07	2.58	0.11	5.48	0.64	0.04	<0.01	0.21
243N-21950E	<1	0.2	<1	44	11	112	<5	<5	<0.1	39	10	271	2	54	123	57	<5	0.4	3	18	0.08	2.95	0.11	5.60	0.83	0.04	<0.01	0.14
243N-22000E	<1	0.2	2	32	5	148	<5	12	<0.1	36	9	293	<2	50	102	58	<5	0.4	3	22	0.07	2.12	0.36	4.83	0.76	0.03	<0.01	0.08
243N-22050E	<1	0.3	<1	38	9	91	<5	<5	0.1	36	12	655	<2	59	112	55	<5	0.6	5	30	0.03	2.58	0.77	4.62	0.73	0.03	<0.01	0.11
243N-22100E	1	0.2	<1	53	7	100	6	<5	0.6	36	14	1577	<2	61	94	62	<5	0.6	10	46	0.02	2.35	1.29	3.86	0.85	0.03	0.01	0.10
STD-SPK-P1	45	0.2	64	26	52	155	20	<5	0.3	36	6	547	<2	121	34	176	<5	0.5	7	86	0.11	1.12	0.93	2.38	0.87	0.38	0.07	0.09
243N-22150E	2	0.6	<1	42	<1	50	14	<5	0.7	18	6	760	<2	64	57	26	<5	0.4	3	62	0.02	0.89	3.27	1.55	0.37	0.01	<0.01	0.08
243N-22200E	<1	0.3	<1	39	4	71	<5	<5	0.3	22	7	161	<2	58	114	43	<5	0.2	4	32	0.10	1.25	0.98	3.45	0.43	0.03	0.01	0.04
243N-22250E	<1	0.4	<1	81	1	27	7	<5	0.6	10	4	559	<2	21	69	23	<5	0.3	2	58	0.02	0.58	3.99	1.46	0.16	0.02	0.01	0.07
243N-22300E	32	0.3	3	44	8	66	<5	<5	<0.1	19	8	254	<2	31	200	41	<5	0.4	4	12	0.09	2.26	0.19	6.30	0.51	0.04	<0.01	0.18
243N-22350E	18	0.8	<1	37	10	57	<5	<5	<0.1	16	6	202	<2	32	127	44	<5	0.4	5	11	0.06	2.64	0.12	5.03	0.42	0.03	<0.01	0.16
243N-22400E	18	0.4	<1	34	5	69	<5	<5	<0.1	19	9	732	<2	31	92	117	<5	0.3	3	17	0.04	1.76	0.27	3.73	0.61	0.06	<0.01	0.11
243N-22450E	3	<0.1	2	27	4	56	<5	<5	<0.1	15	6	232	<2	29	151	49	<5	0.2	3	20	0.05	1.40	0.68	4.03	0.43	0.02	<0.01	0.03
243N-22500E	2	0.3	2	388	9	82	10	<5	0.2	31	19	2723	<2	43	160	107	<5	1.1	21	34	0.03	1.99	1.30	5.43	0.56	0.06	0.01	0.13
243N-22550E	<1	0.6	<1	377	4	72	10	<5	0.3	31	14	1462	<2	50	129	65	<5	0.8	17	42	0.03	1.46	2.16	4.24	0.56	0.04	0.01	0.12
243N-22550E*	NSS	0.5	1	379	5	73	13	<5	0.3	33	15	1470	<2	53	130	68	<5	0.8	19	45	0.04	1.55	2.20	4.29	0.60	0.04	0.01	0.12
243N-22600E	1	0.2	4	83	7	71	5	<5	0.3	19	8	231	<2	30	183	76	<5	0.5	8	96	0.05	1.13	0.91	4.66	0.32	0.04	<0.01	0.16
243N-22650E	1	<0.1	4	39	7	53	7	<5	0.3	23	8	190	<2	30	179	70	<5	0.4	6	19	0.05	1.31	0.28	4.78	0.37	0.04	<0.01	0.04
243N-22700E	1	0.1	6	105	4	74	<5	<5	0.2	33	14	697	2	35	197	62	<5	0.6	10	32	0.07	1.19	1.32	5.33	0.47	0.05	0.01	0.07
247N-20200E	9	<0.1	3	67	6	67	<5	<5	0.1	15	7	305	<2	24	97	77	<5	0.4	6	27	0.03	1.53	0.34	3.67	0.45	0.04	<0.01	0.09
247N-20250E	3	<0.1	4	65	4	46	<5	<5	<0.1	16	7	222	<2	23	91	48	<5	0.3	4	12	0.06	1.46	0.10	3.30	0.45	0.03	<0.01	0.06
247N-20300E	4	0.2	2	49	4	53	<5	<5	0.1	15	10	876	<2	25	91	70	<5	0.4	5	25	0.02	1.43	0.40	3.24	0.46	0.03	<0.01	0.09
247N-20350E	4	0.2	5	85	5	64	<5	<5	<0.1	20	9	334	<2	33	101	89	<5	0.4	6	24	0.06	1.68	0.47	4.16	0.65	0.04	<0.01	0.13
247N-20400E	5	0.2	4	67	5	77	<5	<5	<0.1	25	10	770	<2	45	104	72	<5	0.4	6	27	0.06	1.76	0.50	4.05	0.73	0.04	0.01	0.12
247N-20450E	8	<0.1	2	65	10	62	<5	<5	<0.1	27	11	548	4	46	111	68	<5	0.4	5	28	0.05	1.89	0.58	4.15	0.84	0.04	0.01	0.09
247N-20450E*	15	<0.1	4	65	10	63	<5	<5	<0.1	26	11	542	<2	44	110	66	<5	0.4	5	26	0.05	1.86	0.57	4.10	0.83	0.04	0.01	0.09

PLACER DOME RESEARCH CENTRE  
Geochemical Analysis

Project/Venture: V312  
Area: CAT 94C3  
Remarks:

Geol: D SKETCHLEY  
Lab Project No.: D2507

Date Received: AUG 11, 1992  
Date Completed: SEPT 2, 1992

Page 4 of 7  
Attn: D SKETCHLEY  
G LUSTIG  
E KIMURA

Au - 10.0 g sample digested with Aqua Regia and determined by Graphite Furnace A.A. (D.L. 1 PPB)

ICP - 0.5 g sample digested with 4 ml Aqua Regia at 100 Deg. C for 2 hours.

N.B. The major oxide elements, Ba, Be, Cr, La and W are rarely dissolved completely with this acid dissolution method

SAMPLE No.	Au ppb	Ag ppm	Mo ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Cd ppm	Ni ppm	Co ppm	Mn ppm	Bi ppm	Cr ppm	V ppm	Ba ppm	W ppm	Be ppm	La ppm	Sr ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
247N-20500E	4	0.1	1	52	3	59	<5	<5	<0.1	23	13	920	<5	43	101	81	<5	0.3	4	24	0.05	1.60	0.48	3.65	0.63	0.03	0.01	0.07
247N-20550E	74	0.1	1	73	15	59	6	<5	<0.1	23	9	268	<5	43	101	65	<5	0.5	4	20	0.03	1.84	0.33	4.42	0.47	0.04	0.01	0.09
247N-20600E	18	<0.1	1	83	31	192	<5	<5	0.1	15	12	1760	<5	21	123	96	<5	0.5	13	30	0.04	1.78	1.02	4.52	0.63	0.04	0.01	0.22
247N-20650E	4	0.4	<1	71	11	53	<5	<5	<0.1	17	7	277	<5	30	99	39	<5	0.3	6	15	0.05	2.51	0.23	4.07	0.53	0.04	<0.01	0.16
247N-20700E	5	0.3	2	75	12	67	<5	<5	<0.1	19	9	391	<5	36	101	47	<5	0.4	6	14	0.05	2.71	0.19	4.23	0.55	0.04	0.01	0.16
247N-20750E	1	0.3	<1	87	12	80	<5	<5	<0.1	17	9	506	<5	26	145	48	<5	0.4	9	16	0.05	2.49	0.35	5.32	0.63	0.05	0.01	0.25
247N-20800E	13	0.4	<1	64	3	103	6	<5	<0.1	28	16	2018	<5	62	126	226	<5	0.5	7	36	0.01	2.15	0.89	5.17	0.71	0.05	0.01	0.15
247N-20850E	3	0.4	<1	81	3	71	<5	<5	<0.1	32	14	859	<5	64	121	127	<5	0.4	10	34	0.04	1.77	0.66	5.14	0.84	0.06	0.01	0.12
247N-20900E	12	0.5	1	77	7	72	<5	<5	<0.1	30	11	466	<5	51	113	59	<5	0.4	6	15	0.03	2.69	0.21	5.28	0.74	0.04	<0.01	0.17
STD-SPK-P1	45	0.4	61	27	49	151	18	<5	0.3	34	7	597	<5	110	36	165	<5	0.4	8	80	0.10	1.22	0.86	2.43	0.83	0.32	0.07	0.01
247N-20950E	10	0.3	<1	76	3	80	<5	<5	<0.1	33	15	655	<5	55	149	56	<5	0.6	10	16	0.05	2.14	0.11	6.20	0.74	0.03	<0.01	0.13
247N-21000E	7	0.5	<1	78	2	77	<5	<5	<0.1	30	11	399	<5	57	140	44	<5	0.4	5	13	0.04	2.87	0.11	5.62	0.79	0.04	<0.01	0.10
247N-21050E	7	0.3	<1	69	2	73	<5	<5	<0.1	25	14	1499	<5	47	139	80	<5	0.5	4	22	0.02	2.07	0.26	5.95	0.48	0.03	<0.01	0.12
247N-21100E	1	0.2	<1	67	<1	64	<5	<5	<0.1	24	9	438	<5	44	126	43	<5	0.3	3	13	0.04	2.16	0.15	5.94	0.84	0.03	<0.01	0.23
247N-21150E	1	0.5	1	93	7	81	<5	<5	<0.1	28	12	454	<5	43	142	48	<5	0.5	8	14	0.06	2.91	0.22	6.18	0.78	0.04	<0.01	0.22
247N-21200E	1	0.3	1	82	7	77	<5	<5	<0.1	22	9	413	<5	31	146	48	<5	0.6	8	14	0.04	2.79	0.16	6.38	0.54	0.04	<0.01	0.20
247N-21250E	1	0.4	<1	69	2	71	<5	<5	<0.1	28	10	376	<5	53	164	51	<5	0.4	6	13	0.04	2.48	0.12	7.42	0.58	0.03	<0.01	0.21
247N-21300E	1	0.4	<1	56	<1	75	<5	<5	<0.1	34	11	454	<5	64	159	61	<5	0.3	5	18	0.07	2.11	0.20	7.08	0.90	0.07	0.01	0.32
247N-21350E	2	0.4	2	63	2	74	<5	<5	<0.1	26	11	464	<5	51	134	47	<5	0.3	5	12	0.04	2.32	0.12	6.26	0.59	0.05	<0.01	0.17
247N-21350E*	2	0.4	<1	61	<1	72	<5	<5	<0.1	25	10	456	<5	50	129	48	<5	0.3	5	12	0.04	2.27	0.11	6.09	0.57	0.04	<0.01	0.16
247N-21400E	1	0.4	1	64	2	71	6	<5	<0.1	32	13	441	<5	57	153	46	<5	0.4	7	14	0.06	2.22	0.16	6.51	0.75	0.04	<0.01	0.22
247N-21450E	1	0.3	2	49	2	50	<5	<5	<0.1	18	7	226	<5	37	121	36	<5	0.2	3	9	0.02	1.97	0.07	4.98	0.37	0.03	<0.01	0.13
247N-21500E	2	0.4	2	87	<1	72	<5	5	<0.1	24	10	372	<5	36	113	57	<5	0.3	3	10	0.02	2.43	0.08	5.52	0.48	0.03	<0.01	0.16
247N-21550E	3	0.2	4	124	5	82	6	<5	<0.1	38	17	507	<5	47	126	94	<5	0.5	7	16	0.02	2.93	0.18	5.91	0.67	0.04	<0.01	0.13
247N-21600E	5	0.4	3	90	<1	77	7	5	<0.1	31	12	450	<5	45	137	59	<5	0.3	5	12	0.03	2.13	0.11	5.98	0.51	0.04	<0.01	0.15
247N-21650E	2	0.8	3	98	6	86	5	<5	<0.1	39	16	977	<5	69	149	176	<5	0.6	11	38	0.02	2.72	1.10	5.30	0.77	0.05	<0.01	0.08
247N-21700E	3	0.4	2	89	3	67	7	<5	<0.1	23	10	337	<5	33	108	61	<5	0.3	4	11	0.01	2.26	0.07	4.99	0.38	0.04	<0.01	0.12
247N-21750E	3	0.5	2	93	1	88	11	<5	<0.1	34	12	371	<5	46	126	88	<5	0.4	5	12	0.02	2.91	0.11	6.64	0.69	0.06	<0.01	0.11
247N-21800E	1	0.7	3	72	3	89	6	<5	<0.1	32	11	367	<5	46	117	64	<5	0.3	4	15	0.03	2.69	0.15	6.00	0.67	0.04	<0.01	0.23
247N-21800E*	1	0.6	1	75	3	93	7	<5	<0.1	33	10	368	<5	47	119	66	<5	0.3	5	15	0.03	2.77	0.15	6.19	0.69	0.04	<0.01	0.23
247N-21850E	<1	0.6	2	54	4	71	<5	<5	<0.1	55	19	431	<5	83	129	81	<5	0.7	7	39	0.10	3.64	0.63	4.92	1.27	0.02	0.01	0.05
247N-21900E	1	0.7	<1	43	2	71	<5	<5	<0.1	37	10	397	<5	75	143	58	<5	0.3	5	14	0.10	3.17	0.21	5.77	0.92	0.03	<0.01	0.13
247N-21950E	1	0.5	<1	68	9	99	<5	<5	0.1	65	18	541	<5	97	154	70	<5	0.8	11	25	0.13	3.99	0.28	6.14	1.48	0.03	<0.01	0.12
247N-22000E	<1	0.6	<1	61	2	83	<5	<5	<0.1	30	12	390	<5	51	132	57	<5	0.4	7	16	0.03	2.46	0.15	6.07	0.55	0.04	<0.01	0.08
247N-22050E	2	0.3	1	87	7	99	<5	<5	<0.1	81	28	833	<5	106	162	114	<5	0.7	7	44	0.12	4.63	0.45	6.21	1.99	0.03	0.01	0.08
247N-22100E	1	0.9	<1	31	5	126	<5	<5	<0.1	23	12	650	<5	62	148	120	<5	0.5	6	23	0.12	3.30	0.29	6.37	0.87	0.06	0.01	0.20
247N-22150E	1	0.4	<1	116	5	66	<5	<5	<0.1	84	28	399	<5	106	149	62	<5	0.5	6	36	0.07	4.16	0.46	6.01	1.22	0.03	<0.01	0.07
247N-22200E	<1	0.5	<1	62	12	132	<5	<5	<0.1	97	31	467	3	76	201	29	<5	0.5	3	48	0.23	6.63	0.56	6.93	1.22	0.03	0.04	0.09
247N-22250E	<1	0.4	<1	80	<1	121	<5	<5	<0.1	135	37	840	<5	185	310	24	<5	0.7	5	32	0.52	4.90	0.83	8.66	2.49	0.05	0.02	0.09
247N-22250E*	1	0.3	<1	79	<1	121	<5	<5	<0.1	133	35	836	<5	186	309	22	<5	0.6	5	29	0.49	4.84	0.78	8.30	2.34	0.04	0.02	0.08

**PLACER DOME RESEARCH CENTRE**  
**Geochemical Analysis**

Project/Venture: V312  
Area: CAT 94C3  
Remarks:

Geol: D SKETCHLEY  
Lab Project No.: D2507

Date Received: AUG 11, 1992  
Date Completed: SEPT 2, 1992

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Attn: D SKETCHLEY  
G LUSTIG  
E KIMURA

Au - 10.0 g sample digested with Aqua Regia and determined by Graphite Furnace A.A. (D.L 1 PPB)  
ICP - 0.5 g sample digested with 4 ml Aqua Regia at 100 Deg. C for 2 hours.

N.B. The major oxide elements, Ba, Be, Cr, La and W are rarely dissolved completely with this acid dissolution method

SAMPLE No.	Au ppb	Ag ppm	Mo ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Cd ppm	Ni ppm	Co ppm	Mn ppm	Bi ppm	Cr ppm	V ppm	Ba ppm	W ppm	Be ppm	La ppm	Sr ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
247N-22300E	3	0.1	2	48	9	78	5	16	0.3	40	14	313	<2	55	118	78	△	0.8	18	19	0.07	2.90	0.12	4.65	0.66	0.03	0.01	0.08
247N-22350E	2	<0.1	4	74	<1	86	<5	<5	<0.1	81	18	560	<2	93	155	93	△	0.5	6	17	0.17	4.62	0.31	8.15	1.61	0.02	0.01	0.10
247N-22400E	1	<0.1	4	58	1	100	<5	<5	<0.1	59	14	502	<2	75	138	76	△	0.5	7	16	0.15	3.78	0.22	6.03	1.34	0.04	0.01	0.10
247N-22450E	1	0.6	<1	57	4	103	<5	<5	<0.1	54	13	505	<2	68	140	70	△	0.4	6	15	0.16	3.50	0.29	5.54	1.18	0.04	0.01	0.12
247N-22500E	26	0.1	2	59	2	67	<5	<5	<0.1	30	10	532	<2	38	107	79	△	0.4	7	17	0.08	2.32	0.21	4.05	0.69	0.04	0.01	0.06
247N-22550E	2	0.2	3	170	2	79	<5	<5	<0.1	38	13	629	<2	41	107	103	△	0.4	8	39	0.06	2.80	0.59	4.46	1.14	0.05	0.02	0.08
251N-18200E	2	0.2	2	54	5	52	<5	7	<0.1	11	5	269	<2	17	64	44	△	0.2	8	11	0.05	1.82	0.11	2.66	0.40	0.04	<0.01	0.05
251N-18300E	1	0.1	1	38	2	36	<5	<5	<0.1	6	3	150	<2	14	56	30	△	0.1	6	10	0.02	1.22	0.09	2.55	0.23	0.03	<0.01	0.12
251N-18400E	2	0.5	3	72	6	63	<5	<5	<0.1	16	6	302	<2	19	124	56	△	0.3	10	11	0.04	2.41	0.17	4.81	0.50	0.04	<0.01	0.15
251N-18400E*	2	0.4	2	71	8	62	<5	<5	<0.1	15	6	296	<2	18	122	54	△	0.3	9	11	0.04	2.37	0.16	4.80	0.49	0.04	0.01	0.15
251N-18500E	2	0.1	4	88	10	80	<5	7	0.1	23	13	456	<2	25	155	78	△	0.9	18	17	0.04	2.43	0.16	5.80	0.52	0.04	<0.01	0.19
251N-18600E	2	0.2	4	46	5	45	<5	<5	<0.1	11	5	201	<2	18	95	39	△	0.4	8	12	0.04	2.07	0.14	3.26	0.32	0.04	<0.01	0.09
251N-18700E	2	0.2	4	69	4	59	<5	<5	<0.1	19	6	363	3	23	120	61	△	0.4	7	21	0.06	1.78	0.15	3.81	0.32	0.06	<0.01	0.06
251N-18800E	1	0.3	4	69	8	65	<5	<5	<0.1	13	6	380	<2	19	92	119	△	0.5	8	34	0.05	2.12	0.24	3.42	0.34	0.06	<0.01	0.08
251N-18900E	2	0.4	2	61	9	50	<5	<5	<0.1	10	5	209	<2	18	47	49	△	0.3	6	13	0.03	1.94	0.13	2.38	0.38	0.04	<0.01	0.08
251N-19000E	3	0.4	<1	42	6	44	<5	<5	<0.1	11	5	222	<2	18	67	37	△	0.2	7	11	0.03	1.71	0.12	2.87	0.34	0.04	<0.01	0.07
251N-19100E	2	0.2	3	69	5	58	<5	<5	<0.1	15	6	257	<2	19	121	46	△	0.3	8	12	0.06	1.85	0.21	4.92	0.40	0.04	<0.01	0.21
251N-19200E	1	0.1	2	72	9	54	<5	<5	<0.1	14	5	228	<2	20	87	50	△	0.4	8	12	0.06	2.56	0.18	3.69	0.40	0.05	<0.01	0.12
251N-19300E	1	0.4	2	62	7	52	<5	<5	<0.1	13	6	228	2	19	142	42	△	0.4	8	12	0.06	2.36	0.23	4.58	0.35	0.04	0.01	0.25
STD-SPK-P1	39	0.4	65	28	53	151	19	<5	0.3	36	6	583	<2	115	36	182	△	0.5	9	89	0.12	1.24	0.95	2.38	0.89	0.37	0.07	0.09
251N-19400E	1	0.3	<1	41	5	41	<5	<5	0.1	13	6	205	<2	17	159	46	△	0.5	9	11	0.05	1.29	0.11	5.06	0.22	0.03	<0.01	0.22
251N-19500E	53	0.2	<1	87	3	49	<5	<5	<0.1	13	8	360	<2	15	136	59	△	0.4	8	12	0.03	1.40	0.23	4.37	0.35	0.03	<0.01	0.17
251N-19600E	1	0.2	<1	45	7	33	<5	<5	<0.1	11	4	162	<2	15	155	30	△	0.4	6	6	0.04	2.26	0.08	4.84	0.19	0.02	<0.01	0.17
251N-19700E	2	0.1	2	64	6	45	<5	<5	<0.1	12	5	234	<2	16	121	44	△	0.4	6	8	0.05	2.03	0.13	4.46	0.35	0.03	<0.01	0.14
251N-19800E	3	0.1	2	92	7	92	<5	<5	<0.1	15	12	1302	<2	18	104	195	△	0.8	10	59	0.02	2.70	0.69	4.11	0.48	0.06	<0.01	0.18
251N-19900E	1	0.3	4	67	6	56	<5	<5	<0.1	16	8	281	<2	18	170	42	△	0.4	8	13	0.07	1.73	0.13	4.73	0.42	0.04	<0.01	0.13
251N-20000E	6	0.3	2	46	8	45	<5	<5	0.2	10	6	235	<2	15	72	73	△	0.3	8	28	0.04	1.30	0.37	2.27	0.45	0.03	<0.01	0.05
251N-20100E	4	0.3	2	55	7	40	<5	<5	0.2	9	5	202	<2	14	70	41	△	0.3	7	20	0.03	1.39	0.34	2.31	0.39	0.03	<0.01	0.09
251N-20200E	6	0.2	<1	22	7	27	<5	<5	0.4	4	2	82	<2	13	36	36	△	0.1	5	22	0.02	0.73	0.26	1.20	0.12	0.03	<0.01	0.04
251N-20200E*	<1	0.2	2	23	6	28	<5	<5	0.3	4	2	77	<2	13	36	37	△	0.1	5	23	0.02	0.74	0.27	1.19	0.12	0.03	<0.01	0.04
251N-20250E	28	0.4	1	50	9	44	12	11	1.0	14	10	218	<2	22	55	55	△	0.8	17	24	0.03	0.94	0.26	1.64	0.32	0.04	<0.01	0.05
251N-20300E	3	0.3	1	57	5	52	<5	<5	0.2	11	6	261	<2	17	71	62	△	0.2	5	18	0.06	1.33	0.31	2.47	0.45	0.04	<0.01	0.06
251N-20350E	4	0.1	<1	54	4	45	<5	<5	0.2	9	6	307	<2	15	61	49	△	0.3	8	30	0.03	1.09	0.57	2.33	0.41	0.04	0.01	0.11
251N-20400E	12	0.4	<1	42	6	41	<5	6	0.3	8	5	203	<2	16	48	48	△	0.2	9	20	0.04	1.09	0.47	1.77	0.37	0.03	0.01	0.13
251N-20450E	2	0.4	<1	50	6	54	<5	<5	0.5	7	5	203	<2	15	33	83	△	0.3	5	50	0.02	1.21	0.73	1.62	0.26	0.05	<0.01	0.08
251N-20500E	3	0.5	1	30	6	41	<5	5	0.5	5	2	84	<2	14	25	52	△	0.1	4	33	0.02	0.96	0.55	1.08	0.16	0.05	<0.01	0.07
251N-20550E	5	0.5	3	58	11	45	<5	6	0.2	12	6	242	3	18	81	46	△	0.3	8	16	0.06	1.88	0.22	3.05	0.42	0.04	<0.01	0.12
251N-20600E	1	0.5	2	122	15	70	<5	<5	<0.1	19	8	366	3	24	139	56	△	0.4	7	13	0.08	2.83	0.10	5.30	0.53	0.08	<0.01	0.14
251N-20650E	77	0.3	<1	26	9	26	<5	<5	0.3	5	3	112	<2	14	44	35	△	0.1	7	18	0.04	1.18	0.11	1.56	0.17	0.04	<0.01	0.05
251N-20650E*	16	0.4	<1	25	8	24	<5	<5	0.3	5	3	109	<2	14	43	34	△	0.1	7	18	0.03	1.15	0.10	1.51	0.16	0.04	<0.01	0.05

PLACER DOME RESEARCH CENTRE  
Geochemical Analysis

Project/Venture: V312  
Area: CAT 94C3

Geol: D SKETCHLEY  
Lab Project No: D2507

Date Received: AUG 11, 1992  
Date Completed: SEPT 2, 1992

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Attn: D SKETCHLEY  
G LUSTIG  
E KIMURA

Remarks:

Au - 10.0 g sample digested with Aqua Regia and determined by Graphite Furnace A.A. (D.L 1 PPB)

ICP - 0.5 g sample digested with 4 ml Aqua Regia at 100 Deg. C for 2 hours.

