Assessment Report

GEOLOGICAL AND PHYSICAL WORK

on the MT. MILLIGAN PROPERTY

Heidi 2 and Phil 9 Claims

Omineca Mining Division, British Columbia

NTS 93N/01,04

Latitude 55° 7.5′ N Longitude 124° 1′ W

UTM Zone 10, 6108500N 434500E

Owner/Operator: Placer Dome Canada Limited
1440 Hugh Allan Drive
Kamloops, B.C.
V1S 1L8

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Date: December 19, 1997

TABLE OF CONTENTS

	Page
SUMMARY	1
1.0 INTRODUCTION	2
1.1 Location and Access	2
1.2 Topography and Vegetation	2
1.3 Work History	2
1.4 Summary of Work Done	3
1.5 Claim Status	3
2.0 REGIONAL GEOLOGY	4
3.0 PROPERTY GEOLOGY	5
4.0 DISTRIBUTION OF SULPHIDES AND GOLD IN THE MBX ZONE	6
4.1 Macroscopic Examination of Drill Core	6
4.2 Petrography	7
5.0 CORE STACKING	7
6.0 CONCLUSIONS	8
7.0 RECOMMENDATIONS	8
REFERENCES	9
STATEMENT OF COSTS	10
STATEMENT OF QUALIFICATIONS	11
APPENDIX I	

APPENDICES

I. Petrographic Report

FIGURES

1. Location Map — After Page 2

2. Claim Map — After Page 3

3. Regional Geology — After Page 4

4. Property Geology — After Page 5

5. Core Rack Map — After Page 7

TABLES

I. Mt. Milligan – Intervals Examined July 23-24, 1997 by G. Ditson — After Page 6

II. Mt. Milligan –Drill Core Specimens for Polished Thin Sections; July, 1997 — After Page 7

SUMMARY

Geological and physical work on the Mt. Milligan Property in 1997 consisted of examination of selected drill core from the MBX Zone and re-stacking core boxes. Theft of the treated 4x4's used to construct core racks, and attendant dumping of the core, necessitated the dismantling of racks and piling core into "dead stacks".

Examination of core from the MBX Zone was done to determine if there was a noticeable structural control to mineralization. A total of 148 m of core from 11 drill holes was examined, yielding mixed results. Although some directional control was observed in the form of mineralized fault zones and sulphide-bearing fractures in dominantly steep/vertical orientations, it was not possible to conclude with certainty that there is a significant structural orientation controlling grade.

Petrographic examination of twenty polished sections of samples collected from the intervals of interest also produced inconclusive results. Strong sulphide fabrics were not observed, but weak to moderate alignment of sulphide mesh textures and alignment of sulphides in strongly banded trachytic rocks are present. Gold was observed in and near sulphides and magnetite, but does not exhibit clear directional control by veins or fractures.

The possibility of broad scale structural controls cannot be ruled out, but the evidence observed in this study does not justify further drilling only to explore that possibility. It is recommended that any future drill programs for metallurgical sampling include detailed logging and sampling procedures to quantify the relationship between sulphide-bearing structures and copper and gold grades.

1.0 INTRODUCTION

During the 1997 field season, Placer Dome Canada Limited conducted a program of drill core stacking and geological examination of old core from the MBX Zone. Core stacking was conducted in an effort to deter vandals from dumping core in their pursuit of the treated 4x4's out of which the core racks were constructed. Examination of 148 m of MBX Zone core and the subsequent petrographic study of 20 polished thin sections were done to determine if there is an observable directional control to mineralization.

Physical work was conducted over the period of July 22nd through August 2nd; geological field work was conducted on July 22nd and July 23rd; petrographic work was done August 9th and 10th. All field work was conducted or supervised by G. Ditson; petrography was done by R. Wells.

1.1 Location and Access

The Mt. Milligan property is 65 km west-southwest of Mackenzie, B.C., and 95 km north of Fort St. James, on NTS map sheet 93N/01 (Figure 1). Coordinates are latitude 55° 7.5' N and longitude 124° 1' W; UTM 6108500N and 434500E.

Access to the core storage site at Heidi Lake is by 32 km of paved roads east and south of Mackenzie, 88 km of active logging roads (Finlay North, Finlay Philip West, and Philip North), and 7.6 km of inactive logging road.

1.2 Topography and Vegetation

The western portion of the claims cover an approximately north-south trending topographic high which has been dissected by east-west valleys. The valleys drain both west to Suschona Creek and east to Rainbow Creek, which flows northeasterly across the southeastern portion of the claims. The eastern sector is largely low lying, underlain by a blanket of glacial debris characterized by drumlins, eskers and other glacial features. Local relief is up to of 300 m, ranging from 1050 m in the east to 1500 m in the west.

The entire property is below treeline. Vegetation consists of dense growth of pine, fir, spruce, balsam, alder and aspen. The area over the MBX, 66 and Southern Star Zones has been logged.

1.3 Work History

The area was prospected as early as 1937, but no serious work was done until 1972 when Pechiney Development Ltd. conducted induced polarization, geochemistry and a 5-hole drill program. The property was dormant until 1983 when Selco Inc. did

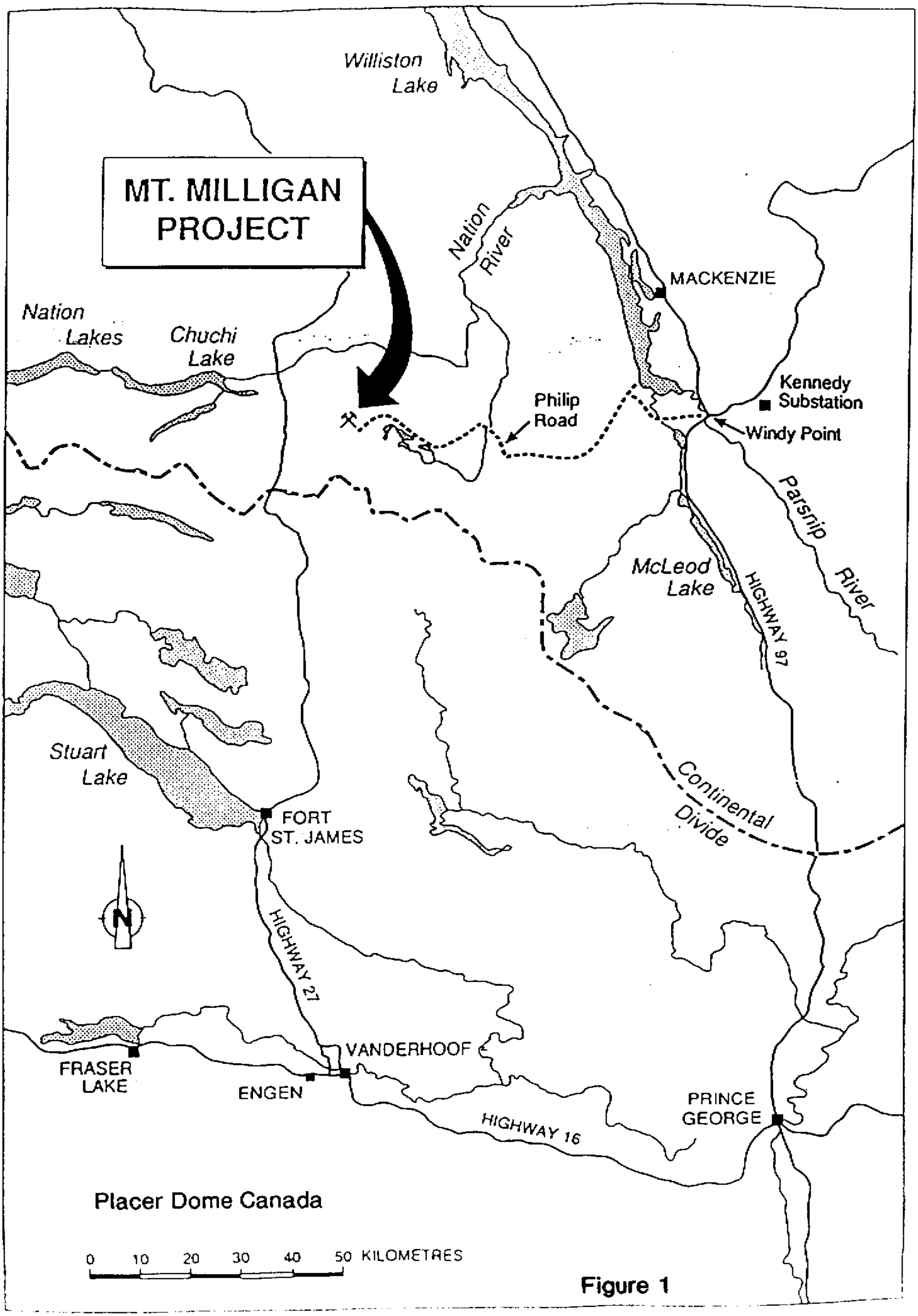

Williston Lake
MT. MILLIGAN PROJECT
Nation River
MACKENZIE
Nation Lakes
Chuchi Lake
Kennedy Substation
Philip Road
Windy Point
Parsnip River
McLeod Lake
HIGHWAY 97
Stuart Lake
Continental Divide
FORT ST. JAMES
N
HIGHWAY 27
VANDERHOOF
FRASER LAKE
ENGEN
PRINCE GEORGE
HIGHWAY 16
Placer Dome Canada
0 10 20 30 40 50 KILOMETRES

Figure 1

extensive geochemical work which identified a Au-As anomaly east of Heidi Lake. Selco amalgamated with BP Resources Canada Limited in 1984. In that same year, R. Haslinger staked claims on adjacent ground, which BP then optioned. Extensive geological, geochemical, lithogeochemical, magnetic, induced polarization and trenching work was done by BP until 1986, when Lincoln Resources Inc. optioned the property. Lincoln's twelfth drill hole was the first to intersect the MBX Zone in 1987. Lincoln later reorganized to become United Lincoln Resources Inc., and then amalgamated with Continental Gold Corp in 1989. Drill hole 199 was the first to intersect the Southern Star Zone later that year. Placer Dome Inc. purchased the property in 1990, did extensive in-fill and step-out drilling, and completed a Pre-Feasibility Study in 1991. There has been little work done on the property since that time.

