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1990 GEOLOGICAL AND GEOCHEMICAL REPORT ON THE ANUK RIVER SOUTH PROJECT

Located in the Galore Creek Area Liard Mining Division NTS 104G/4E 57° 06' North Latitude 131° 35' West Longitude

# GEOLOGICAL BRANCH ASSESSMENT REPORT

# 20,775

-prepared for-CONSOLIDATED GOLDWEST RESOURCES LTD.

> -prepared by-Robert Falls, Geologist

> > December, 1990

1990 GEOLOGICAL AND GEOCHEMICAL REPORT ON THE ANUK RIVER SOUTH PROJECT

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#### 1.0 INTRODUCTION

The Anuk River South property consists of the B.W. 1 and 2 claims, which were staked in December 1988 to cover favourable geology and geochemistry east of the Stikine River, approximately 170 kilometres northwest of Stewart in northwestern British Columbia (Figure 1). Initial geochemical sampling of the property in 1989 returned several anomalous stream sediment samples and one grab sample assaying 1.30 grams gold per tonne. The geological similarity to the Iskut River, Sulphurets and Stewart mining camps to the south and the discovery in recent years of several major precious metals occurrences elsewhere in the Galore Creek district have sparked renewed exploration interest throughout the area.

Reconnaissance exploration, consisting of geological mapping, prospecting and geochemical sampling, was carried out over the Anuk River South property during August 1990. Equity Engineering Ltd. conducted this program for Consolidated Goldwest 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 indicate that the following claims (Figure 2) are owned 49% by Pass Lake Resources Ltd. and 51% by Consolidated Goldwest Resources Ltd.. Separate documents indicate that they are beneficially owned by Pass Lake Resources while Consolidated Goldwest Resources Ltd. earns its interest.

Claim <u>Name</u>	Record Number	No. of Units	Record Date	Expiry Year_		
B.W. 1	5546	20	Dec. 7, 1988	1991		
B.W. 2	5547	<u>20</u> 40	Dec. 7, 1988	1991		

The position of the legal corner posts for the claims has not been verified by Equity Engineering Ltd. personnel.

#### 3.0 LOCATION, ACCESS AND GEOGRAPHY

The B.W. 1 and 2 claims are located within the Coast Range Mountains approximately 170 kilometres northwest of Stewart and 70 kilometres south of Telegraph Creek in northwestern British Columbia (Figure 1). They lie within the Liard Mining Division, centred at 57° 06' north latitude and 131° 35' west longitude.

Access to the Anuk River South property during the 1990 field season was provided by daily helicopter setouts from the Galore Creek camp, which is located approximately eight kilometres to the







east-northeast. Fixed-wing aircraft up to the size of a Turbo Otter fly charters to the Galore Creek airstrip from Smithers. On the Alaskan side of the border, Wrangell lies approximately 100 kilometres to the southwest, and provides a full range of services and supplies, including a 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 within five kilometres of the property.

The B.W. 1 and 2 claims lie south of the Anuk River and five kilometres east of the Stikine River, approximately five kilometres above its confluence with the Porcupine River (Figure 2). They cover the steep slopes south of the Anuk River and most of the Anuk River's main tributary, termed the South Anuk River in this report. Topography is extremely rugged, typical of mountainous and glaciated terrain, with elevations ranging from 250 metres along the Anuk River to over 1600 metres on the main ridge near the southern boundary of the property. Valley glaciers along the southern boundary and at the head of the South Anuk valley descend to 1150 metres.

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 1100 metres, the creek beds and slopes are covered by exceptionally dense slide alder and willow growth. Steeper slopes are covered in short heather and other alpine vegetation. Northerly-facing slopes are covered with permanent snowfields at higher elevations.

The property lies in the wet belt of the Coast Range Mountains, with annual precipitation ranging from 190 to 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.

#### 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), whose Central Zone hosts reserves of 125 million tonnes grading 1.06% copper and 400 ppb gold (Allen et al, 1976). 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 Dobell and Spencer (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 during 1990 which tested their gold potential.

1980's, Teck Corp. In the early conducted regional reconnaissance for gold throughout the area, and delineated 185,000 tonnes of reserves grading 4.11 grams gold per tonne on the Paydirt deposit (Holtby, 1985), which is located approximately five kilometres southeast of the Anuk River South property. Several significant precious metal occurrences were discovered on each of the Trek, Trophy, Wiser, PL 7-13, Icy and JW properties during the 1988 and 1989 field seasons (Figure 3). In most cases, these properties had been explored for copper during the 1960's, but had never received due attention for their gold potential.

During September and October of 1989, Consolidated Goldwest Resources Ltd. carried out reconnaissance exploration on the B.W. claims, taking 22 field-sieved stream sediment samples, one silt sample and seven rock samples. High gold values were returned from three stream sediment samples from Snowy, Mouse and Notch Creeks which drain a gossan south of the legal corner post for the claims. A narrow quartz-sulphide vein hosted by granodiorite assayed 1.30 grams gold per tonne on the B.W. 1 claim (Lehtinen, 1989).

#### 4.2 1990 Work Program

During August 1990, Consolidated Goldwest Resources Ltd. carried out three days of exploration on the Anuk River South claim group, consisting of geological mapping and prospecting.

