IMPERIAL METALS CORPORATION

DRILLING REPORT

DRIFT, DRIFT 1 - 8 CLAIMS

BEAR PROPERTY

BEAR LAKE, B.C.

Omineca Mining Division
Latitude 56° 06’ N
Longitude 126° 52.5’ W
NTS: 94D-2

Owner: Imperial Metals Corporation
Operator: Imperial Metals Corporation,
Suite 200 - 580 Hornby Street,
Vancouver, B.C. V6C 3B6

Stephen Robertson, P.Geo.
May 30, 2005

EXECUTIVE SUMMARY

The Bear Property hosts a large molybdenum-copper mineralized system with potential for tonnage and grades required to host an economic deposit. The property is located 140 km north of Smithers, in northern British Columbia. Infrastructure in the Bear Lake area is favourable with nearby rail, roads, power and airstrip. Imperial Metals Corporation is operator of the project, earning a 100% interest subject to a 1.5% NSR. With the outlook for a sustained strong molybdenum market, Imperial is well positioned to move the Bear project forward quickly through the next stage of exploration, and further if warranted. Although it is not expected that the recent molybdenum trading price of over US$35.00/lb (up from US$2.50/lb in 2002) can be sustained over the long term, a very strong demand for molybdenum from the steel industry is expected for years to come. This will result in a stronger molybdenum price environment at a time when copper is also forecast to trade at elevated prices in a historical perspective.

Imperial Metals Corporation (III-TSX) completed a 1,704 metre, five hole diamond drilling program at the Bear Property in July, 2004. The objective of the program was threefold: First to confirm the mineralization that had been delineated by two earlier drilling campaigns by predecessor operators. Second, to test if the molybdenum grades from previous drilling could be upgraded with the use of larger diameter (NQ2) drill core. Third, to explore the system both laterally and vertically for expansion of the zone. All holes returned long intercepts of molybdenum – copper mineralization. Although the 2004 drilling did not intercept significantly higher grades than the old drilling, the size potential of the system was demonstrated.

The best results of the diamond drilling are from BD-04-18 which returned 295.9 metres of 0.059% molybdenum (Mo) and 0.27% copper (Cu), with mineralization starting at the top of bedrock. Hole BD-04-17 was also impressive with 351.0 metres of 0.047% Mo and 0.21% Cu. Both holes were still mineralized at the completed depth.

The grades returned in 2004 compare favorably with Mo deposits that have been developed in British Columbia, highlighted in the table below.

Economic Porphyry Deposits in British Columbia

Deposit Name	Tonnes (millions)**	Molybdenum (%)	Copper (%)	Copper Equivalent (%)*
Brenda	159.3	0.049	0.18	0.43
Gibraltar	326.5	0.009	0.37	0.42
Endako	194	0.08	-	0.77
Huckleberry	91.2	0.014	0.52	0.59

* Copper equivalent calculations based on long-term estimate prices of $5.00/lb Mo and $1.00/lb Cu

** All tonnage and grade estimates from CIM Special Volume 46

An exploration program consisting of airborne geophysics, geological mapping, prospecting, ground geophysics and drilling is proposed for 2005. The budget for this work is estimated to be $1,000,000.

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICIES

1.0 INTRODUCTION

During July 2004 a program of diamond drilling and prospecting was carried out on the Bear Claims by operator, Imperial Metals Corporation. The work consisted of 1,703.8 metres of NQ2 core drilling and prospecting/sampling over the alpine core of the property.

1.1 Location and Access

The Bear Property is centered at UTM coordinates 6219500N and 632300E in northern British Columbia, 150 km north of the town of Smithers (Figure 1.1). It lies within NTS map sheet 94-D/2W (94D 006 & 016), in the Omineca Mining Division. The property is accessible via float plane to Bear Lake and then by helicopter. Both float plane and helicopter charters are available from Smithers. For the duration of the drilling program described herein, Highland Helicopters had a Bell 206B Jet Ranger based at Bear Lake Lodge to service the drilling operation. Float plane service by Alpine Lakes Air out of Smithers was used to ship groceries, samples, supplies and personnel to Bear Lake. The nearest road is the Upper Driftwood road, currently maintained by Canfor Forest Products. It lies only 15 km to the south of the property and Canfor's plan shows that road will eventually push west into the Driftwood River Valley, which lies west of the Bear Property.

The Bear Lake Lodge is located on the western shore of the north end of Bear Lake, some 10 km north of the centre of the Bear Property. Accommodation for the crew was provided at Bear Lake Lodge for the program described herein. The only practical means of transportation currently available to the property from the lodge is helicopter.

Road access for exploration could be easily built from the Upper Driftwood FSR (15km) but an access corridor that is currently being developed to the North could be very useful should the Bear Project be advanced to development. The Sloan Connector road is currently under design, environmental and route assessment by the MOT. The road would connect the Toodoggone area (Kemess Mine) with Klappan Coal and Stewart. The closest it would pass to the Bear Property is about 30 km to the north, where it passes from the Sustut Valley over to the Squingula River and then heads up the Skeena River.

1.2 Physiography

The property lies on Tsaytut Spur in the Skeena Mountains, south of Mount Coccola and Peteyaz Peak. The eastern slope of the property drains in to Bear Lake which is a Tributary of the Skeena River and the west slopes drain into the Driftwood River, part of the Fraser River system. The vicinity of the property is rugged mountainous terrain, with steep sided mountains and a moderately open and easily walkable alpine. The highest point on the property is 1,858 metres, on an unnamed section of Tsaytut Spur, just to the south of the main area of drilling. Topographic low is at 795 metres, where the property lies close to the western shore of Bear Lake. Roughly 25% of the property is above tree line at 1,400 to 1,700 metres elevation.

1.3 Land Tenure and Ownership

The Bear property is owned and operated by Imperial Metals Corporation (IMC), an established company based in Vancouver, with experience in mining exploration, development and operation. The property at the end of 2004 consisted of 106 units in 9 modified grid claims, covering an area of approximately 26.5 square kilometres (Figure. 2). The claims and their status, pending acceptance of this report, are listed below.

Table 1.1 Claim Status

TITLE #	TITLE NAME	UNITS	RECORD DATE	EXPIRY DATE	REQ'D EXP.
240831	DRIFT	9	June 29, 1989	April 16, 2017	$1,800
409621	DRIFT 1	12	April 16, 2004	April 16, 2015	$1,200
409622	DRIFT 2	16	April 16, 2004	April 16, 2015	$1,600
409623	DRIFT 3	16	April 16, 2004	April 16, 2015	$1,600
409624	DRIFT 4	12	April 16, 2004	April 16, 2015	$1,200
409625	DRIFT 5	15	April 16, 2004	April 16, 2015	$1,500
409626	DRIFT 6	20	April 16, 2004	April 16, 2015	$2,000
412999	DRIFT 7	3	July 25, 2004	April 16, 2015	$300
413000	DRIFT 8	3	July 24, 2004	April 16, 2015	$300

The Bear Property was acquired early in 2004 by optioning a nine unit claim from Gerald Ryzner and staking an additional 97 units. Imperial can earn a 100% interest in the property, subject to a 1.5% NSR, by spending $500,000 on exploration and making $115,000 in cash payments over three years. The NSR can be purchased for $1,500,000. Imperial has $90,000 in payments and $100,000 in work commitment remaining to complete the earn-in (all values in $Cdn).

1.4 Property History

- 1948 – C.S. Lord completes regional mapping of the area and the work is published in GSC memoir 251.
- 1972 – Canadian Nickel Company Ltd. (Canico – becomes INCO later) Discovered copper – molybdenum mineralization while completing a regional porphyry Cu exploration program. The first claims were staked by Canadian Nickel and recorded on Sept 18 of that year.
- 1973 – Canico conducted Geological, Geochemical and Geophysical Surveys.
- 1974 – Follow-up drilling by Canico to test targets established in 1973. A total of 1,265 metres were drilled in 10 diamond drill holes. A minor amount of geological and geochemical work was also done.
- 1975 – Metallurgical (floatation) test work completed by Canico on drill core with encouraging results.
- 1980 – Additional rock sampling.
- 1981 – Mapping, rock geochemistry and geophysical survey work including VLF-EM and IP.
- 1983 – Lornex optioned property from Canico, extended the soil grids and built a number of drill pads, but took the work no further.

- 1996 – International Skyline Gold optioned the property and drilled 4 diamond drill holes for a total of 751 metres of BQTK core. Skyline subsequently dropped the property.
- Mr Ryzner optioned the property to Imperial Metals Corporation in early 2004. Additional ground was staked and the work described here-in was conducted in the summer field season of that year. Five diamond drill holes were completed for a total of 1,704 metres.

1.5 Acknowledgments

The accommodations for the drilling program described herein were provided at Bear Lake Lodge. Our hosts there, especially Kathie Cummings, were tireless in their efforts to make our stay comfortable and productive. Gary Roste took time from his duties at Mount Polley to spearhead a prospecting program and help out with some of the logistics and surveying on the short program.

Chris Commes provided heartwarming sustenance to the crews every day. Steve Goodlife and Pat Rooney of Highland Helicopters in Smithers were '*steady on the stick*' with safe, productive transportation for the crew and equipment moves. Don Lange, Frank Lambert and Gerry Cousins performed admirably in pad construction and core splitting.

IMPERIAL METALS CORPORATION

Bear Lake Project

Figure 1.1

LOCATION MAP

DRAWN BY: S Robertson	DATE: MAY, 2005
SCALE: AS SHOWN	FIGURE NO. 1.1

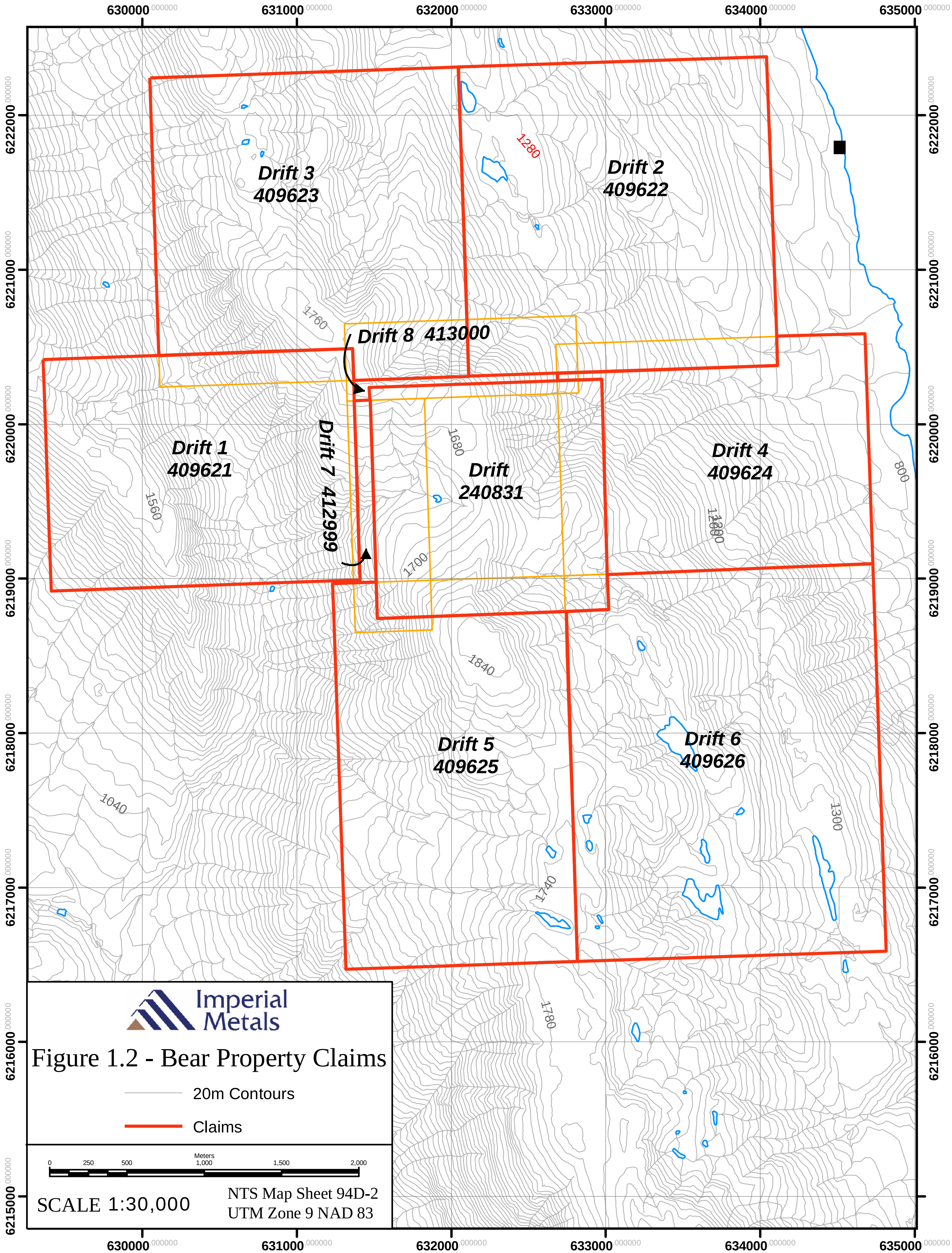


Figure 1.2 - Bear Property Claims

2.0 GEOLOGY

The regional geology of the Bear Lake area was mapped by C.S. Lord of the Geological Survey of Canada (GSC), published in Memoir 251. Detailed mapping of the mineralized core of the property was completed by Canico in 1973 with further work in the early 1980's, but a property wide geology map has not been produced. Geological mapping was not undertaken as a part of the 2004 work described in this report, although field investigations and prospecting confirmed that the previous work appears to be valid. Nomenclature for intrusive rocks has been argued in the past, but can hopefully be settled with the petrographic work described herein, largely in agreement with Woodcock (1982 and 1995).

2.1 Regional Geology

The Bear Property is situated in the Intermontane Belt of the Canadian Cordillera. The Driftwood River to the west and Bear Lake Valley to the east are the local of major faults which bound a thick succession of intermediate to basic volcanics of mostly Hazelton Group with minor intercalated sedimentary horizons. Woodcock (1995) suggests that a component of Takla Group mafic volcanics may also be present. Plugs and stocks of the Kastberg Intrusive suite and Bulkley Intrusive suite are scattered along the belt (See Figure 2.1).

Deposit model types represented within the fault block are shear veins, calc-alkalic porphyry, stratabound sedimentary replacement, stratabound shear zone. Raven (1996) provides a comprehensive description of the minfile showings in the district.

2.2 Property Geology

The Bear property is mostly underlain by Jurassic Hazelton Group, dominantly felsic to intermediate volcanic rock comprised of crystal lithic tuffs, volcaniclastic greywacke, vesicular andesite flows and rhyolite flows (Woodcock, 1995). Mafic volcanic strata exposed on the eastern half of the property are possibly of the Upper Triassic Takla Group. As most of the mineralization is either hosted within or immediately adjacent to the intrusive bodies, little work has been done in mapping or differentiating the volcano-sedimentary stratigraphy. The volcanic strata have been intruded by a multiphase Eocene Kastberg stock. Several phases of the intrusive and immediately adjacent volcanic rocks host molybdenum – copper mineralization.

Lithology

The Kastberg intrusive exposed in the core of the property is a multiphase, calc-alkalic, porphyritic monzonite with intense hydrothermal alteration. These rocks are not deeply weathered and are easily identified in hand specimen with good surface exposure in the alpine. Mapping by Canico geologists in 1973 is believed to be reliable although the nomenclature of the rocks has been inconsistent, with notable differences between Peto, Hunter and Woodcock. The following description of the main rocktypes on the property is based on the core logging from 2004, supported by petrographic work by Katherina Ross of Panterra Geoservices Inc.(See Appendix E). Descriptions of the major rocktypes below are similar to those from Hunter and Woodcock and can be easily correlated.

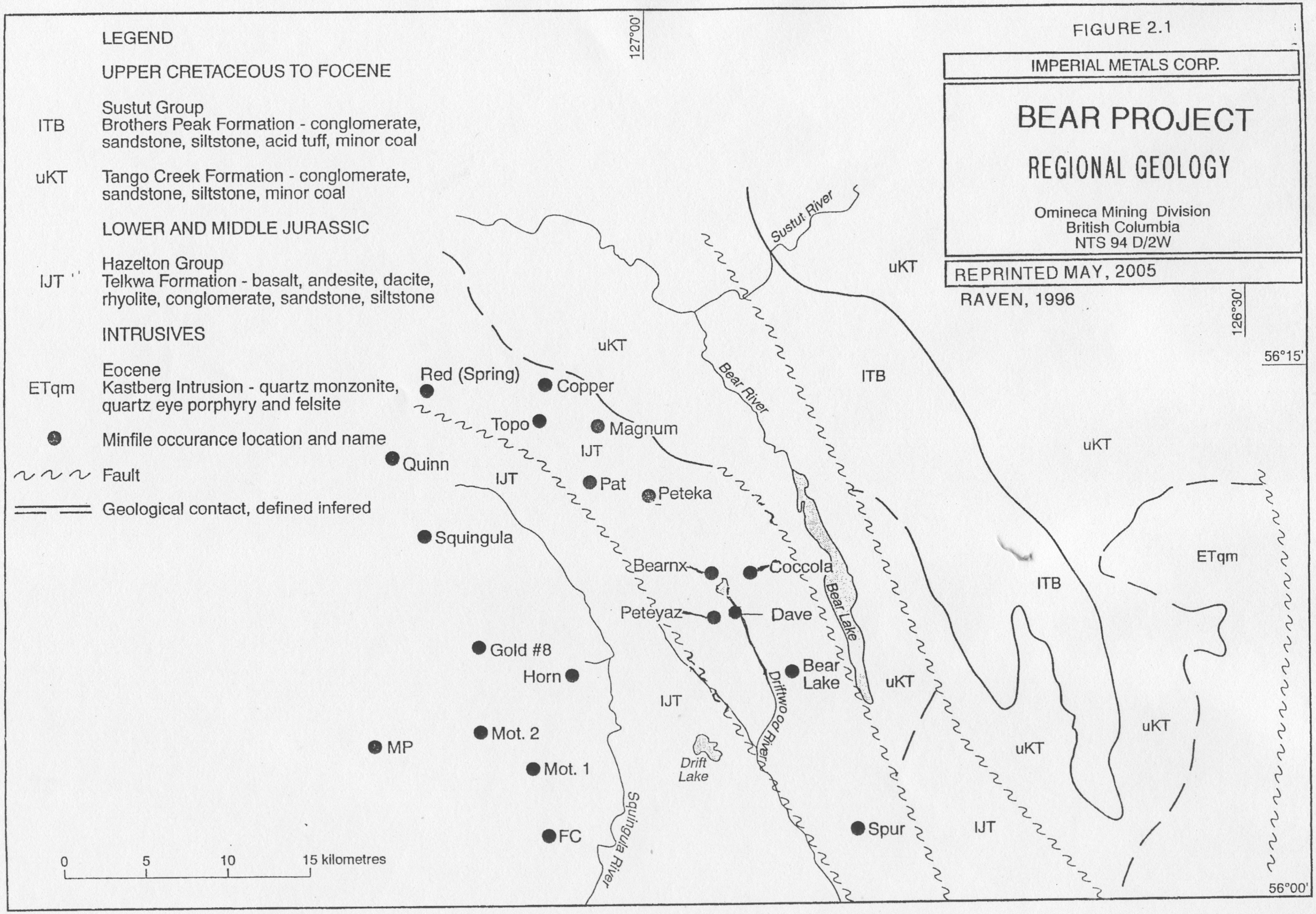


FIGURE 2.1
IMPERIAL METALS CORP.
BEAR PROJECT
REGIONAL GEOLOGY
Omineca Mining Division
British Columbia
NTS 94 D/2W
REPRINTED MAY, 2005
RAVEN, 1996
LEGEND
UPPER CRETACEOUS TO FOCENE
Sustut Group
ITB Brothers Peak Formation - conglomerate, sandstone, siltstone, acid tuff, minor coal
uKT Tango Creek Formation - conglomerate, sandstone, siltstone, minor coal
LOWER AND MIDDLE JURASSIC
Hazelton Group
IJT Telkwa Formation - basalt, andesite, dacite, rhyolite, conglomerate, sandstone, siltstone
INTRUSIVES
Eocene
ETqm Kastberg Intrusion - quartz monzonite, quartz eye porphyry and felsite
Minfile occurance location and name
Fault
Geological contact, defined infered
0 5 10 15 kilometres
127°00'
126°30'
56°15'
56°00'
Sustut River
Bear River
Bear Lake
Driftwood River
Squingula River
Drift Lake
Red (Spring)
Copper
Topo
Magnum
Quinn
Pat
Peteka
Squingula
Bearnx
Coccola
Peteyaz
Dave
Gold #8
Horn
Bear Lake
Mot. 2
MP
Mot. 1
FC
Spur
uKT
ITB
IJT
ETqm

Quartz Diorite

The Quartz Diorite unit is fine to medium-grained, equigranular to weakly porphyritic intrusive. It is comprised dominantly of interlocking, tabular albitic plagioclase, lesser quartz, K feldspar, minor mafic minerals, mostly hornblende and biotite, and up to 5% magnetite. These other minerals are anhedral and infill interstitial space between plagioclase crystals, or form a groundmass in the weakly porphyritic samples. The mafic minerals consist of hornblende and biotite in variable proportions. This rocktype hosts the bulk of the mineralization and also hosts the best grades.

Quartz Monzonite

This unit is a medium to coarse-grained porphyritic intrusion. Plagioclase, quartz, biotite and orthoclase phenocrysts, up to 0.75 mm in length comprise up to half of the rock by volume, and occur in a much finer-grained, K-feldspar dominant groundmass. Plagioclase phenocrysts comprise 15-30%, while quartz phenocrysts comprise 5-20% of the rock. Orthoclase phenocrysts are less common, but are the most definable feature of the rocktype as the megacrysts up to a few centimeters long are distinctly larger than the other phases. Orthoclase phenocrysts also contain inclusions of plagioclase crystals. Mafic content is around 5%, and consists mainly of blocky biotite crystals, intergrown with minor amounts of hornblende and magnetite.

Monzodiorite

The Monzodiorite is a fine-grained porphyritic intrusion, comprised of 15-20% prismatic, green hornblende crystals up to 3 mm in length, in a groundmass of much finer-grained (<0.5mm) felted plagioclase crystals and K-feldspar. Several percent magnetite is disseminated in the groundmass. This unit is quite dark in appearance relative to the other, more acidic, intrusive phases and does not appear to be a good host to mineralization with chalcopyrite and molybdenite rarely observed in this rocktype. Cross cutting relationships observed in core suggest a post mineral emplacement.

Alaskite

Alaskite is a coarsely equigranular to porphyritic phase with >65% perthitic pink potassic feldspar, quartz and plagioclase phenocrysts. The strongly diagnostic characteristics are the large crystals, perthitic orthoclase and lack of mafic minerals, aside from rare flecks of biotite.

Plagioclase Porphyry Dyke

The plagioclase porphyries are a light grey rock with euhedral plagioclase supported in a two phase matrix consisting of coarser quartz crystals and finer quartz and orthoclase crystals. The overall composition of the rock is about 50% quartz, but the feldspars dominate its appearance due to their larger euhedral crystals.

Ultramafic Dyke

Post mineral mafic dykes have augite phenocrysts to 5 mm in a nondescript fine grained groundmass. Contacts are often irregular with chilled margins and large xenoliths of host rock. They are often unmineralized, but can host locally remobilized chalcopyrite and molybdenite.

Quartzite (Rhyolite?)

This unit is observed both in the field and core and its origin is still in question. The rock is comprised mostly of rounded quartz crystals/grains in a muscovite-altered matrix. The rounded nature of the quartz suggests a sedimentary origin, however it is not conclusive and previous workers have described this unit as a rhyolite. Plagioclase crystals and clots with biotite are present and could be detrital. It is also possible that this was a rhyolite, and overprinting alteration has destroyed primary textures. Field relationships may be more useful in determining the origin of this rock in mapping this coming season.

Tuff

A crystal or dust tuff unit is present in small intervals but is often brecciated and mineralized. The overall appearance is coarsely speckled due to large plagioclase laths to 5 mm long, and also large amygdules. Calcite is common along hairline fractures throughout the unit. The unit appears to have been pervasively flooded by hydrothermal fluids resulting in intense alteration but is rarely observed to host strong mineralization.

Volcanic

The volcanic unit observed in core is dominantly mafic flow unit from the east side of the property, believed to be Takla Group. Due to hornfels alteration where the unit is in close proximity to intrusive, the rock is dominantly comprised of green-brown biotite, with lesser albitic plagioclase and minor quartz. The biotite is euhedral, and partially overprints the albite, which occurs as randomly oriented fine-grained, tabular crystals. The secondary biotite has also preferentially overprinted the primary groundmass of the unit.

Alteration

All rocks in or near the intrusive rocks have been significantly hydrothermally altered. Alteration is weakly pervasive but is generally observed as being more intense envelopes along the quartz-kspar-calcite veinlets and microfractures. The quartz veinlets are relatively planar sheeted fracture fillings from hairline to over 1cm. The quartz is intergrown with lesser calcite, dolomite, potassium feldspar, chlorite and sulphides. Altered wall rock has been silicified and potassically altered and may also contain sulphides.

A less prevalent and irregularly shaped set of quartz veinlets postdating the earlier veinlets is observed, carrying copper-molybdenum mineralization as well as calcite and zeolite minerals. No potassic alteration is observed to be directly related to this event and the wallrock is sericite/clay-carbonate-chlorite altered.

Potassic alteration is usually concentrated along the quartz veinlets and associated microfractures and can be difficult to recognize in hand specimen as it is commonly (not always) expressed as microcline, so a stain kit is helpful. The surrounding rocks have a weak but widespread pervasive sericite-chlorite-carbonate alteration. Mafic minerals are often chlorite-carbonate altered and magnetite is observed to be hematitically altered or even replaced with sulphides.

The mafic volcanic rocks in the area of the intrusive have been intensely hornfelsed to the point of being comprised mainly of randomly oriented green-brown biotite flakes, which are partially chloritized near the quartz veinlets.

Mineralization

Molybdenum – copper mineralization on the property is mainly present as molybdenite and chalcopyrite hosted in sheeted quartz-Kspar-calcite veinlets or less frequently, in the adjacent wall rock. Occasional occurrence of Wulfenite is noted, rarely as well formed crystals but usually as orange resinous streaks in the quartz veinlets. Other rare economic minerals include bornite, chalcocite and possibly tetrahedrite.

Hand specimen observation provides that chalcopyrite and molybdenite are spatially related, however, petrographic analysis indicates that they are probably not exactly contemporaneous as the molybdenite is introduced in an early mineralizing with biotite (altered to chlorite) event and chalcopyrite and pyrite often occur together in the later stages of quartz veining. Pyrite is observed replacing chalcopyrite and as interlocking crystals, so they were likely introduced together over at least two pulses of quartz-carbonate veining.

3.0 PROSPECTING AND SURVEYING

3.1 General Discussion

Gary Roste was on the property from July 18 – 25 to complete prospecting on the property. He collected 29 rock specimens and 38 rock samples for analysis. He also confirmed the geologic mapping of the 1973 work where possible. The location of 2004 geologic waypoints and sample locations are presented with the 1973 geologic mapping on figure 3.1.

A description of rock samples from the prospecting program is shown in Appendix D.

3.2 Surveying

The work performed on the property in 2004 was established in the North American Datum 83 (NAD83) UTM system. All of the previous work performed on the property was surveyed in "floating" property grids which were not tied to real world coordinates well enough to transfer the old data into the UTM coordinate system. It helped that the 1996 work completed by International Skyline was very accurately surveyed and used an accurate topographic base map. The surveying work at that time also tied in enough of the 1970's work to get all previous work plotted in a relative sense.

"Rubber sheeting" the 1996 maps onto the TRIM base maps made approximating the data position possible. A hand held Garmin GPSMap 60 was used to find as many of the fixed points (drill steel left in drill holes, survey spads and Legal Corner Posts) as possible and survey them in NAD 83 to confirm their position. Although the Garmin hand held accuracy is not to surveying standard, in the alpine on a clear day with good satellite coverage and multiple reading averaging, 5 metre precision is possible. For the scale of work being performed here, that was felt to be adequate, however a GPS survey instrument is recommended for the next program.

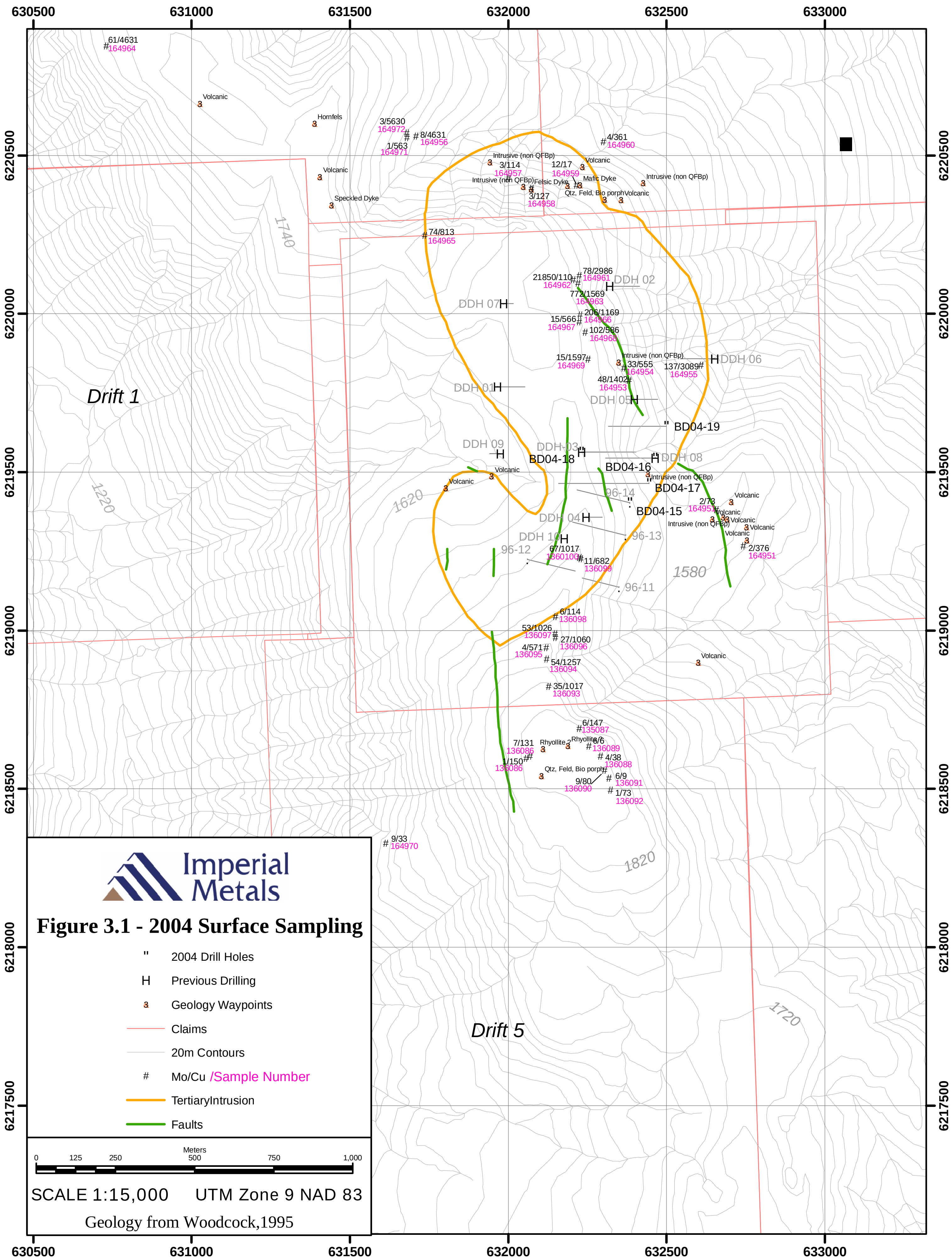


Figure 3.1 - 2004 Surface Sampling

4.0 DIAMOND DRILLING

4.1 Program Summary

Diamond drilling on the Bear Project in July of 2004 was a helicopter supported surface program using a Hydracore 3000 diamond drill rig, operated by contractor F. Boisvenu Diamond Drilling Ltd. Five holes were drilled for a total of 1,703.8 metres.

The best results are from BD-04-18 which returned 295.9 metres of 0.059% molybdenum (Mo) and 0.27% copper (Cu), or 0.56% copper equivalent (CuEqv), with mineralization starting at the top of bedrock. Hole BD-04-17 was also impressive with 351.0 metres of 0.047% Mo and 0.21% Cu or 0.44% CuEqv. Both of those holes were still mineralized at the completed depth

This work satisfied goals of the program which were to confirm the potential for the property to host the volume and grades necessary for an economic deposit. Drilling has confirmed the size potential for the mineralized body to be substantial and it is open for expansion, both laterally and to depth. It was hoped that the use of larger diameter core would demonstrate a significant increase in Molybdenum grades from the Canico work but the 2004 results do not support that theory.

4.2 Drilling Procedures and Program Details

Drill core was delivered to the logging area by helicopter after every shift. The core boxes were covered and secured during the move, and slung by long line. All core boxes have a wooden cover which is attached to the core box with rubber cords. This prevents core from coming out of the box or becoming mixed during transport. The core is carried into the logging area by the geologist.

Core is placed in sequence on the tables, measured, and the drillers blocks changed from imperial to metric units. All core is photographed with a high-quality digital camera, and the photos stored by drill hole. Core logging, using defined rock types and alteration codes, is completed on a Toughbook laptop computer using a logging software package from North Face Software called Lagger. Drill logs are found attached as Appendix A.

Once logged, the geologist marks the core for sampling. This is done according to rock type, alteration and observed mineralization. Most samples are 2.5 m in length, but may be as small as 20 cm. The core is not preferentially oriented in the box, but is generally left as placed there by the drillers. The core is not reoriented to avoid imposing a bias on the core sampling.

Sample books with sequential sample numbers supplied by Acme Laboratories are used to identify the split samples. The books were filled out by the geologist with the position of the sample down the hole. Each page in the sample book has a removable waterproof tag that is placed with the split sample in the bag and shipped to the lab.

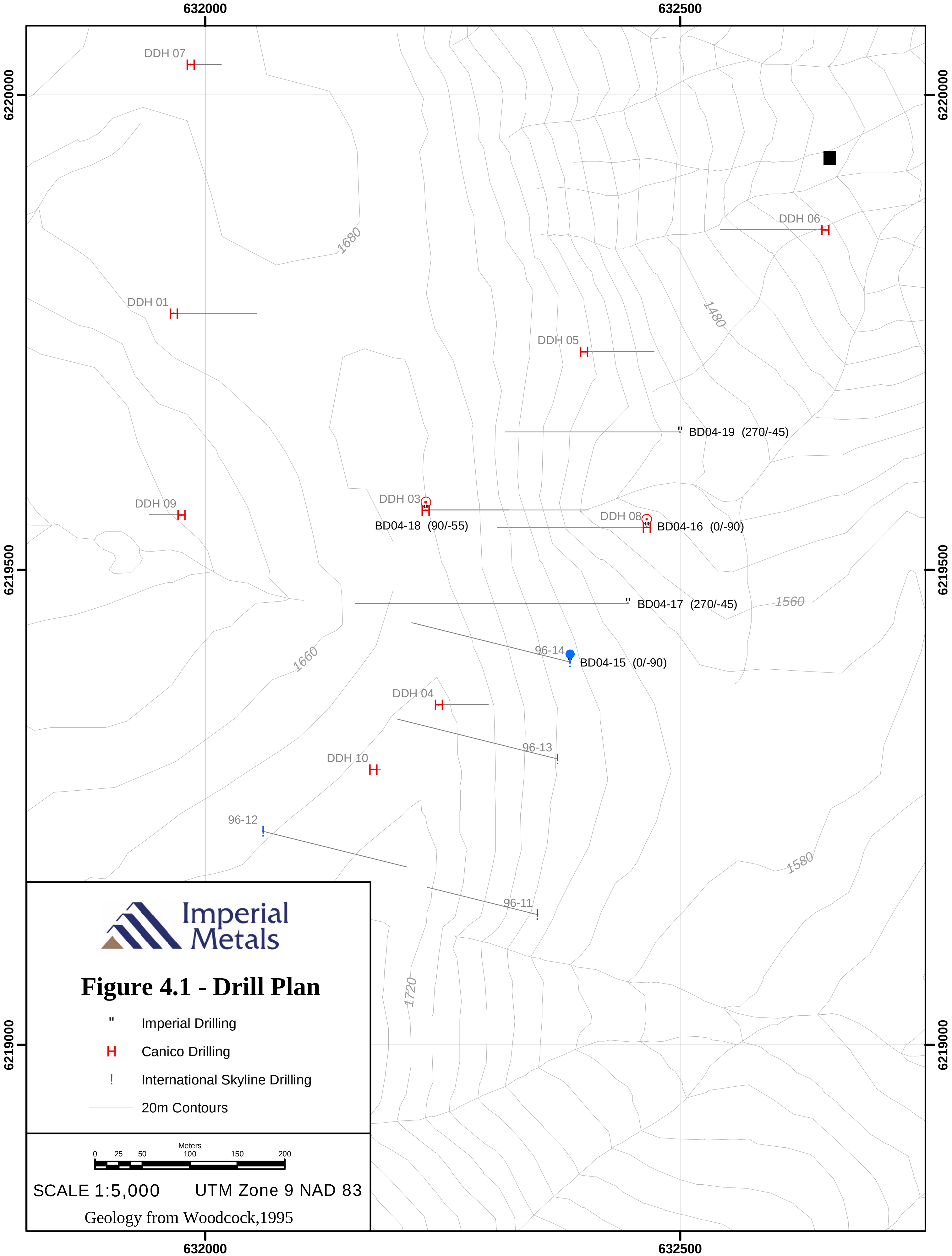


Figure 4.1 - Drill Plan

Geology from Woodcock,1995

The core cutters place the split samples into a single plastic bag. The bags are closed with a plastic zap strap and put into a poly rice bags. Each shipment is checked by the geologist before shipment.

Sample shipments are given a shipment number, and a "Request for Analysis" form is produced for the laboratory. Samples are flown by float plane to Smithers where they are collected by an expediter and then delivered to Acme Laboratory in Vancouver by contract trucking. A copy of the assay sheets are attached as Appendix B and a description of the analytical procedure is provided as Appendix C.

Table 4.1 List of Drill Holes Completed to Date – Bear Project

Bear Diamond Drilling											
DDH#	**Collar Co-ordinates**			**Rig**	**Core**	**Start**	**Completion**	**Az**	**Dip**	**Drilled**	**Cumulative**
	Easting	**Northing**	**Elev**		**Size**	**Date**	**Date**			**Depth (m)**	**Depth (m)**
54301-0	631967	6219770	1675	BBS1	AQ	8-Jul-74	13-Jul-74	90º	-45º	134.11	134.1
54302-0	632321	6220087	1675	BBS1	AQ	15-Jul-74	21-Jul-74	90º	-55º	153.01	287.1
54303-0	632232	6219563	1682	BBS1	AQ	23-Jul-74	1-Aug-74	90º	-55º	153.01	440.1
54304-0	632246	6219358	1713	BBS1	AQ	2-Aug-74	8-Aug-74	90º	-70º	153.31	593.4
54305-0	632399	6219730	1620	BBS1	AQ	11-Aug-74	17-Aug-74	90º	-70º	216.71	810.2
54306-0	632653	6219858	1472	BBS1	AQ	19-Aug-74	25-Aug-74	270º	-45º	156.97	967.1
54307-0	631985	6220032	1650	Winkie		20-Aug-74	28-Aug-74	270º	-45º	47.85	1015.0
54308-0	632465	6219545	1574	BBS1	AQ	27-Aug-74	3-Sep-74	270º	-35º	192.33	1207.3
54309-0	631975	6219558	1648	Winkie		29-Aug-74	2-Sep-74	90º	-45º	45.72	1253.0
54310-0	632177	6219290	1714	Winkie		3-Sep-74	5-Sep-74	90º	-45º	11.58	1264.6
96-11	632350	6219137	1626	JK300	BQTK	29-Aug-96	30-Aug-96	284º	-45º	169.16	1433.8
96-12	632061	6219225	1708	JK300	BQTK	31-Aug-96	3-Sep-96	104º	-45º	221.59	1655.4
96-13	632371	6219301	1639	JK300	BQTK	4-Sep-96	6-Sep-96	284º	-45º	245.36	1900.7
96-14	632384	6219403	1637	JK300	BQTK	7-Sep-96	8-Sep-96	284º	-45º	242.93	2143.6
BD-04-15	632384	6219403	1637	Hydracore 3000	NQ2	8-Jul-04	12-Jul-04	0º	-90º	299.01	2442.7
BD-04-16	632465	6219545	1574	Hydracore 3000	NQ2	12-Jul-04	16-Jul-04	0º	-90º	436.47	2879.1
BD-04-17	632445	6219465	1606	Hydracore 3000	NQ2	16-Jul-04	24-Jul-04	270º	-45º	405.99	3285.1
BD-04-18	632232	6219563	1682	Hydracore 3000	NQ2	24-Jul-04	27-Jul-04	90º	-55º	301.14	3586.3
BD-04-19	632500	6219645	1530	Hydracore 3000	NQ2	27-Jul-04	29-Jul-04	270º	-45º	261.21	3847.5

4.3 Drilling Interpretation

BD04-15

Drill hole BD04-15 was drilled vertically from the same pad used for International Skylines hole 14 in 1996 (See Figure 4.2). It was intended to assist in defining the eastern edge of the intrusive body and also test the hornfelsed mafic volcanics for their potential to host mineralization. Both objectives were achieved. The drill hole intersected a significant amount of both volcanic and intrusive, both of which were mineralized. It appears that the eastern edge of the intrusive irregularly intrudes the mafic volcanic strata and some of the volcanic intercepted is likely to be xenoliths. The mafic volcanic rock is very strongly hornfelsed in close proximity to the intrusive and can be moderately mineralized. A vertical orientation for the hole was necessary to achieve the goals stated but is not an ideal orientation, as the sulphide host quartz veins were generally at 15 to 30 degrees to the core axis.

BD04-16

Similar to the previous hole, this one was targeting the eastern margin of the intrusive but failed to intersect significant mafic volcanic above 235 m depth, above which the hole was dominantly volcanic rocks (See Figure 4.3). Short intervals of volcanic that were noted are expected to be xenoliths. Near surface, the hole was mostly in Quartz diorite with weak to moderate mineralization. Some minor post mineral dyking was also noted. From 255 – 335 metres, the rock types were mixed intrusive (weakly mineralized) and quartzite. The origin of the quartzite is still unknown, as there is rhyolite described in the area, but this unit appears to be an altered quartz rich arkose, with all of the non quartz mineralogy altered to muscovite / sericite. Visual estimates of mineralization in this unit tend to be over estimated as the sulphides show up quite well in the very light colored rock. Below 335 metres, the quartzite is replaced by a finer, siliceous unit, thought to be a dust / crystal tuff. This unit is mineralized, but generally weak.

BD04-17

This hole was collared between 15 and 16, but drilled at -45 degrees to the west. Like the vertical holes the quartz veinlets average 20 to 30 degrees to the core axis. The hole was in intrusive rock, dominantly Quartz diorite with some Quartz Monzonite, over it's entire length and was moderately to well mineralized throughout. The top 50 metres were rather weak, but the hole was terminated due to drill rig limitations at 406 metres depth in good mineralization (last sample 0.17%Mo and 0.14% Cu). This hole was drilled across the heart of the main intrusive and demonstrated that the intrusive can be very consistently mineralized and that the size potential is very significant.

BD04-18

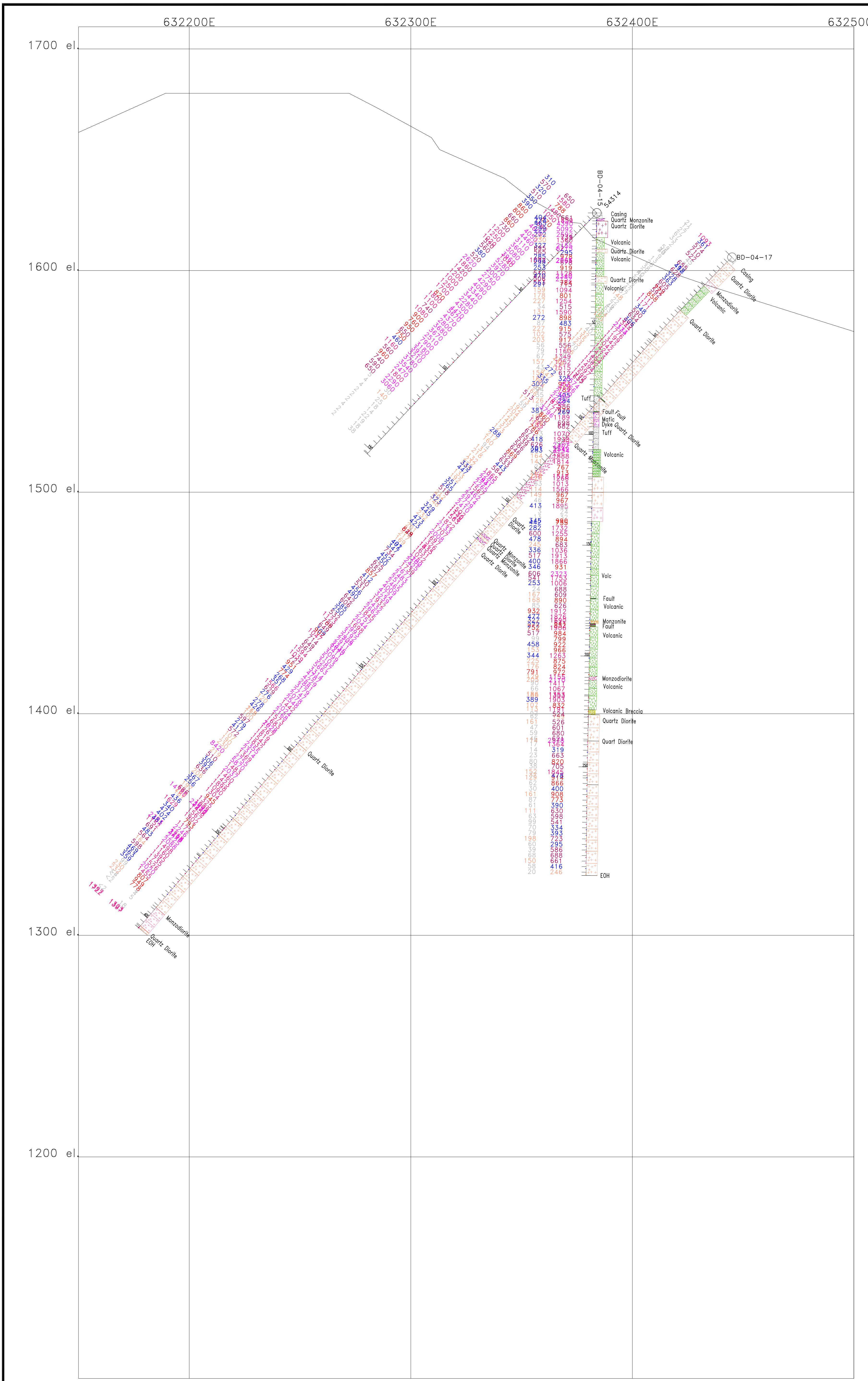
Hole 18 was drilled from the same setup and in the same orientation as Canico's hole 3. The intended purpose was to firstly see if Canico's grades could be duplicated or improved upon (with the use of larger diameter core). Unfortunately the hole, although collared in the same location, was not a true twin, as the overburden material was 12.76 metres of blocky talus which caused the hole to deviate significantly before being collared in bedrock. I would imagine the same thing happened to Canico in 1974 adding to the uncertainty of where the original hole trace went. Using the down hole survey information from BD05-18 and the planned orientation of hole 54303 (Canico's hole 3), the two drill traces are up to 28 metres apart at the end of hole 3. In any case, it does still warrant comparison, and it would seem that the two holes returned relatively similar grades, but are not directly comparible (See Table 4.3)

Mineralization in the hole is quite strong but is weaker where the host is Quartz Monzonite rather than Quartz Diorite. At the end of the hole, the molybdenite and chalcopyrite are cut off by an Augite Porphyry dyke and the three samples taken in the Quartz Diorite which lies beyond the dyke are strong in copper with no appreciable molybdenum. It is probably safe to expect that the molybdenum-copper mineralization continues beyond this to depth, and needs to be tested further.

BD04-19

The final hole of the 2004 program nicely tested the eastern edge of the intrusive complex, with dominantly volcanic rock intercepted in the upper part of the hole and then faulting and mixed intrusives down hole (See Figure 4.4). The volcanic rocks were certainly mineralized but were in the 0.02 to 0.03% Mo and 0.07 – 0.13% Cu range. Some tuff was also intercepted, returning very poor grades.

The intrusive down hole is consistently mineralized, but the grades are weaker than the ones returned in hole 17 and 18, further to the south. This supports Woodcock suggestion that the best mineralization is at the south end of the intrusive (Woodcock, 1995).



ROCK TYPES

- Alaskite
- Augite Porphyry Dyke
- Fault
- Monzodiorite
- Chloritic Plagioclase Porphyry
- Grey Plagioclase Porphyry
- Quartz Feldspar Porphyry
- Quartz Diorite
- Quartz Monzonite
- Quartzite
- Tuff
- Volcanic

Display colors for Molybdenum and Copper

0 - 99 ppm
100 - 249 ppm
250 - 499 ppm
500 - 749 ppm
750 - 999 ppm
1000 - 1999 ppm
>2000 ppm

Metres

0 25 50 75 100

BEAR PROJECT

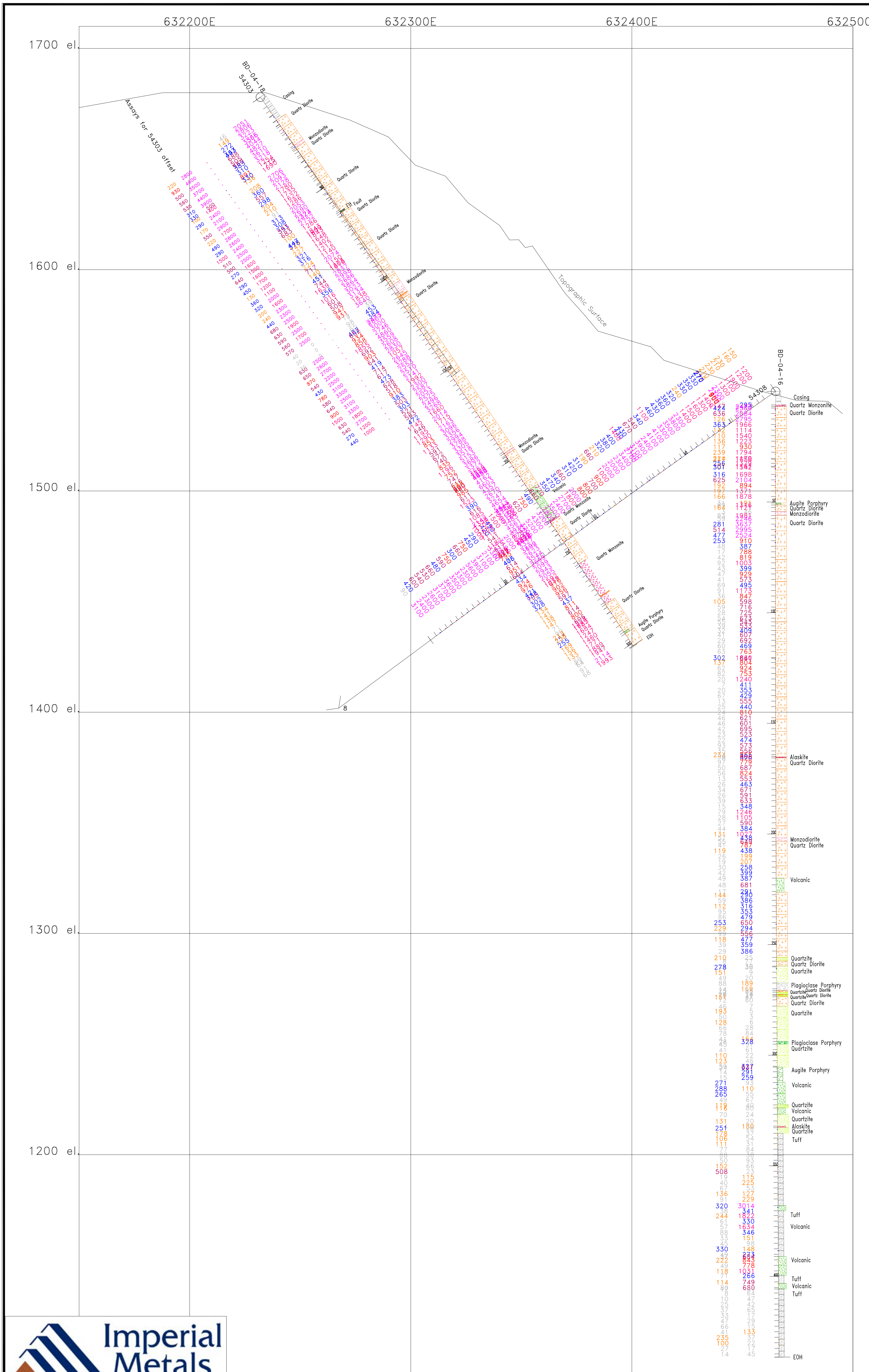
Imperial Metals Corporation

Section: 9450 N

BEAR DRILL SECTIONS

GEOLOGY AND ASSAYS

Drawn by: S Robertson	Date: 02/06/2005
Scale: As Shown	File: Figure 4.2



ROCK TYPES

- Alaskite
- Augite Porphyry Dyke
- Fault
- Monzodiorite
- Chloritic Plagioclase Porphyry
- Grey Plagioclase Porphyry
- Quartz Feldspar Porphyry
- Quartz Diorite
- Quartz Monzonite
- Quartzite
- Tuff
- Volcanic

Molybdenum (ppm)	Copper (ppm)	Downhole Depth and Sample Interval Ticks	Strip Log	Rock Type
166	1878			Quartz Diorite
31	191			Augite Porphyry
89	1316			Quartz Diorite
164	1121			

Display colors for Molybdenum and Copper

- 0 – 99 ppm
- 100 – 249 ppm
- 250 – 499 ppm
- 500 – 749 ppm
- 750 – 999 ppm
- 1000 – 1999 ppm
- >2000 ppm

Metres

0 25 50 75 100

BEAR PROJECT

Imperial Metals Corporation

Section: 9550 N

BEAR DRILL SECTIONS

GEOLOGY AND ASSAYS

Drawn by: S Robertson	Date: 02/06/2005
Scale: As Shown	Figure 4.3

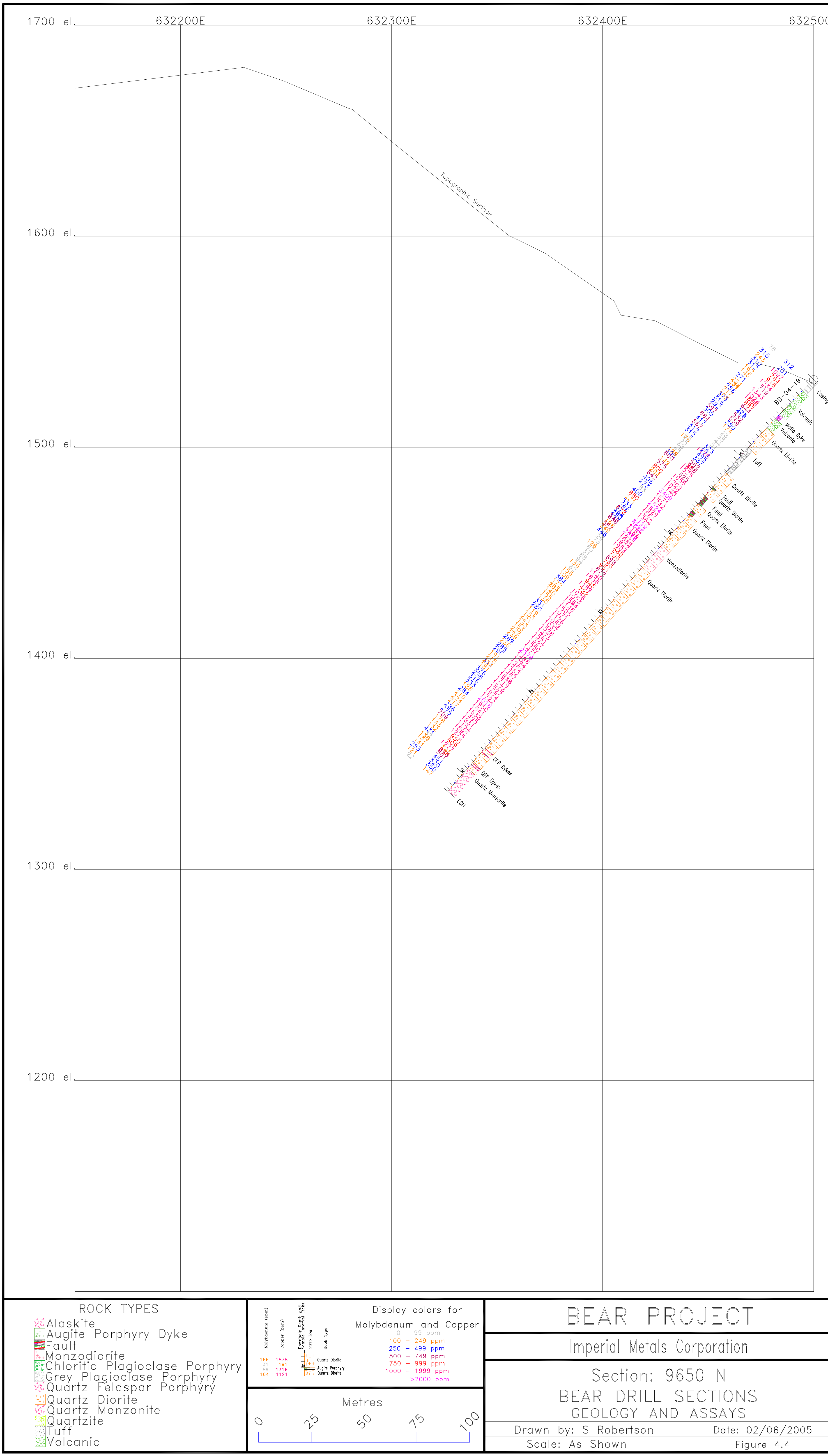
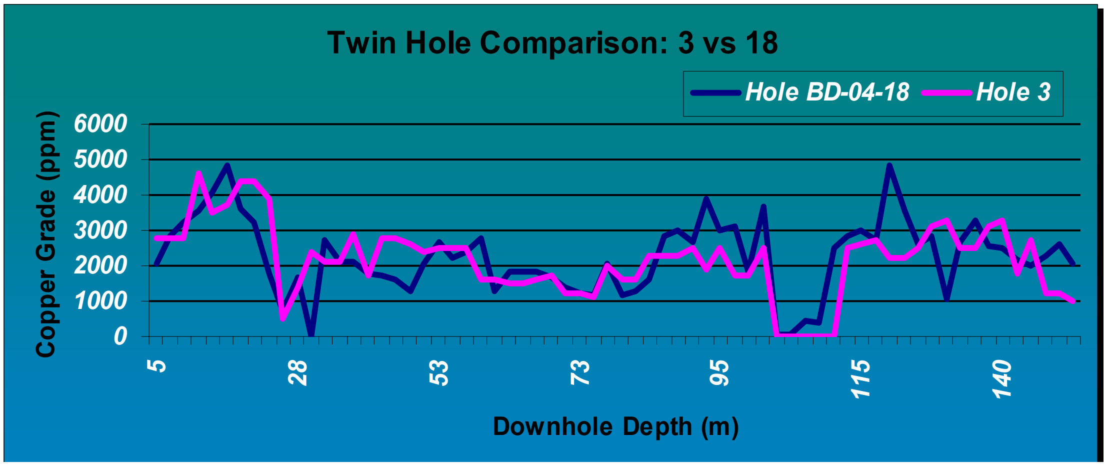
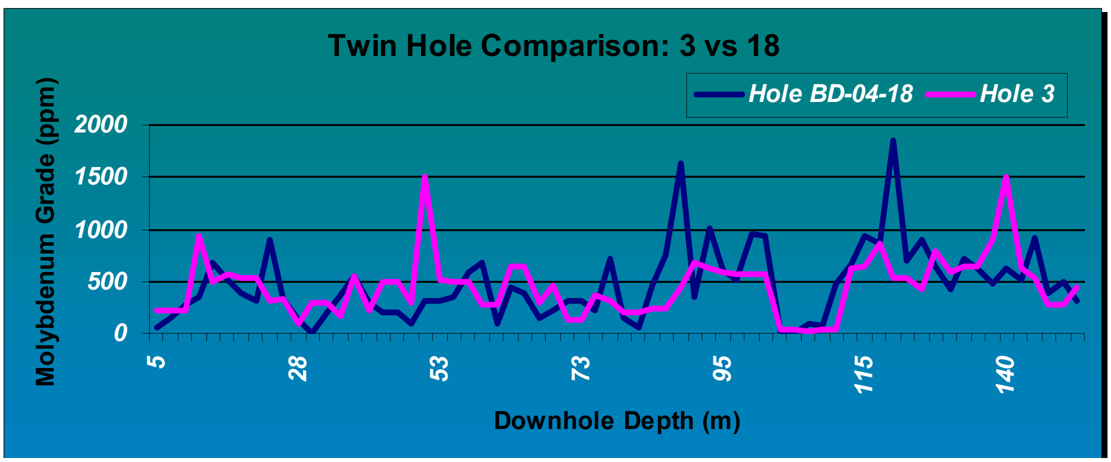
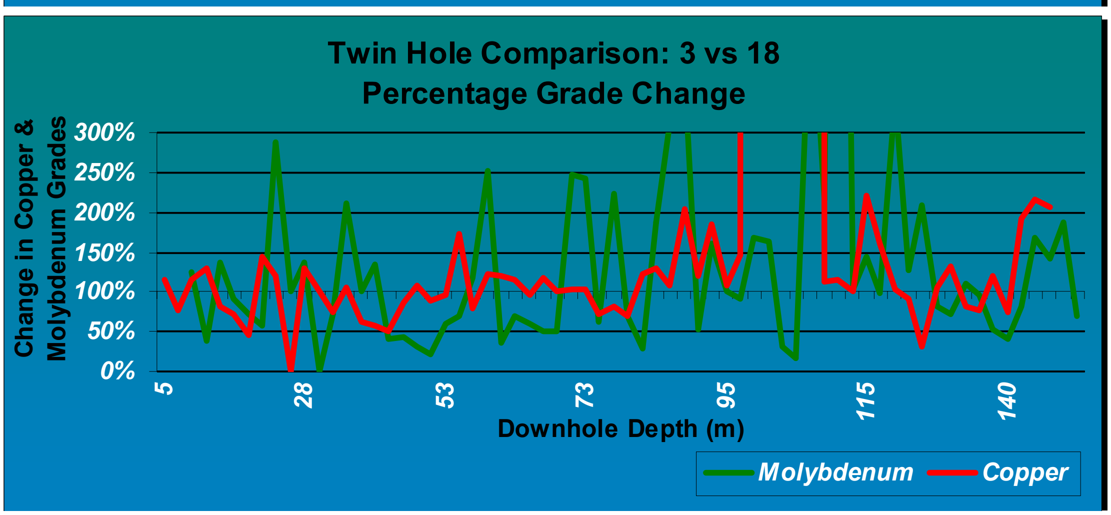

1700 el.
1600 el.
1500 el.
1400 el.
1300 el.
1200 el.
632200E
632300E
632400E
632500E
Topographic Surface
BD-04-19
Casing
Volcanic
Mafic Dyke
Volcanic
Quartz Diorite
Tuff
Quartz Diorite
Fault
Quartz Diorite
Fault
Quartz Diorite
Fault
Quartz Diorite
Monzodiorite
Quartz Diorite
QFP Dykes
QFP Dykes
Quartz Monzonite
EOH
ROCK TYPES
Alaskite
Augite Porphyry Dyke
Fault
Monzodiorite
Chloritic Plagioclase Porphyry
Grey Plagioclase Porphyry
Quartz Feldspar Porphyry
Quartz Diorite
Quartz Monzonite
Quartzite
Tuff
Volcanic
Molybdenum (ppm)
Copper (ppm)
Downhole Depth and Sample Intervals
Strip Log
Rock Type
Quartz Diorite
Augite Porphyry
Quartz Diorite
Display colors for
Molybdenum and Copper
0 – 99 ppm
100 – 249 ppm
250 – 499 ppm
500 – 749 ppm
750 – 999 ppm
1000 – 1999 ppm
>2000 ppm
Metres
0
25
50
75
100
BEAR PROJECT
Imperial Metals Corporation
Section: 9650 N
BEAR DRILL SECTIONS
GEOLOGY AND ASSAYS
Drawn by: S Robertson
Date: 02/06/2005
Scale: As Shown
Figure 4.4

Table 4.2 Comparison of Twinned holes BD04-18 and 54303







5.0 DISCUSSION OF RESULTS

5.1 General

The diamond drilling completed at Bear in 2004 indicates that the area possesses significant potential to host porphyry copper - molybdenum mineralization of the size and grade necessary for an economic ore deposit. The intrusive complex and surrounding mafic volcanics have been shown to host molybdenum - chalcopyrite mineralization over a distance of about 900 metres. Mineralization continues to depth beyond the deepest hole which was drilled to over 400 metres.

5.2 Drilling

The drilling did achieve the stated goals of demonstrating that the mineralization could have potential to host the size and grades necessary to host an economic deposit. Clearly, additional exploration is required on system. The program was not able to establish that the historic drilling had underestimated the molybdenum grades due to the small drill core used. The test of this theory failed due to the deviation of the 2004 drill hole, making a direct comparison with the historic drilling difficult.

All holes in the program intercepted long intervals of significant grades. Although the adjacent hornfelsed volcanics are mineralized, the grades are generally lower than those observed in the best intrusive host, which is the Quartz Diorite. To delineate the best grades in the area, further attention should be paid to characterizing the Quartz Diorite and determining its distribution. In addition to rocktype, the southern portion of the intrusive complex appears to have been more productive than the northern areas.

Holes 17 through 19 all appeared to fail to drill through the mineralization and would have provided useful information had they penetrated deeper. The sheeted quartz veins and many of the faults have a generally vertical orientation. Deeper exploration of the system is required.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The diamond drilling program completed at Bear in 2004 was successful in confirming a large body of molybdenum copper mineralization in and adjacent to the Eocene Kastberg intrusive complex on the core of the property. The potential of well over 100 million tonnes of mineralization is good.

The recommended program (See Table 6.1) consists of an initial phase of airborne geophysics gathering magnetics and radiometrics data. The additional cost/benefit of EM should be considered. Although EM data may be useful in determining the position of major geologic contacts and has some indirect exploration implications (identification of sulphide veins or massive sulphides) there is no direct benefit to the exploration for molybdenum – copper mineralization. Magnetite destruction observed in the petrographic samples and the replacement of magnetite with chalcopyrite are support for a survey with 100 metre line spacing.

