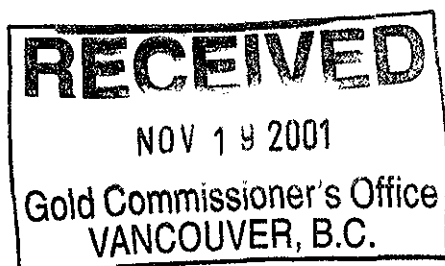


# Assessment Report

on

**2001**

## Percussion and Diamond Drilling



at

Mount Polley Mine  
Cariboo Mining Division

N.T.S. 93A/12E  
Latitude 52° 33' N  
Longitude 121° 38' W

Owner:

**Mount Polley Mining Corporation**

Box 12  
Likely, B.C.  
VOL 1N0

**Volume 1 – Text and Maps**

Vivian F. Park, P. Geo.  
Mine Geologist

29 July 2001

**GEOLOGICAL SURVEY BRANCH**  
ASSESSMENT REPORT

26,691 1 of 3

## TABLE OF CONTENTS

	<u>Page</u>
<b>EXECUTIVE SUMMARY</b>	1
<b>CHAPTER 1: INTRODUCTION</b>	2
1.1 Introduction	2
1.2 Location and Access	2
1.3 Physiography and Vegetation	2
1.4 Claim Status	5
1.5 Property History	5
1.6 2001 Work Program	9
1.6.1 Sample Sample Collection and Storage	9
1.6.2 Sample Preparation and Assay Procedures	9
<b>CHAPTER 2: GEOLOGY</b>	11
2.1 Regional Geology	11
2.2 Property Geology	11
2.2.1 Lithology	11
2.2.2 Structure	11
2.2.3 Breccia Types and Alteration	13
2.2.4 Mineralization	13
<b>CHAPTER 3: 2001 WORK</b>	14
3.1 Summary of Exploration Work	14
3.2 Bell Pit	16
3.3 Cariboo Pit	17
3.4 Southeast Area	18
3.5 Springer	18
<b>CHAPTER 4: CONCLUDING SUMMARY</b>	24
<b>REFERENCES</b>	25

## LIST OF TABLES

		<u>Page</u>
Table 1.4	Status of Claims after 2001 Filing	5
Table 1.6	Summary of 2001 Exploration Activities	8
Table 3.1	Summary of All 2001 Work	16

## LIST OF FIGURES

Figure 1.1	General Location Map	3
Figure 1.2	Regional Location Map	4
Figure 1.4	Claim Map	8
Figure 2.1	Regional Geology Map	12
Figure 3.1b	2001 Areas of Work - 3D View	14
Figure 3.1a	2001 Areas of Exploration - Plan	15

## LIST OF MAPS

Map 2.2	Cariboo, Bell, Springer – Geology Plan	Pocket
Map 3.2	Bell and Cariboo Pits -- Drillhole Collar Location Plan	Pocket
Map 3.4	Southeast Area – Drillhole Collar Location Plan	Pocket
Map 3.5	Springer – Drillhole Collar Location Plan	Pocket

## LIST OF APPENDICES

Appendix 1	2001 Drill hole Listing
Appendix 2	Applicable Expenditures for Assessment Credits
Appendix 3a	Analytical Procedures
Appendix 3b	2001 Core Check Assay Listing
Appendix 4	Geological Characterization – Cariboo and Bell
Appendix 5	Petrographic Study of North Springer Mineralized Breccia
Appendix 6	Statement of Qualifications

## EXECUTIVE SUMMARY

The 2001 work program that spanned from January 12<sup>th</sup> to July 29<sup>th</sup> consisted of percussion and core drilling. The purpose of this work 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 2001, listed alphabetically are: Bell Pit, Cariboo Pit, Southeast Area and Springer Zone (Figure 3.1a and Figure 3.1b).

A total of 170 percussion holes for 9,421.4 meters and 41 core holes for 6696.03 meters were completed for a total expenditure of \$647,494.

Drilling in the Bell Pit confirmed that high-grade sulfide mineralization in the center of the pit is present and continuous, and that the economic model is accurate.

Holes were drilled in the Cariboo Pit to determine the extent of the east super high-grade pod, to investigate the extent of mineralization into the south wall at Ian's Fault to evaluate a possible wall push-back, and to test the final depth of mineralization in the center of the pit. All holes intersected the anticipated copper-gold mineralization and confirmed the block model; however, the results from drilling were not significant enough to warrant any changes in the pit design.

Drilling in the Southeast Area of a metal-in-soil anomaly parallel to and east of the mineralized core failed to intersect significant mineralization.

Drilling in the Springer zone helped to define the North Springer, a newly discovered high-grade zone immediately north of the previously confirmed Springer mineralization, to better define mineralization in the Central and South Springer, to improve the structural and block models and to provide material for metallurgical testwork.

The Bell and Cariboo pits will be mined out by the end of September 2001. No additional work is planned for these areas. No work is planned for the Southeast Area.

Development work in the Springer has been halted; however, metallurgical testwork, especially of the high oxide material, will continue. Additionally, areas adjacent to the North Springer will be prospected and evaluated as potential drill targets.

On 29 June 2001 Imperial Metals Corporation announced that mining and milling operations at Mount Polley Mine will be suspended on 30 September 2001 due to continued depressed copper and gold prices. The mine will be maintained on standby pending an improvement in metal prices.

## 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, wholly owned and operated by Mount Polley Mining Corporation, a division of Imperial Metals Corporation, consists of twenty mineral claims, one fractional claim, and one mining lease that cover 5,575 hectares. 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 mill concentrator complex with 45,000 tonnes per day mined. 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 2001 field season that spanned from January 12th to July 29th.

### 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.

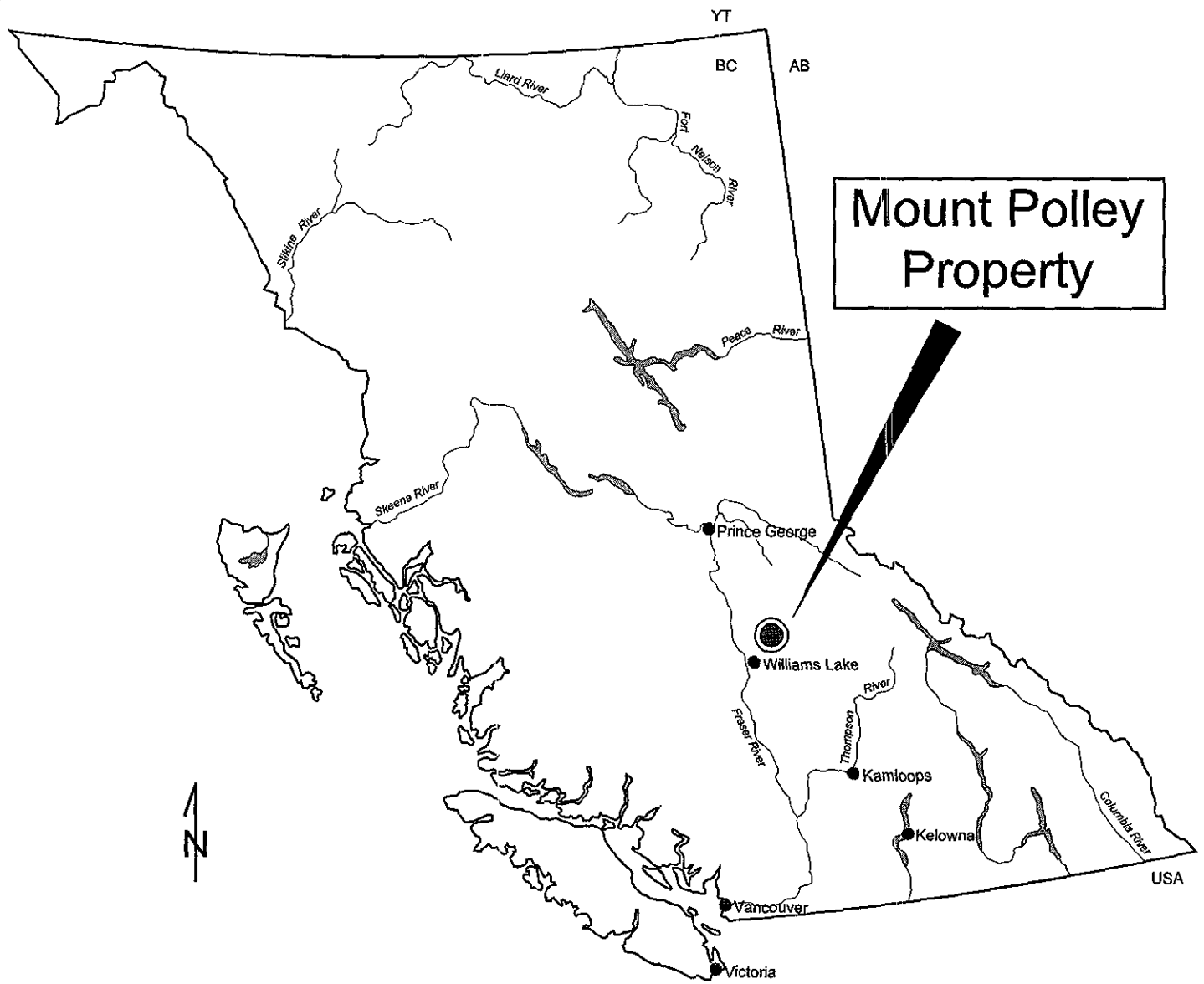
Travel time from Williams Lake is approximately 75 minutes.

### 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°C in July to -10.7° in January. Precipitation averages 856 mm with 350 mm falling as snow.



**Mount Polley  
Property**

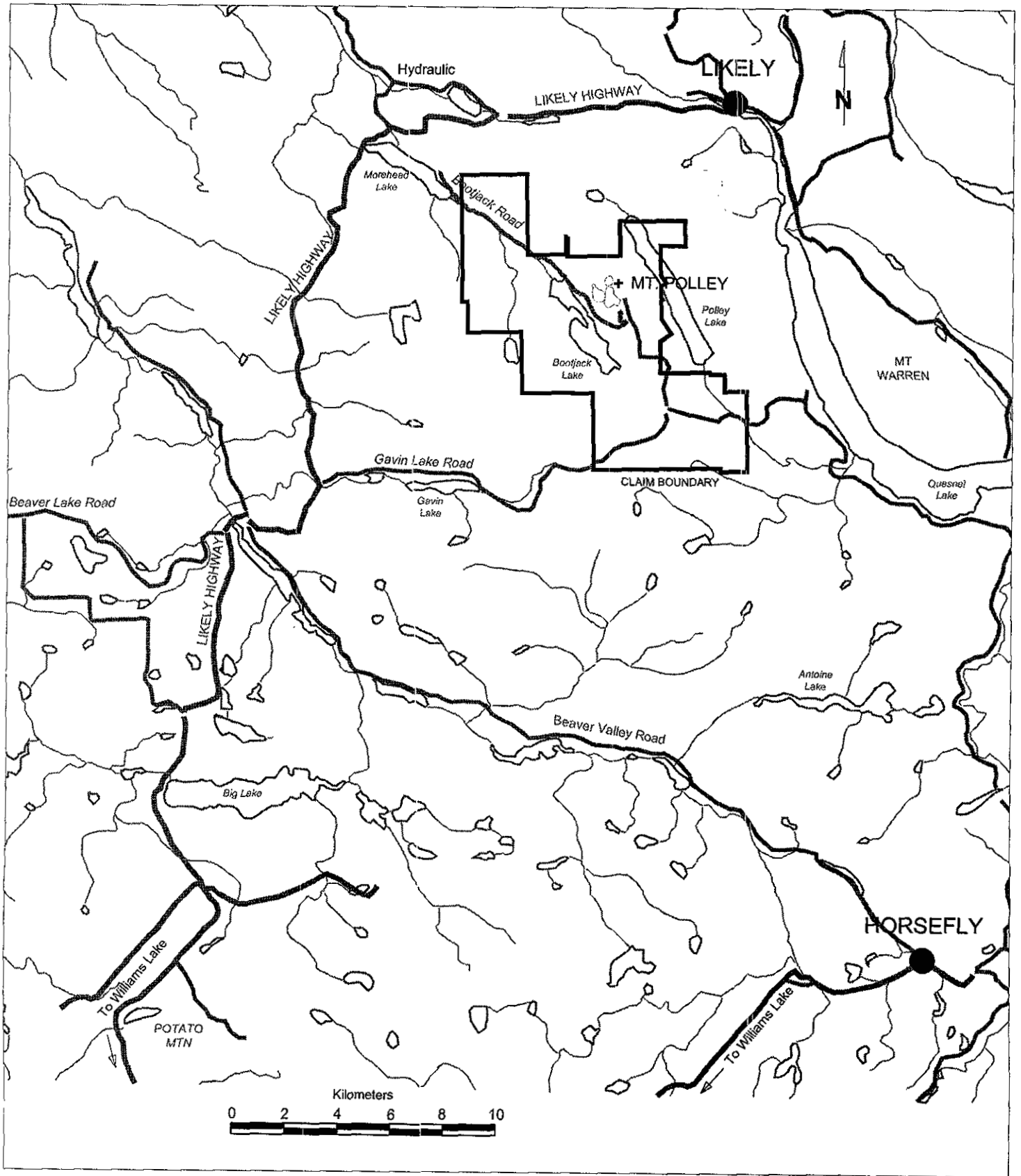
**Mount Polley Mining Corporation**

**Property Location**

Date: December 2000

Drawn By: V. Park

General Location.dwg **Figure 1.1**



Mount Polley Mining Corporation	
<b>Regional Location Map</b>	
Date:	January 2001
	1 : 20 000
Drawn By:	V. Park
	Regional Location.dwg
	<b>Figure 1.2</b>

## 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~~<sup>483</sup> hectares is covered by Mining Lease 345731.

Mount Polley Holding Company Limited owns all claims.

In 2001, all claims will have assessment credits applied to them (Table 1.4). Appendix 2 lists Applicable Expenditures for Assessment Credit.

**Table 1.4 Status of Claims after 2001 Filing**

<i>Claim Name</i>	<i>Tenure No.</i>	<i>No. of Units</i>	<i>Record Date</i>	<i>Expiry Date</i>
CB1	204470	20	4 May 1981	15 December 2011
CB5	204472	20	4 May 1981	15 December 2011
CB8	204473	8	4 May 1981	15 December 2011
CB9	204474	20	4 May 1981	15 December 2011
CB16	204475	20	4 May 1981	15 December 2011
CB19	204476	20	4 May 1981	15 December 2011
CB20	204477	20	4 May 1981	15 December 2011
PM-3	206448	20	17 September 1989	15 December 2011
PM-4	206449	20	14 September 1989	15 December 2011
PM-5	206450	20	29 September 1989	15 December 2011
PM-6	206451	20	29 September 1989	15 December 2011
PM-7	206452	12	17 September 1989	15 December 2011
PM-8	206453	20	17 September 1989	15 December 2011
PM-9	206798	6	23 February 1990	15 December 2011
PM-10	206799	6	23 February 1990	15 December 2011
PM-11	206800	15	23 February 1990	15 December 2011
PM-12	206801	15	21 February 1990	15 December 2011
PM-13	207244	12	26 September 1990	15 December 2011
IMC-2	340018	15	21 September 1995	15 December 2011
IMC-3	340019	5	22 September 1995	15 December 2011
IMC 4 Fr.	340020	1	22 September 1995	15 December 2011
ML	345731	1	22 August 1996	22 August 2002

## 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. Lithochemical 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.

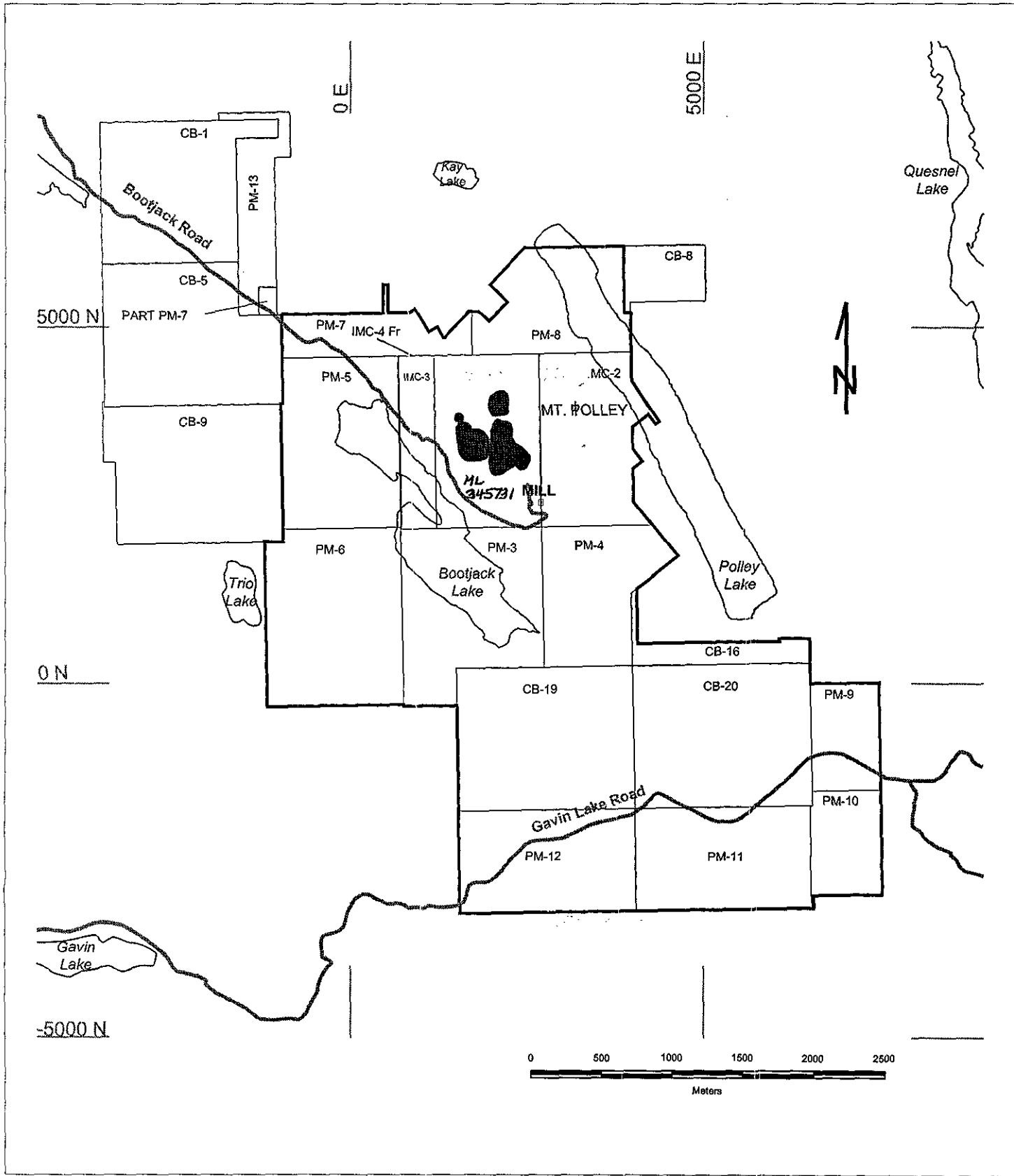
During 1998, nine core holes for 1,993 meters were drilled within and along the margins of the Cariboo Pit. These holes were designed to prove continuity of mineralization to depth, to determine the orientation of mineralization, to provide definition in under-drilled areas and to determine rock quality 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.

In 2000, a total of 226 percussion holes for 10, 652.5 meters and twenty-six core holes of 4, 875.3 meters were completed. The areas that received work were the 207, Bell, C2, Cariboo, 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.

At year end in 2000, Imperial Metals Corporation completed an agreement with Sumitomo Corporation that resulted in a restructuring of the mine's long term debt and Imperial acquiring 100% ownership of Mount Polley Mine.

On 29 June 2001 Imperial Metals Corporation announced that mining and milling operations at Mount Polley Mine will be suspended on 30 September 2001 due to continued depressed copper and gold prices. The mine will be maintained on standby pending an improvement in metal prices.



<b>Mount Polley Mining Corporation</b>		
<b>Claim Map</b>		
NTS 93A/12		
Date:	December 2000	1 : 7 500
Drawn By:	V. Park	Claim Map.dwg <b>Figure 1.4</b>

## 1.6 2001 Work Program

The 2001 work program that spanned from January 12<sup>th</sup> to July 29<sup>th</sup> consisted of percussion and core drilling. All drilling was conducted in an attempt to define and expand upon mineralization in the Springer zone, to confirm the mineable reserves within the Cariboo and Bell pits, and to test previously under-explored areas in the Southeast Area that displayed good metal-in-soil anomalies.

Table 1.6 provides a summary of 2001 exploration activities. The 2001 work program is further discussed in Chapter 3. Figure 3.1a shows the locations of 2001 work in plan. Figure 3.1b is a 3-D graphic of the work areas.

Percussion Drilling	29 holes (1193.4 m)	Mount Polley Mining Corporation
	141 holes (8227.1 m)	Tercon Contracting
Core Drilling	41 holes (6696.0 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 and 3. 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 hole size was 4.5 " for the Tercon rig and 6.5" for the MPMC rig.. The assay interval was 7.5 meters for the Tercon rig and 9.1 meters for the MPMC rig.. 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, depth down the hole and the assay tag number. 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 73% of the core samples were prepared and analyzed by the on-site Mount Polley Mine (MTP) laboratory; 6% of the remaining core was prepared and analyzed by Bondar Clegg (Vancouver, BC), 10% by ASL Chemex (North Vancouver, BC), 6% by International Metallurgical and Environmental (Kelowna, BC) and 5% by R&T Metallurgical Services (Kamloops, 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 for check analyses; the results of quality control/quality assurance procedures are maintained by the MTP laboratory and are not discussed in this report.

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 and 3.

## 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 polyolithic 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. Map 2.2 demonstrates typical property 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 phyrlic monzonite, and augite porphyry and biotite lamprophyre dykes. A stock of phyrlic 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 breccia. 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.

