

ARIS SUMMARY SHEET

District Geologist, Smithers

Off Confidential: 89.12.06

ASSESSMENT REPORT 18555

MINING DIVISION: Liard

PROPERTY: Trophy  
 LOCATION: LAT 57 10 00 LONG 131 15 00  
 UTM 09 6337971 363938  
 NTS 104G03E 104G03W  
 CLAIM(S): Trophy 1-4, Glacier 1-12, Scotch 1-12, Saddle 1-5, Catto 1-2, Bear 1-2  
 Camp 1  
 OPERATOR(S): Continental Gold  
 AUTHOR(S): Heinrich, S.M.; Dawson, G.J.; Augsten, B.E.K.  
 REPORT YEAR: 1989, 816 Pages  
 COMMODITIES  
 SEARCHED FOR: Gold, Silver, Lead, Zinc, Copper  
 KEYWORDS: Triassic, Jurassic, Permian, Limestones, Cherts, Argillites, Pyrite, Gold  
 Galena, Arsenopyrite  
 WORK  
 DONE: Geological, Geochemical, Drilling  
 DIAD 2833.9 m 16 hole(s); NQ  
 GEOL 8925.0 ha  
 Map(s) - 12; Scale(s) - 1:2500, 1:1000, 1:10 000  
 ROCK 1113 sample(s) ; ME  
 Map(s) - 2; Scale(s) - 1:5000, 1:20 000  
 SAMP 1386 sample(s) ; ME  
 SOIL 181 sample(s) ; AU, AG  
 MINFILE: 104G 050, 104G 053

100 0301

TROPHY GOLD PROJECT

GEOLOGICAL, GEOCHEMICAL AND DIAMOND DRILLING REPORT

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TROPHY 1-4, BEAR 1-2, CATTO 1-2  
SCOTCH 1-12, GLACIER 1-2,  
SADDLE 1-15 AND CAMP 1 CLAIMS

FILMED

LIARD MINING DIVISION  
BRITISH COLUMBIA  
NTS 104G/3

LATITUDE 57°10'N  
LONGITUDE 131°15'W

CONTINENTAL GOLD CORP.  
1020 - 800 West Pender Street  
Vancouver, B.C.  
V6C 2V6

By

Silvia M. Heinrich  
Greg J. Dawson  
Bernhardt E.K. Augsten

February 7, 1989

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

18,555  
Part 1 of 5

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## 1.0 SUMMARY

During the summer of 1988 Continental Gold Corp. conducted an extensive combined drilling and regional exploration program on its Trophy Gold Project in northwestern British Columbia, 80 km south of Telegraph Creek.

The Trophy Gold Project area (Bear, Glacier, Scotch, Saddle, Catto and Camp claims) is underlain by a thick sequence of Permian to Triassic sedimentary and volcanic rocks. Permian limestone forms the core of an overturned synform, and on the west bank of the south Scud River these limestones are thrust-faulted over younger Triassic rocks. Middle Triassic and older rocks which include undifferentiated tuffs and clastic sediments are generally strongly folded and have undergone several phases of deformation. Upper Triassic volcanics and sediments appear relatively undeformed, and where bedding is observed these rocks are consistently northwest striking, with steep, predominantly easterly dips. All sediments and volcanics have been intruded by Jurassic intrusives including rocks of the Hickman Pluton, and syenites related to those of the Galore Creek Cu-Au camp.

The 1988 regional program located numerous areas of significant precious and base metal mineralization, 13 of which are considered to warrant immediate follow-up work. These include chalcopyrite-magnetite skarns, which return very good copper and gold values, and shear-controlled vein and breccia systems, which show excellent gold and silver potential. Sampling of these 13 targets returned assay values up to 2.63 oz/T Au, 15.57 oz/T Ag and 17.5% Cu.

The Trophy 1-4 claims are underlain by limestone, chert, conglomerate, volcanic flows and tuffs, breccias and granodioritic to monzodioritic plutons. Dominant northeasterly (and less so, northwesterly) trending fault zones transect the claim region and are associated with gold-silver mineralization. Two such mineralized regions, the Ptarmigan and Eagle zones, were identified in 1987 and were the focus of detailed mapping and drilling efforts in the 1988 field season.

Precious metal mineralization on the Trophy property is represented by a mineral suite including pyrite, galena, sphalerite, chalcopyrite, pyrrhotite, arsenopyrite, tetrahedrite and minor amounts of native gold, electrum, boulangerite and native silver. A disseminated style of mineralization (mostly pyrite and pyrrhotite, minor galena and chalcopyrite) occurs in several geological units, in particular, dominating the hydrothermal breccia and skarnified limestone units located on Trophy 2 and Trophy 1 claims, respectively. Late-stage vein mineralization is generally associated with 0350-trending fractures in the region and crosscuts the disseminated mineralization. Massive sulfide bodies on the Trophy claims consist chiefly of pyrite, pyrrhotite and chalcopyrite with minor galena and arsenopyrite.

Hydrothermal alteration, which is most intense in the intrusive breccia unit in the Ptarmigan zone, is characterized by the mineral assemblage quartz + calcite + iron carbonate + sericite ± K-feldspar ± chlorite.

Surface work on the Trophy property in 1988 resulted in Au and Ag assays of up to 1.4 oz/ton and 154.3 oz/ton, respectively. The drilling program successfully tested three gold zones (Ptarmigan, Eagle and Hummingbird) on the Trophy 1-4 claims. The Ptarmigan zone returned the highest assays with a 11.1 meter intensely altered intersection in drill hole TR 88-4 assaying 0.16 oz/ton Au, 0.88 oz/ton Ag and 1.11% Zn.

Mineralization in the Ptarmigan zone is open at depth and along strike, and gold grades appear to increase with depth.

## 2.0 INTRODUCTION

The Trophy Gold Project (NTS 104 G/3) encompasses the Trophy 1-4, Bear 1-2, Catto 1-2, Glacier 1-12, Saddle 1-15, Scotch 1-15 and Camp 1 claims (48 modified claims in total) containing 757 units, for a total area of 18,925 hectares or 189 square kilometers. Initial geological appraisal, stream sediment sampling, reconnaissance and detailed geological mapping and lithogeochemical sampling

were conducted on the property in 1987 (Forster, 1988). During the summer of 1988, Continental Gold Corp. undertook an exploration effort involving two concurrent programs: 1) detailed geological mapping and diamond drilling on the Trophy 1-4 claims, and 2) regional sampling and geological mapping at a 1:10,000 scale on the 44 claims surrounding the four Trophy claims.

Work on both programs was carried out by a crew of seven geologists, four assistants, four drillers and five support staff. The crew was housed in a fully equipped tent camp on the Scud River, and supported by a Hughes 500D helicopter.

This report presents and discusses the data collected during exploration of the Trophy and surrounding claims in a format acceptable for British Columbia Department of Mines assessment requirements.

Broad similarities in the style of mineralization exist between the Trophy project and nearby properties. The Trophy and Galore Creek claims both have hydrothermally altered breccia bodies that are spatially related to alkaline plutons. Skarn mineralization similar to that on the Trophy property is found on several Iskut River claim groups, (McLymont Creek, CAM, JP and North Zone camps). Several geological features documented in the Sulphurets Creek gold camp, including the sulfide mineral suite, hydrothermal alteration and disseminated mineralization, are like those found on the Trophy 1-4 claims.

## **2.1 Camp Support and Mobilization**

Camp mobilization and demobilization was accomplished utilizing a Caribou from Dease Lake to an airstrip 25 km west of camp, and a Bell 205 helicopter from the airstrip to camp. Groceries and supplies were sent on a weekly basis from Dease Lake to this airstrip. The round trip of 350 kilometers was generally done by a Cessna 207 aircraft. The Hughes 500D helicopter based in camp was used to ferry supplies to and from the airstrip.



## 2.2 Location and Access

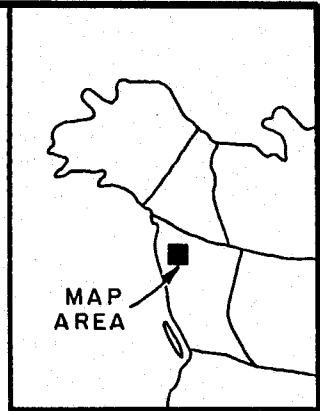
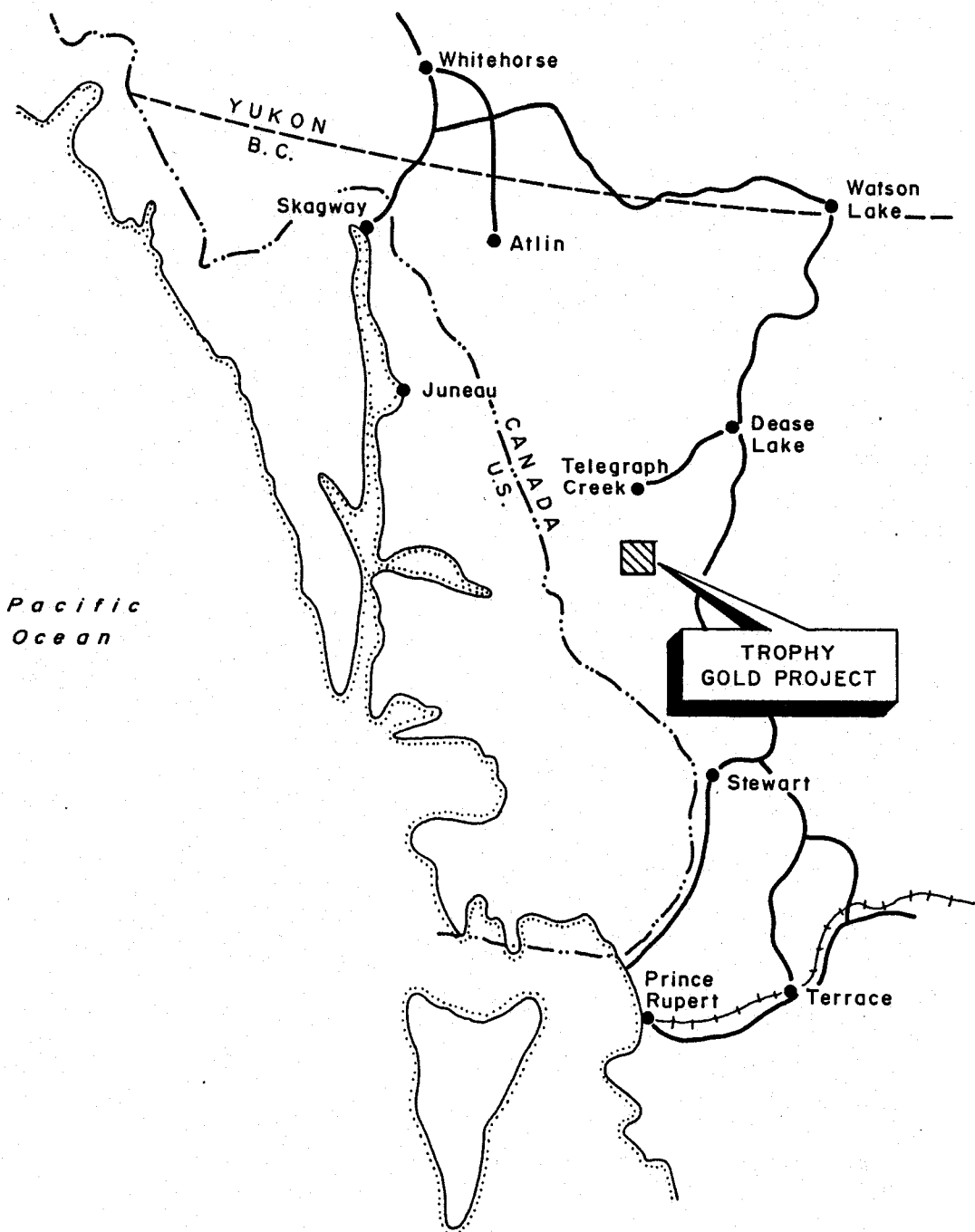
Continental Gold Corp.'s Trophy 1-4, Glacier 1-12, Scotch 1-15, Bear 1-2, Catto 1-2, Saddle 1-15 and Camp 1 claims are situated approximately 100 kilometers southwest of Dease Lake in northwestern British Columbia (Latitude 57° 10'N, Longitude 131° 15'W, NTS 104G/3 (Figure 1)). Access to the property is via helicopter from the 1,220 meter long Scud River air strip located 25 kilometers west of the property at the junction of the Stikine and Scud Rivers (Figure 2). The Scud River airstrip can be accessed by wheeled or ski-equipped aircraft from Dease Lake or Telegraph Creek. Bulky equipment and supplies can be barged up the Stikine River from Wrangell, Alaska to the Scud River airstrip.

During the 1960's, an access road was constructed for a distance of 35 kilometers from the Scud River airstrip to the Galore Creek copper deposit, via the Scud River and Galore Creek valleys (see Figure 2). The Galore Creek copper-gold deposit is situated 10 kilometers southwest of the Trophy 1-4 claims.


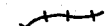
## 2.3 Topography and Climate

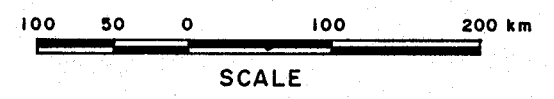
The Trophy Gold Project claims are located within the drainage basin of the Stikine River, at the eastern margin of the Coast Range Mountains. The project area is in rugged alpine terrain with elevations ranging from 700 meters to 2,000 meters a.s.l. Numerous cirques are hollowed out of the mountain sides in the region with many valleys being occupied by both glaciers and ice-sheets.

Precipitation in the vicinity of the claims is variable throughout the year with sudden snow flurries and rain showers being common. Snow remains on many north facing slopes until early July. Many cirques are snow-filled all year round. The best months to conduct mineral exploration are July, August and September, with snow beginning to accumulate at lower elevations by early to mid-October.



**LEGEND**

-  Road
-  Railway



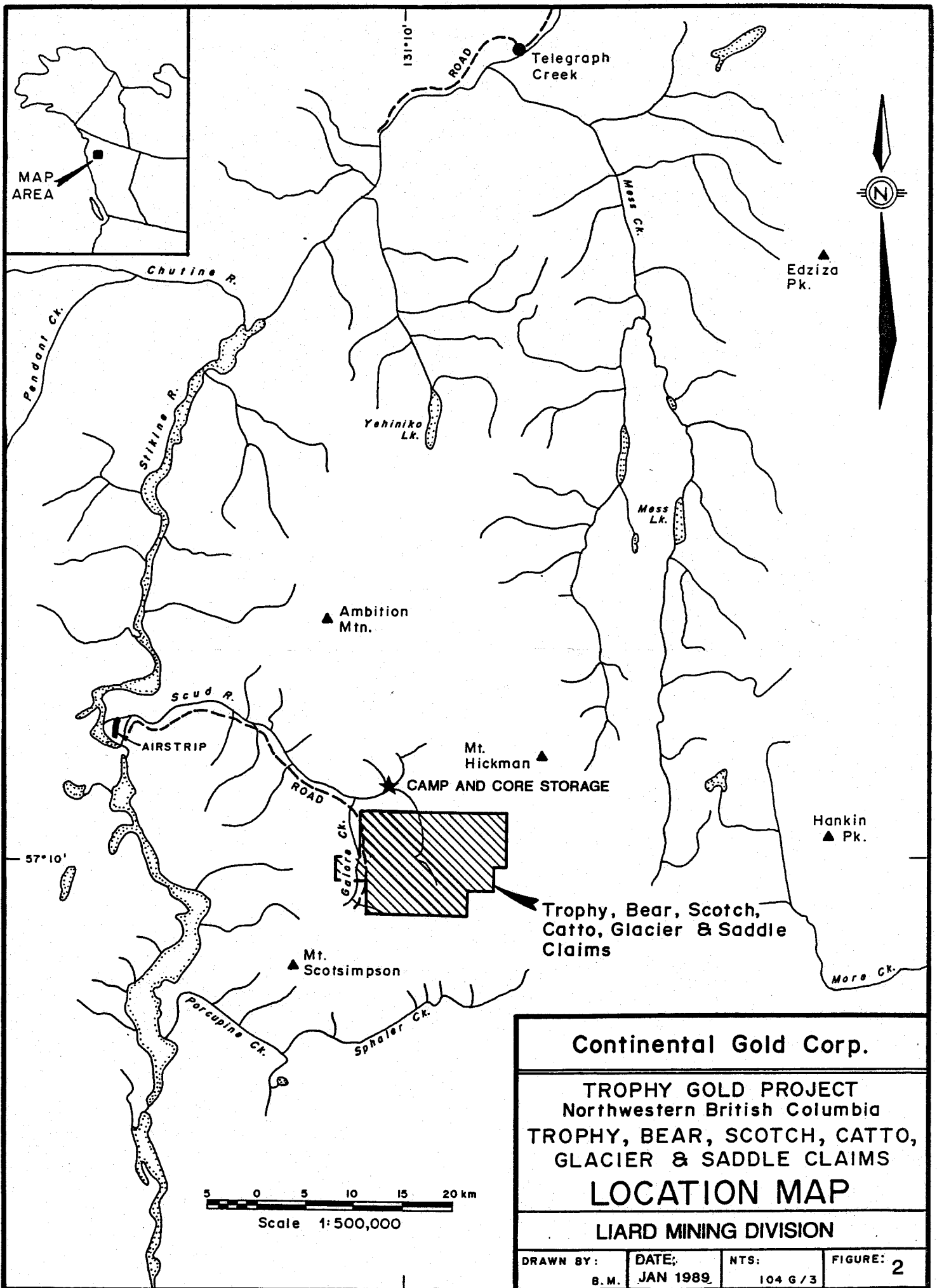
<b>Continental Gold Corp.</b>			
<b>TROPHY GOLD PROJECT</b> Northwestern British Columbia <b>TROPHY, BEAR, SCOTCH, CATTO,</b> <b>GLACIER &amp; SADDLE CLAIMS</b> <b>LOCATION MAP</b>			
<b>LIARD MINING DIVISION</b>			
DRAWN BY:	DATE:	NTS:	FIGURE:
B.M.	JAN 1989	104 G/3	1

*Pacific Ocean*

YUKON  
B.C.

U.S.  
CANADA

**TROPHY  
GOLD PROJECT**



<b>Continental Gold Corp.</b>			
TROPHY GOLD PROJECT Northwestern British Columbia TROPHY, BEAR, SCOTCH, CATTO, GLACIER & SADDLE CLAIMS <b>LOCATION MAP</b>			
<b>LIARD MINING DIVISION</b>			
DRAWN BY:	DATE:	NTS:	FIGURE:
B. M.	JAN 1989	104 G / 3	2

Tree line is approximately 1,300 meters, with most mineralization discovered to date occurring above this elevation. Minor grass and shrubs cover portions of the higher elevations, with much of the claim region being underlain by talus and moraine.

Outcrop exposure on the Trophy claims is approximately 35%, with snow and overburden covering the rest of the region.

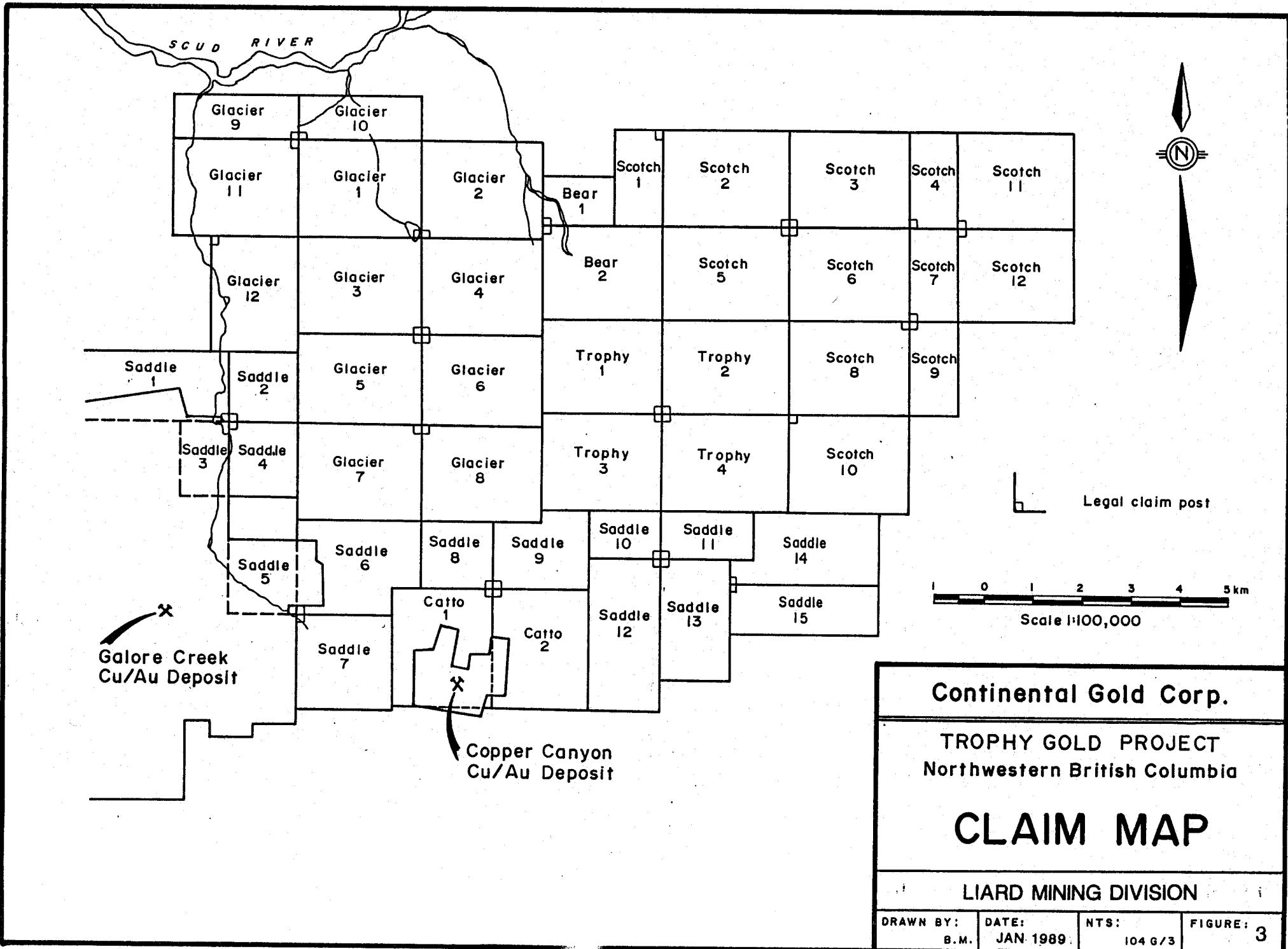
#### 2.4 Property Status

The Trophy Gold Project consists of 48 contiguous claims totalling 757 units (18,925 ha) (Bear 1-2, Catto 1-2, Glacier 1-12, Trophy 1-4, Scotch 1-12, Saddle 1-15, and Camp 1, Figure 3). All mineral claims comprising the project are 100% owned by Continental Gold Corp. Pertinent claim information is outlined in Table 1.

#### 2.5 Exploration History

The first reconnaissance geological mapping in the Telegraph Creek map area was undertaken by Forrest A. Kerr (1948) of the Geological Survey of Canada, who mapped the mountains adjacent to the Stikine and Iskut Rivers in the years 1924 to 1929. In 1956, the Geological Survey of Canada carried out "Operation Stikine" which included a helicopter reconnaissance of the Telegraph Creek map area.

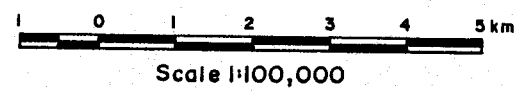
This initial work, combined with geological mapping conducted by J.G. Souther, led to the publication of a 1:250,000 scale geologic map of the Telegraph Map Sheet (104G) in 1972 (Souther, 1972).



SCUD RIVER



Legal claim post



Galore Creek  
Cu/Au Deposit

Copper Canyon  
Cu/Au Deposit

**Continental Gold Corp.**

**TROPHY GOLD PROJECT**  
Northwestern British Columbia

# CLAIM MAP

LIARD MINING DIVISION

DRAWN BY: B.M.	DATE: JAN 1989	NTS: 104 G/3	FIGURE: 3
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**TABLE 1**  
**CLAIM SCHEDULE**

<u>Claim</u>	<u>Record No.</u>	<u>Record Date</u>	<u>Expiry Date Approved</u>	<u>Area (ha)</u>	<u>No. units</u>
Trophy 1	4067	May 15, 1987	1998	500	20
Trophy 2	4068	May 15, 1987	1998	500	20
Trophy 3	4069	May 15, 1987	1998	500	20
Trophy 4	4070	May 15, 1987	1998	500	20
Glacier 1	4121	July 24, 1987	1996	500	20
Glacier 2	4122	July 24, 1987	1996	500	20
Glacier 3	4123	July 24, 1987	1996	500	20
Glacier 4	4124	July 24, 1987	1996	500	20
Glacier 5	4125	July 24, 1987	1997	500	20
Glacier 6	4126	July 24, 1987	1997	500	20
Glacier 7	4127	July 24, 1987	1996	375	15
Glacier 8	4128	July 24, 1987	1998	500	20
Glacier 9	4475	Feb 17, 1988	1994	250	10
Glacier 10	4476	Feb 17, 1988	1994	250	10
Glacier 12	4478	Feb 17, 1988	1994	500	20
Glacier 11	4477	Feb 17, 1988	1994	500	20
Scotch 1	4136	August 10, 1987	1998	200	8
Scotch 2	4137	August 10, 1987	1998	500	20
Scotch 3	4138	August 10, 1987	1992	500	20
Scotch 4	4139	August 10, 1987	1993	200	8
Scotch 5	4140	August 10, 1987	1998	500	20
Scotch 6	4141	August 10, 1987	1992	500	20
Scotch 7	4142	August 10, 1987	1993	200	8
Scotch 8	4143	August 10, 1987	1998	500	20
Scotch 9	4144	August 10, 1987	1998	200	8
Scotch 10	4145	August 10, 1987	1998	500	20
Scotch 11	4483	Feb 17, 1988	1994	500	20
Scotch 12	4484	Feb 17, 1988	1994	500	20
Catto 1	4131	July 24, 1987	1993	500	20
Catto 2	4132	July 24, 1987	1998	500	20
Bear 1	4129	July 24, 1987	1995	150	6
Bear 2	4130	July 24, 1987	1996	500	20
Saddle 1	4430	December 9, 1987	1990	450	18
Saddle 2	4431	December 9, 1987	1992	225	9
Saddle 3	4432	December 9, 1987	1991	150	6
Saddle 4	4433	December 9, 1987	1992	225	9
Saddle 5	4434	December 9, 1987	1991	375	15
Saddle 6	4435	December 9, 1987	1993	500	20
Saddle 7	4436	December 9, 1987	1993	400	16
Saddle 8	4437	December 9, 1987	1993	400	16
Saddle 9	4438	December 9, 1987	1998	400	16
Saddle 10	4439	December 9, 1987	1998	150	6
Saddle 11	4440	December 9, 1987	1998	200	8
Saddle 12	4441	December 9, 1987	1998	450	18
Saddle 13	4442	December 9, 1987	1997	375	15
Saddle 14	4776	July 6, 1988	1998	450	18
Saddle 15	4777	July 6, 1988	1998	300	12
Camp 1	4694	July 27, 1988	1989	50	2
<b>TOTAL</b>				<u>18,925</u>	<u>757</u>

The first recorded mineral exploration in the Telegraph - Stikine River region was undertaken in 1861 when placer gold was discovered on the Stikine River just below the townsite of Telegraph Creek.

