

# **Assessment Report**

on

# 2000 Percussion and Diamond Drilling

at Mount Polley Mine Cariboo Mining Division

N.T.S. 93A/12E Latitude 52<sup>0</sup> 33<sup>°</sup> N Longitude 121<sup>0</sup> 38<sup>°</sup> W

Owner: **Mount Polley Mining Corporation** Box 12 Likely, B.C. V0L 1N0

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March 15, 2001

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### EXECUTIVE SUMMARY

The 2000 work program that spanned from January 4<sup>th</sup> to December 4<sup>th</sup> consisted of percussion and core drilling. All drilling was conducted in an attempt to increase the mineable reserves beneath and adjacent to the currently defined deposits and to test previously under-explored areas outside of the pits areas that displayed good metalin-soil anomalies or encouraging results from prior drilling. The areas that received work in 2000 span the claim block. These areas, listed alphabetically are: 207, Bell, C2, Cariboo Pit (C Pit) – North, C Pit – East, C Pit – South, C Pit – east Ramp, MP-071, Road/Rad, Southeast and Springer.

A total of 226 percussion holes for 10,652.5 meters and 26 core holes for 4,875.3 meters were completed for a total expenditure of \$493,621. This drilling was successful in defining previously discovered copper and gold mineralization in the C2 /207 and Southeast zones, and in discovering high-grade copper mineralization north of the proposed Springer Pit.

Drilling in the C2/207 zone added a geological resource of 1,035,166 tonnes at 0.333 % total copper, 0.443 grams per tonne gold at an oxide ratio of 16.3 %. However, due to current metal prices, the geometry of the mineralized bodies and the high oxide ratio near surface, this area is sub-economic.

In the Southeast area, drilling added a geological resource of 2,468,754 tonnes at 0.332 % total copper, 0.239 grams per tonne gold at an oxide ratio of 29.0 %. Due to poor metal prices, unfavourable preliminary metallurgy and its limited size, this deposit is sub-economic.

In the Springer zone, drilling north of the proposed pit discovered good near-surface copper gold mineralization and confirmed the accuracy of the structural model.

Drilling within the limits of the Cariboo pit provided extra definition for economic block modeling; however, this drilling did not add significantly to the proven reserves.

In the outlying MP-017 and Road/Rad zones, drilling intersected high oxide copper mineralization that appears to be very spatially limited. These areas will not add to the resource.

Work in early 2001 will concentrate on defining the new mineralization north of the proposed Springer pit, and in gaining a better understanding of Springer pit metallurgy and structure. Additionally, more attention will be given to those previously under-explored areas outside the pit areas.

### CHAPTER 1: INTRODUCTION

#### 1.1 Introduction

The Mount Polley Mine is a low-grade, alkalic copper-gold operation located 56 kilometers northeast of Williams Lake, British Columbia (Figure 1.1). The property, owned and operated by Mount Polley Mining Corporation, a joint venture between Imperial Metals Corporation and SC Minerals Incorporated, consists of twenty mineral claims, one fractional claim, and one mining lease that cover 5,575 bectares. Mine, mill and tailings storage facilities, pit and dump areas, and the surrounding exploration zones are all contained within the claim block.

The mine was put into operation in mid-1997, at a capital cost of \$123.5 million. The operation consists of a 20,000 tonnes per day mine and mill concentrator complex. The reserves prior to production were published at 82.3 million tonnes at 0.30 % copper and 0.47 gpt gold. The deposit will be mined sequentially from three pits: Cariboo, Bell and Springer.

The purpose of the exploration was to improve upon current reserves, to provide definition in already explored areas for economic model runs, and to investigate previously under-explored targets.

This report covers the exploration work conducted during the 2000 field season that spanned from January 4th to December 4th.

### 1.2 Location and Access

The Mount Polley Mine is located in south-central British Columbia, eight kilometers southwest of the village of Likely and 56 kilometers northeast of Williams Lake, on NTS Mapsheet 93A/12 at latitude 52° 33° N and longitude 121° 38° W (Figure 1.2).

Road access from Williams Lake is 15 kilometers southeast on Highway 97 to 150 Mile House. 76 kilometers north on the Likely Highway to Morehead Lake, and then 12 kilometers east on the unpaved Bootjack Forest Access Road to the minesite.

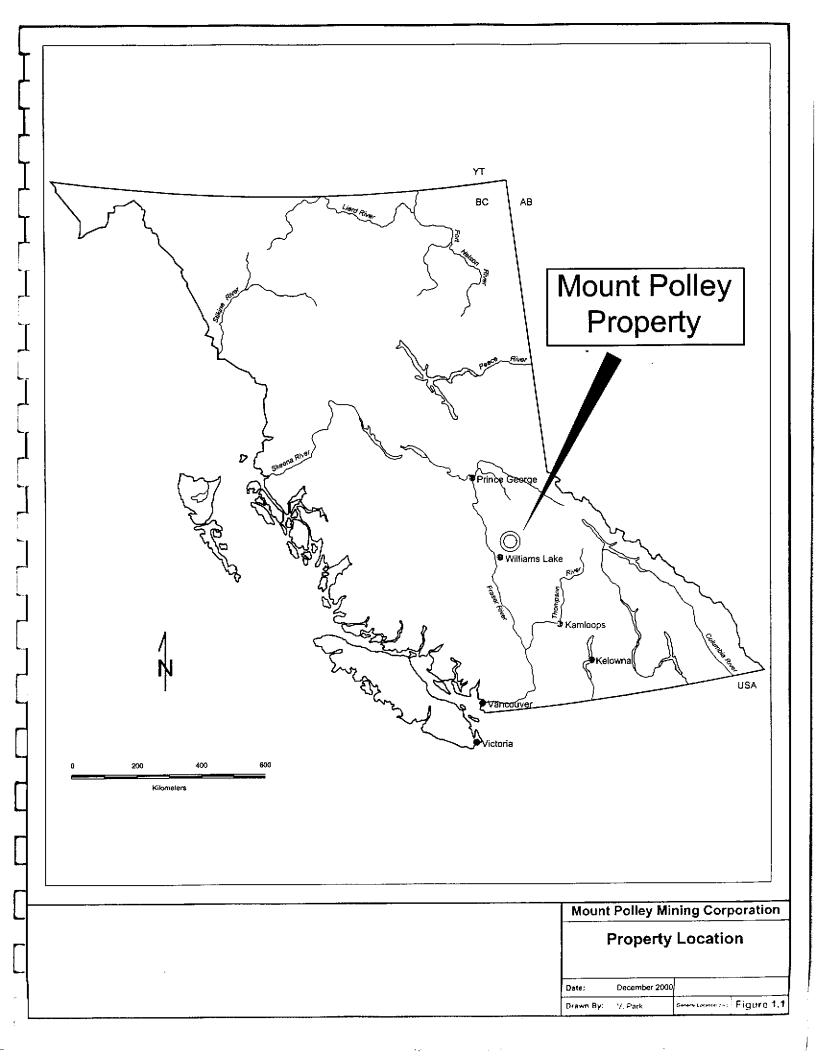
Travel time from Williams Lake is approximately 75 minutes.

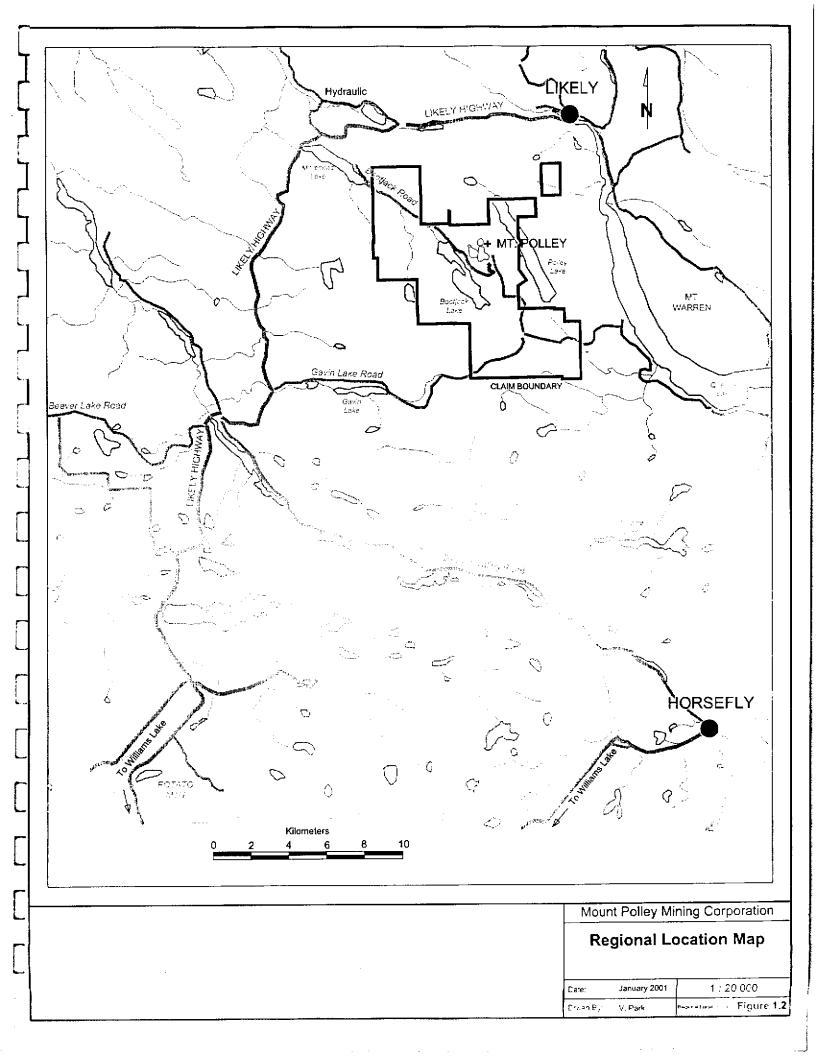
#### 1.3 Physiography and Vegetation

The property sits near the eastern edge of the Fraser Plateau physiographic sub-division, which is characterized by rolling topography and moderate relief. Elevations range from 920 meters at Polley Lake to 1266 meters at the summit of Mount Polley.

Forest cover consists of red cedar, Douglas fir and sub-alpine fir, with lesser black cottonwood, trembling aspen and paper birch. Much of the area has been clear-cut due to commercial logging.

Mean monthly temperatures range from  $13.7^{\circ}$ C in July to  $-10.7^{\circ}$  in January. Precipitation averages 856 mm with 350 mm falling as snow.





#### 1.4 Claim Status

The Mount Polley property consists of twenty mineral claims, one fractional claim, and one mining lease (Figure 1.4). The total area covered is 6745 hectares, of which 4957 hectares is covered by Mining Lease 345731.

Mount Polley Holding Company Limited owns all claims.

In 2000, all claims will have assessment credits applied to them (Table 1.4).

| Claim Name | Tenure No. | No. of Units | Record Date       | Expiry Date      |
|------------|------------|--------------|-------------------|------------------|
| CB1        | 204470     | 20           | 4 May 1981        | 15 December 2010 |
| CB5        | 204472     | 20           | 4 May 1981        | 15 December 2010 |
| CBS        | 204473     | 8            | 4 May 1981        | 15 December 2010 |
| CB9        | 204474     | 20           | 4 May 1981        | 15 December 2010 |
| CB16       | 204475     | 20           | 4 May 1981        | 15 December 2010 |
| CB19       | 204476     | 20           | 4 May 1981        | 15 December 2010 |
| CB20       | 204477     | 20           | 4 May 1981        | 15 December 2010 |
| PM-3       | 206448     | 20           | 17 September 1989 | 15 December 2010 |
| PM-4       | 206449     | 20           | 14 September 1989 | 15 December 2010 |
| PM-5       | 206450     | 20           | 29 September 1989 | 15 December 2010 |
| PM-6       | 206451     | 20           | 29 September 1989 | 15 December 2010 |
| PM-7       | 206452     | 12           | 17 September 1989 | 15 December 2010 |
| PM-8       | 206453     | 20           | 17 September 1989 | 15 December 2010 |
| PM-9       | 206798     | 6            | 23 February 1990  | 15 December 2010 |
| PM-10      | 206799     | 6            | 23 February 1990  | 15 December 2010 |
| PM-11      | 206800     | 15           | 23 February 1990  | 15 December 2010 |
| PM-12      | 206801     | 15           | 21 February 1990  | 15 December 2010 |
| PM-13      | 207244     | 12           | 26 September 1990 | 15 December 2010 |
| IMC-2      | 340018     | 15           | 21 September 1995 | 15 December 2010 |
| IMC-3      | 340019     | 5            | 22 September 1995 | 15 December 2010 |
| IMC 4 Fr.  | 340020     | 1            | 22 September 1995 | 15 December 2010 |

#### Table 1.4 Status of Claims after 2000 Filing

#### 1.5 Property History

The Mount Polley deposit was first discovered as a result of follow-up prospecting of an aeromagnetic anomaly highlighted on a government aeromagnetic Mapsheet issued in 1963. Mastodon Highland Bell Mines Limited and Leitch Gold Mines first staked claims in 1964. In 1966 the two companies merged to form Cariboo-Bell Copper Mines Limited. The property was mapped, soil and geochemical surveys and, air-borne and ground-bases geophysical surveys were conducted, followed by bulldozer trenching and drilling. A group of Japanese companies joined Cariboo-Bell but later withdrew due to concerns about metallurgy. In 1969 Teck Corporation assumed control of Cariboo-Bell.

During the period from 1966 to 1972 at total of 18.341 meters of core drilling and 8.553 meters of percussion drilling was completed in 215 holes. In 1970 magnetic, seismic and induced polarization (IP) surveys were conducted. Teck continued to work the property in 1972, 1973 and 1975. In 1978 Highland Crow Resources, an affiliate of Teck, acquired control. In 1979 Teck completed six percussion holes for 354 meters.

In 1981 E&B Explorations Inc. optioned the property from Highland Crow and completed 1.746 meters of core drilling, 1,295 meters of rotary drilling, and soil geochemical and ground control surveys. IN 1982 E&B acquired a 100% interest and continued to work the property with joint venture partners Geomex Partnerships and Imperial Metals Corporation. From 1982 to 1987 E&B completed soil geochemistry, magnetic, VLF-EM and IP surveys, geological mapping, 3,585 meters of core drilling and 4,026 meters of reverse circulation drilling.

In 1987, Imperial Metals merged with Geomex Partnerships and purchased the remaining interest in the property from Homestake Canada and others. (E&B had merged with Mascot Gold Mines that subsequently merged with Corona Corporation and finally became Homestake Canada).

During the period between 1988 and 1990. Imperial Metals Corporation conducted a comprehensive exploration program consisting of 238 core holes totaling 27,566 meters, the collection of six bulk samples from surface trenches totaling 130 tonnes, geological mapping and IP surveys. In 1990 Wright Engineers completed a positive feasibility study that incorporated new ore reserve calculations, metallurgical testing, geotechnical evaluations, and environmental impact assessments.

During 1993-1994, Theresa Fraser from the University of British Columbia completed a-Masters thesis on the geology, alteration, and origin of hydrothermal breccias on the deposit. The focus of the study was to document data important to aspects of the genesis of the deposit, particularly breccia distribution, breccia types, distinctive matrix minerals and alteration.

In 1994. Gibraltar Mines Ltd., under an option agreement with Imperial Metals, drilled seven core holes for 1,216 meters. Upon evaluation of the project, Gibraltar declined further participation. Following a merger with Bethlehem Resources Corporation in 1995. Imperial completed an in-house feasibility study. Financing was arranged with Sumitomo Corporation through a joint venture with SC Minerals Canada that culminated in the formation of Mount Polley Mining Corporation (MPMC) in April 1996.

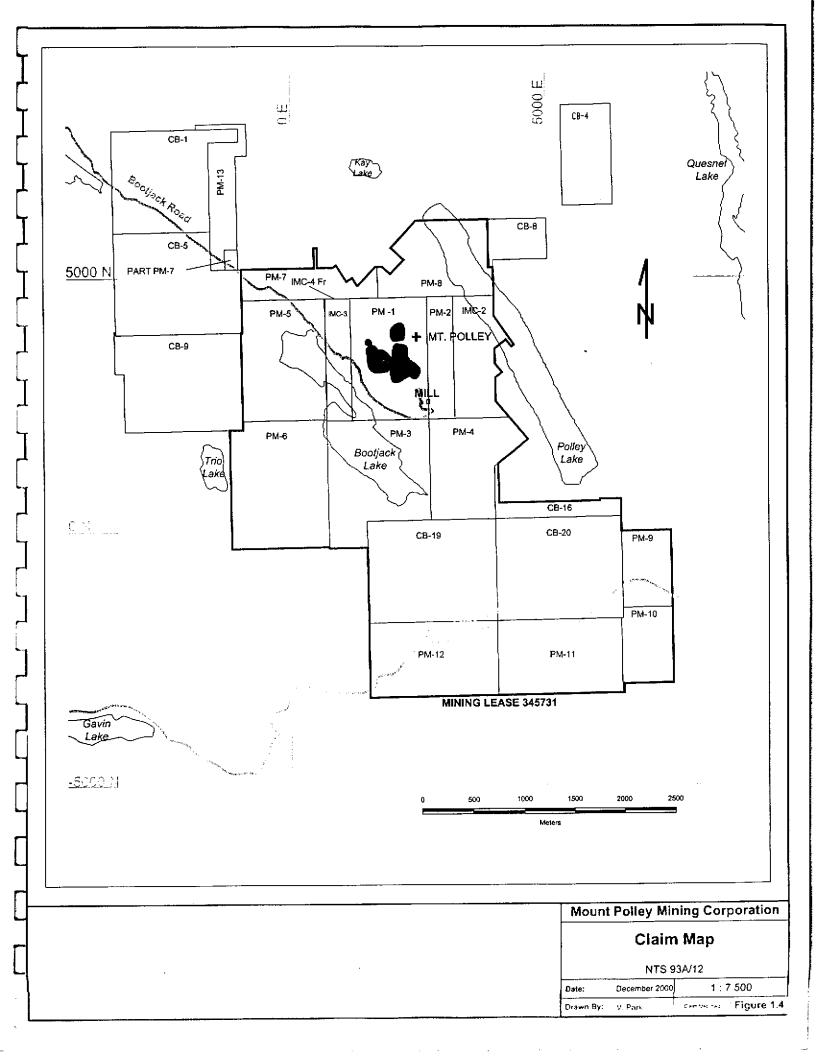
In 1995 MPMC drilled five core holes for 884 to be used for metallurgical test work. Eleven core holes for 1.773 m tested on-site exploration targets outside the proposed pit limits, including the Kay Lake Basin area and the Road Zone. Seven rotary holes for 932 meters were drilled to source and monitor groundwater near the mill and between the pits and adjacent lakes: these holes were also logged and assayed. A soil geochemistry survey was conducted over a six line-kilometer grid.

In 1996, seven core holes for 992 meters were drilled in areas peripheral to the proposed pits, such as the Road Zone, the Northwest Zone and the S Zone. Lithogeochemical samples were collected from road cuts and new bedrock exposures.

In 1997, fifteen core holes for 1.614 meters were drilled to define the margins of the Cariboo Pit and 17 percussion holes for 702 meters were drilled to provide better ore definition for mine planning. Surface and pit wall geological mapping east of and in the Cariboo Pit were conducted concurrently. Three water well holes for 351 meters were drilled to provide source water for milling and mining operations. Rock chip samples from new road cuts were collected and analyzed.

During 1998, nine core holes for 1.993 meters were drilled within and along the margins of the Cariboo Pit. These holes were designed to prove continuity of mineralization to depth, to determine the orientation of mineralization, to provide definition in under-drilled areas and to determine rock quality for pit design. Core from previously drilled holes within the Cariboo Pit area was relogged and reinterpreted.

In 1999, thirty-three percussion holes for 1.385 meters and eighteen core holes for 4.067 meters were completed. The percussion holes tested for near-surface ore reserves southeast of the Cariboo Pit. The core holes were drilled in the Bell Pit area to test for mineralization to the north and east and to depth, in the Cariboo Pit to test high-grade mineralization at the south end of the pit, and to test targets south of the Cariboo Pit that resulted in the discovery of the C2 Zone. Core from previously drilled holes within the Bell Pit and Cariboo Pit areas was relogged and reinterpreted. The surface geology of the Bell Pit area was mapped.



#### 1.6 2000 Work Program

The 2000 work program that spanned from January 4<sup>th</sup> to December 4<sup>th</sup> consisted of percussion and core drilling. All drilling was conducted in an attempt to increase the mineable reserves beneath and adjacent to the currently defined deposits and to test previously under-explored areas outside of the pits areas that displayed good metalin-soil anomalies or encouraging results from prior drilling.

Table 1.6 provides a summary of 2000 exploration activities. Figure 3.1a shows the locations of 2000 work in plan. Figure 3.1b is a 3-D graphic of the work areas.

| Table 1.6           | Summary of 2000 Exploration Activities                            |   |  |  |  |  |
|---------------------|---|---|--|--|--|--|
| Percussion Drilling | 97 holes (5119.6 m)<br>99 holes (4060.5 m)<br>30 holes (1392.4 m) | Mount Polley Mining Corporation<br>Paramount Drilling<br>Tercon Contracting |  |  |  |  |
| Core Drilling       | 26 holes (4875.3 m)   | F. Boisvenu Drilling  |  |  |  |  |

Collar details for all drill holes are provided in Appendix 1a. Drill hole logs with assay certificates are compiled in Volumes 2, 3, 4 and 5. Appendix 2 lists the applicable expenditures for assessment credit.

#### 1.6.1 Sample Collection and Storage

#### **Percussion Drilling**

Representative samples for drilled intervals from each hole were collected, by shovel, from the cone of cuttings that forms around the mouth of the hole. The average hole size was 4.5 °. The average assay interval was 7.5 meters. After each sample was collected, the ground was cleared of cuttings.

A small sample from each interval was washed and placed in a plastic tray in order to preserve a record of and to log the geology. These trays are clearly labeled with hole ID and depth down the hole. They are stored on-site.

#### **Core Drilling**

Core samples are collected in 3.1 meter runs that are placed in wooden boxes. The average core size is NQ2. Each core box holds four meters.

The core is logged geotechnically and geologically. Sample intervals are marked off and the core is submitted for cutting. The core is dissected and one half is sent for analysis and the other half is retained as a geological record or for future test work.

All core is stored on-site.

#### 1.6.2 Sample Preparation and Assay Procedures

All percussion samples and 70% of the core samples were prepared and analyzed by the on-site Mount Polley Mine (MTP) laboratory; the remaining core samples were prepared and analyzed by Bondar Clegg Laboratories (Vancouver, BC). The samples were riffle-split to 500 grams, dried, crushed to -10 mesh (1500 microns) and then pulverized to 95% -200 mesh (75 microns). A 200 gram sample is submitted for determination of total copper, copper oxide, iron and gold. The MTP laboratory analytical procedures are provided in Appendix 3a.

The quality of assay results was rigorously tested both internally and externally. The MTP laboratory includes a standard, a blank and a duplicate sample in each analytical run and 10% of all samples are submitted to external laboratories (Chemex, Bondar Clegg) for check analyses: the results of quality control quality assurance procedures are maintained by the MTP laboratory and are not discussed in this report.

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Additionally, 5-10% of core samples were submitted as blind duplicates. A listing of blind check assay results is provided as Appendix 3b.

All coarse rejects and pulps are retained on-site until consumed by metallurgical test work or discarded.

Original assay certificates are compiled, with drill logs, in Volumes 2, 3, 4 and 5.

## CHAPTER 2: GEOLOGY

#### 2.1 Regional Geology

The Mount Polley deposit is hosted in an alkalic intrusive complex within the Central Quesnel Belt (CQB), a part of Quesnellia extending along the eastern margin of the Intermontaine Belt in south-central British Columbia. The CQB is composed of Upper Triassic to Lower Jurassic sedimentary and volcanic rocks of island arc and oceanic origin extending along the western margin of the Omineca Crystalline Belt. The Nicola Group rocks are thought to have formed in a Late Triassic volcanic arc, east of a subduction-accretion complex.

Stocks within the CQB are interpreted to be coeval with the more broadly distributed volcanic rocks, likely as volcanic centers; northwest-trending faults appear to control the emplacement of these centers. The Polley Stock, dated at 202 Ma and composed of syenite, monzonite, monzodiorite and diorite intrudes Nicola Group polylithic volcanic breccia and alkali basalt. Refer to Figure 2.1.

#### 2.2 Property Geology

The Mount Polley deposit is hosted within the Polley Stock, a 5.5 by 4 kilometer intrusive body composed largely of diorite. The orebody is hosted within intrusion and hydrothermal breccias related to monzonitic intrusions along the north-northwest striking Polley Fault. This fault separates the deposit into the Central Zone (Cariboo and Bell Pits) and the West Zone (Springer Pit), each with distinctive characteristics of mineralization, alteration and breccia types. Figure 2.2 demonstrates typical Cariboo Pit (Central Zone) geology and structure.

#### 2.2.1 Lithology

Deposit lithologies are chiefly diorite, monzonite, plagioclase porphyry, and intrusion breccia consisting of diorite or monzonitic clasts in a plagioclase porphyry or monzonite matrix. Other important lithologies include volcanic breccias and tuffs, porphyritic augite monzodiorite, potassium feldspar phyric monzonite, and augite porphyry and biotite lamprophyre dykes. A stock of phyric monzonite breccia occupies the summit of Mount Polley.

The diorite host is fine-grained, equigranular to weakly porphyritic, and is composed of plagioclase, minor pyroxene and accessory minerals including magnetite, sphene and apatite. Plagioclase porphyry and monzonite intrude diorite and form the matrix of much of the intrusion breceia. The porphyry is crowded with variably sericitized plagioclase phenocrysts up to 5 millimeters. Mafic minerals include primary biotite, hornblende and magnetite although the unit is commonly strongly altered.