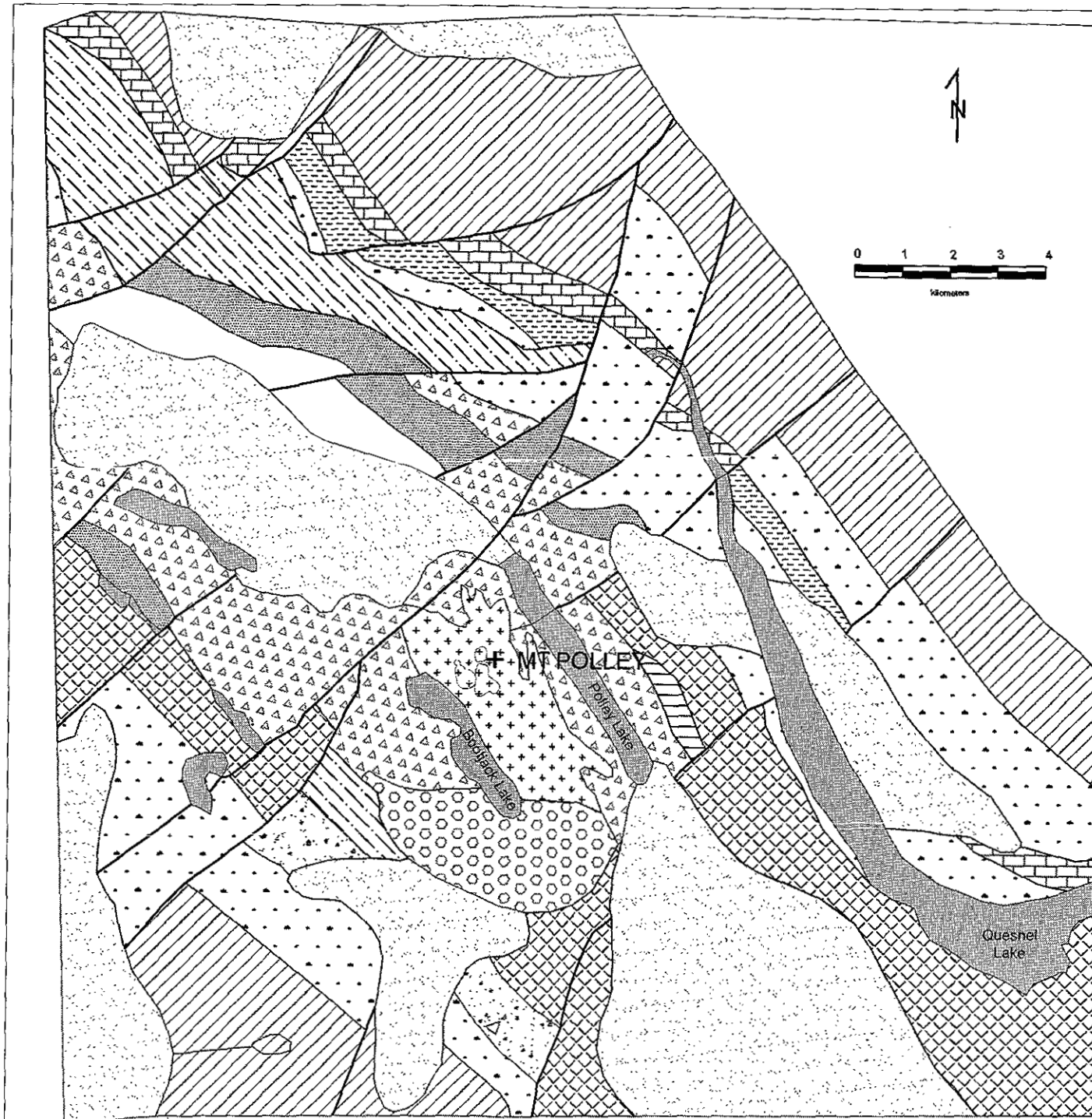
Heterolithic volcanic breccias and tuffs form part of the eastern margin of the central zone and become more dominant to the south and east. Blocks of volcanics occur as xenoliths in the diorite and as occasional clasts in intrusion and hydrothermal breccias.

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 breccia, clay 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 Ian's Fault and Bell North Fault.



# LEGEND

## SEDIMENTARY AND VOLCANIC ROCKS

### PLEISTOCENE

Glacial, fluvio-glacial material

### JURASSIC

Chert, limestone, shale, sandstone

Interbedded sandstone, siltstone

Maroon alkali olivine basalt - analcite-bearing

Feldspathic sandstone, siltstone

Poly lithic breccia with feldspathic clasts

### TRIASSIC

Analcite-bearing maroon and grey basalt

Hornblende-bearing pyroxene basalt

Poly lithic mafic breccia

Maroon alkali basalt

Green and grey alkali basalt

Dark grey/green siltstone, sandstone, mafic tuff, minor conglomerate

### INTRUSIVE ROCKS

#### JURASSIC

Bootjack Stock: pseudoleucite syenite

Polley Stock: monzonite, diorite

### SYMBOLS

Geological Contact - thin black line

Fault - thick black line

Mount Polley Mining Corporation

## Regional Geology

Simplified

Date: December 2000

Drawn By: V. Park

Regional Geology.dwg Figure 2.1

### 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.



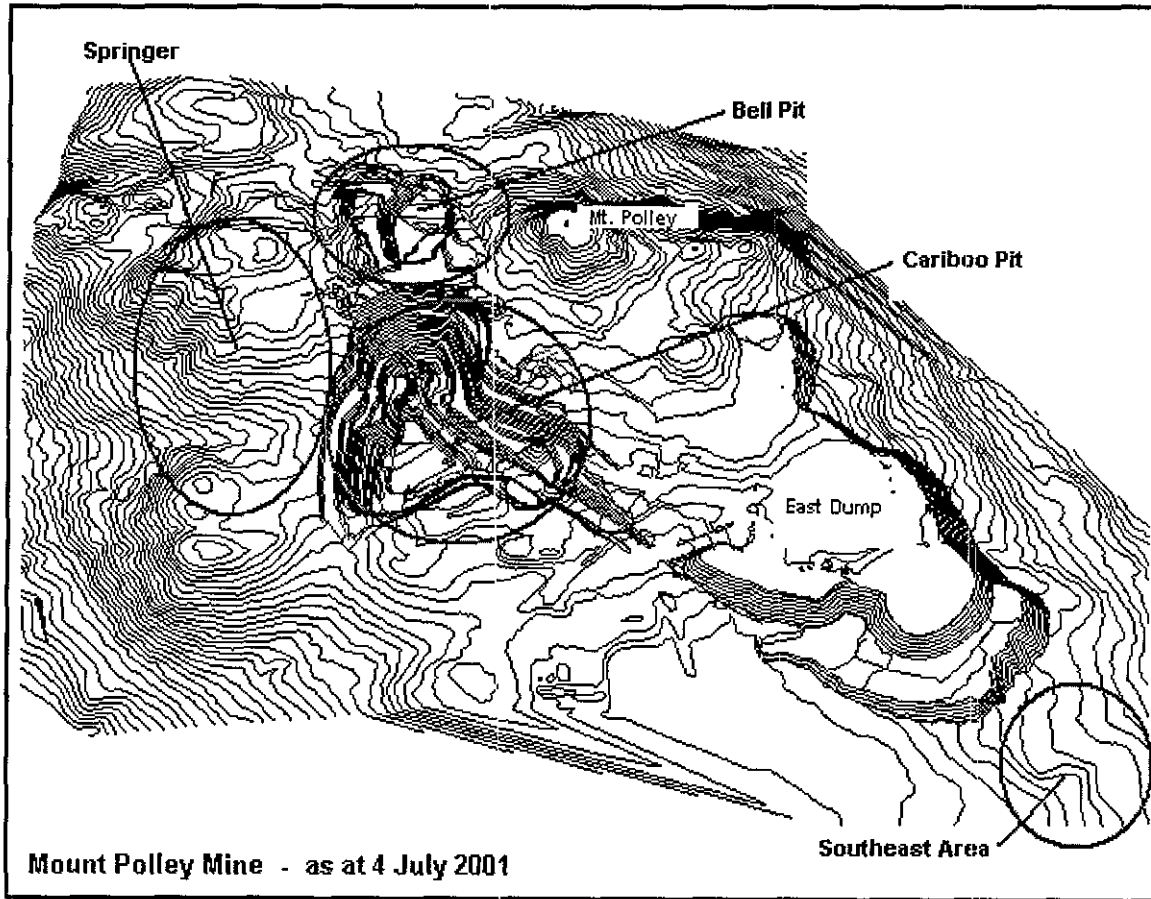
### CHAPTER 3: 2001 WORK

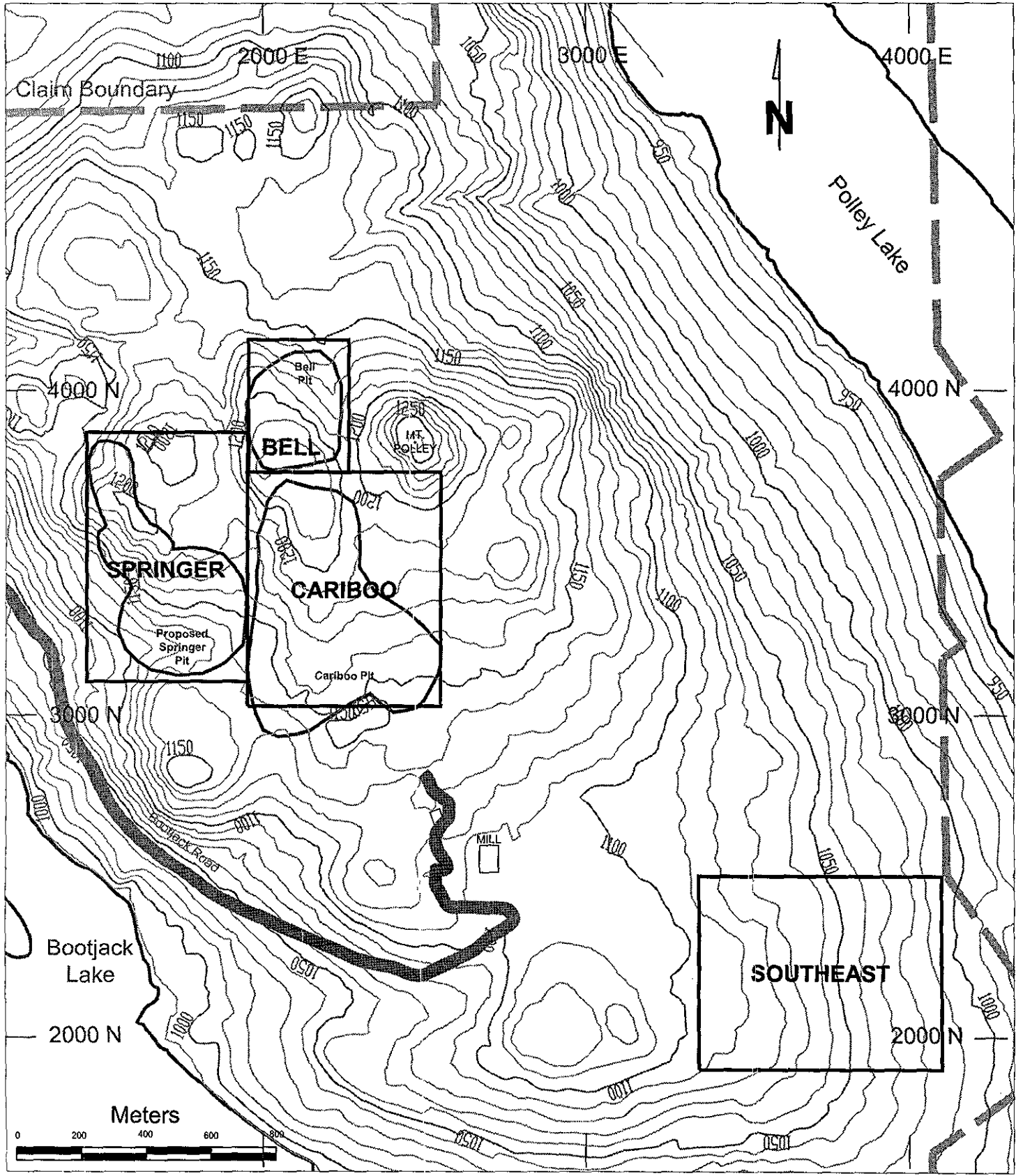
#### 3.1 Summary of Exploration Work

The following is a brief description of work conducted at Mount Polley during 2001. 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 2001, listed alphabetically are: Bell Pit, Cariboo Pit, Southeast Area and Springer Zone (Figure 3.1a and Figure 3.1b).

Figure 3.1b 2001 Areas of Work – 3D View (looking north)





Mount Polley Mining Corporation

**2001 Areas of Exploration**

Date: January 2001

Drawn By: V. Park

2000 Exploration.dwg **Figure 3.1a**

170 percussion holes for 9,421.4 meters and 41 core holes for 6696.0 meters were completed. Table 3.1 provides a summary of all the physical work completed on the property in 2001.

Table 3.1

## Summary of All 2001 Mount Polley Property Work

Zone	Percussion						Core		All Drilling	
	MPMC - Svedala Rig 5		Tercon Contracting		Total		F. Boisvenu Drilling		Total	
	# of Holes	Meterage	# of Holes	Meterage	# of Holes	Meterage	# of Holes	Meterage	# of Holes	Meterage
Bell Pit	5	305.0	0	0.0	5	305.0	0	0.0	5	305.0
Cariboo Pit	20	877.6	0	0.0	20	877.6	10	512.0	30	1389.8
Southeast Area	6	366.0	0	0.0	6	366.0	0	0.0	6	366.0
Springer Zone	110	6687.5	29	1194.3	139	7872.8	31	6183.8	170	14056.6
All	141	8227.1	29	1194.3	170	9421.4	41	6696.0	211	16117.4

### 3.2 Bell Pit

Five percussion holes for 305.0 meters were drilled from the 1190 elevation in an attempt to confirm high-grade mineralization and to improve the block model at the center of the proposed pit (Map 3.2).

Results from this drilling confirmed that high-grade sulfide mineralization (eg. 0.5380 % Cu and 0.90 gpt Au / 61.02 m in T01-85) is present and continuous and that the economic model is accurate.

Copper-gold mineralization is hosted within potassically altered monzonitic breccia as finely disseminated and stringy chalcopyrite. Anomalous quantities of fracture-controlled pyrite continue to depth; metallurgical testwork is ongoing to optimize procedures that suppress the pyrite in order to maintain an adequate copper concentrate grade.

The Bell Pit will be mined-out by the end of September 2001. No additional work is planned.

Assay results are summarized below.

#### Bell Pit Significant Results

Hole ID	From	To	Length	Cu-tot (%)	Cu-ns (%)	Cu Ratio	Au (gpt)
T01-85	0.0	61.0	61.0	0.538	0.051	0.095	0.90
T01-86	0.0	61.0	61.0	0.415	0.071	0.170	0.49
T01-87	0.0	61.0	61.0	0.568	0.059	0.104	0.42
T01-88	0.0	61.0	61.0	0.626	0.115	0.184	0.67
T01-89	0.0	53.3	53.3	0.382	0.089	0.234	0.35

### 3.3 Cariboo Pit

Twenty percussion holes for 877.6 meters and 10 core holes for 512.0 meters were drilled in the Cariboo Pit (Map 3.2). Holes were drilled to determine the extent of the east super high-grade pod, to investigate the extent of mineralization into the south wall at Ian's Fault to evaluate a possible wall push-back, and to test the final depth of mineralization in the center of the pit. All holes intersected the anticipated copper-gold mineralization and confirmed the block model; however, the results from drilling were not significant enough to warrant any changes in the pit design.

Copper-gold mineralization is hosted within potassically altered, magnetitic monzonitic breccia as finely disseminated and stringy chalcopyrite. Malachite and chrysocolla occur in the oxidized areas.

The Cariboo Pit will be mined-out by September 2001; the north end of the pit is being back-filled with Bell Pit waste. No additional work is proposed.

Assay results are summarized below.

#### Cariboo Pit Significant Results

Hole ID	From	To	Length	Cu-tot (%)	Cu-ns (%)	Cu Ratio	Au (gpt)
MP-01-45	123.5	140.3	15.0	0.379	0.080	0.210	0.23
<i>and</i>	146.4	163.0	16.6	0.679	0.170	0.250	0.98
<i>and</i>	183.3	200.0	16.7	0.438	0.030	0.069	0.42
MP-01-46	3.1	50.6	47.5	0.200	0.021	0.106	0.41
<i>includes</i>	13.3	17.2	3.9	0.440	0.033	0.076	0.71
MP-01-47	6.5	50.6	44.1	0.271	0.030	0.109	0.62
<i>includes</i>	6.5	20.1	13.6	0.498	0.065	0.130	1.15
MP-01-48	6.1	9.5	3.4	0.380	0.012	0.031	0.70
<i>and</i>	35.4	50.6	15.2	0.193	0.013	0.069	0.35
MP-01-49	12.2	40.7	28.5	0.241	0.013	0.052	0.47
MP-01-50	24.7	45.5	20.8	0.152	0.040	0.260	0.33
T01-40	0.0	21.3	21.3	0.712	0.042	0.086	0.75
<i>includes</i>	0.0	6.1	6.1	1.719	0.075	0.044	0.63
T01-41	0.0	21.3	21.3	0.8	0.390	0.495	1.700
T01-42	0.0	21.3	21.3	1.360	0.047	0.034	1.72
<i>includes</i>	0.0	6.1	6.1	2.177	0.082	0.038	2.10
T01-43	0.0	21.3	21.3	0.434	0.206	0.488	0.77
<i>includes</i>	0.0	6.1	6.1	0.634	0.263	0.415	0.69
T01-139	<i>no significant results</i>						
T01-140	<i>no significant results</i>						
T01-141	<i>no significant results</i>						
T01-142	<i>no significant results</i>						
T01-145	0.0	45.7	45.7	0.224	0.017	0.077	0.33
T01-146	0.0	45.7	45.7	0.392	0.043	0.130	0.62
T01-147	0.0	45.7	45.7	0.265	0.050	0.190	0.46
T01-148	0.0	45.7	45.7	0.215	0.101	0.465	0.38
T01-149	0.0	45.7	45.7	0.264	0.031	0.135	0.42
T01-150	0.0	30.5	30.5	0.274	0.012	0.043	0.43
T01-151	<i>no significant results</i>						
T01-152	0.0	15.2	15.2	0.283	0.019	0.065	0.37
T01-153	0.0	45.7	45.7	0.203	0.026	0.127	0.30
T01-154	15.2	45.7	30.5	0.194	0.050	0.315	0.37

T01-155	0.0	45.7	45.7	0.235	0.041	0.188	0.42
T01-156	0.0	45.7	45.7	0.219	0.035	0.163	0.43

### 3.4 Southeast Area

Six percussion holes for 366.0 meters were drilled in the Southeast Area, approximately 2 kilometers southeast of the Cariboo Pit (Map 3.4). The holes were drilled into the center of a copper/gold-in-soil anomaly east of and parallel to the main Southeast Area mineralization. Drilling was unsuccessful in adding to the resource. No additional work is planned for this area.

Assay Results are summarized below.

#### Southeast Area Significant Results

Hole ID	From	To	Length	Cu-tot (%)	Cu-ns (%)	Cu Ratio	Au (gpt)
T01-66	<i>no significant results</i>						
T01-67	<i>no significant results</i>						
T01-68	<i>no significant results</i>						
T01-69	<i>no significant results</i>						
T01-70	<i>no significant results</i>						
T01-71	<i>no significant results</i>						

### 3.5 Springer

Thirty-one core holes for 6,183.8 meters and 139 percussion holes for 7,872.8 meters were drilled in the Springer Pit area (Map 3.5). Drilling helped to define the North Springer, a newly discovered high-grade zone immediately north of the previously confirmed Springer mineralization, to better define mineralization in the Central and South Springer, to improve the structural and block models and to provide material for metallurgical testwork.

Mineralization in the North Springer is hosted within intensely magnetitic, variably potassic monzonitic breccia in the form of fine disseminated bornite and lesser stringy and disseminated chalcopyrite. The zone, with an average width of 75 meters, is sharply bounded on the east and west by two sub-parallel, sub-vertical north-northwest structures.

Three mineralized zones in the North Springer have been identified: strong oxide copper-gold mineralization, sulfide copper-gold mineralization and sulfide copper-only mineralization. The copper-only mineralization occurs well below the proposed pit bottom. Composite samples for each of these zones have been submitted for metallurgical testwork. A petrographic study of these rocks is submitted as Appendix 5.

Copper-gold mineralization in the Central and South Springer occurs within very strongly potassically altered, magnetitic, monzonitic breccia that is intensely oxidized for the first several benches. Composite samples from these areas have been for metallurgical testwork. Additionally, a 60,000 tonne testpit within high-oxide material will provide a bulk sample for a mill test.

Due to depressed copper and gold prices and the high cost of preliminary stripping, development of the Springer pit has been halted. Metallurgical testwork will continue in an attempt to optimize the recovery of oxide copper. Additional drilling may be planned if target areas are identified through surface mapping and prospecting.

Assay results are summarized below.