During the 1920's, 1930's and 1940's the emphasis shifted from placer exploration to exploration for lode deposits. Early investigation was confined to accessible areas along the Stikine River, with a number of small copper occurrences being discovered.

The first systematic mineral exploration program in the more remote parts of the region was initiated by Hudson Bay Mining and Smelting Company in 1955. Hudson Bay was mainly concerned with locating large tonnage copper porphyries, which led to the discovery of the Galore Creek (137 MT grading 1.02% Cu, 0.014 oz/ton Au) and Copper Canyon (27 MT grading 1.02% Cu, 0.02 oz/ton Au) deposits, located adjacent to Continental's Trophy Gold Project. The Galore Creek Cu-Au deposit contains a minimum of 1,750,000 ounces of gold.

In 1964 Silver Standard Mines staked the BIK 87-116 claims over the region now covered by the Trophy 1-4 claims following rumours of spectacular copper values being received in the Galore Creek deposit 10 kilometers to the southwest. Lead-zinc mineralization (Ptarmigan showing) was discovered on the BIK claims in a north facing cirque with gold and silver assays of up to 0.16 ounces Au per ton and 6.7 ounces Ag/ton over 16.5 meters. In addition, Silver Standard prospectors located skarn type Cu-Au mineralization at the Hummingbird showing.

Silver Standard Mines was disappointed at not discovering a large copper ore body, so no further exploration was undertaken, and the claims were allowed to lapse in the late 1960's.

During the winter of 1987, D.B. Forster conducted a comprehensive study of potential gold targets in the Telegraph Creek Map Sheet. This study led to the staking of the Trophy 1-4 claims in May, 1987. Subsequent ground geological and geochemical sampling was extremely encouraging, with numerous new gold zones being identified. This survey initiated the staking of a total of 727 B.C. claim units

(Bear 1-2, Trophy 1-4, Catto 1-2, Saddle 1-15, Scotch 1-12, Glacier 1-12) in 1987 and 1988. Field work on the Trophy claims during 1987 identified three major northeast trending, precious metal-bearing shear structures on the Trophy property (Forster, 1988). These structures have a combined overall strike length of over 30 kms with detailed surface channel sampling returning gold values of up to 0.39 oz/T Au equivalent over 8.0 meters (Figure 4).

The success of the 1987 exploration program led to a more rigorous program in 1988, including regional and detailed geological mapping, diamond drilling on the Trophy 1-2 claims, soil geochemical surveys on the Trophy 3 claim and sampling and mapping of the neighbouring claims. In addition, further staking was undertaken in the region, adding two new claims (Saddle 14 and 15) to the Trophy Gold Project area.

## 2.6 Summary of 1988 Work

### Regional Program

The 44 claims surrounding the Trophy 1-4 Group represent an area of (16,925 ha). The area was geologically mapped at a scale of 1:10,000 and 894 rock samples were collected for assay. A detailed breakdown of the man days spent and the samples collected per claim is given in Appendix XI.

### Trophy 1-4 Geological Mapping and Drilling Program

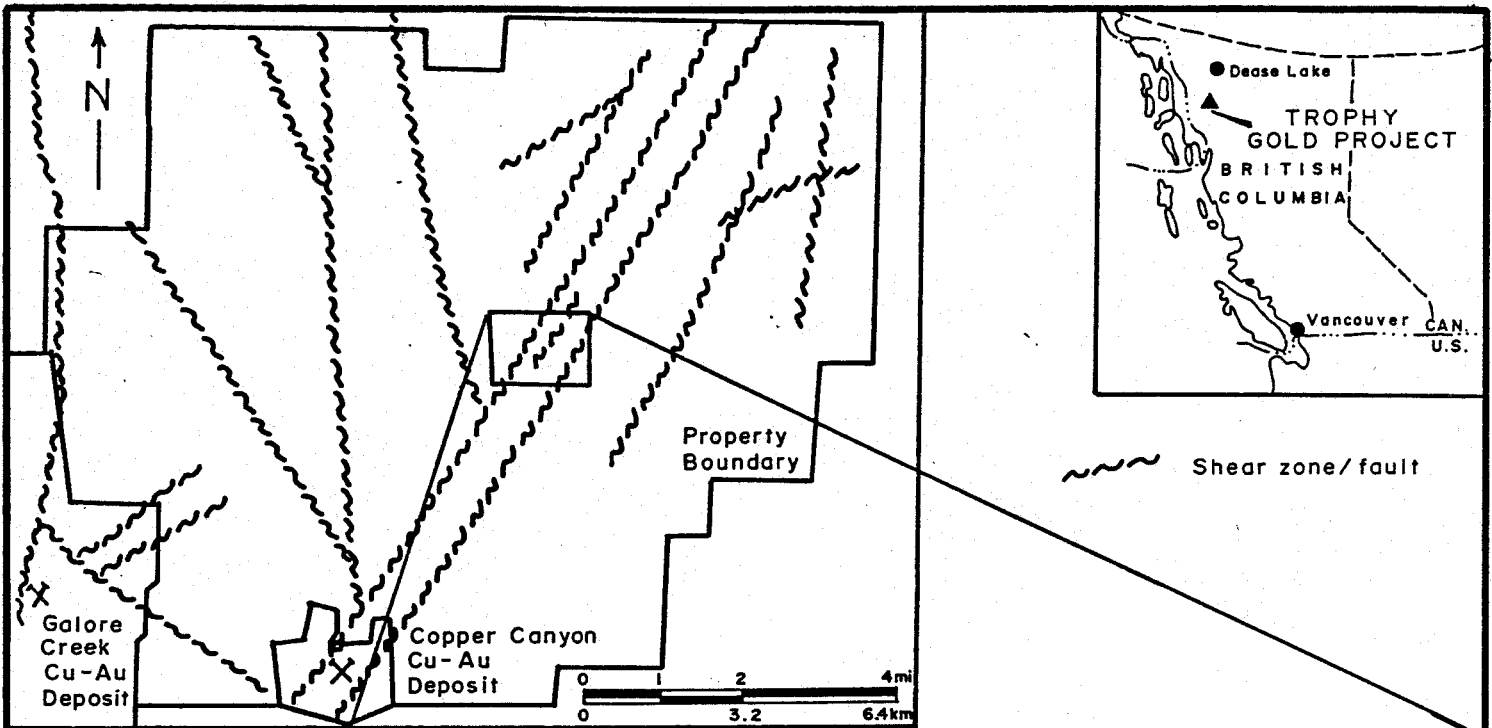
The Trophy 1-4 claims consist of 2,000 Ha. Of the 2,000 Ha, 25 Ha was mapped at a scale of 1:1000. The rest of the Project area was mapped at 1:10,000. Drilling, soil sampling, rock sampling and grid layout were done as outlined in Table 2.

**TABLE 2**  
**Exploration Data Summary**

<u>Claim</u>	<u>Drilling (m)</u>	<u>Soil Samples</u>	<u>Rock and Core</u>	<u>Grid (m)</u>
Trophy 1	487.10	-	253	5325
Trophy 2	2346.85	-	1276	720
Trophy 3	0	181	71	3670
Trophy 4	0	-	5	6000

NQ core was drilled using a Longyear 38A.





**GOLD-SILVER MINERALIZATION**

**Ptarmigan Showings**

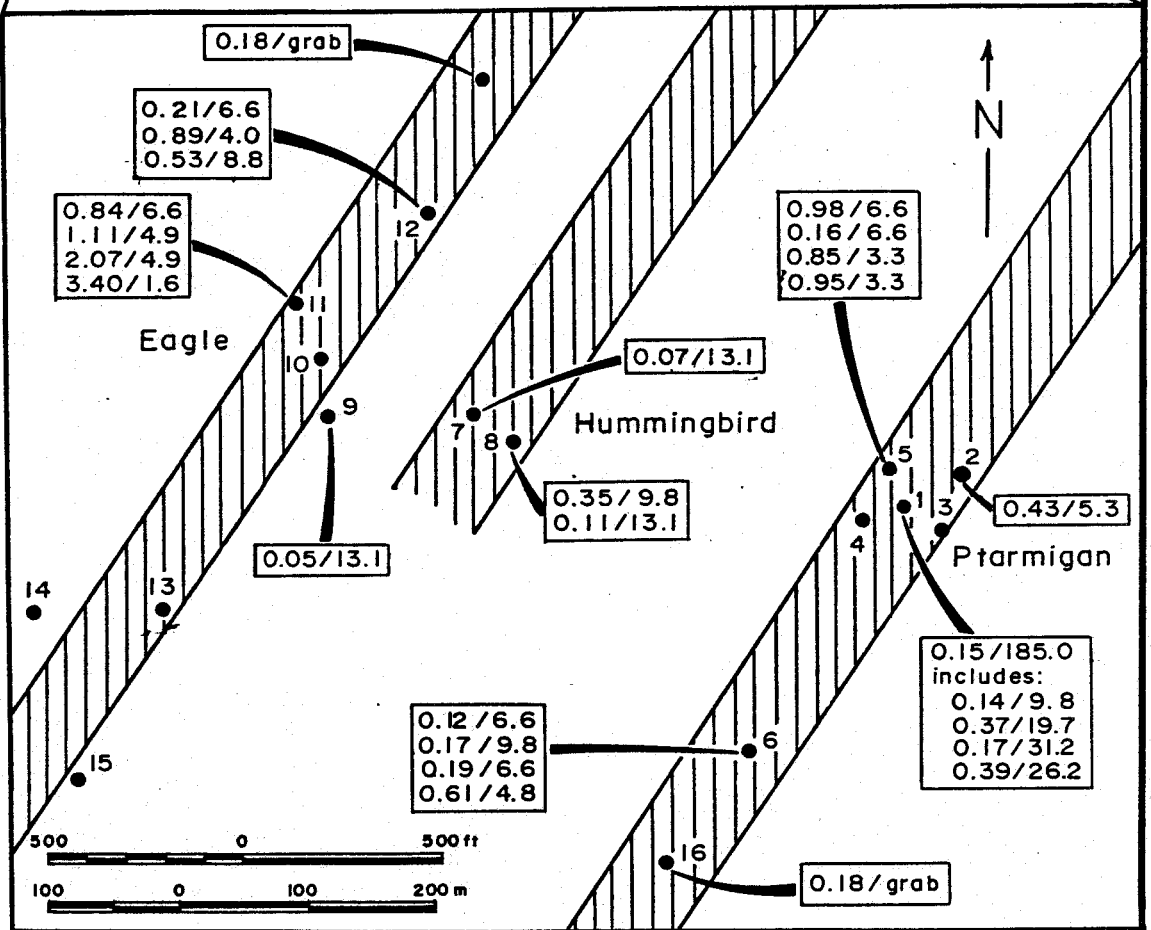
1. A Zone
2. B Zone
3. C Zone
4. D Zone
5. North Extension
6. E Zone

**Hummingbird Showings**

7. Hummingbird
8. South Extension

**Eagle Showings**

9. Massive Sulfide
10. F Zone
11. Quartz Breccia Sulfide
12. Bear Pass
13. Quartz Breccia Oxide
14. Skarn B
15. Skarn C
16. Zone G



0.83/6.6

oz. per ton gold equivalent  
/ true width in feet  
Ag/Au ratio 60:1  
(does not include base metal credits)



Shear zone

( Listed Vancouver Stock Exchange: Trading Symbol CUG)

**Continental Gold Corp.**

**TROPHY GOLD PROJECT**  
North Western B.C.

Trophy, Bear, Scotch, Catto,  
Glacier & Saddle Claims

**Gold-Silver Mineralization**

Date:	NTS:	Figure:
March/88	104 G/3	4

### 3.0 REGIONAL GEOLOGY

#### 3.1 Stratigraphy and Tectonic Setting

The regional geology of the Telegraph Creek map area has been discussed in detail by Kerr (1948) and by Souther (1972). The southwest portion of the Telegraph Creek map sheet in the vicinity of the Trophy claim is underlain by granitic, sedimentary and metamorphic rocks of the Coast Crystalline Complex. This forms the core of the northeasterly trending Stikine Arch (Figure 5).

The oldest rocks in the region are pre-Permian limestone, phyllite, slate, argillite and related rocks. Overlying these rocks is a distinctive Permian assemblage of quite pure limestone containing minor amounts of chert, argillite and slate. Overlying the Permian is a Triassic sequence which consists of flow breccias, tuffs, flows as well as a sedimentary assemblage composed of siltstone, conglomerate, chert and greywacke. Bowser Group Jurassic sediments overlie this Triassic assemblage and are characterized by the presence of conglomerates, greywackes, grits, shales and minor volcanoclastic rocks and related sub-volcanic intrusions.

All pre-lower Jurassic rocks in the map area are intruded by a series of granitic stocks and batholiths ranging in composition from granites to diorites, and syenites. In the northern region of the Telegraph map sheet, Tertiary and Quaternary rhyolite, dacite and basalt flows mask much of the pre-Cretaceous stratigraphy in the vicinity of Mt. Edziza, Canada's largest dormant volcano.

#### 3.2 Structure

Generally speaking, all pre-upper Jurassic rocks in the southern portion of the Telegraph Map Sheet are characterized by the presence of moderately tight and symmetrical upright folds. Thick sections of Permian limestone in the vicinity of the Trophy Gold Project area have experienced polyphase fold episodes, with axial traces exhibiting north and northwestern trends. All folding in the region is pre-lower Tertiary.

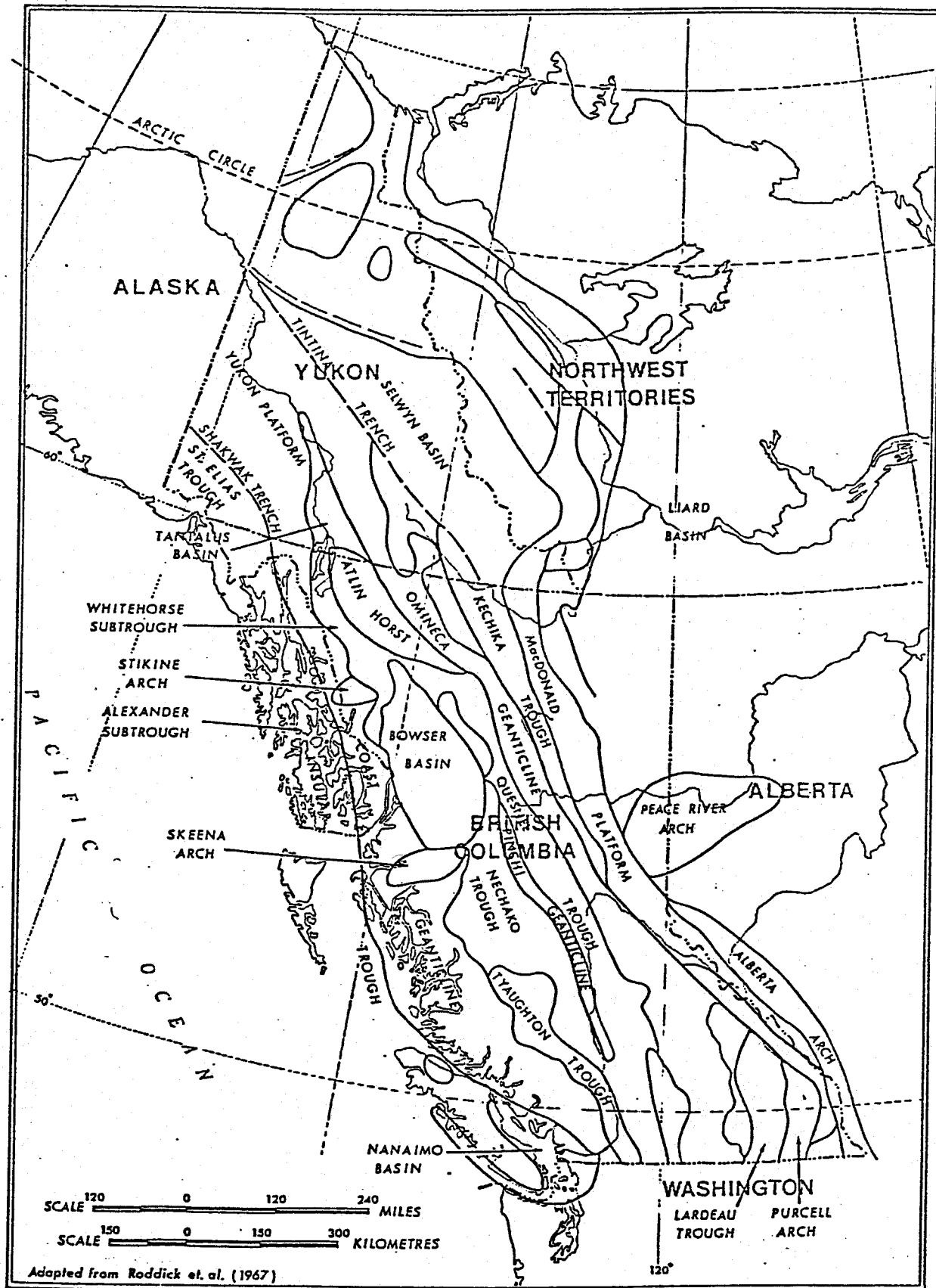


Figure 5: Tectonic framework of the western Cordillera

TABLE 3

Stratigraphic Section  
Telegraph Creek Map-Sheet

(After Souther, 1972)

Era	Period or Epoch	Group or Formation	Map-unit	Lithology	Thickness (feet)	
Cenozoic	Pleistocene and Recent		29	Unconsolidated glacial and alluvial deposits		
			28	Hot spring deposits, tuffa	0-15	
			27	Olivine basalt, flows and tephra	0-1,500	
	Tertiary and Quaternary Upper Tertiary and Pleistocene		26	Rhyolite and dacite flows, lava domes and pyroclastic rocks; minor basalt	0-1,000	
			25	Basalt flows and pyroclastic rocks; minor rhyolite	0-5,000	
	Cretaceous and Tertiary Upper Cretaceous Lower Tertiary	Sloko Group	24	Rhyolite, trachyte and dacite flows and pyroclastic rocks	0-500+	
			23	Biotite andesite lava domes, flows and sills		
			22	Biotite leucogranite intrusions		
		Sustut Group	21	Conglomerate, quartzose sandstone, arkose	1,000+	
			20	Felsite, quartz-feldspar porphyry		
			19	Biotite-hornblende quartz monzonite		
	Jurassic and/or Cretaceous		18	Hornblende diorite		
		17	Granodiorite, quartz diorite; minor diorite, leucogranite, and migmatite			
Jurassic Middle? and Upper	Bowser Group	16	Chert-pebble conglomerate, grit, greywacke, siltstone, and shale	5,000+		
Middle		15	Basalt, basaltic andesite; mainly pillow lava	1,000-3,000		
Lower and Middle		14	Shale; minor siltstone, siliceous, calcareous and ferruginous siltstone.	3,500		
Lower		13	Conglomerate, grit, greywacke, basaltic and andesitic volcanic rocks; peperites	4,000		
		Hickman batholith	12	Syenite, orthoclase porphyry, monzonite, pyroxenite		
			11	Hornblende-quartz diorite, hornblende-pyroxene diorite, amphibolite		
			10	Hornblende granodiorite; minor hornblende quartz diorite		
			Triassic Upper	9	Undifferentiated volcanic and sedimentary rocks; includes units 5 to 8	10,000
				8	Augite andesite flows, pyroclastic rocks and derived sediments; minor greywacke, siltstone and conglomerate	4,000+
7	Siltstone, siliceous siltstone, ribbon chert, calcareous and dolomitic siltstone, greywacke, volcaniclastic rocks and minor limestone.	2,300+				
	6	Limestone, fetid limestone, shale	0-300+			
	5	Greywacke, siltstone, shale; minor conglomerate, tuff and volcanic sandstone	3,000+			
Middle		4	Shale, concretionary shale; minor calcareous shale and siltstone	600+		
Paleozoic	Permian		3	Limestone, minor chert and tuff	1,000-2,000	
	Permian and Mississippian		2	Phyllite, argillaceous quartzite, quartz-sericite and chlorite schist, greenstone, minor chert, schistose tuff and limestone	?	
	Mississippian		1	Limestone, crinoidal limestone, ferruginous limestone; tuff, chert and phyllite	2,850	
	Age unknown, probably pre-Lower Jurassic	A	A	Amphibolite, amphibolite gneiss		
		B	B	Ultramafic rocks; peridotite, dunite, serpentinite		

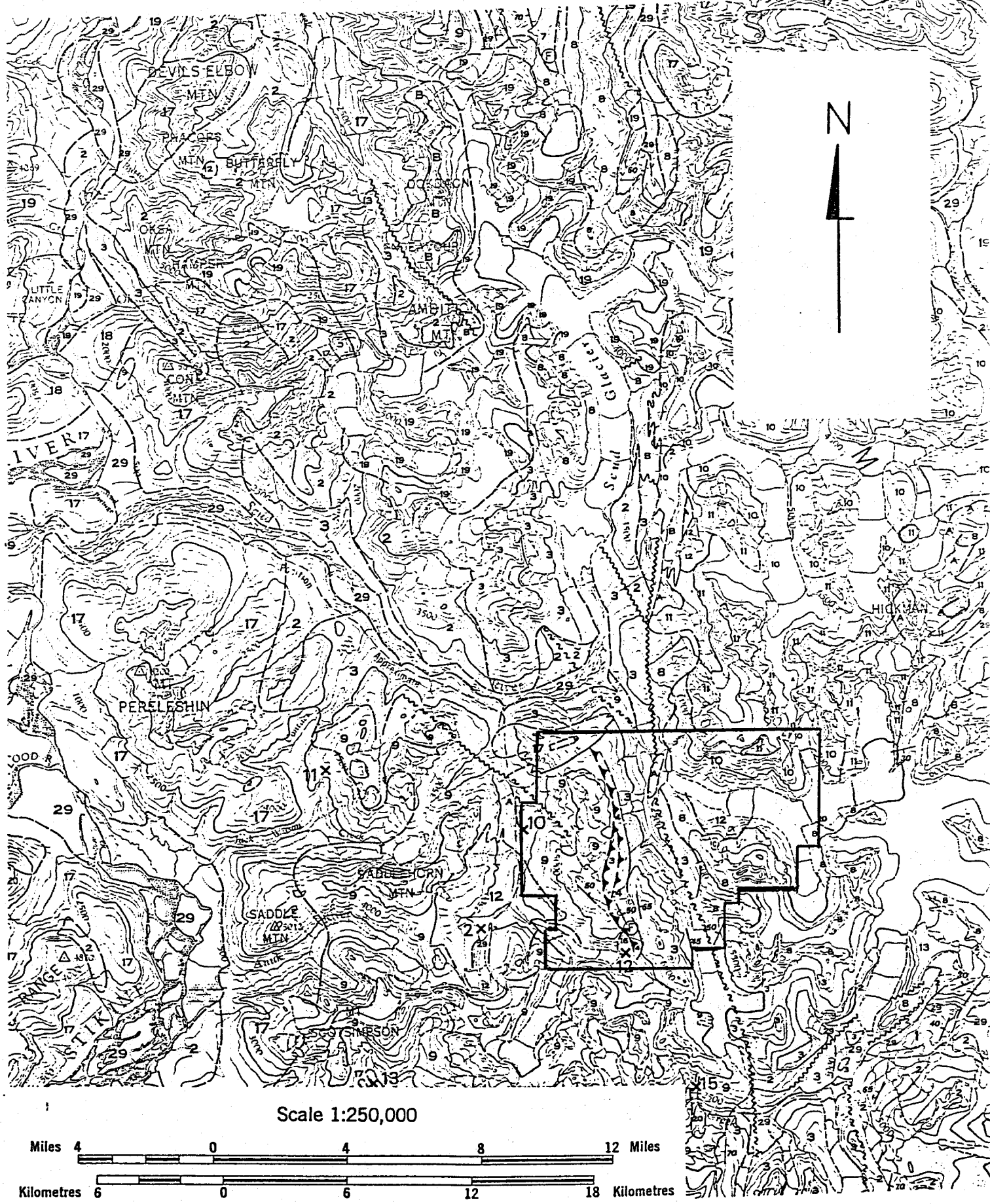


Figure 6 : Regional Geologic Map - Trophy Gold Project  
 (After Souther, 1972)