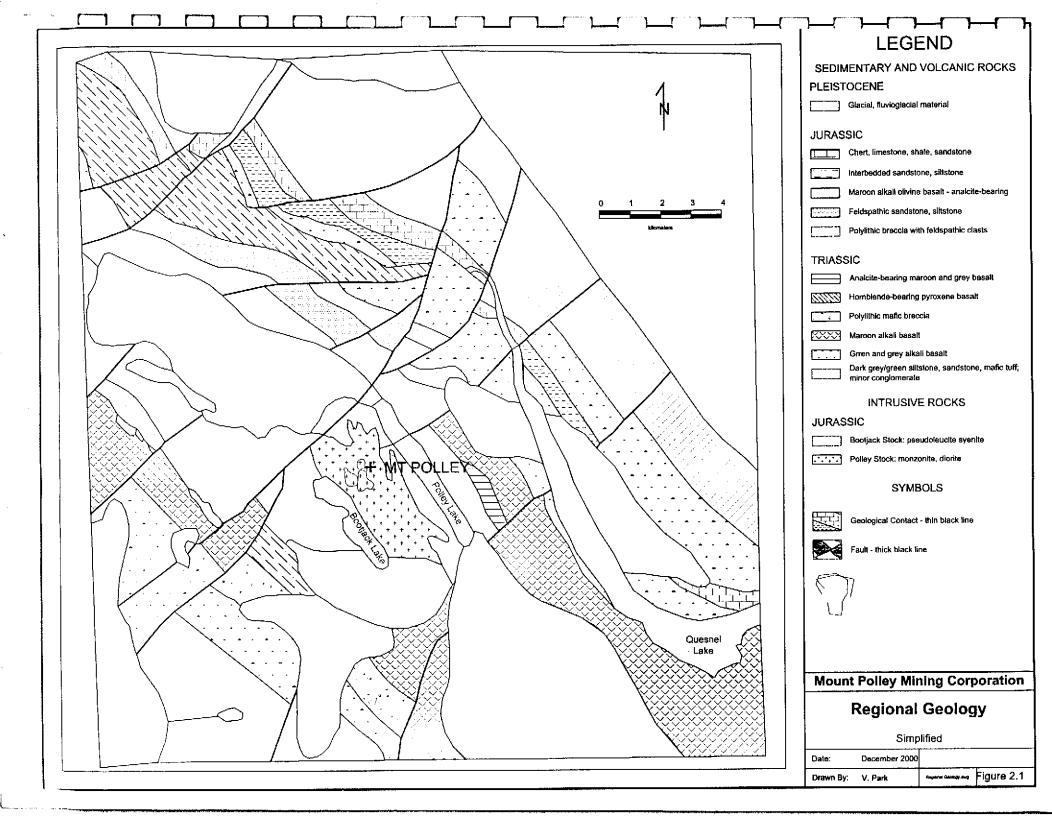
Heterolithic volcanic breccias and tuffs form part of the eastern margin of the central zone and become more dominant to the south and east. Blocks of volcanics occur as xenoliths in the diorite and as occasional clasts in intrusion and hydrothermal breccias.

Appendix 4 is a characterization of geological material from the Bell and Cariboo pits.

#### 2.2.2 Structure

The Polley Fault, trending north-northwest with a steep easterly dip, is the largest structure in the deposit area. In the southwest corner of the Cariboo Pit, the fault consists of gougy fault breecia, elay gouge, and highly sheared and fractured rock over a maximum thickness of over fifty meters and likely represents late movement along an older regional fault structure. The fault zone appears to narrow both to the north and south where it forms the western limit of the C2 Zone, indicating a significant zone of dilation. Several other faults follow the same northerly trend, including the Cariboo Pit Fault.

A second set of northwest-trending faults transects the Cariboo. Bell, and C2 deposits. The structures, including the Oxide Boundary Fault and C2 Fault tend to be highly fractured and gougy over several metres thickness. A third set, complementary but subordinate to the second set, tends to be subtler in expression and may be focal points for late-stage plagioclase porphyry (monzonite) dykes. Examples include fan's Fault and Bell North Fault.



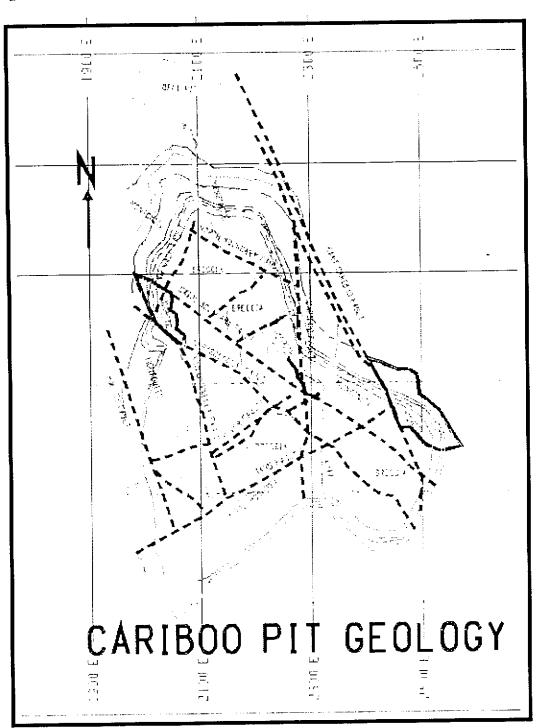


Figure 2.2 Cariboo Pit Geology and Structure

#### 2.2.3 Breccia Types and Alteration

Hydrothermal (crackle) brecciation is superimposed on diorite, plagioclase porphyry, monzonite, intrusion breccia and rarely on volcanic tuff/breccia. Fraser (1994) divided these breccias into four types based on the dominant matrix mineralogy; these breccia types are actinolite, biotite, magnetite, and albite.

Actinolite breccia, mapped in the central zone east of the Polley Fault, consists of sub-angular clasts in a matrix of fibrous dark green actinolite and potassically altered material. Biotite breccia is identified only in the southern part of the central zone by the presence of hydrothermal biotite flakes locally altered to chlorite. Magnetite breccia is much less abundant and localized. Albite breccia dominates only in the Springer Pit area, west of the Polley Fault, and is identified by the presence of prismatic albite crystals in vugs in the breccia matrix, commonly with secondary biotite. The effects of albitization often make it difficult to distinguish clasts.

Alteration at Mount Polley, typical of alkalic porphyry systems, is dominated by a central potassic zone defined by potassium feldspar-albite, biotite, and actinolite, with phyllic/argillic alteration generally restricted to areas of post-mineralization faulting and fracturing. The potassic core is coincident with hydrothermal and intrusive brecciation as well as copper-gold mineralization. The propylitic zone is characterized by albite, epidote, chlorite, carbonates, garnet, pyrite and zeolites.

#### 2.2.4 Mineralization

The deposit contains chalcopyrite, pyrite, and bornite as primary sulphides associated with magnetite. Gold is present as 5 to 30 micron inclusions in chalcopyrite. Ore mineralogy is hosted primarily in hydrothermal and intrusion breccias, with lesser amounts in plagioclase porphyry, monzonite, diorite, and volcanics.

Polished grain mounts of concentrate reveal rare tetrahedrite, galena, sphalerite, and molybdenite. Secondary or supergene sulphides are also rare but include chalcocite, covellite, and digenite.

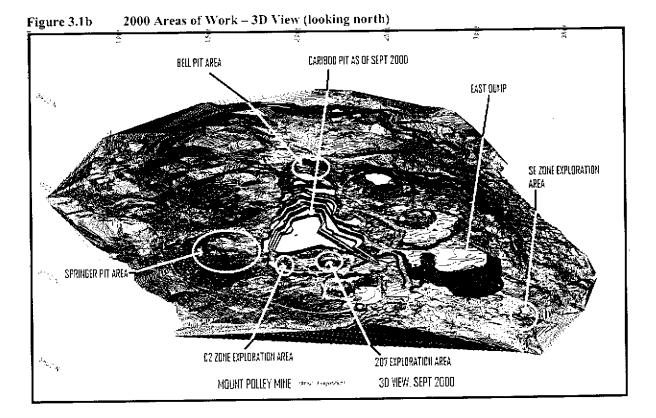
Oxide minerals include malachite, azurite, magnetite, hematite, and limonite (goethite with minor jarosite). Chrysocolla occurs within a fault-controlled block in the Cariboo Pit and in near –surface and faulted areas with the Springer Zone.

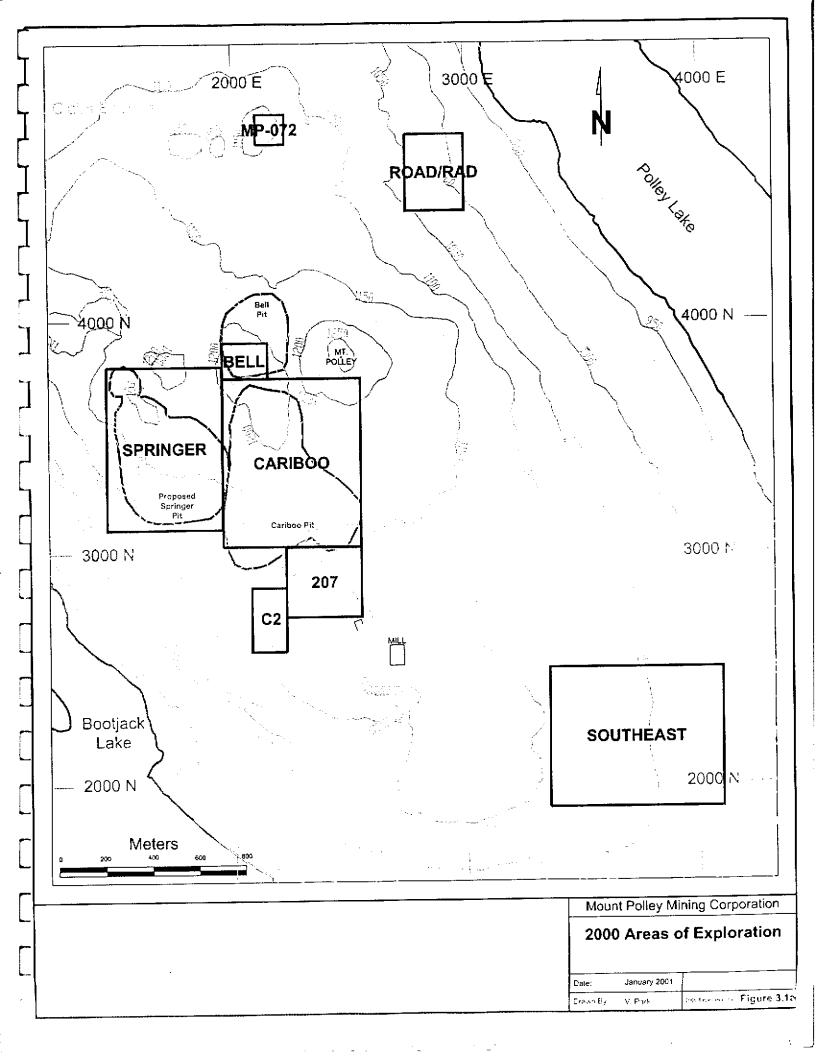
### CHAPTER 3: 2000 WORK

#### 3.1 Summary of Exploration Work

The following is a brief description of work conducted at Mount Polley during 2000. The purpose of the exploration was to improve upon current reserves, to provide definition in already explored areas for economic model runs, and to investigate previously under-explored targets.

The areas that received work in 2000 span the claim block. These areas, listed alphabetically are: 207, Bell, C2, Cariboo Pit (C Pit) – North, C Pit – East, C Pit – South, C Pit – east Ramp, MP-071, Road Rad, Southeast and Springer (Figure 3.1a and Figure 3.1b).





| $M \epsilon$ | ount Polley Mit | ne – 2000 Assessment Report |  | 13 March 2001 |
|--------------|-----------------|-----------------------------|--|---------------|
|              |                 |                             |  |               |

226 percussion holes for 10,652.5 meters and 26 core holes for 4,875.3 meters were completed. Table 3.1 provides a summary of all the physical work completed on the property in 2000.

#### Table 3.1

#### Summary of All 2000 Mount Polley Property Work

|               | Percussion |          |            |              |            |            |            |          |            | Core         |     | All Drilling |  |
|---------------|------------|----------|------------|--------------|------------|------------|------------|----------|------------|--------------|-----|--------------|--|
| . <u></u>     | MTP -      | IR Rig 4 | Paramoui   | nt Drillling | Tercon C   | ontracting | Т          | otal     | F. Boisve  | anu Drilling | Т   | otal         |  |
| Zone          | * of Holes | Meterage | # of Holes | Meterage     | * of Holes | Meterage   | # of Holes | Meterage | ≠ of Holes | Meterage     |     | Meterage     |  |
|               |            |          |            | 1            |            |            |            |          |            |              |     |              |  |
| 207           | 3          | 224.0    | 0          | 0.0          | 0          | 0.0        | 3          | 224.0    | 5          | 900.80       | 8   | 1124.8       |  |
| Bell          | 7          | 309.4    | 0          | 0.0          | 0          | 0.0        | 7          | 309.4    | 0          | 0.0          | 7   | 309,-        |  |
| C2            | 10         | 899.4    | 0          | 0.0          | 0          | 0.0        | 10         | 899.4    | 14         | 2689.0       | 24  | 3588,4       |  |
| C Pit - North | 13         | 558.3    | 15         | 645.0        | 0          | 0.0        | 28         | 1203.3   | 0          | 0.0          | 28  | 1203.2       |  |
| C Pit - East  | 22         | 1065.5   | υ          | 0.0          | {}         | 0.0        | 22         | 1065.5   | 0          | 0.0          | 22  | 1065.        |  |
| C Plt - South | 0          | 0.0      | 0          | 0.0          | 0          | 0.0        | 0          | 0.0      | 1          | 874.6        | 4   | 874.6        |  |
| C Pit - Ramp  | 6          | 5777     | 0          | 0.0          | 0          | 0.0        | 6          | 577.7    | 0          | 0.0          | 6   | 577.3        |  |
| MP-071        | 5          | 221.0    | 0          | 0.0          | 0          | 0.0        | 5          | 221.0    | 0          | 0.0          | 5   | 221.0        |  |
| Road/Rad      | 0          | 0.0      | 7          | 304.5        | 0          | 0.0        | 7          | 304.5    | 0          | 0.0          | 7   | 304.5        |  |
| Southeast     | 31         | 1344.3   | 60         | 2665.5       | 2          | 167.6      | 99         | 4177.4   | 3          | 410.9        | 102 | 4588.3       |  |
| Springer      | 0          | 0.0      | 11         | 445.5        | 28         | 1224.8     | 39         | 1670.3   | 0          | 0.0          | 39  | 1670.j       |  |
| All Zones     | 97         | 5199.6   | 99         | 4060.5       | 30         | 1392.4     | 226        | 10651.5  | 26         | 4875.3       | 252 | 15527.8      |  |

#### 3.2 207

Five core holes for 900.8 meters and three percussion holes for 224.0 meters were drilled in the 207 zone (Figure 3.6). These holes were designed to expand the mineralized zone centered on core hole MP-207 (0.53 % Cu and 1.792 g/T Au / 19.9 m).

Mineralization hosted within potassically-altered, magnetitic, monzonitic breccia forms a continuous body that dips steeply (50°) to the east and strongly resembles the geometry of the C2 mineralized body.

Most holes drilled were successful in delineating broad zones of moderate mineralization (eg. 0.161 % Cu and 0.25 g/T Au / 96.8 m in C31), with smaller intervals of higher-grade values (eg. 0.327 % Cu and 0.38 g/T Au / 22.8 m in C32). The oxide ratio is significantly lower than in the C2 zone. The 207 and C2 zones combined provide a geological resource of 1 035 166 tonnes at 0.333% Cu. 0.443 gpt Au and an oxide ratio of 16.3%: however, at current market metal prices the deposit is sub-economic. Significant results are summarized below.

|           |          |       |       | 207 Sign | incant resui | 15        |          |          |
|-----------|----------|-------|-------|----------|--------------|-----------|----------|----------|
| Hole ID   |          | From  | To    | Length   | Cu-tot (%)   | Cu-ns (%) | Cu Ratio | Au (gpt) |
| MP-00-C16 |          | 43.0  | 79.5  | 36.5     | 0.251        | 0.013     | 0.052    | 0.56     |
|           |          | 84.5  | 94.7  | 10.2     | 0.112        | 0.009     | 0.080    | 0.27     |
|           |          | 124.0 | 136.0 | 12.0     | 0.207        | 0.008     | 0.039    | 0.39     |
| MP-00-C30 |          | 7.6   | 30.9  | 23.3     | 0.164        | 0.094     | 0.57     | 0.25     |
|           | includes | 2.6   | 17.6  | 10.0     | 0.238        | 0.742     | (0, 60)  | 0.42     |
|           |          | 43.5  | 53.0  | 93       | 0.106        | 0.028     | 0.26     | 0.16     |
|           |          | 62.2  | 112.8 | 50.6     | 0.201        | 0.013     | 0.06     | 0.33     |
|           | includes | 102.8 | 112.8 | 10.0     | 9.345        | 0.605     | 0.01     | 0.62     |
|           |          | 157.1 | 236.1 | 79.0     | 0.145        | 0.004     | 0.03     | 0.22     |
|           | includes | 117.5 | 1383  | 20.8     | 0.188        | 0.00      | 0.94     | 6.34     |
| MP-00-C31 |          | 13.1  | 109.9 | 96.8     | 0.161        | 0.010     | 0.06     | 0.25     |

### 207 Significant Results

|           | includes | 25.2 | 331  | 7.9  | 3.060 | 0.005 | 0.00 | 0.48 |
|-----------|----------|------|------|------|-------|-------|------|------|
| MP-00-C32 |          | 6.2  | 19.2 | 13.0 | 0.125 | 0.075 | 0.60 | 0.15 |
|           |          | 25.3 | 33.0 | 7.7  | 0.142 | 0.061 | 0.43 | 0.19 |
|           |          | 40.5 | 98.0 | 57.5 | 0.233 | 0.011 | 0.05 | 0.23 |
|           | includes | 40.5 | 63.3 | 22.8 | 0.327 | 0.018 | 0.06 | 0.38 |
| MP-00-C33 |          | 19.5 | 49.8 | 30.3 | 0.168 | 0.016 | 0.10 | 0.23 |
|           |          | 60.4 | 90.9 | 30.5 | 0.150 | 0.009 | 0.06 | 0.29 |
|           | includes | 66.4 | 74.4 | 8.0  | 0.225 | 0.012 | 0.05 | 0.37 |
| 1R00-5    |          | 0.0  | 44.2 | 44.2 | 0.127 | 0.033 | 0.26 | 0.22 |
|           |          | 67.1 | 89.9 | 22.8 | 0.122 | 0.026 | 0.21 | 0.30 |
| IR00-15   |          | 13.7 | 89.9 | 76.2 | 0.158 | 0.028 | 0.18 | 0.34 |
| IR00-16   |          | 0.0  | 29.0 | 29.0 | 0.234 | 0.141 | 0.60 | 0.39 |

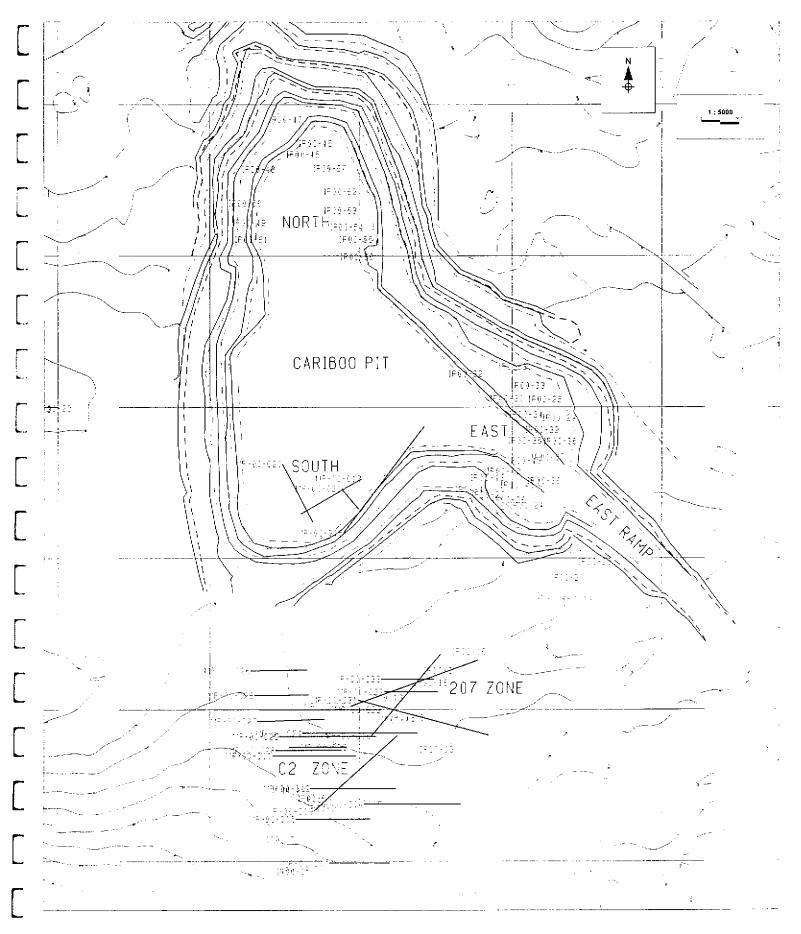
#### 3.3 Bell

Seven percussion holes for 309.4 meters were drilled from the 1215 elevation at the southwest end of the Bell pit (Figure 3.3) in an attempt to better understand the extent of mineralization and to improve the model where there was decreased drill density.

Results from this drilling determined that moderate mineralization (eg. 0.280 % Cu and 0.33 gpt Au / 44.2 m in 1R74) is present right to the diorite contact: however, the values were not significant enough to warrant redesigning the west pit wall. Significant results are summarized below.

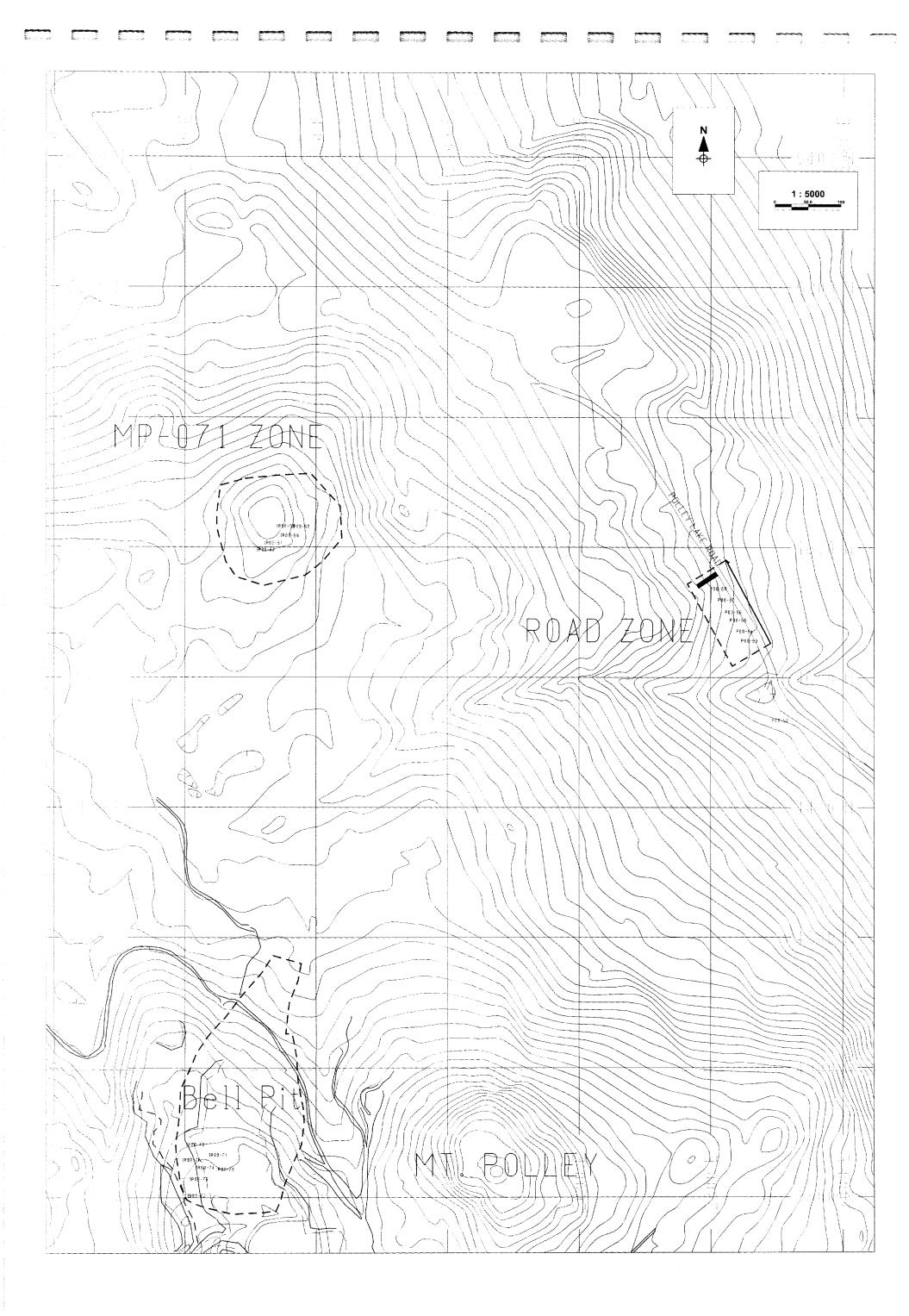
|      |   |  | ben significan   | ( Kesuits   |   |   |
|------|---|--|--|---|---|---|
| From | Τo  | Length   | Cu-tot (%)   | Cu-ns (%)   | Cu Ratio  | Au (gpt)  |
| 0.0  | 21.3  | 21.3   | 0.290  | 0.143   | 0.481   | 0.42  |
| 0.0  | 44.2  | 44.2   | 0.195  | 0.020   | 0.010   | 0.23  |
| 0.0  | 36.6  | 36.6   | 0.204  | 0.011   | 0.052   | 0,29  |
| 0.0  | 44.2  | 44.2   | 0.255  | Ð.009   | 0.032   | 0.31  |
| 0.0  | 44.2  | 44.2   | 0.280  | 0.024   | 0.082   | 0.33  |
| 0.0  | 44.2  | 44.2   | 0.314  | 0.028   | 0.090   | 0,42  |
| 0.0  | 6.1   | 6.1  | 0.113  | 0.045   | 0.398   | 0.13  |
|      | 0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0<br>0.0 | 0.0 21.3   0.0 44.2   0.0 36.6   0.0 44.2   0.0 44.2   0.0 44.2   0.0 44.2   0.0 44.2   0.0 44.2 | From To Length   0.0 21.3 21.3   0.0 44.2 44.2   0.0 36.6 36.6   0.0 44.2 44.2   0.0 36.4 36.6   0.0 44.2 44.2   0.0 44.2 44.2   0.0 44.2 44.2   0.0 44.2 44.2   0.0 44.2 44.2 | From To Length Cu-tot (%)   0.0 21.3 21.3 0.290   0.0 44.2 44.2 0.195   0.0 36.6 36.6 0.204   0.0 44.2 44.2 0.255   0.0 44.2 44.2 0.255   0.0 44.2 44.2 0.280   0.0 44.2 44.2 0.314 | From To Length Cu-tot (%) Cu-ns (%)   0.0 21.3 21.3 0.290 0.143   0.0 44.2 44.2 0.195 0.020   0.0 36.6 36.6 0.204 0.011   0.0 44.2 44.2 0.255 0.009   0.0 44.2 44.2 0.255 0.009   0.0 44.2 44.2 0.280 0.024   0.0 44.2 44.2 0.314 0.028 | 0.0 21.3 21.3 0.290 0.143 0.481   0.0 44.2 44.2 0.195 0.020 0.010   0.0 36.6 36.6 0.204 0.011 0.052   0.0 44.2 44.2 0.255 0.009 0.032   0.0 44.2 44.2 0.255 0.009 0.032   0.0 44.2 44.2 0.280 0.024 0.082   0.0 44.2 44.2 0.314 0.028 0.090 |

