GIGI RESOURCES LTD. 1990 SUMMARY REPORT ON THE TROPHY GOLD PROJECT

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Located in the Galore Creek Area Liard Mining Division NTS 104G/3E, 3W 57° 10' North Latitude 131° 15' West Longitude

> -prepared for-GIGI RESOURCES LTD.

-prepared by-Henry J. Awmack, P.Eng. March, 1991

1990 SUMMARY REPORT ON THE TROPHY GOLD PROJECT

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1.0 INTRODUCTION

The Trophy Gold property, consisting of 769 units, was staked in 1987, 1988 and 1990 to cover favourable lithology and known mineral occurrences in the Galore Creek area, approximately 160 kilometres northwest of Stewart in northwestern British Columbia (Figure 1). Several base metal occurrences were investigated on the Trophy Gold property during the 1960's, with exploration focusing on its western edge. Extensive work was carried out by Continental Gold Corp. in 1988, including 2,834 metres of diamond drilling on three showings, and by Gigi Resources Ltd. in 1989. 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.

A comprehensive exploration program, consisting of geological mapping, prospecting, geochemical sampling, trenching and diamond drilling, was carried out over the Trophy Gold property from June to October of 1990. Equity Engineering Ltd. conducted this program for Gigi Resources Ltd. and has been retained to report on the results of the fieldwork and prepare recommendations for further exploration.

2.0 LIST OF CLAIMS

The Trophy Gold property comprises 769 units in 50 contiguous claims within the Liard Mining Division (Figure 2), as outlined in Table 2.0.1. Records of the British Columbia Ministry of Energy, Mines and Petroleum Resources indicate that these claims are 45% owned by Goldbelt Mines Inc. and 55% owned by Continental Gold Corp.. Separate documents indicate that they are under option to Gigi Resources Ltd..

<u>TABLE</u>	2.0.1
CLAIM	DATA

Claim	Record	No. of	Record	Expiry	
<u>Name</u>	<u>Number</u>	<u> </u>	Date	Year	
Trophy 1	4067	20	May 5, 198 7	1998	
Trophy 2	4068	20	May 5, 1987	1998	
Trophy 3	4069	20	May 5, 1987	1998	
Trophy 4	4070	20	May 5, 1987	1998	
Glacier 1	4121	20	July 24, 1987	1997	
Glacier 2	4122	20	July 24, 1987	1996	
Glacier 3	4123	20	July 24, 1987	1996	
Glacier 4	4124	20	July 24, 1987	1996	
Glacier 5	4125	20	July 24, 1987	1997	
Glacier 6	4126	20	July 24, 1987	1997	
Glacier 7	4127	15	July 24, 1987	1996	





Claim	Record	No. of	Record	Expiry
Clacior 9	A129			<u>1009</u>
Glacier 9	4120	10	$\begin{array}{c} \text{July 24, 1987} \\ \text{Fob } 17 1988 \end{array}$	1990
Glacier J	4475	10	Fob $17, 1988$	1994
Glacier 10	4470	20	Feb. 17, 1988	1995
Glacier 12	4477	20	Feb. 17, 1988	1995
Glacier 13	7768	20	Aug 23 1990	1994*
Scotch 1	4136	8	Aug. 10, 1987	1998
Scotch 2	4137	20	Aug. $10, 1987$	1998
Scotch 3	4138	20	Aug. $10 1987$	1994*
Scotch 4	4139	20	Aug. $10, 1987$	1994*
Scotch 5	4140	20	Aug. 10, 1987	1998
Scotch 6	4141	20	Aug. 10, 1987	1994*
Scotch 7	4142	8	Aug. 10, 1987	1994*
Scotch 8	4143	20	Aug. 10, 1987	1998
Scotch 9	4144	8	Aug. 10, 1987	1998
Scotch 10	4145	20	Aug. 10, 1987	1998
Scotch 11	4483	20	Feb. 17, 1988	1994
Scotch 12	4484	20	Feb. 17, 1988	1994
Catto 1	4131	20	July 24, 1987	1994*
Catto 2	4132	20	July 24, 1987	1998
Bear 1	4129	6	July 24, 1987	1995
Bear 2	4130	20	July 24, 1987	1996
Saddle 1	4430	18	Dec. 9, 1987	1994*
Saddle 2	4431	9	Dec. 9, 1987	1997
Saddle 3	4432	6	Dec. 9, 1987	1994*
Saddle 4	4433	9	Dec. 9, 1987	1994
Saddle 5	4434	15	Dec. 9, 1987	1994*
Saddle 6	4435	20	Dec. 9, 1987	1994*
Saddle 7	4436	16	Dec. 9, 1987	1994*
Saddle 8	4437	16	Dec. 9, 1987	1994*
Saddle 9	4438	16	Dec. 9, 1987	1998
Saddle 10	4439	6	Dec. 9, 1987	1998
Saddle 11	4440	8	Dec. 9, 1987	1997
Saddle 12	4441	18	Dec. 9, 1987	1998
Saddle 13	4442	15	Dec. 9, 1987	1996
Saddle 14	4776	18	July 6, 1988	1998
Saddle 15	4777	12	July 6, 1988	1997
Pinch 1	7905	5	Oct. 15, 1990	1994*
Pinch 2	7906	5	Oct. 15, 1990	1994*
		769		

TABLE 2.0.1 (continued) CLAIM DATA

* Subject to approval of assessment work filed in December 1990.

The Catto 1 and 2 claims almost completely surround the CC, Bik and Penny 2-post claims which cover the Copper Canyon deposit (Figure 2). According to a 1965 survey by Underhill and Underhill of the CC, Bik and Penny claims, three wedge-shaped internal fractions totalling 5850 square metres remained open within the

Copper Canyon property and would be covered by the Catto 1 and 2 claims (Caulfield, 1991). The Saddle 1, 3, 4, 5 and 6 claims overlap the northern and eastern boundaries of the Galore Creek 2-post claim group. In addition, the Saddle 1 claim almost entirely overlies the previously staked Grace 2 claim. These and other, smaller overlaps reduce the actual size of the Trophy Gold property to approximately 720 units (18,000 hectares). The positions of the legal corner posts for the Glacier 1-8, Glacier 13 and Saddle 1-4 claims have been verified by the author.

3.0 LOCATION, ACCESS AND GEOGRAPHY

The Trophy Gold property is located within the Coast Range Mountains approximately 170 kilometres northwest of Stewart and 80 kilometres southeast of Telegraph Creek in northwestern British Columbia (Figure 1). The claims lie within the Liard Mining Division, centred at 57° 10' north latitude and 131° 15' west longitude.

Access to the Trophy Gold property in 1990 was provided by daily helicopter setouts from the Galore Creek camp and airstrip. The entire property lies within twenty kilometres flight distance from the camp. During the field season, fixed-wing aircraft fly charters from Smithers to the Galore Creek camp and airstrip direct or via the Bronson Creek airstrip. The Galore Creek airstrip is 425 metres in length, limiting aircraft that can be safely landed there to the size of a Turbo Otter. The Scud River airstrip, located 29 kilometres to the northwest of the Galore Creek camp at the confluence of the Scud and Stikine Rivers, is suitable for DC-3 aircraft.

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 90-tonne barges upriver as far as Telegraph Creek, allowing economical transportation of heavy machinery and fuel to within sixteen kilometres of the property. During the 1960's, Kennco constructed a cat road from their Galore Creek copper-gold deposit along the east side of Galore Creek and down the Scud River to the Scud River airstrip. This cat road extends through the Saddle 2, 4, 5 and Glacier 9, 11 and 12 claims on the western side of the Trophy property. It has not been maintained and would require extensive reconstruction before becoming usable for its entire length. However, it could be easily upgraded to provide road access from the Galore Creek camp to the Saddle 2, 4 and 5 claims.

The claims cover portions of the Scud River drainage at the eastern margin of the Coast Mountain Range. Topography throughout is rugged, typical of mountainous and glaciated terrain, with elevations ranging from 250 metres on the floodplain of the Scud

River to over 2250 metres on an unnamed peak in the southeast corner of the Trophy 4 claim. Valley glaciers are common throughout the area, with the largest ones descending below 500 metres in elevation.

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 lies at approximately 1000 metres, the creek beds and slopes are covered by 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 between 190 and 380 centimetres. Except during July, August and September, precipitation in the mountains falls mainly as snow, with accumulations of snow 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 (Kerr, 1948b).

4.0 PROPERTY MINING HISTORY

4.1 Previous Work

The Galore Creek district (Figure 3) was extensively explored for its copper potential throughout the 1960's, following the discovery in 1955 of the Galore Creek copper-gold porphyry deposit. This deposit, whose Central Zone hosts reserves of 125 million tonnes grading 1.06% copper and 400 ppb gold (Allen et al, 1976), is located approximately two kilometres west of the Saddle 5 claim Several major mining companies conducted regional boundary. mapping and silt sampling programs over the entire Galore Creek area, and the Copper Canyon copper porphyry deposit was discovered in 1957. Copper Canyon, estimated by Spencer and Dobell (1958) to contain 27 million tonnes at a grade of 0.72% copper and 0.43 g/tonne (0.013 oz/ton) gold, lies eight kilometres east of the Central Zone on claims adjoined on three sides by the Trophy Gold The Copper Canyon deposit and some of the peripheral property. zones on the Galore Creek property were subjects of diamond drilling programs during 1990 which tested their gold potential. Consolidated Rhodes Resources Ltd. has reported 269.5 metres grading 1.06% copper with 1.92 g/tonne (0.056 oz/ton) gold and 22.3 g/tonne (0.65 oz/ton) silver from hole 90-2 on the Copper Canyon property (Northern Miner, Oct. 1/90).

In the mid-1960's, a number of exploration programs were initiated on ground currently covered by the Trophy Gold project. The majority of this work was concentrated along the east side of Galore Creek in the search for copper mineralization similar to the deposit being developed by Stikine Copper at the headwaters of



Galore Creek. The greatest amount of exploration was carried out by the Scud Venture, a syndicate controlled by Silver Standard Mines Limited, on the Stikine North, Stikine East and South Scud properties. Other companies exploring ground now covered by the Trophy Gold project include Conwest Exploration Company Limited, Phelps Dodge Corporation of Canada Limited and Copper Soo Mining Company. Their work programs were mostly limited to geological mapping, prospecting, ground geophysics and silt geochemistry with limited drilling confined to the Stikine East and North properties. The work programs carried out prior to Continental Gold Corp.'s involvement are summarized below in Table 4.1.1.

TABLE 4.1.1 PREVIOUS WORK PROGRAMS

<u>Claim Group</u>	Company	Year	Work Program	Current Claims
Stikine North	Silver Standard	1964	Geol. mapping, silt geochem.	Saddle 2 Glacier 12
		1964	Ground mag. survey	11
		1965	I.P. survey Diamond drilling?	11
		1966	Trenching	
		1974	Diamond drilling 2 holes,	Saddle 2
Stikine East	11	1964	Geol. mapping, silt geochem.	Saddle 4-8 Glacier 7 Catto 1
		1964	Ground mag. survey	н
		1965	I.P. survey Diamond drilling?	Saddle 4,5
		1966	Trenching?	
		1974	Diamond drilling	Saddle 5
South Scud	11	1964	Geol. mapping, silt geochem.	Trophy 1-4
CW	Conwest	1965	I.P. survey, ground mag.	Glacier 12
Lot	Copper	1964	Geol. mapping,	Glacier 4,6,8

TABLE 4.1.1 (continued) PREVIOUS WORK PROGRAMS

<u>Clain</u>	n Group	Company	Year	Work Program	<u>Cnrrent Claims</u>
		Soo		silt geochem, soil geochem.	Saddle 8-10,12 Catto 1,2
Jay,	С	Phelps Dodge	1965	Surveying, geol. mapping, trenching	Scotch 11,12

In 1964, Silver Standard Mines staked the BIK 87-116 claims (South Scud Group) on the basis of weak lead-zinc mineralization, termed the Ptarmigan Zone, found several years earlier by prospectors working for the BIK Syndicate (Lammle, 1964). In addition, a copper-bearing skarn, the Hummingbird Zone, was discovered approximately 500 metres west of the Ptarmigan Zone (Lammle, 1964).