LEGEND

- CENOZOIC**
- QUATERNARY**  
PLEISTOCENE AND RECENT
- 29 Fluvialite gravel; sand, silt; glacial outwash, till, alpine moraine and colluvium
  - 28 Hot-spring deposit, tufa, aragonite
  - 27 Olivine basalt, related pyroclastic rocks and loose tephra; younger than some of 29
- TERTIARY AND QUATERNARY**  
UPPER TERTIARY AND PLEISTOCENE
- 26 Rhyolite and dacite flows, lava domes, pyroclastic rocks and related subvolcanic intrusions; minor basalt
  - 25 Basalt, olivine basalt, dacite, related pyroclastic rocks and subvolcanic intrusions; minor rhyolite; in part younger than some 26
- CRETACEOUS AND TERTIARY**  
UPPER CRETACEOUS AND LOWER TERTIARY
- SLOKO GROUP**
- 24 Light green, purple and white rhyolite, trachyte and dacite flows, pyroclastic rocks and derived sediments
  - 22, 23 22. Biotite leucogranite, subvolcanic stocks, dykes and sills  
23. Porphyritic biotite andesite, lava domes, flows and (?) sills
- SUSTUT GROUP**
- 21 Chert-pebble conglomerate, granite-boulder conglomerate, quartzose sandstone, arkose, siltstone, carbonaceous shale and minor coal
  - 20 Felsite, quartz-feldspar porphyry, pyritiferous felsite, orbicular rhyolite; in part equivalent to 22
  - 19 Medium-to coarse-grained, pink biotite-hornblende quartz monzonite
- JURASSIC AND/OR CRETACEOUS**  
POST-UPPER TRIASSIC PRE-TERTIARY
- 18 Hornblende diorite
  - 17 Granodiorite, quartz diorite; minor diorite, leucogranite and migmatite
- JURASSIC**  
MIDDLE (?) AND UPPER JURASSIC
- BOWSER GROUP**
- 16 Chert-pebble conglomerate, grit, greywacke, subgreywacke, siltstone and shale; may include some 13
- MIDDLE JURASSIC**
- 15 Basalt, pillow lava, tuff-breccia, derived volcanoclastic rocks and related subvolcanic intrusions
- LOWER AND MIDDLE JURASSIC**
- 14 Shale, minor siltstone, siliceous and calcareous siltstone, greywacke and ironstone
- LOWER JURASSIC**
- 13 Conglomerate, polymictic conglomerate; granite-boulder conglomerate, grit, greywacke, siltstone; basaltic and andesitic volcanic rocks, peperites, pillow-breccia and derived volcanoclastic rocks

- MESOZOIC**
- TRIASSIC AND JURASSIC**  
POST-UPPER TRIASSIC PRE-LOWER JURASSIC
- 12 Syenite, orthoclase porphyry, monzonite, pyroxenite
- HICKMAN BATHOLITH**
- 10, 11 10. Hornblende granodiorite, minor hornblende-quartz diorite 11. Hornblende, quartz diorite, hornblende-pyroxene diorite, amphibolite and pyroxene-bearing amphibolite
- TRIASSIC**  
UPPER TRIASSIC
- 9 Undifferentiated volcanic and sedimentary rocks (units 5 to 8 inclusive)
  - 8 Augite-andesite flows, pyroclastic rocks, derived volcanoclastic rocks and related subvolcanic intrusions; minor greywacke, siltstone and polymictic conglomerate
  - 7 Siltstone, thin-bedded siliceous siltstone, ribbon chert, calcareous and dolomitic siltstone, greywacke, volcanic conglomerate, and minor limestone
  - 6 Limestone, feld argillaceous limestone, calcareous shale and reefold limestone; may be in part younger than some 7 and 8
  - 5 Greywacke, siltstone, shale; minor conglomerate, tuff and volcanic sandstone
- MIDDLE TRIASSIC**
- 4 Shale, concretionary black shale; minor calcareous shale and siltstone
- PERMIAN**  
MIDDLE AND UPPER PERMIAN
- 3 Limestone, thick-bedded mainly bioclastic limestone; minor siltstone, chert and tuff
- PERMIAN AND OLDER**
- 2 Phyllite, argillaceous quartzite, quartz-sericite schist, chlorite schist, greenstone, minor chert, schistose tuff and limestone
- MISSISSIPPIAN**
- 1 Limestone, crinoidal limestone, ferruginous limestone; maroon tuff, chert and phyllite
  - B Amphibolite, amphibolite gneiss; age unknown probably pre-Upper Jurassic
  - A Ultramafic rocks; peridotite, dunite, serpentinite; age unknown, probably pre-Lower Jurassic
- Geological boundary (defined and approximate, assumed) ..... ~~~~~
- Bedding (horizontal, inclined, vertical, overturned) ..... + / / /
- Anticline ..... ↗ ↘
- Syncline ..... ↘ ↗
- Fault (defined and approximate, assumed) ..... - - - - -
- Thrust fault, teeth on hanging-wall side (defined and approximate, assumed), ..... ↗ ↘
- Fossil locality ..... ⊕
- Mineral property ..... 15x
- Glacier ..... ○

INDEX TO MINERAL PROPERTIES

1. Liard Copper	5. Bam	9. MH	13. Ann, Su
2. Galore Creek	6. Gordon	10. BIK	14. SF
3. QC, QCA	7. Limpoke	11. JW	15. Goat
4. Naba	8. Poke	12. Copper Canyon	16. Mary

Table 4 : Legend for Geologic Map, Figure 6 (After Souther, 1972)

The Triassic and Jurassic stratigraphy in the Telegraph Creek map sheet has undergone numerous phases of faulting and related shearing. Major northerly trending deep-seated faults transect the region covered by the Trophy claims and create a mosaic of fault-bounded blocks. Abundant subsidiary faults and shear-splays branch out from these major structural features. Normal faulting is most prevalent, with minor reverse faulting having been identified in the region (Souther, 1972). Repeated movement and shearing is evident within many fault zones, with zones of hydrothermal alteration being related to some shearing episodes.

Faulting and shearing in the Telegraph Creek map sheet was most likely initiated during the early Jurassic with many of these structural zones being reactivated during the early Tertiary (Souther, 1972).

### 3.3 Regional Metamorphism and Hydrothermal Alteration

Low grade greenschist facies metamorphism affects most rock units in the map area and is typified in the more mafic rocks by the presence of chlorite and epidote. Sedimentary rocks in the region are frequently less affected by this metamorphic event, with primary bedding and textural features being visible.

Hydrothermal alteration on a regional scale is extensive throughout the map sheet. Alteration zones of hydrothermal origin are easily identified due to the presence of bright orange and red-brown iron oxides and carbonate zones that range up to thousands of meters in diameter. Sampling of these alteration features in the Trophy Project area indicates that they are primarily composed of 30 to 95% iron carbonate, 5 to 30% quartz and trace to 10% very fine grained pyrite. This style of alteration is either pervasive or localized and associated with faults, fault zones, and/or shear structures. Silica-iron carbonate hydrothermal alteration as described above is most intense in regions of complex faulting and shearing associated with syenitic intrusions.

## 4.0 REGIONAL MAPPING AND SAMPLING PROGRAM

### 4.1 Introduction

The 44 claims surrounding the Trophy Group represent an area of 16,925 ha. The purpose of the mapping and sampling program was to cover this area as much as was practically possible in one season at a scale of 1:10,000. The 1:10,000 base maps were made directly from airphotos by Hugh Hamilton Ltd. and aided greatly in the coverage of the area. Total coverage of the Trophy project area is provided by eight of the 1:10,000 map sheets. A 1:20,000 scale composite base map covers the entire project area.

All field data, including geology, rock and silt sample locations, were plotted on the 1:10,000 maps (Plates 1-8, Appendix XII). This data was then compiled and a 1:20,000 scale geology map of the entire project area was produced (Plate 9, Appendix XII). For easy reference, this map has been reduced to 8½ x 11, and included in the text (Figure 7).

All rock samples which assayed better than 100 ppb gold and 25 ppm silver were plotted on a 1:20,000 map, together with their respective gold and silver values (Plate 10, Appendix XII). Silt samples which returned values better than 70 ppb Au were also recorded on the 1:20,000 sample compilation.

### 4.2 Local Geology and Stratigraphy

The project area is underlain by both stratified and intrusive rocks. The stratified rocks include massive Permian limestone, dark grey Middle Triassic argillite and chert, and Middle and (?) Upper Triassic volcanics of the Stuhini Group. To the east of the Scud River these units are subvertical or overturned to the east and young eastward (Read, 1988). On the west these units are strongly overturned to the west, young to the west, and are cut by east dipping thrust faults. On the east side of the Scud, the Middle Triassic Hickman Pluton intrudes volcanics of the



Stuhini Group and on the west side an Upper (?) Jurassic granodiorite stock intrudes Middle Triassic sediments and volcanics but lies thrust faulted against the Permian (Figure 7, Plate 9, Appendix XII).

The major units described in order of decreasing age, are as follows:

### Permian

#### **Unit 2**

A massive to thickly bedded, light grey to white crystalline limestone which sporadically contains crinoidal and bryozoan debris, in addition to locally abundant macrofossil (gastropoda) accumulations. Local siliceous, tuffaceous lenses and interbedded chert beds are common. Included in the Permian is a sequence of structurally complex undifferentiated Paleozoic tuffs and sediments. These rocks predominantly occur in the lower part of the valley of the South Scud River, where access is extremely difficult.

### Middle Triassic

#### **Unit 3**

Dark grey, siliceous and/or limy argillite, concretionary black shale ribbon chert, and minor lenticular grey silty limestone compose a succession ranging in thickness from a few meters to more than 100 meters, Read (1988).

#### **Units 4 - 7 (Stuhini Group)**

Within the map area the Stuhini Group includes at least 4 distinctive rock subgroups, some of which may in fact be lower Jurassic volcanics and sediments. The best exposure of bedded sediments is covered almost entirely by a large glacier.

#### **Unit 4**

Lapilli tuff, laminated ash tuff, undifferentiated volcanic conglomerate, and various derived volcanoclastic rocks form a group of rocks that is individually distinct, but whose relationship to members within the Stuhini Group is sometimes unclear. Andesitic lapilli tuffs occur as green, brown and maroon coloured rocks with fragments varying in size from 0.3 cm to 15 cm in length. They are frequently bedded and appear to interfinger with ash/crystal tuffs which are commonly well laminated, bedded, and can be both maroon and buff to almost white coloured.

Volcanic conglomerates are composed of rounded to sub-rounded clasts of augite and plagioclase porphyry, and maroon andesite. In some exposures the conglomerates grade into a poorly sorted angular breccia.

#### **Unit 5**

Conglomerates form a 1-3 m thick horizon that can be traced for more than 2.0 km. Clasts, forming 75-80% of the rock, are well rounded and elliptical in shape. Clasts are composed of granodiorite, andesite porphyritic volcanics and rare megacrystic orthoclase porphyry. The matrix is extremely limy and contains numerous shell fragments.

#### **Unit 6**

Siltstones form a distinctive unit approximately 300 m thick. They vary considerably in colour from black to light buff or tan. They are consistently thinly laminated with well-defined bedding. Black siltstones are fossiliferous with an unidentified bivalve predominating.

#### **Unit 7**

Massive andesites, massive augite-porphyritic flows and massive plagi-phyric andesites dominate this unit, all of which are generally structurally featureless.

They are dark green to maroon in colour. Augite-porphyrific flows contain typically 25-30% dark green to black augite phenocrysts, which are sub to euhedral and average 3 mm across. They are set in a fine-grained dark green chloritized andesitic matrix.

#### **Unit 8**

The Hickman Pluton includes medium grained biotite hornblende quartz diorite and granodiorite and coarse-grained monzonite and syenite (Read, 1988). All rocks contain chloritized and sericitized mafic minerals and chlorite-epidote-quartz-feldspar filled joints and shears are common. The alteration of the pluton is a result of low grade regional metamorphism which has affected all but the core of the pluton. Except for a two kilometer long faulted portion of the southwestern contact of the pluton within the map area, the remainder of the pluton appears to intrude the volcanics of the Stuhini Group.

#### **Lower Jurassic**

#### **Unit 9**

Medium-grained equigranular hornblende granodiorite occurs throughout the project area.

#### **Unit 10**

This unit occurs as a stock of variable composition with most of it being a medium-grained, equigranular biotite hornblende granodiorite or quartz monzonite with minor hornblende syenite (Read, 1988). This Upper Jurassic? stock is intruded along the Stuhini-Middle Triassic sediment boundary.

## Early Jurassic

### **Unit 11**

This unit is an orthoclase porphyry and is an extension of the Copper Canyon syenite porphyry. The porphyry contains blocky, white, phenocrysts of K-Feldspar up to 4 cm long set in a dark grey to brown fine-grained matrix. Scattered isolated plugs and dikes, generally 2-3 m wide, of the syenite were found usually hosted in tuffs and volcanoclastics of Unit 5.

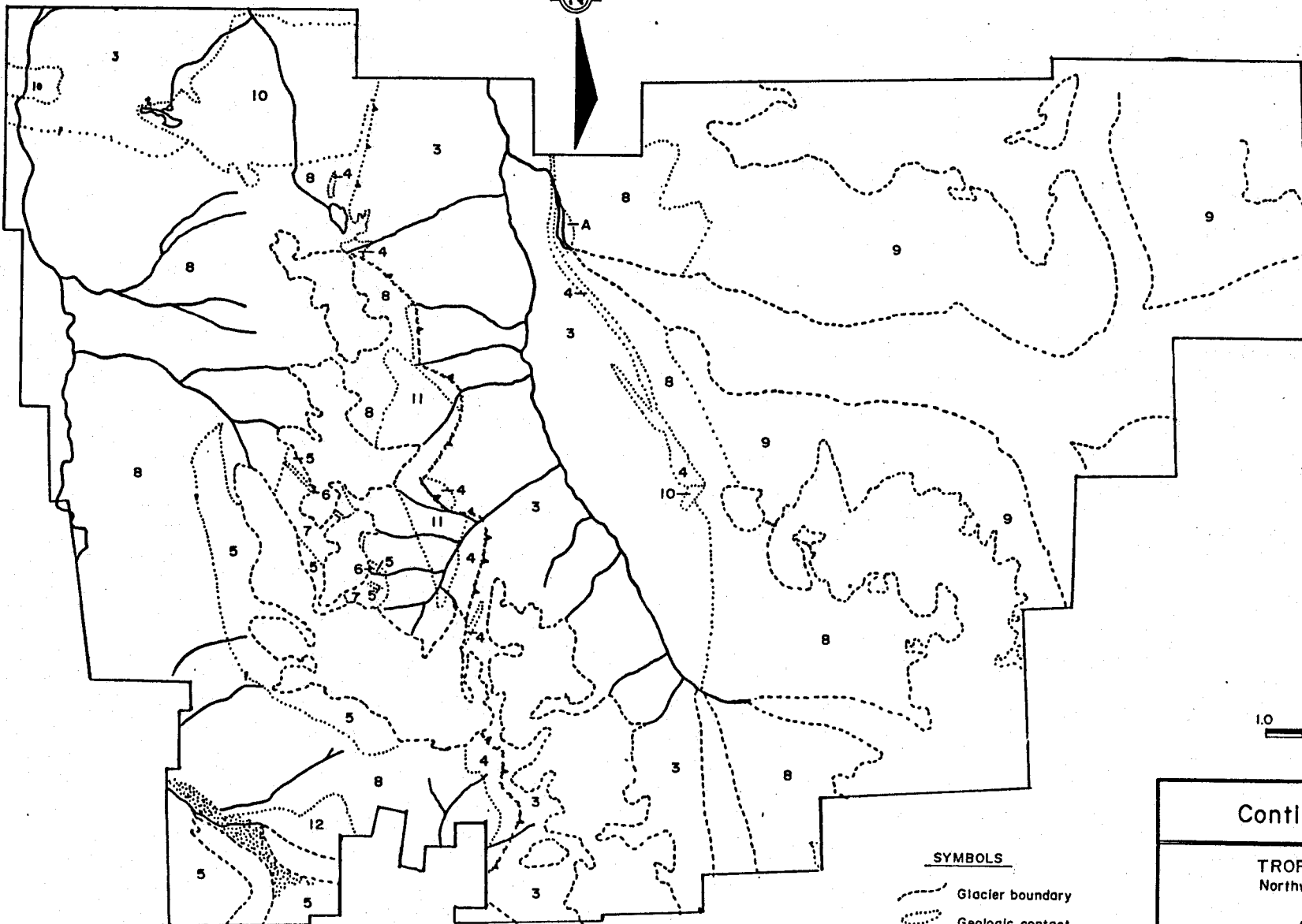
## Age Uncertain

### **Unit A**

Unit A is an ultra-mafic rock which outcrops only in a few isolated pods. The most notable of these is an elliptical body which forms a 400 x 300 m pod in the valley at the toe of Scotch Glacier. The rocks always crop out on or near fault contacts, leading to the speculation that they may be the remnants of old, deep seated intrusions. The ultra-mafic is dark green to black in colour, is medium grained and is variably magnetic. The composition of the rock is close to that of a pyroxenite, consisting dominantly of pyroxene, with minor hornblende and biotite. Chlorite is a common alteration mineral. The rock locally weathers to an incompetent, pale green material.

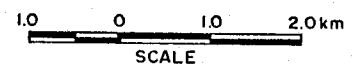
## **4.3 Structure**

On the west side of the south fork of Scud River, the Permian limestone, Middle Triassic argillite, Triassic volcanics, and Early Jurassic(?) granodiorite are involved in an east-dipping thrust and reverse fault system. The stratified rocks, excluding the unbedded Triassic volcanics of unknown orientation, have a moderate eastward dip, but the rock units young westward. The contacts between rock units are planar and faulted. Although the incompetent Middle Triassic argillite is intensely folded, the contact between it and the Permian limestone is knife-sharp and planar. Because the Middle Triassic is faulted against adjacent units, it is locally absent



**LEGEND**

- EARLY JURASSIC**
- 12 Orthoclase porphyry (syenite)
- 11 Biotite hornblende granodiorite, qtz monzonite
- LOWER JURASSIC**
- 10 Granodiorite
- HICKMAN BATHOLITH**
- 9 Hornblende granodiorite, monzonite, minor syenite
- UPPER TRIASSIC**
- 8 Augite-andesite flows, massive andesite flows, plagi-phyrlic andesite flows
- 7 Siltstone, thin-bedded siliceous siltstone
- 6 Polymictic conglomerate
- 5 Lapilli tuff, laminated ash tuff, undifferentiated volcanic conglomerate, derived volcaniclastic rocks
- MIDDLE TRIASSIC**
- 4 Shale, concretionary black shale, siliceous black argillite, chert
- PERMIAN**
- 3 Limestone, thick-bedded, mainly bioclastic limestone, minor siltstone and chert, minor undifferentiated Paleozoic volcanics, tuffs and sediments
- A Ultra mafic rocks, peridotites



**SYMBOLS**

- Glacier boundary
- Geologic contact
- Thrust fault

Continental Gold Corp.

TROPHY GOLD PROJECT  
Northwestern British Columbia

**GEOLOGY**

Liard Mining Division

Drawn by: B. A. M.	Date: October, 1988	NTS:	Figure: <b>7</b>
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between the Permian limestone and the Triassic volcanics. Although Souther (1972) showed the Middle Triassic-Permian contact unfaulted, detailed mapping along this contact shows that it is faulted for nearly its entire length. A northerly oriented granodiorite sill lies across the Triassic argillite-volcanic contact. Its eastern contact is faulted against limestone or argillite for most its length except for the northern and southern ends which lie within the Triassic volcanics. The western plutonic contact intrudes Triassic volcanics along its entire length. At the north end of the map area, near a lake locally called "Trench Lake", the major fault in the system appears to vere to the northwest and strike towards an unfaulted Early Jurassic granodiorite pluton, radiometrically dated at 182 Ma (Allen et al., 1976), which must intrude the fault. In this area, the contact between Permian limestone and greenstone of uncertain volcanic or hypabyssal intrusive origin is highly irregular and folded, which indicates that the limestone contact is locally unfaulted. North of "Trench Lake" geological mapping near the 1,200 m level shows that the granodiorite intrudes the Permian limestone. Although Souther (1972) showed the fault system ending at the southern contact of the granodiorite pluton, it may extend to the west of the pluton and continue along the Permo-Triassic boundary which west of Galore Creek has a significant thickness of rusty weathering Middle Triassic(?) argillite on the boundary according to D. Brown (BCMEM&PR, oral comm., July 26, 1988).

#### 4.4 Mineralization and Geochemistry

A total of 13 new gold mineralized sulfide zones were discovered on the Trophy project area during the 1988 field season (see Figure 3). Varied styles of mineralization were found including skarn, syenite-hosted breccias and related shear/vein hosted mineralization.

##### **Magnetite - Chalcopyrite - Syenite Breccia**

The magnetite - chalcopyrite - syenite breccia mineralization is best represented in exposures on the Scotch 12 claim between 4,500 and 6,000' in elevation (Plate 9, Appendix XII).

The area is underlain entirely by the Hickman pluton. Alkaline series rocks represented are quartz monzonite to monzodiorite in composition. A fracture-joint orientation trending north, northwest and north by northeast with steep easterly dips cut the pluton. It is these fractures that host the gold mineralization.

Mineralization consists of massive magnetite-quartz-tourmaline-chalcopyrite-pyrite veins and shears that range in width from less than 0.5 meters to 10.5 meters. Zones can be traced on surface in excess of 50 m. The veins and shears are enveloped by potassically altered wallrock which grades outward into a weak phyllic zone and abruptly into a propylitic alteration zone. In addition, veining and shearing has created intense brecciation of the wallrock and breccia fragments within these zones are potassically altered. Mineralized zones are commonly marked by abundant malachite staining, as well as jarosite, goethite and manganese oxide. Grab and continuous chip samples yielded gold values up to 3,050 ppb Au and copper values in excess of 99,999 ppm. Some representative samples from this area are listed in Table 5.

**TABLE 5**  
**TROPHY PROJECT**  
**ASSAY COMPILATION**  
**MAGNETITE - CHALCOPYRITE - SYENITE BRECCIA**

<u>Sample Type</u>	<u>Sample Number</u>	<u>Width (m)</u>	<u>Assay / Geochemistry</u>				
			<u>Au ppb</u>	<u>Ag ppm</u>	<u>Pb %</u>	<u>Zn %</u>	<u>Cu ppm</u>
Chip	BL 4775	1.5	420	1.8	-	-	5,926
Chip	BL 4776	1.5	545	2.5	-	-	11,554
Chip	BL 4779	0.5	1,755	18.7	-	-	43,599
Chip	BL 4786	1.5	1,020	3.1	-	-	7,427
Grab	BL 4791	-	240	2.9	-	-	99,999

**TABLE 5 CONTINUED**

Sample Type	Sample Number	Width (m)	Assay / Geochemistry				
			Au ppb	Ag ppm	Pb %	Zn %	Cu ppm
Chip	BL 4792	1.2	2,760	24.1	-	-	89,879
Chip	BL 4796	1.6	1,650	9.1	-	-	27,776
Chip	BL 4797	2.0	1,340	4.6	-	-	21,362
Chip	BL 4803	0.30	540	6.3	-	-	17,980
Grab	PB 6334	-	1,100	23.6	-	-	47,481
Float	PB 6339	-	1,180	11.2	-	-	48,078
Chip	KM 5346	1.5	810	4.5	-	-	16,263
Chip	KM 5347	1.5	630	8.1	-	-	21,223
Chip	KM 5352	1.5	480	2.7	-	-	7,278
Chip	KM 5354	1.5	1,860	13.3	-	-	49,926
Grab	KM 5355	-	2,060	12.3	-	-	29,171
Grab	KM 5356	-	2,310	9.8	-	-	20,571
Chip	KM 5357	1.5	690	3.0	-	-	2,629
Float	BA-4388	-	3,090	20.9	-	-	99,999
	BM 7427	-	1,635	8.1	-	-	31,301

**Note:** 1 oz/T = 34.2 ppm  
10,000 ppm = 1.0%

**Magnetite - Chalcopyrite Skarn**

Magnetite - chalcopyrite skarn hosted mineralization was discovered on the west side of the South Scud River (Trophy 3 claim) colinear with a regional northeast structure trending through the 'Bear Pass' discoveries of 1987 (see Plate 9, Appendix XII).

Skarn mineralization here is hosted by Permian crinoidal limestones with minor cherts or silicified limestones. Andesite dykes cross-cut the limestone and appear to be spatially related to some of the skarn mineralization. Intense shearing and strong fracturing effect the entire mineralized zone. Skarn mineralization is typified by a fine-grained green mineral - possibly diopside, in addition to



**TABLE 6**  
**TROPHY PROJECT**  
**ASSAY COMPILATION**  
**MAGNETITE - CHALCOPYRITE SKARN**

<u>Sample Type</u>	<u>Sample Number</u>	<u>Width (m)</u>	<u>Assay / Geochemistry</u>				
			<u>Au ppb</u>	<u>Ag ppm</u>	<u>Pb %</u>	<u>Zn %</u>	<u>Cu %</u>
Chip	PB 6225	2.6	1,150	1.6	-	-	1.06*
Chip	PB 6226	2.5	105	2.2	-	-	0.37*
Chip	PB 6393	1.0	470	5.6	-	-	1.35*
Chip	PB 6394	1.0	420	4.5	-	-	1.31
Chip	PB 6395	1.0	490	4.4	-	-	1.58
Chip	PB 6396	1.0	430	3.8	-	-	1.77
Chip	PB 6397	1.0	1,290	3.8	-	-	1.1
Grab	KM 2529	-	435	3.2			1.78
Chip	BA 4262	1.0	830	1.4	-	-	0.29
Float	4263	-	1,020	0.8	-	-	1.60
Float	4265	-	810	2.1	-	-	1.66
Chip	4266	1.0	890	4.0	-	-	0.26
Chip	4267	1.0	660	4.5	-	-	0.72
Chip	4268	1.0	260	1.9	-	-	0.21
Grab	4271	-	92	2.0	-	-	2.74

\* denotes calculated value from ppm value

massive lensoid and lenticular magnetite bodies. Recrystallization of the limestone is obscured by the intense shearing and fracturing. Limonite and goethite oxidation is especially well-developed in the areas of intense shearing. Clay-sericite-quartz-carbonate alteration is strong in the highly fractured/sheared cherts or silicified limestones. Fractures in this silicified material are typically malachite-stained, but visible chalcopyrite is rare. This material, while not showing abundant sulphides, does show a marked enrichment in zinc with a high of 5.4% Zn found in a locally derived piece of float. Copper is enriched in this clay-rich material to 0.5%.

Highly anomalous gold values correlate well with magnetite-rich zones. Gold values up to 1,290 ppb and copper values to 17,750 (1.78%) were obtained from these magnetite rich zones. Table 3 summarizes some of the other precious and base metal values. This metallogeny bears a striking resemblance to Gulf International Minerals Ltd., McLymont Creek property located in the Iskut River Gold Belt. On this property magnetite-chalcopyrite skarn mineralization is hosted within crinoidal Permian limestone and drilling has returned intersections of up to 36.5 feet of 1.61 oz/T Au.