Follow-up of the airborne survey with an IP survey over targeted areas using the airborne magnetics as a guide is worth consideration. A limited IP survey was conducted by Canico in 1973 and 1981. This data and the airborne geophysics should be examined by a geophysicist and recommendations made as to the merit of such work.

Following the airborne geophysics, regardless of IP work, a campaign of detailed geologic mapping and diamond drilling is required to advance this prospect to a state where it will be possible to make a decision to advance to feasibility work. The geologic mapping will confirm contacts and descriptions in the core of the intrusive, but will also extend well beyond the alpine exposure to establish the overall geologic setting and search for other areas of economic mineral potential. The results of the airborne geophysics will be valuable in guiding the mapping program.

Diamond drilling will focus on expanding and confirming the known mineralization, with enough flexibility in the program to test outside targets of merit identified by geophysics or mapping. Drilling in the core area will be based on 100 metre north-south and 50 metre east-west grid. With that spacing, it should be possible to complete a resource estimate a the conclusion of the work. At least 3 or 4 holes are expected to be necessary to test outside targets that are generated by airborne geophysics and mapping.

Many of the 2004 drill holes bottomed in strong mineralization and a significant amount of the tonnage potential may be vertical rather than lateral. As a result, a bigger drill rig with potential to easily drill 1000 metres is recommended. The topographic position of the mineralization along a ridge provides an opportunity to explore deeper mineralization which may be economic because of a favorable stripping ratio.

Mineralization is hosted within sheeted quartz veins. The development of techniques for obtaining oriented core that is affordable and easy to use, such as the Ball Mark system, make logging the orientation of the planar veinlets practical. It is strongly recommended that the Ball Mark or similar system be employed on any future diamond drilling programs.

Table 6.1 – **2005 Exploration Proposal**

Bear Project - Exploration Proposal Summer 2005					
Salaries - General					
	Geologist - Manager		50 days @	$400	$20,000
	Mapper - Core Logger		60 days @	$350	$21,000
	Camp Support - Assistant		60 days @	$250	$15,000
	Pad Building - Core splitting	2	40 days @	$250	$20,000
	Camp Cook		60 days @	$350	$21,000
Camp and General Support					
	Camp		600 mandays @	$75	$45,000
	Communications				$7,000
	Food		600 mandays @	$25	$15,000
	Field Supplies				$15,231
	Fuel				$30,000
Travel & Transportation					
	Truck	1	10 days @	$65	$650
	Fixed Wing Flights				$25,000
	Flights		8 flights @	$500	$4,000
	Helicopter		50 hours @	$1,000	$50,000
	Shipping		estimated		$10,000
Airborne Geophysics					
	Airborne Acquisition		200 line-kms @	$130	$26,000
	Weather Delays				$15,000
	Mob/Demob				$10,000
	Interpretation				$5,000
	Reporting				$2,500
Diamond Drilling					
	Drilling		5000 metres @	$100	$500,000
	Additives				$7,500
	Cat Time		100 hours @	$100	$10,000
	Mob/Demob				$10,000
	Reporting				$5,000
Assays					
		Rock	60 samples @	$25	$1,500
		Drill Core	2000 samples @	$22	$44,000
Petrographics and Other Studies					$2,000
Reporting and Drafting					$15,000
Subtotal					$952,381
Contingency (5%)					$47,619
Total Cost					**$1,000,000**

7.0 SELECTED BIBLIOGRAPHY

Debicki, E.J. and Woodcock, J.R. (1982): Geological Consulting Report on the Bear, BE, BW, Claims. BC Assessment Report 10,369.

Gidluck, M.J. (1973): Report on Geological, Geochemical and Geophysical Surveys conducted on the Bear Claims – Groups A, B and C. BC Assessment Report 4648.

Gidluck, M.J. (1974): Diamond Drill Logs on Bear Claims Group A, B and C. BC Assessment Report 5236.

Hunter, E.N. (1974): Geological and Geochemical Surveys Conducted on the Bear Claims – Group C. BC Assessment Report 5269.

International Skyline Gold Corp. (1996): Reports on the Diamond Drilling at the Bear Lake Property, News Release, October 8, 1996.

Jeletsky, O.L. (1976): Takla Project: Preliminary Report on Stratigraphy and Depositional History of Middle to Upper Jurassic Strata in McConnell Creek Map Area(west half) British Columbia; *in* Report of Activities, *Geological Survey of Canada*, Paper 76-1A, Report 13.

Lord, C.S. (1948): McConnell Creek Map-Area, Cassiar District British Columbia; *Geological Survey of Canada*, Memoir 251.

Peto, P. (1980): Geochemical Orientation Survey of the Bear Claims – Group A. BC Assessment Report 8335.

Peto, P. and Krause, B. (1981): Geological, Geochemical and Geophysical Report, Bear Claims – Groups A, B and C, BE, BW Claims. BC Assessment Report 9534.

Raven, Wesley (1996): Geological, Geochemical, Geophysical and Diamond Drilling Report, Chaco Bear Project. Assessment Report 25,270.

Richards, T.A. (1975): Takla Project: McConnell Creek Map Area (94D East Half) British Columbia; *in* Report of Activities, Part A, *Geological Survey of Canada*, Paper 76-1A, Report 10.

Serack, M.L. (1985): Report on the Geochemical Survey Bear 1 - 4 Claims. BC Assessment Report 14,679.

Tipman, R. (1975): Flotation Tests on Bear Lake, BC. Drill Cores. Internal Canico Report. 4pp.

Woodcock (1995): The Bear Lake Cu-Mo Property. Private Consultants Property Report.

8.0 LIST OF PERSONNEL

Position	Name	Company	Days	Dates	Daily Rate	Total
Project Manager	Steve Robertson	Imperial	28	July 4 - 31	$380	$10,640
Geologist	Gary Roste	Imperial	8	July 18 – July 25	$350	$2,800
Pad Builder	Don Lange	Imperial	27	July 4 – July 30	$250	$6,750
Core Cutter	Frank Lambert	Imperial	28	July 4 – July 31	$250	$7,000
Pad Builder	Gerry Cousins	Coureur Des Bois	27	July 4 – July 30	$300	$8,100
Camp Cook	Christine Coombes	1984 Inc	28	July 4 – July 31	$300	$8,400
Drilling Foreman	Jeff Clevland	F. Boisvenu	6	July 3 - July 8		
Driller / Foreman	Mike Medwid	F. Boisvenu	27	July 4 - July 30		
Driller	Sam Stewart	F. Boisvenu	16	July 4 - July 19		
Driller	Phil Small	F. Boisvenu	9	July 22 - July 30		
Helper	Dennis Husty	F. Boisvenu	28	July 3 - July 30		
Helper	Mike Kent	F. Boisvenu	16	July 4 - July 19		
Helper	Michael Desrochers	F. Boisvenu	9	July 22 - July 30		
		Total	**257**	**person-days**		

9.0 STATEMENT OF EXPENDITURES

Salaries	Staff			$23,902
	Contract Labour			$28,886
Food	257 person-days	@ $25/day		$6,425
Accommodation	257 person-days	@ $62/day		$15,934
Transportation				
	Truck Rental		$697	
	Shipping		$4,851	
	Rail		$2,081	
	Fuel (Drill, Camp + Heli)		$18,606	
	Helicopter		$70,370	
	Fixed wing		$15,981	
	Other		$1,494	
	Transportation Total			$114,080
Diamond Drilling	F. Boisvenu Drilling Ltd.	1704m @ $91.88/m		$156,564
Assays	Acme Analytical	796 @ $22		$17,512
Field Supplies				$12,273
Airphotos, Trim and Map				$1,776
Communications	Sat phone, long distance			$1,104
Petrographics	Panterra Geoservices Inc			$1,600
Report Writing & Drafting				$7,000
Courier				$1,177
Filing Fees				$10,571
		Total Cost		**$398,804**

10.0 STATEMENT OF QUALIFICATIONS

I, Stephen Robertson, of 1969B Lower Road, Roberts Creek, British Columbia, hereby certify that:

- I am a geologist, employed by Imperial Metals Corporation.
- I am a 1989 graduate of the University of Alberta in Edmonton, with a Bachelor of Science degree in geology.
- I have been employed in mining since 1988 and have continuously practiced my profession since 1989.
- I am a Professional Geoscientist, registered with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
- I supervised and planned the program described in this report.
- This report is based on the information gained during the 2004 field season and a review of public and private reports.
- This report may be used for development of the property or raising of funds, provided that no portion of it is used out of context, or in such a manner as to convey a meaning different from that set out in the whole.

Signed at Vancouver, British Columbia, this _____ day of ______________, 2005.

____

Stephen Robertson, P.Geo.

APPENDIX A

Drill Logs

Diamond Drill Log

Imperial Metals

Hole No:	**BD-04-15**		
Project Code:	Bear		
Grid			
NORTH:	6219379.000	Location:	Vertical from hole 14 pad
EAST:	632372.000	Logged By:	S Robertson
ELEVATION:	1641.000	Log Date:	08/07/2004
LENGTH:	299.01	Date Started:	08/07/2004
DIP:	-90.0	Date Finished:	12/07/2004
AZIMUTH:	0.0	Contractor:	F Boisvenu
CASING:	0.0	Assayer:	Acme
SIZE:	NQ2		
		Comments:	Still weakly mineralized at end of hole

SURVEY RECORDS

DEPTH	DIP	AZIMUTH	
0.00	-90.00	0.00	
3.05	-88.70	223.40	
45.72	-88.80	226.00	
106.68	-88.40	224.40	
167.64	-89.00	241.30	
228.60	-88.80	243.70	
289.56	-89.40	261.20	

Project: Bear North 6219379.000 East 632372.000 Elev 1641.000 ***Hole Number: BD-04-15*** Imperial Metals

From	To	Rocktype & Description	From	To	Sample	Width	Mo (ppm)	Cu (ppm)
0.00	**2.44**	**Case**						
		Casing through overburden - No return						
2.44	**3.65**	**Quartz Monzonite**	2.44	3.65	138301	1.21	404	661
		Coarse gr porph rock w 50% phenos, mostly plag (5 - 8 mm), with similar sized bio and qtz. Rock appears quite siliceous but is mostly kspar flooding. Frac have 1 - 3 cm envelopes of limonitic stain.						
		« cpy 1.00%» « mo 0.30%»						
		Mineralization hosted in « qtz » « stringers 20.00° 5.00-10« hem 0.50%» « mala 0.05%»						
		« 3.00- 3.05 Quartz Monz Specimen Pet »						
3.65	**11.13**	**Quartz Diorite**	3.65	5.00	138302	1.35	274	1859
		Med gr non porph intrusive with 30-40% mafics (mostly bio) and variable	5.00	7.50	138303	2.50	465	4390
		alteration throughout. Abundant mineralized fractures and some quartz stringers	7.50	10.00	138304	2.50	299	5092
		throughtout.	10.00	11.13	138305	1.13	272	2592
		Contains a quartz vein running parallel to core axis at 8.4 - 9.5 m.						
		« cpy 1.20%» « py 1.00%» « mo 0.50%» hem						
		Top and bottom contacts at 30 tc« hem 0.50%» « mala 0.05%»						
		« 10.30- 10.40 Pet »						
11.13	**16.26**	**Volcanic**	11.13	12.50	138306	1.37	137	739
		Volcanic - Very dark grey homogeneous unit with faint visible feldspar laths.	12.50	15.00	138307	2.50	230	1360
		Weakly hornfelsed with minor secondary biotite development. Unit is 4 - 5 % « qtz 4.00%» « stringers 20.00-30.00° 8.00-10.00mm»	15.00	16.26	138308	1.26	327	2155
		Mineralization is mostly within the strongly dev v f gr pyrite throughout. « py 1.50%» « cpy 0.40%» « mo 0.05%»						
		« 11.30- 11.40 Volcanic Pet »						
16.26	**18.05**	**Quartz Diorite**	16.26	18.05	138309	1.79	695	6215
		Quartz Diorite - Small section of volcanic has been invaded by quartz diorite but still contains remnant volc. Obvious intrusive activity with altered volcanic wall rock. Sx diss throught intrusive as well as in « quartz stringers						

Project: Bear North 6219379.000 East 632372.000 Elev 1641.000 **Hole Number: BD-04-15** Imperial Metals

From To Rocktype & Description

4.00-5.00% 5.00-10.00mm»

« py 2.00%» « cpy 1.00%» « mo 0.10%»

18.05 28.73 Volc

Volcanic - As in previous interval.

The unit is widely but weakly altered making it difficult to identify volcanic textures.

quartz « stringers 15.00-30.00° 5.00-10.00mm»

« 21.60- 21.75 Clay Zone Mineralized 60.00° 15.00cm»

Clay zone is unusual in that it is a very well formed clay with no large rock frags as often observed in gouge. Also no signs of strain observed in HW or FW.

28.73 31.65 Quartz Diorite

Small zone of quartz diorite intruding the volcanic package. Strong associated quartz veinlets and stringer acitivity with associated sx mineralization.

« cpy 1.00%» « py 1.00%» « mo 0.20%»

31.65 82.50 Volc

Same as last interval of Volcanics.

These rocks are relatively homogeneous but faint, fine plag laths visible. The origin is probably andesitic flows, possibly amygdiodial in places.

Unit has occasional patches and zones up to a meter long that are flooded by albite/qtz/kspar or patches of actinolite-epidote alteration. This alteration and the frequency of fracturing decreases down hole from 45 metres. The strength of mineralization also decreases downhole

« cpy 0.30%» « py 1.30%» « mo 0.01%»

« quartz stringers -50.00°0° 1.00-10.00mm»

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
18.05	20.00	138310	1.95	565	295
20.00	21.60	138311	1.60	285	978
21.60	21.75	138312	0.15	1091	2065
21.75	22.50	138313	0.75	532	2161
22.50	25.00	138314	2.50	299	678
25.00	27.50	138315	2.50	253	919
27.50	28.73	138316	1.23	510	1128
28.73	30.00	138317	1.27	470	2340
30.00	31.65	138318	1.65	506	2152
31.65	32.50	138319	0.85	563	784
32.50	35.00	138320	2.50	291	715
35.00	37.50	138321	2.50	159	1094
37.50	40.00	138322	2.50	178	801
40.00	42.50	138323	2.50	227	1254
42.50	45.00	138324	2.50	34	515
45.00	47.50	138325	2.50	131	1590
47.50	50.00	138326	2.50	272	898
50.00	52.50	138327	2.50	87	483
52.50	55.00	138328	2.50	227	915
55.00	57.50	138329	2.50	102	575
57.50	60.00	138330	2.50	203	917
60.00	62.50	138331	2.50	56	556
62.50	65.00	138332	2.50	79	1160

From	To	Rocktype & Description

82.50 89.53 tuff

Very finely laminated water lain tuff. Laminations are 8 -12 mm thick and average 30 degrees tca.
This section seems quite tight with fewer fractures and quartz; strgrs. Most fractures are carbonate filled.>60 degrees tca, 5 - 20 mm wide with minor pyrite, chalcopyrite and moly.
« py 1.00%» « cpy 0.10%» m« magnetite alteration 0.01»

89.53 90.03 Flt

Fault Zone looks somewhat mylonitic. Apple green colour from albite content. Fault at 45 tca.
Moderate quartz flooding with assoc sx.
« py 3.00%» « cpy 0.80%» « mo 0.10%»

90.03 96.50 MfDk

Mafic dyke with strongly specked appearance due to feldspar laths. Small sections of phenocrysts have been actinolite quartz, chlortie, epidote, sx altered. Sx content picks up a little over this interval.
« py 1.00%»« cpy 0.20%» « mo 0.01%»

96.50 106.92 tuff

Tuff - As above interval of tuff.
« py 1.50%» « cpy 0.30%» « mo 0.05%»

106.92 119.13 Volc

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
65.00	67.50	138333	2.50	67	1349
67.50	70.00	138334	2.50	157	1252
70.00	72.50	138335	2.50	43	1515
72.50	75.00	138336	2.50	156	612
75.00	77.50	138337	2.50	182	325
77.50	80.00	138338	2.50	302	953
80.00	82.50	138339	2.50	94	789
82.50	85.00	138340	2.50	35	405
85.00	87.50	138341	2.50	126	284
87.50	89.53	138342	2.03	62	586
89.53	90.03	138343	0.50	381	970
90.03	92.50	138344	2.47	23	269
92.50	95.00	138345	2.50	165	1189
95.00	96.50	138346	1.50	188	698
96.50	100.00	138347	3.50	138	682
100.00	102.50	138348	2.50	93	1070
102.50	105.00	138349	2.50	418	1938
105.00	106.92	138350	1.92	626	2467
106.92	107.50	138420	0.58	301	2549

Project: Bear North 6219379.000 East 632372.000 Elev 1641.000 **Hole Number: BD-04-15** Imperial Metals

From	To	Rocktype & Description	From	To	Sample	Width	Mo (ppm)	Cu (ppm)
		Agglomerate. The clasts appear to be volcanic flow material with plag laths to	107.50	110.00	138351	2.50	283	3134
		3 mm long. The agglomeratic texture has made the rock more receptive to	110.00	112.50	138352	2.50	164	1888
		introduction of quartz and sx. The quartz stingers are about 12 - 15 mm wide	112.50	115.00	138353	2.50	141	1814
		with abundant pyrite and chalco.	115.00	117.50	138354	2.50	23	767
		Fracture filling and veinlets at all angles, but predominantly at 0 - 20 tca.	117.50	119.13	138355	1.63	162	913
		« py 5.00%» « cpy 1.20%» « mo 0.10%»						
119.13	**133.05**	**Quart Diorite**	119.13	120.00	138356	0.87	219	1518
		Quartz diorite - M gr med grey intrusive with plag, microcline, quartz,	120.00	122.50	138357	2.50	125	1266
		biotite, amphibole makeup. Nonporphyritic and mod alteration with kspar/silica	122.50	125.00	138358	2.50	63	1013
		flooding. Probably equal dist of sx in « quartz stringers 3.00% 5.00mm» and	125.00	127.50	138359	2.50	114	1566
		along hairline frac (plus minor diss with quartz flooding).	127.50	130.00	138360	2.50	149	967
		Overall quite competent but brittly fractured in spots.	130.00	132.50	138361	2.50	46	967
		« py 2.00%» « cpy 1.20%» « mo 0.30%»	132.50	133.05	138362	0.55	413	1895
		Rock near bottom contact has increased alteration, fracturing, veining,						
		mineralization. Bottom contact at about 10 tca but much of the veining there is						
		at 20 tca.						
133.05	**139.22**	**Monzodiorite**	133.05	135.00	138363	1.95	4	40
		Very fine grained , weakly porphyritic, melanocratic intrusive rock. Strongly	135.00	137.50	138364	2.50	3	24
		evident chilled margins, Rare phenos of possible amphibole that has been	137.50	139.22	138365	1.72	13	32
		altered to mostly chlorite. Away from chilled margins the f gr groundmass is						
		very pink (kspar rich or rose quartz?). Contains a number of Xenoliths (1 - 2						
		cm) of probably volcanic rock.						
		Dyke is completely unmineralized, suggesting post mineralization emplacement.						
		Top contact at 10 and bottom at 30 tca. Both are quite planar.						
139.22	**144.80**	**Volc**	139.22	140.00	138366	0.78	345	990
		Agglomerate - As previously described. Relatively coarse grained. High quartz	140.00	142.50	138367	2.50	442	755
		stringer content and associated sx.						
		Estimate that greater than half the sx are coarse disseminations rather than						
		hosted in quartz s« stringers 8.00% 1.00-15.00mm» although most chalco and moly						

Project: Bear North 6219379.000 East 632372.000 Elev 1641.000 **Hole Number: BD-04-15** Imperial Metals

From To Rocktype & Description

are hosted in stringers
« py 7.00%» « cpy 1.50%» « mo 0.70%»

144.80 150.40 Volc
Agglomerate as described above but with significant dec in sx.

« py 5.00%» « cpy 1.00%» « mo 0.50%»

150.40 160.62 Volc
Agglomerate - As above, but again lower sx
« py 4.00%» « cpy 0.80%» « mo 0.30%»

160.62 163.61 Volc

Agglomerate. As above but darker and has a few quartz poor fractures coated with very strong chalco and moly minl at 20 tca
« py 3.00%» « cpy 1.20%» « mo 1.00%»

163.61 173.84 Volc
Agglomerate - As described above 160 but sx content is higher again. Some sx associated with quartz stringer and some with quartzless (dry) frac. All orientations, but again 20 tca dominates.
« py 8.00%» « cpy 1.50%» « mo 1.00%»

173.84 174.24 Flt

Gougy fault at 55 tca. Distinctly different than the clay zone observed higher in the hole. This zone has a plasticy quality and is quite clearly sheared, with wall rock remnants contained. Soapy texture.

174.24 184.08 Volc
Volcanic flow. Medium gr, med colour, mod amount of frac. Unit becomes moderately broken toward bottom of interval.

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
142.50	145.00	138368	2.50	282	1732
145.00	147.50	138369	2.50	600	1255
147.50	150.00	138370	2.50	478	894
150.00	152.50	138371	2.50	245	683
152.50	155.00	138372	2.50	336	1036
155.00	157.50	138373	2.50	517	1913
157.50	160.00	138374	2.50	400	1866
160.00	163.10	138375	3.10	346	931
163.10	165.00	138376	1.90	606	2323
165.00	167.50	138377	2.50	541	1753
167.50	170.00	138378	2.50	253	1006
170.00	172.50	138379	2.50	24	688
172.50	175.00	138380	2.50	167	609
175.00	177.50	138381	2.50	168	890
177.50	180.00	138382	2.50	85	626
180.00	182.50	138383	2.50	932	1912

Project: Bear North 6219379.000 East 632372.000 Elev 1641.000 **Hole Number: BD-04-15** Imperial Metals

From	To	Rocktype & Description

« py 5.00%» « cpy 1.20%» « mo 0.50%»

184.08 185.25 Monz

Medium grained monz or quartz monz next to a major fault. Disseminated sx throughout. Pink streaks throughout where kspar has invaded along hairline frac. Most feldspars have been completely clay altered.

« py 8.00%» « cpy 1.50%» « mo 0.50%»

185.25 186.80 Flt

Similar to last fault in that it has a very soapy texture. Bottom contact seems to be clearly at about 35 tca.

186.80 209.06 Volc

Volcanic Flow.- As described previously, with moderate colour, medium grained, Weak to moderate fracturing. Core is quite competent. There are a few frac (both with quartz and without) in the interval with particularily strong Moly coating, generally oriented at 20 30 tca. Unit is quite grey (not green). Often see magnetitie in the sx hosting quartz veinlets, some of which is retro to hematite.

« py 4.00%» « cpy 1.00%» « mo 0.20%»

209.06 211.00 Monzodiorite

Crowded porphyritic rock with up to 5% mafic phenos (formerly amphibole?) in a v f gr matrix which makes up about 30% of the rock. Very irregular contacts, both upper and lower.

« py 4.00%» « cpy 0.50%» « mo 0.05%»

211.00 224.18 Volc

Volcanic Flow - andesitic flow breccia. Slightly coarser griained than previous volcanics, and breccia frags are more clearly identified. Competent core. As much as 2/3 of sx as disseminations and on hairline frac rather than in quartz veinlets.

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
182.50	184.08	138384	1.58	477	1876
184.08	185.25	138385	1.17	327	1690
185.25	186.30	138386	1.05	226	641
186.30	187.50	138387	1.20	277	852
187.50	190.00	138388	2.50	752	1906
190.00	192.50	138389	2.50	517	984
192.50	195.00	138390	2.50	99	799
195.00	197.50	138391	2.50	458	922
197.50	200.00	138392	2.50	153	966
200.00	202.50	138393	2.50	344	1263
202.50	205.00	138394	2.50	225	875
205.00	207.50	138395	2.50	176	824
207.50	209.60	138396	2.10	791	972
209.60	211.00	138397	1.40	129	1155
211.00	212.50	138398	1.50	205	2110
212.50	215.00	138399	2.50	90	1411
215.00	217.50	138400	2.50	66	1067
217.50	220.00	138401	2.50	186	1353
220.00	222.50	138402	2.50	389	1903

Project: Bear North 6219379.000 East 632372.000 Elev 1641.000 **Hole Number: BD-04-15** Imperial Metals

From To Rocktype & Description

No clear bottom contact observed. The volcanic unit becomes progresively more altered, silica flooded, fractured and mineralized. Bottom contact is marked at the last point that the rock is clearly identifiable.

« py 6.00%» « cpy 1.20%» « mo 0.20%»

224.18 226.40 VcBx

Highly altered zone of unknown origin. Intense silica (+/- albite) flooding into this highly fractured zone of stockwork. Core is healed and highly competent. Moderate to strong sx min throughout zone. Minor carbonate along some fractures. Many quartz veinlets have carbonate in them. Calcite does not appear to be related to mineralization and is probably a late infill of the vuggy quartz veinlets.

« py 6.00%» « cpy 1.00%» « mo 0.10%»

226.40 238.26 Quart Diorite

Strongly altered quartz diorite, similar to the previous interval, but the protolith is obviously intrusive rather than volcanic. Good stockwork in some areas, but 20 tca is stil the dominant orientation.

« py 6.00%» « cpy 1.00%» « mo 0.10%»

« 235.00- 235.10 Gougy fault Fault 30.00° 10.00cm»

238.26 258.00 Quart Diorite

Quartz diorite. Back to typicaly, weakly altered, fractured and veined medium gr, med grey intrusive.

About 20% of sx is in quartz vienlets, 50% in hairline fracs and 30% as disseminations. Overall sx content does not seem to be dramatically different than the previous interval of highly alterd rock.

Noticebly more mineralized fractures (with quartz and without) at an angle of 50 - 60 tca.

« 247.85- 254.00 Bleached & silica flooded »

« py 5.00%» « cpy 0.60%» « mo 0.05%»

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
222.50	224.18	138403	1.68	107	832
224.18	226.40	138404	2.22	113	1191
226.40	227.50	138405	1.10	97	524
227.50	230.00	138406	2.50	62	199
230.00	232.50	138407	2.50	161	526
232.50	235.00	138408	2.50	47	601
235.00	237.50	138409	2.50	59	680
237.50	238.26	138410	0.76	46	621
238.26	240.00	138411	1.74	114	2578
240.00	242.50	138412	2.50	17	1364
242.50	245.00	138413	2.50	14	319
245.00	247.85	138414	2.85	23	663
247.85	250.00	138415	2.15	80	820
250.00	252.50	138416	2.50	38	705
252.50	254.00	138417	1.50	152	1845
254.00	255.00	138418	1.00	37	478
255.00	257.50	138419	2.50	129	914
257.50	260.00	138421	2.50	62	866

From	To	Rocktype & Description
258.00	**299.01**	**Quart Diorite**

As above but the amount of alteration has decreased very significantly. The fractures are still mineralized with sx but the frequency has dropped to the point where the rock is most likely subeconomic. Also the ration of moly to chalco seems to be lower.

Still have some isolated zones of quartz introduction with py/cpy/mo/mt mineralization, as indicated by the range features below.

See first pyrrhotite at 294.60 me in a quartz flooded area. It is associated with py/cpy/mo/mt. It is strongly magnetic (hard to tell with magnetitie around though.

« 259.40- 259.50 Mineralized quartz veinlet 20.00° 2.00cm»
« 264.07- 264.22 Mineralized Quartz Veinlet 20.00° 5.00cm»
« 289.00- 289.20 quart flooding »
« 290.50- 290.70 quartz flooding »
« 293.00- 293.30 quartz flooding »
« 294.50- 294.70 quartz flooding

299.01 299.01 EOH

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
260.00	262.50	138422	2.50	30	400
262.50	265.00	138423	2.50	161	908
265.00	267.50	138424	2.50	87	773
267.50	270.00	138425	2.50	61	390
270.00	272.50	138426	2.50	111	630
272.50	275.00	138427	2.50	63	598
275.00	277.50	138428	2.50	99	541
277.50	280.00	138429	2.50	70	334
280.00	282.50	138430	2.50	79	393
282.50	285.00	138431	2.50	198	723
285.00	287.50	138432	2.50	60	295
287.50	290.00	138433	2.50	39	586
290.00	292.50	138434	2.50	68	688
292.50	295.00	138435	2.50	150	661
295.00	297.50	138436	2.50	58	416
297.50	299.01	138437	1.51	20	246

Diamond Drill Log

Imperial Metals

Hole No:	**BD-04-16**
Project Code:	Bear
Grid	
NORTH:	6219545.000
EAST:	632465.000
ELEVATION:	1574.000
LENGTH:	436.47
DIP:	-90.0
AZIMUTH:	0.0
CASING:	6.1
SIZE:	NQ2

Location:	Vertical from hole 8 pad
Logged By:	S Robertson
Log Date:	15/07/2004
Date Started:	12/07/2004
Date Finished:	18/07/2004
Contractor:	F Boisvenu
Assayer:	Acme
Comments:	Upper 250 m weakly min gd. Becomes siliceous below 250m.

SURVEY RECORDS

DEPTH	DIP	AZIMUTH
0.00	-90.00	0.00
252.98	-88.50	12.70

From	To	Rocktype & Description

0.00 6.10 Case

Casing - No return.

6.10 6.80 Quartz Monzonite

May be a boulder of quartz monzonite as the rock at the top of the hole is very broken and of mixed lithologies. No contact observed.

6.80 50.43 Quart Diorite

6.80 50.43 Quart Diorite

6.80 50.43 Quart Diorite

6.80 50.43 Quart Diorite

Very similar to quartz diorite observed in hole BD-04-15. Med gr, med grey, intrusive rock with a strong fracture pattern at 0 - 50 tca but by far most are at 20 - 30 tca. 80% of fractures host quartz veinlets and strngers.

Unit is moderately to strongly magnetic. Strong magnetism is from magnetite on introduced quartz and rock hosts some primary magnetite as well. A notable difference with hole BD-04-15 is the lack of strong hemetite patches (although still rarely present).

Calcite throughout rock as part of the hydrothermal alteration but is particularily concentrated in the quartz veinlets where they had open space and calcite has provided late infill.

Good sx mineralization along frac and to a lesser degree as diss within intrusive. Disseminated sx may be simply mineralization emplaced on random microfractures throughout the rock rather than primary sx in the quartz diorite.

« py 3.00%» « cpy 1.00%» « mo 0.05%»

« 30.27- 30.67 Sandy fault Fault »

« 33.80- 34.20 Weak Gougy Fault Fault 15.00°»

50.43 51.33 Augite Porphyry Dyke

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
6.10	6.80	138438	0.70	25	295
6.80	7.50	138439	0.70	1147	2473
6.80	7.50	138439	0.70	1147	2473
6.80	7.50	138439	0.70	1147	2473
6.80	7.50	138439	0.70	1147	2473
7.50	10.00	138440	2.50	424	2300
10.00	12.50	138441	2.50	636	2084
12.50	15.00	138442	2.50	126	2795
15.00	17.50	138443	2.50	363	1966
17.50	20.00	138444	2.50	142	1114
20.00	22.50	138445	2.50	110	1540
22.50	25.00	138446	2.50	136	1223
25.00	27.50	138447	2.50	117	930
27.50	30.27	138448	2.77	239	1794
30.27	30.67	138449	0.40	224	1170
30.67	32.50	138450	1.83	217	1658
32.50	33.80	138451	1.30	256	1379
33.80	34.20	138452	0.40	157	1161
34.20	37.50	138453	3.30	301	1542
37.50	40.00	138454	2.50	316	1698
40.00	42.50	138455	2.50	625	2104
42.50	45.00	138456	2.50	192	894
45.00	47.50	138457	2.50	197	1371
47.50	50.43	138458	2.93	166	1878
50.43	51.33	138459	0.90	31	191

Project: Bear North 6219545.000 East 632465.000 Elev 1574.000 **Hole Number: BD-04-16** Imperial Metals

From	To	Rocktype & Description

Small, post mineral mafic dyke with augite phenos to 5 mm. V f gr.Irregular top and bottom contacts at about 25 tca. Chilled margins. 20 cm xenolith of megacrystic Quartz Latite Porphyry at top of interval.

51.33 54.34 Quartz Diorite

This unit is becoming slightly altered with pink envelopes around fractures. Considerable amount of chalco is diss rather than fracture related.

« py 2.00%» « cpy 1.50%» « mo 0.10%»

54.34 56.05 Monzodiorite

Monzodiorite, post mineral, very similar to the one observed in hole BD-04-15. Top and bottom contacts both very clearly observed and very irregular. Pink, v f gr matrix. Phenos of amphibole to 1 cm are altered to chlorite and actinolite.

Post mineral.

« py » « cpy » « mo »

56.05 70.00 Quartz Diorite

Strongly altered quartz diorite. The protolith of this strongly altered rock appears to have been quartz diorite, but this interval has a distinctive green-grey colouration with blotches of pink (kspar) and white (quartz). Rock is pervasiveoly altered and mineralized. with a weak fabric at 20 - 30 tca.

« py 6.00%» « cpy 1.60%» m« magnetite alteration 0.20» « mt 1.00%»

70.00 76.00 Quart Diorite

Same unit as above but darker and less altered. Possibly part of a shear zone as this interval is moderately broken at about 35 tca. Darker colour due to lack of kspar and quartz floofing, but still well mineralizaed in some areas, but overall much weaker sx

« py 0.50%» « cpy 0.30%» m« magnetite alteration 0.01»

76.00 104.14 Quartz Diorite

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
51.33	52.50	138460	1.17	89	1316
52.50	54.34	138461	1.84	164	1121
54.34	56.05	138462	1.71	3	46
56.05	57.50	138463	1.45	83	1981
57.50	60.00	138464	2.50	59	2246
60.00	62.50	138465	2.50	281	3637
62.50	65.00	138466	2.50	514	2995
65.00	67.50	138467	2.50	477	2524
67.50	70.00	138468	2.50	253	910
70.00	72.50	138469	2.50	48	387
72.50	75.00	138470	2.50	17	788
75.00	77.50	138471	2.50	42	819
77.50	80.00	138472	2.50	92	1003

From	To	Rocktype & Description
		Relatively fresh quartz diorite. Still weakly mineralized and also observe small envelopes of alteration along fractures and structures. Again, dom fractures at 20 - 30 tca but also have a larger number of 50 tca showing up, often hosting dykelets of felsic (kspar rich) intrusive material (may be pegmatites). *« py 1.00%» « cpy 0.20%» « mo 0.01%» « qtz 5.00%»*
104.14	**108.08**	**Quartz Diorite** *Strongly altered quartz diorite in a healed fault zone. Strong structural fabric at 10 tca. Host rock is altered granodiorite but looks distinctively green compared to surrounding rock. 20% of zone is light apple green from strong albite flooding and the rest is dark green from actinolite? chlorite alteration. Possibly some sericite altered patches as well.* *« py 2.00%» « cpy 0.30%» « mo 0.03%» he« magnetite alteration 0.50» « qtz 7.00%»*
108.08	**165.20**	**Quartz Diorite** *Very similar fresh quartz diorite that was described in interval above 104.14m. Still contains occasional mineralized strngr and veinlet but much of the (weak) mineralization is on dry hairline frac or found as disseminations.* *Petrographic sample that is fairly representative of this large unit taken at 153.10 m* *Xenolith of mafic dyke or volcanic at* *« py 2.00%» « cpy 0.20%» « mo 0.02%» « quartz stringers 5.00»*

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
80.00	82.50	138473	2.50	43	399
82.50	85.00	138474	2.50	47	929
85.00	87.50	138475	2.50	41	573
87.50	90.00	138476	2.50	69	495
90.00	92.50	138477	2.50	91	1173
92.50	95.00	138478	2.50	36	847
95.00	97.50	138479	2.50	105	598
97.50	100.00	138480	2.50	59	716
100.00	102.50	138481	2.50	28	725
102.50	104.14	138482	1.64	54	673
104.14	106.00	138483	1.86	55	543
106.00	108.08	138484	2.08	39	533
108.08	110.00	138485	1.92	32	409
110.00	112.50	138486	2.50	41	607
112.50	115.00	138487	2.50	29	692
115.00	117.50	138488	2.50	60	469
117.50	120.38	138489	2.88	63	763
120.38	120.58	138490	0.20	302	1860
120.58	122.50	138491	1.92	72	641
122.50	125.00	138492	2.50	137	804
125.00	127.50	138493	2.50	62	924
127.50	130.00	138494	2.50	82	753
130.00	132.50	138495	2.50	20	1240

From To Rocktype & Description

165.20 165.65 Alaskite

Small alaskite dyke at 30 tca. Coarse grained pink intrusive. Rare mafic minerals. Hairline fractures at 30 tca with magnetite, chalco, moly and pyrite.
« cpy 1.00%» « mo 0.10%» « py 4.00%» m« magnetite alteration 2.00»

165.65 201.73 Quart Diorite

Quartz diorite, slightly more altered than last interval and becomes moderately broken (drillers reported occasional blocking).
« 175.00- 175.10 Gougy Fault 60.00° 10.00cm»
See some rare to occasional orange mineral (wulfenite?) on quartz veinlets, especially at 175.4 (sample 138515). Increase in the amount of 1 - 5 cm wide kspar veinlets. Also note an increase in magnetite concentration in the quartz veinlets« py 3.00%» « cpy 0.40%» « mo 0.01%»

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
132.50	135.00	138496	2.50	7	411
135.00	137.50	138497	2.50	20	353
137.50	140.00	138498	2.50	67	429
140.00	142.50	138499	2.50	13	555
142.50	145.00	138500	2.50	25	440
145.00	147.50	138501	2.50	24	810
147.50	150.00	138502	2.50	46	621
150.00	152.50	138503	2.50	46	601
152.50	155.00	138504	2.50	42	695
155.00	157.50	138505	2.50	23	523
157.50	160.00	138506	2.50	22	474
160.00	162.50	138507	2.50	93	573
162.50	164.20	138508	1.70	35	556
164.20	165.00	138509	0.80	234	865
165.00	165.65	138510	0.65	56	306
165.65	167.50	138511	1.85	8	520
167.50	170.00	138512	2.50	97	779
170.00	172.50	138513	2.50	50	687
172.50	175.00	138514	2.50	56	824
175.00	177.50	138515	2.50	13	553
177.50	180.00	138516	2.50	26	463
180.00	182.50	138517	2.50	34	671
182.50	185.00	138518	2.50	26	591
185.00	187.50	138519	2.50	39	633
187.50	190.00	138520	2.50	15	348

From	To	Rocktype & Description

201.73 203.35 Monzodiorite

Very fine grained, weakly porphyritic leucocratic intrusive. Less than 5% mafics. Main mineral constituents are kspar and quartz giving unit a glassy pink appearance

« py 0.50%»v « cpy 0.10%» « mo 0.01%»

203.35 220.00 Quartz Diorite

Back into same quartz diorite described above 201 metres.

« py 0.50%» « cpy 0.10%» « mo 0.01%»

220.00 226.38 Volc

Altered volcanic unit. Probably simply a xenolith.

Low sx content

« py 0.50%»

226.38 252.96 Quartz Diorite

Back into fresh quartz diorite. Competent core, but becomes moderately broken 244 - 248.5 around small brittle structure at 247.3.

py

« 247.15- 247.30 Brittle structure Fault 30.0« py 0.30%» « cpy 0.10%» « mo 0.01%»

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
190.00	192.50	138521	2.50	79	1246
192.50	195.00	138522	2.50	28	1105
195.00	197.50	138523	2.50	27	590
197.50	200.00	138524	2.50	44	384
200.00	201.73	138525	1.73	131	1027
201.73	203.35	138526	1.62	57	438
203.35	205.00	138527	1.65	55	649
205.00	207.50	138528	2.50	41	787
207.50	210.00	138529	2.50	119	438
210.00	212.50	138530	2.50	26	199
212.50	215.00	138531	2.50	19	207
215.00	217.50	138532	2.50	30	258
217.50	220.00	138533	2.50	42	399
220.00	223.00	138534	3.00	49	387
223.00	226.00	138535	3.00	48	681
226.00	227.50	138536	1.50	17	291
227.50	230.00	138537	2.50	144	290
230.00	232.50	138538	2.50	59	386
232.50	235.00	138539	2.50	112	316
235.00	237.50	138540	2.50	95	353
237.50	240.00	138541	2.50	86	479
240.00	242.50	138542	2.50	253	650
242.50	245.00	138543	2.50	229	294

From	To	Rocktype & Description	From	To	Sample	Width	Mo (ppm)	Cu (ppm)
			245.00	247.50	138544	2.50	99	556
			247.50	250.00	138545	2.50	118	477
			250.00	252.96	138546	2.96	39	359
252.96	**255.80**	**Quartz Diorite** *Altered quartz diorite. Rock is increasingly siliceous, with patches of albite, and kspar flooding. Also increased overall sx content « py 0.70%» « cpy 0.20%» « mo 0.03%» Very competent.*	252.96	255.80	138547	2.84	29	386
255.80	**257.50**	**Qtzite** *Unit is completely Flooded with silica. Get very strong moly on fracture surfaces but other sx rare. The protolith is faintly observed but unidentifable. Took petrographic sample.at 256.70.*	255.80	257.50	138548	1.70	210	25
257.50	**259.73**	**Quartz Diorite** *Altered quartz diorite. Similar to interval 252.96 - 255.80. Has trace amount of the orange mineral (probably wulfenite) that was observed higher in this hole.*	257.50	259.73	138549	2.23	8	77
259.73	**267.40**	**Qtzite** *Extreemely siliceous interval. Ghosts of breccia fragments clearly visible. Strong moly mineralization along several fractures. Mineralized fractures vary 10 - 25 tca. « mo 0.50%»*	259.73	260.10	138550	0.37	29	30
			260.10	262.50	138551	2.40	278	38
			262.50	265.00	138552	2.50	151	9
			265.00	267.40	138553	2.40	49	20
267.40	**270.80**	**PPg** *Dark grey crowded plag porphyry dyke. Appears to be post silica flooding. Distinctive appearance with pale to white plag phenos in a dark grey matrix, with about 7% disseminated pyrite. Very competent. Contains a few quartz stringers hosting minor molybdenite mineralization. « py 7.00%» « cpy 0.10%» « mo 0.05%»*	267.40	270.00	138554	2.60	88	189
			270.00	270.80	138555	0.80	14	169
270.80	**271.50**	**Quartz Diorite**	270.80	271.50	138556	0.70	23	86

From	To	Rocktype & Description	From	To	Sample	Width	Mo (ppm)	Cu (ppm)
		Altered quartz diorite, but with more silica flooding than in previous intervals. Low sx content.						
271.50	**272.56**	**Quartzite** *As previously described. Not many moly coated fractures in the interval but quite a significant amount of very finely diss specks of moly. Tr amount of green mica along one fracture surface.* *« mo 0.30%»*	271.50	272.56	138557	1.06	12	12
272.56	**272.93**	**Quartz Diorite** *Altered quartz diorite as previously described. Abundant kspar flooding along fracture.* *« py 3.00%»*	272.56	272.93	138558	0.37	8	24
272.93	**273.60**	**Quartzite** *As described above* *« mo 0.30%»*	272.93	273.60	138559	0.67	77	17
273.60	**277.83**	**Quartz Diorite** *Altered quartz diorite. Strong sericite and albite (?) alteration along fracture surfaces.* *« py 1.00%» « cpy 0.10%» « mo 0.10%»*	273.60	275.00	138560	1.40	151	47
			275.00	277.83	138561	2.83	72	60
277.83	**293.85**	**Quartzite** *Varies from buff to pink in color. Less diss and more fracture related moly in this interval. Mineralization is often difficult to identify in hand specimen, but is fairly abundant in patches, both as fine diss and fracture fill with quartz. Also getting close to 1% sericite in some areas, usually along fractures only, but in some spots (eg. 290.7) is found as blotches or patches.* *« py 0.01%» « cpy 0.01%» « mo 0.50%»*	277.83	280.00	138562	2.17	46	7
			280.00	282.50	138563	2.50	193	5
			282.50	285.00	138564	2.50	50	3
			285.00	287.50	138565	2.50	128	6
			287.50	290.00	138566	2.50	66	28
			290.00	292.50	138567	2.50	78	84
			292.50	293.85	138568	1.35	41	164
293.85	**295.00**	**PPc** *Chloritic Plag Porphyry - Crowded plag porphyry in a matrix of secondary chlorite, actinolite, biotite, albite and quartz. Unmineralized intrusive but*	293.85	295.00	138569	1.15	28	328

From To Rocktype & Description

cross cutting quartz veinlets contain trace amounts of sx..
Irregular contacts at about 80 tca.
« py 1.00%» « cpy 0.10%» « mo 0.01%»

295.00 305.45 Quartzite
As described above 293.85.
Good zone of mineralization at 302.8 - 303.5m.
Bottom contact seems be be a gradual increase in fragments of volcanic rock, and then a clean contact at 55 tca with a mafic dyke.

« py 0.50%» « cpy 0.05%» « mo 0.50%»

305.45 312.42 Augite Porphyry Dyke
Augite Porphyry dyke.
Appears to be quite fresh, homogeneous, competent, rarely porphyritic with altered augite phenos. Unit has disseminated and fracture filled pyrite, and chalco and moly on quartz veinlets.
« py 5.00%» « cpy 0.10%» « mo 0.05%»

312.42 322.50 Volc
Very strongly altered unit with probable volcanic protolith. Has a criss cross, pale to buff, stockwork alteration pattern. Some areas the brecciation is clearly visible. Host rock is strongly silicified, not just along frac. Mo mineralization is more difficult to identify in this unit due to the darker colouration, but it is still present.
« py 3.00%» « cpy 0.10%» « mo 0.04%»

322.50 323.85 Quartzite
This unit has a "Leopard Skin" appearance alteration. It is possible that the protolith for this rocktype was a felsic intrusive. It is dominantly quartz with enough kspar to make the appearance buff in some areas and 10 - 15 % biotite surrounded by masses of green mica (probably sericite) in patches 4 - 10 mm across. The sericite can be much more extensive than the biotite,

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
295.00	297.50	138570	2.50	45	31
297.50	300.00	138571	2.50	41	61
300.00	302.50	138572	2.50	110	22
302.50	305.00	138573	2.50	123	46
305.00	305.40	138574	0.40	59	327
305.40	307.50	138575	2.10	24	631
307.50	310.00	138576	2.50	14	291
310.00	312.42	138577	2.42	15	259
312.42	315.00	138578	2.58	271	93
315.00	317.50	138579	2.50	288	110
317.50	320.00	138580	2.50	265	55
320.00	322.50	138581	2.50	49	67
322.50	323.85	138582	1.35	119	40

From To Rocktype & Description	From	To	Sample	Width	Mo (ppm)	Cu (ppm)
although not as distinct.						
Mineralization consists of v f gr diss pyrite, moly and rare chalco. Unit is						
nonmagnetic.						
Unit is very competent.						
Alteration also includes the criss cross pattern of hairline fractures observed						
in the units above and below, but the contrast is very subtle. Most of the						
mineralization seems to be related in some way to the criss crossed fractures.						
« py 0.50%» « cpy 0.01%» « mo 0.10%»						
323.85 326.75 Volc	323.85	326.75	138583	2.90	116	80
Same as unit above the previous quartzite.						
Silica flooding has bleached the unit in some areas.						
« py 1.00%» « cpy 0.10%» « mo 0.10%»						
326.75 332.06 Quartzite	326.75	329.75	138584	3.00	70	24
Back into Leopard Skin alteration.	329.75	332.06	138585	2.31	131	20
« py 0.60%» « cpy 0.01%» « mo 0.15%»						
332.06 332.80 Alaskite	332.06	332.80	138586	0.74	4	180
Small alaskite dyke with contacts at 50 tca. Chilled margins about 6 - 10 cm						
wide at top and bottom.						
Crowded plag porphyry with some megacrysts to 10mm of microcline.						
« py 0.10%» « cpy 0.20%» « mo 0.05%»						
332.80 335.29 Quartzite	332.80	335.29	138587	2.49	251	28
Leopard Skin.						
« py 0.01%» « cpy 0.05%» « mo 0.10%»						
335.29 368.00 tuff	335.29	337.50	138588	2.21	178	37
The protolith for this unit appears more leucocratic but is probably a	337.50	340.00	138589	2.50	106	54
different facies of the volcanic unit. Unit also becomes more leucocratic	340.00	342.50	138590	2.50	111	31
down hole.	342.50	345.00	138591	2.50	77	84
Some of the pyrite has small amounts of magnetite attached making the unit	345.00	347.50	138592	2.50	88	38
slightly magnetic.	347.50	350.00	138593	2.50	50	93

Project: Bear North 6219545.000 East 632465.000 Elev 1574.000 **Hole Number: BD-04-16** Imperial Metals

From	To	Rocktype & Description

Criss cross alteration pattern still pervasive.

« py 0.50%» « cpy 0.05%» « mo 0.10%»

368.00 370.34 Volc

Similar to unit above but this section is quite obviously layered, probably pillows or a flow feature. No hyaloclastite features observed. Sx content has increase dramatically. Unit appears to be right side up.

Silica flooding has brought in the sx and mt.

« py 3.00%» « cpy 1.00%» « mo 0.10%» « mt 2.00%»

370.34 390.98 tuff

Probable tufaceous protolith with fragments into the 10's of cm across, with minor dust and mud infilling. The overall appearance is coarsly porphyritic due to the large amygdules and some large plag laths to 5 mm long. Widespread carbonate within unit along hairline fractures. Rare patches of garnet/epidote +/- magnetite, pyrite, chlorite, actin. Some isolated patches of kspar flooding. One gets the impression that the unit was very receptive to fluid inflow due to its open spaced nature (now completely healed).

OVerall sx content remains high. Large clots of chalco at 395.50 up to 15 mm across

p« py 4.00%» « cpy 0.60%»« mo 0.01%» « mt 1.00%»

390.98 399.63 Volc

Porphyritic Andesite flow. Unit is up to 70% plag phenos (+amygdules?). This unit is obviously quite tight and not as receptive to altering and mineralizing hydrothermal fluids.

« py 2.00%» « cpy 0.10%» « mo 0.05%»

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
350.00	352.50	138594	2.50	152	66
352.50	355.00	138595	2.50	508	23
355.00	357.50	138596	2.50	19	115
357.50	360.00	138597	2.50	40	225
360.00	362.50	138598	2.50	67	53
362.50	365.00	138599	2.50	136	127
365.00	368.00	138600	3.00	91	229
368.00	370.34	138601	2.34	320	3014
370.34	372.50	138602	2.16	38	341
372.50	375.00	138603	2.50	244	1822
375.00	377.50	138604	2.50	61	330
377.50	380.00	138605	2.50	57	1634
380.00	382.50	138606	2.50	88	346
382.50	385.00	138607	2.50	33	151
385.00	387.50	138608	2.50	45	98
387.50	390.00	138609	2.50	330	148
390.00	390.98	138610	0.98	49	273
390.98	392.50	138611	1.52	37	684
392.50	395.00	138612	2.50	222	843
395.00	397.50	138613	2.50	49	778
397.50	399.63	138614	2.13	118	1031

From	To	Rocktype & Description
399.63	**403.20**	**tuff**

As described previously.

« py 0.50%» « cpy 0.01%» « mo 0.05%»

403.20 405.66 Volc

As previously described

« py 1.00%» « cpy 0.10%» « mo 0.05%»

405.66 436.47 tuff

As previously described but sx content is significantly lower. Py is found throughout unit, chalco is rare and moly is restricted to the quartz strngrs.

« py 2.00%» « cpy 0.05%» « mo 0.01%»

436.47 436.47 EOH

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
399.63	402.50	138615	2.87	71	266
402.50	405.00	138616	2.50	114	749
405.00	405.66	138617	0.66	80	680
405.66	407.50	138618	1.84	17	51
407.50	410.00	138619	2.50	8	64
410.00	412.50	138620	2.50	10	47
412.50	415.00	138621	2.50	25	42
415.00	417.50	138622	2.50	37	65
417.50	420.00	138623	2.50	33	17
420.00	422.50	138624	2.50	47	29
422.50	425.00	138625	2.50	66	15
425.00	427.50	138626	2.50	41	133
427.50	430.00	138627	2.50	235	37
430.00	432.50	138628	2.50	100	22
432.50	435.00	138629	2.50	27	17
435.00	436.47	138630	1.47	14	45

Hole No:	BD-04-17	Diamond Drill Log	Imperial Metals
Project Code:	Bear		
Grid			
NORTH:	6219465.000	Location:	Pad C. Between 15 and 16.
EAST:	632445.000	Logged By:	Robertson/Roste
ELEVATION:	1606.000	Log Date:	20/07/2004
LENGTH:	405.99	Date Started:	19/07/2004
DIP:	-45.0	Date Finished:	24/07/2004
AZIMUTH:	90.0	Contractor:	F Boisvenu
CASING:	3.1	Assayer:	Acme
SIZE:	NQ2		
		Comments:	Well mineralized throughout. Hole ended in mineralization.

SURVEY RECORDS

DEPTH	DIP	AZIMUTH	
0.00	-45.00	270.00	
0.00	0.00	0.00	
67.06	-48.40	272.70	
121.92	-48.70	271.20	
188.98	-48.30	277.80	
249.94	-48.70	278.60	
371.86	-48.60	282.90	

Project: Bear North 6219465.000 East 632445.000 Elev 1606.000 **Hole Number: BD-04-17** Imperial Metals

From	To	Rocktype & Description
0.00	**3.05**	**Case**

Casing - No return

From	To	Rocktype & Description
3.05	**14.76**	**Quartz Diorite**

Quartz diorite. Heavily broken with iron oxide stained frac face down to 7.50 metres. Med gr. med grey intrusive with plag, quartz, biotite, as main constituents. Weakly altered (plag to clay) with moderate to weak fracturing. Strongly magnetic, with both primaryand secondary magnetite. Dominant fractures at 20, 35 and 60 tca. Mostly hairline frac with alteration within 3 mm but little quartz. Approx 30% of frac have up to 7mm quartz strngrs.

Bottom contact 35 tca

« py 1.50-2.00%» « cpy 1.00%» « mo 0.10%» « mt 2.00%»

From	To	Rocktype & Description
14.76	**18.13**	**Monzodiorite**

Med coloured very fine grained dyke with altered phenocrysts (formerly amphibole?). Has a brown appearance but examination with a hand lens indicates a pinkish groundmass, probably resulting from kspar content. Very small plag laths barely visible with handlens. Post mineral.

Moderately broken. Top and bottom contacts at about 35 tca.

From	To	Rocktype & Description
18.13	**33.48**	**Volc**

Massive, homogeneous, dark grey, very fine grained volcanic. Moderate to heavy fracturing, with most healed by quartz. Fracture angles at 20, 40 adn 60 tca, dominantly at 60. Quartz strngrs vary 1 - 15 mm with most at 5 - 8 mm. Late calcite infill common on vuggy quartz veins.

Py, chalco, mag with minor moly common on fractures but rarely diss.

« py 4.00%» « cpy 0.80%» « mt 0.50%» « mo 0.05%»

From	To	Rocktype & Description
33.48	**53.50**	**Quartz Diorite**

Quartz diorite as described previously, but very fresh in this interval. Core is moderately to very competent. Dominant fractures at 30 tca

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
3.05	5.00	138631	1.95	21	1093
5.00	7.50	138632	2.50	12	361
7.50	10.00	138633	2.50	27	574
10.00	12.50	138634	2.50	67	710
12.50	14.76	138635	2.26	33	522
14.76	17.50	138636	2.74	2	45
17.50	18.13	138637	0.63	2	35
18.13	20.00	138638	1.87	52	655
20.00	22.50	138639	2.50	24	492
20.00	22.50	138640	2.50	40	418
22.50	25.00	138641	2.50	9	628
25.00	27.50	138642	2.50	13	328
27.50	30.00	138643	2.50	26	363
30.00	32.50	138644	2.50	38	605
32.50	33.48	138645	0.98	27	659
33.48	35.00	138646	1.52	40	772
35.00	37.50	138647	2.50	25	592
37.50	40.00	138648	2.50	63	858

Project: Bear North 6219465.000 East 632445.000 Elev 1606.000 **Hole Number: BD-04-17** Imperial Metals

From	To	Rocktype & Description
		« py 2.00%» « cpy 0.50%» « mo 0.05%» « mt 2.00%»
53.50	**86.86**	**Quartz Diorite**
		Quartz diorite. Not much different than previous interval, but notable increase in sx content and fracturing. Also start to observe disseminated sx in addition to the fracture related. Some patches with up to 2% chalco and a relative increase in Moly.
		« py 3.00%» « cpy 1.20%» « mo 0.15%»
86.86	**87.28**	**Flt**
		Fault Moderate gouge with brittle fracturing on both the hanging wall and footwall. Gouge appears to be well mineralized with pyrite, chalco and moly. 40 tca.
87.28	**110.22**	**Quartz Diorite**
		Quartz diorite - As described in interval above previous fault. Sx content continus to be strong and in patches is very strong, with considerabgle diss sx in addition to frac filling. Also have minor diss moly in addition to quartz

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
40.00	42.50	138649	2.50	22	1111
42.50	45.00	138650	2.50	42	1171
45.00	47.50	138651	2.50	37	348
47.50	50.00	138652	2.50	148	590
50.00	52.50	138653	2.50	22	634
52.50	53.50	138654	1.00	76	306
53.50	55.00	138655	1.50	44	595
55.00	57.50	138656	2.50	63	1344
57.50	60.00	138657	2.50	124	2133
57.50	60.00	138658	2.50	91	2374
60.00	62.50	138659	2.50	155	1776
62.50	65.00	138660	2.50	69	1199
65.00	67.50	138661	2.50	42	1342
67.50	70.00	138662	2.50	40	1042
70.00	72.50	138663	2.50	132	1424
72.50	75.00	138664	2.50	135	1413
75.00	77.50	138665	2.50	123	1454
77.50	80.00	138666	2.50	70	1392
80.00	82.50	138667	2.50	166	1494
82.50	85.00	138668	2.50	81	1597
85.00	86.86	138669	1.86	55	1599
86.86	87.28	138670	0.42	210	735
87.28	90.00	138671	2.72	161	1617
90.00	92.50	138672	2.50	110	2574
92.50	95.00	138673	2.50	272	2466
95.00	97.50	138674	2.50	147	3170

Project: Bear North 6219465.000 East 632445.000 Elev 1606.000 **Hole Number: BD-04-17** Imperial Metals

From	To	Rocktype & Description

related.

Some very strong moly mineralization observed in the bottom 4 metres of interval.

« py 5.00%» « cpy 2.00%» « mo 0.40%»

110.22 145.69 Quartz Monzonite

Quartz Monzonite or quartz feldspar, biotite porphyry. Same rocktype called a quartz Latite Porphyry by Woodcock? Overall appearance is mottled apple green and light grey with black flecks and large buff megacrysts. Unit is very coarse grained with occasional megacrystic kspar. Felsic nature of the unit makes the phenos of bio and amphibole distinctly contrasting with the rest of the unit. Albitization of the feldspars has given the overall apple green colour, while the less altered rocks maintain a light grey appearance.

Sx mineralization is generally limited to quartz filled and hairline fractures, although small quantities of diss pyrite, chalco and moly near the fractures is not uncommon.

Quartz veinlets up to 20mm (and well mineralized) are relatively common in the interval.

« 114.10- 114.40 Small gougy fault 50.00°»
« 124.55- 124.75 Small gougy fault 30.00°»
« 136.00- 136.35 Small gougy fault 30.00°»

145.69 167.70 Quartz Diorite

Typical quartz diorite. Heavily fractured with quartz on 10 - 20% of fractures. Unit is strongly magnetic, mostly due to magnetite on fractures. Quartz veinlets are wider and vuggier than those observed elsewhere. Often observe moly lining parts of the vugs. Fracture orientation is strongly dominated by 20 - 30 tca.

« py 2.00%» « cpy 1.00%» « mo 0.30%» « mt 2.00%»

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
97.50	100.00	138675	2.50	335	2485
100.00	102.50	138676	2.50	164	2236
102.50	105.00	138677	2.50	121	1972
102.50	105.00	138678	2.50	82	1872
105.00	107.50	138679	2.50	166	1171
107.50	110.22	138680	2.72	513	3796
110.22	112.50	138681	2.28	173	860
112.50	115.00	138682	2.50	59	625
115.00	117.50	138683	2.50	192	1152
117.50	120.00	138684	2.50	204	786
120.00	122.50	138685	2.50	123	671
122.50	125.00	138686	2.50	145	652
125.00	127.50	138687	2.50	137	539
127.50	130.00	138688	2.50	123	586
130.00	132.50	138689	2.50	288	646
132.50	135.00	138690	2.50	217	869
135.00	137.50	138691	2.50	160	523
137.50	140.00	138692	2.50	94	633
140.00	142.50	138693	2.50	137	443
142.50	145.69	138694	3.19	218	584
145.69	147.50	138695	1.81	132	1865
147.50	150.00	138696	2.50	232	2285
150.00	152.50	138697	2.50	249	2831
150.00	152.50	138698	2.50	333	2941
152.50	155.00	138699	2.50	447	2265
155.00	157.50	138700	2.50	133	1567
157.50	160.00	138701	2.50	192	2462

Project: Bear North 6219465.000 East 632445.000 Elev 1606.000 **Hole Number: BD-04-17** Imperial Metals

From	To	Rocktype & Description

167.70 169.02 Quartz Monzonite

Very felsic intrusive rock. Looks quite similar to QMonz above but lacks the megacrysts and also has a distinctive pink mottling from kspar flooding. Weakly mineralized by sx bearing quartz veinlets.

Weakly to moderately calcareous with calcite on fine fractures and along altered plagioclase.

« py 0.10%» « cpy 0.05%» « mo 0.01%»

169.02 170.40 Quartz Diorite

As described above. Some very good sx on vuggy fractures.

« py 1.00%» « cpy 1.50%» « mo 0.40%» « mt 0.50%»

170.40 171.90 Quartz Monzonite

As 167.70 to 169.02.

171.90 295.00 Quartz Diorite

As described previously. Unit is very homogeneous. Evidence of cooled margins indicates that the quartz diorite was pre-existing and subsequently intruded by the quartz monzonite and quartz diorite units.

This interval is strongly mineralized, with small areas of weaker sx .

At 192 - 218 magnetite alteration there is a notable increase in degree of fracturing, quartz veining and sx mineralization

Unit quickly goes from very competent to moderately to strongly broken at 192

Unit quickly goes from very competent to moderately to strongly broken at 192

magnetite alteration and then back to very competent at 218m.

Most fracturing is at 20 - 30 tca.

Possible bornite (extreemly fine) at 254.75m

« py 4.00%» « cpy 1.20%» « mo 0.25%» « mt

« 239.90- 240.10 Brittle zone with minor soapy gouge 55.00° 16.00cm»

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
160.00	162.50	138702	2.50	351	2914
162.50	165.00	138703	2.50	265	2729
165.00	167.70	138704	2.70	518	2410
167.70	169.02	138705	1.32	212	1502
169.02	170.40	138706	1.38	201	1130
170.40	171.90	138707	1.50	323	1728
171.90	175.00	138708	3.10	148	1563
175.00	177.50	138709	2.50	329	1822
177.50	180.00	138710	2.50	445	2133
180.00	182.50	138711	2.50	232	1707
182.50	185.00	138712	2.50	473	2008
185.00	187.50	138713	2.50	423	1697
187.50	190.00	138714	2.50	201	1326
190.00	192.50	138797	2.50	648	1835
190.00	192.50	138797	2.50	829	1433
192.50	195.00	138715	2.50	217	1631
195.00	197.50	138716	2.50	169	1022
197.50	200.00	138717	2.50	402	2202
197.50	200.00	138718	2.50	491	2180
200.00	202.50	138719	2.50	347	2425

Project: Bear North 6219465.000 East 632445.000 Elev 1606.000 **Hole Number: BD-04-17** Imperial Metals

From	To	Rocktype & Description
		« 249.92- 250.62 Soapy, mineralized, minor gouge 25.00-40.00°»
		« 265.36- 265.89 Mildly gougy fault zone 20.00-50.00°»
		« 284.66- 284.99 Healed with albite - qtz flooding 25.00°»

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
202.50	205.00	138720	2.50	734	1739
205.00	207.50	138721	2.50	452	2677
207.50	210.00	138722	2.50	450	2483
210.00	212.50	138723	2.50	625	2513
212.50	215.00	138724	2.50	557	2465
215.00	217.50	138725	2.50	857	4009
217.50	220.00	138726	2.50	412	4724
220.00	222.50	138727	2.50	530	3239
222.50	225.00	138728	2.50	531	1932
225.00	227.50	138729	2.50	456	2432
227.50	230.00	138730	2.50	490	2662
230.00	232.50	138731	2.50	642	1845
232.50	235.00	138732	2.50	606	2757
235.00	237.50	138733	2.50	385	2044
237.50	240.00	138734	2.50	250	1698
240.00	242.50	138735	2.50	532	2993
242.50	245.00	138736	2.50	1123	3192
245.00	247.50	138737	2.50	786	2729
245.00	247.50	138738	2.50	709	2505
247.50	249.92	138739	2.42	649	2911
249.92	250.62	138740	0.70	309	2335
250.62	252.50	138741	1.88	902	3645
252.50	255.00	138742	2.50	1047	3411
255.00	257.50	138743	2.50	714	3099
257.50	260.00	138744	2.50	649	5103
260.00	262.50	138745	2.50	567	3287
262.50	265.36	138746	2.86	1594	5663
265.36	267.50	138747	2.14	1039	3314
267.50	270.00	138748	2.50	727	4787

Project: Bear North 6219465.000 East 632445.000 Elev 1606.000 **Hole Number: BD-04-17** Imperial Metals

From	To	Rocktype & Description

295.00 340.08 Quartz Diorite

Continuation of the above quartz diorite but at 295 the unit acquires an overall fabric at 30 tca. Alteration here consists of kspar flooding and silic along fractures but it only affects about 15% of rock by volume. Occasional epidote observed in quartz veinlets.Minor calcite along fracture and mineral boundaries throughout unit. Approximately 50% of hornblende has been chloritized. Average of at least one quartz veinlet/strngr per 10 cm, with many more hairline fractures present. Overall, core is very competent. Start to get more large quartz veinlets (>2cm) with very good moly min (eg 319.13, 320.30, 330.80)

« py 2.00%» « cpy 1.20%» « mo 0.30%» « mt 1.00%»

« 339.96- 340.08 Small gougy fault 75.00°»

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
270.00	272.50	138749	2.50	951	4229
272.50	275.00	138750	2.50	429	2881
275.00	277.50	138751	2.50	774	3179
277.50	280.00	138752	2.50	268	2747
280.00	282.50	138753	2.50	351	2078
282.50	285.00	138754	2.50	1566	2548
285.00	287.50	138755	2.50	629	1442
287.50	290.00	138756	2.50	276	2024
290.00	292.50	138757	2.50	120	2168
292.50	295.00	138758	2.50	278	1573
295.00	297.50	138759	2.50	426	1683
297.50	300.00	138760	2.50	168	1622
297.50	300.00	138761	2.50	215	2028
300.00	302.50	138762	2.50	100	1267
302.50	305.00	138763	2.50	597	1819
305.00	307.50	138764	2.50	279	1543
307.50	310.00	138765	2.50	417	1832
310.00	312.50	138766	2.50	572	2355
312.50	315.00	138767	2.50	107	2314
315.00	317.50	138768	2.50	190	1369
317.50	320.00	138769	2.50	230	2755
320.00	322.50	138770	2.50	8420	5870
322.50	325.00	138771	2.50	219	1483
325.00	327.50	138772	2.50	510	2037
327.50	330.00	138773	2.50	306	1460
330.00	332.50	138774	2.50	392	1423
332.50	335.00	138775	2.50	636	1898
335.00	337.50	138776	2.50	206	1090
337.50	340.08	138777	2.58	367	1304

Project: Bear North 6219465.000 East 632445.000 Elev 1606.000 **Hole Number: BD-04-17** Imperial Metals

From	To	Rocktype & Description

340.08 393.80 Quartz Diorite

As previous interval but strong fabric not present. Unit continues to be fairly well mineralized. Mod magnetic with strong mag along magnetite bearing quartz veinlets and strngrs. Occasional calcite along veilnlets, strngrs and fractures.