## Springer Pit Area Significant Results

Hole ID	From	To	Length	Cu-tot (%)	Cu-ns (%)	Cu Ratio	Au (gpt)
MP-01-40	6.1	128.3	122.2	0.62	0.177	0.285	1.55
MP-01-41	11.0	110.0	99.0	0.562	0.178	0.317	0.54
MP-01-42	7.9	88.0	80.1	0.609	0.239	0.393	0.73
<i>and</i>	150.0	245.5	95.5	0.541	0.032	0.060	0.41
MP-01-43	96.5	158.6	62.1	0.440	0.328	0.745	0.16
MP-01-44	48.0	63.9	15.9	0.438	0.290	0.661	0.13
<i>and</i>	90.8	118.5	27.7	0.371	0.181	0.489	0.15
MP-01-45	123.5	140.3	15.0	0.379	0.080	0.210	0.23
<i>and</i>	146.4	163.0	16.6	0.679	0.170	0.250	0.98
<i>and</i>	183.3	200.0	16.7	0.438	0.030	0.069	0.42
MP-01-51	95.0	124.2	29.2	0.292	0.084	0.286	0.23
<i>and</i>	127.8	200.0	72.2	0.610	0.173	0.284	0.45
MP-01-52	5.5	22.0	16.5	0.405	0.162	0.399	0.36
<i>and</i>	26.0	80.6	54.6	0.701	0.150	0.214	0.64
<i>and</i>	86.9	106.0	19.1	0.413	0.087	0.210	0.28
<i>and</i>	126.5	166.5	40.0	0.331	0.055	0.166	0.26
<i>and</i>	178.4	195.9	17.5	0.293	0.052	0.179	0.38
MP-10-53	4.3	23.2	18.9	0.308	0.237	0.768	0.33
<i>and</i>	152.8	180.6	27.8	0.566	0.084	0.148	0.56
<i>and</i>	187.8	200.0	12.2	0.405	0.175	0.431	0.53
MP-01-54	45.0	58.6	13.6	0.303	0.225	0.742	0.12
<i>and</i>	72.9	85.3	12.4	0.339	0.206	0.609	0.35
<i>and</i>	124.7	180.0	55.3	0.377	0.193	0.513	0.55
MP-01-55	29.4	36.8	7.4	0.601	0.432	0.719	0.91
<i>and</i>	42.9	70.8	27.9	0.194	0.134	0.690	0.44
<i>and</i>	97.0	105.4	8.4	0.252	0.049	0.193	0.66
MP-01-56	93.5	101.0	7.5	0.526	0.031	0.059	0.15
<i>and</i>	107.0	137.0	30.0	0.480	0.013	0.028	0.18
<i>and</i>	161.0	180.5	19.5	0.518	0.102	0.197	0.36
<i>and</i>	209.0	228.5	19.5	0.521	0.016	0.030	0.16
<i>and</i>	233.0	251.8	18.8	0.410	0.014	0.034	0.19
MP-01-57	32.0	116.0	84.0	0.420	0.087	0.206	0.47
<i>and</i>	161.3	184.0	22.7	0.275	0.112	0.407	0.32
MP-01-58	42.0	130.0	88.0	0.645	0.081	0.125	0.77
<i>and</i>	181.5	195.0	13.5	0.360	0.031	0.085	0.36
<i>and</i>	201.0	212.3	11.3	0.309	0.070	0.227	0.52
MP-01-59	25.0	138.0	113.0	0.489	0.065	0.133	0.28
<i>and</i>	178.0	200.0	22.0	0.362	0.091	0.252	0.05
MP-01-60	79.9	170.0	90.1	0.660	0.090	0.136	1.05
MP-01-61	188.0	20.0	12.0	0.205	0.040	0.197	0.31
MP-01-62	57.7	177.0	119.5	0.514	0.093	0.181	0.63
<i>and</i>	3.3	48.6	45.3	0.276	0.189	0.685	0.24
MP-01-63	43.0	63.3	20.3	0.348	0.266	0.765	0.39
<i>and</i>	68.7	118.4	49.7	0.337	0.228	0.678	0.35
<i>and</i>	123.5	148.0	24.5	0.369	0.247	0.669	0.17

MP-01-64		32.5	53.0	20.5	0.329	0.223	0.679	0.33
	<i>and</i>	65.0	107.0	42.0	0.432	0.101	0.233	0.22
MP-01-65		3.7	19.6	15.9	0.322	0.243	0.670	0.34
	<i>and</i>	26.8	63.1	36.3	0.374	0.305	0.798	0.36
	<i>and</i>	65.2	106.0	40.8	0.313	0.101	0.307	0.15
MP-01-66		3.4	28.0	24.6	0.278	0.224	0.756	0.10
	<i>and</i>	117.2	148.0	30.8	0.500	0.089	0.216	0.31
MP-01-67		3.1	54.0	50.9	0.354	0.268	0.734	0.19
	<i>and</i>	141.0	204.8	63.8	0.439	0.019	0.043	0.36
MP-01-68		46.0	70.0	24.0	0.321	0.168	0.428	0.11
	<i>and</i>	70.0	117.5	47.5	0.601	0.151	0.242	0.57
	<i>and</i>	131.5	153.0	21.5	0.450	0.053	0.185	0.30
MP-01-69		165.0	173.0	8.0	0.325	0.061	0.216	0.15
	<i>and</i>	193.0	203.0	10.0	0.402	0.035	0.131	0.67
	<i>and</i>	221.0	235.0	14.0	0.314	0.013	0.042	0.22
MP-01-70		118.0	144.0	26.0	0.290	0.092	0.284	0.20
MP-01-71		6.1	42.1	36	0.3	0.166	0.565	0.140
	<i>and</i>	94.0	108.0	14.0	0.341	0.061	0.181	0.17
	<i>and</i>	108.0	151.2	43.2	0.977	0.155	0.232	0.90
MP-01-72		4.0	58.0	54.0	0.376	0.081	0.230	0.24
MP-01-73		116.0	195.3	79.3	0.410	0.089	0.209	0.32
MP-01-74		108.0	138.0	30.0	0.253	0.011	0.051	0.28
MP-01-75		22.0	80.7	58.7	0.328	0.256	0.809	0.35
	<i>and</i>	96.1	138.0	41.9	0.534	0.265	0.547	0.45
	<i>and</i>	187.5	195.0	7.5	0.531	0.010	0.021	0.27
T01-31		15.2	30.5	15.2	0.106	0.052	0.486	0.13
T01-32		0.0	61.0	61.0	0.414	0.163	0.430	0.34
T01-33		0.0	68.6	68.6	0.420	0.081	0.238	0.33
	<i>includes</i>	45.7	68.6	22.9	0.599	0.073	0.122	0.44
T01-34		0.0	76.2	76.2	0.174	0.128	0.717	0.32
T01-35		22.9	30.5	7.6	0.150	0.098	0.650	0.03
T01-36		7.6	76.2	68.6	0.160	0.072	0.467	0.09
T01-37		15.2	76.2	61.0	0.558	0.438	0.767	0.55
	<i>includes</i>	22.9	53.3	30.4	0.743	0.602	0.812	0.77
T01-38		0.0	30.5	30.5	0.300	0.236	0.763	0.02
	<i>and</i>	38.1	76.2	38.1	0.300	0.235	0.780	0.11
T01-39		0.0	76.2	76.2	0.480	0.358	0.722	0.47
T01-44		0.0	76.2	76.2	0.256	0.175	0.675	0.15
T01-45		0.0	61.0	61.0	0.223	0.145	0.649	0.18
T01-46		0.0	68.6	68.6	0.177	0.061	0.360	0.16
T01-47		0.0	68.6	68.6	0.245	0.173	0.697	0.18
T01-48	<i>no significant results</i>							
T01-49		0.0	61.0	61.0	0.182	0.097	0.521	0.10
T01-50		0.0	61.0	61.0	0.450	0.125	0.327	0.64
T01-51	<i>no significant results</i>							
T01-52	<i>no significant results</i>							
T01-53	<i>no significant results</i>							
T01-54	<i>no significant results</i>							
T01-55		15.2	30.5	15.3	0.272	0.199	0.731	0.07

T01-56	7.6	61.0	53.4	0.314	0.214	0.680	0.08
T01-57	30.5	61.0	30.5	0.424	0.271	0.640	0.16
T01-58	0.0	61.0	61.0	0.350	0.211	0.603	0.27
T01-59	0.0	61.0	61.0	0.294	0.218	0.740	0.25
T01-60	<i>no significant results</i>						
T01-61	22.9	61.0	38.1	0.261	0.104	0.400	0.25
T01-62	0.0	15.2	15.2	0.492	0.368	0.748	0.29
T01-63	<i>no significant results</i>						
T01-64	<i>no significant results</i>						
T01-65	<i>no significant results</i>						
T01-72	<i>no significant results</i>						
T01-73	<i>no significant results</i>						
T01-74	<i>no significant results</i>						
T01-75	<i>no significant results</i>						
T01-76	<i>no significant results</i>						
T01-77	<i>no significant results</i>						
T01-78	<i>no significant results</i>						
T01-79	<i>no significant results</i>						
T01-80	15.2	30.5	15.3	0.257	0.080	0.311	0.26
T01-81	0.0	61.0	61.0	0.332	0.162	0.488	0.12
T01-82	<i>no significant results</i>						
T01-83	<i>no significant results</i>						
T01-84	22.9	53.3	30.4	0.251	0.186	0.742	0.36
T01-91	<i>no significant results</i>						
T01-92	7.6	38.1	30.5	0.305	0.024	0.078	0.26
T01-93	<i>no significant results</i>						
T01-94	<i>no significant results</i>						
T01-95	22.9	38.1	15.2	0.503	0.327	0.651	0.42
T01-96	<i>no significant results</i>						
T01-97	<i>no significant results</i>						
T01-98	<i>no significant results</i>						
T01-99	<i>no significant results</i>						
T01-100	<i>no significant results</i>						
T01-101	<i>no significant results</i>						
T01-102	<i>no significant results</i>						
T01-103	<i>no significant results</i>						
T01-104	<i>no significant results</i>						
T01-105	<i>no significant results</i>						
T01-106	<i>no significant results</i>						
T01-107	<i>no significant results</i>						
T01-108	<i>no significant results</i>						
T01-109	<i>no significant results</i>						
T01-110	<i>no significant results</i>						
T01-111	<i>no significant results</i>						
T01-112	<i>no significant results</i>						
T01-113	0.0	61.0	61.0	0.406	0.072	0.178	0.71
T01-114	38.1	61.0	22.9	0.307	0.024	0.079	0.11
T01-115	<i>no significant results</i>						



T01-116	<i>no significant results</i>						
T01-117	22.9	61.0	38.1	0.488	0.238	0.487	0.55
T01-118	7.6	53.3	45.7	0.310	0.153	0.492	0.16
T01-119	0.0	53.3	53.3	0.259	0.155	0.600	0.24
T01-120	7.6	61.0	53.4	0.407	0.237	0.582	0.26
T01-121	0.0	61.0	61.0	0.490	0.252	0.514	0.49
T01-122	0.0	61.0	61.0	0.458	0.277	0.605	0.61
T01-123	7.6	61.0	53.4	0.241	0.166	0.689	0.14
T01-124	0.0	61.0	61.0	0.225	0.149	0.662	0.13
T01-125	0.0	61.0	61.0	0.258	0.182	0.707	0.16
T01-126	0.0	61.0	61.0	0.339	0.221	0.651	0.34
T01-127	0.0	61.0	61.0	0.246	0.188	0.765	0.15
T01-128	0.0	61.0	61.0	0.518	0.204	0.394	0.45
T01-129	0.0	61.0	61.0	0.450	0.175	0.388	0.34
T01-130	<i>no significant results</i>						
T01-131	<i>no significant results</i>						
T01-132	<i>no significant results</i>						
T01-133	<i>no significant results</i>						
T01-134	<i>no significant results</i>						
T01-135	0.0	61.0	61.0	0.213	0.137	0.642	0.15
T01-136	0.0	38.1	38.1	0.298	0.207	0.695	0.15
T01-137	15.2	38.1	22.9	0.445	0.306	0.687	0.44
T01-138	<i>no significant results</i>						
T01-143	<i>no significant results</i>						
T01-144	<i>no significant results</i>						
T01-157	0.0	61.0	61.0	0.365	0.237	0.645	0.27
T01-158	0.0	61.0	61.0	0.592	0.158	0.399	0.38
T01-159	0.0	61.0	61.0	0.419	0.112	0.278	0.58
T01-160	0.0	61.0	61.0	0.399	0.236	0.580	0.41
T01-161	0.0	15.2	15.2	0.284	0.215	0.751	0.08
T01-162	<i>no significant results</i>						
T01-163	30.5	45.7	15.2	0.285	0.150	0.546	0.17
T01-164	45.7	61.0	15.3	0.331	0.217	0.650	0.20
T01-165	15.2	38.1	22.9	0.388	0.219	0.564	0.26
T01-166	7.6	53.3	45.7	0.461	0.311	0.674	0.40
T01-167	0.0	53.3	53.3	0.378	0.202	0.534	0.32
T01-168	0.0	53.3	53.3	0.352	0.203	0.578	0.28
T01-169	0.0	53.3	53.3	0.325	0.206	0.635	0.17
T01-170	0.0	53.3	53.3	0.264	0.173	0.654	0.27
T01-171	22.9	53.3	30.4	0.272	0.173	0.635	0.16
SV01-1	0.0	43.7	43.7	0.502	0.403	0.802	0.11
SV01-2	0.0	43.7	43.7	0.317	0.229	0.722	0.20
SV01-3	7.2	43.7	36.5	0.373	0.157	0.420	0.25
SV01-4	<i>no significant results</i>						
SV01-5	<i>no significant results</i>						
SV01-6	<i>no significant results</i>						
SV01-7	16.3	43.7	43.7	0.353	0.181	0.514	0.14
SV01-8	0.0	43.7	43.7	0.364	0.306	0.841	0.10
SV01-9	0.0	43.7	43.7	0.351	0.229	0.653	11.00

SV01-10	0.0	43.7	43.7	0.367	0.315	0.857	0.20
SV01-11	0.0	43.7	43.7	0.248	0.197	0.795	0.09
SV01-12	0.0	43.7	43.7	0.446	0.381	0.854	0.27
SV01-13	0.0	43.7	43.7	0.351	0.260	0.742	0.16
SV01-14	0.0	43.7	43.7	0.496	0.337	0.680	0.24
SV01-15	0.0	43.7	43.7	0.386	0.317	0.822	0.13
SV01-16	0.0	43.7	43.7	0.295	0.218	0.739	0.24
SV01-17	<i>no significant results</i>						
SV01-18	<i>no significant results</i>						
SV01-19	<i>no significant results</i>						
SV01-20	0.0	43.7	43.7	0.379	0.307	0.810	0.34
SV01-21	0.0	43.7	43.7	0.260	0.192	0.738	0.21
SV01-22	7.2	43.7	36.5	0.229	0.158	0.688	0.13
SV01-23	7.2	43.7	36.5	0.270	0.226	0.837	0.19
SV01-24	0.0	7.2	7.2	0.580	0.490	0.845	0.50
SV01-25	0.0	34.6	34.6	0.306	0.241	0.789	0.27
SV01-26	7.2	25.5	18.3	0.246	0.181	0.735	0.21
SV01-27	25.5	43.7	18.2	0.315	0.035	0.111	0.44
SV01-28	<i>no significant results</i>						
SV01-29	<i>no significant results</i>						

## CHAPTER 4: CONCLUDING SUMMARY

The 2001 work program that spanned from January 12<sup>th</sup> to July 29<sup>th</sup> consisted of percussion and core drilling. The purpose of this work 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 2001, listed alphabetically are: Bell Pit, Cariboo Pit, Southeast Area and Springer Zone (Figure 3.1a and Figure 3.1b).

A total of 170 percussion holes for 9,421.4 meters and 41 core holes for 6696.03 meters were completed for a total expenditure of \$647,494.

Drilling in the Bell Pit confirmed that high-grade sulfide mineralization in the center of the pit is present and continuous, and that the economic model is accurate.

Holes were drilled in the Cariboo Pit to determine the extent of the east super high-grade pod, to investigate the extent of mineralization into the south wall at Ian's Fault to evaluate a possible wall push-back, and to test the final depth of mineralization in the center of the pit. All holes intersected the anticipated copper-gold mineralization and confirmed the block model; however, the results from drilling were not significant enough to warrant any changes in the pit design.

Drilling in the Southeast Area of a metal-in-soil anomaly parallel to and east of the mineralized core failed to intersect significant mineralization.

Drilling in the Springer zone helped to define the North Springer, a newly discovered high-grade zone immediately north of the previously confirmed Springer mineralization, to better define mineralization in the Central and South Springer, to improve the structural and block models and to provide material for metallurgical testwork.

The Bell and Cariboo pits will be mined out by the end of September 2001. No additional work is planned for these areas. No work is planned for the Southeast Area.

Development work in the Springer has been halted; however, metallurgical testwork, especially of the high oxide material, will continue. Additionally, areas adjacent to the North Springer will be prospected and evaluated as potential drill targets.

On 29 June 2001 Imperial Metals Corporation announced that mining and milling operations at Mount Polley Mine will be suspended on 30 September 2001 due to continued depressed copper and gold prices. The mine will be maintained on standby pending an improvement in metal prices.

## REFERENCES

- Bailey, D.G. (1988): Geology of the Central Quesnel Belt, Hydraulic, South-Central British Columbia; in Geological Fieldwork 1987, B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 1988-1, p.147-153.
- Coe, J.E. (1996): Copper Oxide Occurrences in a Feed Sample from Mount Polley Mine, British Columbia; Cytec Industries Inc., unpublished report, 11 p.
- Fraser, T.M. (1994): Geology, Alteration and Origin of Hydrothermal Breccias at the Mount Polley Alkalic Porphyry Copper-Gold Deposit, South-Central British Columbia; unpublished M.Sc thesis, the University of British Columbia, 261 p.
- Fraser, T.M. (1994): Hydrothermal Breccias and Associated Alteration of the Mount Polley Copper-Gold Deposit; in Geological Fieldwork 1993, B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 1994-1, p.259-267.
- Fraser, T.M., Stanley, C.R., Nikic, Z.T., Pesalj, R. and Gorc, D. (1996): The Mount Polley Alkalic Porphyry Copper-Gold Deposit, South-Central British Columbia; in Porphyry Deposits of the Northwestern Cordillera of North America; Canadian Institute of Mining and Metallurgy, Special Volume 15, p. 388-396.
- Harris J.F. (1989): A Petrographic Study of Mineralized Samples from the Mount Polley Property; Harris Exploration Services, unpublished report, 14 p.
- Harris J.F. (1989): "Modified descriptions and rock names for suite previously described..."; Harris Exploration Services, unpublished report, 38 p.
- Hodgson, C.J., Bailes, R.J. and Verzosa, R.S. (1976): Cariboo-Bell; in Porphyry Deposits of the Canadian Cordillera; Canadian Institute of Mining and Metallurgy, Special Volume 15, p. 388-396.
- Imperial Metals Corporation (1988): Drill Logs for Holes MP-88-1 to MP-88-99; unpublished files.
- McLeod, J.A. (1997): Microscopic study of polished grain mounts of 3 mineral concentrates; Westcoast Mineral Testing Inc., unpublished report 5 p.
- McLeod, J.A. (1997): Microscopic study of polished grain mounts of 5 mineral concentrates; Westcoast Mineral Testing Inc., unpublished report 7 p.
- Hawthorn G. (1997): Laboratory Evaluation of Mt. Polley Ores; Westcoast Mineral Testing Inc., unpublished report 8 p.
- McMillan, W.J. (1991): Porphyry Deposits in the Canadian Cordillera; in Ore Deposits, Tectonics and Metallogeny in the Canadian Cordillera, B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 1991-4, p.253-276.
- McNaughton, K. (1990): Diamond Drilling and Bulk Sampling Report, Mount Polley Project; Imperial Metals Corporation, unpublished report, Volumes 1-3.
- Park, V.F. (2001): Assessment Report on 2000 Percussion and Diamond Drilling at Mount Polley Mine, Mount Polley Mining Corporation; B.C. Ministry of Energy and Mines Assessment Report, 36 p.
- Pesalj, R. (1996): Mount Polley Project, 1996 Exploration Report; Imperial Metals Corporation, unpublished report, 17 p.
- Pesalj, R. (1995): Report on 1995 Exploration on the Mount Polley Property, Likely B.C., Cariboo Mining Division; Imperial Metals Corporation, unpublished report, 18 p.
- Read, P.B. (1997): Surface Geology of the Area East of the Cariboo Pit, Mount Polley Mines, Cariboo Mining Division (93A/12E); Mount Polley Mining Corporation, unpublished report, 25 p.

Tindall, M. (1995): Mt. Polley – Proposed In-Pit Diamond Drilling; Tindall Geoservices Inc., unpublished report, 4 p.

Wild, C.J. (1997): Summary of 1997 Exploration, Diamond and Percussion Drilling, Geological Mapping at Mount Polley Mine, Mount Polley Mining Corporation, unpublished report, 22 p.

Wild, C.J. (1998): 1998 Diamond Drilling and Geological Mapping at Mount Polley Mine, Mount Polley Mining Corporation; B.C. Ministry of Energy and Mines Assessment Report, 25 p.

Wild, C.J. (1999): Report on 1999 Percussion Testhole Program at Mount Polley Mine, Mount Polley Mining Corporation, unpublished report, 15 p.

Wild, C.J. (2000): Report on Percussion and Diamond Drilling and Geological Mapping at Mount Polley Mine, Mount Polley Mining Corporation; B.C. Ministry of Energy and Mines Assessment Report, 68 p.

Wild, C.J. and Letwin J.M. (1998): Report on 1998 Diamond Drilling at Mount Polley Mine, Mount Polley Mining Corporation; unpublished report, 12 p.

Wright Engineers Limited (1990): Mount Polley Project, Williams Lake B.C., Feasibility Study; Imperial Metals Corporation, unpublished report, Volumes 1-5.

**APPENDIX 1**  
**2001 DRILL HOLE LISTING**

Appendix I												
2001 Drillhole Listing												
Hole ID	X	Y	Z	Length	Zone	Hole Type	Hole Size	Drilled By	Drill Start	Drill End	Logged By	Comments
MP-01-37	2308.7	3196.0	1079.8	71.9	C Pit - east SHG	DD	NQ2	F. Boisvenu Drilling	2 February 2001	2 February 2001	V. Park	
MP-01-38	2332.1	3201.2	1079.2	65.8	C Pit - east SHG	DD	NQ2	F. Boisvenu Drilling	2 February 2001	3 February 2001	V. Park	
MP-01-39	2317.8	3205.4	1080.1	41.5	C Pit - east SHG	DD	NQ2	F. Boisvenu Drilling	3 February 2001	3 February 2001	V. Park	
MP-01-40	1518.5	3750.6	1178.5	151.2	Springer	DD	NQ2	F. Boisvenu Drilling	4 February 2001	5 February 2001	V. Park	
MP-01-41	1518.1	3750.8	1178.5	151.2	Springer	DD	NQ2	F. Boisvenu Drilling	5 February 2001	6 February 2001	G. Gillstrom	
MP-01-42	1518.9	3750.4	1178.5	269.4	Springer	DD	NQ2	F. Boisvenu Drilling	8 February 2001	10 February 2001	G. Gillstrom	
MP-01-43	1551.8	3679.4	1202.6	203.0	Springer	DD	NQ2	F. Boisvenu Drilling	10 February 2001	12 February 2001	G. Gillstrom	
MP-01-44	1630.8	3615.9	1207.4	206.0	Springer	DD	NQ2	F. Boisvenu Drilling	12 February 2001	14 February 2001	G. Gillstrom	
MP-01-45	1843.2	3222.0	1128.7	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	14 February 2001	15 February 2001	V. Park	
MP-01-46	2184.1	3129.7	1071.3	50.6	C Pit - south	DD	NQ2	F. Boisvenu Drilling	15 February 2001	15 February 2001	V. Park	
MP-01-47	2213.7	3143.3	1073.0	50.6	C Pit - south	DD	NQ2	F. Boisvenu Drilling	16 February 2001	16 February 2001	V. Park	
MP-01-48	2232.9	3151.6	1075.8	50.6	C Pit - south	DD	NQ2	F. Boisvenu Drilling	16 February 2001	17 February 2001	V. Park	
MP-01-49	2223.0	3172.3	1075.2	50.6	C Pit - south	DD	NQ2	F. Boisvenu Drilling	17 February 2001	17 February 2001	V. Park	
MP-01-50	2248.0	3177.8	1077.8	50.6	C Pit - south	DD	NQ2	F. Boisvenu Drilling	17 February 2001	18 February 2001	V. Park	
MP-01-51	1767.1	3194.5	1122.5	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	19 February 2001	20 February 2001	V. Park	
MP-01-52	1511.0	3785.3	1170.9	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	21 February 2001	21 February 2001	V. Park	
MP-01-53	1909.3	3307.1	1145.8	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	22 February 2001	23 February 2001	C. Wild	
MP-01-54	1881.5	3407.2	1162.2	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	23 February 2001	25 February 2001	C. Wild	
MP-01-55	1926.5	3462.7	1163.2	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	25 February 2001	26 February 2001	C. Wild	
MP-01-56	1616.2	3170.1	1109.2	251.8	Springer	DD	NQ2	F. Boisvenu Drilling	27 February 2001	28 February 2001	C. Wild	
MP-01-57	1555.0	3805.2	1182.0	212.4	Springer	DD	NQ2	F. Boisvenu Drilling	1 March 2001	2 March 2001	C. Wild	
MP-01-58	1582.8	3757.4	1190.0	215.2	Springer	DD	NQ2	F. Boisvenu Drilling	2 March 2001	4 March 2001	C. Wild	
MP-01-59	1583.0	3707.5	1190.5	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	4 March 2001	5 March 2001	C. Wild	
MP-01-60	1450.7	3729.6	1171.2	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	5 March 2001	7 March 2001	C. Wild	
MP-01-61	1436.6	3825.5	1148.7	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	7 March 2001	8 March 2001	C. Wild	
MP-01-62	1540.9	3665.5	1202.1	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	9 March 2001	10 March 2001	C. Wild	
MP-01-63	1446.2	3661.8	1176.8	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	10 March 2001	11 March 2001	C. Wild	
MP-01-64	1438.7	3781.0	1159.2	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	11 March 2001	12 March 2001	C. Wild	
MP-01-65	1730.4	3361.1	1150.9	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	27 March 2001	29 March 2001	C. Wild	
MP-01-66	1671.0	3415.7	1168.0	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	29 March 2001	31 March 2001	C. Wild	
MP-01-67	1742.0	3448.0	1171.8	215.2	Springer	DD	NQ2	F. Boisvenu Drilling	31 March 2001	1 April 2001	C. Wild	
MP-01-68	1652.1	3518.7	1182.2	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	1 April 2001	2 April 2001	G. Gillstrom	
MP-01-69	1671.4	3612.2	1198.7	276.2	Springer	DD	NQ2	F. Boisvenu Drilling	2 April 2001	4 April 2001	G. Gillstrom	
MP-01-70	1611.0	3639.0	1207.3	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	4 April 2001	6 April 2001	C. Wild	
MP-01-71	1550.8	3720.1	1186.9	151.2	Springer	DD	NQ2	F. Boisvenu Drilling	6 April 2001	8 April 2001	C. Wild	
MP-01-72	1536.1	3773.1	1177.3	151.2	Springer	DD	NQ2	F. Boisvenu Drilling	8 April 2001	13 April 2001	C. Wild	
MP-01-73	1608.4	3784.1	1194.6	129.8	Springer	DD	NQ2	F. Boisvenu Drilling	13 April 2001	11 April 2001	C. Wild	
MP-01-74	1649.9	3455.9	1166.1	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	11 April 2001	12 April 2001	C. Wild	
MP-01-75	1803.7	3385.7	1159.1	200.0	Springer	DD	NQ2	F. Boisvenu Drilling	13 April 2001	14 April 2001	C. Wild	
MP-01-76	2153.8	3295.0	1060.1	40.0	C Pit	DD	NQ2	F. Boisvenu Drilling	14 April 2001	14 April 2001	C. Wild	