#### **Trench Lake - Cu - Ag Vein Mineralization**

All mineralization in the area locally known as Trench Lake is related to a parallel set of 120° striking quartz and quartz carbonate veins of variable width (see Plate 9, Appendix XII). The veins range in width from 20 cm to over 1 m. Typically, in excess of 10 veins occur across a 50 m width. Veins typically contain the sulfides galena, sphalerite, chalcopyrite and pyrite.

All veins are enriched in base metals, especially copper, with subordinate values in lead and zinc. In addition they are often enriched in silver with values up to 96.6 ppm (2.8 oz/T Ag) being obtained (Table 7). There is a strong positive correlation between copper and silver in these veins. Gold was anomalous, with values up to 1,420 (0.035 oz/T) being returned from grab samples.

Most of the veins are hosted in either strongly foliated tuffs or massive to fractured andesites. Veins were also observed in chert, chert breccia and volcanic conglomerate in addition to minor veins, veins and blowouts in limestone to the south of Trench Lake.

**TABLE 7**  
**TROPHY PROJECT**  
**ASSAY COMPILATION**  
**TRENCH LAKE MINERALIZATION**

Sample Type	Sample Number	Width (m)	Assay / Geochemistry				
			Au ppb	Ag ppm	Pb %	Zn %	Cu %
Grab	BA 4306	-	-	24.9	-	-	1.54*
Grab	BA 4312	-	-	58.7	-	-	2.83*
Grab	BA 4314	-	-	27.4	-	1.51*	1.62*
Grab	BA 4316	-	1,420	22.0	-	2.76*	1.30*
Chip	BA 4320	0.50	-	30.5	-	-	1.96*
Float	BA 4322	-	-	71.5	-	-	3.84*
Grab	BA 4325	-	-	32.2	-	-	2.52*
Float	PB 6277	-	-	47.5	-	-	3.75*
Grab	PB 6278	-	-	60.0	0	0	3.50*
Grab	PB 6279	-	-	96.9	-	-	5.6*

\*denotes calculated value using the conversion  
10,000 ppm = 1%

#### Limestone Hosted Shears

Late in the field season base and precious metal bearing shears were found hosted within Permian limestone (see Plate 9, Appendix XII). Only three samples were taken, and all three were very anomalous in base metals and gold (see Table 8).

Sample BA 4516 was taken from a silicified malachite stained shear zone with 3% pyrite and 1% chalcopyrite. The sample was anomalous in gold and copper, and very rich in zinc. Sample BA 4517 was taken 2 m along strike from BA 4516 and consisted of massive sphalerite, chalcopyrite and pyrite. This sample yielded spectacular results in zinc and very encouraging gold values. Sample BA 4518 was taken 2 m further along strike in similar host mineralization as BA 4516. Results

were very encouraging, with values of 0.20 oz/T Au and 4.5 oz/T Ag being returned.

**TABLE 8**  
**TROPHY PROJECT**  
**ASSAY COMPILATION**  
**LIMESTONE HOSTED SHEAR MINERALIZATION**

Sample Type	Sample Number	Width (m)	Assay / Geochemistry				
			Au ppb	Ag ppm	Pb %	Zn %	Cu %
Grab	BA 4516	-	199	7.3	46	2.4*	2201
Chip	BA 4517	0.50	.05 oz/t*	3.5 oz/t*	177	10%	1.5%*
Grab	BA 4518	-	0.20 oz/t*	4.5 oz/t*	1426	7162	3473

\* denotes calculated values using the following conversions:  
Au 34,300 ppb = 1 oz/t  
Ag 34.3 ppm = 1 oz/t  
base metals 10,000 ppm = 1%

#### Other Gold Showings

Numerous other gold showings were discovered during the 1988 field season. Many of these showings are associated with regional faults and shears. Sulphides identified with these include chalcopyrite, pyrite, galena, sphalerite and arsenopyrite.

On the Glacier 12 claim (Plate 9, Appendix XII), on the east bank of Galore Creek, gold associated with massive chalcopyrite veining was discovered. Host to this vein is a highly sheared and fractured mafic volcanic rock. Values to 2760 ppb Au, 1.94 oz/t Ag and 8.30% Cu were returned from this vein system (see Table 9). Widths varied from 15 cm to 1.0 m, and the vein could be traced in excess of 100 m.

Similar metallogeny was discovered in the northwest quadrant of the Glacier 5 claim (Plate 9, Appendix XII). Here a 15 to 50 cm wide chalcopyrite vein hosted within a sheared intermediate volcanic carries up to 40% coarse-grained chalcopyrite and 10% pyrite. Chip samples over 15 cm assayed 0.20 oz/t Au, 15.57 oz/t Ag and 17.49% copper, (Table 9). This zone could be traced in excess of 50 m.

**TABLE 9**  
**TROPHY PROJECT**  
**ASSAY COMPILATION**  
**GLACIER CHALCOPYRITE VEINS**

Sample Type	Sample Number	Width (m)	Assay / Geochemistry				
			Au ppb	Ag ppm	Pb %	Zn %	Cu %
<b>Glacier 12 Claims</b>							
Grab	BM 7324		49	2.0 oz/t*			
Chip	BM 7325	1.0	1,340	7.9			0.42
Chip	BM 7328	0.75	2,010	24.6			1.94*
Chip	BM 7329	0.30	1,165	6.9			2.26*
Grab	BM 7330	-	2,360	13.2			8.30*
Grab	BM 7333	-	2,760	1.94 oz/t*			8.30*
Chip	BM 7334	0.60	530	26.7			1.36*
Float	BM 7335	-	725	10.6			3.72*
Chip	BM 7336	0.15	350	10.0			2.15*
Grab	LB 5747	-	60	2.06 oz/t*			9.47*
Grab	LB 5749	-	1,280	14.0			1.08*
Grab	LB 5750	-	6	0.9			1.03*
Grab	LB 5752	-	570	12.7			1.95*
<b>Glacier 5 Claims</b>							
Chip	PB 6388	0.50	760	3.54 oz/t			
Grab	PB 6389	-	.122 oz/t	11.7 oz/t			
Chip	PB 6391	0.15	.20 oz/t	15.57 oz/t			17.49

\* denotes calculated values using the following conversions

Au: 34,300 ppb = 1 oz/t

Ag: 34.3 ppm = 1 oz/t

base metals: 10,000 ppm = 1%

Southeast of Trench Lake numerous quartz-calcite base metal veins similar to those around Trench Lake were discovered (Plate 9, Appendix XII). Sample #BA-4334 and BA-4535 returned significant base metal and silver values and anomalous gold values (see Table 10). Sample BA-4343 was interesting in that the host was a brecciated limestone lens within laminated contorted limestones, containing 25% pyrite, 1% visible chalcopyrite, trace galena and trace sphalerite as breccia matrix. This sample returned values of 4.42 oz/t Ag and 4.71% Cu with anomalous gold.

**TABLE 10**  
**TROPHY PROJECT**  
**ASSAY COMPILATION**  
**SOUTHEAST OF TRENCH LAKE**

<u>Sample Type</u>	<u>Sample Number</u>	<u>Width (m)</u>	<u>Assay / Geochemistry</u>				
			<u>Au ppb</u>	<u>Ag opt</u>	<u>Pb %</u>	<u>Zn %</u>	<u>Cu %</u>
Grab	BA 4334	-	295	12.2	2.42	3.48	2,084*
Grab	BA 4335	-	206	3.15	1.51	1.26	627*
Grab	BA 4343	-	305	4.42	442*	3,999*	4.71

\*denotes ppm for Ag and base metals

On the Glacier 3 claim a narrow pyritic shear is hosted in strongly fractured andesites. This shear consists of a quartz boxwork texture with 90% strongly weathered pyrite. Values to 0.268 oz/t Au were obtained.

In the northwest quadrant of the Glacier 5 claim, limited sampling and prospecting on a large, highly ankeritized, sheared volcanic unit returned 2,380 ppb Au (Sample #BA 4299) with anomalous silver, copper, lead and zinc. The alteration consists of iron carbonate and sericite with very little visible sulphides, and effects a 75 m x 50 m area. The resultant gossan is highly visible.

**TABLE 11**  
**TROPHY PROJECT**  
**ASSAY COMPILATION**  
**MISCELLANEOUS GOLD ZONES**

Sample Type	Sample Number	Width (m)	Assay / Geochemistry				
			Au ppm	Ag ppm	Pb ppm	Zn ppm	Cu ppm
<b>Glacier 3</b>							
Grab	BA 4280	-	0.268 oz/t	2.9	9	9	233
Chip	BA 4395	15	2,290	1.5	18	9	12
<b>Glacier 5</b>							
Chip	BA 4299	20x20cm	2,380	0.9	15	7	322
Grab	BA 4365	-	0.123 oz/t		9.78	2.48%	
Grab	BA 4366	-	3055	5.8 oz/t	2.18%	6.29%	
<b>Glacier 8</b>							
Grab	BM 7424	-	2.63 oz/t	27.2	271	308	187
Grab	LB 5771	-	0.56 oz/t	7.1	113	39	174
Chip	BA 4384	5 cm	4,120	1.0	14	139	10
<b>Saddle 14</b>							
Grab	BA 4428	-	1,090	6.0	137	125	6,873
Grab	BA 4422	-	0.73 oz/t	9.7	27	4,513	116
Grab	PB 6357	-	3,285	6.8	68	28	400

In the southeast quadrant of the Glacier 5 claim a 10-25 cm shear hosted in fragmental volcanoclastic rocks and laminated black siltstones, contained 8% chalcopyrite and 10% to massive galena with possible trace tetrahedrite, (Samples BA 4365 and 4366 (Table 11)).

On the Glacier 8 claim (Plate 9, Appendix XII) extremely high grade gold mineralization has been found in arsenopyrite rich quartz - carbonate - iron carbonate veins. The veins are 5 to 10 cm wide and contain 5-8% arsenopyrite.

Attendant wallrock alteration up to 50 cm on either side of the vein consists of iron carbonate, quartz and sericite. The surface expression of this alteration is manifested by a bright orange-brown weathering. Values to 90,300 ppb Au or 2.63 oz/t Au were obtained in grab samples (see Table 11, Samples BM 7424, LB 5771, BA 4384).

On the Saddle 14 claim, limited prospecting in plagi-phyrlic volcanics returned impressive gold values of up to 0.73 oz/t (see Table 11; Samples BA 4422, 4428 and PB 6357). Sulphide mineralization consisted of 5-10% fracture controlled and disseminated pyrite and trace chalcopyrite.

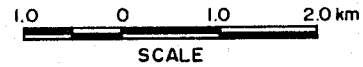
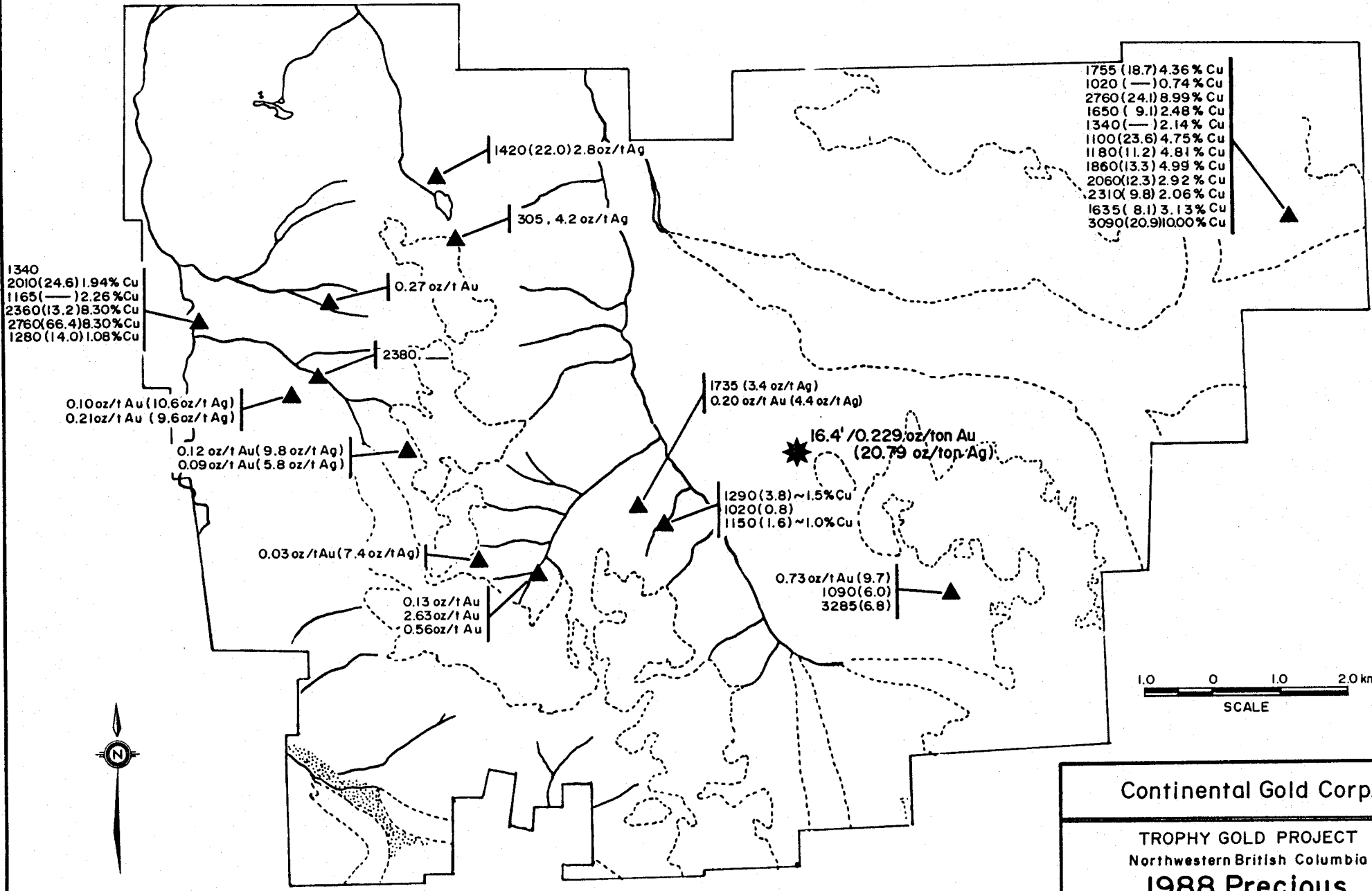
### **Silt Geochemistry**

A limited number of silt samples were taken during the 1988 mapping and prospecting program (see Table 12). Sample locations are plotted on 1:10,000 field maps. Samples which returned values greater than 70 ppb Au are plotted together with their gold and silver values on the 1:20,000 Sample Location Map (see Appendix XII, Map 10). A consistent anomaly is indicated by samples BM 7314, BA 4292 and 4302 on the east side of Saddle Creek in the Glacier 12 and Glacier 5 claims. Another anomalous area is indicated by Sample 7372 and BM 7381 on the Glacier 8 claim. Both of these areas show a marked concentration of rock samples with anomalously high gold values.



**TABLE 12**  
**1988 Silt Samples**

<u>Sample</u>	<u>Claim</u>	<u>Au</u>	<u>Ag</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>
BM 7314	Glacier 12	89	.4	311	25	84
7315	Glacier 12	26	.4	254	19	75
7366	Glacier 8	37	.5	105	40	87
7372	Glacier 8	117	0.7	142	30	127
7378	Glacier 8	52	0.6	69	23	82
7379	Glacier 8	26	0.5	80	15	72
7381	Glacier 8	71	0.6	19	36	143
7382	Bear 1	9	0.1	163	3	54
BA 4461	Saddle 14	61	.5	350	45	208
4462	Saddle 14	12	.5	210	40	151
4346	Glacier 4	5	0.1	72	12	70
4386	Glacier 8	24	.5	82	10	87
4292	Glacier 5	103	.2	130	13	55
4302	Glacier 5	75	1.0	148	39	100
4297	Glacier 12	25	.5	82	10	87
4386	Glacier 8	24	0.5	82	10	87
Pb 106290	Glacier 2	22	.3	87	16	140
6200	Trophy 3	40	0.1			
6201	Trophy 3	3	0.1			
6203	Trophy 3	325	0.3			
BM 7541	DOK 6	13	0.2	94	21	76
7543	DOK 5	1	0.3	132	16	57
BA 4470	Catto	1	0.3	14	15	349
4297	Glacier 12	29	.5	134	33	86
LB 5741	Glacier 12	5	.2	101	12	59
BM 7437	Catto 1	142	2.2	837	84	482
PB 638408	Catto 2	5	2.4	108	22	574
KM 5324	Glacier 6	211	0.7	152	19	73-3/4



★ LOCATION OF THE 1987 DISCOVERIES:  
PTARMIGAN, HUMMINGBIRD AND EAGLE  
PRECIOUS-METAL-BEARING STRUCTURES

Note: Values shown in ppb Au  
(ppm Ag), unless otherwise  
noted.

<b>Continental Gold Corp.</b>			
TROPHY GOLD PROJECT Northwestern British Columbia			
<b>1988 Precious Metal Discoveries</b>			
Llard Mining Division			
Drawn by: B.A.M.	Date: Oct., 1988	NTS:	Figure: 8

## 5.0 TROPHY 1-4 CLAIMS DETAILED GEOLOGY

### 5.1 Introduction

During the 1988 exploration season, detailed geological mapping over 840,000 m<sup>2</sup> of the Trophy 1-4 claims was conducted at a scale of 1:1,000. This work was undertaken with the aid of topographic base maps and a grid system established at the start of the field season for control. This control grid was set at 50 meter intervals using hip chains and slope corrections for control, with the baseline trending 035°. Geologic and sample location maps of the Trophy 1-4 claims at 1:1000 and 1:2500 scales are located in Appendix XII (Plates 11, 12 and 13).

### 5.2 Stratigraphy

The Trophy 1-4 claim is underlain by both stratified, unstratified and intrusive rocks. The stratified units include massive Permian limestone, dark grey Middle Triassic cherts and cherty argillites and Triassic intermediate volcanic tuffs. The unstratified rocks include conglomerate and breccia units. The Middle Triassic Hickman pluton intrudes the chert and volcanic tuff units. The conglomerate and breccia units contain fragments of the intrusive rock and thus appear to be contemporaneous or, more likely, younger in age than the Hickman pluton. A generalized stratigraphic section for the Trophy 1-4 claims is presented in Table 13.

#### **Unit 1 - Limestone**

The oldest rocks on the Trophy 1-4 claims are thick sections of massive Permian limestone which correlate with Unit 3 of Souther (1972). This light grey to white, relatively pure limestone is characterized by local occurrences of crinoid and bryozoan fossils (Read, 1988). This unit contains 0.5 to 1.0 meter thick interbeds of fine argillaceous or tuffaceous material. Blocks or nodules of massive sulfide consisting of pyrrhotite, galena, sphalerite and pyrite, have been identified within the 300 to 700 meter thick limestone section on the claims. In places near

TABLE 13

**Stratigraphic Column - Trophy 1-4 Claims**

**Upper Jurassic(?) or Eocene**

- 11 Felsic Dykes
- 10 Heterolithic intrusive breccia
  - a Monolithic intrusive breccia
  - b Monolithic volcanic breccia
- 9 Heterolithic tectonic breccia
  - a Chert breccia
  - b Conglomerate
- 8 Garnet diopside skarn
  - a Altered volcanic breccia
  - b Altered limestone breccia
- 7 Granodiorite
- 6 Rhyolite dykes

**Lower Jurassic**

- 5 Hickman pluton (monzonite to quartz monzonite, local syenite)

**Middle and (?) Upper Triassic**

- 4 Stuhini group (massive intermediate tuffs and flows)

**Middle Triassic**

- 3 Light grey limestone
- 2 Argillite, chert

**Permian**

- 1 Massive limestone

the top of Unit 1, the limestone appears recrystallized and is characterized by a small proportion of fine granular quartz which gives the weathered surface a pitted texture. Close to the granodiorite plug on Trophy 3 claim, the marble is whitened and skarnified.

Excellent exposures of Unit 1, as prominent bluffs and ridges, occur on the Trophy 1 and 3 claims between elevations of 1,350 and 1,500 meters.

### **Unit 2 - Chert**

Stratigraphically overlying the limestones of Unit 1 and bounding them to the east, is a massive to thinly bedded sequence of clastic rocks composed mainly of chert with minor interbeds of argillite, fossiliferous and argillaceous limestone, light grey fossiliferous limestone and black limestone. Typically dark grey to black in colour, the cherts of Unit 2 display distinct 2 millimeter to 25 centimeter bedding sequences, which give the chert a ribboned appearance.

Unit 2 forms a north-northwest trending belt on the property ranging in width from 50 to 100 metres, and is bounded to the east by an unconformably overlying volcanic sequence.

Generally, the chert unit is moderately to extremely well fractured and may be rust coloured due to weathering of the fracture surfaces.

Pyrite is ubiquitous throughout Unit 2, occurring as disseminations and 1 millimeter wide laminations.

### Unit 3 - Limestone

Two large blocks of light grey coloured limestone occur between 1,600 and 1,640 meter elevations are interbedded with the top of the chert sequence. Rare, isolated crinoid stem ossicles, star-shaped in cross-section, are identified as Pentacrinites and are likely Triassic.

### Unit 4 - Intermediate Volcanic Tuffs and Flows

Middle Triassic andesitic to rhyodacitic volcanic flows and pyroclastic rocks (massive tuffs, lapilli tuffs, tuff breccia) dominate this lower member of the Stuhini group and form a north-northwest trending belt overlying the cherts of Unit 2. Locally, massive augite porphyritic flows occur. Numerous dykes of intermediate to felsic composition cut the underlying chert and may have served as feeders to the volcanic package, which probably exceeds 500 meters in thickness. The intermediate volcanic rocks of Unit 4 are equivalent to Unit 8 on Souther's (1972) Telegraph Creek Map Sheet.

Rocks of Unit 4 are dense and structurally featureless. The volcanic rocks exhibit a fine to medium grained texture and range from dark green or grey-green to maroon in color. Augite porphyritic flows typically contain 25-30% dark green to black, sub to euhedral augite phenocrysts that average 3 mm across.

Composed chiefly of hornblende, augite, K-feldspar, plagioclase, chlorite, quartz pyrite and pyrrhotite, Unit 4 has locally undergone extensive hydrothermal characterized by silicification and pyritization. Quartz selectively replaces much of the primary mineralogy in this unit, resulting in a very hard siliceous, massive rock. Exposures characteristically weather a red-brown to yellow colour due to the oxidation of abundant disseminated pyrite and pyrrhotite.

The volcanic flows and tuffs of Unit 4 are moderately to extremely well fractured, with the dominant fracture sets trending northeast and northwest.

The faulted contact between the upper Triassic intermediate volcanic rocks of Unit 4 and the intrusive rocks of Unit 5 strikes north-northwest across Trophy property.

#### **Unit 5 - Hickman Pluton**

Granitic rocks of Unit 5 are grey to pink, medium to coarse grained, equigranular quartz-poor rocks with a range in composition including biotite hornblende quartz diorite, monzonite and syenite (Read, 1988). The facies most common on the Trophy claims are monzonite-monzodiorite.

Extensive outcrops of Unit 5 occur on the Trophy 3 and Trophy 4 claims at elevations ranging from 1,210 to 1,950 meters. Syenitic phases are composed of approximately 70% K-feldspar phenocrysts in a ground mass of K-feldspar pyroxene, epidote, biotite and minor quartz. Monzonitic phases have a much higher quartz content at the expense of K-feldspar, and may contain minor quantities of hornblende. All rocks contain chloritized and sericitized mafic minerals and common chlorite-epidote-quartz-feldspar fractures and shears. The alteration of the pluton is a result of low grade regional metamorphism which has affected all but the core of the pluton.

Except for a two kilometer long faulted portion of the southwestern contact of the pluton within the map area the remainder of the pluton appears to intrude the volcanics of the Stuhini Group (Read, 1988).

The Hickman pluton is radiometrically dated by the K-AR method at  $221 \pm 8$  and  $229 \pm 6$  Ma on biotite and hornblende respectively (Holbeck, 1988, p. 35).

#### **Unit 6 - Rhyolite Dykes**

White to pale green or light pink rhyolite dykes of 0.5 to 2.0 m widths crosscut most units on the Trophy 1 and 3 claims (Plate 12, Appendix XII). These dykes may be flow-banded and may contain plagioclase phenocrysts in addition to the characteristic rounded quartz phenocrysts ("quartz-eyes").

The rhyolite dykes outcrop between 1,580 and 1,660 meters elevation and are traceable over 30 meter distances on surface, generally trending 005° and dipping to the northwest. Locally, the rhyolite dyke contains 5-10% wall rock fragments consisting of chert, limestone and volcanics.

A swarm of seven dykes crosscut a volcanic tuff outcrop located approximately 150 meters northwest of the L.C.P.

#### **Unit 7 - Granodiorite**

A fine to medium grained, equigranular hornblende, biotite bearing granodiorite or quartz-monzonite (Read, 1988) plug outcrops over 62,500 m<sup>2</sup> at elevations below 1,520 meters in the center of the Trophy 3 claim. Light grey coloured on fresh surfaces, the slightly foliated intrusive rock weathers to buff. Unit 7 intrudes the limestone, chert and volcanic units and is located adjacent to skarn units B, C and D. Also, the granodiorite unit is spatially, and may be genetically, related to numerous rhyolite dykes (Unit 6) observed in the Trophy 3 claims.

Read, (1988) considers this unit Eocene in age because of compositional similarities to radiometrically dated intrusions in the Galore Creek area.

#### **Unit 8 - Garnet Diopside Skarn**

Several skarnified limestone outcrops are located on the Trophy 1 and 3 claims, including the Hummingbird Skarn, Skarn B, Skarn C and Skarn D (Plate #12, Appendix XII).

The Hummingbird Skarn, located at 1,585 meters elevation, is the result of contact metamorphism of the light grey Mid-Triassic limestone unit (Unit 3). This skarn unit is characterized by the mineral assemblage garnet, calcite, diopside, quartz and chlorite as well as the sulfides chalcopryrite, pyrrhotite and pyrite. Sulfides occur as disseminations and fracture fillings. Weathered surfaces typically display a green-blue colour due to the presence of malachite and azurite.



The Hummingbird Skarn covers an area of 2,100 square meters and drilling shows that it extends to at least 15 meters below surface.

