1990 GEOLOGICAL AND GEOCHEMICAL REPORT ON THE CUDS 5-8 CLAIMS

Located in the Galore Creek Area
Liard Mining Division
NTS 104B/13E, 104G/4E

57° 00′ North Latitude
131° 34′ West Longitude

-prepared for-
PASS LAKE RESOURCES LTD.

-prepared by-
Ann L. Doyle, Geologist
David A. Caulfield, F.G.A.C
December, 1990

1990 GEOLOGICAL AND GEOCHEMICAL REPORT ON THE CUDS 5-8 CLAIMS

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1.0 INTRODUCTION

The Cuds 5-8 claims were staked in March 1989 to cover favourable geology south of the Porcupine River, approximately 155 kilometres northwest of Stewart in northwestern British Columbia (Figure 1). The property is generally underlain by Upper Triassic Stuhini Group rocks which have been intruded by an Eocene quartz-monzonite stock, a geological setting similar to that of the Paydirt gold deposit, located five kilometers to the north. Limited mapping and geochemical sampling in September 1989 led to the discovery of narrow quartz-sulphide veins on the Cuds 7 claim assaying up to 4.32 grams per tonne (0.126 oz/ton) gold. The geological similarity to the Iskut River, Sulphurets and Stewart mining camps to the south, and the discovery in the past few years of several major precious metals occurrences elsewhere in the Galore Creek district, has sparked renewed exploration interest throughout the area.

Reconnaissance exploration, consisting of geological mapping, prospecting and geochemical sampling, was carried out over the Cuds 5-8 property during October of 1990. Equity Engineering Ltd. conducted this program for Pass Lake Resources Ltd. and has been retained to report on the results of the fieldwork.

2.0 LIST OF CLAIMS

Records of the British Columbia Ministry of Energy, Mines and Petroleum Resources show that the Cuds 5-8 claims (Figure 2), located in the Liard Mining Division, are owned by Pass Lake Resources Ltd.. Claim data for the Cuds 5-8 property are summarized in Table 2.0.1.

TABLE 2.0.1
CLAIM DATA

Claim Name	Record Number	No. of Units	Record Date	Expiry Year
Cuds 5	5833	20	March 2, 1989	1991
Cuds 6	5834	20	March 2, 1989	1991
Cuds 7	5835	20	March 2, 1989	1991
Cuds 8	5836	20	March 2, 1989	1991
		80		

The claims overlap previously staked ground of the PL 10 and 11 claims to the north and the Wiser III and V claims to the east, reducing the actual ground coverage of the claims to approximately 317 units. The position of the legal corner posts for the Cuds 5-8 claims have been verified by field crews of Equity Engineering Ltd..

Km 0 100 200 300 400 500 Km

MILES 0 50 100 200 300 MILES

PASS LAKE RESOURCES LTD.

CUDS 5-8 CLAIMS
LOCATION MAP

BRITISH COLUMBIA

EQUITY ENGINEERING LTD.

DRAWN J.J.E.	MINING DIV LIARD	FIGURE
NTS 104B/13E,G/4E	SCALE AS SHOWN	1
DATE DEC., 1990	REVISED	

3.0 LOCATION, ACCESS AND PHYSIOGRAPHY

The Cuds 5-8 claims are located within the Coast Range Mountains approximately 160 kilometres northwest of Stewart and 100 kilometres south of Telegraph Creek in northwestern British Columbia (Figure 1). These claims lie within the Liard Mining Division, centered at 57° 00′ north latitude and 131° 34′ west longitude.

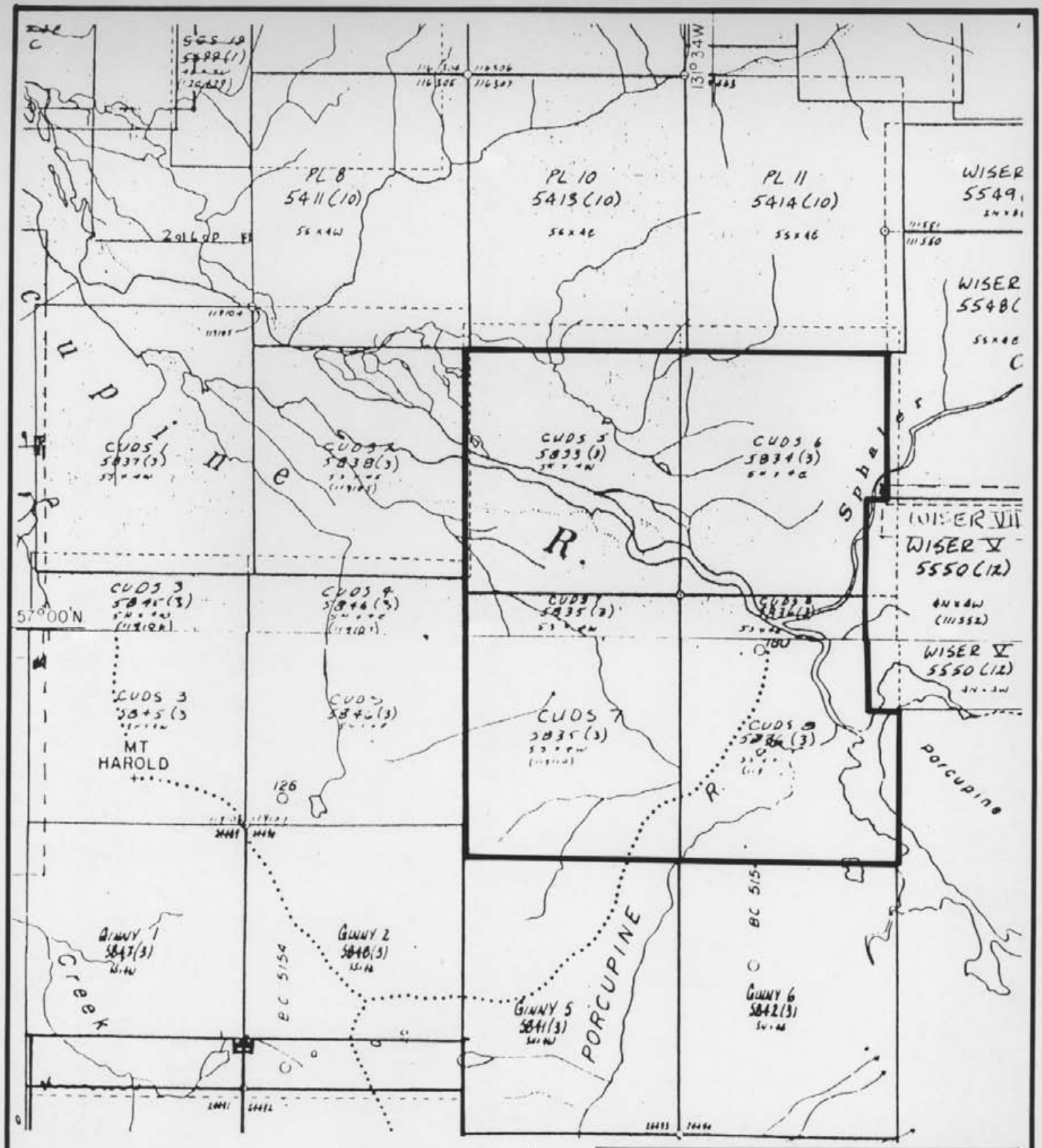
Access to the Cuds 5-8 property during the 1990 field season was provided by daily helicopter setouts from the Porcupine River base camp and airstrip, which are located on the Cuds 5 claim. During the field season, the Porcupine camp was serviced by fixed-wing aircraft up to the size of a Twin Otter, based out of Smithers, Wrangell or Telegraph Creek.

On the Alaskan side of the border, Wrangell lies approximately 80 kilometres 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 in the past, allowing economical transportation of heavy machinery and fuel to the confluence of the Porcupine and Stikine Rivers, located approximately ten kilometres northwest of the property.

The Cuds 5-8 claims straddle the Porcupine River floodplain from ten to fifteen kilometres above its confluence with the Stikine River. The Cuds 5 and 6 claims cover the southern slopes of Split Ridge and the mouth of Sphaler Creek, on the north side of the Porcupine River. The Cuds 7 claim rises south from the Porcupine River up the northeastern flank of Mount Harold. Topography is rugged, typical of mountainous and glaciated terrain, with elevations ranging from 90 metres on the Porcupine River floodplain to over 975 metres on the southwestern corner of Cuds 7. Approximately half of the Cuds 5-8 claims covers a thick sequence of fluvial and glacial sediments on the Porcupine River flood plain.

Slopes are covered by a mature forest of hemlock, spruce and balsam fir with a dense undergrowth of devil's club, alder and huckleberry. Willow and alder cover the Porcupine River floodplain.

The Cuds 5-8 property lies in the wet belt of the Coast Range Mountains, with annual precipitation between 190 and 380 centimetres (Kerr, 1948). Except during July, August and September, precipitation at higher elevations falls mainly as snow, with accumulations reaching three metres or more. Both summer and winter temperatures are moderate, ranging from -5°C in the winter to 20°C in the summer months.



PASS LAKE RESOURCES LTD.

CUDS 5-8 CLAIMS

CLAIM MAP

BRITISH COLUMBIA

EQUITY ENGINEERING LTD.