Closer to Stikine Copper's discovery on the east side of Galore Creek, Silver Standard's holdings included the Stikine North and East Groups. The 1964 and 1965 programs consisted of geological mapping, silt geochemistry and ground magnetometer and induced polarization surveys (Gale, 1964). Minor occurrences of copper mineralization were noted on each property; one 11.9 metre sample of mineralized syenite assayed 0.10% copper on the Stikine East claim group (Gale, 1964). Silt geochemistry showed the drainages in the area of the 1000 metre by 500 metre syenite body on Stikine East to be very anomalous in copper. Large induced polarization anomalies were discovered on both groups (Falconer, neither of which can be adequately explained by 1965a,b), mineralization reported by Silver Standard. Two diamond drill holes totalling 553 metres were drilled in 1965 and eight trenches were excavated in 1966 for a total length of 1036 metres on the Stikine River East and North properties, but exact locations were not reported (BCDM&PR, 1965-66). Silver Standard's interest in this area continued at least until 1974 when four diamond drill holes were reported on the Galore Creek access road (McAusland, 1974a,b). The core for these holes was found in 1989 near one of the drill collars.

In 1965, Phelps Dodge Corporation of Canada Limited worked a group of 126 mineral claims, part of which is now covered by the Scotch 11 and 12 claims. For one month, a crew of ten men did surveying, geological mapping and trenching on magnetite and chalcopyrite mineralized shear zones, known collectively as the Jay Showing. Twelve trenches were blasted for a total length of 398 metres (BCDM&PR, 1965).

In 1987, Continental Gold Corp. staked 80 claim units over the Ptarmigan and Hummingbird showings, and an additional 675 units

around them in 1988. A mapping and sampling program was conducted over the Trophy 1-4 claims in 1987 (Forster, 1987). The following year, more extensive exploration was carried out over the entire Trophy Gold property, consisting of property-wide geological mapping and sampling, detailed mapping on the Trophy 1-4 claims and 2,834 metres of diamond drilling on the Ptarmigan, Hummingbird and Eagle Zones (Heinrich et al, 1989).

During the 1989 field season, Gigi Resources Ltd. carried out property-wide exploration on the Trophy Gold project, taking 110 stream sediment samples, 400 contour soil samples and 415 rock samples. This work was concentrated on the west side of the property in areas underlain by the Stuhini volcanic package. A 10,000 metre contour eoil line along the east slope of Galore Creek revealed several anomalous areas, with geochemical values up to 550 ppb gold and 6990 ppm copper. Nine new precious metals occurrences were discovered by prospecting (Caulfield and Archambault, 1990). Airborne magnetic, VLF-EM and resistivity surveys on lines 100 metres apart were flown over the entire Trophy Gold property (Dvorak, 1990).

4.2 1990 Program

From June through October of 1990, Gigi Resources Ltd. carried out a comprehensive exploration program on the Trophy Gold project, consisting of geological mapping, prospecting, geochemical sampling, ground geophysics, trenching and diamond drilling. This program was designed to define the extent, grade, and continuity of the Ptarmigan Zone, evaluate all known mineral occurrences and investigate the significance of the soil and airborne geophysical anomalies revealed by the 1989 program.

During the course of this program, 80 stream sediment samples, 1890 soil samples, 618 reconnaissance rock samples, and 1356 core samples were taken. Prospecting and reconnaissance geological mapping were carried out using existing topographic maps at a scale of 1:10,000. Known mineral occurrences were located, mapped and evaluated, wherever possible.

The Galore geochemical/geophysical grid was established on the east slope of the Galore Creek valley, upslope from the most anomalous sections of the 1989 soil contour line. A north-south baseline was cut and picketed for 2.6 kilometres from 33+00N to 59+23N at 0+00E. To avoid precipitous terrain, the baseline takes jog westward at 59+23N to 1+24W, then extends another 0.4 а kilometres northward to 63+00N 1+24W (Figure 13). East-west crosslines were flagged 100 metres apart from the baseline, using chain and compass. The Sapo Grid was established on the Glacier 6 claim to search for possible extensions of the Sapo and Mono A 200-metre baseline was picketed at an azimuth of 330° veins. from the northernmost exposure of the Sapo Vein. Four short crosslines were run 50 metres apart from the baseline, and

perpendicular to it. Soil samples were taken at 25 metre intervals along baselines and crosslines for each grid. Wherever possible, soil samples were taken from the red-brown "B" horizon, but talus fines were taken in areas of poor soil development.

VLF-EM and magnetometer surveys were carried out over the Galore and Sapo Grids: 40.675 and 0.75 line-kilometre surveys, respectively. Twenty crosslines were subsequently cut and rechained to allow an induced polarization survey to be carried out. Induced polarization and resistivity surveys, using a dipole-dipole array, were carried out on lines 35-43N east of the baseline and on lines 36-37N and 43-51N west of the baseline, totalling 16.10 line-kilometres. Procedure and results have been described by Visser (1991). Cut line 36+00N was soil sampled at this time because of chaining inaccuracies in the original flagged line.

Six trenches were blasted on the Sapo Vein and on the Galore Grid, in order to expose fresh material for sampling. These trenches were blasted, mucked, mapped and chip sampled. Six diamond drill holes, totalling 1054.9 metres (3461 feet) of BGM core, tested the Ptarmigan Zone perpendicular to its controlling structure. On the Galore Grid, four more BGM holes totalling 829.95 metres (2722.93 feet), were targeted at geological, geophysical, and soil geochemical anomalies. The holes were logged and sampled in their entirety.

Drill logs, analytical certificates, descriptions of rock samples taken in 1990 and Visser's (1991) geophysical report are appended to an assessment report by Harris (1991). This summary report has been largely abridged from the assessment report.

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



LEGEND

(to accompany Figures 4 and 11)

LITHOLOGIES

EOCENE

- 13 Undivided felsic stocks, plugs and dykes.
- 13B Biotite granite.
- 13E Plagioclase porphyritic diorite.

EARLY TO MIDDLE JURASSIC Galore Creek Intrusions

- 11 Undivided Galore Creek syenitic to monzonitic intrusives.
- 11A Syenite.
- 11C Biotite-hornblende quartz monzonite.

MIDDLE TO LATE TRIASSIC Hickman Batholith

- 9 Undivided dioritic to quartz monzonitic intrusive rocks.
- 9C Biotite monzonite to hornblende-biotite quartz monzonite.

UPPER TRIASSIC

Stuhini Group

- 8 Undivided Stuhini Group volcanics, volcaniclastics and sedimentary rocks.
- 8A Interbedded wackes, siltstone and argillites.
- 8D Augite porphyry flows.
- 8E Andesite <u>+</u> andesite crystal tuffs.
- 8H Lapilli tuffs, pyroclastic breccia and agglomerate.

MIDDLE TO UPPER TRIASSIC

7 Silty shales, argillites, chert and carbonaceous limestone.

PERMIAN

- 6 Limestone.
- 6F Tuffs.

MISSISSIPPIAN OR OLDER(?)

U Serpentinite.

