GEOCHEMICAL AND GEOPHYSICAL REPORT

on the

PASS PROPERTY
Pass 1, 2 and 3 Claims
Omineca Mining Division
British Columbia

NTS 94D/08W
56° 18' North Latitude
126° 16' West Longitude

by

S. Wetherup, B.Sc.
R. Cameron, B.Sc., P. Geo

PHELPS DODGE CORPORATION OF CANADA, LIMITED
#1409 - 409 Granville Street
Vancouver, BC, V6C 1T8

Work paid for by
PHELPS DODGE CORPORATION OF CANADA, LIMITED

November 28, 2000

Nov 29/2000

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Phelps Dodge Corporation of Canada, Limited
1409-409 Granville Street, Vancouver, BC V6C 1T8
Telephone (604) 669-2954 Fax (604) 681-3920

SUMMARY

The Pass property lies 190 kilometres north of Smithers, just south of Carruthers Pass. There are no roads into the area, which must be accessed by helicopter. The Pass 1 and 2 claim blocks were staked, by Phelps Dodge in 1998 to cover ground with copper-gold potential, recognized from GIS analysis of government regional stream sediment survey data. An additional claim block, Pass 3, was added in 1999 to cover possible strike extents of a massive sulphide showing found through prospecting in the same year. The claims overlie upper Triassic Takla Group Dewar Formation and Asitka Group volcanic and sedimentary rocks from which stream sediments returned elevated copper, gold, lead, and antimony.

Work in 2000 consisted of geochemical sampling, prospecting along with electro-magnetic and magnetic surveying. Prospecting has resulted in the discovery of several small chalcopyrite and chalcocite veins which returned assay values up to 1.4% Cu, 13.6 g/t Ag and anomalous Au. In addition, geochemical soil sampling on the Pass 3 claims collected several soil samples that are anomalous in Cu, Zn and Ag. Geophysical work proved to be unsuccessful in delineating any further extents to the massive sulphide lens found during the 1999 field season.

Phelps Dodge Corporation of Canada, Limited
1409-409 Granville Street, Vancouver, BC V6C 1T8
Telephone (604) 669-2954 Fax (604) 681-3920

INTRODUCTION

This report describes a program of prospecting, geochemical soil surveying, geological mapping, and EM /magnetic geophysical surveying that was conducted on the Pass property during 2000. In total, 3 man-days were spent conducting the geophysical surveys on July 23rd, 2000 and an additional 6 man-days mapping and prospecting the property on August 27th and August 28th, 2000. Details of the work program and results are presented herein.

LOCATION AND ACCESS

The Pass property (Figure 1) is located in the Hogem Ranges of north-central British Columbia, approximately 190 kilometres north of Smithers, British Columbia. The claims lie amid a rugged group of mountain peaks that are bounded by Quenada Creek and Carruthers Creek. Elevations range from approximately 1370 metres at Carruthers Pass on the northeast side of the Pass 2 claim to 2020 metres on a peak central to the claims. There are no roads and access is by helicopter from Smithers or from seasonal helicopter bases at the 400 km Camp along the Kemess Mine access road, some 20 kilometres north of the property or from the Silver Creek Camp, ~80 km southeast. Geophysical work was based out of the 400 km Camp and the geochemical sampling from the Silver Creek Camp

CLAIMS

The Pass property (Figure 1) at the time of this work program comprised three 4-post mineral claims totalling 60 units. The claims are centred at 56° 18' north latitude, 126° 16' west longitude and shown on Ministry of Energy and Mines claim map 94D/08W. Pertinent details are tabulated below. Expiry dates shown assume that current work is accepted for assessment purposes.

Table 1: CLAIM DATA

Claim Name	Record Number	Units	Expiry Date
Pass 1	365537	20	September 5, 2001
Pass 2	365538	20	September 5, 2001
Pass 3	371846	20	September 18, 2001
Total Units		**60**	

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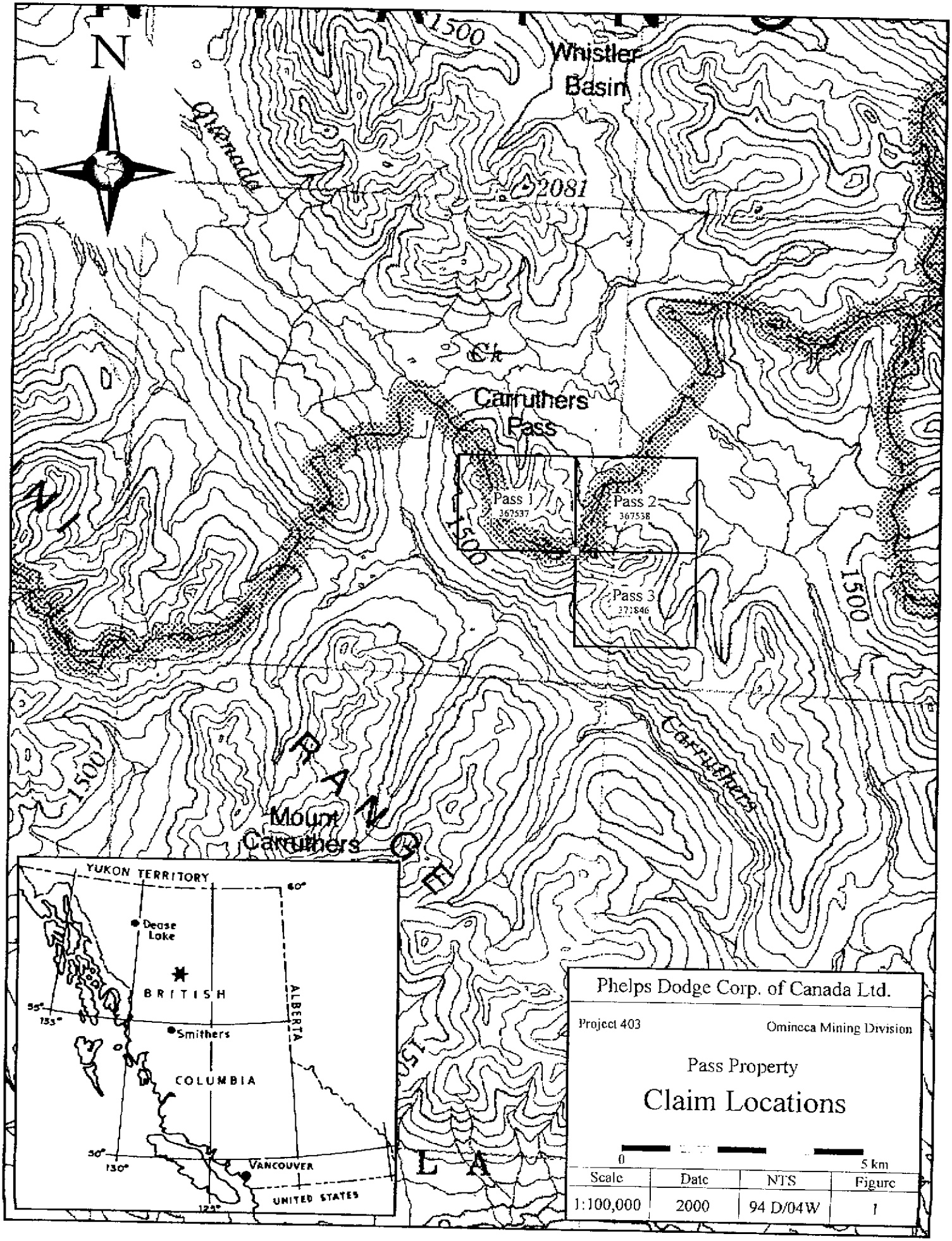