DRAWN:	MINING DIV.: LIARD	FIGURE 2
N.T.S.: 104B/13E,G/4E	SCALE: 1:50000	
DATE: DEC., 1990	REVISED:	

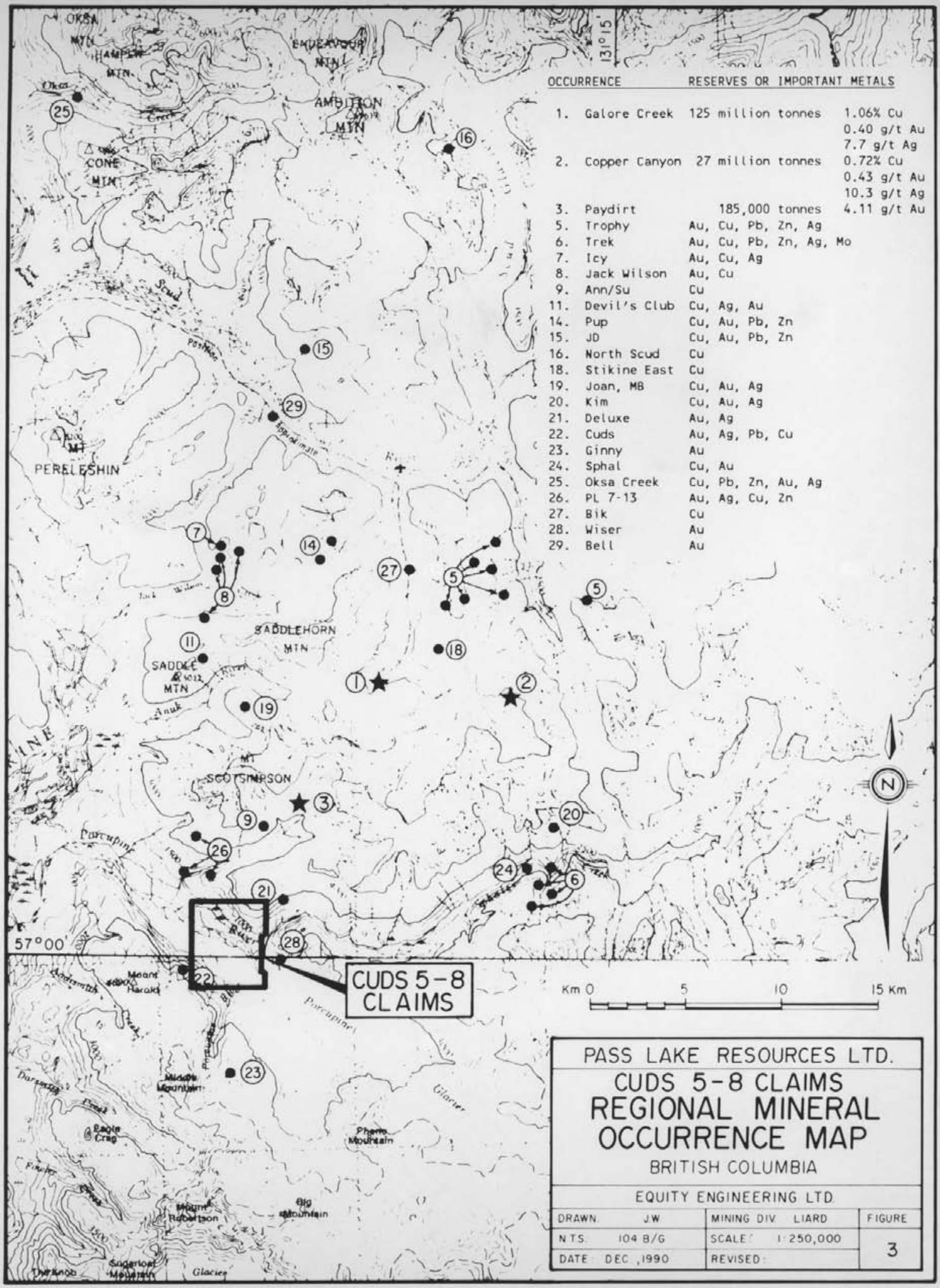
4.0 PROPERTY MINING HISTORY

4.1 Previous Work

The Galore Creek district was extensively explored for its copper potential throughout the 1960's, following the discovery in 1955 of the Galore Creek copper-gold porphyry deposit (Figure 3). 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 sixteen kilometres northeast of the centre of the Cuds 5-8 claims. 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 Spencer and Dobell (1958) to contain 27 million tonnes at a grade of 0.72% copper and 0.43 grams per tonne gold, was discovered eight kilometres east of the Central Zone in 1957. The Copper Canyon deposit and some of the peripheral zones on the Galore Creek property were subjects of diamond drilling programs for their gold potential during 1990.

In the mid-1950's, prospecting crews for K. J. Springer noted abundant low-grade chalcopyrite mineralization on the north side of Split Creek approximately four kilometres north of the Cuds 6 claim (Figure 3). In 1965, Julian Mining Co. Ltd. conducted geological mapping, induced polarization surveys, bulldozer trenching and 2,190 metres of diamond drilling on these showings, known as the Ann or Su prospect, intersecting extensive mineralization grading around 0.1% to 0.2% copper (BCDM, 1966). In 1981, Teck Corp. staked the Ann/Su prospect and discovered the Paydirt gold deposit approximately one kilometre northeast of the center of the Ann/Su copper porphyry deposit. Soil geochemistry, rock sampling, trenching and 760 metres of diamond drilling on the Paydirt deposit delineated 185,000 tonnes of indicated reserves grading 4.11 grams gold per tonne (Holtby, 1985).

Several significant precious metal occurrences were discovered on each of the Trek, Trophy, Icy and JW properties during the 1988 field seasons (Figure 3). In each case, these properties had been explored for copper during the 1960's, but had never received due attention for their gold potential. During the following year, initial reconnaissance exploration was carried out on an additional 25,000 hectares of the Galore Creek district which had received essentially no previous exploration for base or precious metals. Grab samples up to 75.4 grams per tonne (2.20 oz/ton) gold were taken from the PL 7-11 property, which adjoins the Cuds 5-8 property to the north (Caulfield and Kasper, 1989). A float sample assaying 282.9 grams per tonne (8.25 oz/ton) gold was found in Deluxe Creek, approximately 500 metres east of the Cuds 6 claim, apparently related to a major northerly-trending structure (Kasper, 1989). Further work was carried out on both of these properties during the 1990 field season.



OCCURRENCE		RESERVES OR IMPORTANT METALS	
1.	Galore Creek	125 million tonnes	1.06% Cu 0.40 g/t Au 7.7 g/t Ag
2.	Copper Canyon	27 million tonnes	0.72% Cu 0.43 g/t Au 10.3 g/t Ag
3.	Paydirt	185,000 tonnes	4.11 g/t Au
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	
11.	Devil's Club	Cu, Ag, Au	
14.	Pup	Cu, Au, Pb, Zn	
15.	JD	Cu, Au, Pb, Zn	
16.	North Scud	Cu	
18.	Stikine East	Cu	
19.	Joan, MB	Cu, Au, Ag	
20.	Kim	Cu, Au, Ag	
21.	Deluxe	Au, Ag	
22.	Cuds	Au, Ag, Pb, Cu	
23.	Ginny	Au	
24.	Sphal	Cu, Au	
25.	Oksa Creek	Cu, Pb, Zn, Au, Ag	
26.	PL 7-13	Au, Ag, Cu, Zn	
27.	Bik	Cu	
28.	Wiser	Au	
29.	Bell	Au	

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CUDS 5-8 CLAIMS
REGIONAL MINERAL OCCURRENCE MAP
BRITISH COLUMBIA

EQUITY ENGINEERING LTD.

DRAWN: JW	MINING DIV: LIARD	FIGURE
N.T.S.: 104 B/G	SCALE: 1:250,000	3
DATE: DEC., 1990	REVISED:	

During September of 1989, Pass Lake Resources Ltd. carried out initial exploration on the Cuds 5-8 claims, consisting of geological mapping, prospecting and stream sediment sampling, taking 3 field-sieved stream sediment samples, 11 silt samples and 22 rock samples. The Duc Zone, a system of narrow quartz-sulphide veins within a zone of silicification and clay alteration, was discovered approximately 100 metres west of the Cuds 7 claim. Similar mineralization, assaying up to 4.32 grams per tonne (0.126 oz/ton) gold, was found in Bud Creek 750 metres to the east, on the Cuds 7 claim. A 50-centimetre shear zone, located a further 1300 metres to the east, assayed 2.95 grams per tonne (0.086 oz/ton) gold (Kasper, 1990).

4.2 1990 Work Program

During October of 1990, Pass Lake Resources Ltd. carried out limited exploration on the Cuds 5-8 claims, consisting of geological mapping, prospecting and stream sediment sampling. This program was targeted at gold-rich mesothermal base metal veins and gossanous areas similar to those occurring elsewhere in the Galore Creek district and within a similar geological environment which stretches south through the Iskut River, Sulphurets and Stewart mining districts.

During the course of this program, 7 silt samples, 11 soil samples and 7 rock samples were taken. The silt samples were taken from the backwaters of a small creek and analyzed geochemically for gold and 32-element ICP (Figure 5). A line of contour soil samples was taken at 100 metres elevation, on the northwestern corner of the Cuds 5 claim, and also analysed geochemically for gold and 32-element ICP.

Prospecting and reconnaissance geology were carried out over the property, using a 1:10,000 topographic orthophoto as a base (Figure 5). Rock samples, described in Appendix C, were taken from zones of alteration and mineralization and analyzed geochemically for gold and 32-element ICP. Analytical certificates are attached 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, 1989a), 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 (1948), the crew of Operation Stikine (GSC, 1957), Panteleyev (1976), Souther (1972), Souther and

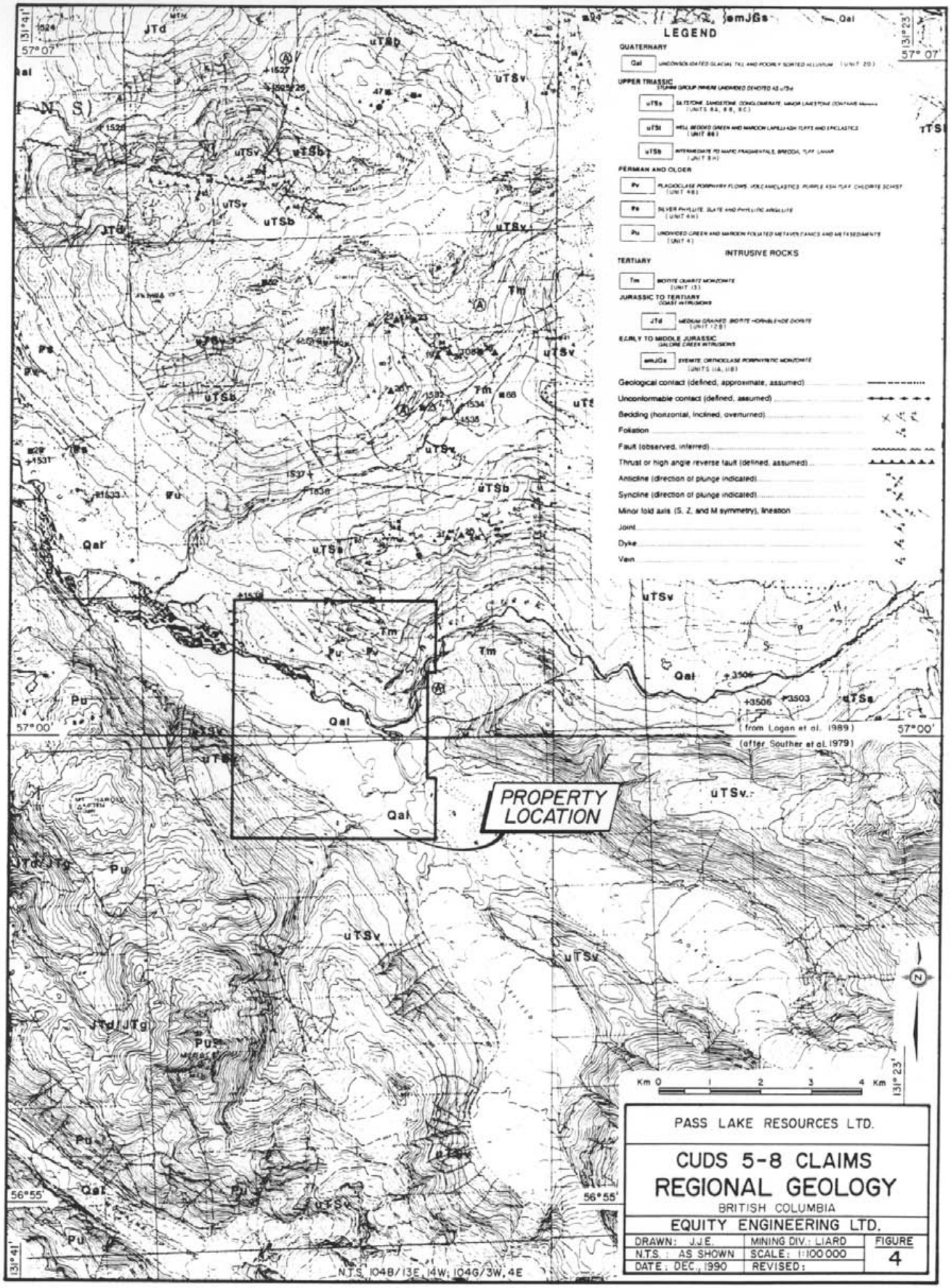
Symons (1974), Monger (1977), and Anderson (1989). The British Columbia Geological Survey has recently completed regional mapping of the area at a scale of 1:50,000 by Brown and Gunning (1989a,b), Logan and Koyanagi (1989) and Logan et al (1989).