Appendix 1												
2001 Drillhole Listing												
Hole ID	X	Y	Z	Length	Zone	Hole Type	Hole Size	Drilled By	Drill Start	Drill End	Logged By	Comments
MP-01-77	2155.3	3292.0	1060.2	40.0	C Pit	DD	NQ2	F. Boisvenu Drilling	14 April 2001	14 April 2001	C. Wild	
SV01-1	1630.0	3278.5	1120.3	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-10	1610.8	3318.1	1125.4	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-11	1623.6	3311.9	1126.8	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-12	1645.6	3291.2	1128.6	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-13	1673.1	3283.4	1129.8	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-14	1702.9	3301.6	1136.9	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-15	1689.0	3293.2	1133.4	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-16	1704.6	3277.5	1128.1	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-17	1721.8	3266.6	1125.9	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-18	1742.8	3270.4	1127.0	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-19	1760.8	3269.2	1128.2	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-2	1661.9	3264.1	1121.3	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-20	1750.2	3317.2	1143.5	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-21	1764.4	3318.0	1143.8	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-22	1773.4	3317.9	1143.3	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-23	1699.3	3356.6	1152.7	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-24	1766.7	3365.5	1156.4	16.3	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-25	1789.8	3335.6	1147.3	34.6	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-26	1786.1	3300.4	1136.5	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-27	1780.8	3290.3	1134.1	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-28	1775.7	3282.0	1132.0	7.2	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-29	1770.1	3271.4	1129.2	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-3	1691.4	3261.9	1124.0	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-4	1539.2	3404.3	1125.9	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-5	1552.7	3391.1	1126.2	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-6	1567.9	3373.2	1126.2	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-7	1582.4	3355.5	1126.3	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-8	1586.9	3339.6	1124.4	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
SV01-9	1594.2	3326.5	1123.6	43.7	Springer	P	6.5"	Svedala (Rig 5)	May - June 2001	May - June 2001	V. Park	
T01-100	1497.2	3618.6	1178.3	61.0	Springer	P	4.5"	Tercon (25K)	3 March 2001	3 March 2001	V. Park	All dry
T01-101	1518.3	3615.1	1181.9	61.0	Springer	P	4.5"	Tercon (25K)	3 March 2001	4 March 2001	V. Park	All dry
T01-102	1822.5	3616.6	1191.6	61.0	Springer	P	4.5"	Tercon (25K)	4 March 2001	4 March 2001	V. Park	Wet from 53.3 m
T01-103	1774.0	3606.4	1188.2	61.0	Springer	P	4.5"	Tercon (25K)	5 March 2001	5 March 2001	V. Park	Wet from 38.1 m
T01-104	1746.2	3603.2	1187.6	61.0	Springer	P	4.5"	Tercon (25K)	5 March 2001	5 March 2001	V. Park	All dry
T01-105	1717.0	3598.8	1188.4	61.0	Springer	P	4.5"	Tercon (25K)	5 March 2001	6 March 2001	V. Park	Damp from 45.7 m; wet from 53.3 m
T01-106	1707.3	3577.2	1189.9	61.0	Springer	P	4.5"	Tercon (25K)	6 March 2001	7 March 2001	V. Park	All dry
T01-107	1706.0	3616.4	1189.4	61.0	Springer	P	4.5"	Tercon (25K)	7 March 2001	7 March 2001	V. Park	All dry
T01-108	1707.8	3640.1	1191.9	61.0	Springer	P	4.5"	Tercon (25K)	7 March 2001	8 March 2001	V. Park	Wet from 45.7 m
T01-109	1706.6	3683.4	1198.3	61.0	Springer	P	4.5"	Tercon (25K)	8 March 2001	8 March 2001	V. Park	All dry



Appendix 1												
2001 Drillhole Listing												
Hole ID	X	Y	Z	Length	Zone	Hole Type	Hole Size	Drilled By	Drill Start	Drill End	Logged By	Comments
T01-110	1702.3	3720.4	1203.3	61.0	Springer	P	4.5"	Tercon (25K)	8 March 2001	8 March 2001	V. Park	Wet from 53.3 m
T01-111	1677.5	3793.1	1201.7	61.0	Springer	P	4.5"	Tercon (25K)	9 March 2001	9 March 2001	V. Park	All dry
T01-112	1689.8	3760.5	1205.6	61.0	Springer	P	4.5"	Tercon (25K)	9 March 2001	9 March 2001	V. Park	All dry
T01-113	1611.4	3485.0	1162.9	61.0	Springer	P	4.5"	Tercon (25K)	10 March 2001	10 March 2001	V. Park	All dry
T01-114	1635.8	3475.3	1162.5	61.0	Springer	P	4.5"	Tercon (25K)	10 March 2001	11 March 2001	V. Park	All dry
T01-115	1649.8	3458.4	1168.7	61.0	Springer	P	4.5"	Tercon (25K)	11 March 2001	11 March 2001	V. Park	All dry
T01-116	1681.7	3459.8	1174.2	61.0	Springer	P	4.5"	Tercon (25K)	11 March 2001	12 March 2001	V. Park	All dry
T01-117	1500.7	3751.5	1175.9	61.0	Springer	P	4.5"	Tercon (25K)	12 March 2001	13 March 2001	V. Park	All dry
T01-118	1544.8	3726.4	1185.7	61.0	Springer	P	4.5"	Tercon (25K)	13 March 2001	13 March 2001	V. Park	All dry
T01-119	1502.4	3829.8	1169.1	61.0	Springer	P	4.5"	Tercon (25K)	14 March 2001	14 March 2001	V. Park	Wet from 38.1 m
T01-120	1501.1	3823.8	1169.1	61.0	Springer	P	4.5"	Tercon (25K)	14 March 2001	14 March 2001	V. Park	All dry
T01-121	1496.3	3816.0	1166.1	61.0	Springer	P	4.5"	Tercon (25K)	16 March 2001	16 March 2001	V. Park	All dry
T01-122	1505.3	3806.0	1167.4	61.0	Springer	P	4.5"	Tercon (25K)	16 March 2001	16 March 2001	V. Park	All dry
T01-123	1501.1	3717.0	1189.8	61.0	Springer	P	4.5"	Tercon (25K)	16 March 2001	17 March 2001	V. Park	All dry
T01-124	1515.7	3710.8	1193.6	61.0	Springer	P	4.5"	Tercon (25K)	17 March 2001	17 March 2001	V. Park	All dry
T01-125	1526.0	3704.8	1195.5	61.0	Springer	P	4.5"	Tercon (25K)	17 March 2001	17 March 2001	V. Park	All dry
T01-126	1539.3	3695.9	1198.6	61.0	Springer	P	4.5"	Tercon (25K)	18 March 2001	18 March 2001	V. Park	All dry
T01-127	1519.0	3723.8	1189.2	61.0	Springer	P	4.5"	Tercon (25K)	18 March 2001	18 March 2001	V. Park	All dry
T01-128	1507.1	3780.1	1169.7	61.0	Springer	P	4.5"	Tercon (25K)	19 March 2001	19 March 2001	V. Park	Wet from 45.7 m
T01-129	1498.2	3770.8	1169.9	61.0	Springer	P	4.5"	Tercon (25K)	19 March 2001	19 March 2001	V. Park	Wet to 15.2 m
T01-130	1517.3	4023.1	1152.3	61.0	Springer	P	4.5"	Tercon (25K)	20 March 2001	20 March 2001	V. Park	Wet from 30.5 m
T01-131	1484.2	4062.5	1163.9	61.0	Springer	P	4.5"	Tercon (25K)	20 March 2001	21 March 2001	V. Park	Damp from 53.3 m
T01-132	1467.0	4060.6	1161.3	61.0	Springer	P	4.5"	Tercon (25K)	21 March 2001	21 March 2001	V. Park	All dry
T01-133	1426.6	4052.0	1162.2	61.0	Springer	P	4.5"	Tercon (25K)	22 March 2001	22 March 2001	V. Park	All dry
T01-134	1456.9	4040.0	1165.7	61.0	Springer	P	4.5"	Tercon (25K)	22 March 2001	22 March 2001	V. Park	All dry
T01-135	1533.7	3484.4	1148.4	61.0	Springer	P	4.5"	Tercon (25K)	23 March 2001	23 March 2001	V. Park	Damp from 53.3 m
T01-136	1525.3	3501.4	1150.1	61.0	Springer	P	4.5"	Tercon (25K)	23 March 2001	24 March 2001	V. Park	All dry
T01-137	1556.7	3478.1	1153.0	61.0	Springer	P	4.5"	Tercon (25K)	24 March 2001	24 March 2001	V. Park	All dry
T01-138	1580.5	3484.5	1157.6	61.0	Springer	P	4.5"	Tercon (25K)	24 March 2001	24 March 2001	V. Park	All dry
T01-139	2118.7	3220.5	1060.7	61.0	C Pit	P	4.5"	Tercon (25K)	7 April 2001	7 April 2001	V. Park	All wet
T01-140	2114.6	3244.2	1060.8	61.0	C Pit	P	4.5"	Tercon (25K)	9 April 2001	10 April 2001	V. Park	All wet
T01-141	2133.0	3245.4	1061.0	61.0	C Pit	P	4.5"	Tercon (25K)	11 April 2001	11 April 2001	V. Park	All wet
T01-142	2111.2	3202.9	1060.7	61.0	C Pit	P	4.5"	Tercon (25K)	11 April 2001	11 April 2001	V. Park	All wet
T01-143	1838.9	3524.8	1186.5	30.5	Springer	P	4.5"	Tercon (25K)	12 April 2001	12 April 2001	V. Park	All dry
T01-144	1840.6	3540.8	1188.4	30.5	Springer	P	4.5"	Tercon (25K)	12 April 2001	12 April 2001	V. Park	All dry
T01-145	2138.2	3362.1	1059.4	45.7	C Pit - central	P	4.5"	Tercon (25K)	17 May 2001	17 May 2001	Not Logged	All wet; not logged; no chip trays
T01-146	2151.2	3360.3	1059.4	45.7	C Pit - central	P	4.5"	Tercon (25K)	17 May 2001	17 May 2001	Not Logged	All wet; not logged; no chip trays
T01-147	2158.1	3345.0	1059.9	45.7	C Pit - central	P	4.5"	Tercon (25K)	18 May 2001	18 May 2001	Not Logged	All wet; not logged; no chip trays
T01-148	2142.4	3345.9	1059.5	45.7	C Pit - central	P	4.5"	Tercon (25K)	18 May 2001	18 May 2001	Not Logged	All wet; not logged; no chip trays
T01-149	2144.6	3331.8	1059.8	45.7	C Pit - central	P	4.5"	Tercon (25K)	18 May 2001	18 May 2001	Not Logged	All wet; not logged; no chip trays

Appendix I												
2001 Drillhole Listing												
Hole ID	X	Y	Z	Length	Zone	Hole Type	Hole Size	Drilled By	Drill Start	Drill End	Logged By	Comments
T01-150	2156.0	3330.6	1059.6	45.7	C Pit - central	P	4.5"	Tercon (25K)	18 May 2001	18 May 2001	Not Logged	All wet; not logged; no chip trays
T01-151	2155.7	3318.8	1059.6	45.7	C Pit - central	P	4.5"	Tercon (25K)	21 May 2001	21 May 2001	Not Logged	All wet; not logged; no chip trays
T01-152	2140.8	3319.4	1059.8	45.7	C Pit - central	P	4.5"	Tercon (25K)	21 May 2001	21 May 2001	Not Logged	All wet; not logged; no chip trays
T01-153	2139.9	3304.4	1059.9	45.7	C Pit - central	P	4.5"	Tercon (25K)	21 May 2001	21 May 2001	Not Logged	All wet; not logged; no chip trays
T01-154	2167.8	3287.7	1059.9	45.7	C Pit - central	P	4.5"	Tercon (25K)	21 May 2001	21 May 2001	Not Logged	All wet; not logged; no chip trays
T01-155	2167.9	3301.7	1059.6	45.7	C Pit - central	P	4.5"	Tercon (25K)	22 May 2001	22 May 2001	Not Logged	All wet; not logged; no chip trays
T01-156	2168.7	3316.9	1059.6	45.7	C Pit - central	P	4.5"	Tercon (25K)	22 May 2001	22 May 2001	Not Logged	All wet; not logged; no chip trays
T01-157	1564.0	3552.8	1174.7	61.0	Springer	P	4.5"	Tercon (25K)	23 May 2001	23 May 2001	V. Park	All dry
T01-158	1574.7	3542.1	1175.4	61.0	Springer	P	4.5"	Tercon (25K)	24 May 2001	24 May 2001	V. Park	All dry
T01-159	1584.9	3535.3	1177.5	61.0	Springer	P	4.5"	Tercon (25K)	24 May 2001	25 May 2001	V. Park	All dry
T01-160	1603.8	3525.7	1180.4	61.0	Springer	P	4.5"	Tercon (25K)	25 May 2001	25 May 2001	V. Park	Wet from 53.3 m
T01-161	1623.2	3527.5	1182.0	61.0	Springer	P	4.5"	Tercon (25K)	25 May 2001	25 May 2001	V. Park	All dry
T01-162	1642.2	3530.1	1182.2	61.0	Springer	P	4.5"	Tercon (25K)	26 May 2001	26 May 2001	V. Park	All dry
T01-163	1652.6	3515.8	1181.9	61.0	Springer	P	4.5"	Tercon (25K)	26 May 2001	26 May 2001	V. Park	Wet from 45.7 m
T01-164	1548.9	3552.2	1168.2	61.0	Springer	P	4.5"	Tercon (25K)	27 May 2001	27 May 2001	V. Park	Wet from 53.3 m
T01-165	1557.8	3538.2	1170.2	61.0	Springer	P	4.5"	Tercon (25K)	27 May 2001	27 May 2001	V. Park	All dry
T01-166	1569.1	3528.2	1171.1	53.3	Springer	P	4.5"	Tercon (25K)	28 May 2001	28 May 2001	V. Park	All dry
T01-167	1583.7	3521.3	1173.2	53.3	Springer	P	4.5"	Tercon (25K)	28 May 2001	28 May 2001	V. Park	All dry
T01-168	1593.7	3514.9	1174.0	53.3	Springer	P	4.5"	Tercon (25K)	28 May 2001	28 May 2001	V. Park	All dry
T01-169	1542.7	3538.7	1164.5	53.3	Springer	P	4.5"	Tercon (25K)	29 May 2001	29 May 2001	V. Park	All dry
T01-170	1550.9	3522.4	1163.7	53.3	Springer	P	4.5"	Tercon (25K)	29 May 2001	29 May 2001	V. Park	
T01-171	1542.1	3561.8	1167.3	53.3	Springer	P	4.5"	Tercon (25K)	29 May 2001	30 May 2001	V. Park	
T01-31	1538.6	3808.0	1179.6	53.3	Springer	P	4.5"	Tercon (25K)	12 January 2001	12 January 2001	V. Park	Wet from 30.5 m; water injected (?) from 15.2 m
T01-32	1522.1	3807.7	1173.7	53.3	Springer	P	4.5"	Tercon (25K)	13 January 2001	13 January 2001	V. Park	All dry
T01-33	1533.0	3771.4	1177.4	68.6	Springer	P	4.5"	Tercon (25K)	14 January 2001	14 January 2001	V. Park	All dry
T01-34	1493.2	3754.7	1175.4	76.2	Springer	P	4.5"	Tercon (25K)	14 January 2001	15 January 2001	V. Park	Wet from 45.7 m
T01-35	1589.7	3718.8	1189.7	38.1	Springer	P	4.5"	Tercon (25K)	15 January 2001	15 January 2001	V. Park	All wet?; hole abandoned due to very poor, wet ground
T01-36	1561.0	3714.2	1188.4	76.2	Springer	P	4.5"	Tercon (25K)	19 January 2001	19 January 2001	V. Park	Wet from 53.3 m
T01-37	1754.9	3478.3	1176.4	76.2	Springer	P	4.5"	Tercon (25K)	20 January 2001	20 January 2001	V. Park	Wet from 53.3 m
T01-38	1675.7	3417.5	1168.6	76.2	Springer	P	4.5"	Tercon (25K)	20 January 2001	21 January 2001	V. Park	All dry
T01-39	1745.8	3441.4	1171.4	76.2	Springer	P	4.5"	Tercon (25K)	21 January 2001	22 January 2001	V. Park	Wet 22.9 - 38.1 m; wet from 61.0 m
T01-40	2314.4	3192.3	1080.3	21.3	C Pit - east SHG	P	4.5"	Tercon (40K)	16 January 2001	16 January 2001	V. Park	All wet
T01-41	2299.9	3193.1	1080.6	21.3	C Pit - east SHG	P	4.5"	Tercon (40K)	16 January 2001	16 January 2001	V. Park	All wet
T01-42	2316.9	3203.6	1080.3	21.3	C Pit - east SHG	P	4.5"	Tercon (40K)	16 January 2001	16 January 2001	V. Park	All wet
T01-43	2301.2	3206.1	1080.7	21.3	C Pit - east SHG	P	4.5"	Tercon (40K)	16 January 2001	16 January 2001	V. Park	All wet
T01-44	1667.2	3359.4	1150.7	76.2	Springer	P	4.5"	Tercon (25K)	23 January 2001	23 January 2001	V. Park	Damp from 61.0 m - water injection?
T01-45	1451.6	3847.3	1148.4	61.0	Springer	P	4.5"	Tercon (25K)	23 January 2001	24 January 2001	V. Park	Damp from 15.2 m; wet from 22.9 m
T01-46	1426.0	3828.4	1146.9	68.6	Springer	P	4.5"	Tercon (25K)	26 January 2001	27 January 2001	V. Park	Wet from 38.1 m
T01-47	1459.7	3821.9	1153.2	68.6	Springer	P	4.5"	Tercon (25K)	24 January 2001	26 January 2001	V. Park	Damp to 7.6 m; wet from 7.6 m
T01-48	1442.2	3782.0	1159.4	61.0	Springer	P	4.5"	Tercon (25K)	30 January 2001	30 January 2001	V. Park	Damp to 7.6 m

Appendix I												
2001 Drillhole Listing												
Hole ID	X	Y	Z	Length	Zone	Hole Type	Hole Size	Drilled By	Drill Start	Drill End	Logged By	Comments
T01-49	1481.5	3781.3	1164.4	61.0	Springer	P	4.5"	Tercon (25K)	30 January 2001	31 January 2001	V. Park	Damp to 7.6 m; wet from 30.5 m
T01-50	1512.1	3795.0	1169.9	61.0	Springer	P	4.5"	Tercon (25K)	31 January 2001	31 January 2001	V. Park	Damp from 53.3 m
T01-51	1415.4	3794.4	1154.1	61.0	Springer	P	4.5"	Tercon (25K)	1 February 2001	1 February 2001	V. Park	Wet from 53.3 m
T01-52	1426.1	3769.6	1159.2	61.0	Springer	P	4.5"	Tercon (25K)	2 February 2001	2 February 2001	V. Park	Damp from 53.3 m
T01-53	1478.6	3755.4	1172.4	61.0	Springer	P	4.5"	Tercon (25K)	3 February 2001	3 February 2001	V. Park	All dry
T01-54	1485.6	3754.9	1172.8	61.0	Springer	P	4.5"	Tercon (25K)	5 February 2001	6 February 2001	V. Park	All dry
T01-55	1626.1	3566.2	1198.4	61.0	Springer	P	4.5"	Tercon (25K)	6 February 2001	6 February 2001	V. Park	All dry
T01-56	1612.7	3586.4	1203.0	61.0	Springer	P	4.5"	Tercon (25K)	7 February 2001	7 February 2001	V. Park	All dry
T01-57	1589.0	3605.8	1198.9	61.0	Springer	P	4.5"	Tercon (25K)	7 February 2001	8 February 2001	V. Park	All dry
T01-58	1507.1	3658.0	1197.1	61.0	Springer	P	4.5"	Tercon (25K)	8 February 2001	8 February 2001	V. Park	All dry
T01-59	1541.1	3663.8	1202.1	61.0	Springer	P	4.5"	Tercon (25K)	8 February 2001	8 February 2001	V. Park	All dry
T01-60	1625.2	3615.4	1208.2	61.0	Springer	P	4.5"	Tercon (25K)	9 February 2001	9 February 2001	V. Park	All dry
T01-61	1515.7	3831.6	1172.3	61.0	Springer	P	4.5"	Tercon (25K)	10 February 2001	10 February 2001	V. Park	Wet from 53.3 m
T01-62	1476.1	3806.4	1159.2	61.0	Springer	P	4.5"	Tercon (25K)	10 February 2001	10 February 2001	V. Park	Wet from 7.6 m
T01-63	1480.1	3865.8	1152.5	61.0	Springer	P	4.5"	Tercon (25K)	11 February 2001	11 February 2001	V. Park	All wet
T01-64	1502.0	3903.7	1151.0	61.0	Springer	P	4.5"	Tercon (25K)	11 February 2001	12 February 2001	V. Park	Wet from 45.7 m
T01-65	1557.0	3993.1	1153.0	61.0	Springer	P	4.5"	Tercon (25K)	12 February 2001	12 February 2001	V. Park	Wet from 22.9 m
T01-66	3929.5	2202.8	1041.2	61.0	Southeast	P	4.5"	Tercon (25K)	14 February 2001	14 February 2001	V. Park	Wet from 45.7 m
T01-67	3957.3	2181.0	1122.5	61.0	Southeast	P	4.5"	Tercon (25K)	14 February 2001	14 February 2001	V. Park	Wet from 38.1 m
T01-68	3967.4	2157.8	1025.0	61.0	Southeast	P	4.5"	Tercon (25K)	15 February 2001	15 February 2001	V. Park	All wet
T01-69	3962.8	2128.4	1026.0	61.0	Southeast	P	4.5"	Tercon (25K)	15 February 2001	15 February 2001	V. Park	Wet from 30.5 m
T01-70	3886.6	2085.6	1050.9	61.0	Southeast	P	4.5"	Tercon (25K)	16 February 2001	16 February 2001	V. Park	All wet
T01-71	3906.5	2096.7	1036.3	61.0	Southeast	P	4.5"	Tercon (25K)	16 February 2001	16 February 2001	V. Park	Wet from 7.6 m
T01-72	1822.8	3379.8	1157.6	61.0	Springer	P	4.5"	Tercon (25K)	17 February 2001	17 February 2001	V. Park	All dry
T01-73	1608.7	3705.8	1194.6	61.0	Springer	P	4.5"	Tercon (25K)	18 February 2001	18 February 2001	V. Park	All dry
T01-74	1603.1	3734.1	1194.1	61.0	Springer	P	4.5"	Tercon (25K)	18 February 2001	18 February 2001	V. Park	Wet from 22.9 m
T01-75	1601.3	3772.2	1194.5	61.0	Springer	P	4.5"	Tercon (25K)	18 February 2001	19 February 2001	V. Park	All dry
T01-76	1449.5	3730.9	1170.0	61.0	Springer	P	4.5"	Tercon (25K)	19 February 2001	19 February 2001	V. Park	All dry
T01-77	1438.7	3696.2	1173.3	61.0	Springer	P	4.5"	Tercon (25K)	19 February 2001	19 February 2001	V. Park	All dry
T01-78	1444.6	3665.0	1176.4	61.0	Springer	P	4.5"	Tercon (25K)	20 February 2001	20 February 2001	V. Park	All dry
T01-79	1565.3	3726.6	1186.0	61.0	Springer	P	4.5"	Tercon (25K)	21 February 2001	21 February 2001	V. Park	Wet from 30.5 m
T01-80	1561.3	3741.3	1185.0	61.0	Springer	P	4.5"	Tercon (25K)	21 February 2001	21 February 2001	V. Park	Wet from 38.1 m
T01-81	1543.6	3744.0	1182.8	61.0	Springer	P	4.5"	Tercon (25K)	22 February 2001	22 February 2001	V. Park	Damp 30.5 - 38.1 m; wet from 53.3 m
T01-82	1878.3	3409.1	1162.2	61.0	Springer	P	4.5"	Tercon (25K)	22 February 2001	22 February 2001	V. Park	All dry
T01-83	1874.6	3456.4	1172.1	61.0	Springer	P	4.5"	Tercon (25K)	22 February 2001	23 February 2001	V. Park	All dry
T01-84	1903.4	3462.4	1166.3	61.0	Springer	P	4.5"	Tercon (25K)	23 February 2001	23 February 2001	V. Park	All dry
T01-85	2104.5	3971.0	1190.6	61.0	Bell	P	4.5"	Tercon (25K)	23 February 2001	23 February 2001	V. Park	All dry
T01-86	2103.9	3985.2	1190.3	61.0	Bell	P	4.5"	Tercon (25K)	24 February 2001	24 February 2001	V. Park	Wet from 45.7 m
T01-87	2089.9	3997.3	1190.3	61.0	Bell	P	4.5"	Tercon (25K)	24 February 2001	24 February 2001	V. Park	All dry
T01-88	2080.2	4006.7	1190.4	61.0	Bell	P	4.5"	Tercon (25K)	25 February 2001	25 February 2001	V. Park	All dry