Some quartz strngers carry moly only mineralization (some of the better moly mineralization) but more often it is assoc with chalco.

py

« 346.26- 346.56 Qtz vein with v strong moly and chalco
« py 1.50%» « cpy 1.00%» « mo 0.30%» « mt 1.00%»
« 362.98- 363.15 Qtz veinlet with stong moly 30.00°»

393.80 404.77 Monzodiorite

Felsic dyke with no mafic minerals left. Rock was 5% amphibole but all has been

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
340.08	342.50	138778	2.42	256	945
342.50	345.00	138779	2.50	197	1325
345.00	346.26	138780	1.26	167	1032
345.00	346.26	138781	1.26	686	1505
346.26	346.56	138782	0.30	14760	23930
346.56	347.50	138783	0.94	203	2272
347.50	350.00	138784	2.50	161	1458
350.00	352.50	138785	2.50	436	1567
352.50	355.00	138786	2.50	1629	1902
355.00	357.50	138787	2.50	340	793
357.50	360.00	138788	2.50	474	1172
360.00	362.50	138789	2.50	402	2246
362.50	362.98	138790	0.48	104	1258
362.98	363.15	138791	0.17	2353	2293
363.15	365.00	138792	1.85	481	3118
365.00	367.50	138793	2.50	1152	2225
367.50	370.00	138794	2.50	691	2088
370.00	372.50	138795	2.50	483	1498
372.50	375.00	138796	2.50	564	1160
375.00	377.50	138798	2.50	164	1395
377.50	380.10	138799	2.60	598	1735
380.10	382.50	138800	2.40	469	1526
382.50	385.00	138801	2.50	363	2020
385.00	387.50	138802	2.50	359	1455
387.50	390.00	138803	2.50	99	807
390.00	392.50	138804	2.50	230	949
392.50	393.80	138805	1.30	232	778
393.80	395.00	138806	1.20	<2	4
395.00	397.50	138807	2.50	<2	4

From	To	Rocktype & Description
		altered to chlorite (Actinolite?). 5% of unit is megacrysts (10 - 25 mm) of kspar within a crowded porphyry comprised largely of quartz and plagioclase. Groundmass is a pinkish brown quartz and kspar. Most minerals are notably altered. Took petrographic specimen. Top contact at 25 tca and bottom at 35. Unit is very weakly mineralized by rare cross cutting quartz strngers. Unit is very competent.
404.77	**405.99**	**Quartz Diorite** *Quartz diorite. Sheared due to emplacement of the neighboring felsic dyke. Strong quartz flooding near contact margin with strong moly mineralization. Moderate, chalco and moly mineralization. Hole was shut down without seeing the last metre of core. « py 2.00%» « cpy 0.50%» « mo 0.20%»*
405.99	**405.99**	**EOH**

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
397.50	400.00	138808	2.50	<2	5
400.00	402.50	138809	2.50		
402.50	404.77	138810	2.27	<2	18
404.77	405.27	138811	0.50	1397	1323
405.27	405.99	138812	0.72	1722	1397

Hole No:	BD-04-18	Diamond Drill Log	Imperial Metals
Project Code:	Bear		
Grid			
NORTH:	6219563.000	Location:	Twin of Inco Hole 3
EAST:	632232.000	Logged By:	S Robertson
ELEVATION:	1682.000	Log Date:	26/07/2004
LENGTH:	301.14	Date Started:	24/07/2004
DIP:	-55.0	Date Finished:	27/07/2004
AZIMUTH:	90.0	Contractor:	F Boisvenu
CASING:	14.3	Assayer:	Acme
SIZE:	NQ2		
		Comments:	Mineralized throughout. Stronger in lower portion. Ended in

SURVEY RECORDS

DEPTH	DIP	AZIMUTH	
0.00	-55.00	90.00	
73.15	-55.40	98.60	
134.11	-55.30	30.10	
192.02	-55.40	100.40	
254.81	-55.70	101.50	

From	To	Rocktype & Description	From	To	Sample	Width	Mo (ppm)	Cu (ppm)
0.00	**5.18**	**Case**						
		No return.						
5.18	**12.76**	**Case**	5.18	7.50	138813	2.32	46	2051
		Casing through overburden - Return consists of material from coarse talus.	7.50	10.00	138814	2.50	149	2806
		Highly oxidized on fracturs and badly broken but no soil component.	10.00	12.76	138815	2.76	272	3223
		95% mineralized granodiorite with 5% Alaskite.						
		All fractures are limonite coated with occasional specks of malachite.						
		Disseminated and fracture filled sulphide mineralization. Moly mineralization						
		does not appear to be strong but may be masked by the heavy limonite coating on						
		all fracture faces.						
		« py 2.00%» « cpy 0.80%» « mo 0.01%»						
12.76	**26.57**	**Quartz Diorite**	12.76	15.00	138816	2.24	357	3565
		Quartz diorite. Well mineralized. Heavy silicification at 13.0 - 14.0 metres.	12.76	15.00	138817	2.24	443	3336
		Limonite on fractures decreases down hole but is present throughout interval.	15.00	17.50	138818	2.50	688	4044
		Moderately well mineralized with fracture frequency up to 3 per 10 cm. Dominant	17.50	20.00	138819	2.50	505	4827
		sx is chalco. Core is moderately to very competent below 14.3m.	20.00	22.50	138820	2.50	383	3610
		Most chalco is fracture related but disseminated is not uncommon in this	22.50	25.00	138821	2.50	310	3218
		interval. Moderately magnetic to strong where concentrated on fractures.	25.00	26.57	138822	1.57	891	1754
		« py 0.50%» « cpy 1.50%» « mo 0.02%» « mt 2.00%»						
26.57	**28.05**	**Monzodiorite**	26.57	28.05	138823	1.48	330	715
		Small felsic dyke at 60 tca (top and bottom clearly observed).						
		Strong limonite staining along fractures and penetrating up to 7 cm into wall						
		rock. Near bottom of dyke takes on an apple green colour due to albitization of						
		feldspars. Strong pyrite in areas of albite flooding.						
		« py 4.00%» « cpy 0.50%» « mo 0.01%»						
28.05	**50.00**	**Quartz Diorite**	28.05	30.00	138824	1.95	136	1690
		Quartz diorite. As described above with limonite only rarely present. Dominant	30.00	32.50	138825	2.50		
		orientation for fractures and quartz strngers is 50 tca.	32.50	35.00	138826	2.50	208	2706
		Competent core. Start to observe much more moly mineralization. Rare malachite	35.00	37.50	138827	2.50	360	2093

From To Rocktype & Description

present with limonite..

« py 1.00%» « cpy 1.30%» « mo 0.20%»

50.00 62.95 Quartz Diorite

As above but core becomes darker and more broken as it approaches the structure below. Fracture coating limonite also increases toward bottom of interval.

Bottom contact at 55 tca

Continues to be well mineralized with chalco and moly.

« py 0.30%» « cpy 1.40%» « mo 0.30%»

62.95 63.81 Flt

Outer edges of the fault zone are finely broken rock (quartz diorite) but identifiable rock is only 10 % of material in the zone.

Upper 30 cm is a very plastic mineralized, med grey clay . This is followed by 50 cm of sandy limonitic material with minor silt content. Drillers report that the sand flowed into their tube quite readily until the hole was conditioned.

Other than the lower contact of the granodiorite above, there is no indicators to suggest the orientation of the fault.

63.81 82.07 Quartz Diorite

Like the quartz diorite above the fault only in reverse. Unit becomes more leucocratic away from the fault. Brokenness of core and limonite also decrease downhole.

Small limonitic broken zone at 81.80 - 82.07 marks the end of observed limonite in this hole.

« py 1.00%» « cpy 0.80%» « mo 0.10%»

82.07 104.12 Quartz Diorite

Unit becomes better mineralized than previous interval and frequency of

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
37.50	40.00	138828	2.50	557	2128
40.00	42.50	138829	2.50	298	1780
42.50	45.00	138830	2.50	204	1735
45.00	47.50	138831	2.50	210	1622
47.50	50.00	138832	2.50	91	1286
50.00	52.50	138833	2.50	313	2053
52.50	55.00	138834	2.50	308	2690
55.00	57.50	138835	2.50	351	2223
55.00	57.50	138836	2.50	593	2374
57.50	60.00	138837	2.50	683	2752
60.00	62.95	138838	2.95	100	1286
62.95	63.81	138839	0.86	447	1843
63.81	65.00	138840	1.19	378	1809
65.00	67.50	138841	2.50	147	1843
67.50	70.00	138842	2.50	227	1648
70.00	72.50	138843	2.50	321	1402
72.50	75.00	138844	2.50	316	1212
75.00	77.50	138845	2.50	224	1140
77.50	80.00	138846	2.50	717	2074
80.00	82.07	138847	2.07	140	1150
82.07	82.50	138848	0.43	58	1303
82.50	85.00	138849	2.50	451	1616

Project: Bear North 6219563.000 East 632232.000 Elev 1682.000 **Hole Number: BD-04-18** Imperial Metals

From	To	Rocktype & Description

fractures increases. This interval has a slightly different appearance as the fractures have a concentration of biotite and magnetite along the fractures giving a vaguely striped appearance. Fractures and strngers also occur as more of a stockwork rather than the consistently oriented and more widely spaced strngers observed up hole.
Strong sx mineralization associated with the increased frac/strnger.
Significantly more pyrite but also more chalco and moly.
Core is quite competent.
Moderate calcite in quartz strngers and hairline fractures.
« py 3.00%» « cpy 1.50%»« mo 0.50%» « mt 2.00%»

104.12 111.75 Monzodiorite
Very fine grained, weakly porphyritic leucocratic intrusive. Phenos of albitized feldspar, quartz and kspar 2 - 5mm with megacrysts of orthoclase to 2 cm across. Overall appearance is very light colour (apple green to tan) with less than 5% mafics.
Unmineralized
« 108.92- 109.80 Xenolith? gd »
« 109.98- 110.37 Xenolith? gd »

111.75 195.82 Quartz Diorite
This interval has the same description as the interval above the previous felsic dyke.
Sx content drops off below 150 metres but is still moderate to strong.
Fracturing, quartz stringrs and sx then increase again around 160 metres. Some particularily good moly around 163 m.
Stringrs and fractures continue to be more of a stockwork pattern than along a particular orientation, but most are at a high angle (>50 tca).
« py 1.50%» « cpy 1.50%» « mo 0.30%» « mt 1.00%»

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
85.00	87.50	138850	2.50	744	2837
87.50	90.00	138851	2.50	1639	2998
90.00	92.50	138852	2.50	356	2686
92.50	95.00	138853	2.50	1016	3864
95.00	97.50	138854	2.50	601	3023
97.50	100.00	138855	2.50	508	3134
100.00	102.50	138856	2.50	947	1838
102.50	104.12	138857	1.62	931	3640
104.12	105.00	138858	0.88	12	73
105.00	107.50	138859	2.50	7	39
107.50	110.00	138860	2.50	98	453
110.00	111.75	138861	1.75	65	384
111.75	112.50	138862	0.75	482	2473
112.50	115.00	138863	2.50	652	2807
115.00	117.50	138864	2.50	934	3000
117.50	120.00	138865	2.50	858	2746
120.00	122.50	138866	2.50	1855	4860
122.50	125.00	138867	2.50	692	3559
125.00	127.50	138868	2.50	903	2608
127.50	130.00	138869	2.50	641	2830
130.00	132.50	138870	2.50	419	1057
132.50	135.00	138871	2.50	714	2645
135.00	137.50	138872	2.50	617	3288

From	To	Rocktype & Description
195.82	**196.93**	**Monzodiorite** *Very leucocratic dyke with, quartz, felds, biotite phenos. Occasional mineralized fractures but mostly barren. M grey colour. No megacrysts present.* *« py 0.10%» « cpy 0.01%» « mo 0.01%»*
196.93	**215.82**	**Quartz Diorite**

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
137.50	140.00	138873	2.50	473	2553
140.00	142.50	138874	2.50	628	2510
142.50	145.00	138875	2.50	518	2141
145.00	147.50	138876	2.50	910	1992
147.50	150.00	138877	2.50	383	2300
150.00	152.50	138878	2.50	503	2587
152.50	155.00	138879	2.50	303	2053
155.00	157.50	138880	2.50	521	2525
157.50	160.00	138881	2.50	563	2496
160.00	162.50	138882	2.50	472	3268
162.50	165.00	138883	2.50	1145	1660
165.00	167.50	138884	2.50	646	2014
167.50	170.00	138885	2.50	1195	1715
170.00	172.50	138886	2.50	1290	2163
172.50	175.00	138887	2.50	853	3096
175.00	177.50	138888	2.50	1133	3356
177.50	180.00	138889	2.50	591	2994
180.00	182.50	138890	2.50	672	3788
182.50	185.00	138891	2.50	740	3305
185.00	187.50	138892	2.50	835	3518
187.50	190.00	138893	2.50	1196	5153
190.00	192.50	138894	2.50	752	3686
192.50	195.00	138895	2.50	747	3372
195.00	195.82	138896	0.82	616	3653
195.82	196.93	138897	1.11	181	1155
196.93	197.50	138898	0.57	900	4060

Project: Bear North 6219563.000 East 632232.000 Elev 1682.000 **Hole Number: BD-04-18** Imperial Metals

From	To	Rocktype & Description

Below 200 metres the unit is more highly altered and displays a fabric at about 50 tca. In some selected areas, the fractures have been the locus of movement to create weak angular, clast supported breccia. Average size and frequency of quartz stringrs increases slightly.

« py 1.50%» « py 1.50%» « mo 0.40%» « mt 1.00%»

215.82 232.88 Volc

Highly altered and sheared andesitic rocks that are probably just a large xenolith of volcanics caught up in the margins of the quartz diorite body. Abundant qd material observed in the interval, flooding the volcanics.

« py 2.00%» « cpy 1.10%» « mo 0.20%»

232.88 233.55 Quartz Monzonite

Similar in composition to the dyke at 195.82 - 196.83, but has more of a classic Quartz Monz signature with kspar phenos, kspar alt along fractures and some remnants of Orthoclase megacrysts. Weak mineralization restricted to a few hairline fractures.

« py 0.10%» « cpy 0.10%» « mo 0.01%»

233.55 256.45 Quartz Diorite

Highly sheared quartz diorite as described above 215.82. Considerable amount of volcanic rock included in this unit as large blocks (xenoliths). All of the open space related to the shearing has provided space for sx deposition adn some chalco chunks form up to 1 cm across. Good moly min as welll. Unit is entirely healed but becomes blocky below 250 metres and is

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
197.50	200.00	138899	2.50	880	4430
197.50	200.00	138900	2.50	720	4654
200.00	202.50	138901	2.50	985	4162
202.50	205.00	138902	2.50	611	6603
205.00	207.50	138903	2.50	1523	4357
207.50	210.00	138904	2.50	390	2670
210.00	212.50	138905	2.50	616	3247
212.50	215.00	138906	2.50	1085	4654
215.00	215.82	138907	0.82	2142	5413
215.82	217.50	138908	1.68	1358	4843
217.50	220.00	138909	2.50	1102	5754
220.00	222.50	138910	2.50	1884	6159
222.50	225.00	138911	2.50	1112	5483
225.00	227.50	138912	2.50	541	4561
227.50	230.00	138913	2.50	1187	3921
230.00	232.50	138914	2.50	617	3703
232.50	232.88	138915	0.38	2709	2855
232.88	233.55	138916	0.67	829	1872
233.55	235.00	138917	1.45	517	4410
235.00	237.50	138918	2.50	795	3327
237.50	240.00	138919	2.50	473	3692
237.50	240.00	138920	2.50	406	3109
240.00	242.50	138921	2.50	614	2623
242.50	245.00	138922	2.50	951	3544

From To Rocktype & Description

weakly gougy 253 - 255 metres.

« 253.00- 255.00 Weakly gougy structure 20.00-30.00°»
« py 2.00%» « cpy 2.00%» « mo 0.50%» « mt 2.00%»

256.45 278.55 Quartz Monzonite

Quartz monzonite - Same as had been described in previous hole. M grey to apple green colour. Crowded porph with occasional orthoclase megasrysts. Unit is moderately to very competent. Occasional to moderate frac related sx mineralization. Upper and lower contacts at about 55 tca.
py
« 274.14- 275.90 gd 0« py 0.10%» « cpy 0.10%» « mo 0.01%»

278.55 293.57 Quartz Diorite

As previous quartz diorite unit,. Increased quartz stringer volume. Continues o be well mineralized. Patchy pink around fractures due to kspar flooding. Competent core.
« py 1.50%» « cpy 1.20%» « mo 0.30%»

293.57 294.59 Augite Porphyry Dyke

Small homogeneous mafic dyke. Upper contact at 35 tcsa. Lower contact not seen.

294.59 301.14 Quartz Diorite

As described in previous granodiorite interval. Quartz strngers are noticeably vuggy.

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
245.00	247.50	138923	2.50	604	2699
247.50	250.00	138924	2.50	434	2099
250.00	252.50	138925	2.50	924	2943
252.50	255.00	138926	2.50	976	2055
255.00	256.45	138927	1.45	421	1592
256.45	257.50	138928	1.05	338	1039
257.50	260.00	138929	2.50	705	916
260.00	262.50	138930	2.50	302	902
262.50	265.00	138931	2.50	328	956
265.00	267.50	138932	2.50	134	597
267.50	270.00	138933	2.50	141	437
270.00	272.50	138934	2.50	138	811
272.50	275.00	138935	2.50	147	614
275.00	277.50	138936	2.50	71	800
277.50	278.55	138937	1.05	90	606
278.55	280.00	138938	1.45	213	1524
280.00	282.50	138939	2.50	253	1727
280.00	282.50	138940	2.50	238	1685
282.50	285.00	138941	2.50	255	1684
285.00	287.50	138942	2.50	169	1247
287.50	290.00	138943	2.50	156	1460
290.00	292.50	138944	2.50	133	1771
292.50	293.57	138945	1.07	60	1889
293.57	294.59	138946	1.02	<2	45
294.59	297.50	138947	2.91	64	1947
297.50	300.00	138948	2.50	91	2114
300.00	301.14	138949	1.14	68	1993

From	To	Rocktype & Description	From	To	Sample	Width	Mo (ppm)	Cu (ppm)
		« py 2.00%» « cpy 0.60%» « mo 0.01%»						
301.14	**301.14**	**EOH**						

Diamond Drill Log

Imperial Metals

Hole No:	**BD-04-19**
Project Code:	Bear
Grid	
NORTH:	6219645.000
EAST:	632500.000
ELEVATION:	1530.000
LENGTH:	261.21
DIP:	-45.0
AZIMUTH:	270
CASING:	3.1
SIZE:	NQ2

Location:	Collared to NE of hole BD-04-16
Logged By:	S Robertson
Log Date:	28/07/2004
Date Started:	27/07/2004
Date Finished:	29/07/2004
Contractor:	F Boisvenu
Assayer:	Acme
Comments:	Weak mineralization throughout. Large fault zone causing bri

SURVEY RECORDS

DEPTH	DIP	AZIMUTH
0.00	-45.00	270.00
66.14	-48.50	272.90
128.02	-48.70	274.20
194.16	-49.10	272.60
249.94	-48.90	275.80

Project: Bear North 6219645.000 East 632500.000 Elev 1530.000 ***Hole Number: BD-04-19*** Imperial Metals

From	To	Rocktype & Description
0.00	**3.05**	**Case**

No Return

From	To	Rocktype & Description
3.05	**7.25**	**Talus**

Talus - Drilled through angular talus with good return. Mixed quartz diorite, QFBP and volcanic boulders. limonite on fracture faces. Weakly mineralized. All coarse with no soil.

From	To	Rocktype & Description
7.25	**22.96**	**Volc**

Mostly flow breccia with moderate quartz strngers and weak sx mineralization.
Core is moderately broken with limonite on fractures to 16.15 metres. No sign of oxidation below that and core is more competent.
Alteration is mostly chorite with minor albite and kspar flooding. Minor magnetite on hairline fractures but otherwise only weakly magnetic. Red garnet in quartz carbonate strngrs 21 - 31.91 metres.
Fractures and strngers mostly at 20 - 30 tca with a less frequent orientation of 45 -60 tca.
« py 2.00%» « cpy 0.60%» « mo 0.02%»

From	To	Rocktype & Description
22.96	**25.85**	**Dyke**

Mafic dyke. Fine grained and homogeneous but has been significantly altered resulting in minor epidote and red garnet streaks, minor kspar and hemitite, chloritization, actinolite and abundant calcite on hairline fractures.
Core is competent.
Abundance of sx is chalco, pyrite, moly.
« py 0.20%» « cpy 1.00%» « mo 0.04%»

From	To	Rocktype & Description
25.85	**31.91**	**Volc**

Same as unit above the mafic dyke, but appears to have increased quartz strngers and moly mineralization.
py
« py 1.50%» « cpy 0.50%» « mo 0.10%»

From	To	Rocktype & Description
31.91	**44.67**	**Quartz Diorite**

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
3.05	7.25	138950	4.20	78	312
7.25	10.00	138951	2.75	315	251
10.00	12.50	138952	2.50	243	1097
12.50	15.00	138953	2.50	310	764
15.00	17.50	138954	2.50	312	918
17.50	20.00	138955	2.50	162	1234
20.00	22.96	138956	2.96	145	719
22.96	25.85	138957	2.89	271	1343
25.85	27.50	138958	1.65	234	1024
27.50	30.00	138959	2.50	201	1309
27.50	30.00	138960	2.50	249	865
30.00	31.91	138961	1.91	256	887
31.91	34.58	138962	2.67	217	644

Project: Bear North 6219645.000 East 632500.000 Elev 1530.000 **Hole Number: BD-04-19** Imperial Metals

From To Rocktype & Description

Like quartz diorite described in previous holes only may be slightly coarser grained (but stil nonporphyritic), and some patches of kspar flooding along fractures.

« 34.58- 35.06 Weak moly min with stg kspar albite altn Quartz Vein 10.00° 3.00c« py 0.20%» « cpy 0.50%» « mo 0.20%»

44.67 60.69 tuff

Interval is mostly dust tuff with minor intrusions of quartz diorite. Bedding within the waterlain tuff varies 70 - 90 tca. Bedding thickness varies 5 cm to 30 cm.

Unit has a striking appearance due to the very dark grey colour of the rock with the starkly contrasting light coloured quartz-feldspar 2-5 mm alteration envelopes surrounding randomly oriented fractures. Minor sx mineralization found along the fractures.

Core is quite competent.

« py 0.20%» « cpy 0.20%» « mo 0.20%»

60.69 69.77 Quartz Diorite

Quartz diorite as described above the previous tuff. Some minor offset of quartz strngers by hairine structures at 25 tca. Unit becomes quite broken in bottom 3 metres.

Rock more altered (chlorite - clay) lower in interval. Rock can be dented with ease in some areas.

py« py 1.00%» « cpy 0.50%» « mo 0.10%»

69.77 70.73 Flt

Weakly gougy fault at 30 tca. Fault has been the locus of significant movement with fragments of quartz diorite, quartz monzonite and volcanic all identifiable within interval.

Sx min is quite weak.

« py 0.40%» « cpy 0.10%» « mo 0.01%»

70.73 75.43 Quartz Diorite

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
34.58	35.06	138963	0.48	103	275
35.06	37.50	138964	2.44	373	468
37.50	40.00	138965	2.50	316	532
40.00	42.50	138966	2.50	292	559
42.50	44.67	138967	2.17	597	350
44.67	47.50	138968	2.83	305	174
47.50	50.00	138969	2.50	664	28
50.00	52.50	138970	2.50	417	38
52.50	55.00	138971	2.50	567	44
55.00	57.50	138972	2.50	312	51
57.50	60.00	138973	2.50	312	323
60.00	60.69	138974	0.69	95	271
60.69	62.50	138975	1.81	176	1175
62.50	65.00	138976	2.50	35	495
65.00	67.50	138977	2.50	88	387
67.50	69.77	138978	2.27	48	562
69.77	70.73	138979	0.96	149	888
69.77	70.73	138980	0.96	198	736
70.73	72.50	138981	1.77	405	1356

Project: Bear North 6219645.000 East 632500.000 Elev 1530.000 ***Hole Number: BD-04-19*** Imperial Metals

From To Rocktype & Description

Very strongly sheared throughout interval. Considerable clay alteration of feldspar. High level of quartz carbonate flooding along fractures.
Wulfenite observed in moderate frequency down to 87 metres. Petrographic specimen taken. Occurs on fractures mixed with quartz and calcite. Resinous and soft.
« py 0.20%» « cpy 0.80%» « mo 0.20%» « mt 0.01%»

75.43 80.42 Flt
Similar to the last fault. Very strongly broken unit with heterolithic frags in a slightly gougy unit. Strong quartz - calcite - wulfenite development with only moderate sx development but good moly observed on some shear planes.
Strong shearing at 30 tca.
« py 0.50%» « cpy 0.50%»m« magnetite alteration 0.30»

80.42 84.54 Quartz Diorite
Very strongly sheared quartz diorite. Difficult to choose what is within the fault zone and what isn't.
This interval is comprised mostly of solid but badly broken rock with weak to moderate sx mineralization.
« py 0.50%» « cpy 0.50%» « mo 0.20%»

84.54 87.18 Flt
Low angle shear zone as described in previous fault interval. 20 tca. Overall the unit is mostly nonmagnetic but some sizable chunks of magnetite in quartz strngers with chalco and moly.
« py 0.10%» « cpy 0.30%» « mo 0.20%» « mt 0.30%»

87.18 106.52 Quartz Diorite
Very fine grained for this rocktype. Rock is only moderately broken to moderately competent. Chlorite (+sericite?) and albite alteration, decreases downhole. Get small (10cm) minor faults within interval at 20 - 40 tca.
Good sx decreased very gradually downhole.
« py 1.00%» « cpy 0.80%» « mo 0.20%»

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
72.50	75.43	138982	2.93	600	1525
75.43	77.50	138983	2.07	149	625
77.50	80.42	138984	2.92	575	1058
80.42	82.50	138985	2.08	800	1209
82.50	84.54	138986	2.04	204	1022
84.54	87.18	138987	2.64	642	1140
87.18	90.00	138988	2.82	406	3409
90.00	92.50	138989	2.50	273	1571
92.50	95.00	138990	2.50	83	1242
95.00	97.50	138991	2.50	400	2224
97.50	100.00	138992	2.50	880	1829
100.00	102.50	138993	2.50	231	1562

From To Rocktype & Description

106.52 111.56 Monzodiorite

Dyke comprised mostly of feldspar which has been completely clay altered to the point of being apple green and soft enough to easily dent with a pocket knife, but is largely intact and healed. Difficult to determine exactly what the protolith unit was but it looks too coarse grained and feldspar rich to have been quartz diorite. Petrographic report indicates Monzodiorite protolith.

« py 0.10%» « cpy 1.20%» « mo 0.50%» « mt 1.00%»

111.56 116.33 Monzodiorite

As described above. Most of the fractures and quartz strngers are 0 - 30 tca. Interval is about 20% quartz by volume. Some good coarse chalco and moly.

« py 0.10%» « cpy 2.00%» « mo 1.00%»

116.33 120.44 Monzodiorite

As above but rock is more strongly altered and not nearly as quartz flooded. Rock is still intact and appears to be moderately competent. Most fractures 10 - 30 tca.

« py 0.10%» « cpy 0.70%» « mo 0.25%»

120.44 170.00 Quartz Diorite

Quartz diorite. Very gradually getting coarser, less altered and more competent down hole. Unit appears to be typical quartz diorite, uninfluenced by the fault zone, below 127.5.

Natural fractures vary 0 - 25 tca. Sx mostly restricted to hairline fractures and quartz strngers. Diss sx rare. Calcite rare to occasionally present. Unit is generally moderately magnetic with some stronger magnetite along fractures.

« py 1.00%» « cpy 0.80%» « mo 0.20%»

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
102.50	105.00	138994	2.50	333	1384
105.00	106.52	138995	1.52	288	2119
106.52	108.00	138996	1.48	878	4561
108.00	109.52	138997	1.52	384	2685
109.52	111.56	138998	2.04	290	1187
111.56	112.50	138999	0.94	373	1599
111.56	112.50	139000	0.94	530	1295
112.50	115.00	140601	2.50	630	2316
115.00	116.33	140602	1.33	196	1273
116.33	118.00	140603	1.67	587	1033
118.00	120.44	140604	2.44	249	1922
120.44	122.50	140605	2.06	446	1904
122.50	125.00	140606	2.50	58	880
125.00	127.50	140607	2.50	73	796
127.50	130.00	140608	2.50	126	698
130.00	132.50	140609	2.50	63	786
132.50	135.00	140610	2.50	31	951
135.00	137.50	140611	2.50	88	672
137.50	140.00	140612	2.50	94	1140
140.00	142.50	140613	2.50	136	1636
142.50	145.00	140614	2.50	82	945
145.00	147.50	140615	2.50	156	1189

From	To	Rocktype & Description
170.00	246.77	**Quartz Diorite**

Continuation of last unit but is quite consistent, with very competent rock, moderate sx and weak alteration. Fractures and stringrs are mostly parallel at 25 - 30 tca, but not evenly spaced.
Pyrite content increases slightly downhole (approaches 1% in small intervals).

Bottom 10 metrres of interfal has a number of kspar - quartz veinlets at various orientations 1 - 5 cm thick. They have little or no sx mineralization.

« py 0.50%» « cpy 1.00%» « mo 0.20%»
« 234.08- 234.48 Kspar rich QMonz 25.00°»
« 236.31- 237.80 QMonz 25.00°»
« 243.16- 243.79 Very irregular contacts QMonz 0°»
« 244.19- 244.52 QMonz>>

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
147.50	150.00	140616	2.50	109	782
150.00	152.50	140617	2.50	384	1026
152.50	155.00	140618	2.50	172	1023
155.00	157.50	140619	2.50	134	1544
155.00	157.50	140620	2.50	203	1594
157.50	160.00	140621	2.50	140	1146
160.00	162.50	140622	2.50	155	1505
162.50	165.00	140623	2.50	135	1071
165.00	167.50	140624	2.50	331	1126
167.50	170.00	140625	2.50	286	1059
170.00	172.50	140626	2.50	119	1037
172.50	175.00	140627	2.50	153	1528
175.00	177.50	140628	2.50	221	1473
177.50	180.00	140629	2.50	133	1551
180.00	182.50	140630	2.50	153	1327
182.50	185.00	140631	2.50	222	1580
185.00	187.50	140632	2.50	239	1471
187.50	190.00	140633	2.50	269	2378
190.00	192.50	140634	2.50	236	1496
192.50	195.00	140635	2.50	288	1294
195.00	197.50	140636	2.50	296	1462
197.50	200.00	140637	2.50	191	1352
200.00	202.50	140638	2.50	218	1467
202.50	205.00	140639	2.50	311	1649
202.50	205.00	140640	2.50	234	1718
205.00	207.50	140641	2.50	181	1719
207.50	210.00	140642	2.50	376	1678
210.00	212.50	140643	2.50	298	1927
212.50	215.00	140644	2.50	316	1974

From	To	Rocktype & Description
246.77	**248.38**	**Quartz Monzonite** *Felsic intrusive which has been completely flooded by quartz and kspar. Protolith barely recognisable.Minor sx mineralization. Top contact clean at 25 tca. Bottom contact very irregular.*
248.38	**261.21**	**Quartz Monzonite** *Fresh looking porphyritic rock with abundant quartz flooding hosting weak to moderate sx mineralization. Rock appears greenish in small intervals due to feldspar alteration. Very similar to previously described quartz monz but Orthoclase megacrysts are not nearly as obvious and are not more than 10 or 12 mm. Core is competent.*
261.21	**261.21**	**EOH**

From	To	Sample	Width	Mo (ppm)	Cu (ppm)
215.00	217.50	140645	2.50	333	1722
217.50	220.00	140646	2.50	188	2016
220.00	222.50	140647	2.50	284	1950
222.50	225.00	140648	2.50	210	1641
225.00	227.50	140649	2.50	224	1538
227.50	230.00	140650	2.50	217	1495
230.00	232.50	140651	2.50	288	1831
232.50	235.00	140652	2.50	275	1154
235.00	237.50	140653	2.50	709	1592
237.50	240.00	140654	2.50	178	1272
240.00	242.50	140655	2.50	143	950
242.50	245.00	140656	2.50	132	809
245.00	246.77	140657	1.77	431	1277
246.77	248.38	140658	1.61	37	145
248.38	250.00	140659	1.62	118	850
248.38	250.00	140660	1.62	130	673
250.00	252.50	140661	2.50	137	501
252.50	255.00	140662	2.50	141	451
255.00	257.50	140663	2.50	253	320
257.50	260.00	140664	2.50	121	350
260.00	261.21	140665	1.21	22	147

APPENDIX B

Analytical Results
Acme Analytical Labs Ltd.

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A404220 Page 1 Received: AUG 5 2004 * 306 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc
SAMPLE	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SI	<2	4	15	33	<.5	<2	<2	14	0.07	<5	<10	<4	<2	162	<.4	<5	<5	<2	7.87	0.012	<2	2	0.1	229	0.03	0.9	>10	0.21	<4	76	<2	2	3	<1	<1
138777	367	1304	10	57	0.7	2	10	553	3.68	7	<10	<4	10	1048	<.4	<5	<5	98	3.03	0.165	35	3	0.98	1009	0.38	8.14	2.79	3.67	4	15	<2	15	24	2	6
138778	256	945	<5	52	<.5	3	9	546	3.96	12	<10	<4	9	1059	<.4	<5	<5	102	3.18	0.169	39	4	0.85	1737	0.38	8.33	2.58	3.77	38	15	<2	15	25	2	6
138779	197	1325	11	45	0.8	3	9	596	3.9	17	<10	<4	9	1026	<.4	<5	<5	96	3.48	0.164	35	4	0.89	437	0.35	7.95	2.64	3.59	57	14	<2	15	24	2	6
138780	167	1032	11	49	0.7	2	10	589	3.98	<5	<10	<4	6	1050	<.4	<5	<5	102	3.16	0.168	37	3	1.02	1749	0.38	8.39	2.85	3.84	14	14	<2	16	24	1	6
138781	686	1505	14	47	1.4	2	10	535	3.56	<5	<10	<4	5	938	<.4	<5	<5	85	2.92	0.156	37	7	0.93	1094	0.34	7.65	2.63	3.41	10	14	<2	14	21	1	5
138782	14760	23930	<5	118	17.1	3	26	324	4.12	<5	<10	<4	8	238	1.4	<5	<5	40	4.28	0.06	13	2	0.29	37	0.11	2.86	0.64	2.24	88	3	<2	7	11	<1	2
138783	203	2272	11	48	1	2	9	469	3.42	<5	<10	<4	7	877	0.4	<5	<5	89	2.92	0.158	34	3	0.91	512	0.34	7.53	2.36	3.85	22	15	<2	14	21	1	5
138784	161	1458	9	46	0.7	2	10	562	3.83	<5	<10	<4	10	1069	0.6	<5	<5	96	3.24	0.17	35	2	1.02	1237	0.38	8.33	2.86	3.59	34	15	<2	16	25	1	6
138785	436	1567	<5	45	0.9	<2	9	533	3.57	7	<10	<4	5	1100	<.4	<5	<5	91	3.38	0.159	35	7	0.93	1010	0.36	7.85	2.67	3.67	44	14	<2	15	22	1	5
138786	1629	1902	5	48	1.7	4	10	519	3.67	7	<10	<4	11	960	0.6	<5	<5	92	2.89	0.162	35	4	0.98	433	0.36	8.04	2.67	3.8	41	12	<2	15	24	2	6
138787	340	793	7	42	<.5	3	9	573	3.88	<5	<10	<4	9	1064	<.4	<5	<5	102	3.26	0.169	35	6	0.98	1071	0.37	8.36	2.89	3.69	24	15	<2	16	25	2	6
138788	474	1172	<5	49	<.5	3	10	480	3.88	<5	<10	<4	13	1145	<.4	<5	7	95	3.25	0.171	35	4	0.62	1897	0.39	8.39	2.77	3.59	22	14	<2	15	26	2	6
138789	402	2246	9	99	1.5	5	9	474	3.6	<5	<10	<4	4	993	<.4	<5	<5	90	3.05	0.147	32	5	0.86	305	0.34	7.76	2.63	3.63	9	11	<2	14	20	1	5
138790	104	1258	6	47	<.5	3	10	613	4.1	<5	<10	<4	6	1237	<.4	<5	<5	101	3.18	0.16	38	3	0.97	1004	0.37	8.23	2.78	3.57	13	13	<2	15	24	1	5
RE 138790	103	1233	6	46	0.5	<2	9	571	3.93	<5	<10	<4	6	1193	<.4	<5	<5	99	3.06	0.154	35	3	0.94	980	0.36	7.93	2.72	3.53	9	15	<2	15	23	1	5
RRE 1387[illegible]	99	1199	<5	45	0.5	<2	9	578	3.82	<5	<10	<4	8	1176	<.4	<5	<5	97	3	0.151	34	2	0.92	1129	0.36	7.75	2.64	3.53	8	13	<2	14	20	1	5
138791	2353	2293	9	19	1.5	5	4	218	1.73	<5	<10	<4	<2	274	<.4	<5	<5	36	1.71	0.058	15	5	0.31	764	0.13	3.01	0.84	1.66	6	5	<2	6	9	1	2
138792	481	3118	<5	65	2.3	<2	15	558	3.96	<5	<10	<4	2	1029	<.4	<5	<5	88	3	0.157	34	4	0.95	378	0.36	8.21	2.72	3.7	20	17	<2	15	24	1	5
138793	1152	2225	<5	54	1.3	2	12	602	3.83	18	<10	<4	11	1005	<.4	<5	<5	96	3.14	0.179	35	4	1.08	487	0.38	8.38	2.37	4.16	>200	11	<2	16	25	2	6
138794	691	2088	<5	52	1.3	4	11	566	3.66	<5	<10	<4	14	900	<.4	<5	5	90	2.74	0.145	34	4	0.91	471	0.34	7.42	2.41	3.64	26	11	<2	14	23	2	5
138795	483	1498	13	46	0.7	4	11	606	3.9	5	24	<4	7	1035	<.4	<5	5	95	3.3	0.159	38	7	0.96	399	0.36	8.17	2.77	3.79	23	10	2	16	25	2	6
138796	564	1160	8	43	<.5	4	9	598	3.65	<5	<10	<4	8	954	<.4	<5	<5	90	3.04	0.152	35	3	0.92	411	0.36	7.8	2.64	3.75	8	11	<2	15	22	1	5
138797	829	1433	10	46	0.5	4	11	624	3.67	5	<10	<4	15	1062	<.4	<5	<5	93	3.18	0.153	35	4	0.94	364	0.36	8	2.7	3.77	50	13	<2	15	23	2	5
138798	164	1395	63	202	0.8	2	11	570	3.72	25	<10	<4	10	975	1	<5	<5	94	3.55	0.159	35	5	0.76	649	0.36	8.35	2.17	3.71	37	13	<2	15	26	2	5
138799	598	1735	14	81	1.3	3	11	531	3.47	19	<10	<4	12	1152	<.4	<5	<5	84	3.12	0.152	36	3	0.75	549	0.35	7.91	2.47	3.66	8	12	<2	15	25	1	5
138800	469	1526	6	55	0.7	2	12	687	3.78	<5	<10	<4	12	1162	<.4	<5	<5	88	3.28	0.159	37	6	0.9	324	0.39	8.22	2.81	3.57	32	11	<2	15	26	2	5
138801	363	2020	8	60	1.3	4	12	621	3.72	<5	<10	<4	9	998	<.4	<5	<5	89	3.17	0.151	36	4	0.92	314	0.36	7.99	2.71	3.62	17	11	<2	15	23	2	5
138802	359	1455	<5	54	0.5	4	11	697	3.81	<5	<10	<4	13	1124	<.4	<5	<5	90	3.25	0.155	37	5	0.89	495	0.37	8.09	2.78	3.43	29	6	<2	15	25	2	5
138803	99	807	<5	51	<.5	3	10	614	3.67	7	<10	<4	13	1086	<.4	<5	<5	88	3.32	0.147	35	4	0.89	1602	0.35	7.95	2.73	3.37	50	15	<2	15	25	1	5
138804	230	949	12	44	<.5	5	10	483	3.21	<5	<10	<4	7	1151	<.4	<5	<5	79	3.42	0.132	34	6	0.82	989	0.31	8.25	2.86	3.49	<4	36	<2	12	22	2	5
138805	232	778	8	38	<.5	3	8	387	2.73	<5	<10	<4	10	1067	<.4	<5	<5	67	2.87	0.115	31	6	0.77	970	0.28	7.66	2.72	3.34	<4	40	<2	11	19	2	5
138806	<2	4	14	40	<.5	6	5	320	1.84	<5	<10	<4	<2	862	<.4	<5	<5	37	2.42	0.067	21	5	0.53	1445	0.17	7.67	2.89	3.21	<4	49	<2	5	14	2	3
138807	<2	4	15	37	<.5	6	5	271	1.51	<5	<10	<4	9	669	<.4	<5	6	31	2.16	0.056	19	5	0.37	1454	0.14	7.63	2.81	3.21	<4	43	<2	4	20	2	3
138808	<2	5	11	44	<.5	6	5	282	1.79	<5	<10	<4	4	691	<.4	<5	<5	37	2.44	0.062	20	6	0.43	1426	0.17	7.78	2.82	3.14	<4	43	<2	5	17	2	3
STANDAR	15	150	31	165	<.5	31	15	1038	4.26	24	<10	<4	5	364	5.6	7	6	116	2.38	0.113	26	244	1.32	720	0.44	7.28	1.9	1.4	10	51	6	15	17	2	13
138810	<2	18	7	52	<.5	10	7	343	2.11	<5	<10	<4	5	932	0.5	15	<5	52	2.34	0.085	27	9	0.67	1518	0.18	8.32	3.31	2.27	7	64	<2	6	23	2	5
138811	1397	1323	14	50	1.4	6	8	342	2.66	<5	<10	<4	<2	616	<.4	<5	<5	73	2.32	0.129	29	5	0.88	314	0.25	7.48	1.66	3.71	52	20	2	11	21	1	5
138812	1722	1397	7	50	1.2	5	8	357	2.91	<5	<10	<4	2	810	<.4	5	12	79	2.36	0.135	31	4	0.87	224	0.27	7.02	1.66	3.41	51	10	<2	12	22	1	5
138813	46	2051	<5	89	1	7	16	906	5.02	<5	<10	<4	4	962	0.4	15	13	144	3.46	0.23	37	5	1.34	1731	0.49	8.77	3.01	2.07	18	21	<2	18	28	2	9
138814	149	2806	<5	92	0.9	6	17	866	5	<5	<10	<4	4	889	<.4	<5	13	152	3.31	0.236	38	4	1.49	1653	0.51	8.33	2.61	2.26	22	16	<2	18	25	1	9
138815	272	3223	<5	96	1.3	7	17	820	4.84	<5	<10	<4	2	863	0.5	5	15	144	3.32	0.228	38	5	1.41	1213	0.48	8.53	2.72	2.28	14	17	<2	17	23	1	9
138816	357	3565	<5	97	1.9	6	17	704	4.29	<5	<10	<4	2	719	<.4	14	11	134	3.71	0.227	37	6	1.28	481	0.46	8.09	2.25	2.58	10	14	<2	17	28	1	9
138817	443	3336	<5	103	2.2	7	17	702	4.56	6	<10	<4	<2	733	0.8	20	16	136	3.59	0.227	36	3	1.25	589	0.47	8.14	2.35	2.44	9	15	<2	17	28	1	9
138818	688	4044	15	129	2.1	7	19	855	5	8	<10	<4	<2	1044	<.4	6	6	151	3.79	0.241	38	6	1.52	702	0.52	8.56	2.69	2.32	7	13	<2	19	27	2	10
138819	505	4827	<5	109	2.2	5	20	735	4.69	<5	<10	<4	2	914	0.4	5	<5	146	3.29	0.236	38	4	1.55	264	0.5	8.47	2.43	2.77	13	10	<2	18	27	1	9
138820	383	3610	<5	98	1.2	6	18	829	5.03	<5	<10	<4	<2	1039	0.4	7	6	157	3.69	0.241	39	4	1.54	647	0.52	8.62	2.72	2.37	<4	13	<2	18	26	1	10
138821	310	3218	5	99	1.6	6	19	934	5.17	<5	<10	<4	<2	1112	<.4	8	<5	153	3.98	0.243	40	5	1.53	821	0.51	8.43	2.76	2.1	6	11	2	19	28	2	10
138822	891	1754	<5	85	2.8	8	18	980	5.37	<5	<10	<4	8	1062	<.4	<5	7	154	4.03	0.225	35	5	1.5	1652	0.5	8.39	2.79	1.97	30	9	<2	17	23	1	10
138823	330	715	33	100	1.4	10	8	335	2.28	15	<10	<4	2	510	1.1	16	8	69	2.11	0.104	25	9	0.51	1250	0.25	7.62	2.14	2.89	44	47	2	7	22	1	5
138824	136	1690	15	91	1.3	5	18	1006	5.61	9	<10	<4	2	1090	0.4	18	15	167	4.26	0.251	39	6	1.51	1774	0.54	8.64	2.85	2.04	8	16	3	19	25	2	10
RE 138824	134	1702	14	91	2.2	7	18	994	5.51	<5	<10	<4	5	1091	<.4	16	12	164	4.27	0.249	37	6	1.51	1787	0.53	8.64	2.83	2.02	8	16	<2	19	26	2	10
RRE 1388[illegible]	129	1658	7	89	1.4	7	18	1003	5.58	6	<10	<4	<2	1109	<.4	13	9	167	4.3	0.252	39	6	1.53	1784	0.53	8.74	2.88	2.02	6	13	<2	19	24	2	10
138826	208	2706	<5	101	1.8	6	18	929	5.21	<5	<10	<4	3	1058	<.4	10	7	149	3.88	0.22	32	5	1.5	1130	0.51	8.59	2.84	2.13	9	10	<2	17	24	1	10
138827	360	2093	<5	86	1.6	8	19	942	5.4	<5	<10	<4	<2	1098	<.4	7	11	156	4.02	0.233	34	6	1.46	1483	0.51	8.6	2.91	2.04	8	16	<2	18	25	1	10
138828	557	2128	<5	83	2.4	6	18	910	5.37	<5	<10	<4	4	1148	<.4	17	9	159	4.01	0.242	32	5	1.47	1322	0.52	8.85	2.89	2.29	16	18	<2	17	24	1	10
138829	298	1780	7	79	1.5	7	16	861	5.16	<5	<10	<4	3	1221	0.4	16	7	148	3.85	0.24	36	4	1.38	1747	0.5	8.78	2.96	2.19	5	14	<2	18	23	1	10
138830	204	1735	<5	78	0.9	8	17	830	4.85	<5	<10	<4	4	1173	0.4	<5	<5	143	3.61	0.197	34	7	1.43	1368	0.49	8.52	2.81	2.22	<4	14	<2	16	20	1	10
138831	210	1622	5	78	1.2	8	18	858	5.07	<5	13	<4	3	1194	<.4	9	8	150	3.64	0.216	35	9	1.49	1566	0.51	8.68	2.89	2.32	<4	15	<2	18	26	1	11
138832	91	1286	6	74	<.5	8	17	844	4.86	<5	<10	<4	3	1115	<.4	<5	6	144	3.66	0.208	35	8	1.45	1575	0.5	8.42	2.83	2.2	<4	14	<2	17	22	1	11
138833	313	2053	6	82	2.3	8	17	770	4.88	<5	<10	<4	<2	1062	<.4	11	6	158	3.57	0.205	30	8	1.49	1307	0.49	8.4	2.7	2.3	11	13	2	16	22	1	12
138834	308	2690	40	136	4.5	6	18	772	5.03	5	<10	<4	3	832	1	24	9	159	3.49	0.203	31	8	1.55	389	0.5	8.44	2.47	2.6	9	12	<2	16	22	1	12
138835	351	2223	5	88	0.7	7	17	785	4.96	<5	<10	<4	<2	936	<.4	<5	<5	148	3.51	0.205	34	8	1.5	1039	0.49	8.5	2.62	2.52	<4	13	<2	17	23	1	11
138836	593	2374	9	86	3	9	18	753	4.85	<5	14	<4	3	909	<.4	10	6	146	3.28	0.2	33	8	1.5	674	0.48	8.36	2.52	2.6	6	13	<2	16	24	1	11

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A404220 Page 1 Received: AUG 5 2004 * 306 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc
SAMPLE	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
138837	683	2752	8	86	2.8	9	18	780	4.9	<5	<10	<4	4	962	<.4	16	9	149	3.56	0.196	30	8	1.48	692	0.49	8.16	2.62	2.18	23	14	<2	16	23	1	11
138838	100	1286	<5	83	0.5	9	18	999	5.26	<5	<10	<4	<2	933	<.4	5	<5	170	4.11	0.198	30	7	1.72	1511	0.54	8.37	2.83	1.9	38	13	<2	16	22	1	13
138839	447	1843	20	211	6.8	10	17	1383	4.69	33	<10	<4	2	708	1.1	11	<5	156	5.36	0.17	27	5	0.95	1563	0.46	7.37	1.44	2.02	45	11	<2	15	20	1	11
138840	378	1809	6	98	0.7	7	17	804	4.96	<5	<10	<4	<2	903	<.4	<5	<5	148	4.04	0.197	32	8	1.28	1587	0.49	8.58	2.8	2.06	5	13	<2	16	21	1	11
138841	147	1843	5	99	<.5	10	23	920	5.86	<5	<10	<4	<2	1131	<.4	13	<5	182	4.15	0.202	29	8	1.69	654	0.55	8.7	2.88	2.06	7	14	<2	17	19	1	13
138842	227	1648	5	83	1.2	8	17	868	5.11	<5	<10	<4	<2	1097	0.4	<5	5	170	3.91	0.196	27	7	1.63	1520	0.53	8.32	2.74	2.11	15	14	<2	16	20	1	13
STANDAR	13	148	32	167	<.5	34	14	1020	4.24	24	<10	<4	7	355	5	6	<5	114	2.26	0.11	26	232	1.18	665	0.42	7.24	1.84	1.14	9	49	5	15	16	2	13
138843	321	1402	6	75	1	8	17	937	4.75	<5	<10	<4	4	1171	<.4	<5	<5	162	4.23	0.197	27	6	1.77	1533	0.5	8.65	2.85	2.56	<4	15	<2	16	19	2	13
138844	316	1212	7	68	0.8	8	18	912	4.73	5	<10	<4	3	1116	<.4	9	<5	157	4.22	0.191	27	7	1.74	1402	0.47	8.53	2.83	2.54	8	14	<2	15	19	2	12
138845	224	1140	5	74	1.4	9	18	943	5.18	7	<10	<4	8	1172	0.4	10	<5	171	4.32	0.196	28	9	1.81	995	0.49	8.66	2.9	2.53	42	19	<2	17	19	2	13
138846	717	2074	<5	73	2.4	7	17	767	4.58	<5	<10	<4	2	1107	<.4	<5	<5	156	3.69	0.181	25	6	1.69	905	0.46	7.97	2.43	2.74	6	15	<2	14	17	1	12
138847	140	1150	9	72	0.9	7	17	878	4.62	<5	<10	<4	5	1129	0.5	<5	<5	161	4.26	0.184	28	7	1.68	1535	0.47	8.28	2.58	2.65	6	16	2	16	17	2	12
138848	58	1303	<5	74	0.8	9	17	932	4.66	<5	<10	<4	4	994	0.4	<5	8	162	4.13	0.183	29	7	1.72	1439	0.48	8.33	2.71	2.39	5	19	<2	15	17	2	12
138849	451	1616	<5	68	1.4	8	17	915	4.79	<5	<10	<4	3	1101	<.4	<5	<5	163	4	0.187	30	8	1.78	1490	0.48	8.46	2.67	2.72	5	16	<2	16	18	2	13
138850	744	2837	<5	79	1.9	8	17	802	4.59	<5	<10	<4	4	1270	<.4	<5	<5	160	3.64	0.176	27	7	1.65	976	0.46	7.99	2.43	2.71	5	14	<2	15	17	1	11
138851	1639	2998	<5	80	0.8	9	18	803	4.63	<5	<10	<4	<2	1129	0.5	<5	<5	154	3.65	0.177	26	10	1.69	879	0.49	8.12	2.52	2.68	<4	14	<2	15	17	1	12
138852	356	2686	<5	82	1.5	8	18	859	4.83	<5	<10	<4	<2	1334	0.5	<5	<5	165	3.92	0.185	30	7	1.73	1510	0.49	8.67	2.69	2.85	10	16	<2	16	20	2	12
138853	1016	3864	<5	90	2.7	9	18	763	4.5	<5	<10	<4	5	1131	0.4	<5	<5	154	3.58	0.184	28	4	1.69	748	0.48	8.47	2.46	3.32	15	19	2	15	20	2	12
138854	601	3023	<5	71	2	7	17	714	4.34	<5	<10	<4	4	1025	0.6	<5	13	147	3.56	0.176	28	4	1.55	890	0.45	8.23	2.5	3	52	16	2	15	19	2	11
138855	508	3134	6	82	1.6	7	18	767	4.73	<5	<10	<4	4	1162	<.4	<5	<5	160	3.88	0.186	29	6	1.65	946	0.49	8.58	2.71	2.83	4	19	<2	16	19	1	11
138856	947	1838	7	67	1.5	6	18	902	5.03	<5	<10	<4	<2	1151	0.4	5	5	170	4.33	0.192	29	6	1.8	1570	0.5	8.97	2.9	2.75	5	21	<2	17	20	2	13
138857	931	3640	6	79	2.4	7	18	721	4.54	<5	<10	<4	<2	1106	<.4	8	<5	162	3.48	0.174	27	5	1.63	780	0.47	8.1	2.39	3.04	11	17	<2	15	18	2	11
138858	12	73	6	37	<.5	8	6	375	1.95	<5	<10	<4	<2	578	<.4	<5	<5	54	2.25	0.086	25	8	0.77	1296	0.19	7.94	3.45	2.3	<4	69	<2	6	16	1	5
138859	7	39	11	32	1.1	8	5	279	1.67	8	<10	<4	10	553	<.4	5	6	46	1.91	0.069	21	5	0.59	1311	0.17	7.52	3.18	2.47	<4	53	<2	5	17	2	4
138860	98	453	11	35	<.5	6	8	434	2.45	6	<10	<4	3	761	<.4	<5	<5	75	2.49	0.1	25	8	0.88	1442	0.25	8.18	3.13	2.79	5	38	<2	8	18	2	6
RE 138860	94	448	14	32	<.5	5	8	434	2.44	<5	<10	<4	7	750	<.4	<5	<5	73	2.47	0.098	22	7	0.87	1428	0.23	8.1	3.08	2.76	5	38	<2	8	16	2	6
RRE 13886	71	370	16	33	<.5	5	8	416	2.32	<5	<10	<4	7	735	<.4	<5	<5	71	2.41	0.095	24	4	0.83	1414	0.24	8.03	3.08	2.75	5	41	<2	8	18	2	6
138861	65	384	11	37	1	8	9	454	2.61	5	15	<4	7	752	<.4	10	5	86	2.74	0.112	27	8	1.01	1418	0.24	8.18	3.14	2.76	78	54	3	8	19	1	7
138862	482	2473	6	60	2.8	7	17	811	4.4	<5	14	<4	8	1033	<.4	<5	<5	154	3.61	0.175	28	5	1.62	1503	0.45	8.43	2.62	2.92	<4	25	2	15	19	1	11
138863	652	2807	6	71	2.7	5	19	825	4.82	7	<10	<4	7	1159	<.4	18	<5	165	4.13	0.188	30	4	1.73	1430	0.5	8.79	2.78	2.76	17	21	<2	16	22	2	12
138864	934	3000	5	75	1.6	7	18	817	4.61	6	<10	<4	<2	1017	<.4	<5	5	154	3.8	0.177	29	5	1.67	1261	0.49	8.3	2.59	2.83	7	19	<2	16	22	1	12
138865	858	2746	<5	76	2.5	5	18	812	4.57	<5	<10	<4	6	1028	<.4	<5	<5	154	3.79	0.177	28	4	1.64	1371	0.46	8.38	2.62	2.77	4	16	<2	16	19	2	12
138866	1855	4860	10	99	1.7	6	21	705	4.64	<5	<10	<4	<2	874	0.5	<5	<5	154	3.31	0.174	28	5	1.68	297	0.45	8.07	2.23	3.34	52	11	2	15	18	2	11
138867	692	3559	10	86	2.7	7	19	819	4.85	<5	<10	<4	6	996	0.5	10	<5	171	3.97	0.189	29	4	1.76	968	0.5	8.61	2.69	2.8	10	19	2	16	22	2	12
138868	903	2608	<5	77	2.2	6	20	873	4.99	<5	<10	<4	3	1086	0.4	15	<5	168	4.03	0.185	30	5	1.73	1350	0.5	8.48	2.64	2.64	11	19	<2	16	20	1	12
138869	641	2830	9	85	1.9	8	19	913	5	5	<10	<4	3	1191	0.6	12	<5	173	4.18	0.19	29	5	1.78	1633	0.51	8.88	2.72	2.88	15	17	2	17	23	2	13
138870	419	1057	10	65	<.5	5	16	812	4.67	<5	<10	<4	5	870	<.4	<5	<5	170	3.9	0.186	32	5	1.81	1680	0.45	8.53	2.14	3.78	14	13	2	16	19	2	12
138871	714	2645	9	77	1.6	6	18	737	4.32	<5	<10	<4	4	980	0.4	<5	5	150	3.54	0.173	28	5	1.65	1292	0.45	8.02	2.23	3.14	4	16	<2	15	19	2	11
138872	617	3288	5	72	0.6	7	16	646	4	<5	<10	<4	2	953	0.5	<5	<5	142	3.24	0.161	29	4	1.49	1407	0.43	8.01	2.31	3.21	4	14	2	15	19	2	10
138873	473	2553	13	74	<.5	5	18	776	4.34	<5	13	<4	2	1022	<.4	<5	<5	149	3.75	0.169	31	5	1.61	1482	0.47	8.34	2.46	2.94	10	12	2	16	22	2	11
138874	628	2510	5	76	<.5	5	18	931	4.82	<5	<10	<4	<2	898	0.5	<5	<5	161	4.39	0.181	29	4	1.81	1530	0.49	8.37	2.4	2.49	<4	12	2	16	19	2	12
STANDAR	12	141	30	162	<.5	34	13	1027	3.98	23	<10	<4	7	355	4.9	7	5	114	2.31	0.109	25	222	1.26	661	0.41	7.24	1.8	1.4	11	47	7	14	16	2	13
138875	518	2141	8	101	1.3	10	20	970	5.49	<5	<10	<4	2	818	0.5	<5	<5	180	3.88	0.187	20	4	1.83	1476	0.55	7.9	2.44	2.44	5	9	<2	14	20	2	12
138876	910	1992	5	89	1.9	6	18	809	4.94	<5	<10	<4	5	750	0.4	<5	<5	170	3.52	0.177	19	6	1.7	1445	0.49	7.7	2.17	2.71	7	10	<2	14	18	2	11
138877	383	2300	6	94	1.5	8	18	874	5.15	10	<10	<4	5	809	<.4	<5	<5	174	3.67	0.18	19	5	1.67	1512	0.5	7.72	2.41	2.66	7	12	<2	13	20	2	11
138878	503	2587	15	103	2.5	7	18	817	4.87	11	<10	<4	3	797	0.8	6	<5	163	3.55	0.177	22	8	1.61	1514	0.49	7.75	2.32	2.83	24	14	2	13	22	2	11
138879	303	2053	<5	104	1.9	8	19	926	5.28	<5	<10	<4	8	885	<.4	9	<5	176	3.65	0.188	26	6	1.68	1639	0.51	8.62	2.52	3	34	11	<2	15	20	2	12
138880	521	2525	<5	99	2.7	8	17	731	4.63	<5	<10	<4	6	706	<.4	<5	<5	154	3.17	0.168	25	6	1.45	1350	0.46	7.75	2.05	3.03	99	9	<2	13	18	2	10
138881	563	2496	13	153	3.5	7	19	876	4.76	19	<10	5	10	685	0.7	12	<5	150	4.96	0.162	27	5	1.36	1710	0.42	7.56	1.88	2.72	25	9	<2	14	21	2	10
138882	472	3268	<5	101	3.1	6	19	801	4.9	7	15	<4	5	753	0.5	11	<5	159	3.16	0.177	21	6	1.71	1397	0.46	7.75	2.24	2.96	36	10	<2	12	22	2	10
138883	1145	1660	11	91	2	6	17	840	4.77	<5	<10	<4	3	743	<.4	<5	<5	160	3.28	0.169	20	5	1.64	1434	0.47	7.57	2.12	2.9	16	10	<2	12	18	2	10
138884	646	2014	10	120	2.5	7	17	761	4.68	14	<10	<4	8	694	0.6	11	<5	165	4.08	0.181	24	5	1.27	1490	0.47	8.27	1.81	3.06	23	10	<2	14	23	2	11
138885	1195	1715	<5	94	2.4	4	17	831	4.84	9	<10	<4	9	761	0.7	5	<5	161	3.29	0.169	20	5	1.65	1465	0.46	7.79	2.15	2.9	22	10	<2	13	20	2	10
138886	1290	2163	5	88	1.5	5	15	645	4.23	<5	<10	<4	6	568	<.4	<5	<5	138	3.06	0.15	21	6	1.3	1336	0.4	7.33	1.61	3.09	13	10	<2	12	18	2	9
138887	853	3096	<5	119	2.7	6	20	810	5.1	12	<10	<4	3	737	0.6	9	<5	163	3.61	0.175	29	7	1.58	1474	0.47	8.13	2.17	2.88	17	8	<2	14	22	2	11
138888	1133	3356	16	120	2.1	7	20	765	4.91	5	<10	<4	7	812	0.9	<5	<5	162	3.31	0.175	22	7	1.63	1430	0.48	7.73	2.23	2.78	12	8	<2	13	21	2	10
138889	591	2994	5	102	2.9	8	18	843	5.04	6	<10	<4	7	834	0.5	7	<5	161	3.23	0.175	26	5	1.69	1469	0.48	7.9	2.25	2.73	10	7	<2	14	20	2	11
138890	672	3788	<5	115	3.1	7	20	857	5.14	6	<10	<4	4	924	0.6	5	<5	168	3.3	0.184	24	6	1.76	1522	0.49	8.11	2.34	2.83	12	9	<2	14	22	2	11
138891	740	3305	6	116	3.4	9	23	928	5.46	7	<10	<4	9	1091	0.4	9	<5	175	3.52	0.186	22	7	1.71	1582	0.51	8.09	2.53	2.93	15	10	<2	14	21	2	11
138892	835	3518	<5	109	2.3	5	19	774	4.75	9	<10	<4	<2	939	0.5	<5	<5	158	3.13	0.18	22	7	1.66	1561	0.47	7.85	2.14	3.18	15	7	<2	13	20	2	10
RE 138892	818	3471	<5	106	2.4	7	19	758	4.68	<5	<10	<4	<2	940	<.4	<5	<5	156	3.08	0.175	24	6	1.64	1537	0.47	7.85	2.13	3.15	13	2	<2	13	19	2	10
RRE 13889	937	4078	9	103	3.5	7	19	746	4.73	<5	<10	<4	2	904	<.4	<5	<5	154	2.99	0.172	24	7	1.61	1259	0.47	7.55	2.01	3.17	16	5	2	13	20	2	10
138893	1196	5153	5	118	3.8	8	26	835	5.31	<5	<10	<4	2	724	0.6	<5	5	156	3.27	0.179	27	6	1.72	547	0.47	7.66	1.91	3.16	181	7	2	14	21	2	11
138894	752	3686	43	156	4.1	7	23	862	5.32	28	<10	<4	6	733	1	18	<5	176	3.63	0.193	28	8	1.61	1545	0.49	8.5	2.02	3.3	36	6	2	15	23	2	12