1.4 Summary of Work Done

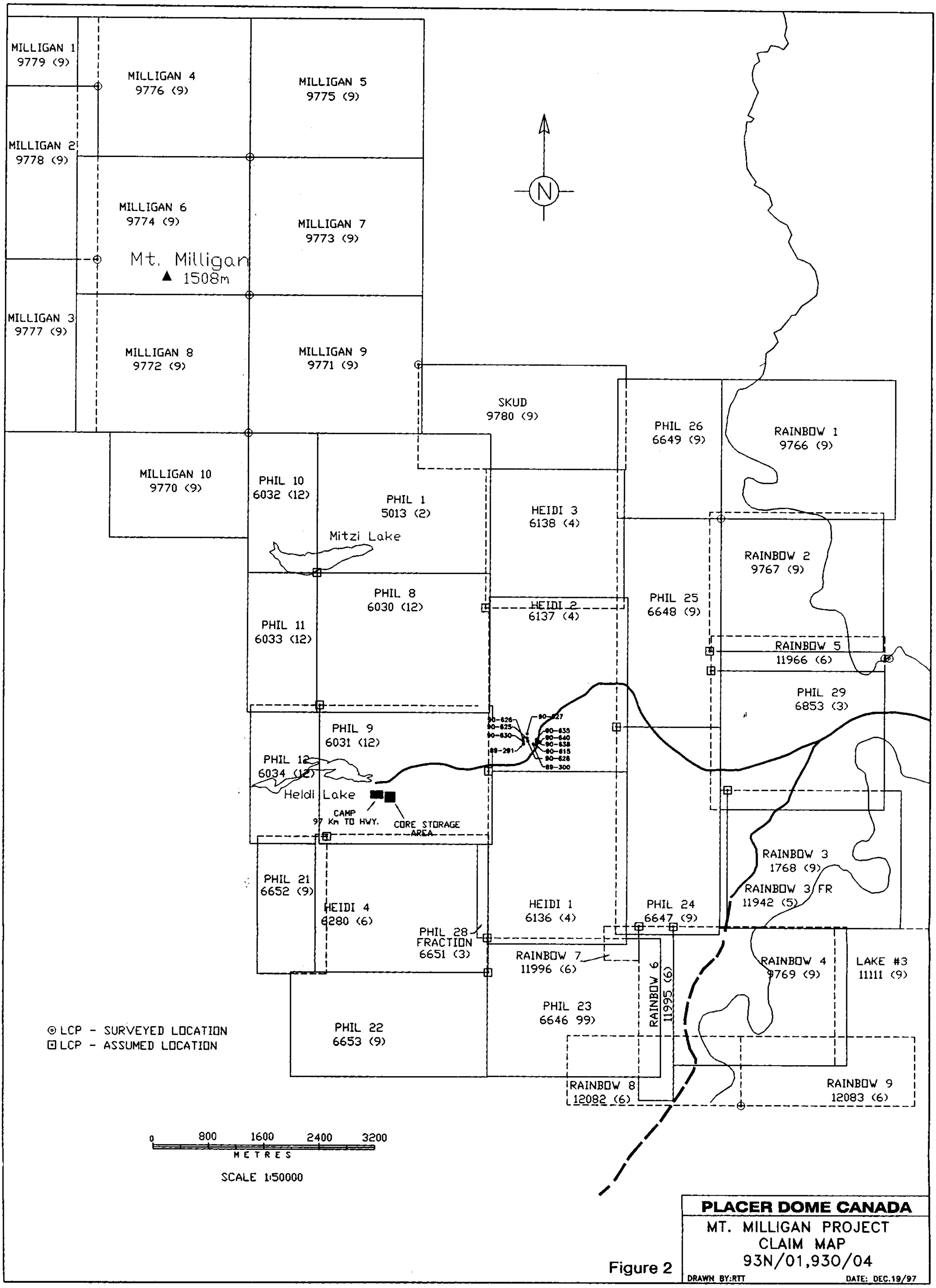
The 1997 geological work program consisted of examination of 25 intervals of varying lengths in 11 separate drill holes in the MBX Zone. Selection of intervals was restricted by the availability of drill core, but was largely chosen in areas where grades were high enough that gross structures and sulphide distribution could be easily distinguished. Twenty core specimens were collected for polished thin section examination.

The 1997 physical work program consisted of dismantling and dead-stacking 18 core racks. Four-by-four posts were piled neatly away from the racks; three empty racks were left standing. Empty core boxes were burned.

1.5 Claim Status

The Phil and Heidi claims (Figure 2) are wholly owned by Placer Dome Canada Limited of Vancouver, British Columbia. A detailed list of claims that make up the Mt. Milligan Property is as follows:

Claim Name	Units	Expiry Date	Record No.
Phil 1	20	1998/02/28	238619
Phil 8	20	1998/12/29	238738
Phil 9	20	1998/12/29	238739
Phil 10	8	2001/12/29	238740
Phil 11	8	1998/12/29	238741
Phil 12	8	1998/12/29	238742
Phil 21	8	1998/09/10	238887
Phil 22	18	2001/09/10	238888
Phil 23	20	2001/09/10	238882
Phil 24	18	2001/09/10	238883
Phil 25	18	1998/09/10	238884
Phil 26	12	2001/09/10	238885
Phil 28 Fr.	1	1998/09/10	238886
Phil 29	20	1998/03/05	238928
Heidi #1	20	1999/04/26	238777
Heidi #2	20	1998/04/26	238778
Heidi 3	16	1998/04/26	238779



MILLIGAN 1
9779 (9)
MILLIGAN 4
9776 (9)
MILLIGAN 5
9775 (9)
MILLIGAN 2
9778 (9)
MILLIGAN 6
9774 (9)
MILLIGAN 7
9773 (9)
Mt. Milligan
1508m
MILLIGAN 3
9777 (9)
MILLIGAN 8
9772 (9)
MILLIGAN 9
9771 (9)
SKUD
9780 (9)
PHIL 26
6649 (9)
RAINBOW 1
9766 (9)
MILLIGAN 10
9770 (9)
PHIL 10
6032 (12)
PHIL 1
5013 (2)
HEIDI 3
6138 (4)
Mitzi Lake
RAINBOW 2
9767 (9)
PHIL 8
6030 (12)
HEIDI 2
6137 (4)
PHIL 25
6648 (9)
PHIL 11
6033 (12)
RAINBOW 5
11966 (6)
PHIL 29
6853 (3)
PHIL 9
6031 (12)
PHIL 12
6034 (12)
Heidi Lake
CAMP
97 Km TO HWY.
CORE STORAGE AREA
RAINBOW 3
1768 (9)
RAINBOW 3 FR
11942 (5)
PHIL 21
6652 (9)
HEIDI 4
6280 (6)
HEIDI 1
6136 (4)
PHIL 24
6647 (9)
PHIL 28
FRACTION
6651 (3)
RAINBOW 7
11996 (6)
RAINBOW 4
9769 (9)
LAKE #3
11111 (9)
RAINBOW 6
11995 (6)
PHIL 23
6646 99)
PHIL 22
6653 (9)
LCP - SURVEYED LOCATION
LCP - ASSUMED LOCATION
RAINBOW 8
12082 (6)
RAINBOW 9
12083 (6)
0
800
1600
2400
3200
METRES
SCALE 1:50000
PLACER DOME CANADA
MT. MILLIGAN PROJECT
CLAIM MAP
93N/01,930/04
DRAWN BY:RTT
DATE: DEC.19/97

Figure 2

Heidi 4	20	1998/06/20	238908
Milligan 1	8	1998/09/09	240125
Milligan 2	20	1998/09/07	240124
Milligan 4	20	1998/09/07	240122
Milligan 5	20	1998/09/07	240121
Milligan 6	20	2001/09/05	240120
Milligan 7	20	2001/09/05	240119
Milligan 3	20	2001/09/08	240123
Milligan 8	20	2001/09/05	240118
Milligan 9	20	2001/09/05	240117
Milligan 10	12	2001/09/06	240116
Rainbow 1	20	2001/09/02	240112
Rainbow 2	20	2001/09/02	240113
Rainbow 3	20	2001/09/03	240114
Rainbow 4	20	2001/09/03	240115
Rainbow 5	5	2001/06/10	242119
Rainbow 6	4	2001/06/12	242148
Rainbow 7	1	2001/06/12	242149
Rainbow 8	10	2001/06/25	242232
Rainbow 9	10	2001/06/25	242233
Rainbow 3 Fr.	1	2001/05/25	242095
See 1	8	2001/04/03	241817
See 2	18	2001/04/03	241818
See 3	20	2001/04/03	241819
See 3 Fr.	1	2002/03/26	243300
See 4	20	2001/04/01	241820
See 5	20	2001/04/03	241821
See 6	18	2001/04/03	241822
See 7	20	2001/04/03	241823
See 8	16	2001/04/01	241824
See 9	20	2001/04/03	241825
See 10	20	2001/04/04	241826
See 11	20	2001/04/04	241827
See 12	20	2001/04/01	241828
See 13	18	2001/04/04	241829
See 14	20	2001/04/04	241830
See 15	20	2001/04/01	241831
See 16	20	2001/04/04	241832
See 19	16	2001/04/04	241833
See 20	1	2001/04/01	241834
See 21	1	2001/04/01	241835
See 22	1	2001/04/02	241836
See 23	1	2001/04/01	241837
See 24	1	2001/04/01	241838
See 25	1	2001/04/01	241839
See 26	18	2001/04/04	241840
See 27	20	2001/04/04	241841
See 50	5	2002/03/26	243301
Skud	18	2001/09/08	240126
Bev	1	2002/07/16	302485
Ezmony	4	2002/07/13	302473