N
1500
Whistler
Basin
Alpenglow
2081
Ch
Carruthers
Pass
Pass 1
367537
Pass 2
367538
Pass 3
371846
1500
1500
1500
Carruthers
RAINBOW
Mount
Carruthers
YUKON TERRITORY
60°
Dease
Lake
BRITISH
COLUMBIA
ALBERTA
55°
133°
Smithers
50°
130°
VANCOUVER
UNITED STATES
120°
Phelps Dodge Corp. of Canada Ltd.
Project 403
Omineca Mining Division
Pass Property
Claim Locations
0
5 km
Scale
Date
NTS
Figure
1:100,000
2000
94 D/04W
1

HISTORY

The first recorded work in the area was done on the Car 1-64 and Ani 1-64 claims, in 1973 by Interior Syndicate (B.C Department of Mines and Petroleum Resources, 1974). They performed 1" to 1000' geological mapping on the Car claims and a silt and soil sampling program that totalled 118 samples, on the Ani claims. During Interior Syndicate's 1973 work they discovered quartz-sulphide veins and pyrite alteration around a diorite intrusion and cutting Dewar Formation host rocks. One sample taken from one of these veins during regional mapping in 1948 by the Geological Survey of Canada (Lord, 1948) was assayed and returned 0.34 g/t Au, 327 g/t Ag, 0.82% Cu, 7.15% Pb, 1.0% Zn.

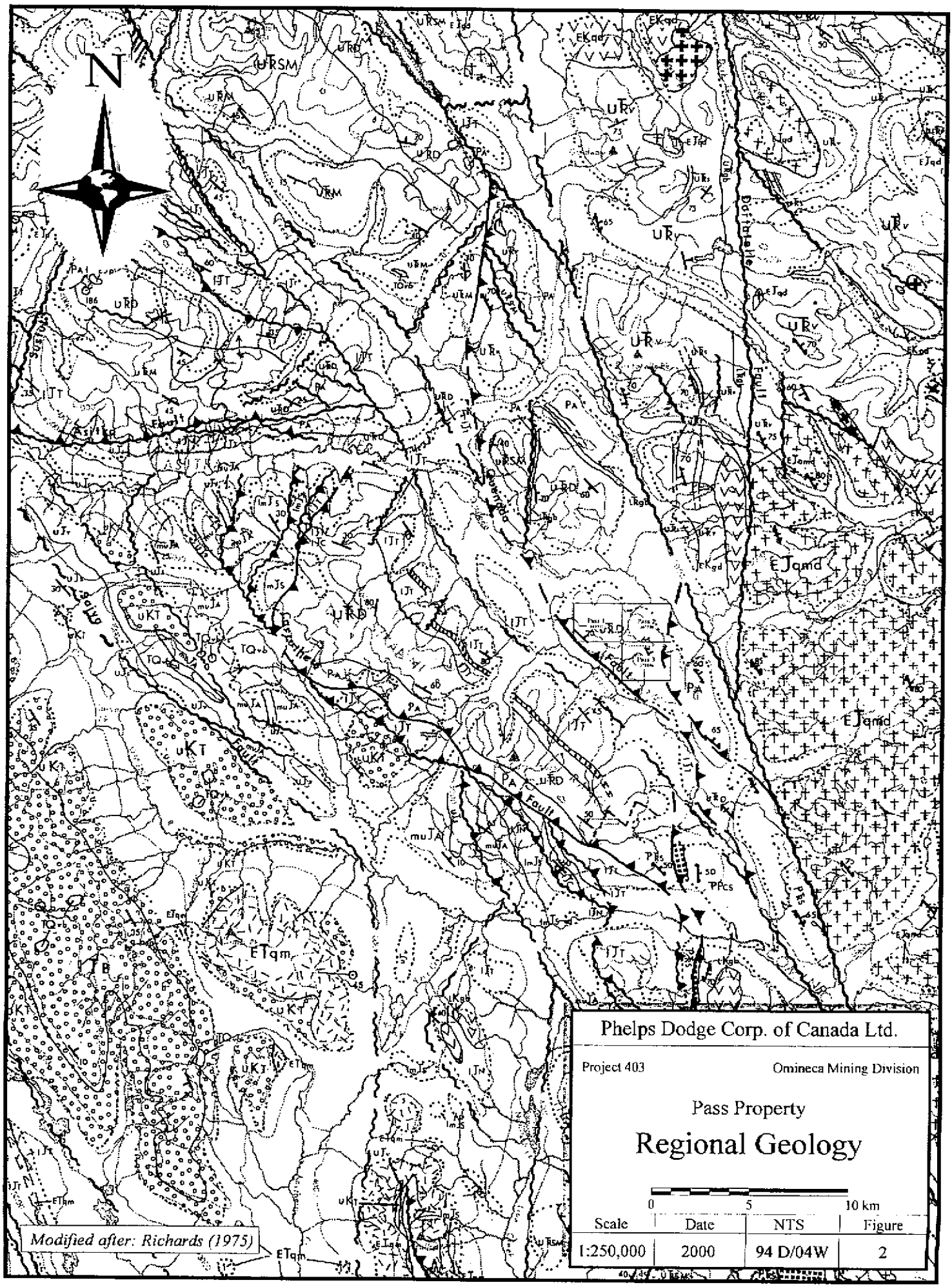
British Columbia regional geochemical survey released in July 1997 documented results of stream sediment samples collected from five creeks draining the property area that returned 74 to 240 ppm copper and 142 to 342 ppm zinc.