## 2001 Drillhole Listing

Hole ID	X	Y	Z	Length	Zone	Hole Type	Hole Size	Drilled By	Drill Start	Drill End	Logged By	Comments
T01-89	2103.8	4003.0	1185.6	61.0	Bell	P	4.5"	Tercon (25K)	25 February 2001	25 February 2001	V. Park	Wet from 53.3 m
T01-90	1791.9	3361.5	1152.5	61.0	Springer	P	4.5"	Tercon (25K)	26 February 2001	26 February 2001	V. Park	Wet from 53.3 m
T01-91	1823.1	3359.8	1151.5	61.0	Springer	P	4.5"	Tercon (25K)	26 February 2001	27 February 2001	V. Park	All dry
T01-92	1804.6	3244.4	1127.1	61.0	Springer	P	4.5"	Tercon (25K)	27 February 2001	27 February 2001	V. Park	Wet from 30.5 m
T01-93	1854.5	3193.6	1130.8	61.0	Springer	P	4.5"	Tercon (25K)	27 February 2001	27 February 2001	V. Park	Wet from 38.1 m
T01-94	1919.0	3171.1	1139.9	61.0	Springer	P	4.5"	Tercon (25K)	27 February 2001	27 February 2001	V. Park	All dry
T01-95	1909.4	3308.2	1145.8	61.0	Springer	P	4.5"	Tercon (25K)	27 February 2001	27 February 2001	V. Park	All dry
T01-96	1872.1	3345.0	1151.3	61.0	Springer	P	4.5"	Tercon (25K)	1 March 2001	1 March 2001	V. Park	All dry
T01-97	1352.6	3672.3	1149.6	61.0	Springer	P	4.5"	Tercon (25K)	1 March 2001	1 March 2001	V. Park	Damp to 15.2 m
T01-98	1394.2	3633.0	1158.1	61.0	Springer	P	4.5"	Tercon (25K)	2 March 2001	2 March 2001	V. Park	All dry
T01-99	1463.0	3624.5	1174.6	61.0	Springer	P	4.5"	Tercon (25K)	3 March 2001	3 March 2001	V. Park	All dry

**APPENDIX 2**

**APPLICABLE EXPENDITURES FOR ASSESSMENT CREDITS**

Mt. Polley Mine						
2001 Program Expenditures	Work Approval NO	2001-1101163-9045			Totals	
Drilling and Geology						
Diamond Drilling (6,696 m)		6,696.0	meters @	52.6	per meter	\$352,209.60
Percussion Drilling (9421.4 m)	Drill 5	1,194.3	meters @	16.5	per meter	\$19,705.95
	Tercon	8,227.1	meters @	17.85	per meter	\$146,853.74
Bulldozer/Excavator		211.0	hours @	120	per hour	\$25,320.00
Assaying	In House	3,900.0	samples @	8.5	per sample	\$33,150.00
	Bondar	700.0	samples @	27	per sample	\$18,900.00
Personnel						
	Geologist - V. Park	42.0	days @	350	per day	\$14,700.00
	Geologist - G. Gillstrom	12.0	days @	350	per day	\$4,200.00
	Geologist - C. Wild	28.0	days @	300	per day	\$8,400.00
	Sampler - G. McMahn	60.0	days @	150	per day	\$9,000.00
	Sampler - R. Ney	35.0	days @	150	per day	\$5,250.00
Reporting, Maps, etc.	V. Park	8.0	days @	300	per day	\$2,400.00
Room and Board						
	Morehead Lake Resort	35.0	days @	75	per day	\$2,625.00
	Fraser Inn	1.0	days @	80	per day	\$80.00
Transportation						
	Airfare - Vancouver to Williams Lake, return					\$900.00
Miscellaneous						
	Supplies, saw blades, etc.					\$3,400.00
	Travel expenses					\$400.00
					GST not included	
					Totals	\$647,494.29

### 2001 Drilling Totals

Area	Percussion						Core		All Drilling Total	
	Tercon		Svedala (Drill 5)		Total		# of holes	Meterage	# of holes	Meterage
	# of holes	Meterage	# of holes	Meterage	# of holes	Meterage				
Bell Pit	5	305.0	0	0	5	305.0	0	0.0	5	305.0
Cariboo Pit	2	877.6	0	0	20	877.6	10	512.2	30	1389.8
Southeast Zone	6	366.0	0	0	6	366.0	0	0.0	6	366.0
Springer Zone	110	6678.5	29	1194.3	139	7872.8	31	6183.8	170	14056.6
<b>All Areas</b>	<b>123</b>	<b>8227.1</b>	<b>29</b>	<b>1194.3</b>	<b>170</b>	<b>9421.4</b>	<b>41</b>	<b>6696</b>	<b>211</b>	<b>16117.4</b>

**APPENDIX 3a**  
**ANALYTICAL PROCEDURES**

# MOUNT POLLEY MINING CORPORATION

## MOUNT POLLEY MINE

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

**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.  $\text{HNO}_3$  and conc.  $\text{HCl}$  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.



# MOUNT POLLEY MINING CORPORATION

## MOUNT POLLEY MINE

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

PAGE 2 / 6  
MPPM 1900

### 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 ( $KNO_3$ ), technical.
5. Borax, anhydrous sodium tetra-borate, technical.
6. Soda Ash, anhydrous sodium carbonate, technical.
7. Litharge, lead monoxide, technical.
8. Silica ( $SiO_2$ ).
9. Flour, plain.
10. Silver nitrate ( $AgNO_3$ ), 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 inquant 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.

# MOUNT POLLEY MINING CORPORATION

## MOUNT POLLEY MINE

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

**PAGE 3 / 6**  
**MPPM 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 digester 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 digester 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 → 1000 mls
1.00 ppm:	10 mls of 100 ppm Au + 100 mls HNO <sub>3</sub> + 100 mls HCl → 1000 mls
2.00 ppm:	20 mls of 100 ppm Au + 100 mls HNO <sub>3</sub> + 100 mls HCl → 1000 mls
10 ppm:	10 mls of 1000 ppm Au + 100 mls HNO <sub>3</sub> + 100 mls HCl → 1000 mls
20 ppm:	20 mls of 1000 ppm Au + 100 mls HNO <sub>3</sub> + 100 mls HCl → 1000 mls

# MOUNT POLLEY MINING CORPORATION

## MOUNT POLLEY MINE

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

PAGE 4 / 6  
 MPPM 1900

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

### A. FUSION

DEFECT	POSSIBLE CAUSE	REMEDY
excessive viscosity, thick slag	low finish temp., excess of acid fluxes	increase temp., less silica and borax, more litharge and soda
undecomposed or insoluble slag components	fusion time too short, insufficient acid fluxes, insufficient flux or specified material	fuse longer, add extra flux or silica or 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 $Fe_3O_4$ between slag and lead, very high sulphides	reduce sample size, fuse longer, add nitre
small button	slag too acidic, excessive nitre, insufficient flour	decrease silica and increase litharge, decrease nitre, add flour
large button	excessive litharge in flux, sample contains sulphides or organics (soils)	decrease litharge, add nitre
hard or brittle button	litharge in button, very high Au (>1%), base metals in button, button contains sulphides (dark grey in colour)	use higher fusion temp, decrease sample weight/increase litharge, 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 (assaying carbon)	crucibles too worn, excess of basic fluxes, lack of acidic fluxes	discard worn crucibles, decrease litharge and soda, increase silica and borax, increase sample size or add silica
excessive frothing or overflowing during fusion	excessive flux or sample for the crucible, excessive nitre	decrease flux and sample charges, decrease nitre

**MOUNT POLLEY MINING CORPORATION**  
**MOUNT POLLEY MINE**

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

**PAGE 5 / 6**  
**MPPM 1900**

**B. CUPELLATION**

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

**MOUNT POLLEY MINING CORPORATION  
MOUNT POLLEY MINE**

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

**PAGE 6 / 6  
MPPM 1900**

---

**CALCULATIONS:**

ppm in sample =  $\frac{\text{AA reading} \times \text{sample vol. (mls)}}{\text{sample wt. (g)}}$

**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

# MOUNT POLLEY MINING CORPORATION

## MOUNT POLLEY MINE

### DETERMINATION OF OXIDE COPPER IN MINE SAMPLES AND MILL HEADS AND TAILS

ISSUE DATE: 29 NOVEMBER 2000

PAGE 1 / 2  
MPPM 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 ( $H_2SO_4$ ).
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:

	Cu
Lamp Current (mA)	15
Slit Width (nm)	0.2
Wavelength (nm)	324.7
Background Correction	Off

5. Record all results on the appropriate worksheet.

# MOUNT POLLEY MINING CORPORATION

## MOUNT POLLEY MINE

DETERMINATION OF OXIDE COPPER IN MINE SAMPLES AND MILL  
HEADS AND TAILS

ISSUE DATE: 29 NOVEMBER 2000

PAGE 1 / 2

MPPM 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 → 1000 mls  
10 ppm: 10 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl → 1000 mls  
15 ppm: 15 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl → 1000 mls  
20 ppm: 20 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl → 1000 mls  
30 ppm: 30 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl → 1000 mls  
50 ppm: 50 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl → 1000 mls

### CALCULATIONS:

ppm in sample = 
$$\frac{\text{AA reading} \times \text{sample vol. (mls)} \times \text{dilution factor}}{\text{sample wt. (g)}}$$

% in sample = 
$$\frac{\text{ppm}}{10,000}$$

### REPORTING OF RESULTS:

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

# MOUNT POLLEY MINING CORPORATION

## MOUNT POLLEY MINE

DETERMINATION OF TOTAL COPPER AND IRON IN MINE SAMPLES AND  
MILL HEADS AND TAILS

PAGE 1 / 2

ISSUE DATE: 29 NOVEMBER 2000

MPPM 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 ( $\text{HNO}_3$ ).
4. Place on the digester block and allow the samples to come to a boil for 15 minutes.
5. Once digestion is complete remove from digester block and allow to cool.
6. Add 4 mls of hydrochloric acid (HCl) and digest for a further 15 minutes.
7. Remove from digester 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



# MOUNT POLLEY MINING CORPORATION

## MOUNT POLLEY MINE

**DETERMINATION OF TOTAL COPPER AND IRON IN MINE SAMPLES AND  
MILL HEADS AND TAILS.**

**ISSUE DATE: 29 NOVEMBER 2000**

**PAGE 2 / 2**

**MPPM 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 → 1000 mls  
10 ppm: 10 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl → 1000 mls  
15 ppm: 15 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl → 1000 mls  
20 ppm: 20 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl → 1000 mls  
30 ppm: 30 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl → 1000 mls  
50 ppm: 50 mls each of 1000 ppm Cu and Fe + 50 mls HNO<sub>3</sub> + 100 mls HCl → 1000 mls

### CALCULATIONS:

$$\text{ppm in sample} = \frac{\text{AA reading} \times \text{sample vol. (mls)} \times \text{dilution factor}}{\text{sample wt. (g)}}$$

$$\% \text{ in sample} = \frac{\text{ppm}}{10,000}$$

### 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 %

APPENDIX 3b

2001 CORE CHECK ASSAY LISTING

2001 Core Check Assay Result Listing

Hole ID	From	To	Interval	Tag ID	Original Sample				Duplicate Sample				
					TCu (%)	CuNS (%)	Au (gpt)	Fe (%)	Tag ID	TCu (%)	CuNS (%)	Au (gpt)	Fe (%)
MP-01-37	28.3	30.9	2.6	73137	0.070	0.007	0.06	4.98	73138	0.069	0.005	0.07	4.55
MP-01-37	46.3	47.3	1.0	73149	0.205	0.013	0.16	3.52	73150	0.215	0.013	0.19	3.56
MP-01-37	60.4	61.6	1.2	72611	1.568	0.094	2.82	8.71	72612	1.774	0.090	3.06	8.32
MP-01-38	25.5	26.3	0.8	73531	0.388	0.287	0.38	4.22	73532	0.437	0.370	0.47	4.91
MP-01-38	39.1	40.9	1.8	73543	0.106	0.010	0.09	4.47	73544	0.095	0.015	0.04	3.76
MP-01-38	51.7	52.3	0.6	73553	0.221	0.059	0.49	3.51	73554	0.319	0.055	0.29	3.68
MP-01-38	64.2	65.8	1.6	73563	0.063	0.005	0.11	3.01	73564	0.067	0.004	0.08	3.04
MP-01-39	26.5	28.6	2.1	73510	0.439	0.033	0.65	6.18	73511	0.439	0.025	0.55	4.21
MP-01-39	38.4	40.6	2.2	73519	0.079	0.039	0.09	5.45	73520	0.101	0.039	0.12	5.40
MP-01-40	17.9	18.9	1.0	73572	0.454	0.422	0.32	4.97	73573	0.473	0.376	0.29	4.43
MP-01-40	33.2	34.0	0.8	73584	1.043	0.604	1.84	4.45	73585	1.164	0.618	1.70	5.00
MP-01-40	53.5	54.5	1.0	73595	1.642	0.119	8.60	5.26	73596	1.711	0.103	9.10	4.90
MP-01-40	66.6	68.5	1.9	73603	0.762	0.101	2.16	3.97	73604	0.705	0.093	2.03	3.81
MP-01-40	86.0	87.5	1.5	73615	0.479	0.041	0.75	4.98	73616	0.000	0.000	0.00	0.00
MP-01-40	97.2	99.3	2.1	73624	0.674	0.055	0.84	4.56	73625	0.623	0.054	0.69	4.86
MP-01-40	115.9	118.0	2.1	73638	0.565	0.053	0.19	5.64	73639	0.516	0.052	0.20	5.72
MP-01-40	133.0	134.7	1.7	73650	0.193	0.033	0.08	6.06	73651	0.192	0.043	0.07	5.32
MP-01-40	149.7	151.2	1.5	72417	0.253	0.061	0.09	6.74	72418	0.263	0.064	0.11	6.18
MP-01-41	26.2	27.7	1.5	73655	0.265	0.072	0.32	3.49	73656	0.314	0.079	0.36	3.60
MP-01-41	44.4	46.4	2.0	73667	0.814	0.410	0.86	4.82	73668	0.836	0.355	0.90	4.38
MP-01-41	64.7	65.8	1.1	73679	0.467	0.433	0.38	5.24	73680	0.422	0.378	0.35	5.08
MP-01-41	82.2	84.1	1.9	73692	0.395	0.039	0.18	5.00	73693	0.426	0.044	0.21	5.44
MP-01-41	114.0	116.0	2.0	73709	0.101	0.013	0.12	5.86	73710	0.102	0.013	0.12	5.98
MP-01-41	136.0	138.0	2.0	73721	0.235	0.050	0.17	5.00	73722	0.182	0.037	0.17	4.56
MP-01-42	23.5	25.0	1.5	73749	1.166	1.024	1.73	4.05	73750	1.091	0.983	1.64	4.12
MP-01-42	41.7	43.1	1.4	73740	1.426	0.088	1.35	3.76	73751	1.559	0.098	1.64	4.64
MP-01-42	56.9	58.9	2.0	73760	0.435	0.315	0.57	8.61	73761	0.414	0.280	0.51	8.38
MP-01-42	76.0	78.0	2.0	73772	0.472	0.058	0.19	5.09	73773	0.476	0.055	0.23	4.94
MP-01-42	98.0	100.0	2.0	73784	0.089	0.006	0.02	4.49	73785	0.096	0.005	0.04	4.54
MP-01-42	122.0	124.0	2.0	73797	0.045	0.003	0.02	4.30	73798	0.040	0.002	0.01	4.52
MP-01-42	144.0	146.0	2.0	73809	0.125	0.003	0.03	5.38	73810	0.104	0.002	0.03	5.34
MP-01-42	156.0	158.0	2.0	73816	0.271	0.009	0.06	5.64	73817	0.255	0.008	0.06	6.12
MP-01-42	168.0	170.0	2.0	73823	0.355	0.026	0.13	5.80	73824	0.317	0.023	0.13	6.18
MP-01-42	190.0	192.0	2.0	73835	0.601	0.067	0.34	7.17	73836	0.601	0.051	0.35	6.73
MP-01-42	213.7	215.2	1.5	73848	1.002	0.067	1.25	6.01	73849	0.822	0.069	1.04	5.86
MP-01-42	232.4	235.0	2.6	73859	0.799	0.040	0.78	4.61	73860	1.591	0.037	1.00	8.61

2001 Core Check Assay Result Listing

Hole ID	From	To	Interval	Tag ID	Original Sample				Duplicate Sample				
					TCu (%)	CuNS (%)	Au (gpt)	Fe (%)	Tag ID	TCu (%)	CuNS (%)	Au (gpt)	Fe (%)
MP-01-42	254.8	257.0	2.2	73872	0.238	0.028	0.12	6.16	73873	0.254	0.032	0.11	6.08
MP-01-42	274.5	276.2	1.7	73883	0.168	0.008	0.09	5.13	73884	0.161	0.006	0.16	5.31
MP-01-43	21.6	23.2	1.6	73894	0.107	0.071	0.06	5.61	73895	0.090	0.062	0.05	5.58
MP-01-43	38.1	39.8	1.7	73905	0.086	0.075	0.08	2.59	73906	0.071	0.062	0.07	2.00
MP-01-43	53.9	56.2	2.3	73916	0.053	0.030	0.02	6.15	73917	0.054	0.030	0.02	6.03
MP-01-43	71.0	72.3	1.3	73927	0.038	0.022	0.03	4.54	73928	0.036	0.022	0.02	4.90
MP-01-43	88.0	90.5	2.5	73938	0.063	0.030	0.06	2.91	73939	0.063	0.032	0.07	2.82
MP-01-43	106.4	108.5	2.1	73949	0.525	0.426	0.21	5.91	73950	0.560	0.429	0.20	6.00
MP-01-43	125.2	126.8	1.6	73960	0.510	0.261	0.18	5.22	73961	0.553	0.289	0.19	4.74
MP-01-43	141.9	143.1	1.2	73971	0.490	0.396	0.26	6.12	73972	0.534	0.415	0.25	6.63
MP-01-43	158.6	160.4	1.8	73982	0.219	0.150	0.07	3.98	73983	0.218	0.127	0.07	4.32
MP-01-43	173.0	175.5	2.5	73993	0.071	0.059	0.01	6.31	73994	0.073	0.064	0.01	6.29
MP-01-43	189.4	191.1	1.7	74151	0.035	0.005	0.01	5.22	74152	0.032	0.005	0.01	5.15
MP-01-44	14.9	16.4	1.5	73344	0.195	0.151	0.07	3.91	73345	0.157	0.118	0.05	4.30
MP-01-44	34.0	36.0	2.0	73355	0.054	0.025	0.02	4.16	73356	0.056	0.026	0.02	4.42
MP-01-44	54.0	56.0	2.0	73366	0.481	0.072	0.14	4.35	73367	0.450	0.079	0.11	4.48
MP-01-44	73.0	74.6	1.6	73377	0.077	0.030	0.03	5.39	73378	0.077	0.032	0.04	5.52
MP-01-44	90.8	93.0	2.2	73388	0.282	0.183	0.17	3.31	73389	0.253	0.170	0.15	3.24
MP-01-44	108.3	110.1	1.8	73399	0.629	0.127	0.15	3.88	73400	0.660	0.103	0.16	3.92
MP-01-44	128.0	130.0	2.0	73410	0.123	0.082	0.03	3.65	73411	0.101	0.069	0.05	3.50
MP-01-44	144.5	146.1	1.6	73421	0.183	0.093	0.09	5.60	73422	0.244	0.117	0.13	4.97
MP-01-44	163.0	165.0	2.0	73432	0.163	0.094	0.09	3.86	73433	0.168	0.103	0.11	3.44
MP-01-44	182.3	184.0	1.7	73443	0.115	0.072	0.15	3.54	73444	0.118	0.073	0.14	3.48
MP-01-44	200.8	203.0	2.2	73454	0.096	0.039	0.05	4.90	73455	0.085	0.035	0.06	4.69
MP-01-45	24.1	26.2	2.1	74169	0.156	0.006	0.20	5.83	74170	0.144	0.008	0.18	5.95
MP-01-45	41.8	43.1	1.3	74180	0.139	0.016	0.10	6.40	74181	0.139	0.011	0.08	6.79
MP-01-45	57.4	58.7	1.3	74191	0.090	0.006	0.03	3.77	74192	0.101	0.006	0.03	3.60
MP-01-45	76.8	77.9	1.1	74202	0.025	0.001	0.02	4.00	74203	0.371	0.001	0.04	4.14
MP-01-45	92.5	94.0	1.5	74215	0.110	0.012	0.08	3.90	74216	0.113	0.011	0.09	3.94
MP-01-45	108.8	110.8	2.0	74226	0.114	0.004	0.06	5.27	74227	0.123	0.005	0.07	5.34
MP-01-45	125.3	126.3	1.0	74237	0.798	0.098	0.42	7.52	74238	0.393	0.050	0.22	8.21
MP-01-45	143.3	145.2	1.9	74248	0.233	0.081	0.25	6.52	74249	0.214	0.094	0.20	6.22
MP-01-45	163.0	164.3	1.3	73310	0.180	0.025	0.23	6.02	73311	0.168	0.028	0.22	5.73
MP-01-45	179.0	181.0	2.0	73321	0.008	0.001	0.01	5.08	73322	0.010	0.001	0.01	4.76
MP-01-45	196.9	199.1	2.2	73332	0.376	0.016	0.39	7.35	73333	0.376	0.016	0.39	7.35
MP-01-46	16.1	17.2	1.1	74090	0.575	0.054	0.91	3.87	74091	0.574	0.047	0.87	3.94