2.0 <u>REGIONAL GEOLOGY</u> (Figure 3)

The Mt. Milligan property is within the Triassic-Jurassic island arc Quesnel Terrane. Intrusions associated with mineralization are coeval (182-183 Ma) with surrounding Takla Group

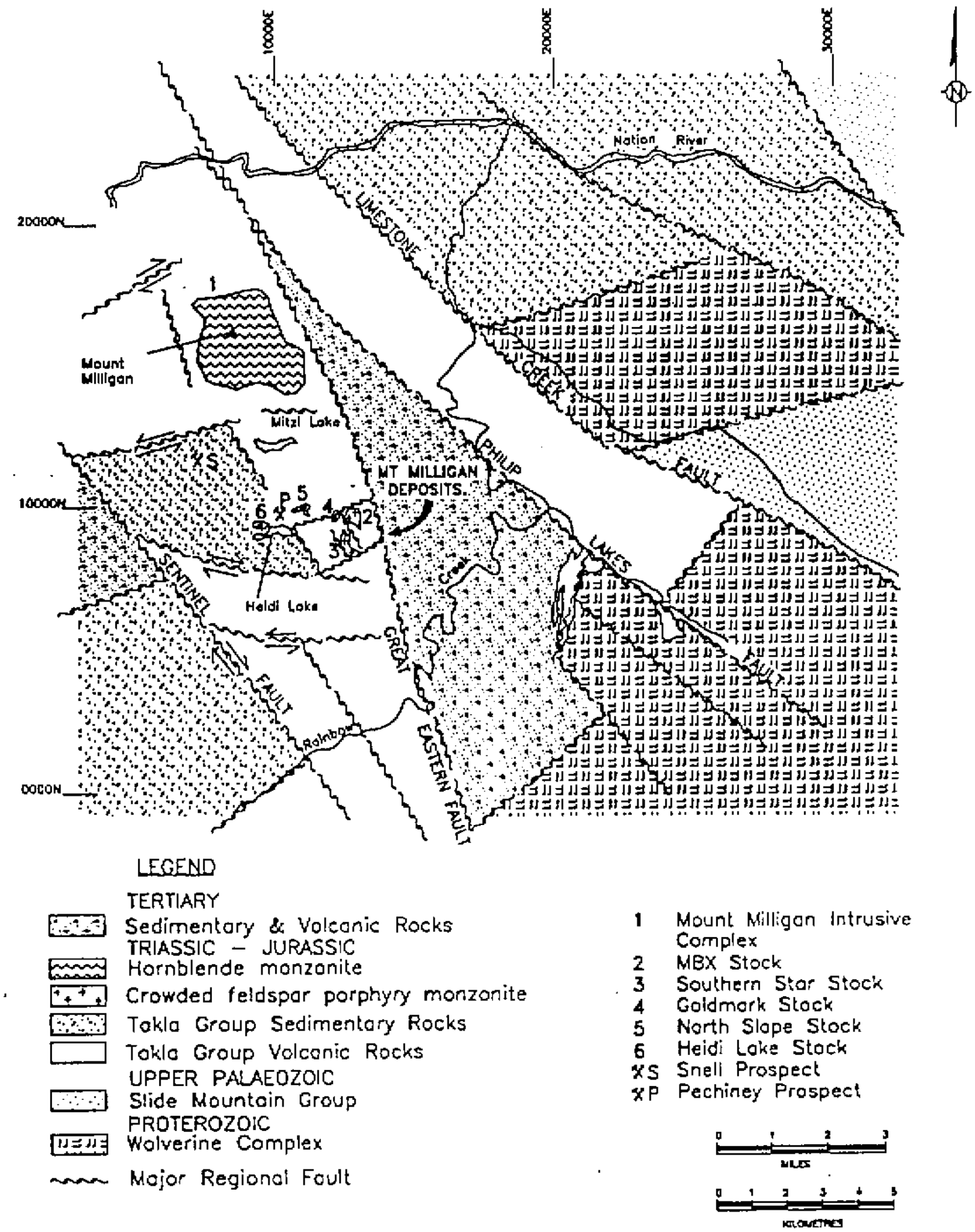


Figure 3. Regional Geology

volcanic rocks. In the vicinity of the deposit, the Witch Lake and Chuchi Lake Formations form the core of the volcanic complex, and are flanked and underlain by sedimentary rocks of the Inzana Lake and Rainbow Creek Formations (Nelson et al., 1992). Crowded feldspar-porphyritic monzonite stocks and dykes associated with mineralization form small magnetic highs on the southern flank of a large northwesterly-trending regional magnetic high which extends 10 km from the MBX Zone to Mount Milligan peak.

3.0 PROPERTY GEOLOGY (Figure 4)

The property is largely underlain by latitic, andesitic to basaltic and trachytic volcanic rocks of the Witch Lake Formation. These units generally trend north-northwesterly and dip moderately to steeply to the east. Major mineralization occurs in and adjacent to the MBX and Southern Star Stocks, which are both monzonite. Trachyte, monzonite and diorite postmineral dykes are common; at least one set of these dykes is Cretaceous (Sketchley, et al., 1995). At least four episodes of faulting have affected the deposit area, the earliest of which is the shallow easterly-dipping, bedding-parallel Rainbow Fault. Also important are east-northeasterly trending cross-faults, and northwesterly-trending, steep easterly-dipping faults which separate the MBX from the Southern Star stocks and dissect the Southern Star Stock. The north-northwesterly trending Great Eastern Fault is a regional structure which truncates mineralization and juxtaposes Takla Group volcanic rocks against Early Tertiary rocks to the east.

The MBX and Southern Star stocks both dip moderately to the west. The MBX Stock is somewhat cylindrical and approximately 400 m in diameter. An elongate, bowl-shaped monzonite body up to 50 m thick, called the Rainbow Dyke, protrudes from the footwall of the MBX Stock. The Rainbow Dyke is locally parallel to stratigraphy, locally occupies the plane of the Rainbow Fault, and locally cross-cuts stratigraphy at a high angle. The Southern Star Stock is a 200-500 m thick, tabular body which has been traced over an 800 m length, and which forks at its northern end. Both intrusions are crowded porphyries with up to 70% 1-10 mm phenocrysts in a fine grained to aphanitic groundmass.

Mineralization on the eastern side of the MBX Stock is largely hosted by volcanic rocks in the MBX and 66 Zones. The MBX Zone is a Cu-Au assemblage characterized by pyrite and chalcopyrite and minor bornite accompanied by biotitic potassic alteration. Highest grade mineralization in the MBX Zone is closest to the contact of the stock, diminishing with distance from it. Toward the southeast, where propylitic alteration becomes prominent, chalcopyrite decreases to weak-to-negligible levels and Au values increase in the Au-only 66 Zone.

In the MBX Zone, chalcopyrite, pyrite, bornite and magnetite are all present. Chalcopyrite is reported to be accompanied locally by pyrite to form coarse-sulphide aggregates. Bornite is said to be associated with higher gold concentrations and to occur exclusively in potassically-altered volcanics as blebs and disseminations in lens-shaped zones close to the footwall contact of the stock (Sketchley, et al., 1995). All sulphides and magnetite occur in both veinlets and disseminations, and there are indications that disseminations are volumetrically more

