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GEOLOGICAL AND GEOCHEMICAL REPORT  
ON THE  
PUP PROJECT

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Located in the Galore Creek Area  
Liard Mining Division  
NTS 104G/3W, 4E  
57° 12' North Latitude  
131° 29' West Longitude

-prepared for-  
CONSOLIDATED GOLDWEST RESOURCES LTD.

-prepared by-  
Katherina V. Ross, Geologist

December, 1989

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,529

# GEOLOGICAL AND GEOCHEMICAL REPORT ON THE PUP PROJECT

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## 1.0 INTRODUCTION

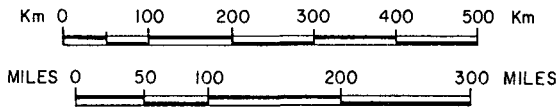
The Pup Project comprises the OP 1-2 and Pup 1-6 claims. The OP 1-2 and Pup 1-4 claims were staked in February and June 1988 to cover favorable lithology and copper geochemistry in the drainage of Galore Pup Creek in the Liard Mining Division, approximately 180 kilometers northwest of Stewart in northwestern British Columbia (Figure 1). The Pup 5 and 6 claims were staked in October 1989 to cover small staking fractions. The Pup property was first explored by Conwest Exploration for its copper potential following the discovery of the Galore Creek copper-gold porphyry deposit five kilometers to the south in 1955. The numerous exploration successes in a similar geological setting approximately seventy kilometers to the south in the Iskut River district and the discovery in the last few years of several major precious metals occurrences throughout the Galore Creek district, have sparked renewed exploration interest throughout the area.

A program of reconnaissance geological mapping, prospecting and contour soil sampling was carried out over the Pup property from August to October of 1989. Equity Engineering Ltd. conducted this program for Consolidated Goldwest Resources Ltd. and has been retained to report on the results of the fieldwork and set forth recommendations for future exploration.

## 2.0 LIST OF CLAIMS

Records of the British Columbia Ministry of Energy, Mines and Petroleum Resources indicate that the OP 1-2 and Pup 1-4 claims are owned by Consolidated Goldwest Resources Ltd. The Pup 5 and 6 claims are owned by Bruno Kasper, in trust for Consolidated Goldwest Resources Ltd. Claim data is summarized in Table 2.0.1 and Figure 2.

# PROPERTY LOCATION



CONSOLIDATED GOLDWEST RESOURCES LTD.		
PUP PROJECT LOCATION MAP		
BRITISH COLUMBIA		
EQUITY ENGINEERING LTD.		
DRAWN: J.W.	MINING DIV. LIARD	FIGURE
N.T.S.: 104G/3W, 4E	SCALE: AS SHOWN	1
DATE: DEC 1989	REVISED:	

TABLE 2.0.1

## CLAIM DATA

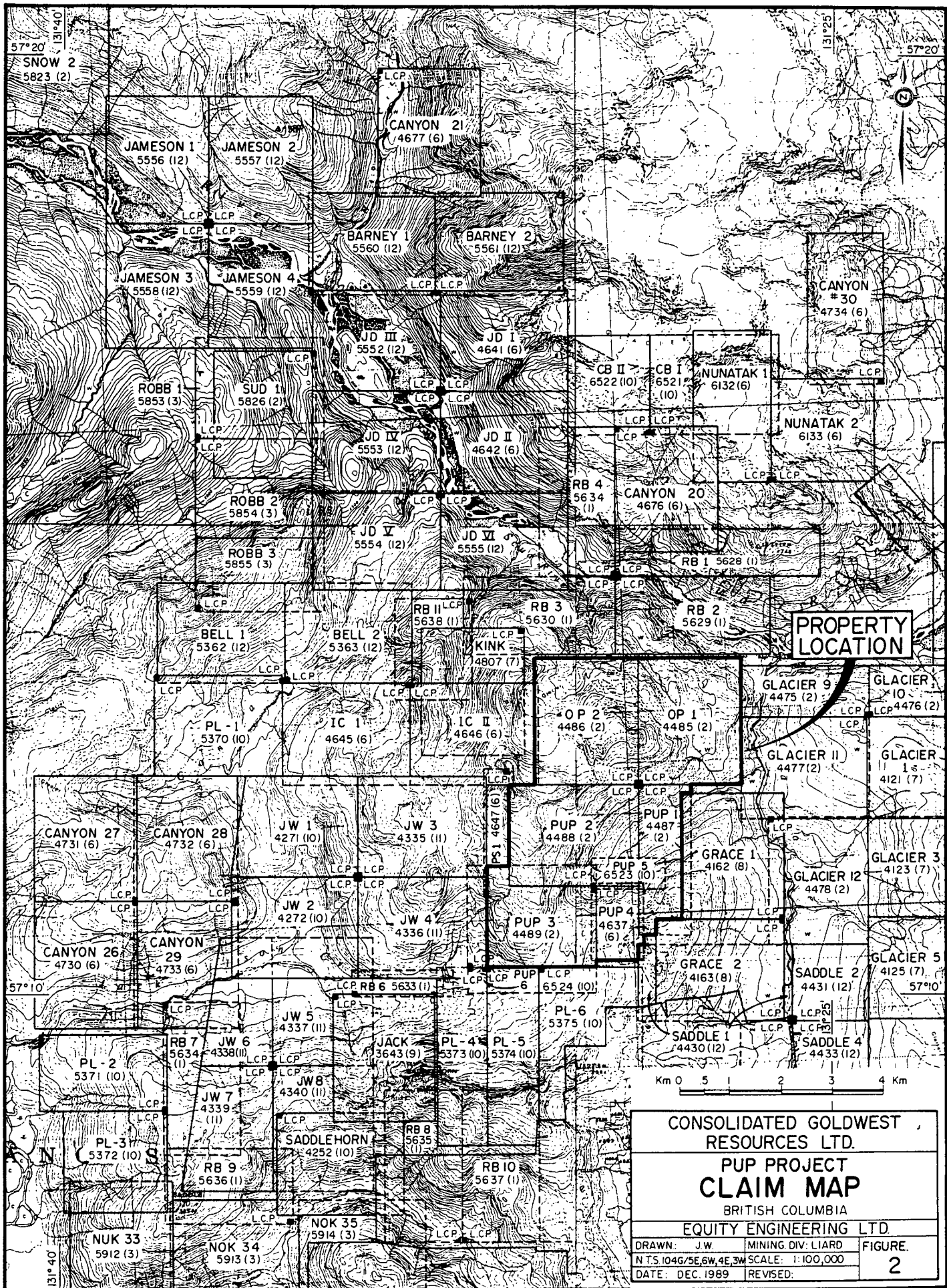
Claim Name	Record Number	No. of Units	Record Date	Expiry Date
OP 1	4485	20	Feb. 22, 1988	Feb. 22, 1990
OP 2	4486	20	Feb. 22, 1988	Feb. 22, 1990
Pup 1	4487	12	Feb. 22, 1988	Feb. 22, 1990
Pup 2	4488	20	Feb. 22, 1988	Feb. 22, 1990
Pup 3	4489	20	Feb. 22, 1988	Feb. 22, 1990
Pup 4	4637	6	June 13, 1988	June 13, 1990
Pup 5	6523	3	Oct. 14, 1989	Oct. 14, 1990
Pup 6	6524	<u>5</u>	Oct. 14, 1989	Oct. 14, 1990
		106		

The locations for all of the legal corner posts for the OP 1-2 and Pup 1-6 claims have been verified by Equity Engineering Ltd. personnel. In October of this year, the Pup 5 claim was staked to cover a narrow gap on the south end of the Pup property and a small internal fraction between the Pup 1, 2, 3 and 4 claims was covered by the Pup 6 claim.

### 3.0 LOCATION, ACCESS AND GEOGRAPHY

The Pup claim group is located within the Coast Range Mountains approximately 180 kilometers northwest of Stewart and 80 kilometers south of Telegraph Creek in northwestern British Columbia (Figure 1). It lies within the Liard Mining Division, centered at 57° 12' north latitude and 131° 29' west longitude.

Access to the Pup property during the 1989 exploration program was provided by helicopter from the Galore Creek airstrip which is located approximately seven kilometers to the south-southeast. During the field season, fixed-wing aircraft fly charters directly from Smithers or via the Bronson Creek airstrip which is located approximately sixty kilometers to the southeast. The Galore Creek



**PROPERTY  
LOCATION**

<b>CONSOLIDATED GOLDWEST RESOURCES LTD.</b>		
<b>PUP PROJECT CLAIM MAP</b>		
BRITISH COLUMBIA		
<b>EQUITY ENGINEERING LTD.</b>		
DRAWN: J.W.	MINING DIV: LIARD	FIGURE:
N.T.S. 104G/5E, 6W, 4E, 3W	SCALE: 1:100,000	<b>2</b>
DATE: DEC. 1989	REVISED:	

airstrip is 425 meters in length, limiting the size of aircraft that can be safely landed there. During the 1989 season, the camp was serviced by a Turbo Otter, based out of Smithers. The Scud River airstrip, located 23 kilometers to the northwest of the Pup property, is suitable for DC-3 aircraft. On the Alaskan side of the border, Wrangell lies approximately 90 kilometers to the southwest, and provides a full range of services and supplies, including a major commercial airport. The Stikine River has been navigated by 100-ton barges upriver as far as Telegraph Creek, allowing economical transportation of heavy machinery and fuel to the Scud River airstrip. In the early 1960's, Kennco constructed a cat road from their Galore Creek copper-gold deposit down the south side of the Scud River to the Stikine River and the Scud River airstrip. This cat road, which passes within a few hundred meters of the northeast corner of the Pup claim group, has not been maintained and would require some reconstruction before becoming passable. During the 1989 program, a helicopter was stationed in the 40-man exploration camp at the Galore Creek airstrip.

The OP and Pup claims cover most of the Galore Pup Creek drainage, extending south into the headwaters of Jack Wilson Creek and north into the drainage of an unnamed creek which drains north into the Scud River (Figure 2). Topography is rugged, typical of mountainous and glaciated terrain, with elevations ranging from 350 meters in the Scud River valley on the northeast corner of the OP 1 claim to 2150 meters on the unnamed peak situated on the western boundary of the Pup 2 claim. Northerly-facing slopes are covered with permanent snowfields at higher elevations. One valley glacier descends to the 1150 meter elevation on the OP 1 claim.

Lower slopes are covered by a mature forest of hemlock, spruce and balsam fir with a dense undergrowth of devil's club, alder and huckleberry. Above treeline, which occurs at approximately 1000 meters, the creek beds and slopes are covered by dense slide alder

and willow growth. The steeper slopes are covered in short heather and other alpine vegetation. Rock exposure is excellent above 1000 meters, though much of it is inaccessible due to the steepness of the terrain.

The property lies in the wet belt of the Coast Range Mountains, with annual precipitation between 190 and 380 centimeters (Kerr, 1948a). Except during July, August and September, precipitation at higher elevations falls mainly as snow, with accumulations reaching three meters or more. Both summer and winter temperatures are moderate, ranging from  $-5^{\circ}\text{C}$  in the winter to  $20^{\circ}\text{C}$  in the summer months.

#### 4.0 PROPERTY MINING HISTORY

##### 4.1 Previous Work

The Galore Creek district (Figure 3) was extensively explored for its copper potential throughout the 1960's, following the discovery in 1955 of the Galore Creek copper-gold porphyry deposit. This deposit, whose Central Zone hosts reserves of 125 million tonnes grading 1.06% copper and 400 ppb gold (Allen et al, 1976), is located approximately five kilometers south of the Pup property. Several major mining companies conducted regional mapping and silt sampling programs over the entire Galore Creek area, and the Copper Canyon copper-gold porphyry, estimated by Grant (1964) at 28 million tonnes grading 0.64% copper, was discovered eight kilometers east of the Galore Creek Central Zone in 1957. Unfortunately, most of the regional data collected at that time was not filed for assessment credit and is not available.

Conwest Exploration staked the CW claim group in 1964 over a large area north and west of the Galore Creek deposit, including

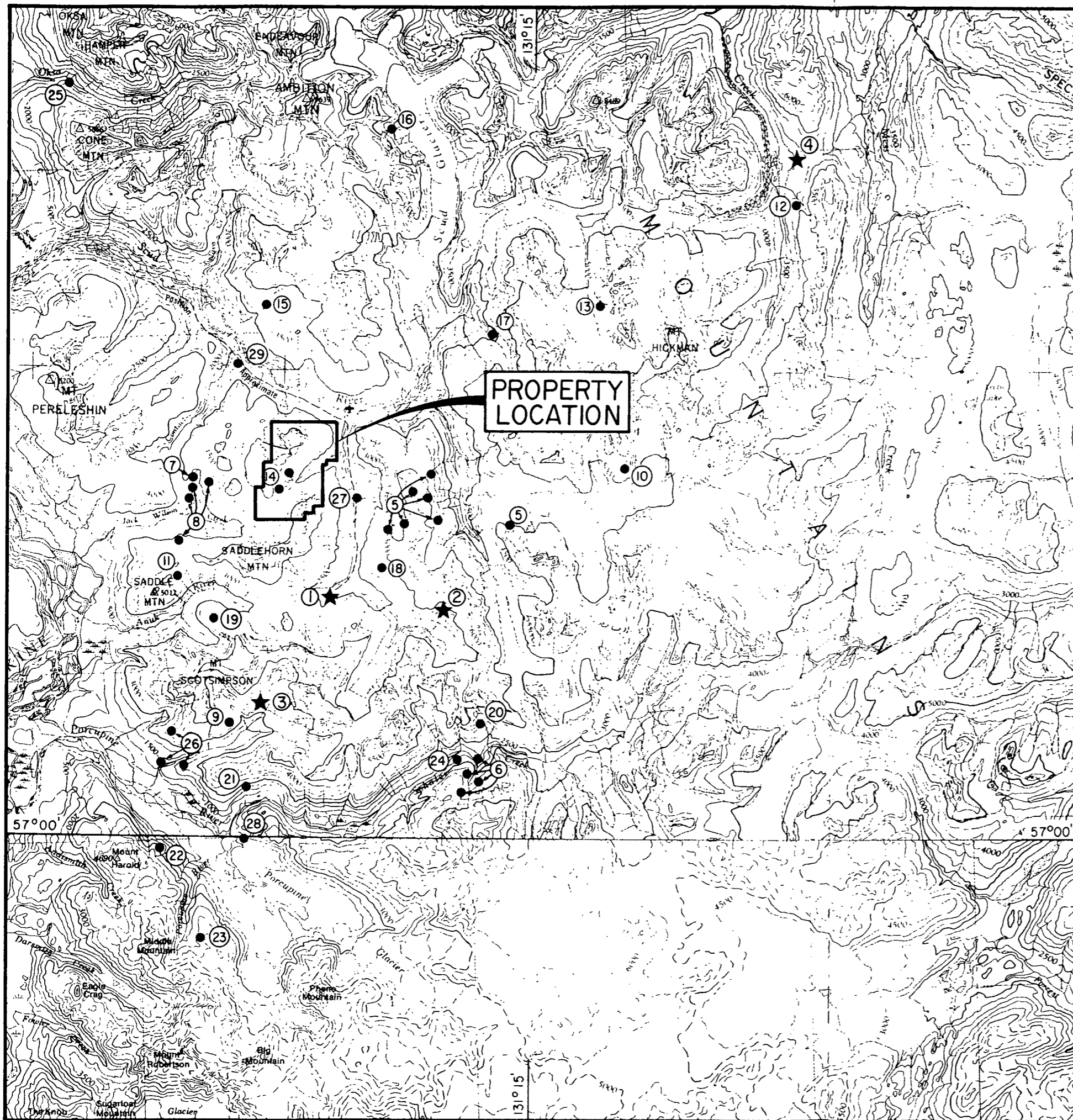


the Galore Pup drainage. They conducted regional mapping and sampling over their claims, taking fifteen rock samples and 91 silt samples in 1964, of which five rock samples and 23 silt samples were taken from the area now covered by the OP and Pup claims. Of the thirteen silt samples which returned values of 300 parts per million copper or higher, ten were taken from ground currently covered by the Pup claim group. No silt samples and only selected rock samples were analysed for gold (Grant, 1964).

In 1965, PCE Explorations and Canadian Superior Explorations staked the O. P. claims near the present location of the OP 1 and 2 claims, but allowed them to lapse after performing limited soil and stream geochemical sampling (Hindson, 1965).

In the early 1980's, Teck Corp. conducted regional exploration for gold and base metals throughout the area, and delineated 185,000 tonnes of drill-indicated reserves grading 4.11 grams gold per tonne in the Paydirt deposit (Holtby, 1985), which is located approximately fifteen kilometers south of the Pup property. In 1987, several precious metal occurrences were discovered on the Trophy project, which adjoins the OP 1 claim to the east. Continental Gold, which acquired the Trophy project in 1988, reported trench samples averaging 2.40 grams per tonne (0.07 ounces/ton) gold and 164.5 grams per tonne (4.80 ounces/ton) silver across 56.4 meters from their Ptarmigan A zone (Continental, 1988a). During the 1988 field season, Continental drilled 2,834 meters in 16 holes, with the best intersection grading 5.48 grams gold and 30.2 grams silver per tonne over 11.1 meters (Continental, 1988b).