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., 1979).

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 (Units 4A and 4B) with associated clastic sediments (Units 4C, 4D, 4G and 4J) and carbonate lenses (Unit 4E). These are capped by up to 700 metres of Mississippian limestone with a diverse fossil fauna (Map Unit 4E). 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, 1989a). Permian limestones (Units 6A, 6B and 6C), also about 700 metres 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 (Unit 7) are overlain by Upper Triassic Stuhini Group siliciclastic (Units 8A and 8B) and volcanic (Units 8D, 8E, 8G, 8H and 8I) 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, 1989a,b). 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 (Unit 9) and the syenites of the Galore Creek Complex (Unit 11). Jura-Cretaceous Coast Plutonic Complex intrusions (Unit 12) occur on the west side of the Galore Creek Camp, along the Stikine River, with the youngest of these intrusions occupying more


LEGEND
QUATERNARY
Qal
UPPER TRIASSIC
uTSs
uTSt
uTSb
PERMIAN AND OLDER
Pv
Ps
Pu
INTRUSIVE ROCKS
TERTIARY
Tm
JURASSIC TO TERTIARY
JTd
EARLY TO MIDDLE JURASSIC
emJGs
Geological contact (defined, approximate, assumed)
Unconformable contact (defined, assumed)
Bedding (horizontal, inclined, overturned)
Foliation
Fault (observed, inferred)
Thrust or high angle reverse fault (defined, assumed)
Anticline (direction of plunge indicated)
Syncline (direction of plunge indicated)
Minor fold axis (S, Z, and M symmetry), lineation
Joint
Dyke
Vein
PROPERTY LOCATION
(from Logan et al. 1989)
(after Souther et al. 1979)
Km 0 1 2 3 4 Km
PASS LAKE RESOURCES LTD.
CUDS 5-8 CLAIMS
REGIONAL GEOLOGY
BRITISH COLUMBIA
EQUITY ENGINEERING LTD.
DRAWN: J.J.E.
MINING DIV.: LIARD
N.T.S.: AS SHOWN
SCALE: 1:100 000
DATE: DEC., 1990
REVISED:
FIGURE 4
N.T.S. 104B/13E, 14W; 104G/3W, 4E

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 (Unit 13), felsic and mafic sills and dykes (Unit 14), and biotite lamprophyre (minette) dykes (Unit 14C).

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; biotite 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, 1989a).

A number of metallic deposit types have been recognized in the Galore Creek camp: porphyry copper $\pm$ molybdenum $\pm$ gold deposits, structurally-controlled, epigenetic precious metal vein/shear deposits, skarns and breccia deposits (Figure 3). 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 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.

The Ann/Su porphyry copper prospect, centered approximately four kilometres north of the Cuds 6 claim, consists of disseminated pyrite and chalcopyrite in Stuhini Group andesitic tuffs, flows and subvolcanic diorite. Diamond drilling and bulldozer trenching were carried out over an area one kilometre in diameter, with the best hole returning grades in the order of 0.10% to 0.20% copper over its entire 230 metre length (BCDM, 1966). Other porphyry copper occurrences in the Galore Creek area include the Copper Canyon, Sphal 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 metres) 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 is comprised of 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. The most fully explored example of the Tertiary mineralization type is the Paydirt gold deposit, located seven kilometres northeast of the Cuds 2 claim, which is a zone of silicification, sericitization and pyritization of andesitic volcaniclastics (Holtby, 1985). The zone, which is exposed on surface over an area of 100 metres by 25 metres, strikes northerly and dips moderately to the west. Gold mineralization occurs preferentially in intensely silicified and heavily pyritic material rather than with more sericitic alteration. The best diamond drill intersections averaged 5.86 grams gold per tonne over 12.0 metres in hole 85-1 and 10.59 grams gold per tonne over 4.95 metres in hole 85-4 (Holtby, 1985).

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 precious metal deposits discovered in the

Galore Creek camp 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 Property Geology

The Cuds 5-8 property is underlain by strata and intrusions ranging in age from Mississippian or older, to Tertiary (Figure 5). North of the Porcupine River, Mississippian or older metasedimentary and metavolcanic rocks of the Stikine Assemblage, are in fault contact with Upper Triassic Stuhini Group volcanic and sedimentary rocks. South of the Porcupine River, the contact between Stikine and Stuhini rocks has yet to be determined. Eocene stocks intrude the pre-Jurassic stratigraphy north of the Porcupine River at the Sphaler Creek confluence. Greenschist facies metamorphism, and weak to moderate chlorite, calcite and epidote alteration, is pervasive throughout the pre-Tertiary rock units and, in places is overprinted by biotite metasomatism as a result of the emplacement of the intrusive stocks. Faults offsetting all rock units are highlighted by drainage patterns and gullies in the area. The property geology in Figure 5 is a compilation of geological mapping during the 1990 and 1989 programs, mapping on adjoining properties by Equity Engineering Ltd. (Caulfield and Kasper, 1989; and Kasper, 1989), the Geological Survey of Canada (Souther et al, 1979) and provincial government geologists (Logan et al, 1989).

Mississippian and older metasedimentary and metavolcanic rocks (Unit 4) are the oldest rock unit on the property. North of the Porcupine River, thin-bedded argillites and siltstones (Unit 4C), outcrop at lower elevations and to the west of Felsic Creek. South of the Porcupine River, Unit 4C, consisting of thin-bedded argillites and siltstones with minor chert interbeds form a broad belt extending northwest and southeast from the southwestern corner of the Cuds 7 claim. East of Felsic Creek, Logan et al (1989) mapped the area as being underlain by metavolcanics (Unit 4B), while further up slope, a silver phyllite, slate and phyllitic argillite unit (Unit 4H) is exposed. Logan and Koyanagi (1989) describe the metavolcanics as being composed of "greenstones and chlorite schists derived from intermediate flows, sills and tuffs at the base, followed by a thick section of purple-green ash lapilli tuff, in turn overlain by plagioclase-phyric flows, sills and volcaniclastics.". They also believe that Unit 4H is stratigraphically older than Units 4B and 4C, therefore indicating

that this rock sequence is overturned. The ridge, wedged between the Porcupine River and the fault linear along Misty Creek, is underlain by metavolcanics with minor intercalated sedimentary units (Units 4C and 4D). The metavolcanics are dominated by a chlorite-feldspar-quartz schist (Unit 4I), which locally exhibits a gneissic texture defined by biotite-rich segregations. A gradational contact exists between the schist and a minor tuff unit (Unit 4A). The tuffs are moderately to strongly foliated, with flattened lapilli fragments, which are, for the most part, biotite altered. Also present in the area, along Misty Creek, are weakly foliated to locally massive andesitic flows. The andesites exhibit pervasive silicification, contain chlorite clots and, in contrast to units 4A and 4I, contain epidote along minor fractures.

Sedimentary and volcanic rocks outcrop along the lower slopes on the south side of the Porcupine River and have been mapped as undivided Upper Triassic Stuhini Group (Unit 8) by Souther et al (1979). This map unit is described by Caulfield and Kasper (1989) north of the Porcupine River where it is thought to be in fault contact with the Mississippian or older strata. The sedimentary rocks (Unit 8A) are "composed of thin bedded, medium to dark grey siltstones, wackes, argillites and carbonaceous argillites" whose bedding strikes west to northwest with a shallow, southwest dip (Caulfield and Kasper, 1989). To the east, a medium to dark green, massive to pyroxene-phyric flow unit (Unit 8D) is in fault contact with the sedimentary rocks. South of the Porcupine River in the area of the Duc Zone, a horizon of felsic tuffaceous sediments (Unit 8G) was identified.

An elliptical, Eocene biotite monzonite to biotite quartz monzonite stock (Unit 13A) has been mapped by Kasper (1989) along Sphaler Creek, north of its confluence with the Porcupine River. Panteleyev (1975) reports a potassium-argon age of 53.5$\pm$1.6 million years for this stock. Smaller stocks of quartz monzonite to quartz syenite, thought to be of similar age, were encountered along Felsic Creek to the west. These fine- to coarse-grained stocks differ from the Sphaler Creek intrusive, in that biotite is not as common.

Three fault sets with distinct orientations, observed or inferred from airphoto interpretation by Caulfield and Kasper (1989) and Kasper (1989), extend onto the property north of the Porcupine River. The surface trace of the most prominent fault, is highlighted by Sphaler Creek. It trends northeast to southwest, crosscutting all other faults and rock units. A northwest- to west-trending fault separates the Mississippian or older strata from the Upper Triassic Stuhini Group north of the Porcupine River. A parallel fault, along Misty Creek, divides the argillites and siliceous siltstones from the metavolcanic units, within the Mississippian strata. Foliation within the Paleozoic strata parallels the west-northwest trending faults. The upper drainage of the Porcupine River is thought to be controlled by north-south

faults. Locally, these faults are also highlighted by gossans with strong quartz and clay alteration. The Deluxe Zone on the Wiser III claims to the north, occurs along a similar northerly trending shear zone.