Prospecting and reconnaissance geology were carried out using a 1:10,000 topographic orthophoto as a base (Figure 5). A total of 19 rock samples, described in Appendix C, were taken from zones of alteration and mineralization and analyzed for gold geochemically and 35 elements by ICP. Samples exceeding 10,000 ppm in base metals were subsequently assayed. 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, <u>in</u> 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 (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 northeasttrending 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 Eccene 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 centre 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 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; 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 northstriking 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<u>+</u>molybdenum+qold deposits, structurally-controlled 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 calcalkalic 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 calcalkaline 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, 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) guartz-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 gold-rich veins at Jack Wilson Creek. the 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 metalbearing 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

Figure 5 is a composite map showing the geology and geochemistry of the Anuk River South property. The geology has been adapted in part from Logan and Koyanagi (1989b) and has been modified on the basis of field work during 1989 and 1990.

The Anuk River South property is underlain by intermediate volcanic tuff and agglomerate of the Upper Triassic Stuhini Group (Units 8E, 8H). The tuffaceous rocks (Unit 8E) are generally fine grained, dark greenish grey in colour and locally contain one millimetre to two millimetre amphibole phenocrysts. This unit often contains less than one percent disseminated pyrite and as a result, frequently forms gossans where weathered. The volcanic agglomerate (Unit 8H) is generally light greenish grey in colour and non-pyritic.

In the western part of the property, the agglomerate (Unit 8H) is intruded by light grey, medium grained Jurassic to Cretaceous diorite to granodiorite of the Coast Plutonic Complex (Unit 12B).

In the south-central part of the property, several small, white, fine- to medium-grained, equigranular monzonite plugs (Unit 13A) intrude the agglomerate. Diorite dykes (Unit 13E) also intrude the agglomerate in this area. These consist of white plagioclase phenocrysts in a green, fine-grained, chloritized groundmass.

Massive, fine-grained, dark green Tertiary andesite dykes (Unit 14A) have been mapped on the western part of the property. Light coloured, massive, fine grained rhyolitic dykes (Unit 14E) also outcrop in this area.

A major vertical shear zone, striking 120 degrees, crosses the B.W. 1 claim. It is up to ten metres wide and is strongly iron carbonate altered. Several smaller faults, of variable orientation, were mapped on the property. Most strike north to northeast and dip steeply towards the east.

#### 6.2 Mineralization

In 1989, sample 447011 was taken from a fifteen centimetre wide sulphide-bearing quartz vein in the south central part of the B.W. 1 claim (FIgure 5). It assayed 1.30 grams per tonne (0.038 ounces per ton) gold. This was a select sample of the sulphide rich portions of the vein. Grab sample 32605 was taken from the same vein during the 1990 field program, returning values of 720 ppb gold, 940 ppm copper, and low values for other precious and base metals.

Sample 32606 was taken approximately 450 metres to the southeast of sample 32605. It was taken from a five centimetre wide quartz vein, containing one to two percent pyrite, which yielded 830 ppb gold when analyzed. Other base and precious metal values for this sample are low.

Sample 32641 was taken from the major shear zone which crosscuts the B.W. 1 claim, 190 metres southeast of sample 32606. It returned low values for all precious and base metals as did

sample 447013, which was taken from the same shear zone in 1989.

Silt samples, taken in 1989 from Snowy, Mouse and Notch Creeks returned high gold values. Although limited by the extreme topography some prospecting was carried out on these streams during the 1990 field program. The streams drain an area of rusty weathering Stuhini Group hornblende andesitic tuff (Unit 8E). The gossan in this area appears to have resulted from the weathering of pyrite, which is disseminated throughout this unit. Prospecting along the streams resulted in the discovery of several narrow sulphide-bearing quartz veins within the tuff.

Sample 32640 was taken at an elevation of 710 metres on Snowy Creek. The sample, from a ten centimetre wide quartz vein containing pyrrhotite and chalcopyrite, returned a value of 1.66% copper but gold and other metals were low.

Sample 32610 was taken at an elevation of 720 metres just east of Mouse Creek. The sample is from a quartz-pyrite-chalcopyritegalena-sphalerite pod, 5 centimetres by 30 centimetres in size. The sample returned values of 1.61 percent lead, 1.26 percent zinc and 940 ppm copper, with low gold and silver values. Several other veins in this area were sampled without significant results. They are generally narrow and discontinuous and appear to be tension veins related to minor steeply dipping, north trending faults.

Sample 32613 was taken at an elevation of 680 metres on Notch Creek. The sample, consisting of quartz-carbonate float containing pyrite and traces of chalcopyrite, returned low values for base and precious metals.

In the southwest part of the B.W. 2 claim, at an elevation of 1480 metres, two samples were taken along the margins of a minor shear zone, striking 170 degrees and dipping 85 degrees to the east. Sample 32614 was taken from a stockwork of quartz veinlets over a width of twenty centimetres. The sample, containing chalcopyrite and pyrite, returned a value of 1.13 percent copper. Other metal values are low. Sample 32615 was taken from a fifteen centimetre wide quartz vein a few metres to the east which contained pyrite and chalcopyrite. It returned values of 1.69 percent copper and 660 ppm zinc, with otherwise low metal values.

## 7.0 DISCUSSION AND CONCLUSIONS

Several sulphide-bearing quartz veins were discovered in stream gullies near the legal corner post. This area was the site of three 1989 silt samples which were anomalous in gold. Samples from the quartz veins have provided some encouraging values for copper, lead and zinc but are not anomalous in gold. It is quite possible that further exploration in this area may result in the discovery of veins which are richer in gold. However, the terrain is extremely steep and this will limit the amount of work which can be carried out.