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A404220 Page 1 Received: AUG 5 2004 * 306 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc
SAMPLE	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
138895	747	3372	48	153	3.7	8	23	832	5.25	20	<10	<4	2	745	0.7	36	<5	171	3.81	0.189	28	7	1.53	1449	0.49	8.44	2.16	3.08	43	8	<2	15	18	2	12
138896	616	3653	<5	110	1.9	7	21	897	5.7	<5	<10	<4	5	977	0.5	<5	<5	187	3.48	0.202	26	7	1.9	1582	0.53	8.5	2.44	3.09	27	9	<2	16	23	2	12
138897	181	1155	9	52	1.6	16	12	451	3.26	6	<10	<4	9	842	<.4	<5	<5	98	2.32	0.13	27	25	1.2	1711	0.33	7.58	2.68	3.04	33	32	2	8	21	2	7
138898	900	4060	7	98	3.4	6	21	684	4.75	<5	<10	<4	8	1011	<.4	<5	<5	143	2.87	0.211	32	6	1.4	1001	0.41	7.47	2.03	3.19	63	12	2	14	19	1	8
138899	880	4430	7	120	3.3	6	22	834	5.44	<5	<10	<4	5	1014	0.5	<5	<5	167	3.67	0.247	33	6	1.61	1575	0.5	8.06	2.31	3.06	32	12	<2	16	23	2	9
138900	720	4654	<5	122	2.5	8	24	839	5.73	<5	<10	<4	7	1042	0.4	<5	<5	177	3.7	0.254	35	12	1.7	1381	0.5	8.28	2.28	3.22	67	11	<2	17	24	2	10
138901	985	4162	<5	115	3.9	5	23	851	5.6	7	<10	<4	11	1187	0.6	15	<5	177	3.65	0.252	34	6	1.65	1593	0.51	8.48	2.48	3.25	30	14	<2	17	27	2	9
138902	611	6603	<5	121	5	7	23	707	5.26	7	<10	<4	9	1034	0.8	9	<5	149	2.91	0.201	29	11	1.4	897	0.41	7.28	2.05	2.86	27	10	<2	14	22	2	8
138903	1523	4357	6	101	3.3	6	24	780	5.38	8	<10	<4	8	1050	<.4	11	<5	167	3.21	0.22	37	6	1.71	1048	0.48	8.19	2.04	3.21	13	14	<2	17	25	2	9
138904	390	2670	7	91	1.8	8	24	851	5.69	<5	<10	<4	10	1007	<.4	<5	<5	172	3.5	0.227	33	12	1.73	1763	0.49	8.55	2.35	3.07	22	14	<2	17	25	2	9
138905	616	3247	6	109	2.1	5	23	947	5.72	<5	<10	<4	8	990	0.4	8	<5	178	3.74	0.23	37	5	1.82	1717	0.51	8.53	2.28	2.94	11	12	2	17	26	2	10
138906	1085	4654	9	126	4.1	9	22	910	5.67	7	<10	<4	9	1321	<.4	8	<5	174	3.47	0.233	35	11	1.81	1376	0.49	8.55	2.2	3.14	22	12	<2	17	25	2	10
STANDAR	13	142	30	165	<.5	32	14	1028	4.31	22	<10	<4	2	351	5	6	7	117	2.13	0.105	23	218	1.24	653	0.41	7.03	1.75	1.37	10	43	5	14	16	2	12
138907	2142	5413	5	145	4.2	3	19	735	5.06	7	<10	<4	14	860	0.8	5	5	142	3.15	0.213	29	4	1.51	208	0.44	8.03	2.02	3.15	<4	11	<2	15	20	2	9
138908	1358	4843	30	193	3.6	6	17	626	4.08	27	<10	<4	9	492	1.5	26	<5	132	4.41	0.204	28	4	0.54	275	0.38	7.68	1.09	3.38	30	11	<2	13	18	2	8
138909	1102	5754	9	136	4	4	19	608	4.51	5	<10	<4	9	684	0.5	<5	<5	133	4.14	0.21	33	3	0.79	208	0.42	8.06	1.77	3.17	10	16	<2	14	20	2	9
138910	1884	6159	12	176	3.2	3	20	621	4.16	12	<10	<4	12	530	0.9	21	<5	136	4.1	0.207	31	4	0.66	149	0.43	7.98	1.21	3.86	21	15	2	14	21	1	8
138911	1112	5483	9	153	5	4	20	763	4.74	<5	<10	<4	7	761	0.7	<5	<5	134	3.45	0.199	32	5	1.52	235	0.42	7.67	1.78	3.09	11	12	<2	15	20	1	8
138912	541	4561	32	193	5.2	3	20	720	4.52	45	<10	<4	11	722	2.2	41	<5	135	3.96	0.204	30	4	1.09	346	0.4	7.91	1.85	3	12	11	3	14	19	2	8
138913	1187	3921	47	174	4.2	5	17	694	4.36	24	<10	<4	10	637	1.4	18	<5	137	3.54	0.193	31	4	1.28	386	0.39	7.57	1.55	3.37	23	10	<2	13	19	2	8
138914	617	3703	<5	101	2.2	3	19	730	4.86	5	<10	<4	8	1382	<.4	<5	<5	143	3.35	0.211	32	3	1.48	780	0.46	8.29	2.22	3.21	17	13	<2	15	21	2	9
138915	2709	2855	167	171	4.4	5	16	699	4.21	54	<10	<4	10	676	1.5	12	<5	134	4.13	0.192	31	5	1.2	572	0.41	7.58	1.66	3.65	17	11	2	15	21	2	8
138916	829	1872	6	65	2.7	5	10	412	3.15	10	<10	<4	11	967	0.5	<5	<5	85	2.59	0.141	32	7	0.94	759	0.35	8.57	3.06	2.97	7	26	<2	8	20	2	5
138917	517	4410	8	100	2.5	4	22	776	5.17	<5	<10	<4	8	979	<.4	<5	<5	149	3.49	0.222	39	4	1.67	362	0.48	8.95	2.5	3.49	22	15	<2	17	23	2	10
138918	795	3327	8	89	2.4	4	18	648	4.48	6	<10	<4	8	816	<.4	10	<5	136	2.96	0.199	32	3	1.51	382	0.43	7.91	1.96	3.74	40	13	<2	14	20	1	9
138919	473	3692	68	172	2.6	4	21	639	4.78	28	<10	<4	12	835	1.1	<5	<5	133	3.62	0.193	32	4	1.21	297	0.44	8.49	2.48	2.83	20	13	2	15	20	2	9
138920	406	3109	46	175	1.5	6	19	675	4.89	29	<10	<4	6	877	1.1	<5	<5	139	3.62	0.199	31	4	1.29	384	0.45	8.68	2.65	2.91	71	11	<2	15	17	2	9
RE 138920	424	3234	52	181	1.2	5	19	705	5.11	36	<10	<4	8	909	1.2	<5	<5	141	3.77	0.205	34	3	1.34	409	0.47	9.03	2.78	3.01	69	14	2	16	20	2	10
RRE 13892	370	3156	56	188	2.8	4	20	667	4.86	40	<10	<4	11	884	1	<5	<5	137	3.64	0.197	30	4	1.29	426	0.45	8.71	2.69	2.85	44	11	<2	16	21	2	9
138921	614	2623	12	101	2.9	4	19	767	4.93	<5	<10	<4	9	898	0.5	16	7	135	3.28	0.192	33	5	1.46	573	0.44	8.41	2.54	3.02	9	13	2	15	21	2	9
138922	951	3544	10	110	4.1	7	17	673	4.54	<5	<10	<4	13	834	0.7	5	<5	132	2.91	0.188	32	6	1.41	528	0.4	7.95	2.18	3.43	9	9	<2	14	20	2	9
138923	604	2699	6	86	1.6	5	14	648	4.48	<5	<10	<4	12	906	<.4	5	<5	122	3.05	0.183	33	5	1.36	758	0.41	8.42	2.58	3.07	5	19	<2	15	20	2	8
138924	434	2099	19	133	1.3	3	14	594	4.35	14	<10	<4	14	838	0.7	<5	<5	110	3.45	0.178	33	3	0.82	746	0.38	8.56	2.37	3.15	8	14	<2	15	22	2	7
138925	924	2943	53	191	3.3	3	14	732	3.79	51	<10	<4	7	689	1.2	<5	<5	95	4.59	0.153	35	2	0.7	437	0.32	7.52	1.86	2.91	16	10	<2	14	19	2	5
138926	976	2055	14	104	1.6	4	14	475	4	<5	<10	<4	9	718	<.4	<5	<5	100	3.06	0.17	37	<2	0.89	429	0.34	8.45	1.55	4.19	32	13	<2	14	20	2	6
138927	421	1592	17	80	2.9	7	12	476	3.9	8	<10	<4	16	758	<.4	10	<5	101	2.55	0.169	39	5	0.88	1885	0.33	8.68	2.03	5.19	13	14	<2	15	23	2	6
138928	338	1039	14	68	0.7	7	10	382	2.74	<5	<10	<4	8	595	<.4	<5	<5	65	2.23	0.1	25	12	0.68	1679	0.23	7.96	2.24	3.93	5	31	<2	7	19	1	5
138929	705	916	11	118	<.5	6	9	370	2.48	10	<10	<4	7	542	0.6	<5	<5	54	2.68	0.092	24	7	0.55	1735	0.21	7.84	2.07	3.3	8	23	<2	6	18	1	4
138930	302	902	11	86	1	9	10	378	2.54	8	<10	<4	7	685	<.4	5	<5	61	2.6	0.098	25	11	0.71	1727	0.24	7.93	1.81	3.29	14	23	<2	7	20	1	4
138931	328	956	12	43	0.8	11	10	360	2.64	<5	<10	<4	8	1014	<.4	<5	<5	63	2.07	0.098	27	13	0.77	1790	0.24	8.25	2.78	3.53	5	28	<2	7	17	1	4
138932	134	597	12	40	0.5	9	9	401	2.72	<5	<10	<4	7	747	<.4	<5	<5	63	2.28	0.1	27	11	0.73	1842	0.25	8.45	2.86	3.47	8	24	2	7	19	1	4
138933	141	437	12	43	1.3	9	9	355	2.77	<5	<10	<4	9	738	0.4	7	<5	62	2.03	0.095	24	8	0.7	1661	0.23	7.94	2.85	3.02	11	25	2	7	19	1	4
138934	138	811	7	43	0.7	9	9	340	2.46	<5	<10	<4	5	539	0.4	<5	<5	56	2.16	0.088	27	9	0.46	1692	0.2	7.71	2.41	3.62	31	23	2	6	17	1	4
138935	147	614	8	41	<.5	8	9	394	2.96	<5	<10	<4	8	781	<.4	<5	<5	68	2.18	0.116	29	8	0.8	1735	0.27	7.92	2.6	3.16	<4	20	<2	9	17	2	4
138936	71	800	11	57	1.5	16	11	476	3.44	<5	<10	<4	10	728	<.4	<5	10	86	2.42	0.142	34	22	1.12	1679	0.32	8.04	2.4	3.64	5	32	3	10	19	2	6
138937	90	606	8	46	<.5	13	10	383	2.93	<5	<10	<4	8	729	<.4	5	<5	70	2.21	0.108	29	18	0.99	1571	0.28	8.01	2.72	2.98	4	38	<2	7	18	1	5
138938	213	1524	8	55	1.4	4	14	502	3.76	<5	<10	<4	11	745	0.4	<5	<5	95	2.62	0.161	40	4	0.88	1805	0.28	8.26	2.22	3.84	7	9	3	14	19	2	5
STANDAR	13	138	30	168	<.5	31	14	963	4.23	21	<10	<4	7	336	5.4	7	6	110	2.25	0.102	24	224	1.21	630	0.39	6.98	1.75	1.35	11	45	6	13	13	2	12
138939	253	1727	13	53	<.5	5	11	558	3.76	<5	<10	<4	8	889	<.4	<5	6	103	2.65	0.167	42	5	0.96	1891	0.31	7.68	2.34	3.06	6	12	<2	16	21	2	6
138940	238	1685	12	53	0.8	6	11	553	3.74	<5	<10	<4	11	887	<.4	<5	<5	102	2.66	0.167	41	7	0.96	1902	0.31	7.78	2.38	3.08	5	12	<2	16	21	2	6
138941	255	1684	7	71	0.9	6	13	455	3.62	7	<10	<4	12	719	0.4	8	5	106	2.39	0.162	40	5	0.96	1680	0.29	7.29	1.94	3.23	14	10	<2	14	19	2	6
138942	169	1247	12	50	1.1	7	13	570	4.05	<5	<10	<4	12	880	0.4	<5	14	113	2.66	0.17	41	7	1.01	1844	0.3	7.59	2.24	2.98	10	11	<2	15	21	2	6
138943	156	1460	10	46	<.5	3	12	461	3.8	<5	<10	<4	4	953	0.6	<5	5	101	2.53	0.152	40	3	0.81	920	0.27	7.52	2.17	3.25	24	12	<2	15	19	2	5
138944	133	1771	14	57	<.5	2	13	460	4.21	<5	<10	<4	10	815	0.5	<5	5	107	2.63	0.157	39	7	0.79	403	0.29	7.51	2.23	2.99	25	10	<2	16	20	2	5
138945	60	1889	11	52	<.5	6	12	528	4.04	<5	<10	<4	10	975	0.4	7	9	103	2.97	0.17	42	6	0.94	2070	0.33	8.29	2.74	2.71	11	15	<2	17	22	2	6
138946	<2	45	27	131	<.5	31	17	898	4.5	5	<10	<4	12	687	<.4	<5	9	147	3.15	0.182	42	49	2.35	1438	0.52	7.78	2.92	2.22	<4	114	<2	17	10	2	14
138947	64	1947	18	50	<.5	5	13	448	4.25	<5	<10	<4	7	850	<.4	10	13	117	2.81	0.169	43	6	0.97	936	0.3	8.01	2.5	2.93	26	15	<2	16	18	2	6
138948	91	2114	9	45	2.1	5	13	434	4.27	<5	<10	<4	7	925	<.4	18	<5	112	2.82	0.17	40	6	0.88	787	0.33	8.24	2.58	3.18	39	14	<2	16	23	2	6
138949	68	1993	7	43	0.8	3	12	446	4.16	<5	<10	<4	6	990	<.4	13	10	112	2.81	0.175	41	4	0.92	2104	0.32	8.2	2.67	2.88	13	12	<2	16	22	2	6
138950	78	312	17	49	0.6	9	9	564	2.72	11	<10	<4	9	525	<.4	11	<5	69	2.08	0.099	31	13	0.72	1418	0.23	8.04	2.85	2.74	<4	29	<2	10	21	1	7
RE 138950	71	304	6	49	<.5	9	8	546	2.65	<5	<10	<4	8	515	<.4	<5	10	68	2.02	0.093	26	13	0.7	1389	0.24	7.87	2.78	2.64	<4	27	<2	10	17	2	7
RRE 13895	84	428	12	47	0.5	8	8	494	2.56	<5	<10	<4	11	525	0.4	6	<5	67	1.95	0.092	29	10	0.65	1456	0.23	7.9	2.84	2.64	<4	31	<2	10	19	2	6
138951	315	251	9	69	1.3	4	13	586	3.65	6	<10	<4	7	185	0.6	20	7	148	2.77	0.085	20	4	1.22	775	0.34	8.43	1.63	3.33	<4	23	<2	14	15	2	13
138952	243	1097	10	86	<.5	3	14	733	4.38	<5	<10	<4	<2	173	0.5	11	<5	190	3.31	0.095	19	2	1.16	626	0.38	8.38	1.62	3.27	6	9	<2	17	13	2	16

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A404220 Page 1 Received: AUG 5 2004 * 306 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc
SAMPLE	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
138953	310	764	10	48	<.5	4	14	504	4.2	<5	<10	<4	2	197	<.4	<5	<5	171	2.61	0.099	22	8	0.87	891	0.38	8.93	2.48	3.2	<4	8	<2	18	15	2	15
138954	312	918	5	39	<.5	4	10	447	3.56	<5	<10	<4	6	187	0.5	<5	<5	131	2.49	0.093	21	3	0.62	665	0.34	7.61	2.49	2.35	8	16	<2	17	14	1	13
138955	162	1234	8	35	<.5	4	8	500	3.72	<5	<10	<4	3	183	<.4	<5	<5	124	2.26	0.092	21	6	0.55	429	0.35	7.99	2.71	2.47	<4	19	<2	18	13	1	12
138956	145	719	10	31	<.5	2	9	488	3.3	<5	<10	<4	6	202	<.4	<5	<5	105	2.64	0.1	21	3	0.61	435	0.29	7.58	2.35	2.37	5	23	<2	18	15	2	11
138957	271	1343	7	128	<.5	7	17	1166	6.27	<5	<10	<4	<2	263	<.4	<5	<5	238	4.15	0.121	23	5	1.15	432	0.55	9.57	2.99	2.26	4	14	<2	21	22	2	27
138958	234	1024	<5	46	<.5	2	10	539	3.43	<5	<10	<4	3	259	<.4	<5	<5	114	2.55	0.098	19	<2	0.71	458	0.33	8.22	2.9	2.45	<4	23	<2	19	15	1	11
138959	201	1309	7	60	<.5	5	11	474	3.4	<5	<10	<4	2	239	0.4	6	<5	115	2.76	0.103	21	4	0.63	448	0.33	8.26	2.58	2.15	<4	21	<2	19	16	1	12
138960	249	865	7	50	<.5	4	9	441	3.19	<5	<10	<4	4	236	<.4	<5	7	105	2.44	0.097	20	3	0.6	451	0.33	8.06	2.69	2.11	<4	20	<2	18	14	1	11
138961	256	887	5	30	<.5	3	8	351	2.77	<5	<10	<4	3	194	<.4	<5	<5	84	1.99	0.091	18	4	0.47	763	0.27	7.5	2.56	2.6	<4	22	<2	17	13	1	10
138962	217	644	8	27	<.5	3	9	263	2.41	<5	<10	<4	10	655	<.4	<5	<5	55	1.93	0.096	36	3	0.71	1926	0.21	7.84	2.2	3.07	<4	13	<2	13	20	2	4
138963	103	275	9	35	<.5	3	5	224	1.09	<5	<10	<4	7	329	<.4	<5	<5	35	2.09	0.084	35	3	0.29	1621	0.11	5.81	1.02	3.39	<4	9	<2	13	13	1	3
138964	373	468	8	30	<.5	4	8	286	2.62	<5	<10	<4	8	762	<.4	<5	<5	63	2.17	0.101	35	3	0.73	2004	0.23	8.15	2.4	2.92	<4	12	<2	13	22	2	5
138965	316	532	<5	33	<.5	4	8	308	2.61	<5	<10	<4	16	757	0.5	<5	<5	61	2.15	0.095	32	6	0.7	1851	0.22	8.09	2.42	2.79	<4	12	<2	12	19	2	5
138966	292	559	6	28	<.5	5	8	296	2.44	<5	<10	<4	7	686	<.4	<5	<5	61	2.1	0.106	30	4	0.7	1995	0.2	8.06	2.31	3.07	<4	11	<2	13	18	2	4
138967	597	350	11	28	<.5	3	7	351	2.58	<5	<10	<4	6	654	<.4	<5	<5	64	2.16	0.104	28	7	0.79	1757	0.23	8.42	2.3	3.3	<4	9	<2	13	18	1	6
138968	305	174	10	33	<.5	4	7	394	2.96	<5	<10	<4	4	385	<.4	<5	<5	71	2.02	0.103	27	5	0.69	932	0.3	8.77	2.3	3.89	<4	6	<2	13	14	1	11
138969	664	28	11	27	<.5	6	6	381	2.69	<5	<10	<4	6	195	<.4	9	<5	42	1.97	0.078	22	4	0.59	498	0.28	7.84	1.87	3.34	<4	9	<2	11	14	1	9
138970	417	38	14	27	<.5	<2	6	370	2.73	<5	<10	<4	2	172	<.4	<5	<5	42	1.84	0.094	20	3	0.69	289	0.28	8.2	2.7	2.99	<4	5	<2	11	13	1	9
STANDAR	14	151	28	167	<.5	33	15	1013	4.09	24	<10	<4	6	347	5.6	7	8	120	2.34	0.114	26	232	1.21	688	0.39	7	1.71	1.21	9	43	<2	15	14	2	13
138971	567	44	11	38	0.9	4	6	430	3.02	10	<10	<4	5	401	<.4	12	<5	93	1.94	0.092	18	4	0.74	522	0.32	8.27	2.38	3.17	4	7	3	11	14	1	11
138972	312	51	10	30	<.5	3	6	357	3.07	9	<10	<4	5	695	<.4	5	<5	94	1.93	0.089	16	4	0.73	422	0.33	7.99	2.26	2.94	<4	13	2	12	13	1	10
138973	312	323	13	56	1.9	4	8	342	2.5	13	<10	<4	18	434	0.6	17	<5	59	2.08	0.099	24	3	0.6	1374	0.27	7.75	1.86	3.21	6	12	3	12	17	1	6
138974	95	271	9	32	0.9	2	7	352	2.39	9	<10	<4	14	339	<.4	5	<5	46	2.04	0.075	32	3	0.6	1062	0.25	7.46	2.04	2.7	7	13	3	14	15	1	6
138975	176	1175	11	37	1.9	2	8	366	2.51	9	<10	<4	16	609	<.4	9	<5	63	2.23	0.099	32	3	0.64	2129	0.23	7.53	2.03	3.02	<4	11	3	12	18	1	4
138976	35	495	9	39	<.5	2	8	383	2.83	<5	<10	<4	14	636	<.4	<5	<5	63	2.24	0.101	28	5	0.59	2215	0.24	7.74	2.2	2.79	<4	8	2	12	17	1	5
138977	88	387	6	40	1.3	2	8	402	2.7	12	<10	<4	13	650	<.4	<5	<5	61	2.37	0.098	29	3	0.47	2160	0.23	7.72	2.13	2.87	5	9	3	11	19	1	4
138978	48	562	87	436	1	7	7	328	2.53	<5	<10	<4	13	402	1.8	9	<5	56	2.42	0.09	20	5	0.37	1823	0.22	7.21	1.57	2.92	15	11	2	9	19	1	4
138979	149	888	68	160	0.9	2	8	403	2.12	21	<10	<4	14	398	1.5	11	6	62	3.21	0.1	30	2	0.34	1428	0.24	7.65	0.36	2.78	14	11	3	11	21	2	4
138980	198	736	40	175	0.8	4	8	436	2.11	14	<10	<4	14	352	1.2	6	5	64	3.42	0.092	30	3	0.36	1324	0.23	7.3	0.32	2.73	12	10	3	12	18	2	4
138981	405	1356	14	89	1.7	3	9	324	2.76	12	11	<4	15	479	0.9	7	10	59	2.14	0.091	29	5	0.54	2276	0.2	7.59	1.4	3.26	5	9	4	11	19	1	4
138982	600	1525	14	38	1.9	2	9	354	2.55	<5	21	<4	13	577	<.4	7	<5	63	2.5	0.081	31	4	0.57	1982	0.18	7.24	1.6	3.28	12	8	5	12	16	1	4
138983	149	625	11	61	0.7	2	8	371	2.44	9	<10	<4	13	408	0.4	6	<5	55	2.51	0.084	25	3	0.54	2295	0.22	7.08	0.94	2.99	26	9	<2	10	18	1	4
138984	575	1058	14	42	1.6	2	9	391	2.38	5	<10	<4	15	859	<.4	9	<5	57	2.79	0.088	29	5	0.64	2632	0.2	7.29	1.33	3.46	11	9	4	12	16	1	4
138985	800	1209	10	47	1.7	3	8	401	2.58	6	<10	<4	17	695	0.4	8	7	65	2.55	0.09	30	3	0.57	1869	0.2	7.29	1.62	3.12	10	9	3	12	18	1	4
138986	204	1022	8	51	0.6	3	8	377	2.56	<5	<10	<4	13	625	<.4	<5	<5	65	2.33	0.091	26	3	0.47	1816	0.22	7.57	1.99	2.96	<4	8	3	11	17	1	4
138987	642	1140	16	102	1.3	4	10	536	2.47	11	<10	<4	10	398	1	<5	6	78	3.55	0.098	28	5	0.44	3203	0.23	7.31	0.72	2.86	13	9	5	12	17	1	5
138988	406	3409	7	64	3.3	6	17	678	4.47	<5	<10	<4	11	631	<.4	5	<5	138	2.88	0.15	35	6	1.1	1861	0.33	7.07	1.63	2.51	15	14	3	13	16	2	8
138989	273	1571	5	60	1.5	4	13	612	3.84	7	<10	<4	14	773	<.4	10	<5	108	2.78	0.159	36	7	0.98	1812	0.37	7.67	2.03	2.54	13	15	5	12	19	2	8
138990	83	1242	<5	64	1.1	7	14	810	3.92	<5	<10	<4	13	845	<.4	5	<5	98	3.62	0.157	33	6	0.9	1820	0.36	7.81	2.17	2.37	11	14	3	13	18	2	8
RE 138990	83	1248	9	65	1.8	6	14	804	3.93	8	<10	<4	15	830	<.4	<5	<5	99	3.57	0.156	34	5	0.9	1791	0.36	7.61	2.16	2.35	13	15	2	13	18	2	8
RRE 13899	89	1128	12	68	1.5	8	14	888	4.2	12	<10	<4	17	914	<.4	10	<5	109	3.67	0.169	38	9	1.01	1917	0.38	8.17	2.45	2.51	14	16	5	14	22	2	8
138991	400	2224	10	59	2.6	6	14	674	3.74	10	<10	<4	15	885	0.5	13	<5	112	2.85	0.14	35	6	0.89	1732	0.3	7.54	2.33	2.85	8	13	2	13	19	2	7
138992	880	1829	7	51	1.3	4	14	477	3.42	<5	<10	<4	13	1125	<.4	5	<5	83	2.65	0.127	25	4	0.82	1715	0.3	7.7	2.34	2.73	4	9	4	10	16	1	6
138993	231	1562	6	46	1.9	4	10	457	2.9	8	<10	<4	16	627	<.4	6	<5	79	2.26	0.127	25	7	0.88	1604	0.31	7.28	2.09	2.9	14	8	2	10	17	1	6
138994	333	1384	9	53	1.6	4	11	492	3.23	<5	<10	<4	18	660	<.4	9	<5	79	2.57	0.12	28	5	0.77	1713	0.28	7.48	2.27	2.57	<4	11	4	11	17	1	6
138995	288	2119	6	54	1.8	2	12	425	3.04	<5	<10	<4	12	650	0.4	<5	<5	75	2.63	0.122	29	5	0.59	2154	0.27	7.4	2.16	2.71	<4	10	2	11	16	2	6
138996	878	4561	14	61	3.2	5	14	525	2.44	13	<10	<4	10	262	0.5	8	6	76	4.17	0.113	26	4	0.21	1326	0.25	7.09	0.53	2.81	14	8	3	11	18	1	5
138997	384	2685	10	65	1.2	4	12	547	3.01	<5	<10	<4	10	298	<.4	<5	<5	88	4.07	0.116	24	5	0.31	1708	0.26	7.25	0.79	2.79	9	8	3	11	16	1	5
138998	290	1187	8	57	1.2	4	10	380	2.71	<5	<10	<4	14	427	0.5	<5	<5	86	2.6	0.127	20	4	0.51	2042	0.27	7.34	1.34	3.8	11	9	3	10	16	1	6
138999	373	1599	34	119	1.3	<2	9	460	2.03	11	<10	<4	15	221	0.5	<5	<5	67	3.83	0.098	21	3	0.19	1586	0.23	6.15	0.19	2.69	40	8	2	9	16	1	5
139000	530	1295	22	117	1.8	3	9	590	2.48	<5	<10	<4	11	255	0.9	10	<5	69	4.72	0.096	20	3	0.3	2912	0.23	5.95	0.19	2.94	43	8	2	10	15	1	5
140601	630	2316	26	87	0.9	4	11	384	2.74	5	<10	<4	13	352	0.4	5	<5	80	2.91	0.115	19	6	0.48	2004	0.24	7.2	0.82	4.05	16	9	2	10	17	1	5
140602	196	1273	40	184	<.5	2	12	458	3.75	21	<10	<4	8	205	1	<5	<5	76	3.29	0.118	21	4	0.62	992	0.26	7.26	0.12	3.68	45	6	2	9	17	1	5
STANDAR	13	145	28	161	<.5	34	14	1006	4.2	23	<10	<4	4	347	6	8	6	119	2.28	0.112	26	235	1.2	698	0.42	7.18	1.7	1.3	9	49	7	15	11	2	13
140603	587	1033	58	195	0.9	5	10	645	2.52	18	<10	<4	8	399	1.3	<5	<5	83	4.88	0.11	31	3	0.77	1191	0.26	7.3	0.14	3.01	41	9	<2	11	19	1	6
140604	249	1922	46	190	0.7	<2	10	619	2.55	35	<10	<4	9	294	1.4	<5	<5	72	4.46	0.109	32	3	0.66	1566	0.23	7.11	0.1	2.21	18	10	<2	10	19	1	5
140605	446	1904	6	70	1	3	10	466	3.01	<5	<10	<4	13	482	0.4	5	<5	80	2.84	0.112	31	4	0.51	1723	0.23	7.57	1.45	3.49	4	11	<2	11	20	1	5
140606	58	880	8	47	0.6	4	10	489	3.16	<5	<10	<4	15	719	<.4	6	<5	77	2.6	0.118	35	4	0.63	1861	0.26	8.21	2.53	2.9	<4	11	<2	11	22	1	6
140607	73	796	8	55	0.7	5	10	543	3.27	<5	<10	<4	13	626	<.4	<5	5	80	2.77	0.122	35	7	0.63	2081	0.26	7.95	2.01	3.01	<4	14	2	12	22	1	6
140608	126	698	8	60	<.5	5	9	586	2.9	6	<10	<4	11	748	<.4	<5	<5	76	2.75	0.116	34	5	0.7	1818	0.26	7.73	1.98	2.88	7	11	<2	11	22	1	6
140609	63	786	8	46	0.5	3	10	607	3.5	8	28	<4	13	1220	<.4	<5	9	82	2.47	0.122	35	6	0.84	1969	0.3	8.37	2.74	2.78	<4	9	<2	12	23	1	6
140610	31	951	8	46	<.5	5	11	524	3.25	10	<10	<4	13	739	<.4	5	<5	86	2.43	0.126	34	6	0.92	1836	0.29	7.96	2.42	2.88	<4	15	<2	13	23	1	6
140611	88	672	6	50	<.5	5	10	571	3.51	8	23	<4	15	1023	0.5	7	<5	92	2.6	0.133	33	7	0.83	1875	0.32	7.96	2.39	2.81	<4	11	<2	12	24	1	7
140612	94	1140	6	78	<.5	4	11	621	3.46	<5	<10	<4	10	607	0.6	<5	<5	92	3.27	0.13	29	7	0.74	1671	0.29	7.87	1.88	2.84	10	9	<2	13	22	1	7

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A404220 Page 1 Received: AUG 5 2004 * 306 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc
SAMPLE	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
140613	136	1636	<5	45	2.1	3	10	455	3.03	6	<10	<4	13	647	0.5	<5	<5	82	2.26	0.12	31	4	0.75	1661	0.26	8.07	2.17	3.42	<4	10	<2	12	21	1	6
140614	82	945	10	34	<.5	2	9	411	2.8	10	<10	<4	13	616	<.4	5	<5	75	2.08	0.105	25	6	0.68	1749	0.23	7.76	2.24	3.23	6	8	2	11	21	1	5
140615	156	1189	<5	37	<.5	3	9	414	2.85	7	<10	<4	15	752	<.4	<5	<5	76	2.17	0.112	27	5	0.74	984	0.24	7.25	2.12	2.99	6	6	2	12	20	1	5
140616	109	782	7	38	<.5	2	9	444	3.08	<5	<10	<4	11	790	0.4	<5	<5	72	2.27	0.108	26	5	0.64	1013	0.24	7.56	2.29	2.92	10	8	2	11	19	1	5
140617	384	1026	5	55	<.5	4	9	459	2.63	<5	<10	<4	10	696	<.4	<5	<5	72	2.51	0.109	29	4	0.58	1921	0.24	7.41	1.7	3.55	8	8	<2	11	18	1	5
140618	172	1023	6	45	0.6	3	9	402	2.89	<5	<10	<4	12	590	<.4	<5	6	81	2.07	0.11	32	4	0.76	1855	0.25	7.69	2.01	3.36	<4	6	<2	12	19	1	5
140619	134	1544	8	48	1	4	10	518	3.18	<5	<10	<4	14	737	<.4	5	<5	80	2.56	0.121	36	6	0.84	1798	0.29	8.33	2.41	3.22	5	8	3	13	24	1	6
140620	203	1594	6	48	0.7	3	10	526	3.14	7	<10	<4	12	728	0.7	5	<5	79	2.34	0.118	33	4	0.82	1874	0.28	8.03	2.4	3.07	5	2	<2	12	23	1	5
RE 140620	197	1561	<5	47	0.9	4	10	528	3.09	12	<10	<4	11	717	0.4	<5	<5	79	2.31	0.117	33	6	0.81	1868	0.28	7.91	2.34	3.03	6	11	2	12	22	1	5
RRE 14062	183	1548	<5	46	1.1	5	10	505	3.11	<5	<10	<4	14	702	0.5	<5	<5	77	2.26	0.115	32	5	0.8	1845	0.28	7.79	2.28	2.98	6	8	<2	12	23	1	5
140621	140	1146	7	36	<.5	2	9	449	2.93	5	<10	<4	7	665	<.4	<5	<5	72	2.27	0.109	31	4	0.74	1840	0.24	7.63	2.23	3	6	9	2	12	18	1	5
140622	155	1505	6	40	<.5	3	9	399	2.9	6	<10	<4	7	588	0.5	<5	<5	75	2.15	0.112	33	3	0.74	1622	0.26	7.47	1.9	3.29	7	5	<2	12	19	1	5
140623	135	1071	<5	47	<.5	3	10	508	3.06	<5	<10	<4	7	1214	<.4	<5	<5	79	2.22	0.113	33	5	0.78	1840	0.27	7.72	2.25	3.09	14	7	2	11	18	1	5
140624	331	1126	6	46	1.2	5	10	472	3.3	6	<10	<4	16	1870	0.4	5	<5	87	2.34	0.119	34	4	0.73	829	0.27	7.97	2.15	3.25	8	9	2	12	20	1	6
140625	286	1059	6	46	1	5	10	411	3.14	<5	<10	<4	12	522	<.4	<5	<5	83	2.32	0.109	31	5	0.53	1368	0.23	7.38	1.78	3.35	12	11	<2	10	17	1	5
140626	119	1037	<5	40	0.8	6	10	420	3.07	14	<10	<4	14	746	0.5	10	<5	79	2.08	0.114	32	5	0.74	1119	0.25	7.71	2.04	3.53	8	8	<2	11	19	1	5
140627	153	1528	9	41	<.5	3	9	311	2.75	13	<10	<4	12	529	0.5	<5	<5	72	1.83	0.102	30	6	0.63	1571	0.22	7.28	1.83	3.4	13	7	3	10	20	1	5
140628	221	1473	<5	37	1.1	3	9	371	2.8	5	<10	<4	14	539	<.4	7	<5	71	2.04	0.104	28	4	0.59	1217	0.23	7.26	1.77	3.34	<4	6	<2	10	20	1	5
140629	133	1551	<5	43	<.5	2	8	398	2.55	<5	<10	<4	8	497	<.4	<5	<5	68	2.74	0.103	27	4	0.44	1730	0.23	7.21	1.52	2.97	15	7	<2	10	19	1	5
140630	153	1327	9	46	0.6	4	10	425	2.79	7	<10	<4	11	641	<.4	<5	<5	78	2.5	0.108	30	6	0.57	1778	0.23	7.39	1.72	3.29	17	8	2	11	19	1	5
140631	222	1580	5	42	<.5	3	10	463	3.09	<5	<10	<4	9	677	<.4	<5	<5	84	2.15	0.114	31	6	0.81	1926	0.26	7.43	2.1	3.19	<4	7	2	11	16	1	5
140632	239	1471	<5	41	<.5	5	10	435	3.08	5	16	<4	10	982	<.4	<5	<5	89	2.12	0.126	33	6	0.88	2035	0.28	7.82	2.1	3.52	<4	8	2	12	20	1	6
140633	269	2378	5	57	<.5	3	11	387	2.89	9	<10	<4	7	491	0.6	<5	<5	80	2.49	0.099	27	11	0.72	1130	0.26	7.33	1.47	3.09	<4	9	2	12	17	1	6
140634	236	1496	<5	30	<.5	4	9	316	2.57	7	<10	<4	8	588	0.7	<5	<5	72	1.72	0.097	28	6	0.74	2079	0.23	7.74	1.72	4.26	<4	9	2	11	17	1	4
STANDAR	12	145	28	159	<.5	31	14	1075	4.33	25	<10	<4	7	366	5	7	7	118	2.31	0.108	26	221	1.13	686	0.41	7.24	1.81	1.28	10	47	7	14	15	2	13
140635	288	1294	10	32	1.3	2	8	287	2.37	14	<10	<4	11	1292	0.6	5	<5	72	1.7	0.103	29	9	0.73	2144	0.22	7.28	1.82	3.86	6	7	<2	11	21	1	4
140636	296	1462	9	33	2.8	2	9	296	2.27	14	<10	<4	18	672	0.5	<5	<5	68	1.8	0.097	28	6	0.68	2127	0.2	7.31	1.87	3.73	7	10	2	11	21	1	5
140637	191	1352	7	42	<.5	2	8	307	2.29	6	<10	<4	9	513	<.4	<5	<5	61	2.1	0.097	27	7	0.53	1871	0.2	6.12	1.29	2.98	<4	2	<2	10	17	1	4
140638	218	1467	7	46	0.7	4	8	334	2.39	<5	<10	<4	8	544	0.7	<5	<5	65	2.2	0.105	28	9	0.57	1991	0.21	6.47	1.35	3.13	10	6	<2	10	19	1	5
140639	311	1649	6	50	1	<2	9	351	2.6	<5	<10	<4	10	527	0.5	<5	<5	78	2.16	0.13	26	6	0.64	1730	0.25	6.38	1.44	3.07	<4	3	<2	11	17	1	5
140640	234	1718	11	44	1.5	2	10	322	2.62	7	11	<4	14	626	0.5	<5	<5	78	1.83	0.125	31	7	0.8	1905	0.23	7.07	1.78	3.54	49	9	2	12	21	1	5
140641	181	1719	10	40	2	3	10	332	2.8	7	36	<4	13	663	0.5	5	<5	82	1.85	0.125	32	8	0.81	1967	0.25	7.09	1.76	3.59	21	9	2	13	21	1	5
140642	376	1678	11	39	0.5	3	9	301	2.29	7	10	<4	9	597	0.5	<5	<5	68	1.64	0.115	29	7	0.75	1766	0.22	6.91	1.77	3.59	6	6	2	11	20	1	5
140643	298	1927	6	42	1.5	2	11	366	2.65	6	<10	<4	10	669	0.4	<5	<5	82	1.96	0.126	32	7	0.8	1902	0.24	7.23	1.82	3.49	6	7	3	12	21	1	5
140644	316	1974	<5	38	1.3	<2	9	313	2.55	9	<10	<4	9	630	<.4	<5	<5	75	1.78	0.121	28	7	0.79	1338	0.25	7.17	1.76	3.69	20	9	<2	11	20	1	5
140645	333	1722	11	39	1.2	2	10	339	2.63	7	<10	<4	9	600	<.4	<5	<5	81	1.88	0.126	31	6	0.82	1844	0.24	7.01	1.63	3.6	8	7	<2	12	20	1	5
140646	188	2016	10	41	1.3	<2	10	330	2.56	5	11	<4	11	602	0.6	<5	<5	79	1.84	0.12	32	8	0.75	1850	0.23	7.28	1.83	3.87	4	9	2	11	19	1	5
RE 140646	178	1955	8	41	<.5	<2	9	306	2.46	<5	<10	<4	8	589	<.4	<5	<5	75	1.79	0.117	28	8	0.73	1803	0.22	7.09	1.78	3.75	<4	7	<2	11	18	1	5
RRE 14064	136	1457	7	34	1	2	9	334	2.47	6	<10	<4	10	617	<.4	<5	<5	72	1.87	0.111	27	6	0.67	1824	0.24	6.92	1.86	3.42	<4	11	<2	11	19	1	5
140647	284	1950	<5	54	<.5	4	11	524	3.16	<5	<10	<4	4	735	0.4	<5	<5	98	2.52	0.151	29	8	1.03	1851	0.3	7.36	1.94	3.11	30	6	<2	14	15	1	7
140648	210	1641	5	76	0.5	6	16	791	4.66	<5	<10	<4	4	930	<.4	<5	<5	166	3.5	0.185	27	7	1.67	1716	0.48	7.68	1.99	2.69	<4	11	<2	16	18	1	12
140649	224	1538	9	81	<.5	5	18	869	4.81	<5	35	<4	3	953	<.4	<5	<5	172	3.63	0.19	27	7	1.79	1747	0.5	7.93	2.19	2.54	<4	13	2	15	15	1	13
140650	217	1495	8	80	<.5	7	16	854	4.58	<5	<10	<4	6	813	<.4	<5	<5	162	3.74	0.192	27	9	1.66	1684	0.48	7.8	2.05	2.66	7	12	<2	15	18	1	13
140651	288	1831	5	79	0.5	5	16	739	4.25	<5	34	<4	6	834	0.6	<5	<5	149	3.28	0.181	28	7	1.53	1748	0.45	7.57	1.98	2.78	38	9	<2	15	18	1	12
140652	275	1154	6	63	0.7	5	15	676	3.88	<5	<10	<4	10	957	0.5	<5	<5	132	2.82	0.159	29	6	1.37	1815	0.4	7.41	2.09	2.87	8	12	3	15	21	1	10
140653	709	1592	10	52	0.7	5	13	497	3.16	<5	<10	<4	8	784	0.4	<5	<5	103	2.36	0.148	26	10	1.14	2153	0.33	7.35	2.05	3.24	32	10	3	11	19	1	8
140654	178	1272	10	71	1.8	5	13	651	4.19	<5	40	<4	14	873	<.4	<5	<5	130	3.13	0.227	41	5	1.35	2248	0.41	7.24	1.57	2.89	20	11	<2	15	18	1	9
140655	143	950	7	105	<.5	3	13	654	4.35	<5	<10	<4	8	747	<.4	<5	<5	141	3.97	0.244	35	5	1.06	1835	0.42	7.5	1.62	2.64	11	11	<2	15	18	1	9
140656	132	809	11	48	0.5	3	10	452	3.04	<5	<10	<4	8	1013	<.4	<5	<5	95	2.5	0.167	33	7	0.88	2057	0.3	7.32	2.22	3	51	15	2	10	17	1	6
140657	431	1277	9	61	<.5	4	17	646	4.12	<5	<10	<4	<2	905	<.4	<5	<5	129	3.12	0.225	35	8	1.43	1997	0.39	7.47	1.89	2.91	64	10	3	15	15	1	9
140658	37	145	19	11	<.5	<2	4	86	0.98	7	<10	<4	14	165	0.4	<5	<5	9	0.73	0.012	14	8	0.11	342	0.05	6.12	2.04	3.51	<4	34	3	2	16	1	<1
140659	118	850	14	36	0.8	3	8	319	2.35	<5	<10	<4	9	800	<.4	<5	<5	58	2.24	0.107	25	10	0.55	1903	0.23	7.88	2.79	2.65	33	14	2	7	21	1	4
140660	130	673	12	36	0.7	5	7	319	2.35	<5	<10	<4	7	793	<.4	<5	<5	57	2.21	0.102	23	11	0.53	1792	0.22	7.82	2.74	2.64	31	13	<2	6	20	1	4
140661	137	501	16	32	<.5	4	7	309	2.29	<5	<10	<4	5	1064	<.4	<5	<5	58	2.18	0.094	25	12	0.56	2004	0.23	7.7	2.73	2.83	30	14	2	6	21	1	4
140662	141	451	12	33	<.5	5	8	312	2.28	<5	<10	<4	8	1139	<.4	<5	<5	54	2.45	0.093	23	5	0.58	1870	0.21	7.57	2.5	2.64	26	16	2	6	19	1	4
140663	253	320	10	30	<.5	5	7	331	2.37	<5	<10	<4	5	1400	<.4	<5	<5	59	2.24	0.102	26	7	0.67	2156	0.25	8.12	3.01	2.59	54	14	2	7	22	1	4
140664	121	350	10	33	<.5	5	8	343	2.29	6	<10	<4	8	1179	<.4	<5	<5	61	2.45	0.099	25	9	0.64	1928	0.24	7.55	2.56	2.76	24	13	<2	7	21	1	4
140665	22	147	13	40	<.5	5	6	361	2.29	<5	<10	<4	8	1048	<.4	<5	<5	57	2.42	0.1	24	10	0.64	1678	0.23	7.68	3.1	2.17	<4	14	<2	7	20	1	4
STANDAR	12	149	28	168	<.5	30	14	1036	4.2	23	<10	<4	6	388	5.7	8	6	123	2.33	0.113	27	236	1.21	721	0.42	7.11	1.75	1.32	10	49	6	15	15	2	13

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6
To Imperial Metals Corporation PROJECT BEAR
Acme file # A403920R   Received: AUG 23 2004 *   2 samples in this disk file.
Analysis: GROUP 7TD - 0.500 GM

SAMPLE	Mo %	Cu %
SAMPLE	%	%
138770	0.842	0.587
STANDAR	0.052	0.576

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A403920 Page 1 Received: JUL 28 2004 * 194 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc
SAMPLE	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SI	<2	2	10	23	<.5	3	<2	13	0.07	<5	<10	<4	<2	149	0.4	<5	<5	<2	7.48	0.011	<2	<2	0.12	164	0.03	0.85	>10	0.22	<4	73	4	2	2	<1	<1
138597	40	225	6	18	<.5	<2	5	260	2.15	5	<10	<4	3	110	<.4	<5	<5	49	1.48	0.058	11	<2	0.35	968	0.19	7.31	1.64	4.51	<4	44	<2	10	8	1	6
138598	67	53	<5	16	<.5	2	3	259	1.87	6	<10	<4	<2	91	0.4	<5	<5	48	1.41	0.052	12	2	0.37	978	0.17	6.91	1.46	4.31	<4	39	<2	9	9	1	5
138599	136	127	7	18	<.5	<2	5	229	2.38	<5	<10	<4	3	143	<.4	<5	<5	42	1.5	0.058	22	2	0.32	1293	0.21	7.6	2.32	4.05	<4	48	<2	11	10	1	6
138600	91	229	5	15	<.5	4	6	209	1.95	7	<10	<4	6	126	<.4	<5	<5	38	1.5	0.054	17	2	0.29	1070	0.15	7.05	1.91	3.97	4	48	<2	10	9	1	5
138601	320	3014	9	36	2.2	9	32	294	4.24	5	33	<4	4	85	0.5	<5	6	74	1.58	0.059	16	7	0.54	300	0.16	7.04	1.24	4.27	7	57	2	12	8	1	8
138602	38	341	5	22	<.5	3	12	259	2.44	<5	<10	<4	<2	150	<.4	<5	<5	48	1.77	0.056	16	3	0.46	938	0.19	7.32	2.26	3.35	<4	60	<2	12	7	1	7
138603	244	1822	<5	30	0.9	12	31	330	4.03	5	<10	<4	5	164	<.4	<5	5	75	2.03	0.057	20	9	0.49	835	0.2	7.21	2.07	3.43	6	82	<2	14	9	1	9
138604	61	330	7	18	<.5	4	9	268	2.38	6	<10	<4	5	171	0.4	<5	<5	42	1.6	0.054	16	2	0.27	1200	0.15	7.26	2.44	3.6	<4	81	<2	11	9	1	5
138605	57	1634	5	21	<.5	2	23	230	2.63	<5	<10	<4	7	151	0.6	<5	<5	36	1.49	0.052	16	3	0.23	887	0.15	7.12	2.35	3.72	4	71	<2	11	9	1	5
138606	88	346	<5	20	<.5	2	7	294	2.28	6	<10	<4	7	131	<.4	<5	<5	42	1.85	0.055	15	3	0.3	1206	0.18	7.32	1.99	3.7	5	88	<2	14	10	1	6
138607	33	151	8	17	<.5	3	7	320	2.34	10	<10	<4	7	158	<.4	<5	<5	42	1.62	0.054	22	2	0.3	1404	0.19	7.39	2.49	3.52	<4	83	<2	13	10	1	6
138608	45	98	<5	18	<.5	4	7	278	2.09	<5	<10	<4	4	142	0.4	<5	<5	39	1.89	0.051	18	3	0.29	1241	0.18	6.74	1.97	3.23	<4	80	<2	12	9	1	5
138609	330	148	5	17	1.1	4	6	278	2	<5	<10	<4	8	159	<.4	<5	<5	43	1.98	0.049	15	2	0.25	1650	0.17	6.77	1.84	3.28	<4	81	<2	12	9	1	5
138610	49	273	<5	17	<.5	<2	7	482	2.1	6	<10	<4	4	160	<.4	<5	<5	50	1.87	0.063	15	2	0.37	1178	0.2	7.71	2.1	3.99	4	65	<2	13	10	2	6
RE 138610	46	256	5	18	<.5	3	8	477	2.01	<5	<10	<4	6	153	<.4	<5	<5	49	1.8	0.061	18	3	0.36	1267	0.2	7.4	2	3.84	4	84	2	14	10	1	6
RRE 13861	48	255	9	19	1	3	8	495	2.06	11	<10	<4	10	158	0.4	<5	<5	52	1.89	0.065	18	3	0.38	1283	0.22	7.64	2.06	3.94	4	67	3	13	10	2	6
138611	37	684	<5	41	<.5	7	15	846	4.66	<5	<10	<4	6	169	<.4	<5	<5	89	3.31	0.162	28	8	1.01	1026	0.32	7.69	1.19	3.69	7	45	<2	13	14	2	7
138612	222	843	<5	40	<.5	6	14	917	4.45	5	<10	<4	5	246	<.4	<5	<5	88	3.52	0.146	25	6	0.86	521	0.3	7.86	1.38	3.73	5	28	<2	12	16	2	6
138613	49	778	5	45	<.5	5	17	1002	4.64	<5	17	<4	2	258	<.4	<5	<5	82	4.01	0.152	27	4	0.9	1007	0.32	8.25	1.3	3.37	5	33	<2	13	16	2	6
138614	118	1031	<5	47	0.8	8	16	945	4.25	5	<10	<4	5	357	0.4	<5	<5	91	3.67	0.162	26	6	0.98	608	0.34	7.92	1.57	3.38	5	32	<2	13	16	2	6
138615	71	266	7	20	<.5	4	7	402	2.67	<5	<10	<4	8	170	<.4	<5	<5	52	1.96	0.06	19	2	0.37	1583	0.23	7.67	1.75	4.38	4	94	<2	15	11	1	6
138616	114	749	<5	40	1.8	11	18	862	4.02	<5	<10	<4	7	385	0.5	<5	<5	83	3.26	0.143	28	4	0.92	1005	0.33	7.89	1.83	3.36	8	57	<2	14	17	2	7
138617	80	680	5	49	<.5	9	19	642	4.52	<5	<10	<4	<2	486	<.4	<5	<5	102	3.64	0.197	30	7	1.15	757	0.38	8.08	2.17	2.89	5	38	<2	16	16	2	7
138618	17	51	7	19	<.5	2	7	318	2.35	<5	<10	<4	4	140	<.4	<5	<5	32	2.02	0.056	18	2	0.39	1393	0.22	7.25	1.54	3.48	<4	82	<2	13	9	1	6
138619	8	64	10	28	1.3	2	5	255	2.54	<5	<10	<4	11	219	0.5	<5	<5	41	2.24	0.059	19	2	0.33	1627	0.22	7.75	2.13	3.51	4	95	<2	15	12	1	6
138620	10	47	8	16	<.5	4	5	243	2.06	<5	<10	<4	4	198	<.4	<5	<5	36	2.04	0.055	21	2	0.32	1564	0.22	7.48	1.95	3.37	<4	89	<2	15	11	1	6
138621	25	42	6	17	<.5	2	6	242	2.22	9	<10	<4	7	185	0.4	<5	<5	41	2.46	0.058	20	3	0.35	991	0.22	7.8	1.99	3.23	4	78	<2	14	12	1	6
138622	37	65	7	19	<.5	2	7	247	2.27	<5	13	<4	6	162	<.4	<5	<5	36	2.41	0.055	23	3	0.32	1255	0.2	7.39	1.68	3.16	<4	72	4	14	9	1	6
138623	33	17	7	16	<.5	2	4	225	2.11	8	<10	<4	7	140	0.4	<5	<5	35	1.91	0.057	21	3	0.37	1294	0.2	7.35	1.6	3.36	<4	52	<2	10	10	2	6
138624	47	29	<5	15	0.8	4	5	191	2.17	11	<10	<4	9	162	0.4	<5	<5	42	1.93	0.053	19	3	0.36	1520	0.2	7.26	1.55	3.42	5	62	<2	10	11	1	6
138625	66	15	<5	14	<.5	2	5	175	1.81	8	<10	<4	6	125	0.4	<5	<5	46	1.39	0.049	18	<2	0.4	1289	0.19	7.76	1.26	3.86	<4	59	<2	10	10	1	6
138626	41	133	15	26	<.5	14	9	330	2.72	8	<10	<4	6	155	0.4	<5	<5	69	1.82	0.054	21	24	0.66	1056	0.24	7.67	1.4	3.58	4	52	<2	11	9	2	9
138627	235	37	<5	23	<.5	5	6	277	2.23	<5	<10	<4	6	313	<.4	<5	<5	77	2.01	0.063	18	20	0.63	1280	0.25	7.56	1.88	3.17	<4	88	<2	15	10	1	9
138628	100	22	5	19	<.5	2	6	217	2.29	<5	<10	<4	4	316	<.4	<5	<5	52	1.35	0.053	20	3	0.53	1750	0.21	7.2	1.66	3.47	<4	88	2	12	9	1	6
STANDARI	12	146	29	163	0.5	33	14	1013	4.18	23	<10	<4	7	352	5.8	5	9	117	2.29	0.108	24	204	1.25	695	0.42	7.09	1.78	1.3	8	47	6	14	11	2	12
138629	27	17	<5	23	<.5	2	6	231	2.68	12	<10	<4	9	186	0.4	7	<5	48	1.15	0.052	14	4	0.63	1108	0.22	6.99	1.28	3.74	<4	59	<2	9	10	1	6
138630	14	45	<5	31	<.5	6	8	297	3.19	9	<10	<4	7	245	<.4	8	<5	54	1.64	0.051	12	4	0.73	881	0.25	7.03	2.15	3.23	<4	67	2	9	11	2	6
138631	21	1093	<5	46	1.1	2	7	594	4.29	8	<10	<4	7	570	0.4	8	<5	99	1.95	0.13	23	5	0.81	1156	0.32	7.63	2.99	2.58	27	13	<2	10	14	2	6
138632	12	361	5	49	0.7	<2	8	760	3.81	<5	<10	<4	6	650	<.4	7	<5	83	2.08	0.129	18	4	0.73	1841	0.32	7.08	2.92	2.86	16	16	<2	9	14	2	4
138633	27	574	<5	49	1	<2	7	715	3.64	10	<10	<4	13	560	<.4	11	<5	85	2.07	0.117	25	5	0.69	1846	0.28	7.86	2.58	3.55	20	16	<2	11	15	2	5
138634	67	710	5	56	1.3	<2	11	854	4.03	11	<10	<4	10	682	<.4	11	<5	86	2.76	0.129	28	5	0.84	1612	0.31	7.96	2.89	2.95	23	14	2	11	14	2	5
138635	33	522	5	49	<.5	<2	8	677	3.78	<5	<10	<4	4	574	<.4	<5	<5	82	2.6	0.125	24	4	0.81	1675	0.29	7.4	2.59	3.12	20	9	<2	10	13	2	5
138636	2	45	10	77	1.3	28	15	784	4.41	20	<10	<4	12	727	0.4	15	<5	137	3.07	0.163	28	50	2.08	1354	0.56	7.33	3.45	2.61	<4	120	<2	12	10	2	12
138637	2	35	8	80	0.7	31	15	809	4.58	19	<10	<4	11	1416	<.4	7	<5	141	3.63	0.167	30	52	2.18	1734	0.55	7.54	2.83	2.68	<4	125	<2	13	9	1	12
138638	52	655	<5	125	<.5	2	22	1453	6.84	10	<10	<4	<2	290	<.4	7	<5	285	2.82	0.118	9	4	2.54	807	0.53	8.35	3.67	2.82	13	5	<2	13	5	2	18
138639	24	492	6	120	0.9	6	22	1254	6.74	5	<10	<4	3	310	0.4	16	7	252	2.08	0.115	12	4	2.77	1016	0.54	8.23	3.54	3.5	15	4	<2	14	7	2	18
138640	40	418	<5	115	0.5	3	20	1294	6.44	9	<10	<4	2	303	<.4	8	12	244	2.14	0.112	12	5	2.8	982	0.54	8.22	3.5	3.49	13	4	<2	14	6	1	18
RE 138640	40	417	<5	115	1.1	4	21	1294	6.48	13	<10	<4	6	307	<.4	14	7	246	2.18	0.114	12	4	2.86	991	0.53	8.48	3.51	3.5	16	4	<2	14	6	1	19
RRE 13864	39	439	<5	113	<.5	3	20	1299	6.36	<5	<10	<4	2	304	<.4	10	10	239	2.14	0.111	12	3	2.76	982	0.52	8.24	3.48	3.49	12	4	<2	14	6	1	18
138641	9	628	<5	121	0.6	3	22	1393	6.62	11	<10	<4	<2	351	<.4	11	<5	248	2.58	0.114	11	3	2.77	1294	0.53	8.62	3.61	3.13	24	4	<2	14	7	1	20
138642	13	328	<5	106	<.5	<2	21	1339	6.75	7	<10	<4	<2	366	<.4	11	<5	250	2.27	0.115	12	4	2.76	1170	0.55	8.51	3.61	3.26	31	4	<2	14	6	1	19
138643	26	363	<5	101	0.6	2	19	1019	6.55	13	<10	<4	3	260	0.5	12	10	249	1.59	0.114	13	3	3.05	882	0.53	8.15	3.56	3.81	43	4	<2	13	6	2	19
138644	38	605	<5	94	0.8	4	20	1035	6.81	8	<10	<4	<2	333	0.4	11	<5	251	2.19	0.117	11	4	2.69	953	0.56	8.02	3.29	3.6	86	6	<2	12	7	2	18
138645	27	659	<5	101	2.2	6	21	944	6.84	15	<10	<4	7	527	0.8	22	<5	268	2.25	0.13	14	5	2.85	1393	0.62	8	3.04	3.75	56	2	<2	11	11	2	18
138646	40	772	<5	58	0.8	8	14	805	5.44	8	<10	<4	8	916	0.6	11	<5	143	3.57	0.18	26	15	1.57	834	0.45	8.08	3.02	2.83	20	14	<2	14	15	2	10
138647	25	592	<5	51	<.5	5	13	776	4.89	<5	<10	<4	5	992	<.4	5	<5	123	3.56	0.169	22	10	1.28	1726	0.41	7.94	3.12	2.76	<4	11	<2	12	13	2	8
138648	63	858	<5	63	<.5	8	14	857	5.43	8	<10	<4	4	915	<.4	5	<5	173	3.64	0.164	23	15	1.54	1613	0.45	8.01	2.88	2.84	7	9	<2	13	11	2	13
138649	22	1111	8	59	<.5	5	14	780	5.23	8	<10	<4	5	923	<.4	6	6	143	3.8	0.196	25	10	1.43	1674	0.44	8.22	2.84	3.13	22	10	<2	12	12	2	8
138650	42	1171	<5	59	<.5	4	14	790	5.11	6	<10	<4	7	852	<.4	5	<5	138	3.41	0.189	21	7	1.31	1686	0.43	7.61	2.71	3.21	31	8	<2	11	12	1	7
138651	37	348	<5	59	<.5	2	14	874	5.22	6	<10	<4	6	915	<.4	5	<5	140	3.83	0.197	28	7	1.34	1760	0.41	8.04	2.79	3.03	7	9	<2	13	11	1	8
138652	148	590	<5	67	<.5	6	16	1008	5.47	<5	<10	<4	8	964	<.4	10	<5	140	4.02	0.211	30	11	1.51	1624	0.46	8.01	2.9	2.78	19	10	<2	14	14	2	9
138653	22	634	<5	53	0.5	9	14	793	4.62	12	<10	<4	10	878	<.4	11	<5	126	3.28	0.173	28	10	1.29	1868	0.41	7.64	2.82	3.06	8	11	<2	12	15	1	8
138654	76	306	<5	52	1.1	8	14	829	4.65	16	<10	<4	10	812	0.5	12	<5	129	3.51	0.175	30	11	1.33	1857	0.39	7.39	2.61	3.07	6	8	<2	13	13	1	8
138655	44	595	<5	46	<.5	4	12	616	4.29	<5	<10	<4	5	731	<.4	<5	<5	118	2.75	0.16	26	9	1.14	1693	0.36	7.1	2.68	3.33	6	10	<2	10	13	2	6
138656	63	1344	<5	55	0.8	5	24	684	6	6	<10	<4	8	717	<.4	5	<5	139	2.98	0.166	28	11	1.32	371	0.39	7.14	2.53	2.9	17	7	<2	11	11	2	8

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A403920 Page 1 Received: JUL 28 2004 * 194 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc
SAMPLE	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
138657	124	2133	<5	60	<.5	4	17	710	5.17	<5	<10	<4	8	848	<.4	<5	5	133	3.21	0.166	27	9	1.33	1353	0.39	7.91	2.91	3.33	<4	14	<2	11	13	2	8
138658	91	2374	<5	67	<.5	6	17	761	5.28	<5	<10	<4	4	868	<.4	<5	<5	138	3.42	0.176	23	11	1.36	1201	0.41	7.74	3.05	3.21	<4	9	2	11	14	2	8
138659	155	1776	10	67	<.5	5	16	708	5.16	9	<10	<4	6	847	<.4	7	<5	134	3.31	0.179	22	9	1.39	1106	0.4	7.56	3.02	2.94	4	9	<2	11	14	2	8
138660	69	1199	5	58	<.5	5	14	697	4.7	10	28	<4	7	851	<.4	5	<5	133	3.11	0.179	28	10	1.34	1760	0.4	7.73	2.69	3.4	<4	8	2	12	13	1	8
STANDARI	13	143	27	170	<.5	34	14	1085	4.39	24	<10	<4	4	335	5.4	7	6	122	2.31	0.106	25	235	1.29	690	0.44	7.26	1.86	1.34	10	52	5	13	11	2	13
138661	42	1342	8	63	0.5	12	17	817	5.41	<5	<10	<4	9	877	<.4	<5	<5	142	3.56	0.201	35	21	1.78	1477	0.39	8.11	2.7	3.15	6	8	<2	14	13	2	10
138662	40	1042	9	62	<.5	9	15	752	5.11	5	<10	<4	12	847	0.6	<5	<5	140	3.3	0.193	29	13	1.64	1792	0.39	8.05	2.56	3.29	8	9	<2	13	12	2	9
138663	132	1424	<5	63	1.1	4	15	778	5.1	<5	<10	<4	11	833	0.4	<5	<5	134	3.37	0.191	26	6	1.42	1581	0.35	7.85	2.49	3.12	9	8	<2	13	13	2	8
138664	135	1413	6	59	<.5	2	16	737	5.01	<5	<10	<4	4	809	<.4	<5	<5	136	3.31	0.198	28	7	1.46	1620	0.37	7.83	2.47	3.26	5	8	<2	13	12	2	8
138665	123	1454	<5	61	<.5	4	17	830	5.4	8	<10	<4	6	886	<.4	<5	<5	145	3.64	0.215	30	7	1.55	1719	0.42	8.01	2.59	2.99	8	11	<2	14	14	2	9
138666	70	1392	8	58	0.5	6	14	665	4.9	6	<10	<4	7	710	0.4	<5	<5	136	3.59	0.189	28	9	1.28	1472	0.35	7.73	2.27	3.16	17	18	2	13	11	1	8
138667	166	1494	6	60	<.5	4	15	764	5.12	<5	<10	<4	<2	844	<.4	<5	<5	138	3.65	0.201	28	7	1.34	1705	0.39	7.92	2.5	3.14	9	9	2	13	12	1	8
138668	81	1597	11	61	<.5	4	16	652	5.16	<5	<10	<4	5	795	<.4	<5	<5	142	3.48	0.186	27	8	1.28	1393	0.36	7.74	2.38	3.29	6	11	<2	13	12	2	8
138669	55	1599	6	58	<.5	5	14	656	5.3	7	15	<4	5	786	0.5	<5	<5	153	4.02	0.189	37	6	1.11	1099	0.36	8.03	2.65	2.91	6	10	<2	13	12	2	8
138670	210	735	<5	50	<.5	5	12	712	5.33	299	<10	<4	5	457	<.4	<5	<5	135	4.7	0.188	24	4	1.09	976	0.35	7.47	0.84	2.84	18	7	<2	11	10	2	8
138671	161	1617	<5	58	1	6	14	671	5.47	7	<10	<4	7	931	2	<5	5	142	3.94	0.201	31	8	1.27	1484	0.38	8.09	2.73	2.62	15	11	3	14	11	2	9
138672	110	2574	<5	65	<.5	5	17	683	5.59	<5	<10	<4	<2	896	<.4	<5	<5	151	3.48	0.208	31	8	1.55	1584	0.39	8.29	2.64	3.1	10	11	<2	15	10	2	9
138673	272	2466	10	66	1.5	4	20	666	5.55	<5	<10	<4	7	895	<.4	<5	<5	158	3.36	0.222	28	6	1.65	1926	0.41	8.42	2.44	3.53	5	12	<2	15	12	2	9
138674	147	3170	<5	67	1.6	5	19	613	5.56	6	12	<4	6	714	<.4	<5	<5	158	3.26	0.209	30	8	1.47	1472	0.37	7.75	2.26	3.27	15	10	<2	14	10	2	9
138675	335	2485	<5	71	0.8	6	17	735	5.51	<5	11	<4	5	882	<.4	<5	<5	152	3.29	0.208	28	8	1.54	1582	0.4	7.97	2.5	3.25	18	11	2	14	11	2	9
138676	164	2236	<5	74	<.5	4	16	884	5.98	<5	<10	<4	6	902	<.4	<5	<5	150	3.69	0.217	29	10	1.69	1240	0.43	8.17	2.54	3.2	15	11	<2	15	11	2	9
138677	121	1972	<5	68	0.7	4	17	710	6.21	10	<10	<4	6	805	0.4	<5	<5	160	3.19	0.21	27	8	1.65	486	0.41	7.8	2.34	3.32	74	9	<2	14	12	2	9
138678	82	1872	<5	68	1	4	21	689	6.53	<5	<10	<4	10	818	0.4	<5	<5	155	3.21	0.205	29	8	1.58	897	0.38	8.03	2.35	3.4	23	9	2	14	12	2	9
138679	166	1171	8	60	1.2	5	14	724	5.09	<5	15	<4	8	867	<.4	<5	<5	144	3.17	0.198	31	5	1.55	1728	0.4	7.96	2.44	3.18	41	11	<2	13	12	2	9
138680	513	3796	<5	84	2.5	4	19	702	5.38	<5	<10	<4	7	857	<.4	<5	6	143	3.33	0.203	33	8	1.49	1480	0.41	7.85	2.34	3.09	10	11	<2	14	10	2	9
RE 138680	514	3832	6	83	1.4	3	18	699	5.37	<5	<10	<4	5	864	<.4	<5	<5	141	3.36	0.204	33	8	1.5	1388	0.4	7.91	2.35	3.11	10	11	<2	14	10	2	9
RRE 13868	461	3596	<5	79	1.7	6	17	712	5.2	9	<10	<4	4	850	0.5	<5	<5	139	3.29	0.202	32	8	1.47	1509	0.41	7.76	2.34	3.03	13	12	<2	14	12	2	9
138681	173	860	7	64	0.7	7	13	510	3.64	11	<10	<4	7	394	<.4	<5	<5	100	2.66	0.087	19	14	0.87	1395	0.24	7.14	1.88	3.31	10	22	<2	7	11	1	7
138682	59	625	8	46	0.6	6	9	294	2.66	6	<10	<4	5	524	<.4	<5	<5	59	2.17	0.09	24	9	0.53	1676	0.23	7.95	2.26	3.5	24	28	<2	6	14	2	4
138683	192	1152	13	82	0.7	6	11	336	2.57	48	<10	<4	5	473	0.5	<5	<5	59	2.38	0.085	24	11	0.49	1685	0.21	7.7	2.16	3.61	12	26	<2	5	12	1	4
138684	204	786	8	62	1	9	8	321	2.52	20	<10	<4	6	502	0.4	<5	<5	63	2.12	0.088	23	11	0.62	2086	0.21	7.71	2.36	3.76	8	28	<2	6	12	2	4
138685	123	671	<5	39	<.5	6	9	346	2.66	11	<10	<4	4	643	<.4	<5	<5	66	2.09	0.092	25	15	0.74	1777	0.23	7.82	2.74	3.55	10	23	<2	6	12	1	4
138686	145	652	<5	37	0.8	11	10	335	2.72	6	<10	<4	7	520	0.4	<5	<5	71	1.97	0.089	24	18	0.68	1844	0.23	7.33	2.28	3.78	47	23	<2	5	11	1	4
138687	137	539	5	39	0.7	9	9	371	2.56	<5	<10	<4	6	551	<.4	<5	5	70	2.18	0.09	24	16	0.62	1871	0.23	7.55	2.46	3.73	16	22	<2	6	12	1	4
138688	123	586	<5	36	0.5	8	9	321	2.56	5	<10	<4	7	557	<.4	<5	<5	65	1.98	0.088	22	16	0.62	1943	0.24	7.58	2.44	3.83	19	22	<2	6	12	1	4
138689	288	646	<5	36	0.6	11	9	343	2.54	<5	<10	<4	5	545	<.4	<5	<5	70	1.93	0.092	26	18	0.69	1876	0.23	7.63	2.35	4.2	32	27	<2	6	13	2	5
138690	217	869	6	34	<.5	9	8	329	2.42	<5	<10	<4	3	441	<.4	<5	<5	70	2.08	0.086	24	14	0.5	1868	0.23	7.31	1.91	4.35	31	27	<2	6	10	1	4
138691	160	523	<5	34	0.5	8	8	321	2.38	<5	<10	<4	6	513	<.4	<5	<5	67	1.97	0.087	23	13	0.62	1781	0.23	7.41	2.23	3.82	36	27	<2	5	12	2	4
138692	94	633	<5	40	0.6	10	9	372	2.64	<5	<10	<4	5	622	<.4	<5	<5	69	1.91	0.091	24	16	0.82	1778	0.24	7.58	2.6	3.65	30	25	<2	6	10	2	5
STANDARI	14	146	34	166	<.5	32	14	1053	4.41	20	<10	<4	6	320	5.1	<5	5	120	2.22	0.101	24	193	1.31	704	0.41	7.19	1.78	1.37	9	52	4	13	10	2	12
138693	137	443	<5	39	<.5	8	8	371	2.45	6	<10	<4	7	561	<.4	6	<5	60	2.11	0.095	21	14	0.64	1732	0.23	7.97	2.77	3.76	26	23	<2	6	15	1	4
138694	218	584	9	34	<.5	8	8	310	2.33	<5	17	<4	5	488	<.4	<5	<5	56	1.92	0.089	21	15	0.57	1596	0.21	7.62	2.54	3.85	15	27	<2	6	13	1	4
138695	132	1865	7	65	1.1	6	16	723	5.01	6	12	<4	4	906	<.4	<5	<5	135	3.58	0.206	25	10	1.26	1413	0.43	7.63	2.65	3.06	10	11	<2	13	12	1	8
138696	232	2285	5	70	0.5	6	15	652	5.07	5	<10	<4	4	824	0.5	7	<5	140	3.12	0.187	24	8	1.16	1655	0.38	7.38	2.31	3.26	22	9	<2	13	12	1	8
138697	249	2831	<5	72	1.7	4	16	585	4.84	<5	13	<4	3	880	0.5	<5	5	133	2.86	0.186	20	10	1.1	1158	0.34	7.07	2.3	3.42	53	8	<2	11	11	1	8
138698	333	2941	8	74	0.8	6	17	661	5.05	<5	18	<4	3	874	0.5	<5	<5	134	3.27	0.201	22	9	1.17	1151	0.36	7.5	2.44	3.64	32	8	<2	13	13	1	8
138699	447	2265	<5	74	<.5	7	17	754	4.91	5	<10	<4	2	888	<.4	<5	<5	138	3.37	0.202	27	12	1.43	1774	0.4	7.75	2.43	3.27	38	8	<2	14	13	1	9
138700	133	1567	<5	80	0.7	8	17	928	5.14	7	<10	<4	6	1006	0.4	5	<5	139	3.83	0.215	31	10	1.64	1757	0.45	8.31	2.68	3.01	16	10	<2	16	13	1	10
138701	192	2462	6	79	<.5	8	17	806	4.82	6	16	<4	3	901	<.4	<5	5	130	3.5	0.197	29	11	1.48	1566	0.41	7.91	2.52	2.94	17	10	<2	13	15	1	9
138702	351	2914	<5	67	0.8	4	15	632	4.48	6	<10	<4	4	907	0.4	<5	<5	113	3.07	0.173	29	7	1.1	1872	0.37	7.78	2.52	3.37	18	10	<2	14	16	1	6
138703	265	2729	<5	68	1.4	7	14	619	4.1	<5	<10	<4	5	938	<.4	<5	<5	99	2.8	0.155	30	8	0.94	1897	0.34	7.71	2.58	3.67	14	9	<2	15	16	1	5
138704	518	2410	7	62	0.9	6	14	639	3.91	<5	20	<4	5	823	<.4	<5	<5	89	2.69	0.155	28	8	0.95	1673	0.32	7.37	2.49	3.57	26	10	<2	13	16	2	5
138705	212	1502	<5	33	<.5	4	12	269	2.92	<5	16	<4	2	677	<.4	<5	5	68	2.17	0.112	23	15	0.69	807	0.26	7.92	2.57	3.82	10	22	2	7	12	1	4
138706	201	1130	<5	44	0.7	5	12	460	3.38	<5	25	<4	8	783	<.4	5	<5	84	2.39	0.141	31	9	0.82	1899	0.28	7.6	2.4	3.77	11	10	<2	13	16	1	5
138707	323	1728	8	37	<.5	4	11	272	2.5	<5	24	<4	3	631	<.4	<5	<5	69	1.97	0.107	28	10	0.74	1727	0.24	7.57	2.15	4.16	15	19	<2	7	12	1	4
138708	148	1563	<5	46	0.7	5	11	485	3.63	<5	<10	<4	7	884	<.4	<5	9	88	2.49	0.141	33	6	0.81	1896	0.29	7.79	2.55	3.63	14	11	<2	14	16	1	5
138709	329	1822	<5	61	<.5	4	14	621	3.89	<5	<10	<4	3	901	<.4	<5	<5	97	2.7	0.154	31	10	0.97	1927	0.32	7.83	2.61	3.63	12	9	<2	14	16	1	6
138710	445	2133	<5	59	1.1	7	13	621	3.85	8	<10	<4	5	824	0.5	<5	<5	96	2.59	0.154	28	8	0.97	1844	0.31	7.33	2.39	3.47	18	7	<2	12	16	1	5
RE 138710	433	2128	<5	59	1.5	6	12	600	3.7	<5	<10	<4	7	822	<.4	<5	<5	91	2.55	0.152	28	8	0.95	1798	0.31	7.33	2.38	3.45	20	8	<2	13	17	1	5
RRE 13871	479	2256	<5	62	0.6	8	13	609	3.85	7	<10	<4	7	846	<.4	<5	<5	96	2.6	0.152	31	9	0.99	1763	0.33	7.62	2.45	3.58	21	7	<2	13	17	1	6
138711	232	1707	<5	60	0.9	6	12	673	3.83	<5	28	<4	8	894	0.5	5	<5	90	2.74	0.152	30	9	0.93	1881	0.33	7.64	2.63	3.43	10	8	<2	14	18	2	6
138712	473	2008	<5	65	0.5	5	13	670	3.85	<5	<10	<4	7	911	0.4	<5	<5	90	2.72	0.149	31	9	0.95	1824	0.33	7.61	2.51	3.44	8	9	<2	14	17	2	6
138713	423	1697	<5	63	0.6	7	12	705	4.02	<5	13	<4	6	972	0.6	<5	<5	97	2.9	0.158	33	9	0.99	1927	0.34	7.92	2.72	3.46	8	10	<2	14	17	2	6
138714	201	1326	<5	56	<.5	5	14	644	4.11	<5	<10	<4	6	895	0.4	<5	<5	94	2.68	0.154	31	9	0.9	1382	0.31	7.72	2.66	3.56	11	10	<2	14	15	2	6
138715	217	1631	5	55	<.5	5	11	567	3.9	8	32	<4	6	971	<.4	<5	9	95	2.76	0.161	36	9	0.93	1944	0.35	8.07	2.76	3.68	9	9	<2	15	18	2	6
138716	169	1022	<5	50	<.5	4	12	636	4.03	<5	12	<4	4	966	<.4	<5	<5	94	2.78	0.153	33	9	0.89	1935	0.34	7.89	2.83	3.41	15	10	<2	15	17	1	6