The pre-Permian stratigraphy south of the Porcupine River has recorded two periods of folding which supports Logan and Koyanagi (1989) who recognize at least two deformational events in the Porcupine area. Bedding and foliation are contorted and fold axes from phase two folds plunge gently to the south. Further mapping in the vicinity of the Duc Zone revealed two northwest-trending faults. Localized between the two faults are strongly foliated Stuhini Group tuffs and sediments. South of the faults are chlorite schists; the foliation trends 125° and dips 40° to the southwest.

6.2 Mineralization

Eight grab samples were taken on the Cuds 5-8 claims during the course of the 1990 field season (Figure 5). Of these, two indicate favourable mineralization on the western border of the Cuds 7 claim.

The samples, located 200 metres east of the Duc Zone, consist of wispy veinlets of pyrite, arsenopyrite and minor galena along fractures in quartz veins. Sample #484732, collected from a 10 centimetre wide quartz vein hosted within Stuhini Group sediments, is oriented approximately east-west and is exposed for 10 metres. It returned values of 165 parts per billion gold, 1.6 parts per million silver, 134 parts per million lead and 360 parts per million arsenic. Pyrite stringers of various orientations were also noted in the area, however, these were not sampled. Sample #484731 consists of quartz vein float material with pyrite and arsenopyrite and returned elevated values of 770 parts per billion gold, 14.6 parts per million silver, as well as 1050, 2680 and greater than 10000 parts per million lead, zinc and arsenic, respectively. The significance of these samples lie in their similarity, in orientation, mineralogy and style of mineralization, to the Duc Zone.

The Duc Zone, located approximately 100 metres west of the western boundary of the Cuds 7 claim, is a series of quartz veins ranging in width from 5 to 40 centimetres and striking in an east or southeast direction. Sulphide mineralization consists of pyrite, arsenopyrite and pyrrhotite with or without sphalerite, galena, chalcopyrite and molybdenite. The mineralization is localized along hairline fractures within crackled quartz veins. These veins are hosted within an intensely silicified and clay altered zone. Float mineralization collected below the Duc Zone, at the bottom of a talus slope, assayed 5.49 grams gold per tonne (0.160 oz/ton), 370.3 grams silver per tonne (10.80 oz/ton), 2.95% zinc, 1885 parts per million copper, 4190 parts per million lead

and greater than 10000 parts per million arsenic (Kasper, 1990). A grab sample, collected from a 20 to 40 centimetre wide quartz vein at the top of the talus slope, returned values of 750 parts per billion gold, 5.8 parts per million silver and greater than 10000 parts per million arsenic (Kasper, 1990). This vein is exposed within a steep gully for over 20 metres. It is uncertain at this time as to whether this vein is the source of the anomalous float. The alteration zone surrounding the mineralized quartz veins also contains blebs and stringers of pyrite and arsenopyrite, as well as mineralized quartz-sulphide veinlets but no significant values were reported.

Slightly elevated levels of antimony, bismuth, cadmium and tungsten (50, 12, 125 and 20 parts per million respectively), were noted in sample #484731. These are comparable to the Duc Zone and further suggest a relationship between this sample and material from the Duc Zone.

Quartz veins and vein float material, similar to veins found within Duc Zone, were also sampled during the 1989 field season, along Bud Creek within the Cuds 7 claim. Caulfield and Kasper (1990) postulated that the Bud Creek Showing is an eastern extension of the Duc Zone, located 750 metres to the east. Although some of these veins strike in a more southeasterly direction, the similarity in mineralogy and trace element geochemistry (ie. antimony, bismuth, cadmium and tungsten) supports this theory. A 30 centimetre quartz vein, outcropping on the west side of Bud Creek , assayed 4.32 grams gold per tonne (0.126 oz/ton), 153.3 grams silver per tonne (4.47 oz/ton), 8480 parts per million lead and 5730 parts per million arsenic (grab sample #172491). Smaller veins and quartz vein float sampled nearby returned lower, but still elevated gold values up to 235 parts per billion as well as silver and base metal values up to 45.0, 5700 and 4600 parts per million for silver, lead and zinc, respectively.

Table 6.2.1 summarizes significant results from 1989 sampling of the Bud Creek Showing and the 1990 sampling between Bud Creek and the Duc Zone.

TABLE 6.2.1

BUD CREEK SHOWING: SIGNIFICANT SAMPLING RESULTS

SAMPLE	WIDTH metres	GOLD (ppb)	SILVER (ppm)	LEAD (ppm)	ZINC (ppm)	ARSENIC (ppm)
172488B	float	235	45.0	1480	88	6140
172490B	0.2	220	9.2	90	118	330
172491B	0.3	4.32 g/t	153.3 g/t	8480	854	5730
172496B	0.05	2.19 g/t	81.4	1.29%	3010	235
484731N	float	770	14.6	1050	2680	>10000
484732N	0.1	165	1.6	134	22	360

sample locations: B Bud Creek Showing, 1989 samples
N Northwest of Bud Creek, 1990 samples

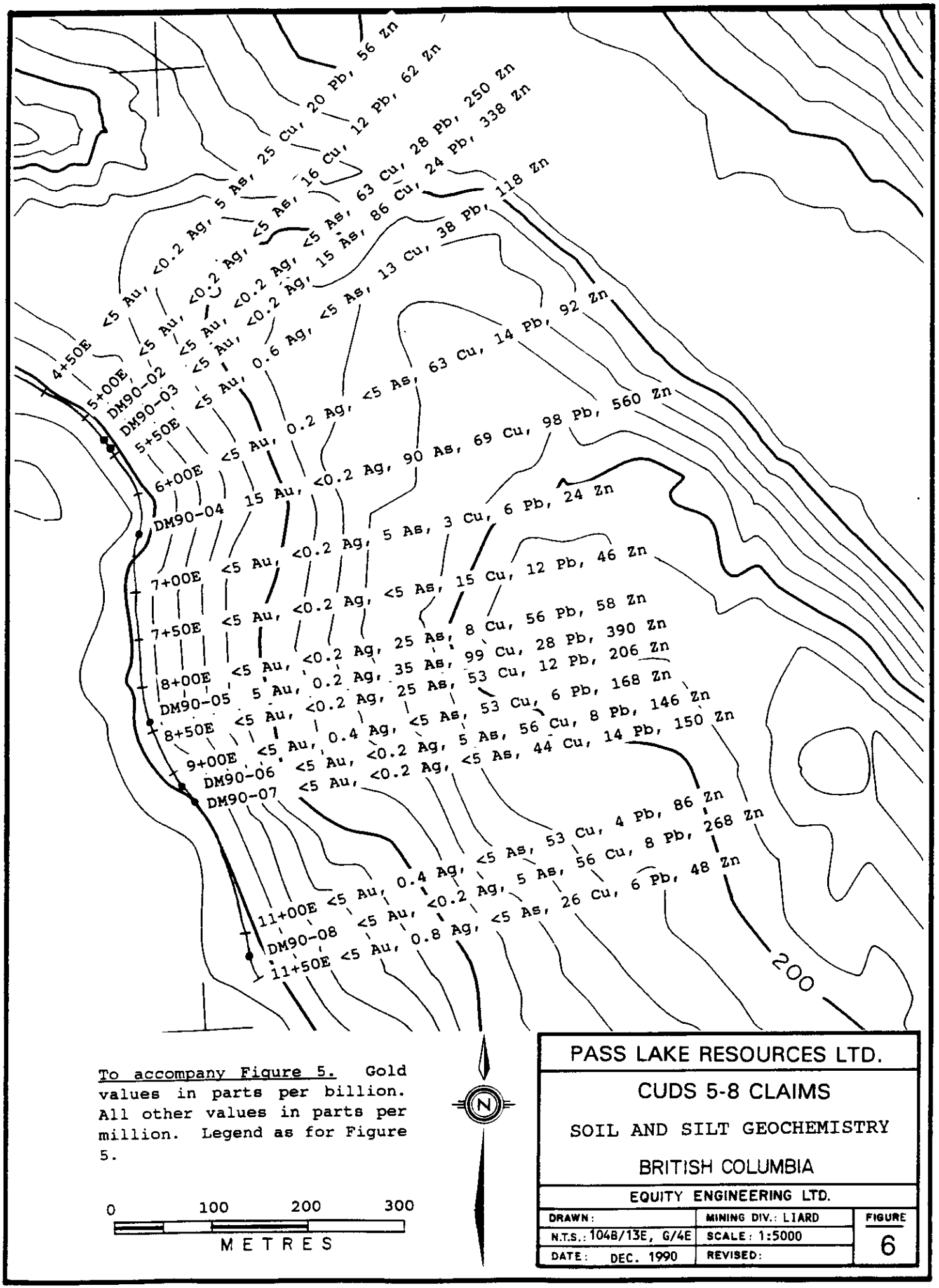
A 50 centimetre wide shear zone with disseminated pyrite and chalcopyrite mineralization was sampled during the 1989 field season in an unnamed creek approximately 1300 metres east-southeast of the Bud Creek showing (Figure 5). Grab sample #463075 returned 2.95 grams gold per tonne (0.086 oz/ton) and 1.06% copper from a 10 centimetre wide zone of fault gouge. The fault strikes 150° and dips 60° to the northeast. This measurement was taken from a limited exposure along the creek bank.

Quartz veins, located south of the confluence of Felsic Creek with Misty Creek, on the north side of Porcupine River, were sampled during the 1990 field season. The quartz veins are shallow, easterly-dipping, west-northwest striking structures, hosted in foliated, Mississippian or older volcanics and sediments. Up to 3% pyrite was noted in the veins. Samples of these structures returned only weakly anomalous base and precious metal values.

Numerous quartz veins were sampled during the 1989 program, approximately 300 metres to the north of Misty Creek, in the vicinity of Felsic Creek. Sulphide mineralogy, consisting of pyrite blebs with traces of chalcopyrite, sphalerite and molybdenite, is reflected in the rock geochemistry. Insignificant gold and silver values were recovered from these samples.