A major, iron carbonate altered shear zone crosses the B.W. 1 claim. Samples taken within this zone did not yield significant results. However, samples 32605 and 32606, each taken from narrow quartz-sulphide veins within 100 metres of the shear zone, gave somewhat elevated gold results. The significance of this veining and its relation to the shear zone is not fully understood.

Samples 32614 and 32615, from narrow quartz-sulphide veins in the southwest part of B.W. 2, yielded copper values of greater than one percent but were low in gold. Further prospecting in this area might reveal more mineralized quartz veins.

Much of the Anuk River South property is underlain by Upper Triassic Stuhini Group volcanics. These rocks host many of the significant precious metal occurrences in the Galore Creek area. Although only limited exploration has been done on the Anuk River South property during the 1989 and 1990 field seasons there have been some encouraging geochemical results for both rock and stream silt samples. These results and the favourable geological environment suggest that further work on the property is merited.

Respectfully submitted, EQUITY ENGINEERING LTD.

Robert Falls

Robert Falls, Geologist

Vancouver, British Columbia December, 1990 APPENDIX A

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APPENDIX B

STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES ANUK RIVER SOUTH CLAIM GROUP (June 15 - October 1, 1990)	
PROFESSIONAL FEES AND WAGES: Robert Falls, Project Geologist 3 days @ \$350/day \$ 1,050.00 David Edwards, Prospector 3 days @ \$300/day900.00	\$ 1,950.00
MOBILIZATION AND SUPPORT COSTS: Pro rata according to mandays on each of several properties operated out of the Galore Creek/Porcupine River Camps	2,871.71
CHEMICAL ANALYSES: Rock Geochemical Samples 19 @ \$21.90 each	416.10
EXPENSES: Radio Rental \$ 30.00 Office Equipment 30.00 Printing and Reproductions 679.01 Accommodation 720.00 Helicopter Charters 1,260.00	<u>2,719.01</u> 7,956.82
MANAGEMENT FEE @ 15%	<u>    1,193.52</u> 9,150.34
REPORT (estimated)	2,000.00
	511, 150.34

## APPENDIX C

## ROCK DESCRIPTIONS

AD	Adularia
AS	Arsenopyrite
AZ	Azurite
BI	Biotite
во	Bornite
CA	Calcite
СВ	Carbonate
сс	Chalcocite
CL	Chlorite
CP	Chalcopyrite
СҮ	Clay
DO	Dolomite
EP	Epidote
GE	Goethite
GL	Galena
HE	Hematite

- Jarosite JA
- Potassium Feldspar KF
- Limonite LI
- Malachite MC
- MG Magnetite
- Manganese MN
- Molybdenite MO
- Mariposite MR
- Sericite MS
- ΡO Pyrrhotite
- Pyrite ΡY
- Quartz QΖ
- SI Silica
- Sphalerite SP
- Tetrahedrite  $\mathbf{TT}$

EQUITY ENG	INEERING LTD.			ROCK SAMPLE DESCRIPTIONS		Pa	age-1-					
Property :	Anuk River South			NTS : 104G/4E	Date : 12/	19/90						
Sample No.	Location :	6331 360	N	Type : Grab	Alteration :	QZ	Au	Ag	As	Cu	Pb	Zn
		341 720	Ε	Strike Length Exp. : 3.00 m	Sulphides	5-15%PY	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
32605	Elevation:	1160.0 m		Sample Width : 150.0 cm	Oxides :	GE, HE	720	16	130	940	6	33
	Orientation	: 121 / 60	S₩	True Width : 25.00 cm	Host :	Granodiorite						
Comments :	Quartz vein in g	granodiorit	e. Res	ample of 447011(1989). Good sulphide	e concentration	throughout vein exposure b	ut this					
	type of sulphide	e mineraliz	ation	has not been observed elsewhere in s	similar veins on	the property.						
Sample No.	Location :	6331 140	N	Type : Grab	Alteration :	NONE OBSERVED	Au	Ag	As	Cu	Pb	Zn
		342 160	Е	Strike Length Exp. : 10.00 m	Sulphides :	1-2%PY	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
32606	Elevation:	1280.0 m		Sample Width : 5.00 cm	Oxides :	NONE OBSERVED	830	<1	10	31	3	33
	Orientation	008 / 76	SE	True Width : 5.00 cm	Host :	Sheared diorite						
Comments :	Taken from quart	z veining	in sli	ghtly sheared diorite south of a maj	jor shear zone.							
Sample No.	Location :	6331 220	N	Type : Grab	Alteration :		Au	Aq	As	Cu	Pb	Zn
•		342 610	Е	Strike Length Exp. : m	Sulphides :	NONE VISIBLE	(dad)	(mag)	(mag)	(nog)	(mag)	(DDM)
32607	Elevation:	1360 m		Sample Width : m	Oxides :	GE, HE	10	<1	20	140	6	28
	Orientation:	110 / 75	NE	True Width : m	Host :	Altered volcanics					-	
Comments :	Apparently alter	ed rock. r	ustv w	eathering. Close to felsic intrusiv	/e.							
			, .									
Sample No	location .	<b>4331 1/0</b>	 N		Altoration .	c1	<b>A</b>	4.5	40	<b>C</b> 11	Dh	75
Sample NO.	Location .	3/2 510		Strike Longth Evp + 2 m	Sulphides	31 1907	Au (pph)	Ay (non)	A5 (000)			411
32608	Flovation	13/0 m	E	Sample Hidth + 10 cm	Sulphides :		20	(ppii) ~1	(ppii) 15	200	(ppii)	12
32000	Orientation	1240 11		True Vidth 10 om	Unites :		20		12	290	2	12
Commonte .	Durite and quart	144 / 70 	uank +	avtune Busty weathered and bested	in altered falsi							
connents :	Fyrice and quart	Z WIEN DOX	NUIKL	exture. Rusty weathered and hosted	in attered lets							
Sample No.	Location :	6332 180	N	Type: Grab	Alteration :	MS	Au	Ag	As	Cu	Pb	Zn
		343 280	Е	Strike Length Exp. : 1 m	Sulphides :	TRPO(?), 2%PY	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
32609	Elevation:	670 m		Sample Width: 2 cm	Oxides :		<5	<1	<5	75	<1	64
	Orientation:	050 / 32	NW	True Width: 2 cm	Host :	Andesitic tuff						
Comments :	1cm quartz vein,	contains r	ninor	calcite and 2% disseminated pyrite.	Slightly serici	itized, green-grey, fine-gr	ained					
	andesitic tuff.											
Sample No.	Location :	6332 145	N	Type : Grab	Alteration :	S1	Au	Ag	As	Cu	Pb	Zn
		343 245	Ε	Strike Length Exp. : 0.3 m	Sulphides :	1-2%GL,1-2%SP,2%PY,TRCP	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
32610	Elevation:	720 m		Sample Width: 5 cm	Oxides :	· ·	55	34	15	940	15000	12000
	Orientation:	350 / 90		True Width : 5 cm	Host :	Andesitic Tuff						
Comments :	Small isolated p	od, 5x20cm	in si	ze, within shear.								