#### **Bell Significant Results**



Imperial Metals Corporation DATE: PROJECT: SCALE:

Mount Polley Mine 2001/03/08 2000 CARIBOO PIT DRILLING 5000.00 FIGURE 3.6



| Imperial Metals Corporation | <b>Mount Polley Mir</b> | 1e                      |
|-----------------------------|-------------------------|-------------------------|
| DATE:                       | 2001/03/08              |                         |
| PROJECT:                    | 2000 BELL, MP-(         | 071, ROAD ZONE DRILLING |
| SCALE:                      | 1:5000.00               | FIGURE 3.3              |

#### 3.4 C Pit - North

Twenty-eight percussion holes for 1203.3 meters were drilled at the north end of the Cariboo pit (Figure 3.6). These holes were drilled in an attempt to expand mineralization out from and below the current pit design and to provide definition in those areas where previous drill density is sparse, in preparation for reserves modeling. Although all holes intersected moderate mineralization, the values were not significant enough to change the pit design. Significant results are summarized below.

| Hole ID |             | From        | To   | Length | Cu-tot (%) | Cu-ns (%) | Cu Ratio | Au (gpt) |
|---------|-------------|-------------|------|--------|------------|-----------|----------|----------|
| IR00-45 |             | 0.0         | 6.1  | 6.1    | 0.311      | 0.017     | 0.055    | 0.47     |
| IR00-46 |             | 0.0         | 44.2 | 44.2   | 0.219      | 0.015     | 0.068    | 0.31     |
| IR00-47 |             | 0.0         | 13.7 | 13.7   | 0.213      | 0.010     | 0.051    | 0.35     |
| IR00-48 |             | 0.0         | 13.7 | 13.7   | 0.189      | 0.010     | 0.057    | 0.27     |
| IR00-49 |             | 0.0         | 36.6 | 36.6   | 0.290      | 0.140     | 0.476    | 0.59     |
| (R00-50 |             | 0.0         | 44.2 | 44.2   | 0.282      | 0.057     | 0.219    | 0.44     |
| IR00-51 |             | 6.1         | 36.6 | 30.5   | 0.194      | 0.129     | 0.620    | 0.38     |
|         | includes    | 29.0        | 36.6 | 7.6    | 0.331      | 0.260     | 0.785    | 0.26     |
| IR00-52 |             | 0.0         | 44.2 | 44.2   | 0.221      | 0.012     | 0.260    | 4.06     |
| IR00-53 |             | 0.0         | 44.2 | 44.2   | 0.261      | 0.008     | 0.290    | 4.75     |
| IR00-54 |             | 0.0         | 44.2 | 44.2   | 0.189      | 0.006     | 0.200    | 4.30     |
| IR00-55 |             | 29.0        | 44.2 | 15.2   | 0.154      | 0.007     | 0.160    | 3.72     |
| IR00-56 | no signific | ant results |      |        |            |           |          |          |
| IR00-57 |             | 0.0         | 44.2 | 44.2   | 0.320      | 0.011     | 0.430    | 4.03     |
| P00-59  |             | 0.0         | 43.5 | 43.5   | 0.167      | 0.012     | 0.073    | 0.24     |
| P00-60  |             | 0.0         | 43.5 | 43.5   | 0.190      | 0.023     | 0.123    | 0.50     |
| P00-61  |             | 0.0         | 43.5 | 43.5   | 0.194      | 0.012     | 0.06t    | 0.28     |
| P00-62  | ,           | 0.0         | 28.5 | 28.5   | 0.193      | 0.006     | 0.029    | 0.28     |
| P00-63  |             | 0.0         | 43.5 | 43.5   | 0.174      | 0.008     | 0.048    | 0.36     |
| P00-64  |             | 0.0         | 28.5 | 28.5   | 0.144      | 0.006     | 0.045    | 0.28     |
| P00-65  |             | 0,0         | 36.0 | 36.0   | 0.172      | 0.021     | 0.171    | 0.30     |
| P00-66  |             | 0.0         | 43.5 | 43.5   | 0.159      | 0.021     | 0.144    | 0.24     |
| P00-67  |             | 6.0         | 21.0 | 15.0   | 0.117      | 0.050     | 0.428    | 0.18     |
| P00-68  |             | 0.0         | 43.5 | 43.5   | 0.213      | 0.067     | 0.334    | 0.34     |
| P00-69  |             | 0.0         | 43.5 | 43.5   | 0.241      | 0.010     | 0.041    | 0.40     |
| P00-70  |             | 0.0         | 43.5 | 43.5   | 0.274      | 0.010     | 0.037    | 0.43     |
| P00-71  |             | 0.0         | 43.5 | 43.5   | 0.232      | 0.017     | 0.075    | 0.26     |
| P00-72  |             | 0.0         | 43.5 | 43.5   | 0.318      | 0.012     | 0.040    | 0.29     |
| P00-73  |             | 0.0         | 43.5 | 43.5   | 0.194      | 0.009     | 0.046    | 0.30     |

#### C Pit - North Significant Results

#### 3.5 C Pit - East

Twenty-two percussion holes for 1065.5 meters have been drilled in the east area of the Cariboo pit. These holes were designed to provide definition in those areas where previous drill density was sparse, in preparation for reserves modeling.

In the east portion, most of the assay results returned indicate that the entire area is weakly, but subeconomically mineralized (e.g. 0.168 % Cu and 0.18 g T Au / 44.2 m in 1R35) as predicted in the block model. Slightly higher values were returned for the intervals corresponding to the 1110 bench (1120 to 1110 elevation). The data, once incorporated in the model run show that region is sub-economic; the pit design did not miss any significant blocks. Significant results are summarized below.

| Hole ID |              | From        | То   | Length | Cu-tot (%) | Cu-ns (%) | Cu Ratio  | Au (gpt) |
|---------|--------------|-------------|------|--------|------------|-----------|-----------|----------|
| IR00-3  |              | 6.1         | 36.6 | 30.5   | 0.146      | 0.017     | 0.1164384 | 0.15     |
| IR00-24 |              | 0.0         | 97.5 | 97.5   | 0.196      | 0.036     | 0.184     | 0.16     |
| IR00-25 |              | 0.0         | 82.3 | 82.3   | 0.150      | 0.034     | 0.227     | 0.17     |
| IR00-26 |              | 0.0         | 44.2 | 44.2   | 0.160      | 0.032     | 0.200     | 0.08     |
| IR00-27 |              | 0.0         | 44.2 | 44.2   | 0.185      | 0.078     | 0.422     | 0.16     |
| IR00-28 | no significa | int results |      |        |            |           |           |          |
| IR00-29 |              | 21.3        | 44.2 | 22.9   | 0.143      | 0.003     | 0.021     | 0.25     |
| [R00-30 |              | 0.0         | 44.2 | 44.2   | 0.167      | 0.026     | 0.156     | 0.15     |
| IR00-31 |              | 0.0         | 44.2 | 44.2   | 0.232      | 0.021     | 0.091     | 0.26     |
| [R00-32 |              | 0.0         | 44.2 | 44.2   | 0.146      | 0.063     | 0.432     | 0.15     |
| [R00-33 |              | 13.7        | 29.0 | 15.3   | 0.125      | 0.004     | 0.032     | 0.18     |
| IR00-34 |              | 0.0         | 44.2 | 44.2   | 0.270      | 0.031     | 0.115     | 0.26     |
| IR00-35 |              | 0.0         | 44.2 | 44.2   | 0.168      | 0.008     | 0.048     | 0.18     |
| IR00-36 |              | 0.0         | 44.2 | 44.2   | 0.142      | 0.005     | 0.035     | 0.16     |
| IR00-37 |              | 6.l         | 44.2 | 38.1   | 0.195      | 0.013     | 0.067     | 0.18     |
| [R00-38 |              | 0.0         | 44.2 | 44.2   | 0.179      | 0.015     | 0.084     | 0.17     |
| IR00-39 |              | 6.1         | 36.6 | 30.5   | 0.132      | 0.070     | 0.530     | 0.15     |
| IR00-40 |              | 0.0         | 44.2 | 44.2   | 0.115      | 0.007     | 0.061     | 0.12     |
| IR00-41 |              | 0.0         | 44.2 | 44.2   | 0.170      | 0.008     | 0.047     | 0.17     |
| IR00-42 |              | 0.0         | 44.2 | 44.2   | 0.115      | 0.012     | 0.104     | 0.11     |
|         | includes     | 0.0         | 6.7  | 6.1    | 0.302      | 0.010     | 0.033     | 0.34     |
| 1R00-43 |              | 0.0         | 44.2 | 44.2   | 0.109      | 0.040     | 0.367     | 0.11     |
| IR00-44 |              | 0.0         | 44.2 | 44.2   | 0.149      | 0.045     | 0.302     | 0.20     |
|         |              |             |      |        |            | -         |           |          |

### C Pit - East Significant Results

#### 3.6 C Pit - South

Four core holes for 874.6 meters were drilled in the south end of the Cariboo pit. Holes C13, C18 and C20 were designed to test for continued mineralization south of the pre-May 2000 pit design and within the deep south Cariboo mineralization; hole C21 was designed to test the eastern extent of mineralization encountered in C13.

The geological units south of the current pit limit dip steeply east. Near surface, ore-grade mineralization, hosted in hydrothermally altered monzonitic or volcanic breccias, does not necessarily follow geological units.

All four holes intersected altered and well-mineralized breccia below the designed pit limit, with grade decreasing to the east. At current market prices, this mineralization does not expand the current pit limits. Significant results are summarized below.

| Hole ID   | From  | To    | Length | Cu-tot (%) | Cu-ns (%) | Cu Ratio | Au (gpt) |
|-----------|-------|-------|--------|------------|-----------|----------|----------|
| MP-00-C13 | 10.9  | 24.4  | 13.5   | 0.275      | 0.026     | 0.095    | 0.33     |
|           | 30.4  | 45.8  | 15.4   | 0.166      | 0.020     | 0.120    | 0.26     |
|           | 53-2  | 91.6  | 38.4   | 0.520      | 0.018     | 0.035    | 1.38     |
|           | 107.2 | 136.7 | 29.5   | 0.155      | 0,006     | 0.039    | 0.28     |
| MP-00-C18 | 29    | 38    | 9      | 0.329      | 0.017     | 0.052    | 0.59     |
|           | 102.6 | 114.6 | 12     | 0.194      | 0.010     | 0.052    | 0.44     |
|           | 122.6 | 180.8 | 58.2   | 0.193      | 0.007     | 0.036    | 0.36     |
|           | 195.9 | 202.8 | 6.9    | 0.216      | 0.012     | 0.056    | 0.28     |

#### C Pit - South Significant Results

| Mount Polley | Mine – 201 | 00 Asses: | sment Re | port |       |       | /     | 3 March 200 |
|--------------|------------|-----------|----------|------|-------|-------|-------|-------------|
| MP-00-C20    |            | 14.8      | 32.2     | 17.4 | 0.199 | 0.037 | 0.186 | 0.35        |
|              |            | 44.5      | 57.3     | 12.8 | 0.259 | 0.030 | 0.116 | 0.41        |
|              |            | 93.2      | 170      | 76.8 | 0.371 | 0.034 | 0.092 | 0.68        |
|              |            | 197.6     | 205.1    | 7.5  | 0.179 | 0.018 | 0.101 | 0.4         |
|              |            | 210.3     | 223.3    | 13   | 0.200 | 0.017 | 0.085 | 0.23        |
| MP-00-C21    |            | 6.7       | 19       | 12.3 | 0.123 | 0.032 | 0.260 | 0.231       |
|              |            | 53.3      | 108.9    | 55.6 | 0.137 | 0.016 | 0.117 | 0.22        |
|              |            | 114.9     | 129      | 14.1 | 0.176 | 0.019 | 0.108 | 0.27        |
|              | includes   | 124       | 129      | 5    | 0.277 | 0.035 | 0.126 | 0.4         |
|              |            | 134.9     | 150.6    | 15.7 | 0.183 | 0.021 | 0.115 | 0.2         |
|              |            | 159.8     | 196      | 36.2 | 0.193 | 0.027 | 0.140 | 0.19        |
|              | includes   | 159.8     | 172      | 12.2 | 0.301 | 0.062 | 0.206 | 0.32        |
|              |            | 200       | 203      | 3    | 0.249 | 0.018 | 0.072 | 0.19        |

### 3.7 C Pit – East Ramp

Six percussion holes for 577.7 meters were drilled east of the Cariboo pit adjacent to the east access ramp (Figure 3.6). All holes intersected non-significant mineralization. The assay results are summarized below.

| Hole ID | From        | То    | Length | Cu-tot (%) | Cu-ns (%) | Cu Ratio | Au (gpt) |
|---------|-------------|-------|--------|------------|-----------|----------|----------|
| 1R00-4  | 13.7        | 82.3  | 68.6   | 0.141      | 0.031     | 0.22     | 0.14     |
| IR00-20 | 0.0         | 29.0  | 29.0   | 0.185      | 0.039     | 0.21     | 0.18     |
| IR00-21 | 13.7        | 89.9  | 76.2   | 0.125      | 0.030     | 0.24     | 0.14     |
| IR00-22 | <b>0</b> ,0 | 59.4  | 59.4   | 0.130      | 0.052     | 0.40     | 0.12     |
| IR00-23 | 21.3        | 36.6  | 15.3   | 0.234      | 0.020     | 0.09     | 0.40     |
|         | 59.4        | 105.2 | 45.8   | 0.116      | 0.015     | 0.13     | 0.12     |

### C Pit - East Ramp Significant Results

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### 3.8 C2

Fourteen core holes for 689.0 meters and ten percussion holes for 830.8 meters were drilled in the C2 zone south of the Cariboo pit (Figure 3.6). Initial drilling was designed to expand the dimensions of and to test the continuity of mineralization as determined by 1999 drilling. Additional holes were drilled as down-dip and along-strike step-outs to confirm near-surface and deeper mineralization, and to provide better definition for reserves modeling between wide-spaced holes.

Mineralization hosted within potassically-altered, magnetitic, monzonitic breccia forms a continuous body that dips steeply to the east. This body is limited to the north by the C2 Fault, to the west by the Polley Fault and to the east by grey, unaltered plagioclase porphyry.

Most holes intersected broad zones of mineralization (eg. 0.331 % Cu and 0.40 g/T Au / 68.7 m in IR9) with locally higher grades (eg. 0.916 % Cu and 0.87 g/T Au / 17 m in C19). Oxidation is very strong near surface and adjacent to the Polley Fault, with the Cu-ns/Cu-tot ratio nearing 90% locally. The C2 and 207 zones combined provide a geological resource of 1 035 166 tonnes at 0.333% Cu, 0.443 gpt Au and an oxide ratio of 16.3%; however, due to current market metal prices and the high degree of oxidation, the C2 is sub-economic. Significant results are summarized below.

| C2 Significant Results |          |       |       |        |            |           |          |          |  |  |  |
|------------------------|----------|-------|-------|--------|------------|-----------|----------|----------|--|--|--|
| Hole ID                |          | From  | Ťo    | Length | Cu-tot (%) | Cu-ns (%) | Cu Ratio | Au (gpt) |  |  |  |
| MIP-00-C11             |          | 38.7  | 46.7  | 8.0    | 0.277      | 0.221     | 0.798    | 0.30     |  |  |  |
|                        |          | 77.2  | 98.3  | 21.1   | 0.281      | 0.135     | 0.480    | 0.27     |  |  |  |
|                        |          | 106.3 | 112.3 | 6.0    | 0.271      | 0.204     | 0.753    | 0.47     |  |  |  |
|                        |          | 129.1 | 165.5 | 36.4   | 0.272      | 0.108     | 0.397    | 0.32     |  |  |  |
|                        |          | 175.0 | 182.9 | 7.9    | 0.183      | 0.036     | 0.197    | 0.29     |  |  |  |
| MP-00-C12              |          | 33.6  | 41.6  | 8.0    | 0.224      | 0.143     | 0.638    | 0.41     |  |  |  |
|                        |          | 60.1  | 70.4  | 10.3   | 0.240      | 0.161     | 0.671    | 0.56     |  |  |  |
|                        |          | 76.7  | 87.5  | 10.8   | 0.608      | 0.194     | 0.319    | 0.71     |  |  |  |
|                        |          | 108.5 | 137.7 | 29.2   | 0.296      | 0.090     | 0.304    | 0.42     |  |  |  |
|                        |          | 157.7 | 163.7 | 6.0    | 0.185      | 0.084     | 0.454    | 0.20     |  |  |  |
|                        |          | 210.9 | 216.9 | 6.0    | 0.180      | 0.139     | 0.772    | 0.33     |  |  |  |
| MP-00-C14              |          | 12.8  | 18.1  | 5.3    | 0.149      | 0.107     | 0.718    | 0,19     |  |  |  |
|                        |          | 44.5  | 102.9 | 58.4   | 0.145      | 0.032     | 0.221    | 0.21     |  |  |  |
|                        |          | 176.4 | 188.9 | 12.5   | 0.280      | 0.058     | 0.207    | 0.27     |  |  |  |
|                        |          | 218.1 | 242.8 | 24.7   | 0.335      | 0.015     | 0.045    | 0.29     |  |  |  |
| MP-00-C15              |          | 12.5  | 28.5  | 16.0   | 0.132      | 0.102     | 0.773    | 0.19     |  |  |  |
|                        |          | 68.8  | 83.9  | 15.1   | 0.220      | 0.041     | 0.186    | 0.22     |  |  |  |
|                        |          | 102.3 | 113.5 | 11.2   | 0.203      | 0.113     | 0.557    | 0.25     |  |  |  |
| MP-00-C17              |          | 128.3 | 137.4 | 9.1    | 0.227      | 0.066     | 0.291    | 0.13     |  |  |  |
|                        |          | 153.0 | 158.4 | 5.4    | 0.372      | 0.107     | 0.288    | 0.15     |  |  |  |
| MP-00-C19              |          | 3.1   | 20.0  | 16.9   | 0.916      | 0.793     | 0.866    | 0.87     |  |  |  |
|                        |          | 62.4  | 68.4  | 6.0    | 0.340      | 0.279     | 0.821    | 0.34     |  |  |  |
|                        |          | 110.2 | 118.2 | 8.0    | 0.173      | 0.083     | 0.480    | 0.53     |  |  |  |
|                        |          | 158.7 | 168.1 | 9.4    | 0.171      | 0.082     | 0.480    | 0.37     |  |  |  |
|                        |          | 183.5 | 189.5 | 6.0    | 0.253      | 0.098     | 0.387    | 0.31     |  |  |  |
| MP-00-C23              |          | 18.3  | 40.7  | 22.4   | 0.289      | 0.199     | 0.689    | 0.37     |  |  |  |
|                        |          | 76.5  | 137.4 | 60.9   | 0.199      | 0.105     | 0.528    | 0.25     |  |  |  |
|                        | includes | 84.0  | 98, 7 | 14.7   | 0.250      | 0.153     | 0.672    | 0.30     |  |  |  |
|                        | and      | 110.2 | 125.4 | 15.2   | 0.370      | 0.163     | 0.526    | 0.47     |  |  |  |
| MP-00-C24              |          | 33.3  | 57.4  | 24.1   | 0.221      | 0.166     | 0.751    | 0.22     |  |  |  |
|                        |          | 117.7 | 143.8 | 26.1   | 0.139      | 0.047     | 0.338    | 0.22     |  |  |  |

|              |        |      |             | -      |
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|           |             | 156.1      | 210.0 | 53.9  | 0.143 | 0.015 | 0.105 | 0.20 |
|-----------|-------------|------------|-------|-------|-------|-------|-------|------|
| MP-00-C25 |             | 3.0        | 90.7  | 87.7  | 0.150 | 0.098 | 0.653 | 0.15 |
| MP-00-C26 |             | 3.0        | 38.0  | 35.0  | 0.379 | 0.190 | 0.501 | 0.61 |
|           | includes    | 28.1       | 38.0  | 9.9   | 1.074 | 0.533 | 0.496 | 1.92 |
|           |             | 50.8       | 60.2  | 9.4   | 0.163 | 0.004 | 0.025 | 0.09 |
| MP-00-C27 |             | 15.9       | 79.9  | 64.0  | 0.166 | 0.108 | 0.651 | 0.19 |
|           | includes    | 15.9       | 32.4  | 16.5  | 0.219 | 0.134 | 0.612 | 0.23 |
|           |             | 84.0       | 106.0 | 22.0  | 0.151 | 0.097 | 0.642 | 0.17 |
| MP-00-C28 |             | 10.1       | 121.0 | 110.9 | 0.203 | 0.107 | 0.527 | 0.18 |
|           | includes    | 34.0       | 83.1  | 49.1  | 0.269 | 0.164 | 0.610 | 0.25 |
| MP-00-C29 |             | 34.3       | 184.4 | 150.1 | 0.158 | 0.078 | 0.494 | 0.15 |
|           | includes    | 95.1       | 123.2 | 27.1  | 0.364 | 0.171 | 0.470 | 0.35 |
| IR00-3    |             | 6.1        | 36.6  | 30.5  | 0.146 | 0.017 | 0.116 | 0.15 |
| IR00-6    |             | 6.1        | 29.0  | 22.9  | 0.133 | 0.063 | 0.474 | 0.13 |
| IR00-7    | no signific | ant result | 5     |       |       |       |       |      |
| IR00-8    |             | 36.6       | 105.2 | 68.8  | 0.175 | 0.093 | 0.53  | 0.32 |
|           | includes    | 36.6       | 59.4  | 22.9  | 0.287 | 0.191 | 0.67  | 0.52 |
| IR00-9    |             | 6.1        | 82.3  | 76.2  | 0.331 | 0.132 | 0.40  | 0.32 |
|           | includes    | 13.7       | 36.6  | 22.9  | 0.621 | 0.233 | 0.38  | 0.57 |
| IR00-10   |             | 6.1        | 51.8  | 45.8  | 0.156 | 0.052 | 0.33  | 0.20 |
| IR00-11   |             | 21.3       | 44.2  | 22.9  | 0.106 | 0.052 | 0.49  | 0.13 |
| IR00-12   |             | 6.1        | 13.7  | 7.6   | 0.139 | 0.040 | 0.29  | 0.15 |
| IR00-13   |             | 0.0        | 89.9  | 89.7  | 0.197 | 0.054 | 0.27  | 0.18 |
| IR00-14   |             | 13.7       | 44.2  | 30.5  | 0.108 | 0.080 | 0.74  | 0.08 |
|           |             | 82.3       | 105.2 | 22.9  | 0.163 | 0.023 | 0.14  | 0.36 |
| IR00-18   |             | 0,0        | 21.3  | 21.3  | 0,142 | 0.112 | 0.79  | 0.15 |
|           |             | 74.7       | 105.2 | 30.5  | 0.129 | 0.009 | 0.07  | 0.21 |
| IR00-19   |             | 0,0        | 6.1   | 6.1   | 0.128 | 0.943 | 0.34  | 0.10 |
|           |             |            |       |       |       |       |       |      |

#### 3.9 MP-071

Five percussion holes for 221.0 meters were drilled to follow up on results returned from MP-071 (.244 % Cu and .310 gpt Au / 15.2 meters) on a knob north of the Bell pit (Figure 3.3). At surface the rock is strongly oxidized with several occurrences of copper oxide; a grab sample from this rock returned 1.912 % Cu and 2.35 gpt Au. IR58 is a twin of MP-071.

Copper and gold mineralization is hosted within strongly potassically altered monzonitic (MZ ->PPp) breccia. IR58, 59 and 60, collared within 20.0 meters of MP-071 returned significant values: however, the copper is highly oxidized. The remaining holes intersected very strongly potassically altered intrusive, but the grades were insignificant. As the mineralization is spatially limited, there is minimal chance of delineating additional reserves. Assay results are summarized below.

|         |              |             |      |        | 5.8        |           |          |          |
|---------|--------------|-------------|------|--------|------------|-----------|----------|----------|
| Hole ID |              | From        | To   | Length | Cu-tot (%) | Cu-ns (%) | Cu Ratio | Au (gpt) |
| IR00-58 |              | 0.0         | 21.3 | 21.3   | 0.224      | 0.125     | 0.436    | 0,19     |
|         | includes     | 0,0         | 6.1  | 6.1    | 0,497      | 0.339     | 0.682    | 0.56     |
| IR00-59 |              | 0.0         | 21.3 | 21.3   | 0.278      | 0.099     | 0.352    | 0.38     |
| IR00-60 |              | 0.0         | 13.7 | 13.7   | 0.140      | 0.072     | 0.472    | 0.10     |
| IR00-61 | no significi | wa results  |      |        |            |           |          |          |
| IR00-62 | no signific  | nnt results |      |        |            |           |          |          |

### **MP-071 Significant Results**

### 3.10 Road/Rad

Seven percussion holes for 304.5 meters were drilled in the Road/Rad zone, northeast of the Bell pit on the Polley Lake Road (Figure 3.3). Although copper mineralization in potassic breccia exists at surface does not persist laterally or at depth; no further work is recommended. Assay results are summarized below.

|         |                  |         |        | is run of British |           |          |          |
|---------|------------------|---------|--------|-------------------|-----------|----------|----------|
| Hole ID | From             | To      | Length | Cu-tot (%)        | Cu-ns (%) | Cu Ratio | Au (gpt) |
| P00-52  | no significant i | esults  |        |                   |           |          |          |
| P00-53  | 28.5             | 43.5    | 15.0   | 0.222             | 0.034     | 0.140    | .01      |
| P00-54  | 0.0              | 13.5    | 13.5   | 0.157             | 0.101     | 0.622    | 0.05     |
| P00-55  | 0.0              | 21.0    | 21.0   | 0.264             | 0.123     | 0.492    | 0.03     |
| P00-56  | 0.0              | 13.5    | 13.5   | 0.610             | 0.392     | 0.66     | 0.15     |
| P00-57  | 0.0              | 6.0     | 6.0    | 0.106             | 0.065     | 0.61     | 0.05     |
| P00-58  | no significant i | results | -      |                   |           |          |          |

### **Road/Rad Significant Results**

#### 3.11 Southeast

Ninety-nine percussion holes for 4177.4 meters and three core holes for 410.9 meters were drilled in the Southeast Area, approximately 2 kilometers southeast of the Cariboo Pit (Figure 3.11a). The holes were collared near R-029 (mineralized to .90 meters with up .487 % Cu and 0.52 gpt Au / 35.0 m); IR64 is a twin of R-029.