N.B. The major oxide elements, Ba, Be, Cr, La and W are rarely dissolved completely with this acid dissolution method

SAMPLE No.	Au ppb	Ag ppm	Mo ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Cd ppm	Ni ppm	Co ppm	Mn ppm	Bi ppm	Cr ppm	V ppm	Ba ppm	W ppm	Be ppm	La ppm	Sr ppm	Tl %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
251N-20700E	2	0.4	2	27	2	30	<5	<5	<0.1	1	2	130	<2	12	39	60	<5	0.2	2	26	0.02	1.26	0.07	1.81	0.15	0.01	<0.01	0.05
251N-20750E	3	0.7	<1	141	10	78	<5	<5	<0.1	18	7	386	<2	23	108	149	<5	0.7	7	30	0.03	3.05	0.17	4.82	0.29	0.08	<0.01	0.13
251N-20800E	3	<0.1	1	41	3	40	<5	<5	<0.1	10	4	187	<2	24	235	52	<5	0.2	<1	13	0.04	1.38	0.14	5.55	0.23	<0.01	<0.01	0.05
251N-20850E	1	<0.1	<1	55	4	57	<5	<5	<0.1	16	6	228	<2	26	124	49	<5	0.2	5	15	0.10	1.67	0.11	4.91	0.35	0.04	<0.01	0.12
251N-20900E	2	<0.1	1	94	6	66	<5	<5	<0.1	19	8	296	3	27	125	46	<5	0.4	4	11	0.06	2.65	0.14	5.28	0.51	0.05	<0.01	0.20
251N-20950E	2	<0.1	<1	35	8	41	<5	<5	<0.1	14	4	188	3	24	115	31	<5	0.2	5	10	0.05	1.96	0.11	4.51	0.27	0.03	<0.01	0.18
251N-21000E	2	<0.1	1	32	8	39	<5	<5	<0.1	12	3	137	6	22	146	43	<5	0.3	6	12	0.05	1.81	0.08	5.08	0.16	0.03	<0.01	0.16
251N-21050E	2	0.1	2	74	5	59	<5	<5	<0.1	18	7	280	4	29	179	53	<5	0.3	7	15	0.08	2.12	0.25	6.15	0.43	0.04	<0.01	0.16
251N-21100E	2	1.6	<1	105	8	47	<5	<5	0.1	11	8	189	<2	32	83	81	<5	1.3	36	48	0.02	2.47	0.64	3.71	0.20	0.03	<0.01	0.13
251N-21100E*	NSS	1.6	<1	104	8	46	<5	<5	0.1	11	8	183	<2	32	80	80	<5	1.3	37	49	0.02	2.43	0.64	3.58	0.19	0.03	<0.01	0.12
251N-21150E	8	0.8	<1	125	9	51	<5	<5	0.4	13	6	373	<2	25	77	67	<5	1.1	16	29	0.01	1.94	0.31	2.69	0.35	0.03	<0.01	0.11
251N-21200E	2	0.3	1	92	6	85	<5	6	<0.1	20	10	457	5	27	101	122	<5	0.8	7	26	0.04	2.26	0.31	4.17	0.56	0.05	<0.01	0.12
251N-21250E	2	0.3	1	70	7	59	<5	<5	0.3	16	9	576	4	25	92	77	<5	0.5	9	20	0.05	1.43	0.25	3.07	0.53	0.04	<0.01	0.09
251N-21300E	4	0.1	2	72	3	57	<5	<5	0.1	16	7	627	3	25	92	73	<5	0.4	7	27	0.03	1.64	0.60	3.44	0.55	0.04	<0.01	0.12
251N-21350E	<1	0.5	<1	65	<1	62	9	5	0.6	6	5	717	<2	22	34	90	<5	0.3	5	92	<0.01	0.65	3.11	1.17	0.30	0.02	<0.01	0.13
251N-21400E	2	0.2	1	97	6	48	<5	<5	0.3	11	6	347	<2	25	100	96	<5	0.5	7	29	0.03	1.27	0.49	3.32	0.16	0.03	<0.01	0.05
251N-21450E	6	0.4	<1	106	9	73	<5	<5	<0.1	20	9	329	7	32	112	98	<5	0.9	16	32	0.03	2.79	0.83	4.87	0.54	0.03	<0.01	0.12
251N-21500E	23	0.2	<1	51	9	53	<5	<5	<0.1	18	6	348	8	29	147	43	<5	0.3	3	13	0.05	1.82	0.17	5.10	0.38	0.03	<0.01	0.16
251N-21550E	100	0.3	<1	97	5	68	<5	<5	0.2	17	9	1010	2	28	107	98	<5	0.5	9	28	0.03	1.67	0.73	3.96	0.54	0.04	0.01	0.11
251N-21550E*	2	0.3	<1	98	3	67	<5	<5	0.2	17	9	1033	4	28	105	98	<5	0.5	9	28	0.03	1.67	0.73	3.93	0.54	0.04	0.01	0.11
251N-21600E	41	<0.1	<1	132	9	92	<5	8	0.4	22	14	520	<2	30	138	110	<5	1.0	20	33	0.03	2.00	0.62	4.80	0.58	0.05	0.01	0.11
251N-21650E	6	0.6	<1	221	10	109	<5	<5	0.3	22	14	2771	2	32	119	129	<5	1.3	19	31	0.03	2.42	0.94	5.32	0.59	0.05	0.01	0.14
251N-21700E	12	0.3	<1	149	7	73	8	<5	<0.1	18	11	413	3	32	108	82	<5	0.7	12	31	0.02	1.94	0.60	4.20	0.56	0.04	<0.01	0.13
251N-21850E	1	0.3	2	76	3	95	<5	<5	0.3	14	11	2097	<2	31	99	114	<5	0.4	11	43	0.03	1.27	1.70	3.57	0.40	0.05	0.01	0.19
251N-21900E	2	0.8	<1	234	10	82	<5	<5	<0.1	17	9	666	<2	32	85	210	<5	1.1	19	57	0.02	3.06	1.74	4.45	0.48	0.06	0.01	0.21
251N-21950E	<1	0.4	5	270	10	106	<5	<5	1.0	16	14	9249	2	23	157	255	<5	1.7	28	58	0.01	2.43	1.70	4.99	0.28	0.05	<0.01	0.26
251N-22000E	3	0.5	<1	108	7	71	<5	<5	<0.1	10	6	481	<2	16	108	81	<5	0.7	12	25	0.03	1.66	0.61	3.79	0.26	0.04	<0.01	0.08
251N-22050E	1	0.6	<1	168	12	116	6	<5	0.3	17	11	1823	2	49	119	114	<5	0.8	22	30	0.03	2.15	0.99	4.28	0.52	0.05	0.01	0.15
251N-22100E	<1	0.3	<1	39	6	68	<5	<5	<0.1	21	7	416	4	36	148	72	<5	0.2	4	15	0.03	1.92	0.21	4.76	0.44	0.05	0.01	0.10
STD-SPK-P1	49	0.3	60	27	51	148	19	<5	0.3	34	5	598	<2	110	42	165	<5	0.5	8	84	0.11	1.17	0.90	2.42	0.83	0.34	0.06	0.08
251N-22150E	2	0.4	<1	36	3	93	<5	7	<0.1	22	9	714	<2	33	158	110	<5	0.4	4	29	0.03	1.81	0.48	5.07	0.51	0.10	<0.01	0.13
251N-22250E	1	0.1	1	41	5	93	<5	<5	<0.1	24	13	478	<2	36	159	87	<5	0.6	9	21	0.03	2.18	0.39	5.08	0.59	0.03	<0.01	0.08
251N-22300E	<1	<0.1	<1	31	7	89	<5	<5	<0.1	28	9	305	<2	47	175	61	<5	0.4	6	16	0.06	2.92	0.17	5.99	0.67	0.03	<0.01	0.28
251N-22350E	1	0.3	<1	38	3	66	<5	<5	<0.1	27	8	294	<2	42	187	44	<5	0.4	3	15	0.07	2.77	0.19	5.80	0.50	0.03	<0.01	0.14
251N-22400E	3	0.4	3	53	3	76	<5	<5	<0.1	39	13	346	<2	53	200	55	<5	0.4	3	17	0.04	3.10	0.25	6.00	0.82	0.04	<0.01	0.11
251N-22450E	4	0.1	<1	66	3	57	<5	<5	<0.1	31	13	589	<2	49	181	100	<5	0.5	4	19	0.05	2.51	0.30	5.88	0.61	0.04	<0.01	0.08
251N-22500E	13	0.4	2	47	6	74	10	<5	<0.1	33	11	371	<2	49	202	69	<5	0.5	4	18	0.03	2.97	0.23	6.56	0.67	0.05	<0.01	0.09
251N-22550E	<1	0.3	<1	41	6	102	<5	<5	<0.1	28	11	200	<2	42	163	57	<5	0.6	5	14	0.08	3.20	0.30	5.48	0.56	0.03	<0.01	0.25
251N-22600E	1	0.3	<1	79	<1	65	<5	<5	<0.1	91	19	439	<2	84	206	64	<5	0.4	3	36	0.24	3.93	0.63	7.07	1.77	0.03	0.01	0.14
251N-22600E*	5	0.3	<1	83	<1	68	<5	<5	<0.1	90	20	440	2	87	208	67	<5	0.4	3	38	0.25	4.13	0.67	7.10	1.88	0.03	0.01	0.14

**PLACER DOME RESEARCH CENTRE**  
**Geochemical Analysis**

Project/Venture: V312  
 Area: CAT 94C3  
 Remarks:

Geol: D SKETCHLEY  
 Lab Project No.: D2507

Date Received: AUG 11, 1992  
 Date Completed: SEPT 2, 1992

Page 7 of 7  
 Attn: D SKETCHLEY  
 G LUSTIG  
 E KIMURA

Au - 10.0 g sample digested with Aqua Regia and determined by Graphite Furnace A.A. (D.L. 1 PPB)  
 ICP - 0.5 g sample digested with 4 ml Aqua Regia at 100 Deg. C for 2 hours.

N.B. The major oxide elements, Ba, Be, Cr, La and W are rarely dissolved completely with this acid dissolution method.

SAMPLE No.	Au ppb	Ag ppm	Mo ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Cd ppm	Ni ppm	Co ppm	Mn ppm	Bi ppm	Cr ppm	V ppm	Ba ppm	W ppm	Be ppm	La ppm	Sr ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
251N-22650E	13	0.3	2	44	3	49	<5	<5	<0.1	26	10	279	6	36	178	38	<5	0.4	7	13	0.09	2.20	0.44	5.70	0.43	0.04	0.01	0.23
251N-22700E	1	0.1	3	81	4	65	<5	<5	<0.1	34	11	347	9	48	201	54	<5	0.5	6	19	0.16	2.59	0.31	6.58	0.65	0.04	0.01	0.13
251N-22700E*	1	0.1	4	80	4	64	<5	<5	<0.1	34	11	341	8	48	197	53	<5	0.5	5	19	0.15	2.52	0.31	6.46	0.63	0.04	0.01	0.13



**PLACER DOME RESEARCH CENTRE**  
**Geochemical Analysis**

Project/Venture: V312  
 Area: CAT 94C3  
 Remarks:

Geol: D SKETCHLEY  
 Lab Project No.: D2496

Date Received: AUGUST 10, 1992 Page 1 of 1  
 Date Completed: AUGUST 25, 1992 Attn: D SKETCHLEY  
 G LUSTIG  
 E KIMURA

Au - 10.0 g sample digested with Aqua Regia and determined by Graphite Furnace A.A. (D.L. 1 PPB)  
 ICP - 0.5 g sample digested with 4 ml Aqua Regia at 100 Deg. C for 2 hours.

N.B. The major oxide elements, Ba, Be, Cr, La and W are rarely dissolved completely with this acid dissolution method

SAMPLE No.	Au ppb	Ag ppm	Mo ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Cd ppm	Ni ppm	Co ppm	Mn ppm	Bi ppm	Cr ppm	V ppm	Ba ppm	W ppm	Be ppm	La ppm	Sr ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
21400E	10	<0.1	1	74	5	42	24	<5	0.4	15	10	465	3	31	142	57	9	0.8	25	27	0.05	0.57	0.80	3.44	0.31	0.04	0.01	0.21
21675E	19	0.6	<1	83	7	97	26	<5	0.3	15	10	740	2	40	99	101	<5	0.7	17	43	0.04	1.18	1.33	3.32	0.44	0.03	0.01	0.14
21450E	8	0.6	1	73	5	175	9	<5	<0.1	23	11	597	4	40	310	111	<5	0.8	19	35	0.06	1.13	0.99	6.69	0.40	0.04	0.01	0.16
255N-400E	7	0.2	1	122	5	65	21	5	0.1	14	11	488	3	18	119	85	<5	0.8	25	31	0.06	1.20	0.73	3.69	0.43	0.06	0.01	0.21
255N-400E*	9	0.2	1	116	5	62	7	<5	<0.1	12	9	460	2	17	110	79	<5	0.7	22	28	0.05	1.15	0.68	3.50	0.41	0.05	0.01	0.20
STD-SPK-P1	66	0.3	64	27	55	154	23	6	0.3	36	6	619	4	119	35	180	<5	0.4	8	88	0.11	1.13	0.91	2.41	0.85	0.36	0.06	0.09

**RECEIVED**  
 AUG 27 1992  
 PLACER DOME INC.  
 EXPLORATION

PLACER DOME RESEARCH CENTRE  
Geochemical Analysis

Project/Venture: V312  
Area: CAT 94C3  
Remarks:

Geol: D SKETCHLEY  
Lab Project No.: D2508

Date Received: AUG 17 1992 1 of 3  
Date Completed: SEPT 2, 1992 Attn: D SKETCHLEY  
G LUSTIG  
E KIMURA

Au - 10.0 g sample digested with Aqua Regia and determined by Graphite Furnace A.A. (D.L 1 PPB)  
ICP - 0.5 g sample digested with 4 ml Aqua Regia at 100 Deg. C for 2 hours.

N.B. The major oxide elements, Ba, Be, Cr, La and W are rarely dissolved completely with this acid dissolution method

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SEP - 3 1992

PLACER DOME INC.

SAMPLE No.	Au ppb	Ag ppm	Mo ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Cd ppm	Ni ppm	Co ppm	Mn ppm	Bi ppm	Cr ppm	V ppm	Ba ppm	W ppm	Be ppm	La ppm	Sr ppm	Ti %	Al %	Si %	Fe %	Mg %	K %	Na %	P %
L255N-20200E	3	0.3	2	174	10	79	8	<5	0.1	14	11	703	<2	22	93	125	<5	1.1	22	52	0.04	2.11	0.72	4.15	0.55	0.06	0.01	0.17
L255N-20250E	2	0.1	5	143	9	124	<5	<5	<0.1	15	9	520	<2	17	120	107	<5	0.7	17	15	0.05	2.04	0.37	4.55	0.54	0.05	0.01	0.17
L255N-20300E	6	0.1	3	78	5	69	<5	<5	<0.1	14	8	420	<2	17	126	52	<5	0.3	7	14	0.04	1.60	0.20	4.63	0.47	0.05	0.01	0.10
L255N-20350E	1	0.5	6	177	12	88	6	<5	<0.1	15	13	819	3	18	106	106	<5	0.8	16	32	0.03	2.39	0.44	4.43	0.56	0.05	0.01	0.18
L255N-20550E	1	0.1	4	111	9	69	<5	<5	<0.1	14	8	417	5	17	109	71	<5	0.4	12	13	0.06	1.84	0.33	4.12	0.44	0.05	0.01	0.14
L255N-20650E	<1	0.4	3	70	9	38	<5	<5	<0.1	11	5	216	6	17	73	85	<5	0.4	10	15	0.04	1.85	0.20	3.24	0.29	0.04	<0.01	0.07
L255N-20750E	5	0.3	3	31	7	30	6	<5	0.2	7	4	310	<2	16	92	35	<5	0.2	8	12	0.04	0.91	0.11	2.26	0.12	0.05	<0.01	0.05
L255N-20800E	21	0.3	1	104	6	58	<5	<5	0.1	12	8	505	<2	16	101	84	<5	0.5	17	27	0.05	1.33	0.73	3.39	0.44	0.06	0.01	0.20
L255N-20850E	1	0.1	<1	77	7	50	<5	<5	0.1	11	8	327	3	16	79	68	<5	0.4	15	20	0.06	1.33	0.56	3.07	0.43	0.05	0.01	0.18
L255N-20850E*	8	0.1	<1	78	5	53	<5	<5	0.1	11	9	328	5	16	80	69	<5	0.4	15	20	0.06	1.36	0.57	3.09	0.44	0.05	0.01	0.19
L255N-20900E	1	0.1	6	117	22	80	28	<5	1.3	26	23	535	11	30	113	134	<5	1.8	36	43	0.06	1.66	0.46	3.40	0.51	0.06	0.01	0.12
L255N-20950E	2	0.2	3	80	16	72	16	<5	1.1	20	19	673	8	26	96	114	<5	1.4	27	35	0.05	1.41	0.42	2.86	0.41	0.05	0.01	0.11
L255N-21050E	<1	0.7	7	388	19	117	<5	<5	<0.1	25	24	2118	9	25	154	292	<5	2.2	29	73	0.03	4.35	0.80	6.32	0.83	0.15	0.01	0.17
L255N-21100E	1	0.3	4	131	12	98	<5	<5	<0.1	19	16	1186	8	21	121	170	<5	0.8	11	38	0.05	2.55	0.50	4.51	0.62	0.07	0.01	0.11
L255N-21150E	<1	0.1	3	131	8	99	<5	<5	<0.1	15	12	719	6	19	110	142	<5	0.7	11	30	0.04	2.23	0.54	4.18	0.58	0.09	0.01	0.15
L255N-21200E	1	0.2	4	53	6	54	<5	<5	0.1	11	6	304	<2	19	64	66	<5	0.3	6	23	0.04	1.37	0.25	2.44	0.44	0.05	<0.01	0.04
L255N-21250E	<1	0.2	4	42	1	49	<5	<5	<0.1	13	6	336	4	22	152	60	<5	0.5	8	15	0.04	1.45	0.28	4.60	0.29	0.04	<0.01	0.14
L255N-21300E	1	1.0	2	103	9	52	7	<5	<0.1	11	8	423	8	17	104	59	<5	1.1	13	29	0.02	2.51	0.50	4.04	0.35	0.05	0.01	0.16
L255N-21500E	15	0.3	3	50	9	61	<5	<5	<0.1	16	7	337	8	26	169	97	<5	0.3	5	22	0.10	1.69	0.25	5.35	0.41	0.04	<0.01	0.05
L255N-21500E*	1	0.3	3	48	9	58	<5	<5	<0.1	16	7	335	9	25	164	96	<5	0.3	5	21	0.09	1.61	0.24	5.16	0.39	0.04	<0.01	0.05
L255N-21600E	1	0.5	3	128	13	88	14	6	0.7	21	17	1149	10	32	95	135	<5	1.4	30	53	0.03	2.32	0.91	3.30	0.49	0.04	0.01	0.15
L255N-21700E	3	0.1	3	106	9	78	7	<5	<0.1	22	10	402	6	33	102	83	<5	0.6	6	21	0.07	3.06	0.19	5.13	0.71	0.04	0.01	0.09
L255N-21750E	1	0.4	1	91	11	82	<5	5	<0.1	23	11	430	10	33	135	75	<5	0.6	9	21	0.08	2.60	0.27	5.76	0.68	0.05	0.01	0.14
L255N-21800E	2	0.4	1	74	7	89	<5	<5	<0.1	18	9	391	6	29	112	86	<5	0.5	7	19	0.05	2.29	0.28	5.03	0.54	0.05	0.01	0.29
L255N-21850E	4	0.3	<1	86	5	70	<5	<5	<0.1	17	9	334	5	29	97	130	<5	0.4	8	25	0.04	1.96	0.24	3.70	0.55	0.05	<0.01	0.07
L255N-21900E	3	0.2	<1	90	2	66	<5	<5	<0.1	22	11	338	<2	41	111	113	<5	0.4	5	34	0.08	2.04	0.67	4.23	0.53	0.05	0.01	0.08
L255N-21950E	<1	0.2	1	56	5	85	<5	<5	<0.1	24	10	471	5	50	146	98	<5	0.4	4	21	0.11	2.39	0.30	5.49	0.53	0.05	0.01	0.28
L255N-22000E	2	0.4	2	57	4	70	<5	<5	<0.1	16	8	424	<2	30	125	66	<5	0.4	5	19	0.06	2.17	0.22	4.84	0.44	0.04	<0.01	0.14
L255N-22050E	1	0.2	2	79	5	72	<5	<5	<0.1	33	13	374	3	58	131	75	<5	0.5	4	29	0.12	3.30	0.65	4.94	0.59	0.05	0.01	0.15
L255N-22050E*	8	0.2	2	78	4	68	<5	<5	<0.1	34	13	365	5	57	131	74	<5	0.5	4	29	0.12	3.33	0.66	4.87	0.59	0.05	0.01	0.14
L255N-22100E	1	0.2	6	175	16	67	15	8	0.8	57	32	619	11	63	170	73	<5	1.6	31	48	0.12	2.96	1.07	4.74	0.85	0.05	0.02	0.11
L255N-22150E	1	0.5	9	101	8	70	17	5	1.1	170	51	482	6	102	253	39	<5	0.8	10	27	0.15	3.51	0.63	5.94	1.21	0.04	0.01	0.07
L255N-22200E	1	1.0	4	86	2	65	8	<5	0.8	283	67	735	3	188	331	26	<5	0.7	9	43	0.16	3.69	1.76	5.73	2.90	0.03	0.03	0.05
L255N-22250E	<1	0.4	3	75	5	65	<5	<5	<0.1	92	25	513	4	94	168	39	<5	0.5	5	29	0.11	3.04	0.78	5.31	1.13	0.04	0.01	0.08
L255N-22300E	1	0.4	2	74	4	64	<5	<5	<0.1	89	24	509	2	94	164	38	<5	0.4	4	30	0.10	2.99	0.78	5.26	1.09	0.03	0.01	0.08
L255N-22350E	3	0.4	2	71	7	81	<5	<5	<0.1	74	29	712	8	93	197	39	<5	0.5	4	28	0.11	4.13	1.00	6.08	1.30	0.05	0.01	0.08
L255N-22400E	3	0.3	3	129	6	66	<5	<5	<0.1	48	20	707	<2	62	136	60	<5	0.5	7	39	0.07	2.81	1.23	4.66	1.00	0.05	0.02	0.10
L255N-22450E	3	0.4	3	199	7	72	<5	<5	<0.1	71	26	1099	4	93	154	84	<5	0.7	18	45	0.08	3.80	1.40	5.30	1.36	0.05	0.01	0.12
L255N-22500E	6	0.2	2	107	2	80	12	<5	<0.1	33	17	721	4	61	152	84	<5	0.5	9	56	0.08	1.92	1.26	5.11	1.10	0.06	0.02	0.15
STD-SPK-P1	59	0.3	63	27	49	150	20	<5	0.3	37	7	564	<2	122	38	170	<5	0.5	6	89	0.11	1.23	1.02	2.31	0.90	0.36	0.07	0.08

PLACER DOME RESEARCH CENTRE  
Geochemical Analysis

Project/Venture: V312  
Area: CAT 94C3

Geol: D SKETCHLEY  
Lab Project No.: D2508

Date Received: AUG 11, 1992  
Date Completed: SEPT 2, 1992

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Attn: D SKETCHLEY  
G LUSTIG  
E KIMURA

Remarks: Au - 10.0 g sample digested with Aqua Regia and determined by Graphite Furnace A.A. (D.L 1 PPB)

ICP - 0.5 g sample digested with 4 ml Aqua Regia at 100 Deg. C for 2 hours.

N.B. The major oxide elements, Ba, Be, Cr, La and W are rarely dissolved completely with this acid dissolution method.

SAMPLE No.	Au ppb	Ag ppm	Mo ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Cd ppm	Ni ppm	Co ppm	Mn ppm	Bi ppm	Cr ppm	V ppm	Ba ppm	W ppm	Ba ppm	La ppm	Sr ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
L255N-22550E	4	0.1	<1	101	7	73	14	<5	<0.1	29	19	729	4	55	149	47	<5	0.7	13	44	0.08	1.71	0.79	5.17	1.01	0.04	0.02	0.13
L255N-22600E	6	0.1	2	151	11	93	32	<5	0.2	38	26	1178	7	56	141	114	<5	1.0	19	62	0.08	2.00	1.11	5.33	1.14	0.05	0.02	0.14
L255N-22650E	8	0.1	1	103	4	68	16	<5	<0.1	28	14	557	<5	50	142	61	<5	0.5	7	52	0.06	2.05	0.96	5.49	1.07	0.04	0.02	0.13
L260N-19000E	2	0.1	2	102	1	61	<5	<5	<0.1	19	11	1038	3	43	118	59	<5	0.5	8	47	0.03	1.48	1.12	4.35	0.61	0.04	0.01	0.11
L260N-19050E	15	0.3	<1	99	4	72	7	<5	<0.1	25	16	808	<5	48	147	58	<5	0.6	7	32	0.04	2.40	0.58	5.39	0.76	0.04	0.01	0.05
L260N-19100E	1	0.1	1	70	7	106	<5	<5	<0.1	24	15	381	3	31	149	120	<5	0.6	1	19	0.01	2.98	0.25	6.85	0.55	0.05	<0.01	0.08
L260N-19150E	2	0.3	<1	66	6	123	<5	<5	<0.1	26	14	485	<5	45	153	95	<5	0.6	3	13	0.05	2.68	0.21	6.08	0.59	0.04	<0.01	0.19
L260N-19200E	3	0.1	2	168	5	79	<5	<5	<0.1	28	17	529	<5	45	135	80	<5	0.6	2	26	0.02	2.33	0.31	6.09	0.60	0.03	<0.01	0.07
L260N-19250E	20	0.1	<1	129	2	69	<5	<5	<0.1	33	16	343	<5	40	149	89	<5	0.5	1	15	0.02	2.45	0.27	6.19	0.49	0.02	<0.01	0.06
L260N-19250E*	4	0.2	1	131	1	70	<5	<5	<0.1	33	15	352	<5	41	159	91	<5	0.5	<1	15	0.02	2.46	0.27	6.26	0.50	0.02	<0.01	0.06
L260N-19300E	2	0.2	2	96	15	117	28	14	1.0	38	24	439	3	55	162	133	<5	1.9	29	30	0.04	2.21	0.27	5.39	0.54	0.05	0.01	0.21
L260N-19350E	7	0.1	<1	127	5	60	<5	<5	<0.1	23	11	355	<5	43	147	61	<5	0.5	5	16	0.06	2.04	0.34	4.70	0.55	0.06	0.01	0.12
L260N-19400E	1	0.2	<1	142	7	106	<5	<5	<0.1	33	21	778	2	49	139	158	<5	0.7	7	79	0.04	3.75	0.80	6.01	0.92	0.06	0.02	0.05
L260N-19450E	39	0.1	<1	71	7	109	7	<5	<0.1	25	12	459	<5	44	150	50	<5	0.6	3	19	0.05	2.15	0.29	5.51	0.62	0.05	<0.01	0.06
L260N-19500E	2	0.4	<1	78	5	115	5	<5	<0.1	44	18	595	<5	56	142	90	<5	0.6	3	39	0.07	3.22	0.47	5.79	0.98	0.06	0.01	0.09
L262N-19000E	8	0.1	<1	128	6	60	11	6	<0.1	37	28	506	3	49	125	63	<5	0.7	5	37	0.06	2.90	0.62	5.02	1.01	0.05	0.01	0.08
L262N-19050E	11	0.2	<1	63	6	120	16	6	<0.1	31	15	422	4	46	136	68	<5	0.5	3	21	0.07	2.69	0.31	6.10	0.57	0.05	0.01	0.07
L262N-19100E	2	0.1	<1	98	2	96	15	<5	<0.1	71	20	483	6	85	136	74	<5	0.6	4	22	0.01	2.50	0.38	7.58	0.79	0.03	<0.01	0.06
L262N-19150E	1	0.2	<1	66	<1	80	9	<5	<0.1	46	15	297	5	53	150	104	<5	0.6	2	25	<0.01	2.74	0.33	7.66	0.35	0.04	<0.01	0.06
L262N-19150E*	<1	0.2	<1	63	<1	79	10	<5	<0.1	43	15	284	6	50	143	100	<5	0.5	1	23	<0.01	2.69	0.32	7.38	0.33	0.04	<0.01	0.06
L262N-19200E	<1	0.2	5	95	22	117	35	9	0.4	35	25	885	7	42	130	106	<5	1.8	20	60	0.02	4.36	0.52	5.54	0.98	0.11	0.01	0.16
L262N-19250E	1	0.1	4	104	7	74	7	10	<0.1	43	19	607	2	68	136	85	<5	0.7	3	39	0.03	3.80	0.45	6.36	1.13	0.06	<0.01	0.08
L262N-19300E	2	0.2	6	88	8	101	<5	<5	<0.1	37	19	569	5	60	154	80	<5	0.6	2	26	0.08	3.54	0.35	6.32	1.13	0.05	0.01	0.08
L262N-19350E	2	0.3	3	34	3	121	12	<5	<0.1	26	12	659	5	44	167	82	<5	0.5	4	18	0.03	2.14	0.24	6.77	0.40	0.05	<0.01	0.10
L262N-19400E	5	0.3	4	53	4	91	6	<5	<0.1	25	12	324	<5	48	151	51	<5	0.5	4	21	0.07	2.32	0.33	5.43	0.57	0.06	0.01	0.08
L262N-19450E	2	0.2	5	55	3	74	12	<5	<0.1	27	14	404	<5	51	157	67	<5	0.4	<1	26	0.07	2.41	0.52	4.99	0.68	0.05	0.01	0.05
L262N-19500E	1	0.1	6	83	9	71	13	5	<0.1	34	17	362	5	55	172	76	<5	0.6	2	28	0.09	3.26	0.54	5.72	0.74	0.07	0.02	0.07
L270N-18100E	2	0.2	6	88	<1	86	25	<5	<0.1	33	16	576	4	64	173	38	<5	0.4	2	29	0.07	2.11	0.71	5.90	0.95	0.03	0.01	0.08
L270N-18200E	4	0.2	5	86	3	141	<5	<5	<0.1	43	18	667	3	53	99	31	<5	0.3	<1	15	<0.01	2.91	0.28	6.92	1.12	0.02	<0.01	0.20
STD-SPK-P1	57	0.2	63	27	49	150	20	<5	0.4	34	6	597	<5	116	34	187	<5	0.4	5	86	0.11	1.06	0.91	2.33	0.84	0.37	0.06	0.08
L270N-18300E	8	0.3	4	79	14	75	37	7	0.2	31	16	424	<5	42	144	76	<5	0.9	12	84	0.05	3.07	0.74	5.02	0.78	0.05	0.02	0.08
L270N-18400E	3	0.5	2	56	28	97	11	<5	<0.1	27	19	1005	<5	33	74	68	<5	0.7	6	88	0.07	5.45	0.48	4.31	0.52	0.06	0.01	0.14
L270N-18500E	7	0.4	1	118	20	111	22	5	<0.1	51	24	515	<5	56	137	61	<5	0.7	5	30	0.11	5.01	0.34	5.68	0.80	0.04	0.01	0.08
L270N-18600E	9	0.1	3	96	15	93	22	<5	<0.1	38	22	573	<5	51	144	77	<5	0.7	3	29	0.09	4.49	0.22	6.00	1.00	0.05	<0.01	0.09
L270N-18700E	3	0.1	<1	82	11	71	18	6	<0.1	37	17	443	3	51	141	79	<5	0.5	4	25	0.04	3.32	0.28	5.96	1.07	0.04	0.01	0.05
L270N-18800E	3	0.2	3	135	13	103	<5	<5	<0.1	38	17	475	<5	50	129	52	<5	0.9	3	30	0.10	3.52	0.40	6.07	1.28	0.05	0.01	0.07
L270N-18900E	6	0.4	<1	92	11	80	8	<5	<0.1	33	15	421	<5	46	122	71	<5	0.4	2	38	0.05	3.74	0.38	5.61	1.04	0.08	0.01	0.11
L270N-19000E	3	0.2	<1	82	5	102	8	<5	<0.1	41	15	675	<5	60	156	71	<5	0.5	4	17	0.08	2.29	0.49	6.92	1.12	0.03	<0.01	0.12
L270N-19100E	10	0.2	2	65	6	77	7	<5	<0.1	32	13	390	<5	44	137	70	<5	0.4	2	23	0.04	2.94	0.29	5.87	0.97	0.05	<0.01	0.09
L270N-19100E*	4	0.3	5	65	6	75	9	<5	<0.1	31	13	379	<5	44	135	69	<5	0.4	2	23	0.04	2.91	0.28	5.76	0.96	0.05	<0.01	0.09

PLACER DOME RESEARCH CENTRE  
Geochemical Analysis

Project/Venture: V312  
Area: CAT 94C3  
Remarks:

Geol: D SKETCHLEY  
Lab Project No.: D2508

Date Received: AUG 11, 1992  
Date Completed: SEPT 2, 1992

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Attn: D SKETCHLEY  
G LUSTIG  
E KIMURA

Au - 10.0 g sample digested with Aqua Regia and determined by Graphite Furnace A.A. (D.L. 1 PPB)

ICP - 0.5 g sample digested with 4 ml Aqua Regia at 100 Deg. C for 2 hours.