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A403920 Page 1 Received: JUL 28 2004 * 194 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc
SAMPLE	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
138717	402	2202	<5	51	0.7	5	14	493	3.81	<5	<10	<4	5	898	<.4	<5	<5	90	2.59	0.154	28	9	0.87	1233	0.32	7.26	2.5	3.53	8	12	<2	13	16	1	5
138718	491	2180	6	51	0.6	3	14	521	4	8	16	<4	3	930	<.4	<5	9	94	2.76	0.16	29	10	0.92	1343	0.32	7.55	2.64	3.54	10	13	<2	13	16	2	5
138719	347	2425	9	58	0.7	5	13	521	3.86	<5	<10	<4	4	901	<.4	<5	<5	89	2.68	0.161	31	10	0.93	1764	0.33	7.66	2.66	3.68	28	12	<2	14	16	2	5
138720	734	1739	<5	47	<.5	5	11	478	3.57	7	23	<4	5	838	<.4	<5	<5	85	2.53	0.149	34	11	0.87	1747	0.31	7.39	2.44	3.49	10	12	<2	14	16	2	5
138721	452	2677	<5	50	0.8	5	12	458	3.67	<5	<10	<4	6	839	<.4	<5	<5	83	2.52	0.149	29	9	0.85	1566	0.29	7.27	2.44	3.68	22	12	<2	13	15	1	5
138722	450	2483	8	56	<.5	4	13	505	3.81	7	<10	<4	3	900	0.4	<5	<5	88	2.61	0.157	38	9	0.91	1836	0.32	7.96	2.64	3.81	10	12	<2	15	17	1	6
138723	625	2513	<5	53	1.4	4	14	509	3.53	11	<10	<4	7	802	0.8	5	<5	84	2.6	0.151	35	9	0.85	1759	0.3	7.52	2.44	3.61	15	10	<2	14	16	2	5
138724	557	2465	5	56	0.7	4	12	480	3.66	5	<10	<4	5	768	<.4	<5	<5	88	2.72	0.151	31	8	0.78	1843	0.3	7.5	2.27	3.7	12	12	<2	13	17	1	5
STANDARI	12	140	32	167	<.5	32	14	1029	4.14	23	<10	<4	<2	317	5.2	<5	6	113	2.31	0.102	24	223	1.21	671	0.41	7.25	1.78	1.32	10	50	3	14	10	2	12
138725	857	4009	38	118	<.5	3	15	424	3.99	28	<10	<4	5	610	1.1	<5	<5	90	2.91	0.149	28	6	0.76	826	0.3	7.05	1.84	3.66	13	13	<2	13	14	1	5
138726	412	4724	55	97	0.6	<2	13	504	4.23	20	<10	<4	6	775	0.4	<5	8	93	2.64	0.155	32	9	0.95	1038	0.32	7.26	2.3	3.53	7	12	<2	14	15	1	5
138727	530	3239	5	68	0.8	3	13	552	3.97	8	15	<4	7	844	<.4	5	7	93	2.72	0.157	30	10	0.94	1522	0.34	7.38	2.52	3.5	11	14	<2	13	15	1	5
138728	531	1932	<5	62	0.8	4	11	573	3.95	8	<10	<4	7	959	<.4	<5	9	96	2.74	0.155	31	9	0.91	1904	0.36	7.5	2.66	3.4	5	14	<2	14	15	1	5
138729	456	2432	7	69	1.1	5	12	596	4.03	6	<10	<4	8	972	0.4	<5	5	98	2.71	0.156	25	13	0.9	1851	0.35	7.3	2.79	3.41	4	13	<2	13	17	1	5
138730	490	2662	<5	65	0.6	4	11	557	4.03	<5	<10	<4	7	939	0.6	<5	12	99	2.51	0.154	28	11	0.88	1603	0.34	7.25	2.54	3.59	27	12	<2	13	14	1	5
138731	642	1845	6	71	<.5	3	12	699	4.17	9	<10	<4	7	1004	0.4	<5	<5	99	3.02	0.163	33	9	0.96	1837	0.35	7.9	2.82	3.27	13	10	<2	15	17	2	6
138732	606	2757	<5	77	<.5	2	12	643	4.11	8	<10	<4	7	983	<.4	<5	<5	94	2.86	0.161	32	10	0.94	1723	0.35	7.77	2.78	3.32	4	13	<2	14	15	2	6
138733	385	2044	6	71	<.5	2	12	678	4.02	9	<10	<4	6	935	0.4	<5	<5	96	2.81	0.16	24	9	0.91	1855	0.36	7.23	2.75	3.35	13	14	<2	12	15	2	5
138734	250	1698	<5	64	<.5	2	12	621	4.1	<5	<10	<4	6	1004	<.4	<5	<5	98	2.95	0.167	26	8	0.98	1952	0.37	7.64	2.8	3.44	106	14	<2	13	16	2	6
138735	532	2993	<5	73	0.7	2	12	574	4.01	9	<10	<4	8	921	<.4	<5	<5	94	3.1	0.157	31	11	0.92	944	0.35	7.61	2.61	3.65	9	14	<2	14	17	1	5
138736	1123	3192	5	75	0.7	<2	11	548	3.74	5	<10	<4	7	822	<.4	<5	<5	88	2.8	0.149	22	9	0.82	1046	0.32	6.73	2.39	3.65	6	11	<2	11	15	1	5
138737	786	2729	<5	74	1.7	3	13	595	3.92	8	<10	<4	13	975	<.4	5	<5	91	3.03	0.15	29	10	0.89	1025	0.33	7.44	2.47	3.6	16	13	<2	13	16	2	5
138738	709	2505	<5	72	0.9	3	12	613	3.79	7	<10	<4	9	936	<.4	<5	<5	90	3.06	0.153	33	8	0.9	1183	0.33	7.59	2.52	3.45	21	13	<2	14	18	2	5
138739	649	2911	7	67	1.7	2	13	498	3.54	7	<10	<4	8	831	<.4	<5	<5	89	2.76	0.142	25	12	0.8	925	0.31	6.73	2.27	3.85	108	11	<2	12	15	1	5
138740	309	2335	<5	64	1.8	3	13	473	3.88	12	<10	<4	12	576	0.6	7	<5	90	2.72	0.149	22	4	1.22	1616	0.31	6.71	0.99	3.43	107	12	<2	12	16	1	5
138741	902	3645	5	90	0.7	<2	15	398	3.64	22	<10	<4	8	570	<.4	<5	<5	91	2.5	0.146	25	6	0.73	982	0.3	7.03	1.85	3.92	81	12	<2	12	13	2	5
138742	1047	3411	5	90	1.8	2	15	568	4.14	11	<10	<4	9	728	<.4	6	<5	102	2.73	0.166	26	8	0.96	1152	0.35	7.3	2.27	3.75	>200	14	<2	13	17	1	6
138743	714	3099	25	100	0.8	3	14	573	4.16	22	<10	<4	5	810	0.5	<5	<5	101	2.69	0.162	23	7	0.95	1410	0.35	7.1	2.39	3.55	27	15	<2	12	15	1	5
138744	649	5103	8	86	<.5	3	18	477	4.59	9	<10	<4	4	844	0.4	<5	<5	101	3	0.152	24	8	0.87	615	0.35	7.55	2.64	3.78	18	15	<2	12	16	1	5
138745	567	3287	6	79	1.2	3	13	534	4.01	5	<10	<4	7	856	<.4	<5	<5	99	3.3	0.165	27	4	0.92	783	0.36	7.42	2.54	3.83	11	15	<2	13	15	2	6
138746	1594	5663	48	168	1.6	2	16	416	4.4	69	<10	<4	9	924	1.7	14	<5	102	3.04	0.155	26	5	0.73	485	0.31	7.12	1.83	4.13	17	13	<2	12	15	1	5
RE 138746	1569	5641	41	162	1.3	4	17	390	4.35	62	<10	<4	7	930	1.3	14	<5	101	3	0.15	26	4	0.72	495	0.3	7.14	1.82	4.09	14	14	<2	12	14	1	5
RRE 13874	1526	5404	36	147	1.1	3	17	387	4.25	50	<10	<4	8	912	1.1	8	5	96	2.9	0.148	24	4	0.66	527	0.29	6.76	1.83	4.03	14	13	<2	11	14	1	5
138747	1039	3314	103	225	3.4	4	14	508	3.63	89	<10	<4	9	630	2.4	44	<5	91	3.22	0.152	28	4	0.73	1040	0.29	7.28	1.74	3.73	18	12	<2	13	14	1	5
138748	727	4787	22	119	1.1	2	15	617	4.12	30	<10	<4	10	943	0.7	5	<5	102	2.75	0.155	32	4	0.91	884	0.32	7.76	2.5	3.73	24	12	<2	14	15	2	6
138749	951	4229	<5	75	1.7	<2	17	518	4.17	<5	<10	<4	12	808	<.4	<5	<5	95	2.68	0.155	28	4	0.86	831	0.31	7.54	2.41	3.8	9	12	<2	13	15	1	6
138750	429	2881	5	69	1	6	13	673	4.11	<5	<10	<4	10	889	<.4	<5	<5	102	2.98	0.164	27	5	0.96	1074	0.35	7.62	2.68	3.65	4	12	2	14	17	1	6
138751	774	3179	<5	75	<.5	2	14	593	3.98	<5	<10	<4	8	893	<.4	<5	<5	97	2.92	0.157	26	4	0.89	1268	0.34	7.48	2.68	3.41	<4	13	<2	13	15	2	5
138752	268	2747	<5	73	0.5	4	13	672	3.93	<5	<10	<4	7	898	<.4	<5	<5	100	2.84	0.163	29	4	0.95	1739	0.34	7.7	2.72	3.6	11	9	<2	14	18	2	6
138753	351	2078	<5	68	1	4	13	669	4	6	<10	<4	9	900	<.4	<5	<5	98	2.78	0.157	29	5	0.93	1904	0.35	7.66	2.68	3.65	53	13	<2	14	17	2	6
138754	1566	2548	<5	82	1.5	3	14	555	3.77	11	<10	<4	10	848	<.4	<5	<5	97	3.34	0.149	28	4	0.78	832	0.31	7.34	1.85	3.87	21	13	<2	13	15	2	5
138755	629	1442	<5	59	1.9	5	13	623	4.12	7	<10	<4	14	880	<.4	<5	<5	104	2.75	0.162	27	3	0.95	1928	0.34	7.63	2.54	3.71	21	14	<2	13	17	2	6
138756	276	2024	<5	64	1.4	5	14	586	4.15	6	<10	<4	12	846	<.4	<5	<5	112	2.89	0.163	29	6	0.98	1494	0.34	7.6	2.37	4.06	39	14	<2	14	17	2	6
STANDARI	13	142	32	162	0.7	32	14	1043	4.3	27	<10	<4	7	328	5.5	7	5	121	2.29	0.107	25	218	1.27	676	0.42	7.16	1.81	1.31	9	49	3	14	9	2	13
138757	120	2168	7	58	<.5	6	10	587	3.93	5	<10	<4	12	891	<.4	<5	8	110	3.25	0.15	30	8	0.94	654	0.33	7.81	2.65	3.62	19	15	<2	14	16	2	6
138758	278	1573	8	49	0.6	3	10	610	3.86	<5	<10	<4	12	944	<.4	<5	9	104	3.16	0.147	33	4	0.91	823	0.32	7.94	2.79	3.53	46	15	<2	14	16	2	6
138759	426	1683	8	50	2	5	10	543	3.62	10	<10	<4	16	853	<.4	8	<5	98	2.87	0.138	27	9	0.85	1166	0.3	7.39	2.53	3.42	18	14	<2	12	17	2	5
138760	168	1622	10	52	<.5	2	9	633	3.79	<5	<10	<4	8	870	<.4	<5	<5	106	3.24	0.142	30	4	0.93	645	0.34	7.46	2.65	3.26	32	14	<2	13	15	2	6
138761	215	2028	12	55	1.5	6	11	606	3.88	10	<10	<4	15	833	0.4	7	5	107	3.25	0.142	28	8	0.92	422	0.32	7.2	2.52	3.27	95	15	<2	13	18	2	6
138762	100	1267	7	47	<.5	3	11	619	3.68	7	<10	<4	16	902	0.4	7	<5	108	2.81	0.149	37	5	0.97	1932	0.33	8.04	2.55	3.73	62	14	<2	14	18	2	6
138763	597	1819	10	55	0.5	4	10	558	3.51	5	<10	<4	12	769	<.4	<5	5	101	2.6	0.132	28	10	0.87	1390	0.3	6.96	2.19	3.34	40	12	<2	12	16	2	5
138764	279	1543	12	66	0.8	4	10	706	3.67	10	<10	<4	15	884	<.4	<5	<5	101	3.1	0.138	32	6	0.87	982	0.32	7.72	2.61	3.42	21	13	<2	14	18	2	6
138765	417	1832	7	56	<.5	7	10	607	3.57	6	<10	<4	11	844	<.4	<5	<5	100	2.87	0.138	26	9	0.81	789	0.3	7.34	2.47	3.62	73	11	<2	12	16	2	5
138766	572	2355	9	60	1	<2	11	592	3.58	5	<10	<4	13	912	<.4	<5	6	97	3.18	0.143	34	4	0.86	987	0.31	7.88	2.63	3.57	41	15	<2	14	18	2	6
138767	107	2314	7	59	1.1	5	10	591	3.66	6	<10	<4	14	888	0.5	<5	6	101	2.96	0.14	34	8	0.87	1151	0.32	7.92	2.65	3.41	22	14	<2	14	17	2	6
138768	190	1369	8	45	1.1	2	10	623	3.83	9	<10	<4	16	889	<.4	<5	<5	105	2.87	0.14	35	5	0.88	1740	0.31	7.9	2.66	3.45	12	16	<2	14	19	2	6
RE 138768	188	1370	7	45	0.9	4	11	621	3.77	10	<10	<4	16	889	<.4	<5	<5	105	2.84	0.141	34	5	0.86	1763	0.31	7.89	2.63	3.44	13	15	<2	14	18	2	6
RRE 13876	174	1536	7	46	<.5	4	9	598	3.71	7	<10	<4	13	895	0.4	<5	<5	102	2.82	0.137	35	8	0.86	1785	0.33	7.92	2.61	3.53	14	15	<2	14	17	2	6
138769	230	2755	10	60	1.6	2	11	532	3.54	12	<10	<4	18	826	0.7	7	<5	102	2.62	0.137	35	5	0.87	1623	0.31	7.84	2.45	3.74	88	13	<2	14	19	2	6
138770	8420	5870	6	74	2.8	7	15	337	2.88	<5	<10	<4	11	536	0.6	6	<5	73	1.65	0.107	30	10	0.62	483	0.23	6.16	1.53	3.96	71	9	<2	11	13	2	4
138771	219	1483	6	52	0.7	3	10	664	3.53	<5	<10	<4	16	869	<.4	<5	<5	99	2.62	0.135	37	5	0.84	1893	0.3	7.97	2.58	3.68	121	15	<2	14	18	2	6
138772	510	2037	6	58	0.9	6	10	567	3.43	<5	<10	<4	13	812	<.4	<5	<5	101	2.36	0.132	36	9	0.84	1856	0.31	7.61	2.34	3.89	84	13	<2	14	17	2	6
138773	306	1460	10	51	1.1	2	9	605	3.58	5	<10	<4	15	860	<.4	<5	<5	108	2.65	0.135	30	4	0.82	1866	0.32	7.52	2.54	3.47	85	14	<2	13	17	2	5
138774	392	1423	63	127	1.9	5	10	493	3.54	47	<10	<4	15	877	1.3	22	<5	101	2.69	0.131	33	7	0.68	1174	0.3	7.62	2.14	3.7	20	14	<2	13	16	2	5
138775	636	1898	5	52	1.2	3	11	555	3.68	8	<10	<4	14	882	<.4	<5	<5	111	2.58	0.141	35	5	0.87	1872	0.33	7.98	2.54	3.86	8	14	<2	14	18	2	6
138776	206	1090	12	45	0.9	5	10	638	3.84	6	<10	<4	16	945	<.4	<5	<5	107	3.13	0.141	34	7	0.83	1551	0.33	7.97	2.89	3.34	7	16	<2	14	17	2	6

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A403920 Page 1 Received: JUL 28 2004 * 194 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc	
SAMPLE	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
138797	648	1835	8	49	<.5	5	11	556	3.44	<5	<10	<4	13	817	<.4	<5	<5	96	2.28	0.126	31	11	0.81	1062	0.27	6.91	2.26	3.29	12	10	<2		12	14	2	5
STANDARI	13	145	29	159	<.5	32	12	1029	3.87	22	<10	<4	8	322	5.1	<5	6	118	2.21	0.095	24	197	1.14	676	0.37	7.15	1.8	1.31	9	52	5	13	9	3	12	

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A403836 Page 1 Received: JUL 26 2004 * 92 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc
SAMPLES	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SI	<2	<2	9	19	<.5	<2	<2	10	0.1	<5	<10	<2	137	<.4	<5	<5	2	6.98	0.011	2	3	0.09	187	0.03	0.86	>10	0.23	<4	61	4	3	2	<1	<1
138512	97	779	5	47	<.5	<2	14	514	4.53	<5	<10	9	727	<.4	<5	7	119	2.67	0.169	36	9	1.12	316	0.33	8.01	2.5	4	53	9	4	13	12	2	7
138513	50	687	8	44	<.5	3	13	491	5.1	10	23	9	718	<.4	<5	<5	148	2.52	0.168	32	6	1.14	463	0.34	8.03	2.45	4.24	18	10	2	14	11	2	7
138514	56	824	<5	46	0.7	<2	12	536	4.39	9	<10	9	831	<.4	<5	5	119	2.97	0.177	36	8	1.15	1652	0.35	8.29	2.71	3.52	8	11	3	16	14	2	8
138515	13	553	19	69	0.6	4	12	678	4.76	7	<10	13	775	<.4	<5	<5	131	3.37	0.183	36	10	1.13	1810	0.38	8.37	2.47	3.37	7	13	2	15	13	2	8
138516	26	463	<5	52	<.5	3	10	604	3.89	<5	<10	10	647	<.4	<5	<5	101	3.06	0.155	33	6	1.06	1509	0.32	7.8	2.34	3.34	22	14	2	14	14	2	7
138517	34	671	7	53	<.5	2	10	663	4.32	<5	<10	10	872	<.4	<5	<5	108	3.38	0.163	34	7	1.08	1440	0.34	8.05	2.69	3.16	5	14	2	13	12	2	7
138518	26	591	<5	55	<.5	4	12	782	4.39	<5	<10	8	1062	<.4	<5	<5	112	3.76	0.18	32	8	1.33	1453	0.39	8.24	2.79	3	17	12	2	15	13	2	8
138519	39	633	<5	56	<.5	4	11	650	4.61	<5	<10	8	759	<.4	<5	<5	128	3.67	0.181	36	4	1.14	1567	0.35	7.94	2.37	2.97	5	10	<2	15	11	2	8
138520	15	348	9	50	<.5	<2	12	812	4.44	7	20	13	870	<.4	<5	<5	114	3.61	0.18	35	7	1.34	1710	0.4	8.44	2.82	3.08	9	15	3	17	16	2	8
138521	79	1246	5	58	0.7	2	12	811	4.72	<5	12	10	938	<.4	<5	<5	120	3.71	0.186	37	6	1.35	1146	0.41	8.28	2.83	3.02	7	15	2	18	17	2	8
138522	28	1105	<5	53	<.5	4	15	670	4.79	<5	<10	7	982	<.4	<5	<5	128	3.62	0.179	34	6	1.3	421	0.39	8.3	2.78	3.15	14	13	2	15	14	2	8
138523	27	590	<5	46	<.5	5	13	710	4.47	5	22	6	941	<.4	<5	<5	114	3.66	0.176	33	6	1.25	813	0.38	8.07	2.8	2.92	<4	12	2	15	13	2	8
138524	44	384	6	45	1	3	11	638	4.14	10	36	9	834	<.4	<5	<5	110	3.5	0.166	33	8	1.02	1470	0.36	7.93	2.72	2.97	6	14	<2	14	14	2	7
138525	131	1027	<5	50	<.5	3	15	546	4.62	<5	<10	5	601	0.4	<5	<5	137	3.78	0.157	30	7	0.75	791	0.29	7.34	2.11	3.22	6	10	<2	14	10	2	7
138526	57	438	8	20	<.5	<2	6	173	1.79	<5	18	23	271	<.4	<5	8	42	1.24	0.05	15	7	0.29	1282	0.12	6.72	1.91	4.5	<4	26	2	6	8	2	2
138527	55	649	5	52	<.5	2	13	604	4.36	<5	<10	6	831	<.4	<5	<5	122	3.41	0.183	35	5	1.11	1447	0.36	8.4	2.45	3.38	<4	13	2	16	13	2	8
138528	41	787	<5	62	<.5	2	12	696	4.24	<5	<10	6	834	<.4	<5	<5	116	3.56	0.181	35	7	1.15	1507	0.38	8.27	2.51	2.95	6	13	2	16	15	2	8
138529	119	438	<5	55	<.5	4	12	853	4.7	11	<10	8	959	<.4	<5	<5	124	3.67	0.184	36	6	1.36	1780	0.42	8.05	2.65	2.8	11	12	<2	19	17	2	8
138530	26	199	<5	57	<.5	5	12	983	4.69	6	15	8	1032	<.4	<5	<5	124	4.25	0.197	38	7	1.41	1791	0.44	8.65	3.07	2.8	<4	16	<2	20	18	2	9
RE 138530	26	197	<5	54	<.5	4	11	973	4.69	<5	<10	8	1036	<.4	<5	<5	123	4.24	0.196	38	7	1.41	1855	0.43	8.64	3.07	2.79	<4	13	2	19	17	2	9
RRE 13853	29	191	8	56	<.5	2	12	957	4.74	8	<10	8	1015	0.4	<5	<5	125	4.18	0.196	36	7	1.41	1705	0.43	8.51	3.02	2.75	<4	13	3	19	16	2	9
138531	19	207	<5	58	1	4	13	1061	4.87	12	<10	12	1035	<.4	5	<5	126	4.2	0.2	32	4	1.45	1796	0.44	8.38	3	2.65	4	17	<2	17	17	2	9
138532	30	258	<5	52	<.5	4	12	931	4.74	8	<10	8	1015	<.4	<5	<5	121	4.22	0.195	34	10	1.36	1490	0.42	8.48	3.09	2.7	5	15	2	16	17	2	8
138533	42	399	<5	51	<.5	5	12	829	4.99	8	<10	8	996	0.5	<5	<5	134	4.07	0.196	37	7	1.36	1281	0.41	8.45	2.9	3.03	8	16	3	17	16	2	9
138534	49	387	<5	48	<.5	5	12	666	4.33	5	<10	5	1016	0.4	<5	<5	119	4.28	0.193	34	6	0.88	1678	0.38	8.63	2.9	2.67	5	12	2	16	14	2	9
138535	48	681	<5	65	<.5	4	11	682	4.31	<5	<10	8	910	0.6	<5	<5	118	3.83	0.18	34	6	1.01	1513	0.38	8.34	2.72	2.78	5	13	3	16	14	2	8
138536	17	291	<5	51	<.5	3	10	713	4.18	<5	<10	11	801	<.4	<5	<5	99	3.61	0.154	34	8	1.04	1626	0.36	8	2.22	2.99	16	11	3	15	14	2	7
138537	144	290	7	40	<.5	4	8	498	3.2	<5	<10	9	706	<.4	<5	<5	89	2.83	0.117	30	8	0.8	1209	0.29	7.23	2.24	3.28	11	11	2	12	14	2	7
138538	59	386	6	41	<.5	3	9	560	3.14	8	<10	4	794	<.4	<5	<5	89	3.01	0.128	29	8	0.97	1572	0.29	7.77	2.74	3.18	5	8	<2	12	14	2	7
138539	112	316	<5	40	<.5	3	22	564	4.21	<5	<10	8	795	0.4	<5	<5	93	3.19	0.129	31	8	0.96	270	0.3	7.8	2.82	3.06	5	7	<2	14	14	2	7
138540	95	353	5	46	0.9	3	9	684	3.61	<5	<10	10	864	<.4	<5	<5	93	3.2	0.133	32	9	1	1814	0.34	8.11	2.98	3.01	<4	9	2	13	14	2	7
138541	86	479	<5	38	0.6	3	9	491	3.05	8	<10	10	797	<.4	<5	<5	80	2.78	0.12	28	6	0.86	1307	0.28	7.86	2.69	3.34	5	9	<2	12	13	2	6
138542	253	650	5	45	<.5	4	9	555	3.48	8	<10	5	833	<.4	<5	<5	98	3.11	0.129	32	11	1.02	1010	0.31	7.73	2.66	3.12	<4	9	<2	13	13	2	7
138543	229	294	9	47	<.5	2	9	702	3.45	8	<10	10	847	<.4	<5	<5	92	3.27	0.133	32	6	1	1850	0.34	8.16	2.98	3.04	<4	9	2	13	16	2	7
STANDAR	12	147	27	165	<.5	32	12	1016	3.99	21	<10	4	323	4.8	5	7	111	2.28	0.102	25	224	1.2	700	0.39	7.03	1.79	1.29	7	41	7	14	9	2	12
138544	99	556	22	103	<.5	<2	8	547	3.02	7	<10	6	788	1.1	<5	5	71	2.6	0.107	25	8	0.77	1629	0.24	7.52	2.59	3.07	5	7	<2	9	16	2	5
138545	118	477	7	37	<.5	2	8	340	2.61	8	11	10	868	<.4	<5	<5	61	2.56	0.092	27	3	0.6	1776	0.19	7.9	2.56	3.43	7	6	3	11	16	2	4
138546	39	359	10	67	<.5	4	7	483	2.89	<5	<10	6	933	0.5	<5	<5	59	2.67	0.095	26	12	0.64	1662	0.22	7.57	2.81	3.02	5	7	<2	10	20	2	4
138547	29	386	14	48	0.5	5	7	435	2.76	7	<10	11	897	1	<5	<5	65	2.5	0.09	27	7	0.61	1911	0.23	8.16	2.54	3.35	7	8	<2	10	18	2	5
138548	210	25	5	11	<.5	2	2	118	1.38	<5	<10	5	207	<.4	<5	<5	44	0.36	0.04	23	6	0.15	327	0.14	6.2	1.13	2.93	<4	7	2	4	6	1	5
138549	8	77	6	27	<.5	4	6	380	2.22	9	<10	8	871	<.4	<5	<5	59	2.32	0.128	22	6	0.57	1149	0.19	7.54	2.22	2.98	7	4	2	9	14	2	5
138550	29	30	<5	12	<.5	4	2	65	1.25	7	<10	7	1401	<.4	<5	6	79	0.46	0.093	28	6	0.05	607	0.13	8.8	0.89	4.04	6	5	4	6	8	1	5
138551	278	38	11	20	<.5	2	<2	43	0.98	8	<10	7	784	0.4	<5	<5	51	0.24	0.043	22	18	0.04	222	0.11	5.32	0.59	2.8	4	12	3	4	7	<1	4
138552	151	9	<5	7	<.5	<2	<2	30	0.37	<5	<10	4	118	<.4	<5	<5	14	0.22	0.037	15	5	0.03	148	0.04	3.95	0.52	2.37	<4	36	3	4	6	<1	2
138553	49	20	<5	13	<.5	3	2	72	0.5	6	<10	7	162	<.4	<5	<5	17	0.43	0.061	21	6	0.08	294	0.05	5.21	0.76	2.91	4	26	2	5	8	1	3
138554	88	189	<5	36	0.6	2	7	774	3.87	8	<10	7	933	<.4	<5	<5	77	3.48	0.147	25	6	0.85	625	0.29	8.18	2.03	2.75	6	27	<2	12	17	3	6
138555	14	169	<5	39	0.5	2	7	502	3.57	<5	<10	5	771	<.4	<5	<5	76	3.57	0.14	25	3	0.81	1069	0.28	7.97	1.89	2.54	6	26	<2	10	16	2	5
138556	23	86	<5	34	<.5	3	4	172	1.32	7	<10	7	604	<.4	<5	<5	58	2.06	0.079	22	3	0.34	952	0.15	8.32	1.96	3.85	11	13	<2	7	13	2	4
138557	12	12	<5	6	<.5	<2	<2	83	0.5	<5	<10	6	65	<.4	<5	<5	8	0.35	0.01	14	6	0.04	314	0.06	1.97	0.44	1.33	<4	28	<2	3	5	<1	1
138558	8	24	11	19	0.7	3	4	179	0.97	10	<10	27	368	<.4	<5	<5	43	1.29	0.056	64	2	0.25	1874	0.13	8.38	1.76	4.88	8	11	<2	7	15	2	4
138559	77	17	<5	7	<.5	2	<2	77	0.51	<5	<10	15	144	<.4	<5	<5	30	0.55	0.049	30	6	0.05	776	0.1	6	0.91	4.05	26	40	<2	5	8	1	3
138560	151	47	10	17	<.5	2	3	181	1.4	<5	<10	8	488	<.4	<5	<5	53	1.31	0.065	32	8	0.22	1659	0.16	8.54	1.86	5.08	6	16	2	7	10	1	4
RE 138560	146	43	9	18	<.5	<2	4	170	1.36	11	<10	9	452	<.4	<5	<5	53	1.3	0.067	29	9	0.23	1547	0.15	8.09	1.76	4.82	7	15	2	6	13	1	4
RRE 13856	137	44	12	19	<.5	2	4	184	1.42	9	<10	9	467	<.4	<5	<5	54	1.29	0.066	29	9	0.22	1582	0.15	8.14	1.79	4.87	7	16	2	7	12	1	4
138561	72	60	9	14	<.5	<2	4	161	1.48	14	<10	9	531	<.4	<5	<5	64	1.41	0.068	32	5	0.31	1367	0.14	8.14	1.65	4.86	6	11	3	7	14	1	4
138562	46	7	<5	8	0.8	<2	<2	39	0.69	14	<10	8	642	<.4	<5	<5	42	0.25	0.076	27	7	0.03	254	0.08	7.45	0.38	3.34	7	9	2	6	8	<1	6
138563	193	5	<5	9	<.5	<2	<2	37	0.35	<5	<10	5	316	<.4	<5	<5	16	0.18	0.051	14	5	0.02	192	0.05	4.74	0.22	2.6	4	29	4	5	9	<1	3
138564	50	3	<5	6	<.5	<2	<2	51	0.5	6	<10	5	201	<.4	<5	<5	80	0.24	0.095	17	12	0.04	253	0.1	7.26	0.35	3.57	5	11	<2	6	7	<1	12
138565	128	6	<5	7	<.5	<2	<2	29	0.4	12	<10	6	170	<.4	<5	<5	59	0.29	0.085	23	6	0.05	214	0.07	8.25	0.31	3.73	5	12	2	6	9	<1	8
138566	66	28	<5	41	<.5	<2	<2	54	0.57	5	<10	2	39	<.4	<5	<5	24	0.22	0.027	10	9	0.03	164	0.06	2.44	0.17	1.47	<4	54	<2	4	4	<1	3
138567	78	84	5	23	1.2	3	<2	54	0.53	<5	<10	6	22	0.4	<5	<5	9	0.23	0.018	13	17	0.01	138	0.07	0.87	0.03	0.57	11	120	<2	6	5	1	3
138568	41	164	<5	14	1	2	<2	73	0.37	<5	<10	6	17	<.4	<5	<5	8	0.53	0.017	11	9	0.02	98	0.1	0.64	0.03	0.36	<4	199	<2	10	4	<1	4
138569	28	328	<5	36	<.5	6	8	431	3.16	<5	<10	5	929	0.4	<5	<5	81	2.75	0.146	24	7	0.93	1283	0.25	7.99	2.44	2.37	7	19	<2	8	15	2	5

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A403836 Page 1   Received: JUL 26 2004 *   92 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc
SAMPLES	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
138570	45	31	<5	7	<.5	2	<2	53	0.35	<5	<10	4	14	<.4	<5	<5	6	0.17	0.011	8	10	0.02	59	0.05	0.51	0.07	0.28	<4	82	3	4	3	<1	1
138571	41	61	<5	16	1.1	<2	2	48	0.44	<5	<10	9	38	<.4	<5	<5	22	0.3	0.019	17	16	0.03	165	0.06	1.65	0.18	1.22	4	56	2	4	5	<1	2
138572	110	22	<5	3	<.5	2	<2	37	0.58	11	<10	9	220	<.4	<5	<5	68	0.33	0.106	19	3	0.04	323	0.09	8.78	0.37	4.19	7	24	4	7	10	<1	6
138573	123	46	<5	10	1.4	2	2	56	0.7	13	<10	10	122	0.4	7	<5	58	0.43	0.063	14	9	0.08	812	0.08	6.56	0.56	4.36	8	37	<2	5	9	1	5
138574	59	327	8	20	<.5	23	11	199	2.31	11	<10	5	197	<.4	<5	<5	180	1.36	0.153	20	82	0.31	1058	0.18	7.39	1.08	5.85	9	23	3	12	11	1	13
138575	24	631	<5	116	<.5	83	27	1562	7.37	<5	<10	2	155	<.4	<5	<5	231	5.15	0.149	14	132	3.25	293	0.5	7.76	1.26	2.54	7	39	<2	15	9	2	29
STANDAR	13	147	35	168	0.5	35	14	1039	4.21	26	<10	4	348	5.6	7	6	117	2.32	0.107	26	210	1.26	624	0.38	7.17	1.74	1.34	10	53	6	14	13	3	12
138576	14	291	<5	311	<.5	80	31	1525	7.1	7	<10	<2	147	1.4	<5	<5	240	3.41	0.149	15	139	4.56	316	0.56	7.54	1.9	3.18	<4	21	2	16	5	2	30
138577	15	259	5	160	<.5	77	26	1519	6.64	<5	<10	<2	196	<.4	<5	9	210	4.32	0.155	15	131	3.75	316	0.58	7.9	1.75	2.81	<4	21	<2	17	4	2	31
138578	271	93	13	38	<.5	13	6	211	2.5	13	<10	7	82	<.4	<5	<5	79	0.95	0.062	13	6	0.73	858	0.19	8.88	1.18	4.67	<4	30	5	8	7	2	8
138579	288	110	11	37	<.5	7	8	259	3.14	11	<10	8	111	<.4	5	<5	78	1.17	0.035	20	5	0.62	751	0.21	7.66	1.11	4.53	4	35	3	7	5	2	8
138580	265	55	<5	26	<.5	6	6	171	2.89	<5	<10	6	79	<.4	<5	<5	54	0.85	0.024	17	5	0.44	792	0.18	6.85	0.88	3.83	<4	31	<2	7	5	1	6
138581	49	67	13	30	<.5	8	11	225	3.06	15	<10	8	121	<.4	<5	<5	60	1.33	0.035	16	4	0.55	758	0.2	7.01	1.09	4	<4	41	3	10	6	2	6
138582	119	40	12	26	1.3	10	8	157	2.4	17	<10	12	71	0.5	7	<5	70	0.48	0.063	26	9	0.52	825	0.19	7.74	0.9	4.25	4	33	4	9	8	2	7
138583	116	80	7	17	<.5	4	8	205	2.58	9	<10	6	152	<.4	<5	5	61	1.27	0.036	14	8	0.44	1273	0.2	7.3	1.57	4.17	<4	31	4	8	6	2	7
138584	70	24	<5	14	<.5	3	6	120	1.62	5	<10	11	103	0.4	<5	<5	47	0.62	0.042	31	3	0.34	488	0.15	6.9	0.77	3.85	<4	25	3	8	5	1	7
138585	131	20	<5	19	<.5	2	6	93	2.01	<5	<10	9	85	<.4	<5	<5	42	0.41	0.03	22	4	0.34	567	0.18	7.28	0.7	4.41	<4	25	5	6	5	2	6
138586	4	180	10	40	<.5	7	8	422	2.67	6	<10	8	809	<.4	<5	<5	73	2.61	0.103	23	14	0.93	1909	0.28	7.86	2.7	3.09	<4	34	<2	8	11	2	6
138587	251	28	12	21	<.5	3	7	133	2	8	<10	7	89	<.4	<5	<5	55	0.56	0.034	29	4	0.37	559	0.17	7.15	0.76	4.22	<4	33	2	7	4	2	8
138588	178	37	8	16	<.5	3	7	197	2.16	15	<10	8	127	<.4	<5	<5	54	1.22	0.039	20	3	0.36	1041	0.18	6.95	1.52	3.88	<4	37	2	8	7	2	6
RE 138588	179	38	13	16	<.5	2	7	184	2.21	8	<10	9	130	0.6	<5	<5	55	1.22	0.039	20	3	0.35	1060	0.18	7.01	1.54	3.97	<4	35	2	8	6	2	6
RRE 13858	177	37	<5	16	<.5	3	7	194	2.24	8	<10	6	125	<.4	<5	<5	56	1.22	0.039	20	5	0.36	1032	0.17	6.93	1.51	3.89	<4	34	3	8	5	1	6
138589	106	54	8	21	<.5	2	5	204	2.27	8	<10	8	109	<.4	<5	<5	45	1.19	0.056	16	5	0.3	1177	0.19	7.36	1.59	4.39	<4	29	2	7	7	1	5
138590	111	31	8	14	<.5	5	5	268	2.19	7	<10	4	150	<.4	<5	<5	39	1.22	0.048	17	5	0.29	1259	0.2	7.07	1.65	3.81	<4	26	<2	6	6	2	5
138591	77	84	7	27	0.9	<2	8	263	2.32	7	22	11	176	<.4	<5	<5	40	2.22	0.057	25	4	0.28	1382	0.18	7.23	1.52	3.53	<4	36	2	10	7	2	5
138592	88	38	6	16	<.5	2	3	176	1.74	8	<10	7	124	<.4	<5	<5	32	1.1	0.044	12	3	0.23	930	0.17	7.17	1.7	4.47	<4	29	<2	6	5	1	5
138593	50	93	7	17	0.6	<2	4	160	2.11	15	<10	9	119	<.4	<5	<5	50	1.21	0.061	16	4	0.21	934	0.21	7.58	2.51	3.82	4	42	2	8	8	1	6
138594	152	66	5	18	<.5	2	3	177	1.93	<5	<10	4	121	0.4	<5	<5	48	1.43	0.054	17	3	0.23	1265	0.18	6.98	1.96	3.65	<4	38	2	8	5	1	6
138595	508	23	12	20	1.3	3	3	164	1.98	16	<10	10	113	<.4	9	<5	44	1.32	0.072	15	5	0.29	823	0.2	7.32	1.95	3.84	<4	42	2	9	9	2	5
138596	19	115	<5	13	0.6	2	4	231	2.19	14	<10	9	101	<.4	<5	<5	42	1.31	0.062	20	4	0.31	932	0.19	7.44	1.91	3.86	4	45	3	10	8	2	6
STANDAR	12	146	29	163	0.5	33	13	1066	4.2	23	<10	7	327	5.5	7	5	116	2.31	0.106	24	214	1.22	699	0.41	7.24	1.79	1.29	7	47	7	14	8	2	12

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A403752 Page 1 Received: JUL 21 2004 * 95 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc
SAMPLES	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SI	<2	2	15	32	<.5	2	2	33	0.21	<5	18	5	164	<.4	<5	<5	2	7.3	0.011	<2	8	0.12	181	0.05	0.94	>10	0.21	<4	65	3	2	2	<1	<1
138354	23	767	<5	120	<.5	6	20	2559	6.62	<5	14	<2	221	<.4	<5	<5	209	3.35	0.101	8	9	2.55	377	0.56	8.69	3.03	2.85	19	8	<2	16	<2	1	26
138355	162	913	26	138	<.5	6	19	1572	6.31	<5	<10	6	281	0.6	<5	<5	250	3.14	0.101	7	9	2.4	730	0.56	8.76	2.08	3.63	11	13	<2	16	8	3	26
138356	219	1518	<5	60	<.5	2	14	688	3.91	<5	<10	7	688	<.4	<5	<5	85	2.67	0.131	22	8	1.02	1675	0.29	7.47	2.3	2.85	13	25	<2	12	6	1	7
138357	125	1266	7	59	<.5	3	13	675	3.91	<5	<10	4	729	<.4	<5	<5	91	2.84	0.137	27	11	1.01	1778	0.31	7.83	2.52	2.88	23	27	<2	13	9	2	7
138358	63	1013	11	77	<.5	3	13	573	3.86	<5	11	7	646	0.4	<5	<5	89	2.73	0.133	26	10	0.91	1742	0.28	7.7	2.44	3	20	27	<2	12	7	2	7
138359	114	1566	12	72	0.9	3	14	509	4.02	<5	27	9	578	<.4	<5	<5	94	2.68	0.135	24	9	0.88	1374	0.27	7.52	2.3	3.04	24	24	<2	12	7	2	8
138360	149	967	<5	70	<.5	3	11	467	3.15	<5	<10	9	618	<.4	<5	<5	74	2.44	0.115	25	11	0.81	1721	0.26	7.56	2.41	3.28	18	24	<2	13	8	2	7
138361	46	967	16	84	0.6	3	15	687	4.29	5	<10	7	700	0.4	<5	<5	94	3.08	0.143	25	10	1.05	1729	0.3	7.85	2.48	2.8	12	28	<2	13	10	2	8
138362	413	1895	89	412	11.4	10	15	639	4.8	22	<10	9	454	6.6	16	30	93	3.51	0.133	23	19	1.02	200	0.29	6.74	2.02	2.93	52	43	<2	12	6	1	8
138363	4	40	11	79	<.5	28	15	820	4.32	11	<10	13	1039	<.4	<5	<5	132	3.86	0.176	35	52	2.21	1364	0.46	7.45	2.5	2.48	<4	118	<2	14	4	2	13
138364	3	24	5	72	<.5	27	15	798	4.24	<5	<10	12	446	<.4	<5	<5	132	3.35	0.177	37	54	2.28	1353	0.47	7.36	2.66	2.63	<4	116	<2	14	4	2	13
138365	13	32	13	78	<.5	28	16	825	4.59	<5	<10	11	1036	<.4	<5	<5	141	4.02	0.185	38	55	2.11	1365	0.5	7.82	2.51	2.72	9	122	<2	15	3	2	13
138366	345	990	13	124	1.4	4	17	682	5.55	<5	<10	5	147	0.6	<5	<5	168	2.35	0.098	17	7	1.48	400	0.38	7.69	3.48	2.79	29	6	<2	12	<2		1	15
138367	442	755	7	64	<.5	3	15	603	4.69	<5	33	<2	205	<.4	<5	<5	169	1.95	0.113	12	7	1.79	342	0.44	8.44	3.81	3.23	9	5	<2	14	<2		1	17
RE 138367	454	789	<5	67	1.6	5	17	639	4.88	<5	<10	5	214	0.4	<5	<5	179	2.04	0.118	10	7	1.88	358	0.45	8.77	3.96	3.32	11	5	<2	14	4	2	18
RRE 13836	371	781	<5	58	<.5	8	15	574	4.31	<5	11	2	194	<.4	<5	<5	157	1.79	0.102	9	7	1.62	331	0.41	7.87	3.51	3.05	5	5	<2	13	<2		1	16
138438	25	295	6	103	<.5	5	9	603	3.16	<5	<10	9	729	1	<5	<5	75	2.44	0.124	31	10	0.81	1841	0.28	7.92	2.75	3.13	12	22	<2	11	13	2	5
138439	1147	2473	5	77	2.2	4	18	615	5.13	<5	<10	10	774	<.4	<5	<5	127	3.34	0.188	40	7	1.11	1335	0.35	7.92	2.1	3.35	14	11	<2	16	13	2	8
138440	424	2300	6	98	1.9	4	15	655	4.59	<5	<10	12	818	0.6	<5	<5	117	3.36	0.177	36	9	1.05	1741	0.34	7.81	2.29	3.1	23	10	<2	15	12	2	7
138441	636	2084	6	86	2.3	3	16	608	5.01	<5	<10	12	765	0.5	<5	<5	140	3.36	0.176	36	7	1.09	1500	0.3	7.6	2.3	3.05	12	10	<2	16	11	2	7
138442	126	2795	<5	103	2	<2	17	569	4.36	<5	<10	11	857	0.6	<5	<5	119	3.16	0.177	34	7	1.1	1565	0.33	7.81	2.3	3.05	14	8	<2	15	12	2	7
138443	363	1966	<5	62	0.8	4	15	666	4.73	<5	<10	10	902	<.4	<5	<5	124	3.26	0.183	35	9	1.2	2034	0.35	7.72	2.43	3.15	15	9	<2	16	12	2	7
138444	142	1114	6	65	1.3	5	14	750	4.4	<5	<10	10	977	<.4	<5	<5	114	3.26	0.185	38	7	1.22	2057	0.36	7.94	2.59	3.04	13	10	<2	16	14	2	7
138445	110	1540	<5	67	1	2	13	647	4.38	<5	<10	8	771	<.4	<5	<5	115	3.18	0.173	38	9	0.99	1647	0.32	7.32	2.15	2.96	10	10	<2	15	11	1	7
138446	136	1223	<5	64	1.3	5	14	817	4.79	<5	<10	12	1030	<.4	<5	<5	127	3.31	0.191	40	8	1.22	2022	0.36	7.85	2.53	3.11	18	10	<2	17	14	2	7
138447	117	930	5	61	1.2	3	14	721	4.97	<5	<10	8	960	<.4	<5	<5	136	3.21	0.189	37	10	1.22	1842	0.35	7.77	2.48	3.1	19	10	2	15	11	1	7
138448	239	1794	<5	66	1.8	4	17	732	4.66	<5	<10	11	1018	0.4	<5	<5	111	3.33	0.198	37	8	1.28	1718	0.36	7.99	2.61	3.04	25	10	<2	17	16	2	8
138449	224	1170	5	64	6.7	5	13	908	4.45	<5	<10	8	1187	<.4	<5	6	115	4.8	0.163	36	5	1.36	1770	0.36	7.26	1.61	2.96	29	9	<2	17	11	2	7
138450	217	1658	<5	69	2.2	4	17	783	4.61	<5	<10	13	968	<.4	<5	<5	118	3.44	0.196	36	7	1.26	1818	0.37	7.84	2.56	2.91	23	8	<2	15	13	2	8
138451	256	1379	<5	60	1.7	4	14	644	5.05	<5	<10	10	732	<.4	<5	<5	140	3.16	0.182	32	9	1.12	1608	0.32	7.19	2.05	2.83	4	8	<2	13	10	2	7
138452	157	1161	12	75	1.7	5	11	483	4.54	<5	<10	5	227	<.4	<5	<5	126	3.93	0.152	25	7	0.56	443	0.22	5.86	1.03	2.27	58	7	<2	10	4	1	5
138453	301	1542	6	50	2	3	13	518	4.05	<5	<10	10	808	<.4	<5	<5	102	2.87	0.159	33	8	0.95	1805	0.3	7.73	2.26	3.63	11	9	<2	13	10	1	6
138454	316	1698	<5	58	2.3	3	14	680	4.37	<5	<10	12	863	<.4	<5	<5	105	3.08	0.168	33	9	1.14	1716	0.31	7.69	2.46	3.29	12	9	<2	14	13	1	7
138455	625	2104	<5	62	2.5	5	18	740	5.1	<5	<10	11	971	<.4	<5	<5	124	3.3	0.181	34	12	1.33	1697	0.34	7.87	2.58	3.1	8	9	<2	15	10	1	8
STANDAR	13	147	33	172	<.5	32	14	1090	4.21	22	<10	7	352	5.4	6	5	117	2.3	0.109	27	227	1.26	647	0.42	6.78	1.71	1.48	10	45	4	14	7	2	12
138456	192	894	<5	54	0.6	4	15	602	5.07	<5	<10	9	745	0.4	<5	<5	140	2.77	0.163	28	9	1.14	1561	0.28	7.59	2.38	2.92	5	7	<2	12	2	<1	7
138457	197	1371	<5	65	2.3	6	17	740	4.63	6	<10	9	1427	0.6	<5	<5	117	3.13	0.182	30	8	1.34	1724	0.33	8.43	2.75	2.94	5	10	<2	15	8	1	8
138458	166	1878	6	54	2.1	6	21	667	5.09	<5	<10	10	1437	0.4	<5	<5	117	2.94	0.176	30	11	1.29	1434	0.3	7.92	2.68	2.84	8	11	<2	13	7	<1	8
138459	31	191	10	85	0.8	30	17	827	4.52	9	<10	8	2703	0.4	<5	<5	132	3.24	0.18	35	51	1.76	1948	0.46	7.83	2.97	3.18	7	97	<2	14	5	1	12
138460	89	1316	5	60	2	9	15	727	4.69	8	<10	10	848	0.5	5	<5	129	2.91	0.182	33	12	1.33	1711	0.31	7.85	2.54	2.89	10	8	<2	14	8	<1	8
138461	164	1121	<5	70	1.2	9	16	825	4.7	<5	<10	6	929	0.5	<5	<5	127	2.89	0.19	35	13	1.53	1780	0.34	8.12	2.71	3.06	<4	11	<2	14	8	1	9
138462	3	46	9	90	0.8	33	18	914	4.74	8	<10	10	863	<.4	<5	<5	149	2.9	0.178	37	64	2.44	1669	0.52	8.05	3.72	2.65	5	123	<2	16	<2		1	15
138463	83	1981	<5	85	1.2	7	18	716	4.8	<5	<10	7	904	<.4	<5	<5	129	3	0.197	34	13	1.51	1759	0.36	8.56	2.86	2.94	<4	12	<2	15	6	1	9
138464	59	2246	<5	59	2.9	7	19	600	4.8	<5	<10	10	638	0.4	<5	<5	126	2.77	0.184	29	10	1.31	1392	0.28	7.81	2.64	2.92	25	8	<2	13	5	1	8
138465	281	3637	7	67	3.6	8	26	569	5.4	9	<10	12	681	0.6	<5	<5	136	2.78	0.183	29	11	1.31	1229	0.27	8.09	2.61	3.05	14	8	<2	14	6	1	8
138466	514	2995	9	59	1.7	7	19	617	4.61	<5	<10	6	535	<.4	<5	<5	112	2.61	0.176	31	10	1.27	1398	0.23	7.69	2.52	2.95	13	8	<2	13	4	1	8
138467	477	2524	6	55	2.4	3	19	568	4.59	<5	<10	12	553	<.4	<5	<5	113	2.55	0.171	32	7	1.23	1282	0.24	7.49	2.45	2.85	19	7	<2	12	5	1	7
138468	253	910	9	60	1.9	7	16	685	4.78	<5	<10	11	604	0.4	<5	<5	117	2.78	0.179	30	10	1.33	1507	0.29	7.62	2.66	2.83	14	6	<2	13	7	1	8
138469	48	387	5	65	0.9	8	15	772	4.69	<5	<10	7	868	<.4	<5	<5	119	3.49	0.2	33	9	1.4	1655	0.32	8.35	2.92	2.58	15	7	<2	15	7	1	8
138470	17	788	10	70	1.7	9	16	761	4.62	<5	<10	12	790	<.4	<5	<5	118	3.37	0.198	37	10	1.39	1642	0.3	8.17	2.74	2.66	9	7	<2	14	10	1	8
RE 138470	20	773	10	69	<.5	9	16	782	4.62	5	<10	4	783	<.4	<5	<5	117	3.37	0.2	38	10	1.4	1637	0.3	8.15	2.76	2.65	6	6	<2	15	7	1	8
RRE 13847	18	835	6	71	0.5	10	17	780	4.65	6	<10	8	795	<.4	<5	<5	118	3.49	0.203	37	11	1.43	1659	0.29	8.28	2.8	2.71	8	7	<2	15	8	1	8
138471	42	819	5	66	0.8	9	16	778	4.76	6	<10	13	727	<.4	<5	<5	122	3.2	0.196	34	9	1.46	1553	0.3	8.08	2.61	2.76	41	8	<2	14	7	1	8
138472	92	1003	<5	52	1.9	8	16	743	4.64	9	<10	10	838	<.4	<5	<5	127	2.91	0.192	33	8	1.48	1650	0.32	7.94	2.46	3.04	4	8	<2	15	11	1	8
138473	43	399	<5	60	0.6	11	16	942	5.04	<5	<10	8	1008	<.4	<5	<5	129	3.55	0.211	32	11	1.63	1828	0.37	8.55	2.96	2.8	<4	8	<2	16	12	1	9
138474	47	929	6	59	1.2	10	18	851	5.11	5	<10	9	930	<.4	<5	<5	126	3.28	0.204	33	10	1.6	1730	0.34	8.21	2.64	2.93	15	5	<2	15	10	1	9
138475	41	573	6	58	0.6	8	17	864	5	6	<10	5	930	<.4	<5	<5	119	3.33	0.198	32	11	1.47	1750	0.33	8.19	2.78	2.88	25	7	<2	15	9	1	8
138476	69	495	8	58	0.6	9	16	798	4.85	10	<10	6	861	0.4	<5	<5	124	3.42	0.195	29	10	1.33	1728	0.33	7.97	2.56	2.8	12	5	<2	14	11	1	8
138477	91	1173	94	334	2.2	8	17	773	5.68	15	<10	10	762	3.8	5	<5	114	3.36	0.185	30	8	1.31	312	0.32	7.75	2.32	2.96	7	6	<2	14	10	1	8
138478	36	847	<5	48	1.3	9	13	625	4.99	7	<10	8	779	<.4	<5	<5	114	2.83	0.182	31	11	1.39	553	0.31	7.95	2.51	3.2	29	8	<2	14	10	1	8
138479	105	598	<5	56	<.5	10	16	785	4.76	<5	<10	7	892	<.4	<5	<5	121	3.12	0.206	38	11	1.63	1881	0.35	8.17	2.6	2.9	12	6	<2	15	10	1	9
138480	59	716	<5	53	1.1	9	15	744	4.55	<5	<10	10	835	<.4	<5	<5	118	2.95	0.195	32	9	1.61	1709	0.34	7.88	2.36	2.88	32	6	<2	14	8	1	8
138481	28	725	<5	55	0.8	11	15	758	4.89	<5	<10	10	923	0.4	<5	<5	135	3.05	0.202	28	11	1.59	1823	0.35	8.22	2.6	3.03	13	7	<2	14	9	1	9

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A403752 Page 1 Received: JUL 21 2004 * 95 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc
SAMPLES	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
138482	54	673	<5	58	1.1	10	15	660	5.11	9	<10	8	796	0.4	<5	<5	136	3.05	0.197	30	10	1.35	1701	0.31	7.9	2.4	3.12	11	5	<2	14	11	2	8
138483	55	543	13	105	1.5	11	17	778	4.57	7	21	12	524	0.7	<5	<5	121	3.51	0.195	29	11	1	1681	0.32	7.9	1.79	3.3	27	6	2	14	12	2	8
138484	39	533	6	61	<.5	9	16	844	5.11	<5	<10	4	808	<.4	<5	<5	143	3.69	0.214	33	13	1.44	1655	0.36	8.1	2.62	2.98	6	6	<2	16	10	1	10
138485	32	409	10	53	0.5	10	13	719	4.53	<5	<10	8	1012	<.4	<5	8	122	3.34	0.191	30	10	1.24	1752	0.32	7.98	2.74	2.79	<4	7	<2	14	11	2	8
138486	41	607	<5	54	<.5	8	15	768	4.77	<5	<10	7	1038	<.4	<5	<5	134	3.15	0.195	35	12	1.49	1782	0.34	8.37	2.84	2.91	4	6	<2	16	13	2	9
138487	29	692	<5	54	1.1	8	15	768	4.6	<5	<10	14	1041	<.4	<5	<5	127	3.1	0.194	31	16	1.47	1799	0.36	8.39	2.93	2.87	<4	6	<2	15	13	2	9
STANDAR	12	147	28	168	<.5	33	15	1104	4.31	25	<10	11	340	6	8	9	120	2.21	0.113	25	229	1.32	633	0.37	7.12	1.85	1.62	10	46	4	14	7	2	12
138488	60	469	10	60	1.3	9	14	869	4.67	11	<10	16	974	0.4	8	<5	126	3.37	0.193	29	14	1.41	1765	0.36	8.03	2.88	2.71	12	9	<2	17	15	2	8
138489	63	763	13	61	<.5	13	16	789	4.84	7	20	10	909	<.4	<5	<5	129	3.74	0.202	29	10	1.33	1769	0.37	8.4	2.93	2.85	11	9	2	15	12	2	9
138490	302	1860	10	80	1.5	4	15	685	2.98	41	<10	6	187	0.9	25	<5	91	4.84	0.116	25	6	0.38	462	0.17	4.57	0.31	2.15	24	5	<2	10	6	1	4
138491	72	641	7	51	<.5	6	13	681	4.52	9	<10	11	830	<.4	<5	<5	127	3.09	0.194	27	10	1.31	1853	0.34	7.8	2.63	2.95	20	7	<2	14	11	2	8
138492	137	804	8	58	1.2	3	17	803	4.6	11	<10	11	944	0.5	6	<5	119	3.35	0.187	28	4	1.24	1837	0.35	8.23	2.9	2.71	11	8	<2	13	12	2	8
138493	62	924	<5	57	1.3	4	14	822	4.48	8	<10	13	891	0.5	<5	<5	122	3.3	0.193	25	6	1.27	1815	0.36	7.96	2.83	2.74	6	11	<2	13	11	2	8
138494	82	753	<5	52	1.6	4	12	773	4.26	8	<10	12	886	0.5	7	<5	118	3.4	0.191	25	4	1.22	1773	0.36	8.03	2.95	2.7	11	9	<2	14	16	2	8
138495	20	1240	5	53	1.6	4	14	854	4.51	5	<10	11	998	<.4	9	<5	125	3.56	0.197	33	7	1.24	1862	0.4	8.24	3.12	2.63	7	11	<2	16	17	2	8
138496	7	411	6	48	0.6	3	13	835	4.52	6	<10	12	1053	0.5	<5	<5	121	3.66	0.198	34	8	1.23	1841	0.39	8.49	3.2	2.63	12	11	<2	17	16	2	9
138497	20	353	6	50	0.6	2	12	852	4.56	<5	<10	11	1029	0.5	<5	<5	124	3.61	0.193	38	5	1.24	1773	0.4	8.56	3.19	2.59	8	11	<2	18	15	2	8
138498	67	429	6	43	1.4	4	12	696	4.54	6	<10	12	990	0.5	6	<5	128	3.29	0.181	33	7	1.16	1777	0.36	8.18	2.97	2.7	5	10	<2	17	15	2	8
138499	13	555	<5	46	0.8	4	11	678	4.37	8	<10	13	918	0.7	5	<5	114	3.34	0.173	28	8	1.04	1870	0.34	8.44	3.1	2.79	10	10	<2	14	14	2	7
138500	25	440	<5	57	1.8	6	14	973	5.59	8	<10	11	788	<.4	5	<5	179	3.83	0.145	24	8	1.43	1212	0.42	8.46	3.15	2.19	15	12	<2	18	9	2	17
RE 138500	25	429	<5	56	1	5	13	948	5.47	6	<10	11	776	0.6	5	<5	176	3.76	0.14	23	8	1.39	1194	0.42	8.32	3.08	2.15	15	10	<2	18	8	2	16
RRE 1385(	24	457	7	58	<.5	5	14	961	5.64	6	<10	7	802	<.4	<5	<5	179	3.89	0.15	25	8	1.45	1236	0.43	8.48	3.1	2.23	11	11	<2	18	9	2	16
138501	24	810	18	58	1.4	4	13	844	5.39	<5	<10	14	884	<.4	<5	<5	148	3.4	0.199	29	9	1.32	1749	0.38	8.17	2.87	2.83	15	9	<2	18	15	2	9
138502	46	621	6	63	1	3	13	751	5.15	10	<10	11	691	0.4	8	<5	154	3.86	0.229	25	7	1.15	1767	0.31	8.18	2.57	3.04	33	8	<2	14	10	2	9
138503	46	601	12	56	0.7	<2	13	782	5.31	7	<10	9	826	0.7	<5	<5	141	3.82	0.189	36	8	1.3	1196	0.33	7.74	2.59	2.66	48	10	<2	16	11	2	8
138504	42	695	8	50	1.8	3	14	772	4.99	12	<10	14	960	<.4	13	<5	124	3.58	0.197	36	7	1.3	1707	0.39	8.13	2.91	2.62	21	13	<2	17	17	2	8
138505	23	523	7	50	<.5	3	12	788	4.9	6	<10	11	1079	0.4	<5	<5	119	3.82	0.203	38	6	1.29	1763	0.4	8.62	3.1	2.63	13	11	<2	18	18	2	8
138506	22	474	<5	49	1.6	4	12	794	4.72	7	<10	16	1040	0.6	9	<5	124	3.61	0.194	36	7	1.22	1710	0.4	8.27	3.01	2.72	16	12	<2	18	16	2	8
138507	93	573	7	50	0.7	3	12	788	4.6	5	<10	14	1085	<.4	<5	<5	116	3.67	0.192	34	6	1.19	1683	0.4	8.15	3.03	2.72	27	13	<2	18	18	3	8
138508	35	556	6	49	1	3	12	831	4.4	8	<10	12	1033	0.6	6	<5	111	3.74	0.187	34	5	1.2	1717	0.39	8.5	3.15	2.66	15	13	<2	16	16	2	8
138509	234	865	<5	96	2.3	27	26	1862	8.13	16	<10	10	525	0.6	<5	<5	296	5.03	0.206	20	43	2.92	926	0.9	8.54	2.85	2.15	30	17	<2	26	45	2	35
138510	56	306	7	34	<.5	2	9	498	3.17	7	<10	11	724	<.4	<5	<5	79	2.44	0.124	30	5	0.87	1532	0.29	7.5	2.58	3.44	26	12	<2	17	19	2	6
138511	8	520	<5	45	1.2	2	13	686	4.76	9	<10	11	911	<.4	8	<5	119	3.32	0.185	33	8	1.16	1558	0.38	8.12	2.82	2.96	25	13	<2	15	16	2	8
STANDAR	11	140	29	167	<.5	32	13	1051	4.2	25	<10	6	322	5	7	5	117	2.29	0.109	23	223	1.25	639	0.42	7.03	1.84	1.4	10	48	6	14	7	3	12

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A403751 Page 1 Received: JUL 21 2004 * 59 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM AU** GROUP 3B - 30.00 GM SAMPLE ANALYSIS BY FA/ICP.