Numerous dykes of intermediate to rhyolitic composition crosscut the Hummingbird Skarn and massive sulfide pods outcrop along the southern contact between the skarn and the adjacent silicified volcanic breccia unit (see Mineralization section 5.4).

Unit 8A corresponds to a hydrothermally altered intermediate volcanic breccia unit that outcrops south and southwest of the Hummingbird Skarn. The volcanic rock is highly silicified and locally resembles a light-coloured chert. On fresh surfaces, Unit 8A is light grey or pale pink-pale green and on weathered surfaces it is rusty brown.

At the Skarn B and C outcrops (Plate 11, Appendix XII), Permian limestone (Unit 1) has been metamorphosed, resulting in the characteristically mottled, pale pink and pale (pistachio) green, massive skarn rock. The skarnified limestone weathers a dark to rusty brown. It is composed chiefly of garnet, chlorite, diopside, calcite, quartz, epidote, actinolite, magnetite, pyrrhotite, minor chalcopyrite and sphalerite. Garnets may form 2-5 centimeter knotted clots.

A total of approximately 4,500 square meters of skarnified limestone is represented by the Skarn B and C outcrops.

Unit 8b corresponds to Skarn D, a metasomatically altered limestone breccia, previously named the QBO, or quartz breccia oxide unit. This unit has a minimum exposed width of 15 meters and is located 60 m southeast of skarn C, at an elevation of 1,580 meters on the Trophy 3 claim. Primary textures and mineralogy have been obliterated. The unit is characterized by a mottled, brecciated appearance, extremely siliceous nature and is white to green.

No primary sulfides remain in the brecciated unit and it appears highly oxidized, with goethite and jarosite comprising approximately 15-35% of the rock and quartz, sericite and iron carbonate making up the rest. Skarn D rocks weather dark red-brown to yellow.

The Skarn B, C and D outcrops are all located within 20-30 meters of a granodiorite plug (Unit 7) and associated rhyolite dyke complex on the Trophy 3 claim. The intrusive body is the source of metasomatic fluids that altered the nearby limestone (Unit 8) volcanoclastic (Unit 8a) and limestone breccia (Unit 8b) units. It is most likely the heat source at the Hummingbird skarn as well and is thus related to the formation of the massive sulfide lenses in that region. The granodiorite-rhyolite complex is thought to extend below the 17,500 square meters of skarnified rocks (Unit 8, 8A and 8B) on the Trophy 3 claim. This is suggested because it is observed in drill core from the Hummingbird zone and because the metasomatized aureole in adjacent rocks is only a few meters wide.

#### **Unit 9 - Heterolithic Tectonic Breccia**

Unit 9, typified by the 50 m high bluff of the QBS showing, is a heterolithic sedimentary block breccia of tectonic origin. This heterolithic breccia outcrops over an area of 19,500 square meters on the northeast trending Eagle structural zone (see Section 5.3) and it is located approximately 400 meters northwest of the LCP (Plate 12, Appendix XII).

Subangular to subrounded clasts of massive pyroclastic rocks, banded chert, minor monzonitic and rhyolitic rocks, and subrounded blocks of limestone are poorly sorted in this chaotic breccia unit. Clasts range from 30 cm to 2 m in diameter and the southwestern margin of the breccia contains blocks of Permian limestone up to 25 m across. The heterolithic breccia is grey-green in color and weathers rusty brown. The matrix of this clast-supported breccia consists of sparry calcite, fine grained quartz, iron oxide minerals and minor pyrite and pyrrhotite disseminations. Unit 9 has undergone mild carbonate and silicic alteration.

The northern extent of this tectonic breccia unit is represented by an outcrop of brecciated chert (Unit 9a) named the Bear Pass zone. Chert fragments range in size from 0.5 to 20 cm and this monolithic breccia hosts disseminated pyrite as well as sulfide bearing veins. The Bear Pass chert breccia is considered to be the top of the banded chert (Unit 2) unit on the Trophy 1-4 claims and it is overlain by massive intermediate volcanic rocks (Unit 4).

A massive to poorly graded conglomerate (Unit 9b) crops out at the southern margin of the QBS showing, at an elevation of 1,670 meters on the Trophy 1 and 3 claims. This light to medium grey coloured unit consists of subrounded clasts of the same compositions as the heterolithic breccia unit (Unit 9). The conglomerate matrix consists of sand to clay sized particles of the constituent clast lithologies in addition to quartz, calcite and 1-2% disseminated pyrite and pyrrhotite.

#### **Unit 10 - Heterolithic Intrusive Breccia**

The heterolithic breccia of Unit 10, exposed in a north facing cirque at an elevation of 1,530 meters on the Trophy 2 and 3 claims, is considered to be of hydrothermal origin (Plate 11, Appendix XII). Surface dimensions of the exposed breccia body are approximately 400 m by 200 m in an irregular but roughly elliptical shape. Snow and talus obscures much of the lateral extent of Unit 10. Drilling has proven that the extent at depth is greater than 600 meters below surface. The breccia unit outcrops on the faulted contact separating intermediate volcanic tuffs (Unit 4) to the southwest and monzodioritic intrusive rocks (Unit 5) to the northeast. Unit 10 in part defines a northeast trending structural feature named the Ptarmigan zone (see Section 5.3).

The breccia unit is light grey to mauve brown colored on fresh surfaces and rust colored on weathered surfaces. Highly altered portions of the breccia outcrop appear bright yellow or orange in color. Unit 10 is a poorly sorted, clast supported breccia, generally composed of 85% clasts. Locally, matrix-supported facies and lenses of maroon-coloured grit displaying graded bed sequences occur within the breccia body.

Breccia clasts are generally subangular to subrounded and range in size from 1 cm to 1 m, with a modal clast size of 5-6 cm. At least 5 lithologies comprise the clasts within the breccia:

- a) Augite porphyry volcanics
- b) Dacitic and rhyolitic volcanics
- c) Fine grained pyroclastics
- d) Medium grained monzodioritic rocks
- e) Red quartz-plagioclase porphyritic rocks

The breccia body is considered to be contemporaneous with or slightly younger than the rhyolite unit because fragments of rhyolite occur in the breccia while skarnified material is absent.

The breccia matrix consists of crystalline quartz, chalcedonic quartz, iron-carbonate, sparry calcite, disseminated pyrite and minor amounts of comminuted rock, galena, sphalerite, chalcopyrite and arsenopyrite. The cement may be white to dark grey in color and disseminated pyrite generally constitutes 3-4% of the total composition. Open space textures are common and vugs are generally lined with quartz, calcite and varying amounts of sulfide minerals. In intensely altered zones within the breccia, stockwork style mineralization occurs, with sulfides constituting 100% of the matrix between clasts.

Intensely altered zones within the breccia body are characterized by the minerals quartz, calcite, iron carbonate, pyrite, sericite and chlorite. Silica flooding and moderate to weak carbonate alteration are common throughout the breccia body and sericitic alteration is locally intense. Also locally, clasts appear partially or totally pyritized. Where the breccia is most intensely altered, original clast textures and compositions are obliterated and the abundance of visible sulfides increases and clasts are partially replaced by pyrite. The most intensely altered zone occurs in the center of the breccia body. The alteration may be structurally controlled as it is most commonly observed in outcrops adjacent to a 140° trending fault that crosscuts the cirque.

The heterolithic breccia unit is crosscut by numerous fractures, dykes and veins (see Section 5.3). No associated intrusion has been identified on surface or at depth but Read (1988) suggests that the breccia body located in the cirque is related to the rhyolite-granodiorite/quartz monzonite complex (Units 6 and 7) of the Trophy 3 claim.

Marginal monolithic breccia facies surround the heterolithic breccia unit. To the north and northeast, a breccia primarily composed of tabular or angular to subrounded monzodioritic intrusive clasts (Unit 10a) separates the heterolithic breccia from the Hickman pluton of Unit 5 (Figure 9). Clasts are generally larger and may be chaotic or shingled in appearance in this unit. At the C zone east extension outcrop, this intrusive crackle breccia is characterized by intense ankeritic weathering and a matrix composed of dark grey to black chalcedonic quartz and up to 10% disseminated euhedral pyrite grains. Where it is exposed, the contact between Unit 10a and the Hickman pluton appears sharp.

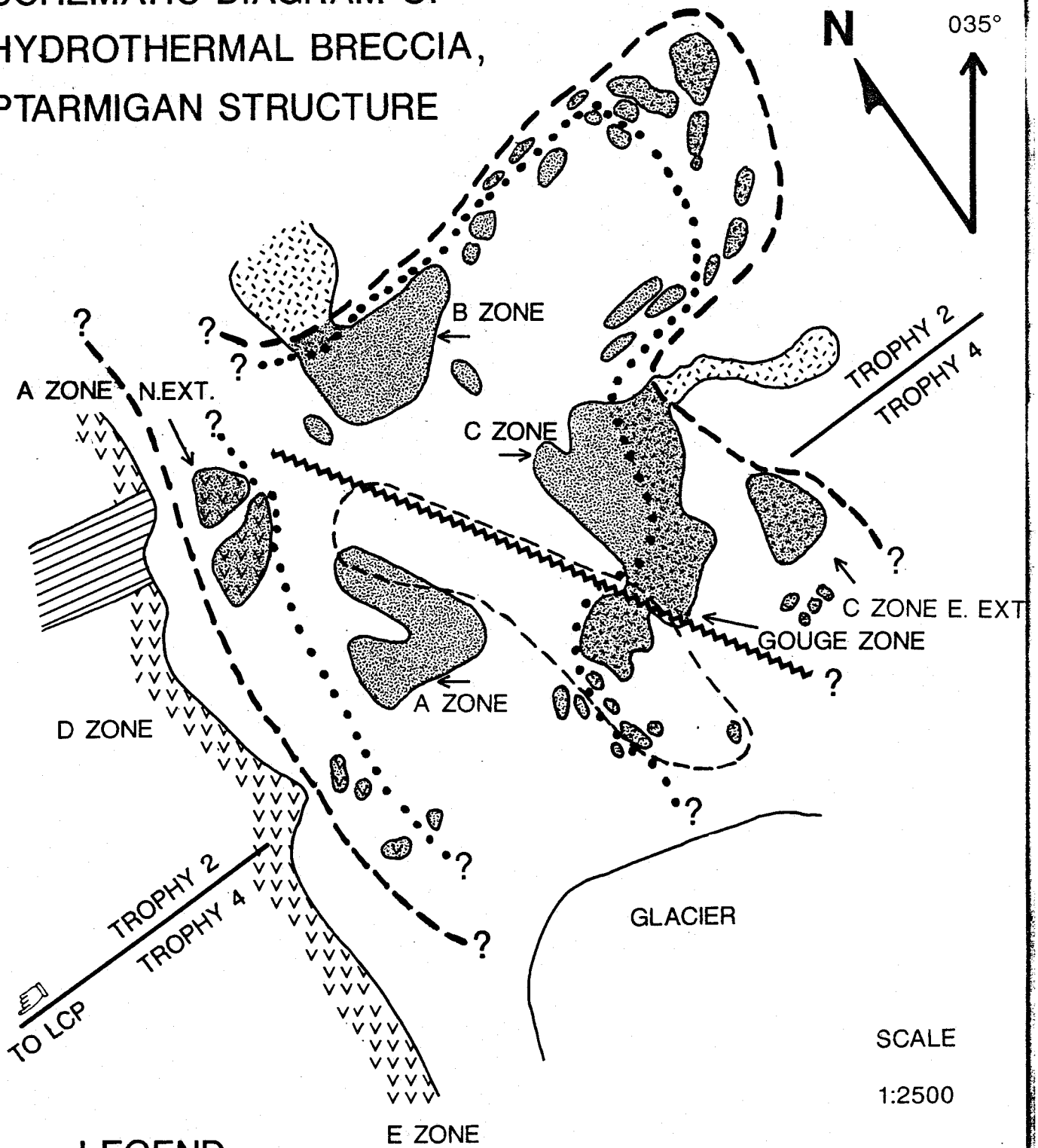
To the northwest and southwest, the heterolithic breccia unit is bordered by a dominantly monolithic breccia, composed of intermediate volcanic clasts (Unit 10b). These clasts commonly appear unrotated and are subangular in shape. The monolithic volcanic breccia has undergone moderate silicification but is not strongly altered to sericite. The contact between Unit 10b and the adjacent intermediate volcanic rocks is not well exposed.







#### **Unit 11 - Felsic Dykes**





Felsite dykes of Unit 11 intrude all pre-Cretaceous rocks on the Trophy claims and generally strike northeast or northwest, paralleling the dominant fracture orientation in the sedimentary and volcanic rocks.

Felsite dykes of Unit 11 are commonly highly fractured and deeply oxidized to a dull yellow-brown to cream colour. Within this unit phenocrysts of plagioclase and/or rounded quartz crystals are surrounded by a very fine grained ground mass of quartz, plagioclase, K-feldspar, biotite and hornblende.

# SCHEMATIC DIAGRAM OF HYDROTHERMAL BRECCIA, PTARMIGAN STRUCTURE



- ### LEGEND
-  HETEROLITHIC BRECCIA
  -  MONOLITHIC BRECCIA (INTRUSIVE)
  -  MONOLITHIC BRECCIA (VOLCANIC)
  -  MONZODIORITIC INTRUSIVES
  -  INTERMEDIATE VOLCANICS
  -  CHERT

-  BRECCIA PIPE BOUNDARY
-  HETEROLITHIC BRECCIA BOUNDARY
-  BOUNDARY OF INTENSE SERICITIC ALTERATION
-  FAULT ZONE

SCALE  
1:2500  
0 50  
meters

FIGURE 9

Typically finely banded, felsites of Unit 11 form dyke-like bodies ranging in width from 0.5 to 8.0 meters. One northeast striking 8 meter wide dyke crosscuts the Trophy area for over 500 meters (Plate 13, Appendix XII).

### 5.3 Structure

The structural history of the Trophy property has played a significant role in the development of the area. Both the Permian limestone (Unit 1) and the Mid-Triassic chert and argillite (Unit 2) units strike northwest (at approximately  $320^{\circ}$ ) and have steep ( $65^{\circ}$ ) to vertically dipping beds, locally overturned to the east. A 100 meter section of chert overlies the Permian limestone and sedimentary features indicate that the unit youngs eastward (Read, 1988).

The chert and limestone units are isoclinally folded, possibly involving the intermediate volcanic rocks (Unit 4) as well, and display an axial trace that generally trends  $330^{\circ}$  and plunges to the southeast. The near vertical chert outcrop in the cirque region (Plate 11, Appendix XII) may be the nose or southeastward extension of one isoclinal fold. This chert outcrop is cut off either by the intrusive breccia body or by the southeast trending fault that occur in the Ptarmigan zone.

Souther (1972) describes two phases of folding which can be recognized in the layered sequences on the Trophy property. The earlier,  $F_1$ , phase is commonly isoclinal and well developed in the chert unit, as described previously. The second,  $F_2$ , phase of folding results in brittle failure of the rocks and is seen as the detachment of fold limbs and noses.

Faults and fractures are abundant and are recognized in nearly all rock units on the Trophy 1-4 claims. The intermediate volcanic (Unit 4) and monzodioritic intrusive (Unit 5) units are separated, at least in part, by a fault contact (Read, 1988). The exposed fault contact northwest of the Ptarmigan zone dips  $25^{\circ}$  southwest but steepens to  $60^{\circ}$  in the outcrops located in the cirque.

The geology of the Trophy 1-4 claims is dominated by two major northeast trending (030°) shear zones. These are characterized by the presence of heterolithic breccia units, a northeasterly trending structural fabric and disseminated sulfide mineralization. A breccia of intrusive origin is located in the Ptarmigan zone and one of tectonic origin in the Bear Pass, QBS and Skarn D (QBO) outcrops of the Eagle zone. The major northeast trending structural zones crosscut folded sedimentary, volcanic and intrusive rock units and are likely related to tectonically-controlled lineaments. The age of formation of the Ptarmigan and Eagle structural zones is not well constrained but crosscutting relationships in the Ptarmigan zone indicate that structurally controlled fracture fillings are late in the geological history of the area.

### Ptarmigan Zone

Structural features observed in outcrops of the Ptarmigan zone, located in the cirque on Trophy claims 2 and 4, include several prominent fracture sets and a southeast trending fault trace.

Ptarmigan zone rocks are moderately to very well fractured. Most fracture surfaces are altered to ankerite, jarosite, goethite and scoradite, giving the cirque area its characteristic reddish brown to yellow weathered color.

The dominant structural fabric in the Ptarmigan zone is related to a persistent northeast trending (030°/80°SE) fracture set. These prominent fractures occur in the volcanic unit as well as in the breccia outcrops of A, A North Extension, B and C zones (Plate 11, Appendix XII). The northeast trending fractures are generally filled with quartz, calcite, pyrite, galena and sphalerite and they occur as isolated veins or as sheeted vein sets. The filled fractures are undeformed and continuous for lengths of up to 15 meters. The northeast trending fractures and veins are late in the geological history of the Ptarmigan zone as they are seen to crosscut many features: a) the individual clasts and pyrite mineralization in the breccia body, b) the contact between the breccia and monzodiorite units, c) a second prominent fracture set and d) a southeast trending fault zone in the cirque.



The second dominant fracture set in the Ptarmigan zone has a trend of approximately  $315^{\circ}$  and a variable (SW-NE), steep dip. Northwest trending fractures are generally more closely spaced and less commonly mineralized than the northeast trending fractures. Those northwest trending fractures that are filled have the same composition as the veins of the first set described. Unlike other outcrops in the cirque, only this second set of northwest trending mineralized veins occurs in the volcanic rocks of E zone.

A southeast trending ( $140^{\circ}/+60^{\circ}$ SW) fault crosses the breccia unit in the Ptarmigan zone. This fault is assumed to be the continuation of the faulted contact between the Triassic intermediate volcanic rocks and the monzodioritic Hickman pluton, (Read, 1988). In the cirque area, the fault is best identified as a five meter wide and 60 meter long zone characterized by several features: a) intensely altered and well fractured breccia outcrops, b) a 2.5 m wide zone of blue-grey fault gouge (clay), and c) a one meter wide felsic dyke that parallels the fault trace. Several felsic dykes in B zone parallel this fault as well.

The presence of fault gouge indicates relatively recent motion on the fault, however, the fault itself is crosscut by northeast trending mineralized veins. The last movement on this fault is considered to have been slight (eg., in the 10-100 meter range) since the contact of the breccia unit is not appreciably offset (Read, 1988). Slickensides in the gouge zone plunge  $56^{\circ}$  toward  $140^{\circ}$  and indicate that the last motion on the fault was reverse in nature, with the northeast block (the pluton) moving downward relative to the southwest block (the volcanic unit). A right lateral component of motion is also indicated by the oblique orientation of the slickensides.

Surficial mapping of the cirque area shows that the most highly altered outcrops in the breccia body occur adjacent to the southeast trending fault. This intense alteration zone is in turn associated with a visible increase in the abundance of sulfide minerals.

## Eagle Zone

Structural features in rocks outside of the Ptarmigan zone are more variable in orientation. Nevertheless, the two dominant fracture sets in the Eagle zone strike 300 to 340° and 010 to 030° and both sets have steep dips. These fractures are best developed in the chert and intermediate volcanic units.

Dykes and veins in the Eagle zone have variable orientations. Sulphide bearing quartz-carbonate veins at Bear Pass trend 065°/50-60°SE, 030°/85°SE and 120°/85°SW. Rhyolite, andesite felsite dykes throughout the Eagle zone trend in various directions, however, one 8 meter wide iron carbonate-altered northeast trending dyke outcrops over a 500 meter distance (Plate 13, Appendix XII).

### 5.4 Mineralization

#### 5.4.1 Introduction

Exploration during the 1987 field season identified 16 auriferous sulfide zones on the Trophy 1-4 claims through an extensive rock and stream sampling program. These and numerous other gold occurrences on the property were further investigated during the 1988 field season by the methods of soil, silt and rock geochemistry, detailed geological mapping, trenching and diamond drilling. The major emphasis of exploration in 1988 was drilling of several target zones and mineralized outcrops that were heavily sampled during the 1987 exploration season. For this reason, some 1987 geochemical values are noted in this section. For a more complete summary of 1987 results, see Continental Gold Corp.'s 1988 Trophy Assessment Report by D.B. Forster.

Gold mineralization on the Trophy claims is related to large scale northeast trending structural zones and skarns. During the 1988 exploration season, gold and silver assays of up to 1.41 oz/ton and 154.27 oz/ton, respectively, were obtained from shear zones, veins, hydrothermally-altered breccia and massive sulfide lenses.

Gold and silver occur with the base metals copper, lead and zinc in the form of sulfide minerals and sulfosalts. Associated gangue and ore minerals vary according to the type of mineralization.

Three northeast (035°) trending mineralized zones known as the Ptarmigan, Eagle and Hummingbird structures were noted in the 1987 exploration of the Trophy area. Detailed mapping and exploration on the Trophy property in 1988 substantiated that the Ptarmigan and Eagle zones control gold mineralization. Elevated gold values along the Ptarmigan zone occur in heterolithic and monolithic breccias as well as intermediate volcanic units. Along the Eagle structure they occur in chert breccia, heterolithic breccia, conglomerate and massive sulfide units. Quartz-carbonate veins bearing pyrite, sphalerite and galena (+ minor chalcopyrite) are also associated with the Ptarmigan and Eagle structures and yield anomalous gold, silver, lead and zinc values. Tables 14 and 15 list these 1988 samples collected on the Trophy 1-4 claims.

On the Trophy 1-4 claims, skarn units B and C and the Hummingbird Zone display mineralization resulting from the skarnification of Permian and Middle Triassic limestones, respectively. Skarn D, previously named the Quartz Breccia Oxide zone, is a mineralized, skarnified limestone breccia. Several massive sulfide lenses, with dimensions of roughly 0.5 m by 2-3 m, occur in skarnified limestone, chert and volcanic units south and west (within 70 meters) of the Hummingbird zone. Smaller massive sulfide pods are found in limestone northwest of Skarns B, C and D.

Skarn mineralization on the Trophy 1-4 claims is represented by the sulfides pyrite, pyrrhotite, chalcopyrite plus minor sphalerite and galena, oxide minerals goethite and jarosit. Gangue minerals include quartz, iron carbonate, calcite, tremolite, chlorite, garnet and diopside. Malachite, azurite, goethite and jarosite occur in fractures and on weathered surfaces.

#### 5.4.2 Mineralization Related to Major Northeast Trending Structures on the Trophy 1 -4 Claims

##### Ptarmigan Zone (A, A North Extension, B, C, D, E Zones)

###### a) Hydrothermally Altered Breccia

The Ptarmigan A, A North Extension, B, C, C East Extension and D gold showings, located at an elevation of 1,520 m in a north-facing cirque on the Trophy 1 and 4 claims, are hosted in an intrusive breccia unit (Plate 11, Appendix XII).

Disseminated and stockwork sulfide mineralization in the Ptarmigan zone is exposed over an elliptical area with dimensions of 400 m x 200 m. Both the marginal monolithic breccia units and the more central heterolithic breccia units are mineralized. Locally, the breccia appears bleached as a result of weathering and hydrothermal alteration. Auriferous sulfide mineralization is represented by pyrite, sphalerite, galena, pyrrhotite, minor chalcopyrite, and arsenopyrite. Trace tetrahedrite, electrum, native gold, native silver, Ti oxide, argentite, and possibly enargite, boulangerite, pyrargyrite and tennantite are observed in polished sections (pers. comm., J.G. Payne, Appendix VIII). In addition to these sulfides, the gangue minerals calcite or Fe carbonate, chalcedonic quartz and crystalline quartz comprise the matrix of the breccia pipe.

Pyrite is ubiquitous in the mineralized Ptarmigan zone and most commonly occurs as 0.5 to 2.0 mm subhedral to euhedral disseminations in the breccia matrix. It can comprise up to 10% of the rock. Pyrite stringers, fracture fillings, and blebs of 1-2 cm width and several cms length are common in the Ptarmigan zone. Both cockscomb textures and petrographic observation of pyrite (pers. comm., J.G. Payne) suggest that locally a gradation towards the marcasite structure occurs. Petrographic observation of polished sections has found that pyrite hosts minor to moderately abundant inclusions of chalcopyrite, galena, sphalerite, pyrrhotite, trace tetrahedrite, arsenopyrite, Fe-oxide and electrum as well as quartz, minor sericite and ankerite (pers. comm., J.G. Payne).

Pyrite, sphalerite, galena, minor pyrrhotite, chalcopyrite, arsenopyrite and minor gangue minerals commonly occur as stockwork mineralization and fill voids between clasts.

Open space textures, commonly lined with drusy quartz and euhedral pyrite grains, are formed where carbonate-rich matrix minerals have dissolved.

Petrographic observation has determined the following detailed relationships between the sulfides and other minerals in the intrusive breccia at the Ptarmigan zone:

- 1 Sphalerite occurs as anhedral to subhedral, medium to deep-brownish red colored grains of 0.05 to 2.0 mm size. These grains occur as inclusions in quartz or intergrown with dolomite and muscovite as inclusions in pyrite. Sphalerite grains may contain minor exsolution lenses of chalcopyrite or minor inclusions of chalcopyrite, pyrrhotite, galena and possibly electrum.
- 2 Galena grains, 0.5 to 1.5 mm across, are generally associated with sphalerite and can be intergrown with quartz, chalcopyrite and electrum. Euhedral galena grains are rarely observed.
- 3 Pyrrhotite forms irregular patches of fine to medium sized grains that are generally interstitial to pyrite and commonly altered to pyrite/marcasite. Pyrrhotite content in the heterolithic breccia unit increases with increased abundance of intermediate volcanic and/or monzonitic intrusive clasts or near the margins of the breccia body.
- 4 Chalcopyrite grains average 0.07 to 0.25 mm in size and occur as anhedral patches in contact with pyrite, sphalerite and pyrrhotite.
- 5 Arsenopyrite most commonly occurs as knots of 0.5 to 1.5 mm long blades in the highly sericitically altered heterolithic and monolithic breccia units. It also forms on fracture surfaces in the intermediate volcanic unit in the Ptarmigan zone. Subhedral disseminations of arsenopyrite in the breccia body are rare.

- 6 Native gold, argentite and electrum, in grains up to 0.05 mm long, occur as minor inclusions within pyrite grains and along grain boundaries of galena, sphalerite and pyrite.