Percussion drilling returned highly favourable results (eg. 0.420 % Cu and 0.66 gpt Au 44.2 m in IR79) that were aggressively followed up with more percussion drilling and a small core-drilling program. Results from drilling identified a central 'core' that hosted high copper and soil values in a non-oxidized, highly silicified magnetite breccia. Toward the east the mineralization occurs as 'gold-only' in magnetite breccia that is more strongly oxidized.

A new digital soil geochemistry map defines two parallel copper-in-soil anomalies in the Southeast Area (Figure 3.11b). The western anomaly defines the present extent of the SE zone. The easterly anomaly shows an apparently mineralized zone of the same size as the SE Zone. Six percussion holes were drilled to investigate this strong, parallel copper-in-soil anomaly.

The area was found to be mostly swamp, and several attempts to put drill access roads into the center of it failed. Due to this extremely boggy ground, only two holes were attempted in the center of the copper-in-soil anomaly. One hole (P86) was completed to depth: the other (P87) was abandoned after 6.0 meters. Neither hole returned significant copper values, but slightly elevated gold (0.186 gpt/ 7.5 m) was encountered in P86. Four were drilled northeast side of the anomaly at the only accessible location. These holes encountered sporadic copper and/or gold values, often occurring independently. The copper-in-soil anomaly cannot be adequately explained: however, due to the wet, organic-rich ground, it seems unlikely that a true anomaly exists in that location.

The remaining percussion holes were drilled immediately adjacent to the previously defined' gold-only' mineralization. The results show weak copper mineralization with slightly elevated gold, with the best continuity trending east-northeast from P92 and –96.

The three core holes (MP34 to -36) were drilled in varying orientations from the center of the SE zone 'coppergold' core to test the vertical and lateral extents of the mineralization, and to better understand the host breccia and the structures.

Strong copper and gold mineralization is usually hosted within intensely silicified and magnetitic breccia. Mineralization also occurs in intensely potassically altered and silicified plagioclase porphyry dykes, near or within wider breccia bodies. Most holes terminated in monzonite, often with small plagioclase laths and larger k-spar crystals that shows variable potassic, propylitic or albitic alteration; even when silicified, magnetitic and pyritic, this rock is not mineralized. The breccia is usually composed of clasts of potassic monzonitic plagioclase (small laths) porphyry (PPp), black aphanitic mafic volcanic and greyish, mafic plagioclase (large and rounded) porphyry (PPg) within and intensely silicified, magnetitic melanic, often plagioclase phyric matrix. White quartz-calcite also serves as significant interclast cement locally. The breccia is further 'crackled' by a strong but subtle clear quartz stockwork that overprints all units. The degree of oxidation drops off sharply after 15-20 meters downhole.

Copper and gold mineralization is strongly associated with chalcopyrite and pyrite, especially in the most intensely silicified and magnetitic sections. Pyrite is typically much more abundant than chalcopyrite, but all sulfides occur similarly as ultra fine disseminated crystals within silicified rock, in sub-mm clear and white quartz stringers and veinlets, as larger (sub-cm) concentrations within cm-scale milky quartz veinlets, as visually significant interclast chunks <1-3cm, as distinct mm to cm-scale bands, within tension gashes and within the ubiquitous conjugate sets of quartz-calcite fractures. Increased copper and gold values are directly proportional to the quantities of sulfides, magnetite and secondary silicification.

Most contacts between units are sharp and intrusive. MP36, oriented due south, passed through a large (>10.0 meters) mineralized fault zone (several healed breccias some gouge and rubble) that was not seen in MP34 and MP35.

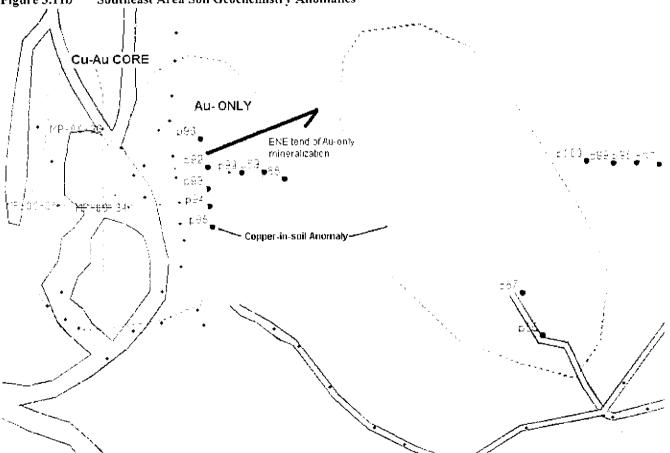
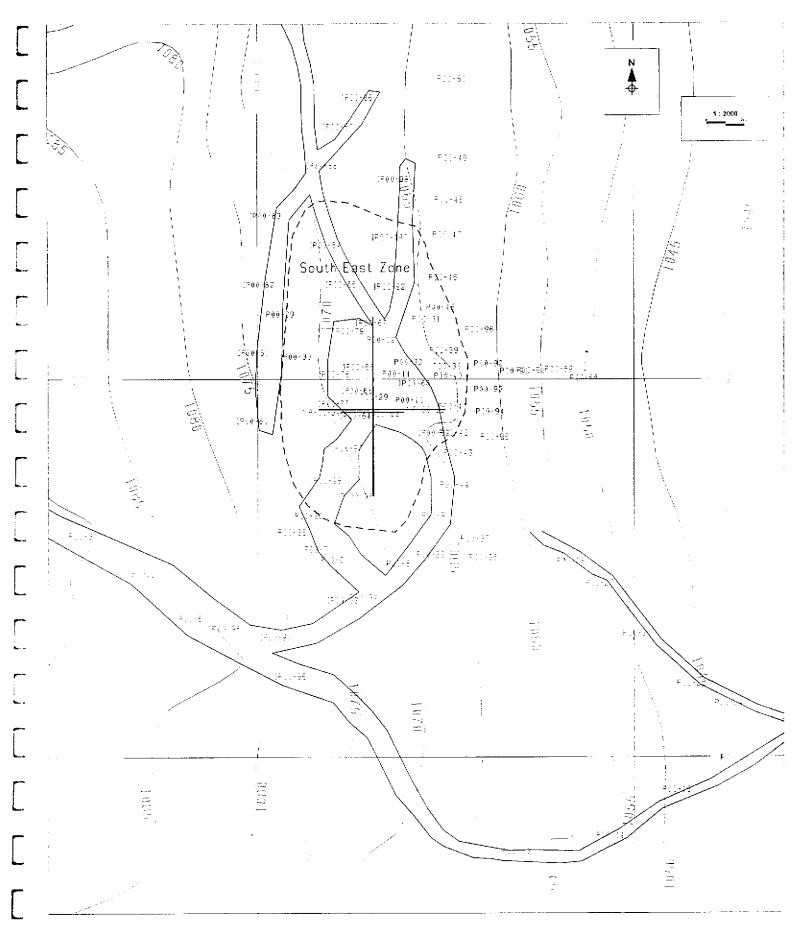


Figure 3.11b Southeast Area Soil Geochemistry Anomalies

A geological resource indicates 2 468 754 tonnes of 0.332 % Cu and 0.239 gpt Au with an oxide ratio of 29.0%: however, at current metal prices and due to metallurgical difficulties this area is sub-economic.



Imperial Metals Corporation DATE: PROJECT: SCALE: Mount Polley Mine 2001/03/08 2000 SOUTHEAST ZONE DRILLING 1:2000.00 FIGURE 3.11a

4 1 N.2

Assay Results are summarized below.

| Hole ID  |            | From                     | То   | Length | Cu-tot (%) | Cu-ns (%) | Cu Ratio                               | Au (gpt) |
|----------|------------|--------------------------|------|--------|------------|-----------|--|----------|
| IR00-63  |            | 0.0                      | 44.2 | 44.2   | 0.257      | 0.101     | 0.366                                  | 0.37     |
|          | includes   | 6.1                      | 21.3 | 15.2   | 0.338      | 0.789     | 0.494                                  | 0.60     |
| IR00-64  |            | 0.0                      | 44.2 | 44.2   | 0.240      | 0.051     | 0.225                                  | 0.51     |
| IR00-65  |            | 0.0                      | 44.2 | 44.2   | 0.405      | 0.067     | 0.216                                  | 0.61     |
| IR00-66  |            | 0.0                      | 44.2 | 44.2   | 0.389      | 0.103     | 0.354                                  | 0.62     |
|          | includes   | 21.3                     | 36.6 | 15.3   | 0.693      | 0.055     | 0.079                                  | 0.93     |
| IR00-67  |            | 0.0                      | 44.2 | 44.2   | 0.217      | 0.103     | 0.467                                  | 0.33     |
| IR00-68  | no signifi | icant resu               | lis  |        |            |           |  |          |
| IR00-69  |            | 21.3                     | 36.6 | 15.3   | 0.121      | 0.031     | 0.249                                  | 0.27     |
| IR00-77  |            | 6.i                      | 44.2 | 38.1   | 0.167      | 0.025     | 0.170                                  | 0.39     |
| IR00-78  |            | 0.0                      | 44.2 | 44.2   | 0.260      | 0.067     | 0.320                                  | 0.44     |
| IR00-79  |            | 0.0                      | 44.2 | 44.2   | 0.420      | 0.061     | 0.180                                  | 0.66     |
| IR00-80  | no signifi | icant resu               | lts  |        |            |           |  |          |
| IR00-81  | no signifi |                          |      |        |            |           |  |          |
| IR00-82  |            | 0.0                      | 13.7 | 13.7   | 0.107      | 0.048     | 0.430                                  | 0.12     |
| IR00-83  | no signifi | · · ·                    | lts  |        |            |           |  |          |
| IR00-84  | no signifi |                          |      |        |            |           |  |          |
| IR00-85  |            | 6.1                      | 44.2 | 36.1   | 0.188      | 0.041     | 0.209                                  | 0.14     |
|          | includes   | 6.1                      | 27.3 | 15.2   | 0.306      | 0.071     | 0.126                                  | 0.27     |
| IR00-86  |            | icant resu               |      |        |            |           |  | -        |
| IR00-87  |            | icant resu               |      |        |            |           |  |          |
| IR00-88  |            | icant resu               |      | i      | ·          | <u> </u>  |  |          |
| IR00-89  |            | icant resu               |      |        |            | ·         |  |          |
|          |            | icant resu               |      |        |            |           | , <u> </u>                             | <u>-</u> |
| IR00-90  |            | icant resu<br>îcant resu |      |        |            |           | ·                                      |          |
| IR00-91  | no signų   | 0.0                      | 44.2 | 44.2   | 0.175      | 0.084     | 0.452                                  | 0.34     |
| IR00-92  | ,          |                          |      |        | 0.248      | 0.084     | 0.623                                  | 0.49     |
| 1000.00  | includes   | 0.0                      | 13.7 | 13.7   | 0.240      | 0.154     | 0.0                                    | 0.47     |
| IR00-93  | no signif  | icant resu               |      | 7.6    | 0.165      | 0.007     | 0.042                                  | 0.02     |
| IR00-94  |            | 36.6                     | 44.2 | ·      | 0.168      |           |  | 0.02     |
| IR00-95  |            | 13.7                     | 21.3 | 7.6    | 0.311      | 0.115     | 0.370                                  | 0.44     |
| IR00-96  | no signif  | icant resu               |      |        | 0.175      | 0.050     |  | 0.37     |
| IR00-97  |            | 0.0                      | 44.2 | 44.2   | 0.135      | 0.050     | 0.381                                  | 0.37     |
| IR00-98  |            | 0.0                      | 13.7 | 13.7   | 0.116      | 0.071     | <u> </u>                               | 0.00     |
| 1R00-99  |            | icant resu               |      |        |            | · · ·     |  |          |
| IR00-100 |            | icant resu               |      |        |            |           | <u> </u>                               |          |
| P00-1    |            | licant resu              |      |        |            |           |  |          |
| P00-2    | no signif  | icant resu               |      |        |            |           |  |          |
| P00-3    |            | 21.0                     | 43.5 | 22.5   | 0.136      | 0.015     | 0.110                                  | 0.15     |
| P00-4    | · · · ·    | icant rest               |      |        |            |           | ··· ·································· |          |
| P00-5    |            | îcant rest               |      |        |            |           |  |          |
| P00-6    | no signif  | icant rest               | ilis |        |            |           |  |          |
| P00-7    | no signij  | icant rest               | dis  |        |            |           |  |          |
| P00-8    |            | 0.0                      | 43.5 | 43.5   | 0.282      | 0.086     | 0.289                                  | 0.51     |
| P00-9    |            | 0.0                      | 21.0 | 21.0   | 0.222      | 0.120     | 0.540                                  | 0.35     |
| P00-10   |            | 28.5                     | 43.5 | 15.0   | 0.147      | 0.026     | 0.173                                  | 0.23     |

### Southeast Significant Results

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|------------------|-------------------------|-------------|----------|-----------------|-------|-------|-------------|
|                  |                         |             |          |                 |       |       |             |
| 200-11           | 0.0                     | 43.5        | 43.5     | 0.251           | 0.086 | 0.297 | 0.71        |
| 200-12           | 0.0                     | 43.5        | 43.5     | 0.138           | 0.071 | 0.510 | 0.24        |
| P00-13           | no significant re.      | sults       |          |                 |       | ·     |             |
| P00-14           | no significant re       | sults       |          |                 |       |       |             |
| P00-15           | no significant re       | sults       |          |                 |       |       |             |
| P00-16           | no significant re       | sults       |          |                 |       |       |             |
| P00-17           | 6.0                     | 21.0        | 15.0     | 0.100           | 0.023 | 0.225 | 0.42        |
| P00-18           | no significant re       | sults       |          |                 |       |       |             |
| P00-19           | no significant re       | sults       |          |                 |       |       |             |
| P00-20           | no significant re       | sults       |          |                 |       |       |             |
| P00-21           | no significant re       | sults       |          |                 |       |       |             |
| P00-22           | no significant re       | sults       |          |                 |       |       |             |
| P00-23           | no significant re       | sults       |          |                 |       |       |             |
| P00-24           | no significant re       |             |          |                 |       |       |             |
| P00-25           | no significant re       |             |          |                 |       | •     |             |
| P00-26           | no significant re       |             |          |                 |       |       |             |
| P00-27           | no significant re       |             |          |                 |       |       |             |
| P00-28           | no significant re       |             |          |                 |       |       |             |
| P00-29           | no significant re       |             |          |                 |       | ·     |             |
| P00-30           | 6.0                     | 36.0        | 30.0     | 0.137           | 0.040 | 0.316 | 0.24        |
| P00-31           | 0.0                     | 43.5        | 43.5     | 0.246           | 0.091 | 0.368 | 0.41        |
| P00-32           | 0.0                     | 43.5        | 43.5     | 0.223           | 0.057 | 0.216 | 0.37        |
| P00-33           | 0.0                     | 36.0        | 36.0     | 0.178           | 0.110 | 0.606 | 0.32        |
| P00-34           | no significant re       | esults      |          |                 |       |       |             |
| P00-35           | no significant re       |             |          |                 |       |       |             |
| P00-36           | no significant re       |             |          | · · ·           |       |       |             |
| P00-37           | no significant re       |             |          |                 |       |       |             |
| P00-38           | no significant re       |             |          |                 |       |       |             |
| P00-39           | 0.0                     | 43.5        | 43.5     | 0.171           | 0.076 | 0.443 | 0.49        |
| P00-40           | <u></u><br>Ú.0          | 43.5        | 43.5     | 0.199           | 0.075 | 0.341 | 0.54        |
| P00-41           | 0.0                     | 43.5        | 43.5     | 0.186           | 0.103 | 0.525 | 0.30        |
| P00-41           | 0.0                     | 21.0        | 21.0     | 0.125           | 0.052 | 0.407 | 0.17        |
| P00-43           | 6.0                     | 13.5        | 7.5      | 0.178           | 0.089 | 0.200 | 0.50        |
| P00-44           | 0.0                     | 13.5        | 13.5     | 0.137           | 0.060 | 0.147 | 0.43        |
| P00-45           | 0.0                     | 28.5        | 28.5     | 0.192           | 0.088 | 0.444 | 0.31        |
| P00-46           | 0.0                     | 28.5        | 28.5     | 0.147           | 0.064 | 0.417 | 0.21        |
| P00-47           | no significant ra       |             |          |                 |       |       |             |
| P00-48           | 13.5                    |             | 22.5     | 0.057           | 0.007 | 0.110 | 0.39        |
| P00-49           | no significant ri       |             |          |                 |       |       |             |
| P00-50           | no significant r        |             |          |                 |       |       |             |
| P00-51           | no significant r        |             |          |                 |       |       |             |
| P00-51           | 0.0                     | 6.0         | 6.0      | 0.125           | 0.063 | 0,504 | 0.42        |
| P00-86           | 28.5                    |             | 7.5      | 0.043           | 0.008 | 0.186 | 0.23        |
| P00-87           | no significant r        |             |          | ~ + * * * * * * |       |       |             |
|                  | no significant r<br>0,0 | 13.5        | 13.5     | 0.148           | 0.095 | 0.636 | 0.18        |
| P00-88           |                         |             | 15.0     | 0.098           | 0.036 | 0.368 | 0.24        |
| P00-89           | and 28.5<br>13.5        |             | 7.5      | 0.131           | 0.050 | 0.381 | 0.27        |
| P00-89<br>P00-90 | . 0.0                   | 6.0         | <u> </u> | 0.105           | 0.060 | 0.556 | 0.08        |

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| ount Polley Mine – 2000 Assessment Report |                        |       |       |                 |       |       |       | 13 March 2001 |  |  |  |
|---|------------------------|-------|-------|-----------------|-------|-------|-------|---------------|--|--|--|
|   |                        |       |       | 13.6            | 0.150 | 0.006 | 0.604 | 0.07          |  |  |  |
| 200-91                                    |                        | 0.0   | 43.5  | 43.5            | 0.159 | 0.096 | 0.506 | 0.37          |  |  |  |
| P00-92                                    |                        | 0.0   | 43.5  | 43.5            | 0.154 | 0.083 |       | ··            |  |  |  |
| P00-93                                    |                        | 0.0   | 13.5  | 13.5            | 0.149 | 0.094 | 0.643 | 0.16          |  |  |  |
| P00-94                                    |                        | 0.0   | 13.5  | 13.5            | 0.100 | 0.073 | 0.691 | 0.13          |  |  |  |
| P00-95                                    |                        | 0.0   | 13.5  | 13.5            | 0.135 | 0.099 | 0.746 | 0.12          |  |  |  |
| P00-96                                    |                        | 0.0   | 28.5  | 28.5            | 0.211 | 0.106 | 0.520 | 0.45          |  |  |  |
| P00-97                                    |                        | 21.0  | 43.5  | 22.5            | 0.240 | 0.008 | 0.036 | 0.11          |  |  |  |
| P00-98                                    |                        | 0.0   | 6.0   | 6.0             | 0.102 | 0.031 | 0.304 | 0.08          |  |  |  |
|   | and                    | 13.5  | 43.5  | 30.0            | 0.065 | 0.009 | 0.181 | 0.25          |  |  |  |
| P00-99                                    | no significant results |       |       |                 |       |       |       |               |  |  |  |
| P00-100                                   |                        | 0.0   | 6.0   | 6.0             | 0.125 | 0.063 | 0.504 | 0.42          |  |  |  |
| T00-29                                    |                        | 0.0   | 91.4  | 91.4            | 0.499 | 0.048 | 0.152 | 0.74          |  |  |  |
|   | includes               | [5.2  | 22.9  | 7.7             | 2.059 | 0.063 | 0.037 | 2.79          |  |  |  |
| T00-30                                    |                        | 0.0   | 76.2  | 76.2            | 0.095 | 0.043 | 0.424 | 0.35          |  |  |  |
|   | includes               | 53.3  | 61.0  | 7,7             | 0.054 | 0.023 | 0.426 | 1.22          |  |  |  |
| MP-00-34                                  |                        | 1.8   | 24.6  | 22.8            | 0.318 | 0.127 | 0.477 | 0.60          |  |  |  |
|   | includes               | 14.3  | 16.3  | 2.0             | 1.237 | 0.395 | 0.374 | 2.63          |  |  |  |
|   | and                    | 31.0  | 66.2  | 35.2            | 0.447 | 0.034 | 0.087 | 0.68          |  |  |  |
|   | and                    | 92.0  | 100.3 | 8.3             | 0.242 | 0.008 | 0.034 | 0.81          |  |  |  |
| MP-00-35                                  |                        | 6.4   | 48.6  | 42.2            | 0.403 | 0.028 | 0.100 | 0.57          |  |  |  |
|   | includes               | 42.3  | 44.4  | 2.7             | 2.387 | 0111  | 0.047 | 2.56          |  |  |  |
|   | and                    | 53.6  | 87.7  | 34.1            | 0.709 | 0.027 | 0.041 | 1.10          |  |  |  |
|   | includes               | 76.8  | 78.5  | L. <del>.</del> | 2.838 | 0.089 | 0.031 | 6.41          |  |  |  |
|   | includes               | 83.5  | 85.5  | 2.0             | 2.373 | 0.074 | 0.031 | 2.85          |  |  |  |
|   | and                    | 108.5 | 129.9 | 21.4            | 0.542 | 0.025 | 0.039 | 0.65          |  |  |  |
|   | includes               | 109.8 | 112.3 | 2.5             | 1.045 | 0.051 | 0.044 | 1.46          |  |  |  |
|   | includes               | 114.3 | 1169  | 2.6             | 1.206 | 0.052 | 0.043 | 1.03          |  |  |  |
| MIP-00-36                                 |                        | 20.4  | 43.0  | 22.6            | 1.1   | 0.028 | 0.039 | 1.860         |  |  |  |
|   | includes               | 27.5  | 29.2  | 1.7             | 2.257 | 0.072 | 0.005 | 1.88          |  |  |  |
|   | includes               | 36.9  | 40.6  | 3               | 2.286 | 0 068 | 0.031 | 4.10          |  |  |  |
|   | and                    | 46.5  | 58.3  | 41.8            | 0.357 | 0.017 | 0.046 | 0.51          |  |  |  |
|   | and                    | 104.6 | 125.0 | 20.4            | 0.234 | 0.022 | 0.100 | 0.48          |  |  |  |

#### 3.12 Springer

Thirty-nine percussion holes for 1,670.3 meters were drilled in the Springer Pit area (Figure 3.11). The drilling was designed to test the new structural model for the Springer pit area and to increase the number of near surface economic blocks in the block model. The program was successful in defining new near surface copper/gold mineralization and in confirming the structural model. Results are summarized below.

Holes T1 to T4 and T22 to T28 were designed to test the exposed breccia in northwest corner of the Springer Zone. T26 to 28 were very encouraging, showing strong mineralization over their entire length. This new zone is assumed to extend north to the Chrysocolla Fault, east to the Springer Fault and remains open to the west.

Holes T5 to 11, P75 to 77 and P0081 to 85 were designed to test near-surface mineralization in the north central Springer area in an attempt to reduce the modeled stripping ratio. All of the holes were well mineralized (0.22 -.46 % Cu and 0 .59-.78 gpt Au) but the oxide ratio in most samples was high (50 – 70 % ).

Holes T14 to T16 were designed to test the southern extent of mineralization up to the South Boundary Fault. These holes were successful in proving up new near surface mineralization, but the mineralization mostly 'gold only" (0.105-.176 % Cu and 0.46-.053 gpt Au).

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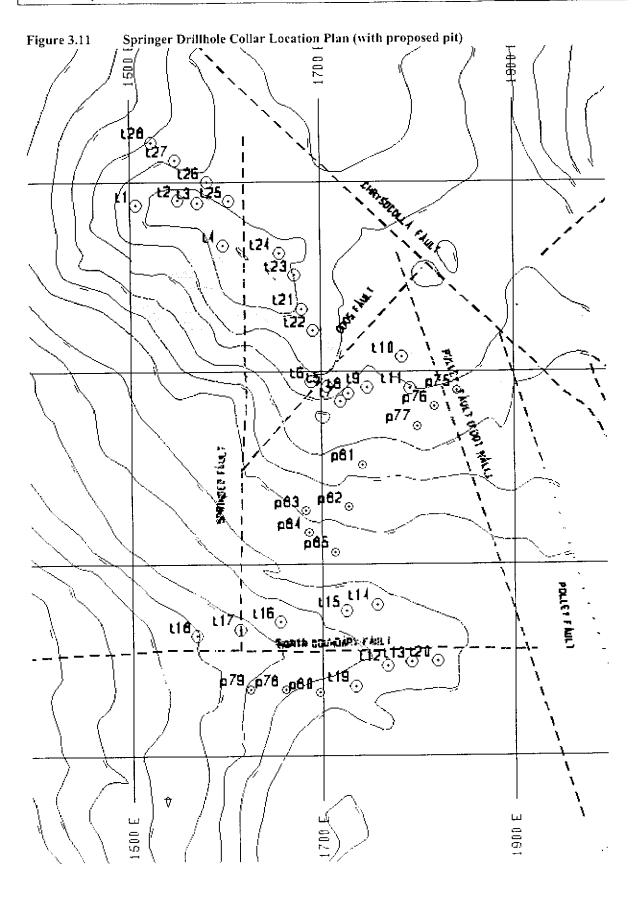
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Holes T17 and 18 were drilled on the west side of the Springer fault to prove that the fault is the major controlling structure and that mineralization extends up to, but not past, this fault. These holes were unmineralized, as expected.

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Assay results are summarized below.