In 1998, based on the results of the 1997 BC regional geochemical survey, Phelps Dodge Corp. of Canada Ltd. conducted a reconnaissance soil and stream sediment sampling program of the anomalous drainages. From the results of the reconnaissance sampling, two 20-unit claim blocks were staked by Phelps Dodge, later that year. Further prospecting in 1999, discovered a massive sulphide lens on the Pass 2 claim and subsequently the Pass 3 claim was staked to cover possible strike extents to the massive sulphide horizon.

REGIONAL GEOLOGY

The Pass property is situated in the eastern Intermontane belt of the Canadian Cordillera, just west of the Pinchi/Ingenika fault (Figure 2)(Richards, 1975). East of the fault, upper Triassic Takla Group basic to intermediate volcanic rocks is intruded by the large, early Jurassic Hogem Batholith, some 5.5 kilometres east of the claim block. On the western side of the fault, the Stikinia, Quesnellia and Cache Creek terranes meet in a structurally complex zone of numerous, easterly dipping thrust sheets. Upper Triassic Takla Group arc volcanics of Quesnellia and Mississippian to upper Triassic Cache Creek ocean derived volcanic and sedimentary rocks have both been thrust over lower and middle Jurassic Hazelton Group arc volcanic rocks of Stikinia. Permian Asitka Group volcanic and sedimentary rocks are sporadically exposed throughout the area, often at the bases of thrust sheets. Several late Cretaceous Axelgold layered gabbroic plutons cut Cache Creek and Hazelton Group rocks south of the property.

The Pass property lies within a shallow, east dipping thrust sheet, bounded on the west by the Quenada Fault and, on the east, by the Ingenika Fault. Intermediate igneous and


N
Phelps Dodge Corp. of Canada Ltd.
Project 403
Omineca Mining Division
Pass Property
Regional Geology
0
5
10 km
Scale
Date
NTS
Figure
1:250,000
2000
94 D/04W
2
Modified after: Richards (1975)

REGIONAL GEOLOGY LEGEND

STRATIFIED ROCKS

UPPER TERTIARY and/or QUATERNARY

TQvb basalt; flow breccia, plugs and dykes

UPPER CRETACEOUS to EOCENE

JTB BROTHERS PEAK FORMATION: conglomerate, sandstone, siltstone, acid tuff; minor coal

uKT TANGO CREEK FORMATION: conglomerate, sandstone, siltstone: minor coal

MIDDLE and UPPER JURASSIC

BOWSER LAKE GROUP

uJv Volcanics: basalt and andesite flow, breccia, tuff, lahar

uJs Sediments: sandstone, siltstone, argillite, conglomerate; minor coal

muJA ASHMAN FORMATION: argillite, siltstone; minor sandstone, tuff

LOWER and MIDDLE JURASSIC

HAZELTON GROUP

lmJs SMITHERS FORMATION: greywacke, siltstone; sandstone, tuff

lJN NILKITKWA FORMATION: argillite, siltstone, greywacke, tuff; minor sandstone, limestone

lJC CARRUTHERS MEMBER: basalt and andesite flow, breccia, pillow breccia, tuff

lJT TELKWA FORMATION: calc-alkaline basalt, andesite, dacite and rhyolite flow, breccia, tuff, lahar, intravolcanic fanglomerate, conglomerate, sandstone, siltstone: (llll) polymictic conglomerate with Asitka, Takla and granitic clasts

UPPER TRIASSIC

TAKLA GROUP

uTRM MOOSEVALE FORMATION: andesitic and basaltic volcanic conglomerate, breccia, sandstone, tuff, argillite

uTRSM SAVAGE MOUNTAIN FORMATION: basic augite porphyry basalt flow, breccia, pillow breccia, tuff, interbedded bladed feldspar porphyry

UTRD DEWAR FORMATION: tuff, sandstone, argillite; minor limestone, breccia

uTRv Volcanics: basic to intermediate flow, breccia, tuff; green phyllite, phyllitic schist; minor sediments

uTRs Sediments; argillite, tuff, sandstone, phyllite and phyllitic schist; limestone, skarn

PERMIAN, TRIASSIC and JURASSIC

PTRLT LAY RANGE ASSEMBLAGE and TAKLA GROUP

PTRs SITLIKA ASSEM8LAGE: sericite, chlorite, siliceous schist and phyllite, minor marble

PERMIAN

PA ASITKA GROUP: basalt, rhyolite, tuff, chert, argillite, carbonate

PENNSYLVANIAN and PERMIAN

PPL LAY RANGE ASSEMBLAGE: basic volcanics, calcareous phyllite, quartzite, limestone

PPC CACHE CREEK GROUP: (s) siliceous phyllite, metachert, marble; (v) greenstone, amphibolite

UPPER PROTEROZOIC

PE ESPEE FORMATION: limestone; minor dolostone

PT TSAYDIZ FORMATION: sericitic phyllite

PS SWANELL. FORMATION: quartzo-feldspathic, gritty sandstone, siltstone, shale and conglomerate, metamorphic equivalents from chlorite to kyanite grade

INTRUSIVE ROCKS

EOCENE

ETqm KASTBERG INTRUSIONS: quartz monzonite, quartz-eye porphyry, felsite

LATE CRETACEOUS

Lkgd AXELGOLD LAYERED INTRUSIVES: gabbro, diabase

EARLY CRETACEOUS and LATER

EK quartz monzodiorite, quartz diorite, granodiorite, quartz diorite

EARLY JURASSIC

EJ quartz monzodiorite, monzodiorite, quartz diorite, diorite, leucocratic porphyry plugs

LATE TRIASSIC

LTRgb gabbro, diabase, hypabyssal augite porphyry

++++ Alaskan-type ultramafics

LATE PALEOZOIC and TRIASSIC

+++++++ Alpine ultramafics; serpentinite, serpentinized peridotite, greenstone

sedimentary rocks belonging to the upper Triassic Dewar Formation of the Takla Group underlie most of the property. A secondary thrust fault, sub-parallel to the Quenada Fault cuts the eastern part of the property and separates rocks of the Dewar Formation and the Asitka Group.