SYMBOLS



~~~~ Fault (approximate)

____ Thrust fault (approximate): barbs on upper plate

 \checkmark Bedding with dip

- Diamond drill hole



Adapted from Harris (1991), Caulfield (1991) and Taylor (1990).

Equity Engineering Ltd.

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 with associated clastic sediments and carbonate lenses. These are capped by up to 700 metres of Mississippian limestone with a diverse fossil fauna. 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 (Unit 6), 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 rocks (Unit 7) are overlain by Upper Triassic Stuhini Group siliciclastic (Units 8A and 8B) and volcanic (Units 8D, 8E, 8G, 8H, 8I and 8J) 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 <u>+</u> gold structurally-controlled precious metal deposits, vein/shear deposits, skarns and breccia deposits (Figure 3). Porphyry copper deposits of this area include both the alkalic Galore Creek coppergold and calc-alkalic Schaft Creek copper-molybdenum deposits. Galore Creek, which is associated with syenitic stocks and dykes 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. Other porphyry copper occurrences in the Galore Creek area include the Copper Canyon, Ann/Su and Jack Wilson Creek deposits.

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 1) Lower Jurassic alkaline "Galore Creek" stocks; and are: 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 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. The Ptarmigan showing on the Trophy property and 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.

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 have localized magmatic-hydrothermal brecciation as well as providing a conduit for mineralizing fluids.

6.0 PROPERTY GEOLOGY

6.1 Lithology

The Trophy Gold property is underlain by strata and intrusions ranging in age from Mississippian or older, to Tertiary. The following is a capsule summary of the stratigraphy of the Trophy Gold property described from the oldest to the youngest. The property geology shown on Figure 4 is a compilation of geological mapping during the 1989 and 1990 programs, mapping by Continental Gold Corp. (Heinrich et al, 1989) and provincial government geologists (Logan et al, 1989).

Unit U -- Ultramafic rocks of unknown, but probable Mississippian or older, age

Serpentinite with numerous, one- to three-centimetre, rounded fragments and xenoliths exhibiting altered selvages outcrops on

both banks of Scotch Creek, above the Scotch Glacier, and on the east bank of Galore Creek.

Unit 6 - Stikine Assemblage: Permian Limestone and Biliciclastics

This unit, outcropping along the South Scud River, has been isoclinally folded and overturned, with the lower limb of this fold acting as the locus of an east-dipping thrust fault. The unit has been divided into six subunits. The lower member limestone (Subunit 6C) comprises 75 metres of dark grey micritic limestone, with interbedded argillite (Subunit 6D), and thinly bedded tuffs (Subunit 6F), overlain by 350 metres of pale grey to buff, thinto medium-bedded calcarenite. Interbedded within this calcarenite are yellowish brown to orange grey structureless cherts and cherty siltstones (Subunit 6E). The bioclastic component of the limestone is predominantly crinoidal with lesser shell and bryozoan This section of limestone commonly exhibits graded fragments. bedding typical of turbidity-current deposition.

The upper member limestone (**Subunit 6A**) overlies the calcarenite. It consists of 100 metres of massive, tan to light grey weathering bryozoan-rich limestone overlain by more than 300 metres of light grey, very thickly bedded bioclastic calcarenites. These calcarenites contain variable proportions of crinoid fragments, generally sparse bryezoan fragments and silicified brachiopods in a fine-grained light grey micritic matrix.

Bodies of coarse, angular block breccia (**Subunit 6B**) are locally present near the base of the calcarenite section. These breccias, thought to be peri-platformal talus deposits, are commonly matrix-supported and locally ferruginous.

Unit 7 -- Middle to Upper Triassic Sediments

This sedimentary sequence is divided into two members; a lower member (**Subunit 7A**) of silty shales, locally fossiliferous and graphitic argillites, and an upper member (**Subunit 7B**) of cherts, cherty siltstones, and rare carbonaceous limestones. These sediments conformably overlie the Permian limestone and define the margins of the two- to three-kilometre wide fault-bounded belt along the South Scud River. These sediments likely acted as the plane of decollement during the folding and thrust faulting of this package.

Unit 8 -- Upper Triassic Stuhini Group Volcanics and Sediments

The Stuhini Group comprises a variety of volcanic flows, tuffs, breccias, and associated sedimentary rocks. This group represents components of an emergent Upper Triassic island arc characterized by distal volcaniclastic and sedimentary turbidites. Field relationships suggest that the area now occupied by the Galore Creek porphyry copper deposit was the local volcanic edifice

(Allen et al., 1976). Based upon radiometric dates (Anderson, 1983) and fossil ages (Souther, 1972) the stratigraphy ranges in age from early Carnian to late Norian.

The volcanics are intermediate to mafic in nature, and exhibit pervasive propylitic alteration, locally displaying strong potassic, silicic, or listwanite alteration. The flows are dark green to black, massive, fine- to medium-grained and andesitic in composition with 15% to 40% plagioclase, up to 20% pyroxene, and up to 20% hornblende phenoorysts in a dense grsen chloritic matrix. They are divided into four subunits based upon mineralogy. Subunit comprises hornblende-feldspar-pyroxene-porphyritic andesite 8D and flow preccias with phenecrysts usually oriented flows Subunit 8E consists of hornblendesubparallel to each other. feldspar andesites and andesitic crystal tuffs, and also exhibits Dark green, aphanitic, vesicular trachytic texture. and amygdaloidal basalts and interbedded flow breccias are glassified as Subunit 8J. Subunit 8F is composed of microdiorites, which are intrusive varieties of Subunits 8D and 8E, with coarser-grained phenocrysts than their extrusive counterparts and no preferred orientation of their phenoorysts.

Subunit 8H comprises lapilli tuffs, pyroclastic breccias and agglomerates with subrounded to subangular fragments larger than 2 millimetres in a matrix of crystal to ash tuff. The clasts are commonly silicified and the similarity of clasts and matrix makes the recognition of the fragmental character difficult except where there has been preferential weathering on exposed surfaces. Subunit 8G is composed of well-laminated tuffs and tuffaceous sediments with fragments smaller than 2 millimetres, and are usually felsic in composition.

Subunit 8I comprises volcanic conglomerates, which consist of rounded volcanic clasts, showing a wide variation in composition, in a matrix of volcanic detritus which is clearly sedimentary in origin. Subunit 8B is a sedimentary conglomerate with volcanic, limestone and other sedimentary clasts in a sandy matrix. It is locally clast-supported, and may contain greywacke interbeds. Subunit 8A comprises generally dark green or maroon, thinly bedded wackes, siltstones, and argillites. The argillites may be carbonaceous and the wacke varies in composition from a greywacke to a quartz arenite.

Unit 9 -- Middle to Late Triassic Hickman Batholith

The Hickman Batholith is a composite body comprised of three I-type Plutons (Brown and Gunning, 1989a): the Middle(?) to Late Triassic Nightout and Hickman Plutons and the Middle Jurassic Yehiniko Pluton (Souther, 1971; Holbek, 1988). The older plutons are sub-volcanic intrusions, spatially and genetically associated with broadly coeval Stuhini Group volcanic strata. Most of the Trophy Gold property east of the South Scud River is underlain by the Hickman Pluton, although some smaller plugs are located on the west side of the South Scud River. In the vicinity of the Ptarmigan Zone, this pluton is bounded by a steeply dipping faulted contact with the Stuhini Group volcanics (Read, 1989, <u>in</u> Heinrich et al., 1989); elsewhere it displays intrusive contacts. According to Souther (1971), the pluton is crudely zoned, ranging in composition from pyroxene diorite in the core to biotite granodiorite near the margins. On the Trophy Gold property, it has been subdivided into three subunits: a biotite and hornblendepyroxene diorite to monzodiorite (**Subunit 9A**), a hornblendebiotite-pyroxene monzonite to quartz monzonite (**Subunit 9B**), which is less mafic than Subunit 9A, and a biotite monzonite to hornblende-biotite quartz monzonite (**Subunit 9c**).

Unit 11 -- Upper Triassic to Lower Jurassic Galore Creek Intrusions

The Galore Creek Complex consists of a series of syenitic intrusions intruding coeval Upper Triassic Stuhini Group volcanics. Outcropping in the southwest corner of the Trophy Gold property are numerous small dykes and plugs of syenitic composition, and the N110 syenite, a sill-like body located between Camp Creek and N110 Creek. **Subunit 11A**, varying in texture from medium-grained equigranular to porphyritic or megacrystic, is dominated by orthoclase phenocrysts in a grey or pink groundmass with various proportions of plagioclase, and biotite, which is commonly altered to chlorite. Strong epidote alteration within this subunit is common.

Subunit 11B is a medium- to coarse-grained orthoclase porphyritic monzonite with equal amounts of orthoclase and green, probably saussuritized, plagioclase. An outcrop of this subunit is located up the north fork of Friendly Creek.

Subunit 11C forms a large stock northwest of the Trench Lake area. This subunit is a medium- to coarse-grained biotitehornblende quartz monzonite to granodiorite. Although it is compositionally distinct, it has been included with the Galore Creek Intrusions because of its Early Jurassic age, dated at 195<u>+</u>6 million years by Logan and Koyanagi (1989).

Unit 13 -- Tertiary Plutonic Rocks

This unit consists of a series of probable Tertiary-aged intrusives. **Subunit 13E** comprises plagioclase-porphyritic dioritic dykes, with up to 60% plagioclase, and up to 20% hornblende, which is locally altered to chlorite and biotite. These dykes are associated with the magnetite-chalcopyrite skarns on the west side of the South Scud River, and are also found along Camp Creek.

A plug of medium-grained, equigranular quartz monzonite to

monzonite (Subunit 13A), with 15% biotite and lesser hornblende, is located immediately south of the Hummingbird Zone. This intrusive is also associated with rhyodacite and rhyolite dyking. A similar Eocene plug is believed to have been the driving force behind the formation of the Ptarmigan Breccia, as indicated by quartz-plagioclase porphyritic quartz monzonite fragments within the breccia and dykes of similar composition cutting the breccia. Subunit 13B comprises a muscovite-biotite granite phase of Subunit 13A. Subunit 13C consiste of quartz syenite to quartz monzonite stocks and dykes with less biotite than Subunit 13A.

Unit 14 -- Dykes and Sills

Numerous dykes and sills of varying composition are found throughout the Trophy Gold property. They cross-cut all units, and are relatively unaltered, suggesting a recent age of emplacement.

6.2 Structure

Regional geological investigations have suggested that two phases of deformation may be present in the Stikine Arch (Souther, 1972). The first one produced bedding-parallel foliation in pre-Permian strata. The second phase of deformation is described as having affected pre- and post-Permian strata and resulted in the formation of southwest-verging folds and thrust faults.

