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GEOLOGICAL AND PROSPECTING REPORT MOUNT MILLIGAN PROPERTY BRITISH COLUMBIA MILLIGAN 6, 7, 8, 9 CLAIMS RAINBOW 1 AND 2 CLAIMS

> OMINECA MINING DIVISION Latitude 55° 08' North Longitude 124° 04' West NTS 93N/1E

### For

୍କ ମ CONTINENTAL GOLD CORP. 10.3 S 1020 - 800 West Pender Street 50 **(7)** Vancouver, B.C. S O V6C 2V6 S  $\bigcirc$  $\leq$ 1000 C By Þ - 6 77 65 T X Douglas B. Forster, M.Sc. 7 > )Z October 23, 1989 **N** C

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Plate 1 Geological Map Milligan 6, 7, 8, 9 Claims

## 1.0 SUMMARY

The Milligan 6, 7, 8, 9 and Rainbow 1 and 2 claims are located in the Omineca Mining Division, approximately 95 km north of Fort St. James, B.C. A helicopter supported geological and prospecting investigation was conducted on the claims during August 1989 to determine if the geological environment on these claims was favourable for hosting gold-copper porphyry deposits similar to the Mt. Milligan deposit located 2 kms south of the Milligan 9 claim.

Geological mapping and prospecting on these claims has located numerous alkaline plutons intruding Takla augite porphyry, indicating a highly favourable geological environment exists for locating gold-porphyry-copper mineralization.

## 2.0 INTRODUCTION

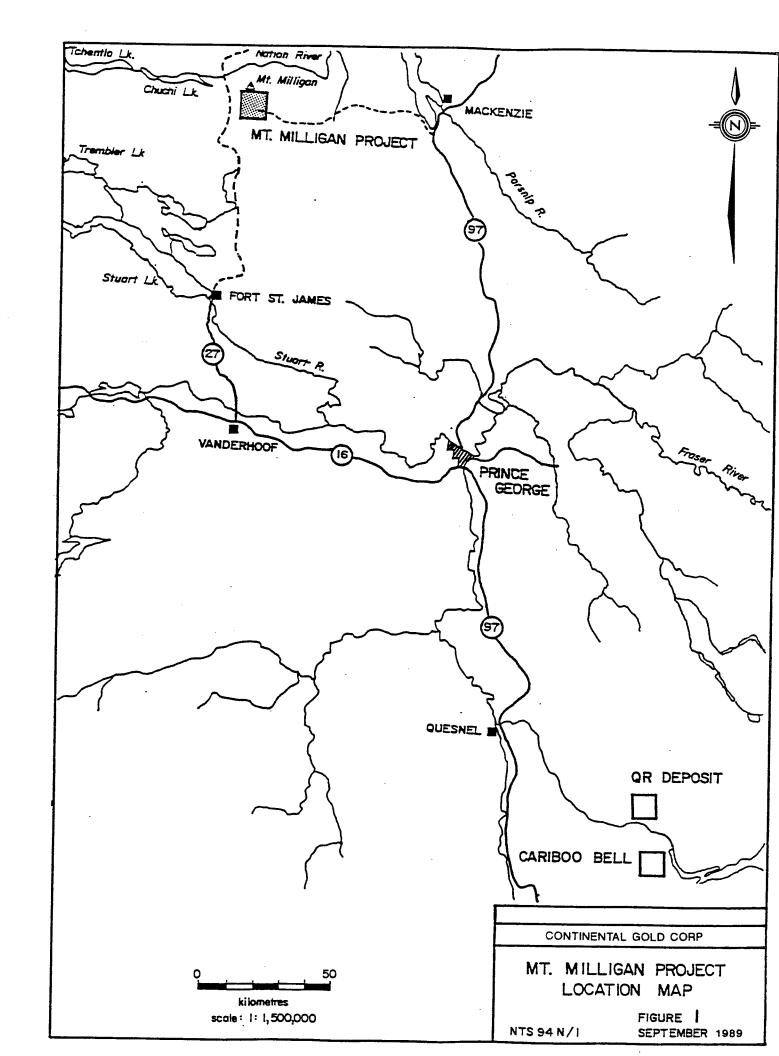
On August 7 - 10, 1989 a helicopter supported geological and prospecting investigation was conducted on the Milligan 6, 7, 8, 9, and Rainbow 1 and 2 claims, owned by Continental Gold Corp. The purpose of this investigation was to determine if the geological environment on these claims was favourable for hosting gold-copper porphyry deposits similar to the Mt. Milligan deposit located 2 kms south of the project area. The geological and prospecting studies were conducted by Continental Gold Corp. geological and engineering staff housed at the Mt. Milligan development site. This report describes this work program, and has been prepared to conform to the British Columbia Ministry of Energy and Mines Assessment Report format.