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| Springer Significant Results |                        |                   |              |              |            |           |  |                  |  |  |  |
|------------------------------|------------------------|-------------------|--------------|--------------|------------|-----------|--|------------------|--|--|--|
| lole ID                      |                        | From              | To           | Length       | Cu-tot (%) | Cu-ns (%) |  | Au (gpt)<br>0.11 |  |  |  |
| 200-75                       |                        | 6.0               | 25.5         | 19.5         | 0.129      | 0.094     | 0.733<br>0.181                         | 0.11             |  |  |  |
|                              | and                    | 33.0              | 40.5         | 7.5          | 0.300      | 0.066     |  | 0.37             |  |  |  |
| P00-76                       |                        | 0.0               | 40.5         | 40.5         | 0.258      | 0.203     | 0.778                                  | 0.08             |  |  |  |
| P00-77                       |                        | 0.0               | 12.0         | 12.0         | 0.118      | 0.072     | 0.613                                  | 0.08             |  |  |  |
|                              | and                    | 25.5              | 33.0         | 7.5          | 0.137      | 0.095     | 0.693                                  | 0.08             |  |  |  |
| P00-78                       |                        | 6.0               | 33.0         | 27.0         | 0.100      | 0.064     | 0.646                                  | 0.18             |  |  |  |
| P00-79                       | no significant         | results           |              |              |            |           |  |                  |  |  |  |
| P00-80                       | no significant results |                   |              |              |            |           |  |                  |  |  |  |
| P00-81                       |                        | 0.0               | 40.5         | 40.5         | 0.340      | 0.264     | 0.758                                  | 0.44             |  |  |  |
| P00-82                       |                        | 0.0               | 40.5         | 40.5         | 0.357      | 0.262     | 0.731                                  | 0.43             |  |  |  |
| P00-83                       |                        | 0.0               | 40.5         | 40.5         | 0.199      | 0.149     | 0.729                                  | 0.12             |  |  |  |
| P00-84                       |                        | 0.0               | 40.5         | 40.5         | 0.359      | 0.263     | 0.699                                  | 0.16             |  |  |  |
| P00-85                       |                        | 0.0               | 40.5         | 40.5         | 0.222      | 0.130     | 0.587                                  | 0.23             |  |  |  |
| T00-1                        |                        | 0.0               | 45.7         | 45.7         | 0.263      | 0.166     | 0.605                                  | 0.14             |  |  |  |
| T00-2                        |                        | 0.0               | 45.7         | 45.7         | 0.280      | 0.137     | 0.489                                  | 0.20             |  |  |  |
| Т00-3                        |                        | 38.1              | 45.7         | 7.6          | 0.115      | 0.034     | 0.296                                  | 0.14             |  |  |  |
| Т00-4                        |                        | 0.0               | 45.7         | 45.7         | 0.124      | 0.074     | 0.583                                  | 0.07             |  |  |  |
| T00-5                        |                        | 0.0               | 45.7         | 45.7         | 0.240      | 0.155     | 0.652                                  | 0.09             |  |  |  |
| T00-6                        |                        | 0.0               | 45.7         | 45.7         | 0.248      | 0.187     | 0.746                                  | 0.10             |  |  |  |
| T00-7                        |                        | 0.0               | 45.7         | 45.7         | 0.224      | 0.154     | 0.675                                  | 0.14             |  |  |  |
| Т00-8                        |                        | 0.0               | 45.7         | 45.7         | 0.213      | 0.153     | 0.711                                  | 0.13             |  |  |  |
| T00-9                        |                        | 0.0               | 38.1         | 38.1         | 0.461      | 0.295     | 0.637                                  | 0.43             |  |  |  |
| T00-10                       |                        | 0.0               | 15.2         | 15.2         | 0.110      | 0.071     | 0.635                                  | 0.09             |  |  |  |
| T00-11                       |                        | 0.0               | 45.7         | 45.7         | 0,160      | 0.121     | 0.700                                  | 0.20             |  |  |  |
| T00-12                       |                        | 22.9              | 38.1         | 15.2         | 0.132      | 0.014     | 0.105                                  | 0.77             |  |  |  |
| T00-13                       |                        | 7.6               | 45.7         | 38.1         | 0.123      | 0.018     | 0.150                                  | 0.14             |  |  |  |
| T00-14                       |                        | 0.0               | 45.7         | 45.7         | 0.108      | 0.055     | 0.506                                  | 0.09             |  |  |  |
| T00-15                       |                        | 0.0               | 45.7         | 45.7         | 0.105      | 0.049     | 0.455                                  | 0.15             |  |  |  |
| T00-16                       |                        | 0.0               | 13.7         | 13.7         | 0.176      | 0.094     | 0.534                                  | 0.16             |  |  |  |
| T00-17                       | no significan          |                   |              |              |            |           |  |                  |  |  |  |
| T00-18                       | no significan          |                   |              |              | · · ·      |           |  |                  |  |  |  |
| T00-19                       | no significan          |                   |              |              |            |           |  |                  |  |  |  |
| T00-19                       | no significan          | 7.6               | 45.7         | 38.1         | 0.139      | 0.009     | 0.068                                  | 0.26             |  |  |  |
| T00-20                       |                        | 38.1              | 45.7         | 7.6          | 0.131      | 0.058     | 0.060                                  | 0.44             |  |  |  |
| T00-21                       |                        | 22.9              | 30.5         | 7.6          | 0.125      | 0.094     | 0.752                                  | 0.20             |  |  |  |
| T00-22                       | no significat          |                   |              |              |            | ·····     | ······································ |                  |  |  |  |
|                              | no significat          | 0.0               | 38.1         | 38.1         | 0.159      | 0.102     | 0.624                                  | 0.19             |  |  |  |
| T00-24                       |                        | 30.5              | 45.7         | 15.2         | 0.177      | 0.128     | 0.721                                  | 0.29             |  |  |  |
| T00-25                       |                        | 0.0               | 45.7         | 45.7         | 0.536      | 0.402     | 0.675                                  | 0.52             |  |  |  |
| T00-26                       |                        | 0.0               | 45.7<br>15.2 | 43.7<br>15 2 | 0.550      | 0.746     | 0.834                                  | 0.94             |  |  |  |
| 7:00.27                      | includes               |                   | 45.7         | 45.7         | 0.244      | 0.137     | 0.548                                  | 0.10             |  |  |  |
| T00-27<br>T00-28             |                        | <u>0.0</u><br>0.0 | 45.7         | 45.7         | 0.494      | 0.320     | 0,600                                  | 0.83             |  |  |  |

### Springer Significant Results

## CHAPTER 4: CONCLUSIONS AND RECOMMENDATIONS

The 2000 Mount Polley Mine exploration program included 10,652.5 meters of percussion drilling and 4,875.3 meters of core drilling. The total expenditure for assessment credits was \$493,621.

All drilling was conducted in an attempt to increase the mineable reserves beneath and adjacent to the currently defined deposits and to test previously under-explored areas outside of the pits areas that displayed good metalin-soil anomalies or encouraging results from prior drilling. The areas that received work in 2000 span the claim block. These areas, listed alphabetically are: 207. Bell, C2, Cariboo Pit (C Pit) – North, C Pit – East, C Pit – South, C Pit – east Ramp, MP-071, Road/Rad, Southeast and Springer.

This drilling was successful in defining previously discovered copper and gold mineralization in the C2 /207 and Southeast zones, and in discovering high-grade copper mineralization north of the proposed Springer Pit.

Drilling in the C2/207 zone added a geological resource of 1,035,166 tonnes at 0.333 % total copper, 0.443 grams per tonne gold at an oxide ratio of 16.3 %. However, due to current metal prices, the geometry of the mineralized bodies and the high oxide ratio near surface, this area is sub-economic.

In the Southeast area, drilling added a geological resource of 2,468,754 tonnes at 0.332 % total copper, 0.239 grams per tonne gold at an oxide ratio of 29.0 %. Due to poor metal prices, unfavourable preliminary metallurgy and its limited size, this deposit is sub-economic.

In the Springer zone, drilling north of the proposed pit discovered good near-surface copper gold mineralization and confirmed the accuracy of the structural model.

Drilling within the limits of the Cariboo pit provided extra definition for economic block modeling: however, this drilling did not add significantly to the proven reserves.

In the outlying MP-017 and Road Rad zones, drilling intersected high oxide copper mineralization that appears to be very spatially limited. These areas will not add to the resource.

Work in early 2001 will concentrate on defining the new mineralization north of the proposed Springer pit, and in gaining a better understanding of Springer pit metallurgy and structure. Additionally, more attention will be given to those previously under-explored areas outside the pit areas.

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## APPENDIX 1

## 2000 DRILL HOLE LISTING

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| [ ]            | - E    | ] [    | ) [    |                |           |           |                       |                   |                    |   |
|----------------|--------|--------|--------|----------------|-----------|-----------|-----------------------|-------------------|--------------------|---|
| Appendix 1     |        |        |        |                |           |           | 2000 Drillhole L      | isting            |                    |   |
| Hole ID        | N      | ľ      | Z      | Length Zone    | Hole Type | Hole Size | Drilled By            | Logged By         | Comments           |   |
| P00-88         | 2200.8 | 2200.8 | 1049.9 | 43.5 Southeast | Р         | 4.5"      | Paramount             | V. Park           | All wet            |   |
| P0D-89         | 2205.5 | 2205.5 | 1053.9 | 28.5 Southeast | P         | 4.5"      | Paramount             | V. Park           | All wet            |   |
| 200-90         | 2204.9 | 2204.9 | 1054-1 | 13.5 Southeast | Р         | 4.5"      | Paramount             | V. Park           | All wet            |   |
| [P00-9]        | 2204.5 | 2204.5 | 1055.7 | 43.5 Southeast | P         | 4.5"      | Paramount             | V. Park           | All wet            |   |
| pno.92         | 2208.5 | 2208.5 | 1058.1 | 43.5 Southeast | P         | 4.5"      | Paramount             | V. Park           | All wet            |   |
| P00-93         | 2194.8 | 2194.8 | 1058.6 | 43.5 Southeast | р         | 4.5"      | Paramount             | V. Park           | All wet            |   |
| P00-94         | 2182.9 | 2182.9 | 1058.3 | 43.5 Southeast | P         | 4.5"      | Paramount             | V. Park           | All wet            |   |
| P00-95         | 2169.4 | 2169.4 | 1058.1 | 43.5 Southeast | р         | 4.5"      | Paramount             | V. Park           | All wet            |   |
| P00-96         | 2226.8 | 2226.8 | 1059.0 | 28.5 Southeast | р         | 4.5"      | Paramount             | V. Park           | All wet            |   |
| P00-97         | 2208,8 | 2208.8 | 1016.8 | 43.5 Southeast | р         | 4.5"      | Paramount             | V. Park           | Wet from 6.0 m     | • |
| P00-98         | 2209.9 | 2209.9 | 1023.7 | 43.5 Southeast | Р         | 4.5"      | Paramount             | V. Park           | Wet from 6.0 m     |   |
| 1900-99        | 2210.0 | 2210.0 | 1018.4 | 43.5 Southeast | р         | 4.5"      | Paramount             | V. Park           | All wet            |   |
| 1200-100       | 2211.5 | 2211.5 | 1023.5 | 43.5 Southeast | P         | 4.5"      | Paramount             | V. Park           | Wet from 21.0 m    |   |
| 100-1          | 1506,0 | 3675.7 | 1197.4 | 45.7 Springer  | р         | 4.5"      | Tercon                | V. Park           |                    |   |
| 100-2          | 1550.4 | 3680.7 | 1202.6 | 45.7 Springer  | P         | 4.5"      | Tercon                | V. Park           |                    |   |
| 100.3          | 1571.3 | 3678-4 | 1203.7 | 45.7 Springer  | 1'        | 4.5"      | Tercon                | V. Park           | :                  |   |
| 100-4          | 1598.3 | 3633.7 | 1205.0 | 45.7 Springer  | P.        | 4.5"      | Tercon                | V. Park           |                    |   |
| 100.5          | 1706.2 | 3484.5 | 1185.2 | 45.7 Springer  | р         | 4.5"      | Tereon                | V. Park           |                    |   |
| 100-6          | 1689.5 | 3489.6 | 1185.5 | 45.7 Springer  | r         | 4.5"      | Tercon                | V. Park           |                    |   |
| 100-7          | 1719.4 | 3469,3 | 1178.0 | 45 7 Springer  | Р         | 4.5"      | Tercon                | V. Park           |                    |   |
| T00-8          | 1727.7 | 3478.1 | 1178.4 | 45.7 Springer  | P         | 4.5"      | Tercon                | V. Park           |                    |   |
| T00-9          | 1746.7 | 3484.0 | 1178.5 | 45.7 Springer  | P         | 4.5"      | Tercon                | V. Park           |                    |   |
| 100-10         | 1782.8 | 3516.0 | 1183.2 | 45.7 Springer  | '<br>[*   | 4.5"      | Tercon                | V. Park           |                    |   |
| 100.11         | 1791.4 | 3483.2 | 1179.0 | 45.7 Springer  | P         | 4.5"      | Tercon                | V. Park           |                    |   |
| 100-12         | 1791.4 | 3194.2 | 11/23/ |                | Р         | 4.5"      | Tercon                | V. Park           | All wet            |   |
| 1              |        |        |        | 45.7 Springer  |           | 4.5"      | Tereon                | V. Park           | Wet to 15.2 m      |   |
| T00-13         | 1791.5 | 3197.7 | 1125.1 | 45.7 Springer  | P         |           |                       | V.Park            | All wet            |   |
| 100-14         | 1756   | 3258.0 | 1126.2 | 45.7 Springer  | I,        | 4.5"      | Тегсов                | V.Park            | All wet            |   |
| T00-15         | 1724.3 | 3251.5 | 1122.7 | 45.7 Springer  | Р         | 4.5"      | Tereon                |                   | All wet; abandoned |   |
| 100-16         | 1650.2 | 3239.8 | 1113.7 | 13.7 Springer  | P         | 4.5"      | Tercon                | V.Park<br>V. Duch | All wet; abandoned |   |
| 100-17         | 1614.2 | 3232.3 | 1107.1 | 22.9 Springer  | P         | 4.5"      | Tercon                | V.Park<br>V.Park  | All wet            |   |
| 100-18         | 1568.3 | 3225.9 | 1098.7 | 45.7 Springer  | P         | 4.5"      | Tercon<br>Tercon      | V. Park           | Wet from 15.2 m    |   |
| 100-19         | 1733.7 | 3172.5 | 1124.0 | 45.7 Springer  | P         | 4.5"      |                       |                   | All wet            |   |
| 100-20         | 1818.2 | 3198.6 | 1126.9 | 45.7 Springer  | P<br>b    | 4.5"      | Tereon                | V. Park           |                    |   |
| 100-21         | 1680,0 | 3566.9 | 1197.0 | 45.7 Springer  | ľ         | 4.5"      | Tercon                | V. Park           |                    |   |
| T00-22         | 1691.4 | 3543.6 | 1198.8 | 45.7 Springer  | <br> ,    | 4.5"      | Tercon                | V. Park           |                    |   |
| 100-23         | 1672.5 | 3602.1 | 1197.8 |                | 4         | 4.5"      | Tercon                | V. Park           |                    |   |
| 100-24         | 1656.7 | 3624.9 | 1199.1 | 45.7 Springer  | P         | 4.5"      | Tercon                | V. Park           | W                  |   |
| 100-25         | 1604.8 | 3679.7 | 1196.2 | 45.7 Springer  | P         | 4.5"      | Tercon                | V. Park           | Wet to 30.5 m      |   |
| 1193.76        | 15813  | 3609.5 | 1191.1 | 45.7 Springer  | P         | 1.5"      | Tercon                | V. Park           |                    |   |
| tu. X *        | 1548.2 | 1.57.3 | 11864  | 45.7 Springer  | P         | 4.5"      | Tercou                | V. Park           | Wet from 22.9 m    |   |
| $4.00 \le 2.8$ | 1822.8 | 3741.3 | 11804  | 45.7 Springer  | 1'        | 4.5"      | Tercon                | V. Park           | Wet from 38.1 m    |   |
| 100.29         | 2190.6 | 2190,6 | 1068.2 | 91.4 Southeast | P         | 4.5"      | Tereon<br>Page B of 7 | V. Park           |                    |   |

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|------------|--------|--------|--------|----------------|-----------|-----------|------------------|-----------|----------|--|
| Appendix 1 |        |        |        |                |           |           | 2000 Drillhole L | isting    | -        |  |
| Hole ID    | X      | ¥      | Z      | Length Zone    | Hole Type | Hole Size | Drilled By       | Logged By | Comments |  |
| 100-30     | 2207.1 | 2207.1 | 1062.1 | 76.2 Southeast | Р         | 4.5"      | Tercon           | V. Park   |          |  |

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| ppendix 1       |        |        |        |                    |                |           | 2000 Drillhole Listi | ng        |  |
|-----------------|--------|--------|--------|--------------------|----------------|-----------|----------------------|-----------|--|
| ole ID          | X      | ı.     | Z      | Length Zone        | Hole Type      | Hole Size | Drifted By           | Logged By | Comments   |
| 00-46           | 2163.4 | 3548.9 | 1109.6 | 44.2 C Pit - North | р              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| 00-47           | 2123.7 | 3580,2 | 1110.2 | 44.2 C Pit - North | Р              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| 00-48           | 2087-7 | 3514.9 | 1110.0 | 44.2 C Pit - North | Р              | 4.5"      | MTP - IR Rig 4       | V. Park   | Wet 21.3 - 29.0 m; wet 36.6 - 44.2 m                             |
| 200-49          | 2075-2 | 3444.1 | 1110.0 | 36.6 C Pit - North | P              | 4.5"      | MTP - IR Rig 4       | V. Park   | Nominal coordinates used for collar survey; wet from 13.7 m      |
| 200-50          | 2069.9 | 3470,0 | 1110.1 | 44.2 C Pit - North | þ              | 4.5"      | MTP - IR Rig 4       | V. Park   | Nominal coordinates used for collar survey; all wet              |
| (00-51          | 2078-1 | 3421.7 | 1110.0 | 44.2 C Pit - North | Р              | 4.5"      | MTP - IR Rig 4       | V. Park   | Nominal coordinates used for collar survey; wet from 21.3 m      |
| (00-52          | 2196.5 | 3485.3 | 1109.6 | 44.2 C Pit - North | р              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| 00.53           | 2196.4 | 3460.2 | 1109,5 | 44.2 C Pit - North | P              | 4.5"      | MTP - IR Rig 4       | V. Park   |  |
| 200-54          | 2204.0 | 3438.4 | 1109.6 | 35.5 C Pit - North | P              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| 200-55          | 2217.5 | 3422.0 | 1109.5 | 44.2 C Pit - North | р              | 4.5"      | MTP - IR Rig 4       | V. Park   | Wet from 13.7 m  |
| 200-56          | 2218.8 | 3398.7 | 1109.0 | 44.2 C Pit - North | 6              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| (00-57          | 2182.0 | 3515.9 | 1109.6 | 44.2 C Pit - North | р              | 4.5"      | MTP - IR Rig 4       | V. Park   |  |
| 200-58          | 2168.1 | 4832.3 | 1461.0 | 44.2 MP-072        | р              | 4.5"      | MTP - IR Rig 4       | V. Park   | Wet from 13.7 m  |
| Run_59          | 2173.9 | 4817.9 | 1159.3 | 44.2 MP-072        | P              | 4.5"      | MTP - IR Rig 4       | V. Park   | Twin of MP-071; wet 0.0 - 6.1 m                                  |
| R(0)- <b>60</b> | 2190,7 | 4831.6 | 1154.3 | 44.2 MP-072        | P              | 4.5"      | MTP - 1R Rig 4       | V. Park   | All wet  |
| 800-61          | 2149.2 | 4806.4 | 1160.5 | 44.2 MP-072        | P              | 4.5"      | MTP - IR Rig 4       | V. Park   | Wet from 13.7 m  |
| <u>₹00-62</u>   | 2137.4 | 4796.2 | 1158.5 | 44.2 MP-072        | Р              | 4.5"      | MTP - IR Rig 4       | V. Park   | Wet from 21.3 m  |
| (00-63          | 2181.7 | 2181.7 | 1067.4 | 44.2 Southeast     | р              | 4.5"      | MTP - IR Rig 4       | V. Park   | Wet from 13.7 m  |
| 410-64          | 2180.3 | 2180.3 | 1069.9 | 44.2 Southeast     | р              | 4.5"      | MTP - IR Rig 4       | V. Park   | Twin of R-029; all wet   |
| R00-65          | 2194.0 | 2194.0 | 1069.3 | 44.2 Southeast     | р              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| R10-66          | 2206.6 | 2206.6 | 1067.8 | 44.2 Southeast     | Р              | 4.5"      | MTP - IR Rig 4       | V. Park   | AB wet   |
| R00-67          | 2230.2 | 2230,2 | 1067.4 | 44.2 Southeast     | Р              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| R00-68          | 2198.0 | 2198.0 | 1064.1 | 44.2 Southeast     | Р              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| R00-69          | 2171.3 | 2171.3 | 1063.8 | 44.2 Southeast     | Ľ              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| 200-70          | 2030.1 | 3882.2 | 1214.4 | 44.2 Bell          | p              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| 200-71          | 2064.8 | 3866,0 | 1214.5 | 44.2 Bell          | P              | 4.5"      | MTP - IR Rig 4       | V. Park   | Damp 0.0 - 6.1 m; wet 6.1 - 13.7 m, 21.3 - 29.0 m; 36.6 - 44.2 f |
| 200-72          | 2031.8 | 3803.1 | 1214.1 | 44.2 Bell          | Ł              | 4.5"      | MTP - IR Rig 4       | V. Park   |  |
| R(0)-73         | 2035.5 | 3828.7 | 1214.0 | 44.2 Bell          | р              | -1.5"     | MTP - IR Rig 4       | V. Park   |  |
| R(B) 74         | 2045.1 | 3846.9 | 1214.3 | 44.2 Bell          | Р              | 4.5"      | MTP - 1R Rig 4       | V. Park   | Wet to 6.1 m   |
| Reo.75          | 2075.6 | 3843.9 | 1214.8 | 44.2 Bell          | P              | 4.5"      | MTP - IR Rig 4       | V. Park   | Wet to 6.1 m   |
| 200.76          | 2024.3 | 3858.4 | 1214.2 | 44.2 Bell          | P              | 4.5"      | MTP - IR Rig 4       | V. Park   | Wet to 6.1 m   |
| R00.77          | 2186.9 | 2186.9 | 1072.0 | 44.2 Southeast     | P              | 45"       | MTP - IR Rig 4       | V. Park   | All wet  |
| R00-78          | 2202.8 | 2202.8 | 1071.4 | 44.2 Southeast     | 1 <sup>1</sup> | 4.5"      | MTP - IR Rig 4       | V. Park   |  |
| R00-79          | 2225.7 | 2225.7 | 1069.4 | 44.2 Southeast     | P              | 4.5"      | MTP - IR Rig 4       | V. Park   | Wet from 13.7 m  |
| R490-80         | 2177.8 |        | 1076.5 |                    | þ              | 4.5"      | MTP - IR Rig 4       | V. Park   | Wet to 13.7 m; wet from 29.0 m                                   |
| R00-81          | 2214.3 | 2214.3 | 1077.2 |                    | P              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| R00-82          | 2250.3 |        | 1076.0 |                    | P              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| R00-83          | 2286.7 |        | 1075.5 |                    | р              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| R00/84          | 22713  |        | 1072.3 |                    | P              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| R00.85          | 2250.5 |        | 1070,4 |                    | P              | 4.5"      | MTP - IR Rig 4       | V. Park   | All wet  |
| R00-86          | 2348.8 |        | 1072.6 |                    | P              | 4.5%      | MTP - IR Rig 4       | V. Park   | All wet  |
| IR00-87         | 2333.4 |        |        |                    | P              | 4.5"      | MTP - IR Rig 4       | V. Park   | Wet from 6.1 m   |

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| appendix 1  | • •           |                  | 1 (    |                     |           | <u> </u>      | 2000 Drillhole Listing | <u>i</u>  |                 |
|-------------|---------------|------------------|--------|---------------------|-----------|---------------|------------------------|-----------|-----------------|
|             |               |                  |        |                     |           | 11.1.5%-      |                        | Langad Ry | Comments        |
| de ID       | X             | Y                | Z      | Length Zone         | Hole Type | Hole Size     | Drilled By             | Logged By |                 |
| 100-88      | <u>2313,0</u> | 2313.0           | 1073.5 | 44.2 Southeast      | P         | 4.5"          | MTP - IR Rig 4         | V. Park   | Wet from 13.7 m |
| 100-89      | 2410.3        | 2410.3           | 1076.4 | 44.2 Southeast      | l,        | 4.5"          | MTP - IR Rig 4         | V. Park   | Wet from 13.7 m |
| 00-90       | 2459.1        | 2459.1           | 1076-9 | 44.2 Southeast      | P         | 4.5"          | MTP - IR Rig 4         | V. Park   | All wet         |
| (00-9)      | 2437.8        | 2437.8           | 1076.6 | 44.2 Southeast      | P         | 4.5"          | MTP - IR Rig 4         | V. Park   | All wet         |
| 200-92      | 2249.3        | 2249.3           | 1066.7 | 44.2 Southeast      | р         | 4.5"          | MTP - IR Rig 4         | V. Park   |                 |
| 200-93      | 2083.3        | 2083.3           | 1079.2 | 44.2 Southeast      | Р         | 4.5"          | MTP - IR Rig 4         | V. Park   |                 |
| 60-94       | 2063.8        | 2063.8           | 1080.8 | 44.2 Southeast      | Р         | 4.5"          | MTP - IR Rig 4         | V. Park   |                 |
| 00-95       | 2068.2        | 2068.2           | 1084.2 | 44.2 Southeast      | P         | 4.5"          | MTP - IR Rig 4         | V. Park   |                 |
| (00-96      | 2043-0        | 2043.0           | 1083.3 | 44.2 Southeast      | P         | 4.5"          | MTP - 1R Rig 4         | V. Park   |                 |
| 200.97      | 2163.4        | 2163.4           | 1070.9 | 44.2 Southeast      | Ľ         | 4.5"          | MTP - IR Rig 4         | V. Park   |                 |
| 00.98       | 2146.2        | 2146/2           | 1073.2 | 36.6 Southeast      | Р         | 4.5"          | MTP - IR Rig 4         | V. Park   |                 |
| (00.99      | 2306.0        | 2306.0           | 1068.9 | 44.2 Southeast      | р         | 4.5"          | MTP - IR Rig 4         | V. Park   |                 |
| 00-100      | 2275.3        | 2275.3           | 1067.5 | 25.9 Southeast      | р         | $4.5^{\circ}$ | MTP - IR Rig 4         | V. Park   |                 |
| 1]'-00-C[]] | 2195.8        | 2739.4           | 1128.3 | 224.3 C2            | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| (P-00-C12   | 2248.1        | 2696.0           | 1130.3 | 227.4 C2            | ÐD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| H-00-C13    | 2120.7        | 3058.8           | 1110.5 | 163.8 C Pit - South | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| 11 DO C14   | 23,33,0       | 2675.4           | 1122.0 | 254.8 C2            | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| P-00-C15    | 2214.3        | 2655.7           | 1115.5 | 198.4 C2            | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| IP-00-C16   | 2306.0        | 2873.2           | 1137.6 | 198.4 207           | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| 18-00-017   | 2240.8        | 2597.6           | 1109.8 | 162.2 C2            | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| IP-00-C18   | 2285.0        | 3175.3           | 1119.7 | 251.5 C Pit - South | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| 1P-00-C19   | 2250.3        | 2766.4           | 1135.9 | 212.1 C2            | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| 1P-00-C20   | 2137.1        | 3047.4           | 1109,4 | 256.3 C Pit - South | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| 18-00-C21   | 2198.1        | 3065.2           | 1119.3 | 203.0 C Pit - South | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
|             |               |                  | 1126.3 | 251.8 C2            | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| HP-00-C22   | 2066.8        | 2799.9           | 1126.9 | 228.6 C2            | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| IP-00-C23   | 2105.4        | 2750.7           |        |                     | DD<br>DD  | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| .1P-00-C24  | 2276.5        | .768.9<br>2010 P | 1135.4 | 267.0 C2            | 00        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| 11400-C25   | 2131.8        | 2819.8           | 1135.1 | 102.7 C2            |           | NQ2<br>NQ2    | F. Boisvenu Drilling   | C. Wild   |                 |
| IP-00-C26   | 2130.4        | 2852.5           | 1134.7 | 107.3 C2            | DD<br>DD  | NQ2<br>NQ2    | F. Boisvenu Drilling   | C. Wild   |                 |
| AP-00-C27   | 2153.1        | 2787.4           | 1133.8 |                     | DD<br>DD  | NQ2<br>NQ2    | F. Bojsvena Drilling   | C. Wild   |                 |
| 1P-00-C28   | 2176.1        | 2746.3           | 1127.9 |                     | DD<br>DD  |               | F. Boisvena Drilling   |           |                 |
| 1P-00-C29   | 2221.6        | 2764.7           |        |                     | DD        | NQ2<br>NO2    | F. Boisvenu Drifling   | C. Wild   |                 |
| 1P-00-C30   | 2355.2        | 2865.3           | 1138.4 | 251.8 207           | DD        | NQ2           |                        |           |                 |
| 4P-00-C31   | <u>2369,4</u> | 2766.4           | 1129.3 |                     | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| 4P-00-C32   | 2302.4        | 2823.3           | 1137.6 |                     | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   |                 |
| vIP-00-C33  | 1 8022        | 2840.4           | 1138.3 |                     | DD        | NQ2           | F. Boisvenu Drilling   | C. Wild   | CE)             |
| 41P-08)-34  | 2182.3        | 2182.3           | 1067.4 |                     | DD        | NQ2           | F Boisvenu Drilling    | V. Park   | SE)             |
| MP-00-35    | 2183.7        | 2183-7           | 1074.5 |                     | DD        | NQ2           | F. Boisvenn Drilling   | V. Park   | SF2             |
| AB-00-36    | 1233.2        | 2233.2           | 1069.2 |                     | DD        | NO2           | F. Boisvenu Drilling   | V. Park   | SE3             |
| Plus        | 21573         | 2157.3           | 1100,4 |                     | P         | 4.5"          | Paramount              | V. Park   | All wet         |
| PO-12       | 2141.8        | 2141.8           | 1096.0 |                     | 11        | 4.5"          | Paramount              | V. Park   | All wet         |
| Ethics -    | 2117.4        | 2117.4           | 1092.2 | 43.5 Southeast      | יי        | 4.5"          | Ратанкови              | V. Park   | All wet         |