Southwest-verging folding and faulting near the margins of the Hickman Pluton involves both the marginal phases of the pluton and the Stuhini Group which it intrudes (Read, 1989, in Heinrich et al., 1989). This suggests that southwest-verging deformation can be no older than Late Triassic. According to Read (1989), on the west side of the South Scud River "...the Permian limestone, Middle Triassic argillite, Triassic volcanics and Early Jurassic(?) granodiorite [Hickman Pluton] are involved in an east-dipping thrust and reverse fault system. The stratified rocks, excluding the Triassic volcanics of unknown orientation, have a moderate eastward dip, but the rock units young westward [and are therefore overturned on a large scale]. The contact between rock units is mainly planar and faulted.". This thrust juxtaposed Stuhini Group on top of the Permian limestones and shales in what would otherwise be considered a normal stratigraphic sequence. In Copper Canyon, Early Jurassic Galore Creek syenites are in faulted contact with Middle Triassic sediments, indicating an age not older than Early Jurassic for this fault system. Other thrust faults have been recognized within Stuhini Group strata, and the whole package may be imbricated to an extent which is largely unrecognized.

Four fault sets have been recognized on the property. Northerly striking faults are vertical to steeply east-dipping and were active from Early Jurassic to Recent times and include a prominent north-south trending fault along the South Scud River. Northwest-striking faults are probably coeval with the north

striking faults, but locally predate them. Northwest-striking faults include the thrust faults previously noted, such as the Cone Mountain fault (Brown and Gunning, 1989a) and its extension along strike to the southeast through to Trench Lake. The Ptarmigan subvertical northwest striking feature, Fault, a is closely associated with the breccia-hosted mineralization located at the contact between the Stuhini Group and the Hickman Pluton. Northeast faults are steeply dipping and show sinistral movement. An example of this type of faulting is the Camp Creek fault located in the southwest corner of the property where it forms the northern boundary of the N110 syenite body. There are several subparallel creeks in this area which are likely controlled by this fault East-west faults are vertical or steeply dipping to the style. north and show normal movement with the north side down. They mostly postdate the north and northwest trending faults. An eastwest fault plane was mapped up the north fork of Friendly Creek, explaining why the continuation of the thrust fault could not be located to the north.

7.0 MINERALIZATION

A wide variety of mineralization types have been identified on the Trophy Gold property to date (Figure 4). These include breccia-hosted precious metal mineralization, precious and base metal mesothermal veins, porphyry-style mineralization, skarns, and shear-related listwanite alteration zones. The majority of mineral occurrences were produced by two intrusive-related mineralizing events, in the Middle Triassic to Lower Jurassic, and in the Eocene. The porphyry-style mineralization related to syenitic intrusions in the **Galore Grid** area is an example of the first mineralizing event, and the silver-zinc-gold mineralization of the **Ptarmigan Zone** is typical of the younger mineralizing event.

7.1 Breccia-hosted Mineralization

There are three significant mineralized breccia bodies found on the Trophy Gold property. The **Ptarmigan Zone** is localized within a magmato-hydrothermal breccia pipe; the **Eagle Zone** is hosted within a debris flow breccia; and the **Jay Showing** is a fault-related breccia. A fourth occurrence, the **Barney Showing** (Occurrence 26), is a less significant fault-related breccia which is located north of Trench Lake.

Ptarmigan Zone

The Ptarmigan Breccia (Figure 10) is a concentrically-zoned, pipe-like body of heterolithic and homolithic magmato-hydrothermal breccia at the contact between the Upper Triassic Hickman Pluton and Upper Triassic Stuhini Group volcanics. The northwesttrending, steeply east-dipping Ptarmigan Fault cuts through the Ptarmigan Breccia, marked by an envelope of intense sericiticsilicic alteration with associated sulphide mineralization. This alteration envelope, which has been termed the Ptarmigan Zone, centred upon and parallel to the Ptarmigan Fault, is approximately 220 metres long and up to 70 metres wide. Sulphide minerals include pyrite, sphalerite, galena, pyrrhotite, minor chalcopyrite and arsenopyrite which occur in stockwork veining and between Dominant gangue minerals are calcite, iron breccia fragments. carbonate, sericite and silica. Northeast-trending mineralized fractures are a conspicuous feature of the fault zone. These fractures are likely dilational features contemporaneous with the Ptarmigan Fault. Drilling in 1990 returned scattered intersections up to 2.0 metres wide assaying 3.19 g/tonne (0.093 oz/ton) gold and 56.6 g/tonne (1.65 oz/ton) silver.

Eagle Zone

The Eagle Zone, including the Quartz Breccia Sulphide (QBS) Zone and Bear Pass Breccia, is a mineralized debris flow. It displays weak hydrothermal alteration to an assemblage of quartz, sericite, iron carbonate, and possibly potassium feldspar with pyrite being the dominant sulphide present. Auriferous mineralization associated with the QBS Zone includes massive sulphide blocks and galena "shears" within large limestone clasts. The QBS Zone is elliptical in shape, being 250 metres long and 150 metres wide. Two diamond drill holes, TR88-9 and -11, scissored the breccia along a northwest-southeast orientation. Hole TR88-9, which was abandoned at 142.7 metres, did not intersect the breccia indicating the northwest boundary has a southeasterly dip. Two wide zones of low grade gold values were intersected in the upper half of hole TR88-11 including a one metre intersection of 3.53 g/tonne (0.102 oz/ton) gold located at the footwall of the "sedimentary breccia-conglomerate" (Heinrich et al, 1989).

The Bear Pass Breccia section of the Eagle Zone contains stockworks and narrow (3-7 centimetres) veins mineralized with galena, arsenopyrite, pyrite, pyrrhotite, sphalerite, tetrahedrite, and ruby silver in a gangue of quartz, calcium and iron carbonates. The 1988 sampling revealed that the highest gold and silver values are restricted to selected grab samples of the narrow veinlets containing the higher sulphide concentrations. More rigorous chip sampling of the zone later in the 1988 program returned much lower gold values ranging up to 1290 ppb gold over one metre sample intervals. The zone, as mapped, appears to be limited to the northeast by volcanic units and to the southwest by sediments. The Bear Pass Breccia structure was also drill-tested in 1988, intersecting several wider zones of low grade gold values similar to the surface trenching results. A single two metre intersection of 2.95 g/tonne (0.086 oz/ton) gold was encountered in hole TR88-10, associated with a massive pyrite fracture filling that occurs at this point in the hole.

Jay Showing: Occurrence 1

The Jay Showing consists of fault-related magnetite and chalcopyrite mineralization within the Hickman Batholith. The fault zone is characterized by a central zone of massive magnetite (up to 60%), chalcopyrite (5% to 20%) and minor pyrite with brecciated fragments of the Hickman Batholith. This grades laterally into a zone of clast-supported Hickman breccia cemented by magnetite and quartz. Peripheral to the fault zone, magnetite stringers locally penetrate the Hickman intrusive. The faults trend north-northwest, with moderate to steep east dips, and are brittle and discontinuous in nature. The mineralized fault zones never exceed 3.5 metres in width or 20 metres in strike length. Representative grab samples of these structures assayed up to 2.85 g/tonne (0.083 oz/ton) gold (32536) and 4.59% copper (32531), but the discontinuous nature of the mineralization and faulting limits its potential.

7.2 Porphyry-style Mineralization

pprphyry-style disseminated Several pccurrences of mineralization have been identified on the Trophy Gold property to date. In the southwest corner of the property, these showings (Occurrences 5, 14, 24, 27 and 28) are related to Galore Creek syenitic intrusions. Occurrence 20 is hosted by felsic dykes immediately west of Friendly Glacier, and Occurrence 12 is related to a feldspar porphyry stock and its associated dykes, located near the eastern border of the property. The more significant occurrences are described below.

Popeye Zone: Occurrence 24

This showing is found along Fly Creek, one of many Camp Creek tributaries in the southwest corner of the property (Figure 11). Mineralization exposed thus far extends for 65 metres, over an average trenched width of 2.8 metres, along an 042° trend. The Popeye Zone consists of mineralized Stuhini Group feldsparporphyritic andesite and Galore Creek syenite. The dominant sulphide mineralization consists of up to 15% disseminated pyrite, although a shear structure in the core of the zone also contains chalcopyrite, sphalerite, and galena with traces of covellite. Chip sampling across this shear structure, which trends 041°/76°W, produced a weighted average of 1.34 g/tonne (0.039 oz/ton) gold over 1.2 metres. The surrounding volcanics are strongly oxidized near the surface with abundant goethitic and jarositic boxworks. Chlorite, epidote, and potassium feldspar alteration are ubiquitous. Sulphide mineralization is weaker in the syenite, but gold values are significantly higher, assaying up to 12.8 g/tonne (0.372 oz/ton) gold in a representative grab sample (4501) of magnetite-and pyrite-rich sygnite at the north end of the zone. With the exception of the vein structure, silver and base metal values are not anomalous.

The Popeye Zone, which is mostly covered by overburden, remains open along strike to the northeast and southwest. The extent of the syenite, and of gold mineralization within the syenite, have not been fully determined. However, two small outcrops of similar syenite with 1-2% chalcopyrite, 1-2% magnetite and traces of pyrite with gold values up to 0.96 g/tonne (0.028 oz/ton) were found downstream along Fly Creek.

Woody Float Occurrences: Occurrence 28

This occurrence consists of two float samples found in the southern part of the Galore Grid. Sample 32285 was taken from subangular float in the next drainage north of Fly Creek, approximately 400 metres west of the Popeye Zone. It consisted of strongly oxidized, epidote and potassium feldspar altered Stuhini Group volcaniclastics with 7-10% pyrite, and assayed 1.75 g/tonne (0.051 oz/ton) gold, with low silver and base metal values. A sample of limonitic subcrop taken from a tributary of Fly Creek 600 metres northeast of the Popeye Zone assayed 4.32 g/tonne (0.126 oz/ton) gold with 1000 ppm copper.

N110 Showing: Occurrence 14

The N110 Showing consists of disseminated pyrite and chalcopyrite mineralization in Stuhini Group volcanics and the syenite body in the N110 canyon. The N110 syenite is a southeast dipping sill (Jeffery, 1965) and was previously explored for its copper potential in the mid 1960's. The Murray Showing, located west of N110 Creek, averaged 0.10% copper over 11.9 metres (Gale, 1964). Chip sampling of this showing in 1990 (32179) returned 5000 ppm copper and 85 ppb gold across 1.0 metres. The most significant mineralization in the N110 canyon is hosted within Stuhini Group feldspar-phyric agglomerate and augite-feldspar-phyric crystal tuff, with up to 10% pyrite and 2% chalcopyrite. The volcanics are altered to chlorite and epidote, with local potassium feldspar Surface exposures are commonly oxidized and display alteration. a boxwork texture. Quartz-epidote-hematite-sulphide veinlets are also found within the syenite and volcanics. The syenite, part of the Galore Creek Complex, is orthoclase-phyric with chlorite and epidote clots spotted within the groundmass. Diffuse malachite staining is found on the syenite in talus throughout the canyon. Sample 32263, a 1.0 metre chip sample of oxidized, potassium feldspar and epidote altered Stuhini Group volcanics mineralized with 4% pyrite assayed 1.27 g/tonne (0.037 oz/ton) gold with 300 The best copper grades (2420 ppm in sample 447127) ppm copper. appear to be found within the syenite.

7.3 Veins and Shear Zones

Numerous gold-bearing veins and shear zones have been identified on the Trophy Gold property (Occurrences 4, 6, 8, 9, 10, 11, 13, 18, 19, 21, 22 and 25). Occurrences 3, 7, 15, 16 and 17

are similar in style and mineralogy but with negligible gold grades. The veins are mesothermal in nature, contain base metal sulphides, and a few are associated with listwanite altered zones. With the exception of the Sapo and Mono Veins, none show potential for significant size, continuity and grade.

Sapo and Mono Veins: Occurrence 22