### 2.1 Location and Access

The Milligan 6, 7, 8 and 9 and Rainbow 1 and 2 claims are located at latitude 55° 08'N and longitude 124° 04' West in the Omineca Mining Division. They are approximately 95 km north of Fort St. James and 10 km southeast of the Nation River bridge on the Manson Creek Highway (NTS 93N/1, Figure 1).

Access to the property is by a gravel road which extends 10 km beyond the Rainbow Creek bridge at the end of the Philips North Main Line logging road. Access to the Philips Main Line is gained from Windy Point on Highway 97, approximately 150 km north of Prince George. The Milligan 6, 7, 8 and 9 claims have no road access, with a Ft. St. James or McKenzie based helicopter providing easy access. The Rainbow 1 and 2 claims can be accessed by gravel logging roads.

The claims cover a series of northwest-trending ridges which extend from Mt. Milligan in the north to Rainbow Creek in the south. Local relief is in the order of 300 metres with an average elevation of 1,200 metres. Drainage from the claims is either east to Rainbow Creek or west to Suschona Creek, then north to the Nation River. Vegetation consists of



continuous dense growth of pine, fir, spruce, balsam, alder and aspen. The entire property is below treeline.

## 2.2 Claim Status

This report covers a portion of Continental Gold Corp's Mt. Milligan property. The Milligan 6, 7, 8, 9 and Rainbow 1 and 2 claims were staked in September, 1988 and are owned 100% in the name of Continental Gold Corp.

The claims total 120 claim units. Pertinent claim information is outlined in Table 1. The location of Milligan and Rainbow claims on the Mt. Milligan property is depicted in Figure 2.

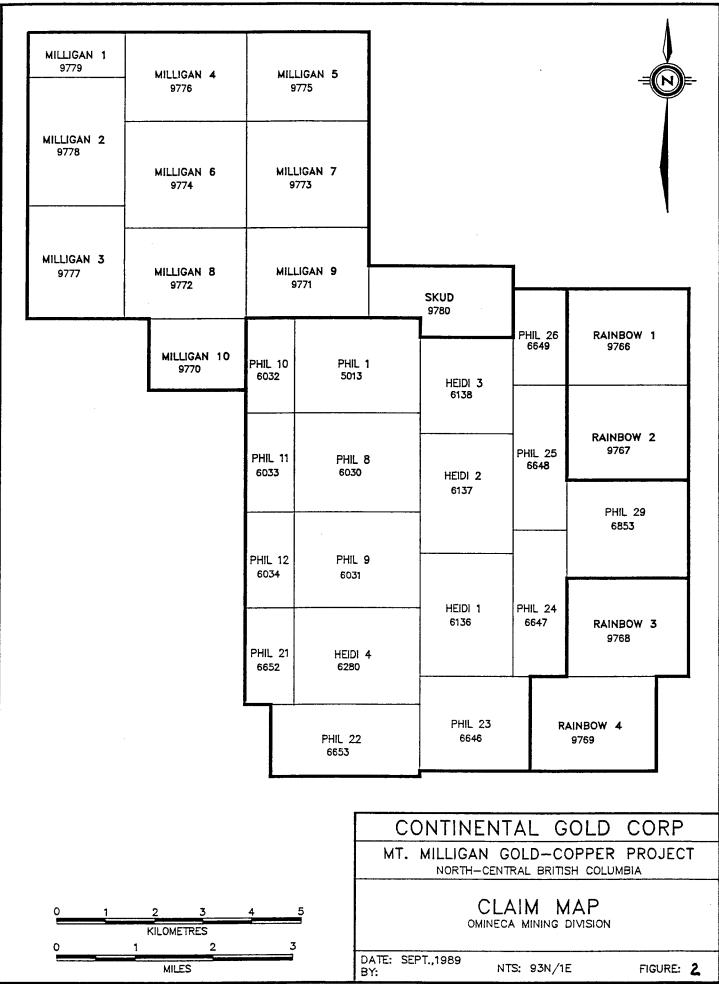
## TABLE 1 Claim Schedule Mt. Milligan

Claim	Record No.	No. of Units	Year Recorded	Expiry* Date
Milligan 6	9774	20	September 5, 1988	1990
Milligan 7	9773	20	September 5, 1988	1990
Milligan 8	9772	20	September 5, 1988	1990
Milligan 9	9771	20	September 4, 1988	1990
Rainbow 1	9766	20	September 2, 1988	1990
Rainbow 2	9767	20	September 2, 1988	1990
		120 unit	IS	