••••••••••••••••••

EQUITY ENG Property :	INEERING LTD. Anuk River South			ROCK SAMPLE DESCRIPTIONS NTS : 104G/4E	Date : 12/	19/90	Page-2-					
Sample No. 32611 Comments :	Location : Elevation: Orientation Irregular quart:	6332 145 343 225 725 m : 050 / 66 z vein in s	N E SE heared	Type: Grab Strike Length Exp.: 0.5 m Sample Width: 10 cm True Width: 10 cm volcanics.	Alteration : Sulphides : Oxides : Host :	50%PO LI Grey andesitic tuff	Au (ppb) <5	Ag (ppm) 2	As (ppm) <5	Cu (ppm) 860	РЬ (ррт) 310	2n (ppm) 400
Sample No.	Location :	6332 155 343 225	 N E	Type : Float Strike Length Exp. : m	Alteration : Sulphides :	TRGL, 1%SP	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
32612	Elevation: Orientation	718 m : /		Sample Width : m True Width : m	Oxides : Host :	LI Andesitic tuff	<5	<1	<5	120	340	6900
Comments :	1-15mm wide qua	rtz-calcite	veins	in andesite float.								
Sample No.	Location :	6332 075 343 465	N	Type: Float Strikelength Fxp - m	Alteration : Sulphides :	CB, SI 5%py TRCP(2)	Au (pph)	Ag (pom)	As (nom)	Cu (ppm)	Pb (ppm)	Zn
32613	Elevation: Orientation:	680 m	L	Sample Width : m True Width : m	Oxides : Host :	Quartz-carbonate vein	<5	<1	<5	120	21	230
Comments :	Pyrite-bearing w	vein. Floa	t foun	d along gully, on ice.								
Sample No.	Location :	6331 120 343 090	N E	Type: Grab Strike Length Exp.:4 m	Alteration : Sulphides :	3%CP, TRPY	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
32614	Elevation: Orientation:	1480 m :044 /70	NW	Sample Width : 1 m True Width : 20 cm	Oxides : Host :	GE, HE, MC Agglomerate (?)	160	10	25	11000	28	130
Comments :	Stockwork, orier with bleby chalc	nted 044/70 pyrite and	W, and d pyrii	d to a lesser degree, normal to this ce, 5-20cm wide.	s orientation.	Stockwork comprised of c	µartz veinl	ets				
Sample No.	Location :	6331 125 343 100	NE	Type : Grab Strike Length Exp. : 0.2 m	Alteration : Sulphides :	5%CP, TRPY	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
32615	Elevation: Orientation:	1480 m 170 / 85	E	Sample Width: 15 cm True Width: 15 cm	Oxides : Host :	MC Sheared agglomerate (?	85	15	<5	19000	660	150
Comments :	Sample from a sm rock has little	nall quartz or no sulph	pod/ve ides.	ein. Abundant malachite. Abundant	chalcopyrite in	blebs and veinlets. Ad	, Ijacent shea	red				
Sample No.	Location :	6330 670	N	Type: Grab	Alteration :		Au	Ag	As	Cu	Pb	Zn
32635	Elevation:	343 370 1585 m	E	Strike Length Exp. : 0.5 m Sample Width : 10 cm True Width : 0.1 cm	Sulphides : Oxides : Host	TRCP MC, LI Dark grey appesite	(ppb) 5	(ppm) <1	(ppm.) <5	(ppm) 160	(ppm) 11	(ppm) 75
Comments :	Calcite vein alc	ong joint su	rface.	NGC WIGHT UT UN	1051 :	Dark grey dindesite						