Gold and silver values increase dramatically in samples from the most intensely altered outcrops of the breccia body in the Ptarmigan zone. The alteration mineral assemblage includes quartz, sericite, calcite and/or ankerite, chlorite, green illite, K-feldspar, kaolinite, goethite and jarosite. Silicic and carbonate alteration are relatively strong throughout the Ptarmigan zone, while moderate to advanced sericitic alteration occurs only locally. Alteration to chlorite, K-feldspar and clay minerals is minor.

The most intense sericitic alteration of rocks in the Ptarmigan zone is focussed along a southeast trending fault zone that transects the breccia body. Breccia outcrops west (up to 60 meters away) of this fault are bleached to pale green-gray and locally they are weathered to a bright orange-yellow color (i.e., the discovery outcrop, named 'A zone').

Sampling of bleached breccia outcrops located in a zone of fault gouge yielded gold and silver values of up to 0.126 oz/ton and 2.82 oz/ton respectively (Sample 9732, Table 15). Grab samples collected from the highly weathered A zone returned assays of up to 3.2 oz Au/ton and 324 oz Ag/ton and a 5 meter chip sample from A zone averaged 0.229 oz Au/ton and 20.8 oz Ag/ton (Forster, 1988).

b) Sulfide-bearing Veins

A strong northeast trending structural fabric is defined by the trends of both high grade veins and abundant fractures in the volcanic, intrusive and brecciated rocks located in the Ptarmigan zone. The dominant strike of veins in the breccia body is 030°/vertical, with a range of orientations from 020-035°/ 80° to vertical. A second dominant vein orientation is in the 310-330° azimuth range, with this vein set being offset by the northeast striking veins. Locally, northeast striking sheeted veins occur in zones up to 4 meters wide (eg., samples 6701-6704). The abundance of veins is locally seen to increase within 2 meters of the contact between the breccia and monzonitic units.

The mineralized veins in the Ptarmigan zone are considered to be late-stage features as outlined in Section 5.3.

The mineralized veins are up to 5 cm wide but are typically 0.5 to 1.0 cm wide and are exposed for several meters in length. Individual veins have been traced up to 15 meters along strike in the breccia body. The typical mineral composition of the veins is similar to the stockwork mineralization in the breccia body; chalcedonic to very fine grained quartz and lesser calcite (or dolomite, ankerite), pyrite, sphalerite and galena. Minor amounts of very fine grained muscovite (intergrown with calcite), K-feldspar, chlorite, chalcopyrite, pyrrhotite and arsenopyrite are common. Other minerals identified include native silver, argentite, electrum and tetrahedrite. Veinlets consisting of only one sulfide mineral such as pyrite, pyrrhotite or arsenopyrite, are less common. Sericitic alteration commonly bleaches the host breccia within 0.2 to 1 cm centimeters of the vein margins. Increased carbonate alteration also appears to be associated with the vein-type mineralization.

c) Massive Sulfide Shears in E Zone

The most southerly extension of the 035° trending, mineralized Ptarmigan structure occurs in the intermediate volcanic tuffs of E zone (Plate 11, Appendix XII). This site is located 175 m south of A zone, at an elevation of 1,670 meters; snow and talus obscure the Ptarmigan structure between A zone and E zone. E zone, situated immediately beneath the cirque rim, is snow-covered for much of the field season.

When exposed, the E zone volcanic rocks are more intensely fractured (dominant fracture trends are 035° and 290°) and hydrothermally altered than adjacent volcanic rocks.

Both shear-hosted and vein-type mineralization occur in E zone. Massive sulfide shears or lenses (up to 1 cm x 8 cm in size) are concentrated along prominent fractures and are composed of pyrite, arsenopyrite, pyrrhotite and chalcopyrite. One grab sample of massive sulfide mineralization (sample 9755) resulted in assays of 1.41 oz Au/ton and 13.3 oz Ag/ton, similar to values from samples

collected in 1987. Limited chip sampling of E zone gold mineralization in 1987 yielded assays of 0.556 oz Au/ton and 3.11 oz Ag/ton over 1.5 meters and 0.153 oz Au/ton and 0.81 oz Ag/ton over 3.0 meters. Sulfide-bearing veinlets and veins contain quartz carbonate, pyrite and arsenopyrite.

### Eagle Zone

#### a) Heterolithic and Chert Breccia Units

The Quartz Breccia Sulfide (QBS) and Bear Pass breccia units outcrop on the Trophy 1 claim at an elevation of approximately 1,670 and 1,580 meters respectively (Plate 12, Appendix XII). The breccias are located on the 035° trending Eagle structure and both host disseminated pyrite mineralization. Hydrothermal alteration of the QBS heterolithic breccia and Bear Pass chert breccia is less intense than that at the Ptarmigan zone and is represented by an alteration mineral assemblage including quartz + sericite + Fe-carbonate + K-feldspar. Iron oxide minerals, goethite and jarosite, are the result of oxidation of the hydrothermal sulfides present in the breccias and are the cause of the characteristic rusty-brown to orange-yellow weathered color of the rocks.

Disseminated mineralization in the QBS unit ranges from very fine grained subhedral or euhedral pyrite to patches of pyrite up to 1.5 mm in size. Pyrite grains in the QBS may contain replacement patches of quartz, calcite and chlorite or inclusions of tremolite. Minor pyrrhotite disseminations are visible in drill core and galena, sphalerite, tetrahedrite, electrum and native gold have been identified in thin section (pers. comm. J.G. Payne, 1988). Chip sampling in 1987 returned assays of up to 0.7 oz Au/ton and 8 oz Ag/ton over 2.0 meters.

Other forms of auriferous mineralization associated with the QBS unit include massive sulfide blocks and galena shears in large limestone clasts within the QBS. The massive sulfide blocks are composed mainly of pyrite and are thought to have replaced limestone clasts. The galena-bearing limestone clasts are very weathered, with a porous and highly oxidized appearance. Grab samples of this auriferous galena resulted in assays up to 4.3 oz Au/ton and 48.0 oz Ag/ton in 1987 (sample 1602) and 0.36 oz Au/ton in 1988 (sample 6726).



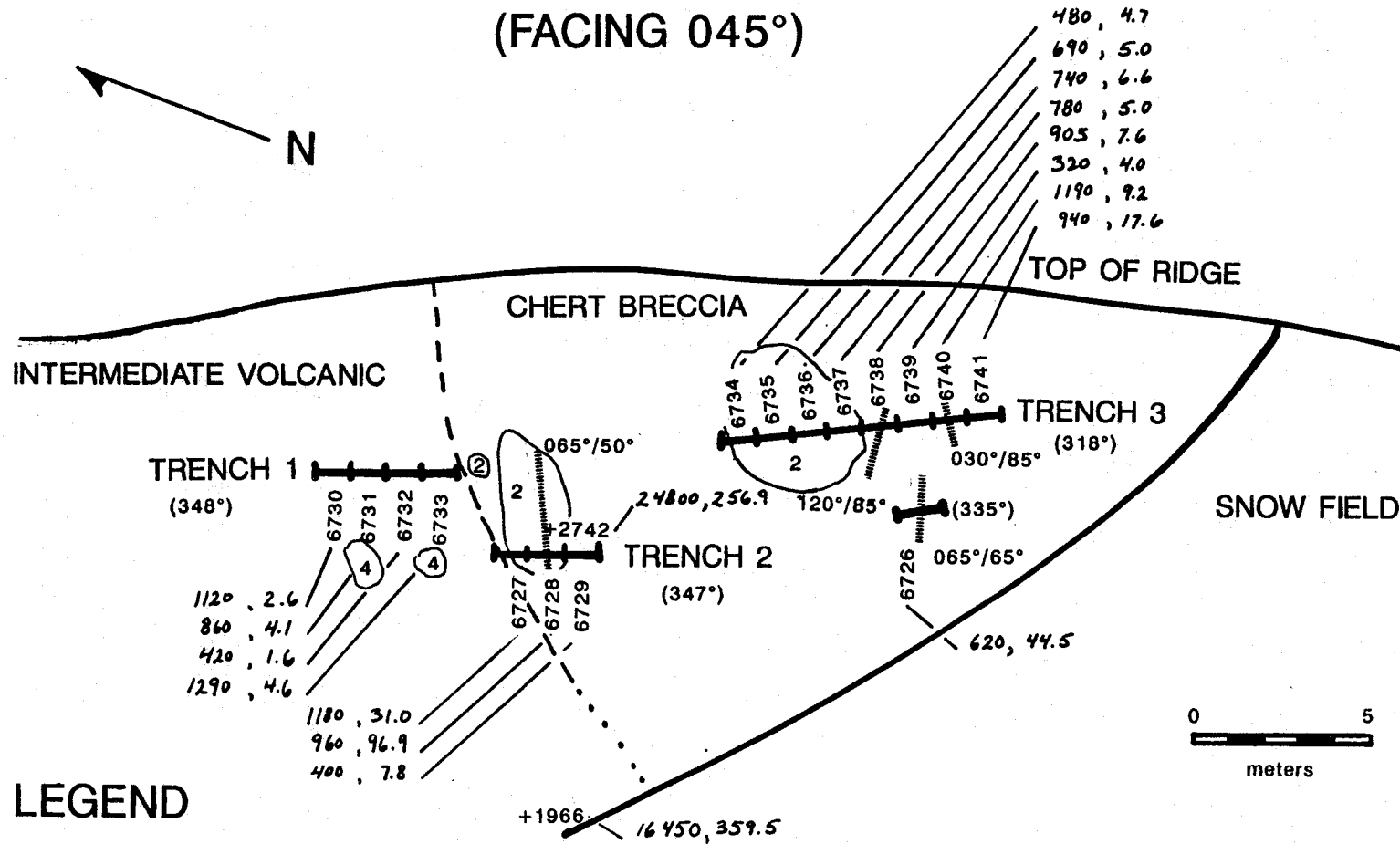
The Bear Pass breccia contains disseminated subhedral to euhedral grains of pyrite averaging 0.02 - 0.03 mm in size and comprising up to 4% of the rock. Values from previous 1.0 meter chip sampling (1987) ranged from 1130-1685 ppb Au. Another 1.0 meter chip sample across the chert breccia - massive tuff contact yielded 5990 ppb Au (0.175 oz/on Au). Trenches totalling 16.5 meters in length were blasted and sampled (samples 6726 - 6741) on the Bear Pass mineralized zone in 1988. Results are summarized in Table 14 and Figure 10.

b) Sulfide-bearing Veins at Bear Pass

Quartz veins and vein stockwork within the brecciated cherts and cherty argillites of the Bear Pass area contain gold-bearing sulfide mineralization (Figure 10). Three veins ranging from 3-7 cm in width and 065-075°/ 60° SE in orientation were identified at Bear Pass during the 1988 field season. Trenching revealed that these veins pinch and swell along strike. Drusy cavities as well as comb and cockade textures are displayed by the veins and stockworks. The relative order of abundance of minerals in these veins is galena, arsenopyrite, tetrahedrite/tennantite, pyrite, pyrrotite, sphalerite, chalcopyrite and ruby silver. Vein gangue minerals consist of quartz, carbonates (mostly calcite and iron carbonate), chlorite, jarosite and goethite.

Thin section investigation has identified the detailed relationships between sulfide minerals present in veins at the Bear Pass zone (pers. comm., J.G. Payne, 1988). Galena is found intergrown with quartz, tetrahedrite, chlorite, and possibly boulangerite. Arsenopyrite occurs as scattered, subhedral grains in patches comprised of galena and boulangerite. Pyrite is generally disseminated, in subhedral grains of 0.1 to 0.8 mm size. Chalcopyrite occurs as 1 mm patches within calcite grains and as 2 mm patches where it occurs adjacent to galena, tetrahedrite and boulangerite. Minor electrum, as grains averaging 0.03 to 0.08 mm in size, is intergrown with galena, tetrahedrite and boulangerite where they occur together.

# 1988 BEAR PASS TRENCHES (FACING 045°)



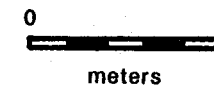
## LEGEND

- 2 BANDED CHERT BRECCIA
- 4 INTERMEDIATE VOLCANIC
- SULFIDE-BEARING VEINS
- GEOLOGICAL CONTACT

1988 SAMPLE  
 6733 6734

+2768 1987 SAMPLE

620, 44.5 Au (ppb), Ag (ppm)



CONTINENTAL GOLD CORP.  
TROPHY GOLD PROJECT

FIGURE 10

**TABLE 14**  
**Bear Pass Trench Samples 1988**

<u>Sample</u>	<u>Length</u> (in meters)	<u>Rock Type</u>	<u>Au</u> (ppb)	<u>Ag</u> (ppm)	<u>Cu</u> %	<u>Zn</u> (ppm)
6726	1.5	Chrt. bx., sulf. bearing vein	620	44.5	170	277
<b>Trench 1 (Trend = 348°)</b>						
6730	1.0	Volc., pyrite veinlet	1,120	2.6	37	647
6731	1.0	Volc.	860	4.1	47	568
6732	1.0	Volc., pyrite veinlet	420	1.6	35	527
6733	1.0	Volc.	1,290	4.6	45	757
<b>Trench 2 (Trend = 347°)</b>						
6727	1.0	Chrt. bx., dyke	1180	31.0	292	205
6728	1.0	Chrt. bx., sulf. bearing vein	960	96.9	265	319
6729	1.0	Chrt. bx.	400	7.8	84	203
<b>Trench 3 (Trend = 318°)</b>						
6734	1.0	Chrt. bx.	480	4.7	33	283
6735	1.0	Chrt. bx.	690	5.0	7.3	354
6736	1.0	Chrt. bx.	740	6.6	91	494
6737	1.0	Chrt. bx., volc/dyke	780	5.0	75	270
6738	1.0	Chrt. bx., sulf. bearing vein	905	7.6	104	807
6739	1.0	Dyke	320	4.0	49	153
6740	1.0	Chrt. bx., sulf. bearing vein	1,190	9.2	112	443
6741	1.0	Chrt./Chrt. bx.	940	17.6	123	670
<b>Other</b>						
9766	Grab	Chrt. bx., sulf. bearing vein (high grade)	0.37 (opt)	154.27 (opt)	4,423	2,639

- Note:**
- 1) Chrt. bx. = Chert breccia
  - 2) Sulf. bearing vein/veinlet = Vein/veinlet bearing galena + arsenopyrite + tetrahedrite + pyrite + pyrrotite + sphalerite + chalcopyrite + ruby silver
  - 3) Volc. = Intermediate volcanic tuff unit

Alteration of the Bear Pass consists of weak to locally moderate silicification, locally weak carbonate alteration and less common sericitization. Rare green illite was identified in drill core.

One grab sample of sulfide-rich stockwork mineralization (sample 1966) from the 1987 field season returned assays of up to 0.40 oz Au/ton and 65.3 oz Ag/ton and another grab sample of vein material yielded 0.723 oz. Au/ton and negligible Ag (sample 2742). A 1 meter continuous chip sample across vein and wallrock material returned a value of 5120 ppb Au. One grab sample collected in 1988 (sample 9766) returned an assay of 0.372 oz. Au/ton and 154.3 oz. Ag/ton (Table 14).

#### 5.4.2 Mineralization Related to Skarns

##### Skarnified Limestones

##### a) Hummingbird Zone

The Hummingbird Au-Cu-Ag mineralized zone is located at an elevation of 1,585 meters, approximately 235 meters northwest of the LCP, on the Trophy 1 claim (Plate 12, Appendix XII). Contact metamorphism of Mid-Triassic limestones (Unit 3) and minor cherts (Unit 2) has resulted in auriferous skarn mineralization. This mineralization occurs as disseminated blebs of pyrrhotite (up to 2-3% of rock), trace pyrite and chalcopyrite within the host skarn composed of garnet, diopside, calcite, chlorite and quartz. Weathered surfaces are dark brown in colour and are typically coated by malachite and azurite. Samples of the skarn mineralization collected in 1987 assayed up to 0.05 oz Au/ton, 1.91 oz Ag/ton and 0.81% Cu for a chip sample collected over one meter and 0.156 oz Au/ton, 2.36 oz Ag/ton and 4.28% Cu from a grab sample of sulfide bearing skarn. Average assays were approximately 0.04 oz Au/ton, 1.70 oz Ag/ton and 0.71% Cu over 1.0 meter. No surface samples were collected from this zone during the 1988 field season.

b) Skarns B, C and D

Mineralization in skarns B and C is similar to that in the Hummingbird skarn, with the sulfides pyrrhotite, chalcopyrite, minor pyrite and sphalerite being documented. The sulfides occur as 1-5 mm disseminations and can comprise up to 2-3% of the skarn host rock. Gold values ranging from 250 to 700 ppb were obtained in 1987 grab samples of pyrrhotite-rich zones within skarns B and C.

Skarn D is exposed approximately 100 meters southeast of skarns B and C. No primary sulfides remain in this highly silicified and brecciated limestone. Goethite and jarosite constitute 15-30% of the rock. Grab samples from the 1987 field season yield a range of gold assays from 0.01 to 0.03 oz/ton.

Detailed surface mapping of skarns B, C and D in 1988 was hampered by steep terrain and these efforts failed to uncover anymore significant mineralization in the immediate area.

**Massive Sulfide Showings**

a) Hummingbird Zone

Podiform massive sulfide bodies, with approximate dimensions of 1.5 m width and 3.0 m length, occur along the contact between the skarnified limestones of the Hummingbird zone (Unit 8) and the adjacent altered volcanic breccia unit (Unit 8A). On surface, these pods appear discrete and discontinuous rather than a stratified massive sulfide body. The pods consist of pyrrhotite, pyrite, chalcopyrite and galena. Smaller pods (eg. samples 6724-35, 8247, Table 15) outcrop within the Hummingbird skarn and on its northwestern contact with Unit 2.

Two massive sulfide pods were trenched during the 1988 exploration program. The first trench, located at 0+98N and 5+50W, cut a small shear and a massive sulfide lens which produced grab samples assaying up to 0.47 oz. Au/ton, 10.7 ppm Ag and 3.5% Cu. Chip sampling returned a weighted average of 0.239 oz/T Au and 1.44%

Cu over 3.0 metres (Samples 6742 to 6746). A second massive sulfide pod, located 8 meters away from the first (1+00N, 0+43WD), was trenched with a representative grab sample assaying 0.674 oz Au/ton, 15.7 ppm Ag and 5,961% Cu (sample 6747).

Where the massive sulfide pods outcrop, the contact between the skarnified limestone and adjacent volcanic breccia unit appears highly weathered and sheared. The volcanic unit is commonly crumbly, in places clay-like, and bleached or jarositically altered. Iron rich seams and ferricrete are developed locally along the contact between the limestone and volcanic rocks. Sulfide-rich seams composed of pyrite, pyrrhotite, chalcopyrite and galena develop within the volcanic breccia and toward the contact, they coalesce to form the massive sulfide pod.

b) Massive Sulfide Lenses in skarns B, C and D

Massive sulfide pods, with average dimensions 0.75 m by 1.0 m, outcrop at the skarn-granodiorite contact and locally within the skarn units. These pods consist of pyrrhotite, minor chalcopyrite and pyrite. One grab sample (sample 6751) collected in 1988 from a massive sulfide pod in skarn B resulted in a gold assay of 0.073 oz Au/ton.

c) Massive Sulfide Within Chert Unit

A massive sulfide lens crops out at an elevation of 1,690 meters on the Trophy 1 claim. It occurs as a massive, non-laminated lens and is considered a "stratabound" massive sulfide body. Its width varies from 2 to 6 meters and it has been traced over 60 meters along strike (350°). The total strike extent of this mineralized zone is unknown due to talus cover.

This massive sulfide unit is composed chiefly of pyrrhotite, pyrite, arsenopyrite and chalcopyrite and may have up to 3% quartz as gangue mineralization. Due to an unusually late snow cover, no work was done on this zone in 1988.

**TABLE 15**

**1988 Rock Samples From Trophy Claims 1-4**

**I. SAMPLES RELATED TO NORTHEAST TRENDING STRUCTURES**

**A. Ptarmigan Zone**

<u>Sample#</u>	<u>Rock</u>	<u>Type (Width in meters)</u>	<u>Au (ppb)</u>	<u>Ag (ppm)</u>	<u>Cu %</u>	<u>Zn %</u>
<b>A Zone</b>						
4714	Alt'd. Het. Bx.	chip (1)	2,540	87.6	145	3,149
4715	Alt'd. Het. Bx.	chip (1)	3,190	364.0	172	947
4716	Alt'd. Het. Bx.	chip (1)	945	46.6	47	1,383
4724	Gouge, Alt'd. Het. Bx.	chip (0.2)	109	6.8	119	449
4756	Alt'd. Het. Bx., Sulf. Vns.	chip (1)	3,530	1,956.0	357	5,438
4757	Alt'd. Het. Bx.	chip (1)	385	15.3	331	2,110
4758	Alt'd. Het. Bx.	chip (1)	245	30.4	258	11,236
4759	Alt'd. Het. Bx	chip (1)	155	4.8	135	534

**B Zone**

4717	Het. Bx., Sulf. Vns.	chip (1)	3,710	36.4	185	2,669
4718	Het. Bx.	chip (1½)	265	6.7	106	948
4719	Het. Bx., Sulf. Vns.	chip (½)	440	4.4	135	1,639
4720	Het. Bx., Sulf. Vns.	chip (1)	880	10.0	138	2,090
4721	Het. Bx., Sulf. Vns.	chip (1½)	1,045	37.0	432	3,979

**C Zone**

4703	Mon. Bx. (I)	G	63	1.2	84	43
4722	Gouge	chip (1)	135	10.8	213	1,485
4726	Gouge, Het. Bx.	chip (1)	420	26.6	272	1,321
4727	Gouge	chip (1)	225	10.8	144	1,241
4728	Gouge	chip (1)	395	33.5	215	4,026
4729	Alt'd. Het. Bx., Sulf. Vns.	chip (1)	335	12.5	136	399

**Note:**

Alt'd. Het. Bx. = Altered heterolithic breccia  
 Chert Bx. = Chert breccia  
 Chip = Continuous chip sample  
 G = Grab sample  
 Het. Bx. = Heterolithic breccia  
 (I) = Intrusive  
 (V) = Volcanic

Ls. = Limestone  
 Mass. Sulf. = Massive sulfide  
 Mon. Bx. = Monolithic breccia  
 Sulf. Vns. = Sulfide-bearing  
 veinlets/veins  
 Volc. = Intermediate volcanic

I. SAMPLES RELATED TO NORTHEAST TRENDING STRUCTURES

A. Ptarmigan Zone (Continued)

Sample#	Rock	Type (Width in meters)	Au (ppb)	Ag (ppm)	Cu %	Zn %
<b>C Zone</b>						
4730	Alt'd. Het. Bx., Sulf. Vns.	chip (1)	590	6.1	189	8,713
4731	Alt'd. Het. Bx., Sulf. Vns.	chip (1)	3,550	73.3	172	4,063
4732	Alt'd. Het. Bx., Sulf. Vns.	chip (1)	73	38.0	258	624
4733	Alt'd. Het. Bx., Sulf. Vns.	chip (1)	48	1.5	187	65
4734	Alt'd. Het. Bx., Sulf. Vns.	chip (1)	85	2.4	99	310
4735	Alt'd. Het. Bx., Sulf. Vns.	chip (1)	450	5.9	132	891
4736	Alt'd. Het. Bx., Sulf. Vns.	chip (1)	750	7.3	87	955
4737	Alt'd. Het. Bx., Sulf. Vns.	chip (1)	925	8.6	113	1,247
4752	Andesite Dyke, Sulf. Vns.	chip (1)	72	4.8	82	351
4753	Andesite Dyke, Sulf. Vns.	chip (0.7)	25	0.3	14	594
4754	Andesite Dyke, Sulf. Vns.	chip (1)	39	7.7	66	437
4755	Andesite Dyke, Sulf. Vns.	chip (1.7)	59	5.1	22	455
6700	Fault gouge, Het. Bx.	G	355	5.0	103	148
6701	Het. Bx., Sulf. Vns.	chip (1)	270	13.2	222	535
6702	Het. Bx., Sulf. Vns.	chip (1)	745	128.5	984	11,879
6703	Het. Bx., Sulf. Vns.	chip (1)	1,360	10.5	154	111
6704	Het. Bx.	G	87	2.3	89	1,010
6705	Het. Bx., Sulf. Vns.	G	570	26.3	136	823
6706	Gouge	G	73	3.2	159	349
6707	Het. Bx., Sulf. Vns.	chip (1)	2,020	197.9	1,928	52,576
6709	Gouge	chip (1)	64	4.8	419	711
6710	Gouge	chip (1.5)	53	2.0	220	93
6711	Gouge	chip (1)	97	18.0	486	1,042
6716	Gouge	chip (1)	210	5.3	208	438
6717	Gouge	chip (1)	52	3.7	144	356
9731	Gouge	chip (1)	35	0.8	119	51
9732	Gouge	G	3,720	93.9	146	1,886
9733	Gouge	G	78	4.5	178	235
9734	Gouge, Sulf. Vns.	G	5,130	37.8	188	8,949
9735	Gouge	chip (1.2)	1,165	53.7	302	6,515
9736	Gouge	chip (1.1)	98	3.6	120	429
9737	Gouge, Sulf. Vns.	G	1,750	189.9	1,303	24,012
9740	Gouge, Sulf. Vns.	chip (0.5)	15,040	228.2	1,167	15,233

**Note:**

Alt'd. Het. Bx. = Altered heterolithic breccia  
 Chert Bx. = Chert breccia  
 Chip = Continuous chip sample  
 G = Grab sample  
 Het. Bx. = Heterolithic breccia  
 (I) = Intrusive  
 (V) = Volcanic

Ls. = Limestone  
 Mass. Sulf. = Massive sulfide  
 Mon. Bx. = Monolithic breccia  
 Sulf. Vns. = Sulfide-bearing  
 veinlets/veins  
 Volc. = Intermediate volcanic



I. SAMPLES RELATED TO NORTHEAST TRENDING STRUCTURES

A. Ptarmigan Zone (Continued)

Sample#	Rock	Type (Width in meters)	Au (ppb)	Ag (ppm)	Cu %	Zn %
<b>C Zone</b>						
9741	Gouge, Sulf. Vns	chip (4.0)	1,060	30.8	305	3,514
9753	Gouge	G	66	3.2	146	206
9754	Gouge	G	141	6.6	188	963