N.B. The major oxide elements, Ba, Be, Cr, La and W are rarely dissolved completely with this acid dissolution method

SAMPLE No.	Au ppb	Ag ppm	Mo ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Cd ppm	Ni ppm	Co ppm	Mn ppm	Bi ppm	Cr ppm	V ppm	Ba ppm	W ppm	Be ppm	La ppm	Sr ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
L270N-19200E	5	<0.1	2	54	7	102	<5	9	<0.1	27	12	456	<2	45	135	71	<5	0.5	4	22	0.05	2.38	0.30	5.39	0.77	0.04	0.01	0.14
L270N-19300E	2	0.1	<1	82	6	80	<5	<5	<0.1	33	15	485	5	61	160	80	<5	0.7	4	29	0.05	2.90	0.61	5.45	0.81	0.04	0.01	0.05
L270N-19400E	3	0.1	<1	65	4	79	<5	<5	<0.1	27	11	446	7	47	120	59	<5	0.5	4	26	0.05	2.44	0.31	4.89	0.74	0.04	0.01	0.11
L270N-19500E	3	0.2	<1	55	7	82	<5	9	<0.1	29	12	423	3	47	129	94	<5	0.5	5	20	0.04	2.75	0.27	5.23	0.78	0.04	0.01	0.15
L270N-19600E	2	0.2	1	40	4	98	<5	7	<0.1	28	12	459	8	48	154	60	<5	0.5	4	21	0.08	2.41	0.34	5.42	0.77	0.04	0.01	0.08
L270N-19700E	1	0.1	<1	45	7	141	<5	7	<0.1	37	15	548	6	47	136	51	<5	0.5	5	17	0.08	3.28	0.28	5.59	1.16	0.04	<0.01	0.10
L270N-19800E	3	0.1	3	62	6	107	<5	9	<0.1	34	14	454	9	47	142	46	<5	0.6	5	14	0.06	2.85	0.24	5.84	0.81	0.03	<0.01	0.11
L270N-19900E	7	0.2	3	66	7	93	<5	<5	<0.1	25	12	403	4	38	133	79	<5	0.4	5	19	0.05	2.51	0.36	4.93	0.79	0.04	0.01	0.19
L270N-20000E	7	0.1	2	101	6	74	<5	<5	<0.1	34	16	453	5	47	137	64	<5	0.6	3	16	0.09	3.13	0.31	4.83	0.93	0.04	<0.01	0.11
L270N-20000E*	3	0.1	4	104	8	73	<5	<5	<0.1	34	17	462	5	48	141	67	<5	0.6	3	17	0.10	3.23	0.33	4.94	0.95	0.04	0.01	0.11
L270N-20100E	2	0.1	4	56	10	128	11	5	0.2	33	17	443	9	40	160	102	<5	0.9	14	25	0.10	2.56	0.31	5.49	0.87	0.06	0.01	0.07
L270N-20200E	2	0.3	6	45	5	128	<5	<5	<0.1	27	12	391	3	34	121	56	<5	0.4	5	25	0.10	2.22	0.40	5.15	0.81	0.08	0.01	0.10
L270N-20300E	3	0.3	4	56	6	93	<5	<5	<0.1	20	9	319	7	24	110	66	<5	0.6	7	17	0.07	2.67	0.18	4.97	0.54	0.05	<0.01	0.13
L270N-20400E	1	0.6	3	45	8	76	<5	<5	<0.1	14	9	429	5	17	118	51	<5	0.4	5	11	0.04	2.25	0.17	4.29	0.43	0.04	<0.01	0.18
L270N-20500E	4	0.1	2	93	8	77	<5	<5	<0.1	23	13	407	4	23	112	78	<5	0.6	8	15	0.04	2.69	0.24	4.51	0.67	0.05	<0.01	0.13
L270N-20600E	1	0.1	1	58	5	92	<5	<5	<0.1	44	15	526	5	52	136	64	<5	0.4	4	17	0.10	3.24	0.42	5.10	1.11	0.04	<0.01	0.15
L270N-20700E	2	0.1	<1	39	3	98	12	<5	<0.1	20	10	373	7	27	100	64	<5	0.4	3	5	<0.01	2.36	0.08	5.08	0.59	0.04	<0.01	0.11
L270N-20800E	3	0.4	<1	39	4	84	<5	<5	<0.1	28	11	396	6	42	155	64	<5	0.4	3	15	0.10	2.89	0.35	5.86	0.83	0.05	0.01	0.14
L270N-20900E	3	0.5	3	56	7	122	<5	<5	<0.1	36	16	469	7	49	146	72	<5	0.5	3	14	0.11	3.59	0.29	5.64	0.98	0.06	0.01	0.14
STD-SPK-P1	59	0.3	64	26	49	155	20	<5	0.4	35	6	582	<2	118	33	179	<5	0.5	8	90	0.12	1.15	0.96	2.40	0.88	0.39	0.07	0.08
L270N-21000E	2	0.2	3	70	10	77	14	<5	<0.1	37	18	379	7	55	155	105	<5	0.9	11	22	0.08	3.08	0.27	5.46	0.82	0.05	0.01	0.08
L270N-21100E	3	<0.1	2	83	6	82	9	<5	<0.1	35	16	472	3	51	136	111	<5	0.6	4	23	0.08	3.55	0.31	5.32	1.01	0.06	0.02	0.15
L270N-21200E	2	0.1	2	52	6	87	11	<5	<0.1	27	11	310	7	49	167	60	<5	0.6	6	14	0.09	2.75	0.20	6.03	0.60	0.05	0.01	0.14
L270N-21300E	2	0.2	3	96	3	80	9	<5	<0.1	29	15	1020	4	68	146	80	<5	0.5	8	36	0.09	2.11	1.15	5.00	0.85	0.07	0.03	0.07
L270N-21400E	2	0.2	2	62	3	100	7	<5	<0.1	33	14	427	7	49	152	93	<5	0.5	3	18	0.08	2.92	0.35	5.58	0.78	0.05	0.02	0.06
L270N-21500E	2	0.5	2	150	4	89	5	<5	<0.1	56	15	748	7	80	137	69	<5	0.6	9	30	0.07	2.34	1.13	5.05	0.87	0.05	0.02	0.05
L270N-21600E	2	0.2	1	73	<1	84	8	<5	<0.1	27	14	1807	3	53	119	89	<5	0.4	5	39	0.06	1.67	2.02	4.24	0.74	0.05	0.03	0.11
L270N-21700E	6	0.1	2	76	7	63	7	<5	<0.1	30	12	574	4	46	148	68	<5	0.6	7	40	0.07	3.70	0.94	4.94	0.68	0.04	0.02	0.06
L270N-21800E	2	0.3	6	89	12	163	<5	<5	<0.1	118	57	490	8	134	234	34	<5	0.5	3	48	0.33	5.87	1.45	5.20	1.26	0.05	0.01	0.10
L270N-21800E*	1	0.2	5	87	11	161	<5	<5	<0.1	115	55	489	7	131	228	33	<5	0.5	3	47	0.32	5.76	1.41	5.09	1.22	0.05	0.01	0.09
L270N-21900E	1	0.1	5	94	25	89	44	24	1.9	55	34	434	8	66	182	74	<5	2.5	45	38	0.11	2.66	0.54	4.47	0.69	0.04	0.02	0.15
L270N-22000E	2	0.1	3	78	12	191	<5	5	0.1	78	29	515	5	132	215	65	<5	0.8	10	34	0.21	4.36	0.38	6.44	1.16	0.05	0.01	0.14
L270N-22100E	3	0.2	2	71	9	171	<5	<5	<0.1	129	32	684	6	124	182	92	<5	0.5	5	23	0.23	4.59	0.60	6.91	1.51	0.04	0.01	0.20
L270N-22200E	1	0.4	<1	47	4	124	<5	<5	<0.1	77	21	800	3	117	226	83	<5	0.5	3	14	0.30	3.67	0.71	7.16	1.08	0.03	0.01	0.13
L270N-22300E	1	0.3	<1	73	6	140	6	<5	<0.1	74	24	545	3	103	195	63	<5	0.5	4	17	0.17	3.90	0.53	6.77	1.17	0.05	0.01	0.12
L270N-22400E	2	0.2	<1	77	7	95	<5	5	<0.1	63	22	605	<2	69	164	61	<5	0.6	5	23	0.12	3.42	0.54	5.87	1.01	0.04	0.01	0.06
L270N-22400E*	3	0.2	1	78	9	94	<5	<5	<0.1	52	22	614	4	68	165	61	<5	0.6	5	23	0.12	3.45	0.55	5.91	1.02	0.04	0.01	0.06

**Appendix III**  
**Soil Sample Statistical Analysis**

#####  
SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

Variable = AU Unit = N = 323

Mean = 0.4170 Min = -0.3010 1st Quartile = 0.0000  
 Std. Dev. = 0.4659 Max = 2.0000 Median = 0.3010  
 CV % = 111.7317 Skewness = 0.6667 3rd Quartile = 0.6990

Anti-Log Mean = 2.612 Anti-Log Std. Dev. : (-) 0.893  
 (+) 7.638

%	cum %	antilog	cls int	(# of bins = 26 - bin size = 0.0920)
0.00	0.15	0.450	-0.3471	
9.29	9.41	0.556	-0.2550	*****
0.00	9.41	0.687	-0.1630	
0.00	9.41	0.849	-0.0709	
22.29	31.64	1.050	0.0211	*****
0.00	31.64	1.298	0.1132	
0.00	31.64	1.604	0.2052	
0.00	31.64	1.983	0.2972	
20.43	52.01	2.451	0.3893	*****
14.24	66.20	3.029	0.4813	*****
0.00	66.20	3.744	0.5734	
5.88	72.07	4.628	0.6654	*****
5.57	77.62	5.721	0.7574	*****
7.43	85.03	7.071	0.8495	*****
2.79	87.81	8.740	0.9415	****
1.86	89.66	10.804	1.0336	***
3.10	92.75	13.354	1.1256	*****
0.93	93.67	16.506	1.2176	**
1.86	95.52	20.403	1.3097	***
0.93	96.45	25.219	1.4017	**
0.62	97.07	31.173	1.4938	*
0.31	97.38	38.531	1.5858	
0.93	98.30	47.627	1.6779	**
0.31	98.61	58.870	1.7699	
0.31	98.92	72.768	1.8619	
0.62	99.54	89.945	1.9540	*
0.31	99.85	111.178	2.0460	

Each "\*" represents approximately 2.0 observations.

#####

#####  
 SUMMARY STATISTICS and HISTOGRAM LOGARITHMIC VALUES

Variable = CU Unit = N = 323

Mean = 1.8435 Min = 1.3424 1st Quartile = 1.7263  
 Std. Dev. = 0.1980 Max = 2.5888 Median = 1.8513  
 CV % = 10.7391 Skewness = 0.4180 3rd Quartile = 1.9530

Anti-Log Mean = 69.746 Anti-Log Std. Dev. : (-) 44.212  
 (+) 110.027

%	cum %	antilog	cls int	(# of bins = 26 - bin size = 0.0499)
0.00	0.15	20.773	1.3175	
0.93	1.08	23.300	1.3674	**
0.31	1.39	26.134	1.4172	
0.62	2.01	29.313	1.4671	*
3.41	5.40	32.879	1.5169	*****
1.86	7.25	36.879	1.5668	***
6.19	13.43	41.365	1.6166	*****
5.57	18.98	46.397	1.6665	*****
4.64	23.61	52.041	1.7163	*****
9.60	33.18	58.372	1.7662	*****
9.29	42.44	65.472	1.8161	*****
12.07	54.48	73.437	1.8659	*****
12.69	67.13	82.370	1.9158	*****
10.22	77.31	92.390	1.9656	*****
7.74	85.03	103.630	2.0155	*****
4.33	89.35	116.236	2.0653	*****
3.41	92.75	130.376	2.1152	*****
2.17	94.91	146.235	2.1651	****
0.93	95.83	164.025	2.2149	**
1.86	97.69	183.978	2.2648	***
0.31	97.99	206.358	2.3146	
0.31	98.30	231.461	2.3645	
0.31	98.61	259.618	2.4143	
0.31	98.92	291.200	2.4642	
0.00	98.92	326.623	2.5140	
0.00	98.92	366.356	2.5639	
0.93	99.85	410.922	2.6138	**

0 1 2 3 4

Each "\*" represents approximately 2.0 observations.

#####

PLACER DOME INC.  
-----

PDI Data Analysis System - STATS

run on 92:11:12 at 13:26:07

Current directory: /data2/expl/northreg

V312

Summary of data from file : cat92.sla  
-----

This data file contains an internal header: ( 7 records)

Data grouped into 33 fields  
with format: (3A8,A4,A2, 28F6.0)

Character ID fields:  
GRID SAMP SMP2 PROJ TYPE

Coordinate fields:

Other data fields:

AG AL AS AU BA BE BI CA CD CO CR CU  
FE K LA MG MN MO NA NI P PB SB SR  
TI V W ZN

Missing data indicated by NULL value 99999.0

BASIC STATISTICS OF SELECTED DATA FIELDS:

NAME	N	DATA	NULLS	MINIMUM	MAXIMUM	MEAN	STD. DEV.	GEOM. MEAN	DISPERSION
AG	323	0	0.500000E-01	1.60000	0.317183	0.207747	0.250390	0.119586	0.524270
AL	323	0	0.580000	6.63000	2.38399	0.864865	2.23394	1.54432	3.23151
AS	323	0	2.50000	44.0000	5.65789	6.31066	3.99371	1.91475	8.32993
AU	323	0	0.500000	100.000	5.35294	10.5836	2.61228	0.893461	7.63772
BA	323	0	23.0000	292.000	72.5944	33.6991	66.6772	44.5880	99.7096
BE	323	0	0.100000	2.50000	0.501238	0.298649	0.443008	0.273713	0.717015
BI	323	0	1.00000	11.0000	2.28483	2.26216	1.62307	0.765798	3.44002
CA	323	0	0.300000E-01	3.99000	0.448297	0.478409	0.299571	0.121933	0.736001
CD	323	0	0.500000E-01	1.90000	0.115944	0.206346	0.697369E-01	0.323509E-01	0.150328
CO	323	0	2.00000	67.0000	12.6006	7.47573	10.9665	6.45284	18.6374
CR	323	0	12.0000	188.000	44.4892	24.5145	39.0372	23.3955	65.1366
CU	323	0	22.0000	388.000	78.0898	45.3677	69.7464	44.2130	110.026
FE	323	0	1.08000	8.66000	4.96585	1.25438	4.76030	3.46037	6.54857
K	323	0	0.500000E-02	0.150000	0.433901E-01	0.159980E-01	0.406385E-01	0.279541E-01	0.590785E-01
LA	323	0	0.500000	45.0000	6.77709	5.98457	5.16985	2.47817	10.7851
MG	323	0	0.120000	2.90000	0.671424	0.354524	0.591481	0.353901	0.988555
MN	323	0	82.0000	9249.00	575.663	638.262	458.902	249.523	843.974
MO	323	0	0.500000	9.00000	1.84211	1.51180	1.31433	0.567445	3.04428
NA	323	0	0.500000E-02	0.400000E-01	0.809597E-02	0.	0.713595E-02	0.448184E-02	0.113618E-01
NI	323	0	1.00000	283.000	30.3189	24.4380	25.0672	13.6606	45.9986
P	323	0	0.200000E-01	0.320000	0.120248	0.532247E-01	0.108620	0.681907E-01	0.173018
PB	323	0	0.500000	31.0000	6.21517	4.82128	4.35762	1.66118	11.4310
SB	323	0	2.50000	24.0000	3.14396	2.14972	2.84603	1.96857	4.11459



Nov 12 13:27

P1327gnl

2

SR	323	0	5.00000	96.0000	24.3034	14.3322	21.0641	12.4349	35.6813
TI	323	0	0.500000E-02	0.520000	0.561300E-01	0.498994E-01	0.424069E-01	0.194802E-01	0.923166E-01
V	323	0	25.0000	331.000	127.994	39.3581	121.722	87.2554	169.803
W	323	0	2.50000	2.50000	2.50000	0.	2.50001	2.50001	2.50001
ZN	323	0	22.0000	209.000	78.8142	26.9244	74.4763	52.8924	104.868

CORMAT: RUN ON 92:11:12 AT 13:26:07

Data from file: cat92.sla

V312

Correlation matrix for 323 records with 28 variables

LOG:	AG 1	AL 1	AS 1	AU 1	BA 1	BE 1	BI 1	CA 1	CD 1	CO 1	CR 1	CU 1	FE 1	K 1	LA 1
AG	1.000	0.088	0.016	-0.073	0.010	-0.021	-0.194	-0.037	0.052	0.032	0.091	0.041	-0.025	0.068	0.004
AL	0.088	1.000	0.118	-0.076	0.208	0.456	0.256	-0.034	-0.334	0.709	0.614	0.318	0.693	0.222	-0.033
AS	0.016	0.118	1.000	0.070	0.072	0.304	0.162	0.010	0.253	0.350	0.262	0.252	0.157	0.086	0.109
AU	-0.073	-0.076	0.070	1.000	0.058	-0.082	-0.160	-0.129	-0.066	-0.038	-0.096	0.033	-0.054	0.024	-0.067
BA	0.010	0.208	0.072	0.058	1.000	0.494	0.147	0.247	0.069	0.268	-0.024	0.412	0.101	0.347	0.297
BE	-0.021	0.456	0.304	-0.082	0.494	1.000	0.396	0.430	0.275	0.640	0.266	0.634	0.319	0.325	0.564
BI	-0.194	0.256	0.162	-0.160	0.147	0.396	1.000	0.209	0.093	0.298	0.094	0.187	0.137	0.219	0.245
CA	-0.037	-0.034	0.010	-0.129	0.247	0.430	0.209	1.000	0.357	0.348	0.195	0.295	-0.174	0.190	0.337
CD	0.052	-0.334	0.253	-0.066	0.069	0.275	0.093	0.357	1.000	0.014	-0.142	0.108	-0.505	-0.053	0.455
CO	0.032	0.709	0.350	-0.038	0.268	0.640	0.298	0.348	0.014	1.000	0.776	0.480	0.610	0.287	0.105
CR	0.091	0.614	0.262	-0.096	-0.024	0.266	0.094	0.195	-0.142	0.776	1.000	0.157	0.618	0.079	-0.172
CU	0.041	0.318	0.252	0.033	0.412	0.634	0.187	0.295	0.108	0.480	0.157	1.000	0.253	0.275	0.415
FE	-0.025	0.693	0.157	-0.054	0.101	0.319	0.137	-0.174	-0.505	0.610	0.618	0.253	1.000	0.164	-0.179
K	0.068	0.222	0.086	0.024	0.347	0.325	0.219	0.190	-0.053	0.287	0.079	0.275	0.164	1.000	0.338
LA	0.004	-0.033	0.109	-0.067	0.297	0.564	0.245	0.337	0.455	0.105	-0.172	0.415	-0.179	0.338	1.000
MG	-0.004	0.711	0.160	-0.023	0.113	0.363	0.171	0.262	-0.203	0.825	0.811	0.276	0.585	0.287	-0.029
MN	0.118	0.288	0.187	0.007	0.467	0.525	0.098	0.511	0.110	0.625	0.390	0.510	0.303	0.292	0.212
MO	-0.134	0.103	0.157	-0.128	0.051	0.210	0.247	0.097	0.097	0.170	-0.023	0.167	0.059	0.170	0.161
NA	-0.093	0.264	0.263	-0.026	0.085	0.352	0.320	0.510	0.114	0.489	0.412	0.292	0.150	0.318	0.300
NI	0.030	0.727	0.259	-0.094	0.042	0.388	0.189	0.165	-0.141	0.874	0.904	0.279	0.706	0.127	-0.103
P	0.137	0.240	-0.016	-0.023	0.083	0.183	0.049	-0.211	-0.111	0.100	0.029	0.228	0.332	0.193	0.182
PB	-0.079	0.278	0.177	0.146	0.236	0.389	0.276	0.029	0.181	0.149	-0.114	0.266	-0.040	0.321	0.413
SB	-0.135	0.098	0.250	-0.019	0.079	0.256	0.179	0.010	0.325	0.164	0.065	0.013	-0.042	0.040	0.185
SR	0.012	0.069	0.189	-0.088	0.419	0.516	0.171	0.830	0.389	0.394	0.187	0.363	-0.179	0.259	0.381
TI	-0.180	0.338	-0.132	-0.165	-0.157	0.155	0.277	0.274	-0.058	0.314	0.348	-0.082	0.192	0.232	0.142
V	-0.125	0.522	0.124	-0.127	-0.008	0.378	0.251	0.091	-0.262	0.575	0.567	0.183	0.829	0.155	-0.004
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ZN	0.045	0.631	0.181	-0.022	0.420	0.469	0.203	0.123	-0.145	0.682	0.512	0.287	0.589	0.257	-0.021

LOG:	MG 1	MN 1	MO 1	NA 1	NI 1	P 1	PB 1	SB 1	SR 1	TI 1	V 1	W 1	ZN 1
AG	-0.004	0.118	-0.134	-0.093	0.030	0.137	-0.079	-0.135	0.012	-0.180	-0.125	0.000	0.045
AL	0.711	0.288	0.103	0.264	0.727	0.240	0.278	0.098	0.069	0.338	0.522	0.000	0.631
AS	0.160	0.187	0.157	0.263	0.259	-0.016	0.177	0.250	0.189	-0.132	0.124	0.000	0.181
AU	-0.023	0.007	-0.128	-0.026	-0.094	-0.023	0.146	-0.019	-0.088	-0.165	-0.127	0.000	-0.022
BA	0.113	0.467	0.051	0.085	0.042	0.083	0.236	0.079	0.419	-0.157	-0.008	0.000	0.420
BE	0.363	0.525	0.210	0.352	0.388	0.183	0.389	0.256	0.516	0.155	0.378	0.000	0.469
BI	0.171	0.098	0.247	0.320	0.189	0.049	0.276	0.179	0.171	0.277	0.251	0.000	0.203
CA	0.262	0.511	0.097	0.510	0.165	-0.211	0.029	0.010	0.830	0.274	0.091	0.000	0.123
CD	-0.203	0.110	0.097	0.114	-0.141	-0.111	0.181	0.325	0.389	-0.058	-0.262	0.000	-0.145
CO	0.825	0.625	0.170	0.489	0.874	0.100	0.149	0.164	0.394	0.314	0.575	0.000	0.682
CR	0.811	0.390	-0.023	0.412	0.904	0.029	-0.114	0.065	0.187	0.348	0.567	0.000	0.512
CU	0.276	0.510	0.167	0.292	0.279	0.228	0.266	0.013	0.363	-0.082	0.183	0.000	0.287
FE	0.585	0.303	0.059	0.150	0.706	0.332	-0.040	-0.042	-0.179	0.192	0.829	0.000	0.589
K	0.287	0.292	0.170	0.318	0.127	0.193	0.321	0.040	0.259	0.232	0.155	0.000	0.257
LA	-0.029	0.212	0.161	0.300	-0.103	0.182	0.413	0.185	0.381	0.142	-0.004	0.000	-0.021
MG	1.000	0.472	0.113	0.495	0.834	0.114	0.059	0.090	0.251	0.451	0.505	0.000	0.591
MN	0.472	1.000	0.078	0.358	0.411	0.204	0.026	-0.039	0.474	-0.039	0.252	0.000	0.553
MO	0.113	0.078	1.000	0.157	0.088	-0.068	0.115	0.100	0.111	0.182	0.175	0.000	0.047





HISTO:

V312

RUN ON 92:11:12 AT 13:26:07

File: cat92.sla Field name: CU LOG = 1 REPVAL = 0.00100

323 SAMPLES WITH CU MINIMUM: 22.0000 MAXIMUM: 388.000

323 VALUES PLOTTED: 0 NOT IN RANGE 22.0000 to 388.000

GEOMETRIC MEAN: 69.7464 DISPERSION: 44.2130 110.026

SCALE OF HISTOGRAM IS 0.40 COUNTS /PRINT POSITION # = 5,50,95%

N	MIDPOINT	PERCENT	0	4	8	12	16	20	24	28	32	36	40
2	22.000	0.62	I*****										I
1	23.636	0.31	I***										I
1	25.395	0.31	I***										I
2	27.284	0.62	I*****										I
5	29.313	1.55	I*****										I
6	31.494	# 1.86	I*****										I
4	33.836	1.24	I*****										I
3	36.353	0.93	I*****										I
13	39.058	4.02	I*****										I
13	41.963	4.02	I*****										I
11	45.084	3.41	I*****										I
11	48.438	3.41	I*****										I
8	52.041	2.48	I*****										I
23	55.912	7.12	I*****										I
20	60.071	6.19	I*****										I
19	64.540	5.88	I*****										I
25	69.340	# 7.74	I*****										I
28	74.498	8.67	I*****										I
22	80.040	6.81	I*****										I
25	85.994	7.74	I*****										I
14	92.391	4.33	I*****										I
16	99.263	4.95	I*****										I
14	106.65	4.33	I*****										I
5	114.58	1.55	I*****										I
4	123.10	1.24	I*****										I
9	132.26	2.79	I*****										I
3	142.10	# 0.93	I*****										I
3	152.67	0.93	I*****										I
3	164.02	0.93	I*****										I
3	176.23	0.93	I*****										I
0	189.33	0.00	I										I
1	203.42	0.31	I***										I
1	218.55	0.31	I***										I
1	234.81	0.31	I***										I
0	252.27	0.00	I										I
1	271.04	0.31	I***										I
0	291.20	0.00	I										I
0	312.86	0.00	I										I
0	336.13	0.00	I										I
0	361.14	0.00	I										I
3	388.00	0.93	I*****										I

----- 323 0 4 8 12 16 20 24 28 32 36 40

HISTO:

V312

RUN ON 92:11:12 AT 13:26:07

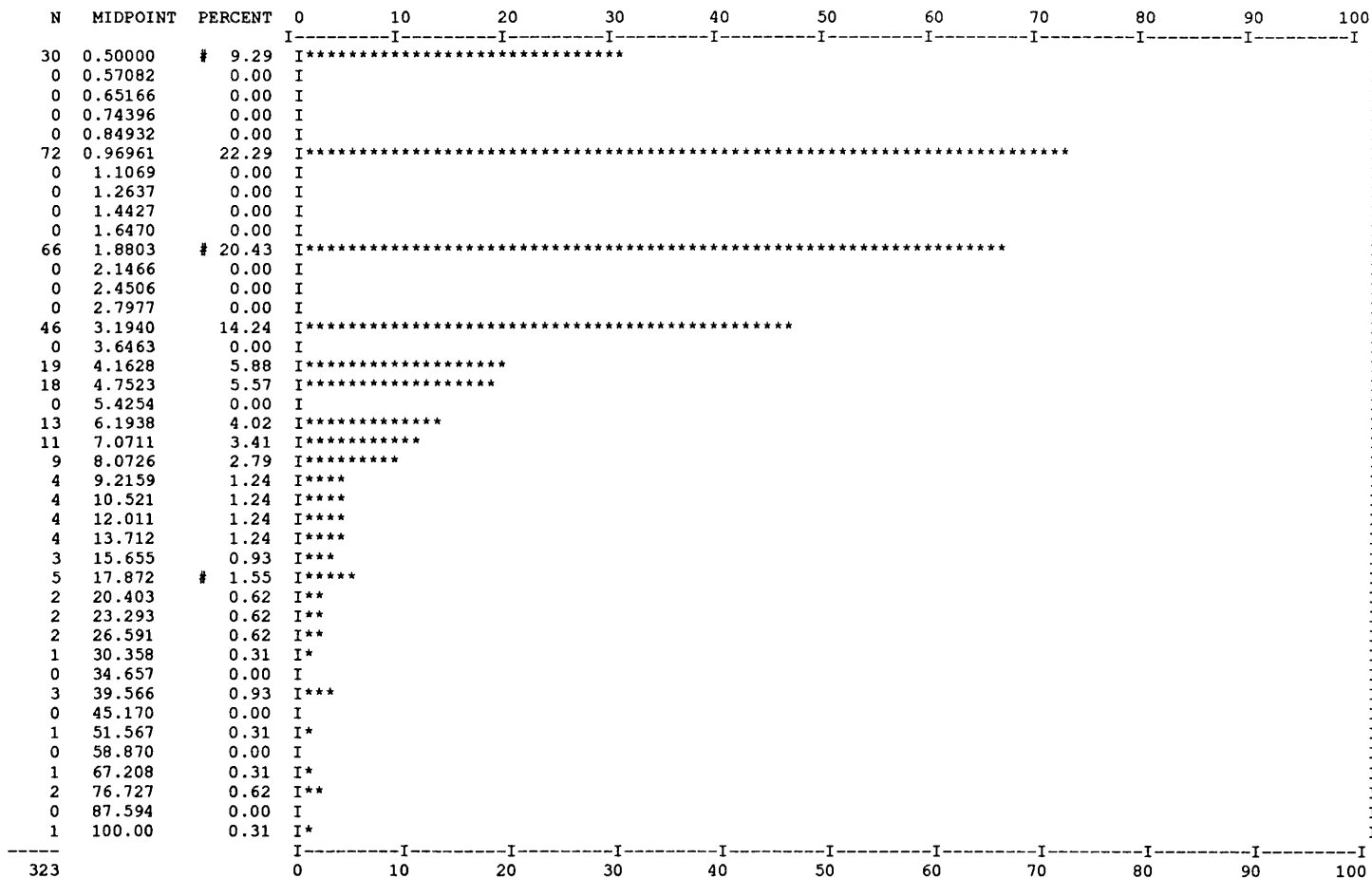
File: cat92.sla Field name: AU LOG = 1 REPVAL = 0.00100