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc	Au
SAMPLES	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb
SI	<2	2	10	43	<.5	<2	<2	7	0.14	<5	<10	2	154	<.4	<5	<5	2	7.28	0.012	<2	6	0.1	187	0.05	0.88	>10	0.23	<4	57	3	2	2	<1	<1	<2
138301	404	661	19	89	1	8	9	359	3.03	16	10	8	387	<.4	<5	<5	75	2.11	0.104	26	17	0.7	1369	0.22	7.24	1.91	4	20	29	<2	7	8	1	5	5
138302	274	1859	18	131	1.1	4	15	607	4.62	44	<10	6	486	<.4	<5	<5	127	2.75	0.191	23	6	0.92	1276	0.32	7.64	1.56	3.72	58	11	<2	12	7	1	8	11
138303	465	4390	81	172	3.6	9	24	576	5.22	22	<10	6	692	1.9	5	<5	139	2.54	0.199	26	6	1.23	996	0.34	7.95	2.07	4.01	16	11	<2	14	8	<1	9	26
138304	299	5092	15	69	4.6	13	24	439	4.81	5	<10	8	644	0.4	7	<5	109	2.02	0.159	21	7	1.03	577	0.26	6.8	2.15	3.59	11	8	<2	11	7	<1	7	25
138305	272	2592	9	60	2.4	9	16	526	4.51	<5	12	8	881	0.8	10	<5	112	2.66	0.161	21	8	1.28	942	0.3	8.36	2.93	3.79	14	8	<2	12	7	1	8	13
138306	137	739	9	110	0.8	40	20	896	5.95	<5	14	3	168	<.4	5	<5	247	1.26	0.149	15	79	4.1	793	0.51	6.78	2.05	4.62	9	17	2	14	7	<1	22	4
138307	230	1360	7	106	0.5	40	22	1218	6.09	9	<10	3	215	<.4	<5	<5	169	2.51	0.134	16	73	2.79	703	0.45	7.39	2.21	3.23	22	20	<2	17	5	<1	26	6
138308	327	2155	9	111	1.8	39	27	896	5.9	<5	<10	4	254	<.4	<5	<5	173	1.4	0.134	17	71	3.45	1082	0.44	6.94	2.06	4.42	<4	9	<2	14	6	<1	19	7
138309	695	6215	11	97	4	22	29	798	5.58	<5	<10	3	626	0.5	<5	<5	163	2.65	0.145	24	15	2.11	639	0.43	8.18	3.18	3.2	16	11	<2	18	7	1	15	31
138310	565	295	<5	124	<.5	41	28	1377	5.91	<5	30	<2	201	<.4	<5	16	279	1.55	0.149	17	72	4.33	1214	0.54	7.4	2.34	4.37	4	19	<2	15	5	1	27	4
138311	285	978	11	174	1	45	27	2162	6.66	9	<10	2	274	<.4	5	<5	264	1.8	0.165	13	82	4.05	2109	0.58	7.78	2.68	4.29	11	6	<2	17	5	1	28	3
138312	1091	2065	11	154	15.6	40	27	1680	6.31	<5	15	<2	274	<.4	<5	5	213	1.77	0.146	16	78	3.09	1878	0.49	7.03	2.1	4.19	60	19	4	17	4	1	26	13
138313	532	2161	8	155	2	46	28	1539	6.23	<5	<10	3	297	<.4	5	5	232	1.52	0.155	13	82	3.11	2552	0.52	7.19	2.3	4.22	9	6	<2	16	6	1	26	11
138314	299	678	8	151	<.5	45	26	1643	6.13	<5	<10	3	222	<.4	<5	<5	275	1.41	0.151	14	79	4	1659	0.53	7.28	2.36	4.31	<4	7	<2	16	3	1	26	2
138315	253	919	8	107	1.7	42	23	1120	5.87	<5	<10	3	176	<.4	7	<5	256	1.82	0.146	15	81	3.57	707	0.48	6.9	2.2	4.18	20	6	<2	14	5	1	26	16
138316	510	1128	<5	101	0.5	44	27	1218	6.31	<5	<10	<2	274	<.4	<5	<5	189	2.25	0.155	18	87	3.19	810	0.48	7.2	2.43	3.68	8	14	<2	17	4	1	27	9
138317	470	2340	7	79	2	23	25	955	5.32	<5	<10	5	721	<.4	6	<5	163	3.13	0.185	23	37	2.36	851	0.42	8.12	3.08	2.74	29	12	2	19	10	2	16	7
138318	506	2152	9	46	1.7	13	15	428	3.38	<5	13	6	715	<.4	<5	<5	98	2.15	0.117	20	16	1.33	829	0.25	8.11	3.17	3.48	16	6	<2	12	4	2	9	6
138319	563	784	<5	110	1.2	41	24	1043	5.98	<5	<10	2	221	<.4	<5	<5	187	1.33	0.137	15	81	4.13	1151	0.47	6.87	1.94	4.53	10	16	<2	14	4	1	23	5
138320	291	715	9	149	0.6	53	29	1571	6.18	<5	<10	3	188	<.4	<5	5	236	1.2	0.15	16	88	4.31	1027	0.51	7.15	2.24	4.48	5	24	<2	16	5	1	27	4
RE 138320	296	732	<5	153	<.5	52	30	1617	6.18	<5	<10	<2	185	<.4	<5	<5	241	1.15	0.154	14	93	4.23	1027	0.51	6.79	2.17	4.52	4	19	<2	14	3	1	24	5
RRE 13832	315	660	12	161	<.5	57	32	1679	6.64	<5	11	4	197	<.4	<5	<5	256	1.3	0.162	17	96	4.69	1079	0.53	7.6	2.37	4.72	7	24	<2	16	6	2	29	4
138321	159	1094	9	113	0.6	49	25	1820	6.47	8	<10	3	171	0.5	5	<5	250	2.92	0.163	16	97	3.43	556	0.51	7.55	3	3.25	101	12	<2	19	7	1	29	4
138322	178	801	8	133	0.6	52	26	1259	6.24	<5	<10	3	160	<.4	<5	5	267	1.17	0.152	15	97	4.39	862	0.49	6.98	2.23	4.49	4	19	<2	15	4	2	26	6
138323	227	1254	11	139	1.1	52	28	2280	6.87	<5	<10	3	197	<.4	<5	<5	238	2.21	0.165	14	96	3.65	482	0.5	7.87	3.5	3.12	48	10	<2	18	5	1	29	<2
138324	34	515	8	164	<.5	58	30	2696	6.94	<5	<10	<2	265	<.4	<5	<5	228	1.94	0.169	13	99	4.17	1554	0.53	7.71	2.94	3.95	17	6	<2	18	5	1	29	<2
138325	131	1590	14	178	0.9	56	30	1505	6.96	<5	<10	3	359	<.4	<5	<5	235	2.62	0.164	16	100	3.28	1219	0.52	7.71	2.3	3.65	72	10	<2	17	5	2	29	17
138326	272	898	7	178	<.5	53	25	1548	6.32	15	<10	<2	196	<.4	<5	<5	216	1.91	0.155	13	101	3.82	601	0.48	6.89	2.26	3.8	18	3	<2	14	4	2	26	3
138327	87	483	6	171	<.5	59	26	1961	6.42	<5	<10	2	217	<.4	<5	<5	211	1.91	0.159	17	103	3.99	546	0.5	7.3	2.71	3.75	29	9	<2	17	6	2	27	6
138328	227	915	10	194	<.5	61	27	2086	6.38	<5	12	<2	194	<.4	<5	5	221	1.41	0.155	14	106	4.08	522	0.5	6.62	2.41	4	10	7	<2	15	4	2	23	2
138329	102	575	<5	164	<.5	58	27	1804	6.59	6	<10	2	192	<.4	5	<5	251	1.54	0.159	14	99	4.05	609	0.5	6.55	2.48	3.94	11	24	<2	16	5	2	23	<2
138330	203	917	<5	143	0.7	57	30	1969	6.56	<5	<10	3	334	<.4	<5	<5	234	2.56	0.164	16	101	4.18	994	0.53	7.71	2.67	3.45	48	29	<2	19	5	2	30	4
138331	56	556	7	113	1.2	60	29	1802	6.92	5	<10	5	469	<.4	8	<5	238	3.55	0.172	15	104	3.75	896	0.53	7.96	3.14	2.73	17	23	<2	20	9	2	30	3
138332	79	1160	9	120	0.8	61	32	1681	7.33	<5	<10	3	513	0.4	<5	<5	250	3.94	0.173	17	108	3.47	747	0.55	8.08	3.05	2.56	54	31	<2	21	7	2	31	2
STANDAR	12	153	30	164	<.5	33	14	1100	4.29	21	<10	6	336	5.9	7	7	122	2.29	0.111	23	230	1.25	667	0.41	7.11	1.94	1.38	8	46	4	14	7	2	13	491
138333	67	1349	7	132	1.5	68	36	1770	7.57	10	17	4	712	0.5	<5	5	246	4.26	0.161	15	117	3.95	1077	0.56	7.81	2.71	2.71	29	29	<2	20	3	1	29	7
138334	157	1252	<5	128	1.6	63	31	1712	7.21	<5	<10	5	493	<.4	<5	<5	237	3.01	0.161	15	125	4.02	1205	0.56	7.57	2.45	3.3	58	24	<2	19	3	2	26	34
138335	43	1515	5	166	2.7	50	35	2485	7.37	6	10	2	240	<.4	<5	<5	172	2.39	0.16	15	88	4.08	462	0.56	7.28	3.22	3.05	47	33	<2	19	2	1	26	10
138336	156	612	6	175	1.1	41	27	2316	6.92	<5	<10	2	268	0.6	<5	<5	218	2.55	0.159	17	81	4.2	485	0.55	7.51	3.14	3.16	24	24	<2	19	6	1	26	2
138337	182	325	8	185	<.5	42	26	2463	6.54	<5	<10	2	237	<.4	<5	<5	219	1.64	0.159	14	82	4.31	870	0.56	7.07	2.68	3.87	<4	27	<2	17	2	1	25	732
138338	302	953	14	224	0.7	43	28	2237	6.5	<5	<10	<2	302	0.8	<5	5	222	2.07	0.15	16	82	4.03	1201	0.54	6.89	2.59	3.63	34	24	<2	18	<2	1	25	3
138339	94	789	5	155	1.4	44	29	2097	6.92	6	<10	3	367	<.4	<5	<5	256	2.45	0.163	16	84	4.38	1091	0.57	7.5	2.73	3.55	53	32	<2	18	5	2	27	4
138340	35	405	<5	175	<.5	47	28	2161	6.44	<5	<10	<2	275	<.4	<5	<5	239	1.82	0.156	13	80	4.29	1309	0.55	6.57	2.46	3.79	44	25	<2	17	6	2	23	<2
138341	126	284	7	123	0.8	175	37	2974	6.51	<5	<10	<2	341	0.4	<5	5	242	3.93	0.072	6	450	5.57	1166	0.5	7.06	1.92	3.02	14	21	<2	16	3	1	32	3
138342	62	586	<5	138	1.1	174	37	2882	6.29	<5	<10	6	264	<.4	<5	<5	239	3.77	0.066	4	446	5.4	1166	0.48	6.64	1.7	3.23	21	21	<2	14	4	1	30	3
138343	381	970	11	189	<.5	144	32	2840	5.65	<5	28	<2	324	0.5	<5	<5	232	7.6	0.063	6	392	2.97	383	0.44	6.47	0.55	2.75	44	23	<2	15	<2	1	31	5
138344	23	269	<5	236	1.1	120	33	3179	7.46	<5	<10	2	210	<.4	<5	6	223	3.42	0.123	9	307	4.7	551	0.55	7.56	2.9	2.76	31	27	<2	17	5	2	31	<2
RE 138344	22	253	<5	229	<.5	115	31	3009	7.11	<5	<10	2	202	<.4	<5	<5	212	3.2	0.117	9	287	4.42	530	0.53	7.21	2.77	2.69	22	27	<2	16	3	2	29	<2
RRE 13834	23	253	5	227	<.5	112	30	2961	7.19	<5	11	2	202	<.4	<5	11	211	3.21	0.116	10	271	4.44	525	0.53	7.31	2.78	2.7	22	29	<2	16	3	2	30	<2
138345	165	1189	7	161	2	64	31	2258	7.2	11	<10	6	190	<.4	7	<5	225	2.99	0.152	14	109	3.81	584	0.54	7.22	2.84	2.91	43	24	<2	18	6	2	26	4
138346	188	698	5	132	<.5	63	29	1974	6.63	<5	<10	4	216	<.4	<5	<5	240	2.36	0.166	14	114	3.97	1451	0.59	7.08	2.43	3.62	22	25	<2	18	5	2	25	<2
138347	138	682	5	177	1.1	66	29	2201	6.74	7	<10	4	227	<.4	<5	<5	129	3.31	0.137	12	103	3.94	1095	0.53	7.1	1.87	3.73	44	19	<2	16	5	1	25	<2
138348	93	1070	9	163	0.8	77	41	2091	7.42	11	<10	2	248	<.4	<5	<5	108	3.24	0.121	9	138	3.92	2493	0.51	6.68	1.08	5.23	50	17	<2	13	5	1	22	8
138349	418	1938	9	147	2.1	74	35	1652	8.71	10	<10	4	207	<.4	<5	<5	174	2.96	0.115	11	153	4.14	941	0.51	6.66	1.14	4.87	22	10	<2	12	4	2	23	7
138350	626	2467	10	129	3	36	26	1075	8.03	13	17	3	183	<.4	<5	5	146	2.67	0.094	11	60	3.42	819	0.5	7.23	1.63	4.19	15	17	<2	13	4	2	25	24
138351	283	3134	14	143	0.7	11	30	1347	7.26	9	<10	<2	201	<.4	<5	<5	271	2.59	0.076	10	9	1.88	261	0.45	7.97	3.7	2.56	24	23	<2	19	3	2	23	37
138352	164	1888	8	121	1.7	6	24	1625	7.24	5	<10	3	208	0.4	<5	<5	163	2.73	0.095	7	6	2.07	447	0.5	8.12	2.95	3.33	10	10	<2	14	4	1	25	22
138353	141	1814	16	124	1.9	5	28	2203	7.32	9	15	<2	199	<.4	7	8	144	2.86	0.103	7	6	2.17	532	0.54	8.25	2.79	3.76	26	11	7	13	4	2	25	6
138420	301	2549	6	102	2.6	11	19	891	6.15	6	<10	4	187	<.4	5	<5	163	1.94	0.041	12	17	1.52	325	0.44	7.51	3.56	2.78	20	14	<2	14	8	1	22	12
STANDAR	14	157	31	174	<.5	33	15	1059	4.52	21	<10	7	357	5.5	7	8	123	2.43	0.11	25	249	1.31	668	0.43	7.3	1.81	1.3	10	51	6	15	10	2	13	489

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A403718 Page 1 Received: JUL 21 2004 * 76 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM AU** GROUP 3B - 30.00 GM SAMPLE ANALYSIS BY FA/ICP.

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc	Au
SAMPLES	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb
SI	<2	<2	11	20	<.5	3	<2	26	0.08	<5	<10	<2	139	0.4	<5	<5	4	7.42	0.012	<2	2	0.12	145	0.03	0.87	>10	0.15	<4	71	3	3	<2	<1	<1	2
138368	282	1732	<5	60	1.7	5	20	560	5.26	19	<10	5	159	0.9	7	6	193	1.38	0.098	13	4	1.66	270	0.37	8.16	4.03	2.72	5	4	<2	14	3	1	16	15
138369	600	1255	12	62	<.5	6	17	638	4.47	17	<10	<2	193	<.4	<5	11	197	1.75	0.088	12	4	1.69	556	0.39	8.26	2.97	4.63	5	8	2	10	2	1	18	12
138370	478	894	12	82	0.6	8	18	885	5.14	11	<10	5	193	0.4	8	10	182	1.93	0.103	14	4	2.28	411	0.5	8.94	3.51	4.15	5	9	2	13	4	1	23	9
138371	245	683	9	47	<.5	4	15	703	4.1	14	<10	5	615	<.4	<5	9	100	2.72	0.134	25	4	1.29	1606	0.31	8.04	2.86	2.53	5	20	2	12	7	2	8	32
138372	336	1036	9	49	<.5	5	14	709	4.26	12	<10	5	757	<.4	<5	16	96	3.17	0.149	26	4	1.13	1889	0.3	8.39	2.83	2.61	5	22	3	13	9	1	8	12
138373	517	1913	10	48	1.3	6	16	632	4.19	11	<10	6	663	0.6	<5	11	91	2.87	0.142	26	5	1.09	1782	0.27	8	2.59	2.76	10	22	2	12	7	1	7	10
138374	400	1866	10	55	2.1	3	18	591	4.24	24	<10	9	651	0.5	<5	10	90	2.93	0.143	25	4	1.04	1444	0.26	7.89	2.64	2.52	6	24	<2	12	9	1	7	11
138375	346	931	7	87	1	6	23	795	5.41	17	<10	6	210	0.7	12	16	172	1.96	0.103	13	4	2.17	470	0.42	8.79	3.87	3.22	9	11	2	15	5	1	22	4
138376	606	2323	17	61	2	3	16	504	4.35	15	<10	5	588	0.6	<5	7	99	2.68	0.136	22	5	1.01	571	0.27	7.75	2.82	2.47	9	22	<2	12	7	1	8	15
138377	541	1753	9	47	1.2	6	20	583	4.4	14	<10	4	524	0.4	<5	14	104	2.59	0.123	23	4	1.18	1177	0.29	7.9	2.79	2.55	9	18	2	13	7	1	9	14
138378	253	1006	<5	60	0.5	5	16	812	5.03	16	<10	2	368	<.4	<5	11	143	2.62	0.131	17	5	1.62	703	0.37	8.76	3.69	2.3	10	18	3	18	5	2	14	4
138379	24	688	6	47	<.5	5	14	659	4.47	13	<10	4	697	<.4	<5	5	105	3.17	0.143	25	4	1.51	1591	0.31	8.27	2.82	2.23	7	25	<2	15	9	2	11	4
138380	167	609	8	45	1.2	5	17	734	4.25	17	<10	8	758	0.9	<5	15	94	3.4	0.151	27	5	1.28	1798	0.31	8.3	2.6	2.18	10	26	2	13	10	2	8	2
RE 138380	166	591	6	46	0.6	3	16	720	4.17	13	<10	5	718	0.4	<5	6	91	3.32	0.145	26	5	1.24	1761	0.3	8.16	2.52	2.12	8	24	2	13	8	1	7	8
RRE 13838	166	591	6	45	<.5	4	15	713	4.11	13	<10	<2	757	<.4	<5	7	90	3.36	0.146	27	4	1.26	1787	0.31	8.25	2.55	2.12	10	24	3	13	9	2	7	3
138381	168	890	9	67	0.6	5	16	584	4.05	14	<10	5	514	0.6	<5	12	93	2.81	0.13	23	5	0.94	1326	0.27	7.48	2.68	2.15	21	19	<2	12	7	1	7	23
138382	85	626	5	73	0.5	4	16	753	4.67	14	<10	3	319	0.7	<5	11	152	2.16	0.12	16	4	1.65	582	0.38	8.54	3.81	2.14	4	17	2	14	7	2	14	5
138383	932	1912	<5	90	2.2	5	18	826	5.25	15	<10	4	173	0.7	8	<5	194	1.58	0.113	16	4	2.51	282	0.47	8.58	3.76	2.99	6	10	2	14	6	1	20	9
138384	477	1876	<5	64	1.9	8	17	632	4.97	19	<10	6	210	0.7	9	14	173	1.73	0.104	13	4	1.81	424	0.42	8.67	3.78	2.93	5	9	3	12	5	1	19	5
138385	327	1690	9	29	1	3	23	359	3.23	20	<10	9	467	<.4	<5	5	66	2.21	0.086	30	2	0.86	1289	0.18	8.13	2.58	2.83	5	11	2	12	5	2	7	12
138386	226	641	11	76	<.5	8	12	911	4.79	21	<10	<2	222	0.5	<5	15	171	2.25	0.116	15	5	1.72	581	0.43	9.52	2.28	4.18	6	7	2	13	3	2	23	8
138387	277	852	9	80	<.5	6	16	1061	4.74	16	<10	2	158	0.5	<5	7	165	2.13	0.115	15	4	1.77	234	0.44	8.67	4.08	1.97	5	15	2	17	3	1	18	9
138388	752	1906	<5	75	0.8	8	20	837	5.25	10	<10	3	184	0.4	<5	10	174	1.72	0.113	17	9	1.69	385	0.42	9.05	4.13	3	7	8	2	14	3	2	22	11
138389	517	984	10	84	0.8	4	18	1007	5.4	12	10	3	194	<.4	5	13	206	2.14	0.12	17	7	1.95	452	0.49	9.19	3.65	3.17	6	9	4	14	4	2	22	4
138390	99	799	<5	69	0.6	4	20	849	5.08	7	<10	2	174	0.9	<5	11	180	2.28	0.113	15	6	1.95	401	0.48	9.14	3.68	2.67	9	11	2	19	3	1	21	4
138391	458	922	6	70	0.9	6	20	1093	5.97	<5	<10	<2	167	<.4	<5	12	170	2.31	0.112	19	8	1.61	331	0.44	8.81	3.93	2.29	6	10	2	18	3	1	19	21
138392	153	966	11	64	<.5	6	18	827	5.38	8	<10	4	179	0.6	<5	15	132	1.84	0.111	15	6	1.45	594	0.43	9.05	3.63	3.42	<4	7	3	15	3	1	21	10
138393	344	1263	<5	70	<.5	4	18	690	5.02	7	<10	3	247	0.5	<5	<5	179	1.97	0.11	16	6	1.92	744	0.42	8.69	3.63	3.09	<4	6	3	16	4	1	16	6
138394	225	875	<5	98	1.3	6	22	913	5.44	12	<10	5	207	0.8	<5	10	238	1.8	0.124	9	6	3.37	1249	0.54	8.65	3.04	4.41	<4	7	3	12	6	3	15	3
138395	176	824	6	119	<.5	5	17	1120	5.36	<5	<10	2	203	0.6	<5	6	250	1.61	0.121	11	5	2.9	993	0.53	8.87	3.2	4.25	<4	3	3	12	4	2	18	3
138396	791	972	8	84	0.6	2	18	780	4.96	6	<10	3	249	0.5	<5	6	212	1.67	0.113	21	5	2.17	694	0.46	8.75	3.64	3	<4	6	3	14	4	1	16	5
138397	129	1155	<5	36	1.1	8	12	371	3.2	<5	<10	8	619	<.4	<5	<5	92	2.16	0.102	26	16	1.17	1294	0.27	7.89	2.83	2.41	<4	33	2	9	10	2	7	4
138398	205	2110	<5	89	1.6	2	18	898	5.28	<5	<10	3	159	0.5	<5	13	203	1.64	0.101	16	6	1.65	283	0.39	8.45	4.15	1.98	7	5	3	13	2	1	16	7
138399	90	1411	<5	79	1.5	4	18	1193	5.23	7	<10	5	156	0.7	<5	10	205	2.12	0.105	14	7	1.87	267	0.43	8.57	4.19	1.74	13	9	2	18	5	1	17	5
STANDAR	13	147	27	161	<.5	31	14	1033	4.01	23	<10	5	325	5.5	<5	5	119	2.3	0.106	26	221	1.21	652	0.42	7.14	1.85	1.24	9	46	6	14	7	2	13	494
138400	66	1067	48	77	1.7	7	18	897	5.57	<5	<10	2	167	0.6	6	10	198	2.02	0.105	15	7	1.67	258	0.41	8.71	4.31	2.14	<4	12	<2	19	<2	2	18	6
138401	186	1353	<5	62	1.3	7	22	509	5.22	<5	<10	2	184	0.6	<5	<5	210	1.69	0.114	15	6	1.6	291	0.43	8.94	4.16	2.55	<4	10	<2	16	<2	2	20	14
138402	389	1903	15	59	2.4	6	16	520	4.84	<5	<10	2	166	0.7	<5	12	161	1.87	0.105	17	6	1.54	292	0.39	8.59	3.95	2.75	<4	16	<2	17	<2	2	16	7
138403	107	832	<5	62	0.6	7	16	756	4.87	<5	<10	<2	200	<.4	<5	9	146	2.16	0.102	11	6	1.63	420	0.43	8.36	3.24	2.7	4	15	<2	18	<2	2	16	10
138404	113	1191	8	28	1.4	2	10	252	2.85	<5	<10	4	202	0.4	<5	10	83	1.66	0.055	14	5	0.38	592	0.19	6.81	2.85	2.65	<4	21	<2	10	3	1	8	9
138405	97	524	6	36	0.5	3	6	207	2.43	<5	<10	6	391	<.4	<5	<5	66	1.71	0.054	19	7	0.51	1672	0.17	7.54	2.54	3.24	<4	23	<2	9	4	2	5	4
138406	62	199	9	19	0.6	4	4	230	1.97	<5	<10	7	239	<.4	<5	9	62	1.32	0.037	13	6	0.57	1065	0.15	7.23	2.36	3.18	<4	22	<2	7	5	2	5	2
138407	161	526	10	19	0.8	3	8	245	3.18	6	<10	6	349	0.5	8	8	72	1.67	0.079	23	7	0.49	1132	0.25	8.65	3.15	3.55	4	18	<2	9	8	2	9	7
138408	47	601	14	32	1.2	4	7	257	2.72	9	<10	7	391	0.9	6	<5	66	1.83	0.072	23	5	0.44	1367	0.21	7.45	2.59	2.8	6	19	<2	9	7	2	7	2
138409	59	680	12	20	0.9	3	8	202	2.46	5	<10	8	558	0.6	<5	<5	55	1.95	0.084	28	8	0.49	1610	0.15	7.49	2.29	3.21	4	19	<2	13	7	2	5	6
138410	46	621	7	20	0.6	3	7	227	2.61	<5	<10	4	417	<.4	<5	<5	72	1.56	0.095	24	5	0.58	1120	0.24	7.58	2.36	3.64	10	10	<2	14	7	2	7	2
138411	114	2578	10	68	2.2	6	18	845	5.74	<5	<10	3	807	0.7	9	6	173	3.87	0.199	27	9	1.83	1221	0.51	8.3	2.54	2.02	<4	13	<2	17	6	2	13	15
138412	17	1364	<5	71	1.2	9	23	1106	5.94	<5	<10	5	920	0.7	6	<5	186	4.57	0.21	29	7	1.84	1312	0.54	8.29	2.73	1.95	5	19	<2	17	9	3	14	8
138413	14	319	6	72	<.5	4	17	1279	5.91	<5	<10	3	1012	0.7	<5	<5	189	4.99	0.209	29	10	1.83	1408	0.59	8.61	3	1.97	11	17	<2	18	6	2	14	<2
138414	23	663	<5	68	<.5	7	18	1108	5.71	<5	<10	4	943	0.5	<5	<5	180	4.48	0.197	29	8	1.74	1350	0.53	8.35	2.78	2.03	7	15	<2	17	5	2	14	3
138415	80	820	8	24	1.2	4	7	295	2.81	<5	<10	8	324	<.4	<5	5	75	1.97	0.08	20	13	0.48	728	0.23	6.86	2.76	2.52	4	14	<2	11	3	1	7	8
138416	38	705	12	20	0.8	3	8	222	2.83	11	<10	8	218	0.4	11	5	68	1.7	0.068	20	11	0.29	682	0.23	7.34	3.18	3.14	5	15	<2	11	7	2	7	6
138417	152	1845	9	30	2.2	4	12	367	4.02	<5	<10	3	433	0.7	<5	<5	95	2.42	0.102	19	8	0.56	540	0.26	7.88	3.09	2.85	11	14	<2	16	3	2	9	11
138418	37	478	<5	48	<.5	4	10	539	4.07	<5	<10	2	733	<.4	<5	<5	90	3.15	0.126	20	6	0.87	1039	0.29	7.76	2.94	2.22	<4	11	<2	11	6	2	7	3
RE 138418	39	475	<5	53	<.5	4	10	546	4.22	<5	<10	2	758	<.4	<5	<5	91	3.22	0.128	22	13	0.91	1255	0.29	7.92	2.94	2.21	6	9	<2	12	6	2	7	2
RRE 1384	40	469	<5	50	<.5	4	10	540	4.23	<5	<10	<2	728	<.4	<5	<5	91	3.15	0.127	18	9	0.88	1024	0.3	7.7	2.94	2.22	<4	8	<2	11	5	2	7	2
138419	129	914	7	37	<.5	2	12	457	4.2	<5	<10	4	669	<.4	<5	<5	91	2.86	0.126	18	8	0.86	320	0.26	7.5	2.48	2.74	15	8	<2	10	8	1	7	6
138420 not	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2
138421	62	866	5	37	1	6	13	539	4.36	<5	<10	5	722	0.5	<5	<5	98	3.01	0.135	20	10	0.93	708	0.28	7.73	2.66	2.58	7	10	<2	11	8	2	7	6
138422	30	400	12	41	0.7	6	12	635	4.25	<5	<10	7	795	<.4	<5	<5	100	3.41	0.141	22	8	1.02	1105	0.32	8.08	2.98	2.42	6	11	<2	12	9	2	8	6
138423	161	908	7	37	1	6	11	473	4.44	<5	<10	5	726	0.4	<5	<5	96	2.95	0.131	23	13	0.93	347	0.27	7.76	2.51	2.71	12	11	<2	11	5	2	7	20
138424	87	773	8	42	0.8	7	11	604	4.21	<5	<10	5	799	0.5	7	<5	94	3.41	0.14	24	8	1	1115	0.32	8.15	2.96	2.5	7	9	<2	12	10	2	8	4
138425	61	390	33	85	0.5	5	11	570	4.11	8	<10	3	722	0.5	<5	<5	96	3.25	0.137	19	9	1	1405	0.32	7.63	2.8	2.28	<4	11	<2	11	8	2	7	3

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation PROJECT BEAR
Acme file # A403718 Page 1 Received: JUL 21 2004 * 76 samples in this disk file.
Analysis: GROUP 1E - 0.25 GM AU** GROUP 3B - 30.00 GM SAMPLE ANALYSIS BY FA/ICP.

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc	Au
SAMPLES	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb
138426	111	630	5	41	1.3	3	12	562	3.99	<5	<10	8	773	<.4	<5	10	93	3.33	0.135	18	8	0.98	924	0.31	7.71	2.87	2.36	6	10	<2	11	11	2	7	3
138427	63	598	8	53	<.5	5	11	605	4.05	<5	<10	3	770	<.4	<5	<5	96	3.14	0.139	22	9	1.04	1797	0.33	8.09	2.96	2.33	<4	12	<2	12	9	2	8	5
138428	99	541	7	45	0.7	3	11	656	4.08	6	<10	5	760	<.4	<5	6	98	3.31	0.144	19	6	1.07	1778	0.34	8.02	2.95	2.28	5	11	<2	12	10	2	7	5
138429	70	334	10	39	<.5	7	10	693	4.12	<5	<10	2	776	<.4	<5	7	95	3.18	0.143	19	9	1.06	1770	0.33	7.81	2.99	2.25	<4	11	<2	11	10	2	7	2
138430	79	393	6	41	0.5	6	11	678	4.06	<5	<10	5	792	<.4	7	<5	97	3.31	0.147	25	7	1.14	1783	0.34	8.61	3.22	2.43	5	14	<2	13	12	2	9	3
138431	198	723	9	39	0.9	6	14	618	4.47	13	<10	5	644	<.4	13	<5	94	3.52	0.134	20	8	1.06	1022	0.3	7.62	2.66	2.35	8	13	<2	12	9	2	8	3
STANDAR	12	145	28	169	<.5	37	13	1104	4.23	22	<10	4	348	5.7	8	6	121	2.31	0.109	23	225	1.24	674	0.41	7.2	1.92	1.46	10	51	5	14	7	3	13	486
138432	60	295	6	41	<.5	<2	12	693	4.27	<5	<10	5	802	0.6	<5	<5	95	3.33	0.147	23	8	1.11	1741	0.34	8.17	3.07	2.55	10	17	<2	12	12	2	7	2
138433	39	586	6	36	0.9	<2	13	530	4.11	<5	<10	6	703	<.4	6	<5	96	3.14	0.14	22	10	1.07	685	0.31	8.09	2.86	2.81	18	15	2	12	12	2	7	4
138434	68	688	8	35	<.5	<2	12	446	4.08	<5	<10	7	641	<.4	<5	<5	99	3.06	0.146	23	7	1.05	659	0.29	8.22	2.66	2.9	19	17	<2	12	10	2	7	4
138435	150	661	5	35	1.2	<2	14	422	4.05	<5	<10	5	605	0.5	<5	<5	88	2.81	0.131	20	13	0.91	374	0.27	7.61	2.53	2.71	13	16	<2	11	7	2	7	4
138436	58	416	8	38	<.5	2	11	504	3.86	<5	<10	6	640	0.5	<5	<5	86	2.91	0.134	21	8	1.09	1461	0.3	7.65	2.54	2.45	14	13	<2	12	10	2	7	<2
138437	20	246	<5	35	0.9	<2	10	510	3.52	<5	<10	6	662	<.4	5	<5	80	2.78	0.131	18	6	0.99	1622	0.29	7.95	2.68	2.95	<4	13	<2	12	13	2	7	4
STANDAR	11	140	29	167	<.5	32	13	1051	4.2	25	<10	6	322	5	7	5	117	2.29	0.109	23	223	1.25	639	0.42	7.03	1.84	1.4	10	48	6	14	7	3	12	474

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6
To Imperial Metals Corporation PROJECT BEAR
Acme file # A404220R   Received: AUG 30 2004 *   2 samples in this disk file.
Analysis: GROUP 7TD - 0.500 GM

SAMPLE	Mo %	Cu %
SAMPLE	%	%
138782	1.476	2.393
STANDAR	0.051	0.587

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT
To Imperial Metals Corporation
Acme file # A403968 Page 1 Received: JUL 28 2004 * 41 samples in this disk file.
Analysis: GROUP 1D - 0.50 GM
AU** GROUP 3B - 30.00 GM SAMPLE ANALYSIS BY FA/ICP.

SAMPLE	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au**
SAMPLE	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppb
SI	<1	<1	6	13	<.3	<1	<1	6	0.05	<2	<8	<2	<2	1	<.5	<3	<3	<1	0.07	<.001	<1	<1	<.01	2	<.01	<3	<.01	0.29	<.01	<2	<2
164951	2	376	11	27	0.5	6	46	153	5.57	2	<8	<2	3	103	<.5	<3	9	23	0.54	0.119	7	7	0.21	52	0.1	7	0.5	0.07	0.07	44	32
164952	2	73	3	50	3.4	4	7	311	3.4	9	<8	<2	5	37	<.5	20	31	66	0.43	0.126	6	15	0.83	195	0.13	7	1.11	0.06	0.2	3	64
164953	33	555	5	33	<.3	5	5	367	1.65	<2	<8	<2	5	38	<.5	<3	<3	39	0.59	0.092	19	14	0.39	233	0.08	5	0.56	0.06	0.23	5	2
164954	48	1402	19	56	1	4	5	302	2.23	<2	<8	<2	6	48	<.5	<3	<3	58	0.43	0.094	19	6	0.41	177	0.09	4	0.67	0.06	0.28	<2	7
164955	137	3089	5	23	2.8	7	51	120	3.62	<2	<8	<2	5	26	<.5	<3	5	20	0.23	0.048	2	6	0.22	79	0.02	7	0.87	0.07	0.37	3	28
164956	8	>10000	156	2512	>100	5	12	1573	3.65	2180	<8	<2	<2	258	78.7	>2000	8	15	3.89	<.001	<1	13	1.34	215	<.01	10	0.06	0.01	0.04	2	65
164957	3	114	<3	26	1.2	4	2	167	2.95	5	<8	<2	4	36	<.5	7	<3	84	0.64	0.204	17	13	0.44	116	0.13	4	0.73	0.06	0.12	10	2
164958	3	127	10	27	0.3	4	4	227	2.88	<2	<8	<2	4	40	<.5	<3	3	79	0.73	0.196	16	10	0.45	93	0.13	6	0.67	0.09	0.16	<2	<2
164959	12	17	3	17	<.3	4	4	51	2.22	<2	<8	<2	4	2	<.5	<3	<3	37	0.03	0.017	9	9	0.16	19	0.03	6	0.38	0.08	0.12	<2	11
164960	4	361	5	46	<.3	5	6	435	1.93	<2	<8	<2	6	49	<.5	<3	<3	27	0.97	0.09	20	10	0.36	461	0.04	3	0.71	0.06	0.25	<2	2
164961	772	1569	6	38	0.6	4	9	216	2.17	<2	<8	<2	5	39	<.5	<3	<3	51	0.41	0.112	18	17	0.58	164	0.11	4	0.89	0.06	0.42	3	7
164962	78	2986	70	206	1	4	7	243	1.67	16	<8	<2	8	29	1.3	9	<3	22	0.35	0.118	35	9	0.17	271	0.02	10	0.71	0.04	0.26	4	12
RE 164962	74	2914	71	205	0.9	4	7	236	1.54	15	10	<2	8	29	1.2	10	<3	22	0.34	0.117	34	6	0.17	263	0.02	8	0.7	0.04	0.25	3	3
164963	>2000	1105	1331	176	19.9	3	<1	73	2.15	561	<8	<2	3	53	3.6	23	5	5	0.05	0.023	5	13	0.01	112	<.01	5	0.02	0.01	0.06	<2	69
164964	61	4631	10	65	2.4	5	8	903	3.71	9	<8	<2	<2	14	<.5	<3	5	42	1.39	0.039	3	10	0.73	41	0.09	7	0.96	0.03	0.09	<2	21
164965	74	813	789	541	3.6	4	12	804	4.94	353	8	<2	<2	361	8.3	8	3	28	2.63	0.063	9	7	0.99	142	<.01	5	0.37	0.02	0.12	2	6
164966	206	1169	18	60	0.6	6	7	581	1.84	5	<8	<2	6	101	<.5	<3	<3	40	0.4	0.096	19	16	0.5	345	0.08	3	0.86	0.05	0.27	96	6
164967	16	566	6	46	<.3	4	6	264	2.13	3	<8	<2	6	29	<.5	3	<3	37	0.3	0.09	24	10	0.34	474	0.06	3	0.72	0.06	0.23	2	7
164968	102	586	9	37	<.3	5	6	226	1.74	<2	<8	<2	5	24	<.5	<3	<3	42	0.31	0.09	19	13	0.44	291	0.09	<3	0.75	0.05	0.31	2	5
164969	15	1597	4	49	1.8	4	4	360	1.57	7	<8	<2	6	26	<.5	15	<3	27	0.52	0.092	23	9	0.16	261	0.02	<3	0.5	0.04	0.25	<2	9
164970	9	33	11	58	<.3	3	6	335	2.84	22	<8	<2	3	29	0.9	<3	<3	5	0.69	0.083	7	8	0.02	20	<.01	4	0.41	0.02	0.22	<2	13
164971	1	563	51	348	17.4	5	10	1073	2.3	119	<8	<2	<2	113	4.4	176	<3	3	4.76	0.005	1	4	1.14	3557	<.01	<3	0.01	<.01	0.01	<2	2
164972	3	5718	306	1778	>100	8	13	4061	8.48	968	<8	<2	<2	1976	37.2	>2000	10	13	13.39	0.004	1	1	5.06	719	<.01	5	0.13	0.01	0.08	<2	23
STANDARI	12	139	25	135	0.3	24	11	737	2.91	17	<8	<2	3	46	5.3	3	6	58	0.72	0.092	12	189	0.65	133	0.09	16	1.95	0.04	0.14	5	480
C 136085	7	131	<3	35	0.5	5	5	325	2.99	<2	<8	<2	6	85	<.5	3	4	57	0.39	0.121	7	15	0.78	227	0.14	4	1.48	0.07	0.51	3	3
C 136086	1	150	3	41	0.9	4	3	307	3.48	7	<8	<2	2	16	<.5	4	5	30	0.08	0.035	4	13	0.46	75	0.1	3	1.14	0.07	0.54	3	4
C 136087	6	147	<3	14	1.8	3	<1	44	1.13	4	<8	<2	5	34	<.5	7	4	5	0.03	0.009	11	11	0.01	118	<.01	<3	0.25	0.05	0.17	3	5
C 136088	6	6	<3	67	<.3	10	4	644	2.8	2	<8	<2	<2	71	<.5	3	<3	27	0.74	0.046	3	39	0.66	45	0.15	3	1.5	0.19	0.62	3	4
C 136089	4	38	21	126	<.3	3	<1	41	1.35	41	<8	<2	6	30	<.5	<3	<3	4	0.01	0.018	25	8	0.02	172	<.01	4	0.32	0.01	0.26	3	4
C 136090	6	9	<3	15	<.3	2	1	166	1.42	3	<8	<2	4	37	<.5	<3	<3	3	0.54	0.014	4	6	0.05	40	0.01	3	1.03	0.15	0.25	<2	6
C 136091	9	80	3	12	<.3	4	1	111	1.4	3	<8	<2	6	5	<.5	<3	<3	5	0.03	0.014	5	8	0.13	60	0.02	3	0.65	0.01	0.28	<2	5
C 136092	1	73	<3	14	<.3	4	2	110	1.69	2	<8	<2	6	8	<.5	<3	3	22	0.04	0.016	15	11	0.08	31	<.01	<3	0.38	0.07	0.16	<2	9
C 136093	35	850	1107	155	42.9	3	3	35	3.32	664	<8	<2	4	12	3.6	469	11	18	0.05	0.074	9	13	0.01	79	<.01	<3	0.46	<.01	0.13	4	14
C 136094	54	1257	<3	18	0.7	4	3	247	1.57	3	<8	<2	6	33	<.5	<3	4	12	0.59	0.079	21	7	0.08	332	0.01	<3	0.41	0.03	0.27	>100	13
C 136095	4	571	<3	26	0.6	5	6	330	1.68	4	<8	<2	7	33	<.5	<3	<3	10	0.97	0.09	23	12	0.14	293	<.01	<3	0.41	0.04	0.24	7	22
C 136096	27	1060	9	57	0.6	5	5	272	1.77	6	<8	<2	6	33	0.7	<3	3	19	0.59	0.086	25	7	0.17	375	0.01	<3	0.56	0.04	0.25	16	8
C 136097	53	1026	<3	34	1.1	4	6	307	3.68	<2	<8	<2	5	61	<.5	<3	<3	93	0.82	0.178	15	11	0.8	238	0.15	<3	1.14	0.1	0.41	25	9
C 136098	6	114	3	31	0.4	6	5	381	1.95	7	<8	<2	7	29	<.5	5	3	29	0.61	0.093	22	17	0.32	254	0.03	3	0.71	0.05	0.27	4	3
RE C 1360	8	108	6	30	0.3	6	5	377	1.93	5	<8	<2	7	28	<.5	5	3	28	0.6	0.091	22	15	0.32	252	0.03	3	0.71	0.05	0.27	3	2
C 136099	67	1017	<3	68	1.6	5	10	401	4.91	2	<8	<2	6	66	<.5	4	<3	144	0.83	0.206	16	11	0.97	477	0.21	<3	1.55	0.1	0.55	4	6
C 136100	11	682	<3	33	0.6	6	6	406	2.23	<2	<8	<2	7	24	<.5	<3	<3	24	0.48	0.087	22	16	0.28	366	0.02	4	0.67	0.04	0.26	3	3
STANDARI	12	148	24	132	0.3	24	12	729	2.89	17	<8	<2	3	45	5	3	6	58	0.72	0.09	12	176	0.62	133	0.1	15	1.9	0.03	0.14	7	483

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6
To Imperial Metals Corporation
me file # A403968R Received: AUG 13 2004 * 4 samples in this disk file.
Analysis: GROUP 7AR - 1.000 GM

SAMPLE	Mo	Cu	Ag	Sb
SAMPLE	%	%	gm/mt	%
164956	0.001	1.268	916	0.533
164963	2.185	0.11	25	0.003
164972	0.004	0.575	290	0.255
STANDAR	0.05	0.563	160	0.127

Hole	From	To	Interval	sample	Mo	Cu	Ag
Units	(m)	(m)	(m)	#	ppm	ppm	ppm
Detection Limit					<2	<2	<.5
BD-04-15	2.44	3.65	1.21	138301	404	661	1
BD-04-15	3.65	5.00	1.35	138302	274	1859	1.1
BD-04-15	5.00	7.50	2.50	138303	465	4390	3.6
BD-04-15	7.50	10.00	2.50	138304	299	5092	4.6
BD-04-15	10.00	11.13	1.13	138305	272	2592	2.4
BD-04-15	11.13	12.50	1.37	138306	137	739	0.8
BD-04-15	12.50	15.00	2.50	138307	230	1360	0.5
BD-04-15	15.00	16.26	1.26	138308	327	2155	1.8
BD-04-15	16.26	18.05	1.79	138309	695	6215	4
BD-04-15	18.05	20.00	1.95	138310	565	295	0
BD-04-15	20.00	21.60	1.60	138311	285	978	1
BD-04-15	21.60	21.75	0.15	138312	1091	2065	15.6
BD-04-15	21.75	22.50	0.75	138313	532	2161	2
BD-04-15	22.50	25.00	2.50	138314	299	678	0
BD-04-15	25.00	27.50	2.50	138315	253	919	1.7
BD-04-15	27.50	28.73	1.23	138316	510	1128	0.5
BD-04-15	28.73	30.00	1.27	138317	470	2340	2
BD-04-15	30.00	31.65	1.65	138318	506	2152	1.7
BD-04-15	31.65	32.50	0.85	138319	563	784	1.2
BD-04-15	32.50	35.00	2.50	138320	291	715	0.6
BD-04-15	35.00	37.50	2.50	138321	159	1094	0.6
BD-04-15	37.50	40.00	2.50	138322	178	801	0.6
BD-04-15	40.00	42.50	2.50	138323	227	1254	1.1
BD-04-15	42.50	45.00	2.50	138324	34	515	0
BD-04-15	45.00	47.50	2.50	138325	131	1590	0.9
BD-04-15	47.50	50.00	2.50	138326	272	898	0
BD-04-15	50.00	52.50	2.50	138327	87	483	0
BD-04-15	52.50	55.00	2.50	138328	227	915	0
BD-04-15	55.00	57.50	2.50	138329	102	575	0
BD-04-15	57.50	60.00	2.50	138330	203	917	0.7
BD-04-15	60.00	62.50	2.50	138331	56	556	1.2
BD-04-15	62.50	65.00	2.50	138332	79	1160	0.8
BD-04-15	65.00	67.50	2.50	138333	67	1349	1.5
BD-04-15	67.50	70.00	2.50	138334	157	1252	1.6
BD-04-15	70.00	72.50	2.50	138335	43	1515	2.7
BD-04-15	72.50	75.00	2.50	138336	156	612	1.1
BD-04-15	75.00	77.50	2.50	138337	182	325	0
BD-04-15	77.50	80.00	2.50	138338	302	953	0.7
BD-04-15	80.00	82.50	2.50	138339	94	789	1.4
BD-04-15	82.50	85.00	2.50	138340	35	405	0
BD-04-15	85.00	87.50	2.50	138341	126	284	0.8
BD-04-15	87.50	89.53	2.03	138342	62	586	1.1
BD-04-15	89.53	90.03	0.50	138343	381	970	0
BD-04-15	90.03	92.50	2.47	138344	23	269	1.1
BD-04-15	92.50	95.00	2.50	138345	165	1189	2
BD-04-15	95.00	96.50	1.50	138346	188	698	0
BD-04-15	96.50	100.00	3.50	138347	138	682	1.1
BD-04-15	100.00	102.50	2.50	138348	93	1070	0.8

BD-04-15	102.50	105.00	2.50	138349	418	1938	2.1
BD-04-15	105.00	106.92	1.92	138350	626	2467	3
BD-04-15	107.50	110.00	2.50	138351	283	3134	0.7
BD-04-15	110.00	112.50	2.50	138352	164	1888	1.7
BD-04-15	112.50	115.00	2.50	138353	141	1814	1.9
BD-04-15	115.00	117.50	2.50	138354	23	767	0
BD-04-15	117.50	119.13	1.63	138355	162	913	0
BD-04-15	119.13	120.00	0.87	138356	219	1518	0
BD-04-15	120.00	122.50	2.50	138357	125	1266	0
BD-04-15	122.50	125.00	2.50	138358	63	1013	0
BD-04-15	125.00	127.50	2.50	138359	114	1566	0.9
BD-04-15	127.50	130.00	2.50	138360	149	967	0
BD-04-15	130.00	132.50	2.50	138361	46	967	0.6
BD-04-15	132.50	133.05	0.55	138362	413	1895	11.4
BD-04-15	133.05	135.00	1.95	138363	4	40	0
BD-04-15	135.00	137.50	2.50	138364	3	24	0
BD-04-15	137.50	139.22	1.72	138365	13	32	0
BD-04-15	139.22	140.00	0.78	138366	345	990	1.4
BD-04-15	140.00	142.50	2.50	138367	442	755	0
BD-04-15	142.50	145.00	2.50	138368	282	1732	1.7
BD-04-15	145.00	147.50	2.50	138369	600	1255	0
BD-04-15	147.50	150.00	2.50	138370	478	894	0.6
BD-04-15	150.00	152.50	2.50	138371	245	683	0
BD-04-15	152.50	155.00	2.50	138372	336	1036	0
BD-04-15	155.00	157.50	2.50	138373	517	1913	1.3
BD-04-15	157.50	160.00	2.50	138374	400	1866	2.1
BD-04-15	160.00	163.10	3.10	138375	346	931	1
BD-04-15	163.10	165.00	1.90	138376	606	2323	2
BD-04-15	165.00	167.50	2.50	138377	541	1753	1.2
BD-04-15	167.50	170.00	2.50	138378	253	1006	0.5
BD-04-15	170.00	172.50	2.50	138379	24	688	0
BD-04-15	172.50	175.00	2.50	138380	167	609	1.2
BD-04-15	175.00	177.50	2.50	138381	168	890	0.6
BD-04-15	177.50	180.00	2.50	138382	85	626	0.5
BD-04-15	180.00	182.50	2.50	138383	932	1912	2.2
BD-04-15	182.50	184.08	1.58	138384	477	1876	1.9
BD-04-15	184.08	185.25	1.17	138385	327	1690	1
BD-04-15	185.25	186.30	1.05	138386	226	641	0
BD-04-15	186.30	187.50	1.20	138387	277	852	0
BD-04-15	187.50	190.00	2.50	138388	752	1906	0.8
BD-04-15	190.00	192.50	2.50	138389	517	984	0.8
BD-04-15	192.50	195.00	2.50	138390	99	799	0.6
BD-04-15	195.00	197.50	2.50	138391	458	922	0.9
BD-04-15	197.50	200.00	2.50	138392	153	966	0
BD-04-15	200.00	202.50	2.50	138393	344	1263	0
BD-04-15	202.50	205.00	2.50	138394	225	875	1.3
BD-04-15	205.00	207.50	2.50	138395	176	824	0
BD-04-15	207.50	209.60	2.10	138396	791	972	0.6
BD-04-15	209.60	211.00	1.40	138397	129	1155	1.1
BD-04-15	211.00	212.50	1.50	138398	205	2110	1.6
BD-04-15	212.50	215.00	2.50	138399	90	1411	1.5

BD-04-15	215.00	217.50	2.50	138400	66	1067	1.7
BD-04-15	217.50	220.00	2.50	138401	186	1353	1.3
BD-04-15	220.00	222.50	2.50	138402	389	1903	2.4
BD-04-15	222.50	224.18	1.68	138403	107	832	0.6
BD-04-15	224.18	226.40	2.22	138404	113	1191	1.4
BD-04-15	226.40	227.50	1.10	138405	97	524	0.5
BD-04-15	227.50	230.00	2.50	138406	62	199	0.6
BD-04-15	230.00	232.50	2.50	138407	161	526	0.8
BD-04-15	232.50	235.00	2.50	138408	47	601	1.2
BD-04-15	235.00	237.50	2.50	138409	59	680	0.9
BD-04-15	237.50	238.26	0.76	138410	46	621	0.6
BD-04-15	238.26	240.00	1.74	138411	114	2578	2.2
BD-04-15	240.00	242.50	2.50	138412	17	1364	1.2
BD-04-15	242.50	245.00	2.50	138413	14	319	0
BD-04-15	245.00	247.85	2.85	138414	23	663	0
BD-04-15	247.85	250.00	2.15	138415	80	820	1.2
BD-04-15	250.00	252.50	2.50	138416	38	705	0.8
BD-04-15	252.50	254.00	1.50	138417	152	1845	2.2
BD-04-15	254.00	255.00	1.00	138418	37	478	0
BD-04-15	255.00	257.50	2.50	138419	129	914	0
BD-04-15	106.92	107.50	0.58	138420	301	2549	2.6
BD-04-15	257.50	260.00	2.50	138421	62	866	1
BD-04-15	260.00	262.50	2.50	138422	30	400	0.7
BD-04-15	262.50	265.00	2.50	138423	161	908	1
BD-04-15	265.00	267.50	2.50	138424	87	773	0.8
BD-04-15	267.50	270.00	2.50	138425	61	390	0.5
BD-04-15	270.00	272.50	2.50	138426	111	630	1.3
BD-04-15	272.50	275.00	2.50	138427	63	598	0
BD-04-15	275.00	277.50	2.50	138428	99	541	0.7
BD-04-15	277.50	280.00	2.50	138429	70	334	0
BD-04-15	280.00	282.50	2.50	138430	79	393	0.5
BD-04-15	282.50	285.00	2.50	138431	198	723	0.9
BD-04-15	285.00	287.50	2.50	138432	60	295	0
BD-04-15	287.50	290.00	2.50	138433	39	586	0.9
BD-04-15	290.00	292.50	2.50	138434	68	688	0
BD-04-15	292.50	295.00	2.50	138435	150	661	1.2
BD-04-15	295.00	297.50	2.50	138436	58	416	0
BD-04-15	297.50	299.01	1.51	138437	20	246	0.9
BD-04-16	6.10	6.80	0.70	138438	25	295	0
BD-04-16	6.80	7.50	0.70	138439	1147	2473	2.2
BD-04-16	7.50	10.00	2.50	138440	424	2300	1.9
BD-04-16	10.00	12.50	2.50	138441	636	2084	2.3
BD-04-16	12.50	15.00	2.50	138442	126	2795	2
BD-04-16	15.00	17.50	2.50	138443	363	1966	0.8
BD-04-16	17.50	20.00	2.50	138444	142	1114	1.3
BD-04-16	20.00	22.50	2.50	138445	110	1540	1
BD-04-16	22.50	25.00	2.50	138446	136	1223	1.3
BD-04-16	25.00	27.50	2.50	138447	117	930	1.2
BD-04-16	27.50	30.27	2.77	138448	239	1794	1.8
BD-04-16	30.27	30.67	0.40	138449	224	1170	6.7

BD-04-16	30.67	32.50	1.83	138450	217	1658	2.2
BD-04-16	32.50	33.80	1.30	138451	256	1379	1.7
BD-04-16	33.80	34.20	0.40	138452	157	1161	1.7
BD-04-16	34.20	37.50	3.30	138453	301	1542	2
BD-04-16	37.50	40.00	2.50	138454	316	1698	2.3
BD-04-16	40.00	42.50	2.50	138455	625	2104	2.5
BD-04-16	42.50	45.00	2.50	138456	192	894	0.6
BD-04-16	45.00	47.50	2.50	138457	197	1371	2.3
BD-04-16	47.50	50.43	2.93	138458	166	1878	2.1
BD-04-16	50.43	51.33	0.90	138459	31	191	0.8
BD-04-16	51.33	52.50	1.17	138460	89	1316	2
BD-04-16	52.50	54.34	1.84	138461	164	1121	1.2
BD-04-16	54.34	56.05	1.71	138462	3	46	0.8
BD-04-16	56.05	57.50	1.45	138463	83	1981	1.2
BD-04-16	57.50	60.00	2.50	138464	59	2246	2.9
BD-04-16	60.00	62.50	2.50	138465	281	3637	3.6
BD-04-16	62.50	65.00	2.50	138466	514	2995	1.7
BD-04-16	65.00	67.50	2.50	138467	477	2524	2.4
BD-04-16	67.50	70.00	2.50	138468	253	910	1.9
BD-04-16	70.00	72.50	2.50	138469	48	387	0.9
BD-04-16	72.50	75.00	2.50	138470	17	788	1.7
BD-04-16	75.00	77.50	2.50	138471	42	819	0.8
BD-04-16	77.50	80.00	2.50	138472	92	1003	1.9
BD-04-16	80.00	82.50	2.50	138473	43	399	0.6
BD-04-16	82.50	85.00	2.50	138474	47	929	1.2
BD-04-16	85.00	87.50	2.50	138475	41	573	0.6
BD-04-16	87.50	90.00	2.50	138476	69	495	0.6
BD-04-16	90.00	92.50	2.50	138477	91	1173	2.2
BD-04-16	92.50	95.00	2.50	138478	36	847	1.3
BD-04-16	95.00	97.50	2.50	138479	105	598	0
BD-04-16	97.50	100.00	2.50	138480	59	716	1.1
BD-04-16	100.00	102.50	2.50	138481	28	725	0.8
BD-04-16	102.50	104.14	1.64	138482	54	673	1.1
BD-04-16	104.14	106.00	1.86	138483	55	543	1.5
BD-04-16	106.00	108.08	2.08	138484	39	533	0
BD-04-16	108.08	110.00	1.92	138485	32	409	0.5
BD-04-16	110.00	112.50	2.50	138486	41	607	0
BD-04-16	112.50	115.00	2.50	138487	29	692	1.1
BD-04-16	115.00	117.50	2.50	138488	60	469	1.3
BD-04-16	117.50	120.38	2.88	138489	63	763	0
BD-04-16	120.38	120.58	0.20	138490	302	1860	1.5
BD-04-16	120.58	122.50	1.92	138491	72	641	0
BD-04-16	122.50	125.00	2.50	138492	137	804	1.2
BD-04-16	125.00	127.50	2.50	138493	62	924	1.3
BD-04-16	127.50	130.00	2.50	138494	82	753	1.6
BD-04-16	130.00	132.50	2.50	138495	20	1240	1.6
BD-04-16	132.50	135.00	2.50	138496	7	411	0.6
BD-04-16	135.00	137.50	2.50	138497	20	353	0.6
BD-04-16	137.50	140.00	2.50	138498	67	429	1.4
BD-04-16	140.00	142.50	2.50	138499	13	555	0.8
BD-04-16	142.50	145.00	2.50	138500	25	440	1.8

BD-04-16	145.00	147.50	2.50	138501	24	810	1.4
BD-04-16	147.50	150.00	2.50	138502	46	621	1
BD-04-16	150.00	152.50	2.50	138503	46	601	0.7
BD-04-16	152.50	155.00	2.50	138504	42	695	1.8
BD-04-16	155.00	157.50	2.50	138505	23	523	0
BD-04-16	157.50	160.00	2.50	138506	22	474	1.6
BD-04-16	160.00	162.50	2.50	138507	93	573	0.7
BD-04-16	162.50	164.20	1.70	138508	35	556	1
BD-04-16	164.20	165.00	0.80	138509	234	865	2.3
BD-04-16	165.00	165.65	0.65	138510	56	306	0
BD-04-16	165.65	167.50	1.85	138511	8	520	1.2
BD-04-16	167.50	170.00	2.50	138512	97	779	0
BD-04-16	170.00	172.50	2.50	138513	50	687	0
BD-04-16	172.50	175.00	2.50	138514	56	824	0.7
BD-04-16	175.00	177.50	2.50	138515	13	553	0.6
BD-04-16	177.50	180.00	2.50	138516	26	463	0
BD-04-16	180.00	182.50	2.50	138517	34	671	0
BD-04-16	182.50	185.00	2.50	138518	26	591	0
BD-04-16	185.00	187.50	2.50	138519	39	633	0
BD-04-16	187.50	190.00	2.50	138520	15	348	0
BD-04-16	190.00	192.50	2.50	138521	79	1246	0.7
BD-04-16	192.50	195.00	2.50	138522	28	1105	0
BD-04-16	195.00	197.50	2.50	138523	27	590	0
BD-04-16	197.50	200.00	2.50	138524	44	384	1
BD-04-16	200.00	201.73	1.73	138525	131	1027	0
BD-04-16	201.73	203.35	1.62	138526	57	438	0
BD-04-16	203.35	205.00	1.65	138527	55	649	0
BD-04-16	205.00	207.50	2.50	138528	41	787	0
BD-04-16	207.50	210.00	2.50	138529	119	438	0
BD-04-16	210.00	212.50	2.50	138530	26	199	0
BD-04-16	212.50	215.00	2.50	138531	19	207	1
BD-04-16	215.00	217.50	2.50	138532	30	258	0
BD-04-16	217.50	220.00	2.50	138533	42	399	0
BD-04-16	220.00	223.00	3.00	138534	49	387	0
BD-04-16	223.00	226.00	3.00	138535	48	681	0
BD-04-16	226.00	227.50	1.50	138536	17	291	0
BD-04-16	227.50	230.00	2.50	138537	144	290	0
BD-04-16	230.00	232.50	2.50	138538	59	386	0
BD-04-16	232.50	235.00	2.50	138539	112	316	0
BD-04-16	235.00	237.50	2.50	138540	95	353	0.9
BD-04-16	237.50	240.00	2.50	138541	86	479	0.6
BD-04-16	240.00	242.50	2.50	138542	253	650	0
BD-04-16	242.50	245.00	2.50	138543	229	294	0
BD-04-16	245.00	247.50	2.50	138544	99	556	0
BD-04-16	247.50	250.00	2.50	138545	118	477	0
BD-04-16	250.00	252.96	2.96	138546	39	359	0
BD-04-16	252.96	255.80	2.84	138547	29	386	0.5
BD-04-16	255.80	257.50	1.70	138548	210	25	0
BD-04-16	257.50	259.73	2.23	138549	8	77	0
BD-04-16	259.73	260.10	0.37	138550	29	30	0
BD-04-16	260.10	262.50	2.40	138551	278	38	0

BD-04-16	262.50	265.00	2.50	138552	151	9	0
BD-04-16	265.00	267.40	2.40	138553	49	20	0
BD-04-16	267.40	270.00	2.60	138554	88	189	0.6
BD-04-16	270.00	270.80	0.80	138555	14	169	0.5
BD-04-16	270.80	271.50	0.70	138556	23	86	0
BD-04-16	271.50	272.56	1.06	138557	12	12	0
BD-04-16	272.56	272.93	0.37	138558	8	24	0.7
BD-04-16	272.93	273.60	0.67	138559	77	17	0
BD-04-16	273.60	275.00	1.40	138560	151	47	0
BD-04-16	275.00	277.83	2.83	138561	72	60	0
BD-04-16	277.83	280.00	2.17	138562	46	7	0.8
BD-04-16	280.00	282.50	2.50	138563	193	5	0
BD-04-16	282.50	285.00	2.50	138564	50	3	0
BD-04-16	285.00	287.50	2.50	138565	128	6	0
BD-04-16	287.50	290.00	2.50	138566	66	28	0
BD-04-16	290.00	292.50	2.50	138567	78	84	1.2
BD-04-16	292.50	293.85	1.35	138568	41	164	1
BD-04-16	293.85	295.00	1.15	138569	28	328	0
BD-04-16	295.00	297.50	2.50	138570	45	31	0
BD-04-16	297.50	300.00	2.50	138571	41	61	1.1
BD-04-16	300.00	302.50	2.50	138572	110	22	0
BD-04-16	302.50	305.00	2.50	138573	123	46	1.4
BD-04-16	305.00	305.40	0.40	138574	59	327	0
BD-04-16	305.40	307.50	2.10	138575	24	631	0
BD-04-16	307.50	310.00	2.50	138576	14	291	0
BD-04-16	310.00	312.42	2.42	138577	15	259	0
BD-04-16	312.42	315.00	2.58	138578	271	93	0
BD-04-16	315.00	317.50	2.50	138579	288	110	0
BD-04-16	317.50	320.00	2.50	138580	265	55	0
BD-04-16	320.00	322.50	2.50	138581	49	67	0
BD-04-16	322.50	323.85	1.35	138582	119	40	1.3
BD-04-16	323.85	326.75	2.90	138583	116	80	0
BD-04-16	326.75	329.75	3.00	138584	70	24	0
BD-04-16	329.75	332.06	2.31	138585	131	20	0
BD-04-16	332.06	332.80	0.74	138586	4	180	0
BD-04-16	332.80	335.29	2.49	138587	251	28	0
BD-04-16	335.29	337.50	2.21	138588	178	37	0
BD-04-16	337.50	340.00	2.50	138589	106	54	0
BD-04-16	340.00	342.50	2.50	138590	111	31	0
BD-04-16	342.50	345.00	2.50	138591	77	84	0.9
BD-04-16	345.00	347.50	2.50	138592	88	38	0
BD-04-16	347.50	350.00	2.50	138593	50	93	0.6
BD-04-16	350.00	352.50	2.50	138594	152	66	0
BD-04-16	352.50	355.00	2.50	138595	508	23	1.3
BD-04-16	355.00	357.50	2.50	138596	19	115	0.6
BD-04-16	357.50	360.00	2.50	138597	40	225	0
BD-04-16	360.00	362.50	2.50	138598	67	53	0
BD-04-16	362.50	365.00	2.50	138599	136	127	0
BD-04-16	365.00	368.00	3.00	138600	91	229	0
BD-04-16	368.00	370.34	2.34	138601	320	3014	2.2
BD-04-16	370.34	372.50	2.16	138602	38	341	0