During September of 1988, Consolidated Goldwest Resources Ltd. carried out a preliminary exploration program on the Pup claim group, consisting of geological mapping, prospecting and geochemical sampling. Eleven screened stream sediment samples were



NAME OF OCCURRENCE	MINERAL RESERVES AND/OR ELEMENTS	
1. Galore Creek	125,000,000 tonnes	0.40 gm/tonne Au 7.70 gm/tonne Ag
2. Copper Canyon	25,000,000 tonnes	0.64% Cu
3. Paydirt	185,000 tonnes	4.11 gm/tonne Au
4. Schaft Creek	330,000,000 tonnes	0.32 gm/tonne Au 1.50 gm/tonne Ag 0.40% Cu 0.036% MoS <sub>2</sub>
5. Trophy		Au, Cu, Pb, Zn, Ag
6. Trek		Au, Cu, Pb, Zn, Ag, Mo
7. Icy		Au, Cu, Ag
8. Jack Wilson		Au, Cu
9. Ann/Su		Cu
10. Jay		Cu, Au, Ag
11. Devil's Club		Cu, Ag, Au
12. Hicks		Cu, Mo
13. Alberta		Cu
14. Pup		Cu, Au, Pb, Zn
15. JD		Cu, Au, Pb, Zn
16. North Scud		Cu
17. Middle Scud		Cu, Ag
18. Stikine East		Cu
19. Joan, MB		Cu, Au, Ag
20. Kim		Cu, Au, Ag
21. Wiser		Au, Ag
22. Cuds		Au, Ag, Pb, Cu
23. Ginny		Au
24. Spha		Cu, Au
25. Oksa Creek		Cu, Pb, Zn, Au, Ag
26. PL 7-11		Au, Ag, Cu, Zn
27. Bik		Cu
28. Gienlivet		Au
29. Bell		Au

- MINERAL OCCURRENCE
- ★ MINERAL DEPOSIT



CONSOLIDATED GOLDWEST  
RESOURCES LTD.

PUP PROJECT  
**REGIONAL MINERAL  
OCCURRENCE MAP**

BRITISH COLUMBIA

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EQUITY ENGINEERING LTD.

Drawn: J.W.	MINING DIV: LIARD	FIGURE
N.T.S.: 104B,G	SCALE: 1:250,000	<b>3</b>
DATE: DEC. 1989	REVISED:	

collected from tributaries of Galore Pup Creek. All of these contained appreciable gold with three samples carrying greater than 60 parts per billion gold. Five rock samples were collected from mineralized outcrop and float near Galore Pup Creek, with values up to 1000 parts per billion gold and 4800 parts per million copper (Awmack, 1989).

Elsewhere in the Galore Creek district, several significant precious metals occurrences were discovered on each of the JD, TREK, ICY and Jack Wilson properties during the 1988 field season. In each case, these properties had been explored for copper during the 1960's, but had never received due attention for their gold potential. In particular, eight zones of significant gold mineralization were discovered on the ICY and JW properties, which adjoin the OP and Pup claims to the west. These zones returned grab samples up to 150.1 grams per tonne (4.38 ounces/ton) gold and chip samples up to 11.3 grams per tonne (0.329 ounces/ton) gold across 3.4 meters (Awmack and Yamamura, 1988).

#### 4.2 1989 Work Program

During August, September and October of 1989, Consolidated Goldwest Resources Ltd. carried out a follow-up exploration program on the Pup property, consisting of reconnaissance geological mapping, prospecting and contour soil sampling. This exploration was targeted at mesothermal precious metal vein/shear occurrences similar to those occurring elsewhere in the Galore Creek district and within a similar geological environment which stretches south to the Iskut River, Sulphurets and Stewart mining districts.

During the course of this program 8 stream silt samples, 68 soil samples and 130 rock samples were taken. Silt samples were taken from backwaters or dry beds of other drainages and were screened to minus 80 mesh in the laboratory and analysed

geochemically for gold and 32-element ICP. Samples with insufficient fines were screened through a minus 35 mesh and then pulverized to minus 150 mesh before being analysed. Rock samples were analysed geochemically for gold and 10-element ICP. Rock samples that ran greater than 1000 parts per billion gold, or 10,000 parts per million copper, lead or zinc were assayed.

Two contour soil lines were established, beginning west of the head of the Galore Pup Creek valley and extending northeasterly along the southeast facing slope (Figure 6). The soil lines were positioned to investigate gossanous areas upslope and to cover the areas from which Conwest obtained positive stream silt results in 1964. The first line was established at 950 meters elevation, starting 100 meters from the head of the valley and extending northeast for 500 meters. This line was terminated because it was felt that the results would not accurately reflect possible mineralization upslope, due to the gentleness of the slope. In the analytical certificate forms in Appendix D, the line is labelled incorrectly as following the 3550 foot contour. A second line was established at 975 meters elevation, starting two hundred meters from the head of the valley and extending 1725 meters, where it was terminated due to the steepness of the terrain. This line is labelled either as 1000 meters or as 3200 feet elevation in Appendix D. Soil samples were taken every 25 meters, wherever possible from the B-horizon. Soil samples were screened to minus 80 mesh in the laboratory and analysed geochemically for gold and 10-element ICP (Figure 4).

Prospecting and reconnaissance geological mapping was conducted using a topographic orthophoto at a scale of 1:10,000 (Figures 5 and 6). Rock samples were taken from zones of alteration and mineralization, both in outcrop and float. Rock descriptions are attached in Appendix C, and analytical certificates in Appendix D.

## 5.0 REGIONAL GEOLOGY

The first geological investigations of the Stikine River in northwestern British Columbia began over a century ago when Russian geologists came to Russian North America assessing the area's mineral potential (Alaskan Geographic Society, 1979, *in* Brown and Gunning, 1988), and was followed by the first Geological Survey of Canada foray of G.M. Dawson and R. McConnel in 1887. Several more generations of federal and provincial geologists have been sent to the Stikine, including Kerr (1948b), the crew of Operation Stikine (GSC, 1957), Panteleyev (1976), Souther (1972), Souther and Symons (1974), Monger (1977), and Anderson (1989). The British Columbia Geological Survey has recently completed regional mapping of the area at a scale of 1:50,000 by Brown and Gunning (1989a,b) and Logan and Koyanagi (1989a,b).

The Galore Creek Camp lies within the Intermontane Belt, a geological and physiographic province of the Canadian Cordillera, and flanks the Coast Plutonic Complex to the west (Figure 4). At Galore Creek, the generally northwest-trending structure of the Intermontane Belt is discordantly cut across by the northeast-trending Stikine Arch which became an important, relatively positive tectonic element in Mesozoic time when it began to influence sedimentation into the Bowser Successor Basin to the southeast and into the Whitehorse Trough to the northwest (Souther et al., 1974).

Stikinian stratigraphy ranges from possibly Devonian to Jurassic, and was subsequently intruded by granitoid plutons of Upper Triassic to Eocene age. The oldest strata exposed in the Galore Creek camp are Mississippian or older mafic to intermediate volcanic flows and pyroclastic rocks (Map Units 4a and 4c) with associated clastic sediments and carbonate lenses (Map Unit 4b). These are capped by up to 700 meters of Mississippian limestone

with a diverse fossil fauna (Map Unit 4d). It appears from fossil evidence that all of the Pennsylvanian system is missing and may be represented by an angular unconformity and lacuna of 30 million years, though field relationships are complicated by faulting (Monger, 1977; Logan and Koyanagi, 1988). Permian limestones (Map Unit 6), also about 700 meters thick, lie upon the Mississippian limestone but are succeeded by a second lacuna amounting to about 20 million years from the Upper Permian to the upper Lower Triassic.

Middle and Upper Triassic siliciclastic and volcanic rocks (Map Unit 7) are overlain by Upper Triassic Stuhini Group siliciclastic (Map Unit 8a) and volcanic (Map Unit 8b, 8c and 8d) rocks, consisting of mafic to intermediate pyroclastic rocks and lesser flows. The Galore Creek porphyry copper deposit appears from field evidence to mark the edifice of an eroded volcanic center with numerous sub-volcanic plutons of syenitic composition. Jurassic Bowser Basin strata onlap the Stuhini Group strata to the southeast of Iskut River but, because of erosion and non-deposition, are virtually absent from the Galore Creek area.

The plutonic rocks follow a three-fold division (Logan and Koyanagi, 1988). Middle Triassic to Late Jurassic syenitic and broadly granodioritic intrusions are partly coeval and cogenetic with the Stuhini Group volcanics and include the composite Hickman Batholith (Map Unit 9) and the syenitic porphyries of the Galore Creek Complex (Map Unit 11). Jura-Cretaceous Coast Plutonic Complex intrusions (Map Unit 12) occur on the west side of the Galore Creek Camp, along the Stikine River, with the youngest of these intrusions occupying more axial positions along the trend of the Coast Plutonic Complex flanked by older intrusions. The youngest intrusives in the Galore Creek Camp are Eocene (quartz-) monzonitic plugs (Map Unit 13), felsic and mafic sills and dykes

(Map Unit 14), and biotite lamprophyre (minette) dykes (Map Unit 14).

The dominant style of deformation in the Galore Creek area consists of upright north-trending, open to tight folds and northwest-trending, southwest-verging, folding and reverse faulting in the greenschist facies of regional metamorphism. Localized contact metamorphism ranges as high as pyroxene hornfels grade; metasomatism is also noted near intrusions. Upright folding may be an early manifestation of a progressive deformation which later resulted in southwest-verging structures. Southwest-verging deformation involves the marginal phases of the Hickman Batholith and so is, at least in part, no older than Late Triassic.

Steeply dipping faults which strike north, northwest, northeast, and east have broken the area into a fault-block mosaic. North-striking faults are vertical to steeply east-dipping and parallel to the Mess Creek Fault (Souther, 1972), which was active from Early Jurassic to Recent times (Souther and Symons, 1974); northwest-striking faults are probably coeval with the north-striking faults, but locally pre-date them. East-west trending faults are vertical or steeply dipping to the north and have normal-type motion on them (i.e., north-side down), whereas northeast-striking faults are the loci of (sinistral) strike-slip motion (Brown and Gunning, 1988a).

A number of metallic deposit types have been recognized in the Galore Creek camp: porphyry copper+molybdenum+gold deposits, structurally-controlled precious metal vein/shear deposits, skarns and breccia deposits. Porphyry copper deposits of this area include both the alkalic Galore Creek copper-gold and calc-alkalic Schaft Creek copper-molybdenum deposits. Galore Creek, which is associated with syenitic stocks and dikes rather than a quartz-feldspar porphyry, is further contrasted from the calc-alkaline

**LEGEND**

- QUATERNARY**  
 Qal UNCONSOLIDATED GLACIAL TILL AND POORLY SORTED ALLUVIUM
- UPPER TRIASSIC**  
 STIKINE GROUP MEMBER UNCONFORMED ON QUATERNARY (Unit B)
- UTSb SATURATED LIMESTONE, CONGLOMERATE, SANDY LIMESTONE CONTAINING LIMONITE (Unit 8a)
  - UTSv FINE-GRAINED PORPHYRY FLOWS AND FRAGMENTALS (Unit 8b)
  - UTSd HYPERPHYCITE TO MAFIC FRAGMENTALS, BRECCIA, TUFF, LIMONITE (Unit 8d)
- MIDDLE TO UPPER TRIASSIC**  
 muTSv MASSIVE ANDESITE FLOWS AND TUFFS AND VOLCANIC BASALT (Unit 7c)
- PERMIAN**  
**STIKINE ASSEMBLAGE**
- Pv1 LIGHT GREY TO MASSES TO THICKLY BEDDED BUFF BIOLASTIC CALCARENITE (Unit 6a)
  - Pv2 DARK GREY TO BUFF THIN BEDDED BIOLASTIC LIMESTONE, CHESTNUT-BROWN INDURATED MUDSHALE (Unit 6c)
  - Pv3c DARK GREY TO BLACK COARSELY BIOLASTIC MORTAR CLASTIC MUDSHALE WITH SANDS (Unit 6c)
  - Pv3b BULKY ARGILLITE UNIT WITH PYRITIC BEDDING, ARGILLITE AND SILTSTONE (Unit 5)
- PERMIAN AND OLDER**
- Pv PLACIOCLASE PORPHYRY FLOWS, VOLCANICLASTICS, PURPLE ASH TUFF, CHALCITE SCORST (Unit 4c)
  - Pu IMPURED GNEISS AND GRANITE FOLIADED METAVOLCANICS AND METASEDIMENTS (Unit 4)
  - Sia LIMESTONE HORIZONS WHITE TO GREY RECRYSTALLIZED LIMESTONE IN BOTH Pv AND Pu
  - M1 MIDDLE JURASSIC UNIT WELL BEDDED TO LAMINATED SENONOTIC ASH TUFF AND SILTSTONE, VANCOLOURED CHESTNUT BIOLASTIC SILTSTONE (Unit 4a)
- INTRUSIVE ROCKS**
- JURASSIC TO TERTIARY**  
 COARSE INTRUSIVES
- J1b MEDIUM GRAINED, BIOTITE-HORNBLENDIC DIORITE (Unit 12b)
  - J1m MAFIC GRANULITE FELDSPAR MEGACRYSTIC GRANITE TO MONZONITE (Unit 12a)
- MIDDLE JURASSIC**  
 mJd COARSE-GRAINED, MEDIUM GRAINED, HORNBLENDIC BIOTITE GRANODIORITE AND QUARTZ MONZONITE (Unit 10a)
- mJb HETEROGENEOUS, MEDIUM TO COARSE GRAINED QUARTZ DIORITE-HORNBLENDIC DIORITE, HORNBLENDIC AND PYROCLASTIC (Unit 10b)
- EARLY TO MIDDLE JURASSIC**  
 OLIGOCENE INTRUSIVES
- emJc3b STEEP, ORTHOCLASE PORPHYRYIC MONZONITE (Unit 11c)
- EARLY JURASSIC**  
 emJc1 MEDIUM GRAINED, HORNBLENDIC BIOTITE GRANODIORITE TO MONZONITE (Unit 11c)

- Geological boundary (defined, approximate, assumed) . . . . .
- Unconformity (assumed) . . . . .
- Bedding (inclined, vertical, parallel to location) . . . . .
- Bedding tops (observed, inclined, vertical, overturned) . . . . .
- Bedding, estimated attitude (g = gentle, m = moderate, s = steep) . . . . .
- Fold axis (inclined, vertical, M = MYOCLINE) . . . . .
- Joint set, kind, vertical . . . . .
- Dike (inclined, vertical) . . . . .
- Dike, estimated attitude (g = gentle, m = moderate, s = steep) . . . . .
- Vein (inclined, vertical, Q = QUARTZ) . . . . .
- Archeval axis . . . . .
- Optimal synclinal axis . . . . .
- Anticline of minor fold (inclined, vertical) . . . . .
- Fold axis of minor fold (inclined, vertical) . . . . .
- Fold axis of major fold (inclined, vertical) . . . . .
- High angle fault, surface trace (defined, approximate, assumed) . . . . .
- Solid circle indicates downthrown side, arrows indicate relative movement . . . . .
- Thrust fault (defined, approximate, assumed, slash in direction of dip) . . . . .
- Shear zone (myline) . . . . .



Geology after: Logan et al 1989b  
 Brown & Gunning 1989b



**CONSOLIDATED GOLDWEST RESOURCES LTD.**  
**PUP PROJECT**  
**REGIONAL GEOLOGY**  
 BRITISH COLUMBIA

**EQUITY ENGINEERING LTD.**

DRAWN: J.W.	MINING DIV. UJARD	FIGURE:
NTS: 104G/5E, 6W, 4E, 3W	SCALE: 1:100,000	4
DATE: DEC. 1989	REVISED:	



Schaft Creek in that molybdenite is rare, magnetite is common and gold and silver are important by-products. The mineralization is clearly coeval and cogenetic with the spatially associated intrusive bodies. Other porphyry copper occurrences in the Galore Creek area include the Copper Canyon, Sue/Ann, Bik and Jack Wilson Creek deposits (Figure 3).

Structurally-controlled gold-silver deposits have been the focus of exploration in recent years. The vein/shear occurrences are similar throughout the Galore Creek camp in that they are mesothermal in nature, containing base metal sulphides with strong silica veining and alteration. However, it appears that the intrusive bodies associated with this mineralization fall into two classes on the basis of age and composition. These two classes are reflected in differences in the style of structures, sulphide mineralogy and associated alteration products. The intrusive types are: 1) Lower Jurassic alkaline "Galore Creek" stocks; and 2) Eocene quartz monzonite to porphyritic granodiorite intrusions. Lead isotope data from the Stewart mining camp (Alldrick et al., 1987) further supports the proposition that separate Jurassic and Tertiary mineralizing events were "brief regional-scale phenomena".

Structures associated with the Lower Jurassic syenites are typically narrow (less than 2.0 meters) quartz-chlorite veins mineralized predominately with pyrite, chalcopyrite and magnetite. Examples of these structures in the Galore Creek camp include many of the discrete zones peripheral to the Galore Creek deposit and the gold-rich veins at Jack Wilson Creek. The Tertiary mineralization comprises discrete quartz veins and larger 'shear' zones characterized by pervasive silicification, sericitization and pyritization whose total sulphide content is commonly quite low. The quartz veins contain a larger spectrum of sulphide minerals including pyrite, chalcopyrite, pyrrhotite, arsenopyrite, galena and sphalerite. Unlike the Jurassic mineralization, silver grades

may be very high. A number of mineral showings discovered in the Porcupine River area, including the Paydirt deposit, are of this type.

Skarns represent a minor percentage of the precious metal-bearing occurrences in the Galore Creek camp. The mineralogy of these deposits could be influenced by the composition of the intrusion driving the hydrothermal fluids, in much the same way as described above for the structurally-controlled deposits. If the invading intrusives are alkalic, the skarn assemblage will be dominated by magnetite and chalcopyrite, as at the Galore Creek deposit and the Hummingbird skarn on the east side of the South Scud River.

The breccia hosted mineralization discovered in the Galore Creek camp precious metal deposits appear to be unique in style and mineralization. Three occurrences have been located in the camp: (1) the zinc-silver-gold Ptarmigan zone in the South Scud River area, (2) the copper-molybdenum-gold-silver breccia at the Trek property on Sphaler Creek and (3) the copper-bearing and magnetite breccias of the complex Galore Creek deposit. The single common denominator of each is that the zones are located along fault structures which may represent the main conduit for mineralizing fluids.