323 SAMPLES WITH AU MINIMUM: 0.500000 MAXIMUM: 100.000

323 VALUES PLOTTED: 0 NOT IN RANGE 0.500000 to 100.000

GEOMETRIC MEAN: 2.61228 DISPERSION: 0.893461 7.63772

SCALE OF HISTOGRAM IS 1.00 COUNTS /PRINT POSITION # = 5,50,95%



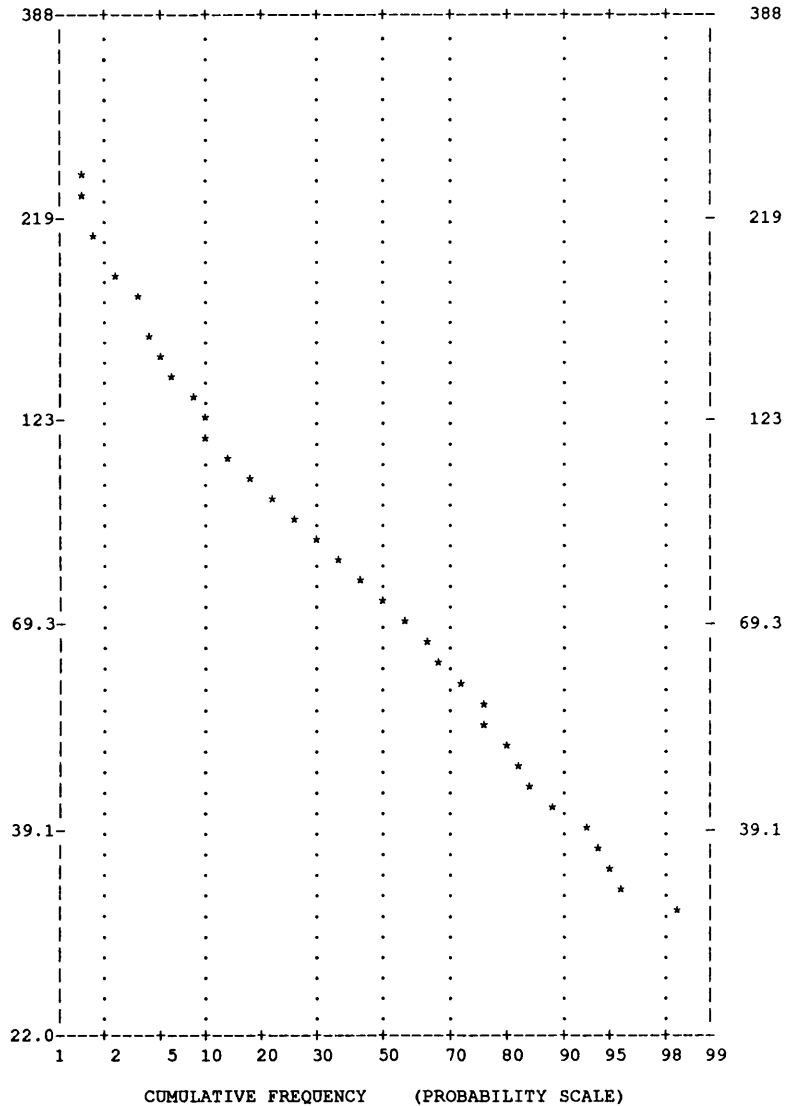
323

PRBPLT: V312 RUN ON 92:11:12 AT 13:26:07  
 file: cat92.sla Field name: CU LOG =1 REPVAL = 0.00100

MIN = 22.000 MAX = 388.00 MEAN = 78.090 STD DEV = 45.368  
 NUMBER OF DATA PLOTTED = 323 ( 0 NULLS 0 < YMIN 0 > YMAX)

CLASSIFICATION TABLE

Minimum	Maximum	Nval	Freq	Cum Freq
366.3560387.9999		3	0.009	0.009
345.9196366.3560		0	0.000	0.009
326.6233345.9196		0	0.000	0.009
308.4033326.6233		0	0.000	0.009
291.1996308.4033		0	0.000	0.009
274.9556291.1996		0	0.000	0.009
259.6177274.9556		1	0.003	0.012
245.1355259.6177		0	0.000	0.012
231.4612245.1355		1	0.003	0.015
218.5496231.4612		1	0.003	0.019
206.3582218.5496		0	0.000	0.019
194.8469206.3582		1	0.003	0.022
183.9777194.8469		0	0.000	0.022
173.7149183.9777		3	0.009	0.031
164.0246173.7149		3	0.009	0.040
154.8748164.0246		0	0.000	0.040
146.2354154.8748		3	0.009	0.050
138.0779146.2354		3	0.009	0.059
130.3756138.0779		4	0.012	0.071
123.1029130.3756		8	0.025	0.096
116.2358123.1029		3	0.009	0.105
109.7518116.2358		3	0.009	0.115
103.6296109.7518		11	0.034	0.149
97.84875103.6296		11	0.034	0.183
92.3904797.84875		14	0.043	0.226
87.2366592.39047		13	0.040	0.266
82.3703287.23665		20	0.062	0.328
77.7754782.37032		22	0.068	0.396
73.4369277.77547		19	0.059	0.455
69.3403973.43692		20	0.062	0.517
65.4723869.34039		19	0.059	0.576
61.8201365.47238		20	0.062	0.638
58.3716261.82013		10	0.031	0.669
55.1154958.37162		16	0.050	0.718
52.0409855.11549		15	0.046	0.765
49.1379752.04098		7	0.022	0.786
46.3969049.13797		8	0.025	0.811
43.8087446.39690		11	0.034	0.845
41.3649743.80874		7	0.022	0.867
39.0575041.36497		9	0.028	0.895
36.8787639.05750		11	0.034	0.929
34.8215636.87876		4	0.012	0.941
32.8791034.82156		2	0.006	0.947
31.0450132.87910		2	0.006	0.954
29.3132331.04501		9	0.028	0.981
27.6780529.31323		0	0.000	0.981
26.1340827.67805		2	0.006	0.988
24.6762426.13408		1	0.003	0.991
23.2997324.67624		0	0.000	0.991
22.0000023.29973		3	0.009	1.000



PRBPLT:

V312

RUN ON 92:11:12 AT 13:26:07

file: cat92.sla

Field name: AU

LOG =1

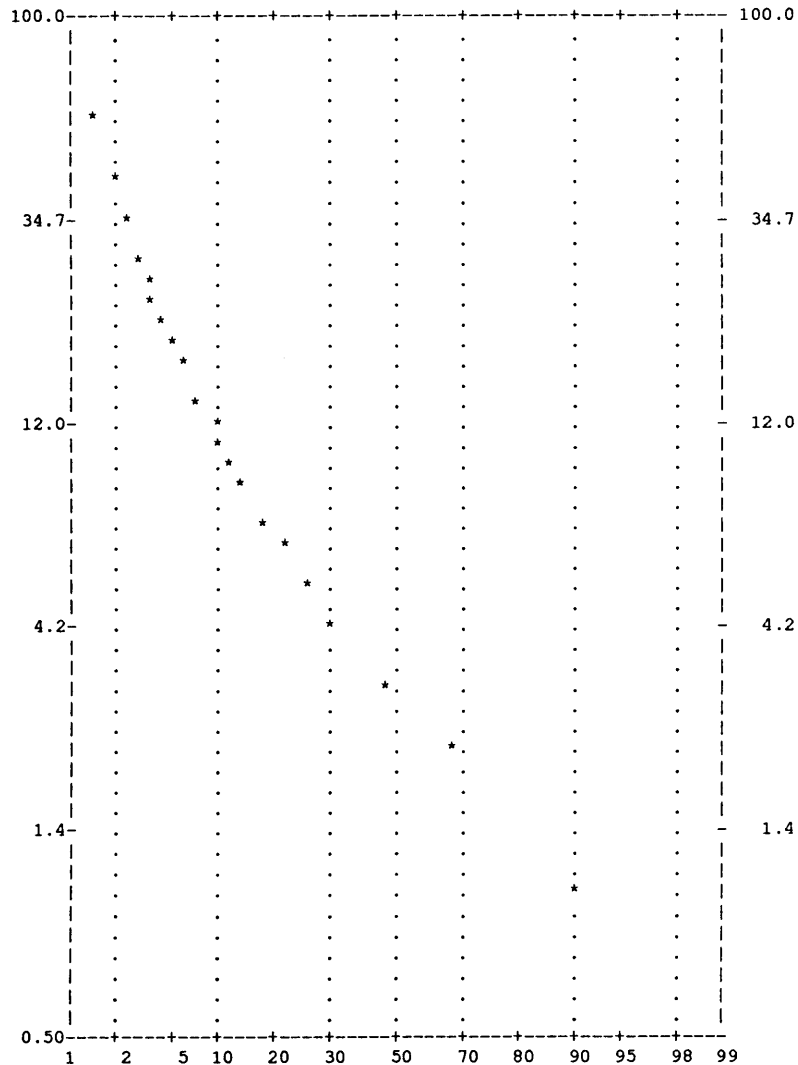
REPVAL =

0.00100

MIN = .50000      MAX = 100.00      MEAN = 5.3529      STD DEV = 10.584  
 NUMBER OF DATA PLOTTED = 323 ( 0 NULLS    0 < YMIN    0 > YMAX)

CLASSIFICATION TABLE

Minimum	Maximum	Nval	Freq	Cum Freq
89.9454399	99997	1	0.003	0.003
80.9018989	94543	0	0.000	0.003
72.7676180	90189	2	0.006	0.009
65.4511672	76761	1	0.003	0.012
58.8703865	45116	0	0.000	0.012
52.9512458	87038	1	0.003	0.015
47.6272652	95124	0	0.000	0.015
42.8385847	62726	0	0.000	0.015
38.5313742	83858	3	0.009	0.025
34.6572338	53137	0	0.000	0.025
31.1726134	65723	1	0.003	0.028
28.0383631	17261	0	0.000	0.028
25.2192528	03836	2	0.006	0.034
22.6835725	21925	2	0.006	0.040
20.4028522	68357	1	0.003	0.043
18.3514520	40285	2	0.006	0.050
16.5063018	35145	4	0.012	0.062
14.8466716	50630	3	0.009	0.071
13.3539114	84667	0	0.000	0.071
12.0112413	35391	4	0.012	0.084
10.8035712	01124	6	0.019	0.102
9.71732410	80357	2	0.006	0.108
8.7402949	71732	4	0.012	0.121
7.8615028	74029	9	0.028	0.149
7.0710667	86150	0	0.000	0.149
6.3601057	07106	11	0.034	0.183
5.7206276	36010	13	0.040	0.223
5.1454465	72062	0	0.000	0.223
4.6280985	14544	18	0.056	0.279
4.1627654	62809	0	0.000	0.279
3.7442194	16276	19	0.059	0.337
3.3677573	74421	0	0.000	0.337
3.0291463	36775	0	0.000	0.337
2.7245803	02914	46	0.142	0.480
2.4506372	72458	0	0.000	0.480
2.2042372	45063	0	0.000	0.480
1.9826122	20423	66	0.204	0.684
1.7832701	98261	0	0.000	0.684
1.6039711	78327	0	0.000	0.684
1.4427001	60397	0	0.000	0.684
1.2976431	44270	0	0.000	0.684
1.1671721	29764	0	0.000	0.684
1.0498181	16717	0	0.000	0.684
0.9442641	04981	72	0.223	0.907
0.8493230	94426	0	0.000	0.907
0.7639280	84932	0	0.000	0.907
0.6871190	76392	0	0.000	0.907
0.6180320	68711	0	0.000	0.907
0.5558920	61803	0	0.000	0.907
0.5000000	55589	30	0.093	1.000



CUMULATIVE FREQUENCY (PROBABILITY SCALE)



#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = E:\CAT\GCHM\92\CAT92.PPS

Variable = AU Unit = N = 323  
N CI = 26

Transform = Logarithmic Number of Populations = 2

# of Missing Observations = 0.

=====

Raw Data Maximum Likelihood Parameter Estimates

Maximum LN Likelihood Value = -202.305

Parameterized Degrees of Freedom = 3

Population	Mean	Std Dev	Percentage
1	2.375	- 0.918 + 6.141	96.76
2	46.283	- 29.251 + 73.231	3.24

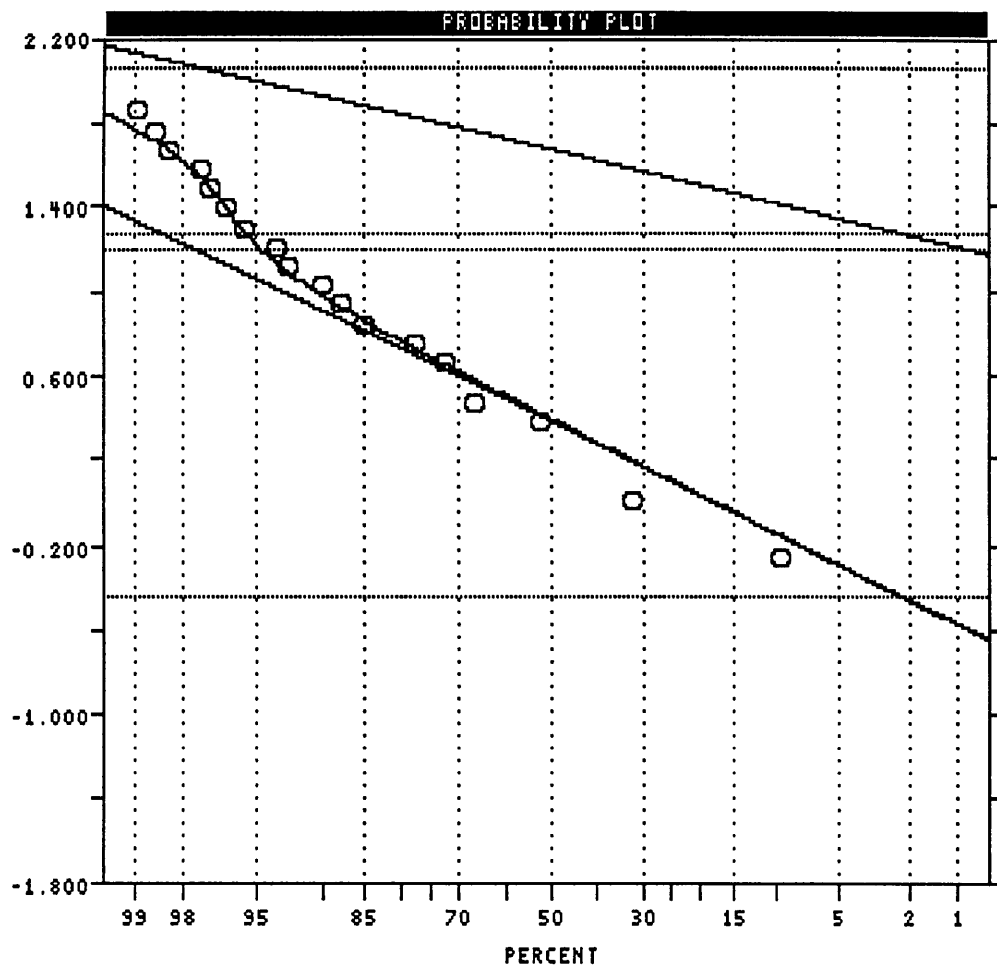
=====

Default Thresholds.

Standard Deviation Multiplier = 2.0

Pop.	Thresholds
1	0.355 15.880
2	18.487 115.871

#####



=====

VARIABLE = AU

UNIT =

N = 323

N CI = 26

POPULATIONS

=====

Pop.	Mean	Std.Dev.	%
1	0.3756	0.4126	96.8
2	1.6654	0.1993	3.2

POP. THRESHOLDS

Pop.	Mean	Std.Dev.
1	-0.4496	1.2008
2	1.2669	2.0640

RAW DATA ML  
PARAMETER ESTIMATES

#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = E:\CAT\GCHM\92\CAT92.PPS

Variable = AU Unit = N = 323  
N CI = 26

Transform = Logarithmic Number of Populations = 2

# of Missing Observations = 0.

=====

Raw Data Maximum Likelihood Parameter Estimates

Maximum LN Likelihood Value = -202.392

Parameterized Degrees of Freedom = 3

Population	Mean	Std Dev	Percentage
-----	-----	-----	-----
1	2.376	- 0.924 + 6.106	96.80
2	47.898	- 30.680 + 74.777	3.20

=====

Thresholds Which Minimize Classification Errors.

Thresholds  
-----

27.907

#####

U312

LOGARITHMIC VALUES

=====

VARIABLE = AU

UNIT =

N = 323

N CI = 26

POPULATIONS

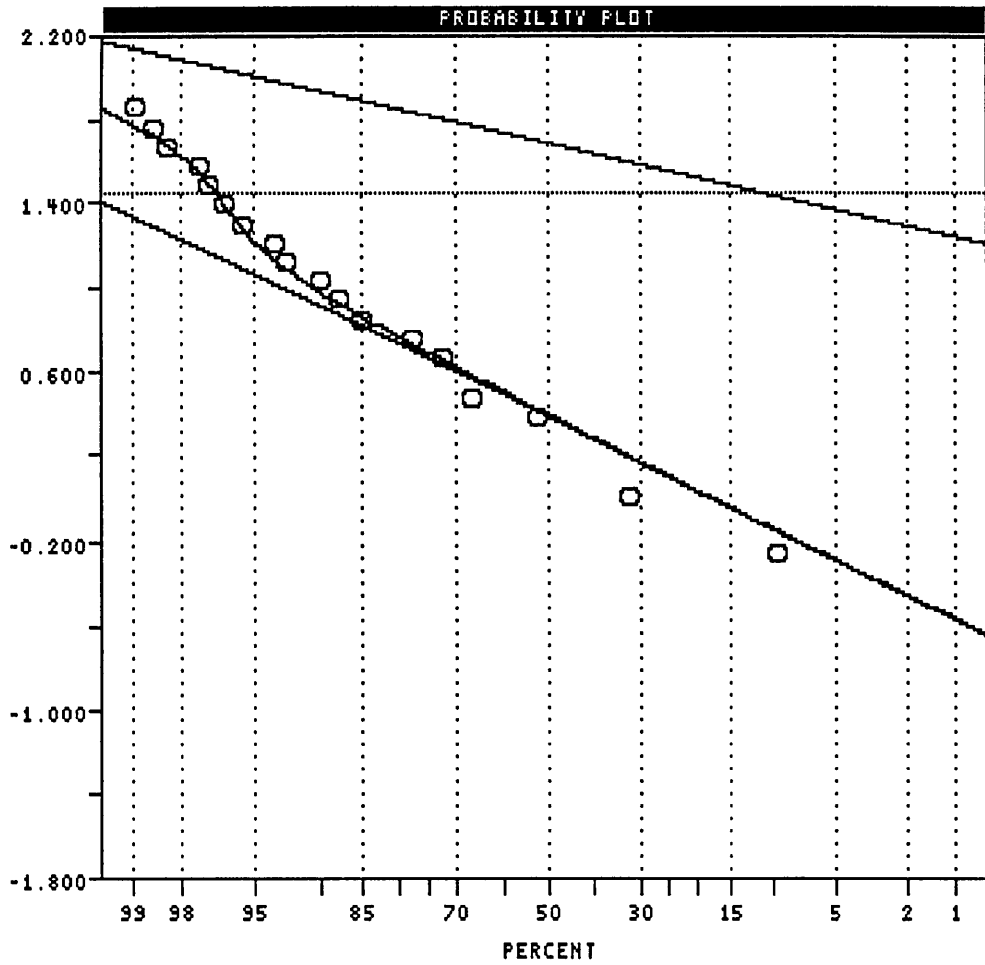
=====

Pop.	Mean	Std.Dev.	%
1	0.3758	0.4100	96.8
2	1.6803	0.1935	3.2

THRESHOLDS

=====

1.4457



RAW DATA ML  
PARAMETER ESTIMATES

#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = E:\CAT\GCHM\92\CAT92.PPS

Variable = CU Unit = N = 323  
N CI = 26

Transform = Logarithmic Number of Populations = 2

# of Missing Observations = 0.

=====

Users Visual Parameter Estimates

Population	Mean	Std Dev	Percentage
-----	-----	-----	-----
1	67.829	- 44.983 + 102.278	98.20
2	286.308	- 214.272 + 382.561	1.80

=====

Default Thresholds.

Standard Deviation Multiplier = 2.0

Pop.	Thresholds
----	-----
1	29.832 154.223
2	160.361 511.173

#####

U312

LOGARITHMIC VALUES

=====

VARIABLE = CU

UNIT =

N = 323

N CI = 26

POPULATIONS

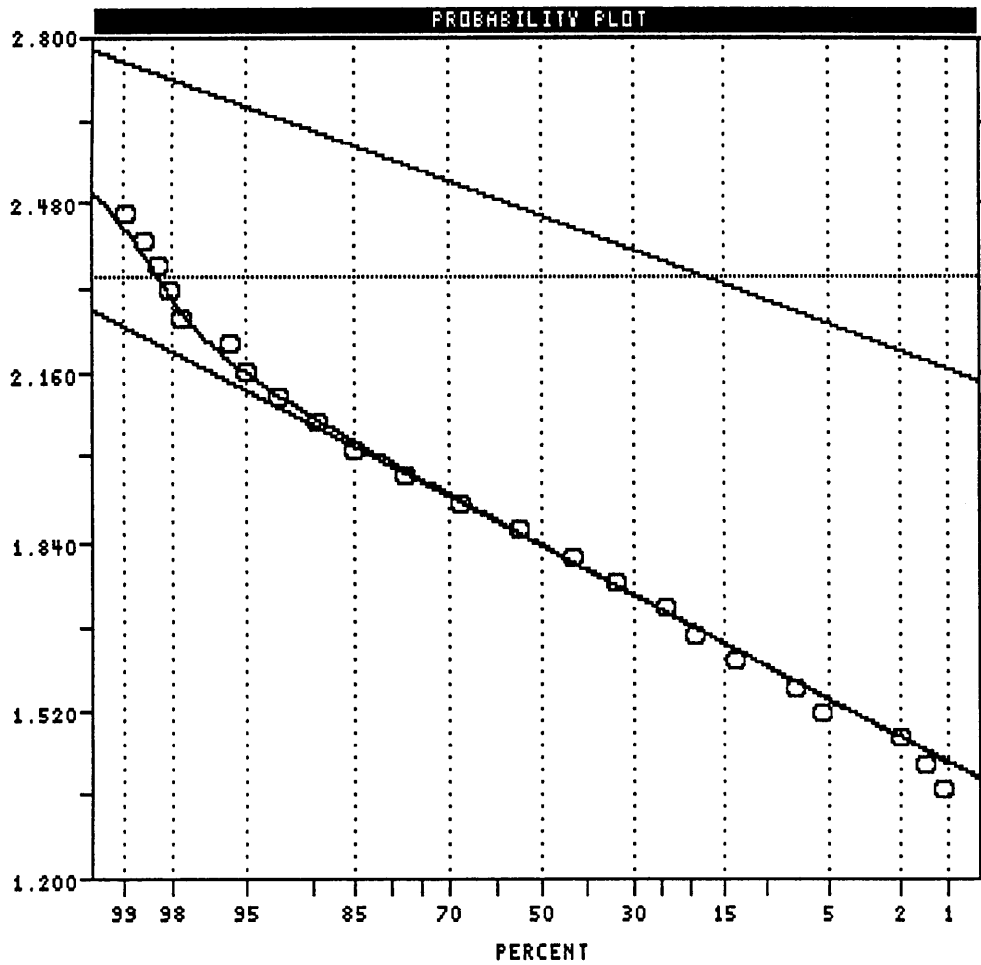
=====

Pop.	Mean	Std.Dev.	%
1	1.8314	0.1784	98.2
2	2.4568	0.1259	1.8

THRESHOLDS

=====

2.3411



USERS VISUAL  
PARAMETER ESTIMATES

#####

PARAMETER SUMMARY STATISTICS FOR PROBABILITY PLOT ANALYSIS

Data File Name = E:\CAT\GCHM\92\CAT92.PPS

Variable = CU Unit = N = 323  
N CI = 26

Transform = Logarithmic Number of Populations = 2

# of Missing Observations = 0.

=====

Users Visual Parameter Estimates

Population	Mean	Std Dev	Percentage
1	67.829	- 44.983 + 102.278	98.20
2	286.308	- 214.272 + 382.561	1.80

=====

Thresholds Which Minimize Classification Errors.