201 Core Check Assay Result Listing

Hole ID	From	To	Interval	Tag ID	Original Sample				Duplicate Sample				
					TCu (%)	CuNS (%)	Au (gpt)	Fe (%)	Tag ID	TCu (%)	CuNS (%)	Au (gpt)	Fe (%)
MP-01-46	33.3	35.3	2.0	74101	0.081	0.006	0.20	8.37	74102	0.084	0.009	0.25	7.92
MP-01-46	46.0	47.9	1.9	74109	0.244	0.025	0.56	10.20	74110	0.291	0.033	0.47	11.10
MP-01-47	12.1	13.3	1.2	74119	0.237	0.056	0.52	8.69	74120	0.220	0.049	0.47	8.61
MP-01-47	21.0	22.6	1.6	74127	0.153	0.007	0.22	8.77	74128	0.226	0.011	0.41	8.11
MP-01-47	35.1	36.7	1.6	74138	0.200	0.031	0.27	6.11	74139	0.204	0.030	0.36	5.90
MP-01-48	21.8	23.8	2.0	74033	0.122	0.004	0.39	8.08	74034	0.089	0.004	0.22	8.12
MP-01-48	37.0	38.0	1.0	74044	0.273	0.012	0.45	4.28	74045	0.245	0.011	0.45	4.18
MP-01-49	27.7	29.9	2.2	74010	0.259	0.008	0.54	6.01	74011	0.245	0.009	0.60	6.60
MP-01-49	47.0	49.0	2.0	74021	0.005	0.001	0.01	5.81	74022	0.005	0.001	0.01	5.63
MP-01-50	19.5	21.0	1.5	74060	0.251	0.007	0.48	4.60	74061	0.271	0.008	0.52	4.37
MP-01-50	37.7	39.3	1.6	74072	0.217	0.156	0.51	5.93	74073	0.211	0.154	0.45	5.67
MP-01-51	29.0	31.0	2.0	73467	0.167	0.021	0.07	6.78	73468	0.160	0.014	0.07	6.44
MP-01-51	49.0	51.0	2.0	74353	0.536	0.013	0.94	6.81	74354	0.478	0.012	0.72	6.72
MP-01-51	68.8	71.0	2.2	74364	0.096	0.003	0.09	5.36	74365	0.096	0.002	0.10	5.43
MP-01-51	88.9	91.0	2.1	74375	0.167	0.022	0.26	4.52	74376	0.152	0.016	0.26	4.35
MP-01-51	106.6	108.6	2.0	74386	0.338	0.238	0.24	6.90	74387	0.343	0.235	0.70	7.15
MP-01-51	124.2	126.0	1.8	74397	0.215	0.112	0.15	4.68	74398	0.195	0.101	0.11	4.59
MP-01-51	144.0	146.1	2.1	74408	0.696	0.482	0.38	4.76	74409	0.656	0.484	0.38	4.64
MP-01-51	164.9	165.9	1.0	74419	0.663	0.041	0.54	5.22	74420	0.817	0.043	0.76	5.21
MP-01-51	182.0	184.0	2.0	74455	0.380	0.030	0.20	6.18	74456	0.430	0.040	0.26	6.10
MP-01-52	24.0	26.0	2.0	74475	0.078	0.022	0.07	3.07	72626	0.090	0.028	0.08	2.70
MP-01-52	43.0	44.5	1.5	72636	0.457	0.236	0.82	4.33	72637	0.444	0.221	0.85	4.60
MP-01-52	61.9	63.9	2.0	72647	0.524	0.049	0.44	4.75	72648	0.531	0.040	0.45	4.75
MP-01-52	82.6	84.6	2.0	72658	0.196	0.075	0.09	3.96	72659	0.188	0.062	0.08	3.90
MP-01-52	102.0	104.0	2.0	72669	0.388	0.073	0.33	6.50	72670	0.313	0.063	0.27	6.44
MP-01-52	121.0	122.7	1.7	72680	0.100	0.007	0.06	6.32	72681	0.122	0.010	0.11	6.33
MP-01-52	140.0	142.0	2.0	72691	0.241	0.028	0.19	4.87	72962	0.659	0.286	1.04	5.66
MP-01-52	158.8	160.3	1.5	73027	0.235	0.042	0.21	3.91	73028	0.234	0.042	0.22	4.19
MP-01-52	173.7	175.6	1.9	73038	0.211	0.036	0.17	2.04	73039	0.214	0.037	0.17	2.06
MP-01-52	190.8	191.8	1.0	73049	0.553	0.079	0.58	6.00	73050	0.547	0.071	0.54	5.03
MP-01-53	21.0	23.2	2.2	74284	0.519	0.395	0.96	6.55	74285	0.548	0.423	0.87	6.96
MP-01-53	40.0	42.0	2.0	74295	0.039	0.026	0.02	3.05	74296	0.047	0.033	0.02	3.11
MP-01-53	58.2	59.9	1.7	73156	0.041	0.008	0.02	3.78	73157	0.030	0.007	0.02	3.84
MP-01-53	77.7	79.1	1.4	73167	0.014	0.002	0.01	3.45	73168	0.015	0.002	0.01	3.65
MP-01-53	96.0	97.8	1.8	72553	0.043	0.002	0.02	5.64	72554	0.033	0.005	0.01	4.81
MP-01-53	112.0	114.0	2.0	72566	0.577	0.046	0.37	8.08	72567	0.564	0.028	0.28	8.48

## 2001 Core Check Assay Result Listing

Hole ID	From	To	Interval	Tag ID	Original Sample				Duplicate Sample				
					TCu (%)	CuNS (%)	Au (gpt)	Fe (%)	Tag ID	TCu (%)	CuNS (%)	Au (gpt)	Fe (%)
MP-01-53	127.3	129.8	2.5	72827	0.354	0.095	0.21	4.47	72828	0.419	0.097	0.36	4.97
MP-01-53	152.0	152.8	0.8	72842	0.023	0.004	0.01	5.92	72841	0.371	0.031	0.57	6.11
MP-01-53	177.5	179.0	1.5	72860	0.624	0.032	0.53	9.14	72861	0.678	0.035	0.60	10.40
MP-01-54	47.0	49.0	2.0	72899	0.298	0.264	0.15	5.14	72900	0.291	0.218	0.11	5.01
MP-01-54	79.7	81.7	2.0	72919	0.314	0.110	0.37	5.75	72920	0.296	0.110	0.36	5.83
MP-01-54	117.0	119.0	2.0	72939	0.051	0.030	0.02	2.32	72940	0.056	0.032	0.01	2.14
MP-01-54	150.0	152.0	2.0	72959	0.337	0.264	0.46	5.85	72960	0.331	0.257	0.17	6.35
MP-01-54	186.0	188.0	2.0	72979	0.119	0.006	0.13	6.79	72980	0.087	0.007	0.09	6.94
MP-01-55	29.4	31.0	1.6	72999	0.588	0.541	1.21	6.77	73000	0.000	0.000	0.00	0.00
MP-01-55	63.0	64.9	1.9	73018	0.154	0.090	0.32	3.27	73019	0.156	0.084	0.42	3.30
MP-01-55	89.0	91.0	2.0	73059	0.098	0.019	0.06	6.76	73060	0.104	0.017	0.06	7.77
MP-01-55	127.3	129.3	2.0	73079	0.072	0.010	0.09	2.63	73080	0.068	0.009	0.08	2.78
MP-01-55	168.0	170.0	2.0	73099	0.049	0.010	0.07	2.70	73100	0.000	0.000	0.00	0.00
MP-01-56	28.0	31.0	3.0	73119	0.017	0.010	0.02	5.40	73120	0.000	0.000	0.00	0.00
MP-01-56	77.4	80.0	2.6	73239	0.024	0.010	0.03	4.20	73240	0.000	0.000	0.00	0.00
MP-01-56	110.0	111.5	1.5	73259	0.439	0.010	0.12	5.55	73260	0.000	0.000	0.00	0.00
MP-01-56	138.5	140.0	1.5	73279	0.185	0.020	0.11	5.00	73280	0.000	0.000	0.00	0.00
MP-01-56	167.0	168.5	1.5	73299	0.966	0.210	0.80	5.35	73300	0.000	0.000	0.00	0.00
MP-01-56	224.0	225.5	1.5	74339	0.335	0.010	0.10	4.05	74340	0.000	0.000	0.00	0.00
MP-01-56	245.0	246.5	1.5	74479	0.331	0.010	0.22	3.05	74480	0.000	0.000	0.00	0.00
MP-01-57	36.0	38.0	2.0	74499	0.444	0.030	0.32	5.75	74500	0.000	0.000	0.00	0.00
MP-01-57	74.0	76.0	2.0	72369	0.334	0.160	0.42	4.60	72370	0.000	0.000	0.00	0.00
MP-01-57	112.0	114.0	2.0	72389	0.349	0.100	0.34	6.85	72390	0.000	0.000	0.00	0.00
MP-01-57	140.0	141.2	1.2	72429	0.295	0.041	0.21	5.75	72430	0.252	0.025	0.15	5.85
MP-01-57	172.0	174.0	2.0	72449	0.131	0.096	0.21	1.79	72450	0.140	0.125	0.22	1.65
MP-01-57	210.0	212.1	2.1	72469	0.197	0.006	0.32	4.38	72470	0.218	0.005	0.29	4.13
MP-01-58	42.0	44.0	2.0	72489	0.366	0.061	0.18	5.78	72490	0.339	0.055	0.15	5.84
MP-01-58	80.0	82.0	2.0	72509	1.193	0.059	1.67	3.57	72510	1.093	0.066	1.32	4.03
MP-01-58	118.0	120.0	2.0	72529	0.843	0.070	0.64	6.37	72530	0.853	0.054	0.72	5.38
MP-01-58	155.2	156.8	1.6	72549	0.043	0.019	0.36	2.07	72550	0.077	0.026	0.69	2.13
MP-01-58	181.5	183.0	1.5	72589	0.226	0.028	0.34	4.57	72890	0.061	0.033	0.02	3.48
MP-01-59	3.4	5.0	1.6	72709	0.131	0.081	0.04	4.97	72710	0.143	0.082	0.04	5.13
MP-01-59	40.0	42.0	2.0	72729	0.642	0.045	0.22	4.91	72730	0.692	0.035	0.24	4.95
MP-01-59	78.0	80.0	2.0	72749	0.549	0.046	0.24	6.54	72750	0.499	0.042	0.20	6.10
MP-01-59	116.0	118.0	2.0	72769	0.458	0.030	0.32	4.64	72770	0.371	0.032	0.27	4.59
MP-01-59	153.1	153.8	0.7	72789	0.016	0.002	0.01	5.83	72790	0.012	0.002	0.01	5.89

2001 Core Check Assay Result Listing

Hole ID	From	To	Interval	Tag ID	Original Sample				Duplicate Sample				
					TCu (%)	CuNS (%)	Au (gpt)	Fe (%)	Tag ID	TCu (%)	CuNS (%)	Au (gpt)	Fe (%)
MP-01-59	190.0	192.0	2.0	72809	0.243	0.018	0.11	3.63	72810	0.267	0.020	0.11	3.68
MP-01-60	39.8	42.0	2.2	74509	0.074	0.019	0.05	2.85	74510	0.049	0.022	0.05	3.15
MP-01-60	78.0	79.9	1.9	74529	0.104	0.024	0.17	5.26	74530	0.284	0.128	0.36	4.27
MP-01-60	116.0	118.0	2.0	74549	0.530	0.034	1.26	5.14	74550	0.554	0.040	1.29	4.80
MP-01-60	154.0	156.0	2.0	74569	0.553	0.103	0.80	5.96	74570	0.546	0.113	0.69	6.12
MP-01-60	192.0	194.0	2.0	74589	0.382	0.181	0.28	3.91	74590	0.387	0.190	0.29	3.92
MP-01-61	34.0	36.0	2.0	74609	0.225	0.188	0.26	5.64	74610	0.233	0.196	0.23	5.89
MP-01-61	72.0	74.0	2.0	74629	0.136	0.103	0.06	5.99	74630	0.141	0.111	0.05	5.78
MP-01-61	109.5	111.4	1.9	74649	0.280	0.147	0.26	2.65	74650	0.281	0.169	0.23	3.03
MP-01-61	144.8	146.6	1.8	74669	0.210	0.028	0.26	5.31	74670	0.213	0.036	0.28	5.49
MP-01-61	182.0	184.0	2.0	74689	0.040	0.010	0.08	1.52	74690	0.037	0.011	0.06	1.55
MP-01-62	22.5	24.5	2.0	74709	0.250	0.125	0.13	5.91	74710	0.241	0.116	0.14	6.18
MP-01-62	61.5	63.5	2.0	74729	0.280	0.237	0.10	4.49	74730	0.318	0.266	0.12	5.01
MP-01-62	99.0	101.0	2.0	74749	0.481	0.051	0.19	5.57	74750	0.478	0.059	0.18	5.48
MP-01-62	137.0	139.0	2.0	74769	0.665	0.054	2.92	5.15	74770	0.657	0.053	2.62	5.21
MP-01-62	175.0	177.0	2.0	74789	0.250	0.042	0.12	4.46	74790	0.247	0.037	0.12	4.57
MP-01-63	15.5	17.3	1.8	74809	0.136	0.094	0.09	8.56	74810	0.141	0.106	0.09	8.64
MP-01-63	55.2	57.5	2.3	74829	0.251	0.161	0.24	6.35	74830	0.299	0.194	0.32	6.58
MP-01-63	92.0	94.0	2.0	74849	0.269	0.033	0.29	6.55	74850	0.264	0.057	0.26	6.58
MP-01-63	130.0	132.0	2.0	74869	0.482	0.248	0.25	5.84	74870	0.413	0.194	0.22	5.49
MP-01-63	168.0	170.0	2.0	74889	0.132	0.035	0.05	7.19	74890	0.000	0.000	0.00	0.00
MP-01-64	18.0	20.0	2.0	74909	0.133	0.098	0.12	4.03	74910	0.126	0.094	0.07	4.04
MP-01-64	53.0	55.0	2.0	74929	0.223	0.133	0.01	3.61	74930	0.224	0.132	0.02	3.25
MP-01-64	91.0	93.0	2.0	74949	0.337	0.216	0.24	5.53	74950	0.389	0.228	0.30	5.70
MP-01-64	129.0	131.0	2.0	74969	0.252	0.024	0.14	5.77	74970	0.240	0.022	0.11	5.98
MP-01-64	167.0	169.0	2.0	74989	0.333	0.038	0.14	6.58	74990	0.311	0.034	0.12	6.48
MP-01-65	26.8	29.0	2.2	75020	0.230	0.185	0.17	7.27	75021	0.000	0.000	0.00	0.00
MP-01-65	61.4	63.1	1.7	75040	0.490	0.425	0.28	6.94	75041	0.000	0.000	0.00	0.00
MP-01-65	98.0	100.0	2.0	75060	0.560	0.459	0.16	5.62	75061	0.000	0.000	0.00	0.00
MP-01-65	134.0	136.0	2.0	75080	0.140	0.036	0.06	8.48	75081	0.000	0.000	0.00	0.00
MP-01-65	170.9	173.3	2.4	75100	0.020	0.008	0.02	6.49	75101	0.000	0.000	0.00	0.00
MP-01-66	7.0	9.0	2.0	75120	0.370	0.300	0.13	7.99	75121	0.000	0.000	0.00	0.00
MP-01-66	45.1	47.0	1.9	75140	0.210	0.177	0.07	7.11	75141	0.000	0.000	0.00	0.00
MP-01-66	78.0	80.0	2.0	75160	0.090	0.021	0.08	5.80	75161	0.000	0.000	0.00	0.00
MP-01-66	113.7	115.4	1.7	75180	0.040	0.021	0.01	4.16	75181	0.000	0.000	0.00	0.00
MP-01-66	144.7	146.5	1.8	75200	0.340	0.193	0.20	5.26	75201	0.000	0.000	0.00	0.00

## 2001 Core Check Assay Result Listing

Hole ID	From	To	Interval	Tag ID	Original Sample				Duplicate Sample				
					TCu (%)	CuNS (%)	Au (gpt)	Fe (%)	Tag ID	TCu (%)	CuNS (%)	Au (gpt)	Fe (%)
MP-01-66	182.0	184.0	2.0	75220	0.080	0.029	0.04	5.50	75221	0.000	0.000	0.00	0.00
MP-01-67	23.4	25.0	1.6	75240	0.299	0.228	0.15	5.66	75241	0.376	0.307	0.14	5.49
MP-01-67	60.0	62.0	2.0	75260	0.103	0.078	0.03	6.16	75261	0.120	0.089	0.03	6.06
MP-01-67	98.0	100.0	2.0	75280	0.027	0.017	0.01	5.38	75281	0.033	0.021	0.01	5.65
MP-01-67	133.0	135.0	2.0	75300	0.067	0.007	0.05	4.79	75301	0.067	0.007	0.05	4.79
MP-01-67	171.0	173.0	2.0	75320	0.405	0.017	0.30	4.96	75321	0.446	0.026	0.33	3.95
MP-01-67	206.5	208.2	1.7	75340	0.112	0.005	0.09	2.74	75341	0.143	0.005	0.13	3.49
MP-01-68	32.0	34.0	2.0	75360	0.240	0.166	0.05	6.40	75361	0.259	0.180	0.05	6.44
MP-01-68	70.0	72.0	2.0	75380	0.241	0.029	0.10	4.02	75381	0.237	0.034	0.08	3.79
MP-01-68	108.0	110.0	2.0	75400	1.022	0.606	0.49	3.77	75401	1.115	0.660	0.57	4.16



**APPENDIX 4**

**MOUNT POLLEY MINE GEOLOGICAL CHARACTERIZATION  
Cariboo and Bell**

---

## MOUNT POLLEY MINING CORPORATION

---

**TO:** GREG SMYTH  
**FROM:** GREG GILLSTROM  
**SUBJECT:** GEOLOGY SECTION OF M - 200  
**DATE:** OCT 10, 2000  
**CC:** 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 **Central 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 structurally controlled block of breccia in the northeast section of the Bell Zone. This faulted zone has been erroneously termed as a 'phyllitic 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 breccia 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 (13 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

- Evans A.M. (1980) An introduction to Ore Geology, *Blackwell Scientific Publications, Oxford*
- Hollister V.F. (1975) An Appraisal of the nature of some Porphyry Copper Deposits. *Sci. Engng. &*, 225-233.
- Lowell J.D. & Guilbert J.M. (1970) Lateral and Vertical Alteration Mineralization Zoning in Porphyry Ore Deposits. *Econ. Geol.*, 65, 373-408.

**APPENDIX 5**

**PETROGRAPHIC STUDY OF NORTH SPRINGER MINERALIZED BRECCIA**

*Harris*  
EXPLORATION  
SERVICES

MINERALOGY AND GEOCHEMISTRY

534 ELLIS STREET, NORTH VANCOUVER, B.C., CANADA V7H 2G6

TELEPHONE (604) 929-5867

Report for: Mount Polley Mining Corp.,  
Box 12,  
LIKELY, B.C.  
VOL 1N0

Report 01-35

April 12, 2001

PETROGRAPHIC EXAMINATION OF SAMPLES FROM  
THE SPRINGER PIT

Introduction:

4 core samples, numbered as below, were submitted by Todd Morgan for Greg Gillstrom. Typical portions of each core piece were prepared for examination as polished thin sections (slide numbers as shown).

Sample	Slide No.
MP 40-1	01-919
MP 40-3	01-920
MP 42-2	01-921
MP 52-2	01-922

Summary:

These four rocks are all of similar general lithology, being rather fine grained monzonites of intrusive aspect. They are composed dominantly of intergrowths of fresh to mildly altered K-feldspar and plagioclase, typically in a grain size range of about 0.1 - 1.0 mm.

Primary mafics are pyroxene, minor biotite, and magnetite. These total about 6% in samples MP 40-1 and 42-2, which are notably leucocratic. In MP 40-3 they total about 22% and in 52-2 about 13%.

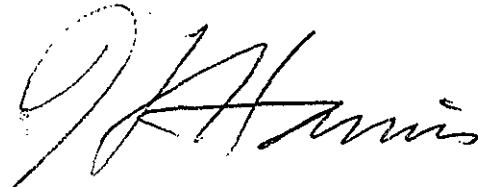
A distinctive suite of secondary (deuteric?) minerals includes probable prehnite (dominant) plus zeolites, carbonate and brown garnet. These total an estimated 2-7% in the first three samples, but are essentially absent in MP 52-2. The magnetite occurs in part as veniform (microstructurally controlled?) segregations but, overall, these rocks appear only weakly fractured.

Minor proportions of disseminated Cu sulfides are present in all four samples. In MP 40-1 these are chalcopyrite, more or less strongly oxidized (altered to limonite and occasional malachite). MP 40-3 contains only low levels of sulfides (estimated 0.5%). These consist of disseminated bornite and chalcopyrite of small mean particle size (typically ranging from 2 - 150 microns). MP 42-2 contains about 3% chalcopyrite and traces of bornite, mainly in the form of segregations up to 1 mm or so in size. MP 52-2 contains an estimated 1.5% of chalcopyrite as fine disseminations similar in grain size to those in MP 40-3, but of greater abundance.

The sulfides in these rocks typically occur in randomly disseminated mode, with minimal structural control and little consistency in their association with particular host rock minerals. A minor proportion of them occur in a very low particle size range which may prove unrecoverable.

The simple mineralogy, and the total absence of pyrite, are favourable features with respect to metallurgical treatment.

Individual petrographic descriptions and a set of illustrative photomicrographs are attached.