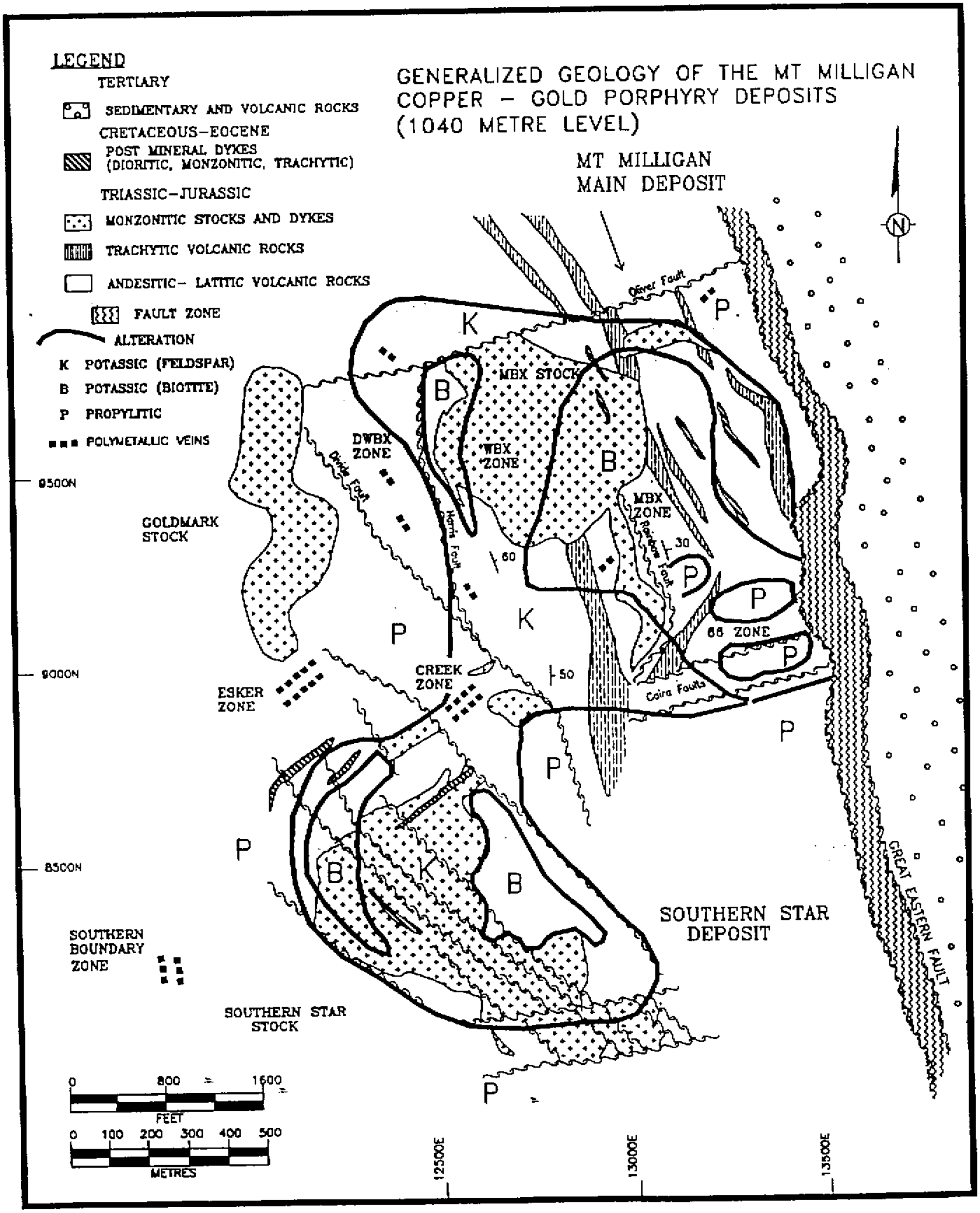

GENERALIZED GEOLOGY OF THE MT MILLIGAN COPPER - GOLD PORPHYRY DEPOSITS (1040 METRE LEVEL)
LEGEND
TERTIARY
SEDIMENTARY AND VOLCANIC ROCKS
CRETACEOUS-EOCENE
POST MINERAL DYKES (DIORITIC, MONZONITIC, TRACHYTIC)
TRIASSIC-JURASSIC
MONZONITIC STOCKS AND DYKES
TRACHYTIC VOLCANIC ROCKS
ANDESITIC- LATITIC VOLCANIC ROCKS
FAULT ZONE
ALTERATION
K POTASSIC (FELDSPAR)
B POTASSIC (BIOTITE)
P PROPYLITIC
POLYMETALLIC VEINS
MT MILLIGAN MAIN DEPOSIT
N
Oliver Fault
K
P
MBX STOCK
B
DWBX ZONE
WBX ZONE
MBX ZONE
GOLDMARK STOCK
9500N
9000N
8500N
Harris Fault
Divide Fault
Rainbow Fault
Caira Faults
66 ZONE
CREEK ZONE
ESKER ZONE
SOUTHERN STAR DEPOSIT
SOUTHERN BOUNDARY ZONE
SOUTHERN STAR STOCK
GREAT EASTERN FAULT
60
50
30
0 800 1600
FEET
0 100 200 300 400 500
METRES
12500E
13000E
13500E

Figure 4

important. There has been no detailed study of the distribution of sulphides and Au in the MBX Zone, and drill logs are generally descriptive in nature.

4.0 DISTRIBUTION OF SULPHIDES AND GOLD IN THE MBX ZONE

4.1 Macroscopic Examination of Drill Core

Table I contains detailed observations on a total of 148.01 m of core from 11 drill holes in the MBX Zone. The following conclusions were made relative to directional controls for sulphides:

Metres	Control	Direction
53.55	No	
6.00	Yes	faults of unknown orientation
29.70	Yes	low angle to core axis
5.65	Yes	low to moderate angle to core axis
17.40	Possible	low angle to core axis
4.70	Possible	low to moderate angle to core axis
4.75	Possible	60 degrees to core axis
5.00	Possible	Unknown orientation
21.26	Unknown	
148.01		

Twenty-eight percent of the core contains variable proportions of sulphides which exhibit directional control, either in faults or in sulphide-bearing fractures with preferred orientations. Thirty-six percent clearly has no observable directional control, and 22% may have a directional control. It was not possible to determine whether or not a control exists in 14% of the core observed. These statistics are only a summary of observations; they do not represent generalizations that can be applied to mineralization, since the core examined is not statistically representative. However, it may be significant that the most commonly observed directional controls were oriented at low angles to (vertical) core axes.

Sulphide-bearing fractures are most commonly hairline to 1 mm thick. Sulphides are generally discontinuous along fractures, rarely extending more than a few centimetres along each fracture. Disseminated sulphides are commonly present in addition to fracture-controlled sulphides, and locally may represent the majority of the total sulphide content. Quartz-feldspar-pyrite-chalcopyrite veins and very fine grained pyrite veinlets are uncommon, but probably influence grade locally.

TABLE I. Mt. Milligan - Intervals Examined July 23-24, 1997 by G. Ditson

Drill Hole	Interval	Grade	Description	Fractures* Low	Fractures* Mod	Fractures* Hi	Directional Control?	Samples
89-291	92-116	2.76 g/t Au 0.624% Cu	Higher grade intervals (3-4 g/t) have less spectacular sulphides than 1 g/t zones, but they have more cpy, most commonly as blebs and coarse cm-scale patches. Interval 112-122.5 has especially spectacular cg blebby py, but it is <u>not</u> preferentially oriented. There is the odd fracture filling at about 45° c/a or sub-parallel to c/a, but they carry minimal sulphide compared to the blebs. Also get short sections where several orientations of aligned blebs are present, commonly about perpendicular to the c/a				No	97.20
89-291	146-148	229.00 g/t Au 1.610% Cu	Local abundant cpy; interval probably averages 3%. Py is more abundant (~10%) and locally occurs as pale euhedral/subhedral coarse disseminations. Last 40 cm (?) is all very fine rubble					146.70
89-300	196-200	3.085 g/t Au 0.251% Cu	Albite?-epidote altered volcanics with 5% py as clots/blebs with no directional control. One 3 cm band of blebby py about 30° c/a. Many 0.5 cm carbonate veins (react only to 40% HCl) without sulphides.				No	
89-300	200-202	4.99 g/t Au 0.122% Cu	White, intensely albite?-altered rock with clots and blebs of fine grained py throughout; no sulphide-bearing veins, and no directional control. One qz vein.				No	
89-300	204-206	6.000 g/t Au 0.200% Cu	Pyrite-rich fault gouge.				Yes (fault)	
90-615	73-75	1.00 g/t Au 0.810% Cu	At 73 m begin to get K-feldspar (or albite) veinlets (without sulphides) with cloudy, irreg pervasively bleached envelopes; these veinlets have no more sulphide than surrounding wall rocks.	2	5	2	No	73.85
90-615	77-79	1.09 g/t Au 0.498% Cu	Fine rubble.					
90-615	124.45-141.71	1.23 g/t Au 0.298% Cu	Rainbow Dyke. Highest grade section (2.4 g/t) is mostly rubble. Very little sulphide in entire interval is associated with fracture fills. Most sulphide is fine to coarse blebby py with minor cpy. Hairline shatter fractures (some with rusty Fe-carb) become abundant down hole approaching a rubbled zone at 133.2-140.5, where most of grade is. Specular hematite in 5-8 mm cacite/Fe carbonate veinlet near 141 m and perhaps more hem is in discontinuous reticulate fracture fillings below rubble.					
90-625	72-84	1.56 g/t Au 0.582% Cu	Cpy mostly fracture controlled and in some clots of disseminations, but 3 cm was the longest cpy seam seen; usually hairline, < 1 cm, and variably oriented; not common (<0.5% cpy). At 73.95 is a 6 mm qz-feld?-py-cp veinlet at 45° c/a. Qz-cpy veins no longer present below 80.4, and erratic disseminations are more common to at least 86 m, except at 83.3-84.4, where fracture filling cpy occurs mostly at 25° c/a and less commonly at 45° c/a. These fracture fillings are about 8 x m, and 75% are shallow. (Erratic disseminated py and cpy to 88.5 m. Two 50° c/a qz-cpy veins near 88.5 m.) Qz-py-feld-cp veinlets occur at 78.1 m (65° c/a, 5 mm), 78.9 m (60° c/a, 7 mm), 79.2 m (20° c/a, 3 mm), 79.6 m (60° c/a, 7 mm), 80.0 m (60° c/a, 2 cm(?)), 80.4 m (60° c/a, 2.5 cm).				Yes low Angle	80.4 81.0
90-625	146.5-151.2	1.04 g/t Au 0.62% Cu	Fracture fillings are mostly hairline and very discontinuous (only a few centimetres long), containing py and only minor cpy. Most sulphides are disseminated or in coarse clots/blebs.	13	3	2	Possible low angle	
90-625	152-156.7	2.54 g/t Au 1.128% Cu	Py and cpy pick up down hole as irregular blebs, clots and veinlets. Most of the shallow ones are at beginning of interval. Fractures look so irregular that a directional control is pretty hard to imagine when get into the cpy-rich material. There is only one small sample with what could be called irregular veinlets or aligned blebs in anastomosing irregular feldspar? veinlets. Locally visible breccia texture.	11	14	3	Possible low-mod angle	154.90

*Sulphide-bearing fracture orientations are relative to the core axis (c/a); low (0-30), mod (30-60), hi (60-90).