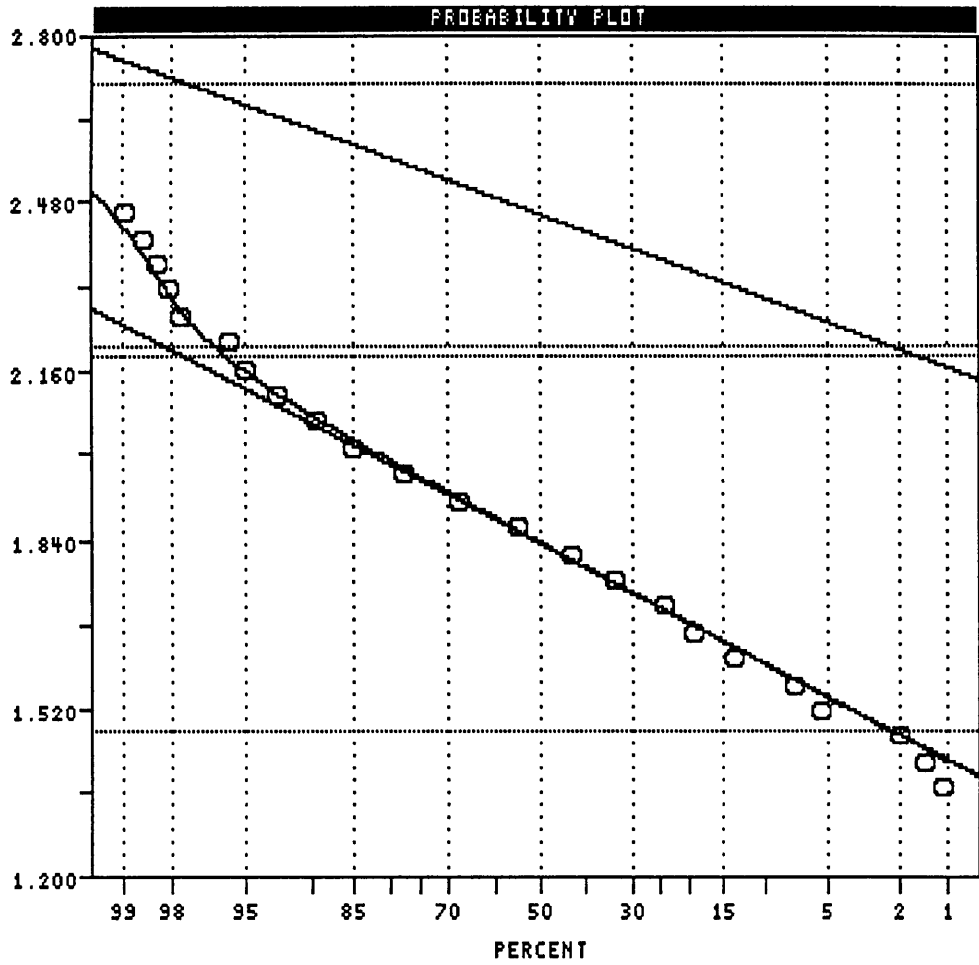
Thresholds  
-----

219.308

#####

U312

LOGARITHMIC VALUES



=====

VARIABLE = CU

UNIT =

N = 323

N CI = 26

POPULATIONS

=====

Pop.	Mean	Std.Dev.	%
1	1.8314	0.1784	98.2
2	2.4568	0.1259	1.8

POP. THRESHOLDS

-----

Pop.	THRESHOLDS
1	1.4747 2.1881
2	2.2051 2.7086

USERS VISUAL  
PARAMETER ESTIMATES



**Appendix IV**

**VLF-EM and Magnetometer Data**

LINE	GRID-X	GRID-Y	IP	QD
L23900N	18250	23900	-3	10
L23900N	18275	23900	-5	0
L23900N	18300	23900	-7	-2
L23900N	18325	23900	-5	1
L23900N	18350	23900	-5	-6
L23900N	18375	23900	-5	-2
L23900N	18400	23900	0	-8
L23900N	18425	23900	0	-4
L23900N	18450	23900	-5	-2
L23900N	18475	23900	-10	-2
L23900N	18500	23900	-10	-2
L23900N	18525	23900	-5	-6
L23900N	18550	23900	0	-2
L23900N	18575	23900	0	0
L23900N	18600	23900	-10	-8
L23900N	18625	23900	-16	-10
L23900N	18650	23900	-20	2
L23900N	18675	23900	-10	6
L23900N	18700	23900	-5	8
L23900N	18725	23900	-10	-2
L23900N	18750	23900	-15	-4
L23900N	18775	23900	-10	-10
L23900N	18800	23900	0	1
L23900N	18825	23900	2	-3
L23900N	18850	23900	0	-8
L23900N	18875	23900	3	-2
L23900N	18900	23900	-10	0
L23900N	18925	23900	-5	-4
L23900N	18950	23900	0	4
L23900N	18975	23900	-10	14
L23900N	19000	23900	-25	6
L23900N	19025	23900	-27	10
L23900N	19050	23900	-20	4
L23900N	19075	23900	-15	-4
L23900N	19100	23900	-15	-4
L23900N	19125	23900	-5	-6
L23900N	19150	23900	0	2
L23900N	19175	23900	0	-4
L23900N	19200	23900	5	0
L23900N	19225	23900	5	-4
L23900N	19250	23900	5	2
L23900N	19275	23900	10	4
L23900N	19300	23900	12	4
L23900N	19325	23900	5	-4
L23900N	19350	23900	8	2
L23900N	19375	23900	5	4
L23900N	19400	23900	10	4
L23900N	19425	23900	5	4
L23900N	19450	23900	-2	2
L23900N	19475	23900	0	6
L23900N	19500	23900	0	-4
L23900N	19525	23900	10	2
L23900N	19550	23900	10	-4
L23900N	19575	23900	15	-6
L23900N	19600	23900	10	-10
L23900N	19625	23900	15	-10
L23900N	19650	23900	15	4
L23900N	19675	23900	10	2
L23900N	19700	23900	12	2

LINE	GRID-X	GRID-Y	IP	QD
L23900N	19725	23900	5	4
L23900N	19750	23900	5	6
L23900N	19775	23900	-10	-4
L23900N	19800	23900	0	4
L23900N	19825	23900	5	2
L23900N	19850	23900	7	0
L23900N	19875	23900	25	2
L23900N	19900	23900	13	0
L23900N	19925	23900	0	-12
L23900N	19950	23900	5	-8
L23900N	19975	23900	10	-4
L23900N	20000	23900	10	2
L23900N	20025	23900	-5	2
L23900N	20050	23900	5	4
L23900N	20075	23900	10	2
L23900N	20100	23900	20	-2
L23900N	20125	23900	15	-6
L23900N	20150	23900	20	0
L23900N	20175	23900	25	0
L23900N	20200	23900	15	-2
L23900N	20225	23900	10	-4
L23900N	20250	23900	5	-4
L23900N	20275	23900	5	0
L23900N	20300	23900	0	2
L23900N	20325	23900	-5	2
L23900N	20350	23900	-10	-4
L23900N	20375	23900	-8	-3
L23900N	20400	23900	0	0
L23900N	20425	23900	5	6
L23900N	20450	23900	0	-2
L23900N	20475	23900	-7	4
L23900N	20500	23900	-15	-6
L23900N	20525	23900	-5	-6
L23900N	20550	23900	0	2
L23900N	20575	23900	-10	-4
L23900N	20600	23900	-15	2
L23900N	20625	23900	-15	-4
L23900N	20650	23900	-15	-6
L23900N	20675	23900	-25	-6
L23900N	20700	23900	-20	-8
L23900N	20725	23900	-5	-8
L23900N	20750	23900	0	-4
L23900N	20775	23900	6	-2
L23900N	20800	23900	-5	-10
L23900N	20825	23900	3	-2
L23900N	20850	23900	5	-2
L23900N	20875	23900	0	-2
L23900N	20900	23900	-10	0
L23900N	20925	23900	-25	-4
L23900N	20950	23900	-20	-2
L23900N	20975	23900	-30	-6
L23900N	21000	23900	-30	4
L23900N	21025	23900	-25	8
L23900N	21050	23900	-20	8
L23900N	21075	23900	-20	8
L23900N	21100	23900	-5	6
L23900N	21125	23900	-15	-4
L23900N	21150	23900	0	10
L23900N	21175	23900	-5	4
L23900N	21200	23900	-5	6

LINE	GRID-X	GRID-Y	IP	QD
L23900N	21225	23900	-10	6
L23900N	21250	23900	-20	2
L23900N	21275	23900	5	10
L23900N	21300	23900	-5	18
L23900N	21325	23900	-3	8
L23900N	21350	23900	-15	2
L23900N	21375	23900	-7	10
L23900N	21400	23900	-15	6
L23900N	21425	23900	-20	6
L23900N	21450	23900	-7	4
L23900N	21475	23900	-10	4
L23900N	21500	23900	-15	-2
L23900N	21525	23900	-20	-4
L23900N	21550	23900	-20	2
L23900N	21575	23900	-40	-8
L23900N	21600	23900	-45	-12
L23900N	21625	23900	-35	-2
L23900N	21650	23900	-35	-8
L23900N	21675	23900	-30	-6
L23900N	21700	23900	-30	-10
L23900N	21725	23900	-20	-10
L23900N	21750	23900	-25	-2
L23900N	21775	23900	-30	-2
L23900N	21800	23900	-40	-2
L23900N	21825	23900	-30	6
L23900N	21850	23900	-25	-2
L23900N	21875	23900	-30	4
L23900N	21900	23900	-34	6
L23900N	21925	23900	-30	8
L23900N	21950	23900	-55	-6
L23900N	21975	23900	-40	2
L23900N	22000	23900	-35	0
L23900N	22025	23900	-20	-4
L23900N	22050	23900	-22	0
L23900N	22075	23900	-15	8
L23900N	22100	23900	-27	6
L23900N	22125	23900	-45	2
L23900N	22150	23900	-30	-4
L23900N	22175	23900	-25	4
L23900N	22200	23900	-20	-2
L23900N	22225	23900	-15	2
L23900N	22250	23900	-15	-2
L23900N	22275	23900	-20	-8
L23900N	22300	23900	-15	-4
L23900N	22325	23900	-10	4
L23900N	22350	23900	-7	-4
L23900N	22375	23900	-20	-10
L23900N	22400	23900	-15	-8
L23900N	22425	23900	-10	-8
L23900N	22450	23900	-10	-6
L23900N	22475	23900	-15	-2
L23900N	22500	23900	-15	0
L23900N	22525	23900	-25	4
L23900N	22550	23900	-30	-2
L23900N	22575	23900	-25	2
L23900N	22600	23900	-30	0
L23900N	22625	23900	-25	-4
L23900N	22650	23900	-30	-2
L23900N	22675	23900	-25	2
L23900N	22700	23900	-10	4

LINE	GRID-X	GRID-Y	IP	QD
L24300N	20200	24300	10	-2
L24300N	20225	24300	11	-2
L24300N	20250	24300	-6	1
L24300N	20275	24300	-19	0
L24300N	20300	24300	-15	1
L24300N	20325	24300	-5	-3
L24300N	20350	24300	-6	-2
L24300N	20375	24300	3	-4
L24300N	20400	24300	3	-1
L24300N	20425	24300	1	-4
L24300N	20450	24300	-3	-6
L24300N	20475	24300	-4	-2
L24300N	20500	24300	-1	-1
L24300N	20525	24300	-2	-6
L24300N	20550	24300	-7	-15
L24300N	20575	24300	-19	-5
L24300N	20600	24300	-6	-6
L24300N	20625	24300	-4	-4
L24300N	20650	24300	4	3
L24300N	20675	24300	4	6
L24300N	20700	24300	-3	12
L24300N	20725	24300	-21	15
L24300N	20750	24300	-19	14
L24300N	20775	24300	-19	16
L24300N	20800	24300	-15	12
L24300N	20825	24300	-11	8
L24300N	20850	24300	-17	4
L24300N	20875	24300	-7	2
L24300N	20900	24300	-4	3
L24300N	20925	24300	-1	4
L24300N	20950	24300	1	4
L24300N	20975	24300	4	3
L24300N	21000	24300	4	3
L24300N	21025	24300	2	2
L24300N	21050	24300	1	0
L24300N	21075	24300	0	-1
L24300N	21100	24300	-2	-2
L24300N	21125	24300	3	1
L24300N	21150	24300	9	6
L24300N	21175	24300	3	7
L24300N	21200	24300	9	-4
L24300N	21225	24300	3	4
L24300N	21250	24300	-19	5
L24300N	21275	24300	-10	11
L24300N	21300	24300	-5	8
L24300N	21325	24300	0	7
L24300N	21350	24300	-12	11
L24300N	21375	24300	-14	10
L24300N	21400	24300	-18	2
L24300N	21425	24300	-17	2
L24300N	21450	24300	-27	-2
L24300N	21475	24300	-36	-4
L24300N	21500	24300	-49	-10
L24300N	21525	24300	-65	-8
L24300N	21550	24300	-52	-8
L24300N	21575	24300	-40	-7
L24300N	21600	24300	-36	-4
L24300N	21625	24300	-34	-5
L24300N	21650	24300	-28	-2
L24300N	21675	24300	-41	-4

LINE	GRID-X	GRID-Y	IP	QD
L24300N	21700	24300	-50	1
L24300N	21725	24300	-53	-1
L24300N	21750	24300	-48	2
L24300N	21775	24300	-59	2
L24300N	21800	24300	-51	-2
L24300N	21825	24300	-39	-1
L24300N	21850	24300	-32	1
L24300N	21875	24300	-23	2
L24300N	21900	24300	-19	-2
L24300N	21925	24300	-31	3
L24300N	21950	24300	-51	-2
L24300N	21975	24300	-50	0
L24300N	22000	24300	-37	2
L24300N	22025	24300	-23	5
L24300N	22050	24300	-14	7
L24300N	22075	24300	-17	6
L24300N	22100	24300	-31	5
L24300N	22125	24300	-42	7
L24300N	22150	24300	-29	5
L24300N	22175	24300	-30	2
L24300N	22200	24300	-32	-2
L24300N	22225	24300	-26	-3
L24300N	22250	24300	-16	-2
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L24300N	22325	24300	-6	-4
L24300N	22350	24300	-8	-9
L24300N	22375	24300	-6	-3
L24300N	22400	24300	-23	-1
L24300N	22425	24300	-24	1
L24300N	22450	24300	-21	0
L24300N	22475	24300	-20	-2
L24300N	22500	24300	-24	-2
L24300N	22525	24300	-22	-4
L24300N	22550	24300	-23	-2
L24300N	22575	24300	-29	-2
L24300N	22600	24300	-26	-2
L24300N	22625	24300	-26	0
L24300N	22650	24300	-24	0
L24300N	22675	24300	-25	0
L24300N	22700	24300	-28	2
L24700N	20200	24700	-29	-4
L24700N	20225	24700	-30	-4
L24700N	20250	24700	-5	-2
L24700N	20275	24700	-6	-2
L24700N	20300	24700	-9	-3
L24700N	20325	24700	-8	-3
L24700N	20350	24700	-7	-6
L24700N	20375	24700	-7	-4
L24700N	20400	24700	-8	0
L24700N	20425	24700	-5	-2
L24700N	20450	24700	-6	1
L24700N	20475	24700	-8	3
L24700N	20500	24700	-6	2
L24700N	20525	24700	-9	2
L24700N	20550	24700	-7	3
L24700N	20575	24700	-11	0
L24700N	20600	24700	-8	0
L24700N	20625	24700	-7	2
L24700N	20650	24700	-4	0

LINE	GRID-X	GRID-Y	IP	QD
L24700N	20675	24700	-6	0
L24700N	20700	24700	-6	-2
L24700N	20725	24700	-9	-2
L24700N	20750	24700	-9	0
L24700N	20775	24700	-10	-3
L24700N	20800	24700	-10	-2
L24700N	20825	24700	-5	-4
L24700N	20850	24700	-4	-5
L24700N	20875	24700	-8	-5
L24700N	20900	24700	-8	-5
L24700N	20925	24700	-5	-5
L24700N	20950	24700	-4	-5
L24700N	20975	24700	-5	-2
L24700N	21000	24700	-6	-1
L24700N	21025	24700	-7	1
L24700N	21050	24700	-9	0
L24700N	21075	24700	-9	-1
L24700N	21100	24700	-15	-2
L24700N	21125	24700	-21	0
L24700N	21150	24700	-20	0
L24700N	21175	24700	-16	0
L24700N	21200	24700	-13	-4
L24700N	21225	24700	-14	-3
L24700N	21250	24700	-21	8
L24700N	21275	24700	-17	4
L24700N	21300	24700	-15	6
L24700N	21325	24700	-13	5
L24700N	21350	24700	-18	4
L24700N	21375	24700	-39	5
L24700N	21400	24700	-36	6
L24700N	21425	24700	-34	0
L24700N	21450	24700	-34	-1
L24700N	21475	24700	-38	-4
L24700N	21500	24700	-45	-6
L24700N	21525	24700	-31	-5
L24700N	21550	24700	-30	-6
L24700N	21575	24700	-25	-6
L24700N	21600	24700	-21	-8
L24700N	21625	24700	-20	-8
L24700N	21650	24700	-22	-8
L24700N	21675	24700	-24	-14
L24700N	21700	24700	-37	-10
L24700N	21725	24700	-47	-8
L24700N	21750	24700	-37	-8
L24700N	21775	24700	-31	-7
L24700N	21800	24700	-25	-6
L24700N	21825	24700	-18	-6
L24700N	21850	24700	-13	-6
L24700N	21875	24700	-12	-4
L24700N	21900	24700	-14	-2
L24700N	21925	24700	-14	4
L24700N	21950	24700	-14	-4
L24700N	21975	24700	-15	-2
L24700N	22000	24700	-1	-3
L24700N	22025	24700	-28	-6
L24700N	22050	24700	-31	-4
L24700N	22075	24700	-35	-2
L24700N	22100	24700	-49	-3
L24700N	22125	24700	-28	0
L24700N	22150	24700	-23	-5

LINE	GRID-X	GRID-Y	IP	QD
L24700N	22175	24700	-23	-2
L24700N	22200	24700	-25	-1
L24700N	22225	24700	-35	1
L24700N	22250	24700	-34	0
L24700N	22275	24700	-30	1
L24700N	22300	24700	-18	0
L24700N	22325	24700	-22	1
L24700N	22350	24700	-23	-2
L24700N	22375	24700	-19	0
L24700N	22400	24700	-18	-2
L24700N	22425	24700	-23	0
L24700N	22450	24700	-21	2
L24700N	22475	24700	-17	4
L24700N	22500	24700	-24	6
L24700N	22525	24700	-29	6
L24700N	22550	24700	-23	7
25500N	20225	25500	-16	-4
25500N	20250	25500	-16	-7
25500N	20275	25500	-12	-5
25500N	20300	25500	-5	-4
25500N	20325	25500	-5	-4
25500N	20350	25500	-3	-4
25500N	20375	25500	-2	0
25500N	20400	25500	-4	-2
20200E	20200	24725	-9	-4
20200E	20200	24750	-10	-6
20200E	20200	24775	-9	-5
20200E	20200	24800	-7	-1
20200E	20200	24825	-6	0
20200E	20200	24850	-5	0
20200E	20200	24875	-2	-3
20200E	20200	24900	-1	-2
20200E	20200	24925	4	-2
20200E	20200	24950	4	-2
20200E	20200	24975	3	-4
20200E	20200	25000	3	-5
20200E	20200	25025	-2	-6
20200E	20200	25050	-9	-5
20200E	20200	25075	-14	-6
20200E	20200	25100	-15	-6
20200E	20200	25125	-15	-2
20200E	20200	25150	-14	-4
20200E	20200	25175	-13	-1
20200E	20200	25200	-9	0
20200E	20200	25225	-8	0
20200E	20200	25250	-5	2
20200E	20200	25275	-7	1
20200E	20200	25300	-11	2
20200E	20200	25325	-11	2
20200E	20200	25350	-12	2
20200E	20200	25375	-13	2
20200E	20200	25400	-16	-1
20200E	20200	25425	-17	-2
20200E	20200	25450	-14	-2
20200E	20200	25475	-11	-3
20200E	20200	25500	-12	-4



LINE	GRID-X	GRID-Y	MAG
TL20200	20200	24450	57779.8
TL20200	20200	24475	57609.4
TL20200	20200	24500	57552.4
TL20200	20200	24525	57458.2
TL20200	20200	24550	57800.8
TL20200	20200	24575	57812.0
TL20200	20200	24600	57600.6
TL20200	20200	24625	57608.0
TL20200	20200	24650	57621.6
TL20200	20200	24675	57558.6
TL20200	20200	24700	57433.0
TL20200	20200	24725	57338.0
TL20200	20200	24750	57405.0
TL20200	20200	24775	57476.0
TL20200	20200	24800	57497.0
TL20200	20200	24825	57455.4
TL20200	20200	24850	57465.2
TL20200	20200	24875	57442.2
TL20200	20200	24900	57431.8
TL20200	20200	24925	57463.4
TL20200	20200	24950	57535.4
TL20200	20200	24975	57593.2
TL20200	20200	25000	57517.2
TL20200	20200	25025	57612.8
TL20200	20200	25050	57589.2
TL20200	20200	25075	57548.6
TL20200	20200	25100	57630.4
TL20200	20200	25125	57888.6
TL20200	20200	25150	57914.2
TL20200	20200	25175	57924.2
TL20200	20200	25200	57982.0
TL20200	20200	25225	57997.2
TL20200	20200	25250	58003.6
TL20200	20200	25275	57907.0
TL20200	20200	25300	57919.2
TL20200	20200	25325	57832.4
TL20200	20200	25350	57734.6
TL20200	20200	25375	57778.8
TL20200	20200	25400	57685.0
TL20200	20200	25425	57705.2
TL20200	20200	25450	57533.6
TL20200	20200	25475	57398.4
L23900	18100	23900	57472.4
L23900	18125	23900	58115.8
L23900	18150	23900	58192.6
L23900	18175	23900	58497.8
L23900	18200	23900	58469.0
L23900	18225	23900	58163.0
L23900	18250	23900	58348.8
L23900	18275	23900	58032.0
L23900	18300	23900	57747.6
L23900	18325	23900	58536.6
L23900	18350	23900	57835.6
L23900	18375	23900	58081.0
L23900	18400	23900	57854.2
L23900	18425	23900	57576.0
L23900	18450	23900	57721.2
L23900	18475	23900	57663.2
L23900	18500	23900	57481.4

LINE	GRID-X	GRID-Y	MAG
L23900	18525	23900	57610.8
L23900	18550	23900	57612.2
L23900	18575	23900	57744.0
L23900	18600	23900	57695.6
L23900	18625	23900	57699.6
L23900	18650	23900	57712.8
L23900	18675	23900	57376.0
L23900	18700	23900	57128.2
L23900	18725	23900	56945.6
L23900	18750	23900	56775.0
L23900	18775	23900	56998.6
L23900	18800	23900	58684.6
L23900	18825	23900	58205.6
L23900	18850	23900	57700.6
L23900	18875	23900	57221.2
L23900	18900	23900	58605.6
L23900	18925	23900	58848.8
L23900	18950	23900	58799.4
L23900	18975	23900	58329.4
L23900	19000	23900	58091.2
L23900	19025	23900	58221.2
L23900	19050	23900	57759.6
L23900	19075	23900	57529.0
L23900	19100	23900	57463.8
L23900	19125	23900	57541.6
L23900	19150	23900	57550.8
L23900	19175	23900	57551.8
L23900	19200	23900	57582.6
L23900	19225	23900	57663.0
L23900	19250	23900	57602.8
L23900	19275	23900	57611.6
L23900	19300	23900	57865.0
L23900	19325	23900	57559.0
L23900	19350	23900	57551.4
L23900	19375	23900	57661.0
L23900	19400	23900	57879.6
L23900	19425	23900	57986.2
L23900	19450	23900	58039.4
L23900	19475	23900	58209.6
L23900	19500	23900	57888.4
L23900	19525	23900	58110.6
L23900	19550	23900	57721.0
L23900	19575	23900	57276.0
L23900	19600	23900	57304.6
L23900	19625	23900	57562.6
L23900	19650	23900	57805.2
L23900	19675	23900	58098.8
L23900	19700	23900	58494.6
L23900	19725	23900	58152.4
L23900	19750	23900	58017.6
L23900	19775	23900	58203.2
L23900	19800	23900	58386.2
L23900	19825	23900	58803.6
L23900	19850	23900	57830.0
L23900	19875	23900	57927.6
L23900	19900	23900	58309.4
L23900	19925	23900	58411.0
L23900	19950	23900	58095.0
L23900	19975	23900	58024.8
L23900	20000	23900	57709.6

LINE	GRID-X	GRID-Y	MAG
L23900	20025	23900	57857.8
L23900	20050	23900	59396.0
L23900	20075	23900	58822.8
L23900	20100	23900	58608.6
L23900	20125	23900	59377.4
L23900	20150	23900	59529.2
L23900	20175	23900	59207.6
L23900	20200	23900	58865.0
L23900	20225	23900	58323.8
L23900	20250	23900	58780.0
L23900	20275	23900	57990.8
L23900	20300	23900	58106.6
L23900	20325	23900	58284.2
L23900	20350	23900	58073.0
L23900	20375	23900	58075.0
L23900	20400	23900	57757.6
L23900	20425	23900	57614.6
L23900	20450	23900	57588.8
L23900	20475	23900	57583.6
L23900	20500	23900	57603.6
L23900	20525	23900	57672.8
L23900	20550	23900	57801.0
L23900	20575	23900	58144.0
L23900	20600	23900	58402.0
L23900	20625	23900	57916.0
L23900	20650	23900	57943.8
L23900	20675	23900	57853.2
L23900	20700	23900	58101.4
L23900	20725	23900	57757.0
L23900	20750	23900	57651.0
L23900	20775	23900	57580.4
L23900	20800	23900	57713.0
L23900	20825	23900	57799.8
L23900	20850	23900	57891.2
L23900	20875	23900	57889.6
L23900	20900	23900	57687.6
L23900	20925	23900	57754.8
L23900	20950	23900	57752.4
L23900	20975	23900	57873.6
L23900	21000	23900	58113.8
L23900	21025	23900	58143.4
L23900	21050	23900	57793.0
L23900	21075	23900	57922.0
L23900	21100	23900	57746.4
L23900	21125	23900	57726.0
L23900	21150	23900	57740.2
L23900	21175	23900	57758.2
L23900	21200	23900	57769.8
L23900	21225	23900	57771.6
L23900	21250	23900	57769.4
L23900	21275	23900	57775.6
L23900	21300	23900	57798.2
L23900	21325	23900	57850.8
L23900	21350	23900	57786.2
L23900	21375	23900	57785.0
L23900	21400	23900	57837.0
L23900	21425	23900	57748.0
L23900	21450	23900	57781.0
L23900	21475	23900	57770.8
L23900	21500	23900	57784.4

LINE	GRID-X	GRID-Y	MAG
L23900	21525	23900	57791.8
L23900	21550	23900	57791.2
L23900	21575	23900	57799.0
L23900	21600	23900	57815.6
L23900	21625	23900	57773.4
L23900	21650	23900	57797.6
L23900	21675	23900	57856.4
L23900	21700	23900	57855.2
L23900	21725	23900	57785.6
L23900	21750	23900	57799.0
L23900	21775	23900	57854.0
L23900	21800	23900	57930.6
L23900	21825	23900	57790.0
L23900	21850	23900	57804.8
L23900	21875	23900	57823.2
L23900	21900	23900	57872.6
L23900	21925	23900	57845.0
L23900	21950	23900	57803.2
L23900	21975	23900	57785.4
L23900	22000	23900	57839.6
L23900	22025	23900	57851.8
L23900	22050	23900	57796.4
L23900	22075	23900	57795.6
L23900	22100	23900	57819.0
L23900	22125	23900	57723.6
L23900	22150	23900	57802.0
L23900	22175	23900	58225.6
L23900	22200	23900	58266.6
L23900	22225	23900	57855.4
L23900	22250	23900	57679.2
L23900	22275	23900	57584.0
L23900	22300	23900	57908.6
L23900	22325	23900	57873.6
L23900	22350	23900	57921.2
L23900	22375	23900	58017.8
L23900	22400	23900	57931.4
L23900	22425	23900	58087.0
L23900	22450	23900	57805.0
L23900	22475	23900	57842.6
L23900	22500	23900	57835.0
L24300	22700	24300	58175.6
L24300	22675	24300	58147.2
L24300	22650	24300	58309.4
L24300	22625	24300	58097.2
L24300	22600	24300	58395.4
L24300	22575	24300	58286.0
L24300	22550	24300	58143.4
L24300	22525	24300	58078.2
L24300	22500	24300	58011.0
L24300	22475	24300	57984.8
L24300	22450	24300	57872.8
L24300	22425	24300	57979.0
L24300	22400	24300	57953.8
L24300	22375	24300	57761.8
L24300	22350	24300	57846.2
L24300	22325	24300	57806.4
L24300	22300	24300	58117.8
L24300	22275	24300	57994.2
L24300	22250	24300	57861.2
L24300	22225	24300	57836.2

LINE	GRID-X	GRID-Y	MAG
L24300	22200	24300	57847.8
L24300	22175	24300	57876.8
L24300	22150	24300	57865.4
L24300	22125	24300	57852.0
L24300	22100	24300	57856.2
L24300	22075	24300	57870.6
L24300	22050	24300	57865.4
L24300	22025	24300	57828.2
L24300	22000	24300	57952.2
L24300	21975	24300	57888.8
L24300	21950	24300	58007.2
L24300	21925	24300	57904.0
L24300	21900	24300	57842.4
L24300	21875	24300	57784.4
L24300	21850	24300	57786.8
L24300	21825	24300	57761.8
L24300	21800	24300	57731.4
L24300	21775	24300	57734.8
L24300	21750	24300	57754.2
L24300	21725	24300	57782.8
L24300	21700	24300	58139.8
L24300	21675	24300	58190.6
L24300	21650	24300	57992.2
L24300	21625	24300	57895.2
L24300	21600	24300	57882.4
L24300	21575	24300	57845.8
L24300	21550	24300	57837.2
L24300	21525	24300	57830.4
L24300	21500	24300	57828.8
L24300	21475	24300	57813.4
L24300	21450	24300	57827.4
L24300	21425	24300	57822.8
L24300	21400	24300	57814.0
L24300	21375	24300	57825.6
L24300	21350	24300	57812.8
L24300	21325	24300	57771.8
L24300	21300	24300	57840.8
L24300	21275	24300	57861.4
L24300	21250	24300	57789.4
L24300	21225	24300	57768.2
L24300	21200	24300	57770.2
L24300	21175	24300	57749.8
L24300	21150	24300	57741.0
L24300	21125	24300	57734.2
L24300	21100	24300	57716.8
L24300	21075	24300	57725.0
L24300	21050	24300	57711.0
L24300	21025	24300	57701.8
L24300	21000	24300	57697.6
L24300	20975	24300	57664.8
L24300	20950	24300	57645.4
L24300	20925	24300	57568.8
L24300	20900	24300	57629.8
L24300	20875	24300	57647.6
L24300	20850	24300	57589.0
L24300	20825	24300	57546.0
L24300	20800	24300	57450.6
L24300	20775	24300	57578.2
L24300	20750	24300	57457.4
L24300	20725	24300	57369.0