## 6.0 PROPERTY GEOLOGY AND MINERALIZATION

### 6.1 Geology

Reconnaissance geological mapping was conducted over most of the Pup property during the 1989 program (Figure 5). Descriptions below are based on Grant (1964), Logan et al. (1989a,b) and the work carried out on the property during 1989.

The oldest rock unit recognized on the property is a pale grey to buff-colored, thickly bedded, crystalline Permian limestone (Unit 5a); with minor cherty and argillaceous interbeds, which underlies most of the OP 1 and 2 claims. Bedding generally strikes north and dips steeply to the west. The limestones on the property lie in the eastern limb of a northerly striking, southerly plunging syncline mapped by Logan et al. (1989b) to the northwest. A pronounced northwest striking fault cuts through the limestones across the OP 1 claim. The limestones form cliffs up to 700 meters in height on the western side of the fault. Minor, irregular gabbroic dykes occur randomly in the limestones, apparently unrelated to any major structures.

The second oldest unit is a Middle Triassic carbonaceous silty shale (Unit 7). Logan et al. (1989b) have mapped this unit in fault-bounded wedges 600 meters northwest of the legal corner post for the OP 2 claim and at the edge of a glacier on the western boundary of that claim. Logan et al. (1989b) describe the unit as carbonaceous silty shales with elliptical concretions, overlain by siliceous and limey siltstones.

The remainder of the claim block is underlain by the Upper Triassic Stuhini Group of sediments, volcanic flows and tuffs (Unit 8) which are believed to overly conformably the Middle Triassic sediments. Greywacke and sedimentary breccia (Unit 8a) are exposed along Galore Pup Creek. The greywacke is dark grey, micaceous and calcareous. The sedimentary breccia is composed of a grey-green fine- to medium-grained matrix containing numerous rip-up clasts of dark grey shale. Bedding strikes northeast and dips steeply northwest. Limited mapping along the southeastern slope of the valley confirmed the presence of siltstones and greywackes up to 1250 meters elevation. On the northwestern slope of Galore Pup valley, the clastic sediments are overlain by 30 meters of black, graphitic, rusty weathering argillite which is overlain by an

unknown thickness of grey-green siltstones. These siltstones are slightly micaceous and contain 2-3% finely disseminated pyrite. Bedding strikes north-south with a steep dip to the west. Several discontinuous, pyrrhotite-bearing quartz-carbonate veins, less than 10 centimeters in width, crosscut the bedding.

Above the sediments, at approximately 1000 meters elevation, is a mixed package of weathered schistose rocks of uncertain origin (Unit 8) and altered volcanics (Unit 8b). Foliation strikes northeast and dips to the northwest. Finely disseminated pyrite occurs in the schist. The volcanics are pyritic, rusty weathering and generally too oxidized to determine their original composition. At 1350 meters elevation, the volcanics are overlain by clastic sediments (Unit 8a), similar to those exposed in Galore Pup Creek and at higher elevations by dark grey, well laminated argillites. Minor pyroxene porphyry flows (Unit 8b) are interbedded with the sediments. The bedded sedimentary rocks are truncated to the southwest, towards the head of the valley, by the overlying volcanic units (Unit 8b). The nature of the contact is uncertain; it may be a low angle thrust fault or an angular unconformity.

The Saddle area is a complex assemblage of Stuhini Group tuffaceous units, altered volcanics and minor graphitic argillites, with altered diorite/monzonite intrusives of probable Early Jurassic age (Figure 7). Numerous north-northeast to north-northwest trending shear zones cross the area, obscuring contacts and imparting a strong foliation to the affected units. Foliation strikes consistently north-northeast and dips forty to seventy degrees to the west. Highly altered, pyritiferous volcanics, siltstones and intrusives underlie the western half of the Saddle area, whereas relatively unaltered, undeformed crystal tuffs (Unit 8c) and porphyritic intrusives (Unit 11) underlie the eastern half of the saddle. The intrusives are pale grey, weathering to white or rusty brown with less than 5% quartz phenocrysts and up to 10%

black hornblende needles in a fine-grained grey matrix containing finely disseminated pyrite. These intrusives have not been dated; they have been assigned to the Jurassic Galore Creek Intrusions (Unit 11) although their textures more closely resemble the Tertiary stocks found elsewhere in the Galore Creek district. The crystal tuff (Unit 8c) is pale grey, weathering to white. Its crystal fragments stand out in relief on weathered surfaces, giving the rock a gritty, sedimentary appearance. Another very fine-grained pale grey-green rock commonly carries up to 5% disseminated pyrite, but it was impossible to determine in the field if this unit was originally a sediment or a volcanic.

The ridge on the western half of the Pup 3 claim is dominantly underlain by pale grey-green crystal tuffs grading into tuffaceous siltstones (Unit 8c) and pyroxene porphyry flows (Unit 8b). Contacts between the two units are sharp and highly irregular. The tuffaceous units dominate the western half of the ridge, the pyroxene porphyry flows the eastern half. The tuffs are pale grey-green, with fine-grained white and black fragments. Bedding is well developed. The pyroxene-phyric flow units are medium grey-green to green in colour with a fine grained matrix containing 10-20% equigranular augite phenocrysts which range from one to five millimeters in size. In heavily oxidised exposures, the phenocrysts have weathered out, leaving the rock with a characteristic pock-marked surface. Thin-bedded, dark grey, rusty weathering argillites (Unit 8a) outcrop on top of the ridge and as faulted, sheared wedges caught up in the volcanics. A well defined shear zone, ten meters in width, strikes  $010^{\circ}$  and dips steeply to the west along the length of the ridge. A twenty-five meter wide, fault-bounded band of foliated argillites parallels the shear on the western side of the ridge and a one meter wide biotite lamprophyre dyke (Unit 14c) cuts the volcanic units on the eastern side. Minor late stage, undeformed porphyritic dykes (Unit 14d) cutting the older units. These dykes vary in appearance but are

generally medium to dark grey in colour, with a fine grained matrix, containing up to 25% white feldspar laths and 10% black hornblende needles.

Grant (1964) and Logan et al. (1989b) have mapped a medium-grained quartz monzonite stock (Unit 11c) at the intersection of Galore Pup and Galore Creeks, on the eastern boundary of the OP 1 claim. Grant estimated its composition at 30% plagioclase, 15% perthite and antiperthite, 20% quartz, 20% actinolite, 10% chlorite and 1% biotite. This outcrop was not examined during the current program.

## 6.2 Mineralization

A total of 130 rock samples were collected from mineralized and altered float and outcrop (Figure 6). Two zones of interest were extensively sampled: the "Saddle Zone", located on the western half of the saddle area between the headwaters of Jack Wilson and Galore Pup Creeks (Figure 7) and the "Malachite Zone", located on the northwestern slope of the Galore Pup valley between 1000 and 1400 meters elevation.

The Saddle Zone (Figure 7) comprises altered volcanics, intrusives and sediments, cut by a number of strong northerly-trending shears. Alteration is variable and irregular, with bleaching and clay alteration in some areas and silicification in others. Chlorite and epidote alteration is also locally present in the volcanics. Pyritization is widespread, with most rocks containing a minimum of 2-3% silvery pyrite. Mineralization consists of 1-5% finely disseminated pyrite with lesser disseminated chalcopyrite, galena and sphalerite, with or without quartz, in foliated host rocks. Galena and sphalerite are more prevalent in the southern half of the saddle, while pyrite dominates to the north.



Sampling in the Saddle Zone was concentrated on a major shear approximately ten meters in width, termed the "Jack Wilson Shear", which trends north-northeast and dips  $50^{\circ}$  to the west. The shear can be traced for approximately 1100 meters along strike, cutting across the saddle and disappearing under glacial debris in Jack Wilson Creek. Ten samples were taken from this shear along 600 meters of strike length, returning anomalous gold and base metal values which ranged up to 480 parts per billion gold, 8610 parts per million copper, 1.95% lead and 3.40% zinc. Sample #459585, which was taken 100 meters to the east of the Jack Wilson Shear, assayed 1.30 grams per tonne (0.038 oz/ton) gold with low base metal values across 1.5 meters.

Another well defined shear within the Saddle Zone, termed the "Galena Shear", trends  $032^{\circ}$  and dips vertically approximately one hundred meters east of and near parallel to the Jack Wilson Shear. It is marked by a gully approximately five meters deep, which is truncated to the north at the bowl shaped area at the head of the Jack Wilson Creek. Erratic quartz veins with minor blebby galena occur in foliated volcanics near the edge of the recessive gully. The veins are less than thirty centimeters in width and several meters in length. White quartz comprises about five percent of the float within the gully, indicating that quartz veining is more extensive in the shear itself. None of this float was sampled.

Another major shear zone, parallel to the Galena Shear and a further 200 meters to the east, was sampled at only two locations along its inferred 1000 meter strike length. In both samples, #447212 and #447213, erratic quartz-sulphide veins, which range from 0.10 to 1.0 meters in width, are hosted in dark green pyroxene porphyry flows adjacent to the shear. These quartz veins, which locally carry blebs of chalcopyrite, galena and sphalerite, are discontinuous, with strike lengths of several meters. They returned anomalous values up to 810 parts per billion gold, 40.0



parts per million silver, 1.91% zinc, 9140 parts per million lead and 1400 parts per million copper. Two hundred meters south of the Pup property on the PL 6 claim, a quartz vein in foliated dark green volcanics assayed 209 grams per tonne (6.09 ounces per ton) silver with 5.92% lead (Kasper, 1989).

Sample #459580, which carried 1.92% copper and 280 parts per billion gold, is a float sample collected on the western side of the Saddle Zone. Its source was not located. Significant results from the Saddle Zone are summarized in Table 6.2.1.

TABLE 6.2.1

SADDLE ZONE SAMPLING RESULTS

SAMPLE	WIDTH (meters)	GOLD (ppb)	SILVER (ppm)	COPPER (ppm)	LEAD (ppm)	ZINC (ppm)
447202	Float	560	1.0	2160	35	40
447203	0.3	480	2.0	962	5	34
447206	1.0	210	16.5	1.57%	25	128
447212	0.1-1.0	810	<0.5	375	30	130
447213	0.2-0.5	50	40.0	1400	9140	1.91%
459580	Float	280	13.0	1.92%	<5	60
459583	1.0	130	3.5	2410	75	1.11%
459585	1.5	0.038 oz/t	7.0	184	365	152
463059	0.5	350	3.0	1780	230	704
463063	0.5	260	5.5	8610	<5	78
463065	1.5	95	5.0	716	1.95%	3.40%

The Malachite Zone extends 400 meters horizontally, between 1000 and 1400 meters elevation on the northwestern slope of the Galore Pup valley, in an area drained by several major tributaries of Galore Pup Creek (Figure 6). Altered, rusty-weathering, pyritic volcanics, which appear shattered but are generally unfoliated, and minor pyritic schists, contain one to two percent disseminated chalcopyrite. The resulting malachite stain is strongest around the two easternmost forks of the tributaries.

Mineralization in the Malachite Zone is both disseminated and within discrete quartz veins. In the first type, one to seven

percent pyrite and chalcopyrite form blebs and disseminations within altered volcanics. Grab sample #459562, which was taken across one meter of this material from within a twenty meter patch of heavy malachite staining, assayed 1.23 grams per tonne (0.036 ounces per ton) gold with 2.05% copper. The second type of mineralization consists of quartz veins with up to 5% pyrite and chalcopyrite. The quartz veins are generally five to twenty centimeters in width and up to five meters in length. Grab sample #459552, taken from a 1.5 meter wide pyritic quartz vein, returned values of 740 parts per billion gold with 6180 parts per million copper. A small outcrop of a felsic intrusive body, several meters square and containing up to one percent disseminated chalcopyrite, outcrops just below the Malachite Zone. Sample #463113, taken from this intrusive, ran 125 parts per billion gold with 1035 parts per million copper. Silver, lead and zinc values are relatively low for all Malachite Zone samples. Table 6.2.2 summarizes significant results from the Malachite Zone.

TABLE 6.2.2  
MALACHITE ZONE SAMPLING RESULTS

SAMPLE	WIDTH (meters)	GOLD (ppb)	SILVER (ppm)	COPPER (ppm)	LEAD (ppm)	ZINC (ppm)
459555	1.5	740	3.5	6180	5	62
459556	Float	115	1.0	6030	5	112
459558	1.0	205	1.0	3360	5	48
459561	Float	490	18.5	1.31%	10	704
459562	0.1	60	<0.5	2550	5	68
459563	1.0	0.036 oz/t	8.0	2.05%	15	268
459564	Float	60	0.5	2390	<5	64
463113	1.0	125	0.5	1035	10	50

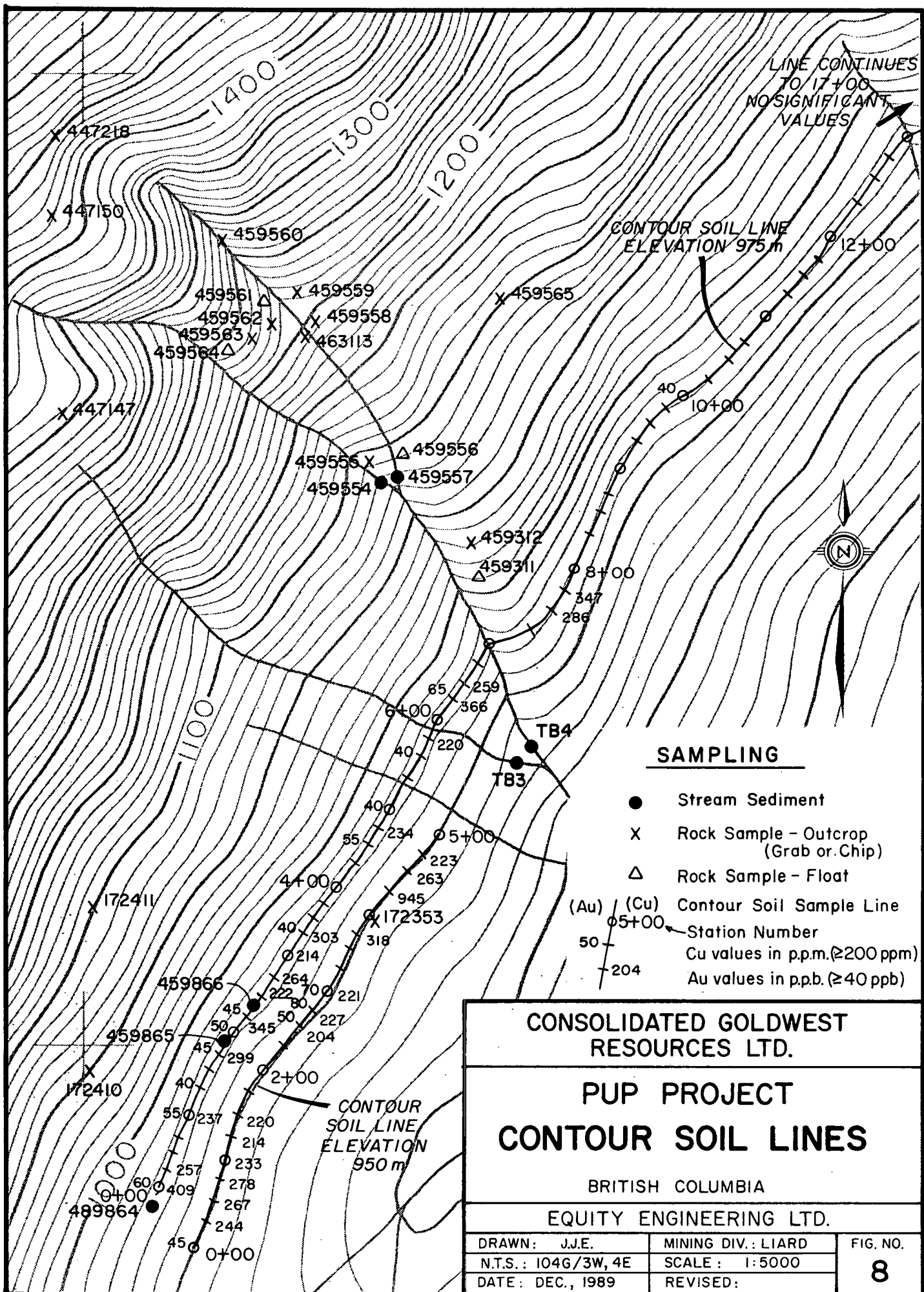
A prominent gossan occurs along the thrust-faulted contact between the Permian limestone and the Stuhini assemblage on the OP 1 claim. Much of the contact is snow filled and inaccessible, and only low values were returned from sampling of the gossan. Similarly, no significant mineralization was found to explain the gossan in the limestones on the OP 2 claim.

## 7.0 GEOCHEMISTRY

During the 1989 field season, eight stream silt samples were collected on the OP and Pup claims. All but one of the samples returned ten parts per billion gold or less. The exception, sample #459557, was taken from the northernmost stream draining the Malachite Zone and contained 40 parts per billion gold, 322 parts per million copper, 178 parts per million zinc and 25 parts per million arsenic. All of these values exceed the 90th percentile calculated from 1291 silt samples taken throughout the Telegraph Creek and Sumdum map sheets by a joint federal and provincial regional geochemical survey (GSC, 1988), and copper exceeds the 99th percentile. A second anomalous copper value of 174 parts per million in sample #459864 was returned from a small stream which drains the same hillside, approximately 800 meters to the south.

During exploration on the PL 6 claim in 1989, several silt samples were taken from tributaries of Jack Wilson Creek which also drain the Saddle Zone property. These returned anomalous values for gold and base metals up to 65 parts per billion gold, 534 parts per million copper, 29 parts per million arsenic and 20 parts per million lead (Kasper, 1989).