TABLE I. Mt. Milligan - Intervals Examined July 23-24, 1997 by G. Ditson

Drill Hole	Interval	Grade	Description	Fractures* Low	Fractures* Mod	Fractures* Hi	Directional Control?	Samples
90-625	198-200	4.63 g/t Au 1.370% Cu	Fault zone - crushed, rubbled core. A couple of chunks with intense sulphide as large blebs.				Yes (fault)	
90-626	131-135	1.39 g/t Au 0.566% Cu	Slight increase in py and cpy, mostly along hairline fractures at shallow angle to core axis, but some moderate and high angle ones present. Cpy is uncommon in fractures.				Yes low angle	
90-627	174-176	15.20 g/t Au 0.321% Cu	Crushed, finely rubbled zone; strong chlorite, abundant slickensided surfaces. This interval doesn't look any different from the sample below, which is only 0.46 g/t compared to 15.2 g/t in this interval. Sulphides in both intervals about 1% py and < 0.5% cpy.				Yes (slickensides)	
90-627	218-222	3.16 g/t Au 0.94% Cu	Very little fracture control - perhaps 2-3 fractures or narrow sulphide-bearing veinlets in entire interval.				No	218.7 220.15
90-628	33.35-38.9	2.43 g/t Au 1.25% Cu	Disseminated blebby py and cpy come and go, 0-5%. One 2 cm wide cpy-bearing qz vein at 45° c/a. Probably about 1/5 of sulphides are in fracture fillings. Serious fault gouge begins at 43 m, where grade drops a bit.	6	5	6	No	34.75 36.4
90-628	262-268.7	2.09 g/t Au 0.473% Cu	Banded trachyte has some fractures and slip surfaces (some hematite-coated) parallel to core that cut bedding at an acute angle. Banding is 30° c/a. Py and cpy occur on them, but there's more sulphide disseminated throughout as patches and preferentially in some bands. Sample has the most sulphide seen in entire interval.				Possible low angle	266.50
90-630	142.7-156.4	4.50 g/t Au 0.647% Cu	Trachyte. To 148 m is shattered (RQD=0) because of abundant fractures and slickensided surfaces parallel and subparallel to core. Core is light brown, but no carbonate detected even with 40% HCl. Less than 1% sulphides visible as disseminations, and some on fracture surfaces which are mostly parallel to the core axis. Py and cpy are both present; locally up to 6%. Py largely disseminated; cpy tends to occur in patches of disseminations or more commonly on fractures sub-parallel to core axis. Qz veins present parallel to core axis carry very little sulphide (about the same as the surrounding rock). Samples are some of the best endowed of entire interval, which grades 8.15 g/t Au.				Yes low angle	150.0 150.25 155.05
90-635	139-143	3.31 g/t Au 0.71% Cu	Beginning of interval marked by an increase in coarse disseminated cpy and py with very few fracture fillings (the 0.5 m interval right above has 3 shallow, 8 moderate and 2 high angle pyrite-bearing fractures and 2-3% 1-2 mm disseminated and <1 cm blebby py). Breccia texture obvious in this interval; volcanics are more massive and less altered below this interval, and sulphide content drops off again.				No	140.15 142.2
90-638	133-135	4.47 g/t Au 0.940% Cu	Unusual fracture fillings/veinlets of very fine grained py with fluidal texture are 1-4 mm thick; 2 are shallow, no moderate ones, and 1 steep one. These only occur to 133.7. Other sulphide-bearing fracture fillings are the more normal variety (hairline, discontinuous). Abundant very coarse blebby py, up to 4 x 1 cm; common ovoid/roundish py clots 0.2-1 cm in diameter. Cpy disseminations most common at top of interval near the very fine grained py veinlets, but not in them(?).	3	2	1	Possible low angle	133.70
90-638	135-139	1.38 g/t Au 0.571% Cu	Disseminated and clots of py with fracture fillings only in the last 50 cm.	2	3	0	Possible low angle	
90-638	139-147	2.37 g/t Au 0.575% Cu	Pyritic fracture fillings very minor compared to disseminations. At 143.1 is a bit of the very fine grained py in a reticulate cluster, but it's the only occurrence down to 147 m - the rest is disseminated and blebby, 0.5-3 mm; some blebs are aligned into quasi-fracture fills.	4	5	4	No	143.40

*Sulphide-bearing fracture orientations are relative to the core axis (c/a): low (0-30), mod (30-60), hi (60-90).

TABLE I. Mt. Milligan - Intervals Examined July 23-24, 1997 by G. Ditson

Drill Hole	Interval	Grade	Description	Fractures*			Directional Control?	Samples
				Low	Mod	Hi		
90-640	69-74	0.98 g/t Au 0.263% Cu	Breccia with round fragments - some intrusive frags. A 2 cm thick qz vein with py(cp) at 72.5 m; only 1 fracture filling seen, containing a 5 mm length of cpy.				Possible	
90-640	74-79.65	1.19 g/t Au 0.634% Cu	Trachyte; locally with breccia texture. 1-3% py and cpy occur disseminated and as small blebs, and also in commonly discontinuous hairline fractures (≤ 1 mm) and narrow veinlets (one 3 mm thick 60° c/a; one 1-2 cm thick with 20% qz 60° c/a). At 78.2-78.4 is about 10% py as irregular very fine grained stringers (and the 1-2 cm qz vein). Irregular very fine grained py stringers/fracture fillings also at 76.8 m. The moderate angle fracture fillings are bedding plane alignments. Below 78.25, sulphides (especially cpy) are clearly related to trachyte banding and a perpendicular set, producing a reticulate pattern of shallow and moderate fractures, with about equal sulphide in both orientations.	12	10	2	Yes low-mod angle	78.25 79.65
90-640	79.65-84.4	0.71 g/t Au 1.06% Cu	Less cpy, but py occurs in disseminations, blebs and fracture fillings which are < 1/3 of total py. Fracture fillings show no preferred orientation, but there are two py-rich zones, a 3 mm vein and a 1.5 cm breccia zone with minor py, which are 60° c/a. There are also short brecciated sections with nothing but disseminations.				Possible 60° c/a	

*Sulphide-bearing fracture orientations are relative to the core axis (c/a); low (0-30), mod (30-60), hi (60-90).

4.2 Petrography

Twenty samples were collected for polished thin section examinations (Table II). These were examined by Ron C. Wells with an emphasis on gold and its association with sulphides and structures. Mr. Wells' complete report is attached as Appendix I, and is summarized below.

Gold in the 1-30 micron size range was observed in 11 of the 20 samples examined. Opaque minerals present in polished thin sections are chalcopyrite, pyrite, bornite and magnetite, all of which were observed in association with gold. Chalcopyrite, present in every section, occurs as individually disseminated grains, grain aggregates, and as local fracture veinlets, forming mesh textures in many samples where all modes are present. At least two generations of pyrite are present, occurring as disseminated grains, aggregates or discontinuous veinlets. Early pyrite commonly contains chalcopyrite veinlets, whereas later pyrite may contain chalcopyrite, pyrite and rare gold inclusions. Bornite, present only in pyrite-poor samples, occurs as rims and envelopes to chalcopyrite grains, commonly with significant magnetite. Both bornite and chalcopyrite occur in a late quartz vein in one sample. Magnetite occurs as disseminations, grain aggregates, or as coarse grained dismembered veinlets, and commonly contains chalcopyrite either as inclusions or interstitially. Magnetite is also observed to occur disseminated along bands (with or without chalcopyrite) in well-banded trachyte.

Most samples contain fracture controlled sulphides, but strong sulphide fabrics were not observed. Local weak to moderate alignment of mesh textures were observed, but sulphide-bearing fracture veinlets are commonly variably oriented and broken up. Strongly banded rocks (e.g., trachyte) exhibit predictable alignment along bands.

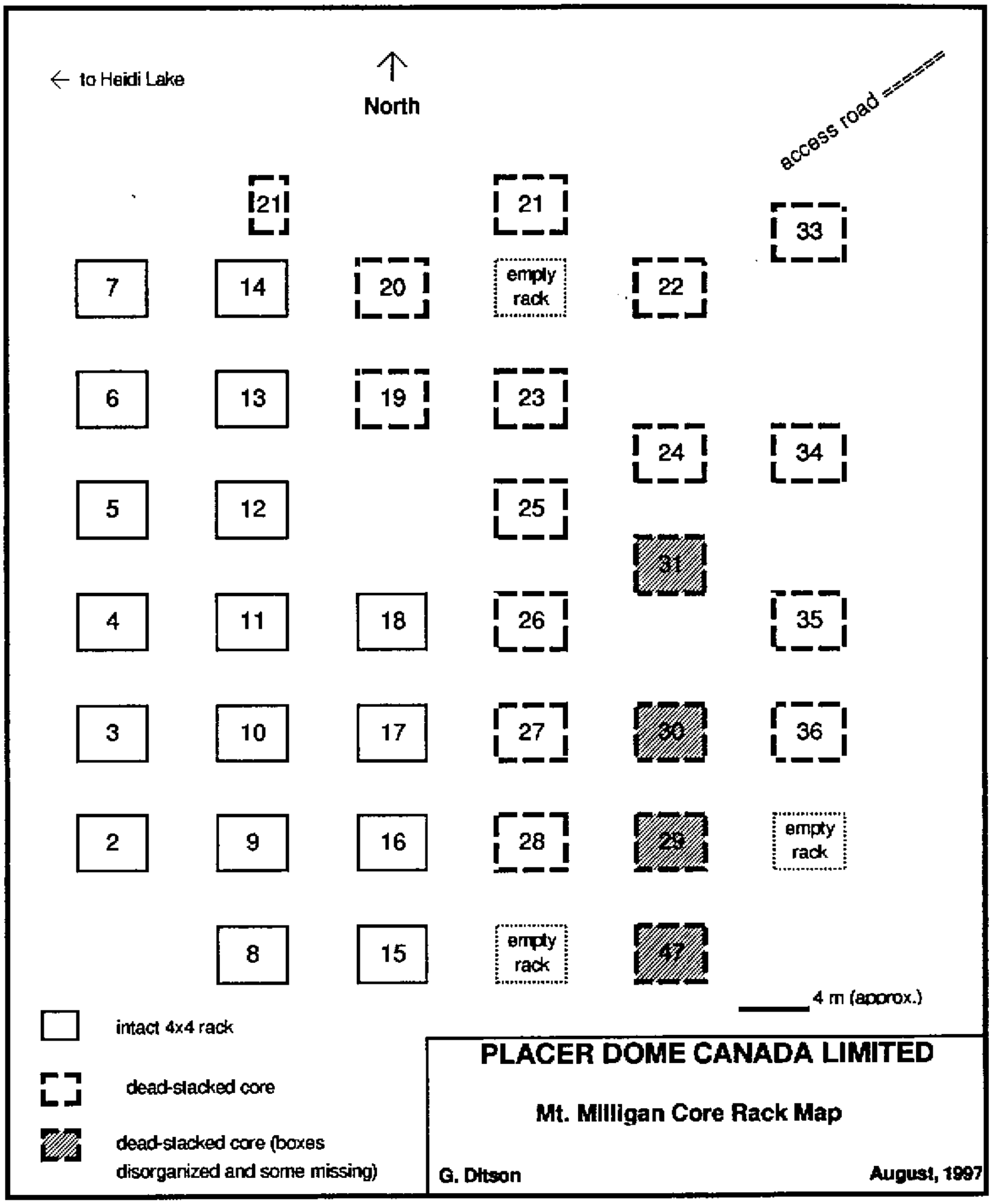
Gold was observed with chalcopyrite as inclusions and at grain boundaries, at chalcopyrite-bornite, chalcopyrite-pyrite, and magnetite-pyrite grain boundaries, in a chalcopyrite veinlet in pyrite, as inclusions in coarse pyrite, and in silicates proximal to coarse pyrite. Late quartz veins with abundant chalcopyrite and lesser bornite do not appear to host gold, nor do late chlorite- or carbonate-filled fractures.