LINE	GRID-X	GRID-Y	MAG
L24300	20700	24300	57715.2
L24300	20675	24300	57677.4
L24300	20650	24300	57595.6
L24300	20625	24300	57724.4
L24300	20600	24300	57713.0
L24300	20575	24300	57536.4
L24300	20550	24300	57504.2
L24300	20525	24300	57504.2
L24300	20500	24300	57494.8
L24300	20475	24300	57443.8
L24300	20450	24300	57568.2
L24300	20425	24300	57379.6
L24300	20400	24300	57326.6
L24300	20375	24300	57400.4
L24300	20350	24300	57885.6
L24300	20325	24300	57597.0
L24300	20300	24300	57250.4
L24300	20275	24300	57504.0
L24300	20250	24300	57151.2
L24300	20225	24300	57028.0
L24300	20200	24300	57329.8
L24300	20175	24300	57610.2
L24300	20150	24300	57692.6
L24300	20125	24300	57759.0
L24300	20100	24300	57780.8
L24300	20075	24300	57911.4
L24300	20050	24300	57395.4
L24300	20025	24300	57308.6
L24300	20000	24300	57392.6
L24300	19975	24300	57085.0
L25500	20200	25500	57418.2
L25500	20225	25500	57485.8
L25500	20250	25500	57626.6
L25500	20275	25500	57662.0
L25500	20300	25500	57563.6
L25500	20325	25500	57555.8
L25500	20350	25500	57517.6
L25500	20375	25500	57660.4
L25500	20400	25500	57620.2
L25500	20425	25500	57535.0
L25500	20450	25500	57661.8
L25500	20475	25500	57589.8
L25500	20500	25500	57552.2
L25500	20525	25500	57620.6
L25500	20550	25500	57819.4
L25500	20575	25500	57561.0
L25500	20600	25500	57728.6
L25500	20625	25500	57758.2
L25500	20650	25500	57625.0
L25500	20675	25500	57793.8
L25500	20700	25500	57825.8
L25500	20725	25500	57839.0
L25500	20750	25500	57879.6
L25500	20775	25500	57906.6
L25500	20800	25500	57868.2
L25500	20825	25500	58001.2
L25500	20850	25500	57941.6
L25500	20875	25500	57902.4
L25500	20900	25500	57933.8
L25500	20925	25500	57890.2

LINE	GRID-X	GRID-Y	MAG
L25500	20950	25500	57789.4
L25500	20975	25500	57869.6
L25500	21000	25500	57848.4
L25500	21025	25500	57855.4
L25500	21050	25500	57757.2
L25500	21075	25500	57831.0
L25500	21100	25500	57709.0
L25500	21125	25500	57659.8
L25500	21150	25500	57704.2
L25500	21175	25500	57768.0
L25500	21200	25500	57723.6
L25500	21225	25500	57942.6
L25500	21250	25500	57583.0
L25500	21275	25500	57570.2
L25500	21300	25500	57731.6
L25500	21325	25500	57643.6
L25500	21350	25500	57601.2
L25500	21375	25500	57752.2
L25500	21400	25500	57564.2
L25500	21425	25500	57615.8
L25500	21450	25500	57538.8
L25500	21475	25500	57582.4
L25500	21500	25500	57542.4
L25500	21525	25500	57853.6
L25500	21550	25500	57692.0
L25500	21575	25500	57652.0
L25500	21600	25500	57672.8
L25500	21625	25500	57818.2
L25500	21650	25500	57962.2
L25500	21675	25500	57787.2
L25500	21700	25500	57903.8
L25500	21725	25500	57852.8
L25500	21750	25500	57724.6
L25500	21775	25500	57767.0
L25500	21800	25500	57615.8
L25500	21825	25500	58152.8
L25500	21850	25500	57599.4
L25500	21875	25500	57792.0
L25500	21900	25500	57824.8
L25500	21925	25500	57897.2
L25500	21950	25500	57733.6
L25500	21975	25500	57665.0
L25500	22000	25500	57841.8
L25500	22025	25500	57758.0
L25500	22050	25500	57848.4
L25500	22075	25500	57765.0
L25500	22100	25500	57793.4
L25500	22125	25500	57816.8
L25500	22150	25500	57919.6
L25500	22175	25500	57810.0
L25500	22200	25500	57880.8
L25500	22225	25500	57824.2
L25500	22250	25500	57895.4
L25500	22275	25500	57907.0
L25500	22300	25500	57874.2
L25500	22325	25500	57884.8
L25500	22350	25500	57879.4
L25500	22375	25500	57902.4
L25500	22400	25500	57825.4
L25500	22425	25500	57882.0

LINE	GRID-X	GRID-Y	MAG
L25500	22450	25500	57875.8
L25500	22475	25500	57885.4
L25500	22500	25500	57918.6
L25500	22525	25500	58000.2
L25500	22550	25500	58121.8
L25500	22575	25500	58137.0
L25500	22600	25500	58061.2
L25500	22625	25500	58039.0
L25500	22650	25500	58150.4
L25500	22675	25500	58023.6
L25500	22700	25500	57953.0
L25500	22725	25500	57930.6



## 5.5 Magnetometer Survey

### Method

A magnetometer survey was conducted over 3 grid lines on the Cat 23 Grid and a portion of a tie-line. The survey utilized 25 meter stations, for a total of 10.8 km surveyed.

The survey utilized a Geometrics G-856A portable proton magnetometer. The base station magnetometer was inoperable during the survey and data was, unfortunately, not corrected for diurnal variation. The survey was also conducted during a period of active magnetic storms.

Daily readings were dumped out to disk in a Toshiba 3200 laptop portable computer. The data was stored on disk for eventual transfer to a Sun computer system for final plotting and processing.

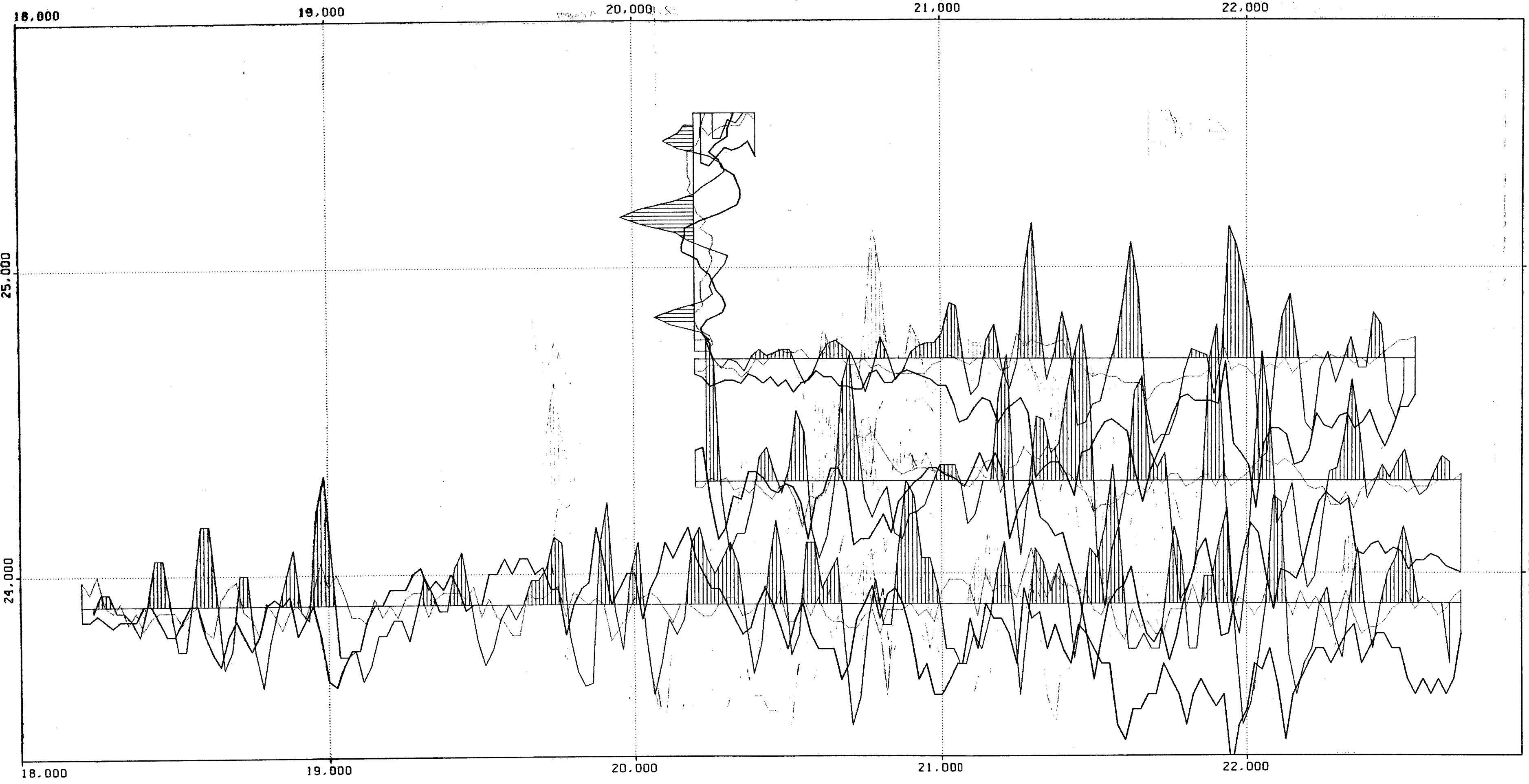
Magnetometer profiles, plotted at 1:10 000 scale, are presented as Figure 5 of this report. Raw data is compiled in Appendix III.

### Results and Interpretation

In view of the fact that magnetic data was only collected over three widely spaced (400m and 1200 m) grid lines where there is very little outcrop to correlate with, it is difficult to draw any reliable conclusions from the data.

Magnetic response is low to moderate over the mapped area of interbedded tuff and sedimentary rocks. On line 23 900N, west of the Cat 23/24 claim line, magnetometer data is extremely noisy, with several spikey peaks and lows. No outcrop was found in this area, however, regional geology places the contact between the upper and lower units of the Plughat Mountain Formation in this area. As IP chargeabilities are low in this area, the fluctuations probably represent differing magnetic content between mafic volcanic and sedimentary rocks in the upper unit.

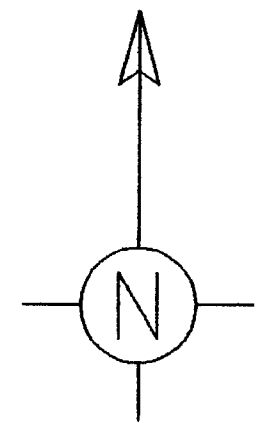
The author also notes that magnetic data on line 24 300N is somewhat elevated over the southern end of the IP resistivity high, supporting the possibility of a small intrusive body in this vicinity. A peak on the east side of this high, at 21 700E, is coincident with the fault detected by the IP and VLF-EM surveys.



DATA PLOTTED ON THIS MAP:

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- FIELD FILE
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- ▨ ERTY INPHASE
- SCALE: 10.0 UNITS / CM
- BASE LEVEL: 0.0
- FRASER FILTER APPLIED
- ERTY QUAD
- SCALE: 10.0 UNITS / CM
- BASE LEVEL: 0.0



**22722**

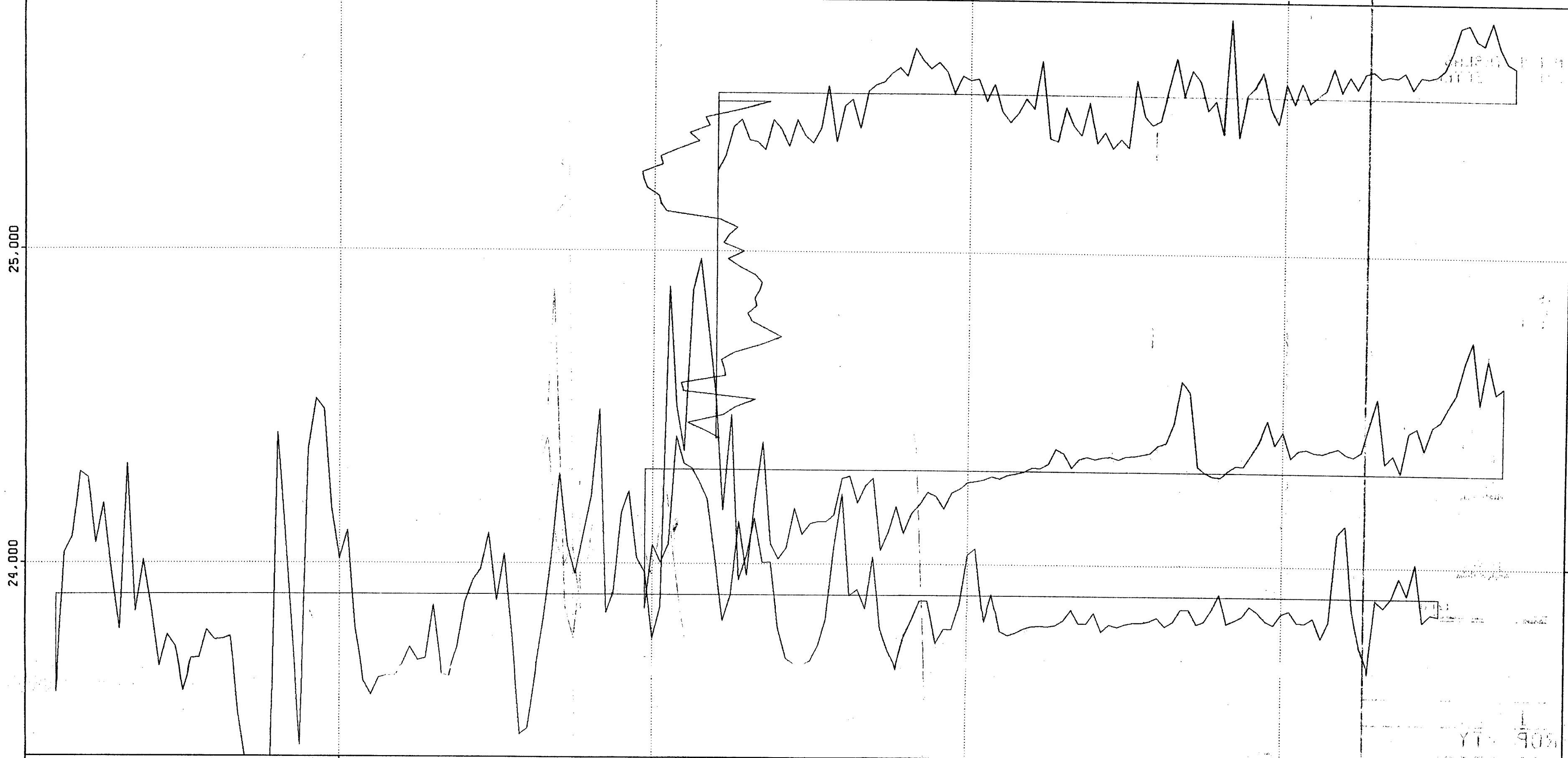
PLACER DOME INC.

DRAWN TJC  
DATE 92:12:08  
SCALE 1:10000

CAT PROPERTY  
VLF-EM STACKED PROFILES

NO. 4

18.000 19.000 20.000 21.000 22.000



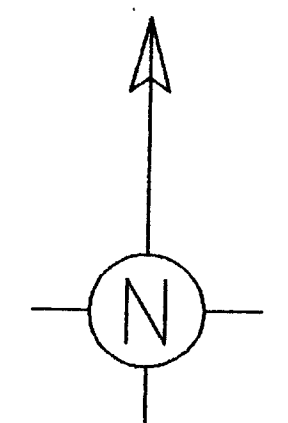
25.000  
24.000

MAGNETOMETER READINGS IN NANOTESLAS  
 AVERAGE VALUE FOR EACH LINE SELECTED  
 AS BASE.  
 UNCORRECTED DATA

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 MAG MAG.STAT  
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 LINES BIASED TO AVG = BASE




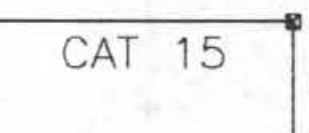
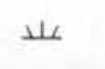

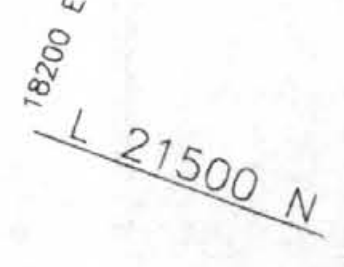

**22722**

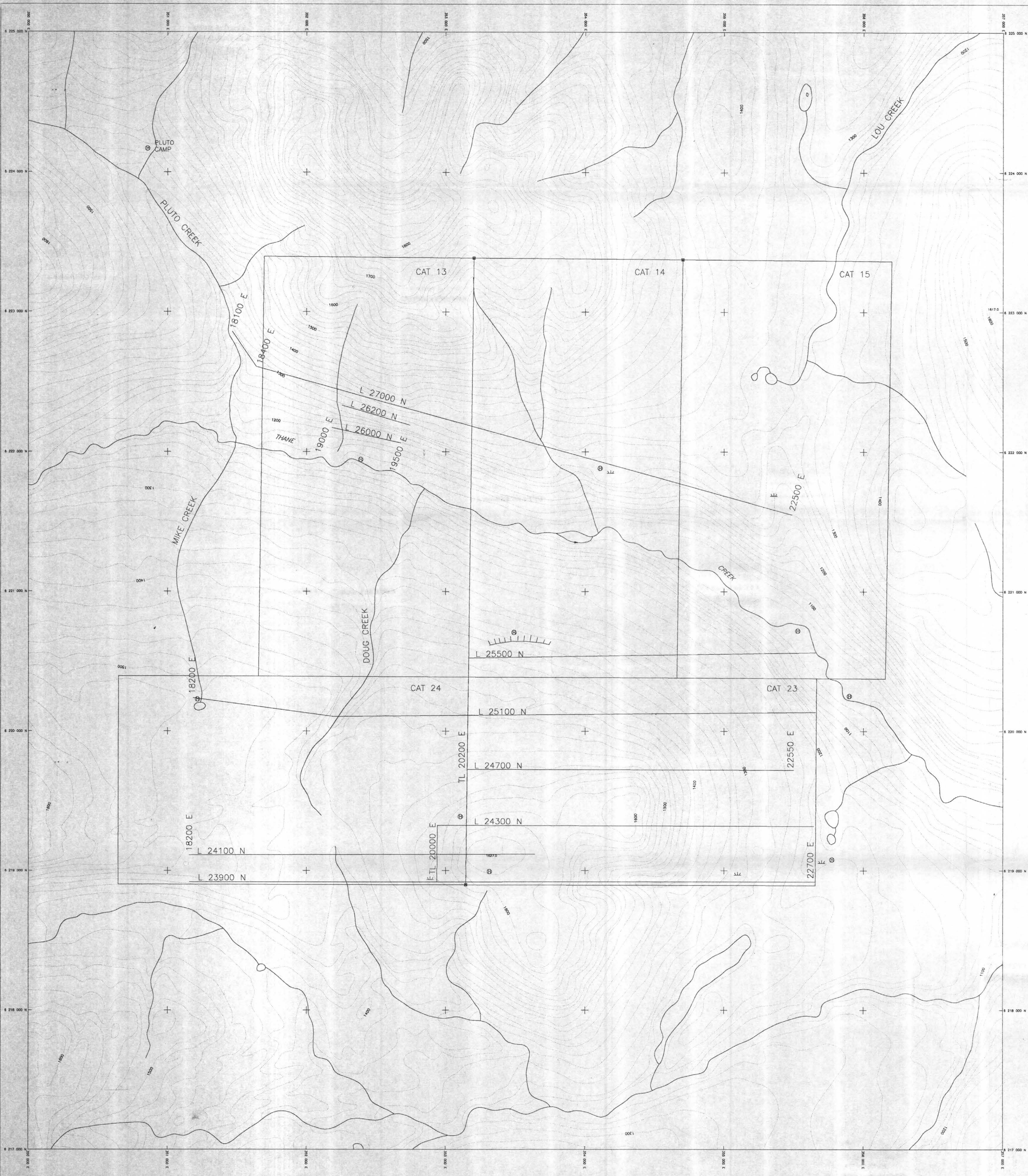
18.000 19.000 20.000 21.000 22.000

DRAWN TJC		PLACER DOME INC. CAT PROPERTY GROUND MAGNETICS
DATE 92:12:21		
SCALE 1:10000		
		NO. 5



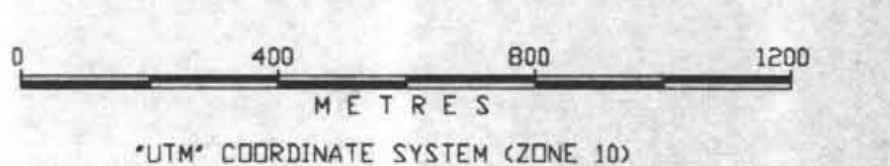
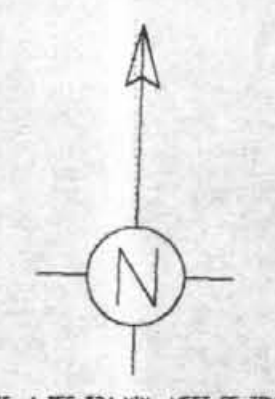
LEGEND

-  SURFACE CONTOURS WITH ELEVATION IN METRES
-  CLAIM BOUNDARY WITH LCP AND CLAIM NAME
-  SWAMP
-  HELICOPTER PAD
-  GRID LINE WITH LINE NUMBER AND DISTANCE ALONG LINE
-  STREAM



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**22,722**  
PART 1 OF 2



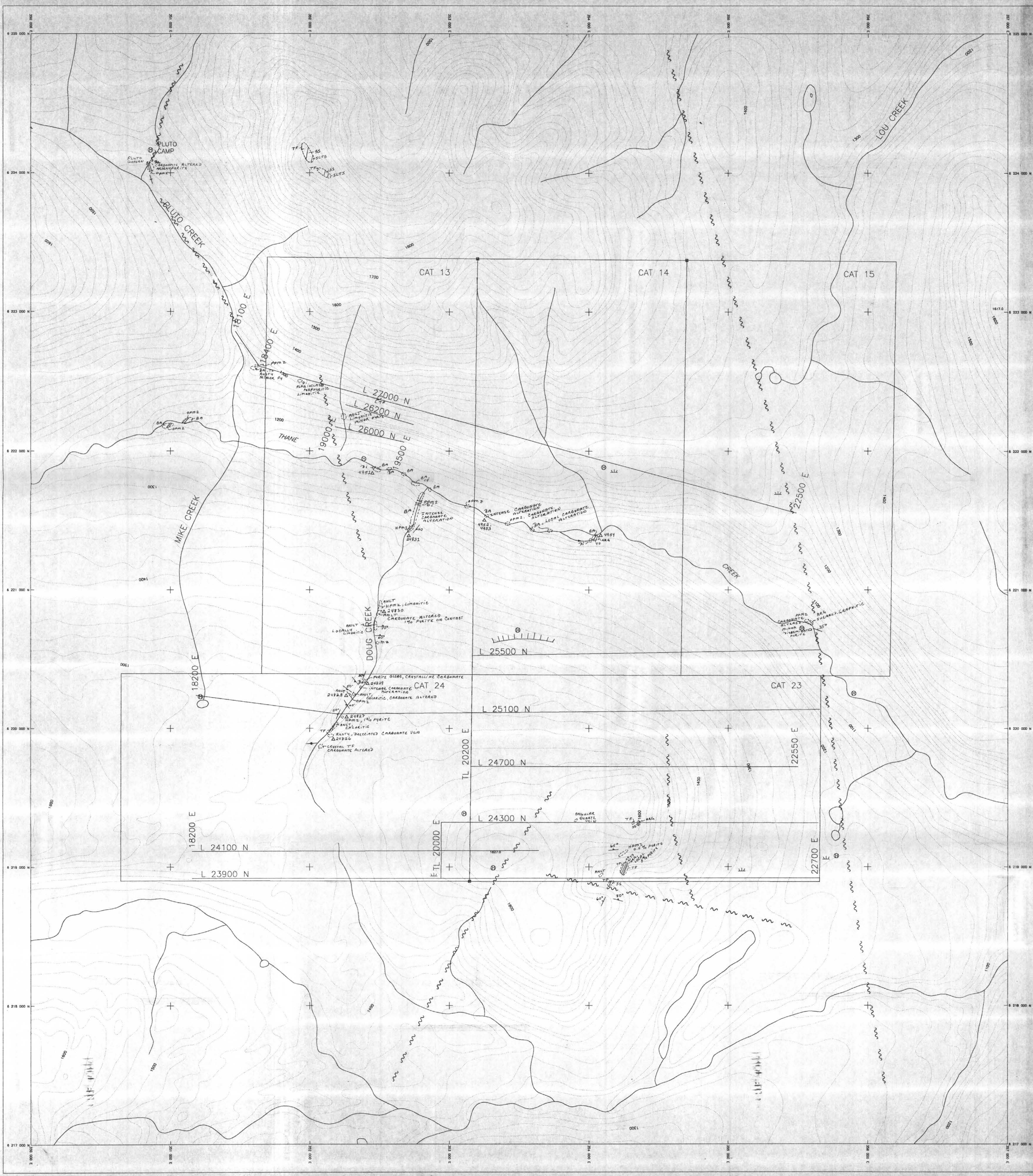
UTM COORDINATE SYSTEM (ZONE 10)

PLACER DOME INC.  
CAT CLAIMS  
BASE MAP

DRAWN TJC  
DATE 9/21/09  
SCALE 1:10000  
NTS 94C3

PAGE 6





**GEOLOGY LEGEND**

**LITHOLOGIES**

**INTRUSIVE ROCKS**

DI Diorite, granodiorite  
 HPMZ Hornblende-plagioclase porphyry monzonite  
 OPMZ Orthoclase porphyry monzonite  
 PPMZ Plagioclase porphyry monzonite  
 MZ Monzonite; medium grained

**VOLCANIC ROCKS**

ANLT Andesite lapilli tuff  
 TF Tuff and crystal tuff  
 BA Basalt; fine grained and augite-plagioclase porphyry

**SEDIMENTARY ROCKS**

SS Sandstone  
 SLTS Siltstone  
 ARG Argillite; locally pyritic and graphitic mudstone

**SYMBOLS**

Limit of outcropping rock  
 Geologic contact; observed  
 Bedding; inclined, vertical  
 Joints; inclined, vertical  
 Fractures; inclined, vertical  
 Rock sample location, sample number  
 Fault; inferred

**ROCK SAMPLE GEOCHEMICAL RESULTS**

SAMPLE NO	AU (ppb)	CU (ppm)
A4951	1	373
A4952	4	67
A4953	2	28
A4954	2	16
A24826	53	63
A24827	10	130
A24828	10	11
A24829	4	4
A24830	10	299
A24831	3	217

**TOPOGRAPHY LEGEND**

SURFACE CONTOURS WITH ELEVATION IN METRES

CAT 15 CLAIM BOUNDARY WITH LCP AND CLAIM NAME

SWAMP

HELICOPTER PAD

GRID LINE WITH LINE NUMBER AND DISTANCE ALONG LINE

STREAM

UTM NORTH IS 3 METERS HIGH WEST OF TRUE NORTH

0 400 800 1200 METRES

UTM COORDINATE SYSTEM (ZONE 10)