Most of the soil samples from the 950 meter soil contour line and south of station 11+00 on the 975 meter soil contour line were anomalous in gold and copper (Figure 8). Gold values for these sample ranged from 10 to 100 parts per billion, with an average of 30 parts per billion. Copper values ranged up to 945 parts per million, with most between 100 and 300 parts per million. The highest gold and copper values occur together at the 4+25 meter station on the 950 meter elevation line. The Malachite Zone lies upslope from the 975 meter elevation line between stations 5+00 and 9+00 and the 950 meter elevation line does not extend as far north as the Malachite Zone. In fact, the highest values are found south



LINE CONTINUES TO 17+00 NO SIGNIFICANT VALUES

CONTOUR SOIL LINE ELEVATION 975 m

CONTOUR SOIL LINE ELEVATION 950 m



**SAMPLING**

- Stream Sediment
- X Rock Sample - Outcrop (Grab or Chip)
- Δ Rock Sample - Float
- (Au) (Cu) Contour Soil Sample Line
- Station Number
- Cu values in p.p.m. (≥200 ppm)
- Au values in p.p.b. (≥40 ppb)

<b>CONSOLIDATED GOLDWEST RESOURCES LTD.</b>		
<b>PUP PROJECT</b>		
<b>CONTOUR SOIL LINES</b>		
BRITISH COLUMBIA		
EQUITY ENGINEERING LTD.		
DRAWN: J.J.E.	MINING DIV.: LIARD	FIG. NO.
N.T.S.: I04G/3W, 4E	SCALE: 1:5000	<b>8</b>
DATE: DEC., 1989	REVISED:	

of the Malachite Zone, suggesting that mineralization similar to that of the Malachite Zone may extend south, possibly as far as the Saddle Zone.

North of the 11+00 meter station on the 975 meter contour line, gold and copper values decrease. Gold tends to be below the detection limit of 5 parts per billion, with scattered values in the 5 to 55 parts per billion range. Copper values range from 22 to 89 parts per million.

Silver, lead and zinc values were low throughout the soil survey area, with maximum values of 2.0, 55 and 192 parts per million, respectively. An isolated high value of 350 parts per million zinc occurs with the second highest copper value, 409 parts per million, at the 0+00 station on the 975 meter elevation soil contour line. Arsenic values were generally below 25 parts per million, but ranged up to 50 parts per million.

## 8.0 DISCUSSION

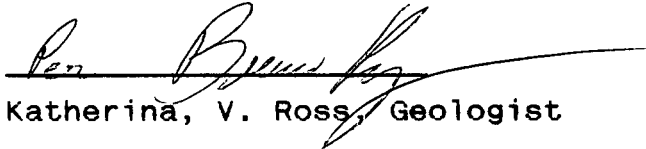
Two areas of widespread mineralization, the Saddle and Malachite Zones, were discovered on the OP and Pup claims during the 1989 exploration program. The Saddle Zone is a system of northerly-trending shears and related copper-gold-lead-zinc occurrences which cover an area 300 meters by 1100 meters, hosted by well-altered Stuhini Group tuffs, sediments and volcanics which have been intruded by quartz-hornblende porphyry plugs. Several of these shear zones can be traced for more than 1000 meters, forming gossanous gullies. Most of the sampling to date has been from irregular quartz-sulphide veins in foliated volcanics adjacent to the shear zones, with values up to 810 parts per billion gold, 40.0 parts per million silver, 1.92% copper and 1.91% zinc in separate samples. Values up to 0.038 ounces gold per ton, 1.95%

lead and 3.40% zinc were returned from the small number of samples taken from the shears themselves. Due to the recessive nature of the shear zones, soil geochemistry will prove very useful in locating mineralization within the shears themselves. It is expected that mineralization within the shears would be of higher grade than the quartz vein offshoots.

The Malachite Zone is a porphyry style copper-gold occurrence which has been mapped over an area of 400 meters by 300 meters, with grab samples up to 2.05% copper and 0.036 ounces per ton gold. Anomalous copper-gold soil geochemistry continues for a further 500 meters to the south towards the Saddle Zone, remaining open in this direction. The Malachite Zone, which has received only limited mapping and sampling to date, has the potential for hosting a porphyry copper-gold deposit or smaller, structurally-controlled gold-copper veins and shears. Both styles of mineralization are present in similar geological environments immediately to the west on Jack Wilson Creek and immediately to the southeast on the Grace claims and within the Galore Creek deposits.

The Pup claim group is at a very early stage of exploration. Two large mineralized systems have been discovered, each with indicated dimensions in the order of 300 meters by 1100 meters. Much more work will be necessary to investigate the potential of these systems for gold and base metal mineralization, but preliminary results are encouraging. Large structures, good initial geochemical results, and favorable lithologies and alteration, coupled with the exploration successes achieved during the past few years throughout the Galore Creek camp and further south in the Iskut River, Unuk River and Stewart districts, provide abundant incentive for further exploration of the Pup property.

Respectfully submitted,  
EQUITY ENGINEERING LTD.

  
Katherina, V. Ross, Geologist

Vancouver, British Columbia

APPENDIX A

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1418A.

APPENDIX B

STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES  
PUP CLAIM GROUP

PROFESSIONAL FEES AND WAGES:

David A. Caulfield, FGAC		
1.0 days @ \$400/day	\$	400.00
Jim Lehtinen, Project Geologist		
2.0 days @ \$400/day		800.00
Katherina Ross, Geologist		
11.5 days @ \$350/day		4,025.00
David Ridley, Prospector		
6.5 days @ \$300/day		1,950.00
Tom Bell, Prospector		
3.5 days @ \$300/day		1,050.00
Bruce Holden, Prospector		
3.25 days @ \$300/day		975.00
Derek Roulston, Sampler		
5.0 days @ \$200/day		1,000.00
David Hicks, Sampler		
5.0 days @ \$200/day		<u>1,000.00</u>
		\$ 11,200.00

EQUIPMENT RENTALS:

Handheld Radios		
30 @ \$5		150.00

JOINT MOBILIZATION, SUPERVISION AND SUPPORT COSTS:  
Prorated in accordance with number of mandays  
worked on each of several claim groups in the  
Galore Creek area

4,776.45

CHEMICAL ANALYSES:

Silt Samples		
8 @ \$15.69	\$	125.52
Soil Samples		
68 @ \$15.50		1,054.00
Rock Geochemical Samples		
130 @ \$18.25		<u>2,372.50</u>
		3,552.02

EXPENSES:

Materials and Supplies	\$	339.30
Printing and Reproductions		102.52
Accommodation and Meals		4,618.95
Helicopter Charters		4,674.60
Communications		<u>34.50</u>
		9,769.87

REPORT PREPARATION:  
(Estimated)

1,500.00

\$ 30,948.34

=====

APPENDIX C

ROCK DESCRIPTIONS

Sampler Dave Hicks

Project KGG 89-01

Location Ref Galore Creek

Date Aug 31, 1989

Property OP 1-2 and PUP 1-4

Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization		Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
172351	348660 E 6339670 N	Grab/oc	1.0m	Altered Volcanics	SI, CY	PY-5%	1280m. elev. schistose, bleached dissem. euhedral pyrite	25	<0.5	30	15	40	29
172352	348500 E 633958 N	Grab/oc	2.0m	Porphyritic Volcanics	SI	PY-20%	1240m. elev.; pale gray-darker medium grained pheno's	<5	<0.5	47	<5	24	11
172353	349300 E 6341120 N	Grab/oc		Altered Volcanics	SI, CB	PY-<1%	1010m. elev.; sample taken along soil contour line. (#17)	<5	<0.5	68	<5	48	7
Derek Roulston Sept. 9/89				Pup 1-4									
459851	349400 E 6343240 N	Grab/oc		Limestone	CB	PY<1%	1621m. elev. dissem. pyrite in limestone	5	<0.5	27	<5	26	9
459852	349300 E 6343210 N	Grab/oc	3.0m	Altered argillite	CB malachite	PY, CP 2%	1615m. elev.; mineral dissem. through rock; 72m. width; length 7100m; contact w/intrusive	30	1.0	657	5	120	9
459853	349900 E 6343380 N	Grab/oc	0.5m	Carbonate vein	CB	PY	1615m. elev.; py in bedding over 25m. width causing O <sub>2</sub> staining	95	<0.5	132	35	352	59
459860	349690 E 6340510 N	Grab/oc		Siltstone	SI	PY 30%	1104m. elev.; PY-dissem in siltstone	<5	<0.5	50	<5	94	2
459861	349760 E 6340800 N	Grab/oc	2.0m	Quartz	SI, CB	PY, CP	1013m. elev.; Quartz veins over 2.0m.	<5	<0.5	139	15	42	97
459862	349900 E 6340860 N	Grab/oc		Greywacke	SI, CB	PY	1028m. elev. - dissem. pyrite + fracture filling	<5	<0.5	24	10	102	10
459863	350000 E 6340890 N	Grab/oc	1.5m	Greywacke	SI, CL	PY	-minor py in schistose wacke w/chlorite alteration	200	<0.5	47	20	154	17
David Ridley Sept. 18/89				Pup 1-4									
463065	348420 E 6339390 N	Grab/oc	1.5m 1.5m x 20m	Altered volcanic	CB SE-CL?	PY-7% GL .5%	1188m. elev. main shear heading towards J.W. ck; trend 10°/50°W; very fine mineralization	95	5.0	716	1.95%	3.40%	10
463066	348410 E 6339350 N	Grab/oc	60cm	Quartz vein	CB, CL EP	PY-2%	1185m. elev.; hosted in volcanics; same shear in creek	20	<0.5	164	230	450	2

Sampler Tom Bell

Project KGG-89-01

Location Ref Galore Creek

Date Aug 31/89

Property OP 1-2 and PUP 1-4

Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization		Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
172401	6339460 N 348660 E	O.C. grab	5m	Quartz stringer	CL,	PY minor	elev. 1225m, 25 m <sup>2</sup> area of stringers 160°/-60°SW	<5	<0.5	16	5	40	11
172402	6339620 N 348710 E	O.C. grab	5m	Altered volcanics	SI	PY-5%	ele. 1270m, 10m wide in pyritic intrusive, 5/70°NW, finely disseminated	20	<0.5	48	10	16	15
172403	6339640 N 348700 E	O.C. grab	2m	Argillite	SI, LI	PY, CP 5-7%	elev. 1220m, schistose, shear 170°/-85°NW, 10m wide	20	<0.5	128	5	18	35
172404	6340020 N 348740 E	O.C. grab	1m	Argillite	LI, OX	PY, Mn 5%	elev. 1270m, 10m wide pod, slightly schistose, dissem. pyrite	30	<0.5	71	<5	30	15
172405	6340170 N 348670 E	O.C. grab	5m	Argillite	LI,	PY 25%	ele. 1270m, 20m wide pod, massive pyrite	<5	<0.5	172	5	50	30
172406	6340510 N 348620 E	O.C. grab	2m	Argillite	LI	PY 3%	elev. 1220m, 2m pod, quartz stringers	60	<0.5	76	5	32	25
172407	6340560 N 348640 E	O.C. grab	2m	Argillite	CL	PY, CP 3%	elev. 1215m, shear zone 20°/45°NW 50cm wide, 10m strike length	45	5.5	3440	<5	68	17
172408	6340760 N 348670 E	O.C. grab	2m	Altered Mafic?	CB, LI	PY 2%	elev. 1125m, 2-3m wide shear 360°/65°W	215	<0.5	123	<5	36	29
172409	6340720 N 348780 E	O.C. grab	1m	Quartz vein	QZ	PY, CP,	elev. 1125m, 25cm quartz vein in oblique shear	70	<0.5	43	5	10	12
172410	6340980 N 349010 E	O.C. grab	5m	Intrusive Syenite?	LI, CB	PY, PO, CP	elev. 1050m, medium grained, grey	30	<0.5	514	<5	44	9
172411	6341140 N 349010 E	O.C. grab	2m	carb. altered rock	CB	PY 50%	ele. 1100m, 3m <sup>2</sup> strong alteration intense carb-Fe alteration, PY clumps	<5	<0.5	92	5	22	9
172412	6341040 N 348320 E	float		altered volc.	SI, OX CL,	QL, PY minor	elev. 1570m, talus, highly altered, grey fine grained	<5	<0.5	116	320	334	11
172413	6340910 N 348370 E	O.C. grab	1.0m	quartz- carb vein	SE, CL OX	PY, HS, <1% minor CP	elev. 1450m, banded siltstone host. 70°/vertical, veins swells to 1.5m, pinches out	<5	<0.5	55	5	88	10
172414	6339500 N 348430 E	float		quartz vein	minor CY	PY; minor malachite	elev. 1185m, talus	<5	<0.5	619	5	14	9
172415 + 172416		Silt											
172417	348710 6344340	Float		Dirty sediments	sericite LI	PY; minor CP; HS	1200m. elev. talus, dk gray, poorly sorted; lots of this in float	30	<0.5	58	15	90	9
172418	348580 6344160	Grab/oc	10m 10m	Altered sediments	CB, LI sericite	PY-5% dissem.	1310m. elev; shear zone; strike 180°/vertical dips in contact w/ limestone	20	<0.5	68	5	106	14
172419	348560 6344140	Grab/oc	5.0m	chloritic schist	CL, CB	Pyrite	1310m. elev; same shear, large euhedral pyrite	15	<0.5	68	10	132	11
172420	348530 6344150	Grab/oc	2.0m 10m	Altered argillite	SI, LI CB	PY-20% dissem.	1310m. elev; schistose; strike 20°; gossanous zone 2.0m wide	<5	<0.5	49	<5	106	9



Sampler Bruce Holden

Project KGG 89-01

Location Ref Galore Creek

Date Aug 31 - 1989

Property OP 1-2 and Pup 1-4

Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization		Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
447201	348600 E 6339580 N	Grab/oc	10-20m	intrusive?	QZ >> CB	PY (5%)	1235m. elev mineralization occurs as stringers; no strike/dip taken - maybe oc pad	20	<0.5	65	15	62	90
447202	348450 E 6339550 N	Float	-	intrusive	QZ >> CB	PY > CP + malachite (3-4%)	1205m elev; found below # 201 - source not found	560	1.0	2160	35	40	11
447203	348440 E 6339520 N	Grab/oc	0.3m	Argillaceous tuff	QZ >> CL	PY, malachite (3-5%)	1195m. elev; Qtz vein, coarse + crystalline; strike 033°/70°W	480	2.0	962	5	34	9
447204	348660 E 6339460 N	Grab/oc	0.1m	Quartz vein	Quartz; minor chlorite	PY, MnO <sub>2</sub> (<1%)	1170m. elev; vein consists of a series of veins + is discontinuous; no orientation observed	10	<0.5	36	5	4	7
447205	348360 E 6339180 N	Float	-	Argillaceous tuff	Quartz; chlorite	CP, PY + malachite (<5%)	1105m. elev; bleb + stringer mineralization; source found see 447206	95	2.5	5220	5	114	11
447206	348390 E 6339180 N	Grab/oc	1.0m	"	Quartz; chlorite	CP > PY (10%)	1130m. elev; set of Qtz. veins over 5m? width; 320°/90°; 20m. length	210	16.5	157%	25	126	11
447207	348420 E 6339180 N	Grab/oc	1.0m	"	Quartz >> chlorite	CP > PY, malachite (2-3%)	1140m. elev; continuation of 206; taken 25m. away on strike	<5	0.5	1290	10	18	11
447208	348400 E 6339220 N	Grab/oc	<0.5m	"	"	CP, PY (3-5%)	1140m. elev; continuation of 207 taken 8m. away	65	6.5	7430	10	58	12
447209	348470 E 6339270 N	Grab/oc	1.0m	Quartz vein	Quartz >> chlorite	PY (<1%)	1115m. elev; followed on surface for 5-10m. 200°/50°NW	<5	<0.5	119	10	34	7
447210	348550 E 6339260 N	Grab/oc	0.5m	Quartz vein	Quartz >> chlorite	PY, SP, GL (3%)	1120m. elev; stringer + blebs mineralization; 090°/90°	<5	4.0	112	920	36	7
447211	348610 E 6339260 N	Float	-	Quartz vein	Quartz >> chlorite	PY, GL, CP	1150m. elev; - veins nearby - purple/blue iridescence on sulphides	<5	11.5	85	2750	2440	12
447212	348640 E 6339220 N	Grab/oc		Quartz vein	Quartz > chlorite	PY, CP, PO (15%)	1150m. elev; series of thin Qtz veins in volcanics; veins 8cm. to 1m.; erratic 140°/90°	810	<0.5	375	30	130	7
447213	348640 E 6339180 N	Grab/oc		Quartz vein	Quartz	SP, GL, CP (10%)	1210m. elev; more erratic veins 0.25-0.5m in width	50	40.0	1400	9140	191%	80
447215	348210 E 6339060 N	Grab/oc		Quartz vein	chlorite	CA, malachite stain	1060m. elev; host - dark green volcanics	180	2.5	2670	465	196	10
447217	348520 E 6339300 N	Grab/oc	0.5m	Quartz vein		PY	1280m. elev. schistose; gray altered host rock	<5	<0.5	203	30	106	10