5.0 CORE STACKING

Drill core in racks 19-31 and 33-36 was dead-stacked into piles approximately 1 m high (Figure 5). The 12-foot long 4x4 timbers were largely piled neatly out of the way of the drill core, but three empty racks were left standing. All empty core boxes were burned. Four of the stacks (29-31 and 47) had been dismantled by vandals shortly before this program began, and core had been stacked haphazardly off to the sides. The core in these stacks is therefore not in order, is probably mixed up between stacks, and some is definitely missing because a couple of the vandals' stacks had tipped over.

TABLE II. Mt. Milligan - Drill Core Specimens for Polished Thin Sections; July, 1997

Section	Drill Hole	Depth	Description	Section Angle to Core Axis
9450	89-291	97.20	Abundant py, minor cp	90
9450	89-291	146.70	A coarse grained cp-rich band adjacent to finely laminated band; sulphide blebs/disseminations parallel to banding (20° c/a) and in perpendicular fractures (10° c/a)	60
9425	90-615	73.85	Disseminated and fracture filling py, cp; fractures 30 and 60° c/a	85
9525	90-625	80.40	A 2.5 cm wide qz-cpy vein 60° c/a	0
9525	90-625	81.00	About 4% fine-med grained disseminated py	90
9525	90-625	154.90	Heavy py, cpy disseminations, blebs and minor fracture fillings 15° c/a	90
9600	90-627	218.70	Blebby py, cpy; py in hairline reticulate fracture fillings 45° c/a	25
9600	90-627	220.15	5% blebby py and cpy	85
9500	90-628	34.75	qz-cpy vein 45° c/a and sub-parallel cpy fracture fillings	10
9500	90-628	36.40	Local disseminated py, cp and one cp fracture filling	90
9500	90-628	266.50	Disseminated and fracture filling cpy localized in one band (20° c/a) in trachyte; 1 large cpy fracture filling; 1 py fracture filling	20
9500	90-630	150.00	Trachyte bands 30° c/a; disseminated py; interval grades 8.15 g/t Au	35
9500	90-630	150.25	Fine grained disseminated py in trachyte; minor fracture fillings/veinlets with py, cpy; interval grades 8.15 g/t Au	65
9500	90-630	155.05	10% disseminated and clustered fine grained py, cp and 1 main py(cpy) fracture filling/veinlet 45° c/a; interval grades 8.19 g/t Au	35
9525	90-635	140.15	Coarse disseminated py and cpy; 1 hairline cpy fracture filling 35° c/a	25
9525	90-635	142.20	Abundant disseminated py and minor py fracture fillings 45° c/a	90
9475	90-638	133.70	Disseminated and blebby py, cpy; 1 large mag cluster; very fg py veinlet 80° c/a	10
9475	90-638	143.40	Py and minor cpy disseminated throughout with several orientations (20, 45, 90° c/a) of aligned blebs	20
9475	90-640	78.25	Very fg py fracture filling/veinlet 0° c/a and similar but narrower ones 90° c/a; large, irregular clot of same vfg py with minor cpy	90
9475	90-640	79.65	Abundant disseminated coarse cpy blebs and very minor very fine fracture fillings with no specific orientation	60



← to Heidi Lake
North
access road ======
21
21
33
7
14
20
empty rack
22
6
13
19
23
24
34
5
12
25
31
4
11
18
26
35
3
10
17
27
30
36
2
9
16
28
29
empty rack
8
15
empty rack
47
4 m (approx.)
intact 4x4 rack
dead-stacked core
dead-stacked core (boxes disorganized and some missing)
PLACER DOME CANADA LIMITED
Mt. Milligan Core Rack Map
G. Ditson
August, 1997

Figure 5

It was not possible to restack all of the drill core during the field program. Racks 2-18 are still standing, but it is hoped that the effort to move the other stacks, which block their access, and a newly dug trench across the main road near the core racks, will be enough to deter vandals.

6.0 CONCLUSIONS

Macroscopic examination of drill core revealed that some copper mineralization in the MBX Zone may be locally controlled by steeply-dipping sulphide-bearing fractures. Strongly banded rocks, especially trachyte, also tend to host sulphides along banding. Petrographic examination of 20 core samples did not reveal strong sulphide fabrics, but local weak to moderate alignment of mesh textures is present. Sulphide-bearing fracture veinlets observed in polished thin sections are commonly variably-oriented and discontinuous. The only fracture observed to contain gold was a chalcopyrite veinlet within fractured/brecciated pyrite.

No definite visible directional control to mineralization was observed, but there is evidence that the presence of such controls cannot be ruled out. The fact that some of the core examined exhibits a preferential orientation subparallel to the vertical core axes suggests that steeply-dipping panels of fractures could be present. Locally aligned mesh textures observed in polished thin sections may also be indicative of such controls.

7.0 RECOMMENDATIONS

Although steep structural controls cannot be ruled out, the evidence is not strong enough to justify a drill program for the sole purpose of proving or disproving the possibility. However, it is strongly recommended that any future drilling (e.g., for metallurgical sampling) include orientation of drill core and a detailed core logging and assay program to track the presence of oriented sulphide-bearing fractures and their relationship to both Cu and Au grades.

REFERENCES

Nelson, J., Bellefontaine, K., Rees, C. and Maclean, M., 1992. Regional geological mapping in the Nation Lakes area (93N/2E,7E). *In* Geological Fieldwork 1991. British Columbia Ministry of Energy, Mines and Petroleum Resources, Paper 1992-1.

Sketchley, D.A., Rebagliati, C.M. and DeLong, C., 1995. Geology, alteration and zoning patterns of the Mt. Milligan copper-gold deposits. *In* Porphyry Deposits of the Northwestern Cordillera of North America, CIM Special Volume 46, p. 650-665.

STATEMENT OF COSTS

Mt. Milligan Property – Phil and Heidi Claims

Labour (Salary and Benefits)

G. Ditson, Project Geologist, 14 days @$350/day	4,900.00
R. Wells, Consultant, 2 days @$500/day	1,000.00
P. Watt, Technician, 15 days @$235/day	3,525.00
R. Hindson, Assistant Technician, 15 days @$150/day	2,250.00

Site Costs

Room & Board in Mackenzie (8 person-days @$73.60/day)	588.80
Trailer and equipment rental (Kamloops Geological Services; 14 days @$50/day)	700.00
Meals (in Mackenzie) - 8 person-days	139.62
Camp Groceries	784.90
Radio Rental (2 weeks)	68.40
Satellite Telephone Rental	568.86
Field Supplies	197.25

Vehicle Expenses

Truck Rental (Kamloops Geological Services; ¾ ton, 4x4; 15 days @$75/day)	1,125.00
Gasoline and taxis	638.44

Sample Preparation

20 polished thin sections prepared by Vancouver Petrographics	839.95

Report Preparation

Kamloops Geological Services Ltd.	475.00
G. Ditson (5 days @$350/day)	1,750.00

TOTAL $ 19,551.22

STATEMENT OF QUALIFICATIONS

I, Gwendolen May Ditson, of the municipality of Kamloops, British Columbia, do hereby certify that:

1. I am a graduate of the University of Southern California, where I received a B.S. in Geology in 1974, and of the University of British Columbia where I received an M.Sc. in Geology in 1978.

2. I have practiced my profession part-time since 1976, and full-time since 1978.

3. I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

4. I am a member in good standing of the Canadian Institute of Mining and Metallurgy.

4. I am currently employed by Placer Dome Canada Limited, and was responsible for the field program on the Mt. Milligan Property during 1997.

Dec. 19, 1997

Date

Gwendolen May Ditson, PGeo.

APPENDIX I

Petrographic Report by R. C. Wells

August 11, 1997

KAMLOOPS GEOLOGICAL SERVICES LTD.