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|              |               | [      |         |        | <u>רו רו</u>   |           |           | 2000 Drillhole Li | Isting    | ─ <u>┘</u>        |
|--------------|---------------|--------|---------|--------|----------------|-----------|-----------|-------------------|-----------|-------------------|
| $\Delta_{1}$ | ppendix 1     |        |         |        |                |           |           | ation frequencies | aring     |                   |
| 11           | ule ID        | X      | ¥       | Z      | Length Zone    | Hole Type | Hole Size | Drilled By        | Logged By | Comments          |
| 14           | )(1-4         | 2096.4 | 2096.4  | 1088.1 | 28.5 Southeast | Р         | 4.5"      | Paramount         | V. Park   | All wet           |
| 1            | 10.5          | 2073.6 | 2073.6  | 1085.9 | 43.5 Southeast | P         | 4.5"      | Paramount         | V. Park   | Wet from 6.0 m?   |
|              | iU-fi         | 2104.6 | 2104.6  | 1077.7 | 43.5 Southeast | Р         | 4.5"      | Paramount         | V. Park   | Wet from 6.0 m    |
| · · ·        | 10.7          | 2110.3 | 2110.3  | 1080.5 | 43.5 Southeast | р         | 4.5"      | Paramount         | V. Park   | Wet from 6.0 m    |
|              | 00-8          | 2102.7 | 2102.7  | 1068.7 | 43.5 Southeast | Р         | 4.5"      | Paramount         | V. Park   | All wet           |
| 1            |               | 2127.9 | 2127.9  | 1066.4 | 21.0 Southeast | P         | 4.5"      | Paramount         | V. Park   | All wet           |
| 1.           | 00-10         | 2188.9 | 2188.9  | 1063.9 | 43.5 Southeast | Р         | 4.5"      | Paramount         | V. Park   | Wet from 6.0 m    |
|              | 00-11         | 2203.0 | 2203.0  | 1065.1 | 43.5 Southeast | p         | 4.5"      | Paramount         | V. Park   | Damp from 36.6 m? |
|              | 00-12         | 2221.2 | 2221.2  | 1067.1 | 43.5 Southeast | Р         | 4.5"      | Paramount         | V. Park   | Wet from 6.0 m    |
|              | 00-13         | 1950.4 | 1950.4  | 1057.5 | 43.5 Southeast | р         | 4.5"      | Paramount         | V. Park   | Wet from 21.0 m   |
| i            | 00-14         | 1958.7 | 1958.7  | 1057.5 | 43.5 Southeast | Р         | 4.5"      | Paraniount        | V. Park   | Wet from 6.0 m    |
|              | (10-15        | 1982.8 | 1982.8  | 1053.4 | 43.5 Southeast | Р         | 4.5"      | Paramount         | V. Park   | Wet from 21.0 m   |
| 1            | 90-16         | 1999.4 | 1999.4  | 1041.6 | 43.5 Southeast | p         | 4.5"      | Paramonut         | V. Park   | Wet from 13.5 m   |
|              | 00-17         | 2018.4 | 2018.4  | 1039.9 | 28.5 Southeast | р         | 4.5"      | Paramount         | V. Park   | All wet           |
|              | 00-18         | 2039-1 | 2039.1  | 1032.5 | 43.5 Southeast | Р         | 4.5"      | Paramount         | V. Park   | Wet from 6.0 m    |
| 1            | 00-19         | 2045.7 | 2045.7  | 1028.4 | 28.5 Southeast | ľ         | 4.5"      | Paramount         | V. Park   | Wet??             |
|              | 00.20         | 2050.7 | 2050.7  | 1027.5 | 43.5 Southeast | р         | 4.5"      | Paramount         | V. Park   | Wet from 0.0 m    |
|              | 00-21         | 2055.5 | 2055.5  | 1022.0 | 43.5 Southeast | P         | 4.5"      | Paramount         | V. Park   | Wet from 21.0 m   |
|              | 00- <u>22</u> | 2067.6 | 2067.6  | 1028.0 | 43.5 Southeast | P         | 4.5"      | Paramount         | V. Park   | Wet from 13.5 m   |
|              | 00-23         | 2110.0 | 2110.0  | 1025.0 | 43.5 Southeast | р         | 4.5"      | Paramount         | V. Park   | Wet from 21.0 m   |
|              | 00-24         | 2028.7 | 2028.7  | 1042.7 | 43.5 Southeast | p         | 4.5"      | Paramount         | V. Park   | Wet from 13.5 m   |
| 1            | 40-25         | 2039.2 | 2039.2  | 1048.7 | 43.5 Southeast | р         | 4.5"      | Paramount         | V. Park   | Wet from 13.5 m   |
|              | 100-26        | 2065.7 | 2065.7  | 1050.0 | 43.5 Southeast | P         | 4.5"      | Paramount         | V. Park   |                   |
|              | 900-27        | 2092.3 | 2092.3  | 1052.3 | 43.5 Southeast | 1º        | 4.5"      | Paramount         | V. Park   |                   |
|              | 90- <u>28</u> | 2103.9 | 2103.9  | 1051.3 | 43.5 Southeast | F         | 4.5"      | Paramount         | V. Park   |                   |
| 1            | 200-29        | 2234.8 | 2234.8  | 1074.7 | 43.5 Southeast | P         | 4.5"      | Paramount         | V. Park   |                   |
|              | 200-30        | 2212.2 | 2212.2  | 1075.0 | 43.5 Southeast | P         | 4.5"      | Paramount         | V. Park   | Wet from 13.5 m   |
| 1            | 200-31        | 2232.4 | 22,32,4 | 1063.3 | 43.5 Southeast | P         | 4.5"      | Paramount         | V. Park   | Wet from 6.0 m    |
|              | 200-32        | 2209.3 | 2209.3  | 1065.1 | 43.5 Southeast | ·<br>P    | 4.5"      | Paramount         | V. Park   | Wet from 36.0 m   |
|              | 900-33        | 2107.6 | 2107.6  | 1068.4 | 36.0 Southeast | P         | 4.5"      | Paramount         | V. Park   | All wet           |
|              | 200-34        | 2084.8 | 2084.8  | 1069.2 | 43.5 Southeast | r         | 4.5"      | Paramount         | V. Park   | Wet from 6.0 m    |
|              | 2010-35       | 2119.2 | 2119.2  | 1075.0 |                | ľ         | 4.5"      | Paramount         | V. Park   | Wet from 36.0 m   |
| 1            | 200-36        | 2127.8 | 2127.8  | 1076.0 |                | P.        | 4.5"      | Paramount         | V. Park   | Wet??             |
|              | 100-37        | 2115.9 |         | 1061.9 |                | Р         | 4.5"      | Paramount         | V. Park   | All wet           |
| •            | 200-38        | 2106.1 | 2106.1  | 1062.1 | 43.5 Southeast | Р         | 4.5"      | Paramount         | V. Park   | All wet           |
|              | 2(1()=33)     | 2235.6 |         |        |                | ĥ         | 4.5"      | Paramount         | V. Park   | All wet           |
| 1            | 100-40        | 2202.0 |         | 1063.4 |                | P         | 4.5"      | Paramount         | V. Park   | All wet           |
|              | 200-41        | 2185.6 |         |        |                | Р         | 4.5"      | Paramount         | V. Park   | All wet           |
| 1            | Pino 42       | 2171.6 |         |        |                | P         | 4.5"      | Paramount         | V. Park   | All wet           |
| {            | P10-13        | 2161.0 |         |        |                | ľ         | 4.5"      | Paramount         | V. Park   | All wet           |
| 1            | 1986-14       | 2144.1 |         | 1060,7 |                | p         | 4.5"      | Paramount         | V. Park   | Wet from 6.0 m    |
|              | 1400-45       |        | 2238.5  |        |                | ŀ         | 4.5"      | Paramount         | V. Park   | All wet           |

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|     | toly 1D                    | X                | Y                | Z                | Length Zone        | Hole Type | Hole Size    | Drilled By | Logged By | Comments                        |
|-----|----------------------------|------------------|------------------|------------------|--------------------|-----------|--------------|------------|-----------|---------------------------------|
|     |                            | 2254.4           | 2254.4           | 1062.9           | 43.5 Southeast     | p.        | 4.5"         | Paramount  | V. Park   | All wet                         |
|     | 900- <b>46</b><br>900-17   | 2276.8           | 2276.8           | 1063.2           | 43.5 Southeast     | p         | 4.5"         | Раганкчин  | V. Park   | All wet                         |
| Í   | 200-47                     | 2295,3           | 2295.3           | 1063.1           | 43.5 Southeast     | '<br> 7   | 4.5"         | Paramount  | V. Park   | All wet                         |
|     | 200-48                     | 2317.1           | 2317.1           | 1063.7           | 43.5 Southeast     | P         | 4.5"         | Paramount  | V. Park   | Wet from 6.0 m                  |
|     | 200-49<br>100-50           | 2317.1           | 2358.8           | 1064.3           | 43.5 Southeast     | P         | 4.5"         | Paramoust  | V. Park   | Wet from 6.0 m                  |
|     | 200-50                     | 2403.4           | 2403.4           | 1064.0           | 43.5 Southeast     | ,<br>p    | 4.5"         | Paramount  | V. Park   | Wet from 6.0 m                  |
|     | 200-51<br>100-52           | 2405.4           | 4533.9           | 1004.0           | 43.5 Road/Rad      | r<br>P    | 4.5"         | Paramount  | V. Park   | Wet from 13.5 m                 |
|     | 400-52<br>Min 52           |                  | 4656.7           | 1017.7           | 43.5 Road/Rad      | p         | 4.5"         | Paramount  | V. Park   | Wet from 21.0 m                 |
| ļ   | 200-53                     | 2871.4           | 4671.3           | 1019.7           | 43.5 Road/Rad      | P         | 4.5"         | Paramount  | V. Park   |                                 |
| Í   | 200-54<br>NWV 55           | 2864.0           | 4688.5           | 1021.3           | 43.5 Road/Rad      | P         | 4.5"         | Paramount  | V. Park   |                                 |
|     | POO-55                     | 2854.3           | 4000.0           | 1021.5           | 43.5 Road/Rad      | P         | 4.5"         | Paramount  | V. Park   | Wet from 36.0 m                 |
|     | 2010- <u>56</u><br>1890-57 | 2847.0<br>2836.1 | 4719.7           | 1022.5           | 43.5 Road/Rad      | P         | 4.5"         | Paramount  | V. Park   | All wet                         |
|     | 1400-57<br>100-38          | 2836.4<br>2824.6 | 4736.8           | 1024.4           | 43.5 Road/Rad      | p         | 4.5"         | Paramount  | V. Park   | Wet from 13.5 m                 |
| 1   | 190-58<br>190-59           | 2824.0           | 3428.4           | 102.0.9          | 43.5 C Pit - North | ľ         | 4.5"         | Paransount | V. Park   | All wet                         |
|     |                            | 2144.0           | 3432.7           | 1089.7           | 43.5 C Pit - North | p         | 4.5"         | Paramount  | V. Park   | All wet                         |
|     | P00-60<br>D00- 61          | 2107.6           | 3457.2           | 1089.7           | 43.5 C Pit - North | р         | 4.5"         | Paramoust  | V. Park   | All wet                         |
|     | P00-61                     | 2119.3           | 3520.0           | 1090.1           | 43.5 C Pit - North | p         | 4.5"         | Paramount  | V. Park   | All wet                         |
|     | P00-62<br>P00-63           | 2147.5           | 3520.0           | 1050.1           | 43.5 C Pit - North | r<br>P    | 4.5"         | Paramount  | V. Park   | All wet                         |
|     |                            |                  | 3531.3           | 1089.8           | 43.5 C Pit - North | P         | 4.5"         | Paramount  | V. Park   | All wet                         |
|     | 1900-64<br>Duni 45         | 2130,3           | 3503.1           | 1089.8           | 36.0 C Pit - North | P         | 4.5"         | Paramount  | V. Park   | All wet                         |
| - i | P00-65<br>D00-66           | 2103.9           | 3489.6           | 1089.7           | 43.5 C Pit - North | r<br>T    | 4.5"         | Paramount  | V. Park   | All wet                         |
| I   | P00-66                     | 2111.0<br>2094.0 | 3470.1           | 1089.8           | 43.5 C Pit - North | P         | 4.5"         | Paramount  | V. Park   | All wet                         |
| 1   | 1400-67<br>Dou: 7.9        |                  |                  |                  | 43.5 C Pit - North | т<br>Р    | 4.5"         | Paramount  | V. Park   | All wet                         |
| 1   | P00-68<br>100-70           | 2075.1           | 3468.4           | 1089.7           | 43.5 C Pit - North | т<br>Р    | 4.5"         | Paramount  | V. Park   | All wet                         |
|     | [100-69<br>100-70          | 2129,9           | 3476.6<br>3499,8 | 1089.7<br>1089.7 | 43.5 C Pit - North | P<br>P    | 4.5"         | Paramount  | V. Park   | All wet                         |
|     | Pho 70                     | 2143.2           |                  | 1089.8           | 43.5 C Pit - North | p         | 4.5"         | Paramount  | V. Park   | All wet                         |
| - 1 | PO0-71                     | 2156.5           | 3483.2           |                  | 43.5 C Pit - North | r<br>P    | 4.5"         | Paramount  | V. Park   | All wet                         |
| - 1 | P00-72                     | 2159.6           | 3460.5<br>3565.7 | 1089.8<br>1090.2 | 43.5 C Pit - North | P         | 4.5"         | Paramount  | V. Park   | Wet from 21.0 m                 |
| 1   | P00-73<br>P00-74           | 2147.5<br>2104.0 | 2104.0           | 1074.0           | 40.5 Southeast     | Р         | 4.5"         | Paramount  | V. Park   | All wet                         |
|     | P00-74<br>P00-75           | 2104.0<br>[830.9 | 3480.6           | 1174.0           | 40.5 Springer      | P         | 4.5"         | Paramount  | V.Park    |                                 |
| I   | Pous 75<br>Pous 76         | 1839.9           | 3464.0           | 1181.9           | 40.5 Springer      | P         | 4.5"         | Paramount  | V.Park    |                                 |
| - 1 | P00-77                     | 1798.3           | 3444.0           | 1174.6           | 40.5 Springer      | P         | 4.5"         | Paramount  | V.Park    |                                 |
|     | P00-78                     | 1726.3           | 3168.5           | 1117.3           | 40.5 Springer      | ր         | 4.5"         | Paramount  | V. Park   |                                 |
|     | 200-79                     | 1624.5           | 3169.3           | 1112.7           | 40.5 Springer      | '<br>P    | 4.5"         | Paramount  | V. Park   | Wet from 18.0 m                 |
|     | P00-80                     | 1624.5           |                  | 1122.1           | 40.5 Springer      | [*        | 4.5"         | Paramount  | V. Park   | Wet from 12.0 m                 |
|     | P00-81                     | 1741.4           | 3403.6           |                  | 40.5 Springer      | p         | 4.5"         | Paramount  | V. Park   |                                 |
|     | P00-82                     | 1741.4           | 3359.8           | 1150.5           | 40.5 Springer      | ľ         | 4.5          | Paramount  | V. Park   | All wet, except 12.0 - 18.0m    |
|     | P00-83                     | 1683.2           | 3355.6           |                  | 40.5 Springer      | Р         | 4.5"         | Paramount  | V. Park   |                                 |
|     | 1900.84                    | 1686.1           | 3332.7           | 1146.3           | 40.5 Springer      | P         | 4.5"         | Paramount  | V. Park   | Wet from 33.0 m                 |
|     | P00 85                     | 1.13.7           | 312.7            | 1139.4           | 40.5 Springer      | P         | 4 <u>5</u> " | Paramount  | V. Park   | Damp to 12.0 m; very wet after  |
|     | 1200-86                    | 2099.1           | 2099.1           | 1027.4           | 43.5 Southeast     | μ         | 4.5"         | Paramount  | V. Park   | Sample discarded before logging |
|     | P00-87                     | 2126.3           | -                |                  |                    | p         | 4.5"         | Paramount  | V. Park   | Sample disearded before logging |

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| Appendix 1         |                  |                  |                  |                                |           |              | 2000 Drillhole Li | sung               | 1  |  |
|--------------------|------------------|------------------|------------------|--------------------------------|-----------|--------------|-------------------|--------------------|--|--|
| Tole ID            | X                | Y                | Z                | Length Zone                    | Hole Type | Hole Size    | Drilled By        | Logged By          | Comments   |  |
| 9(10)-88           | 2200.8           | 2200,8           | 1049.9           | 43.5 Southeast                 | P         | 4.5"         | Paramount         | V. Park            | All wet  |  |
| 00-89              | 2205.5           | 2205.5           | 1053.9           | 28.5 Southeast                 | P         | 4.5"         | Paramount         | V. Park            | All wet  |  |
| 40-90              | 2204.9           | 2204.9           | 1054.1           | 13.5 Southeast                 | Р         | 4.5"         | Paramount         | V. Park            | All wet  |  |
| [PGO-9]            | 2204.5           | 2204.5           | 1055.7           | 43.5 Southeast                 | р         | 4.5"         | Paramount         | V. Park            | All wet  |  |
| Pao 92             | 2208.5           | 2208.5           | 1058.1           | 43.5 Southeast                 | ч         | 4.5"         | Paramount         | V. Park            | All wet  |  |
| <br>1200-93        | 2194.8           | 2194.8           | 1058.6           | 43.5 Southeast                 | р         | 4.5"         | Paramount         | V. Park            | All wet  |  |
| P()()-94           | 2182.9           | 2182.9           | 1058.3           | 43.5 Southeast                 | р         | 4.5"         | Paramount         | V. Park            | All wet  |  |
| P00-95             | 2169.4           | 2169.4           | 1058.1           | 43.5 Southeast                 | P         | 4.5"         | Paramount         | V. Park            | All wet  |  |
| PD0-96             | 2226.8           | 2226.8           | 1059.0           | 28.5 Southeast                 | Ч         | 4.5"         | Paramount         | V. Park            | All wet  |  |
| P00-97             | 2208,8           | 2208.8           | 1016.8           | 43.5 Southeast                 | P         | 4.5"         | Paramount         | V. Park            | Wet from 6.0 m   |  |
| P00-98             | <u>22</u> 09,9   | 2209,9           | 1023.7           | 43.5 Southeast                 | P         | 4.5"         | Paramount         | V. Park            | Wet from 6.0 m   |  |
| P00.99             | 2210.0           | 2210.0           | 1018.4           | 43.5 Southeast                 | j'        | 4.5"         | Paramount         | V. Park            | All wet  |  |
| P00-100            | 2211.5           | 2211.5           | 1023.5           | 43.5 Southeast                 | Р         | 4.5"         | Paramount         | V. Park            | Wet from 21.0 m  |  |
| 100-1              | 1506.0           | 3675.7           | 1197.4           | 45.7 Springer                  | Р         | 4.5"         | Tercon            | V. Park            |  |  |
| 100.2              | 1550.4           | 3680.7           | 1202.6           | 45.7 Springer                  | P         | 4.5"         | Tercon            | V. Park            |  |  |
| 100-3              | 1571.3           | 3678.4           | 1203.7           | 45.7 Springer                  | P         | 4.5"         | Tercon            | V. Park            |  |  |
| Ψθ0-4              | 1598.3           | 3633.7           | 1205.0           | 45.7 Springer                  | Р         | 4.5"         | Tercon            | V. Park            |  |  |
| 100-5              | 1706.2           | 3484.5           | 1185.2           | 45.7 Springer                  | р         | 4.5"         | Tercon            | V. Park            |  |  |
| [1011-6            | 1689.5           | 3489.6           | 1185.5           | 45.7 Springer                  | р         | 4.5"         | Tercon            | V. Park            |  |  |
| 100-7              | 1719.4           | 3469.3           | 1178.0           | 45.7 Springer                  | р         | 4.5"         | Tercon            | V. Park            |  |  |
| T00-8              | 1727.7           | 3478.1           | 1178.4           | 45.7 Springer                  | P         | 4.5"         | Tercon            | V. Park            |  |  |
| fno-9              | 1746.7           | 3484.0           | 1178.5           | 45.7 Springer                  | P         | 4.5"         | Tercon            | V. Park            |  |  |
| T00-10             | 1782.8           | 3516.0           | 1183.2           | 45.7 Springer                  | P         | 4.5"         | Tereon            | V. Park            |  |  |
| 100-11             | 1791.4           | 3483.2           | 1179.0           | 45.7 Springer                  | P         | 4.5"         | Tereon            | V. Park            |  |  |
| 100-12             | 1766.8           | 3194.2           | 1122.4           | 45.7 Springer                  | ·<br>p    | 4.5"         | Tercon            | V. Park            | All wet  |  |
| 100-13             | 1791.5           | 3197.7           | 1125.1           | 45.7 Springer                  | P         | 4.5"         | Tercon            | V. Park            | Wet to 15.2 m  |  |
| T00-14             |                  |                  | 1126.2           | 45.7 Springer                  | P         | 4.5"         | Tercon            | V.Park             | All wet  |  |
|                    | 1756.1           | 3258.0           |                  |                                | p         | 4.5"         | Tercon            | V.Park             | All wet  |  |
| 100-15<br>Ton-16   | 1724.3           | 3251.5           | 1122.7           | 45.7 Springer                  |           | 4.5"         | Тегсов            | V.Park             | All wet; abandoned   |  |
| 1'00-16<br>1'00-17 | 1656.2           | 3 <u>23</u> 9.8  | 1113.7<br>1107.1 | 13.7 Springer                  | '<br> •   | 4.5"         | Tercon            | V.Park             | All wet; abandoned   |  |
| 100-17             | 1614.2           | 3232.3<br>3225.9 | )098.7           | 22.9 Springer<br>45.7 Springer | 1<br>{?   | 4.5"         | Tercon            | V.Park             | All wet  |  |
| 100-19             | 1568.3<br>1733.7 | 3172.5           | 1124.0           | 45.7 Springer                  | P         | 4.5"         | Tercon            | V. Park            | Wet from 15.2 m  |  |
| T00-20             | 1818.2           | 3198.6           | 1126.9           | • •                            | P         | 4.5"         | Tercon            | V. Park            | All wet  |  |
| T00-24             | 1616.2           | 3566.9           | 1120.9           |                                | r<br>P    | 4.5"         | Tercon            | V. Park            |  |  |
| 100-22             |                  |                  |                  |                                | ч<br>Ч    | 4.5"         | Tercon            | V. Park            |  |  |
| T00-23             | 1691.4           | 3543.6           | 1107.8           |                                | P         | 4.5"         | Tercon            | V. Park            |  |  |
| 100-25             | 1672.5           | 3602.1           | 1197.8           |                                | r<br>p    | 4.5"         | Tercon            | V. Park            |  |  |
| 100524             | 1656-7           | 3624.9           | 1199.1           | 45.7 Springer                  |           | 4.5"         | Tereon            | V. Park            | Wet to 30.5 m  |  |
|                    | 1604.8           | 3679.7           | 1196.2           |                                | P<br>V    | 4.5"<br>4.5" |                   | V. Park            | and the second |  |
| 100-36             | 15813            | 3600.5           | 1191.1           | 45.7 Springer                  | r:<br>Ir  |              | Tercon            | V. Park            | Wet from 22.9 m  |  |
|                    | 1548.1           | 3122.2           | [186]            |                                | P.        | 4.5"<br>1.5" | fercou<br>Tomon   |                    | Wet from 38.1 m  |  |
| 100-28             | 1522.8           | 3741.3           | 1180.1           | 45.7 Springer                  | P.        | 4.5"         | Tereon            | V. Park<br>V. Park | Wer (10)[11:249.1 [1]  |  |

| - 17 T   | [      |        | ר ר    |                |           | $\square$ |                |                    | <b>-1</b> |
|----------|--------|--------|--------|----------------|-----------|-----------|----------------|--------------------|-----------|
| Appendix |        |        |        |                |           |           | 2000 Drillhole | Listing            |           |
|          |        |        |        |                |           |           |                |                    |           |
| Hole ID  | X      | Y      | Z      | Length Zone .  | Hole Type | Hole Size | Drilled By     | Logged By Comments |           |
| (100-30  | 2207.1 | 2207.1 | 1062.1 | 76.2 Southeast | Р         | 4.5*      | Tercon         | V. Park            |           |

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## APPS NDIX 2

## APPLICABLE EXPENDITUR: S FOR ASSESSMENT CREDITS

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| Mt. Polley Mine   |                      |        |           |        |             |              |  |  |  |
|---|----------------------|--------|-----------|--------|-------------|--------------|--|--|--|
| 2000 Program Expenditures Work Approval N0 1101163-9045 |                      |        |           |        |             |              |  |  |  |
| Drilling and Geology                                    |                      |        |           |        |             |              |  |  |  |
| Diamond Drilling (4275.3 m)                             |                      | 4275.3 | meters @  | 53     | per meter   | \$226,590.90 |  |  |  |
| Percussion Drilling (10652.5 m)                         | Paramount            | 4104   | meters @  | 16.5   | per meter   | \$67,716.00  |  |  |  |
|   | Tercon               | 1392   | meters @  |        | per meter   | \$24,847.20  |  |  |  |
|   | IR Drill             | 5199.6 | meters @  | 16.5   | per meter   | \$85,793.40  |  |  |  |
| Buildozer/Excavator                                     |                      | 60     | hours @   | 120    | per hour    | \$7,200.00   |  |  |  |
| Assaying  |                      |        |           |        |             | [            |  |  |  |
|   | In House             | 1883.7 | samples @ | 6      | per sample  | \$11,302.20  |  |  |  |
|   | Bondar               | 580    | samples @ | 31.74  | per sample  | \$18,411.43  |  |  |  |
| Personnel   |                      |        |           |        |             | 1            |  |  |  |
| Geologist - V. Park                                     |                      | 55     | days @    | 300    | per day     | \$16,500.00  |  |  |  |
| Geologist - G. Gillstrom                                |                      | 23     | days @    | 300    | per day     | \$6,900.00   |  |  |  |
| Sampler - G. McMahn                                     |                      | 60     | days @    | 150    | per day     | \$9,000.00   |  |  |  |
| Sampler - R. Ney  |                      | 60     | days @    | 150    | per day     | \$9,000.00   |  |  |  |
| Reporting, Maps, etc.                                   | V. Park              | 7      | days @    | 300    | per day     | \$2,100.00   |  |  |  |
| Room and Board  |                      |        |           |        |             |              |  |  |  |
| Morehead Lake Resort                                    |                      | 60     | days @    | 75     | per day     | \$4,500.00   |  |  |  |
| Fraser Inn  |                      | 2      | days @    | 80     | per day     | \$160.00     |  |  |  |
| Transportation  |                      |        |           |        |             |              |  |  |  |
| Airfare - Vancouver to Willi                            | ams Lake, return x 2 |        |           |        |             | \$900.00     |  |  |  |
| Miscellaneous   |                      |        |           |        |             |              |  |  |  |
| Supplies, saw blades, etc.                              |                      |        |           |        |             | \$2,500.00   |  |  |  |
| Travel expenses   |                      |        |           | GST n  | ot included | \$200.00     |  |  |  |
|   |                      |        |           | Totals |             | \$493,621.13 |  |  |  |

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Appendix 2 Applicable Expenditures for Assessment Credits

## APPENDIX 3a

## ANALYTICAL PROCEDURES

Γ \_\_\_\_ **b**..... -1 -----. . -

والمعترف فالمنافر والمتعجمة الناف الحصور ويعترون التنافي المنافر ويتستعدو عهدت الالتان والمنافر

# DETERMINATION OF TOTAL COPPER AND IRON IN MINE SAMPLES AND<br/>MILL HEADS AND TAILSPAGE 1 / 2ISSUE DATE: 29 NOVEMBER 2000MPPM 1200

**SCOPE:** This procedure shall apply to mine samples and mill heads and tails samples as submitted to the assay lab at the Mount Polley Minesite.