PROPERTY GEOLOGY

Upper Triassic Takla Group volcanic and sedimentary rocks of the Dewar Formation underlie the most of the claims with a fault bounded sliver of Permian Asitka Group in the easternmost portion (Figure 2). Dewar Formation shale, siltstone, cherty siltstone, and intermediate to mafic volcanic rocks and sills and minor chert comprise much of the rock in the central and eastern claims. Shale units are black and pyritic/pyrrhotitic with minor siltstone, andesitic tuff and limestone interbeds. Grey to light green siltstone is well bedded, locally siliceous and is intercalated with minor shale, basalt and andesitic tuff. Chert is white to dark grey and well layered, with minor siltstone and shale interbeds. Igneous rocks consist of olive green andesitic sills with some reworked epiclastic units, mafic to intermediate flows and tuff and rare finely laminated felsic tuff. Mafic to intermediate epiclastic breccias, conglomerates, and greywackes with minor intercalated shale beds of the Dewar Formation underlie the western portion of the claims (Pass 1).

Asitka Group rocks consist of argillite, chert, basalt, tuffaceous and argillaceous carbonate (Monger, *et al.*, 1991). These rocks are separated from the Dewar Formation on the claims by a shallow to moderate dipping west directed thrust fault. Deformation within the Dewar Formation rocks increases with proximity to the thrust fault. Within the fault, the competent limestone and siltstone layers are broken into sigmoidal lenses between tightly folded shale layers. The wavelength of folds decreases from centimetre scale folds within 100 m of the fault to broad 10 to 100 m scale folds throughout much of the property.

A small hornblende-diorite stock occurs within the centre of the claims. It is medium grained and appears to have induced the formation of quartz veins +/- arsenopyrite, chalcopyrite, sphalerite, and galena which occur in the Dewar Formation rocks to the north of the intrusion.

Disseminated pyrite or pyrrhotite is common as well as along fracture fillings and bedding planes in sedimentary rocks and locally in igneous rocks. Concentrations up to 20% have been observed generally within black shale where pyrite/pyrrhotite occurs locally as pods or beds

Within the Pass 2 claim block, a sulphide rich shale horizon with massive sulphide lenses was discovered with samples grading 0.17% and 0.85% Cu and anomalous silver. Shale samples taken east of the massive sulphide showing returned 1.1 to 3.0 g/t Ag with little Cu.

2000 WORK PROGRAM

The 2000 work program on Pass property consisted of an electro-magnetic and magnetic survey on July 23rd, 2000 and contour soil sampling accompanied by prospecting between August 27th and 28th, 2000.

Seventeen grab samples and twenty-three soil samples were taken and sent to Acme Analytical Laboratories Ltd. in Vancouver, B.C. for preparation and analysis by Ultratrace ICP-MS. Sample descriptions are compiled in Appendix I, analytical procedures and certificates are included in Appendix II. Sample locations and results for copper, zinc, and silver are shown in Figure 4.

Geophysical work was conducted and supervised by Peter E. Walcott and Associates Ltd. and assisted by Phelps Dodge employees. A small grid comprising 1000 metres of magnetic and 625 metres of electro-magnetic survey was completed in the valley north of the massive sulphide showing on Pass 2 (Figure 3). Appendix III contains a description of the methods and details of the results from the surveys.

RESULTS

The logistical report along with total field magnetic, vertical gradient magnetic, and electromagnetic profiles are in Appendix III. Vertical gradient, total field magnetic and electromagnetic geophysical survey methods all failed to show a response which would indicate the continuation of the massive sulphide lens beneath talus cover within the valley directly north of the outcropping massive sulphide lens. This despite the fact that the massive sulphide and the surrounding rocks contain 5 to 70% pyrrhotite and are magnetic.

However, prospecting on the Pass 3 claim block found more shale interbedded with massive pyrite layers and several chalcopyrite and malachite stained veins within shale and cherty siltstone. Select rock samples from the chalcopyrite veins returned assay values up to 1.4% Cu, 13.6 g/t Ag, 1734 ppm Zn, and 230 ppb Au. In addition, soil sampling on the Pass 3 claims collected several samples that are anomalous in Cu, Zn and Ag. Soil

sampling results are summarized in table 2. Rock and soil sample locations are plotted in figure 4 and summaries of analytical results with notes are in Appendix I.

Table 2: SUMMARY OF SOIL GEOCHEMISTRY

Element	# of Anomolous Samples	Highest Value	Comments
Cu	10 samples > 400 ppm	633 ppm	400 m of > 400 ppm
Zn	6 samples > 400 ppm	880 ppm	
Ag	11 samples > 300 ppb	2084 ppb	3 samples > 1000 ppb

CONCLUSIONS AND RECOMMENDATIONS

Both electro-magnetic and vertical gradient/total field magnetic geophysical surveys failed to reveal any distinct anomalies extending along strike from the pyrrhotite rich rocks in and around the massive sulphide lenses. The lack of a geophysical signature for the massive sulphide horizon may be due to two reasons (1) the horizon doesn't extend below cover (over the 25 m to the nearest survey line), possibly due to folding or faulting, or (2) the fact that all the rocks in the area contain 2-5% pyrrhotite may mean there was not a significant contrast in EM and magnetic properties between the target horizon and the surrounding rocks.

However, the geochemical sampling program returned encouraging results. Soil sampling results show several strings of samples with elevated copper and silver in areas with little to no previous prospecting. Also, the prospecting that was done during this work program discovered several new copper showings, which are also anomalous in zinc, silver and gold.

Hence, more prospecting and geological mapping on the property is warranted in order to explain the soil anomalies discovered this year. In addition, the soil sampling programs thus far have been widely spaced reconnaissance sampling and further more detailed work should also be performed.

DISBURSEMENTS

Expenditures for the 2000 exploration program on the Pass property total $9364.55 and are itemized below. A sum of $6000 was used to apply one year of work on the claims as documented in this report.