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

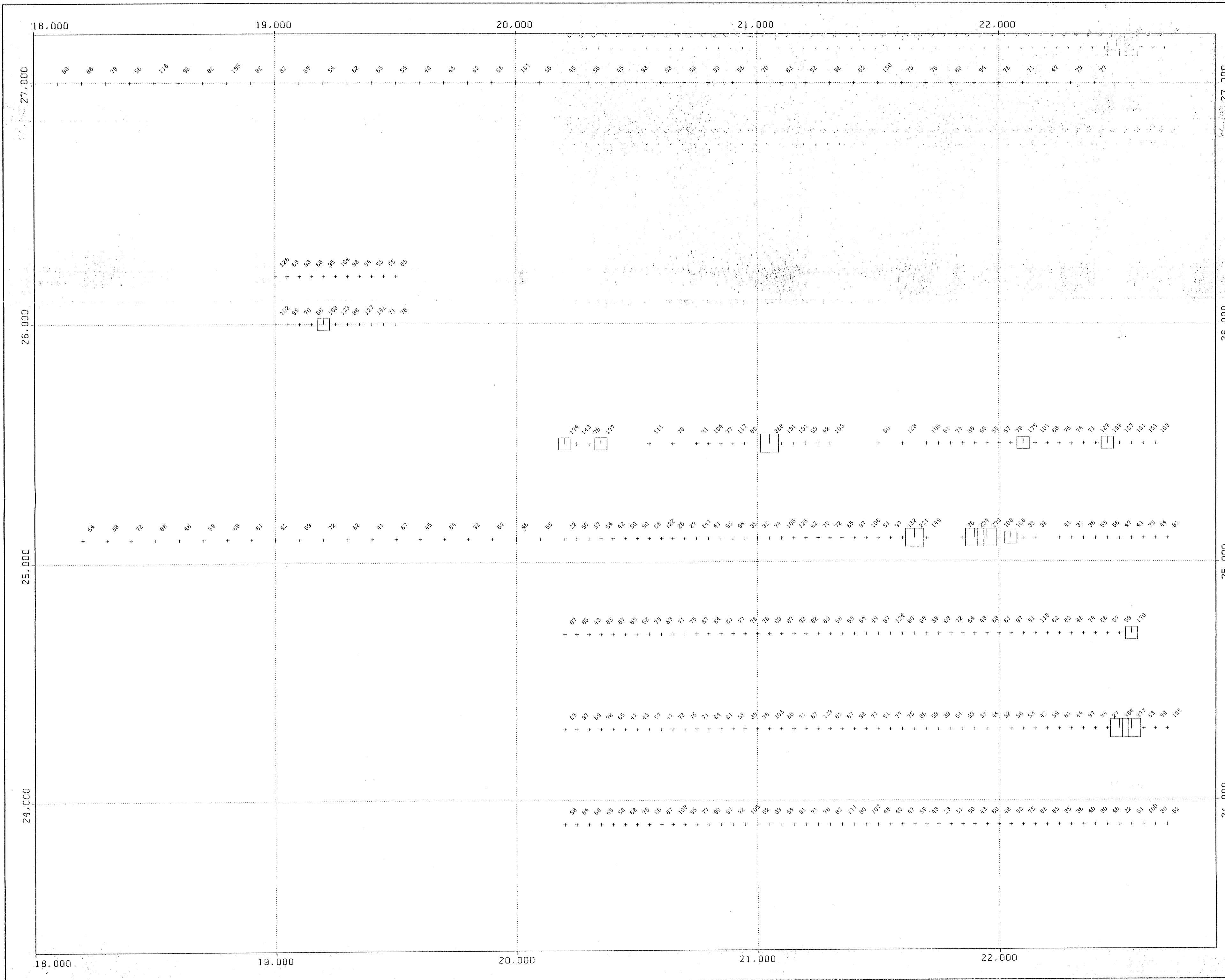
**22,722**

**PART 1 OF 2**

**PLACER DOME INC. CAT CLAIMS PROPERTY GEOLOGY**

DRAWN TJC  
 DATE 9/2/09  
 SCALE 1:10000  
 NTS 94C3

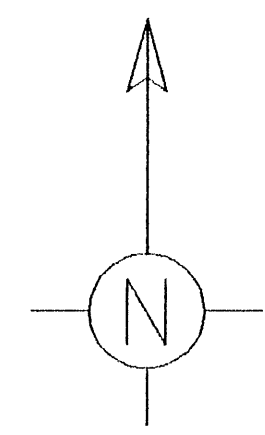




[ ] CU > 220 PPM  
 [ ] 160 < CU < 220 PPM  
 + CU < 160 PPM

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POINTS: FIELD FILE  
 POINTS: CU ASSAYS  
 POINTS: CU ASSAYS

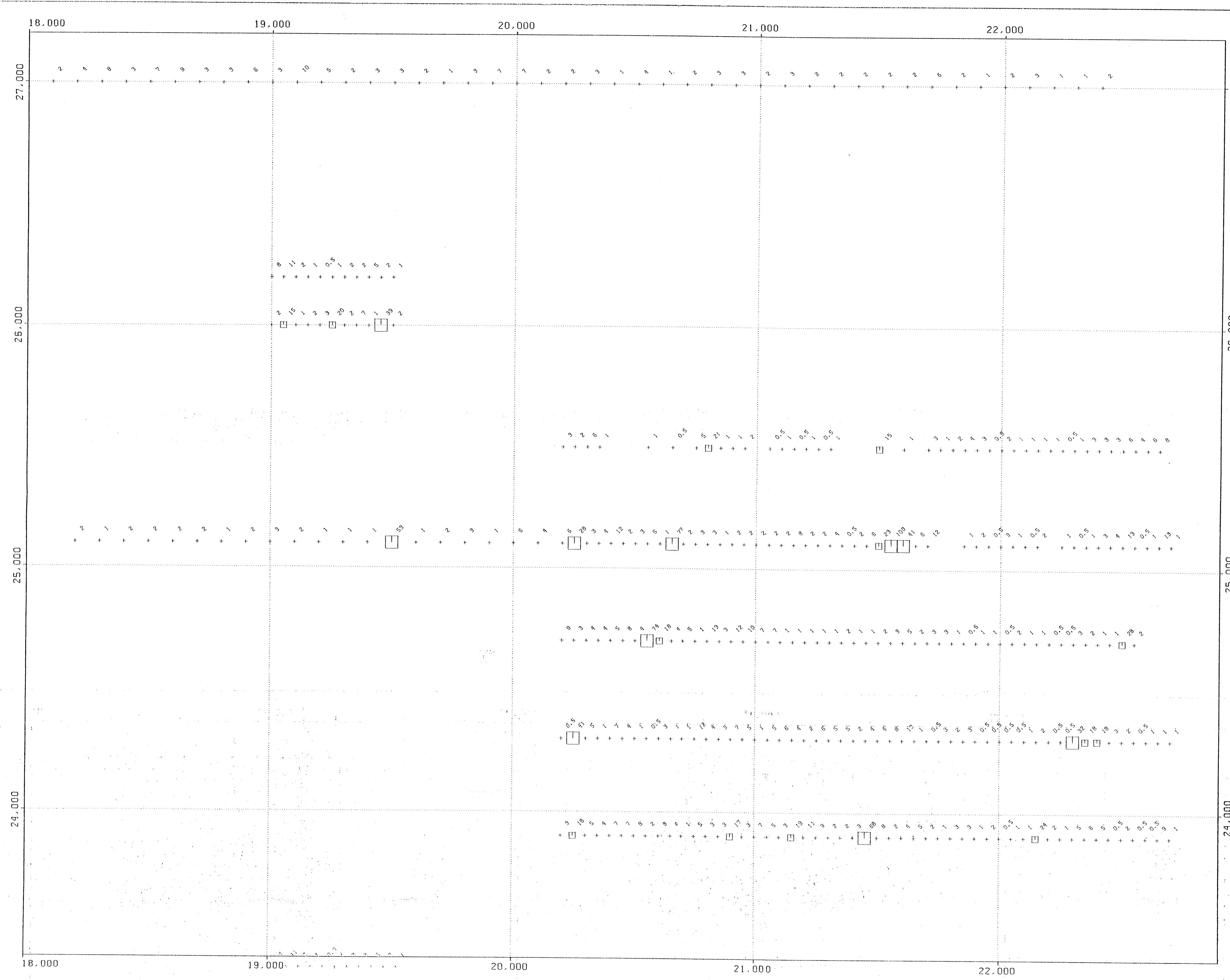


GEOLOGICAL BRANCH  
 ASSESSMENT REPORT

**22,722**

PART 1 OF 2

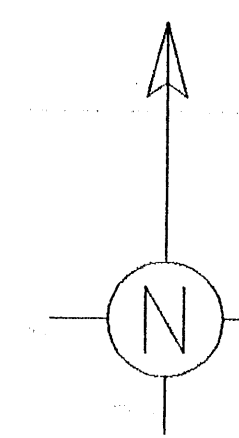
DRAWN TJC		PLACER DOME INC.	
DATE 92:12:21		CAT PROPERTY	
SCALE 1:10000		SOIL AND SILT GEOCHEMISTRY	
		COPPER IN PPM	
		NO. 8	



- AU > 28 PPB
- ▣ 15 < AU < 28 PPB
- + AU < 15 PPB

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POINTS: FIELD FILE  
 AU ASSAYS  
 POINTS: AU ASSAYS



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

22,722



PLACER DOME INC.	
DRAWN TJC	CAT PROPERTY
DATE 92:12:21	SOIL AND SILT GEOCHEMISTRY
SCALE 1:10000	GOLD IN PPB
	NO. 9

LOG NO: JAN 12 1993 RD.

ACTION.

FILE NO:

**A GEOPHYSICAL REPORT ON  
AN INDUCED POLARIZATION SURVEY  
ON THE CAT CLAIMS  
OMINECA MINING DIVISION  
BRITISH COLUMBIA**

**LATITUDE 56°03'N  
LONGITUDE 125°22'W  
NTS 94C/3**

**FOR**

**PLACER DOME INC.**

**BY**

**S. John A. Cornock, B.Sc.**

**and**

**John Lloyd, M.Sc., P.Eng.**

**LLOYD GEOPHYSICS INC. GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**SEPTEMBER, 1992**

**22,722**

**PART 2 OF 2**



## SUMMARY

During the period of July 27th to August 5th, 1992, Lloyd Geophysics Inc. carried out a time domain Induced Polarization (IP) survey on the CAT Claims for Placer Dome Inc.

A broad anomalous zone extending across the grid area was detected and was characterized by localized areas of both higher and lower resistivities. The area of higher resistivity appears to coincide with an intrusive body while the area of lower resistivity is believed to be associated with sulphides.

Additional IP surveying is recommended to the north in order to delineate the full extent of the anomaly before any drilling is considered.

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3.0 PROPERTY STATUS AND CLAIM HOLDINGS	1
4.0 REGIONAL GEOLOGY	4
5.0 INSTRUMENT SPECIFICATIONS	4
6.0 SURVEY SPECIFICATIONS	7
7.0 DATA PROCESSING	7
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9.0 DISCUSSION OF RESULTS	8
10.0 CONCLUSIONS AND RECOMMENDATIONS	11

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Cost of Surveying and Reporting	Appendix B
Certification of Senior Author	Appendix C

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Figure 2	Claims and Grid Location	3
Figure 3	BRGM IP-6 Receiver Parameters	5
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## **1.0 INTRODUCTION**

During the period of July 27th to August 5th, 1992, Lloyd Geophysics Inc. carried out a time domain Induced Polarization (IP) survey on the CAT Claims near Uslika Lake, British Columbia for Placer Dome Inc.

The intent of this survey was to locate and identify responses associated with a copper-gold porphyry system.

## **2.0 PROPERTY LOCATION AND ACCESS**

The CAT claims are located approximately 200 kilometres northwest of Windy Point, British Columbia near Uslika Lake. The claims are centred on latitude 56°03'North, longitude 125°22'West in the Omineca Mining Division (Figure 1), NTS 94C/3.

Access to the property is by truck from Windy Point along logging roads adjacent to Williston Lake and on the Osilinka Mainline to Uslika Lake. From there, access is by helicopter to the property which lies to the north.

## **3.0 PROPERTY STATUS AND CLAIM HOLDINGS**

The CAT property consists of 5 mineral claims totalling 84 units. The claims, their record numbers and expiry dates are listed below.





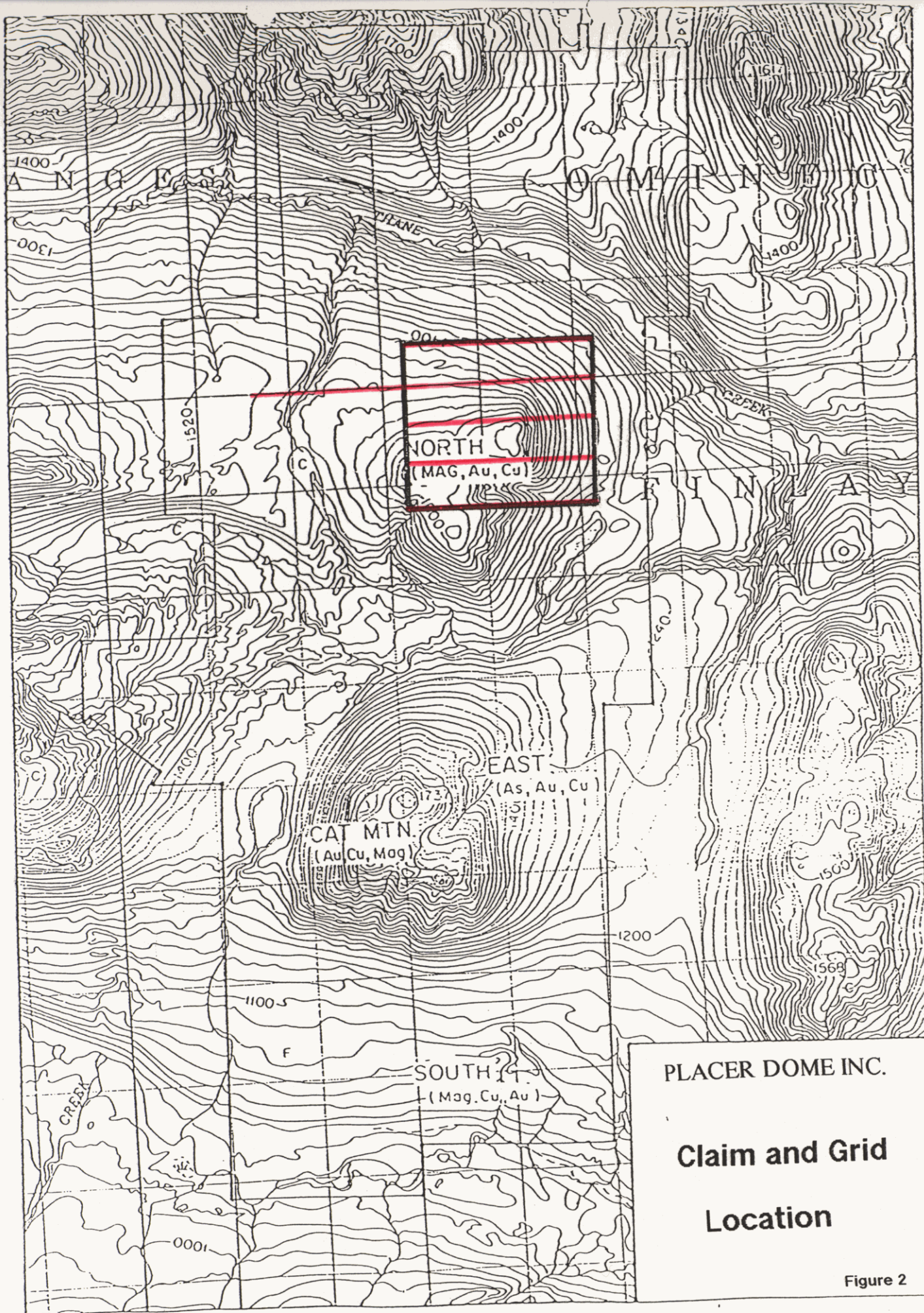


Figure 2

<u>Claim</u>	<u>Units</u>	<u>Record No.</u>	<u>Expiry Date</u>
CAT 13	18	241436	November 16, 1992
CAT 14	18	241437	November 16, 1992
CAT 15	18	241438	November 16, 1992
CAT 23	15	310299	June 12, 1993
CAT 24	15	310300	June 12, 1993

#### **4.0 REGIONAL GEOLOGY**

No information is available at this time.

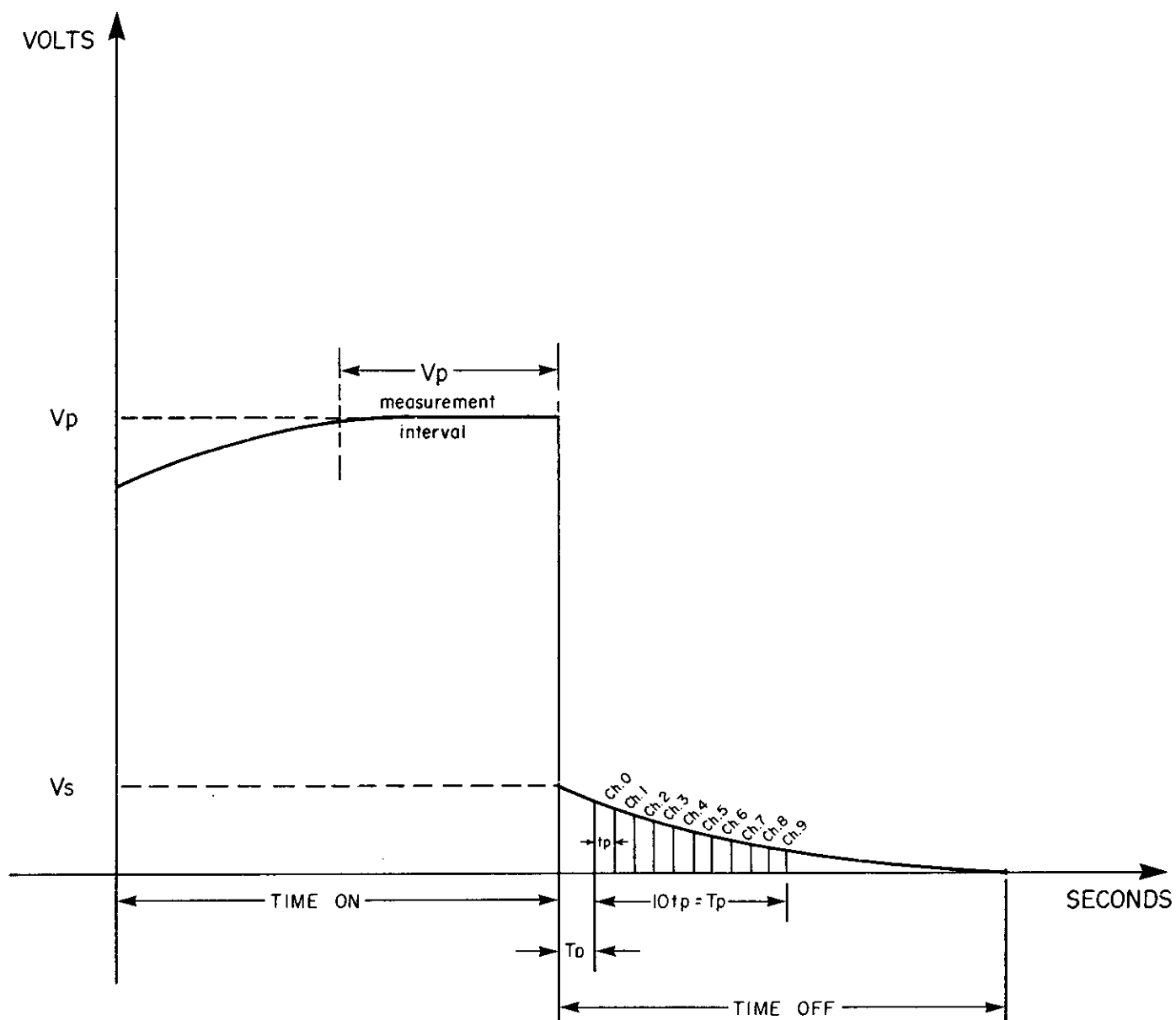
#### **5.0 INSTRUMENT SPECIFICATIONS**

The equipment used to carry out this survey was a time domain measuring system consisting of a Wagner Leland/Onan motor generator set and a Mark II transmitter manufactured by Hunttec Limited, Toronto, Canada and a 6 channel IP-6 receiver manufactured by BRGM Instruments, Orleans, France.

The Wagner Leland/Onan motor generator supplies in excess of 7.5 kilowatts of 3 phase power to the ground at 400 hertz via the Mark II transmitter.

The transmitter was operated with a cycle time of 8 seconds and the duty cycle ratio: [(time on)/(time on + time off)] was 0.5. This means the cycling sequence of the transmitter was 2 seconds current "on" and 2 seconds current "off" with consecutive pulses reversed in polarity.





### BRGM IP-6 RECEIVER PARAMETERS

Figure 3

The IP-6 receiver can read up to 6 dipoles simultaneously. It is microprocessor controlled, featuring automatic calibration, gain setting, SP cancellation and fault diagnosis. To accommodate a wide range of geological conditions, the delay time, the window widths and hence the total integration time is programmable via the keypad. Measurements are calculated automatically every 2 to 4 seconds from the averaged waveform which is accumulated in memory.

The window widths of the IP-6 receiver can be programmed arithmetically or logarithmically. For this particular survey the instrument was programmed arithmetically into 10 equal window widths or channels, Ch<sub>0</sub>, Ch<sub>1</sub>, Ch<sub>2</sub>, Ch<sub>3</sub>, Ch<sub>4</sub>, Ch<sub>5</sub>, Ch<sub>6</sub>, Ch<sub>7</sub>, Ch<sub>8</sub>, Ch<sub>9</sub> (see Figure 2). These may be recorded individually and summed up automatically to obtain the total chargeability. Similarly the resistivity ( $\rho_s$ ) in ohm-metres is also calculated automatically.

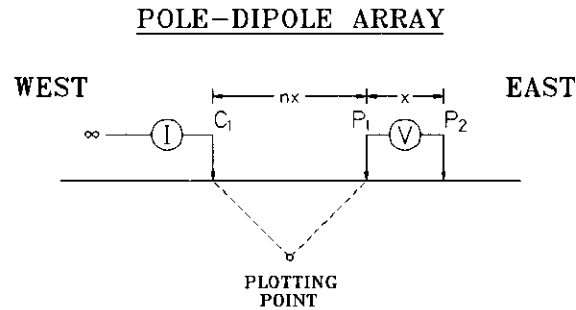
The instrument parameters chosen for this survey were as follows:

Cycle Time ( $T_c$ )	= 8 seconds
Ratio $\frac{(\text{Time On})}{(\text{Time Off})}$	= 1:1
Duty Cycle Ratio	
$\frac{(\text{Time On})}{(\text{Time On})+(\text{Time Off})}$	= 0.5
Delay Time ( $T_D$ )	= 120 milliseconds
Window Width ( $t_p$ )	= 90 milliseconds
Total Integrating Time ( $T_p$ )	= 900 milliseconds



## 6.0 SURVEY SPECIFICATIONS

The configuration of the POLE-DIPOLE array used for the survey is shown below:



$$x = 100 \text{ metres} \quad n = 1, 2, 3 \text{ and } 4$$

On the CAT property, the current electrode,  $C_1$ , was WEST of the potential measuring dipole  $P_1P_2$ . Here the measurements were taken for  $x = 100$  metres and  $n = 1, 2, 3$  and  $4$  on lines 400 metres apart. The dipole length ( $x$ ) is the distance between  $P_1$  and  $P_2$  and determines mainly the sensitivity of the array. The electrode separation ( $nx$ ) is the distance between  $C_1$  and  $P_1$  and determines mainly the depth of penetration of the array.

## 7.0 DATA PROCESSING

At the end of each survey day the data collected was processed in the field, for a quick review of anomalies, data integrity checks and inspection by the client's representative.

In the office the data was transferred to a COMPAQ 386 coupled to a Hewlett Packard Draftsman II plotter for preparation of final pseudo-sections and contour plan maps on mylar.

## 8.0 DATA PRESENTATION

The data gathered from the survey discussed in this report is presented on 4 pseudo-sections and 2 contour plan maps as listed below:

### Pseudo-Sections

<u>Line No.</u>	<u>Dwg. No.</u>	<u>Line No.</u>	<u>Dwg. No.</u>
23900N	92333-CAT1	24700N	92333-CAT3
24300N	92333-CAT2	25100N	92333-CAT4

### Contour Plan Maps

Chargeability 10 Point Triangular Filter	92333-CAT5
Resistivity 10 Point Triangular Filter	92333-CAT6

## 9.0 DISCUSSION OF RESULTS

A detailed study has been made of the pseudo-sections which accompany this report. These pseudo-sections are not sections of the electrical properties of the sub-surface strata and cannot be treated as such when determining the depth, width and thickness of a zone which produces an anomalous pattern.

From the study the anomalies selected are shown on the individual pseudo-sections and are classified into 4 groups. These are definite, probable and possible anomalies and anomalies which have a deeper source.

This classification is based partly on the relative amplitudes of the chargeability and to a lesser degree on the resistivity response. Of equal importance in this classification is the overall anomaly pattern and the degree to which this pattern may be correlated from line to line, provided of course that the correlation is not so extensive along strike so as to most probably represent only the subcrop of a geological formation.

An IP response depends largely on the following factors:

1. The volume content of sulphide minerals
2. The number of pore paths that are blocked by sulphide grains
3. The number of sulphide faces that are available for polarization
4. The absolute size and shape of the sulphide grains and the relationship of their size and shape to the size and shape of the available pore paths
5. The electrode array employed
6. The width, depth, thickness and strike length of the mineralized body and its location relative to the array
7. The resistivity contrast between the mineralized body and the unmineralized host rock

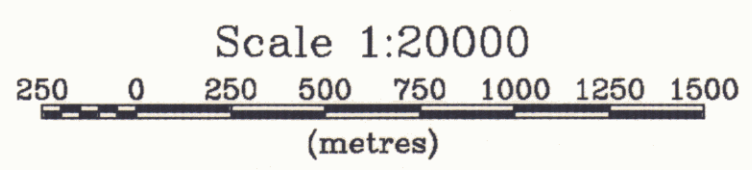
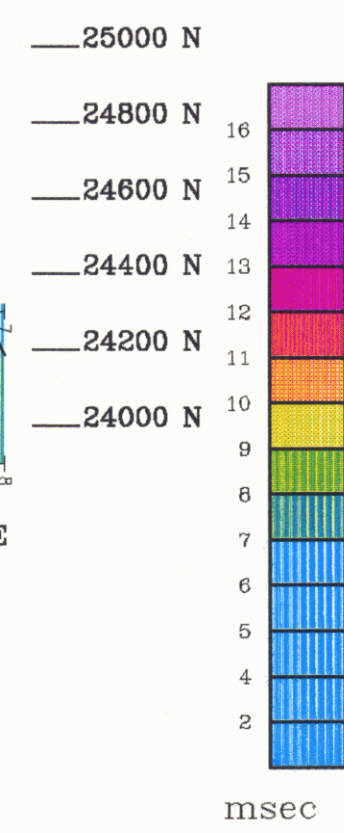
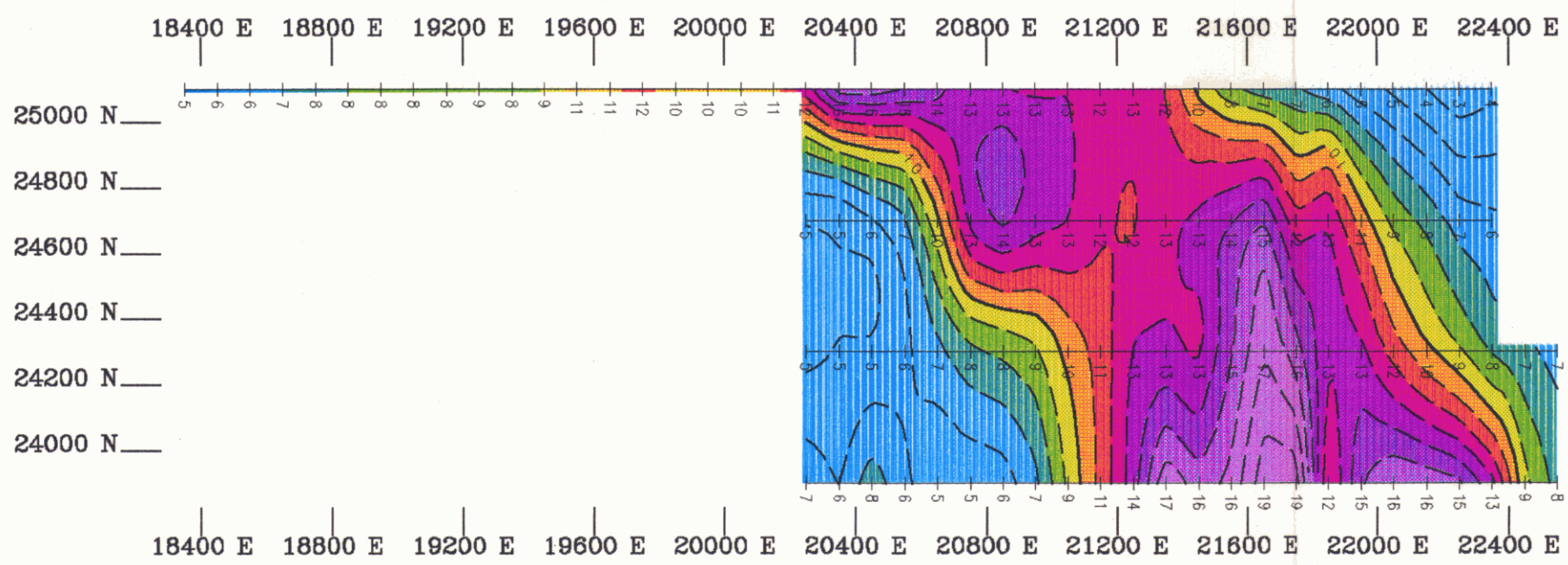
The 1992 IP/Resistivity survey has outlined 1 large anomalous zone, approximately 1200 metres wide which extends across the grid area from the northwest to the southeast (See Dwg. No. 92333-CAT5). A zone of high resistivity (900-1100 ohm metres) is present on lines 24300N and 24700N which has been interpreted as an intrusive body and accounts for the

# LEGEND

INDUCED POLARIZATION SURVEY  
 POLE-DIPOLE ARRAY  
 DIPOLE SEPARATION : 100 METRES  
 CURRENT ELECTRODE WEST OF POTENTIAL DIPOLE

## CONTOUR INTERVALS

--- 1.0 MSEC  
 ——— 10.0 MSEC



<b>PLACER DOME INC.</b>
OMINECA PROJECT - CAT Claims Omineca Mining Division
<b>CHARGEABILITY 10 POINT TRIANGULAR FILTER</b>
NTS 94 C/3 Map Scale 1 : 20000 Drawing : 92333-CAT5
<b>LLOYD GEOPHYSICS INC.</b>

high chargeabilities within the zone. However, the area to the northwest within the zone coincides with resistivities in the 200-400 ohm-metre range which make it more inviting to further exploration.