#### **INTRODUCTION:**

This procedure involves the chemical analysis of Total Copper (Cu) by Direct Aspiration (AAS) following an aqua regia digest.

## SAFETY:

Wear safety glasses and rubber gloves at all times when handling acids and wipe up spills immediately.

#### PROCEDURE:

- 1. Weigh  $0.50 \pm 0.01$  g of sample into a 50 ml volumetric test tube. Include one standard with each lot of samples.
- 2. Add enough water to wet sample.
- 3. Add 5 mls of nitric acid ( $HNO_3$ ).
- 4. Place on the digestor block and allow the samples to come to a boil for 15 minutes.
- 5. Once digestion is complete remove from digestor block and allow to cool.
- 6. Add 4 mls of hydrochloric acid (HCl) and digest for a further 15 minutes.
- 7. Remove from digestor block and allow to cool. Bulk to volume with distilled water, stopper, shake well and allow to settle.
- 8. It is necessary to dilute each sample for the determination of iron. Using the automatic diluter dilute each sample 1:10 into test tubes using the dilution matrix.
- 9. Read the samples on the AAS under the following conditions:

|                       | Cu    | Fe    |
|-----------------------|-------|-------|
| Lamp Current (mA)     | 15    | 20    |
| Slit Width (nm)       | 0.2   | 0.2   |
| Wavelength (nm)       | 324.7 | 248.3 |
| Background Correction | Off   | Off   |

# DETERMINATION OF OXIDE COPPER IN MINE SAMPLES AND MILLHEADS AND TAILSPAGE 1 / 2ISSUE DATE: 29 NOVEMBER 2000MPPM 1300

**SCOPE:** This procedure shall apply to mine samples and mill heads and tails samples as submitted to the assay lab at the Mount Polley Minesite.

#### **INTRODUCTION:**

This procedure involves the chemical analysis of Copper (Cu) by Direct Aspiration (AAS) following a cold sulphuric acid digest.

## SAFETY:

Wear safety glasses and rubber gloves at all times when handling acids and wipe up spills immediately.

## **PROCEDURE:**

- 1. Weigh  $0.50 \pm 0.01$  g of sample into a 50 ml volumetric test tube. Include one standard with each lot of samples.
- 2. From the bottle top dispenser add 20.0 mls of 2.5 % sulphuric acid (H<sub>2</sub>SO<sub>4</sub>).
- 3. Place sample rack in shaker and shake for 90 minutes. Stop shaker and allow to settle.
- 4. Read the samples on the AAS under the following conditions:
  - CuLamp Current (mA)15Slit Width (nm)0.2Wavelength (nm)324.7Background CorrectionOff
- 5. Record all results on the appropriate worksheet.

DETERMINATION OF TOTAL COPPER AND IRON IN MINE SAMPLES AND<br/>MILL HEADS AND TAILS.PAGE 2 / 2ISSUE DATE: 29 NOVEMBER 2000MPPM 1200

10. Record all results on the appropriate worksheet.

### **CALIBRATION STANDARD PREPARATION:**

Standards are made from commercially supplied 1000 ppm stock solutions.

5 ppm: 5 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl  $\rightarrow$  1000 mls 10 ppm: 10 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl  $\rightarrow$  1000 mls 15 ppm: 15 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl  $\rightarrow$  1000 mls 20 ppm: 20 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl  $\rightarrow$  1000 mls 30 ppm: 30 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl  $\rightarrow$  1000 mls 50 ppm: 50 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl  $\rightarrow$  1000 mls

#### **CALCULATIONS:**

| ppm | 1N | sampi | e | <u></u> |
|-----|----|-------|---|---------|

AA reading x sample vol. (mls) x dilution factor sample wt. (g)

% in sample =

<u>ppm</u> 10.000

### **REPORTING OF RESULTS:**

Cu:

Report all results to the third decimal i.e. 0.315% = 0.315%

Fe:

Report all results to the second decimal i.e. 3.155% = 3.16%

# DETERMINATION OF OXIDE COPPER IN MINE SAMPLES AND MILLHEADS AND TAILSPAGE 1 / 2ISSUE DATE: 29 NOVEMBER 2000MPPM 1300

### CALIBRATION STANDARD PREPARATION:

Standards are made from commercially supplied 1000 ppm stock solutions.

5 ppm: 5 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl  $\rightarrow$  1000 mls 10 ppm: 10 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl  $\rightarrow$  1000 mls 15 ppm: 15 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl  $\rightarrow$  1000 mls 20 ppm: 20 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl  $\rightarrow$  1000 mls 30 ppm: 30 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl  $\rightarrow$  1000 mls 50 ppm: 50 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl  $\rightarrow$  1000 mls

### CALCULATIONS:

ppm in sample =

AA reading x sample vol. (mls) x dilution factor sample wt. (g)

% in sample =

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<u>ppm</u> 10,000

#### **REPORTING OF RESULTS:**

Report all results to the third decimal i.e. 0.315% = 0.315%

## DETERMINATION OF GOLD BY FIRE ASSAY PAO ISSUE DATE: 29 NOVEMBER 2000 MP

PAGE 1 / 6 MPPM 1900

**SCOPE:** This procedure shall be used for normal mine and exploration samples and concentrates as received at the Mount Polley mine site only.

## **INTRODUCTION:**

This procedure involves a fire assay fusion with lead as the collecting medium for the precious metals. The lead is separated from the slag and is then removed by cupellation leaving a silver prill containing the precious metals. The prill is then parted using conc. HNO<sub>3</sub> and conc. HCl and the resulting solution is determined for Au by AAS.

## SAFETY:

Due to the fire assay lab containing both high temperature furnaces and lead, special rules and safety precautions must be followed to avoid accidents and elevated blood lead levels or lead poisoning.

- 1. Safety shoes or boots must be worn at all times when in fire assay.
- 2. Smoking, eating and drinking are prohibited in and around the fire assay section at all times.
- 3. Gloves are to worn when mixing samples with flux or in any other processes which involve the handling of flux or litharge.
- 4. Safety glasses or masks must be worn when deslagging buttons and are recommended when using or looking into furnaces.
- 5. Fluxing must be performed in the flux hood at all times.
- 6. The extraction wet scrubber must be on at all times when cupellation, fusion or fluxing in the fluxing hood is being performed. This extraction should be started at the beginning of the shift and must be checked after power fluctuations and re-set if necessary. No cupellation or fluxing can be performed under any circumstances if the scrubber unit is down for maintenance or is not working.
- 7. Only staff fully trained in furnace maintenance may be involved in repairing the furnace or replacing the electrical elements.
- 8. Gloves must be worn at all times when placing pots or cupels into furnaces or when removing them.
- 9. Hands should be thoroughly cleaned, particularly under the finger nails, before eating, drinking or smoking after working in fire assay.
- 10. Any spillage of flux or chemicals must be cleaned up immediately.

## DETERMINATION OF GOLD BY FIRE ASSAY ISSUE DATE: 29 NOVEMBER 2000

#### **REAGENTS / CONSUMABLES**

- 1. Flux (prepared commercially, see recipe below)
  - Mine Flux: dense soda ash ( 350kg), lead oxide (600 kg), borax glass (80 kg), flour (35 kg), silver nitrate (110 g/t), kerosene

Con Flux: dense soda ash ( 350kg), lead oxide (600 kg), borax glass (80 kg), kerosene

- 2. 30 gram Crucibles.
- 3. Cupels (6A).
- 4. Potassium Nitrate (KNO<sub>3</sub>), technical.
- 5. Borax, anhydrous sodium tetra-borate, technical.
- 6. Soda Ash, anhydrous sodium carbonate, technical.
- 7. Litharge, lead monoxide, technical.
- 8. Silica (SiO<sub>2</sub>).
- 9. Flour, plain.
- 10. Silver nitrate (AgNO<sub>3</sub>), AR grade.
- 11. Kerosene, commercial grade.

#### PROCEDURE

- 1. Flux up a rack of pots with  $90 \pm 10$  g of the appropriate flux (measured with a calibrated scoop).
- 2. Record the weight to be weighed for the samples on the worksheet if they are all the same. If not write the weight in the appropriate column.
- 3. Weigh the samples usually at  $20.00 \pm 0.02$  g for Mines and Heads and Tails or at  $10.00 \pm 0.02$  g for Concentrates and transfer the sample in on top of the flux checking to ensure it is put in the correct pot. Check every sample number when weighing to ensure the sample order is correct and samples are put in the correct pots. Add a silver inquart to concentrate samples.
- 4. Weigh a standard into pot 23 and enter the name of the standard and the weight used (standards of higher gold concentrations may require differing weights).
- 5. Double check that all weights, etc. have been entered and paperwork completed and that the correct flux additions have all been made.
- 6. Mix the flux and sample thoroughly by stirring with a spatula. The mixture should contain no lumps of flux or sample and should be a uniform colour.
- 7. Load the samples into a pre-heated pot furnace and fuse at 1900 °F until fusion is complete. This usually takes 45 to 60 minutes. The melt should be still, i.e. the circulation of lead is no longer apparent.
- 8. When all of the samples have fused, pour the melt into cast iron moulds, ensuring no lead is lost.
- 9. Leave to cool. When cooled sufficiently, break the slag away from the lead, and hammer into a button (removing all the slag) taking care not to loose any lead.
- **Note:** Re-assay samples with buttons less than 20g, adjusting the flux as required. Buttons over 60g can be split.

## DETERMINATION OF GOLD BY FIRE ASSAYPAGE 3 / 6ISSUE DATE: 29 NOVEMBER 2000MPPM 1900

10. Transfer the lead buttons to the button dropper and then to the heated cupels in the cupellation furnace set at 1800 °F and close the door.

11. After a few minutes, open the door to see if all the buttons have "opened" and are "driving". If so,

- close the door and open the door vent and the main vent. If not, close the door and wait until they have started "driving". If the buttons become "frozen" (caused by solidification of lead over the surface) the temperature should be raised quickly by closing all vents. The temperature should be carefully controlled, as too high a temperature will cause losses, especially for silver, and results obtained by raising the temperature after "freezing" are usually low.
- 12. When cupellation is complete, remove the cupels from the furnace and allow to cool with fume extraction. Note any large or unusual prills on the worksheet and repeat the samples (with suitable reagents).
- 13. Transfer the gold/silver prill to a test tube with the first tube in the fire labelled as A, B, C, MR, etc..
- 14. Add 1.0 ml of 1:4 HNO<sub>3</sub>, cover with plastic wrap and place on the digestor block for 15 minutes or until the solution has gone colourless and the prills have fully parted. Remove from the block and cool to room temperature.
- 15. Carefully add 2.0 mls of con. HCl and place back on digestor block for 20 minutes.
- 16. Add 2.0 mls of distilled water and vortex mix.
- 17. Let the solution settle for 15 minutes and read on the AAS under the following conditions:

|                       | Au    |
|-----------------------|-------|
| Lamp Current (mA)     | 10    |
| Slit Width (nm)       | 0.7   |
| Wavelength (nm)       | 242.8 |
| Background Correction | On    |

### CALIBRATION STANDARD PREPARATION:

Standards are made from commercially supplied 1000 ppm stock solutions.

| 0.50 ppm: | 5 mls of 100 ppm Au + 100 mls HNO <sub>3</sub> + 100 mls HCl $\rightarrow$ 1000 mls   |
|-----------|---|
| 1.00 ppm: | 10 mls of 100 ppm Au + 100 mls HNO <sub>3</sub> + 100 mls HCl $\rightarrow$ 1000 mls  |
| 2.00 ppm: | 20 mls of 100 ppm Au + 100 mls HNO <sub>3</sub> + 100 mls HCl $\rightarrow$ 1000 mls  |
| 10 ppn::  | 10 mls of 1000 ppm Au + 100 mls HNO <sub>3</sub> + 100 mls HCl $\rightarrow$ 1000 mls |
| 20 ppm:   | 20 mls of 1000 ppm Au + 100 mls HNO <sub>3</sub> + 100 mls HCl $\rightarrow$ 1000 mls |

## DETERMINATION OF GOLD BY FIRE ASSAYPAGE 4 / 6ISSUE DATE: 29 NOVEMBER 2000MPPM 1900

There are some common problems encountered in fire assay fusion and cupellation. A list of possible causes and remedies are as follows:

| Α. | FUSION |
|----|--------|
|    |        |

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| DEFECT  | POSSIBLE CAUSE   | REMEDY  |  |  |  |
|---|--|---|--|--|--|
| excessive viscosity, thick slag                       | low finish temp., excess of acid fluxes  | increase temp., less silica and borax.<br>more litharge and soda  |  |  |  |
| undecomposed or insoluble slag<br>components          | fusion time too short, insufficient acid<br>fluxes, insufficient flux or specified<br>material                       | fuse longer, add extra flux or silica or<br>borax   |  |  |  |
| unfused material in slag or on sides of the crucibles | poor mixing  | ensure samples are properly mixed   |  |  |  |
| Shotting  | excessive slag viscosity   | add 25g litharge  |  |  |  |
| lead splattered in mould                              | unfused particles of Fe <sub>3</sub> O <sub>4</sub> between slag<br>and lead, very high sulphides                    | reduce sample size, fuse longer, add nitre  |  |  |  |
| small button  | slag too acidic. excessive nitre.<br>insufficient flour  | decrease silica and increase litharge.<br>decrease nitre, add flour                                     |  |  |  |
| large button  | excessive litharge in flux, sample<br>contains sulphides or organics (soils)   | decrease litharge, add nitre  |  |  |  |
| hard or brittle button                                | litharge in button, very high Au (>1%),<br>base metals in button, button contains<br>sulphides (dark grey in colour) | use higher fusion temp. decrease<br>sample weight/increase litharge.<br>increase litharge and soda ash. |  |  |  |
| speiss or matte                                       | insufficient litharge or soda ash  | decrease sample weight and increase litharge  |  |  |  |
| crucibles leak after being eaten through              | crucibles too worn, excess of basic  | discard worn crucibles, decrease  |  |  |  |
| (assaying carbon)                                     | fluxes, lack of acidic fluxes  | litharge and soda, increase silica and<br>borax, increase sample size or add<br>silica                  |  |  |  |
| excessive frothing or overflowing during fusion       | excessive flux or sample for the<br>crucible, excessive nitre  | decrease flux and sample charges.<br>decrease nitre   |  |  |  |

## DETERMINATION OF GOLD BY FIRE ASSAY ISSUE DATE: 29 NOVEMBER 2000

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## B. <u>CUPELLATION</u>

| DEFECT                 | POSSIBLE CAUSE   | REMEDY  |
|------------------------|--|---|
| frozen buttons         | temp too low, cupels started too cold,<br>excessive airflow over cupels,<br>door/vents opened too early, very high<br>base metals              | increase temp, preheat cupels to ><br>930°C, check for leaks around the<br>door, vent settings allow too great an<br>airflow, ensure samples are "driving"<br>prior to opening vents/door, reassay<br>using smaller sample charge |
| driving takes > 5 mins | cupellation temp, too low, cupels too<br>cold, cupels allowed to cool too much<br>during loading, excess base metals or<br>sulphides in button | increase cupellation temp., preheat<br>cupels to > 930°C, load cupels<br>carefully but quickly, reassay using<br>nitre or lower sample weight   |
| sprouting of prills    | large prills (high silver content<br>samples)  | cool slowly and starve O <sub>2</sub> by covering<br>immediately after removing from<br>cupellation.  |

### GENERAL NOTES

- 1. Thorough mixing of the sample is critical otherwise low recoveries in gold assays will result.
- 2. Visual observation should be maintained on unusual or non-routine samples to ensure that fusion proceeds satisfactorily.
- 3. If the prill has a whitish-gold appearance (this colour is readily observed) the ratio of gold to silver may be too high to ensure complete parting. If a prill has a greyish white pitted appearance it usually contains a high proportion of bismuth or lead.
- 4. The volumes of acids and water used in the prill digestion, and also the temperature, must be carefully controlled. Evaporation loss must be kept to a minimum, however, a sufficiently high temperature is required for complete dissolution of silver and gold and precipitation and coagulation of silver chloride.

#### RANGE

When taking a 20g sample charge the lower detection limit is 0.01 ppm Au and the higher detection limit is 60 ppm Au. The assay of higher level Au samples requires additional silver for parting, or a smaller sample weight to be taken to ensure a Ag to Au ratio of at least 3.0 to 1.

## DETERMINATION OF GOLD BY FIRE ASSAYPAGE 6 / 6ISSUE DATE: 29 NOVEMBER 2000MPPM 1900

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## CALCULATIONS:

ppm in sample =

AA reading x sample vol. (mls) sample wt. (g)

## **REPORTING OF RESULTS:**

Au low range (0 to 10 ppm) :

Report all results to the second decimal i.e. 0.315 g/t = 0.32 g/t

Au high range ( > 10 ppm) :

Report all results to the first decimal i.e. 12.35 g/t = 12.4 g/t

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## APPENDIX 3b

## 2000 CORE CHECK ASSAY LISTING

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| Appendix 3b | b 2000 Core Check Assay Listing - Blind Duplicates |        |        |         |             |              |        |        |         |                          |                   |        |
|-------------|--|--------|--------|---------|-------------|--------------|--------|--------|---------|--------------------------|-------------------|--------|
|             |  |        |        |         | Original Sa | nole         |        | Ì      |         |                          |                   |        |
| Hole ID     | From (m)   | To (m) | Tag 1D | TCu (%) | CUNS (%)    | An (gpt)     | Fe (%) | Tag ID | TCu (%) | Duplicate Sa<br>CUNS (%) | Au (gpt)          | Fe (%) |
| MP-00-C11   | 28.4   | 29.9   | 49939  | 0,099   | 0.045       | 0.07         | 5.14   | 49940  | 0.097   | 0.042                    | 0.06              | 4.59   |
| MP-00-C11   | 68.0   | 70.0   | 49959  | 0.136   | 0.095       | 0.13         | .4.77  | 49960  | 0.128   | 0.089                    | 0.09              | 5.08   |
| MP-00-C11   | 104.3  | 106.3  | 49979  | 0.130   | 0.045       | 0.15         | 4.92   | 49980  | 0.109   | 0.034                    | 0.14              | 4.77   |
| MP-00-C11   | 143.1  | 145.1  | 40900  | 0.270   | 0.058       | 0.32         | 4.60   | 50000  | 0.268   | 0.064                    | <sup>i</sup> 0.33 | :4.99  |
| MP-00-C11   | 181.0  | 182.9  | 50019  | 0.188   | 0.029       | 0.26         | 3.03   | 50020  | 0.196   | 0.034                    | 0.27              | 3.07   |
| MP-00-C11   | 218.6  | 220.6  | 50039  | 0.014   | 0.003       | 0.01         | 5.31   | 50040  | 0.017   | 0.004                    | 0.01              | 5.48   |
| MP-00-C12   | 61.6   | 63.1   | 50059  | 0.277   | 0.173       | 0.35         | 6.79   | 50060  | 0.325   | 0.210                    | 0.41              | 6.70   |
| MP-00-C12   | .91.5  | 93.5   | 50079  | 0.132   | 0.063       | 0.15         | 2.98   | 50080  | 0.149   | 0.080                    | 0.17              | 3.01   |
| MP-00-C12   | 127.9  | 129.4  | 50099  | 0.339   | 0.014       | 0.31         | 5.10   | 50100  | 0.413   | 0.012                    | 0.44              | 5.24   |
| MP-00-C12   | 161.7  | 163.7  | 50119  | 0.196   | 0.104       | .0.25        | 3.25   | 50120  | 0.178   | 0.084                    | 0.18              | 3.30   |
| MP-00-C12   | 200.9  | 202.9  | 50139  | 0.077   | 0.014       | 0.05         | 4.69   | 50140  | 0.098   | 0.016                    | 0.06              | 4.60   |
| MP-00-C13   | 12.4   | 13.9   | 50159  | 0.419   | .0.100      | 0.50         | 5.51   | 50160  | 0.387   | 0.073                    | 0.53              | 6.19   |
| MP-00-C13   | 41.1   | 42.8   | 50179  | 0, 91   | 0.009       | 0.28         | 1.72   | 50180  | 0.186   | 0.008                    | 0.30              | 1.69   |
| MP-00-C13   | 69.7   | 71.2   | 50199  | 0.147   | 0.007       | 0.26         | 2.30   | 50200  | 0.151   | 0.007                    | 0.22              | 2.40   |
| MP-00-C13   | 99.2   | 101.2  | 50219  | 0.070   | 0.006       | 0.13         | 4.88   | 50220  | 0.073   | 0.005                    | 0.14              | 4.75   |
| MP-00-C13   | 136.7  | 137.9  | 50239  | 0.108   | 0.005       | 0.15         | 4.37   | 50240  | 0.109   | 0.006                    | 0.15              | 4.51   |
| MP-00-C14   | 20.2   | 22.3   | 50259  | 0.151   | 0.079       | 0.17         | 2.00   | 50260  | 0.113   | 0.056                    | 0.13              | 1.89   |
| MP-00-C14   | 49.7   | 51.7   | 50279  | 0.169   | 0.007       | 0,16         | 6.17   | 50280  | 0.164   | 0.005                    | 0.15              | 6.10   |
| MP-00-C14   | 86,9   | 88.9   | 50299  | 0.083   | 0.042       | 0.13         | 3.60   | 50300  | 0.078   | 0.036                    | 0.11              | 3.82   |
| MP-00-C14   | 125.6  | 127.6  | 50319  | 0.179   | 0.041       | 0.13         | 3.92   | 50320  | 0.173   | 0.045                    | 0.21              | 3.94   |
| MP-00-C14   | 161.4  | 162.9  | 50339  | 0.146   | 0.044       | 0.23         | 4.50   | 50340  | 0.129   | 0.034                    | 0.39              | 4.40   |
| MP-00-C14   | 188.9  | 190.2  | 50359  | 0.086   | 0,001       | 0.07         | 4.13   | 50360  | 0.064   | 0.002                    | 0.05              | 4.05   |
| MP-00-C14   | 227.4  | 229.0  | 50379  | 0.428   | 0.019       | 0,10         | 3.00   | 50380  | 0.486   | 0.021                    | 0.26              | 2.77   |
| MP-00-C15   | 14.5   | 16.5   | 50399  | 0.189   | 0.156       | 0.44         | 3.86   | 50400  | 0.196   | 0.158                    | 0.40              | 3.63   |
| MP-00-C15   | 51.8   | 53.3   | 50419  | 0.064   | 0.040       | 0.16         | 5.17   | 50420  | 0.097   | 0.055                    | 0.17              | 5.28   |
| MP-00-C15   | 82.3   | 83.9   | 50439  | 0.242   | 0.043       | 0.20         | 3.75   | 50440  | 0.246   | 0.049                    | 0.30              | 3.74   |
| MP-00-C15   | 115.5  | 117.5  | 50459  | 0.106   | 0,049       | 0.16         | -5.04  | 50460  | 0.116   | 0.061                    | 0.21              | 5.17   |
| MP-00-C15   | 153.5  | 155.5  | 50479  | 0.183   | 0.024       | 0.19         | -4.79  | 50480  | 0.190   | 0.028                    | 0.25              | 4.15   |
| MP-00-C15   | 191.5  | 193.5  | 50499  | 0.114   | 0,060       | 0.12         | 4.62   | 50500  | 0.125   | 0.065                    | 0.14              | 4.44   |
| MP-00-C16   | 36.5   | 37.7   | 50519  | 0.040   | 0.026       | 0.05         | 12.55  | 50520  | 0.040   | 0.027                    | 0.05              | 12.53  |
| MP-00-C16   | 62.0   | 63.5   | 50539  | 0.260   | 0.006       | 0.50         | 5.13   | 50540  | 0.290   | 0.006                    | 0.43              | 5.04   |
| MP-00-C16   | 92.7   | 94.7   | 50559  | 0.40    | 0.006       | 0.20         | 4.88   | 50560  | 0.160   | 0.010                    | 0.23              | 4.78   |
| MP-00-C16   | 130.0  | 132.0  | 50579  | 0.220   | 0.005       | 0.50         | 5.30   | 50580  | 0.200   | 0.004                    | 0.50              | 5.00   |
| MP-00-C16   | 172.5  | 175.0  | 50599  | 0.030   | 0.003       | 0.03         | 3.17   | 50600  | 0.020   | 0.001                    | 0.02              | 3.31   |
| MP-00-C17   | 14.3   | 16.0   | 50619  | 0.060   | 0.020       | 0.02         | 2.86   | 50620  | 0.060   | 0.021                    | 0.02              | 2.56   |
| MP-00-C17   | 51.1   | 53.0   | 50639  | 0.014   | 0.006       | 0.02         | 3.11   | 50640  | 0.010   | 0.003                    | 0,03              | 2.95   |
| MP-00-C17   | 89.0   | 91.0   | 50659  | 0.140   | 0.013       | 0.06         | 5.08   | 50660  | 0.135   | 0.013                    | 0.06              | 4,99   |
| MP-00-C17   | 126.0  | 128.3  | 50679  | 0.010   | 0,001       | 0.01         | 2.76   | 50680  | 0,010   | 0.001                    | 0.02              | 2.79   |
| MP-00-C18   | 5.0  | 7.0    | 50699  | 0.146   | 0.094       | 0.12         | 4.10   | 50700  | 0.145   | 0.093                    | 0.14              | 4.33   |
| MP-00-C18   | 41.0   | 42.5   | 50719  | 0.119   | 0.018       | 0.21         | 3.61   | 50720  | 0.125   | 0.016                    | 0.17              | 3.62   |
| MP-00-C18   | 71.8   | 73.6   | 50739  | 0.014   | 0.001       | Path#11 of 3 |        | -50740 | 0.017   | 0.001                    | 0.01              | 5.47   |