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EQUITY ENG	INEERING LTD.			ROCK SAMPLE DESCRIPTIONS				Page-3-					
Property :	Anuk River South			NTS : 104G/4E		Date : 12/	19/90						
Sample No.	Location :	6330 925 343 160	N E	Type : Grab Strike Length Exp. : m	n	Alteration : Sulphides :	<1%PY	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
32636	Elevation: Orientation	1570 m : /		Sample Width : 10 cm True Width : m		Oxides : Host :	HE Dark grey andesite	<5	<1	<5	120	5	52
Comments :	Character sample	e of rusty	weathe	ring andesite.									
Sample No.	Location :	6331 010	 N	Type: Float		Alteration :		Au	Ag	As	Cu	РЬ	Zn
		343 195	Е	Strike Length Exp. : n	n	Sulphides :	<1%CP	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
32637	Elevation:	1530 m		Sample Width : m		Oxides :	AZ, MC, LI	10	1	<5	930	2	49
Comments :	Orientation: Quartz float. S	: / Several bar	ren au	True Width : m artz veins in the vicinity.		Host :							
			· ··· -										
Sample No.	Location :	6331 470	N	Type : Float		Alteration :		Au	Ag	As	Cu	Pb	Zn
		343 410	E	Strike Length Exp. :	n	Sulphides :	1%CP	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
32638	Elevation:	1220 m		Sample Width : m		Oxides :	AZ, MC, LI	<5	3	<5	1900	<1	27
	Orientation:	: /	-	True Width : m		Host :	Andesite						
Comments :	Select sample fr	rom several	quart	z float boulders. In talus slop	be bel	low cliffs of S	tuhini volcanics.						
Sample No.	Location :	6332 180	N	Type : Select		Alteration :		Au	Ag	As	Cu	Pb	Zn
		344 230	Ε	Strike Length Exp. : 0.5 m	n	Sulphides :	<1%CP, 2%PO	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
32639	Elevation:	690 m		Sample Width : 5 cm		Oxides :	MC, LI	<5	2	<5	2100	1	460
	Orientation:	098 / 40	N	True Width : 10 cm		Host :	Andesitic tuff						
Comments :	Quartz vein alor 30-40cm wide out	ng shear zo crops in g	ne in : ully fi	gully. Sample from mineralized or 2m. Orientation of the large	porti er vei	ion of vein. A	larger but poorly mine	ralized vein					
					.,								
Sample No.	Location :	6332 160	N	Type : Select		Alteration :		Au	Ag	As	Cu	Pb	Zn
•		343 040	Е	Strike Length Exp. : 2 m	A	Sulphides :	20%CP. 60%P0	(dod)	(mag)	(DDM)	(10011)	(DDM)	(DOM)
32640	Elevation:	710 m		Sample Width : 10 cm		Oxides :	LI	110	11	<5	13000	<1	290
	Orientation:	083 / 90		True Width : 10 cm		Host :	Andesitic tuff (?)						
Comments :	Sample from the	mineralize	d port	ion of a quartz vein 5-10cm wide	e. Mi	ineralization i	s spotty. Appears to p	inch on west					
	side, overburder	on east.	•	·									
Sample No.	Location :	6331070	N	Type : Select		Alteration :	СВ	Au	Ag	As	Cu	РЬ	Zn
		342325	E	Strike Length Exp. : 5 m	n	Sulphides :	<1%PY	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
32641	Elevation:	1290 m		Sample Width : 10 cm		Oxides :	LI	35	<1	40	340	9	20
	Orientation:	134 / 62	NE	True Width : 1-30 cm		Host :	Carbonate-altered vol	canics					
Comments :	From a mineraliz	ed patch w	ithina	an otherwise barren quartz-carbo	nate	vein.							

EQUITY ENGINEERING LTD.			ROCK SAMPLE DESCRIPTIONS								
Property : Anuk	River South		NTS : 104G/4E	Date : 12/'	19/90						
Sample No.	Location :	6331135 N	Type: Grab	Alteration :	NONE OBSERVED	Au	Ag	As	Cu	РЬ	Zn
		342480 E	Strike Length Exp. : 0.5 m	Sulphides :	5%21	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
32642	Elevation:	1335 m	Sample Width : 3 cm	Oxides :	LI	15	<1	15	300	2	37
	Orientation:	?/?	True Width : 3 cm	Host :	Agglomerate						
Comments : Qua	irtz-pyrite sw	eat in agglome	rate.								

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APPENDIX D

CERTIFICATES OF ANALYSIS

\_\_\_\_\_ Equity Engineering Ltd. \_\_\_\_\_





2 - 302 - 48th STREET, EAST SASKATOON, SASKATCHEWAN S7K 6A4 (306) 931-1033 FAX: (306) 242-4717

# CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Prime Exploration Ltd. 10th Floor, Box 10-808 West Hastings St. Vancouver, B. C. V6C 2X6



INVOICE #: 14465 P.O.: R-2120

SAMPLE(S) OF Rock

R. Falls Project: Anuk River South

REMARKS: Wrangell Samples - Equity Engineering

	Au ppb
32605	720
32606	830
32607	10
32608	20
32609	<5
32610	55
32611	<5
32612	<5
32613	<5
32635	5
32636	<5
32637	10
32638	<5
32639	<5
32640	110

COPIES TO: C. Idziszek, J. Foster INVOICE TO: Prime - Vancouver

Aug 05/90

Bernie V. SIGNED .

Page 1 of 1

For enquiries on this report, please contact Customer Service Department. Samples, Pulps and Rejects discarded two months from the date of this report.