7.0 GEOCHEMISTRY

During the course of the 1990 exploration program, fourteen soil samples were taken at 50 metre intervals along the 100 metre contour line, located in the northwest corner of the Cuds 5 claim (Figure 5). Seven silt samples were taken in 1990 from drainages



To accompany Figure 5. Gold values in parts per billion. All other values in parts per million. Legend as for Figure 5.

PASS LAKE RESOURCES LTD.

CUDS 5-8 CLAIMS

SOIL AND SILT GEOCHEMISTRY

BRITISH COLUMBIA

EQUITY ENGINEERING LTD.

DRAWN:	MINING DIV.: LIARD	FIGURE
N.T.S.: 104B/13E, G/4E	SCALE: 1:5000	6
DATE: DEC. 1990	REVISED:	

located along this line. Geochemical data from the silt samples taken north of the Porcupine River were compared with the statistical data for the government silt sampling survey of the Telegraph Creek-Sumdum map sheet while samples taken in previous years, south of the Porcupine River, were compared with the statistical data for the Iskut River map sheet (GSC, 1988a,b). The silt samples are directly comparable to the government results listed in Figure 5, and anomalous results can be defined in the same way. Field-sieved stream sediment samples, whose geochemical values have been variably enhanced during the sieving process, cannot be directly compared to the silt samples. There were not enough soil samples taken to conduct a meaningful statistical analysis but is felt that the following levels are anomalous: gold (25 ppb), silver (1.0 ppm), copper (100 ppm), lead (20 ppm), zinc (150 ppm) and arsenic (20 ppm).

Six of the soil samples returned encouraging results, although gold values were below detection limit. Anomalous arsenic, lead and zinc values are centred around CL100, 8+50E with maximum values of 25 parts per million arsenic, 56 parts per million lead and 206 parts per million zinc. An area of elevated silver values was identified further along the contour soil line, with samples CL100, 9+00E, 11+00E and 11+50E returning elevated silver values of 0.4, 0.4 and 0.8 parts per million, respectively.

Two of the 1990 silt samples collected from drainages along the contour soil line, DM90-04 and DM90-05, contained detectable amounts of 15 and 5 parts per billion gold, respectively. However, these values would not be considered anomalous (greater than the 90th percentile) when compared to the government statistics. In general, the samples contained high zinc concentrations ranging from 146 to 560 parts per million. Anomalous arsenic, lead and zinc values seem to be centred around sample DM90-04 whose drainage contained the highest arsenic, lead and zinc values of 90 parts per million, 560 parts per million and 98 parts per million, respectively. The source of the soil and silt anomalies have yet to be determined.

During the course of the 1989 exploration program, three field-sieved stream sediment samples and eleven stream silt samples were taken from drainages on the Cuds 5-8 claims (Figure 5). Four of the streams were anomalous in zinc and seven can be considered anomalous in arsenic. Silt sample #172489 collected in 1989 from Bud Creek returned an anomalous arsenic value of 110 parts per million, which is greater than the governments 95th percentile (78 ppm) for the Iskut River map sheet (GSC, 1988a). This high arsenic value reflects the high arsenic content of the auriferous samples taken upstream. Anomalous arsenic values along with one elevated zinc value were also recovered from an unnamed stream and its tributaries one kilometre to the southeast of Bud Creek. The source or significance of these anomalies has yet to be determined.

North of the Porcupine River, elevated molybdenum values up to 15 parts per million were recovered from silt samples taken in 1989 from streams which drain an area intruded by the quartz monzonite stocks (Unit 13A). Associated with the molybdenum were anomalous zinc and arsenic values with highs of 230 parts per million zinc and 35 parts per million arsenic (greater than the governments 95th percentile for zinc (181 ppm) and arsenic (29 ppm) for the Telegraph Creek-Sumdum map sheets (GSC, 1988b)). The three field screened stream sediment samples (samples #459499, #459500 and #463401) collected in this area corroborate these anomalous values. The molybdenum values reflect molybdenite mineralization found within these intrusives during this field program and by Caulfield and Kasper (1989). They also report that elevated arsenic values associated with anomalous gold values were recovered on a contour soil line located upslope on the PL 11 claim west of the Deluxe Zone, as well as elevated zinc values from a soil line in pre-Permian strata. The anomalous zinc and arsenic values in the stream sediment geochemistry may be related to the soil anomalies to the north.

Four silt samples were taken during regional geochemical sampling conducted by the federal government (GSC, 1988a,b) from streams which drain the Cuds 5-8 property (Figure 5). All four samples contained elevated values of gold with a high of 11 parts per billion. However, none of the samples can be considered anomalous (ie. >90th percentile) when compared statistically with all samples taken from either the Iskut River or Telegraph Creek-Sumdum map sheets. These samples also contained background levels of silver and base metals.

8.0 DISCUSSION AND CONCLUSIONS

The Cuds 5-8 claims are still at an early stage of exploration, however, the results to date are very encouraging. The 1990 program, consisting of limited geological mapping, prospecting and sampling, provided further evidence for an eastern extension of the Duc Zone and geochemical sampling outlined an area of anomalous arsenic, lead and zinc values on the ridge immediately north of the Porcupine River on the Cuds 5 claim. In relation to each other, the two areas are quite distinctive by way of their different host rocks.

To date, the most significant mineral occurrences occur on the southern portion of the property. They seem to be related to or at least similar to the Duc Zone which is hosted within Upper Triassic Stuhini Group sedimentary and volcanic rocks, some 100 metres west of the Cuds 7 western boundary. This silicified and clay altered zone contains a number of narrow, gold-bearing quartz-sulphide veins. Float and grab samples from these veins returned gold values up to 5.49 grams gold per tonne (0.160 oz/ton) with significant silver and base metal values. Approximately 750 metres

to the east of the Duc Zone, within the Cuds 7 claim, similar quartz-sulphide veins outcrop by Bud Creek. Samples collected during 1989 assayed up to 4.32 grams gold per tonne (0.126 oz/ton) with significant silver and base metal results. This quartz-sulphide veining may indicate a possible eastward extension of the Duc Zone. The similar quartz-sulphide vein material sampled in 1990 occurs between the Duc Zone and the Bud Creek showings. Samples consisted of auriferous sulphide stringers, localized along fractures within the quartz veins. The float and grab samples contained elevated metal values, up to 770 parts per billion gold, 14.6 parts per million silver, 1050 parts per million lead, 2680 parts per million zinc and greater than 10000 parts per million arsenic.

A narrow pyritic-auriferous shear zone was found approximately 1300 metres east-southeast of the Bud Creek Showing. A 10 centimetre grab from this zone returned 2.95 grams gold per tonne (0.086 oz/ton). This shear is also located within Upper Triassic Stuhini Group strata.

Potential precious and base metal mineralization may be indicated by way of arsenic$\pm$zinc and zinc$\pm$arsenic$\pm$lead stream and soil geochemical anomalies. To date, the source or significance of these anomalies has yet to be determined. Soil geochemistry on the PL 11 claim to the north of the Cuds 6 claim, has indicated an arsenic-gold association in the Stuhini Group volcanics west of the Deluxe Zone. This should be taken into consideration when looking for the source of the arsenic stream geochemistry anomalies on the Cuds 5 and 6 claims.

No recorded work has been done to date in the northeastern corner of the Cuds 6 claim. This area exhibits the same geological characteristics as the gold-bearing Deluxe Zone to the east; the area is underlain by Stuhini Group strata, it is cut by northerly trending fault structures and has been intruded by an Eocene quartz monzonite stock. The presence of sericite$\pm$silica alteration has yet to be determined.

The Cuds 5-8 property has demonstrated favourable underlying geology and alteration, similar to that hosting other precious metals occurrences in the Galore Creek district. The discovery of gold-bearing mineralization and highly encouraging stream geochemical results from the property, coupled with exploration successes achieved throughout Galore Creek in the past year, provide abundant incentive to conduct further exploration work on the Cuds 5-8 claims.

Respectfully submitted,
EQUITY ENGINEERING LTD.

Ann L. Doyle, Geologist

David A. Caulfield, P.G.A.C.

GEOLOGICAL ASSOCIATION OF CANADA
D. A. Caulfield
FELLOW

Vancouver, B.C.
December, 1990

APPENDIX A

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BIBLIOGRAPHY

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APPENDIX B

STATEMENTS OF EXPENDITURES

STATEMENT OF EXPENDITURES
CUDS EAST CLAIM GROUP
(CUDS 5-8 CLAIMS)
(June 15 - October 11, 1990)

PROFESSIONAL FEES AND WAGES:		
David Caulfield, F.G.A.C.		
1.25 days @ $375/day	$ 468.75	
Donald McInnes, Project Manager		
1 day @ $300/day	300.00	
Ann Doyle, Geologist		
2.5 days @ $300/day	750.00	
Lloyd Addie, Prospector		
2 days @ $250/day	500.00	
Greg Shaw, Sampler		
1 day @ $200/day	200.00	
		$ 2,218.75
MOBILIZATION AND SUPPORT COSTS:		
Pro rata according to mandays on each of several properties operated out of the Galore Creek/Porcupine River Camps		1,101.21
CHEMICAL ANALYSES:		
Soil Samples		
11 @ $14.57 each	$ 160.27	
Rock Geochemical Samples		
7 @ $17.39 each	121.73	
Silt Samples		
7 @ $14.57 each	101.99	
		383.99
EXPENSES:		
Radio Rental	$ 30.00	
Drafting	52.50	
Printing and Reproductions	94.40	
Accommodation	1,218.75	
Orthophoto	1,445.00	
Courier and Telefax	6.95	
Helicopter Charters	531.17	
		3,378.77
MANAGEMENT FEE @ 15% on expenses		377.10
		7,459.82
REPORT (estimated)		2,000.00
		$ 9,459.82

APPENDIX C

ROCK DESCRIPTIONS

Description Abbreviations:

AS	Arsenopyrite	KF	Potassium Feldspar
AZ	Azurite	LI	Limonite
BI	Biotite	MC	Malachite
CA	Calcite	MG	Magnetite
CB	Carbonate	MO	Molybdenite
CL	Chlorite	MS	Sericite
CP	Chalcopyrite	MU	Muscovite
CY	Clay	PR	Pyrrhotite
DO	Dolomite	PY	Pyrite
EP	Epidote	QZ	Quartz
FE	Iron	SI	Silica
GL	Galena	SP	Sphalerite

Property : Cuds 5-8 NTS : 104G/4E Date : 12/14/90

Sample No.								Au	Ag	As	Cu	Pb	Zn
	Location :	6321 555	N	Type : Grab		Alteration :	BI, CL, QZ	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		343 340	E	Strike Length Exp. : 2 m		Sulphides :	1%PY						
465569	Elevation:	100 m		Sample Width : 10 cm		Oxides :	HE	0.	0.0	0.	11.	10.	48.
	Orientation:	280 / 42	N	True Width : 10 cm		Host :	Metavolcanic, possibly intrusive (?)						