Accommodation and Board	9 mandays @ $70/manday	$ 630.00
Assays		
17 Rock samples	$18.40/sample	$ 312.80
23 Rock samples	$15.88/sample	$ 365.24
Communication, Satellite Telephone		
Glentel		$ 360.50
Geophysical Contract		
Peter E. Walcott and Associates		$ 560.00
Labour		
Steve Wetherup, geologist	3 days @ $250/day	$ 750.00
L. Poznikoff, geologist	2 days @ $250/day	$ 500.00
Ted Archibald, contractor	2 days @ $240/day	$ 480.00
Rick Roe, contractor	1 days @ $266.75/day	$ 266.75
Transportation, Helicopter		
Interior Helicopters	6.1 hours @ $842.50/hr	$ 5139.26
Total		**$ 9364.55**

Prepared by;

PHELPS DODGE CORPORATION OF CANADA, LIMITED

Stephen W. Wetherup, BSc.
Vancouver, B.C.
November 28, 2000

Robert Scott Cameron, B. Sc., P. Geo.
Vancouver, B.C.
November 28, 2000

BIBLIOGRAPHY

British Columbia Department of Mines and Petroleum Resources (1974)
"Geology, Exploration and Mining in British Columbia 1974", pp. 301-302.

Geological Survey Branch (1997)
"British Columbia Regional Geochemical Survey, NTS 94D - McConnell Creek "; BC RGS 45, compiled by W. Jackaman, July 1997.

Lord, C.S. (1948)
"McConnell Creek map-area, Cassiar district, British Columbia."; Geological Survey of Canada Memoir 251, p. 63.

Monger, J.W.H., Wheeler, J.O., Tipper, H.W., Gabrielse, H., Harms, T., Struik, L.C., Campbell, R.B., Dodds, C.J., Gehrels, G.E., and O'Brien, J. (1991)
"Part B. Cordilleran terranes"; in Upper Devonian to Middle Jurassic assemblages, Chapter 8 of Geology of the Cordilleran Orogen in Canada, H. Gabrielse, and C.J. Yorath (ed.); Geological Survey of Canada, no. 4, p. 281-327. (also Geological Society of America, The Geology of North America, v. G-2).

Richards, T. (1975)
"McConnell Creek Map-Area (94D/E), Geology"; Geological Survey of Canada Open File 342, compiled by T. Richards, 1975.

Phelps Dodge Corporation of Canada, Limited
1409-409 Granville Street, Vancouver, BC V6C 1T8
Telephone (604) 669-2954 Fax (604) 681-3920

CERTIFICATE

I, Stephen William Wetherup, certify to the following:

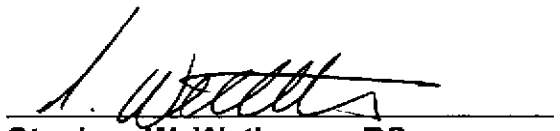
1. I am a consulting geologist currently residing at #307 - 1106 Pacific Street, Vancouver, B.C.

2. I am a Geoscientist in Training (G.I.T.) in the Association of Professional Engineers and Geoscientists of British Columbia.

3. My academic qualifications are:

   B.Sc., Honours, University of Manitoba, Winnipeg, Manitoba.

4. I have been engaged in geological work since graduation in 1995.



Stephen W. Wetherup, BSc.
Vancouver, B.C.
November 21, 2000

Phelps Dodge Corporation of Canada, Limited
1409-409 Granville Street, Vancouver, BC V6C 1T8
Telephone (604) 669-2954 Fax (604) 681-3920

CERTIFICATE

I, Robert Scott Cameron certify to the following:

1. I am a geologist employed by Phelps Dodge Corporation of Canada Limited, 1409-409 Granville Street, Vancouver, BC.

2. I am a Professional Geoscientist registered with the Association of Professional Engineers and Geoscientists of British Columbia.

3. My academic qualifications are:

   B.Sc. Hons., 1981, Carleton University, Ottawa, Ontario

4. I have been engaged in geological work since graduation in 1981.

Robert Scott Cameron, B. Sc., P. Geo.
Vancouver, B.C.
November 21, 2000

Phelps Dodge Corporation of Canada, Limited
1409-409 Granville Street, Vancouver, BC V6C 1T8
Telephone (604) 669-2954 Fax (604) 681-3920

APPENDIX I

Sample Descriptions and Selected Analytical Results

Phelps Dodge Corporation of Canada, Limited
1409-409 Granville Street, Vancouver, BC V6C 1T8
Telephone (604) 669-2954 Fax (604) 681-3920