BD-04-16	372.50	375.00	2.50	138603	244	1822	0.9
BD-04-16	375.00	377.50	2.50	138604	61	330	0
BD-04-16	377.50	380.00	2.50	138605	57	1634	0
BD-04-16	380.00	382.50	2.50	138606	88	346	0
BD-04-16	382.50	385.00	2.50	138607	33	151	0
BD-04-16	385.00	387.50	2.50	138608	45	98	0
BD-04-16	387.50	390.00	2.50	138609	330	148	1.1
BD-04-16	390.00	390.98	0.98	138610	49	273	0
BD-04-16	390.98	392.50	1.52	138611	37	684	0
BD-04-16	392.50	395.00	2.50	138612	222	843	0
BD-04-16	395.00	397.50	2.50	138613	49	778	0
BD-04-16	397.50	399.63	2.13	138614	118	1031	0.8
BD-04-16	399.63	402.50	2.87	138615	71	266	0
BD-04-16	402.50	405.00	2.50	138616	114	749	1.8
BD-04-16	405.00	405.66	0.66	138617	80	680	0
BD-04-16	405.66	407.50	1.84	138618	17	51	0
BD-04-16	407.50	410.00	2.50	138619	8	64	1.3
BD-04-16	410.00	412.50	2.50	138620	10	47	0
BD-04-16	412.50	415.00	2.50	138621	25	42	0
BD-04-16	415.00	417.50	2.50	138622	37	65	0
BD-04-16	417.50	420.00	2.50	138623	33	17	0
BD-04-16	420.00	422.50	2.50	138624	47	29	0.8
BD-04-16	422.50	425.00	2.50	138625	66	15	0
BD-04-16	425.00	427.50	2.50	138626	41	133	0
BD-04-16	427.50	430.00	2.50	138627	235	37	0
BD-04-16	430.00	432.50	2.50	138628	100	22	0
BD-04-16	432.50	435.00	2.50	138629	27	17	0
BD-04-16	435.00	436.47	1.47	138630	14	45	0
BD-04-17	3.05	5.00	1.95	138631	21	1093	1.1
BD-04-17	5.00	7.50	2.50	138632	12	361	0.7
BD-04-17	7.50	10.00	2.50	138633	27	574	1
BD-04-17	10.00	12.50	2.50	138634	67	710	1.3
BD-04-17	12.50	14.76	2.26	138635	33	522	0
BD-04-17	14.76	17.50	2.74	138636	2	45	1.3
BD-04-17	17.50	18.13	0.63	138637	2	35	0.7
BD-04-17	18.13	20.00	1.87	138638	52	655	0
BD-04-17	20.00	22.50	2.50	138639	24	492	0.9
BD-04-17	20.00	22.50	2.50	138640	40	418	0.5
BD-04-17	22.50	25.00	2.50	138641	9	628	0.6
BD-04-17	25.00	27.50	2.50	138642	13	328	0
BD-04-17	27.50	30.00	2.50	138643	26	363	0.6
BD-04-17	30.00	32.50	2.50	138644	38	605	0.8
BD-04-17	32.50	33.48	0.98	138645	27	659	2.2
BD-04-17	33.48	35.00	1.52	138646	40	772	0.8
BD-04-17	35.00	37.50	2.50	138647	25	592	0
BD-04-17	37.50	40.00	2.50	138648	63	858	0
BD-04-17	40.00	42.50	2.50	138649	22	1111	0
BD-04-17	42.50	45.00	2.50	138650	42	1171	0
BD-04-17	45.00	47.50	2.50	138651	37	348	0
BD-04-17	47.50	50.00	2.50	138652	148	590	0

BD-04-17	50.00	52.50	2.50	138653	22	634	0.5
BD-04-17	52.50	53.50	1.00	138654	76	306	1.1
BD-04-17	53.50	55.00	1.50	138655	44	595	0
BD-04-17	55.00	57.50	2.50	138656	63	1344	0.8
BD-04-17	57.50	60.00	2.50	138657	124	2133	0
BD-04-17	57.50	60.00	2.50	138658	91	2374	0
BD-04-17	60.00	62.50	2.50	138659	155	1776	0
BD-04-17	62.50	65.00	2.50	138660	69	1199	0
BD-04-17	65.00	67.50	2.50	138661	42	1342	0.5
BD-04-17	67.50	70.00	2.50	138662	40	1042	0
BD-04-17	70.00	72.50	2.50	138663	132	1424	1.1
BD-04-17	72.50	75.00	2.50	138664	135	1413	0
BD-04-17	75.00	77.50	2.50	138665	123	1454	0
BD-04-17	77.50	80.00	2.50	138666	70	1392	0.5
BD-04-17	80.00	82.50	2.50	138667	166	1494	0
BD-04-17	82.50	85.00	2.50	138668	81	1597	0
BD-04-17	85.00	86.86	1.86	138669	55	1599	0
BD-04-17	86.86	87.28	0.42	138670	210	735	0
BD-04-17	87.28	90.00	2.72	138671	161	1617	1
BD-04-17	90.00	92.50	2.50	138672	110	2574	0
BD-04-17	92.50	95.00	2.50	138673	272	2466	1.5
BD-04-17	95.00	97.50	2.50	138674	147	3170	1.6
BD-04-17	97.50	100.00	2.50	138675	335	2485	0.8
BD-04-17	100.00	102.50	2.50	138676	164	2236	0
BD-04-17	102.50	105.00	2.50	138677	121	1972	0.7
BD-04-17	102.50	105.00	2.50	138678	82	1872	1
BD-04-17	105.00	107.50	2.50	138679	166	1171	1.2
BD-04-17	107.50	110.22	2.72	138680	513	3796	2.5
BD-04-17	110.22	112.50	2.28	138681	173	860	0.7
BD-04-17	112.50	115.00	2.50	138682	59	625	0.6
BD-04-17	115.00	117.50	2.50	138683	192	1152	0.7
BD-04-17	117.50	120.00	2.50	138684	204	786	1
BD-04-17	120.00	122.50	2.50	138685	123	671	0
BD-04-17	122.50	125.00	2.50	138686	145	652	0.8
BD-04-17	125.00	127.50	2.50	138687	137	539	0.7
BD-04-17	127.50	130.00	2.50	138688	123	586	0.5
BD-04-17	130.00	132.50	2.50	138689	288	646	0.6
BD-04-17	132.50	135.00	2.50	138690	217	869	0
BD-04-17	135.00	137.50	2.50	138691	160	523	0.5
BD-04-17	137.50	140.00	2.50	138692	94	633	0.6
BD-04-17	140.00	142.50	2.50	138693	137	443	0
BD-04-17	142.50	145.69	3.19	138694	218	584	0
BD-04-17	145.69	147.50	1.81	138695	132	1865	1.1
BD-04-17	147.50	150.00	2.50	138696	232	2285	0.5
BD-04-17	150.00	152.50	2.50	138697	249	2831	1.7
BD-04-17	150.00	152.50	2.50	138698	333	2941	0.8
BD-04-17	152.50	155.00	2.50	138699	447	2265	0
BD-04-17	155.00	157.50	2.50	138700	133	1567	0.7
BD-04-17	157.50	160.00	2.50	138701	192	2462	0
BD-04-17	160.00	162.50	2.50	138702	351	2914	0.8
BD-04-17	162.50	165.00	2.50	138703	265	2729	1.4

BD-04-17	165.00	167.70	2.70	138704	518	2410	0.9
BD-04-17	167.70	169.02	1.32	138705	212	1502	0
BD-04-17	169.02	170.40	1.38	138706	201	1130	0.7
BD-04-17	170.40	171.90	1.50	138707	323	1728	0
BD-04-17	171.90	175.00	3.10	138708	148	1563	0.7
BD-04-17	175.00	177.50	2.50	138709	329	1822	0
BD-04-17	177.50	180.00	2.50	138710	445	2133	1.1
BD-04-17	180.00	182.50	2.50	138711	232	1707	0.9
BD-04-17	182.50	185.00	2.50	138712	473	2008	0.5
BD-04-17	185.00	187.50	2.50	138713	423	1697	0.6
BD-04-17	187.50	190.00	2.50	138714	201	1326	0
BD-04-17	190.00	192.50	2.50	138797	648	1835	0
BD-04-17	192.50	195.00	2.50	138715	217	1631	0
BD-04-17	195.00	197.50	2.50	138716	169	1022	0
BD-04-17	197.50	200.00	2.50	138717	402	2202	0.7
BD-04-17	197.50	200.00	2.50	138718	491	2180	0.6
BD-04-17	200.00	202.50	2.50	138719	347	2425	0.7
BD-04-17	202.50	205.00	2.50	138720	734	1739	0
BD-04-17	205.00	207.50	2.50	138721	452	2677	0.8
BD-04-17	207.50	210.00	2.50	138722	450	2483	0
BD-04-17	210.00	212.50	2.50	138723	625	2513	1.4
BD-04-17	212.50	215.00	2.50	138724	557	2465	0.7
BD-04-17	215.00	217.50	2.50	138725	857	4009	0
BD-04-17	217.50	220.00	2.50	138726	412	4724	0.6
BD-04-17	220.00	222.50	2.50	138727	530	3239	0.8
BD-04-17	222.50	225.00	2.50	138728	531	1932	0.8
BD-04-17	225.00	227.50	2.50	138729	456	2432	1.1
BD-04-17	227.50	230.00	2.50	138730	490	2662	0.6
BD-04-17	230.00	232.50	2.50	138731	642	1845	0
BD-04-17	232.50	235.00	2.50	138732	606	2757	0
BD-04-17	235.00	237.50	2.50	138733	385	2044	0
BD-04-17	237.50	240.00	2.50	138734	250	1698	0
BD-04-17	240.00	242.50	2.50	138735	532	2993	0.7
BD-04-17	242.50	245.00	2.50	138736	1123	3192	0.7
BD-04-17	245.00	247.50	2.50	138737	786	2729	1.7
BD-04-17	245.00	247.50	2.50	138738	709	2505	0.9
BD-04-17	247.50	249.92	2.42	138739	649	2911	1.7
BD-04-17	249.92	250.62	0.70	138740	309	2335	1.8
BD-04-17	250.62	252.50	1.88	138741	902	3645	0.7
BD-04-17	252.50	255.00	2.50	138742	1047	3411	1.8
BD-04-17	255.00	257.50	2.50	138743	714	3099	0.8
BD-04-17	257.50	260.00	2.50	138744	649	5103	0
BD-04-17	260.00	262.50	2.50	138745	567	3287	1.2
BD-04-17	262.50	265.36	2.86	138746	1594	5663	1.6
BD-04-17	265.36	267.50	2.14	138747	1039	3314	3.4
BD-04-17	267.50	270.00	2.50	138748	727	4787	1.1
BD-04-17	270.00	272.50	2.50	138749	951	4229	1.7
BD-04-17	272.50	275.00	2.50	138750	429	2881	1
BD-04-17	275.00	277.50	2.50	138751	774	3179	0
BD-04-17	277.50	280.00	2.50	138752	268	2747	0.5
BD-04-17	280.00	282.50	2.50	138753	351	2078	1

BD-04-17	282.50	285.00	2.50	138754	1566	2548	1.5
BD-04-17	285.00	287.50	2.50	138755	629	1442	1.9
BD-04-17	287.50	290.00	2.50	138756	276	2024	1.4
BD-04-17	290.00	292.50	2.50	138757	120	2168	0
BD-04-17	292.50	295.00	2.50	138758	278	1573	0.6
BD-04-17	295.00	297.50	2.50	138759	426	1683	2
BD-04-17	297.50	300.00	2.50	138760	168	1622	0
BD-04-17	297.50	300.00	2.50	138761	215	2028	1.5
BD-04-17	300.00	302.50	2.50	138762	100	1267	0
BD-04-17	302.50	305.00	2.50	138763	597	1819	0.5
BD-04-17	305.00	307.50	2.50	138764	279	1543	0.8
BD-04-17	307.50	310.00	2.50	138765	417	1832	0
BD-04-17	310.00	312.50	2.50	138766	572	2355	1
BD-04-17	312.50	315.00	2.50	138767	107	2314	1.1
BD-04-17	315.00	317.50	2.50	138768	190	1369	1.1
BD-04-17	317.50	320.00	2.50	138769	230	2755	1.6
BD-04-17	320.00	322.50	2.50	138770	8420	5870	2.8
BD-04-17	322.50	325.00	2.50	138771	219	1483	0.7
BD-04-17	325.00	327.50	2.50	138772	510	2037	0.9
BD-04-17	327.50	330.00	2.50	138773	306	1460	1.1
BD-04-17	330.00	332.50	2.50	138774	392	1423	1.9
BD-04-17	332.50	335.00	2.50	138775	636	1898	1.2
BD-04-17	335.00	337.50	2.50	138776	206	1090	0.9
BD-04-17	337.50	340.08	2.58	138777	367	1304	0.7
BD-04-17	340.08	342.50	2.42	138778	256	945	0
BD-04-17	342.50	345.00	2.50	138779	197	1325	0.8
BD-04-17	345.00	346.26	1.26	138780	167	1032	0.7
BD-04-17	345.00	346.26	1.26	138781	686	1505	1.4
BD-04-17	346.26	346.56	0.30	138782	14760	23930	17.1
BD-04-17	346.56	347.50	0.94	138783	203	2272	1
BD-04-17	347.50	350.00	2.50	138784	161	1458	0.7
BD-04-17	350.00	352.50	2.50	138785	436	1567	0.9
BD-04-17	352.50	355.00	2.50	138786	1629	1902	1.7
BD-04-17	355.00	357.50	2.50	138787	340	793	0
BD-04-17	357.50	360.00	2.50	138788	474	1172	0
BD-04-17	360.00	362.50	2.50	138789	402	2246	1.5
BD-04-17	362.50	362.98	0.48	138790	104	1258	0
BD-04-17	362.98	363.15	0.17	138791	2353	2293	1.5
BD-04-17	363.15	365.00	1.85	138792	481	3118	2.3
BD-04-17	365.00	367.50	2.50	138793	1152	2225	1.3
BD-04-17	367.50	370.00	2.50	138794	691	2088	1.3
BD-04-17	370.00	372.50	2.50	138795	483	1498	0.7
BD-04-17	372.50	375.00	2.50	138796	564	1160	0
BD-04-17	375.00	377.50	2.50	138798	829	1433	0.5
BD-04-17	377.50	380.10	2.60	138799	164	1395	0.8
BD-04-17	380.10	382.50	2.40	138800	598	1735	1.3
BD-04-17	382.50	385.00	2.50	138801	469	1526	0.7
BD-04-17	385.00	387.50	2.50	138802	363	2020	1.3
BD-04-17	387.50	390.00	2.50	138803	359	1455	0.5
BD-04-17	390.00	392.50	2.50	138804	99	807	0
BD-04-17	392.50	393.80	1.30	138805	230	949	0

BD-04-17	393.80	395.00	1.20	138806	232	778	0
BD-04-17	395.00	397.50	2.50	138807	0	4	0
BD-04-17	397.50	400.00	2.50	138808	0	4	0
BD-04-17	400.00	402.50	2.50	138809	0	5	0
BD-04-17	402.50	404.77	2.27	138810	0	18	0
BD-04-17	404.77	405.27	0.50	138811	1397	1323	1.4
BD-04-17	405.27	405.99	0.72	138812	1722	1397	1.2
BD-04-18	5.18	7.50	2.32	138813	46	2051	1
BD-04-18	7.50	10.00	2.50	138814	149	2806	0.9
BD-04-18	10.00	12.76	2.76	138815	272	3223	1.3
BD-04-18	12.76	15.00	2.24	138816	357	3565	1.9
BD-04-18	12.76	15.00	2.24	138817	443	3336	2.2
BD-04-18	15.00	17.50	2.50	138818	688	4044	2.1
BD-04-18	17.50	20.00	2.50	138819	505	4827	2.2
BD-04-18	20.00	22.50	2.50	138820	383	3610	1.2
BD-04-18	22.50	25.00	2.50	138821	310	3218	1.6
BD-04-18	25.00	26.57	1.57	138822	891	1754	2.8
BD-04-18	26.57	28.05	1.48	138823	330	715	1.4
BD-04-18	28.05	30.00	1.95	138824	136	1690	1.3
BD-04-18	30.00	32.50	2.50	138825	0	0	0
BD-04-18	32.50	35.00	2.50	138826	208	2706	1.8
BD-04-18	35.00	37.50	2.50	138827	360	2093	1.6
BD-04-18	37.50	40.00	2.50	138828	557	2128	2.4
BD-04-18	40.00	42.50	2.50	138829	298	1780	1.5
BD-04-18	42.50	45.00	2.50	138830	204	1735	0.9
BD-04-18	45.00	47.50	2.50	138831	210	1622	1.2
BD-04-18	47.50	50.00	2.50	138832	91	1286	0
BD-04-18	50.00	52.50	2.50	138833	313	2053	2.3
BD-04-18	52.50	55.00	2.50	138834	308	2690	4.5
BD-04-18	55.00	57.50	2.50	138835	351	2223	0.7
BD-04-18	55.00	57.50	2.50	138836	593	2374	3
BD-04-18	57.50	60.00	2.50	138837	683	2752	2.8
BD-04-18	60.00	62.95	2.95	138838	100	1286	0.5
BD-04-18	62.95	63.81	0.86	138839	447	1843	6.8
BD-04-18	63.81	65.00	1.19	138840	378	1809	0.7
BD-04-18	65.00	67.50	2.50	138841	147	1843	0
BD-04-18	67.50	70.00	2.50	138842	227	1648	1.2
BD-04-18	70.00	72.50	2.50	138843	321	1402	1
BD-04-18	72.50	75.00	2.50	138844	316	1212	0.8
BD-04-18	75.00	77.50	2.50	138845	224	1140	1.4
BD-04-18	77.50	80.00	2.50	138846	717	2074	2.4
BD-04-18	80.00	82.07	2.07	138847	140	1150	0.9
BD-04-18	82.07	82.50	0.43	138848	58	1303	0.8
BD-04-18	82.50	85.00	2.50	138849	451	1616	1.4
BD-04-18	85.00	87.50	2.50	138850	744	2837	1.9
BD-04-18	87.50	90.00	2.50	138851	1639	2998	0.8
BD-04-18	90.00	92.50	2.50	138852	356	2686	1.5
BD-04-18	92.50	95.00	2.50	138853	1016	3864	2.7
BD-04-18	95.00	97.50	2.50	138854	601	3023	2
BD-04-18	97.50	100.00	2.50	138855	508	3134	1.6

BD-04-18	100.00	102.50	2.50	138856	947	1838	1.5
BD-04-18	102.50	104.12	1.62	138857	931	3640	2.4
BD-04-18	104.12	105.00	0.88	138858	12	73	0
BD-04-18	105.00	107.50	2.50	138859	7	39	1.1
BD-04-18	107.50	110.00	2.50	138860	98	453	0
BD-04-18	110.00	111.75	1.75	138861	65	384	1
BD-04-18	111.75	112.50	0.75	138862	482	2473	2.8
BD-04-18	112.50	115.00	2.50	138863	652	2807	2.7
BD-04-18	115.00	117.50	2.50	138864	934	3000	1.6
BD-04-18	117.50	120.00	2.50	138865	858	2746	2.5
BD-04-18	120.00	122.50	2.50	138866	1855	4860	1.7
BD-04-18	122.50	125.00	2.50	138867	692	3559	2.7
BD-04-18	125.00	127.50	2.50	138868	903	2608	2.2
BD-04-18	127.50	130.00	2.50	138869	641	2830	1.9
BD-04-18	130.00	132.50	2.50	138870	419	1057	0
BD-04-18	132.50	135.00	2.50	138871	714	2645	1.6
BD-04-18	135.00	137.50	2.50	138872	617	3288	0.6
BD-04-18	137.50	140.00	2.50	138873	473	2553	0
BD-04-18	140.00	142.50	2.50	138874	628	2510	0
BD-04-18	142.50	145.00	2.50	138875	518	2141	1.3
BD-04-18	145.00	147.50	2.50	138876	910	1992	1.9
BD-04-18	147.50	150.00	2.50	138877	383	2300	1.5
BD-04-18	150.00	152.50	2.50	138878	503	2587	2.5
BD-04-18	152.50	155.00	2.50	138879	303	2053	1.9
BD-04-18	155.00	157.50	2.50	138880	521	2525	2.7
BD-04-18	157.50	160.00	2.50	138881	563	2496	3.5
BD-04-18	160.00	162.50	2.50	138882	472	3268	3.1
BD-04-18	162.50	165.00	2.50	138883	1145	1660	2
BD-04-18	165.00	167.50	2.50	138884	646	2014	2.5
BD-04-18	167.50	170.00	2.50	138885	1195	1715	2.4
BD-04-18	170.00	172.50	2.50	138886	1290	2163	1.5
BD-04-18	172.50	175.00	2.50	138887	853	3096	2.7
BD-04-18	175.00	177.50	2.50	138888	1133	3356	2.1
BD-04-18	177.50	180.00	2.50	138889	591	2994	2.9
BD-04-18	180.00	182.50	2.50	138890	672	3788	3.1
BD-04-18	182.50	185.00	2.50	138891	740	3305	3.4
BD-04-18	185.00	187.50	2.50	138892	835	3518	2.3
BD-04-18	187.50	190.00	2.50	138893	1196	5153	3.8
BD-04-18	190.00	192.50	2.50	138894	752	3686	4.1
BD-04-18	192.50	195.00	2.50	138895	747	3372	3.7
BD-04-18	195.00	195.82	0.82	138896	616	3653	1.9
BD-04-18	195.82	196.93	1.11	138897	181	1155	1.6
BD-04-18	196.93	197.50	0.57	138898	900	4060	3.4
BD-04-18	197.50	200.00	2.50	138899	880	4430	3.3
BD-04-18	197.50	200.00	2.50	138900	720	4654	2.5
BD-04-18	200.00	202.50	2.50	138901	985	4162	3.9
BD-04-18	202.50	205.00	2.50	138902	611	6603	5
BD-04-18	205.00	207.50	2.50	138903	1523	4357	3.3
BD-04-18	207.50	210.00	2.50	138904	390	2670	1.8
BD-04-18	210.00	212.50	2.50	138905	616	3247	2.1
BD-04-18	212.50	215.00	2.50	138906	1085	4654	4.1

BD-04-18	215.00	215.82	0.82	138907	2142	5413	4.2
BD-04-18	215.82	217.50	1.68	138908	1358	4843	3.6
BD-04-18	217.50	220.00	2.50	138909	1102	5754	4
BD-04-18	220.00	222.50	2.50	138910	1884	6159	3.2
BD-04-18	222.50	225.00	2.50	138911	1112	5483	5
BD-04-18	225.00	227.50	2.50	138912	541	4561	5.2
BD-04-18	227.50	230.00	2.50	138913	1187	3921	4.2
BD-04-18	230.00	232.50	2.50	138914	617	3703	2.2
BD-04-18	232.50	232.88	0.38	138915	2709	2855	4.4
BD-04-18	232.88	233.55	0.67	138916	829	1872	2.7
BD-04-18	233.55	235.00	1.45	138917	517	4410	2.5
BD-04-18	235.00	237.50	2.50	138918	795	3327	2.4
BD-04-18	237.50	240.00	2.50	138919	473	3692	2.6
BD-04-18	237.50	240.00	2.50	138920	406	3109	1.5
BD-04-18	240.00	242.50	2.50	138921	614	2623	2.9
BD-04-18	242.50	245.00	2.50	138922	951	3544	4.1
BD-04-18	245.00	247.50	2.50	138923	604	2699	1.6
BD-04-18	247.50	250.00	2.50	138924	434	2099	1.3
BD-04-18	250.00	252.50	2.50	138925	924	2943	3.3
BD-04-18	252.50	255.00	2.50	138926	976	2055	1.6
BD-04-18	255.00	256.45	1.45	138927	421	1592	2.9
BD-04-18	256.45	257.50	1.05	138928	338	1039	0.7
BD-04-18	257.50	260.00	2.50	138929	705	916	0
BD-04-18	260.00	262.50	2.50	138930	302	902	1
BD-04-18	262.50	265.00	2.50	138931	328	956	0.8
BD-04-18	265.00	267.50	2.50	138932	134	597	0.5
BD-04-18	267.50	270.00	2.50	138933	141	437	1.3
BD-04-18	270.00	272.50	2.50	138934	138	811	0.7
BD-04-18	272.50	275.00	2.50	138935	147	614	0
BD-04-18	275.00	277.50	2.50	138936	71	800	1.5
BD-04-18	277.50	278.55	1.05	138937	90	606	0
BD-04-18	278.55	280.00	1.45	138938	213	1524	1.4
BD-04-18	280.00	282.50	2.50	138939	253	1727	0
BD-04-18	280.00	282.50	2.50	138940	238	1685	0.8
BD-04-18	282.50	285.00	2.50	138941	255	1684	0.9
BD-04-18	285.00	287.50	2.50	138942	169	1247	1.1
BD-04-18	287.50	290.00	2.50	138943	156	1460	0
BD-04-18	290.00	292.50	2.50	138944	133	1771	0
BD-04-18	292.50	293.57	1.07	138945	60	1889	0
BD-04-18	293.57	294.59	1.02	138946	0	45	0
BD-04-18	294.59	297.50	2.91	138947	64	1947	0
BD-04-18	297.50	300.00	2.50	138948	91	2114	2.1
BD-04-18	300.00	301.14	1.14	138949	68	1993	0.8
BD-04-19	3.05	7.25	4.20	138950	78	312	0.6
BD-04-19	7.25	10.00	2.75	138951	315	251	1.3
BD-04-19	10.00	12.50	2.50	138952	243	1097	0
BD-04-19	12.50	15.00	2.50	138953	310	764	0
BD-04-19	15.00	17.50	2.50	138954	312	918	0
BD-04-19	17.50	20.00	2.50	138955	162	1234	0
BD-04-19	20.00	22.96	2.96	138956	145	719	0

BD-04-19	22.96	25.85	2.89	138957	271	1343	0
BD-04-19	25.85	27.50	1.65	138958	234	1024	0
BD-04-19	27.50	30.00	2.50	138959	201	1309	0
BD-04-19	27.50	30.00	2.50	138960	249	865	0
BD-04-19	30.00	31.91	1.91	138961	256	887	0
BD-04-19	31.91	34.58	2.67	138962	217	644	0
BD-04-19	34.58	35.06	0.48	138963	103	275	0
BD-04-19	35.06	37.50	2.44	138964	373	468	0
BD-04-19	37.50	40.00	2.50	138965	316	532	0
BD-04-19	40.00	42.50	2.50	138966	292	559	0
BD-04-19	42.50	44.67	2.17	138967	597	350	0
BD-04-19	44.67	47.50	2.83	138968	305	174	0
BD-04-19	47.50	50.00	2.50	138969	664	28	0
BD-04-19	50.00	52.50	2.50	138970	417	38	0
BD-04-19	52.50	55.00	2.50	138971	567	44	0.9
BD-04-19	55.00	57.50	2.50	138972	312	51	0
BD-04-19	57.50	60.00	2.50	138973	312	323	1.9
BD-04-19	60.00	60.69	0.69	138974	95	271	0.9
BD-04-19	60.69	62.50	1.81	138975	176	1175	1.9
BD-04-19	62.50	65.00	2.50	138976	35	495	0
BD-04-19	65.00	67.50	2.50	138977	88	387	1.3
BD-04-19	67.50	69.77	2.27	138978	48	562	1
BD-04-19	69.77	70.73	0.96	138979	149	888	0.9
BD-04-19	69.77	70.73	0.96	138980	198	736	0.8
BD-04-19	70.73	72.50	1.77	138981	405	1356	1.7
BD-04-19	72.50	75.43	2.93	138982	600	1525	1.9
BD-04-19	75.43	77.50	2.07	138983	149	625	0.7
BD-04-19	77.50	80.42	2.92	138984	575	1058	1.6
BD-04-19	80.42	82.50	2.08	138985	800	1209	1.7
BD-04-19	82.50	84.54	2.04	138986	204	1022	0.6
BD-04-19	84.54	87.18	2.64	138987	642	1140	1.3
BD-04-19	87.18	90.00	2.82	138988	406	3409	3.3
BD-04-19	90.00	92.50	2.50	138989	273	1571	1.5
BD-04-19	92.50	95.00	2.50	138990	83	1242	1.1
BD-04-19	95.00	97.50	2.50	138991	400	2224	2.6
BD-04-19	97.50	100.00	2.50	138992	880	1829	1.3
BD-04-19	100.00	102.50	2.50	138993	231	1562	1.9
BD-04-19	102.50	105.00	2.50	138994	333	1384	1.6
BD-04-19	105.00	106.52	1.52	138995	288	2119	1.8
BD-04-19	106.52	108.00	1.48	138996	878	4561	3.2
BD-04-19	108.00	109.52	1.52	138997	384	2685	1.2
BD-04-19	109.52	111.56	2.04	138998	290	1187	1.2
BD-04-19	111.56	112.50	0.94	138999	373	1599	1.3
BD-04-19	111.56	112.50	0.94	139000	530	1295	1.8
BD-04-19	112.50	115.00	2.50	140601	630	2316	0.9
BD-04-19	115.00	116.33	1.33	140602	196	1273	0
BD-04-19	116.33	118.00	1.67	140603	587	1033	0.9
BD-04-19	118.00	120.44	2.44	140604	249	1922	0.7
BD-04-19	120.44	122.50	2.06	140605	446	1904	1
BD-04-19	122.50	125.00	2.50	140606	58	880	0.6
BD-04-19	125.00	127.50	2.50	140607	73	796	0.7

BD-04-19	127.50	130.00	2.50	140608	126	698	0
BD-04-19	130.00	132.50	2.50	140609	63	786	0.5
BD-04-19	132.50	135.00	2.50	140610	31	951	0
BD-04-19	135.00	137.50	2.50	140611	88	672	0
BD-04-19	137.50	140.00	2.50	140612	94	1140	0
BD-04-19	140.00	142.50	2.50	140613	136	1636	2.1
BD-04-19	142.50	145.00	2.50	140614	82	945	0
BD-04-19	145.00	147.50	2.50	140615	156	1189	0
BD-04-19	147.50	150.00	2.50	140616	109	782	0
BD-04-19	150.00	152.50	2.50	140617	384	1026	0
BD-04-19	152.50	155.00	2.50	140618	172	1023	0.6
BD-04-19	155.00	157.50	2.50	140619	134	1544	1
BD-04-19	155.00	157.50	2.50	140620	203	1594	0.7
BD-04-19	157.50	160.00	2.50	140621	140	1146	0
BD-04-19	160.00	162.50	2.50	140622	155	1505	0
BD-04-19	162.50	165.00	2.50	140623	135	1071	0
BD-04-19	165.00	167.50	2.50	140624	331	1126	1.2
BD-04-19	167.50	170.00	2.50	140625	286	1059	1
BD-04-19	170.00	172.50	2.50	140626	119	1037	0.8
BD-04-19	172.50	175.00	2.50	140627	153	1528	0
BD-04-19	175.00	177.50	2.50	140628	221	1473	1.1
BD-04-19	177.50	180.00	2.50	140629	133	1551	0
BD-04-19	180.00	182.50	2.50	140630	153	1327	0.6
BD-04-19	182.50	185.00	2.50	140631	222	1580	0
BD-04-19	185.00	187.50	2.50	140632	239	1471	0
BD-04-19	187.50	190.00	2.50	140633	269	2378	0
BD-04-19	190.00	192.50	2.50	140634	236	1496	0
BD-04-19	192.50	195.00	2.50	140635	288	1294	1.3
BD-04-19	195.00	197.50	2.50	140636	296	1462	2.8
BD-04-19	197.50	200.00	2.50	140637	191	1352	0
BD-04-19	200.00	202.50	2.50	140638	218	1467	0.7
BD-04-19	202.50	205.00	2.50	140639	311	1649	1
BD-04-19	202.50	205.00	2.50	140640	234	1718	1.5
BD-04-19	205.00	207.50	2.50	140641	181	1719	2
BD-04-19	207.50	210.00	2.50	140642	376	1678	0.5
BD-04-19	210.00	212.50	2.50	140643	298	1927	1.5
BD-04-19	212.50	215.00	2.50	140644	316	1974	1.3
BD-04-19	215.00	217.50	2.50	140645	333	1722	1.2
BD-04-19	217.50	220.00	2.50	140646	188	2016	1.3
BD-04-19	220.00	222.50	2.50	140647	284	1950	0
BD-04-19	222.50	225.00	2.50	140648	210	1641	0.5
BD-04-19	225.00	227.50	2.50	140649	224	1538	0
BD-04-19	227.50	230.00	2.50	140650	217	1495	0
BD-04-19	230.00	232.50	2.50	140651	288	1831	0.5
BD-04-19	232.50	235.00	2.50	140652	275	1154	0.7
BD-04-19	235.00	237.50	2.50	140653	709	1592	0.7
BD-04-19	237.50	240.00	2.50	140654	178	1272	1.8
BD-04-19	240.00	242.50	2.50	140655	143	950	0
BD-04-19	242.50	245.00	2.50	140656	132	809	0.5
BD-04-19	245.00	246.77	1.77	140657	431	1277	0
BD-04-19	246.77	248.38	1.61	140658	37	145	0

BD-04-19	248.38	250.00	1.62	140659	118	850	0.8
BD-04-19	248.38	250.00	1.62	140660	130	673	0.7
BD-04-19	250.00	252.50	2.50	140661	137	501	0
BD-04-19	252.50	255.00	2.50	140662	141	451	0
BD-04-19	255.00	257.50	2.50	140663	253	320	0
BD-04-19	257.50	260.00	2.50	140664	121	350	0
BD-04-19	260.00	261.21	1.21	140665	22	147	0

APPENDIX C

Analytical Technique
Acme Analytical Labs Ltd.

<u>MDIC01:</u> ICP Analysis of Aqua Regia Digested Geological Materials

SCOPE :

This method is suitable for the semi-quantitative analysis of geological samples within the defined analytical ranges where the limitation of strong mineral acid apply.

PRINCIPLE :

The sample (0.5 grams) is digested with a mixture of hydrochloric and nitric acids. The samples are heated in a hot water bath (90 °C). After the digestion step the samples are cooled, bulked to the final volume and mixed well. The resulting solution is analyzed by ICP-AES.

<u>APPLICABLE ANALYTE RANGES FOR ICP-AES:</u>

Element	Ag	Bi	Cr	K	Mn	Ni	Sn	Ti	Zr	Al	Ca
Detection Limit	0.2	5	1	0.01	1	1	20	0.01	1	0.01	0.01
Upper Limit	200.0	2000	20000	10.00	20000	20000	2000	10.00	5000	10.00	10.00
Units	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	%	%
Element	Cu	La	Mo	Pb	Sr	V	Zn	As	Cd	Fe	Li
Detection Limit	1	1	1	2	1	1	1	5	0.2	0.01	1
Upper Limit	10000	2000	10000	10000	2000	20000	10000	10000	2000.0	10.00	20000
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
Element	Na	Sb	Ta	W	Ba	Co	Ga	Mg	Nb	Sc	Te
Detection Limit	0.01	5	10	20	1	1	2	0.01	1	5	10
Upper Limit	10.00	2000	1000	2000	2000	20000	10000	10.00	10000	2000	2000
Units	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
Element	Y										
Detection Limit	1										
Upper Limit	2000										
Units	ppm										

A slightly modified version of this method has been set up for clients with sample matrices containing high total dissolved solids (i.e. high Iron (Fe) concentrations). For this modified version of the method, the sample weights have been reduced, increasing the dilution factor. The applicable analyte ranges for this modified method are listed below.

Element	Ag	Bi	Cr	K	Mn	Ni	Sn	Ti	Zr	Al	Ca	
Detection Limit	0.2	5	1	0.01	1	1	20	0.01	1	0.01	0.01	
Upper Limit	400.0	4000	40000	20.00	40000	20000	4000	10.00	10000	20.00	20.00	
Units	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	%	%	
Element	Cu	La	Mo	Pb	Sr	V	Zn	As	Cd	Fe	Li	
Detection Limit	1	1	1	2	1	1	1	5	0.2	0.01	1	
Upper Limit	20000	4000	20000	20000	4000	20000	20000	20000	4000.0	20.00	20000	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	
Element	Na	Sb	Ta	W	Ba	Co	Ga	Mg	Nb	Sc	Te	Y
Detection Limit	0.01	5	10	20	1	1	2	0.01	1	5	10	1
Upper Limit	20.00	4000	2000	4000	10000	20000	20000	20.00	20000	4000	4000	4000
Units	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm

In addition to standard elements listed above the following elements maybe report in place or in addition to the elements listed above.

Element	Be	Hg	P	S*	Se
Detection Limit	0.5	0.5	10	0.01	10
Upper Limit	2000.0	1000.0	20000	10.00	2000
Units	ppm	ppm	ppm	%	ppm

*Please note that S is list as “Qualitative” only.

PRECISION:

The tolerance criteria for variation of analytical data result from all stages of the analysis and are subject to the sample matrix and the specific technique used.

Expected tolerance criteria at various concentrations for this method are as follows:

Element	Duplicate of Reference	Value	Tolerance
Ag, Cd	Detection Limit	0.2	+/- 100%
(ppm)	0.4	1.0	50%
	1.2	5.0	25%
	5.2	50.0	15%
	50.2	200.0	10%
		>200.0	15%
Bi, Sb, Sc, As, Ce	Detection Limit	5	+/- 100%
(ppm)	10	25	50%
	30	50	25%
	55	500	15%
	505	2000	10%
		>2000	15%
Cr, V, Zn, Li, Y, Nb,	Detection Limit	1	+/- 100%
Ba, La, Sr, Zr	2	10	50%
(ppm)	11	20	25%
	21	200	15%
	201	2000	10%
		> 2000	15%
K, Ti, Al, Ca, Fe, Na,	Detection Limit	0.01	+/- 100%
Mg, S	0.02	0.05	50%
(%)	0.06	0.10	25%
	0.11	1.00	15%
	1.01	10.00	10%
		>10.00	15%
Sn, W	Detection Limit	20	+/- 100%
(ppm)	40	100	50%
	120	200	25%
	220	2000	10%
		>2000	15%
Ni, Cu, Co, Mn, Mo,	Detection Limit	1	+/- 100%
Sr(ppm)	2	5	50%
	6	10	25%
	11	100	15%
	101	1000	10%
		>1000	15%
Pb, Ga	Detection Limit	2	+/- 100%
(ppm)	4	10	50%
	12	20	25%
	22	200	15%
	202	2000	10%
		> 2000	15%
Te, Ta, P, Se	Detection Limit	10	+/- 100%
(ppm)	20	50	50%
	60	100	25%
	110	1000	10%
		>1000	15%
Be, Hg	Detection Limit	0.5	+/- 100%
(ppm)	1.0	2.5	50%
	2.0	25.0	25%
	25.5	500.0	10%
		>500.0	15%

This table is intended as a guideline in the absence of repeatability and reproducibility data.

APPENDIX D

Rock Sample Descriptions

BEAR ROCK SAMPLES.

136085 TO 136100

164951 TO 164972

WED JULY 21, 2004

Set down on mountain top. elev. 1860m

136085

Rusty med fx'd granitic dyke in QFBp south of main peak. 5% Sx mostly Py but w/ Tr Cp.

136086

Platey rhyo dk w/ qtz eyes and Py ± Cp diss blebs and some good stqs 3-4mm thick.

|136087| [illegible]

21-2

Cont'd - rock is subcrop south of the Cairn. Dark grey/maroon groundmass with xtals of plag and a few large biotite after amphibole xtals.

|136088| Dark grey fine tx'd mafic dyke. Frac faces contain shiny dark mineral ?

|136089| Rhyo w/ diss Py and // stgs 2-3mm w/ Fe ox on them.

|136090| 5% Py in bleach Int Ry.

|136091| Py w/ Tr Cp in Rhy INTR. on Ridge. o/c

|136092| Subcrop just below the ridge w/ Tr Cp as well as 5% Py.

|136093| Sil'd w/ qtz stgs ≤ 5mm and ≤10% coarse diss Py. Zone runs 010° and is only a few metres wide.

|136094| QFBp w/ diss Cp and Py Also 3-4mm stgs of qtz w/ Cp and tr Mo. Near top of ridge running south from the saddle. Maybe ≤0.2% Copper. Py>Cp.

|136095| QFBp w/ blebs of Cp. May run ≤0.2% Cu. Cp=Py here

|136096| QFBp Dyke is about 20m wide. 0.2% blebby Cp. Traces of Mal.

136097 QFBp w/ diss Cp

136098 QFBp w/ diss cp
Still coming down the ridge. This is in front of the old pad that they made years ago OLDPAD.

136099
O/c of Mmz just on east side of QFBp Dyke. 3mm frac face w/ good Cp.

137000
subcrop QFBp w/ good Cp and some mal on frac.

Prospecting in SE corner.
VLC1 is volcanic o/c on S. side of the creek and talus slope. Maroon fit massive.

164951
Float boulder w/ 10% Sx mostly Py but some cp as well.

164952
Intr med. txd grano. 10% Py w/ tr cp. Py is diss and on frac faces. ~25m uphill from 2 Barrels of chopper fuel.

- Went looking for old holes and found #5 maybe.

- Walking along cliffs North of #5.

164953

Cp on fracs in Intr.

164954

Cp on fracs in Intr. Both above samples are HG. although Cp is present in all this cliff face.

Down the creek looking for DH-6. Very steep.

164955

Cp on stgs in small spring creek ~ 50m up from where Hole 6 was supposed to be.

Back up the hill to work on the valley to the north of the main zone.

164956

FLOAT. Very high grade qtz vein material on north side of valley in talus slope. Cp and chalcocite (?). Good Mal and Az. Very rusty boulders.

164957

Diss Py in Monz. Also Py on frac faces.

Felsic Dyke 004/90. Fin/Mkm Kspar groundmass w/ a few qtz eyes.

164958

Py diss and on frac faces in Monz.

INTR- F: Dioritic comp w/ a sheared or elongated fabric. Much less mafics.

164959

Bleached intr? ~~or~~
Intr I think. Good fracs
2-3mm w/ lots of Py. Don't
see anything else but...
wpt. DK - MC 6.0m mafic Dk 010/90

164960

Down in the creek where
QFBp crosses over. Blebs of Cp
as usual.
INTF? - along claim line.
Same Dioritic, foliated rock

164961

Good mal, cp and Mo
on narrow fracs. Near top
of scree slope. 015/90

164962

Same vein ~ 20m uphill.

164963

X-cutting veins running 146°
10cm thick. lots of Sulphure.
Same, local. Many contain
chalcocite or maybe lots of
Mo. 164964 - STEVE'S ROCK wpt 47

SUN, JULY 25/2004

164965

SUBCROP - vein material, Qtz
with 1cm Py stg. Tr Cp Mo
and Mal stain.

164966 QFBp w/ diss Cp

164967 As above Tr Cp only.

164968 As above .3 cp.

164968 As above. Working
south along the QFBp dyke.

164969 As above.

164970 Near SW corner
of Intrusion. Bleached in
of DK w/ 10% fine diss Py
Very rusty. Rock is white
but is rotted QFBP I
think.

APPENDIX E

Petrographic Study
Panterra Geoservices Inc.

PANTERRA GEOSERVICES INC.
Applied geological studies for exploration and mining

14180 Greencrest Drive
Surrey, B.C., Canada
V4P 1L9
Phone/fax 604-536-4744

PETROGRAPHIC STUDY OF THE BEAR PROJECT, OMINECA MINING DISTRICT, BRITISH COLUMBIA

Prepared for

Imperial Metals Corporation

420-355 Burrard Street

Vancouver, B.C., Canada

V6C 2G8

By

Katherina V. Ross
M.Sc., P.Geo

September 06, 2004

INTRODUCTION

The Bear property is located in the Omineca Mining District west of Bear Lake, north of Takla Lake, or 140 kilometres north of Smithers in northwest British Columbia. It is currently under exploration by Imperial Metals Corp. (Imperial) for copper-molybdenum porphyry-style mineralization. A suite of fourteen samples collected from 2004 drill core, was submitted to Panterra Geoservices Inc. by Mr. Steve Roberston, of Imperial for petrographic descriptions. Samples were selected from four different drill holes, at depths ranging from 3.0 m to 398.1 m downhole depth. Of particular interest was the nature of the occurrence of the sulphides. Six of the samples were prepared as polished thin sections, the remainder were prepared as covered thin sections. This report includes a summary of the findings, followed by detailed descriptions of each sample, with representative photomicrographs.

LITHOLOGIES

Five different rock units are represented in this suite of samples. All but one of the samples is clearly intrusive in nature. This one sample may be a metamorphosed sediment. Another of the samples is a dyke with an unusual composition of biotite and albite. The remaining samples can be divided into three distinct intrusive phases.

Quartzite/Arkose or Rhyolite? (BD-04-16, 256.9m)

This sample is comprised of rounded quartz crystals/grains in a muscovite-altered matrix. The quartz content is approximately 60%. The rounded nature of the quartz suggests a sedimentary origin, however it is not conclusive. Plagioclase crystals (10%) and clots with biotite are also present, these could be detrital. It is also possible that this was a rhyolite, and overprinting alteration has destroyed primary textures. Field relationships may be more useful in determining the origin of this rock.

Biotite-Hornfelsed Mafic? Dyke (BD-04-15, 10.8m)

This sample is comprised of 75% green-brown biotite, 20% albitic plagioclase and minor quartz. The biotite is fresh, euhedral, and partially overprints the albite, which occurs as randomly oriented fine-grained, tabular crystals. This highly unusual composition does not fit with any recognizable rock type. Lamprophyre dykes are often biotite-rich, but are also generally highly potassic, and also contain pyroxenes. The biotite is possibly secondary in nature, and has preferentially overprinted the primary groundmass of the sample.

Monzodiorite (BD-04-15, 136.3m; BD-04-17, 15.8m)

This unit is a fine-grained porphyritic intrusion, comprised of 15-20% prismatic, green hornblende crystals up to 3 mm in length, in a groundmass of much finer-grained (<0.5mm) felted plagioclase crystals and indistinct K-feldspar. Several percent magnetite is disseminated in the groundmass. Apatite is an accessory phase. Extinction angles of least altered plagioclase crystals indicate an andesine composition.

Quartz Monzonite (BD-04-15, 3.0m; BD-04-17, 142.2m; BD-04-17, 170.5m; BD-04-17, 398.1m)

This unit is a medium to coarse-grained porphyritic intrusion. There is some textural and compositional variation in the unit. Plagioclase, quartz, biotite and orthoclase phenocrysts, up to 0.75 mm in length comprise up to 50% of the rock by volume, and occur in a much finer-grained, K-feldspar dominant groundmass. Plagioclase phenocrysts comprise 15-30%, while quartz phenocrysts comprise 5-20%. Orthoclase phenocrysts are rare, but are generally larger than the other phases, and contain inclusions of plagioclase crystals. Mafic content is around 5%, and consists mainly of blocky biotite crystals, intergrown with minor amounts of hornblende. Minor amounts of magnetite are present, generally concentrated with biotite. Apatite and zircon are present as accessory phases.

Quartz Diorite (BD-04-15, 10.0m; BD-04-15, 268.0m; BD-04-16, 153.0m; BD-04-17, 363.6m; BD-04-19, 58.5m; BD-04-19, 118.0m)

This unit is a fine to medium-grained, equigranular to weakly porphyritic intrusion. It is comprised of 35-60% interlocking, tabular albitic plagioclase, with 5-10% quartz, 10-20% K-feldspar, approximately 15% mafic minerals and up to 5% magnetite. These other minerals are anhedral and infill interstitial space between plagioclase crystals, or form a groundmass in the weakly porphyritic samples. The mafic minerals consist of hornblende and biotite in variable proportions. Sphene and magnetite are intergrown with the mafics. Crystal size is up to 4 mm. Apatite is present in minor amounts.

ALTERATION AND MINERALIZATION

All of the samples are altered to some degree, but with the exception of the possible biotite-hornfels, and the muscovite-altered quartzite/rhyolite, alteration of primary minerals is only weakly to moderately intense, and is not texturally destructive. Eleven of the samples are cut by quartz veinlets, or microfractures, and alteration in these samples is most strongly developed around these features. Copper-molybdenum mineralization is associated with the quartz veinlets. Veinlets were observed in all lithologies except the monzodiorite.

Quartz-K-feldspar-Carbonate-Sulphide Veinlets

The quartz veinlets range from hairline fractures up to 0.5 cm in width. All have distinct secondary K-feldspar envelopes around them. The veinlets are planar, and where more than one is present in a sample, they are subparallel. Quartz crystals are interlocking, and are intergrown with lesser amounts of calcite or dolomite, and K-feldspar. Pyrite and chalcopyrite occur in the veins. They can occur separately, or can be intergrown with one another, and a small percentage of the chalcopyrite is encapsulated in pyrite. Sulphide crystals are anhedral and can be up to 4 mm. Bornite, and possibly minor amounts of chalcocite, are intergrown with chalcopyrite, and encapsulated in pyrite in BD-04-19, 118.0m. Bornite was not observed in any other sample. Fine-grained chalcopyrite and pyrite occur in the wallrock around the quartz veinlets, often concentrated in mafic mineral sites, sometimes replacing primary magnetite. These sulphides are <0.5 mm.

Molybdenite was identified in four samples. It occurs as very fine-grained flakes on the margins of quartz veinlets. It is generally enclosed in a thin chlorite selvedge on the veins. This may have originally been a biotite envelope around the vein, which has altered to chlorite.

Quartz-Calcite-Zeolite Veinlets

Sample BD-04-19, 58.5m is cut by quartz-calcite-zeolite veinlets. These veinlets are more irregular in shape than the quartz-K-feldspar-sulphide veinlets. Chalcopyrite and pyrite are present in these veins, and in the wall rock around them. These veins do not have a distinct K-feldspar envelope, but the surrounding wallrock is sericite/clay-carbonate-chlorite altered.

Pervasive Sericite-Chlorite-Carbonate

There is some degree of pervasive sericite-chlorite-carbonate alteration in all samples. Very fine-grained scaly sericite and carbonate partially replace plagioclase crystals. Chlorite and carbonate replace biotite and hornblende. Magnetite is weakly hematite altered in some samples, and partially replaced by pyrite in others. Alteration is strongest around quartz veinlets, but is also present in samples without veins, including the monzodiorite unit.

Biotite Hornfels

Sample BD-04-15, 10.8m is comprised mainly of randomly oriented, green-brown biotite flakes, which appear to be partially overprinting albitic plagioclase. The biotite is in turn altered to chlorite around a hairline quartz-K-feldspar-carbonate-sulphide vein, indicating it predates the veining event. This may be an intensely hornfelsed dyke. Other than the possible biotite selvedges around some of the quartz veins (now altered to chlorite), there is no evidence of secondary biotite in the other samples.

Pervasive Muscovite/Sericite-Carbonate

Sample BD-04-16, 256.9m is intensely muscovite altered. The protolith of this sample is unclear, in part due to the alteration. The groundmass is replaced by fine-grained muscovite/sericite, and larger flakes of muscovite. Plagioclase crystals are replaced by a mixture of sericite-carbonate. Minor amounts of biotite are carbonate altered. This sample is cut by a hairline quartz veinlet with a distinct K-feldspar envelope which overprints the wallrock.

CONCLUSIONS

Five different rock units were identified in these suite of rocks; three distinct intrusive phases i) monzodiorite, ii) quartz monzonite, and iii) quartz diorite; one dyke of uncertain affinity; and one possible quartz-rich sedimentary unit or rhyolite.

Copper-molybdenum mineralization is associated with planar quartz-K-feldspar-carbonate veinlets. These veinlets have distinct K-feldspar envelopes. Chalcopyrite, pyrite and minor amounts of bornite occur within the veins and in the adjacent wallrock. A minor amount of the chalcopyrite and bornite is encapsulated in pyrite. Molybdenite appears to be restricted to the margins of veins, often in a chloritic selvedge, which may originally have been biotite. Therefore, there may be two generations of veins; a quartz-K-feldspar-biotite-chalcopyrite-pyrite-molybdenite stage, and a quartz-K-feldspar-chalcopyrite-pyrite stage. These veinlets were observed cross cutting all but the monzodiorite phase. Chalcopyrite and pyrite were also observed with a quartz-calcite-zeolite vein, which lacked a K-feldspar envelope.

Pervasive sericite-chlorite-carbonate alteration is developed in all samples, though it is not intense. Compositions of the primary minerals are often well preserved. Alteration is strongest around the quartz veinlets. The only evidence of biotite hornfels is in the dyke of uncertain affinity.

Photo 1a: BD-04-15: Top left to bottom right: 3.0m, 10.0m, 10.8m (biotite dyke), 136.3m, 268.0m.

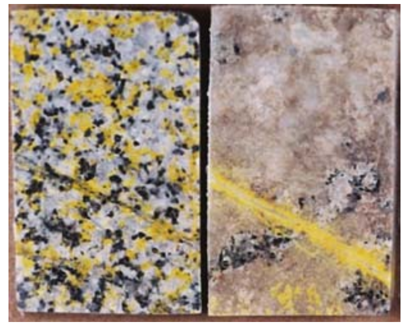


Photo 1b: BD-04-16: Left:153.0m, Right: 256.9m (quartzite or rhyolite?).

Photo 1c: BD-04-17: Top left to bottom right: 15.8m, 142.2m, 170.5m, 363.6m, 398.1m.

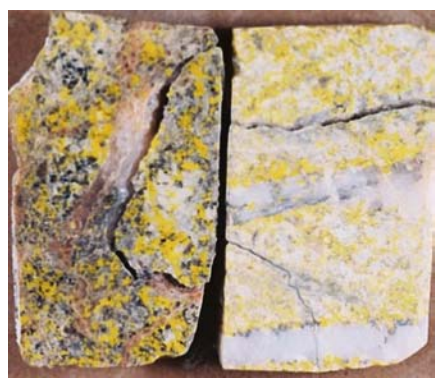


Photo 1d: BD-04-19: Left: 58.5m, Right: 118.0m.

*****Note all the offcut blocks have been stained with sodium cobltinitrite. The yellow colour indicates the presence of K-feldspar.

SAMPLE: BD-04-15 3.0m (Covered Thin section)
LITHOLOGY: Quartz Monzonite
ALTERATION: Pervasive Sericite-carbonate, associated with Quartz-sulphide veins

Hand Sample Description: The sample is a medium to coarse-grained porphyry. Phenocrysts comprise 40-50% of the rock by volume, are up to 0.75 cm in length. They are dominantly plagioclase, with several percent rounded quartz eyes, blocky black biotite crystals, and scattered orthoclase crystals, which appear to be the coarsest-grained crystal phase. The grey-green groundmass stains pervasively yellow with sodium cobaltinitrite, indicating it is dominantly aphanitic K-feldspar. The sample is cut by sub-parallel watery quartz-pyrite+/-K-feldspar veinlets (1-4 mm wide). Quartz in the veins is prismatic. Plagioclase phenocrysts are greenish-sericite altered, particularly in 1.5 cm envelopes around the veins. There is also an inner K-feldspar envelope to the veins, which stains more intensely yellow than the rest of the groundmass. Overall sulphide content is 2-3%, and consists mainly of pyrite in the veinlets. A few crystals are disseminated in the wallrock.

TRANSLUCENT MINERALS

Mineral	%	Distribution & Characteristics	Opt. Prop.
K-feldspar	37	fine-grained, interlocking primary K-feldspar in groundmass, rare phenocryst, additional secondary K-feldspar around quartz veins	low biref.
quartz	20	fine to coarse-grained, embayed phenocrysts up to 5 mm, interlocking to prismatic in veins, possibly in groundmass	1^{st} order biref.
carbonate	15	present in vein, replacing biotite and plagioclase phenocrysts and patchy alteration adjacent to veins	extreme biref.
plagioclase	10	relict tabular phenocrysts up to 4 mm, twins and oscillatory zoning preserved in some crystals, most replaced by very fine-grained secondary minerals	twinning
sericite	05	very fine-grained, scaly masses replacing plagioclase	yellowish biref.
muscovite	05	fine-grained, radiating crystals within carbonate in vein, and flakes replacing primary minerals	3^{rd} order biref.
biotite	05	medium-grained, up to 1.5 mm, blocky flakes, dark brown to green-brown pleochroic, some calcite replacement	masked high biref.
apatite	trace	fine-grained, prismatic crystals, primary, high relief, clear	low biref.

OPAQUE MINERALS

Mineral	%	Distribution & Characteristics	Reflectance
pyrite	03	fine-grained, concentrated in carbonate-rich portions of veins	

Thin Section Description: The sample is comprised of plagioclase, quartz and biotite phenocrysts in fine-grained K-feldspar dominant groundmass. Primary twinning is still preserved in some of the plagioclase crystals, but most are pervasively replaced by a very fine-grained mixture of sericite or muscovite and calcite. Some crystals also have cores or patches of very fine-grained mosaic textured quartz(?). Some of the biotite phenocrysts appear fresh, while others are totally replaced by a mixture of calcite and muscovite. Intensity of alteration is related to proximity to veins. There are also crystals with more prismatic shapes. These may originally have been hornblende, but has been totally replaced by dark cloudy, secondary minerals. The groundmass consists of very fine-grained interlocking K-feldspar, flecked with sericite and carbonate. Apatite occurs as an accessory phase.

Three veins cut the section. The largest consists of interlocking quartz crystals and carbonate, with minor amounts of radiating muscovite and a clot of pyrite. Quartz crystals are prismatic where they penetrate the carbonate. A thin discontinuous selvedge of sericite/muscovite occurs on the quartz-dominant portions of the vein. A few small fragments of intensely K-feldspar altered wallrock are incorporated into the vein. The second vein is comprised mainly of interlocking quartz, with K-feldspar altered wall fragments and minor amounts of carbonate and muscovite. The third vein consists of quartz, carbonate and pyrite. Pyrite is the main vein fill for a portion of the vein and encloses euhedral quartz crystals. Carbonate with prismatic quartz is dominant along part of the vein, and coarse-grained quartz with finer margins is dominant in other portions. Patches of carbonate, muscovite and pyrite alteration occur adjacent to the vein, in part replacing phenocrysts. Phenocrysts tend to be obliterated adjacent to these veins, with only relict shapes preserved.

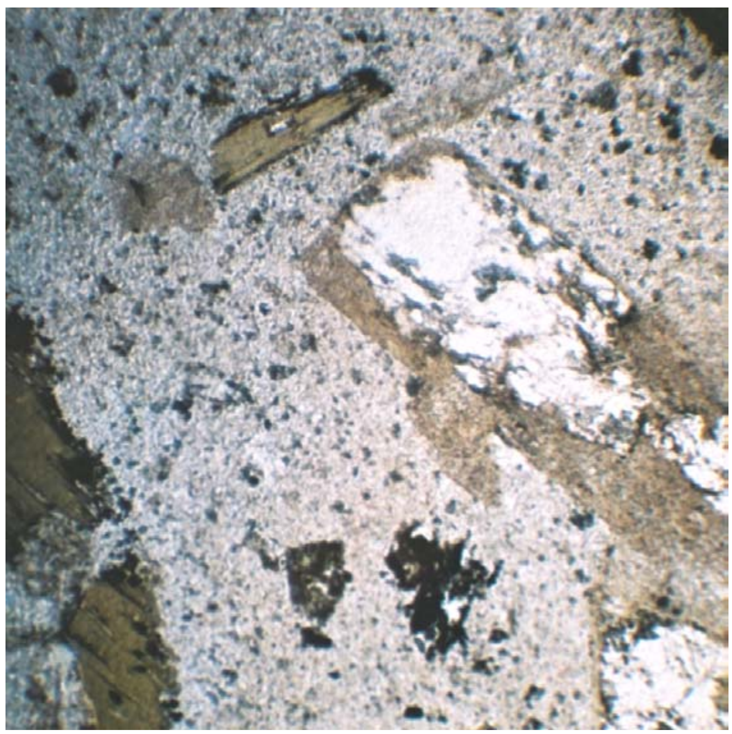


Photo 2: BD-04-15, 3.0 m. This image illustrates the general texture of this unit. Tabular plagioclase phenocrysts (right, clear) are partially replaced by scaly masses of sericite. Flakes of brown biotite are relatively unaltered in this view. The fine-grained groundmass is dominantly K-feldspar. Fov 3 mm, ppl.

SAMPLE: BD-04-15 10.0m (Covered Thin section)
LITHOLOGY: Quartz Diorite
ALTERATION: K-feldspar-chlorite around veins, Weak pervasive sericite

Hand Sample Description: The sample is a medium-grained, weakly porphyritic rock, comprised of approximately 70% tabular to equant plagioclase crystals intergrown with interstitial black amphibole crystals. Plagioclase crystals range from <1-3 mm. Hornblende is fine-grained and anhedral. The sample is cut by a 1 mm wide quartz-sulphide veinlet with a distinct <1 mm K-feldspar envelope. Within the wallrock approximately 5% of the groundmass interstitial to the plagioclase crystals stains yellow, indicating it is K-feldspar. The rock is weakly magnetic, magnetite appears to be intergrown with hornblende. Sulphides occur in the quartz veinlet, as well as along hairline fractures, and in mafic mineral sites in the wall rock. Overall sulphide content is several %.

TRANSLUCENT MINERALS

Mineral	%	Distribution & Characteristics	Opt. Prop.
plagioclase/ albite	50	medium-grained, interlocking tabular to blocky crystals up to 3 mm, well preserved, albitic compositions	oscillatory zoning
biotite	10	fine-grained, ragged to blocky flakes interstitial to plagioclase, dark brown to yellow brown pleochroic	masked high biref.
K-feldspar	10	fine-grained, anhedral, clear, overprinting plagioclase on vein margins, some in wallrock difficult to distinguish	low biref.
quartz	10	anhedral, in groundmass interstitial to plagioclase and in vein	1^{st} order biref.
carbonate	05	very fine-grained, with sericite replacing plagioclase, in veinlet with quartz and pyrite	extreme biref.
sericite	05	very fine-grained, flakes and scaly masses, replacing plagioclase	yellowish biref.
hornblende	03	fine-grained, anhedral, intergrown with biotite, pale to dark olive green pleochroic	2^{nd} order biref.
chlorite	02	fine-grained, green pleochroic, replacing biotite next to vein	brown biref.

OPAQUE MINERALS

Mineral	%	Distribution & Characteristics	Reflectance
sulphides	02	fine-grained, to 1 mm, in quartz veinlet and hairline veinlets	
magnetite	03	fine-grained, intergrown with mafic minerals in wallrock	

Thin Section Description: The sample is comprised of relatively coarse-grained, interlocking plagioclase crystals in a groundmass of fine-grained plagioclase, biotite intergrown with hornblende, K-feldspar, magnetite and quartz. Twinning and oscillatory zoning is well preserved in the plagioclase phenocrysts, and small extinction angles ($<10^o$) indicate it has an albitic composition. Very fine-grained sericite mixed with carbonate fleck the plagioclase, and form scaly patches in the groundmass. Biotite and hornblende are fresh. A sulphide-bearing quartz veinlet cuts the section. It is comprised of interlocking quartz with clots of sulphide, and minor amounts of green chlorite. A clear secondary K-feldspar envelope overprints the primary plagioclase, and biotite is altered to chlorite immediately adjacent to this vein.

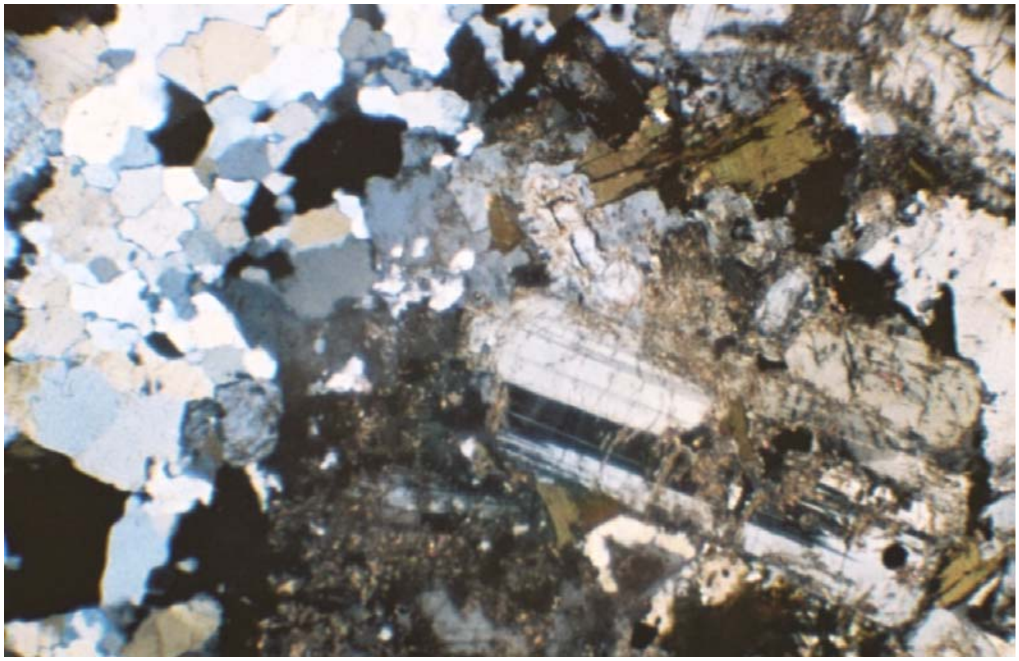


Photo 3: BD-04-15, 10.0 m. The quartz diorite is comprised of interlocking plagioclase crystals (twinned) with interstitial brown biotite, quartz and K-feldspar. A quartz vein is visible on the left side of the photo. Fine-grained sericite alteration affects the wallrock. Fov 3 mm, xpl.