Comments : 1cm wide quartz stringer. Sample located 150m north of the tree line at the bend in the river, north of camp.

Sample No.								Au	Ag	As	Cu	Pb	Zn
	Location :	6321 690	N	Type : Grab		Alteration :	BI, CL, QZ, SI	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		343 350	E	Strike Length Exp. : 1 m		Sulphides :	1%PY						
465570	Elevation:	190 m		Sample Width : 15 cm		Oxides :	LI	0.	0.0	0.	9.	4.	36.
	Orientation:	310 / 90		True Width : 15 cm		Host :	Metavolcanic						

Comments : Limonitic weathering on fractures. Sample located 250m from tree line.

Sample No.								Au	Ag	As	Cu	Pb	Zn
	Location :	6321 750	N	Type : Grab		Alteration :	CA, CL, QZ, SI	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		343 450	E	Strike Length Exp. : 2 m		Sulphides :	3%PY						
465571	Elevation:	115 m		Sample Width : 0.5 m		Oxides :	GE	0.	0.0	0.	116.	6.	92.
	Orientation:	/		True Width : 0.5 m		Host :	Fine-grained greywacke						

Comments : Pyrite along quartz-filled fractures oriented 150/80N. Sample located in small, north-south trending gully leading into south side of the swamp.

Sample No.								Au	Ag	As	Cu	Pb	Zn
	Location :	6321 740	N	Type : Grab		Alteration :	CL, SI	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		343 370	E	Strike Length Exp. : 10 m		Sulphides :	TRPY						
465646	Elevation:	190 m		Sample Width : 2.5 m		Oxides :	GE, JA	0.	0.0	0.	82.	4.	86.
	Orientation:	/		True Width : 2.5 m		Host :	Volcanic						

Comments : Oxides occur mainly along fractures. Rock contains chlorite clots, and is pervasively silicified. Volcanics are weakly foliated.

Sample No.								Au	Ag	As	Cu	Pb	Zn
	Location :	6321 770	N	Type : Chip		Alteration :	CL, SI	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		343 400	E	Strike Length Exp. : 1 m		Sulphides :	TRPY						
465647	Elevation:	150 m		Sample Width : 30 cm		Oxides :		65.	0.0	0.	6.	18.	18.
	Orientation:	332 / 26	E	True Width : 30 cm		Host :	Weakly foliated volcanic						

Comments : The outcrop is very lichen covered therefore it is very difficult to trace the vein. Outcrop is 25m wide; vein possibly extends for 10-25m. Trace pyrite in vein and wallrock.

Sample No.								Au	Ag	As	Cu	Pb	Zn
	Location :	6319 690	N	Type : Float		Alteration :	QZ	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
		341 820	E	Strike Length Exp. : m		Sulphides :	2%AS, 3%PY						
484731	Elevation:	460 m		Sample Width : m		Oxides :	MC	770.	14.6	10000	76.	1052.	2676.
	Orientation:	/		True Width : m		Host :							

Comments : Sample located along drainage due south of camp. Pyrite, arsenopyrite and scorodite along white quartz veinlets, 10cm wide, in float boulder. Boulder is 15cm in diameter.

Property : Cuds 5-8 NTS : 104G/4E Date : 12/14/90

Sample No.	Location :	6319 730 N	Type : Grab	Alteration : QZ, SI	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
		341 860 E	Strike Length Exp. : 8 m	Sulphides : 1%AS, TRGL(?), 8%PY						
484732	Elevation:	410 m	Sample Width : 10 cm	Oxides :	165.	1.6	360.	40.	134.	22.
	Orientation:	165 / 74 E	True Width : 10 cm	Host : Metasediments						

Comments : Fine-grained brassy pyrite in wispy veinlets, along fractures in medium-grained, slightly rusty quartz. Also contains very fine-grained, blue galena(?), and minor arsenopyrite. Abundance of pyrite stringers of various orientations in area.

APPENDIX D

CERTIFICATES OF ANALYSIS

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

A9025722

Comments: CC: PASS LAKE RESOURCES

CERTIFICATE A9025722

EQUITY ENGINEERING LTD.

Project: CUDS 5-8
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 7-NOV-90.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	2	Geochem ring to approx 150 mesh
294	2	Crush and split (0-10 pounds)
238	2	NITRIC-AQUA REGIA DIGESTION
* NOTE	1:	

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	2	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
922	2	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	200
921	2	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
923	2	As ppm: 32 element, soil & rock	ICP-AES	5	10000
924	2	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
925	2	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
926	2	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
927	2	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
928	2	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
929	2	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
930	2	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
931	2	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
932	2	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
933	2	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
951	2	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
934	2	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
935	2	La ppm: 32 element, soil & rock	ICP-AES	10	10000
936	2	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
937	2	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
938	2	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
939	2	Na %: 32 element, soil & rock	ICP-AES	0.01	5.00
940	2	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
941	2	P ppm: 32 element, soil & rock	ICP-AES	10	10000
942	2	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
943	2	Sb ppm: 32 element, soil & rock	ICP-AES	5	10000
958	2	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
944	2	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
945	2	Ti %: 32 element, soil & rock	ICP-AES	0.01	5.00
946	2	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
947	2	U ppm: 32 element, soil & rock	ICP-AES	10	10000
948	2	V ppm: 32 element, soil & rock	ICP-AES	1	10000
949	2	W ppm: 32 element, soil & rock	ICP-AES	10	10000
950	2	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

Project : CUDS 5-8
Comments: CC: PASS LAKE RESOURCES

Invoice Date: 7-NOV-90
Invoice No. : I-9025722
P.O. Number :

CERTIFICATE OF ANALYSIS A9025722

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	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
484731	205	294	770	14.6	0.14	>10000	40	< 0.5	12	0.44	50.0	2	78	76	4.65	< 10	< 1	0.06	< 10	0.11	225
484732	205	294	165	1.6	0.15	360	10	< 0.5	< 2	0.57	< 0.5	7	165	40	3.63	< 10	< 1	0.03	< 10	0.07	185

CERTIFICATION: B. Caufield

Chemex Labs Ltd.

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To: EQUITY ENGINEERING LTD.

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VANCOUVER, BC
V6B 1N2

Project : CUDS 5-8
Comments: CC: PASS LAKE RESOURCES

Invoice Date: 7-NOV-90
Invoice No. : I-9025722
P.O. Number :

CERTIFICATE OF ANALYSIS A9025722

SAMPLE DESCRIPTION	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
484731	205	294	7	0.01	2	40	1050	125	< 1	18	< 0.01	< 10	< 10	6	20	2680
484732	205	294	5	0.01	6	90	134	5	< 1	16	< 0.01	< 10	< 10	6	< 10	22

CERTIFICATION: B. Caughlin

Chemex Labs Ltd.

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To: EQUITY ENGINEERING LTD. *

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VANCOUVER, BC
V6B 1N2

Project : CUDS 5-8
Comments:

Invoice Date: 31-OCT-90
Invoice No. : I-9025577
P.O. Number : WGD90-02

CERTIFICATE OF ANALYSIS A9025577

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	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
465569	205	294	< 5	< 0.2	0.88	< 5	70	< 0.5	< 2	0.12	< 0.5	4	122	11	1.73	< 10	< 1	0.36	< 10	0.32	325
465570	205	294	< 5	< 0.2	0.98	< 5	70	< 0.5	< 2	0.11	< 0.5	4	89	9	1.91	< 10	< 1	0.30	< 10	0.49	340
465571	205	294	< 5	< 0.2	1.75	< 5	200	< 0.5	< 2	1.46	< 0.5	12	70	116	4.33	< 10	< 1	0.60	10	1.06	755
465646	205	294	< 5	< 0.2	1.78	< 5	250	< 0.5	< 2	0.43	< 0.5	11	67	82	3.78	< 10	< 1	0.43	10	0.97	570
465647	205	294	65	< 0.2	0.56	< 5	50	< 0.5	< 2	0.05	< 0.5	2	157	6	1.19	< 10	< 1	0.09	< 10	0.35	240

CERTIFICATION: B. Caughlin

Chemex Labs Ltd.

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To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

Project : CUDS 5-8
Comments:

Invoice Date: 31-OCT-90
Invoice No. : I-9025577
P.O. Number : WGD90-02

CERTIFICATE OF ANALYSIS A9025577

SAMPLE DESCRIPTION	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
465569	205	294	< 1	0.07	5	420	10	< 5	1	21	0.04	< 10	< 10	33	< 10	48
465570	205	294	< 1	0.07	5	430	4	< 5	2	10	0.03	< 10	< 10	43	< 10	36
465571	205	294	2	0.07	19	1090	6	< 5	8	66	0.07	< 10	< 10	96	< 10	92
465646	205	294	< 1	0.06	13	620	4	< 5	4	12	0.05	< 10	< 10	81	< 10	86
465647	205	294	< 1	0.05	5	180	18	< 5	1	5	0.01	< 10	< 10	27	< 10	18

CERTIFICATION: B. Caufield

Chemex Labs Ltd.

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To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

A9025992

Comments:

CERTIFICATE A9025992

EQUITY ENGINEERING LTD.