910 HEATHERTON COURT
KAMLOOPS, B.C.
V1S 1P9

Telephone 828-2585
Fax No. 372-1012

TO: G. Ditson, Placer Dome Canada

FROM: R.C. Wells, P.Geo., FGAC, Consulting Geologist

RE: Petrographic Study of samples from the MBX Zone - Mt. Milligan

DATE: August 11, 1997

INTRODUCTION

A suite of 20 polished thin sections from the Mt. Milligan copper-gold MBX Zone were submitted by Gwen Ditson. This forms part of a current study on possible directional controls on gold mineralization. The samples were from mineralized intervals grading between 1.0 and 229.0 g/t gold, 0.437 and 1.610% copper from 1989-90 drill core. A total of 9 holes from the MBX Zone were sampled. Petrographic examinations were requested for all samples with an emphasis put on gold grains and their mode of occurrence.

PROCEDURE

All of the samples were examined in cut blocks and polished thin section using binocular and petrographic/metallurgical microscopes (respectively). Short descriptions were made regarding host rocks, alteration, opaque assemblages and gold grains (when observed). These are presented in a summary form within the appended table.

Fine gold grains in the 1 to 30 micron size range were observed in 11 of the 20 sections. A longer search would have revealed more grains but was not possible due to time limitations.

Because of the gold's fine grain size, colour and common proximity to chalcopyrite, photography was difficult.

COMMENTS ON LITHOLOGIES, ALTERATION AND OPAQUE ASSEMBLAGES

The samples represent a suite of variably potassic altered feldspar rich flows and possible intrusive rocks. Both fine feldspar and hornblende porphyries are indicated. It is however impossible to determine the proportions of original and hydrothermal K-feldspar. Suggested original compositions are in the latite (trachyandesite) to trachyte range(?). Remnant (strong flow aligned) trachytic textures are fairly common. Brecciation is also suggested in some samples, this may be original (autobreccias, tuffs) or hydrothermal. Sample 90-640-79.65m is a possible example of a hydrothermal breccia.

Alteration in all of the samples can be described as fairly intense and potassic with hydrothermal biotite, local K-feldspar and magnetite. Plagioclase where coarser commonly displays weak to moderate sericite alteration. Chlorite occurs in most samples after biotite or amphibole (hornblende). Chalcopyrite is present in all of the samples and may occur with magnetite, pyrite and bornite in varying proportions. Chalcopyrite may form disseminated individual grains, grain aggregates (with other opaques) and local fracture veinlets. All three chalcopyrite modes occur in many samples producing mesh textures. Pyrite is commonly coarser than the chalcopyrite forming disseminated grains, small aggregates or discontinuous veinlets. More than one pyrite generation is often apparent. Early fractured grains frequently contain chalcopyrite veinlets, later grains may contain chalcopyrite, pyrite and rare gold inclusions. Bornite occurs in pyrite poor samples from holes 625 and 628. The bornite often occurs with chalcopyrite and is later, forming rims and enveloping grains. Significant magnetite occurs in two of these samples. Fracture fill bornite and chalcopyrite occur together in a late quartz vein in sample 90-625, 80.40 m. Magnetite occurs as either disseminated grains, grain aggregates or as dismembered veinlets where it is coarser grained with interstitial chalcopyrite (90-627, 218.70 m). Coarse disseminated and vein magnetite may contain chalcopyrite inclusions. Some 'trachytic' samples contain significant disseminated magnetite in bands with or without chalcopyrite (89-291, 146.70 m).

Most samples contain some sulfide which can be described as veinlet or weak fracture controlled. Nowhere (on a thin section scale) was a strong sulfide fabric (alignment) observed. Interconnecting (mesh) textures define a weak to moderate alignment locally. Magnetite and or pyrite and chalcopyrite veinlets within thin sections and cut blocks have variable orientation and frequently are broken or brecciated. Alignment of sulfides and, or magnetite does occur in banded samples in the form of disseminated grain concentrations.

GOLD

Gold grains were observed in 11 of the 20 thin sections in a variety of settings as follows:

1. 1-10 micron grains associated with chalcopyrite as inclusions or at grain boundaries. Sample 90-625, 81.0 m.

2. 5-10 micron grains at chalcopyrite-bornite grain boundary. Sample 90-625, 81.0 m.

3. 12-15 micron grains at chalcopyrite-pyrite grain boundary (coarse Py). Sample 90-630, 155.05 m.

4. 1-2 micron grains in chalcopyrite veinlet in pyrite. Sample 90-615, 73.85 m.

5. 4-30 micron grains as inclusions in coarse pyrite. Sample 90-628, 266.50 m and sample 90-635, 140.15 m.

6. 1-3 micron grains at magnetite-pyrite grain boundary within a magnetite-chalcopyrite-carbonate vein. Sample 90-638, 133.70 m.

7. 5-10 micron grains at silicate grain boundaries proximal to coarse pyrite. Sample 90-635, 140.15 m.

CONCLUSIONS

Gold appears to have a spatial association with chalcopyrite, bornite, coarse pyrite and lesser magnetite in a potassic alteration setting. Gold grains were not observed in **1.** quartz veins (with chalcopyrite), **2.** late chlorite or carbonate fracture veinlets or **3.** in silicate domains outside of sulfide areas. The coarsest gold observed was as 20 to 30 micron inclusions in pyrite in holes 628, 630 and 635. The sample from the highest grade gold interval (229.0 g/t) in hole 291 had very fine gold grains in a chalcopyrite rich band with mesh textures (band and fracture control).

The variety of gold modes observed in the MBX Zone samples does not suggest any clear directional controls. Broad scale structural and, or lithological controls of copper-gold mineralization in this setting are however highly probable. Detailed directional fan drilling combined with careful geological constrained sampling is required to test these controls.

Ronald C. Wells, P. Geo., FGAC.

MT. MILLIGAN - PETROGRAPHY SUMMARY TABLE (To accompany report by R.C. Wells, August 11, 1997)

HOLE NO. (METRES) TS. NO.	GRADES (original 2m sample) Au g/t:Cu%	HOST	OPAQUES	COMMENTS	AU WHERE OBSERVED
89-291 (97.20) 1	4.42:0.890	Fine grained, patchy biotite and magnetic minor dissem. carb, local chl patches.	Cpy>Mgt>> Py 3.6% Cpy	Dissem. and irregular aggregates of fine Cpy + Mgt. Patchy coarser Py.	2-3 micron grain in Cpy aggregate.
89-291 (146.70) 2	229.0 : 1.610	Mm scale banding, fine grained. Felsic bands more Cpy rich. Dark bands, fine grained with variable biotite and local chlorite. Strongly magnetic.	Cpy>>Mgt± Minor Py or Mgt>>Cpy 2-10% Mgt 1-8% Cpy	Irregular aggregates of Cpy. Common mesh textures. Local high angle Cpy veinlets. Discontinuous fine magnetite aggregates possibly broken early veins. Minor Cpy. Also dissem. fine Mgt.	2 or 3, 2-5 micron grains in Cpy domain
90-615 (73.85) 3	1.00 : 0.810	Remnant feldspar porphyritic textures. Fine grained, local trachytic groundmass, biotite overprint. Patchy carbonate, some veinlets. Non magnetic.	Py>Cpy No Mgt 6% Py 1-3% Cpy	Fine to mm scale anhedral Py, dissem. and aggregates. Inclusions and widespread fracture Cpy in Py. Fine dissem and local fracture controlled (mesh) Cpy textures in silicate areas.	Probable 1-2 micron grain within Cpy veinlet in coarse fractured Py.
90-625 (80.40) 4	2.36:0.852	Cm scale qtz vein with fracture controlled fine/med. grained Cpy. Minor carb. altered host with patchy biotite, fine dissem. Mgt.	VEIN Cpy>Bornite >>Mgt 3-7% Cpy 1-2% Bornite	Cpy filled fractures. Local (later) bornite at margins or as rims to Cpy. Bornite commonly occurs with fracture carb. Wallrocks have fine dissem. Mgt. Minor associated Cpy.	

HOLE NO. (METRES) TS. NO.	GRADES (original 2m sample) Au g/t:Cu%	HOST	OPAQUES	COMMENTS	AU WHERE OBSERVED
90-625 (81.00) 5	2.36:0.852	Dark coloured, fine grained and magnetic. Patchy carbonate, biotite and fine disseminated sulfides. Remnant porphyritic? textures.	Bornite> Cpy dissem. Mgt 2-3% Bornite 1-2% Cpy	Anhedral bornite predominates commonly with Cpy as grain aggregates up to 1.5mm. Fine dissem. anhedral Mgt.	5-10 micron grains at edge of Cpy near bornite.
90-625 (154.90) 6	2.45 : 1.675	Dark coloured, fine grained with dissem. and fracture fine to coarse sulfides. Patchy biotite and local significant carbonate. Biotite and carbonate pseudomorphs after phenocrysts?	Cpy>>Py Minor Mgt. 5-8% Cpy	Py as med-coarse anhedral to cubic locally fractured grains. F/M grained Cpy as anhedral aggregates. Commonly later than Py. Local Cpy veinlets. Minor dissem. Mgt.	
90-627 (218.70) 7	3.87:1.060	Mottled, fine grained with patchy biotite, moderate pervasive and veinlet carbonate. Strongly magnetic with dissem and veinlet magnetite (to 2mm). Dissem. Fine sulfides. Local chl. patches.	Mgt>>Cpy >Py 3-10% Mgt 1-3% Cpy	Dissem. and veinlet Mgt. Predom. fine anhedral aggregates with fine Cpy. Dissem. anhedral Cpy locally as coarser aggregates with Mgt. Some large subhedral Py cubes to 3mm. Local Mgt inclusions.	