2 - 302 - 48th STREET, EAST SASKATOON, SASKATCHEWAN S7K 6A4 (306) 931-1033 FAX: (306) 242-4717

# CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Prime Exploration Ltd. 10th Floor, Box 10-808 West Hastings St. Vancouver, B. C. V6C 2X6



INVOICE #: 14516 P.O.: R-2138

SAMPLE(S) OF Rock

R. Falls Project: Anuk River South

REMARKS: Wrangell Samples - Equity Engineering

Au ppb

326141603264135

32642 15 32615 85

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Aug 09/90

Bernie V SIGNED \_

Page 1 of 1

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2 - 302 - 48th STREET, EAST SASKATOON, SASKATCHEWAN S7K 6A4 (306) 931-1033 FAX: (306) 242-4717

# CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Prime Exploration Ltd 10th Floor, Box 10-808 West Hastings St. REPORT No. Vancouver, B.C. S9865 V6C 2X6

> INVOICE #: 15279 P.O.:

SAMPLE(S) OF Pulps

R. Falls Project: Anuk River South

REMARKS: Wrangell Samples - Equity Engineering

Cu ४

32614 1.13 32615 1.69

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Sep 10/90

Bernie Vun SIGNED \_

Page 1 of 1

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2 - 302 - 48th STREET, EAST SASKATOON, SASKATCHEWAN S7K 6A4 (306) 931-1033 FAX: (306) 242-4717

# CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Prime Exploration Ltd. 10th Floor, Box 10-808 West Hastings St. REPORT No. Vancouver, B.C. S1756 V6C 2X6

INVOICE #: 16487 P.O.:

SAMPLE(S) OF Pulp

Project: Anuk River South

REMARKS: Equity Engineering

Pb	Zn
€	웅

32610 **1.61 1.26** 

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Dec 07/90

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2 - 302 - 48th STREET, EAST SASKATOON, SASKATCHEWAN S7K 6A4 (306) 931-1033 FAX: (306) 242-4717

# CERTIFICATE OF ANALYSIS

Prime Exploration Ltd. SAMPLE(S) FROM REPORT No. 10th Floor, Box 10-808 West Hastings St. S1783 Vancouver, B.C. V6C 2X6

INVOICE #: 16525 P.O.:

SAMPLE(S) OF Pulp

Project: Anuk River South

Equity Engineering **REMARKS:** 

> Cu 옿

32640 1.66

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Dec 07/90

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Page 1 of 1

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2-302-48TH STREET, SASKATOON, SASKATCHEWAN TELEPHONE #: (306) 931 - 1033 FAX #: (306) 242 - 4717 57K 6A4

I.C.A.P. PLASMA SCAN

## Aqua-Regia Digestion

PRI 10tl 808	ME EXPLORATI h Floor Box West Hastin couver B.C.	ON LTD. 10 os St. V&C 2X6						T.S.L. T.S.L. T.S.L.	REPORT File Invoice	No. : 5 - No. : No. : 1480	9370 - 1 08	
ATTI	N: J. FOSTE	R	PROJECT:	ANUK RIVER	SOUTH	EQUITY I	ENGINEERING	R-2120	ALL RES	ULTS PPM		
	ELEMENT		32605	32606	<b>326</b> 07	32608	32609	32610	32611	32612	<b>326</b> 13	32635
-	Aluminum	[A]]	4100	<b>45</b> 00	14000	2200	17000	5100	2100	<b>940</b> 0	<b>95</b> 00	16000
	Iron	[Fe]	<b>890</b> 00	21000	<b>4500</b> 0	<b>6200</b> 0	33000	16000	130000	27000	24000	24000
L	Calcium	[Ca]	1600	3000	<b>38</b> 00	1800	41000	26000	18000	28000	62000	14000
	Magnesium	[Mo]	2000	2200	5500	390	7100	3000	1700	4200	4800	5500
	Sodium	[Na]	60	100	240	40	150	60	30	190	120	490
	Potassium	EK 3	150	<b>49</b> 0	6800	1300	850	770	100	280	570	7600
	Titanium	[Ti]	92	75	1300	400	360	26	18	710	670	1100
	Manganese	EMn 3	190	370	<b>29</b> 0	240	780	530	230	650	830	510
	Phosphorus	[P]]	36	400	1500	1400	900	240	42	1100	1100	1600
L I	Barium	[Ba]	17	68	48	46	24	26	7	11	13	33
_	Chromium	[Cr]	63	63	28	45	49	51	34	33	24	24
	Zirconium	[2r]	11	3	10	8	8	3	20	4	3	6
	Copper	[Cu]	<b>94</b> 0	31	140	290	75	940	860	120	120	160
	Nickel	[Ni]	29	4	5	3	26	4	83	13	12	4
	Lead	[Pb]	6	3	- 6	3	< 1	15000	310	340	21	11
	Zinc	[Zn]	33	33	28	12	64	12000	400	<b>69</b> 00	230	75
	Vanadium	[V]]	16	10	220	33	86	7	3	39	47	78
	Strontium	[Sr]	5	13	38	19	200	310	110	75	160	58
	Cobalt	[Co]	83	10	5	7	18	5	120	21	16	11
1	Malybdenum	[Mo]	< 2	< 2	- 2	2	< 2	< 2	< 2	< 2	< 2	< 2
_	Silver	EAg3	16	< 1	$\langle 1 \rangle$	< 1	< 1	34	2	$\langle 1 \rangle$	< 1	< 1
	Cadmium	[Cd]	3	< 1	< 1	< 1	< 1	71	2	70	3	< 1
U	Beryllium	(Be]	$\langle 1 \rangle$	< 1	< 1	< 1	< 1	< i	< 1	< 1	< 1	- < 1
	Baron	CB ]	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	Antimony	(Sb]	15	< 5	< 5	< 5	< 5	45	< 3	< 5	< 5	< 5
	Yttrium	[Y]	2	2	6	4	4	5	2	3	4	5
	Scandium	[Sc]	< 1	< 1	11	3	6	2	< 1	1	2	2
	Tunosten	[W]	< 10	< 10	< 10	< <b>1</b> 0	< 10	200	< 10	90	< 10	< 10
	Niobium	EN63	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ι.	Thorium	[Th]	20	< 10	40	10	30	30	50	20	30	30
<b>F</b>	Arsenic	[As]	130	10	20	15	< 5	15	< 5	< 5	< 5	< 5
	Bisauth	[Bi]	15	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
E -	Tin	[Sn]	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	Lithium	[Li]	< 5	5	10	< 5	15	5	< 5	< 5	10	15
	Holmium	[Ho]	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10