C Zone East Extension

4704	Mon. Bx. (I)	G	54	1.0	118	329
4705	Mon. Bx. (I)	chip (1)	290	2.4	74	461
4706	Mon. Bx. (I)	chip (1)	1,930	6.2	78	576
4707	Mon. Bx. (I)	chip (1)	101	2.0	68	206
4708	Mon. Bx. (I)	chip (1)	73	2.9	120	406
4709	Mon. Bx. (I)	chip (1)	129	2.1	91	75
4710	Mon. Bx. (I)	chip (1)	670	4.4	141	294
4711	Mon. Bx. (I)	chip (1)	98	3.1	159	245
4712	Mon. Bx. (I)	chip (1)	78	1.3	131	120
4713	Mon. Bx. (I)	chip (1)	38	2.6	127	65
7174	Mon. Bx., Sulf. Vns.	G	870	163.0	1,453	1,385
9743	Dyke	G	15	0.1	356	49
9744	Pyritic Volc.	chip (1)	40	0.2	54	140
9745	Pyritic Volc.	chip (1)	47	0.6	107	114
9746	Pyritic Volc.	chip (1)	72	0.7	92	88
9747	Pyritic Volc.	chip (1)	73	0.3	48	173
9748	Pyritic Volc.	chip (1)	19	0.2	33	161
9749	Pyritic Volc.	chip (1)	32	0.5	145	43

A Zone North Extension

4725	Mon. Bx. (V)	G	5,520	6.5	514	118
4760	Mon. Bx. (V), Sulf. Vns	chip (1)	61	0.8	76	153
4761	Mon. Bx. (V)	chip (1)	90	1.2	151	57
4762	Mon. Bx. (V)	chip (1)	31	0.5	124	89

**Note:**

Alt'd. Het. Bx. = Altered heterolithic breccia  
 Chert Bx. = Chert breccia  
 Chip = Continuous chip sample  
 G = Grab sample  
 Het. Bx. = Heterolithic breccia  
 (I) = Intrusive  
 (V) = Volcanic

Ls. = Limestone  
 Mass. Sulf. = Massive sulfide  
 Mon. Bx. = Monolithic breccia  
 Sulf. Vns. = Sulfide-bearing  
 veinlets/veins  
 Volc. = Intermediate volcanic

I. SAMPLES RELATED TO NORTHEAST TRENDING STRUCTURES

A. Ptarmigan Zone (Continued)

Sample#	Rock	Type (Width in meters)	Au (ppb)	Ag (ppm)	Cu %	Zn %
<b>A Zone North Extension</b>						
4763	Mon. Bx. (V)	chip (1)	47	0.5	41	207
4764	Mon. Bx. (V)	chip (1)	185	1.6	186	68
4765	Mon. Bx. (V)	chip (2)	335	0.5	100	306
4766	Mon. Bx. (V)	chip (2)	192	1.0	144	140
4767	Mon. Bx. (V)	chip (2)	64	0.6	61	295
4768	Chert	chip (2)	250	1.1	129	460
6708	Chert	chip (1)	89	1.0	67	392
7724	Chert	chip (1)	620	1.6	61	36
9729	Chert	G	68	3.6	196	57
9730	Chert	chip (2.0)	260	3.0	314	128
9738	Chert	G	290	3.7	249	249
9739	Chert	G	155	1.7	25	73

D Zone

6712	Volc.	chip (2)	95	1.0	94	480
6713	Volc.	chip (1)	255	0.9	58	130
6714	Volc.	chip (1.25)	114	4.5	87	132
6715	Volc.	chip (1)	144	7.4	863	186

E Zone

9755	Volc., Mass. Sulf.	G	48,200	456.9	432	1,211
9756	Volc., Mass. Sulf.	G	7,115	36.3	489	531
9757	Volc., Mass. Sulf.	G	7,850	85.9	32,098	704

B. Eagle Zone

QBS

6720	Limestone clast in Het. Bx.	G	3,280	3.9	105	2,778
6723	Conglomerate	G	46	1.1	113	26

Note:

Alt'd. Het. Bx. = Altered heterolithic breccia  
 Chert Bx. = Chert breccia  
 Chip = Continuous chip sample  
 G = Grab sample  
 Het. Bx. = Heterolithic breccia  
 (I) = Intrusive  
 (V) = Volcanic

Ls. = Limestone  
 Mass. Sulf. = Massive sulfide  
 Mon. Bx. = Monolithic breccia  
 Sulf. Vns. = Sulfide-bearing  
 veinlets/veins  
 Volc. = Intermediate volcanic

I. SAMPLES RELATED TO NORTHEAST TRENDING STRUCTURES

B. Eagle Zone (Continued)

Sample#	Rock	Type (Width in meters)	Au (ppb)	Ag (ppm)	Cu %	Zn %
Bear Pass (see Figure 10)						
6726	Chert Bx., Sulf. Vns.	chip (15)	620	44.5	1.70	277
6727	Intrusive, Chert Bx.	chip (1)	1,180	31.0	292	205
6728	Chert Bx., Sulf Vns	chip (1)	960	96.9	265	319
6729	Chert Bx.	chip (1)	400	7.8	84	203
6730	Dyke Sulf. Vns.	chip (1)	1,120	2.6	37	646
6731	Chert Bx.	chip (1)	860	4.1	47	568
6732	Chert Bx.	chip (1)	420	1.6	35	527
6733	Dyke Volc.	chip (1)	1,290	4.6	45	757
6734	Chert Bx.	chip (1)	480	4.7	33	283
6735	Chert Bx.	chip (1)	690	5.0	7.3	354
6736	Chert Bx.	chip (1)	740	6.6	91	494
6737	Chert Bx.	chip (1)	780	5.0	75	270
6738	Chert Bx.	chip (1)	905	7.6	104	807
6739	Chert Bx.	chip (1)	320	4.0	49	153
6740	Chert Sulf. Vns.	chip (1)	1,190	9.2	112	443
6741	Chert Sulf. Vns	chip (1)	940	17.6	123	670
9766	Sulf. Vns., Chert	G	12,930	248.2	4,423	2,639

II. SAMPLES RELATED TO SKARN TYPE MINERALIZATION

Hummingbird Zone

6724	Mass. Sulf.	chip (1)	1,980	3.2	1,202	57
6725	Mass. Sulf.	chip (1.5)	230	4.0	1,017	45
8247	Ls. Skarn	G	745	4.3	2,441	67

Hummingbird South Extension

4514	Mass. Sulf.	G	6320	7.8	3,454	46
4723	Mass. Sulf.	chip (0.5)	6,530	14.6	2,598	116
6742	Volc.	chip (1)	85	1.3	437	112

Notes:

Alt'd. Het. Bx. = Altered heterolithic breccia  
 Chert Bx. = Chert breccia  
 Chip = Continuous chip sample  
 G = Grab sample  
 Het. Bx. = Heterolithic breccia  
 (I) = Intrusive  
 (V) = Volcanic

Ls. = Limestone  
 Mass. Sulf. = Massive sulfide  
 Mon. Bx. = Monolithic breccia  
 Sulf. Vns. = Sulfide-bearing  
 veinlets/veins  
 Volc. = Intermediate volcanic

II. SAMPLES RELATED TO SKARN TYPE MINERALIZATION

Sample#	Rock	Type (Width in metres)	Au (ppb)	Ag (ppm)	Cu %	Zn %
<b>Hummingbird South Extension</b>						
6743	Volc.	chip (1)	5,635	6.9	225	165
6744	Mass. Sulf.	chip (1)	18,200	10.7	3,487	89
6745	Volc., Mass. Sulf.	chip (1)	790	1.5	634	75
6746	Mass. Ls., Dyke	chip (0.67)	132	0.7	49	35
6747	Mass. Sulf.	chip (1)	10,685	7.5	1,232	372
6748	Volc.	G	550	6.4	632	139
6749	Mass. Sulf.	G	25,900	15.7	5,961	115
9758	Mass. Sulf.	G	3,115	9.8	7,748	83
9759	Mass. Sulf.	G	23,500	15.8	9,644	75
9560	Skarn Ls.	G	860	10.2	5,726	322
7551	Skarn Ls.	G	395	1.1	405	67

**Skarn D (QBO)**

6750	Dyke	G	28	0.5	89	89
6751	Mass. Sulf., Skarn Ls.	G	2,020	32.3	32.3	6,077

**Note:**

Alt'd. Het. Bx. = Altered heterolithic breccia  
 Chert Bx. = Chert breccia  
 Chip = Continuous chip sample  
 G = Grab sample  
 Het. Bx. = Heterolithic breccia  
 (I) = Intrusive  
 (V) = Volcanic

Ls. = Limestone  
 Mass. Sulf. = Massive sulfide  
 Mon. Bx. = Monolithic breccia  
 Sulf. Vns. = Sulfide-bearing  
 veinlets/veins  
 Volc. = Intermediate volcanic

## 5.5 Geochemistry

Gold and silver litho-geochemistry for the Trophy 1-4 claims is plotted on Plates 11 and 12 in Appendix XII. For corresponding trace and major element ICP analyses, see Appendix I in which geochemical results for both the Trophy claims and the regional program are listed.

### **Litho-geochemistry: Sampling Procedure**

A total of 237 representative samples were collected from Trophy claims 1-4, either as representative grabs over an unspecified area, or as continuous chip samples. Chip samples are composed of numerous 0.5 to 2.0 centimetre chips of rock collected within a narrow band, across the strike of lithological units, over a specific sampling interval that ranged from 0.5 to 2.0 metres.

All sample locations are marked by the presence of a numbered strip of orange flagging. Sample numbers are composed of a two-number prefix (00 to 48) indicating the property code, and a four-digit suffix which uniquely specifies the sample. On all geochemical maps the project code has been omitted for brevity.

Samples ranged in size from 0.3 to 5.0 kilograms depending on the sample type and area sampled. All samples were placed in 8 by 13 inch polyurethane bags for transport to the analytical lab.

### **Litho-geochemistry: Analytical Procedures**

All rock samples were analyzed by Acme Analytical Labs of Vancouver, B.C. Rock samples were screened to -100 mesh after undergoing primary and secondary jaw crushing, tertiary cone crushing and ring pulverization. Geochemical analysis for Au was provided by fire assay and atomic absorption after a 10 gram sub-sample underwent aqua regia digestion. All rock samples were also analyzed for 30 trace

and major elements, including As, Cu, Pb, Zn and Ag, utilizing an Inductively Coupled Plasma (ICP) technique. Prior to ICP analysis, a 0.5 gram sample is digested with a heated HCl, HNO<sub>3</sub> reagent for one hour, with the resulting solution being diluted to 10 mls with water. Surface samples that reported geochemical results greater than 500 ppb Au were analyzed by fire assay, utilizing a 1/2 assay ton (15.0 g) sample. Samples that returned geochemical results greater than 50 ppb Ag were also assayed by fire assay. Selected assays were also conducted for Pb, Zn and Cu, where geochemical analyses warranted assay verification.

### **Soil Geochemistry: Sampling and Analytical Procedures**

A total of 181 soil samples were collected from the Trophy 3 claim. Soil samples were collected from an average depth of 15 centimetres, representing both the A and B type soil horizons. Descriptions of soil samples and their corresponding analytical results are summarized in Appendix IV. Soil survey lines and sample locations are shown on Plate 14 in Appendix XII.

Soil samples were analyzed for Au and Ag by Acme Analytical Labs. Atomic absorption techniques were applied and the resultant assays for each sample are listed in Appendix III.

### **Soil Geochemistry: Results**

Soil geochemistry gave inconclusive results for the samples collected on the Trophy 3 claim. The range in assays for the soil samples was from the detection limit (1) to 72 ppb for gold and from the detecting limit (0.1) to 7.4 ppm for silver. No trends in soil geochemistry are identified.

### **5.6 Petrography**

A total of 24 thin sections from the Trophy 1-4 claim area were sent to Vancouver Petrographics Ltd. for microscopic examination in 1988. Mineralogical and textural description of these samples were made by J.G. Payne and are presented in Appendix VIII.

Microscopic studies indicate that gold-silver mineralization is hosted by altered dacite tuffs and flows and several breccia units. This mineralization occurs both as disseminations in the host rocks and as veinlets and veins. Minerals present within the hydrothermally altered zones include quartz, calcite/dolomite, sericite, plagioclase, chlorite, apatite and sphene. Minor amounts of muscovite, biotite and K-feldspar were also noted. Gold and silver-bearing minerals identified in polished section include pyrite, galena, sphalerite, chalcopryrite, arsenopyrite, tetrahedrite, pyrrhotite, native gold, argentite and electrum. Electrum occurs as inclusions in pyrite, along with inclusions of galena, pyrrhotite and argentite or as grains in patches with galena, tetrahedrite and boulangerite. Native silver and boulangerite have been tentatively identified.

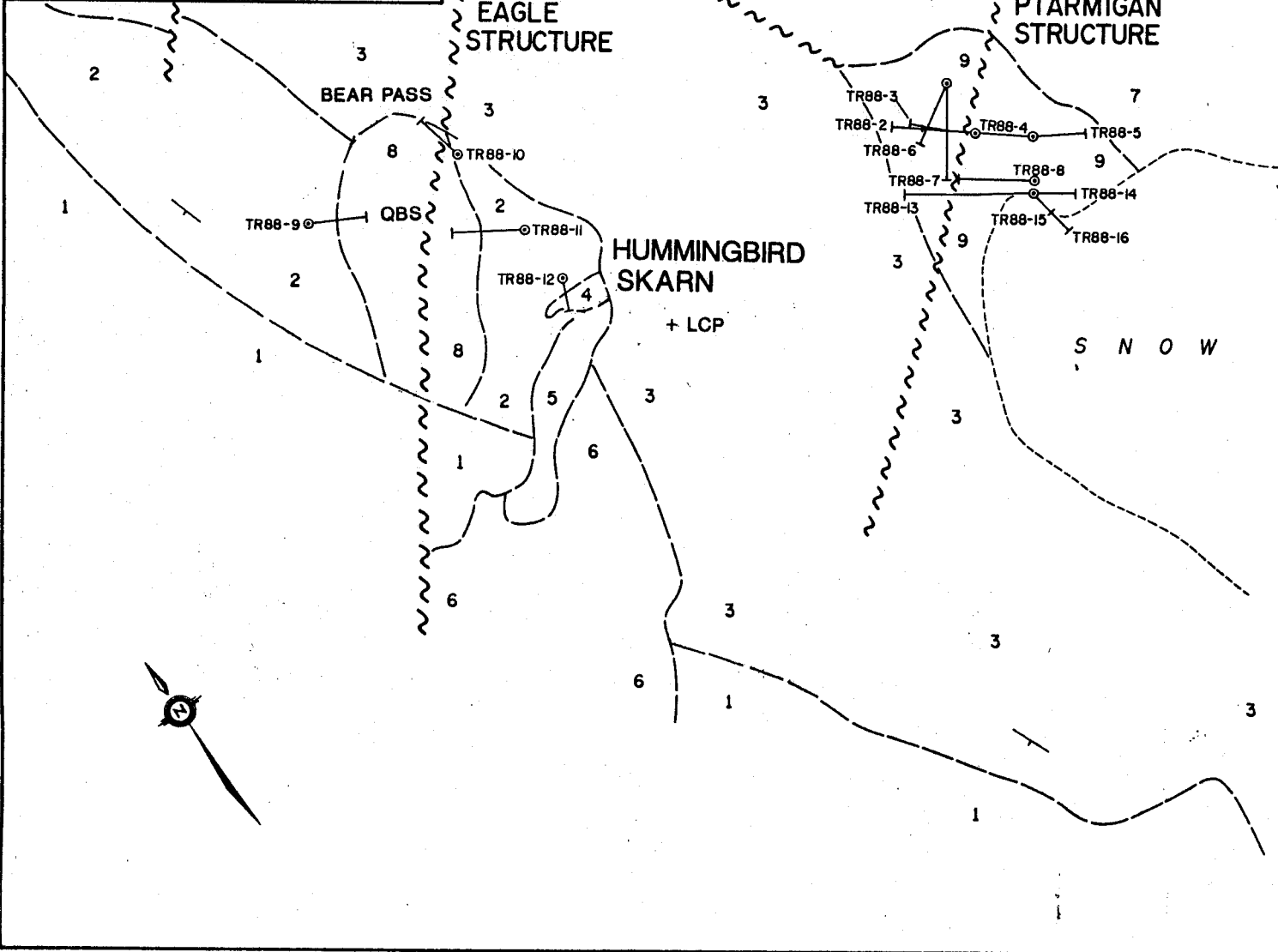
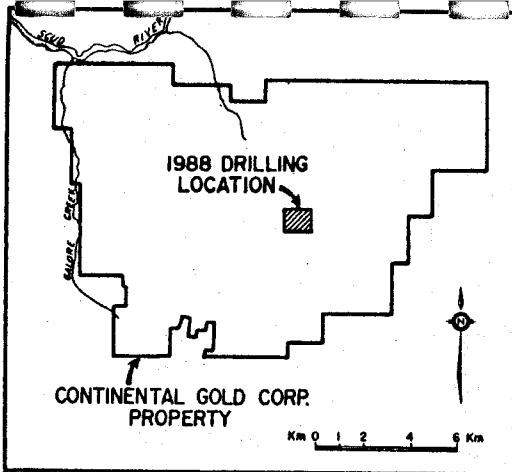
## **6.0 DIAMOND DRILL PROGRAM**

### **6.1 Introduction**

The initial diamond drilling program conducted on the Trophy 1-4 claims in 1988 tested several zones with high potential for gold mineralization. The proposed targets were chosen based on geological mapping and geochemical exploration work completed in 1987 and the early part of the 1988 field season.

### **6.2 Summary**

A total of 2,834 meters (9,295 feet) of NQ core was drilled in sixteen inclined diamond drill holes on Continental Gold Corp.'s Trophy property in order to test the gold mineralization in several units (Figure 11). The first seven drill holes (TR88-1 to TR88-7) were chosen so as to intersect a highly altered portion of the breccia outcrop at A zone, located in the Ptarmigan zone. Five other holes (TR88-8 and TR88-13 to TR88-16) in the Ptarmigan zone were drilled in order to establish the extent of the breccia body and to locate other high grade sections in the unit. On the Eagle zone, two holes (TR88-9 and TR88-11) were drilled in order to test the mineralization of the QBS outcrop at depth and one hole (TR88-10) was drilled to intersect the high grade sulfide veins at the Bear Pass outcrop.



**LEGEND**

- JURASSIC**
- 9 HYDROTHERMALLY ALTERED BRECCIA GOLD-SILVER MINERALIZATION
  - 8 CONGLOMERATE/CHERT BRECCIA GOLD-SILVER MINERALIZATION
  - 7 QUARTZ MONZONITE-SYENITE
  - 6 GRANODIORITE
  - 5 ALTERED VOLCANIC OR LIMESTONE BRECCIA
  - 4 Cu-Au SKARN
- TRIASSIC**
- 3 VOLCANIC FLOWS AND TUFFS
  - 2 CHERT AND CHERTY ARGILLITE
- PERMIAN**
- 1 LIMESTONE
- GEOLGIC CONTACT (INFERRED)
- ~ SHEAR ZONE/FAULT
- ▴ THRUST FAULT
- BEDDING SYMBOL
- 1988 DRILL HOLE LOCATION



CONTINENTAL GOLD CORP.

TROPHY GOLD PROJECT  
NORTHWESTERN BRITISH COLUMBIA

1988 DIAMOND DRILL HOLE  
LOCATION MAP

LIARD MINING DIVISION

Drawn. J.W.	Date Oct. 1988	N.T.S. 104 G/3	FIGURE 11
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D.W. Coates Enterprises Ltd. was contracted to complete the drilling program on the Trophy 1-4 claims and a Longyear 38 drill was mobilized onto the property in early July of 1988. A Caribou airplane and a Bell 205 helicopter (the mobilization helicopter is owned by Vancouver Island Helicopter, the demobilization helicopter is owned by Northern Mountain Helicopter) were used to move the drill from the airstrip to drill site. A V.I.H. Hughes 500D was used to move drilling materials and crew from camp to the drill site in addition to making all drill moves on the Trophy property. Drilling was initiated on July 21 and the final hole was completed on September 18, 1988, as shown in Table 16.

Three or four Continental Gold Corp. geologists were on site to supervise the program and to log the core. Drilling was conducted on a 24 hour a day schedule by a pair of two-man shifts. Access to the drill pads was by helicopter.

Drill core boxes were flown into camp by helicopter once or twice daily. Geotechnical assessment (RQD) of the core was made and color photographs taken prior to logging. In general, detailed logging took place prior to splitting and sampling of the drill core. Sample lengths range from 0.5 to 1 meter in mineralized zones and 1 to 3 meters in barren rock.

After logging was completed, the core was then split using a manual core-splitter. Half of the split core was double bagged for shipment to the analytical lab, with the other half remaining in the core tray for future reference.

Core storage facilities are at the Continental Gold Corp. base camp, located one kilometer northwest of the junction between the Scud River and the South Scud River (Figure 2). Sampled core was flown from camp to the airstrip by the Hughes 500D helicopter and by fixed wing plane to Smithers, B.C., where it was transferred to Canadian Airlines Airlines and flown to Vancouver, B.C.

A total of 1,386 drill core samples were shipped to Acme Labs for analysis.

TABLE 16

## SUMMARY OF 1988 DIAMOND DRILLING

Hole	Grid Location	Azimuth(°)	Dip(°)	Date Started	Date Finished	Casing Depth (meters)	Depth (meters)	Surveyed	Cumulative Footage (meters)
TR 88-1	3+47N 0+32W	300	-45	July 20	July 21	7.62	42.7		42.7
TR 88-2	3+47N 0+32W	310	-60	July 21	July 24	4.27	219.8		262.4
TR 88-3	3+47N 0+32W	310	-74	July 24	July 28	5.18	288.7	Casing left	55.1
TR 88-4	3+51.8N 0+43.3E	310	-66	July 30	August 3	5.18	340.5	Casing pulled 400 ft. NQ lost	891.6
TR 88-5	3+51.8N 0+43.3E	119	-50	August 4	August 5	5.18	99.4	Casing pulled	991.0
TR 88-6	4+09N 0+73.4W	240	-75	August 5	August 8	3.05	307.6	Casing left	1,298.6
TR 88-7	4+09N 0+73.4W	215	-50	August 8	August 11	3.05	192.9	Casing left	1,491.5
TR 88-8	2+87N 0+43E	305	-58	August 12	August 15	13.70	175.9	Casing left	1,667.4
TR 88-9	2+25N 8+65W	125	-55	August 16	August 21	7.92	142.7	Casing left	1,810.0
TR 88-10	3+10N 7+40W	358	-58	August 22	August 24	3.00	122.2	Casing left	1,932.2
TR 88-11	2+19N 6+47W	311	-55	August 26	August 30	4.30	158.2	Casing left	2,090.4
TR 88-12	1+67N 5+51W	208	-50	August 31	September 2	9.14	64.0	Casing left	2,154.4
TR 88-13	2+70N 0+43E	305	-60	September 3	September 12	3.05	331.9	Casing left	2,486.3
TR 88-14	2+70N 0+43E	115	-60	September 13	September 14	6.10	117.7	Casing left	2,604.0
TR 88-15	2+70N 0+43E	165	-60	September 15	September 16	3.85	57.1	Casing left	2,661.1
TR 88-16	2+70N 0+43E	171	-75	September 16	September 18	3.85	172.8	Casing left	2,833.9

### 6.3 Diamond Drilling Results

Detailed geological logs of diamond drill holes TR 88-1 to TR 88-16 are presented in Appendix V. The geotechnical drill logs (RQD) indicating rock quality are located in Appendix VI. All geochemical analyses and assays of drill core samples are reported in Appendix VII.

Eleven of the sixteen diamond drill holes collared on the Trophy property were completed. The other five holes (TR 88-1, TR 88-8, TR 88-9, TR 88-12 and TR 88-15) were abandoned because of the intensely fractured nature of the rocks. Core recovery ranged from poor to excellent, with the brecciated units yielding an average of 50-70% recovery. Geological units identified in diamond drill core from the Ptarmigan, Eagle and Hummingbird zones are reported in Table 17.

A summary of pertinent Au, Ag, Pb and Zn assays from the diamond drill program is given in Table 18.

The Ptarmigan zone was the major focus of the diamond drilling program in 1988. Holes drilled in this area intersected a steeply dipping heterolithic breccia unit, marginal monolithic breccia facies, intermediate volcanic tuffs and monzodioritic intrusive rocks as well as sulfide-bearing veins and dykes of varying compositions (felsite, diorite, andesite and rhyolite). All holes encountered wide zones of silicification, carbonate and sericitic alteration and sulfide mineralization within the heterolithic and monolithic breccia units known to be gold-bearing from surface sampling. Those holes testing the highly altered A zone target at depth all terminated in breccia and ten drill holes in the Ptarmigan zone ended in this unit.

Up to 10% pyrite, 5% sphalerite and 4% galena were recorded from zones of intense sericitic alteration within the breccia body in the Ptarmigan zone. Zones of intense sericitic alteration at depth are associated with an abundance of quartz feldspar porphyry dykes, fractures and major fault zones in the breccia body. This alteration has been intersected at significant depths (eg. 200 meters vertical) in

TABLE 17

**GEOLOGICAL UNITS IDENTIFIED IN DIAMOND DRILL CORE**

	<b>Unit#</b>
<b>Ptarmigan Zone</b>	
Heterolithic Intrusive Breccia	10
Monolithic Intrusive Breccia	10a
Monolithic Volcanic Breccia	10b
Intermediate Volcanic Tuff	4
Monzodioritic Intrusive	5
Dykes (felsite, diorite, dacite)	11
<b>Eagle Zone</b>	
A. Bear Pass	
Intermediate Volcanic Breccia	4
Chert Breccia	9a
Intermediate Volcanic Tuffs	4
Dykes (dacite, felsite)	11
B. QBS	
Massive Chert	2
Heterolithic Tectonic Breccia	9
Conglomerate	9b
Rhyolite (Breccia)	6
<b>Hummingbird Zone</b>	
Garnet Diopside Skarn	8
Light Grey Limestone	3
Rhyolite	6
Chert	2

NORTHWEST

SOUTHEAST

SURFACE

0.09, 4.78, - / 9.8  
(0.17)

0.07, 4.80, - / 57.8  
(0.15)

0.16, 14.04, - / 8.2  
(0.39)

0.04, 2.03, 0.09 / 6.0  
(0.07)

TR88-1

TR88-5

BRECCIA

0.08, 2.30, 1.50 / 33.8  
(0.12)

0.12, 6.24, 2.82 / 10.3  
(0.22)

BRECCIA

PLUTON

0.05, 0.54, 0.70 / 15.1  
(0.06)

0.09, 0.32, 0.40 / 2.3  
(0.10)

**LEGEND**



MINERALIZED STRUCTURE



INCLINED DRILL HOLE

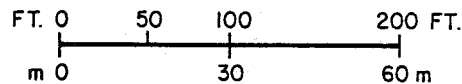


GOLD-SILVER-ZINC INTERSECTION

**ASSAY SEQUENCE**

0.12, 6.24, 2.82 / 32.8  
(0.22)

oz/ton Au, oz/ton Ag, % Zn/Meter  
(Gold equivalent)  
oz/ton



TR88-2

0.16, 0.88, 1.11 / 11.4  
(0.17)

0.10, 0.75, 1.11 / 23.9  
(0.11)

OPEN

TR88-3

TR88-4

CONTINENTAL GOLD CORP.