Sampler Bruce Holden

Project KGG 89-01

Location Ref Gabre Creek

Date Sept. 1-2, 1989

Property OP 1-2 and PUP 1-4

Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample		DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
			Width	True Width	Rock Type	Alteration	Mineralization		Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
447218	348980 E 6341940 N	Grab/oc		11cm.	Quartz-carbonate			1447m. elev. hosted in argillite	<5	<0.5	73	35	30	6
447219	349320 E 6342150 N	Grab/oc			Quartz vein		Py	1372m. elev. - erratic widths -hosted in sediments	<5	<0.5	65	50	20	6
447220	349750 E 6342500 N	Grab/oc			Quartz		Py	1350m. elev.; fracture coating of pyrite in erratic Qtz. veining	<5	0.5	50	50	22	45
447221	350050 E 6342790 N	Grab/oc		8cm.	Quartz vein		Iron stain	1400m. elev.; hosted in sediments	<5	<0.5	15	10	42	20
447222	349870 E 6342760 N	Grab/oc		22cm.	Quartz vein			1440m. elev.; Gray + white Qtz w/ < 10% sulphides	<5	<0.5	39	315	1210	19
447223	No sample				ticket destroyed									
447224	349470 E 6342510 N	Grab/oc		8cm. - 1m.	Quartz vein			1500m. elev. barren vein	<5	<0.5	5	5	24	9
447225	349380 E 6342640 N	Grab/oc			Quartz - minor carbonate vein			1600m. elev. numerous Qtz. veins w/ minor gray Qtz.	<5	<0.5	6	5	12	10
447226	351220 E 6343330 N	Float		10cm.	Quartz	CB	Py, GL, SP	975m. elev.; talus; near volcanic limestone contact; in limestone white Qtz.	<5	<0.5	33	1045	3900	9
447227	351170 E 6343080 N	Grab/oc		10m.	Altered Sediments	CL CB	Py	980m. elev.; alteration zone	10	<0.5	149	15	92	6
447228	351120 E 6343060 N	Grab/oc		20cm.	Qtz vein	QZ, CY	Py minor malachite	1034m. elev.; strike 500/700 W zone of veining within fault contact	<5	<0.5	188	10	28	17
447229	351050 E 6343060 N	Grab/oc		10cm-1m.	Qtz vein	QZ, LI	Py - 390	1060m. elev.; large gossan along same fault. 1400/700 W	<5	<0.5	204	5	20	17
447230	351140 E 6342980 N	Grab/oc			Altered Volcanics	SI	Py	1014m. elev.; unknown origin, large shear zone along fault	<5	<0.5	324	10	34	9
447231	351270 E 6343080 N	Grab/oc		?	Fault rock	SI	Py CP	914m. elev.; in fault creek; silicified sed/volcanics; grades into breccia w/ sulphide rich matrix	<5	<0.5	773	<5	26	6
447232	351660 E 6342700 N	Grab/oc			intrusive	SI	Py	650m. elev.; light gray/white phenos w/ dissem. pyrite	130	<0.5	38	20	58	16

Sampler Lika Russ

Project KGG-81-01

Location Ref Galore Creek

Date Sept 1, 1989

Property CP102, PUP 1-4

Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization		Au PPb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
459301	6344340N 350740E	Float		Qtz vein	SI	minor Malachite, py	elev. 1100m, very minor staining in white qtz, disseminated py	<5	16.5	251	725	34	12
459310	6342150N 350910E	Grab o.c.	15cm	Altered Sediments	CB	Py - 5%	elev. 735m, narrow rusty zones with massive pyrite	185	4.0	350	940	246	50
459311	6341210 N 34990E	Float		Quartz		CP - 1%	elev. 880 m, creek bed, float malachite staining	50	2.5	3400	45	44	11
459312	6341520 N 349400E	Grab o.c.	10cm	Carbonate- Quartz		PO - 5%	elev. 1030 m, vein is siliceous sediments, several veins, massive pyrrhotite	<5	<0.5	182	5	28	9
459313	6341480 N 349410E	Float		Altered Volcanic(?)	SI	Py - CP 1%	elev. 1020 m, heavy malachite staining	125	1.0	3570	20	98	9
459314	6342210 N 349740E	Grab o.c.	?	Altered Volcanics	SI	Py 2%	elev. 1165m, disseminated silvery pyrite in altered rock, pale grey/green	<5	<0.5	71	5	52	80
459315	6342260N 349750E	Grab o.c.	?	Altered Volcanic	SI	Py - 2%	elev. 1175m - same as above	<5	<0.5	40	<5	30	32
459316	6342040N 349420E	Grab o.c.		Altered Volcanic	SI	Py - 3%	elev. 1250m, - same as above	<5	<0.5	28	5	30	17
459326	6340170N 348530E	Grab o.c.	5m	Monzonite		Py >> Po 2-3%	elev. 1280m, disseminated pyrite,	20	<0.5	72	<5	22	15
459327	6340220N 348620E	Grab o.c.	4m	Altered Seds/Volcanic	SI	Py 2-5%	elev. 1250m, weak clay alteration, quartz sweets	15	<0.5	55	5	24	20
459328	6340140N 348700E	Grab o.c.	2m	Monzonite	CY	Py >> Po 5%	elev. 1265m, not rusty weathering	<5	<0.5	71	15	46	10
459329	6340100N 348740E	Grab o.c.	1m	Sediment		Py - 15%	elev. 1260 m, fine grained pyrite	<5	<0.5	100	<5	22	2
459330	6340010 N 348840E	Grab o.c.	2m	Sediment	CB, CL	Py 3%	elev. 1270 m, pyrite fills vugs Zone 15m x 8m	5	<0.5	18	5	34	3
459331	6339620 N 348630E	Grab o.c.	1m	Intrusive	CY,	Py > Po 3%	elev. 1260, pyrite occurs as fracture fill and blotches, shear zone	<5	<0.5	24	<5	34	33
459332	6339500 N 348710E	Grab o.c.	2m	chlorite Schist	CL,	Py 5%	elev. 1250, intrusive/sediment contact, shear striking N-S.	20	<0.5	359	5	50	10
459333	6339220N 348460E	Grab o.c.	1m	Altered Volcanics	CY	Py - 5%	elev. 1160 m, shear zone - striking 24°, disseminated Pyrite	5	<0.5	20	10	38	39
459334	6339360 N 348380E	Grab o.c.	2m	Altered Volcanic	CY	Py 5-10%	elev. 1190 m, bleached and oxidized disseminated pyrite	10	<0.5	53	5	30	6
459335	6340660 N 347530 E	Grab o.c.	0.3m 0.3m	Quartz- Carb Vein	CB,	Py minor	elev. 1570m, hosted in mafic flows bedding - strikes 48°/38° SE	<5	<0.5	66	<5	52	<1
459336	6340640 N 347600 E	Grab o.c.	2m ?	Clastic Sediments		Py minor	elev. 1570m, rusty weathering probably due to argillite clasts	<5	<0.5	48	5	80	2
459337	6340590N 347720E	Grab o.c.	2m 4m	Tuff	SI-CB	Py - minor	elev. 1620m, rusty tuff unit with minor veining	<5	<0.5	97	<5	40	<1



Sampler David Ridley

Project KGG-89-01

Location Ref Galore Creek

Date Sept. 8, 1989

Property OP 1-2 and PUP 1-4

Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization		Au PPb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
447147	348980 E 6341660 N	Grab O.C.	30cm	Quartz vein	SI	PY - minor	elev. 1371m, hosted in a fine grained mafic volcanic flow, vein strike 20°/55°NW	10	<0.5	78	75	88	9
447148	348930 E 6341700 N	Grab O.C.		Altered Volcanic	SI	PY 1-2%	elev. 1395m, pale green/gray, disseminated pyrite	5	<0.5	69	25	160	10
447149	348940 E 6341750 N	Grab O.C.		Altered Sediment	SI	PY - 2%	elev. 1408m, pyrite concentrated in quartz stringers	10	<0.5	68	30	574	9
447150	348970 E 6341860 N	Grab O.C.	45cm	Volcanic	CB	PY - 1%	elev. 1438m carbonated silt, carbonaceous with argillite beds, carbonate veining	<5	<0.5	62	10	70	9
459551	348930 E 6341780 N	Grab O.C.	12cm	Quartz vein	CB, SI	PY - 1%	elev. 1386m, host rock altered, volcanic foliated, finely disseminated pyrite	35	0.5	287	10	72	9
459552	348860 E 6341600 N	Grab O.C.	1m	Quartz vein	CB, SI	PO, PY 1%	elev. 1589m, strikes 20°, vein lies on contact between two types of volcanics	<5	0.5	64	<5	38	9
459553	348920 E 6341510 N	Grab O.C.	1m	Altered Volcanic	CB SE.	PY 1%	elev. 1347m, strike 20°/55°NW, small foliated zone outcrops over 150m	5	<0.5	40	<5	56	10
459554	349290 E 6341570 N	Silt											
459555	349280 E 6341800 N	Grab O.C.	1.5m	Quartz vein	SI	PY 5%	elev. 1080m, host - altered volcanic pyrite - massive in small vein swarm	740	3.5	6180	5	62	38
459556	349340 E 6341620 N	Float		Altered Volcanic	CB malachite	PY, CP - 4% - minor GA	elev. 1080, carbonate veinlets carrying py + cp. lots of malachite	115	1.0	6030	5	112	12
459557	349320 E 6341600 N	Silt											
459558	349240 E 6341740 N	Grab O.C.	1.0m 50m	Altered Volcanic	CL, Malachite	minor PY, CP	elev. 1207m, little malachite staining over 50m wide zone, over 200m long	205	1.0	3360	5	48	11
459559	349230 E 6341780 N	Grab O.C.	1.0m	Altered Volcanic	SI	PY - 2%	elev. 1237m, finely disseminated pyrite, overlies malachite zone	15	<0.5	730	5	20	12
459560	349140 E 6341840 N	Grab O.C.	15cm	Altered Volcanic		PY - 7%	elev. 1267m, massive + disseminated pyrite, pods 15 x 45cm, zone - 60m wide	40	1.0	984	10	48	16
459561	349200 E 6341780 N	Float		Altered Volcanic	CB	PY >> CP 5%	elev. 1240m, disseminated to massive pyrite	490	18.5	1.31%	10	704	16
459562	349200 E 6341740 N	Grab O.C.	1.0m 10cm	Carbonate vein	CB, Malachite	PY, CP minor	elev. 1203m, shear zone trending 250°, hosted in bleached, altered volcanics	60	<0.5	2550	5	68	15
459563	349180 E 6341730 N	Grab O.C.	1.0m 20m x ?	Altered Volcanic	SI	PY, CP 5%	elev. 1210m, heavy malachite staining large area covered by staining	0.03% oz/t	8.0	2.05%	15	268	41
459564	349160 E 6341720 N	Float		Altered Volcanic	CB Malachite	PY, CP 2%	elev. 1234m, proximal to source, heavy malachite staining	60	0.5	2390	<5	64	11
459565	349430 E 6341780 N	Grab O.C.		Altered Volcanic	SI	PY - 3%	elev. 1109m, disseminated pyrite	35	0.5	956	<5	50	12
459566	349440 E 6342140 N	Float	20cm	Altered Volcanic	SI	PY, CP 5%	elev. 1280m, quartz flooded, massive sulphides	15	<0.5	932	15	66	3

Sampler David Ridley

Project KG 89-01

Location Ref Galore Creek

Date Sept. 10, 1989

Property DP1-2, PUP 1-4

Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
					Rock Type	Alteration	Mineralization		Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
459567	349750 E 6342370 N	Grab O.C.		90cm	Quartz Vein	SI, CB	P4 - minor	elev. 1255, vein in shear zone 1.5m wide, bleached volcanics	90	<0.5	37	<5	28	7
459568	349950 E 6342580 N	Grab O.C.		3m	Altered Volcanics	SI	P4 - minor	elev. 1341m, shear zone 140°, 3m wide, bleached, rusty	<5	<0.5	15	5	26	<1
459577	6342910 N 349810 E	Silt												
459578	6343140 N 349840 E	Float		-	Quartz Vein	SI	P4 - 2%	elev. 1530m, highly altered schistose rock	90	3.5	481	40	106	32
459579	6337890 N 348380 E	Float		-	Altered Volcanic	CB	P4 - 10%	elev. 1286m, proximal to source, pink veinlets + disseminations	10	<0.5	148	<5	38	6
459580	6337850 N 348400 E	Float		8-10cm	Quartz Vein	SI, CL,	CP 2-3%	elev. 1234m, hosted in volcanics, malachite	280	13.0	1.92%	<5	60	1
459581	6339830 N 348400 E	Float		-	Altered Volcanic	CB, EP	P4 >> CP 5%	elev. 1213m, pyrite in disseminated bands, malachite stain	100	0.5	1830	5	22	14
459582	6339790 N 348500 E	Grab O.C.		2.5m 3m	Altered Volcanic	SI	P4 >> CP	elev. 1203m, shear zone - 50m - strikes 197°/70°, quartz flooded, malachite	80	1.5	2340	20	66	9
459583	6337710 N 348500 E	Grab O.C.		1m 3m	Altered Volcanic	SI	P4 - 3% SP 1%	elev. 1203m, same shear 35m south, very fine disseminated sphalerite	130	3.5	2410	75	1.11%	11
459584	6339660 N 348590 E	Float		20cm	Quartz Vein	SI	Po - 10% CP - 1% P4+	elev. 1188m, massive sulphides talus slope	10	<0.5	367	<5	200	<1
459585	6339680 N 348570 E	Grab O.C.		1.5 1.5-3m	Altered Volcanic	CY, MR	P4 2%	elev. 1207m, shear zone with mar. posite, strike 180°/57°W, 50m	0.038 0.21%	7.0	184	365	152	4
459586	6339810 N 348550 E	Grab O.C.		2m 3.5m	Altered Volcanic	CB	P4 2%	elev. 1228m, fault, very fine disseminated pyrite, strikes 174°/90°	45	<0.5	494	10	56	6
459587	6339780 N 348580 E	Grab O.C.		10cm	Quartz Vein	SI	Po - 3% CP, P4, GA - 1%	elev. 1219m, east side of fault, vein strikes 198°/80° NE	20	1.0	462	180	24	1
459588	6339790 N 348500 E	Grab O.C.		10cm	Quartz Vein	SI	P4, CP 1-2%	elev. 1231m, east side of fault, vein strikes N.E., malachite	120	1.5	1615	5	38	1
463059	6339720 N 348500 E	Grab O.C.		0.5m 3m	Altered Volcanic + Quartz Vein	CB, SI	P4 >> CP 5-7%	elev. 1203m, same shear zone as 459581 + 582.	350	3.0	1780	230	704	9
463060	6339760 N 348560 E	Grab O.C.		1.0m ?	Altered Volcanic	CL, EP-?	P4 - 3%	elev. 1222m, shear strikes 18°/50°W 100m east of previous shear	40	<0.5	172	<5	58	3
463061	6339770 N 348560 E	Grab O.C.		1.0m ?	Altered Volcanic	Fe - oxides	P4 - 3%	elev. 1240m, 100 north of 463060, highly altered	40	<0.5	139	<5	40	10
463062	6339820 N 348520 E	Float		?	Quartz	SI	CP - 2% P4 - 10%	elev. 1213m, sm from 459584 proximal to source	<5	<0.5	1530	<5	54	1
463063	6339660 N 348500 E	Grab O.C.		50cm 2.5m	Altered Volcanic	CB, SE-CL?	CP - 3% P4 - 1%	elev. 1213m, 100m of 463059, shear zone malachite staining	260	5.5	8610	<5	78	2
463064	6339420 N 348280 E	Grab O.C.		8cm	Altered Volcanics	SI, CB CL, EP	P4 - 1-2%	elev. 1213m, quartz veining over 4x20m lens zone, massive chlorite in veins, zone trends 160°	50	<0.5	124	<5	4	2

APPENDIX D

CERTIFICATES OF ANALYSIS



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212 BROOKSBANK AVE., NORTH VANCOUVER,  
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V6C 2X6

Project : PUP KCG-89-01

Comments: ATTN: JIM FOSTER CC: EQUITY ENG

• Page No. : 1  
Tot. Pages: 1  
Date : 28-SEP-89  
Invoice # : I-8925512  
P.O. # : NONE

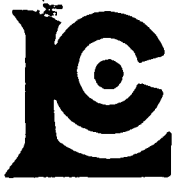
## CERTIFICATE OF ANALYSIS A8925512

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mb ppm	Ni ppm	Pb ppm	Zn ppm			
172415	201 298	< 5	10	< 0.5	10	44	2.18	490	< 1	52	< 5	62			
172416	201 298	< 5	11	< 0.5	10	51	2.17	480	1	57	< 5	74			

CERTIFICATION :

*B. Coughlin*





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Project: PUP KCM-89-01

Comments: ATTN: TIM FOSTER CC: EQUITY ENG

Page No.: 1  
Tot. Pages: 2  
Date: 28-SEP-89  
Invoice #: I-8925513  
P.O. #: NONE