DATE : AUG-22-1990

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SIGNED : <u>Bernie Dum</u>

T 5 L LABORATORIES

2-302-48TH STREET, SASKATOON, SASKATCHEMAN 57K 6A4 TELEPHONE #: (306) 931 - 1033 FAX #: (306) 242 - 4717

I.C.A.P. PLASMA SCAN

Aqua-Regia Digestion

PRIME EXPLORATION LTD. T.S.L. REPORT No. : S - 9370 - 2 10th Floor Box 10 T.S.L. File No. : 808 West Hastinos St. T.5.L. Invoice No. : 14808 Vancouver B.C. V6C 2X6 ATTN: J. FOSTER PROJECT: ANUK RIVER SOUTH EQUITY ENGINEERING R-2120 ALL RESULTS PPM 32636 32637 32638 32639 32640

ELEMENT						
Aluminum	[A1]	20000	7100	1200	7300	3600
Iron	[Fe]	34000	14000	<b>660</b> 0	52000	140000
Calcium	[Ca]	5900	5900	1200	2000	1700
Magnesium	[Ma]	7000	3800	470	4400	2600
Sodium	[Na]	550	80	30	50	20
Potassium	EK 3	13000	460	110	560	280
Titanium	[Ti]	1400	680	130	35	110
Manganese	[Mn]	530	320	37	200	130
Phosphorus	[P]	1500	440	88	330	130
Barium	[Ba]	41	8	2	26	10
Chromium	[Cr]	17	95	95	91	22
Zirconium	[Zr]	3	3	1	5	18
Copper	(Cu)	120	930	1900	2100	13000
Nickel	[Ni]	4	3	2	58	170
Lead	[Pb]	5	2	< 1	i	< 1
Zinc	[Zn]	52	49	27	460	290
Vanadium	EV 3	120	38	6	18	6
Strontium	[Sr]	46	44	22	9	4
Cobalt	[Co]	12	4	4	55	260
Molybdenum	(Ma)	< 2	2	< 2	< 2	< 2
Silver	[Ag]	. < 1	1	3	. 2	11
Cadmium	[Cd]	< 1	< 1	< 1	5	9
Beryllium	[Be]	< 1	< 1	< 1-	1	< 1
Boron	[B]	< 10	< 10	< 10	< 10	< 10
Antimony	[56]	< 5	< 5	< 5	< 5	< 5
Yttrium	[ Y]	5	2	< 1	2	2
Scandium	[Sc]	< 1	2	< 1	< 1	$\langle 1 \rangle$
Tungsten	[W]	< 10	< 10	< 10	< 10	< 10
Niobium	[Nb]	< 10	< 10	< 10	< 10	< 10
Thorium	[Th]	<b>4</b> 0	< 10	< 10	< 10	70
Arsenic	[As]	< 5	< 5	< 5	< 5	< 5
Bisauth	[Bi]	< 5	< 5	< 5	< 5	< 5
Tin	[ <b>S</b> n]	< 10	< 10	< 10	< 10	< 10
Lithium	[[1]	20	5	< 5	< 5	< 5
Holaium	[Ho]	< 10	< 10	< 10	< 10	< 10

DATE : AUG-22-1990

Bernie Dunn

SIGNED :