Pass Property

Summary of Soil Assays and Notes

2000 Field Season

Sample	Date	Type	Material	Horiz	Colour	Topo	Remarks	Northing NAD83	Easting NAD83	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppb)	As (ppm)	Au (ppb)
77582	8/27/2000	Soil	Talus	C	Brown	Hilltop	c1 Soil contour, start in saddle at 1710m elevation	6241199	671543	20.8	9.2	72.3	238	2.7	1
77583	8/27/2000	Soil	Talus	C	Brown	Hilltop	c1 100m, gossanous pyritic cherts and argillites,	6241099	671468	47.6	6.7	110.4	91	4.2	1
77584	8/27/2000	Soil	Talus	C	Brown	Hillside	c1 200m, 1695m elev., heading ~306 deg.	6241049	671393	171.8	11.3	219.6	123	176.1	5
77585	8/27/2000	Soil	Talus	C	Brown	Hillside	c1 300m, intrusive dyke o/c	6241099	671293	153.2	8.9	151.8	97	26.7	3
77586	8/27/2000	Soil	Talus	C	Brown	Hillside	c1 400m, mainly argillite here, 1660m elev.	6241149	671218	160.1	10.9	151.6	177	12.1	4
77587	8/27/2000	Soil	Talus	C	Brown	Hillside	c1 500m, 1645m elev.	6241199	671143	195.9	47.2	348.4	**911**	24	12
77588	8/27/2000	Soil	Talus	C	Brown	Hillside	c1 600m, 1635m elev.	6241299	670968	**397.8**	47.5	**880.2**	**2084**	55.3	19
77589	8/27/2000	Soil	Talus	C	Brown	Hillside	c1 700m	6241299	670968	**518.5**	30.9	**565.8**	**1183**	58.5	6
77590	8/27/2000	Soil	Talus	C	Brown	Hillside	c1 800m	6241349	670893	**410.9**	10.4	354.4	249	59.6	4
77591	8/27/2000	Soil	Talus	C	Brown	Hillside	c1 900m	6241424	670793	**400.4**	13	316.3	333	64.4	8
77593	8/27/2000	Soil	Talus	C	Black	Hillside	c1 1000m, 1655m elev.	6241499	670718	293.7	10	270.9	282	14.8	7
77594	8/27/2000	Soil	Talus	C	Black	Hillside	c1 1100m	6241524	670643	307.8	9	179.7	162	18.6	4
77595	8/27/2000	Soil	Talus	C	Black	Hillside	c1 1200m, 1670m elev. in gulley below saddle	6241699	670543	245.2	7	118.8	214	15.2	2
77868	8/27/2000	Soil	Talus	C	Brown	Flat	c2 0+00, rusty shales and red and green siltstone	6242409	670298	188.5	18.9	280.9	316	44	6
77869	8/27/2000	Soil	Talus	C	Brown	Hillside	c2 1+00, greywacke with 1-2% pyrrhotite	6242320	670323	**469.2**	10.7	273.7	191	22.6	15
77870	8/27/2000	Soil	Talus	C	Brown	Hillside	c2 2+00, augite phyric intrusive in Talus	6242231	670349	**467.7**	25.1	**410.9**	**652**	40.6	9
77871	8/27/2000	Soil	Talus	C	Brown	Hillside	c2 3+00, siltstone, shale and augite phyric intrus	6242142	670374	**442.4**	36.3	**518.6**	**870**	71.6	9
77872	8/27/2000	Soil	Talus	C	Brown	Hillside	c2 4+00, mostly siltstone Talus	6242054	670400	**420.9**	17.8	313.2	320	29.2	13
77873	8/27/2000	Soil	Talus	C	Brown	Hillside	c2 5+00, green chloritic, sheared siltstone(?) tal	6241965	670426	341.1	6.1	183	100	3.8	4
77874	8/27/2000	Soil	Talus	C	Brown	Hillside	c2 6+00, grassy slope, some siltstone Talus	6241876	670451	153.6	6.3	140.9	221	7.1	5
77875	8/27/2000	Soil	Talus	C	Brown	Hillside	c2 7+00, Talus fines	6241787	670477	**460.7**	31.6	**646.7**	**567**	87.3	10
77876	8/27/2000	Soil	Talus	B	Brown	Hillside	c2 8+00, Talus fines	6241699	670503	**417.6**	26.9	333.7	392	38.4	5
77877	8/27/2000	Soil	Talus	C	Brown	Hillside	c2 9+00, Talus fines, shale and siltstone Talus	6241669	670618	**633.3**	49.3	711	**1233**	62.2	10

Pass Property ***Summary of Rock Sample Assays and Notes*** 2000 Field Season

Sample	Date	Type	Material	Colour	Topo	Remarks	Northing NAD83	Easting NAD83	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppb)	As (ppm)	Au (ppb)
76414	7/23/2000	Grab	Bedrock	Red	Hillside	1-5mm pyrite pods within dark grey siltstone	6242424	670293	289.6	11.8	85.7	150	5.1	
76415	7/23/2000	Grab	Bedrock	Red	Hillside	slightly cherty black pyritic siltstone with 15% pyrite	6242424	670293	88.9	21.8	161.3	**1135**	8.7	0
77592	8/27/2000	Grab	Bedrock		Hillside	quartz in brecciated argillite with minor disseminated pyrite	6241224	671118	42.6	20.9	27.9	418	33.6	2
77866	8/27/2000	Grab	Talus	Grey	Hillside	malachite in carbonate along fractures in siltston	6242729	670613	**1452.8**	1.3	90.4	137		1
77867	8/27/2000	Grab	Talus	Grey	Hillside	minor chalcopyrite-pyrite+/-chalcocite in rusty layered siltst	6242699	670513	477.2	1.8	34.8	158	0.5	2
77878	8/27/2000	Grab	Bedrock	Orange	Hillside	10-15% pyrite +/- chalcopyrite in rusty zone 2m wide in siltsto	6241669	670583	131.4	4.8	66.7	318	0.4	3
77879	8/27/2000	Grab	Talus	Brown	Hillside	rusty siltstone with pods of fine grained pyrite +/- chalcopyrite	6241654	670598	266.7	8.5	50.2	400	3.6	2
77880	8/27/2000	Grab	Talus	Grey	Hillside	pyrite+/- chalcopyrite +/- bornite? or magnetite in a med. to coarse	6241639	670613	187.8	0.5	55.1	80	0.6	26
77881	8/27/2000	Grab	Talus	Grey	Hillside	augite phyric intrusive with 1% pyrrhotite and minor chalcopyrite	6242619	670613	120.0	1.1	55.7	54	0.7	1
77787	8/27/2000	Grab	Bedrock	Red	Hillside	pyrrhotite + chalcopyrite within a silicified? greywacke	6243479	670193	558.5	2	52.1	322	0.2	1
77596	8/28/2000	Grab	Bedrock		Flat	banded limonitic chert with disseminated pyrite	6242474	670318	108.6	6.4	8.6	102	15.5	1
77597	8/28/2000	Grab	Bedrock		Hillside	greenstone with clots of qtz and minor disseminated pyrite	6242549	669943	229.3	8.5	**1734**	77	2.4	2
77598	8/28/2000	Grab	Bedrock		Hillside	siltstone with minor pyrite and qtz stringers, breccia	6242849	669018	83.9	2.4	50.9	58	0.1	0
77599	8/28/2000	Grab	Talus		Hillside	pyritic chert	6242374	670543	20.4	5.2	11.2	44	16.9	1
77882	8/28/2000	Grab	Talus	Red	Hillside	5-7% pyrite in brecciated red/green siltstone	6241619	670613	8.0	4.6	52.5	64	7.4	2
77788	8/28/2000	Grab	Bedrock	Red	Hillside	pyrite pods within a hornfelsed shale with trace chalcopyrite	6241599	671253	200.4	3.4	67	254	3.2	1
77789	8/28/2000	Grab	Bedrock	Green	Hillside	light green chert layer with ~1mm thick chalcopyrite veins	6241674	671193	**5188.1**	0.5	36.1	**13660**	0.9	4
77790	8/28/2000	Grab	Bedrock	Red	Hillside	chrysocolla stain with chalcopyrite veining	6242789	671018	**13974.0**	21.1	83.4	631	16	**230**

APPENDIX II

Analytical Technique and Certificates

ANALYTICAL METHOD

ICP-MS A 15 gram sample is digested with 90 millilitres 3-1-2 HCL-HNo_3-H_2O at 95° C for one hour and is diluted to 300 millilitres with water. This leach is partial for Mn, Fe, Sr, Ca, P, La, Cr, Mg, Ba, Ti, B, W and limited for Na, K, Ga and Al. The solution is analysed directly by ICP-MS.