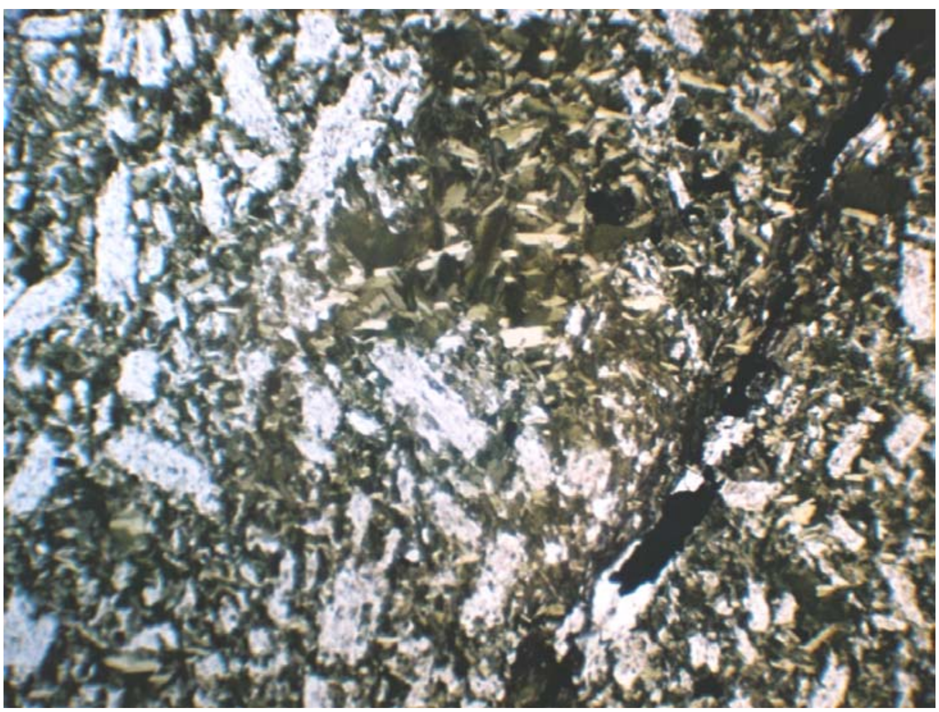


Photo 4: BD-04-15, 10.8 m. This sample is comprised of albitic plagioclase crystals in a groundmass of biotite. Locally the biotite forms dense clots (top, center). The section is cut by a <1mm thick quartz-K-feldspar-sulphide veinlet (right side, running bottom center to top right corner).Fov 3 mm, ppl.

SAMPLE: BD-04-15 10.8m (Covered Thin section)
LITHOLOGY: Biotite Hornfelsed Mafic Dyke?
ALTERATION: Intense Pervasive Biotite, Minor Carbonate-K-feldspar-pyrite

Hand Sample Description: The sample is a very fine-grained, black rock comprised of a felted mass of vitreous and micaceous crystals. Crystals are <0.5 mm in size, and consist of plagioclase and biotite. There are indistinct more mafic rich clots in which very fine-grained pyrite is concentrated. Planar hairline sulphide veinlets cut the sample. In the stained off-cut block, there is a minor amount of K-feldspar along these veinlets, and only trace amounts in the groundmass overprinting plagioclase. The rock is not magnetic.

TRANSLUCENT MINERALS

Mineral	%	Distribution & Characteristics	Opt. Prop.
biotite	75	fine-grained, up to 0.3 mm, tabular to equant flakes, randomly oriented, dark olive-brown to yellowish pleochroic	masked high biref.
plagioclase/ albite	20	fine-grained, up to 1.5 mm, tabular, randomly oriented, flecked with minute crystals of biotite	twinning
K-feldspar	03	identified by stain	low biref.
quartz	02	fine-grained, anhedral, in biotite-rich clots	no twinning
carbonate	trace	very fine-grained, in envelope around veinlet, colourless	high biref.

OPAQUE MINERALS

Mineral	%	Distribution & Characteristics	Reflectance
pyrite	minor	very fine-grained, along fracture, in mafic clots	

Thin Section Description: This sample is comprised of plagioclase and biotite. Plagioclase crystals have tabular shapes, but crystal margins are overprinted by biotite flakes, and minute biotite crystals are abundant within the plagioclase crystals. Twinning extinction angles indicate an albitic composition. The biotite is generally finer-grained than the plagioclase, except within the rounded biotite-rich clots. It has a distinct greenish colour, but the high birefringence indicates it is biotite, not chlorite. A small amount of quartz is present in the biotite-clots, but does not appear to occur elsewhere in the groundmass. Minor amounts of pyrite also occur in these clots. Biotite is unaltered, except within a narrow envelope around a pyrite-quartz-K-feldspar-carbonate veinlet in which it is slightly cloudy and more granular, with minor carbonate alteration. The veinlet does not have sharp walls and is often only one crystal in width (<0.3mm).

It is difficult to be certain of the origin of this rock, without any field context. The protolith may have been a mafic dyke, which have been pervasively overprinted by a biotite hornfels. The biotite does appear to be partially overprinting the albite. The other alteranative interpretation is that this is a lamprophyre dyke, however, lamprophyres are typically highly potassic, which is inconsistent with the albite crystals present in this sample.

SAMPLE: BD-04-15 136.3m (Covered Thin section)
LITHOLOGY: Monzodiorite
ALTERATION: Moderate pervasive Chlorite-sericite-carbonate

Hand Sample Description: The sample is a fine-grained crowded porphyry, consisting of blocky greenish crystals (up to 1 mm in length) is a pinkish groundmass of minute plagioclase and K-feldspar crystals. The rock has a salt and pepper texture. Mafic content is 15-20%, and the rock is weakly magnetic due to magnetite finely disseminated in the groundmass. Staining of the offcut block enhances the texture, and masses of tiny plagioclase crystals can be seen intergrown with indistinct K-feldspar (which stains bright yellow) in the groundmass. No sulphides are visible in the hand samples.

TRANSLUCENT MINERALS

Mineral	%	Distribution & Characteristics	Opt. Prop.
plagioclase	35	fine-grained, up to 0.5 mm, generally much finer, randomly oriented, felted mass in indistinct K-feldspar groundmass	twinning
K-feldspar	30	very fine-grained, identified by stain, cloudy	low biref.
chlorite	15	very fine-grained, scaly, pseudomorph replacement of amphibole	yellowish biref.
carbonate	10	anhedral, patches of alteration overprinting groundmass, and replacing amphibole	
sericite	05	very fine-grained, flecks in plagioclase	yellowish
quartz	03	very fine-grained, anhedral, in groundmass, clear	low biref.
amphibole	-	relict prismatic shapes, up to 2 mm, replaced by cloudy mixture of chlorite, carbonate and minute opaques	yellowish biref.
sphene	minor	very fine-grained, granules high relief, brownish, in chlorite	high biref.

OPAQUE MINERALS

Mineral	%	Distribution & Characteristics	Reflectance
magnetite	02	very fine-grained, <50 microns, semi-cubic, some reddish hematite, disseminated in groundmass	

Thin Section Description: The sample is comprised of a felted mass of plagioclase crystals, and larger, less abundant amphibole crystals in an indistinct K-feldspar-rich groundmass, dusted with very fine-grained magnetite. The plagioclase has extinction angles of around 20^o, indicating a composition of andesine. It is slightly cloudy, and dusted with sericite. The primary amphibole has been completely replaced by a cloudy, yellow-green chlorite, carbonate and sphene. Carbonate often occurs as a clear core, surrounded by scaly chlorite, intergrown with sphene granules. Small patches of carbonate (<0.5mm) also overprint the groundmass. The magnetite has been partially altered to hematite, some crystals are reddish and slightly translucent.

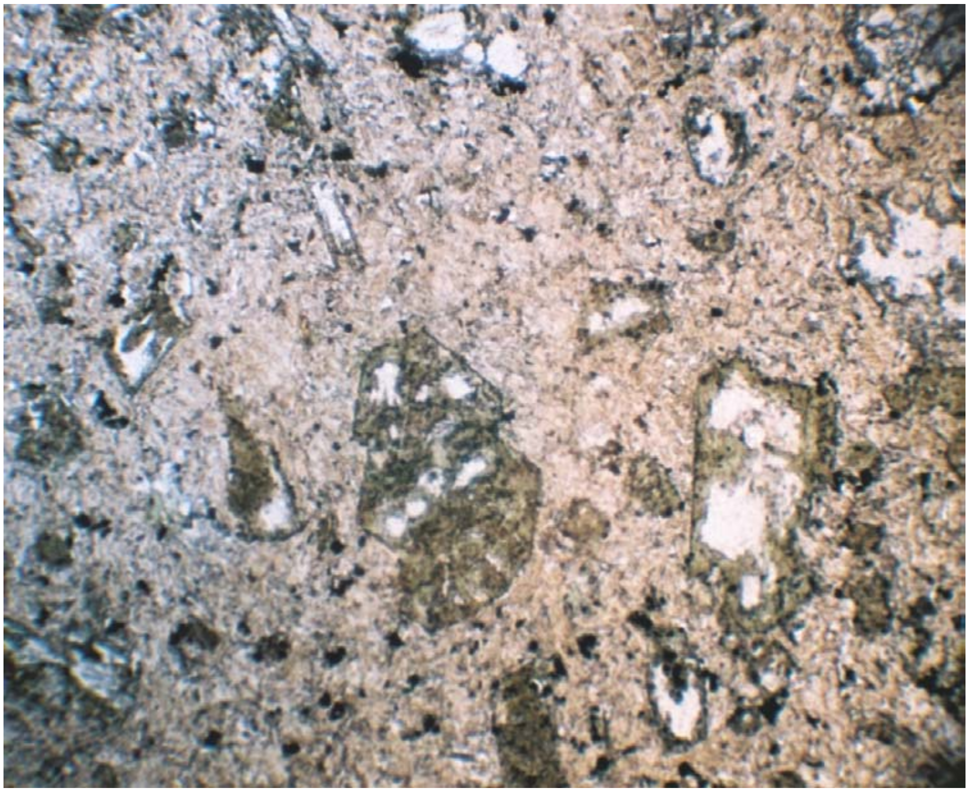


Photo 5: BD-04-15, 136.3 m. This image illustrates the overall texture of the monzodiorite unit. Prismatic hornblende crystals occur in a plagioclase-K-feldspar groundmass. In this sample the hornblende is replaced by a clear core of carbonate, surrounded by green chlorite. Fov 3 mm, ppl.

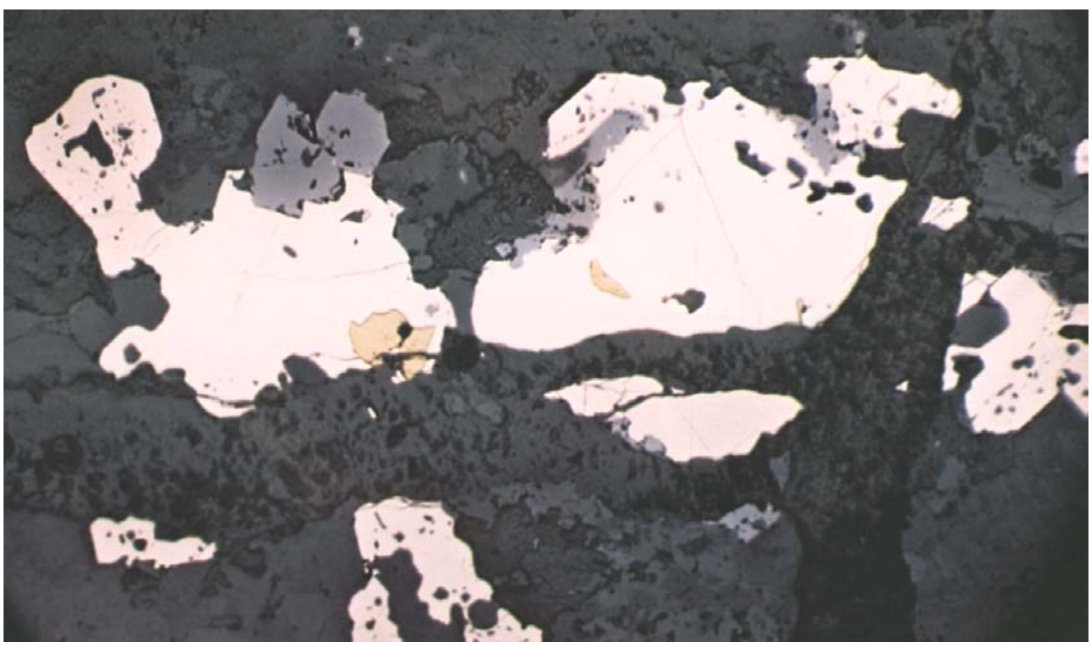


Photo 6: BD-04-15, 268.0 m. Quartz-sulphide veinlet. Pyrite (pale yellow) is intergrown with magnetite (grey) and chalcopyrite (deep yellow) which it partially encapsulates. Fov 1.5 mm, rl.

SAMPLE: BD-04-15 268.0m (Polished Thin section)
LITHOLOGY: Quartz Diorite
ALTERATION: Pervasive Chlorite associated with Quartz-sulphide veins

Hand Sample Description: The sample is a medium-grained, weakly porphyritic grey intrusion, comprised of approximately 60% white plagioclase, in a groundmass of acicular black amphibole (5-10%) and very fine-grained grey K-feldspar. The porphyritic texture is more apparent in the stained block. In the unstained block the plagioclase crystals are indistinct, in the stained block they are seen to be supported in a K-feldspar (yellow stained) groundmass. Whitish quartz-sericite-pyrite hairline veinlets cut the sample. In the stained piece these veinlets have a distinct yellow K-feldspar-rich enveloped (<1 mm wide). A minor amount of sulphide is disseminated in mafic mineral sites, but most occurs along fractures. Overall sulphide content is <2%. The rock is moderately magnetic.

TRANSLUCENT MINERALS

Mineral	%	Distribution & Characteristics	Opt. Prop.
plagioclase/ albite	45	medium-grained, interlocking tabular to blocky crystals up to 2 mm, fine-grained in groundmass, clear	oscillatory zoning
K-feldspar	15	fine-grained, anhedral, clear, overprinting plagioclase on vein margins, some in groundmass, difficult to distinguish	low biref.
quartz	15	very fine-grained, <100 microns, anhedral interlocking groundmass to plagioclase crystals and in veinlets	1st order biref.
hornblende	10	fine-grained, ragged, anhedral, often rimming/replacing biotite, pale to dark olive green pleochroic	2nd order biref.
biotite	05	fine-grained, ragged to blocky flakes forming clots in groundmass, dark brown to yellow brown pleochroic	masked high biref.
chlorite	05	fine-grained, green pleochroic, replacing biotite and hornblende	very low biref.
carbonate	minor	very fine-grained, with sericite replacing plagioclase, in veinlet with quartz and pyrite	extreme biref.
sericite	minor	very fine-grained, flakes within plagioclase	yellowish biref.
sphene	minor	very fine-grained, granules with mafics, high relief	extreme biref.
epidote	minor	very fine-grained, anhedral, yellowish, high relief, in and adjacent to quartz-pyrite vein	2-3rd order biref.
apatite	minor	fine-grained, prismatic crystals, primary, high relief, clear	low biref.

OPAQUE MINERALS

Mineral	%	Distribution & Characteristics	Reflectance
chalcopyrite	01	very fine-grained, free and intergrown with pyrite, along veinlets and disseminated	deep yellow
pyrite	02	fine-grained, anhedral, along veinlets and disseminated	pale yellow
magnetite	02	very fine-grained, equant, disseminated, some with pyrite	dull grey

Thin Section Description: The sample is comprised of tabular plagioclase phenocrysts, in a fine-grained, interlocking groundmass of quartz-plagioclase-K-feldspar, and ragged hornblende-biotite. Plagioclase phenocrysts are randomly oriented, and often occur in clusters (glomeroporphyritic texture). Extinction angles indicate an albitic composition. Plagioclase is very fresh in this sample, with only minor amounts of sericite alteration. Hornblende is more abundant than biotite, and appears to be overprinting it, however, both are partially overprinted by chlorite. Hornblende-biotite crystals are poikilitic, enclosing groundmass quartz-plagioclase-K-feldspar crystals. Granules of sphene are intergrown with the mafic minerals. Very fine-grained magnetite is disseminated throughout the sample.

The veinlets that cut the sample are comprised mainly of interlocking quartz, with lesser amounts of carbonate, epidote and sulphides. Sodium cobaltinitrite staining indicates there is a K-feldspar envelope around the veinlets. This is difficult to distinguish from the groundmass, but can be seen overprinting plagioclase crystals cut by the veinlets. Chlorite and epidote alteration of hornblende/biotite also occurs adjacent to the veinlets. Most of the chalcopyrite and pyrite occur along the veinlets. A small amount occurs in the wallrock in mafic mineral sites. A minor amount of chalcopyrite is encapsulated in pyrite, most of it occurs separately as trails of crystals along the veinlets. Magnetite is locally intergrown with sulphides along the margins of the veinlets. It was probably pre-existing in the wallrock.

SAMPLE: BD-04-16 153.0m (Polished Thin section)
LITHOLOGY: Quartz Diorite
ALTERATION: Sericite-chlorite-carbonate associated with Quartz-K-feldspar-sulphide veins

Hand Sample Description: A medium-grained equigranular intrusion, comprised of interlocking plagioclase, K-feldspar, quartz and hornblende in decreasing amounts. Crystal size is up to 4 mm. The rock is a mixture of white and black crystals. The rock is moderately magnetic. Chalcopyrite and pyrite occur on hairline fractures, in mafic mineral sites and as larger clots. Overall sulphide content is approximately 5%. The sulphide veinlets have some secondary quartz and K-feldspar associated with them, but no well defined alteration envelopes. This sample appears to be a more equigranular version of two previous samples (BD-04 15 10m, and BD-04-268m).

TRANSLUCENT MINERALS

Mineral	%	Distribution & Characteristics	Opt. Prop.
plagioclase/ albite	34	medium-grained, interlocking tabular to blocky crystals up to 3 mm, well preserved, albitic compositions	oscillatory zoning
K-feldspar/ orthoclase	20	medium-grained, up to 3 mm. sub-equant, clear, enlcoses plagioclase crystals, no twinning	1st order biref.
quartz	10	anhedral, in groundmass interstitial to plagioclase and in vein	1st order biref.
hornblende	10	fine-grained, subhedral, intergrown with biotite, pale to dark olive green pleochroic	2nd order biref.
chlorite	05	fine-grained, green pleochroic, replacing biotite/hornblende	brown biref.
carbonate	05	fine-grained, platy, with chlorite/sericite replacing mafics, in veinlet with quartz and pyrite	extreme biref.
sericite	03	very fine-grained, fibrous and scaly masses, replacing plagioclase	yellowish biref.
sphene	03	fine-grained, up to 0.5 mm, prismatic, high relief, brownish, primary phase	extreme biref.
biotite	02	fine-grained, ragged to blocky flakes, with hornblende, dark brown to yellow brown pleochroic	masked high biref.
epidote	minor	very fine-grained, anhedral, yellow, high relief, with carbonate	2-3rd order biref.
apatite	minor	fine-grained, prismatic crystals, primary, high relief, clear	low biref.

OPAQUE MINERALS

Mineral	%	Distribution & Characteristics	Reflectance
pyrite	05	fine-grained, crystals in veinlets up to 4 mm	pale yellow
magnetite	02	fine-grained, <0.4 mm, equant, disseminated,	dull grey
chalcopyrite	01	fine-grained, <0.25 mm, mainly in wallrock	deep yellow

Thin Section Description: The sample consists of interlocking plagioclase and orthoclase crystals, with quartz, hornblende, sphene and biotite occupying interstitial positions. Large orthoclase crystals enclose smaller tabular plagioclase crystals. Hornblende crystals are slightly prismatic, and contain flakes of biotite. Primary sphene often occurs adjacent to hornblende. Away from the two cross cutting veinlets, these minerals are very fresh. Alteration effects begin approximately 4 mm from the veinlets, and is most intense between them. The veinlets are comprised of interlocking quartz, K-feldspar, pyrite and radiating flakes of pale green chlorite. Alteration around the vein consists of sericite-chlorite-carbonate. Chlorite replaces mafics, and flakes of sericite dust feldspars. Between the veinlets, carbonate preferentially replaces the hornblende/biotite sites, enclosing primary apatite crystals that are often spatially associated with these sites.

Pyrite occurs as elongate continuous crystals up to 4 mm in length, and encloses quartz crystals. Trace amounts of chalcopyrite are encapsulated in pyrite. Chalcopyrite and pyrite also occur in the alteration envelope around the vein, often concentrated in the mafic mineral sites. Chalcopyrite occurs as free crystals, as well as inclusions in pyrite, and intergrown with magnetite. Magnetite is disseminated throughout the wallrock, but contains flecks of pyrite, and is also partially altered to hematite (paler grey reflectance). Around the veins magnetite content is lower, and it appears to have been replaced by sulphides.

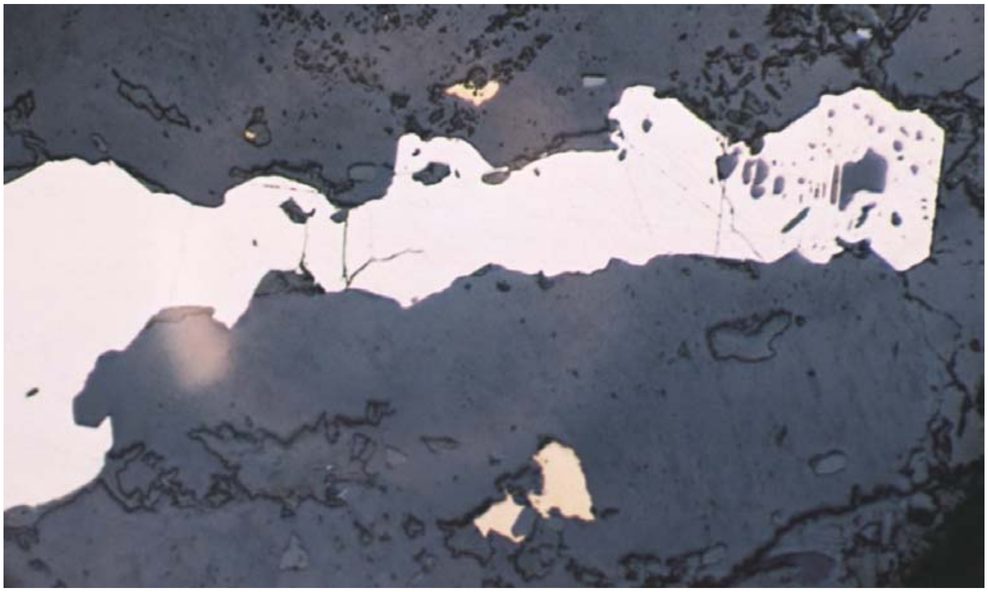


Photo 7: BD-04-16, 153.0 m. Quartz-K-feldspar-pyrite vein. Elongate crystals of pyrite (pale yellow) up to 4 mm occur within the veinlet. Much finer-grained chalcopyrite (darker yellow) occurs in the wallrock adjacent to the vein. Fov 1.5 mm, rl.

Photo 8: BD-04-16, 153.0 m. This image is a good illustration of the quartz diorite texture. Relatively unaltered, tabular plagioclase crystals (twinned) are interlocking, while hornblende (yellow-blue), quartz (white), and sphene (pinkish) infill the interstitial space. Fov 3 mm, xpl.

SAMPLE: BD-04-16 256.9m (Covered Thin section)
LITHOLOGY: Quartzite/Arkose or Rhyolite?
ALTERATION: Pervasive Muscovite-carbonate

Hand Sample Description: The sample is a grey-tan, fine-grained, crystalline rock of indeterminate origin. It has a sugary texture and is siliceous. The colours of the rock are mottled, with indistinct paler greenish spots and rounded clots with black mafic crystals. The sample is cut by a watery quartz-molybdenite veinlet (<1 mm) with a narrow white envelope. In the stained off cut, this envelope stains bright yellow, indicating it is K-feldspar. The texture of the rock is more apparent in the stained off cut, and it is comprised of packed, rounded quartz grains/crystals with interstitial sericite. K-feldspar occurs interstitially in one corner of the section, which may correspond to one of the greenish spots.

TRANSLUCENT MINERALS

Mineral	%	Distribution & Characteristics	Opt. Prop.
quartz	60	fine-grained, rounded grains 100-300 microns, slightly sutured crystal boundaries where they meet, unstrained	1st order biref.
muscovite/ sericite	15	fine-grained, tabular flakes, sometimes felted, matrix to quartz crystals, clear, colourless, parallel extinction	3rd order biref.
plagioclase	10	fine-grained, tabular, slightly cloudy, intergrown with biotite and interstitial to quartz crystals, replaced by muscovite	relict twinning
K-feldspar	05	fine-grained, clear, envelope to quartz vein, no twinning	low biref.
carbonate	05	very fine-grained, with muscovite, partially replaces biotite	extreme relief
biotite	03	fine-grained, tabular flakes up to 1.5 mm, dark brown to yellow pleochroic	masked high biref.

OPAQUE MINERALS

Mineral	%	Distribution & Characteristics	Reflectance
molybdenite	minor	fine-grained, <0.5 mm, flakes, often bent, in vein	
pyrite	minor	fine-grained, <0.5 mm, cubic, in wallrock	
rutile?	02	very fine-grained, granules, very dark brown	nearly opaque

Thin Section Description: The sample is comprised of rounded quartz grains, and less abundant plagioclase crystals, in a matrix of muscovite. Muscovite partially replaces plagioclase, and infills interstitial space. It occurs as discrete flakes, and as less distinct cloudy, scaly masses. The quartz grains are quite uniform in size, there is no indication of bedding. Original feldspar content would have been higher, but the plagioclase has been preferentially altered to muscovite/sericite. Clots with mafic minerals visible in the hand sample are comprised of plagioclase and biotite. The biotite has a minor amount of carbonate replacing it along crystals boundaries and cleavage planes. Plagioclase is more intensely altered by muscovite/sericite and carbonate, but relict twinning is still visible. The cross cutting veinlet consists of interlocking quartz. The K-feldspar envelope is well defined and completely overprints the surrounding wallrock 0.5 mm from the vein, and replaces the matrix a further 1 mm into the wallrock. Very fine-grained, flaky opaque minerals (molybdenite) occur mainly in the K-feldspar envelope, only minor amounts are within the quartz. Cubic (pyrite) opaque crystals occur in the wallrock adjacent to the vein. Unidentified, very fine-grained, anhedral semi-opaque minerals (rutile?) occur throughout the matrix. The origin of the biotite bearing clots is not clear. They may have been small lithic fragments. Protolith may have been sandstone/arkose, or a very felsic intrusion.

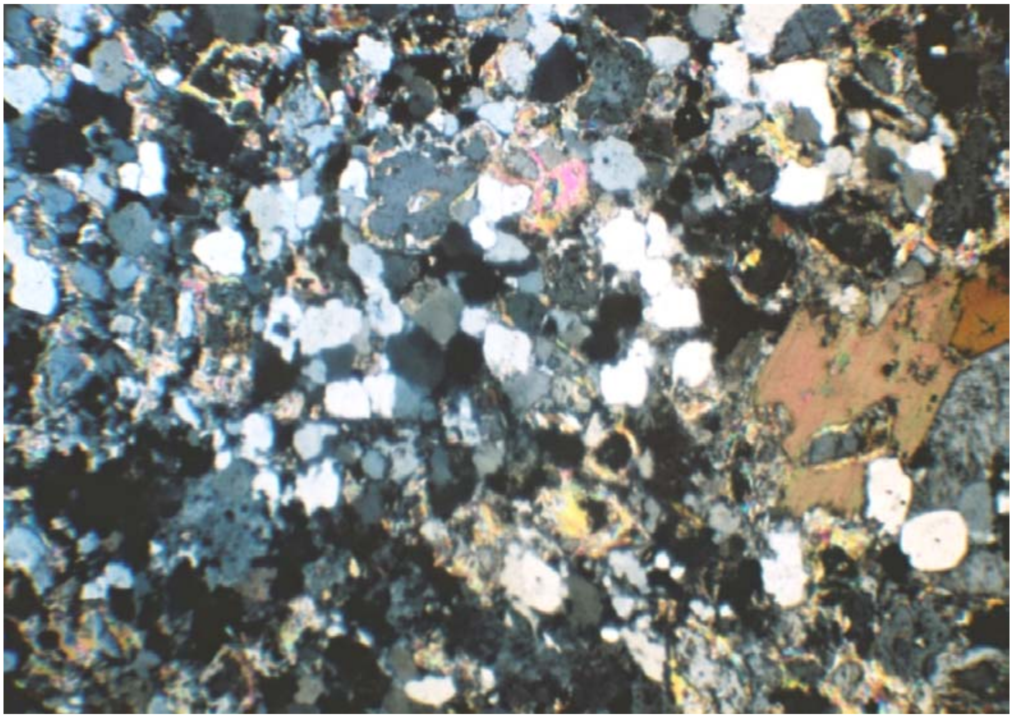


Photo 9: BD-04-16, 256.9 m. This sample is comprised dominantly of rounded quartz grains/crystals in a muscovite altered groundmass. Flakes of relatively fresh biotite occur in clots. The sample is cut by a quartz veinlet with a distinct K-feldspar envelope (dark, lower left corner). Fov 3 mm, xpl.

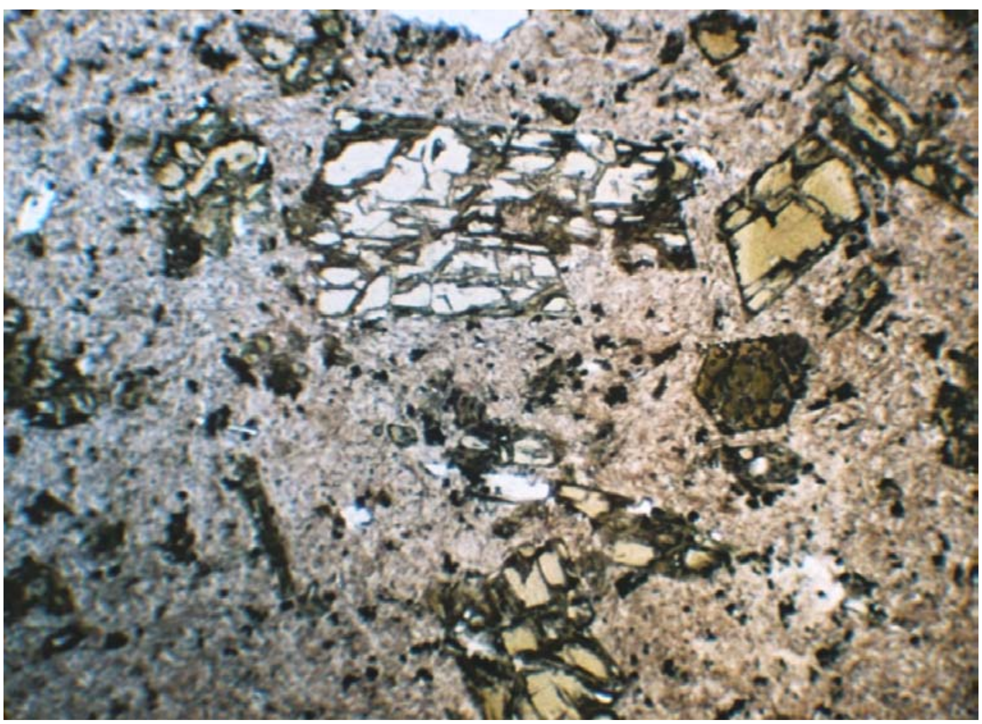


Photo 10: BD-04-17, 15.8 m. This image is a good illustration of the monzodiorite texture. Relatively unaltered prismatic hornblende crystals (pale to dark yellow-brown) occur in a groundmass of fine-grained plagioclase crystals in K-feldspar. Fov 3 mm, ppl.

SAMPLE: BD-04-17 15.8m (Covered Thin section)
LITHOLOGY: Monzodiorite
ALTERATION: Weak Pervasive Chlorite-carbonate-sericite

Hand Sample Description: The sample is a fine-grained porphyry consisting of black hornblende crystals (10-15%) up to 3 mm, in a finer-grained, dark pink plagioclase-K-feldspar groundmass. It is the same intrusion as sample BD-04-15 136.3m. A clot of quartz with a pink K-feldspar rim occurs in one corner of the hand sample. Small plagioclase-hornblende-rich clots occur in the off cut block. There are no veinlets, and no sulphides apparent in the samples. The rock is moderately magnetic.

TRANSLUCENT MINERALS

Mineral	%	Distribution & Characteristics	Opt. Prop.
plagioclase	40	fine-grained, up to 0.5 mm, generally much finer, randomly oriented, felted mass in indistinct K-feldspar groundmass	twinning
K-feldspar	30	very fine-grained, identified by stain, cloudy	low biref.
hornblende	15	fine-grained, up to 3 mm, prismatic crystals, pleochroic olive green to pale yellow, partially chlorite-carbonate altered	1-2nd order biref.
chlorite	05	very fine-grained, scaly to fibrous, same green as hornblende it replaces	low biref.
carbonate	05	anhedral, patches of alteration in groundmass and replacing hornblende	high biref.
sericite	02	very fine-grained, flecks in plagioclase	yellowish
apatite	minor	very fine-grained, euhedral, high relief, clear	low biref.

OPAQUE MINERALS

Mineral	%	Distribution & Characteristics	Reflectance
magnetite	03	fine-grained, <0.5 mm, anhedral, disseminated throughout	

Thin Section Description: The sample is comprised of prismatic hornblende crystals, in a groundmass of much finer-grained felted plagioclase crystals, and indistinct K-feldspar. The groundmass is dusted with very fine-grained opaques (magnetite). Much of the primary hornblende is preserved, but the crystals are partially altered around their margins and along fractures and cleavage planes, by chlorite and carbonate. The chlorite is the same color as the hornblende, and is distinguished by its lower birefringence. Twinning is still apparent in the plagioclase crystals, and indicates an albitic composition, but the crystals are rather cloudy. They are flecked with sericite, and while staining of the offcut indicates K-feldspar is abundant, it can not be clearly distinguished in the groundmass, and may be partially overprinting the albite.

SAMPLE: BD-04-17 142.2m (Covered Thin section)
LITHOLOGY: Quartz Monzonite
ALTERATION: Weak Pervasive Sericite-carbonate-chlorite

Hand Sample Description: The sample is a coarse-grained porphyry, consisting of plagioclase (30%), quartz (10%), and biotite (5%) phenocrysts in a pale pink, aphanitic K-feldspar groundmass. Quartz is the coarsest-grained crystal phase, with embayed crystals up to 4 mm across. Plagioclase is greenish and partially sericite altered. A much finer-grained, K-feldspar-rich clot (1 cm) is present. A quartz veinlet with a K-feldspar envelope cuts the section. The rock is slightly magnetic. Trace amounts of pyrite/chalcopyrite are present on microfractures. This sample is very similar to BD-04-15 3.0m, and the following samples BD-04-17 170.5m and 398.1 m.

TRANSLUCENT MINERALS

Mineral	%	Distribution & Characteristics	Opt. Prop.
K-feldspar	45	very fine-grained, mosaic textured groundmass, rare phenocryst, secondary K-feldspar around quartz veins	low biref.
plagioclase	20	tabular phenocrysts up to 4 mm, partially replaced by very fine-grained scaly sericite	twinning
quartz	10	fine to coarse-grained, blocky embayed phenocrysts up to 4 mm, interlocking to prismatic in veins, possibly in groundmass	1st order biref.
sericite	10	very fine-grained, scaly masses replacing plagioclase	yellowish biref.
carbonate	05	present in vein, replacing biotite and plagioclase phenocrysts and patchy alteration adjacent to veins	extreme biref.
biotite	05	medium-grained, up to 1.5 mm, blocky flakes, dark brown to yellow pleochroic, rimmed with tiny opaque crystals	masked high biref.
chlorite	03	fine-grained, platy, green, replacing biotite possibly some fine-grained hornblende	purplish biref.
hornblende	01	fine-grained, semi-prismatic, olive green pleochroic, intergrown with biotite and apatite	masked biref.
apatite	minor	fine-grained, prismatic crystals, primary, high relief, clear	low biref.
zircon	trace	very fine-grained, prismatic, very high relief colourless	high biref.
sphene	trace	very fine-grained, prismatic, very high relief, brownish	extreme biref.

OPAQUE MINERALS

Mineral	%	Distribution & Characteristics	Reflectance
sulphides	minor	very fine-grained, along hairline fractures	
magnetite	01	fine-grained, disseminated in mafic sites	

Thin Section Description: The sample is comprised of relatively coarse-grained quartz, plagioclase, biotite, hornblende and K-feldspar phenocrysts, in a mosaic textured groundmass of K-feldspar. Prismatic crystals of apatite , zircon and sphene occur as accessory phases. Biotite and hornblende crystals often occur adjacent to each other, or are intergrown. Both are partially replaced by chlorite, though hornblende is more intensely altered. Minute opaque crystals often rim biotite flakes. Plagioclase phenocrysts often have very fresh looking cores, with well preserved twinning, but the margins, or patches along crystal planes are altered to a mass of scaly yellowish sericite. Alteration in the groundmass consists of very fine-grained sericite and carbonate, that occur in minute patches overprinting the K-feldspar. One large orthoclase crystal occurs in the section, it encloses quartz crystals and looks more like a fragment in the off cut block, but in thin section is seen to be one large continuous crystal.

The main veinlet consists of relatively coarse-grained quartz crystals, which have some subgrain development. Plagioclase and biotite crystals next to the vein are pervasively altered to sericite and carbonate. There are prismatic K-feldspar crystals growing on the margins of the vein, into the quartz.

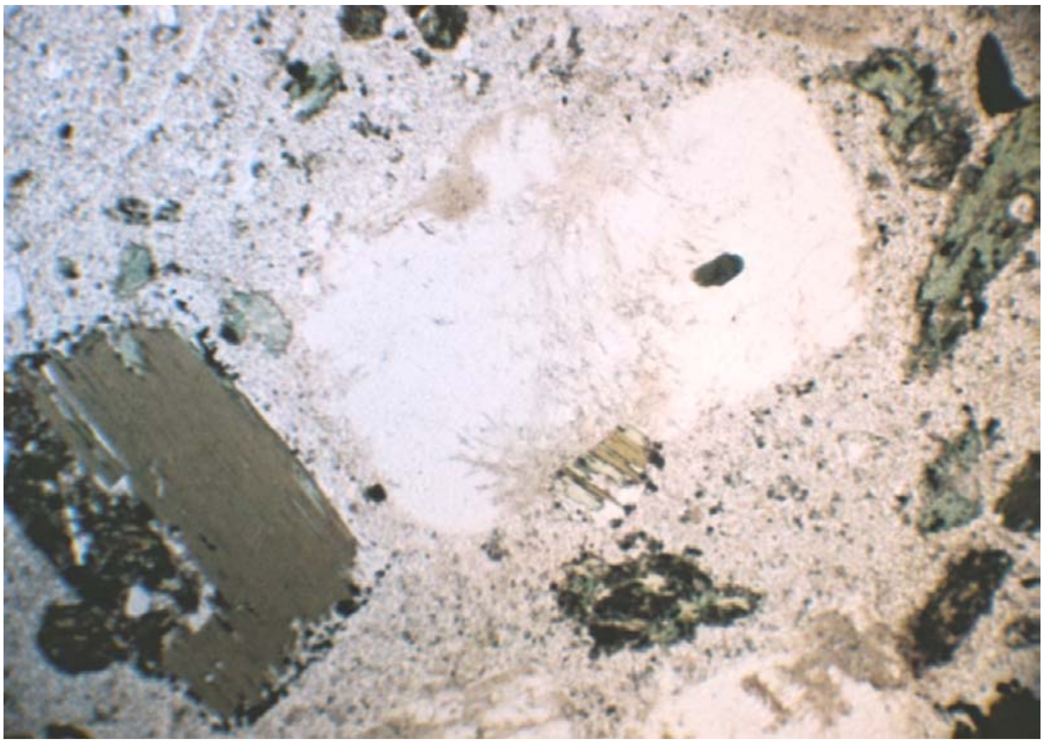


Photo 11: BD-04-17, 142.2 m. This image is a good illustration of the quartz monzonite texture. A larger relatively unaltered tabular plagioclase crystal (clear), and finer-grained biotite (brown) occur in a very fine-grained groundmass of K-feldspar. Minute opaque crystals rim biotite. Green chlorite partially replaces biotite, particularly the smaller flakes (upper right). Fov 3 mm, ppl.

SAMPLE: BD-04-17 170.5 m (Polished Thin section)
LITHOLOGY: Quartz Monzonite
ALTERATION: Early K-feldspar-biotite, associated with Quartz-calcite-sulphide vein, Retrograde Chlorite-sericite

Hand Sample Description: The sample is a medium-grained grey porphyry, consisting of blocky plagioclase (30-40%), quartz (5%), biotite (<5%), and hornblende (3%) phenocrysts in a much finer-grained groundmass of the same minerals, intergrown with K-feldspar. The sample by veinlets of chalcopyrite-pyrite-molybdenite intergrown with quartz and rimmed with a pink K-feldspar envelope which overprints the plagioclase phenocrysts. Veinlet walls are uneven, and sulphide-bearing fractures branch off the main vein several mm into the wallrock. Overall sulphide content is around 5%. This rock is probably a finer-grained version of the previous sample.

TRANSLUCENT MINERALS

Mineral	%	Distribution & Characteristics	Opt. Prop.
plagioclase	30	tabular phenocrysts up to 3 mm, twins and oscillatory zoning, partial sericite replacement	twinning
K-feldspar	25	fine-grained, interlocking in groundmass, rare large phenocryst, secondary K-feldspar around quartz veins	low biref.
quartz	24	fine to coarse-grained, embayed phenocrysts up to 3 mm, in groundmass, interlocking to prismatic in veins	1st order biref.
biotite	04	medium-grained, up to 1.5 mm, blocky flakes, dark brown to yellow pleochroic, some chlorite replacement	masked high biref.
sericite	05	very fine-grained, scaly masses replacing plagioclase	yellowish biref.
chlorite	03	fine-grained, platy to fibrous, green pleochroic, replacing biotite, on margins of vein with molybdenite, in vein with pyrite	brownish biref.
calcite	02	present in vein, polygonal interlocking crystals up to 0.5 mm, intergrown with chalcopyrite	extreme biref.
hornblende	minor	fine-grained, semi-prismatic, olive green pleochroic, intergrown with biotite and apatite	masked biref.
apatite	minor	fine-grained, prismatic crystals, primary, high relief, clear	low biref.

OPAQUE MINERALS

Mineral	%	Distribution & Characteristics	Reflectance
chalcopyrite	04	fine-grained, <4 mm, anhedral, in vein, prismatic pyrite crystals and flakes of molybdenite growing on margins	deep yellow
pyrite	02	fine-grained, <4 mm, anhedral in vein, disseminated in wallrock	pale yellow
molybdenite	01	very fine-grained, bent flakes on vein margins	light grey, anisotropic
magnetite	minor	fine-grained, anhedral, pitted disseminated in wallrock	dull grey

Thin Section Description: The sample is comprised of quartz, K-feldspar, and biotite phenocrysts up to 3 mm, in a much finer-grained K-feldspar-quartz groundmass. Plagioclase is partially altered to cloudy sericite, particularly in the 1 cm wide K-feldspar enriched envelope around the cross cutting vein. Biotite is intergrown with minor amounts of hornblende, and is partially replaced by green chlorite. Smaller flakes, and possibly small hornblende crystals are totally altered to chlorite. Quartz crystals can be distinguished in the groundmass, due to their slightly higher birefringence than the K-feldspar, and occur as single crystals. This quartz appears to be a primary component of the groundmass (rather than patchy overprinting crystals). Fine-grained sericite and chlorite are also present in the groundmass, replacing K-feldspar.

The vein is comprised of interlocking quartz crystals up to 4 mm, intergrown with platy calcite, sulphides, and minor chlorite. Anhedral chalcopyrite and pyrite occur in the vein, and are more closely spatially associated with calcite. Chalcopyrite has prismatic pyrite crystals, and a minor amount of molybdenite growing around its margins. Molybdenite, as well as chalcopyrite and pyrite also occur in a chlorite-rich selvedge on the vein. This may originally have been a biotite envelope that has altered to chlorite during retrograde alteration. Chalcopyrite intergrown with magnetite occurs within the K-feldspar envelope, while pyrite is more abundant, disseminated in the wallrock outside the K-feldspar envelope. Pitted crystals of magnetite occur in the wallrock. A minor amount of chalcopyrite is encapsulated in pyrite.

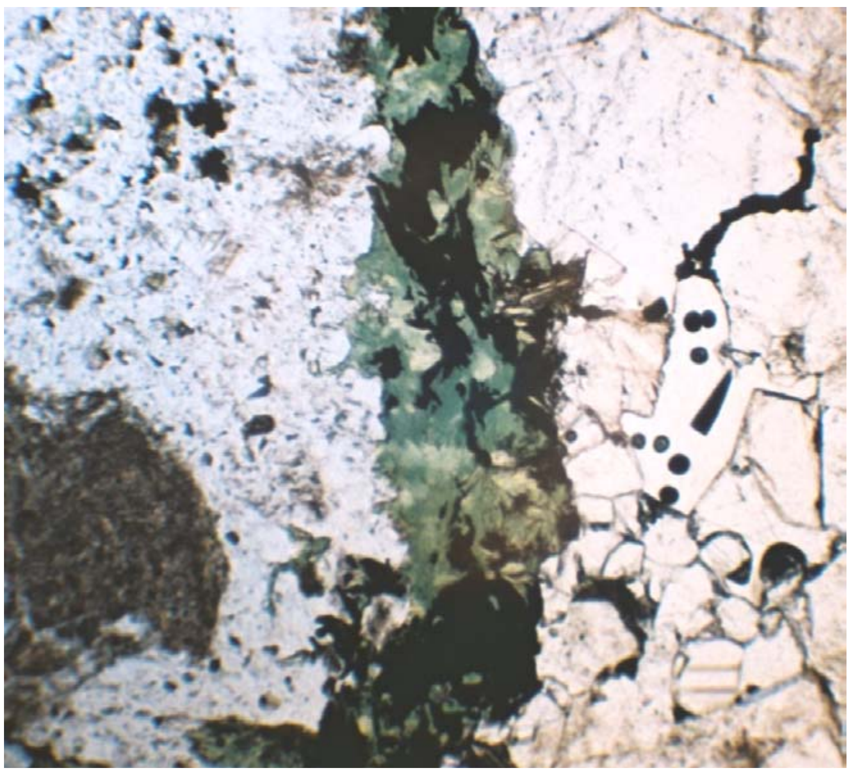


Photo 12: BD-04-17, 170.5 m. A quartz-K-feldspar-carbonate-sulphide vein occurs on the right side of the photo, wallrock occurs on the left, separated by a vein selvedge of green chlorite which contains flakes of molybdenite (opaque). Fov 3 mm, ppl.

Photo 13: BD-04-17, 170.5 m. Flakes of fine-grained molybdenite (silvery) occur along the margins of a quartz-K-feldspar-carbonate-sulphide vein. Pyrite (yellow) and chalcopyrite occur in the vein. Fov 1.5 mm, rl.

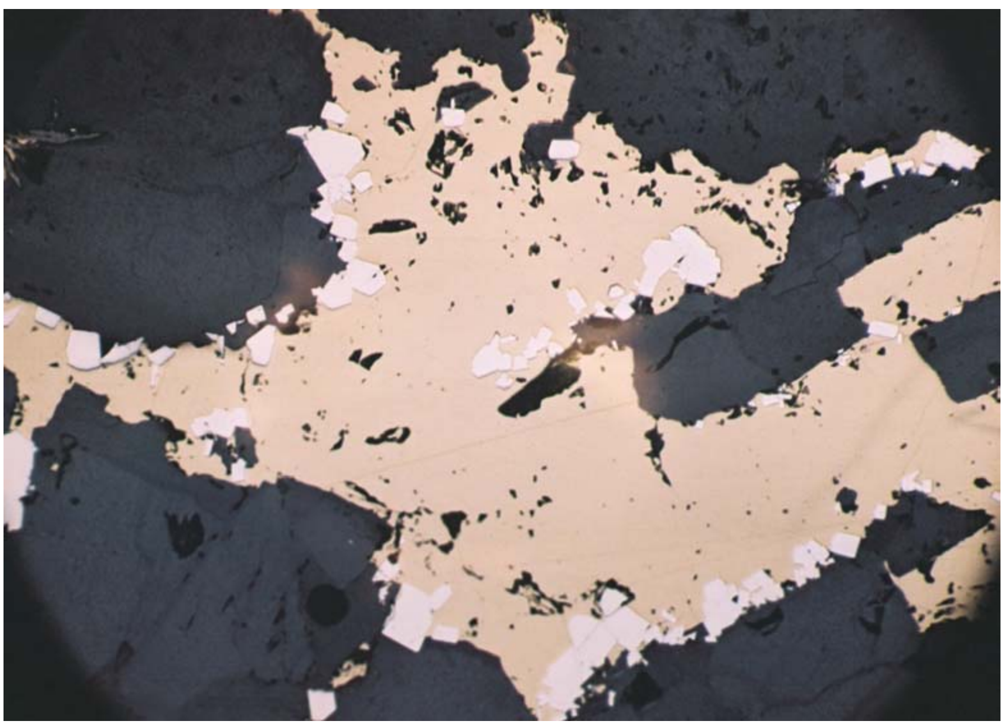


Photo 14: BD-04-17, 170.5 m. Euhedral crystals of pyrite (pale yellow) overgrow the edges of chalcopyrite (deep yellow) with a vein. Fov 1.5 mm, rl.

SAMPLE: BD-04-17 363.6m (Polished Thin section)
LITHOLOGY: Quartz Diorite
ALTERATION: Quartz-K-feldspar-Biotite-Sulphide vein, Weak Retrograde Chlorite-sericite

Hand Sample Description: The sample is a fine-grained, fairly equigranular intrusion consisting of tabular plagioclase and hornblende crystals, with interstitial K-feldspar. Crystal size is up to 1.5 mm. The section is cut by a 2 m wide planar grey quartz vein, with very fine-grained molybdenite along the vein margins, and a distinct narrow (<0.5 mm) K-feldspar envelope. K-feldspar alteration also occurs around a microfracture. Pyrite and chalcopyrite occur on fracture surfaces on the hand sample, but do not appear in the off cut section. Sulphide content of the thin section itself is low, <2%. The sample is most similar to BD-04-15 268.0m.

TRANSLUCENT MINERALS

Mineral	%	Distribution & Characteristics	Opt. Prop.
plagioclase/ albite	60	medium-grained, interlocking tabular to blocky crystals up to 3 mm, well preserved, albitic compositions	oscillatory zoning
K-feldspar	15	fine-grained, anhedral, clear, overprinting plagioclase on vein margins, some in wallrock difficult to distinguish	low biref.
hornblende	10	fine-grained, anhedral, intergrown with biotite, pale to dark olive green pleochroic	2nd order biref.
quartz	05	anhedral, in groundmass interstitial to plagioclase and in vein	1st order biref.
sphene	03	fine-grained, anhedral, high relief, brownish, interstitial to plagioclase	extreme biref.
chlorite	02	fine-grained, green pleochroic, replacing biotite next to vein	brown biref.
biotite	minor	fine-grained, ragged, around vein	masked high biref.
carbonate	minor	very fine-grained, alteration around vein	extreme biref.
sericite	minor	very fine-grained, flakes and scaly masses, replacing plagioclase	yellowish biref.
epidote	minor	fine-grained, anhedral, yellow green, with chlorite on margins of vein, replacing sphene locally, high relief	3rd order biref.

OPAQUE MINERALS

Mineral	%	Distribution & Characteristics	Reflectance
magnetite	05	very fine-grained, <0.3mm, rounded to cubic, disseminated	dull grey
molybdenite	<01	very fine-grained, flakes, on margins of vein	light grey
pyrite	minor	very fine-grained, <0.3 mm, adjacent to vein	pale yellow
chalcopyrite	trace	very fine-grained, <0.3 mm, adjacent to vein	deep yellow

Thin Section Description: The sample is comprised of interlocking plagioclase crystals, with interstitial quartz, K-feldspar and hornblende. There is very little primary biotite in this sample. Plagioclase is relatively fresh, with only minor amounts of very fine-grained sericitic alteration. Hornblende is ragged, but still has the optical properties of amphibole. Fine-grained biotite adjacent to the vein is probably secondary in nature, and genetically related to the K-feldspar envelope around the quartz vein, however it has been almost totally altered to green chlorite.

There is also some weak carbonate and epidote alteration around the vein. The vein is comprised of interlocking quartz, and minor amounts of carbonate. The K-feldspar envelope is <1 mm thick, and only effects the groundmass. Very fine-grained flakes of molybdenite occur mainly on the margins of the vein, but some occurs in the vein, and is associated with very fine-grained, scaly K-feldspar and chlorite. A few crystals of pyrite and chalcopyrite occur in the wallrock, adjacent to the vein, often intergrown with biotite. Magnetite is disseminated throughout the wallrock and is stable right up to the vein.

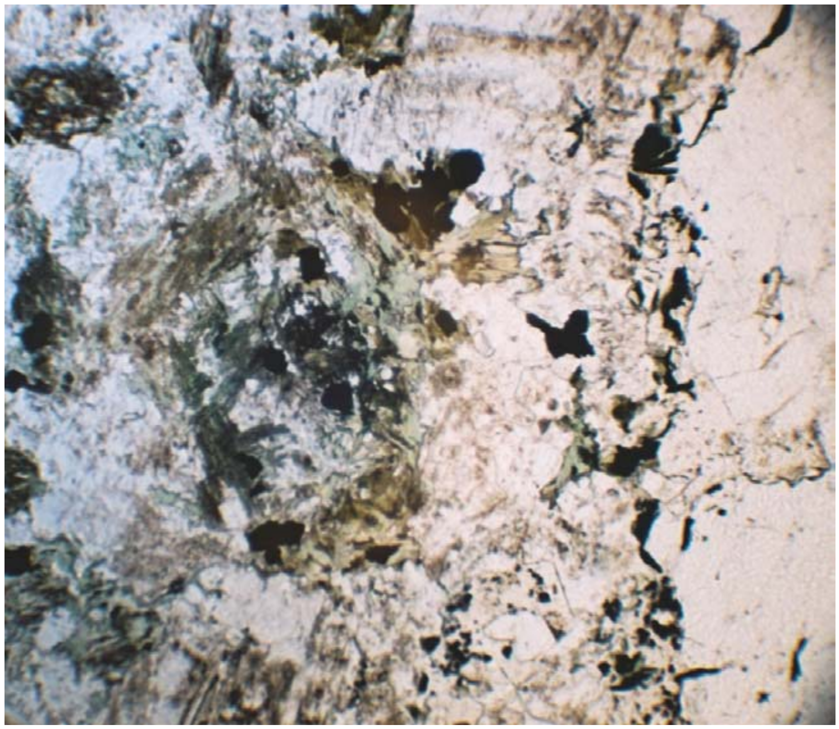


Photo 14: BD-04-17, 363.6 m. A quartz-carbonate vein occurs on the right hand side of the photo, altered wallrock on the left. Very fine-grained flakes of molybdenite (opaque) occur on the vein margin. Biotite adjacent to the vein is partially altered to green chlorite. Fov 3 mm, ppl.

SAMPLE: BD-04-17 398.1m (Covered Thin section)
LITHOLOGY: Quartz Monzonite
ALTERATION: Moderately Intense Pervasive Muscovite-carbonate

Hand Sample Description: The sample is a pale yellowish-green, medium to coarse-grained porphyry. Plagioclase, quartz, biotite and orthoclase occur as phenocrysts in a much finer-grained groundmass of the same minerals, intergrown with K-feldspar. Quartz is the coarsest-grained phase, with rounded quartz eyes up to 5 mm present. Orthoclase phenocrysts enclose smaller plagioclase crystals. Plagioclase and biotite are pervasively sericite/muscovite altered. There are no veinlets or sulphides in the hand samples. This sample is most like BD-04-15 3.0m.

TRANSLUCENT MINERALS

Mineral	%	Distribution & Characteristics	Opt. Prop.
K-feldspar	55	fine-grained, interlocking in groundmass, rare large phenocryst	low biref.
plagioclase	15	relict tabular phenocrysts up to 4 mm, largely replaced by very fine-grained sericite/muscovite	relict twinning
muscovite/ sericite	15	fine-grained, flakes, replacing primary minerals, clear, colourless	3rd order biref.
carbonate	10	fine-grained, replacing plagioclase and biotite phenocrysts and granular patchy alteration of groundmass	extreme biref.
quartz	05	coarse-grained, embayed phenocrysts up to 5 mm, possibly in groundmass	1st order biref.
biotite	-	relict medium-grained, blocky flakes, totally replaced by muscovite	masked high biref.

OPAQUE MINERALS

Mineral	%	Distribution & Characteristics	Reflectance
opaques	minor	very fine-grained granules in remnant mafic sites	

Thin Section Description: The sample is comprised of plagioclase, quartz, biotite and K-feldspar phenocrysts in a fine-grained, interlocking K-feldspar dominant groundmass. Muscovite and lesser amounts of carbonate have totally replaced the biotite. Plagioclase is flecked with muscovite/sericite and carbonate. Relict twinning is visible in a few crystals but is mostly destroyed, indicating the plagioclase has recrystallized, replacing the primary composition. The groundmass is partially replaced by patchy carbonate alteration, and flakes of muscovite. There are only minor amounts of unidentified opaque minerals, concentrated mainly in relict mafic crystal sites.

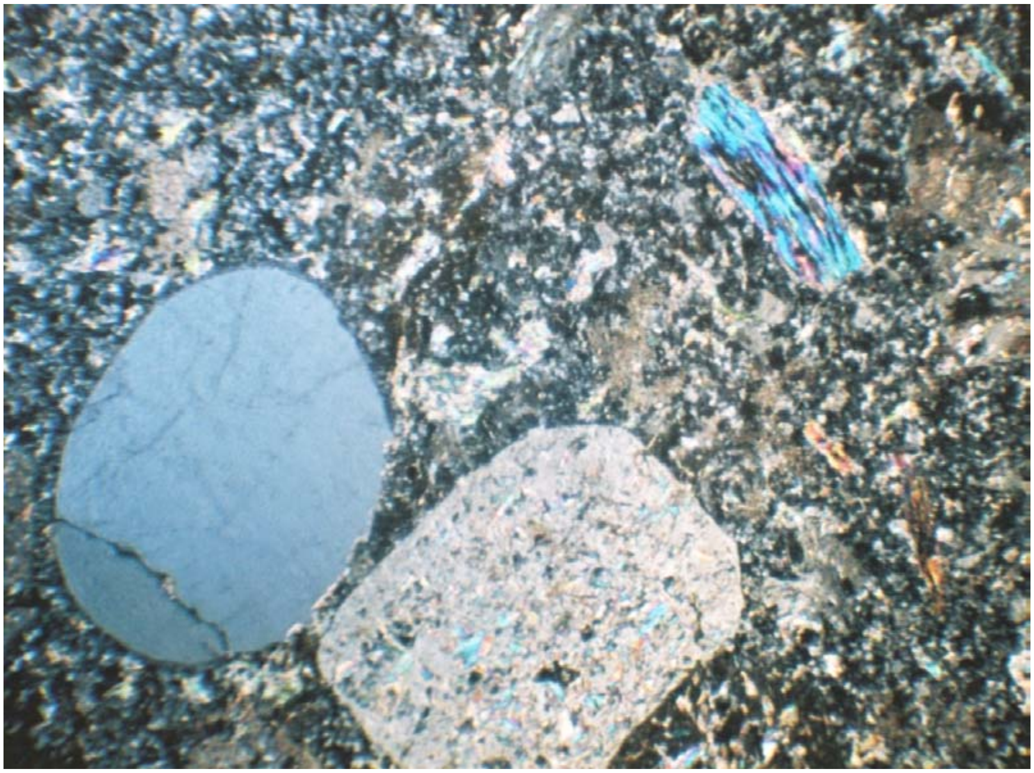


Photo 15: BD-04-17, 398.1 m. In this sample euhedral plagioclase crystals are altered to a mass of fine-grained sericite (bottom, center), while biotite is altered to muscovite (top right, blue). The groundmass is partially altered to sericite and carbonate. Quartz eyes (round, left) are unaltered. Fov 3 mm, xpl.

Photo 16: BD-04-19, 58.5 m. Primary mafic minerals are altered to chlorite (green), and plagioclase is altered to sericite around quartz-carbonate-zeolite veins. Blebs of sulphides (opaque) occur in the wallrock. Fov 3 mm, ppl.

SAMPLE: BD-04-19 58.5m (Polished Thin section)
LITHOLOGY: Quartz Diorite
ALTERATION: Quartz-calcite-zeolite veins, Pervasive Sericite-chlorite+/-sulphide+/-quartz

Hand Sample Description: The sample is a fairly equigranular, medium-grained intrusion, comprised of interlocking plagioclase, K-feldspar, quartz and hornblende, in decreasing proportions. Crystal size is 2 mm or less. The sample is cut by numerous white to rusty pink carbonate veinlets. Fracture surfaces with slickensides are coated in dark chlorite and carbonates. Minor amounts of pyrite are also on these surfaces, though overall sulphide content is <2%. This sample is very similar to the other equigranular samples in holes BD-04-15, 16 and 17.

TRANSLUCENT MINERALS

Mineral	%	Distribution & Characteristics	Opt. Prop.
plagioclase/ albite	33	medium-grained, interlocking tabular to blocky crystals up to 2 mm, locally sericite altered	twinning
K-feldspar	20	medium-grained, equant, interlocking, less altered than plagioclase	no twinning
quartz	15	anhedral, interlocking, in groundmass interstitial to plagioclase and in veinlets with calcite	1st order biref.
calcite	10	very fine-grained, with sericite replacing plagioclase, mainly in veinlets with quartz and zeolite	extreme biref.
sericite/ clays	05	very fine-grained, flakes and scaly masses, cloudy, replacing plagioclase adjacent to veins	yellowish biref.
zeolite	05	fine-grained, tabular, in vein, clear, colourless, one good cleavage, parallel extinction	1st order biref.
chlorite	05	fine-grained, green pleochroic, replacing biotite next to vein	brown biref.
biotite	03	fine-grained, ragged to tabular flakes interstitial to plagioclase, dark brown to yellow pleochroic, chlorite altered	masked high biref.
sphene	02	fine-grained, anhedral, with biotite, high relief, brownish	high biref.
hornblende	-	relict ragged crystals, intergrown with biotite, chlorite-carbonate altered	2nd order biref.

OPAQUE MINERALS

Mineral	%	Distribution & Characteristics	Reflectance
pyrite	02	blebs up to 3 mm, mostly finer-grained, in wallrock and veins	pale yellow
chalcopyrite	01	very fine-grained, in wallrock around veins and in veins	deep yellow
magnetite	03	very fine-grained, disseminated in wallrock and in veins	dull grey

Thin Section Description: The sample is comprised of interlocking plagioclase and K-feldspar (orthoclase) crystals, with interstitial quartz and biotite. It is cut by a series of quartz-calcite-zeolite veinlets and microveinlets. Plagioclase is sericite/clay-carbonate altered around these veins, and biotite is altered to chlorite. What appears to be relict hornblende is totally altered to chlorite-carbonate. Quartz in the veins in interlocking, calcite is platy to slightly fibrous. The zeolite occurs as tabular to rhombic crystals. Patchy interlocking quartz in the groundmass may be additional secondary quartz, or recrystallization of primary quartz. Disseminated magnetite is preserved in less altered domains of wallrock. Very fine-grained pyrite and chalcopyrite occur in the wallrock around the veinlets, not much appears to be within the veins, however it is not always obvious what is vein and what is altered wall rock.

SAMPLE: BD-04-19 118.0m (Polished Thin section)
LITHOLOGY: Quartz Diorite
ALTERATION: Quartz-dolomite veins, Pervasive Sericite-Carbonate+/-Quartz

Hand Sample Description: The protolith to this sample was very similar to the preceding sample. It was comprised of interlocking plagioclase, quartz, K-feldspar and mafic minerals, but has been intensely overprinted by secondary minerals. Alteration has been partially texture destructive. Plagioclase is altered to soft white sericite/clay. Mafic minerals are altered to pale chlorite. Quartz and K-feldspar are preserved. The sample is cut by several sub-parallel quartz veins (up to 5 mm wide) which have distinct, but narrow secondary K-feldspar envelopes. Minor amounts of molybdenite occur mainly on the vein margins, while clots of pyrite and chalcopyrite occur more in the core of the vein. Fine-grained sulphides are disseminated in the wallrock, but most is within the veins. Overall sulphide content is around 4%. The sample does not react to HCl.

TRANSLUCENT MINERALS

Mineral	%	Distribution & Characteristics	Opt. Prop.
K-feldspar	25	anhedral, in veins, difficult to distinguish in wallrock	low biref.
sericite/ muscovite	22	very fine-grained, flakes and scaly masses, replacing primary minerals	yellowish biref.
carbonate	20	very fine-grained, with sericite replacing plagioclase, rhombic in vein with quartz and K-feldspar	extreme biref.
quartz	15	anhedral, interlocking crystals in groundmass interstitial to plagioclase	1st order biref.
quartz	10	interlocking crystals in vein	1st order biref.
chlorite	03	fine-grained, scaly masses, low relief, colourless, veinlets and in groundmass	very low biref.
apatite	minor	fine-grained, prismatic crystals, primary, high relief, clear	low biref.
plagioclase	-	relict medium-grained, interlocking tabular to blocky crystals, totally replaced by sericite-carbonate	
biotite	-	ragged flakes, totally replaced by sericite-carbonate	masked high biref.

OPAQUE MINERALS

Mineral	%	Distribution & Characteristics	Reflectance
chalcopyrite	02	fine-grained, up to 1 mm, anhedral, veins and disseminated	deep yellow
pyrite	02	fine-grained, up to 1 mm, anhedral	pale yellow
molybdenite	minor	very fine-grained, flakes, in vein margins	silver grey
bornite	minor	very fine-grained, with chalcopyrite in quartz vein	purple
unidentified	trace	fine-grained, with chalcopyrite and bornite	grey-blue

Thin Section Description: The protolith to this sample was comprised of interlocking plagioclase, K-feldspar and quartz, with an unknown quantity of mafic minerals. It has been pervasively overprinted by scaly masses of sericite and carbonate, and a nearly colourless chlorite. Mafic minerals are completely destroyed, except for a few remnant, crystal shapes. The sample is cut by quartz-carbonate veins. The carbonate occurs as rhombic crystals in the vein, only reacts to cold HCl when scratched, indicating it is dolomitic. Quartz is interlocking, with variable crystal size. The K-feldspar envelopes visible in the offcut are not distinguishable from the wallrock. Chalcopyrite, bornite and a pale grey-blue mineral, (possibly chalcocite), often intergrown with one another, and molybdenite occur along the margins of the vein. Disseminated pyrite and chalcopyrite occur in the wallrock, and along microfractures and less well defined quartz veins. Pyrite contains inclusions of both chalcopyrite and to a lesser extent bornite.

Photo 17: BD-04-19, 118.0 m. Bornite (purple), and possibly chalcocite (grey-blue) were observed in this sample intergrown with chalcopyrite (yellow) and to a lesser extent pyrite. Fine-grained flakes of molybdenite occur peripheral to the copper sulphides (upper left, grey). Fov 1.5 mm, rl.