Three new veins were found west of the South Scud River on the Glacier 6 claim: the **Sapo Vein** and the two **Mono Veins**. The Sapo **Vein** is a quartz vein with 10% pyrite, and traces of arsenopyrite, sphalerite, and galena within Stuhini Group augite porphyritic volcanics, 25 metres west of a contact with the Hickman quartz monzonite. The vein is exposed for 22 metres along a strike of 150°/70°NE with a true width of 3.95 metres. Chip sampling across this exposure produced a weighted average of 1.71 g gold per tonne (0.050 oz/ton). It pinches, or is faulted to the south within 20 metres of the exposure. A small ridge is thought to mark the vein to the north for 20 metres. To test the northern extension of this vein, two trenches were blasted, mapped and sampled. The first trench, located 2.0 metres along strike and uphill from the discovery samples, showed the vein to be faulted into two segments, returning gold assays of 0.55 g/tonne (0.016 oz/ton) over a true width of 1.2 metres and 0.55 g/tonne (0.016 oz/ton) over 0.5 metres These veins are anomalous in lead, zinc and arsenic. true width. The second trench, 26 metres further uphill and along strike, failed to expose the veins, or any significant mineralization.

The Mono Showing, found 120 metres northeast of the Sapo Vein, consists of two quartz-muscovite veins with 15% to 20% pyrite and lesser sphalerite and chalcopyrite. The veins average 50 to 100 centimetres in width and are hosted within the Hickman guartz The southern vein is exposed for 35 metres at an monzonite. orientation of $110^{\circ}/90^{\circ}$ and the northern vein is exposed for 85 metres along a strike of 127°/90°. Both veins are quite regular in their width and orientation. They are covered by overburden to the west, and coalesce and pinch to the east. Chip sample 32672, across a true width of 75 centimetres from the southern vein, assayed 10.90 g/tonne (0.32 oz/ton) gold with 1.16% zinc. Chip sample 32671, taken across 125 centimetres from the northern vein, assayed 2.09 g/tonne (0.061 oz/ton) gold, 2.02% zinc, 73.0 ppm silver and 6200 ppm copper.

7.4 Skarns

Limestone-hosted sulphide-bearing exoskarns (Occurrences 2, 23 and the Hummingbird Zone) are found along the South Scud River, related to dykes marginal to the Hickman pluton and a Tertiary biotite quartz monzonite stock. These occurrences are characterized by small, irregular lenses of massive chalcopyritepyrite-pyrrhotite (for the Hummingbird Zone) or magnetitechalcopyrite-pyrite-sphalerite (for Occurrences 2 and 23). Gold values are generally less than 1000 ppb gold, even with up to 3.51% copper and 3.50% zinc for separate grab samples.

8.0 GEOCHEMISTRY

8.1 Stream Sediment Geochemistry

During the course of the 1990 season, 80 stream sediment samples were collected, consisting of 55 field-sieved stream sediment samples, 16 moss-mat samples and nine silt samples.

Several highly anomalous moss-mat samples, with up to 3440 ppb gold, were taken from Fly Creek and D.C. Gulch on the Galore Grid. This area hosts several significant porphyry-style showings, including the **Popeye** and **Woody Showings**, and also exhibits highly anomalous soil geochemistry.

Several stream sediment samples were taken from other creeks draining the west side of the Galore Grid, four of which were anomalous in gold with up to 250 ppb. Within this area, which also has anomalous soil geochemistry, diamond drill hole TR90-10 returned an intersection exceeding one g/tonne gold over several metres.

Three silt and moss-mat samples were taken from Flintstone Creek, which flows north from Trench Lake, were anomalous with up to 746 ppm zinc, 475 ppm arsenic and 2260 ppm barium. This creek marks the contact between a Jurassic monzonite stock and a wedge of Middle Triassic sediments. A sample of a fault breccia within these sediments assayed 2.19 g/tonne gold (0.064 oz/ton), and 152.57 g/tonne silver (4.45 oz/ton) with 1500 ppm zinc and 600 ppm arsenic.

The bulk of the field-sieved stream sediment samples collected in 1990 were from drainages in the South Scud River valley and the Scotch Glacier valley. Few of these field-sieved samples were anomalous in precious or base metals. The creek draining the **Ptarmigan Zone** is highly anomalous, with 1.03 g/tonne (0.030 oz/ton) gold, 22 ppm silver, 800 ppm arsenic, 550 ppm zinc, 340 ppm lead, and 190 ppm copper. The stream draining the copper-bearing **Occurrence 2** is anomalous in copper (340 ppm). Sample 90RL-05, from just north of **Occurrence 4**, a zinc-rich shear zone, contains 360 ppm zinc.

8.2 Soil Geochemistry

Two soil geochemical grids were established on the Trophy Gold property: the **Galore** and **Sapo Grids**. A total of 1846 samples were taken from the Galore Grid which was designed to test an area with favourable geology and reconnaissance soil geochemistry. Fortyfour samples were taken from the Sapo Grid to test for possible





upslope extensions of the Sapo and Mono Veins. Cumulative frequency plots were used to calculate background, anomalous and strongly anomalous levels, based on the median, median plus one standard deviation (84.4 percentile) and median plus two standard deviation (97.7 percentile) levels. Background and anomalous levels for silver are below the analytical detection limit. Anomalous levels for each element are summarized in Table 8.2.1.

TABLE 8.2.1 ANOMALOUS LEVELS FOR SOIL GEOCHEMISTRY

ELEMENT	BACKGROUND	ANOMALOUS	STRONGLY ANOMALOUS
Gold	19 ppb	60 ppb	190 ppb
Silver	n/a	n/a	2.3 ppm
Copper	60 ppm	125 ppm	380 ppm
Lead	19 ppm	31 ppm	78 ppm
Zinc	56 ppm	95 ppm	200 ppm
Arsenic	10.5 ppm	26 ppm	52 ppm

<u>Galore Grid</u>: The Galore Grid returned several anomalous gold or multi-element anomalies (Figure 5).

Anomaly A: This northeast-trending gold anomaly, with values up to 460 ppb, consists of five parallel northerly-trending anomalies between lines 41+00N and 51+00N. It lies west of the baseline and is up to 300 metres wide. Copper, lead, and zinc values are locally elevated within this anomaly, but correlation of these elements with gold is poor. This area is underlain by mafic volcaniclastics and a syenitic intrusion. Diamond drill hole TR90-10, which was designed to test this anomaly, intersected auriferous pyrite-bearing Stuhini Group volcaniclastics near surface.

Anomaly B: A broad copper-gold anomaly trends northeast between lines 33+00N and 40+00N east of the baseline. The gold anomalous zones are discontinuous but display a strong correlation with copper within this 200 metre wide zone. This anomaly parallels the Camp Creek drainage system and overlies the projected contact between the N110 syenite and Stuhini Group volcanics. Rock samples of pyrite- and chalcopyrite-mineralized syenite from within this anomaly returned values of up to 0.96 g/tonne gold (0.028 oz/ton, sample 28249) and 1000 ppm copper.

Anomaly C: Three parallel north-trending gold anomalies between lines 37+00N and 43+00N form this anomaly. Extending from 0+00E to 4+50E, it is a northern continuation of Anomaly B, but with lower copper values. However, lead and arsenic values are locally enriched in this area. Mafic volcaniclastics and flows cut by symitic dykes underlie this anomaly, which also contains the **Popeye Zone.** Auriferous Stuhini Group volcanics were cut in drill holes TR90-07 and -08, which tested chargeability highs within Anomaly C.

Anomaly D: A broad, irregular copper-gold anomaly has been defined between lines 34+00N and 43+00N from 5+00E to 9+50E. As in Anomaly B, gold enrichment is discontinuous, but correlative with copper enrichment. A zone of elevated lead values is locally coincident with this anomaly. This area is dominantly underlain by the N110 syenite, although the anomaly extends north of its contact with Stuhini Group flows. Chalcopyrite- and pyritemineralized syenite, including the Murray Showing, occur in this area, returning values up to 430 ppb gold and 5000 ppm copper.

Anomaly E: This anomaly is a broad, irregular, northeasttrending lead-zinc-arsenic anomaly that is roughly 400 metres wide and extends from 41+00N to 59+00N, centred about the baseline. Lead values show strong positive correlations with zinc and arsenic, but zinc and arsenic values do not correlate as well with each other. Anomalous gold values are spotty throughout this area. Underlying this area are sediments to the north, and lapilli tuffs and andesitic flows to the south. No mineralization has been found in place to explain this anomaly, except for a single sample of pyritic float which contained 20 ppb gold, 1600 ppm lead, 1500 ppm zinc, and 25 ppm arsenic.

The Galore Grid soil geochemistry appears to exhibit zoning characteristic of porphyry systems: elevated copper and gold values within and adjacent to the syenite, enriched gold values immediately surrounding the syenite and anomalous lead, zinc and arsenic values peripheral to the system.

Sapo Grid: The Sapo Grid (Figure 6) revealed strongly anomalous soil geochemistry, for all elements, with up to 200 ppb gold, 20 ppm silver, 7500 ppm copper, 881 ppm lead, 4000 ppm zinc, and 865 ppm arsenic. Gold values show a particularly strong positive correlation with arsenic. Chip samples from the Sapo Vein, discussed in section 7.3, are distinctly enriched in gold, lead, zinc and arsenic, while the Mono Veins contain more copper and less arsenic. The highest gold and arsenic soil values are located at 5+00N, 5+00E (the northernmost exposure of the Sapo Vein), along with anomalous silver, copper, lead and zinc values. Anomalous values continue 25 metres north (north=330°) indicating that the vein extends this far. The absence of soil anomalies further north reflects the absence of veining in trench SA-TR-90-02, located just uphill. The Mono Veins are exposed between 6+00E and 6+50E on line 5+50N, reflected by anomalous to highly anomalous gold, copper, zinc, and arsenic values. These anomalies extend northwesterly across the entire grid, with the grid's highest copper, zinc and silver values at 6+50N 6+00E, 75 metres uphill from the northernmost Mono Vein exposure and along their projected trend.

A third anomalous trend, located west of the baseline,

consists of anomalous to highly anomalous gold, arsenic, zinc and copper values. This northwesterly-trending anomaly is geochemically similar to the Sapo Vein and could indicate a faulted continuation of it.

9.0 GEOPHYSICS

Magnetometer and VLF-EM surveys were conducted over the Galore (Figure 7) and Sapo (Figure 9) Grids by SJ Geophysics Ltd.. An induced polarization and resistivity survey was conducted over selected areas of the Galore Grid by Quest Canada Exploration Services (Figure 8). Both surveys were subsequently described and interpreted by Visser (1991).

9.1 Galore Grid: Magnetometer Survey

The magnetometer survey on the Galore Grid identified several areas with anomalous magnetic field signatures. The M1 anomaly consists of several strong magnetic highs separated by zones of lower magnetic response. These magnetic field highs are related to the underlying N110 syenite, which commonly contains as much as 3% magnetite in hand specimens. A northeast trending magnetic low follows Camp Creek, which is underlain by less magnetic Stuhini Group mafic volcanics. West of this relative magnetic low feature, a similarly trending magnetic high was delineated. This magnetic high may represent another syenitic intrusion that is sub-parallel to the N110 syenite, and may be similar to the syenite exposed at the Popeye Zone.

A magnetic low feature, anomaly M2, closely follows D.C. Gulch. This area is also marked by a chargeability high and Visser (1990) suggests that this feature may represent magnetite destruction along a shear zone.

The M3 anomaly marks an increase in magnetic relief that reflects a lithologic contact between Stuhini Group sediments to the north and Stuhini Group volcanics to the south. A magnetic low, anomaly M4, was defined by the survey west of the baseline and north of 49+00 N. This area, underlain by mafic volcanics, has limited outcrop exposure, and is coincident with a VLF-EM conductor axis of moderate strength. Anomaly M5 is a contact between an area of uniform magnetic response to the west and lower, more variable, responses to the east.

9.2 Galore Grid: VLF-EM Survey

Interpretation of the VLF-EM survey was hampered by noise in the data. For the most part, conductor axes delineated by this survey could not be related to magnetic features or geology.