HOLE NO. (METRES) TS. NO.	GRADES (original 2m sample) Au g/t:Cu%	HOST	OPAQUES	COMMENTS	AU WHERE OBSERVED
90-627 (220.15) 8	2.44:0.820	Mottled, fine to fine/med grained. Patchy disseminated and veinlet chlorite and carbonate, minor biotite. Weak magnetic. Dissem. and veinlet sulfides.	Cpy 6-10% >> Py Minor Mgt	Coarse patches, veinlets and local mesh texture chalcopyrite. These patches include local subhedral, fractured Py minor fine Mgt. Some fine dissem. anhedral Py.	2-3, 3-10 micron grains at edges of Cpy aggregate.
90-628 (34.75) 9	1.84:1.330	1.5cm quartz vein with irregular contacts contain significant fracture sulfides local epidote, chlorite. Remnant coarse hornblende laths in host. Patchy fine biotite, local chlorite. Moderately magnetic. Fine dissem sulfides.	VEIN - Cpy HOST -Mgt > to = Cpy Cpy total >5%	Vein is 20% fracture and dissem. Cpy. Predominantly fine, local medium grained Wallrocks to vein have significant fine disseminated anhedral Mgt which locally forms aggregates with Cpy. Patchy fine dissem. Cpy.	
90-628 (36.40) 10	3.27:1.120	Dark, fine grained and magnetic with remnant hornblende phenocrysts to 3mm. Significant patchy carbonate, local biotite. Feldspathic background minor quartz.	Mgt>Cpy =Bornite Bornite +Cpy =1-3%	Magnetite predominates as fine to fine/med dissem. grains commonly occuring in clusters. Coarser Mgt has fine Cpy inclusions Cpy with Bornite may form interstitial grains in these areas. Bornite and Cpy may form dissem. aggregates or individual grains.	Possible v. fine micron Au in Bornite/Cpy cluster

HOLE NO. (METRES) TS. NO.	GRADES (original 2m sample) Au g/t:Cu%	HOST	OPAQUES	COMMENTS	AU WHERE OBSERVED
90-628 (266.50) 11	3.45:0.425	Mottled greys, fine grained quartzo-feldspathic with patchy chlorite (after biotite?). Numerous fine to coarse dissem. aggregate and veinlet sulfides. Patchy generally weakly magnetic, minor carb.	Cpy = Py >>Mgt Cpy + Py = 7-10%	Medium to coarse Py to 3mm. Py forms individual grains and discontinous veins. Fractured grains with Cpy inclusions and veinlets, fine to coarse Cpy dissem. grains, aggregates and fine veinlets. Fine dissem. Mgt in chlorite patches.	30 micron grain in Py
90-630 (150.0) 12	8.15:0.532	Moderate mm. scale banding which is in composition, (fine) grain size and dissem. sulfide/oxide %. strongly magnetic. Significant and variable chlorite (after biotite?). Feldspathic. Several high angle quartz and chlorite-carbonate veinlets.	Variable proportions. Py, Cpy, Mgt Cpy>to =Py Cpy + Py = 8-12%	Opaques are predominantly fine dissem. local aggregates. Some magnetite rich bands-minor sulfides. Other bands Cpy, Py little Mgt. Cpy and minor Py occur in high angle veinlets.	
90-630 (150.25) 13	8.15:0.532	Crude coarse mm banding fine grained weakly magnetic. Feldspathic with patchy chlorite after biotite. Fine low and high angle quartz, carbonate>quartz veinlets up to 1mm. Local Chl veinlets.	Py = to >Cpy Minor Mgt Cpy + Py = 3-6%	Subhedral dissem. Py and aggregates up to 1mm. Fine patchy dissem. Cpy. Sparse v. fine dissem. Mgt. Some Cpy occurs in low angle Qtz-Carb veinlets.	

HOLE NO. (METRES) TS. NO.	GRADES (original 2m sample) Au g/t:Cu%	HOST	OPAQUES	COMMENTS	AU WHERE OBSERVED
90-630 (155.05) 14	8.19:0.535	Strongly altered and fine grained, significant quartz, carbonate and biotite (Chl). Sericitized feldspar. Ankeritic carbonate? pervasive and narrow veins to 2mm.	Py>Cpy Py 8-1% Cpy 2-3% Sparse Mgt.	Mesh textures with Cpy and Py. Py locally coarser to 1mm sometimes mm scale aggregates. Coarser Py fractures with Cpy veinlets & inclusions. Cpy fine grained mesh textures with Py (fracture controlled). No sulfides in carb vein.	12-15 micron grain at Cpy, Py contact. (Coarse Py)
90-635 (140.15) 15	3.25:0.740	Dark coloured, fine grained and mod. magnetic. Pervasive, patchy fine biotite, local relict fine feldspar porphyry textures. Lighter feldspathic patches 0.3mm grain size. 1-2mm dissem. sulfide patches.	Py = Cpy total 5-8% Mgt patchy 1-5%	Aggregates of fine Py, Cpy local Mgt up to 2mm. Py is locally coarser subhedral to 2mm with inclusions of Mgt. Cpy. Local Au clusters. Sulfides are predom. dissem. local v. fine Cpy fracture veinlets. Significant clusters of fine dissem. Mgt outside of sulfide areas. Some grains are subhedral, local fine Cpy inclusions.	Cluster of 4 grains between 4-30 microns occur as inclusions in Py and at grain boundaries in surrounding silicates.
90-635 (142.20) 16	3.36:0.680	Dark coloured, fine grained and mod. magnetic. Patchy pervasive fine biotite, remnant fine feldspar porphyritic textures. Patchy dissem. Sulfides. One 1-2mm wide quartz-carbonate-Py vein. Local narrower qtz-carb. veinlets at 90^0 to this.	VEIN Py>>Cpy HOST Py>Mgt=Cpy TOTAL Py 5-8% Cpy 1-3%	Weakly brecciated Py vein with 1-2mm, locally fractured grains. V. fine Cpy as veinlets, inclusion and rims in Py. Nearby 1-3mm Py, Mgt grain aggregates, patches 0.3 to 1mm grain size. Much finer associated Cpy.	

HOLE NO. (METRES) TS. NO.	GRADES (original 2m sample) Au g/t:Cu%	HOST	OPAQUES	COMMENTS	AU WHERE OBSERVED
90-638 (133.70) 17	4.47 : 0.940	Dark coloured, fine grained and pervasive biotite with remnant fine feldspar porphyry textures, non magnetic. Cut by a 1cm wide strongly magnetic, magnetite-carbonate vein with feldspar, qtz, biotite, carb. envelope	VEIN Mgt>>Cpy Py dominates marginal areas. HOST Cpy>>Py sparse Mgt Cpy 2-3%	VEIN Core area 0.1 to 0.4mm dissem. Mgt with interstitial carb, fine Cpy. Numerous Cpy inclusions local veinlets in Mgt. Marginal areas sparse fine dissem. Py HOST 1-5mm patches of Cpy local subhedral Py.	Possible 1-3 micron grain at Mgt, Py boundary in vein core.
90-638 (143.40) 18	3.32:0.880	Mottled dark and light greys, fine grained, patchy wk-mod. magnetic. Pervasive-patchy fine biotite, remnant fine/med feldspar porphyry textures. Local qtz and carbonate patches. Fine, med. dissem. sulfides, local cubes of Py.	Py>to=Cpy >>Mgt Py+Cpy=5.8%	Disseminated and grain clusters of Py and Cpy. Py is coarser up to 1mm subhedral grains. Cpy is predom. much finer. Dissem. Mgt is finer still and patchy. Fine Cpy local Mgt inclusions in Py.	

HOLE NO. (METRES) TS. NO.	GRADES (original 2m sample) Au g/t:Cu%	HOST	OPAQUES	COMMENTS	AU WHERE OBSERVED
90-640 (78.25) 19	1.58:1.120	Sulfide rich sample semi massive areas. Outside of these fine grained feldspathic with trachytic textures. Fine dissem. biotite local fine carbonate veinlets. Local large carbonate patches. Sulfide areas have coarser biotite laths, carbonate, quartz, feldspar.	TRACHYTIC AREAS- fine subhedral Py> finer anhedral Cpy> finer Mgt. SULFIDE AREAS Py (coarser) >>Cpy>>fine Mgt	Sulfide/oxide proportions similar in both domains. Coarser grains in sulfide domain. Cpy and Mgt occur as inclusions in Py predom. in sulfide domain. Some fine subhedral Py along fine fractures in trachytic domain..	One 1-3 micron grain at Py/Cpy boundary
90-640 (79.65) 20	1.58:1.120	Mottled greys with fine breccia textures overprinted by dissem. sulfide patches up to 6mm. Quartz-feldspar and fine biotite patches, local carbonate. Fragments are angular, matrix supported, rarely >1cm. Sulfides predom. occur in matrix areas.	Cpy>>Py Cpy 5-7%	Cpy aggregates up to 6mm which locally envelope Py cubes (up to 0.5mm). Patchy v. fine dissem. Cpy occurs as grain clusters throughout. Sparse v. fine dissem. Mgt.	

STATEMENT OF QUALIFICATIONS

I, Ronald C. Wells, of the City of Kamloops, British Columbia, hereby certify that:

1. I am a Fellow of the Geological Association of Canada

2. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia.

3. I am a graduate of the University of Wales, U.K. with a B. Sc. Hons. in Geology (1974), did post graduate (M. Sc.) studies at Laurentian University, Sudbury, Ontario (1976-77) in Economic Geology.

4. I am presently employed as Consulting Geologist and President of Kamloops Geological Services Ltd., Kamloops, B.C.

5. I have practised continuously as a geologist for the last 18 years throughout Canada, USA and Latin America and have past experience and employment as a geologist in Europe.

6. Ten of these years were in the capacity of Regional Geologist for Lacana Mining Corp., then Corona Corporation in both N. Ontario / Quebec and S. British Columbia.

7. In 1997 the author completed petrographic studies for Placer Dome Canada Ltd. on the Mt. Milligan Project.

R.C. Wells, P.Geo., F.G.A.C.

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