Project: CUDS 5-8
P.O. # : WGD90-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 7-NOV-90.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
201	11	Dry, sieve to -80 mesh
238	11	NITRIC-AQUA REGIA DIGESTION

* NOTE 1:

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	11	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
922	11	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	200
921	11	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
923	11	As ppm: 32 element, soil & rock	ICP-AES	5	10000
924	11	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
925	11	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
926	11	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
927	11	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
928	11	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
929	11	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
930	11	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
931	11	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
932	11	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
933	11	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
951	11	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
934	11	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
935	11	La ppm: 32 element, soil & rock	ICP-AES	10	10000
936	11	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
937	11	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
938	11	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
939	11	Na %: 32 element, soil & rock	ICP-AES	0.01	5.00
940	11	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
941	11	P ppm: 32 element, soil & rock	ICP-AES	10	10000
942	11	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
943	11	Sb ppm: 32 element, soil & rock	ICP-AES	5	10000
958	11	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
944	11	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
945	11	Ti %: 32 element, soil & rock	ICP-AES	0.01	5.00
946	11	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
947	11	U ppm: 32 element, soil & rock	ICP-AES	10	10000
948	11	V ppm: 32 element, soil & rock	ICP-AES	1	10000
949	11	W ppm: 32 element, soil & rock	ICP-AES	10	10000
950	11	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000

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To: EQUITY ENGINEERING LTD.
207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

Project : CUDS 5-8
Comments:

Invoice Date: 7-NOV-90
Invoice No. : I-9025992
P.O. Number : WGD90-02

CERTIFICATE OF ANALYSIS A9025992

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	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
CL100 4+50E	201	238	< 5	< 0.2	1.59	5	40	< 0.5	2	0.13	0.5	2	30	25	5.52	< 10	< 1	0.04	< 10	0.28	295
CL100 5+00E	201	238	< 5	< 0.2	2.53	< 5	70	< 0.5	< 2	0.29	0.5	5	42	16	6.86	< 10	< 1	0.07	10	0.46	205
CL100 5+50E	201	238	< 5	0.6	3.39	< 5	180	< 0.5	< 2	0.37	1.0	6	45	13	4.41	< 10	< 1	0.25	10	0.82	845
CL100 6+00E	201	238	< 5	0.2	4.27	< 5	220	< 0.5	< 2	0.10	0.5	7	56	63	7.34	< 10	< 1	0.50	10	1.19	560
CL100 7+00E	201	238	< 5	< 0.2	1.60	5	70	< 0.5	4	0.06	< 0.5	1	15	3	2.78	< 10	< 1	0.08	10	0.15	115
CL100 7+50E	201	238	< 5	< 0.2	1.87	< 5	80	< 0.5	2	0.10	0.5	2	32	15	3.06	< 10	< 1	0.22	< 10	0.73	265
CL100 8+00E	201	238	< 5	< 0.2	1.34	25	30	< 0.5	< 2	0.11	< 0.5	1	15	8	2.26	< 10	< 1	0.02	10	0.10	220
CL100 8+50E	201	238	< 5	< 0.2	3.45	25	140	< 0.5	< 2	0.34	1.5	17	47	53	3.80	< 10	< 1	0.09	10	0.91	2240
CL100 9+00E	201	238	< 5	0.4	2.96	< 5	210	0.5	< 2	1.21	4.0	6	25	53	2.88	< 10	< 1	0.05	20	0.26	3110
CL100 11+00E	201	238	< 5	0.4	3.95	< 5	170	< 0.5	< 2	0.20	0.5	7	42	53	5.14	< 10	< 1	0.07	10	0.78	505
CL100 11+50E	201	238	< 5	0.8	3.48	< 5	80	< 0.5	< 2	0.18	0.5	4	32	26	3.62	< 10	< 1	0.05	10	0.42	150

CERTIFICATION: B. Caplin

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

Project : CUDS 5-8
Comments:

Invoice Date: 7-NOV-90
Invoice No. : I-9025992
P.O. Number : WGD90-02

CERTIFICATE OF ANALYSIS A9025992

SAMPLE DESCRIPTION	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
CL100 4+50E	201	238	2	0.01	5	560	20	< 5	2	10	0.29	< 10	10	192	< 10	56
CL100 5+00E	201	238	1	0.03	9	500	12	< 5	3	32	0.54	< 10	< 10	199	< 10	62
CL100 5+50E	201	238	4	0.03	22	730	38	< 5	5	27	0.25	< 10	< 10	179	< 10	118
CL100 6+00E	201	238	4	0.02	17	1490	14	5	9	8	0.33	< 10	< 10	201	< 10	92
CL100 7+00E	201	238	2	0.04	2	140	6	< 5	2	4	0.19	< 10	< 10	73	< 10	24
CL100 7+50E	201	238	1	0.02	4	690	12	< 5	2	10	0.17	< 10	< 10	81	< 10	46
CL100 8+00E	201	238	3	0.01	4	370	56	< 5	1	10	0.22	< 10	< 10	80	< 10	58
CL100 8+50E	201	238	2	0.02	24	1230	12	< 5	3	17	0.16	10	< 10	77	< 10	206
CL100 9+00E	201	238	7	0.04	23	1470	6	< 5	1	49	0.07	< 10	< 10	46	< 10	168
CL100 11+00E	201	238	2	0.01	11	670	4	5	5	14	0.21	< 10	< 10	143	< 10	86
CL100 11+50E	201	238	2	0.06	9	700	6	< 5	4	9	0.16	< 10	< 10	84	< 10	48

CERTIFICATION: B. Caglioni

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221

To: EQUITY ENGINEERING LTD.

207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

A9025578

Comments:

CERTIFICATE A9025578

EQUITY ENGINEERING LTD.

Project: CUDS 5-8
P.O. # : WGD90-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 31-OCT-90.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
201	7	Dry, sieve to -80 mesh
238	7	NITRIC-AQUA REGIA DIGESTION
* NOTE	1:	

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	7	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
922	7	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	200
921	7	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
923	7	As ppm: 32 element, soil & rock	ICP-AES	5	10000
924	7	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
925	7	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
926	7	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
927	7	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
928	7	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
929	7	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
930	7	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
931	7	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
932	7	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
933	7	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
951	7	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
934	7	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
935	7	La ppm: 32 element, soil & rock	ICP-AES	10	10000
936	7	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
937	7	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
938	7	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
939	7	Na %: 32 element, soil & rock	ICP-AES	0.01	5.00
940	7	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
941	7	P ppm: 32 element, soil & rock	ICP-AES	10	10000
942	7	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
943	7	Sb ppm: 32 element, soil & rock	ICP-AES	5	10000
958	7	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
944	7	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
945	7	Ti %: 32 element, soil & rock	ICP-AES	0.01	5.00
946	7	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
947	7	U ppm: 32 element, soil & rock	ICP-AES	10	10000
948	7	V ppm: 32 element, soil & rock	ICP-AES	1	10000
949	7	W ppm: 32 element, soil & rock	ICP-AES	10	10000
950	7	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000

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207 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N2

Project : CUDS 5-8
Comments:

Invoice Date: 31-OCT-90
Invoice No. : I-9025578
P.O. Number : WGD90-02

CERTIFICATE OF ANALYSIS A9025578

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	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
DM90-02	201	238	< 5	< 0.2	3.11	< 5	360	< 0.5	< 2	0.65	1.5	12	73	63	4.50	10	< 1	0.56	10	1.60	1560
DM90-03	201	238	< 5	< 0.2	2.97	15	220	0.5	< 2	0.65	6.5	13	44	86	4.34	10	< 1	0.27	10	0.99	1280
DM90-04	201	238	15	< 0.2	2.74	90	210	< 0.5	< 2	0.38	9.5	24	31	69	4.70	< 10	< 1	0.27	10	0.73	3140
DM90-05	201	238	5	0.2	4.82	35	290	1.0	< 2	0.71	6.5	29	63	99	3.89	10	< 1	0.35	20	1.22	4380
DM90-06	201	238	< 5	< 0.2	3.74	5	440	< 0.5	< 2	1.02	0.5	17	85	56	4.29	10	< 1	0.54	10	1.68	1440
DM90-07	201	238	< 5	< 0.2	3.06	< 5	510	< 0.5	< 2	1.05	1.5	16	62	44	4.17	10	< 1	0.33	20	1.28	2950
DM90-08	201	238	< 5	< 0.2	3.06	5	680	< 0.5	< 2	0.69	1.0	15	47	56	5.09	< 10	< 1	0.56	10	1.62	1455

CERTIFICATION: B. Caglioni

Chemex Labs Ltd.

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V6B 1N2

Project : CUDS 5-8
Comments:

Invoice Date: 31-OCT-90
Invoice No. : I-9025578
P.O. Number : WGD90-02

CERTIFICATE OF ANALYSIS A9025578

SAMPLE DESCRIPTION	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
DM90-02	201	238	5	0.04	43	1060	28	< 5	9	43	0.18	< 10	< 10	179	< 10	250
DM90-03	201	238	2	0.02	28	1370	24	< 5	5	38	0.18	< 10	< 10	122	< 10	338
DM90-04	201	238	3	0.02	32	710	98	< 5	3	27	0.13	< 10	< 10	90	< 10	560
DM90-05	201	238	2	0.02	53	1840	28	5	5	36	0.12	< 10	< 10	89	< 10	390
DM90-06	201	238	1	0.03	36	1710	8	< 5	4	46	0.23	< 10	< 10	128	< 10	146
DM90-07	201	238	2	0.05	32	1550	14	< 5	4	70	0.19	< 10	< 10	100	< 10	150
DM90-08	201	238	1	0.02	29	1270	8	< 5	9	38	0.18	< 10	< 10	150	< 10	268

CERTIFICATION: B. Campbell

APPENDIX E

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, ANN L. DOYLE, of 3114 Grant Street, 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 Carleton University with a Bachelor of Science degree in Geology.

3. THAT my primary employment since June, 1989 has been in the field of mineral exploration.

4. THAT this report is based on fieldwork carried out under my direction.

5. THAT I own no shares, directly or indirectly, in Pass Lake Resources Ltd., nor do I expect to acquire any shares. I have no interest, directly or indirectly, in the Cuds 5-8 property.

DATED at Vancouver, British Columbia, this 19 day of December, 1990.

A L Doyle

Ann L. Doyle, Geologist

I, DAVID A. CAULFIELD, of 3142 Gambier Street, Coquitlam, 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.

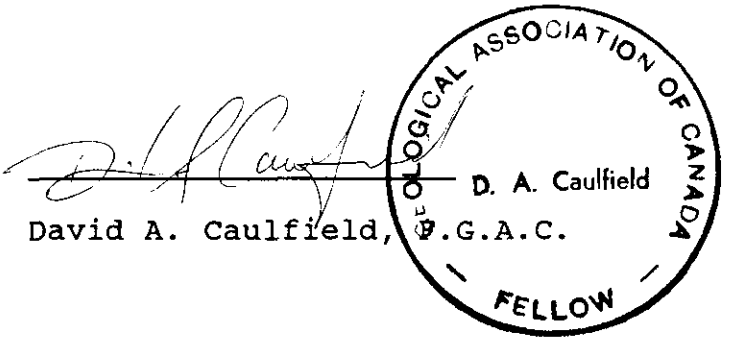
2. THAT I am a graduate of the University of British Columbia with a Bachelor of Science degree in Geology.

3. THAT I am a Fellow of the Geological Association of Canada.

4. THAT this report is based on fieldwork carried out by personnel of Equity Engineering Ltd. in September 1990, government publications and assessment reports filed with the Province of British Columbia. I have examined the property.