## CERTIFICATE OF ANALYSIS A8925513

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mb ppm	Ni ppm	Pb ppm	Zn ppm			
172351	205 298	25	29	< 0.5	6	30	3.66	395	4	1	15	40			
172352	205 298	< 5	11	< 0.5	11	47	3.45	230	6	2	< 5	24			
172401	205 298	< 5	11	< 0.5	3	16	1.75	435	1	2	5	40			
172402	205 298	20	15	< 0.5	12	48	4.51	250	9	14	10	16			
172403	205 298	20	35	< 0.5	14	128	5.84	330	9	23	5	18			
172404	205 298	30	15	< 0.5	12	71	4.67	385	2	11	< 5	30			
172405	205 298	< 5	30	< 0.5	21	172	10.70	585	44	6	5	50			
172406	205 298	60	25	< 0.5	13	76	6.43	415	12	3	5	32			
172407	205 298	45	17	5.5	12	3440	6.55	460	54	< 1	< 5	68			
172408	205 298	215	29	< 0.5	14	123	4.92	520	9	33	< 5	36			
172409	205 298	70	12	< 0.5	3	43	1.33	190	2	19	5	10			
172410	205 298	30	9	< 0.5	56	514	5.08	585	12	27	< 5	44			
172411	205 298	< 5	9	< 0.5	11	92	3.97	205	5	14	5	22			
172412	205 298	< 5	11	< 0.5	19	116	5.17	1225	15	6	320	334			
172413	205 298	< 5	10	< 0.5	16	55	4.53	1050	1	13	5	88			
172414	205 298	< 5	9	< 0.5	2	619	2.16	135	1	3	5	14			
172417	205 298	30	9	< 0.5	14	58	4.15	1000	2	12	15	90			
172418	205 298	20	14	< 0.5	31	68	7.31	430	1	62	5	106			
172419	205 298	15	11	< 0.5	29	68	6.39	370	1	60	10	132			
172420	205 298	< 5	9	< 0.5	19	49	4.37	615	< 1	57	< 5	106			
447201	205 298	20	90	< 0.5	22	65	5.63	835	3	20	15	82			
447202	205 298	560	11	1.0	12	2160	3.13	345	2	2	35	40			
447203	205 298	480	9	2.0	9	962	3.67	335	2	1	5	34			
447204	205 298	10	7	< 0.5	2	36	0.39	280	< 1	1	5	4			
447205	205 298	95	11	2.5	10	5220	3.25	695	1	2	5	114			
447206	205 298	210	11	16.5	4	>10000	6.20	50	2	2	25	128			
447207	205 298	< 5	11	0.5	2	1290	0.99	235	< 1	2	10	18			
447208	205 298	65	12	6.5	6	7430	5.27	135	< 1	2	10	58			
447209	205 298	< 5	7	< 0.5	1	119	0.84	405	< 1	< 1	10	31			
447210	205 298	< 5	7	4.0	5	112	1.15	95	1	< 1	920	36			
447211	205 298	< 5	12	11.5	7	85	1.81	135	< 1	< 1	2750	2440			
447212	205 298	810	7	< 0.5	36	375	10.40	785	3	2	30	30			
447213	205 298	50	80	40.0	44	1400	6.00	300	1	2	9140	>10000			
447215	205 298	180	10	2.5	8	2670	1.80	1025	2	4	465	96			
447217	205 298	< 5	10	< 0.5	24	6	3.54	90	3	< 1	30	106			
447218	205 298	< 5	6	< 0.5	8	73	1.52	540	1	1	35	30			
447219	205 298	< 5	6	< 0.5	1	65	0.33	105	< 1	3	50	20			
447220	205 298	< 5	45	0.5	3	50	2.72	170	3	< 1	50	22			

CERTIFICATION

*B. Campbell*



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Project : PUP KGR-89-01

Comments: ATTN: JIM FOSTER CC: EQUITY ENG

Page No. : 2  
Tot. Pages: 2  
Date : 28-SEP-89  
Invoice # : 1-8925513  
P.O. # : NONE

## CERTIFICATE OF ANALYSIS A8925513

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mb ppm	Ni ppm	Pb ppm	Zn ppm		
447221	205 298	< 5	20	< 0.5	2	15	1.13	385	< 1	5	10	42		
447222	205 298	< 5	19	< 0.5	8	39	1.45	695	< 4	18	315	1210		
447224	205 298	< 5	9	< 0.5	< 1	5	0.20	285	< 1	4	5	24		
447225	205 298	< 5	10	< 0.5	1	6	0.15	115	1	5	5	12		
447226	205 298	< 5	9	< 0.5	6	33	0.64	1035	1	7	1045	3900		
447227	205 298	10	6	< 0.5	36	149	4.74	180	< 1	75	15	92		
447228	205 298	< 5	17	< 0.5	112	188	8.22	85	6	46	10	28		
447229	205 298	< 5	17	< 0.5	84	204	7.58	65	2	41	5	20		
447230	205 298	< 5	9	< 0.5	53	324	10.40	240	< 1	135	10	34		
447231	205 298	< 5	6	< 0.5	63	773	10.65	140	< 1	103	< 5	26		
447232	205 298	130	16	< 0.5	11	38	2.63	530	7	11	20	58		
459301	205 298	< 5	12	16.5	7	251	0.22	255	2	3	725	34		

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Project: PUPO

Comments: ATTN: JIM FOSTER CC: EQUITY ENGINEERING

• Page No. \_\_\_\_\_  
Tot. Pages: 1  
Date: 2-OCT-89  
Invoice #: I-8925776  
P.O. #: KGG89-01

## CERTIFICATE OF ANALYSIS A8925776

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm			
L3550 00M	201	298	45	23	< 0.5	21	194	5.34	695	24	40	15	142			
L3550 025M	201	298	20	24	< 0.5	34	244	5.20	1245	5	140	10	132			
L3550 050M	201	298	20	32	< 0.5	32	267	5.24	1170	4	142	10	146			
L3550 075M	201	298	20	27	< 0.5	35	278	5.38	1260	4	150	20	138			
L3550 100M	201	298	30	24	< 0.5	31	233	4.93	1145	4	137	5	134			
L3550 125M	201	298	25	22	< 0.5	36	214	5.07	1280	2	183	10	148			
L3550 150M	201	298	25	23	< 0.5	37	220	5.52	1145	< 1	217	10	204			
L3550 175M	201	298	15	16	< 0.5	30	178	4.91	1225	3	128	5	138			
L3550 200M	201	298	20	35	< 0.5	30	143	4.74	1125	< 1	170	10	146			
L3550 225M	201	298	30	22	< 0.5	33	146	5.05	1230	< 1	100	20	124			
L3550 250M	201	298	50	24	< 0.5	33	204	5.41	1270	5	63	15	128			
L3550 275M	201	298	80	17	< 0.5	26	227	4.77	1210	7	48	45	104			
L3550 300M	201	298	70	19	< 0.5	27	221	5.19	1305	8	47	5	94			
L3550 325M	201	298	35	16	< 0.5	28	137	4.59	1225	6	41	5	90			
L3550 350M	201	298	15	10	< 0.5	16	85	3.28	660	4	26	10	80			
L3550 375M	201	298	20	19	< 0.5	30	318	5.56	1285	4	80	< 5	120			
L3550 425M	201	298	100	23	< 0.5	38	945	5.80	1550	23	70	5	142			
L3550 450M	201	298	15	19	< 0.5	30	263	5.31	1175	< 1	80	5	114			
L3550 475M	201	298	10	16	< 0.5	25	223	4.82	1035	< 1	75	5	106			
L3550 500M	201	298	25	14	< 0.5	24	92	4.15	1010	5	42	5	96			

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Page Number : 1-A  
Total Pages : 1  
Invoice Date : 1-OCT-89  
Invoice No. : I-8925965  
P.O. Number : KGG-8901

Project : PUP  
Comments : ATTN: JIM FOSTER DC: EQUITY ENGINEERING

## CERTIFICATE OF ANALYSIS

### A8925965

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
	459554	201	238	< 5	1.74	< 0.2	15	50	< 0.5	< 2	1.54	< 0.5	18	50	88	3.25	10	< 1	0.05	20	1.26
459557	201	238	40	1.91	0.6	25	60	< 0.5	2	0.89	0.5	31	72	322	4.96	10	< 1	0.06	20	1.49	1100

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Total Pages : 1  
Invoice Date: 1-OCT-89  
Invoice No. : I-8925965  
P.O. Number : KGG-8901

Project : PUP  
Comments : ATTN: JIM FOSTER CC: EQUITY ENGINEERING

## CERTIFICATE OF ANALYSIS

A8925965

SAMPLE DESCRIPTION	PREP CODE		Mo	Na	Ni	P	Pb	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn
			ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
459554	201	238	1	0.01	47	1120	6	5	3	57	0.18	< 10	< 10	45	10	96
459557	201	238	5	0.01	109	1370	14	5	3	36	0.14	< 10	< 10	50	20	178

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Project: PUP

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• Page No. \_\_\_\_\_  
Tot. Pages: 1  
Date: 03-OCT-89  
Invoice #: I-8925966  
P.O. #: KGG89-01

## CERTIFICATE OF ANALYSIS A8925966

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mb ppm	Ni ppm	Pb ppm	Zn ppm	Au FA oz/T		
447147	205	298	10	9	< 0.5	7	78	1.84	240	< 1	18	75	88	=====		
447148	205	298	5	10	< 0.5	7	69	3.73	940	2	27	25	160	=====		
447149	205	298	10	9	< 0.5	13	68	3.71	845	< 1	34	30	574	=====		
447150	205	298	< 5	9	< 0.5	8	62	1.77	985	< 1	5	10	70	=====		
459310	205	298	185	50	4.0	31	350	13.50	470	5	13	940	246	=====		
459311	205	298	50	11	2.5	13	3400	2.19	240	< 1	5	45	44	=====		
459312	205	298	< 5	9	< 0.5	14	182	3.11	790	< 1	30	5	28	=====		
459313	205	298	125	9	1.0	15	3570	3.09	470	26	11	20	98	=====		
459551	205	298	35	9	0.5	17	287	4.28	360	57	31	10	72	=====		
459552	205	298	< 5	9	0.5	7	64	2.17	370	2	29	< 5	38	=====		
459553	205	298	5	10	< 0.5	10	40	2.65	665	< 1	49	< 5	56	=====		
459555	205	298	740	38	3.5	86	6180	8.50	185	4	16	5	62	=====		
459556	205	298	115	12	1.0	22	6030	2.99	465	21	8	5	112	=====		
459558	205	298	205	11	1.0	13	3360	1.95	355	15	14	5	48	=====		
459559	205	298	15	12	< 0.5	16	736	2.71	120	14	55	5	20	=====		
459560	205	298	40	16	1.0	53	984	10.15	400	25	79	10	48	=====		
459561	205	298	490	16	18.5	46	>10000	5.78	600	92	94	10	704	=====		
459562	205	298	60	15	< 0.5	15	2550	2.24	840	11	42	5	68	=====		
459563	205	298	1400	41	8.0	45	>10000	5.78	445	20	47	15	268	=====	0.036	
459564	205	298	60	11	0.5	19	2390	3.38	390	2	11	< 5	64	=====		
459565	205	298	35	12	0.5	18	956	4.84	395	107	1	< 5	50	=====		
459851	205	298	5	9	< 0.5	3	27	0.52	140	< 1	6	< 5	26	=====		
459852	205	298	30	9	1.0	14	657	2.76	450	1	44	5	120	=====		
459853	205	298	95	59	< 0.5	12	132	12.70	380	5	29	35	352	=====		

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V6C 2X6

Project: PUP OPTION

Comments: ATTN: JIM FOSTER CC: EQUITY ENGINEERING

Page No.: 1-A  
Tot. Pages: 1  
Date: 09-OCT-89  
Invoice #: I-8926560  
P.O. #: KGG89-01

## CERTIFICATE OF ANALYSIS A8926560

SAMPLE DESCRIPTION	PREP CODE		Au	Al	Ag	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn
			ppb FA+AA	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm
459577	201	238	< 5	1.41	0.8	25	200	1.5	< 2	2.04	1.5	22	36	94	4.73	10	< 1	0.07	10	1.08	720

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V6C 2X6

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• Page No.: 1-B  
Tot. Pages: 1  
Date: 09-OCT-89  
Invoice #: I-8926560  
P.O. #: EGG89-01

## CERTIFICATE OF ANALYSIS A8926560

SAMPLE DESCRIPTION	PREP CODE		Mb	Na	Ni	P	Pb	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn
			ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
459577	201	238	15	0.01	63	1880	6	< 5	4	49	0.09	< 10	< 10	71	< 10	240



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Page No.: 1  
Tot. Pages: 1  
Date: 11-OCT-89  
Invoice #: I-8926561  
P.O. #: KGG89-01

## CERTIFICATE OF ANALYSIS A8926561

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mb ppm	Ni ppm	Pb ppm	Zn ppm
1000M 0+00	201 298	60	14	< 0.5	43	409	6.71	1665	5	194	10	350
1000M 0+25	201 298	35	14	< 0.5	40	257	6.37	1430	9	124	20	192
3300 0+50	201 298	30	24	< 0.5	31	184	7.62	825	16	88	15	110
3300 0+75	201 298	25	17	< 0.5	21	106	6.24	835	12	75	10	94
3200 1+00	201 298	55	23	< 0.5	31	237	8.24	1565	13	63	55	130
3200 1+25	201 298	40	12	< 0.5	42	186	6.14	1645	4	58	5	148
3200 1+50	201 298	30	48	< 0.5	13	163	7.20	480	40	44	15	78
3200 1+75	201 298	45	16	< 0.5	24	299	5.92	1110	22	61	15	68
3200 2+00	201 298	50	22	< 0.5	17	152	7.52	1265	14	63	20	86
3200 2+25	201 298	45	17	< 0.5	43	345	6.74	1920	6	82	10	124
3200 2+50	203 298	25	6	< 0.5	30	222	5.97	1305	4	96	5	126
3200 2+75	203 298	30	9	< 0.5	29	264	5.31	1140	4	86	5	138
3200 3+00	217 298	35	4	< 0.5	27	214	5.01	1060	8	87	5	124
3200 3+25	201 298	40	12	< 0.5	35	303	6.05	1250	24	63	10	114
3200 3+50	201 298	15	5	< 0.5	8	105	5.32	280	21	31	5	66
3200 3+75	201 298	10	5	< 0.5	10	78	4.73	455	8	34	10	78
3200 4+00	201 298	15	6	< 0.5	18	97	6.84	1015	19	20	40	82
3200 4+25	217 298	10	5	< 0.5	21	82	4.42	1060	4	35	5	102
3200 4+50	203 298	55	5	< 0.5	21	119	4.20	1055	7	40	< 5	112
3200 4+75	203 298	30	6	< 0.5	26	234	4.40	1185	9	45	5	134

CERTIFICATION

*B. Coughlin*



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BRITISH COLUMBIA, CANADA V7J-2C1

PHONE (604) 984-0121

PRIME EXPLORATIONS LTD.

808 W. HASTINGS ST., 10TH FLOOR  
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V6C 2X6

Project: PUP OPTION

Comments: ATTN: JIM FOSTER CC: EQUITY ENGINEERING

Page No.: 1  
Tot. Pages: 1  
Date: 11-OCT-89  
Invoice #: I-8926562  
P.O. #: KGG89-01

## CERTIFICATE OF ANALYSIS A8926562

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mb ppm	Ni ppm	Pb ppm	Zn ppm
459314	205 298	< 5	80	< 0.5	13	71	4.63	945	1	9	5	52
459315	205 298	< 5	32	< 0.5	10	40	3.46	420	1	2	< 5	30
459316	205 298	< 5	17	< 0.5	9	28	2.93	585	2	2	5	30
459326	205 298	20	15	< 0.5	17	72	3.74	470	3	9	< 5	32
459327	205 298	15	20	< 0.5	10	55	3.46	480	1	6	5	24
459328	205 298	< 5	10	< 0.5	13	71	3.97	770	2	< 1	15	46
459329	205 298	< 5	2	< 0.5	15	100	2.14	340	1	9	< 5	22
459330	205 298	< 5	3	< 0.5	13	18	4.16	1035	< 1	1	5	34
459331	205 298	< 5	33	< 0.5	11	24	3.00	745	2	2	< 5	34
459332	205 298	20	10	< 0.5	20	359	4.98	830	5	14	5	50
459333	205 298	5	39	< 0.5	9	20	4.41	905	< 1	1	10	38
459334	205 298	10	6	< 0.5	6	53	6.63	505	13	3	5	30
459578	205 298	90	32	< 3.5	9	481	>15.00	125	19	34	40	106
459860	205 298	< 5	2	< 0.5	18	50	5.01	750	< 1	10	< 5	94
459861	205 298	< 5	97	< 0.5	16	139	4.26	590	< 1	7	15	42
459862	205 298	< 5	10	< 0.5	13	24	4.20	1420	< 1	6	10	102
459863	205 298	200	17	< 0.5	20	47	2.75	1850	1	119	20	154

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Comments: ATTN: JIM FOSTER CC: EQUITY ENGINEERING

Page #  
Tot. Pa.  
Date: 11-OCT-89  
Invoice # : I-8926563  
P.O. # : KGG89-07

## CERTIFICATE OF ANALYSIS A8926563

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mb ppm	Ni ppm	Pb ppm	Zn ppm			
459566	205	298	15	3	< 0.5	74	932	13.75	560	< 6	65	15	66			
459567	205	298	90	7	< 0.5	7	37	1.96	545	1	7	< 5	28			
459568	205	298	< 5	< 1	< 0.5	4	15	2.72	385	1	1	5	26			

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To: PRIME EXPLORATIONS LTD.