Anomaly VS1 consists of a weak to moderate strength conductor



axis that has been separated into three segments by possible cross structures. No obvious structures were noted during mapping to explain this anomaly. Anomaly VH1 is the strongest VLF-EM anomaly in the data set and correlates well with the western edge of the M1 magnetic field anomaly. Visser (1991) suggests that this conductor axis represents the faulted contact of a syenitic intrusive.

Anomaly VS2 is a northwest trending anomaly that truncates the M1 magnetic field anomaly and the VH1 conductor axis, and is postulated to represent a fault structure. It crosses the contact between the volcanics and the intrusive, but there is no field evidence of a fault with this orientation in this area. Anomaly VS3 is parallel to the northern extension of the M5 magnetic field anomaly. It appears to represent a lithologic contact between carbonate-altered lapilli tuffs and a mixed package of sediments, mafic flows and volcaniclastics.

Anomaly VH3 is located in an area of limited outcrop that is underlain by Stuhini Group sediments. There are no discernible features exposed on surface to explain these conductor axes. Conductor axes VH2 are related to a magnetic low, anomaly M4, but no field evidence has been noted to account for these geophysical signatures.

9.3 Galore Grid: Induced Polarization Survey

The induced polarization survey was carried out over sections of the Galore Grid with anomalous gold and/or copper soil geochemistry (Figure 8). There appear to be three distinct chargeability backgrounds that are likely due to varying sulphide percentages. The I.P. responses do not appear to be lithologically dependent as these responses cross lithologic contacts and similar rock units have different responses. High chargeabilities are generally coincident with resistivity lows, but conversely, resistivity lows do not always indicate a chargeability high.

A strong chargeability high was defined between lines 35+00N and 37+00N, east of the baseline that follows the Camp Creek drainage system. The anomaly, which is underlain by pyritic mafic volcanics between the N110 syenite and another sub-parallel syenitic intrusion, is marked by anomalous soil and rock geochemistry and a resistivity contact. Drill hole TR90-09, drilled beneath the anomaly, intersected weak gold mineralization below a zone of high sulphide content. This chargeability high extends into the syenite and a resistivity low within the syenite closely corresponds with a magnetic field low. This anomaly may extend north to line 39+00N, but missing data due to a precipitous canyon hinders interpretation. Another strong chargeability anomaly, accompanied by higher resistivity, was delineated west of the baseline on lines 36+00N and 37+00N. This anomaly is also marked by anomalous rock, soil, and stream sediment geochemistry,



and a magnetic low feature.

Lines 39+00N to 43+00N are marked by a high chargeability background, especially between lines 39+00N and 41+00N. This area, associated with low resistivity and a broad gold soil anomaly, is underlain by mafic volcanics and volcaniclastics with 5%-7% pyrite. The high sulphide content of these volcanics likely accounts for the high background chargeability. A shallow chargeability high on line 40+00N at 3+50E correlates well with the northern extension of the Popeye Zone.

A lower chargeability background was defined west of the baseline between lines 42+00N and 51+00N, reflecting a lower total sulphide content in the underlying mafic volcanics. A series of resistivity contacts extending from line 43+00N to line 49+00N parallel a gold soil geochemistry anomaly in this area. Weak to moderate chargeability highs are associated with the resistivity Drill hole TR90-10 tested these collective features, contacts. auriferous, intersecting an near-surface zone of mafic volcaniclastics with 1-3% total sulphides. This intersection correlates well with a weak, shallow chargeability high.

9.4 Sapo Grid Surveys

Three lines were surveyed by magnetometer and VLF-EM over the Sapo Grid to locate the northern extension of the Sapo and Mono Veins (Figure 9). The survey several northwesterly-trending magnetic lows and VLF-EM conductors. None of these features correspond directly to the Sapo or Mono Veins, although they parallel their strike prientation.

9.5 Airborne Magnetic, Electromagnetic and VLF Survey

During the winter of 1989 and spring of 1990, Aerodat Ltd. flew a helicopter-borne geophysical survey over the Trophy Gold property to outline areas of possible near surface disseminated or massive sulphide mineralization and aid in geological mapping. The magnetic field survey was successful in delineating areas underlain by intrusive bodies, such as the Hickman Batholith, Galore Creek intrusives, and various other intrusive bodies. Prominent lineaments in regions of high magnetic field correlate well with faults and contacts.

A narrow, distinct, low resistivity feature winds along the east and west banks of the South Scud River. This corresponds to a belt of Permian limestone, Middle Triassic sediments and Stuhini Group volcanics and sediments. These Middle Triassic sediments, consisting of shales, argillites, and siltstones, are commonly graphitic which explains this low resistivity feature. Also, in most cases, low resistivity zones parallel magnetic anomalies and trends.



The electromagnetic data outlined numerous conductors of varying strength. Two weak conductors were noted on the east bank of Galore Creek north of the grid area. This area was sampled in 1989 and disseminated pyrite and chalcopyrite mineralization was noted within epidote and chlorite altered mafic volcanics. Numerous strong conductors are related to the Middle Triassic sediments which are commonly graphitic. Strong conductors are also associated with the mineralization in the vicinity of Trench Lake and the Sapo and Mono Veins, the ultramafic body along the South Scud River, and the faulting, mineralization and Middle Triassic sediments surrounding the Hummingbird skarn.

10.0 DIAMOND DRILLING

10.1 Ptarmigan Zone Drilling

During July and August of 1990, the Ptarmigan Zone structure was the target of six diamond drill holes, totalling 1054.85 metres of BGM core. The holes were drilled on five sections, 50 to 75 metres apart and perpendicular to the Ptarmigan Fault, to test the strike length, grade and continuity of the mineralization (Figure Table 10.1.1 summarizes the drill hole 10). locations, orientations, and lengths. Table 10.1.2 summarizes intersections exceeding 1.70 g/tonne gold (0.050 oz/ton), or 34.3 g/tonne silver (1.00 oz/ton) and with a minimum core length of one metre.

TABLE 10.1.1 1990 PTARMIGAN ZONE DIAMOND DRILL HOLE DATA

Hole	Grid Location		Azimuth	Dip	Length
Number	North	East/West	(degrees)	(degrees)	(metres)
TR90-01	9+60	0+50 W	240	-45	191.71
TR90-02	8+84	0+45 W	240	-45	167.63
TR90-03	8+28	0+50 W	240	-45	89.00
TR90-04	7+76	0+30 W	240	-45	181.65
TR90-06	8+30	0+10 E	240	-45	252.67

TABLE 10.1.21990 PTARMIGAN ZONE SIGNIFICANT DRILL INTERSECTIONS

Hole	Depth	Length	Au	Ag	Cu	Pb	Zn
Number	(metres)	(metres)	(g/t)	<u>(q/t)</u>	(%)	(%)	(%)
TR90-01	1.52 - 2.80	1.28	0.89	45.9	0.07	0.28	0.15
	30.95 - 31.95	1.00	8.67	21.6	0.04	0.01	0.26
	34.0 - 36.2	2.20	0.72	35.6	0.03	0.11	0.60
	44.5 - 45.5	1.00	2.47	39.8	0.07	0.01	0.96
	104.7 - 106.2	1.50	2.02	12.3	0.01	0.01	0.24
TR90-03	20.1 - 21.1	1.00	0.10	65.5	0.02	0.20	0.87
	82.75 - 84.35	1.60	1.68	96.7	0.05	0.20	0.66
TR90-04	33.12 - 34.2	1.08	0.03	41.1	0.04	0.09	0.12
	40.6 - 41.6	1.00	<0.03	35.0	0.03	0.22	0.43



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HOIE	Depth	Length	Au	Ag	Cu	qq	Zn
<u>Number</u>	<u>(metres)</u>	(metres)	<u>(q/t)</u>	<u>(g/t)</u>	(%)	(%)	(%)
TR90-04	50.0 - 51.0	1.00	3.22	194.7	0.05	0.79	0.71
	74.0 - 75.0	1.00	0.58	43.9	0.03	0.24	0.18
	94.7 - 96.7	2.00	3.19	56.6	0.03	0.29	0.23
	104.0 - 107.0	3.00	2.30	33.3	0.04	0.23	0.17
	109.0 - 110.0	1.00	0.45	60.7	0.05	1.10	0.20
	122.6 - 123.9	1.30	0.27	36.7	0.07	0.18	0.21
	126.25 - 128.25	2.00	0.51	95.7	0.01	0.75	0.35
	140.6 - 143.33	2.73	0.41	41.1	0.02	0.32	0.35
	145.55 - 146.55	1.00	0.10	34.3	0.09	0.19	1.07
	177.3 - 178.5	1.20	0.21	36.3	0.11	0.06	0.86
TR90-05	44.7 - 46.2	1.50	1.75	3.09	0.01	<0.01	0.03
	57.8 - 58.9	1.20	3.94	3.09	0.02	0.01	0.01
	121.75 - 123.0	1.25	0.17	44.6	0.02	0.12	0.03
	130.5 - 132.0	1.50	0.41	44.6	0.02	0.12	0.03
TR90-06	59.3 - 60.65	1.35	0.41	37.7	0.08	0.07	0.05
	88.1 - 89.5	1.40	9.94	37.7	0.03	0.10	0.29
	216.9 - 218.4	1.50	0.62	58.6	0.02	0.03	0.01

TABLE 10.1.2 (continued) 1990 PTARMIGAN ZONE SIGNIFICANT DRILL INTERSECTIONS

Although favourable sericitic alteration is fairly continuous between sections, no correlation between drill holes can be made for mineralized intervals, all of which are less than 3.0 metres in width. This suggests that northeast-trending dilational structures exert strong control on mineralization. The Ptarmigan Zone remains open to the south underneath the Ptarmigan Glacier, but its northern extent was delimited by TR90-05.

10.2 Galore Grid Drilling

Four diamond drill holes, totalling 829.95 metres of BGM core were drilled on the Galore Grid during the 1990 field season (Figure 11). They were targeted at areas of favourable geology or surface showings coincident with soil geochemical anomalies and geophysical anomalies. Table 10.2.1 summarizes drill hole locations, orientations, and lengths.

TABLE 10.2.11990 GALORE GRID DIAMOND DRILL HOLE DATA

Hole	Grid Lo	cation	Azimuth	Dip	Length
Number	North	East/West	(degrees)	(degrees)	(metres)
TR90-07	40+46	2+63 E	130	-45	181.96
TR90-08	40+91	2+17 E	270	-45	255.11
TR90-09	37+08	3+16 E	310	-45	147.46
TR90-10	45+91	4+29 W	090	-45	200.25

Diamond drill hole TR90-07 was designed to test the depth



extension of the **Popeye Zone.** This area is marked by a gold-copper soil anomaly, a broad chargeability high, and a magnetic field high. The drill hole intersected Stuhini Group volcaniclastics and flows with weak, pervasive chlorite alteration. All significant intersections in drill hole TR90-07 are associated with moderate to intense epidote and potassium feldspar alteration and 3% to 9% pyrite. This hole did not intersect any of the syenite that is present on surface at the Popeye Zone. This suggests that the syenite, which shows the best dold mineralization on surface, is an east-dipping body and the shear-hosted veining may parallel this intrusive body. No obvious fault structures were intersected in the hole to suggest that the syenite was displaced.

	TABLE 10.2	<u>. 2</u>		
SIGNIFICANT	INTERSECTIONS:	DRILL	HOLE	TR90-07

Depth	Length	Au	Ag	Ou	Pb	Zn
(metres)	(metres)	(g/t)	(g/t)	(maa)	(ppm)	(ppm)
21.2 - 27.2	6.0	0.45	<1.7	104	10	61
63.5 - 68.0	4.5	0.69	<1.7	124	<1	16
95.0 - 105.6	10.6	0.45	<1.7	96	<1	24
113.1 - 117.6	4.5	0.45	<1.7	114	<1	24
135.6 - 138.6	3.0	0.51	<1.7	<100	200	66

Drill hole TR90-08, located 65 metres northwest of drill hole TR90-07, was drilled to test a gold soil geochemical anomaly in an area of limited outcrop. Geophysical surveys in this area indicate a magnetic field high, a moderate, shallow chargeability high and resistivity low, and a strong VLF conductor axis. Trench GC-TR-90-04, located on this drill section, exposed mineralized augitephyric andesite with 6% pyrite and gold assays up to 0.55 g/tonne (0.016 oz/ton). This drill hole intersected Stuhini Group lapilli tuffs and applomerates with varying degrees of potassium feldspar and epidote alteration. These volcaniclastics contain disseminated and blebby pyrite in concentrations of 3% to 9% in the upper 94 metres of the hole and 1% to 3% below this depth. Locally, there are short intervals, generally less than one metre in length, of brecciated agglomerate containing silicified clasts in a calcareous matrix. These zones contain up to 9% pyrite and traces of chalcopyrite, but are not anomalous in base or precious metals.

Weakly anomalous gold intersections are dominantly found in the upper part of the hole where sulphide percentages are greatest. These intersections are most often associated with moderate to intense epidote and potassium feldspar alteration and containing 1% to 5% disseminated and blebby pyrite.

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Depth	Length	Au	Ag	Cu	Pb	Zn
(metres)	(metres) <u>(g/t)</u>	<u>(g/t)</u>	(mqq)	(mqq)	(ppm)