| Appendix 3b |                           | 2000 Core Check Assay Listing - Blind Duplicates |        |         |          |               |        |        |         |                    |          |        |  |
|-------------|---------------------------|--|--------|---------|----------|---------------|--------|--------|---------|--------------------|----------|--------|--|
|             | Original Sample Duplicate |  |        |         |          |               |        |        |         | Duplicate Sa       | mple     |        |  |
| Hole ID     | From (m)                  | To (m)   | Tag ID | ТСи (%) | CUNS (%) | Au (gpt)      | Fe (%) | Tag ID | ТСн (%) | CUNS (%)           | Au (gpt) | Fe (%) |  |
| MP-00-C18   | 108.6                     | 110.6  | 50759  | 0.138   | 0.011    | 0.17          | 4.38   | 50760  | 0.126   | 0.010              | 0.27     | 4.21   |  |
| MP-00-C18   | 146.6                     | 148.1  | 50779  | 0.060   | 0.001    | 0,09          | 3.62   | 50780  | 0.090   | 0.001              | 0.17     | 3.76   |  |
| MP-00-C18   | 180.8                     | 182.6  | 50799  | 0.030   | 0.004    | 0.04          | 4.42   | 50800  | 0.030   | 0.002              | 0.03     | 4.29   |  |
| MP-00-C18   | 213.8                     | 215.7  | 50819  | 0.020   | 0.001    | 0.02          | 4.51   | 50820  | 0.030   | 0.001              | 0.02     | 4.25   |  |
| MP-00-C19   | 5.0                       | 6.5  | 50839  | 0.580   | 0,512    | 0.44          | 9.65   | 50840  | 0.530   | 0.477              | 0.20     | 8.99   |  |
| MP-00-C19   | 36.5                      | 38.5   | 50859  | 0.040   | 0.032    | 0.03          | 3.38   | 50860  | 0.050   | 0.041              | 0.04     | 3.25   |  |
| MP-00-C19   | 72.4                      | 74.4   | 50879  | 0.100   | 0.035    | 0.08          | 5.63   | 50880  | 0.110   | 0.049              | 0.08     | 5.33   |  |
| MP-00-C19   | 108.2                     | 110.2  | 50899  | 0.090   | 0.016    | 0.07          | 6.23   | 50900  | 0.100   | 0.026              | 0.11     | 6.04   |  |
| MP-00-C19   | 145,4                     | 147.2  | 50919  | 0.160   | 0.124    | 0.26          | 3.60   | 50920  | 0.150   | 0.105              | 0.23     | 3.73   |  |
| MP-00-C19   | 180.4                     | 181.7  | 50939  | 0.130   | 0.020    | 0.01          | 4.90   | 50940  | 0.140   | 0.020              | 0.01     | 5.02   |  |
| MP-00-C20   | 6.6                       | 8.8  | 50959  | 0.057   | 0.001    | 0.08          | 3.35   | 50960  | 0.047   | 0.002              | 0.07     | 3.21   |  |
| MP-00-C20   | 39.1                      | 40.9   | 50979  | 0.037   | 0,003    | 0.04          | 3.42   | 50980  | 0.039   | 0.006              | 0.03     | 3.55   |  |
| MP-00-C20   | 73.8                      | 75.9   | 50999  | 0,036   | 0.002    | 0.03          | 2.56   | 51000  | 0.035   | 0.002              | 0.03     | 2.54   |  |
| MP-00-C20   | 109.2                     | 111.2  | 51019  | 0.503   | 0.052    | 1.01          | 14.90  | 51020  | 0.517   | 0.082              | 0.97     | 13.70  |  |
| MP-00-C20   | 143.2                     | 145.2  | 51039  | 0.269   | 0.032    | 0.37          | 7.59   | 51040  | 0.217   | 0.024              | 0.44     | 7.73   |  |
| MP-00-C20   | 182.5                     | 185.0  | 51059  | 0.013   | 0.003    | 0.01          | 4.63   | 51060  | 0.011   | 0.002              | 0.01     | 4.40   |  |
| MP-00-C20   | 220.4                     | 221.3  | 51079  | 0.018   | 0.003    | 0.01          | 4.99   | 51080  | 0.017   | 0.003              | 0.03     | 5.12   |  |
| MP-00-C21   | 6.7                       | 8.6  | 51099  | 0.162   | 0.094    | 0.32          | 4.86   | 51100  | 0.198   | 0.114              | 0.41     | 4.65   |  |
| MP-00-C21   | 45.3                      | 47.3   | 51119  | 0.048   | 0.003    | 0.10          | 2.35   | 51120  | 0.038   | 0.006              | 0.07     | 2.40   |  |
| MP-00-C21   | 80.6                      | 82.6   | 51139  | 0.110   | 0.020    | 0.17          | 2.83   | 51140  | 0.100   | 0.008              | 0.21     | 2.66   |  |
| MP-00-C21   | 116.9                     | 118.9  | 51159  | 0.150   | 0.006    | 0.29          | 5.81   | 51160  | 0.132   | 0.005              | 0.26     | 5.64   |  |
| MP-00-C21   | 155.2                     | 157.5  | 51179  | 0.021   | 0.002    | 0.02          | 2.64   | 51180  | 0.021   | 0.002              | 0.02     | 2.85   |  |
| MP-00-C21   | 194.0                     | 196.0  | 51199  | 0.162   | 0.012    | 0.14          | 5.46   | 51200  | 0.158   | 0.010              | 0.15     | 5.47   |  |
| MP+00-C22   | 45.9                      | 47.5   | 51219  | 0.142   | 0.110    | 0.09          | 4.57   | 51220  | 0.128   | 0.097              | 0.11     | 4.07   |  |
| MP-00-C22   | 82.6                      | 84.6   | 51239  | 0.247   | 0.039    | 0.25          | 4.47   | 51240  | 0.227   | 0.033              | 0.21     | 4.43   |  |
| MP-00-C22   | 122.5                     | 125.4  | 51259  | 0.019   | 0,003    | 0.01          | 5.18   | 51260  | 0.019   | 0.003              | -0.01    | 5.06   |  |
| MP-00-C22   | 159.6                     | 161.0  | 51279  | 0.590   | 0.028    | 0.98          | 6.33   | 51280  | 0.556   | 0.023              | 0.97     | 5.56   |  |
| MP-00-C22   | 196.9                     | 198.6  | 51299  | 0.045   | 0.016    | 0,(14         | 2,88   | 51300  | 0.047   | 0.015              | 0.04     | 2.92   |  |
| MP-00-C22   | 232.0                     | 234.0  | 51319  | 0.051   | 0,006    | 0.04          | 3.40   | 51320  | 0.054   | 0.004              | 0.08     | 3.82   |  |
| MP-00-C23   | 33.9                      | 35.6   | 51339  | 0.438   | 0.372    | 0.97          | 5.12   | 51340  | 0.309   | 0.245              | 0.30     | 5.00   |  |
| MP-00-C23   | 72.6                      | 74.6   | 51359  | 0.011   | 0.003    | 0.02          | 5.36   | 51360  | 0.011   | 0.003              | 0.01     | 5.40   |  |
| MP-00-C23   | 104.1                     | 105.8  | 51379  | 0.123   | 0.054    | 0.09          | 4.45   | 51380  | 0.134   | 0.056              | 0.15     | 4.27   |  |
| MP-00-C23   | 139.4                     | 141.4  | 51399  | 0.090   | 0.043    | 0.12          | 5.18   | 51400  | 0.100   | 0.041              | 0.15     | 5.40   |  |
| MP-00-C23   | 178.1                     | 180.1  | 51419  | 0.220   | 0.007    | 0.15          | 3.72   | 51420  | 0.160   | 0.004              | 0.11     | 3.89   |  |
| MP-00-C23   | 213.8                     | 215.8  | 51439  | 0.080   | 0.005    | 0.08          | 4.89   | 51440  | 0.060   | 0.005              | 0.07     | 5.19   |  |
| MP-00-C24   | 26.5                      | 28.2   | 51459  | 0.050   | 0.035    | 0.05          | 6.34   | 51460  | 0.050   | 0.035              | 0.05     | 6.51   |  |
| MP-00-C24   | 65.8                      | 68.1   | 51479  | 0,010   | 0.001    | 0.01          | 3.27   | 51480  | 0.010   | 0.001              | 0.04     | 3.17   |  |
| MP-00-C24   | 104.7                     | 106.9  | 51499  | 0.040   | 0.029    | 0.03          | 4.49   | 51500  | 0.050   | 0.030              | 0.03     | 4.65   |  |
| MP-00-C24   | 137.4                     | 139.0  | 51519  | 0.160   | 0.036    | 0,50          | 3.83   | 51520  | 0.150   | 0.024              | 0.36     | 3.29   |  |
| MP-00-C24   | 172.8                     | 175.5  | 51539  | 0.030   | 0.019    | 0.05          | 5.46   | 51540  | 0.030   | 0.015              | 0.03     | 5.41   |  |
| MP-00-C24   | 212.0                     | 214.0  | 51559  | 0.010   | 0.001    | Pathell2 of 3 | 7.00   | 51560  | 0.020   | <sup>1</sup> 0.001 | 0.01     | 7.25   |  |

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| Appendix 3b |          |              |        |         | 200             | 0 Core Chec | k Assay Listi | ng - Blind Du | plicates |                  |                   |                   |  |  |
|-------------|----------|--------------|--------|---------|-----------------|-------------|---------------|---------------|----------|------------------|-------------------|-------------------|--|--|
|             |          |              |        |         | Original Sample |             |               |               |          | Duplicate Sample |                   |                   |  |  |
| Hole ID     | From (m) | To (m)       | Tag 1D | ТСи (%) | CUNS (%)        | Au (gpt)    | Fc (%)        | Tag ID        | TCu (%)  | CUNS (%)         | An (gpt)          | Fe (%)            |  |  |
| MP-00-C24   | 255.0    | 257.0        | 51579  | 0.080   | 0.029           | 0.04        | 4.46          | 51580         | 0.050    | 0.014            | <sub>i</sub> 0.03 | (4.05             |  |  |
| MP-00-C25   | 23.0     | 25.0         | 51599  | 0,200   | 0.158           | 0.18        | 6.00          | 51600         | 0.180    | 0.144            | 0.24              | 6.53              |  |  |
| MP-00-C25   | 61.0     | 62.8         | 51619  | 0.200   | 0.159           | 0.21        | 5.73          | 51620         | 0.190    | 0.152            | 0.17              | 5.68              |  |  |
| MP-00-C25   | 100.7    | 102.7        | 51639  | 0.040   | 0.004           | 0.03        | 2.61          | 51640         | 0.020    | 0.002            | 0.02              | 2.57              |  |  |
| MP-00-C26   | 34.3     | 35.4         | 51659  | 2.160   | 0.568           | 4.73        | 15.00         | 51660         | 2.206    | 0.528            | 6.48              | 15.00             |  |  |
| MP-00-C26   | 66.2     | 68.2         | 51679  | 0.030   | 0,004           | 0.01        | 2.01          | 51680         | 0.020    | 0.001            | 0.01              | 2.03              |  |  |
| MP-00-C27   | 17.8     | 19.8         | 51699  | 0.131   | 0.090           | 0.10        | 4.80          | 51700         | 0.149    | 0.093            | 0.13              | 4.24              |  |  |
| MP-00-C27   | 51.5     | 54.0         | 51719  | 0.017   | 0.009           | 0.01        | 4.94          | 51720         | 0.017    | 0.009            | 0.01              | 5.03              |  |  |
| MP-00-C27   | 84.8     | 86.0         | 51739  | 0.018   | 0.005           | 0.03        | 4.01          | 51740         | 0.019    | 0.006            | 0.05              | 3.55              |  |  |
| MP-00-C27   | 126.0    | 127.1        | 51759  | 0.022   | 0.007           | 0.01        | 2.27          | 51760         | 0.024    | 0.008            | 0.01              | 2.23              |  |  |
| MP-00-C28   | 46.8     | 47.8         | 51779  | 0.041   | 0.018           | 0.01        | 4.85          | 51780         | 0.031    | 0.013            | 0.01              | 4.83              |  |  |
| MP-00-C28   | 75.9     | <b>77</b> .4 | 51799  | 0.170   | 0.113           | 0.15        | 4.83          | 51800         | 0.206    | 0.138            | 0.16              | 4.47              |  |  |
| MP-00-C28   | 110,4    | 112.9        | 51819  | 0.154   | 0.050           | 0.14        | 4.20          | 51820         | 0.154    | 0.049            | 0.15              | 3.97              |  |  |
| MP-00-C29   | 36.3     | 38.3         | 51839  | 0.092   | 0.015           | 0.06        | 5.36          | 51840         | 0.081    | 0.014            | 0.04              | 4.89              |  |  |
| MP-00-C29   | 73.0     | 75.0         | 51859  | 0.124   | 0.070           | 0.15        | 5.14          | 51860         | 0.124    | 0.071            | 0.17              | 5.48              |  |  |
| MP-00-C29   | 109.3    | 111.4        | 51879  | 0.208   | 0.022           | 0.30        | 4.99          | 51880         | 0.239    | 0.020            | 0.28              | 4.63              |  |  |
| MP-00-C29   | 146.4    | 148.4        | 51899  | 0.102   | 0.063           | 0,09        | 4.27          | .51900        | 0.095    | 0.056            | 0.10              | 4.14              |  |  |
| MP-00-C29   | 182.4    | 184.4        | 51919  | 0.203   | 0.091           | 0.19        | 3.74          | 51920         | 0.200    | 0.095            | 0.17              | 3.58              |  |  |
| MP-00-C30   | 32.2     | 33.9         | 51939  | 0.059   | 0.021           | 0,07        | 4.58          | 51940         | 0.062    | 0.020            | 0.05              | 4.19              |  |  |
| MP-00-C30   | 65.9     | 67.9         | 51959  | 0.190   | 0.031           | 0.35        | 7.97          | 51960         | 0.350    | 0.056            | 0.60              | 9.12              |  |  |
| MP-00-C30   | 99.4     | 101.4        | 51979  | 0.180   | 0.020           | 0.32        | 1.69          | 51980         | 0.210    | 0.017            | 0.35              | 1.60              |  |  |
| MP-00-C30   | 169.5    | 171.2        | 72019  | 0.170   | 0.001           | 0.27        | 5.55          | 72020         | 0.180    | 0.003            | 0.32              | 5.38              |  |  |
| MP-00-C30   | 1343     | 136.3        | 51999  | 0.230   | 0.003           | 0.72        | 5.23          | 52000         | 0.220    | 0.003            | 0.38              | 5.02              |  |  |
| MP-00-C30   | 207.5    | 209.2        | 72039  | 0,060   | 0,001           | 0.12        | 5.54          | 72040         | 0.060    | 0.002            | 0.11              | 4.98              |  |  |
| MP-00-C30   | 245.3    | 247.3        | 72059  | 0.110   | 0.003           | 0.20        | 5.25          | 72060         | 0.120    | 0.001            | 0.30              | 5.88              |  |  |
| MP-00-C31   | 39.0     | 40.6         | 72079  | 0.130   | 0.001           | 0.24        | :5,70         | 72080         | 0.120    | 0.001            | 0.21              | 5.74              |  |  |
| MP-00-C31   | 76.6     | 78.6         | 72099  | 0.100   | 1).0()4         | 0.17        | 6.72          | 72100         | 0.090    | 0.002            | 0.13              | <sup>1</sup> 7.05 |  |  |
| MP-00-C31   | 112.3    | 114.2        | 72119  | 0.087   | 0.019           | 0.15        | 4.53          | 72120         | 0.087    | 0.023            | 0.22              | 4.59              |  |  |
| MP-00-C31   | 146.3    | 147.6        | 72139  | 0,180   | 0.014           | 0.35        | 2.71          | 72140         | 0.162    | 0.013            | 0.25              | 2.25              |  |  |
| MP-00-C31   | 181.7    | 183.7        | 72159  | 0.117   | 0,004           | 0.18        | 3.06          | 72160         | 0.134    | 0.006            | 0.23              | 2.99              |  |  |
| MP-00-C31   | 220.0    | 221.3        | 72179  | 0,046   | 0.001           | 0.06        | 5.77          | 72180         | 0.030    | 0,002            | 0.05              | $^{1}5.26$        |  |  |
| MP-00-C32   | 9.7      | 11.6         | 72199  | 0.228   | 0.098           | 0.16        | 4.03          | 72200         | 0.162    | 0.074            | 0.14              | 3.81              |  |  |
| MP-00-C32   | 40.5     | 42.1         | 72219  | 0.401   | 0.006           | 0.30        | 4.44          | 72220         | 0.349    | 0.005            | 0.33              | 4.92              |  |  |
| MP-00-C32   | 73.0     | 74.8         | 72239  | 0.157   | 0.002           | 0.13        | 3.30          | 72240         | 0.240    | 0.004            | 0.17              | 3.48              |  |  |
| MP+00-C33   | 11.2     | 12.9         | 72259  | 0.052   | 0.033           | 0.06        | 4.76          | 72260         | 0.050    | 0.032            | 0.07              | 4.91              |  |  |
| MP-00-C33   | 39.6     | 41.6         | 72279  | 0,269   | 0.037           | 0.27        | 5.01          | 72280         | 0.221    | 0.038            | 0.34              | 4.66              |  |  |
| MP-00-C33   | 74.4     | 76.4         | 72299  | 0.148   | 0.006           | 0.27        | 4.09          | 72300         | 0.158    | 0.012            | 0.19              | 4.36              |  |  |

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## APPENDIX 4

## MOUNT POLLEY MINE GEOLOGICAL CHARACTERIZATION Cariboo and Bell

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## MOUNT POLLEY MINING CORPORATION

TO:GREG SMYTHFROM:GREG GILLSTROMSUBJECT:GEOLOGY SECTION OF M - 200DATE:OCT 10, 2000CC:DON PARSONS, VIVIAN PARK, STEPHANIE EAGEN

## **GEOLOGICAL CHARACTERIZATION**

## CARIBOO AND BELL PITS (Map 1)

Without exception, the ore-waste contacts in the Cariboo and Bell Pits are sharp and structurally controlled. The twelve major faults in the pits are very linear structures that juxtapose the monzonite and diorite against the mineralized breccia; therefore, grade control in the Cariboo and Bell Pits is fairly straightforward.

## 1) ORE

In general, high-grade feed from the Cariboo and Bell Pits consists of pink, potassically altered breccia. Clasts within the breccia are angular and of varying lithology, ranging from black, fine-grained volcanic to grey, porphyritic intrusive; the matrix is medium-grained plagioclase porphyry monzonite. Plagioclase phenocrysts in the matrix are strongly clay-altered and are texturally similar to those in the grey, unaltered plagioclase porphyry to the south of the pit. Veins and veinlets of calcite, epidote, actinolite and microcline, present throughout the breccia, are more abundant in more strongly mineralized rock.

Magnetite content within the breccia matrix is highly variable depending on location and correlates strongly with copper and gold grades. Very high-grade (Cu-Au) magnetite pipes occur in the South and East Lobe zones; these pipes were mistaken as supergene mineralization in the early stages of exploration.

Copper mineralization occurs mostly as disseminated chalcopyrite. Minor chalcopyrite also occurs in fractures and veinlets. Minor bornite and trace quantities of covellite, chalcocite and digenite are present in more strongly altered rock. Copper oxides (true oxides, carbonates and silicates) are present in varying quantities throughout the pit. Malachite/azurite occurs as powdery fracture-fill. Chrysocolla occurs in fractures and veinlets and as blebs to 2 cm.

#### Ore Classification

Ore in the Cariboo Pit can be divided into four distinct zones: the **South Zone**, the **North Zone** and the **East Lobe Zone**. The **Bell Zone** is an extension of the North Cariboo Zone; an unmineralized fault-bounded section of monzonite divides the zones.

The **South Zone** ore is softer, more altered and relatively higher-grade, with larger blebs and veinlets of chalcopyrite. It has a moderate oxide to total copper oxide ratio of 10 to 30%. The ore has a moderate to high magnetite content and contains several post-mineralization, copper/gold-rich magnetite pipes. The magnetite pipes are two to three meters in diameter.

The Central Zone is fault-bounded and highly oxidized. The ore is strongly altered with common secondary biotite. It has a moderate to high oxide to total copper ratio of 30 to 60 %. Chrysocolla comprises 5 to 15% of the copper mineralization. Chalcopyrite is very finely disseminated.

The East Lobe Zone ore has the highest copper-gold grades and magnetite content. The zone contains several large magnetite pipes (up to twenty meters in diameter), and in many areas the breccia matrix is composed entirely of magnetite. Copper mineralization occurs as disseminated and veined, and occasionally massive chalcopyrite. Minor quantities of bornite, chalcocite, covellite and digenite also occur. It has a moderate oxide to total copper ratio of 20 -35 %, but unlike in the Central Zone, chrysocolla is rare.

This zone is mostly mined out, with the magnetite feeders having been truncated at depth. The main mineralization occurred between the 1140 and 1100 benches.

The North Cariboo Zone and Bell Zone ore is typically hard, with the breccia matrix appearing less altered than elsewhere in the Cariboo Pit. Mineralization occurs as finely disseminated chalcopyrite: other copper sulfides are rare. It has a low oxide to total copper ratio of 2 to 10 %. Chrysocolla is rare to absent.

From surface mapping and drill hole logging it appears that pyrite occurs in slightly elevated amounts (0.5-2%) in one structural controlled block of breccia in the northeast section of the Bell Zone. This faulted zone has been erroneously termed as a 'phyllic or pyrite halo', as described in the idealized **Lowell and Guilbert Porphyry Model** (1970), but is in fact still part of the potassic core of the Mount Polley deposit. The Mount Polley deposit more closely resembles the **Diorite Porphyry Model** (Holliter 1975, Evans 1980) than the Lowell and Guilbert model, as it lacks both the phyllic and argillic alteration phases.

"The diorite model deposits differ in a number of ways from the Lowell-Guilbert model; one of the main reasons is that the sulphur concentrations are relatively low in the mineralizing fluids. As a result, very little of the iron oxides in the host rock are converted to pyrite and most of the iron remains in the chlorites and biotites, while excess iron tends to occur as magnetite which may be present in all alteration zones" (Evans 1980).

The economics of this block of breecia is currently being evaluated; it may not be included in the newest Bell Pit design. If copper prices improve and this zone is to be mined, a sampling program will be put in place to insure ARD monitoring. At present the planned procedure is to sample every sixth hole (within the zone and to an outer radius of 10m) with geochemical characterization to be conducted on each sample.

## 2) WASTE

The Polley Stock is a northwesterly, elongated stock approximately five kilometers long that occurs between Bootjack and Polley lakes. The stock is a multi-phase pluton with a composition ranging from diorite through monzonite to porphyritic monzonite. The waste rock in the Cariboo Pit is composed of all phases of the Polley Stock, with approximately 50% monzonite, 30% plagioclase porphyry monzonite. and 20% diorite. The waste rock in the planned Bell Pit is composed of approximately 50% diorite. 40% monzonite/plagioclase porphyry monzonite, and 10% volcanic.

## Waste Classification

Monzonite forms most of the east, west and north walls of the Cariboo Pit and the south and east walls of the Bell Pit. This unit is a relatively fresh, white-grey/pink-grey, medium-grained (1-3 mm), equigranular

to weakly feldspar-phyric intrusive. It is composed of potassium feldspar and plagioclase feldspar (mostly albite and orthoclase) with accessory minerals including magnetite, augite, biotite, calcite, apatite and epidote.

**Plagioclase Porphyry Monzonite** forms the south wall of the Cariboo Pit and is distributed as elongate faulted blocks in the Bell Pit. This unit is a fresh, grey intrusion with a medium-grained monzonitic groundmass and white plagioclase phenocrysts. The rock has a moderate to intense porphyritic texture.

**Diorite** occurs at the center of the Cariboo Pit in three distinct structurally controlled blocks, and forms the west wall in the Bell Pit. The unit is a fresh, blue-grey/salt-and-pepper, fine to medium-grained, equigranular to porphyritic intrusion. It is mostly composed of plagioclase feldspar with minor pyroxene: accessory minerals include magnetite, biotite, calcite and apatite.

**Volcanics** occur as a shallow faulted block in the center of the Bell Pit. The unit is fresh, dark green/grey andesite with a fine-grained matrix. The matrix is mainly composed of pyroxene and plagioclase.

### **References**

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## APPENDIX 5

## STATEMENT OF QUALIFICATIONS

### STATEMENT OF QUALIFICATIONS

- I, Vivian F. Park, of the village of Big Lake, British Columbia, Canada, do hereby certify that:
- 1. I have been employed in the position of Mine Geologist (Mount Polley Mine) since April 2000.
- 2. I graduated from the University of British Columbia with a Bachelor of Science Degree in Geology in 1990.
- 3. I have been continually active in mineral exploration since 1988.
- 4. I am a registered member of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
- 5. I supervised the exploration program and performed part of the work described in this report.

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Vivian F. Park, P. Geo.

Mine Geologist Mount Polley Mining Corporation

1 March 2001