808 W. HASTINGS ST., 10TH FLOOR  
VANCOUVER, BC  
V6C 2X6

Project: PUP PROPERTY PUP OPT

Comments: ATTN: JIM FOSTER (EQUITY ENGINEERING)

Page No.: 1  
Tot. Pages: 1  
Date: 16-OCT-89  
Invoice #: I-8927192  
P.O. #: KGG89-01

## CERTIFICATE OF ANALYSIS A8927192

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mb ppm	Ni ppm	Pb ppm	Zn ppm			
L3200F 5+00	201	298	40	7	< 0.5	28	95	4.46	1105	13	34	5	112			
L3200F 5+25	201	298	25	5	< 0.5	4	24	1.98	195	3	9	5	122			
L3200F 5+50	201	298	40	5	< 0.5	13	198	4.42	680	24	22	5	82			
L3200F 5+75	201	298	10	3	< 0.5	23	220	3.39	970	4	32	< 5	148			
L3200F 6+25	201	298	65	50	< 0.5	29	366	5.11	1050	2	109	5	166			
L3200F 6+50	201	298	30	12	0.5	28	259	4.91	1135	< 1	111	5	184			
L3200F 6+75	201	298	15	11	1.0	14	128	4.47	815	3	30	5	80			
L3200F 7+00	201	298	20	7	< 0.5	7	59	4.08	385	3	19	< 5	50			
L3200F 7+25	201	298	10	9	< 0.5	8	125	5.57	255	4	33	15	86			
L3200F 7+50	201	298	35	20	< 0.5	39	286	5.36	1580	7	72	10	136			
L3200F 7+75	201	298	35	11	< 0.5	18	347	6.70	1120	7	49	20	126			
L3200F 8+00	201	298	20	7	< 0.5	7	136	5.77	305	5	29	10	74			
L3200F 8+25	201	298	30	3	1.0	7	39	4.14	185	3	24	5	64			
L3200F 8+50	201	298	20	1	< 0.5	3	53	2.13	75	6	10	5	50			
L3200F 8+75	201	298	10	3	< 0.5	8	70	8.92	1045	5	9	10	52			
L3200F 9+00	201	298	30	10	< 0.5	52	111	4.39	2720	3	78	20	150			
L3200F 9+25	201	298	20	15	2.0	27	105	5.34	1280	5	59	15	176			
L3200F 9+50	201	298	30	17	< 0.5	30	112	4.89	1610	2	59	15	128			
L3200F 9+75	201	298	25	17	< 0.5	28	165	5.40	1320	3	67	10	168			
L3200F 10+00	201	298	40	27	0.5	39	139	5.69	1540	2	90	15	148			
L3200F 10+25	201	298	30	17	< 0.5	43	134	5.19	2090	3	95	15	172			
L3200F 10+50	201	298	35	17	< 0.5	35	110	5.16	1270	2	97	10	160			
L3200F 10+75	201	298	30	20	< 0.5	33	90	5.28	1950	3	56	25	176			
L3200F 11+00	201	298	20	20	< 0.5	33	89	4.09	2360	2	56	10	186			
L3200F 11+25	201	298	25	19	< 0.5	39	67	4.48	2610	2	58	10	178			
L3200F 11+50	201	298	25	27	< 0.5	21	66	4.23	1100	5	39	10	164			
L3200F 11+75	201	298	< 5	7	< 0.5	6	27	5.71	270	5	15	5	76			
L3200F 12+00	201	298	< 5	3	0.5	5	44	5.09	490	5	11	5	58			
L3200F 12+25	201	298	< 5	7	< 0.5	8	35	5.46	800	7	16	15	72			
L3200F 12+50	201	298	5	7	< 0.5	7	39	2.79	150	11	15	5	82			
L3200F 12+75	201	298	< 5	7	0.5	5	40	6.07	230	3	22	15	74			
L3200F 13+00	201	298	20	23	< 0.5	6	35	7.07	335	5	15	15	52			
L3200F 13+25	201	298	< 5	32	< 0.5	13	34	3.76	1630	3	18	15	134			
L3200F 13+50	201	298	30	20	< 0.5	7	40	3.56	105	5	19	15	92			
L3200F 13+75	201	298	10	1	< 0.5	4	54	2.87	95	1	24	< 5	88			
L3200F 14+00 (20)	201	298	35	7	2.0	6	42	6.79	220	2	26	10	66			
L3200F 14+25 (50)	201	298	10	5	0.5	6	26	5.95	255	1	21	5	60			
L3200F 14+50 (75)	201	298	5	5	1.0	7	62	3.22	270	2	17	10	58			

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212 BROOKSBANK AVE., NORTH VANCOUVER,  
BRITISH COLUMBIA, CANADA V7J-2C1  
PHONE (604) 984-0221

to: PRIME EXPLORATIONS LTD.

808 W. HASTINGS ST., 10TH FLOOR  
VANCOUVER, BC  
V6C 2X6

Project: PUP PROPERTY PUP OPT

Comments: ATT: JIM FOSTER CC: EQUITY ENGINEERING

Page: 1-A  
Tot. Pages: 1  
Date: 16-OCT-89  
Invoice #: I-8927193  
P.O. #: KGG89-01

## CERTIFICATE OF ANALYSIS A8927193

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Al %	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
459864	203 238	10	1.74	< 0.2	< 5	50	< 0.5	< 2	0.63	0.5	19	139	174	3.85	< 10	< 1	0.09	10	1.54	675
459865	203 238	< 5	2.51	< 0.2	40	50	< 0.5	< 2	0.51	< 0.5	21	215	80	4.45	< 10	< 1	0.09	10	2.44	830
459866	203 238	10	2.00	< 0.2	< 5	50	< 0.5	< 2	0.75	0.5	17	134	96	3.63	< 10	< 1	0.11	10	1.74	720

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Project : PUP PROPERTY PUP OPT

Comments: ATT: JIM FOSTER CC: EQUITY ENGINEERING

Page : 1-B  
Tot. Pages: 1  
Date : 16-OCT-89  
Invoice # : I-8927193  
P.O. # : KGG89-01

## CERTIFICATE OF ANALYSIS A8927193

SAMPLE DESCRIPTION	PREP CODE		Mo	Na	Ni	P	Pb	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn
			ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
459864	203	238	9	0.02	86	980	8	< 5	3	72	0.20	< 10	< 10	62	< 10	100
459865	203	238	3	0.02	102	700	< 2	< 5	4	36	0.22	< 10	< 10	79	< 10	86
459866	203	238	4	0.03	73	1190	2	< 5	4	69	0.22	< 10	< 10	80	< 10	66

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Project: PUP PROPERTY PUP OPT

Comments: ATTN: JIM FOSTER EQ: EQUITY ENGINEERING

Page: 1  
Tot. Pages: 1  
Date: 16-OCT-89  
Invoice #: I-8927194  
P.O. #: KGG89-01

## CERTIFICATE OF ANALYSIS A8927194

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mb ppm	Ni ppm	Pb ppm	Zn ppm	Au FA oz/T		
459335	205 298	< 5	< 1	< 0.5	17	66	3.45	510	9	22	< 5	52	---		
459336	205 298	< 5	< 2	< 0.5	11	48	3.03	895	< 1	5	< 5	80	---		
459337	205 298	< 5	< 1	< 0.5	11	97	3.07	535	< 1	6	< 5	40	---		
459338	205 298	< 5	< 1	< 0.5	17	56	3.56	485	< 1	22	< 5	66	---		
459339	205 298	< 5	< 1	< 0.5	19	95	4.81	1495	1	10	10	136	---		
459340	205 298	< 5	1	< 0.5	11	93	5.24	680	< 1	19	< 5	52	---		
459349	205 298	40	4	< 0.5	15	447	4.81	605	1	13	< 5	32	---		
459350	205 298	< 5	4	< 0.5	18	139	5.99	855	25	5	< 5	48	---		
459579	205 298	10	6	< 0.5	23	148	5.75	570	76	4	< 5	38	---		
459580	205 298	280	1	13.0	5	>10000	3.93	155	14	3	< 5	60	---		
459581	205 298	100	14	0.5	35	1830	8.78	665	19	32	5	22	---		
459582	205 298	80	9	1.5	10	2340	4.89	1005	2	2	20	66	---		
459583	205 298	130	11	3.5	9	2410	4.11	685	3	1	75	>10000	---		
459584	205 298	10	< 1	< 0.5	26	367	5.21	200	< 1	5	< 5	200	---		
459585	205 298	1320	4	7.0	1	184	5.92	365	1	39	365	152	0.038		
459586	205 298	45	6	< 0.5	10	494	3.77	1290	2	17	10	56	---		
459587	205 298	20	1	1.0	5	462	1.62	160	77	4	180	24	---		
459588	205 298	120	1	1.5	4	1615	1.81	225	2	4	5	38	---		
463059	205 298	350	9	3.0	9	1780	3.54	1385	3	3	230	70	---		
463060	205 298	40	3	< 0.5	11	172	3.61	700	2	2	< 5	58	---		
463061	205 298	40	10	< 0.5	11	139	5.93	850	1	2	< 5	40	---		
463062	205 298	< 5	1	< 0.5	35	1530	9.27	440	< 1	3	< 5	54	---		
463063	205 298	260	2	5.5	9	8610	3.74	1045	1	2	< 5	78	---		
463064	205 298	50	2	< 0.5	1	124	2.65	405	1	2	< 5	4	---		
463065	205 298	95	10	5.0	11	716	5.02	1735	7	1	>10000	>10000	---		
463066	205 298	20	2	< 0.5	5	164	1.92	465	2	2	230	450	---		
463101	205 298	120	5	0.5	10	426	4.47	385	7	13	70	138	---		

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To TIME EXPLORATIONS LTD.

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V6C 2X6

Project : PUP KKG-89-01  
Comments: ATTN: JIM FOSTER  EQUITY ENG

Page No.  
Tot. Page  
Date 5-OCT-89  
Invoice # : 1-8927358  
P.O. #

## CERTIFICATE OF ANALYSIS A8927358

SAMPLE DESCRIPTION	PREP CODE	Cu %	Pb %	Zn %	Ag FA oz/T						
447206 447213	214 -- 214 --	1.57	-----	1.91	-----						

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To: PRIME EXPLORATIONS LTD.

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V6C 2X6

Project: PUP PROPERTY PUP OPT  
Comments: ATTN: JIM FOSTER CC: EQUITY ENGINEERING

Page No. 1  
Tot. Pages: 1  
Date: 23-OCT-89  
Invoice #: I-8928449  
P.O. #: KGG-89-1

## CERTIFICATE OF ANALYSIS A8928449

SAMPLE DESCRIPTION	PREP CODE	Cu %	Pb %	Zn %						
459580	214 ---	1.92	-----	-----						
459583	214 ---	-----	-----	1.11						
463065	214 ---	-----	1.95	3.40						

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Project : OP+PUP

Comments: ATTN: JIM FOSTER SC: EQUITY ENGINEERING

Page No : 1  
 Tot. Pages: 1  
 Date : 31-OCT-89  
 Invoice # : I-8928823  
 P.O. # : KGG89-01

## CERTIFICATE OF ANALYSIS A8928823

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mb ppm	Ni ppm	Pb ppm	Zn ppm			
LINE 2 15+25M	201	298	< 5	11	< 0.5	5	75	3.97	155	5	16	20	76			
LINE 2 15+50N	201	298	20	19	< 0.5	5	50	6.36	195	4	26	20	128			
LINE 2 15+75N	203	298	15	4	< 0.5	2	39	2.63	115	2	5	5	72			
LINE 2 16+00N	201	298	< 5	6	0.5	5	50	4.32	385	3	8	20	54			
LINE 2 16+25N	203	298	< 5	7	1.5	2	50	2.85	85	5	8	10	50			
LINE 2 16+50N	201	298	< 5	12	2.0	4	42	4.26	190	19	25	5	100			
LINE 2 16+75N	203	298	< 5	11	0.5	3	27	5.12	175	6	11	5	72			
LINE 2 17+00N	203	298	< 5	15	1.0	17	53	4.96	1355	13	30	10	160			
LINE 2 17+25N	201	298	< 5	3	0.5	1	22	6.95	290	4	8	< 5	52			

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Project : OP+PUP

Comments: ATTN: JIM FOSTER CC: EQUITY ENGINEERING

• Page No. \_\_\_\_\_  
 Tot. Pages: 1  
 Date : 31-OCT-89  
 Invoice # : I-8928824  
 P.O. # : KGG89-01

## CERTIFICATE OF ANALYSIS A8928824

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	As ppm	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mb ppm	Ni ppm	Pb ppm	Zn ppm			
	463102	205	298	50	230	< 0.5	25	18	7.50	430	8	26	< 5	26		
463103	205	298	< 5	5	0.5	18	294	4.99	800	1	1	< 5	44			
463104	205	298	< 5	4	2.0	1	32	1.09	255	< 1	2	1750	1350			
463105	205	298	35	4	< 0.5	11	358	3.18	500	6	6	10	38			
463113	205	298	125	< 1	0.5	10	1035	2.74	605	5	3	10	50			
463114	205	298	30	19	< 0.5	18	216	4.64	980	1	23	10	52			

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PHONE (604) 984-0221

To PRIME EXPLORATIONS LTD.

808 W. HASTINGS ST., 10TH FLOOR  
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V6C 2X6

Project : PUP

Comments: ATTN: JIM FOSTER CC: EQUITY ENGINEERING

• Page No. : 1  
Tot. Pages: 1  
Date : 20-NOV-89  
Invoice # : I-8930331  
P.O. # : KGG89-01

## CERTIFICATE OF ANALYSIS A8930331

SAMPLE DESCRIPTION	PREP CODE	Cu %									
459561 459563	214 -- 214 --	1.31 2.05									

CERTIFICATION :

*W. Stefanini*

APPENDIX E

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

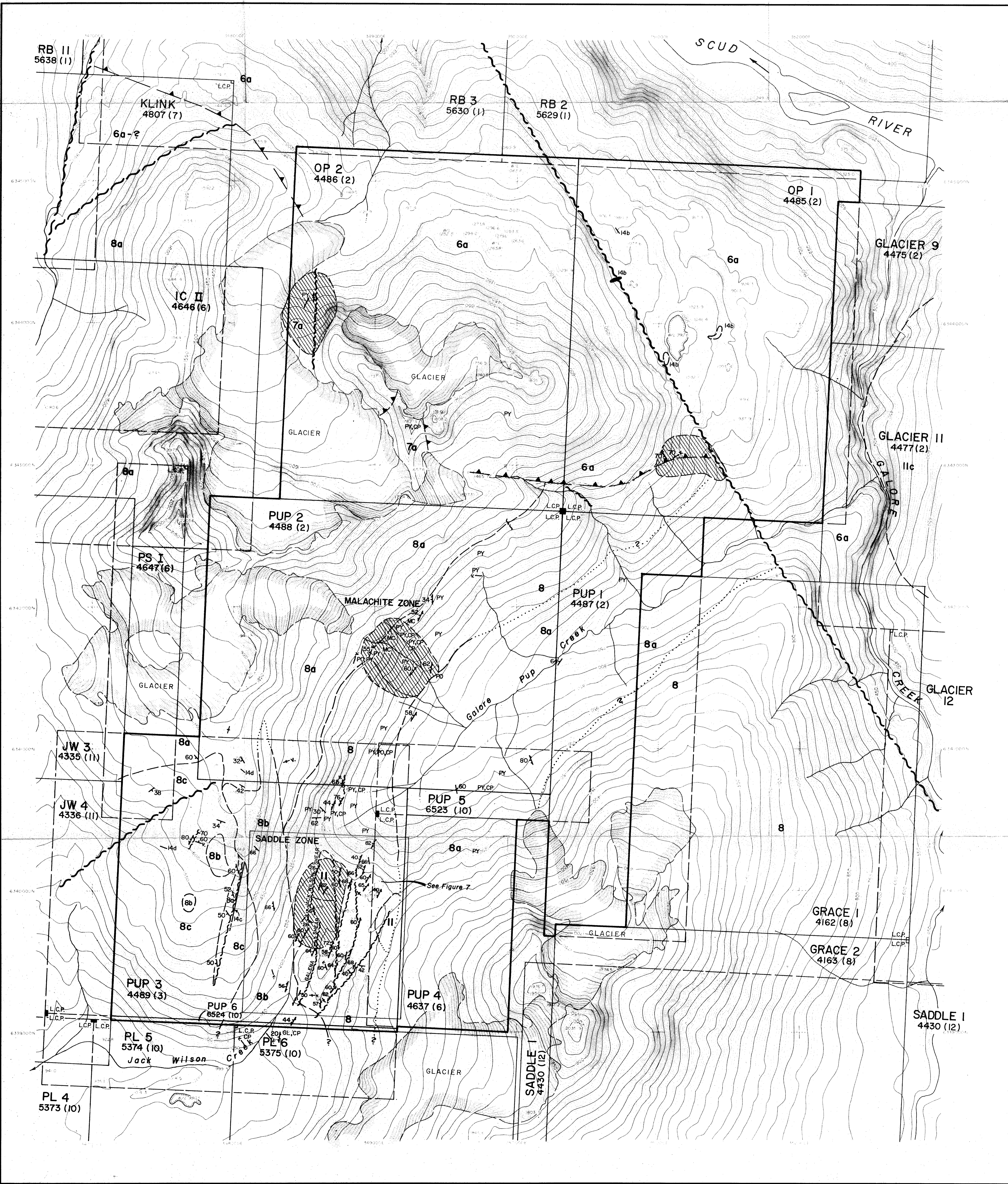
I, KATHERINA V. ROSS, of 4188 West 15<sup>th</sup> Avenue, Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

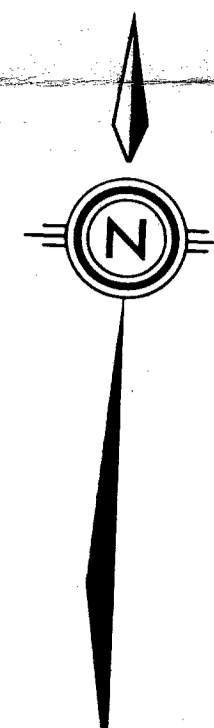
1. THAT I am a Consulting Geologist with offices at Suite 207, 675 West Hastings Street, Vancouver, British Columbia.
2. THAT I am a graduate of the University of Waterloo with an honours Bachelor of Science degree in Geology.
3. THAT my primary employment since May, 1988 has been in the field of mineral exploration.
4. THAT this report is based on fieldwork conducted under my supervision on the Pup Property during September and October 1989, and government publications and reports filed with the Government of British Columbia.
5. I have no interest in the property described herein, nor in securities of any company associated with the property, nor do I expect to acquire any such interest.

DATED at Vancouver, British Columbia, this \_\_\_\_\_ day of December, 1989.

Katherina Ross

Katherina Ross,  
B.Sc. Geology



  
 (UTM. GRID IS 2°06' WEST OF TRUE NORTH.)