30.2 - 34.7	4.5	0.41	<1.7	62	12	40
43.7 - 45.2	1.5	0.45	<1.7	190	7	43
48.2 - 52.7	4.5	0.38	<1.7	225	36	90
60.2 - 61.7	1.5	0.55	<1.7	480	17	41
98.3 - 99.8	1.5	0.72	2.1	300	13	58
105.8 - 107.3	1.5	0.34	2.1	4	14	57
147.8 - 149.3	1.5	0.48	<1.7	4	8	34
179.1 - 180.6	1.5	0.51	2.4	<1	35	36

TABLE 10.2.3 SIGNIFICANT INTERSECTIONS: DRILL HOLE TR90-08

Diamond drill hole TR90-09 was targeted at a syenite dyke that outcrops along Fly Creek. A strong, narrow gold-copper soil geochemistry anomaly, and a magnetic high, follows the trend of this The induced polarization survey delineated a dvke. chargeability high in this area. In the upper portion of the hole, Stuhini Group lapilli tuff is strongly altered to epidote and local patches of strong potassium feldspar alteration. Sulphide mineralization with this alteration includes 1% to 6% disseminated pyrite and traces of chalcopyrite. Lower in the hole, the lapilli tuff displays moderate to strong chlorite alteration with moderate epidote and minor, patchy potassium feldspar alteration. Sulphide content decreases to 1% to 3% disseminated pyrite with no chalcopyrite. This drill hole was abandoned before reaching the syenite dyke due to caving in the hole.

A 13.0 metre interval of lapilli tuff, significantly enriched in gold and copper, was encountered at a depth of 49 metres. This zone is intensely fractured and contains 1% to 3% pyrite with traces of chalcopyrite and malachite and is marked by moderate to intense epidote and weak potassium feldspar alteration. This auriferous zone lies directly below a zone of moderately to intensely potassium feldspar altered lapilli tuff with 3% to 6% pyrite and traces of chalcopyrite.

TABLE 10.2.4SIGNIFICANT INTERSECTIONS:DRILL HOLE TR90-09

Depth	Length	Au	Ag	Cu	Pb	Zn
(metres)	(metres)	(q/t)	<u>(q/t)</u>	(mqq)	(ppm)	(ppm)
49.7 - 62.7	13.0	0.45	<1.7	1144	8	35
86.9 - 87.4	0.5	0.31	<1.7	1200	7	27

A large gold soil anomaly on the west side of the Galore Grid was the target of drill hole TR90-10. This area is marked by an elongate, weak chargeability high and resistivity low that extends continuously for 600 metres and is coincident with the soil anomaly. This area is underlain by Stuhini Group volcaniclastics, and small outcrops and subcrops of Galore Creek orthoclase porphyritic syenite have been mapped 50 metres to the south of the The lapilli tuffs and agglomerates intersected in hole collar. TR90-10 are slightly to moderately epidote and potassium feldspar The clasts in the agglomerates are up to 20 centimetres altered. in diameter, and are comprised of syenitic and volcanic fragments are commonly well preserved due to the less intense that alteration. This texture is similar to the host of the Central Zone of the Galore Creek deposit. The large clast size and the presence of syenitic fragments in the volcaniclastics suggest a proximal volcanic centre. In areas of intense epidote and potassium feldspar alteration, the pyrite content increases to as much as 10%, occurring as blebby aggregates. The lower 90 metres of the hole is dominated by a felsic dyke that locally contains feldspar phenocrysts, clots of chlorite, disseminated specular hematite and only traces of pyrite. This dyke outcrops 400 metres to the east of the collar.

The mineralized zone is hosted in lapilli tuffs, with 1% to 3% pyrite and traces of chalcopyrite and malachite, that are moderately epidote and potassium feldspar altered. This auriferous horizon, which is found in the upper 65 metres of the hole, is only weakly enriched in copper, and silver and other base metal values are not anomalous.

TABLE 10.2.5 SIGNIFICANT INTERSECTIONS: DRILL HOLE TR90-10

Depth	Length	Au	Ag	Cu	Pb	Zn
(metres)	(metres)	(g/t)	(g/t)	(ppm)	(ppm)	(ppm)
12.1 - 61.6	49.5	0.94	<1.7	176	4	31
including:						
33.1 - 49.6	16.5	1.71	<1.7	301	3	30

A diamond drill hole collar and stacked drill core from hole BIK 74-5 is located at 44+00N 7+00W. The hole was drilled vertically for 179.5 metres in 1974 by the BIK syndicate along the Galore Creek access road 330 metres southwest of the collar for TR90-10. The BQ core was in excellent shape and had not been sampled. This drill core was logged and selectively sampled during the 1990 field season. The core consists of Stuhini Group volcaniclastics and tuffs with varying degrees of potassium feldspar, epidote, and propylitic alteration. Disseminated pyrite in concentrations of up to 7% is found throughout the volcanics. Garnets occur within the volcaniclastics and tuffs.

11.0 DISCUSSION AND CONCLUSIONS

The focus of the 1990 field program was to evaluate previously discovered occurrences and airborne geophysical anomalies, test the grade, continuity and strike length of the Ptarmigan Zone, and investigate the porphyry copper-gold potential in the southwest corner of the Trophy Gold property. On the Trophy Gold property, there are numerous occurrences of porphyry-style mineralization, breccia-hosted mineralization, auriferous and/or argentiferous base metal veins, and skarns. All known occurrences were thoroughly evaluated this year and, with few exceptions, are limited by grade, continuity or size and require no follow-up work.

The Ptarmigan Zone was drilled across the northwest trending Ptarmigan Fault structure that controls its sericitic alteration Drilling confirmed that the best mineralization is envelope. associated with silicification containing base metal sulphides within strongly sericitized heterolithic breccia. The sericitization envelope is limited to the north, but remains open to the south beneath the Ptarmigan Glacier. Northeast trending dilational features related to the Ptarmigan Fault appear to exert strong structural control over mineralization and, consequently, mineralized zones are limited in extent. The Ptarmigan Zone has been well tested and does not demonstrate sufficient grade, extent and continuity to warrant further exploration.

Two new discoveries have not been fully evaluated: the Sapo and Mono Veins, which have returned significant precious metal values. Although they are limited in surface exposure, soil geochemistry indicates that these veins continue further along strike.

The Galore Grid area returned highly anomalous gold<u>+</u>copper soil geochemistry and ground geophysics over an area of 1800 x 1600 metres. This appears largely related to porphyry-style mineralization associated with symmitic sills and dykes intruding andesitic volcanics.

The Popeye Zone is a northeast-trending zone of mineralized syenite and andesitic volcanic rocks on the Galore Grid. An epidote and potassium feldspar altered syenitic intrusive, which is thought to be a southeast-dipping body, has assayed up to 12.75 An auriferous (1.34 g/tonne, g/tonne (0.372 ounces/ton) gold. 0.039 oz/ton) 1.2 metre wide shear zone with guartz-calcibe veining containing base metal sulphides occurs within this zone. The mineralogy and structural style of this zone suggests that it may be later feature not directly related to the porphyry а mineralization. The Popeye Zone is located near the northern edge of a chargeability high, a VLF-EM conductor and magnetic field high all within a gold soil geochemical anomaly.

Immediately south of the Popeye Zone is another northeast trending sygnific intrusion that is sub-parallel to the N110 sygnife. This area is marked by a copper-gold soil geochemical anomaly coincident with sub-parallel magnetic highs and lows and a chargeability contact. This zone of anomalous soil geochemistry and ground geophysics, with over 750 metres of strike length, extends north to the Popeye Zone. Drill hole TR90-09 tested a wedge of Stuhini Group volcanics and chargeability high between this syenite body and the N110 syenite. The drill hole intersected 13.0 metres grading 0.45 g/tonne (0.013 oz/ton) and 1144 ppm copper.

Drill hole TR90-10, collared on the west side of the Galore Grid, intersected 49.5 metres of volcaniclastics grading 0.94 g/tonne (0.027 oz/ton) gold. This intersection correlates well with an 800 metre long gold soil geochemical anomaly and a 600 metre long chargeability high and resistivity contact zone.

In 1988, 50.5% of gold reserves in British Columbia were hosted in porphyry deposits (Schroeter et al., 1989). Alkalic such as Galore Creek and Copper Canyon, porphyries, are significantly enriched in gold in comparison to calc-alkaline The Galore Grid area of the Trophy Gold property has porphyries. several characteristics in common with these adjacent deposits. Several syenitic intrusions intrude a coeval volcanic pile in the A volcanic breccia body with syenite clasts, similar grid area. to that which hosts Galore Creek's Central Zone three kilometres to the southwest, has been noted in drill core. The strongest mineralization is associated with these syenitic intrusions, either in the volcanics or within the intrusions themselves. On the Trophy Gold property, mottled epidote and potassium feldspar alteration has been described, commonly in proximity to, or within syenitic dykes or sills, and epidote endoskarns have been observed on the Galore Creek property (Beane and Titley, 1981). At Galore Creek and Copper Canyon, the best copper and gold grades occur with hydrothermal biotite and garnet which developed along with potassium feldspar. Hydrothermal biotite has not been observed in the Galore Grid area, although garnet occurs in BIK hole 74-5. Drilling to date may have only tested the periphery of the alteration system, and further drilling may encounter the favourable biotite alteration and its associated copper-gold mineralization.

12.0 RECOMMENDATIONS

12.1 Program

Phase I:

The main purpose of the Phase I program should be to define the gold-copper porphyry potential of the area extending from the Galore Grid east to Copper Canyon. This will include extension of the induced polarization survey on the Galore Grid, reconnaissance soil geochemistry southeast of the Grid and more detailed examination of the area between the N110 and Copper Canyon syenite bodies. In addition, the Mono Vein and its associated soil geochemical anomaly should be trenched along strike, and limited geological mapping and prospecting should be conducted on selected areas not thoroughly examined to date.

Further geological mapping and prospecting should be carried out over the Saddle 6-8 and Catto 1 claims to examine the favourable syenite-volcanic geological environment in the southwest corner of the Trophy Gold property. Contour soil geochemical lines should be run at the 1300, 1400, 1500, 1600 and 1700 metre elevations between the N110 and Copper Canyon syenite bodies. The length of these lines will be approximately 2.5 kilometres with sample stations every 25 metres. The area south of the East Fork Glacier should be investigated although the claim coverage is limited; particular attention should be paid the southwest corner of the Saddle 7 claim, which lies close to the Saddls and South 110 deposits of Stikine Copper Limited. Due to steep terrain, climbing geologists will be necessary for thorough evaluation.

The induced polarization survey on the Galore Grid should be expanded over three areas. The extent of the chargeability anomaly on line 43+00N east of the baseline should be determined by surveying 700 metres east on lines 44+00N and 45+00N. For completeness, 800 metre west lines should be completed between lines 37+00N and 42+00N to determine the extent of the I.P. anomalies on each. Finally, the large lead-zinc-arsenic soil geochemical anomaly from line 53+00N to 59+00N should be surveyed from the baseline to 6+00E. All of the above lines will need to be cut prior to commencement of the geophysical survey.

Phase II:

A second phase of exploration consisting of up to 1,125 metres of reconnaissance diamond drilling may be warranted to test geophysical targets on the Galore Grid developed during Phase I. Advancement to this phase will be contingent upon favourable results from Phase I.

Phase III:

Further diamond drilling, if warranted by the results of the Phase II program, should be directed at providing data between the initial drill holes on the Galore Grid and testing second-priority targets. Advancement to the third phase will be contingent upon favourable results from the second phase.

12.2 Budget

Phase I:

WAGES

Project Geologist 36 days @ \$400/day	\$	14,400
Prospector	•	
34 days @ \$300/day		10,200

Samplers	15 200		