A handwritten signature in cursive script, appearing to read 'J.F. Harris'.

J.F. Harris Ph.D.

## PHOTOMICROGRAPHS

Photos are by reflected light except where otherwise stated

### SAMPLE MP 40-1

Neg. 500-14: Scale 1 cm = 42 microns. Illustrates the partially oxidized state of the chalcopyrite (yellow) in this sample. Grey rims are limonite.

Neg. 500-15: Same field as 500-14, but by transmitted light. The limonite ranges in appearance from near opaque (black) to translucent red-brown. The speckled matrix is feldspar. White grains are pyroxene and prehnite.

Neg. 500-17: Transmitted light. Scale 1 cm = 85 microns. Shows limonite pseudomorphs (red-brown) with small relict cores of chalcopyrite (black). Field includes a pocket of malachite (green to blackish green; upper left) fringed by prismatic grains of prehnite. White veinlet at lower right is zeolite.

Neg. 500-18: Reflected light. Scale 1 cm = 85 microns. Shows partially oxidized chalcopyrite (yellow, with grey rims of limonite) intergrown with a cluster of magnetite grains (battleship grey).

### SAMPLE MP 40-3

Neg. 500-19: Scale 1 cm = 42 microns. Shows chalcopyrite (yellow) and bornite (pinkish brown) as disseminated grains, ranging in size from 2 - 100 microns. A grain of magnetite (grey) at left centre contains a tiny inclusion of bornite/chalcopyrite. Sulfides in this sample are unoxidized.

Neg. 500-20: Scale 1 cm = 21 microns. High magnification, showing disseminated grains of bornite (brownish pink). Grain at lower right incorporates an area of chalcopyrite which hosts a tiny (10 micron) speck of native Au (appearing white in the photo because of its very high reflectivity). Large bornite grain at upper left is composite with magnetite (grey).

### SAMPLE MP 42-2

Neg. 500-21: Scale 1 cm = 85 microns. Shows typical grain size range of disseminated chalcopyrite (yellow) in the feldspathic rock matrix (dark).

Neg. 500-22: Scale 1 cm = 85 microns. Example of more coarsely segregated chalcopyrite (clump almost 1 mm in size). Note content of fine-grained inclusions of magnetite (grey) and silicates (dark) in the chalcopyrite



SAMPLE MP 52-2

Neg. 500-23: Scale 1 cm = 42 microns. Typical example of disseminated chalcopyrite (yellow). This includes grains ranging down to as little as 1 or 2 microns in size. However, the bulk of the chalcopyrite occurs in a size range of 40 microns or greater.

Neg. 500-24: Scale 1 cm = 85 microns. Clusters of magnetite grains (battleship grey) incorporating chalcopyrite as tiny inclusions, 2 - 40 microns in size.

## Estimated mode

K-feldspar	62
Plagioclase	20
Pyroxene	3
Garnet	trace
Apatite	trace
Prehnite?	4
Zeolite	3
Magnetite	3
Chalcopyrite	0.5
Malachite	trace
Limonite	4

This rock is a fine-grained leucocratic monzonite composed largely of K-feldspar plus accessory plagioclase, in the form of an aggregate of anhedral grains, 30 - 300 microns in size. Occasional coarser phenocrystic grains of feldspars reach 1.0 mm or more in size.

Minor constituents include pyroxene and magnetite - both occurring as sparsely scattered, small grains, seldom exceeding 300 microns in size. Rare examples of magnetite as hairline veinlets are also seen.

The rock contains fine-grained secondary minerals - consisting of probable prehnite, and zeolite. The prehnite occurs as randomly disseminated flecks and small pockets throughout the feldspar aggregate. The zeolite occurs in similar mode, and also as an infilling to hairline veinlets.

Sulfides (chalcopyrite) are rare, though appear originally to have been more abundant. The scattered tiny grains of chalcopyrite, which occur in randomly disseminated mode, almost invariably form remnant cores to compact, translucent limonite - indicating that this rock is more or less extensively oxidized. Limonite is also seen independently as pseudomorphs and - in presumed redistributed form - as small, crustified pockets. A little malachite is locally developed, in association with chalcopyrite remnants and/or limonite.

SAMPLE MP 40-3 (Slide 01-920)

MONZONITE

Estimated mode

K-feldspar	43
Plagioclase	27
Sericite	4
Epidote	2
Pyroxene	16
Biotite	2
Garnet	trace
Sphene	trace
Apatite	trace
Prehnite	0.5
Carbonate	1
Magnetite	4
Bornite)	0.5
Chalcopyrite)	

This rock is of similar general type to MP 40-1, but somewhat coarser grained and with a higher content of mafics.

Randomly-oriented, subhedral, prismatic grains of plagioclase, 0.2 - 1.5 mm in size, occur abundantly scattered through a dominant matrix of finer-grained anhedral K-feldspar. The plagioclase shows mild to moderate saussuritization (dustings of fine-grained sericite and epidote). The K-feldspar shows even, brownish, argillic turbidity. A little prehnite is seen as sporadic tiny pockets in the feldspar aggregate.

The principal mafic is colourless to pale green clinopyroxene, occurring as subhedral/anhedral grains 0.2 - 1.0 mm in size. Minor, pale brown biotite is a minor accessory, sometimes associated with the pyroxene, and sometimes as independent small flakes.

The rock is cut by a few hairline veinlets infilled by carbonate and magnetite. A little andradite garnet is locally developed as selvages to some of these veinlets.

The bulk of the magnetite in this rock occurs as disseminated, individual, equant grains, 20 - 700 microns in size. These sometimes - but not always - show close association with clumps of pyroxene.

Sulfides are sparse, fine-grained and irregularly developed. They consist of bornite and chalcopyrite (or composite grains of the two), as disseminated individual grains and small clumps, 2 - 150 microns in size. The sulfides are sometimes associated with pyroxene, but overall show no consistent association with any particular host rock mineral. Very tiny specks of sulfides were noted as inclusions in both pyroxene and magnetite. In addition, a localized thread of bornite was seen in one of the hairline veinlets. Pyrite is absent.

## Estimated mode

K-feldspar	52
Plagioclase	35
Pyroxene	3
Biotite	trace
Apatite	trace
Prehnite	3
Carbonate	0.5
Garnet	1
Magnetite	2.5
Chalcopyrite	3
Bornite	trace

This is another quartz-free, feldspar-rich rock of intrusive textural aspect. It resembles MP 40-1 in its mafic-poor composition, but has a grain size range more similar to that of MP 40-3.

It consists essentially of an intergrowth of plagioclase and K-feldspar. The plagioclase typically occurs as subhedral/prismatic grains up to 1.0 mm or so in length, abundantly scattered through a matrix of somewhat finer-grained, anhedral K-feldspar.

Prehnite is a widespread minor alteration product throughout the feldspar aggregate, as tiny flecks, clusters and pockets in the 10 - 150 micron size range.

Mafics are minor. They consist of scattered, rather ill-formed grains of pyroxene, 0.1 - 0.5 mm in size (rarely to 1.0 mm).

Sulfides - consisting of chalcopyrite plus minor intergrown bornite - are substantially more abundant in this sample than in the previous two. The chalcopyrite occurs partly as disseminations of tiny grains 5 - 100 microns in size, but the bulk of it is in the form of clumps and irregular veniform or pockety concentrations associated with magnetite, andradite garnet and carbonate. Chalcopyrite in this mode includes segregations up to 0.5 mm in size. However, in some cases its effective grain size is reduced by virtue of the presence of intimately intergrown non-sulfide constituents.

As in the other samples of the suite, pyrite is absent. This obviously constitutes a favourable feature as regards mineral treatment.

Estimated mode

K-feldspar	50
Plagioclase	33
Sericite	2
Epidote	0.5
Pyroxene	6
Biotite	1.5
Apatite	trace
Sphene	trace
Carbonate	trace
Zeolite	trace
Magnetite	5
Hematite	trace
Chalcopyrite	1.5

This sample shows similar general lithology to the others of the suite. It is a fine-grained, rather leucocratic monzonite, composed dominantly of K-feldspar and plagioclase,.

Examination of the off-cut shows patchy or banded variations in the feldspar proportions. In about half of the sectioned area, K-spar (yellow-stained) and plagioclase (white-etched) are intergrown in approximately equal proportions. In the remainder, however, K-feldspar is strongly dominant.

The scale of the mineral intergrowth in this rock is generally in the range of 0.1 - 1.0 mm. The plagioclase tends to show subhedral prismatic form, and is mildly to moderately saussuritized. The K-spar forms an anhedral aggregate, and shows strong, even, brownish turbidity. The pervasive development of prehnite seen in the other samples of the suite is absent in this rock, as is garnet.

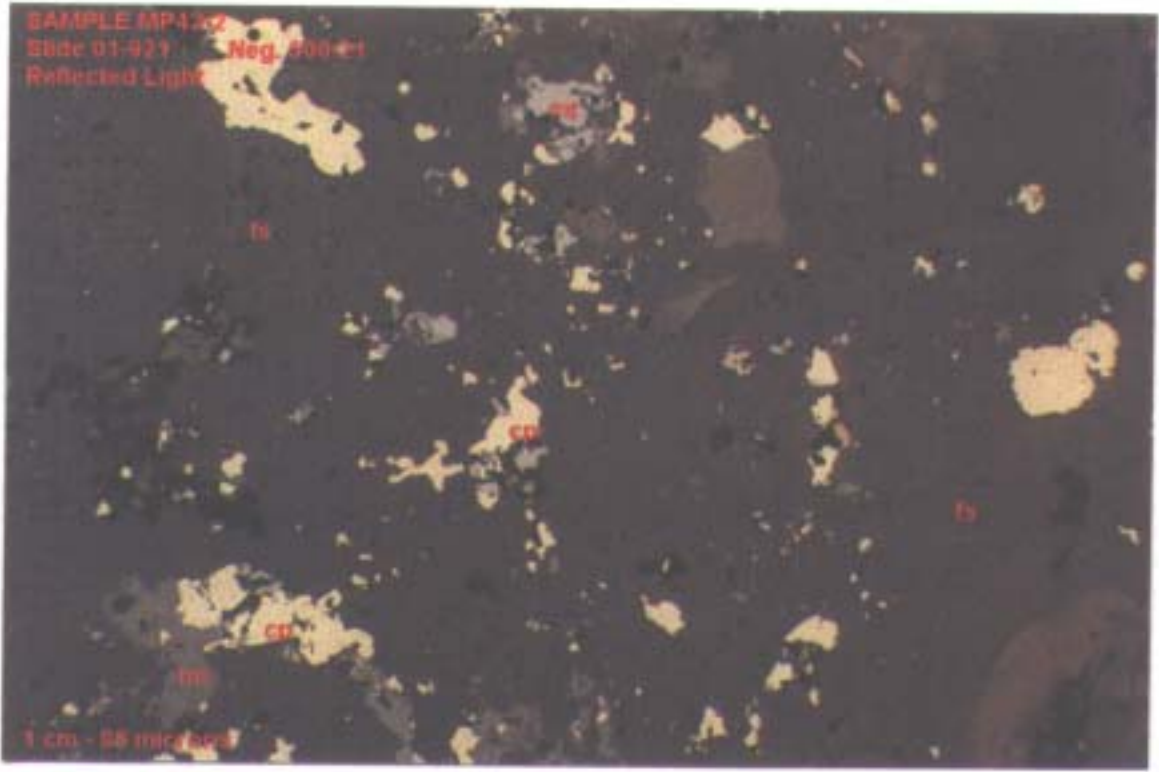
Mafics consist of pyroxene as rather sparsely scattered, subhedral grains plus minor biotite.

The dominant opaque constituent is magnetite. To a minor extent this occurs as random disseminations of grains or small clumps, 5 - 150 microns in size, but the bulk of it is in the form of irregular, multidirectional, veniform segregations, ranging up to 1 mm or more in thickness.

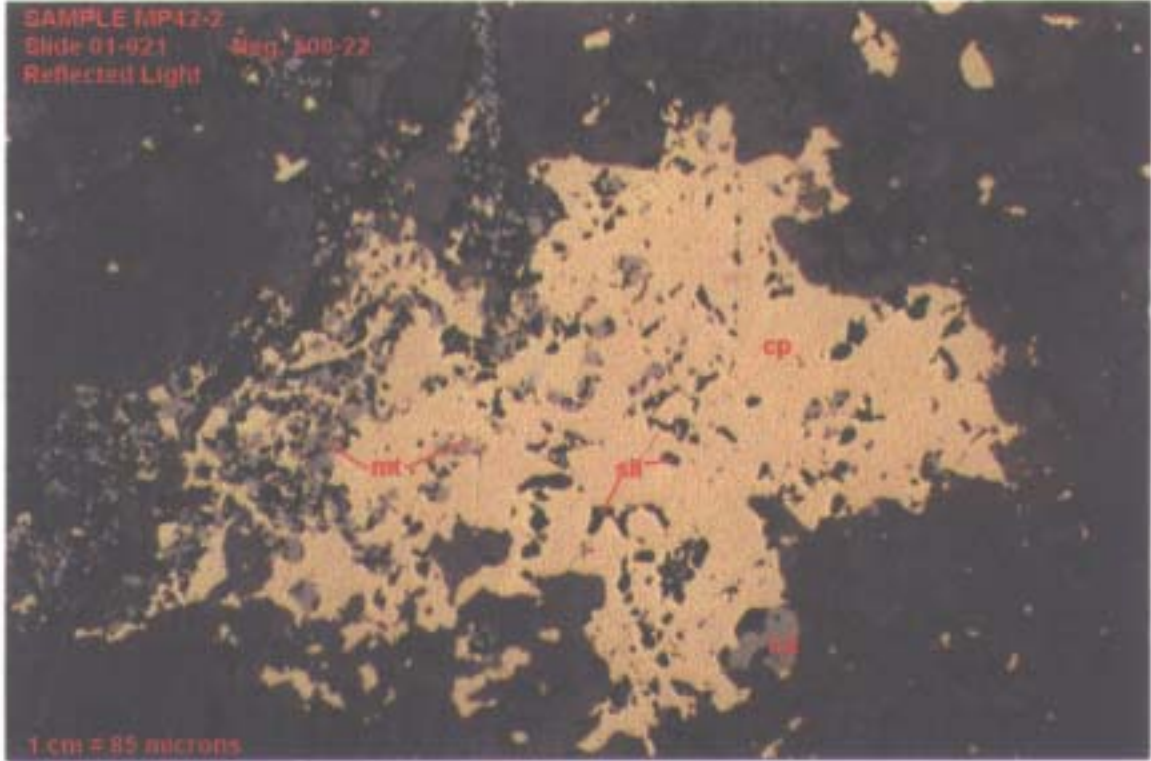
Sulfides in this sample consist solely of chalcopyrite - much of it notably fine-grained. It occurs in randomly disseminated mode, ranging from specks of a few microns up to small clumps of 0.1 - 0.2 mm. For the most part it appears independent of the magnetite, though the latter not infrequently contains scattered tiny inclusions of chalcopyrite 2 - 50 microns in size. A few of the disseminated chalcopyrite clumps incorporate intergrown hematite.

Sample MP 52-2 cont.

Because of its small average particle size, recovery of the chalcopyrite from rock of the type exemplified by this sample would necessitate a rather fine grind.



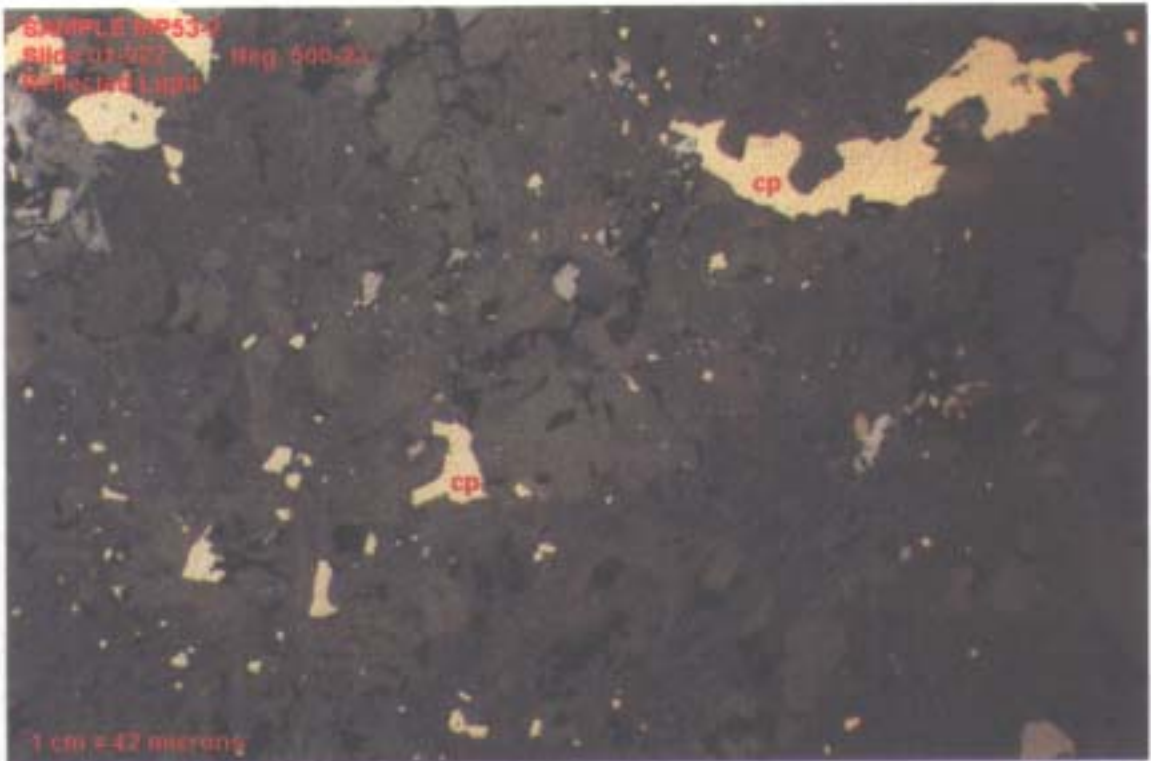
SAMPLE MP42-2  
Slide 01-921 Mag. 500-22  
Reflected Light