**LEGEND**

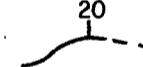
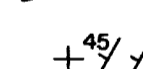
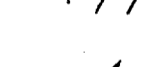
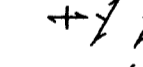
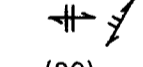
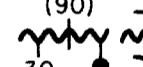
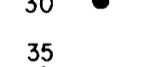

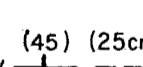

**INTRUSIVE ROCKS**

- TERTIARY**  
 Dykes and sills  
 14 Undivided, probable Tertiary dykes.  
 14b basaltic (gabbro); 14c lamprophyre (biotite  
 minette); 14d diabasic
- MIDDLE TRIASSIC - to - ? MIDDLE JURASSIC**  
 Galore Creek Intrusions  
 11 Undivided Galore Creek intrusive rocks.  
 11a syenite; 11b orthoclase porphyritic monzonite;  
 11c biotite-hornblende quartz monzonite - to - granodiorite

**STRATIFIED ROCKS**

- MESOZOIC "STIKINIAN" STRATA**
- UPPER TRIASSIC**  
 Stuhini Group  
 8 Undivided volcanic, pyroclastic and volcanoclastic rock.  
 8a shale, siltstone, argillite, limestone, conglomerate;  
 8b augite porphyritic basaltic andesite flows, breccia  
 and agglomerate; aphanitic and plagioclase-  
 porphyritic andesite; 8c bedded augite crystal tuff,  
 tuffaceous siltstone; 8d volcanoclastic agglomerate  
 with subangular - to - subrounded clasts  
 — apparently conformable contact —
- MIDDLE - to - UPPER TRIASSIC**  
 (Un-named)  
 7 Undivided post-Permian, pre-Stuhini Group  
 sedimentary strata, including pyroclastic rocks  
 7a siliciclastic and pyroclastic; 7b chert  
 ~~~~~ probable angular unconformity and lacuna ~~~~~
- PALEOZOIC "STIKINE ASSEMBLAGE"**
- PERMIAN**  
 (Un-named)  
 6 Undivided Permian strata  
 6a upper member Permian limestone - massive, light coloured
- CP Chalcocopyrite      PY Pyrite  
 GL Galena              PO Pyrrothite  
 MC Malachite          SP Sphalerite

**SYMBOLS**

-  Geological boundary (defined, approximate, assumed); dip indicated  
 Bedding, tops known (horizontal, inclined, vertical, overturned, dip unknown)  
 Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)  
 Second generation (horizontal, inclined, vertical)  
 Fault (defined, approximate, assumed). Inclined, vertical, downthrown side, horizontal movement  
 Thrust fault (defined, approximate, assumed). Barbs on upper plate, dip indicated  
 Dyke, vein (V), or stockwork (S), (defined, approximate, assumed). Dip, width indicated  
 Mineral occurrence (pyrite)  
 Gossan  
 Legal Corner Post (located, approximate)

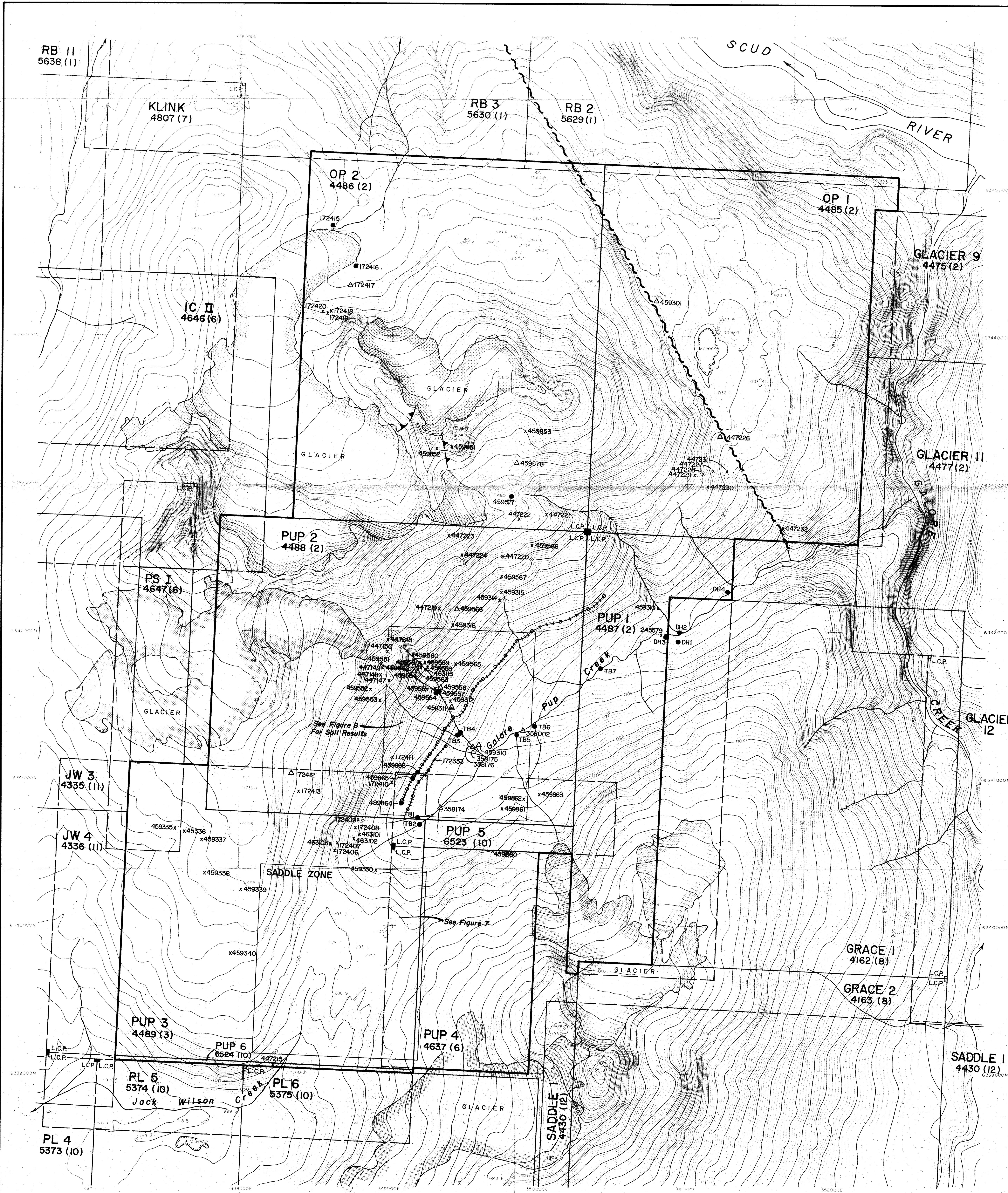
**GEOLOGICAL BRANCH ASSESSMENT REPORT**

**19,529**



|                                             |                    |          |
|---------------------------------------------|--------------------|----------|
| <b>CONSOLIDATED GOLDWEST RESOURCES LTD.</b> |                    |          |
| <b>PUP PROJECT GEOLOGY</b>                  |                    |          |
| BRITISH COLUMBIA EQUITY ENGINEERING LTD.    |                    |          |
| DRAWN: J.J.E.                               | MINING DIV.: LIARD | FIG. NO. |
| N.T.S.: 1046/3W,4E                          | SCALE: 1:10000     | <b>5</b> |
| DATE: DEC., 1989                            | REVISED:           |          |





**1989 STREAM SEDIMENT RESULTS**

| Sample | Au(ppb) | Ag(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 172415 | <5      | <0.5    | 44      | <5      | 62      | 17      |
| 172416 | <5      | <0.5    | 51      | <5      | 74      | 11      |
| 459554 | <5      | <0.2    | 88      | 6       | 96      | 15      |
| 459557 | 40      | 0.6     | 322     | 14      | 178     | 25      |
| 459577 | <5      | 0.8     | 84      | 6       | 240     | 23      |
| 459864 | 10      | <0.2    | 174     | 8       | 100     | <5      |
| 459865 | <5      | <0.2    | 80      | <2      | 86      | 40      |
| 459866 | 10      | <0.2    | 96      | 2       | 66      | <5      |

**1988 STREAM SEDIMENT RESULTS**

| Sample | Au(ppb) | Ag(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| TB1    | 45      | 0.2     | 131     | 6       | 89      | 15      |
| TB2    | 40      | 0.2     | 94      | 14      | 95      | 15      |
| TB3    | 15      | 0.2     | 72      | 2       | 72      | <5      |
| TB4    | 85      | 0.2     | 176     | 2       | 87      | 5       |
| TB5    | 15      | 0.4     | 54      | 6       | 81      | <5      |
| TB6    | 15      | 0.4     | 50      | 4       | 84      | 5       |
| TB7    | 55      | 0.2     | 65      | 2       | 87      | 5       |
| DH1    | 135     | 0.6     | 78      | 34      | 236     | 25      |
| DH2    | 25      | 0.4     | 84      | 20      | 235     | 20      |
| DH3    | 30      | 0.4     | 54      | 22      | 148     | 20      |
| DH4    | 60      | 0.2     | 118     | 36      | 109     | 15      |

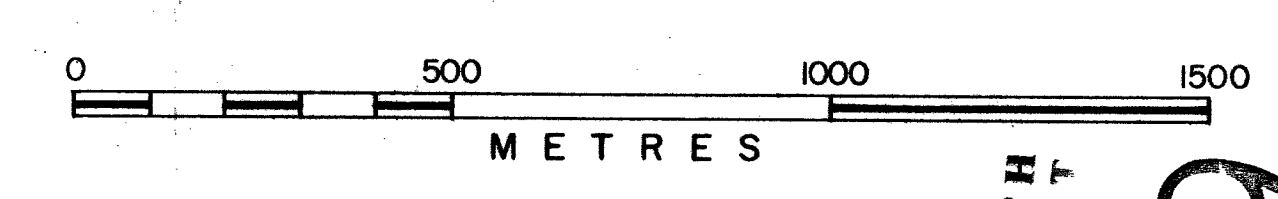
**1989 ROCK GEOCHEMICAL RESULTS**

| Sample | Au(ppb) | Ag(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 172353 | <5      | <0.5    | 68      | <5      | 48      | 7       |
| 172406 | 60      | <0.5    | 76      | 5       | 32      | 25      |
| 172407 | 45      | 0.5     | 340     | <5      | 68      | 17      |
| 172408 | 215     | <0.5    | 123     | <5      | 36      | 29      |
| 172409 | 70      | <0.5    | 43      | 5       | 10      | 12      |
| 172410 | 30      | <0.5    | 514     | <5      | 44      | 9       |
| 172411 | <5      | <0.5    | 92      | 5       | 22      | 5       |
| 172412 | <5      | <0.5    | 116     | 320     | 334     | 11      |
| 172413 | <5      | <0.5    | 55      | 5       | 88      | 10      |
| 172417 | 30      | <0.5    | 68      | 15      | 90      | 9       |
| 172418 | 20      | <0.5    | 68      | 5       | 106     | 14      |
| 172419 | 15      | <0.5    | 68      | 10      | 132     | 11      |
| 172420 | <5      | <0.5    | 49      | <5      | 106     | 9       |
| 447147 | 10      | <0.5    | 78      | 35      | 88      | 9       |
| 447148 | 5       | <0.5    | 69      | 25      | 160     | 10      |
| 447149 | 10      | <0.5    | 68      | 30      | 574     | 9       |
| 447150 | <5      | <0.5    | 62      | 10      | 70      | 9       |
| 447218 | <5      | <0.5    | 73      | 35      | 30      | 6       |
| 447219 | <5      | <0.5    | 65      | 50      | 20      | 6       |
| 447220 | <5      | 0.5     | 50      | 50      | 22      | 45      |
| 447221 | <5      | <0.5    | 15      | 10      | 42      | 20      |
| 447222 | <5      | <0.5    | 39      | 315     | 1210    | 19      |
| 447224 | <5      | <0.5    | 5       | 5       | 24      | 9       |
| 447225 | <5      | <0.5    | 6       | 5       | 12      | 10      |
| 447226 | 40      | <0.5    | 33      | 1045    | 3900    | 9       |
| 447227 | 10      | <0.5    | 149     | 15      | 92      | 6       |
| 447228 | <5      | <0.5    | 188     | 10      | 28      | 17      |
| 447229 | <5      | <0.5    | 204     | 5       | 20      | 17      |
| 447230 | <5      | <0.5    | 324     | 10      | 34      | 9       |
| 447231 | <5      | <0.5    | 773     | <5      | 26      | 6       |
| 447232 | 130     | <0.5    | 38      | 20      | 58      | 16      |
| 459301 | <5      | 16.5    | 251     | 725     | 34      | 12      |
| 459310 | 185     | 4.0     | 350     | 940     | 245     | 50      |
| 459311 | 50      | 2.5     | 3400    | 45      | 44      | 11      |
| 459312 | <5      | <0.5    | 182     | 5       | 28      | 9       |
| 459313 | 125     | 1.0     | 3570    | 20      | 98      | 9       |
| 459314 | <5      | <0.5    | 71      | 5       | 52      | 80      |
| 459315 | <5      | <0.5    | 40      | <5      | 30      | 32      |
| 459316 | <5      | <0.5    | 28      | 5       | 30      | 17      |
| 459335 | <5      | <0.5    | 66      | <5      | 52      | 1       |
| 459336 | <5      | <0.5    | 48      | 5       | 80      | 2       |
| 459337 | <5      | <0.5    | 97      | <5      | 40      | <1      |
| 459338 | <5      | <0.5    | 56      | <5      | 66      | 1       |
| 459339 | <5      | <0.5    | 95      | 10      | 136     | 1       |
| 459340 | <5      | <0.5    | 93      | <5      | 52      | 1       |
| 459350 | <5      | <0.5    | 139     | <5      | 48      | 4       |
| 459551 | 35      | 0.5     | 287     | 10      | 72      | 9       |
| 459552 | <5      | 0.5     | 64      | <5      | 38      | 9       |
| 459553 | 5       | <0.5    | 40      | <5      | 56      | 10      |
| 459555 | 740     | 3.5     | 6180    | 5       | 62      | 38      |
| 459556 | 115     | 1.0     | 6030    | 5       | 112     | 12      |
| 459558 | 205     | 1.0     | 3360    | 5       | 48      | 11      |
| 459559 | 15      | <0.5    | 736     | 5       | 20      | 12      |
| 459560 | 40      | 1.0     | 984     | 10      | 48      | 16      |
| 459561 | 490     | 14.5    | 1314    | 10      | 74      | 16      |
| 459562 | 60      | <0.5    | 2550    | 5       | 68      | 15      |
| 459563 | 0.036*  | 8.0     | 2.05*   | 15      | 268     | 41      |
| 459564 | 60      | 0.5     | 2390    | <5      | 64      | 11      |
| 459565 | 35      | 0.5     | 956     | <5      | 50      | 12      |
| 459566 | 15      | <0.5    | 932     | 15      | 66      | 3       |
| 459567 | 90      | <0.5    | 37      | <5      | 28      | 7       |
| 459568 | <5      | <0.5    | 15      | 5       | 26      | 3       |
| 459578 | 90      | 3.5     | 481     | 40      | 106     | 32      |
| 459851 | 5       | <0.5    | 27      | <5      | 26      | 9       |
| 459852 | 30      | 1.0     | 657     | 5       | 120     | 9       |
| 459853 | 95      | <0.5    | 132     | 35      | 352     | 59      |
| 459860 | <5      | <0.5    | 50      | <5      | 94      | 2       |
| 459861 | <5      | <0.5    | 139     | 15      | 42      | 97      |
| 459862 | <5      | <0.5    | 24      | 10      | 102     | 10      |
| 459863 | 200     | <0.5    | 47      | 20      | 154     | 17      |
| 463101 | 120     | 0.5     | 426     | 70      | 138     | 5       |
| 463102 | 50      | <0.5    | 18      | <5      | 26      | 230     |
| 463103 | <5      | 0.5     | 294     | <5      | 44      | 5       |
| 463113 | 125     | 0.5     | 1035    | 10      | 50      | <1      |

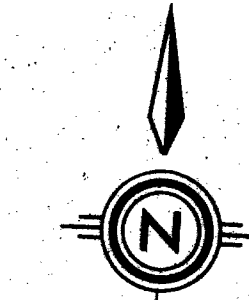
**1988 ROCK GEOCHEMICAL RESULTS**

| Sample | Au(ppb) | Ag(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) | As(ppm) |
|--------|---------|---------|---------|---------|---------|---------|
| 245579 | 290     | 0.2     | 121     | <2      | 79      | <5      |
| 358174 | 1000    | 7.0     | 4810    | 56      | 33      | 570     |
| 358175 | 10      | 0.2     | 89      | 8       | 10      | 5       |
| 358176 | 450     | 16.0    | 813     | <2      | 733     | <5      |
| 358002 | 190     | 0.8     | 819     | 4       | 26      | <5      |

(\* denotes assay in ounces per ton)



- SAMPLING**
- Stream Sediment
  - x Rock Sample - Outcrop (Gnd or Clp)
  - △ Rock Sample - Float
  - Contour Soil Sample Line
- For Location of Cu Values > 100 ppm and Au Values > 40 ppb Refer to Figure 8



10,529

GEOCHEMISTRY BRANCH  
ASSAY REPORT

|                                             |                    |          |
|---------------------------------------------|--------------------|----------|
| <b>CONSOLIDATED GOLDWEST RESOURCES LTD.</b> |                    |          |
| <b>PUP PROJECT</b>                          |                    |          |
| <b>GEOCHEMISTRY</b>                         |                    |          |
| BRITISH COLUMBIA                            |                    |          |
| EQUITY ENGINEERING LTD.                     |                    |          |
| DRAWN: J.J.E.                               | MINING DIV.: LIARD | FIG. NO. |
| N.T.S.: 104G/3W, 4E                         | SCALE: 1:10,000    | 6        |
| DATE: DEC., 1989                            | REVISED:           |          |

(UTM. GRID IS 2°06' WEST OF TRUE NORTH.)