\*upon approval of this assessment report

### 3.0 REGIONAL GEOLOGY

The Milligan 6, 7, 8, 9 and Rainbow 1 and 2 claims lie within the Mesozoic volcanic-sedimentary Quesnel Trough of the Intermontane Tectonic Belt. The Quesnel Trough is underlain by Upper Triassic - Lower Jurassic Nicola, Takla, Rossland and Stuhini group sub-alkaline to alkaline volcanic rocks. In the project area alkali basaltic rocks of the Takla group are intruded by



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lower Jurassic phases of the Hogem Batholith. Syenitic to monzonitic phases of the batholith occur adjacent to the subject claims, and are associated with Au-Cu porphyry mineralization at the Mt. Milligan deposit.

Outcrop on the Milligan and Rainbow claims is sparse to nil, with most of the region being covered by glacially derived overburden. Regional geological mapping by the Geological Survey of Canada indicates that the claims are underlain by Takla basaltic rocks which are intruded by alkaline and calc-alkaline granitic stocks.

## 4.0 PROPERTY GEOLOGY

Helicopter supported geological traverses were made along the ridge leading to the summit of Mt. Milligan (Milligan 6, 7, 8, 9 claims). These traverses revealed a wide compositional spectrum of plutons ranging from calc-alkaline quartz monzonite porphyry to alkaline monzonites, diorites, and gabbro (Plate 1). These stocks intrude augite porphyry debris flows of the Takla volcanic series.

In addition to the helicopter geology traverses conducted on the Milligan 6, 7, 8, 9 claims prospecting was initiated on the Rainbow 1 and 2 claims.

The Rainbow 1 and 2 claims are covered by a thick sequence of glacially derived overburden comprised of glacial till and fluvial - glacial sediments. Landforms include eskers, terminal moraine and benched terraces. Prospecting failed to locate any rock exposures.

The following are detailed rock descriptions of the major intrusive units identified during the geological traverses on the Milligan 6, 7, 8 and 9 claims. The sample locations are depicted on Plate 1 (in pocket).

#### HELICOPTER TRAVERSE

#### Sample Locations on Plate 1

#### Sample 1 Hornblende Monzonite

- summit of Mt. Milligan
- 50 lbs. collected possible geochronology
- medium grained hypidiomorphic texture with a weak fabric developed by subparallel alignment of slightly elongate plagioclase laths

35% white plagioclase laths approx. 1 mm wide, 1-3 mm long

40% subhedral mafic grains

35% hornblende dark green - acicular grains .5 mm wide, 1-2 mm long

3-4% equant subhedral to euhedral pyroxene dark green grains .5 mm across, usually associated with other mafics

1% small (less than .5 mm) anhedral magnetite grains, partially or completely surrounded by other mafic minerals

25% interstitial anhedral K-spar - trace very fine grained apatite (epidote)

## Sample 2 Biotite Monzonite

- ridge to the east of summit
- 50 lbs collected for possible geochronology
- medium to fine grained hypidiomorphic monzonite with 20% biotite interstitial oikocrysts with completely anhedral grain boundaries defined by crystal faces of other smaller grains - they are up to 5 mm across and include fine grained subhedral to euhedral plagioclase and guartz grains
- weak fabric developed by subparallel alignment of K-spar, plagioclase, and hornblende

20% plagioclase laths .5 m X 1 - 2 mm

20% acicular hornblende slightly smaller in dimension

30% interstitial to lath-like pink K-spar of similar size

3% fine grained subhedral to euhedral quartz grains poikilitically included in the biotite, and in interstitial feldspar

2% anhedral fine grained magnetite usually associated with the mafic minerals

### Sample Locations on Plate 1 (Continued)

#### Sample 3 Hornblende Monzonite

- slope of Mt. Milligan
- medium grained hypidiomorphic equigranular monzonite

25% equant to lath like white plagioclase grains 1 x 1 mm to .5 x 1 mm

50% mafics – subhedral to anhedral, grain boundaries controlled by feldspar forms

35% hornblende

3-5% magnetite - minor biotite, trace pyroxene

25% interstitial K-spar, often forming a rind or rim around white plagioclase

#### Sample 4 Biotite Diorite

 medium grey fine to medium grained hypidiomorphic diorite to monzodiorite

> 10% interstitial oikocrysts of biotite with anhedral grain boundaries defined by crystal faces of smaller surrounding grains, 3-5 mm across - Poikilitically includes plagioclase

25% pale subhedral plagioclase laths .5 - 1 mm long

10% pale pink interstitial K-spar and occasional K-spar lath

40% mafic minerals other than biotite - mostly subhedral small stubby 1 lb. laths .5 mm accessory pyroxene, magnetite one large twinned subhedral plagioclase lath 3 mm x 7 mm