## 10.0 CONCLUSIONS AND RECOMMENDATIONS

The IP/Resistivity survey has shown a broad anomalous zone which extends across the grid area. Within the zone are two areas with contrasting resistivities. The high chargeabilities associated with the high resistivities are believed to indicate the presence of an intrusive. Whereas to the northwest of this intrusive, still within the zone, is an area possessing respectable chargeabilities coincident with resistivities in the 200-400 ohm-metre range and is believed to be associated with sulphide mineralization and should be considered as a possible drill target.

Additional IP surveying is recommended to the north between 19400E and 21400E in order to determine the full extent of the anomaly before drilling.

Respectfully Submitted,  
LLOYD GEOPHYSICS INC.



S. John A. Cornock, B.Sc.  
Geophysicist



John Lloyd, M.Sc., P.Eng.  
Geophysicist

September, 1992

## APPENDIX A

### Personnel Employed on Survey

<u>Name</u>	<u>Occupation</u>	<u>Address</u>	<u>Dates</u>
J Lloyd	Geophysicist	Lloyd Geophysics Inc. #1503-1166 Alberni Street Vancouver, B.C. V6E 3Z3	Sept 21, 1992
J Cornock	Geophysicist	"	July 27-Aug 5/92 Sept 18 & 20/92
J Carver	Geophysical Technician	"	July 27-Aug 5/92
C Bilquist	Geophysical Technician	"	July 27-Aug 5/92
M Cordiez	Helper	"	July 27-Aug 5/92
J Lambert	Helper	"	July 27-Aug 5/92

## APPENDIX B

### Cost of Surveying And Reporting

Lloyd Geophysics Inc. contracted the IP data acquisition on a per diem basis. Mobilization/ Demobilization, camp costs, data processing, computer plotting, map reproduction, interpretation and report writing were additional costs. The breakdown of these costs was as follows:

Mob/Demob of Camp by Truck	\$ 722.81
Camp Costs	347.83
Living and Travelling Expenses for 5 Man Crew	469.60
Mob/Demob of 5 Man Crew by Truck	2,899.61
Data Acquisition	6,510.00
Data Processing and Computer Plotting	355.00
Consumables and Reproduction Costs	22.60
Interpretation and Report Writing	<u>915.00</u>
 Sub-Total	 \$ 12,242.45
G.S.T. @ 7%	<u>856.97</u>
 TOTAL	 \$ <u>13,099.42</u>

## APPENDIX C

### Certification of Senior Author

I, John Lloyd, of 1503-1166 Alberni Street, in the City of Vancouver, in the Province of British Columbia, do hereby certify that:

1. I graduated from the University of Liverpool, England in 1960 with a B.Sc. in Physics and Geology, Geophysics Option.
2. I obtained the diploma of the Imperial College of Science and Technology (D.I.C.), in Applied Geophysics from the Royal School of Mines, London University in 1961.
3. I obtained the degree of M.Sc. in Geophysics from the Royal School of Mines, London University in 1962.
4. I am a member in good standing of the Association of Professional Engineers in the Province of British Columbia, the Society of Exploration Geophysicists of America, the European Association of Exploration Geophysicists and the Canadian Institute of Mining and Metallurgy.
5. I have been practising my profession for over twenty-five years.

Vancouver, B.C.

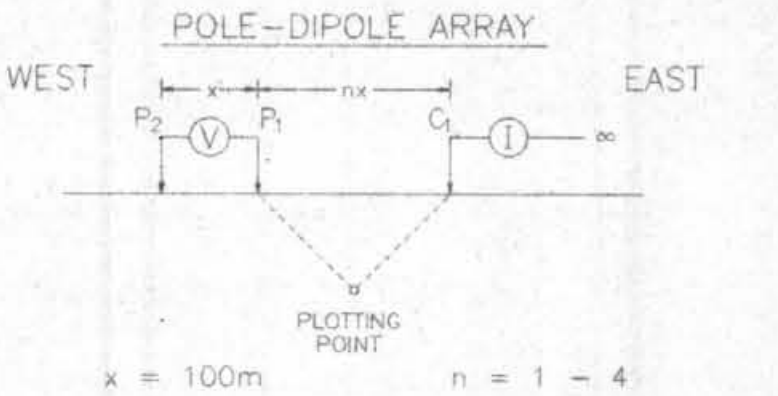


PLACER DOME INC.

Omineca Project

CAT Claims

LINE: 25100N



CURRENT ELECTRODE C1 EAST OF POTENTIAL DIPOLE PP2

SURFACE PROJECTION OF ANOMALOUS ZONES

- DEFINITE [Solid black bar]
- PROBABLE [Dashed black bar]
- POSSIBLE [Hatched black bar]
- AT DEPTH [Dotted black bar]

SCALE 1 : 5000

CONTOUR INTERVALS

APP.CHARGEABILITY : 1.0 (msec)

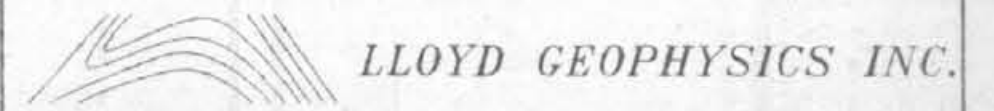
APP.RESISTIVITY : 100 (ohm-m)

DATE SURVEYED: August 3, 1992

Tx: Hurtec Mk2-Model 7500

Rx: EDA IP-6

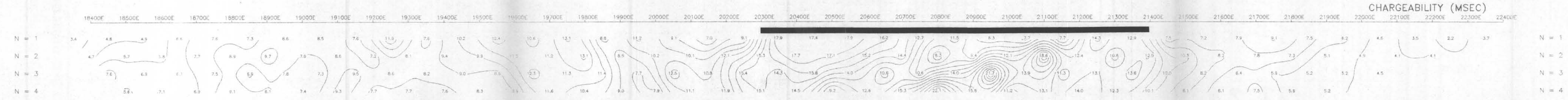
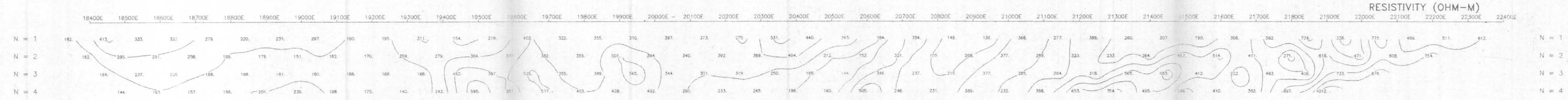
22722



LLOYD GEOPHYSICS INC.

INDUCED POLARIZATION SURVEY

DRAWING NUMBER : 92333-CAT4



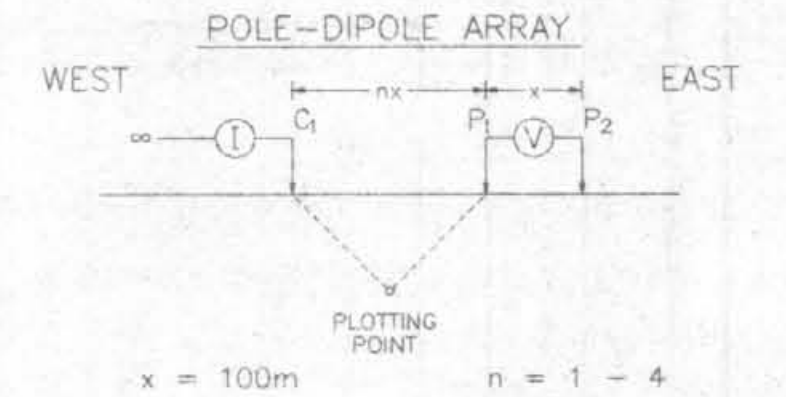


# PLACER DOME INC.

Omineca Project

CAT Claims

**LINE: 24700N**



CURRENT ELECTRODE  $C_1$  WEST OF POTENTIAL DIPOLE  $P_1P_2$

SURFACE PROJECTION OF ANOMALOUS ZONES

- DEFINITE
- PROBABLE
- POSSIBLE
- AT DEPTH

SCALE 1 : 5000

CONTOUR INTERVALS

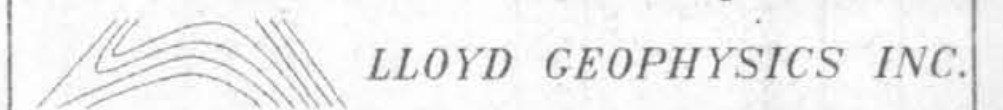
APP.CHARGEABILITY : 1.0 (msec)  
APP.RESISTIVITY : 1.00 (ohm-m)

DATE SURVEYED: August 1, 1992

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Rx: EDA IP-6

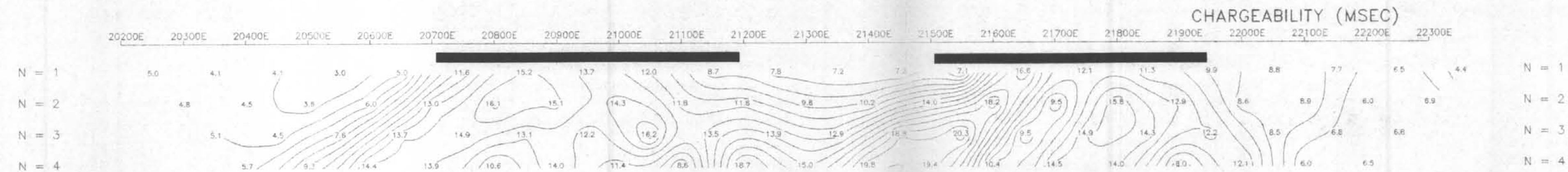
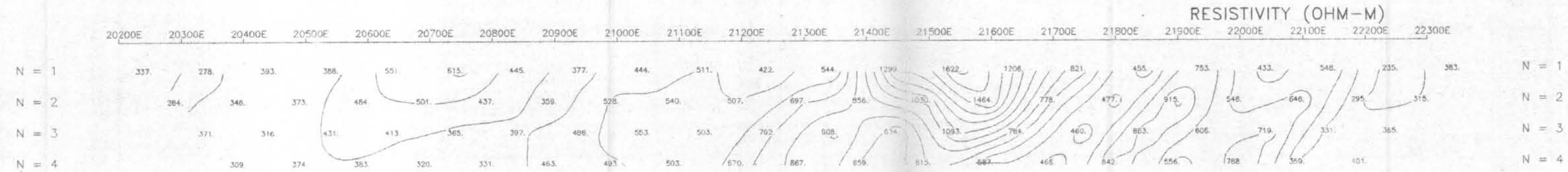
**22722**



LLOYD GEOPHYSICS INC.

INDUCED POLARIZATION SURVEY

DRAWING NUMBER : 92333-CAT3



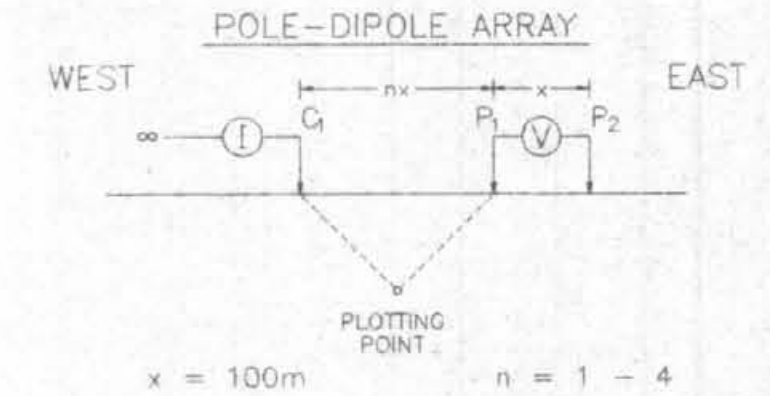


# PLACER DOME INC.

Omineca Project

CAT Claims

**LINE: 24300N**



CURRENT ELECTRODE C<sub>1</sub> WEST OF POTENTIAL DIPOLE P<sub>1</sub>P<sub>2</sub>

SURFACE PROJECTION OF ANOMALOUS ZONES

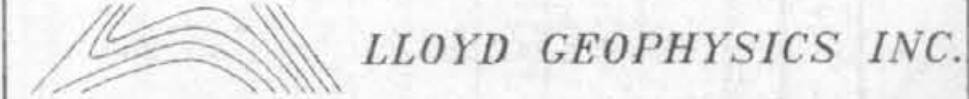
- DEFINITE
- PROBABLE
- POSSIBLE
- AT DEPTH

SCALE 1 : 5000

CONTOUR INTERVALS  
 APP. CHARGEABILITY 1.0 (msec)  
 APP. RESISTIVITY 100 (ohm-m)

DATE SURVEYED: July 30, 1992  
 Tx: Hunttec Mk2 Model 7500  
 Rx: EDA IP-6

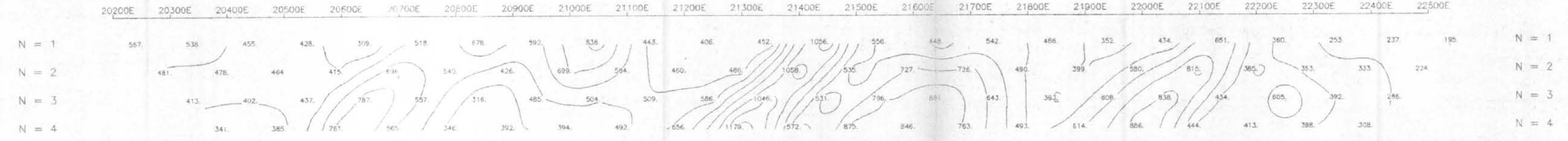
## 22722



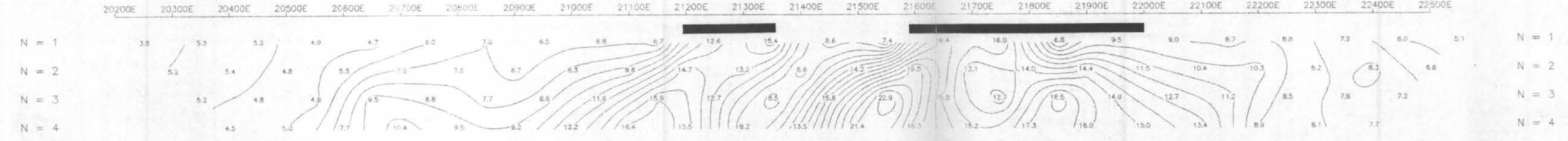
INDUCED POLARIZATION SURVEY

DRAWING NUMBER : 92333-CAT2

## RESISTIVITY (OHM-M)



## CHARGEABILITY (MSEC)



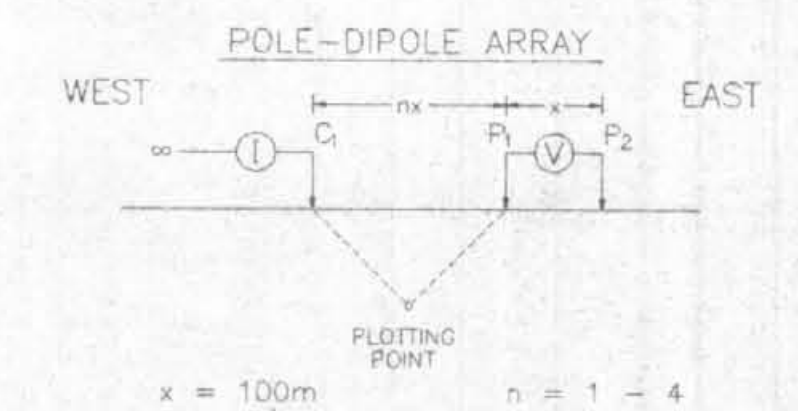


# PLACER DOME INC.

Omineca Project

CAT Claims

**LINE: 23900N**



CURRENT ELECTRODE  $C_1$  WEST OF POTENTIAL DIPOLE  $P_1P_2$

SURFACE PROJECTION OF ANOMALOUS ZONES

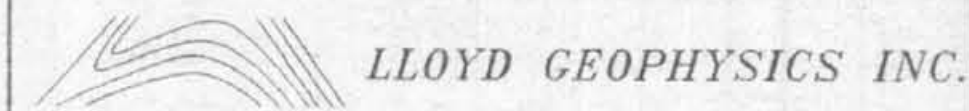
- DEFINITE
- PROBABLE
- POSSIBLE
- AT DEPTH

SCALE 1" : 5000

CONTOUR INTERVALS  
 APP CHARGEABILITY : 1.0 (msec)  
 APP RESISTIVITY : 100 (ohm-m)

DATE SURVEYED: July 31, 1992  
 Tx: Huntec Mk2 Model 7500  
 Rx: EDA IP-6

**22722**



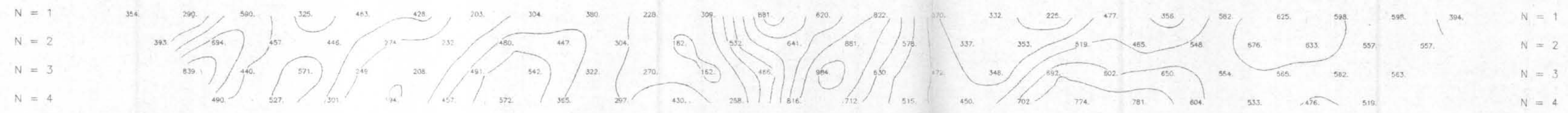
LLOYD GEOPHYSICS INC.

INDUCED POLARIZATION SURVEY

DRAWING NUMBER : 92333-CAT1

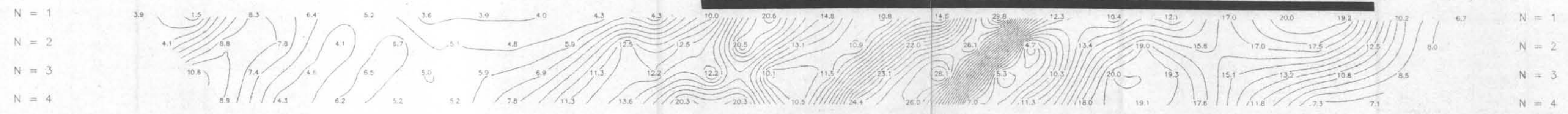
RESISTIVITY (OHM-M)

20200E 20300E 20400E 20500E 20600E 20700E 20800E 20900E 21000E 21100E 21200E 21300E 21400E 21500E 21600E 21700E 21800E 21900E 22000E 22100E 22200E 22300E 22400E 22500E



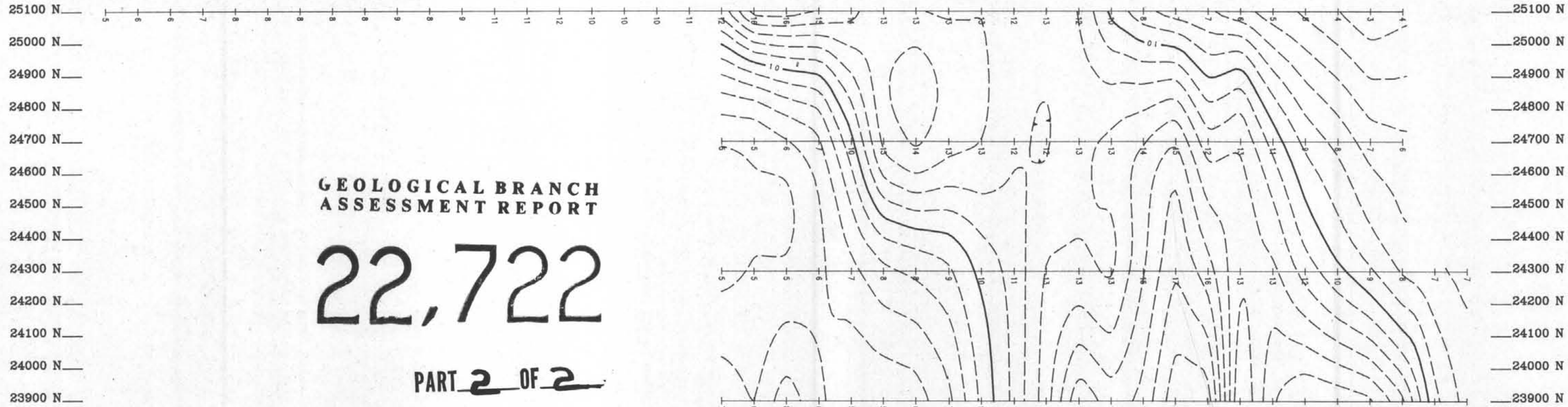
CHARGEABILITY (MSEC)

20200E 20300E 20400E 20500E 20600E 20700E 20800E 20900E 21000E 21100E 21200E 21300E 21400E 21500E 21600E 21700E 21800E 21900E 22000E 22100E 22200E 22300E 22400E 22500E





18400 E 18600 E 18800 E 19000 E 19200 E 19400 E 19600 E 19800 E 20000 E 20200 E 20400 E 20600 E 20800 E 21000 E 21200 E 21400 E 21600 E 21800 E 22000 E 22200 E 22400 E

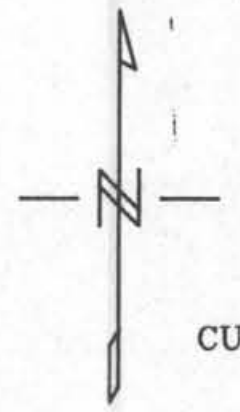
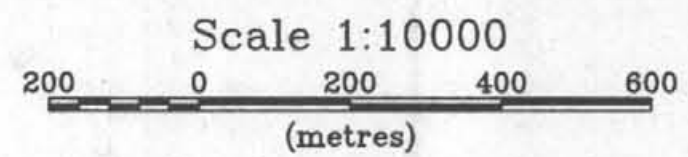


**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**22,722**

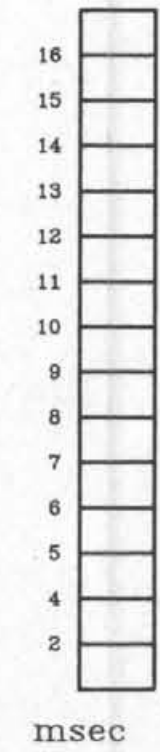
**PART 2 OF 2**

18400 E 18600 E 18800 E 19000 E 19200 E 19400 E 19600 E 19800 E 20000 E 20200 E 20400 E 20600 E 20800 E 21000 E 21200 E 21400 E 21600 E 21800 E 22000 E 22200 E 22400 E



**LEGEND**  
 INDUCED POLARIZATION SURVEY  
 POLE-DIPOLE ARRAY  
 DIPOLE SEPARATION : 100 METRES  
 CURRENT ELECTRODE WEST OF POTENTIAL DIPOLE

**CONTOUR INTERVALS**  
 - - - 1.0 MSEC  
 ——— 10.0 MSEC



<b>PLACER DOME INC.</b>
OMINECA PROJECT - CAT Claims Omineca Mining Division
<b>CHARGEABILITY 10 POINT TRIANGULAR FILTER</b> NTS 94 C/3 Map Scale 1 : 10000 Drawing : 92333-CAT5
<b>LLOYD GEOPHYSICS INC.</b>

**LEGEND**

INDUCED POLARIZATION SURVEY  
POLE-DIPOLE ARRAY

DIPOLE SEPARATION : 100 METRES

CURRENT ELECTRODE WEST OF POTENTIAL DIPOLE

**CONTOUR INTERVALS**

- 25 OHM-M
- 100 OHM-M
- 500 OHM-M

**PLACER DOME INC.**

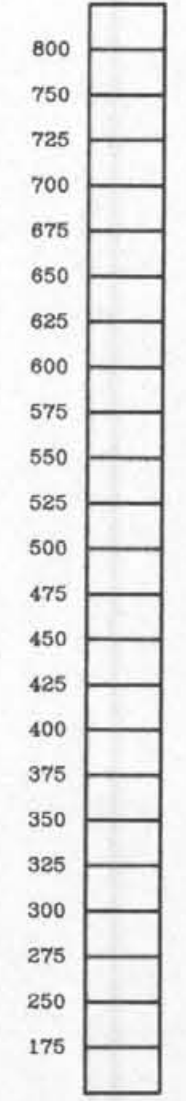
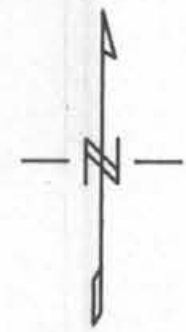
OMINECA PROJECT - CAT Claims  
Omineca Mining Division

**RESISTIVITY**  
**10 POINT TRIANGULAR FILTER**

NTS 94 C/3

Map Scale 1 : 10000 Drawing : 92333-CAT6

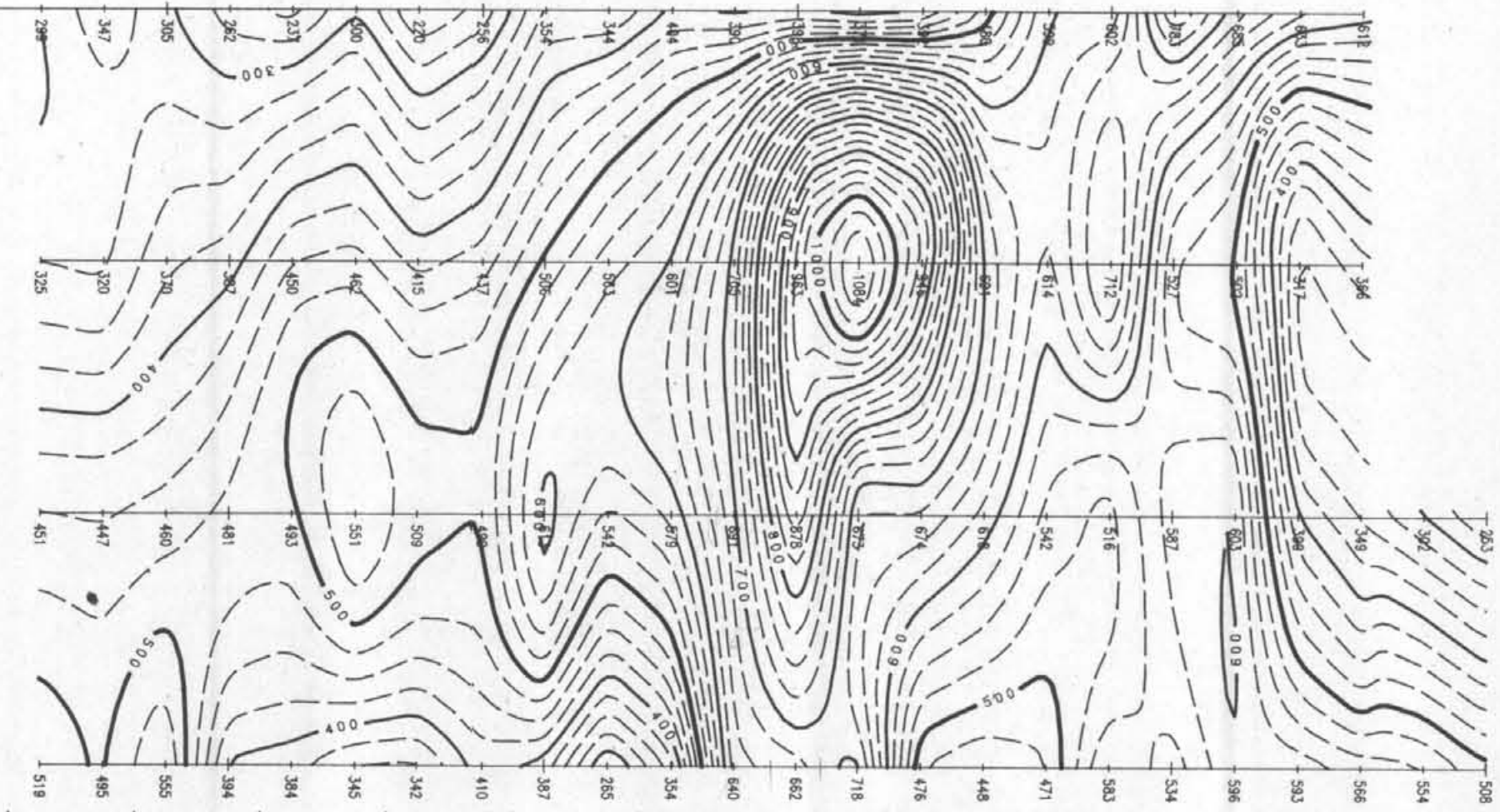
**LLOYD GEOPHYSICS INC.**



ohm-m

18400 E 18600 E 18800 E 19000 E 19200 E 19400 E 19600 E 19800 E 20000 E 20200 E 20400 E 20600 E 20800 E 21000 E 21200 E 21400 E 21600 E 21800 E 22000 E 22200 E 22400 E

25100 N  
25000 N  
24900 N  
24800 N  
24700 N  
24600 N  
24500 N  
24400 N  
24300 N  
24200 N  
24100 N  
24000 N  
23900 N



**PART 2 OF 2**  
**GEOLOGICAL BRANCH**  
**ASSESSMENT REPORT**  
**22,722**

18400 E 18600 E 18800 E 19000 E 19200 E 19400 E 19600 E 19800 E 20000 E 20200 E 20400 E 20600 E 20800 E 21000 E 21200 E 21400 E 21600 E 21800 E 22000 E 22200 E 22400 E