			·				
	TSI	i AR	RATIRIES				
		. Gran	2-302	-48th stre te Fa	ET, SASK LEPHONE X #:	ATOON, SASKATCHEWA #: (306) 931 - 1033 (306) 242 - 4717	57K 6A4 5
			I.C.A.P	. Plasma s	Can	Aqua-Regia Digesti	ion
	PRIME EXPLORATION 10th Floor Box	ON LTD. 10					T.S.L. REPORT No. : S - 9419 - 1 T.S.L. File No. :
	808 West Hastin Vancouver B.C. ATTN: J. ENSTE	os St. V6C 2X6 R	PROJECT	ANNIK RTUFR	SOUTH		T.S.L. Invoice No. : 14909
-					000111		
	ELEMENT		32614	32641	32642	32615	
	Aluminum	[A1]	17000	1900	8800	12000	
	Iron	[Fe]	35000	11000	43000	36000	
<b>1</b> . ,	Calcium	[Ca]	14000	1900	4800	2700	
	Magnesium	EMo I	6700	550	2300	5200	
	Batassius	LNAJ FM D	200	200	70	60 470	
1. 2	Titanium	LK J [Ti]	1306	55	2000	400 7 <b>4</b> 0	,
$\square$	Manoanese	[Mn]	860	100	320	870	
	Phosphorus	(P ]	1200	150	1700	720	
A - 2	Barium	[Ba]	53	43	55	20	
$\overline{\Box}$	Chromium	[Cr]	21	20	17	38	
	Zirconium	[Zr]	9	2	3	5	
ŧ.	Copper	(Cu)	11000	340	300	19000	
<b>-</b> 1	Nickel	ENil	14	2	36	8	
	Lead	1701	28	9	2	660	
[	LINC	1203	130	20	3/	130	
<b>F</b>	Steartium	[V] [Se]	120	17		61 41	
	Cobalt	[[n]	120	5	28 28	14	
Į.	Molybdenum	[Mo]	< 2	16	< 2	< 2	
	Silver	[Ag]	10	< 1	< 1	15	
	Cadmium	[[b]]	4	< i	< 1	4	
( :	Beryllium	[Be]	< 1	< 1	< 1	< 1	
-	Baron	CB ]	< 10	< 10	< 10	< 10	
	Antimony	[Sb]	15	< 5	< 5	< 5	
U	YTTPlum	LY J	6		12	3	
_	Tuposteo	1963 FW 3	J 2 10	< 1 Z 10	1	3 Z 10	
	Ninhius	LW J [Nh]	< 10 < 10	<ul><li>√ 10</li><li>&lt; 10</li></ul>	10	< 10 < 10	
L.	Thorium	[Th]	50	< 10	60	20	
	Arsenic	[As]	25	40	15	< 5	
(	Bismuth	[Bi]	5	5	< 5	10	
{	Tin	[Sn]	< 10	< 10	< 10	< 10	
_	Lithium	[Li]	15	< 5	10	10	
	Holmium	[Ho]	< 10	< 10	< 10	< 10	
1 -							

DATE : AUG-25-1990

Section of the sectio

SIGNED : Bernie Dunn

APPENDIX E

STATEMENT OF QUALIFICATIONS

#### STATEMENT OF QUALIFICATIONS

I, ROBERT B. FALLS, of 103-2181 Panorama Drive, North 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 Toronto with a Bachelor of Science Degree in Geology, 1982.
- 3. THAT my primary employment since 1987 has been in the field of mineral exploration.
- 4. THAT this report is based on data generated from work supervised by myself during July, 1990 and on assessment reports filed with the province of British Columbia.
- 5. THAT 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 <u>3</u>/<u>A</u> day of December, 1990.

Robert Falls

Robert Falls, Geologist



1990 ROO	CK SAMPLE A	NALYSIS		<b>Db</b> (	<b>C</b> = (		FIELD S	CREENED ST	REAM SEDIN	IENT SAMPI	E ANALYSE	ES (I
Sample	Au (ppb)	Ag (ppm)	Cu (ppm)	PD (ppm)	Zn (ppm)	AS (ppm)	A50221	Au (ppb)	Ad (ppm)	Cu (ppm)	PD(ppm)	Zn
32605	720	16	940	0	33	130	459221	10	<0.2	10	~2	
32606	830	<1	31	3	33	10	459222	40	<0.2	10	2	
32607	10	<1	140	6	28	20	459223	10	0.2	10	<2	
32608	20	<1	290	3	12	15	459224	< 5	<0.2	12	<2	
32609	<5	<1	75	<1	64	<5	459225	<5	<0.2	17	10	
32610	55	34	940	1.61%	1.26%	15	459226	20	<0.2	18	<2	
32611	<5	2	860	310	400	<5	459227	<5	<0.2	14	2	
32612	<5	<1	120	340	6900	<5	459228	35	<0.2	17	<2	
32613	<5	<1	120	21	230	<5	459229	<5	<0.2	19	2	
32614	160	10	1.13%	28	130	25	459230	<5	<0.2	19	<2	
32615	85	15	1.69%	660	150	<5	459231	<5	0.2	15	30	
32635	5	<1	160	11	75	<5	459232	<5	<0.2	18	10	
32636	<5	<1	120	4	5	<5	459233	<5	<0.2	70	16	
32637	10	1	930	3	2	<5	459234	105	0.2	75	8	
32638	<5	3	1900	2	<1	<5	463301	<5	<0.2	99	<2	
32639	<5	2	2100	58	1	<5	463302	20	<0.2	128	<2	
32640	110	11	1.66%	1 170	<1	<5	463303	10	<0.2	96	<2	
32641	35	<1	340	9	120	40	463304	<5	0.2	97	<2	
32642	15	<1	300	2	37	15	463305	10	0.2	120	<2	
	1.00		(1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997)				463306	390	<0.2	112	<2	
							463307	275	<0.2	69	2	
1989 RO	CK SAMPLE A	NALYSES					463308	30	<0.2	74	4	
Sample	Au(ppb)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	As (ppm)					1	
447011	1.30g/t	17.5	1800	10	44	190						
447012	<5	<0.5	30	5	2.2	10	GOVERNM	ENT REGION	AL GEOCHEN	ITCAL SAME	LES (1987)	)
447013	<5	<0.5	5	5	60	9	Sample	Au (ppb)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn
459053	<5	<0.5	107	85	164	11	871525	38	0.1	72	5	2
459054	<5	<0.5	37	20	48	9	871526	32	0.1	71	5	
459054	15	<0.5	76	10	40	11	071520	56	0.1	11	5	
459050	<5	0.5	202	10	20	12						
459057	5	0.5	382	5	28	12						
		Walk Walks										
1989 SI	LT SAMPLE A	NALYSES	Cii (nom)	Pb(nnm)	2n (nnm)	As (nnm)						