Phelps Dodge Corporation of Canada, Limited
1409-409 Granville Street, Vancouver, BC V6C 1T8
Telephone (604) 669-2954 Fax (604) 681-3920

(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Phelps Dodge Corp. PROJECT PASS File # A003357

1409 - 409 Granville St., Vancouver BC V6T 1T2 Submitted by: Stephen Wetherup

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppb	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Sc ppm	Tl ppm	S %	Hg ppb	Se ppm	Te ppm	Ga ppm	Sample gm
77592	6.99	42.61	20.85	27.9	418	23.3	6.2	285	2.10	33.6	.3	2.0	4	5.1	.19	2.86	.14	92	3.95	.027	1.5	32.4	.19	5.1	.068	4	2.92	.003	< .01	2.6	6.1	.06	1.75	23	10.6	18	8.1	15
77596	4.85	108.59	6.37	8.6	102	29.7	2.0	1296	4.70	15.5	< .1	.7	.9	9.2	< .01	87	.15	50	.10	.057	6.8	8.9	.46	185.6	.006	2	1.06	.005	.06	1.4	2.9	< .02	.83	<5	1.1	.08	7.2	15
77597	1.89	229.31	8.48	1734.1	77	16.2	14.4	394	1.83	2.4	.2	1.5	.4	42.4	16.05	.29	.03	64	5.38	.075	2.1	21.2	.58	19.7	.100	9	2.56	.062	.03	1.0	1.8	< .02	.21	82	2.3	.04	10.6	15
77598	2.27	83.85	2.36	50.9	58	8.4	12.9	730	3.05	.1	3	3	5	45.9	.10	.12	.02	98	3.91	.067	2.7	13.5	1.11	5.1	.203	7	2.73	.026	< .01	1.2	5.1	.02	.06	<5	.7	.05	9.7	15
77599	5.57	20.42	5.16	11.2	44	15.2	3.5	42	.72	16.9	< .1	1.4	.3	2.2	.07	.82	.40	3	.05	.022	2.4	20.7	.02	116.7	.002	2	.11	.002	.07	5.2	5	.03	.27	8	2	.43	.3	15
77787	.83	558.49	1.97	52.1	322	11.6	28.0	1698	5.11	2	6	.8	2.3	9.5	.07	.07	.20	150	1.41	.244	9.9	26.6	1.92	9.0	.150	1	2.89	.035	< .01	5	2.9	< .02	.66	<5	4.6	.14	9.9	15
77788	2.23	200.38	3.06	67.0	254	21.4	25.7	906	5.45	3.2	2	.9	.6	9.1	.02	1.20	1.17	94	1.21	.126	4.2	33.4	2.17	69.0	.238	1	2.39	.033	.04	6	6.2	.04	2.72	10	6.6	.19	9.2	15
77789	1.39	5188.14	.52	36.1	13660	3.9	3.8	230	1.99	.9	< .1	4.3	.1	28.9	.04	.08	1.55	29	.37	.015	1.4	16.8	.42	724.1	.012	1	.52	.011	.01	3.5	1.6	.02	.17	14	9.2	.13	1.2	15
77790	.67	13973.74	21.09	83.4	631	72.7	103.0	2658	5.31	16.0	.3	230.0	1.1	89.2	.48	.35	.31	122	3.87	.141	8.8	54.1	2.81	74.8	.159	1	3.11	.029	.06	.6	7.3	.05	.17	6	24.6	.57	12.6	15
RE 77790	.63	13940.84	23.25	79.6	566	73.8	101.0	2649	5.28	15.4	3	240.2	1.1	84.5	.50	.37	.34	121	3.85	.137	7.9	53.4	2.80	76.1	.120	2	3.07	.029	.06	.6	7.3	.05	.16	11	24.1	.60	12.2	15
77866	.81	1452.80	1.32	90.4	137	4.8	12.6	1204	3.09	< .1	.3	1.3	1.1	50.1	.06	.06	.04	86	2.28	.214	6.7	10.9	2.00	46.2	.095	<1	2.33	.041	.02	.6	1.2	< .02	.07	<5	1.8	.02	10.6	15
77867	1.15	477.20	1.75	34.8	158	15.6	13.1	658	2.63	5	2	1.5	.4	8.3	.05	.06	.55	76	.76	.119	2.5	25.4	1.42	47.3	.350	<1	1.57	.041	.05	1.0	4.3	< .02	.76	<5	5.0	.14	7.8	15
77878	1.10	131.38	4.80	66.7	318	34.5	22.3	688	7.38	.4	< .1	3.1	.4	24.1	.06	.38	.06	137	1.09	.068	4.4	55.9	2.13	36.4	.314	<1	2.98	.016	.06	< .2	7.0	.28	.71	23	2.0	.02	9.5	15
77879	1.97	266.69	8.48	60.2	400	30.8	23.6	502	3.74	3.6	.4	2.1	1.4	11.3	.09	.42	.95	99	1.22	.134	7.7	38.9	1.20	60.0	.280	<1	2.01	.041	.13	.8	4.7	.04	1.19	6	25.5	.09	7.1	15
77880	.97	187.76	.45	55.1	80	16.4	23.7	796	4.57	.6	.4	25.6	1.0	33.0	.07	.14	.02	161	2.03	.133	4.3	4.6	1.34	29.3	.281	1	2.56	.109	.11	.7	3.4	< .02	.14	<5	7	.03	10.4	15
77881	.45	120.02	1.11	55.7	51	115.1	41.2	623	4.56	.7	< .1	1.1	.4	22.8	.09	.04	.03	132	.74	.077	3.9	330.2	3.09	19.8	.166	<1	2.71	.016	.04	.2	1.3	.09	.08	<5	.3	.03	7.9	15
77882	.22	8.03	4.83	52.5	64	21.9	13.8	400	4.05	7.4	.3	2.1	.2	23.6	.05	.38	.04	78	.91	.096	1.3	18.9	1.60	49.4	.377	<1	1.79	.022	.20	3	4.0	< .02	1.22	<5	7.4	.08	6.6	15
STANDARD DS2	14.03	128.23	35.23	152.9	267	31.6	11.2	829	3.08	61.5	18.7	200.0	3.4	25.6	10.92	9.90	10.70	72	.52	.088	14.6	155.0	.59	150.1	.086	2	1.64	.031	.15	7.9	3.9	1.89	.02	229	2.1	1.90	6.8	15

GROUP 1F15 - 15.00 GM SAMPLE, 90 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 300 ML, ANALYSIS BY ICP/ES & MS.
UPPER LIMITS - AG, AU, HG, W, SE, TE, TL, GA, SN = 100 PPM; MO, CO, CD, SB, BI, TH, U, B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.
- SAMPLE TYPE: ROCK R200 60C Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 31 2000 DATE REPORT MAILED: Sept 13/00 SIGNED BY. C. Leong D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Data ___ FA ___

ACME ANALYTICAL LABORATORIES LTD.