1 cm = 85 microns

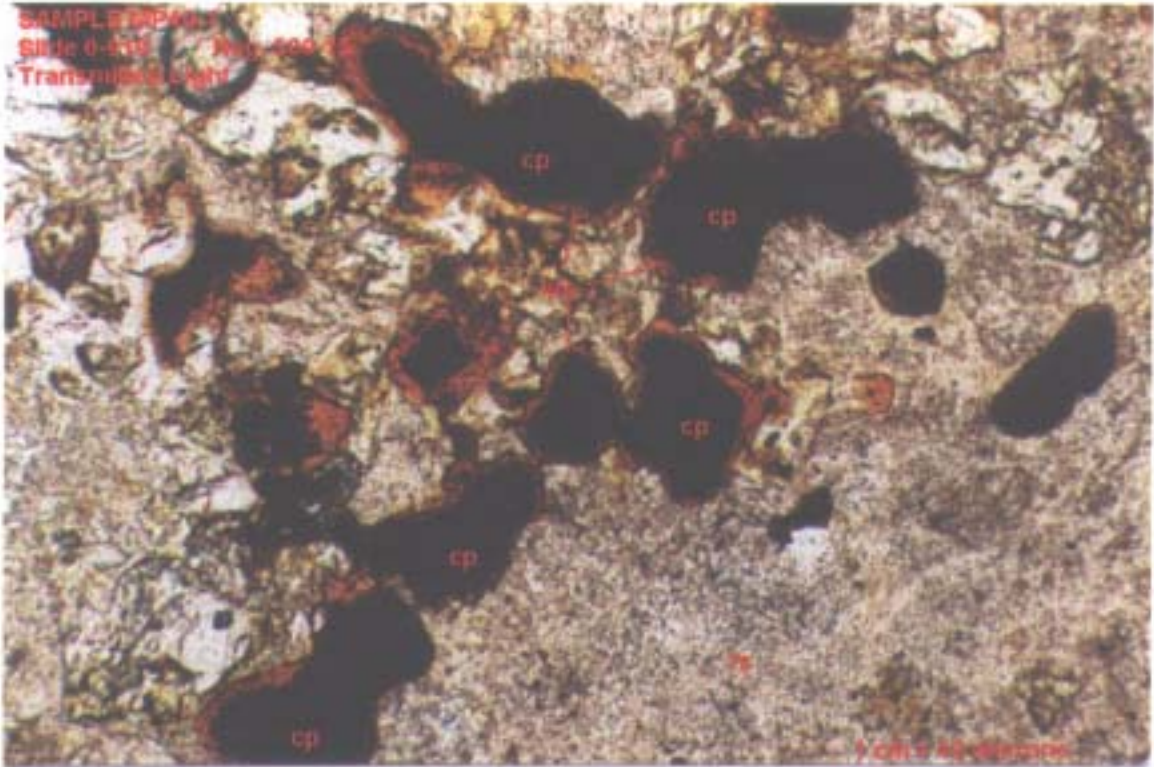


SAMPLE MP53-6  
Slide 01-027 Mag. 500x  
Wetland Lagoon



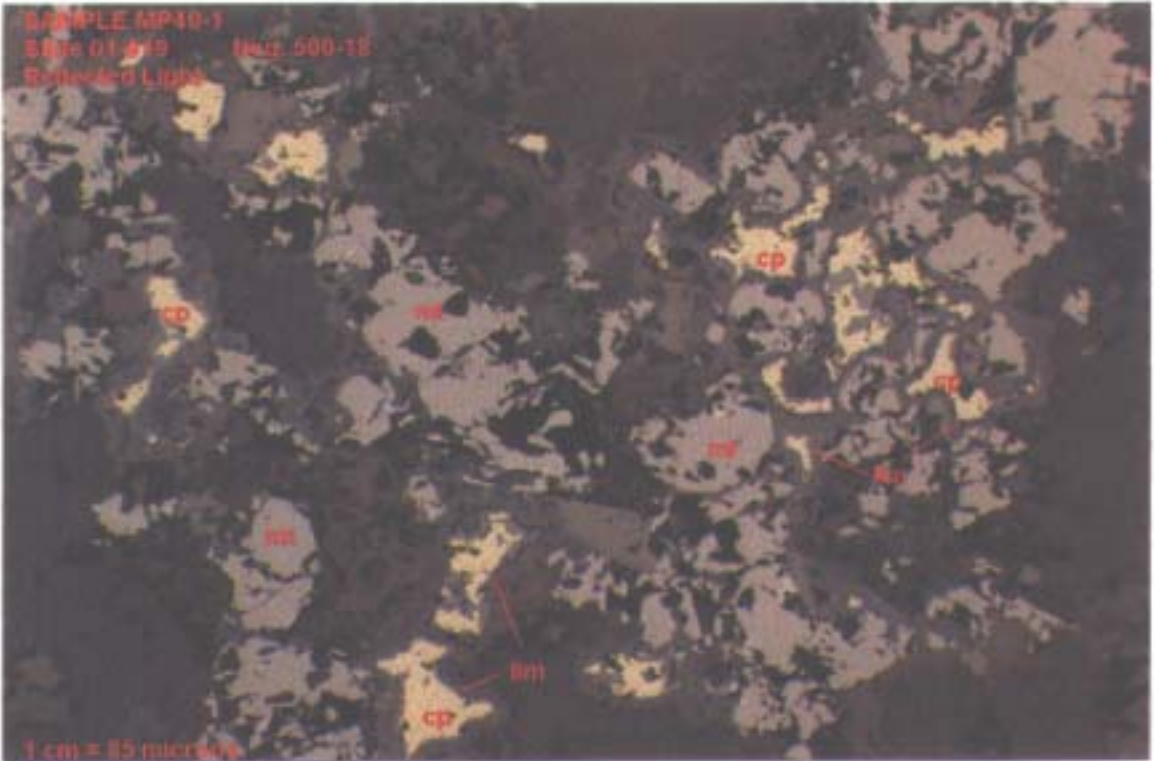
1 cm = 42 microns

SAMPLE RP001  
Slide 0-910  
Transmitted Light



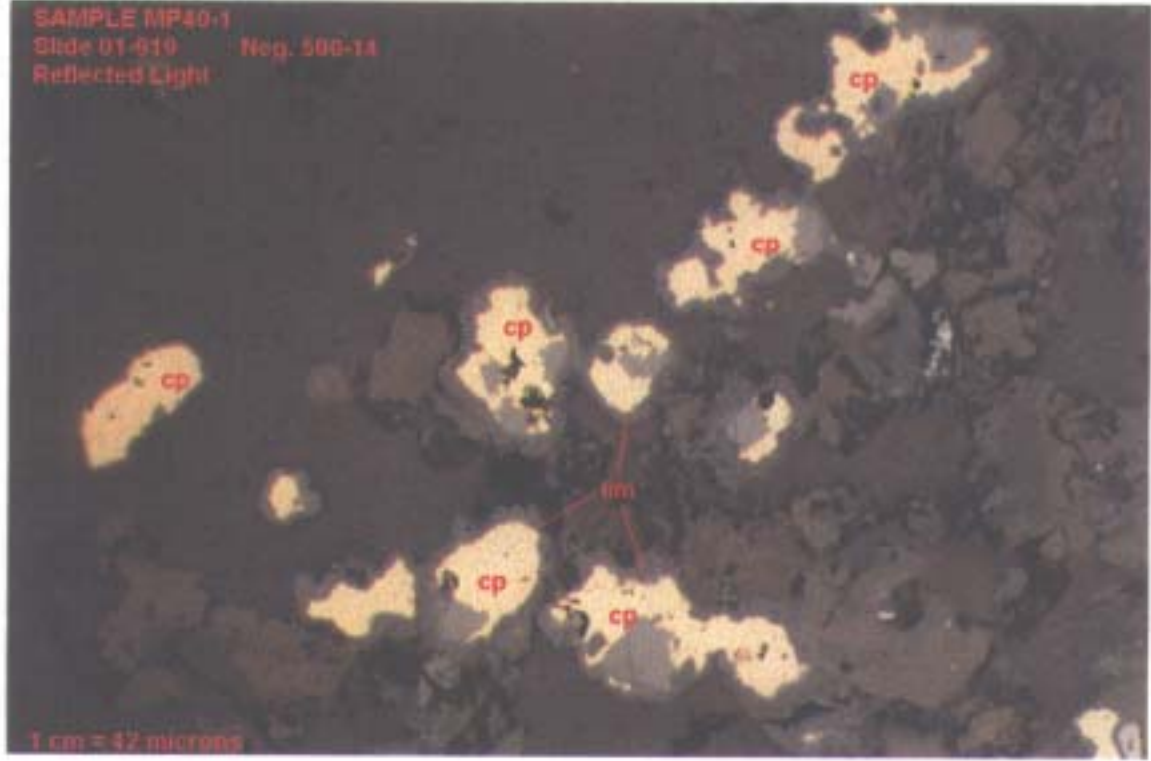
1 cm = 40 micrometers

SAMPLE MP10-1  
SITE 01 219 (Net. 500-18)  
Reversed Light

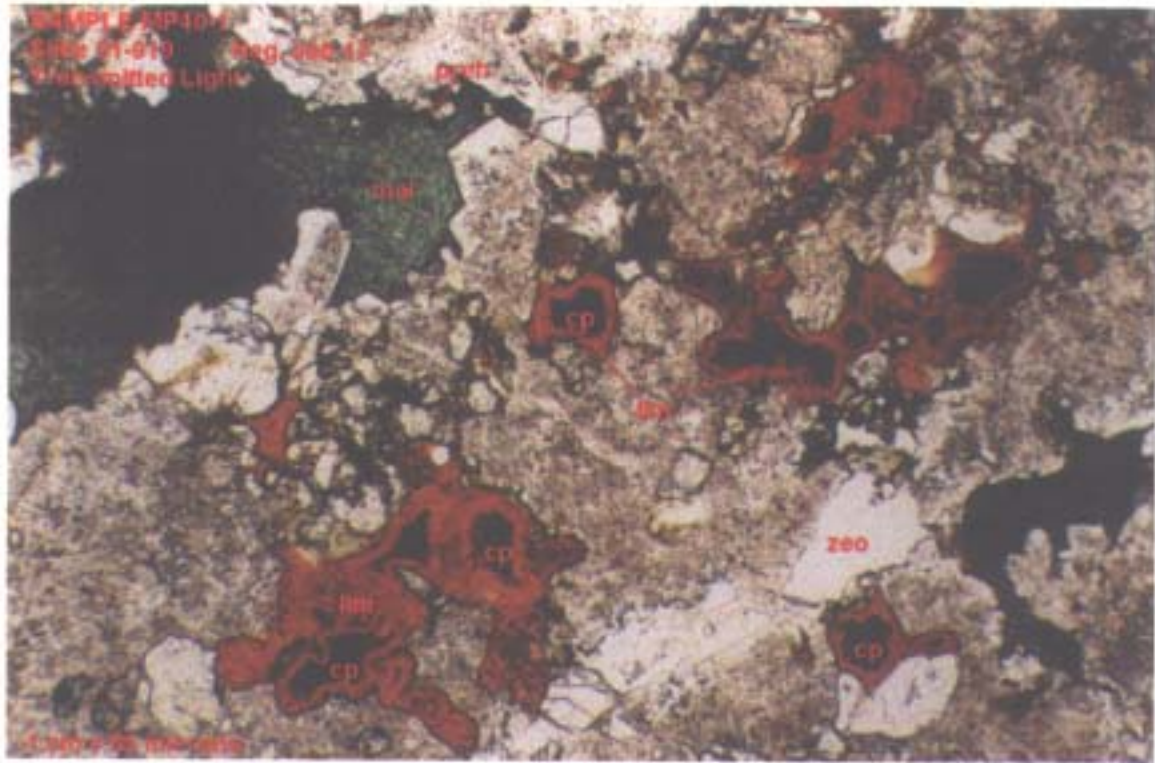


1 cm = 85 microns

SAMPLE MP40-1  
Slide 01-610 Neg. 500-14  
Reflected Light



1 cm = 42 microns



APPENDIX 6

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.



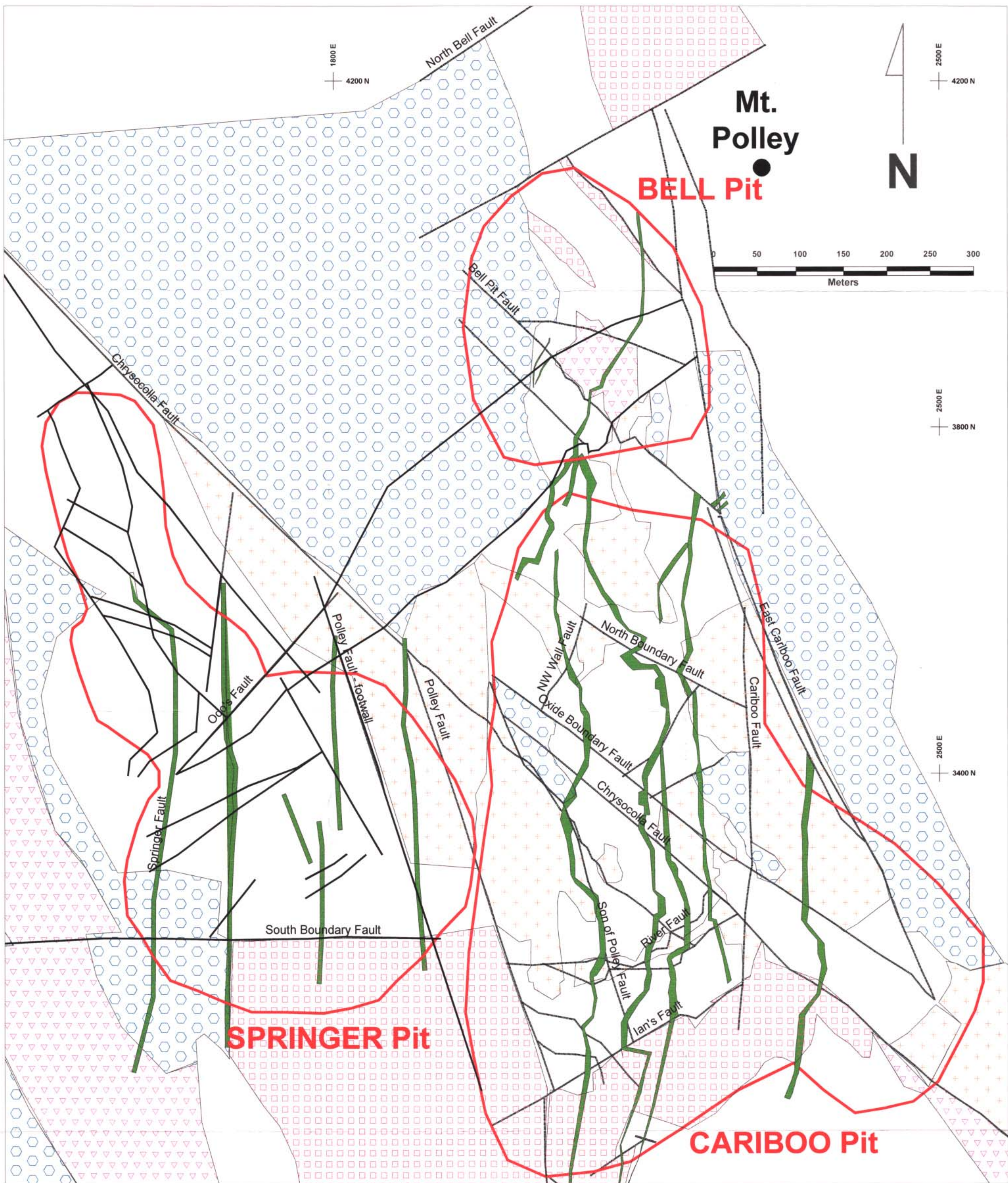
Vivian F. Park, P. Geo.











Mine Geologist  
Mount Polley Mining Corporation

29 July 2001





**LEGEND**

-  Breccia
-  Monzonite
-  Diorite
-  Plagioclase Porphyry
-  Volcanic
-  Augite Porphyry Dyke
-  Fault
-  Pit Limit

**Mount Polley Mining Corporation**

**Cariboo, Bell and Springer  
Geology Plan**

26691 1/3 ①

Date: 4 July 2001

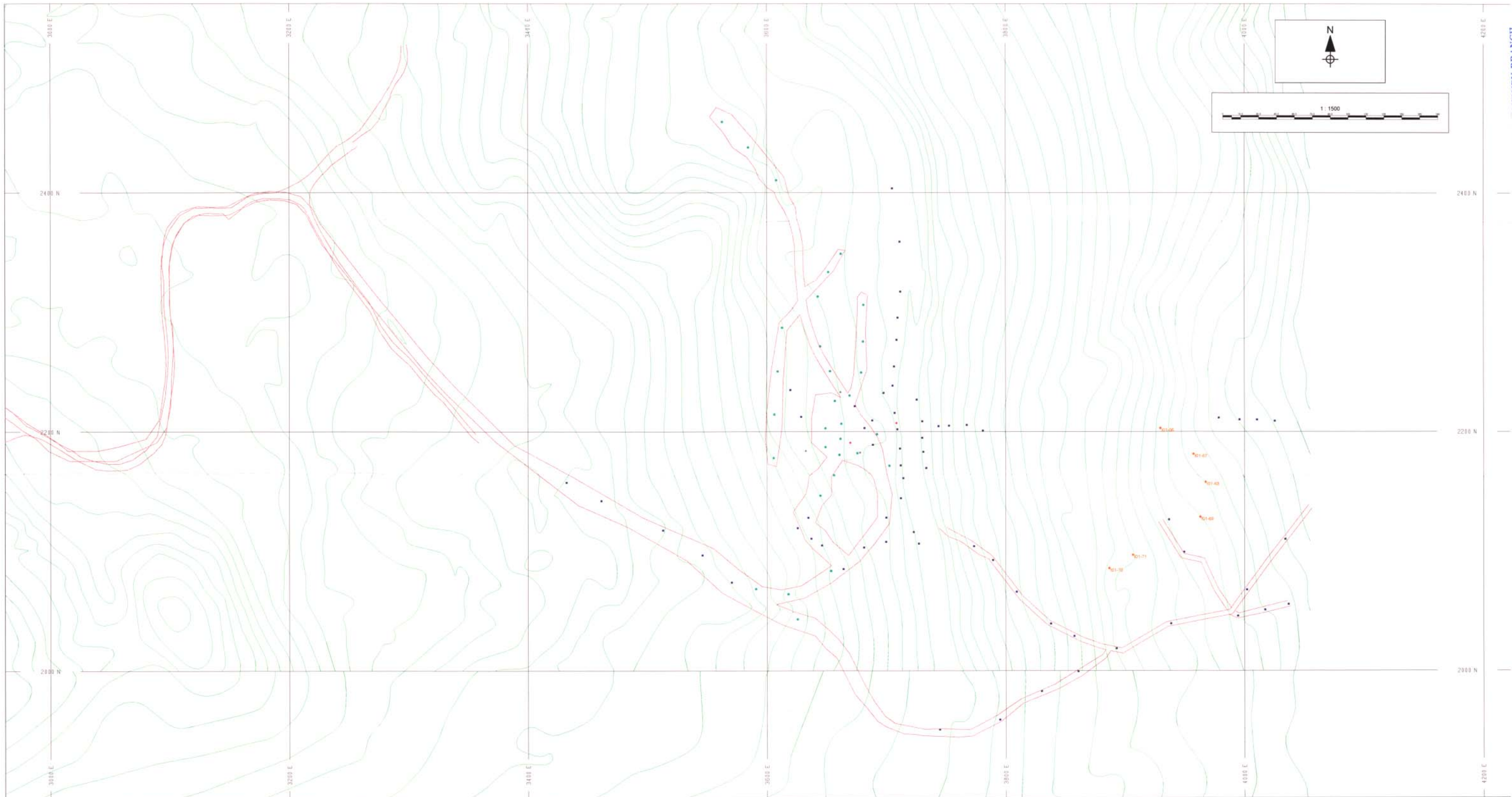
1 : 2 000

Drawn By: V. Park

geology.dwg

MAP 2.2

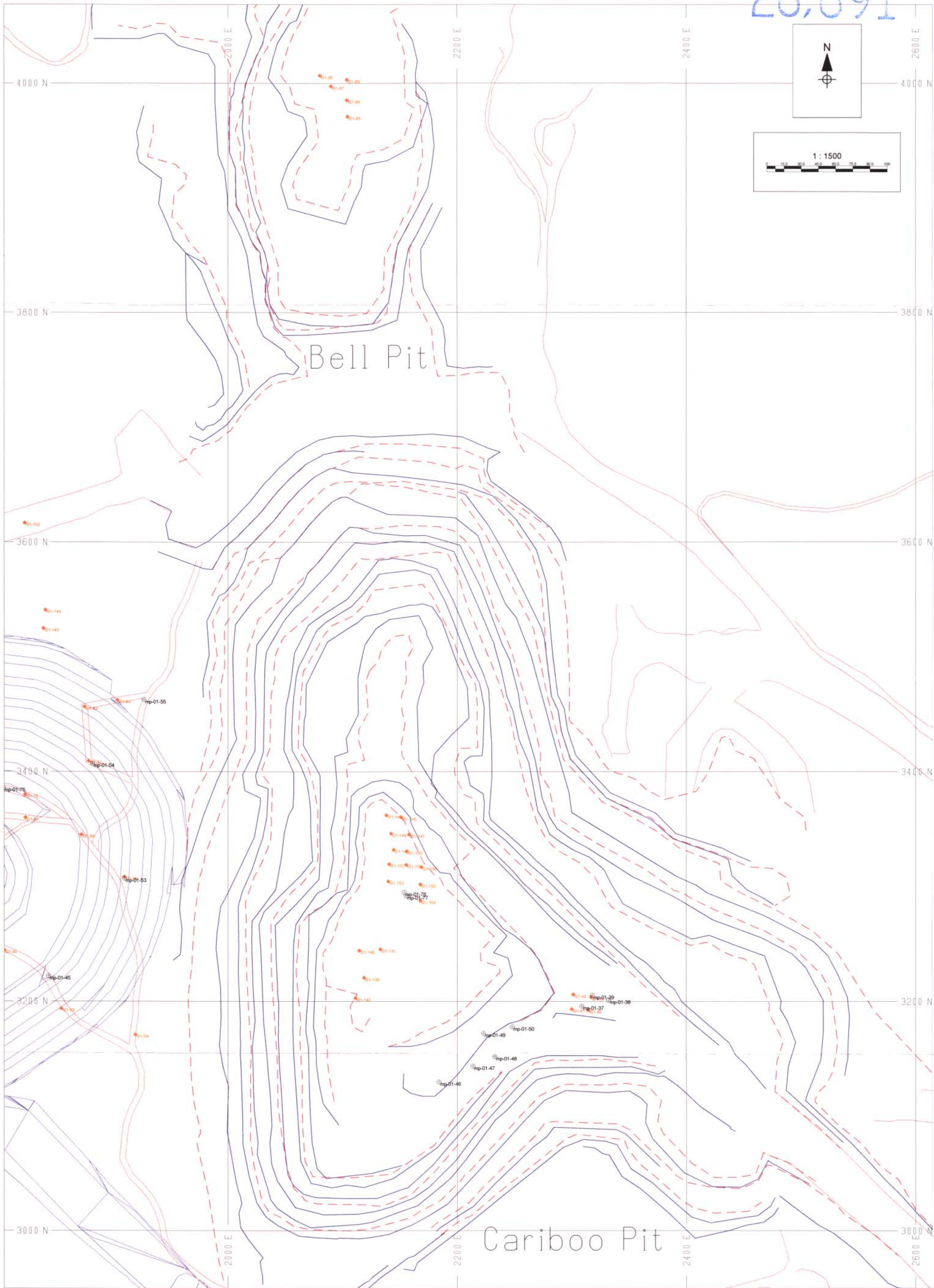




	Mount Polley Mine
	Southeast Area
	2001 Drillhole Collar Location Plan
SCALE:	1 : 1500.00
Asbuilt	2 July 2001
	MAP 34



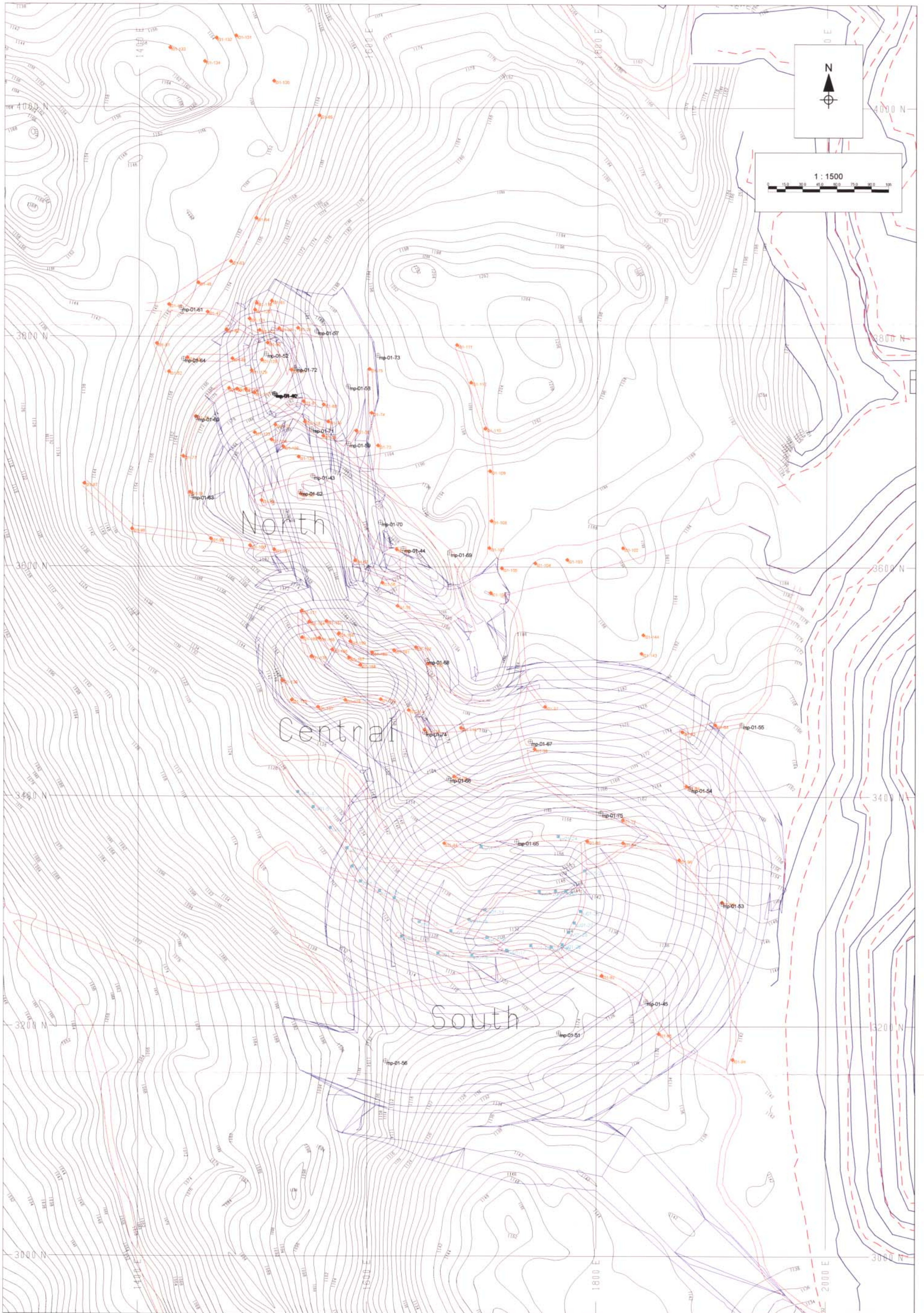
26,691



	Mount Polley Mine
	Cariboo and Bell Pits
	2001 Drillhole Collar Location Plan
SCALE:	1 : 1500.00
Asbuilt	2 July 2001
	mp 32

26691 1/3 (3)





	Mount Polley Mine
	Springer Zone
	2001 Drillhole Collar Location Plan
SCALE:	1 : 1500.00
Asbuilt	2 July 2001
	MAP 3.5

26691 1/3 (4)  
 GEOLOGICAL SURVEY BRANCH

26,691