TROPHY GOLD PROJECT  
PTARMIGAN STRUCTURE

DIAMOND DRILL SECTION  
DDH'S TR88-1,2,3,4,5  
SECTION LOOKING NORTHEAST

Date.  
Oct. 1988.

N.T.S.  
1046/3

Figure. **12**

holes TR 88-4 and TR 88-6 and it occurs in both heterolithic and monolithic breccia facies. A schematic drill section (Figure 12) shows the intensely altered and mineralized zone within the breccia body.

Diamond drill hole TR 88-2 intersected 32.9 meters assaying 0.08 oz/T Au, 2.30 oz/T Ag and 1.5% Zn, at 50.3 meters below surface. Within this section, a 10 meter interval assayed 0.12 oz/T Au, 6.24 oz/T Ag and 2.82% Zn (Table 18).

Drill hole TR 88-4, drilled on the same section as TR 88-2 (Figure 12) intersected the Ptarmigan precious metal structure at the deepest point to date, 192-212 meters vertically below surface, with 11.1 meters grading 0.16 oz/T Au, 0.88 oz/T Ag and 1.11% Zn. Along this section, gold grades appear to be increasing with depth.

Diamond drill holes TR 88-14, 15 and 16 were drilled to test the extent of the gold-bearing breccia under moraine and snow, 103.7 meters south of the TR 88-1 to 5 drill section. All holes intersected and terminated in heavily sericitized and silicified breccia. A total of 19 precious and base metal mineralized intercepts were identified in the three holes including 2.0 meters grading 0.12 oz/T Au, 3.98 oz/T Ag and 2.90% Zn (see Table 18). These holes showed a greater abundance of sulfide bearing veins and disseminated arsenopyrite at depth than any other drill holes in the Ptarmigan zone.

Galena-rich sulfide mineralization was also much more prominent in this portion of the Ptarmigan breccia, with intersections from TR 88-16 including 0.10 oz/T Au, 11.01 oz/T Ag, 0.54% Zn and 2.85% Pb over 1 meter and 0.06 oz/T Au, 8.92 oz/T Ag, 2.31% Zn and 3.61% Pb over 2 meters.

Three drill holes in the Ptarmigan zone (TR 88-1, TR 88-8 and TR 88-15) were abandoned short of their targets because of difficult drilling conditions caused by abundant fractures in fault zones within the breccia body.

**TABLE 18**

**1988 Diamond Drill Results  
Summary of Pertinent Au, Ag, Zn, Pb Assays  
Diamond Drill Holes TR 88-1 to TR 88-16**

<u>Hole No.</u>	<u>Azimuth (degr.)</u>	<u>Dip (degr.)</u>	<u>Length (m)</u>	<u>Interval (m)</u>	<u>Width (m)</u>	<u>Au oz/t</u>	<u>Ag oz/t</u>	<u>Zn %</u>	<u>Pb %</u>	<u>Remarks</u>	<u>Target</u>
TR88-1 includes	310	-45	42.7	37.6 - 42.6	10.3	0.02	1.29	0.51	-	Hole lost Short of target	Ptarmigan
				39.6 - 42.6	3.0	0.03	1.85	0.69	-		
TR88-2 includes	310	-60	219.8	56.0 - 88.9	32.9	0.08	2.30	1.50	-		
				58.9 - 68.9	10.0	0.12	6.24	2.82	-		
				72.9 - 77.9	5.0	0.14	1.27	1.82	-		
				58.9 - 61.9	3.0	0.16	9.46	4.25	-		
TR88-3	310	-75	288.7	90.0 - 104.7	14.7	0.05	0.54	0.70	-	Poor Recovery	Ptarmigan
				114.4 - 119.3	4.9	0.09	0.32	0.40	-		
				231.1 - 231.6	0.5	0.19	0.11	0.11	-		
TR88-4 includes includes	310	-65	340.5	207.5 - 208.5	1.0	0.43	0.44	-	-		Ptarmigan
				213.2 - 236.5	23.3	0.10	0.75	1.11	-		
				213.2 - 224.3	11.1	0.16	0.88	1.11	-		
				213.2 - 216.6	3.4	0.22	1.43	1.26	-		
TR88-5	120	-50	99.4	8.9 - 11.5	2.6	0.02	5.63	0.35	-	Geological hole	Ptarmigan
				14.2 - 20.1	5.9	0.04	2.03	-	-		
TR88-6	240	-75	307.6	106.4 - 107.6	1.2	0.06	0.32	0.63	-	Geological hole	Ptarmigan
				124.5 - 126.3	1.8	0.06	0.32	0.63	-		
TR88-7	215	-50	192.9	72.0 - 76.0	4.0	0.08	1.90	0.66	-		Ptarmigan
				98.8 - 100.1	1.3	0.11	0.21	0.18	-		
				98.8 - 105.4	1.1	0.11	0.26	-	-		
				120.7 - 125.2	4.5	0.07	1.00	1.11	-		
				127.2 - 128.3	1.1	0.12	3.10	2.15	-		
TR88-8 includes	305	-57	175.9	53.8 - 60.5	6.7	0.06	1.12	0.10	-	Hole lost Short of target	Ptarmigan
				53.8 - 56.8	3.0	0.10	1.87	0.16	-		

TABLE 18 CONTINUED

<u>Hole No.</u>	<u>Azimuth (degr.)</u>	<u>Dip (degr.)</u>	<u>Length (m)</u>	<u>Interval (m)</u>	<u>Width (m)</u>	<u>Au oz/t</u>	<u>Ag oz/t</u>	<u>Zn %</u>	<u>Pb %</u>	<u>Remarks</u>	<u>Target</u>
TR88-9	125	-55	142.7	Hole lost							Eagle
TR88-10	355	-60	122.2	3.3 - 11.3	8.0	0.02	-	-	-		Eagle
				17.4 - 20.4	3.0	0.03	-	-	-		
				24.4 - 32.4	8.0	0.02	-	-	-		
				49.8 - 51.8	2.0	0.09	0.53	-	-		
				76.8 - 77.4	0.6	0.03	1.85	-	-		
TR88-11	305	-57	158.2	4.3 - 45.0	40.7	0.02	-	-	-		Eagle
TR88-12	212	-50	64.0	Hole lost							Hummingbird
TR88-13 includes	300	-60	331.9	31.6 - 35.9	4.3	0.04	0.50	-	-		Ptarmigan
				32.9 - 34.2	1.3	0.10	0.18	-	-		
				38.3 - 40.3	2.0	0.04	0.66	-	-		
TR88-14	120	-60	117.7	11.2 - 13.9	2.7	0.08	2.50	-	-		Ptarmigan
				68.1 - 70.1	2.0	0.12	3.98	2.90	-		
				77.9 - 81.2	3.3	0.05	0.20	-	-		
				87.2 - 90.2	3.0	0.06	0.20	-	-		
				116.0 - 117.5	1.5	0.04	2.28	-	-		
TR88-15	165	-60	57.1	16.1 - 18.1	2.0	0.05	2.62	-	-	Hole lost Short of target	Ptarmigan
				20.1 - 21.2	1.1	0.11	0.63	-	-		
				29.2 - 30.2	1.0	0.03	5.73	4.08	0.91		
				43.9 - 45.1	1.2	0.05	4.83	1.32	1.89		
TR88-16	165	-75	172.8	15.0 - 17.0	2.0	0.06	1.01	-	-		Ptarmigan
				19.8 - 23.5	3.7	0.03	1.66	-	-		
				29.5 - 31.5	2.0	0.07	1.93	0.81	-		
				50.0 - 51.1	1.1	0.11	0.43	-	-		
				62.0 - 64.0	2.0	0.10	6.20	0.90	0.92		
				71.0 - 102.5	31.5	0.10	11.01	0.54	2.85		
				106.9 - 108.0	1.1	0.03	3.21	0.45	1.25		
				110.8 - 112.0	1.2	0.04	3.38	0.93	1.26		
				113.5 - 114.5	1.0	0.05	7.19	1.40	1.90		
				125.5 - 127.5	2.0	0.06	8.92	2.31	3.61		



Three holes were drilled in the Eagle zone and they intersected northwest dipping chert/argillite sediments, conglomerates, heterolithic tectonic breccia and chert breccia units as well as numerous dykes.

Drill core from the QBS outcrop (TR 88-9, TR 88-11) returned assays up to 0.02 oz Au/ton over 40.7 meters and one hole was abandoned due to difficult drilling conditions.

Drill hole TR 88-10 at Bear Pass intersected significant tetrahedrite, galena, arsenopyrite and pyrrhotite mineralization throughout the chert breccia and wide zones of low grade precious metals were intersected, including 8.0 meters grading 0.02 oz/T Au and 2.0 meters grading 0.09 oz/T Au and 0.53 oz/T Ag. Drilling did not intersect at depth the high grade sulfide-bearing veins that returned gold values up to 0.38 oz/T Au in surface samples. This is likely due to the tendency for the veins to pinch and swell as seen in the surface sampling and trenching efforts undertaken at Bear Pass.

The drill hole at Hummingbird Skarn (TR 88-12) intersected skarnified limestone, banded chert and two rhyolite dykes. The hole was abandoned short of the target massive sulfide lenses due to difficult drilling conditions and the lack of proper equipment by the drilling contractor.

## **7.0 CONCLUSIONS AND RECOMMENDATIONS**

### **7.1 Regional Mapping and Sampling Program (Glacier, Saddle, Bear, Catto, Scotch and Camp Claims)**

The regional mapping and sampling program succeeded in finding 13 new zones of precious and base metal mineralization that warrant immediate follow-up work. This work should include the following:

- Geologic mapping at a scale of 1:2500 or more detailed over the mineralized zones.

- Trenching and chip sampling to better define the extent of mineralized zones.
- Ground geophysics over and around mineralized zones. A magnetic system would be best over the magnetite breccia and skarn mineralization, while an electro-magnetic system would be best over the vein hosted chalcopyrite-pyrite mineralization.
- Successful application of the above recommendations should be followed up with diamond drilling.

Furthermore, the 44 claims investigated in the summer of 1988 represent such a large area, that it is certain that many more zones of significant mineralization remain to be found. To this end the following recommendations are made:

- Intensive silt sampling of the entire project area. The few silt samples taken this summer indicate that silts are a reliable indicator of anomalous precious metal mineralization. Because of the erratic nature of gold dispersion in creeks, a number of samples should be taken per creek. Ideally, samples should be taken at 100 m intervals down the drainage, but the practicality of time and manpower will have to dictate the actual number of samples taken.
- Airborne geophysics utilizing both magnetic and electro-magnetic methods should be flown over the entire project area. This would be especially helpful in locating magnetite breccia and skarn type mineralization.

## 7.2 Trophy 1-4 Claims

Continental Gold Corp's initial drilling program on the Trophy property in 1988, successfully drill tested three areas of gold mineralization. The Ptarmigan breccia body is interpreted to be of hydrothermal origin and it hosts the most widespread and potentially largest tonnage gold-silver mineralization discovered to date on the Trophy property. The best gold intersections obtained during drilling were 0.428 oz/T Au over 1.0 meters and 0.16 oz/T Au, 0.88 oz/T Ag and 1.11% Zn over a 11.1 meter interval.

Drill core shows that an increase in abundance of sulfide minerals, corresponding with the highest Au, Ag, Zn and Cu values, is associated with zones of intense sericitic alteration and stockwork mineralization within the breccia. Visible sulfides most commonly associated with gold mineralization include pyrite, sphalerite, galena and minor chalcopyrite, arsenopyrite and pyrrhotite. Stockwork mineralization occurs as sulfides forming 100% of the breccia matrix. The intensely altered zones are in turn associated with the presence of abundant felsite dykes and faults or fractures in the breccia unit. These features suggest that hydrothermal fluids associated with the late dykes used the fractured zones as conduits and concentrated a second generation of ore minerals in stockwork style, possibly overprinting the disseminated pyrite mineralization found everywhere in the breccia body. The true extent of the Ptarmigan mineralized zone is still unknown as the Au and Ag-bearing breccia is open at depth and to the south under glacial moraine and snow.

A drilling program of 3,000 meters in the Ptarmigan zone is recommended for the 1989 field season. The following work is suggested.

1. A step-out drilling program to test the southern extension of mineralization associated with an intensely sericitically altered zone within the breccia body, which was intersected in drill holes TR 88-14, 15 and 16.

2. Further drilling in the Ptarmigan zone in the vicinity of holes TR 88-1 to 8, to test the down-dip extension of the mineralized breccia body, where gold grades appear to increase with depth.
3. Drilling of the E zone mineralization.

In the 1988 drilling program, the Eagle zone did not yield significant gold values, however, much of the sulfide has been oxidized to limonite and goethite. Deeper drilling is necessary to fully test the potential of the gold-bearing breccia at a depth below the level of oxidation.

The major emphasis of Continental Gold Corp.'s 1988 exploration effort was to test the Ptarmigan breccia body, and thus the numerous precious metal skarn zones on the property did not receive enough attention. It is imperative to better assess the gold potential of the known skarn zones as well as the large volume of Permian limestone not yet prospected on the property, particularly in light of the current exploration of skarnified limestones taking place in the Iskut River area.

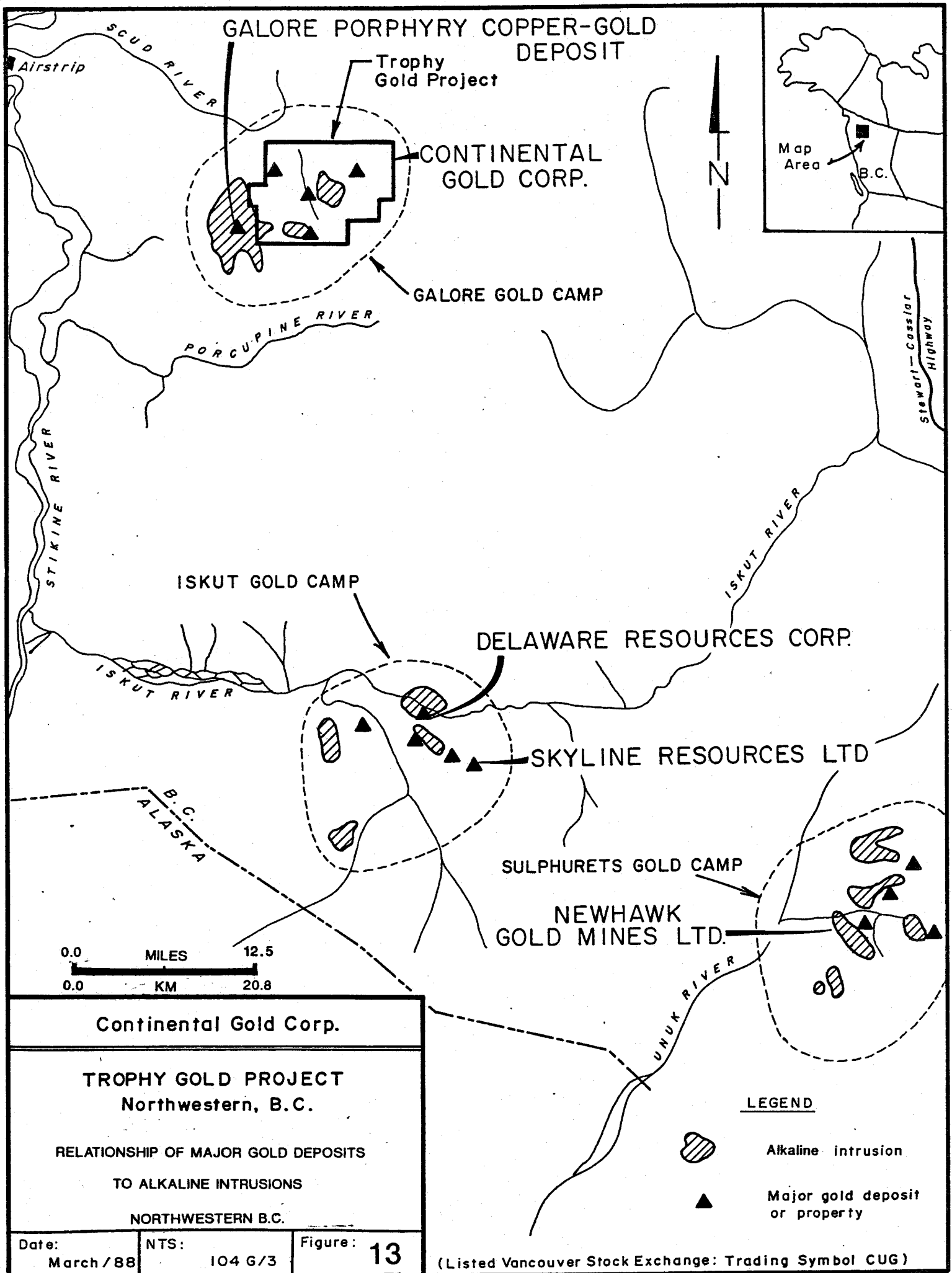
The granodiorite plug located in the Trophy 3 claim is considered to be the heat source that metasomatically altered the volcanic, chert and limestone units at the Skarn B, Skarn C, Skarn D (QBO) and Hummingbird mineralized zones. Geological settings similar to these should be sought on the Trophy claims. The following exploration efforts are recommended.

1. The massive sulfide bodies located at the Hummingbird skarn should be a priority target for a drilling program in 1989 as the extension of these high grade precious metal-bearing lenses at depth must be tested.
2. Prospecting of the Permian limestone unit below treeline on Trophy claims 1 and 3 should be carried out in order to locate undiscovered skarn type mineralization and/or structurally controlled massive sulfide bodies.

3. A soil survey should be conducted in regions underlain by limestones on Trophy claim 1 and the northern half of Trophy claim 3 in order to identify skarn type mineralization. The survey conducted in 1988 in the southern portion of claim 3 probably missed the limestone section adjacent to the granodiorite body.
4. Trenching of the limestone blocks in the QBS outcrop should be undertaken to determine the nature and extent of the high grade gold-bearing galena pods within the limestone.

Many similarities exist between the various styles of mineralization on the Trophy claims and mineralization located in the Galore Creek, Iskut River and Sulphurets Creek gold camps. On both the Trophy and Galore Creek properties, a steep, pipelike, hydrothermally altered breccia body is spatially related to Early Mesozoic alkaline plutonic rocks (Figure 13). Skarn-type mineralization, which is found in several localities on the Trophy claims, also occurs on the McLymont Creek (Gulf International), CAM and JP (Pezgold) and North Zone (Ticker Tape Resources) properties in the Iskut River area. Mineralization at the Sulphurets camp bears several similarities to the mineralization in the Trophy region. Similarities include the presence of a sericitically altered (andesite) breccia hosting disseminated gold mineralization (Snowfield Zone), a very similar sulfide mineral assemblage in zones of vein and stockwork-type mineralization, and the presence of northwest-trending, pervasively sericite-silica altered zones, located at the contact between an alkaline pluton and intermediate volcanics rocks (West Zone).

The Trophy property is situated in a relatively unexplored portion of a 200 km long belt of gold deposits stretching from Westmin's Premier/Big Missouri mines in the south of North American Metal's Golden Bear deposit in the north (Figure 14). Within this belt, large, structurally controlled gold deposits discovered to date contain proven reserves totalling over 6,000,000 ounces of contained gold. The Trophy project area has the potential of adding significantly to this reserve base within two to three years.



**GALORE PORPHYRY COPPER-GOLD DEPOSIT**

Trophy Gold Project

CONTINENTAL GOLD CORP.

GALORE GOLD CAMP

ISKUT GOLD CAMP

DELAWARE RESOURCES CORP.

SKYLINE RESOURCES LTD

SULPHURETS GOLD CAMP

NEWHAWK GOLD MINES LTD.

**LEGEND**



Alkaline intrusion



Major gold deposit or property

0.0 MILES 12.5  
0.0 KM 20.8

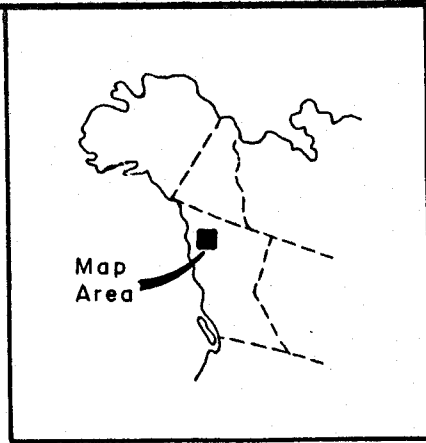
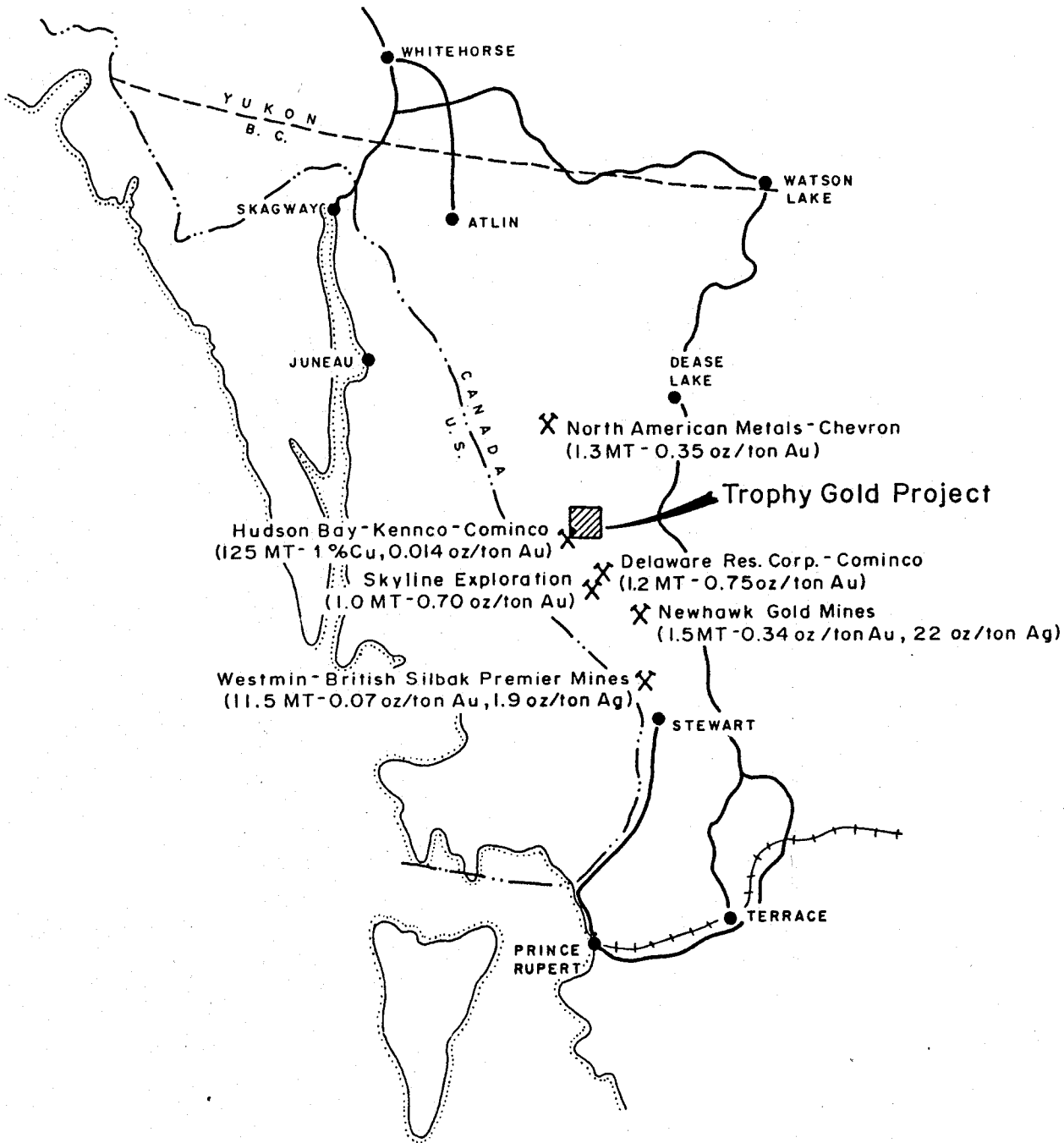
Continental Gold Corp.

**TROPHY GOLD PROJECT**  
Northwestern, B.C.

RELATIONSHIP OF MAJOR GOLD DEPOSITS  
TO ALKALINE INTRUSIONS  
NORTHWESTERN B.C.

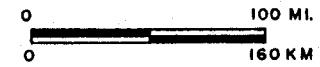
Date: March /88    NTS: 104 G/3    Figure: **13**

(Listed Vancouver Stock Exchange: Trading Symbol CUG)



**LEGEND**

- X Potential gold producers
- Railway
- Road



<b>Continental Gold Corp.</b>		
<b>TROPHY GOLD PROJECT</b>		
<b>Potential Gold Producers</b>		
<b>Northwestern B.C.</b>		
Date: March/88	NTS: 104G/3	Figure: <b>14</b>

(Listed Vancouver Stock Exchange: Trading Symbol CUG)

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