2 @ 34 days @ \$225/day		\$ 39	,900
RENTALS		·	,
Rock Drill	•		
7 days @ \$60/day Hand-hald Radio Rontal	Ş 420		
4 @ 32 days @ \$5/day	640		
		1	,060
SUBCONTRACTS			
Climbing Geologists	\$ 8 000		
Linecutting	\$ 8,000		
18 days @ \$550/day	9,900		
Induced Polarization			
12 days @ \$1200/day	14,400		
IP Report	5,000	37	. 300
		5,	,
CHEMICAL ANALYSES			
Rock Geochemical (Au+33 element)	¢ 4 210		
200 @ \$21.05 Soil Geochemical (Au+33 element)	\$ 4,210		
525 @ \$18.00	9,450		
		13	,660
MATERIALS AND SUPPLIES	A BCA		
Geochemical Supplies Gasoline	\$ 750 400		
Explosives	700		
	<u></u>	1	,850
SUPPORT			
Accommodation: Galore Cr. Camp	\$ 25 500		
Communications	<i>3 23,300</i> 400		
Helicopter	• • •		
40 hours @ \$750/hr	30,000		
Fixed Wing Aircraft	4,000		
Expediting	1 000		
Printing	500		
Travel Expenses	8,700		
		\$ 70	,850
		20	000
REPORT PREPARATION		<u>\$ 184</u>	,620
		, <i></i>	
MANAGEMENT FEE @ 15%		27	<u>,693</u>
		Ş 212	,313
CONTINGENCY @ 10%		21	.231
		\$ 233	,544

	36
GST @ 7%	<u> 16,348</u> \$ 249,892
The recommended Phase I program will cost \$250,000 to implement.	approximately
<u>Phase II</u> (contingent on Phase I results):	
DIAMOND DRILLING 1,125 Metres (NQ core) @ \$250/metre (all inclusive)	\$ 281,250
MANAGEMENT FEE @ 15%	<u>42,188</u> \$ 323,438
G.S.T @ 7%	<u>22,641</u> \$ 346,079
The recommended Phase II program will cost \$350,000 to implement.	approximately
Phase III (contingent on Phase II results)	:
DIAMOND DRILLING 2,925 Metres (NQ core) @ \$250/metre (all inclusive)	\$ 731,250
MANAGEMENT FEE @ 15%	<u> 109,688</u> \$ 840,938
G.S.T @ 7%	<u>58,866</u> \$ 899,804
Total Phases I, II and III	<u>\$1,495,775</u>
Say	<u>\$1,500,000</u>
Respectfully submitted	

Henry J. Awnack, P. Engl. AWMACK Vancouver, British Coluffibia March, 1991 APPENDIX A

BIBLIOGRAPHY

BIBLIOGRAPHY

Alaskan Geographic Society (1979): The Stikine River; V. 6, 94 pp.

Alldrick, D.J., Gabites, J.E. and Godwin, C.I. (1987): Lead Isotope Data from the Stewart Mining Camp, <u>in</u> Geological Fieldwork 1986; British Columbia Ministry of Energy, Mines, and Petroleum Resources, Geological Survey Branch, Paper 1987-1, pp. 93-102.

Allen, D.G. (1971): The Origin of Sheet Fractures in the Galore Creek Deposit, British Columbia; Can. Jour. Earth Sci., V.8., pp. 704-711.

Allen, D.G., A. Panteleyev and A.T. Armstrong (1976): Galore Creek, <u>in</u> CIM Special Volume 15; pp. 402-414.

Anderson, R.G. (1983): The Geology of the Hotailuh Batholith and Surrounding Volcanic and Sedimentary rocks, North-central British Columbia; Unpublished Ph.D. thesis, Carleton University, Ottawa, Ontario, Canada.

Anderson, R.G. (1989): A Stratigraphic, Plutonic, and Structural Framework for the Iskut River map area, Northwestern British Columbia, <u>in</u> Current Research, Part E; Geol. Surv. Can. Paper 89-1E, pp. 145-154.

Barr, D.A. (1966): The Galore Creek Copper Deposits; Canadian Institute of Mining and Metallurgy, Bulletin, V.59, pp. 841-853.

Beane, R.E. and Titley, S.R. (1981): Porphyry Copper Deposits <u>in</u> Economic Geology Seventy-Fifth Anniversary Volume 1905-1980 edited by B.J. Skinner; pp. 214-269.

Brown, D.A., and Gunning, M.H. (1989a): Geology of the Scud River area, North Western British Columbia, (104G/5,6), <u>in</u> Geological Fieldwork 1988; British Columbia Ministry of Energy, Mines, and Petroleum Resources, Geological Survey Branch, Paper 1989-1, pp. 251-267.

Brown, D.A., and Gunning, M.H. (1989b): Geology of the Scud River area, North Western B.C. (map); British Columbia Ministry of Energy, Mines, and Petroleum Resources, Geological Survey Branch, Open File 1989-7.

Burmeister, N.W. (1965): Geological Report on the Horn Claims Prepared for Silver Standard Mines Ltd.; British Colombia Ministry of Energy, Mines and Petroleum Resources Assessment Report #697.

Caulfield, D.A. (1991): Qualifying Report on the Copper Penny Project; Private Report for Consolidated Rhodes Resources Ltd. Caulfield, D.A., and Archambault, M. (1990): Geological and Geochemical Report on the Trophy Gold Project; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #19783.

Collins, D.A. (1989): Report on the Trophy Gold Project; Report prepared for Gigi Resources Ltd.

de Rosen-Spence, A. (1985): Shoshonites and associated rocks of central British Columbia, <u>in</u> Fieldwork 1984; British Columbia Ministry of Energy, Mines, and Petroleum Resources, Geological Survey Branch, Paper 1985-1, pp. 426-442.

Dods, A.R. and Watson, R.K., (1965): Report on An Induced Polarization and Magnetic Survey - CW Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #747.

Dods, A.R. and Watson, R.K., (1966): Report on An Induced Polarization and Magnetic Survey - CW Group Conwest Exploration Co. Ltd.; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #937.

Dvorak, Z. (1990): Report on Combined Helicopterborne Magnetic, Electromagnetic and VLF Survey of the Trophy Gold Project, Northwestern British Columbia; Report prepared for Gigi Resources Ltd. by Aerodat Limited.

Falconer, R.D. (1965a): Geophysical Report (Induced Polarization Survey) on the Stikine East Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #687.

Falconer, R.D. (1965b): Geophysical Report (Induced Polarization Survey) on the Stikine North Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #688.

Falconer, R.D. (1965c): Geophysical Report (Magnetometer Survey) on the Stikine North Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #692.

Falconer, R.D. (1964a): Geophysical Report (Magnetometer Survey) on Mining Claims of the Stikine East Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #593.

Falconer, R.D. (1964b): Geological Report on the Stikine North Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #694.

Forster, D.B. (1988): Trophy Gold Project Geological and Geochemical Report; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #17101.

Fox, P.E., Grove, E.W., Seraphim, R.H. and Sutherland-Brown, A. (1976): Schaft Creek, <u>in</u> Porphyry Deposits of the Canadian Cordillera; Canadian Institute of Mining and Metallurgy, Special Volume 15, pp. 402-414.

Gale, R.E. (1964): Geological Report on the Stikine East Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #622.

Geological Survey of Canada (1957): Stikine River area, Cassiar District, British Columbia; Geological Survey of Canada Map 9-1957.

Geological Survey of Canada (1988): National Geochemical Reconnaissance, Sumdum - Telegraph Creek, British Columbia (NTS 104F - 104G); GSC Open File 1646.

Gerasimoff, M. and Caulfield, D.A. (1990): Regional Geology and Mineralization of the Galore Creek Camp; Proprietary Report for Prime Explorations Ltd. and Pass Lake Resources Ltd. dated February, 1990.

Grant, G.W. (1964): Final Geological Report - CW Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #621.

Harris, S. (1991): 1990 Geological, Geochemical, Geophysical and Diamond Drilling Report on the Trophy Gold Project; Report submitted for assessment credit to the British Columbia Ministry of Energy, Mines and Petroleum Resources.

Hill, H.L. (1965): Report on the "Lot" Mineral Claims; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #717.

Heinrich, S.M., Dawson, G.J., and Augsten, B.E.K. (1989): Trophy Gold Project: Geological Geochemical, and Diamond Drilling Report; Report submitted for assessment credit to the British Columbia Ministry of Energy, Mines and Petroleum Resources.

Holbeck, A.M. (1988): Geology and Mineralization of the Stikine Assemblage, Mess Creek area, northwestern British Columbia, unpublished M.Sc. thesis, University of British Columbia, Vancouver, British Columbia, Canada, 174 pp.

Holtby, M.H. (1985): Geological, Soil Geochemical, Trenching and Diamond Drilling Programme on the Paydirt Claim Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #14,980.

Kerr, F.A. (1948a): Lower Stikine and Iskut River areas, British Columbia; Geological Survey of Canada, Memoir 246, 94 pp. Kerr, F.A. (1948b): Taku River map-area, British Columbia; Geological Survey of Canada, Memoir 248, 84 pp. Lammle, C.A.R. (1964a): Geological Report on the Middle Scud Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #589.

Lammle, C.A.R. (1964b): Geological Report on the South Scud Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #623.

Logan, J.M. and Koyanagi, V.M. (1989a): Geology and Mineral Deposits of the Galore Creek area, Northwestern B.C., 104G/3,4, <u>in</u> Geological Fieldwork 1988; British Columbia Ministry of Energy, Mines, and Petroleum Resources, Geological Survey Branch, Paper 1989-1, pp. 269-284.

Logan, J.M., Koyanagi, V.M. and Rhys, D. (1989b): Geology and Mineral Occurrences of the Galore Creek Area; British Columbia Ministry of Energy, Mines, and Petroleum Resources; Geological Survey Branch Open File 1989-8, Sheet 1 of 2.

McAusland, J.H. (1974a): Drilling Report on the Bik South Claim Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #5093.

McAusland, J.H. (1974b): Drilling Report on the Bik North Claim Group; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #5104.

Monger, J.W.H. (1977): Upper Palaeozoic rocks of the western Canadian Cordillera and their bearing on Cordilleran evolution; Can. Jour. Earth Sci., V.14, pp. 1832-1859.

Monger, J.W.H. (1984): Cordilleran Tectonics: a canadian [sic] perspective; Bull. Soc. Geol. France, 1984 (7) t. XXVI, N. 2, pp. 255-278.

Naylor, H.H.F. (1965): Report on Geology - Copper Canyon; British Columbia Ministry of Energy, Mines and Petroleum Resources Assessment Report #603.

Nelson, J., and Payne, J.G. (1984): Palaeozoic volcanic assemblages and volcanogenic massive sulphide deposits near Tulsequah, B.C.; Can. Jour. Earth Sci., V.21, pp. 379-381.

Panteleyev, A. (1976): Galore Creek map area, British Columbia, in Geological Fieldwork 1975; British Columbia Ministry of Energy, Mines, and Petroleum Resources; Geological Survey Branch, Paper 1976-1, pp. 79-81.

Read, P.B. (1988): Report on the Trophy Property of Continental Gold Corporation, Liard Mining District, Northwestern British Columbia; Private report for Continental Gold Corporation.

Souther, J.G. (1971): Telegraph Creek Map Area, British Columbia; Geological Survey of Canada Paper 71-44. Schroeter, T.G., Lund, C., and Carter, G. (1989): Gold Production and Reserves in British Columbia; Ministry of Energy, Mines and Petroleum Resources Open File 1989-22.

Souther, J.G., and Armstrong, J.E. (1966): North Central Belt of the Cordillera of British Columbia, <u>in</u> Tectonic History and Mineral Deposits of the Western Cordillera; Canadian Institute of Mining and Metallurgy, Special Volume 8, pp. 171-184.

Souther, J.G., and Symons, D.T.A. (1974): Stratigraphy and Palaeomagnetism of the Mount Edziza volcanic complex, northwestern British Columbia; Geological Survey of Canada Paper 73-32, 48 pp.

Souther, J.G., Brew, D.A., and Okulitch, A.V. (1979): Iskut River 1:1,000,000; Geological Atlas Geological Survey of Canada, Map 1418A.

Taylor, K. (1990): Galore Creek Property Geology; Unpublished map at a scale of 1:12,000 prepared for Stikine Copper Limited.

Visser, S.J. (1991): Magnetometer and VLF-EM Survey and Induced Polarization Interpretation on the Trophy Gold Property; Report prepared for Gigi Resources Ltd. by SJ Geophysics Ltd.

APPENDIX B

ENGINEER'S CERTIFICATE

Equity Engineering Ltd. ____

ENGINEER'S CERTIFICATE

I, HENRY J. AWMACK, of 12-1348 Nelson Street, Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

- THAT I am a Consulting Geological Engineer 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 an honours degree in Geological Engineering.
- 3. THAT I am a member in good standing of the Association of Professional Engineers of British Columbia.
- 4. THAT this report is based on fieldwork carried out by myself and by personnel of Equity Engineering Ltd. from June to October 1990, government publications and assessment reports filed with the Province of British Columbia. I have examined the property in the field.
- 5. THAT I have no interest, directly or indirectly, in the property or securities of Gigi Resources Ltd., Goldbelt Mines Inc. or Continental Gold Corp., nor do I intend to acquire such interest.
- 6. THAT I consent to the use by Gigi Resources Ltd. of this report in a Statement of Material Facts or any such document as may be required by the Vancouver Stock Exchange or the Office of the Superintendent of Brokers.

DATED at Vancouver, British Columbia, this 5^{H} day of M_{ar} , 1991.