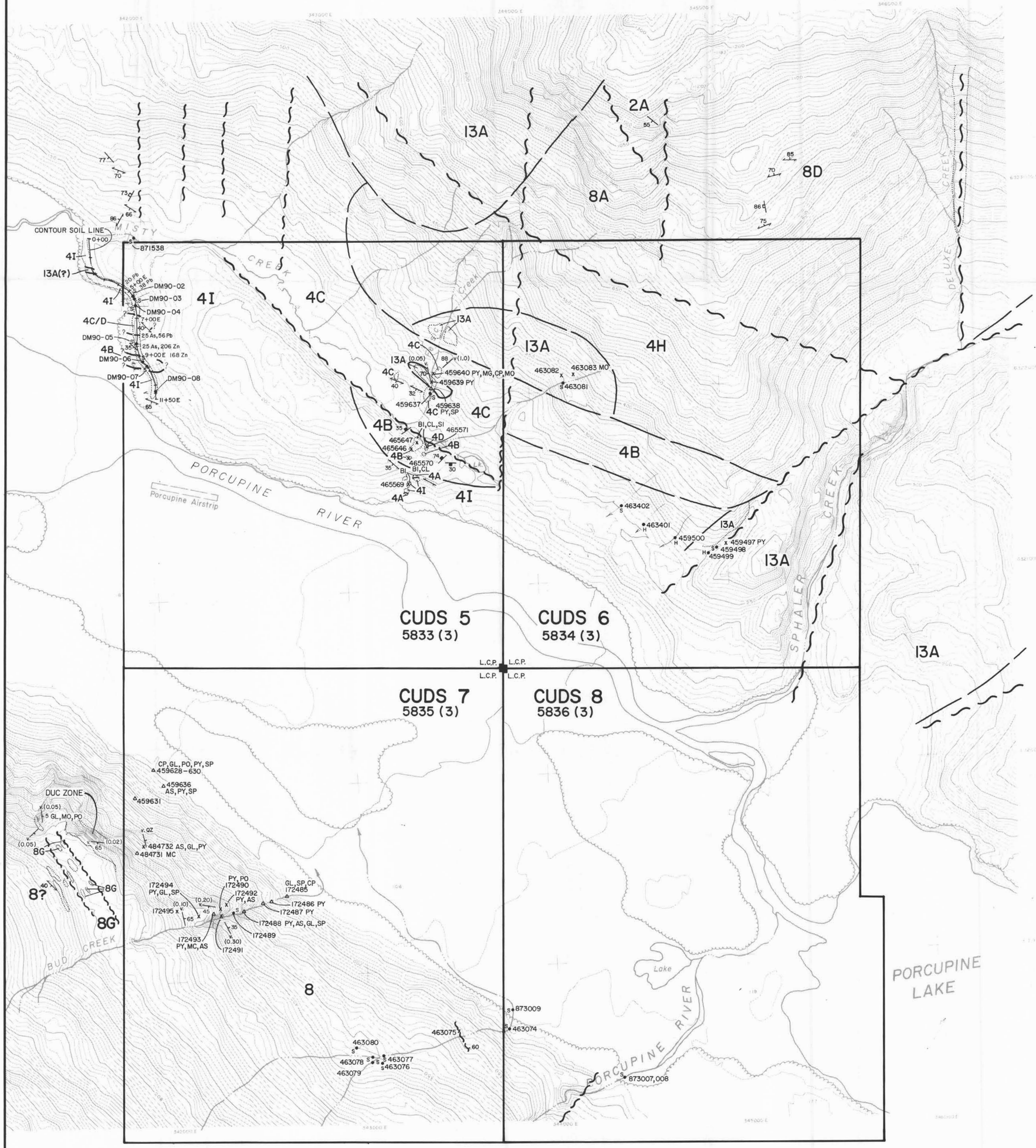
5. THAT I own directly or indirectly own 36,000 shares of Pass Lake Resources Ltd.. I have no interest, directly or indirectly, in the Cuds 5-8 property.

DATED at Vancouver, British Columbia, this 19 day of December, 1990.



D. A. Caulfield

David A. Caulfield, F.G.A.C.



1990 ROCK GEOCHEMICAL RESULTS

Sample	Au(ppb)	Ag(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)	As(ppm)
465569	<5	<0.2	11	10	48	<5
465570	<5	<0.2	9	4	36	<5
465571	<5	<0.2	116	6	92	<5
465646	<5	<0.2	82	4	86	<5
465647	65	<0.2	6	18	18	<5
484731	770	14.6	76	1050	2680	>10000
484732	165	1.6	40	134	22	360

1990 SILT GEOCHEMICAL RESULTS

Sample	Au(ppb)	Ag(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)	As(ppm)
DM90-02	<5	<0.2	63	28	250	<5
DM90-03	<5	<0.2	86	24	338	15
DM90-04	15	<0.2	69	98	560	90
DM90-05	5	<0.2	99	28	390	35
DM90-06	<5	<0.2	56	8	146	5
DM90-07	<5	<0.2	44	14	150	<5
DM90-08	<5	<0.2	56	8	268	5

1989 ROCK GEOCHEMICAL RESULTS

Sample	Au(ppb)	Ag(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)	As(ppm)
172485	135	33.8	53	5700	4602	<5
172486	30	<0.2	8	10	98	5
172487	<5	<0.2	201	16	130	15
172488	235	45	47	1480	88	6135
172490	220	9.2	291	90	118	330
172491	4.32g/t	153.3g/t	64	8482	854	5725
172492	160	6.6	20	378	82	190
172493	130	5.6	773	130	62	600
172494	70	1.8	84	260	232	170
172495	55	17.8	66	4778	572	280
459497	<5	<0.2	37	<2	76	<5
459628	120	8.4	197	226	1.4%	7265
459629	<5	<0.2	139	8	186	145
459630	<5	4.2	657	14	82	70
459631	<5	3.2	538	62	70	20
459636	5.49g/t	370.3g/t	1887	4190	2.95%	10000
459638	100	4.8	135	90	474	725
459639	10	3	23	56	192	265
459640	70	0.2	275	<2	32	75
463075	2.95g/t	13.6	1.06%	14	620	<5
463082	10	<0.2	169	4	182	25
463083	<5	<0.2	60	<2	16	<5

1989 SILT GEOCHEMICAL RESULTS

Sample	Au(ppb)	Ag(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)	As(ppm)
172489	<5	<0.2	107	2	124	110
459498	<5	<0.2	29	10	230	20
459637	<5	<0.2	35	<2	82	5
463074	<5	<0.2	55	<2	112	20
463076	<5	<0.2	51	<2	174	65
463077	<5	<0.2	87	<2	130	60
463078	<5	<0.2	51	2	112	30
463079	<5	<0.2	67	4	114	35
463080	<5	<0.2	40	<2	116	50
463081	<5	<0.2	67	16	218	35
463402	<5	<0.2	51	<2	134	10

1989 FIELD SCREENED STREAM SEDIMENT GEOCHEMICAL RESULTS

Sample	Au(ppb)	Ag(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)	As(ppm)
459499	<5	<0.2	21	2	160	20
459500	<5	<0.2	18	16	148	20
463401	5	<0.2	38	<2	100	<5

GOVERNMENT REGIONAL GEOCHEMICAL SAMPLES

Sample	Au(ppb)	Ag(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)	As(ppm)
T 871538	7	0.2	55	8	62	4
I 873007	11	0.1	83	4	68	25
I 873008	10	0.1	83	2	70	23
I 873009	6	0.1	43	7	110	9

I Located on the Iskut River Map Sheet (GSC, 1988a)
T Located on the Telegraph Creek - Sumdum Map Sheet (GSC, 1988b)

STATISTICAL ANALYSIS FOR GOVERNMENT REGIONAL GEOCHEMICAL SAMPLES

For Iskut Map Sheet:

Percentile	Au(ppb)	Ag(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)	As(ppm)
90th	58	0.6	117	28	220	45
95th	168	1.0	169	48	328	78
99th	493	2.1	372	134	570	310

For Telegraph Creek - Sumdum Map Sheet:

Percentile	Au(ppb)	Ag(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)	As(ppm)
90th	30	0.3	103	16	133	17
95th	65	0.4	132	22	181	29
99th	237	1.0	272	55	478	81

LEGEND

LITHOLOGIES

QUATERNARY
20 Glacial and unconsolidated alluvial deposits.

EOCENE
13A Biotite quartz monzonite to monzonite with granodiorite phases: medium-grained, equigranular and leucocratic.

UPPER TRIASSIC
Stuhini Group
8 Undivided Stuhini Group volcanic, volcaniclastic and sedimentary rocks.
8A Interbedded wackes, siltstone, argillites and carbonaceous argillites: laminated to thin bedded.
8D Augite porphyry: includes pyroxene-phyric flows.
8G Tuffs/tuffaceous sediments: felsic, with well developed laminations.

MISSISSIPPIAN AND OLDER
4 Undivided metavolcanics and metasediments.
4A Tuff unit: consists of ash tuff, lapilli tuff and tuffaceous siltstone; generally siliceous, locally sheared, grades into chlorite-feldspar-quartz schist.
4B Intermediate flows and pyroclastics.
4C Argillite, siltstone: strongly laminated, siltstones are siliceous, argillites are biotite altered.
4D Greywacke: fine- to medium-grained; interbedded with lenses of argillite and siltstone of unit 4C.
4H Silver phyllite and slate.
4I Chlorite-feldspar-quartz schist: locally gneissic.

MINERAL ABBREVIATIONS

AS	arsenopyrite	BI	biotite	CB	Fe-carbonate
CL	chlorite	CP	chalcopyrite	EP	epidote
GL	galena	MC	malachite	MG	magnetite
MO	molybdenite	MS	sericite	PO	pyrrhotite
PY	pyrite	QZ	quartz	SI	silica
SP	sphalerite				

SYMBOLS

- Rock outcrop
- Geological boundary (approximate)
- Fault with dip (approximate, inferred)
- Bedding with dip
- Foliation (inclined, dip unknown)
- (0.01) Vein with dip and true width in metres
- Joint with dip
- Δ , x Rock sample (float, grab from outcrop)
- •S Silt sample
- •H Field-sieved stream sediment sample
- Contour soil line with 50 metre stations.
- L.C.P. Legal corner post (located)
- Tree line

Geology adapted in part from Souther et al. (1979), Logan et al. (1989), Caulfield and Kasper (1989) and (1990) and Kasper (1989).

Government geochemical data from GSC Open File 1645 (1988a) and 1646 (1988b).

0 500 1000 1500
METRES

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DRAWN: A.D. / J.J.E	MINING DIV.: LIARD	FIGURE 5
N.T.S.: 104 B/4 E	SCALE: 1:10000	
DATE: DEC., 1990	REVISED:	