#### Sample 5 Hornblende Monzonite

- 50 lbs. collected possible geochronology similar in composition to Samples 1 and 3, perhaps a little more mafic than 1 and a little less than 3
- K-feldspar appears as distinct laths, as well as interstitial material
- medium grained hypidiomorphic equigranular

10% K-spar 1 X 2 - 3 mm laths showing crude fabric

10% interstitial k-spar

35% equant to lath-like plagioclases usually 1 X 1 to 1 X 2 mm

45% mafics, mostly stubbly hornblende laths, with accessory, biotite, pyroxene and magnetite

## Sample Locations on Plate 1 (Continued)

### Sample 6 Plagioclase Monzonite Porphyry

- small dyke
- fine grained to medium grained hypidiomorphic ground mass of:

40% interstitial k-spar

8% acicular mafics, probably biotite +/1 hornblende

7% anhedral quartz grains about 1 mm across occurring in clumps and aggregates

10% irregularly sized equant plagioclase from .5 mm to 2 mm

There is actually a continuous spectrum of plagioclase grain sizes from the ground mass (.5 mm) to phenocrysts 8 mm long, but distribution is roughly bimodal with phenocrysts over 5 mm and ground mass plagioclase under 2 mm

35% equant to stubby laths of subhedral to euhedral plagioclases 5-8 mm across

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

Helicopter supported geological traverses on the Milligan 6, 7, 8 and 9 claims has located numerous alkaline and calc-alkaline plutons on the claims. The presence of these plutons intruding Takla augite porphyry debris flows indicates a highly favourable geological environment for locating gold -copper porphyry mineralization similar to the Mt. Milligan gold-copper deposit of Continental Gold and B.P. Resources Canada Ltd.

Detailed mapping is required to distinguish and delineate each pluton on the Milligan claims and to assess alteration assemblages within the enclosing Takla group volcanics.

## <u>APPENDIX</u> I

## STATEMENT OF QUALIFICATIONS

I, Douglas B. Forster of #313-1350 Comox Street of the City of Vancouver, British Columbia, do hereby certify that:

- I graduated from the University of British Columbia in geology, having obtained my Bachelor of Science in 1981 and my Master of Science in 1984.
- 2. I have worked in the field of mineral exploration in B.C., Manitoba, Saskatchewan and the Yukon Territories since 1977.
- 3. I am an Associate of the Geological Association of Canada.
- 4. I am a Director of Continental Gold Corp., and hold securities of the aforementioned.
- 5. This report is based in part on my personal observations on the property, and a review of all pertinent data.

Douglas B. Forster, M.Sc. Director Continental Gold Corp.

Vancouver, B.C.

## APPENDIX II

# COST STATEMENT

Rainbow 1 and 2 Claims - Prospecting August 7, 8, 1989

M. Rebagliati, Project Manager, 2 days @ \$350/day			5 700
D. Tomblin, Prospector, 2 days @ \$145/day			290
Truck rental, 2 days @ \$100/day			200
Room and Board, 4 days	@ \$50/day		200

Total Rainbow 1 and 2 Claims

\$ 1,390

# APPENDIX II CONTINUED

Milligan 6, 8 Claims - Geological Traverses August 9, 10, 1989

M. Harris, Geologist, 0.5 day @ \$170/day	\$ 8 <i>5</i>
C. DeLong, Geologist, 1 day @ \$160/day	160
W. Donaldson, Geologist, 0.5 day @ \$170/day	85
A. Findlay, Geologist, 0.5 day @ \$250/day	125
M. Rebagliati, Project Manager, 1 day @ \$350/day	350
Room and board, 4 man days @ \$50/day	200
4x4 truck rental, 1 day @ \$100/day	100
Northern Mtn. Helicopters, 2.35 hrs. @ 615.47/hr.	1,446
Lo Straith, Draftsman, 0.5 day @ \$150/day	75
Map preparation and reproductions	 50

Total Milligan 6, 8 Claims

\$ 2,676

## APPENDIX II CONTINUED

Milligan 9, 7 Claims - Geological Traverses August 9, 10, 1989

M. Harris, Geologist, 1 day @ \$170/day	\$ 170
C. DeLong, Geologist, 1 day @ \$160/day	160
Northern Mtn. Helicopters, 0.9 hrs. @ 615.47/hr.	557
Lo Straith, Draftsman, 0.5 day @ \$150/day	7 <i>5</i>
Map preparation and reproductions	 50

Total Milligan 5, 7 Claims

\$ 1,012