(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Phelps Dodge Corp. PROJECT PASS File # A003359

1409 - 409 Granville St., Vancouver BC V6T 1T2 Submitted by: Stephen Wetherup

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppb	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Sc ppm	Tl ppm	S %	Hg ppb	Se ppm	Te ppm	Ga ppm	Sample gm
77582	1.44	20.83	9.20	72.3	238	17.7	13.0	616	3.33	2.7	.7	1.3	.1	10.4	15	.30	.19	91	.11	.091	6.5	47.7	1.90	162.6	.040	<1	3.19	.003	.05	<.2	2.4	.09	.08	54	.5	.07	12.3	15
77583	1.08	47.56	6.72	110.4	91	21.4	18.9	934	4.93	4.2	.3	1.4	.3	9.4	27	.34	.10	100	.15	.066	6.3	27.9	2.27	100.0	.080	<1	3.41	.004	.05	<.2	4.1	.05	.02	28	.6	.03	9.4	15
77584	3.62	171.83	11.30	219.6	123	77.6	35.0	1424	6.23	176.1	2.0	4.9	.8	22.1	59	1.17	.36	195	.44	.110	14.0	64.1	2.28	105.6	.139	1	3.86	.006	.04	<.2	10.7	.08	.03	36	1.6	.06	11.7	15
77585	4.38	153.28	8.90	151.8	97	42.3	39.0	1709	6.26	26.7	.5	3.0	.4	34.7	45	.85	.20	235	.56	.105	6.7	60.4	1.71	57.1	.222	1	3.23	.006	.04	<.2	12.8	.11	.08	54	1.0	.05	12.8	15
77586	3.42	160.14	10.94	151.6	177	33.0	24.2	1006	5.99	12.1	.4	4.2	4	29.7	45	.82	.40	216	.58	.119	7.6	47.1	1.45	65.9	.293	1	3.11	.007	.04	<.2	9.5	.13	.14	69	2.0	.10	12.8	15
77587	16.92	195.86	47.23	348.4	911	45.5	36.7	2038	8.46	24.0	1.0	11.7	2	97.7	1.09	5.30	.23	116	.23	.378	12.6	33.3	.84	66.9	.061	<1	2.60	.005	.05	<.2	5.9	.29	.10	71	7.4	.22	7.3	15
77588	25.72	397.79	47.45	880.2	2084	154.3	77.5	3823	9.87	55.3	1.6	18.8	1.4	9.2	5.60	13.87	.29	77	.06	.201	20.2	40.2	.66	76.5	.046	<1	2.17	.005	.06	.2	7.3	.66	.17	150	10.6	.30	3.6	15
77589	33.40	518.47	30.88	565.8	1183	194.4	103.7	3903	12.16	58.5	2.2	5.8	1.8	33.0	5.00	6.58	.16	98	.24	.235	20.6	59.3	1.33	85.9	.086	1	3.19	.006	.08	2	7.9	.91	.16	134	10.6	.20	6.1	15
77590	43.66	410.91	10.40	364.4	249	268.6	102.6	2680	11.01	59.6	2.3	3.8	1.3	17.0	3.16	4.10	.12	167	.32	.164	10.6	31.6	1.17	37.0	.142	1	2.81	.007	.07	2	10.7	1.22	.23	124	9.9	.18	6.8	15
77591	28.77	400.37	13.01	316.3	333	160.4	106.5	2776	9.79	64.4	1.9	8.3	1.0	34.4	2.29	4.80	.11	245	.52	.173	11.0	42.4	1.59	64.9	.130	1	3.71	.008	.09	<.2	13.2	.80	.07	57	6.8	.14	10.6	15
77593	37.70	293.69	9.98	270.9	282	205.7	106.5	2034	8.30	14.8	2.1	7.1	5	34.6	1.41	2.61	.09	458	.31	.120	6.7	216.5	2.74	59.7	.102	1	3.94	.007	.03	<.2	9.1	.82	.07	121	7.1	.15	11.5	15
77594	14.79	307.76	9.01	179.7	162	156.2	106.6	1901	7.60	18.6	1.0	3.7	.3	34.7	2.17	1.57	.07	220	.91	.123	6.8	168.5	2.45	29.7	.099	1	3.06	.006	.07	<.2	8.4	.38	.10	72	4.5	.10	9.6	15
77595	6.30	245.22	6.97	118.8	214	32.8	37.9	1367	5.45	15.2	.8	2.3	1	32.8	.44	.84	.14	169	.41	.156	6.0	28.5	.79	37.6	.074	1	4.25	.005	.04	<.2	4.6	.25	.12	110	3.3	.09	10.2	15
77868	14.10	188.49	18.91	280.9	316	74.4	41.0	1780	6.74	44.0	1.1	6.2	.8	38.7	1.13	3.80	.26	191	.23	.184	8.6	62.7	1.39	79.1	.119	1	3.41	.007	.06	<.2	7.1	.55	.04	46	4.0	.16	10.9	15
77869	5.47	469.23	10.71	273.7	191	73.0	113.7	3884	10.66	22.6	.4	14.7	.7	61.4	.95	2.26	.16	336	.67	.129	9.8	33.7	2.49	72.1	.281	1	4.24	.006	.04	<.2	36.5	.21	.03	37	1.9	.08	18.3	15
77870	11.37	467.68	25.11	410.9	652	138.4	95.8	2960	8.95	40.6	1.1	9.0	1.2	24.2	2.93	2.57	.13	174	.63	.126	19.0	167.8	2.54	49.6	.098	1	2.98	.007	.05	<.2	16.4	.52	.08	92	4.0	.12	9.9	15
RE 77870	10.56	444.17	23.31	392.5	607	133.4	89.9	2825	8.57	38.3	1.0	6.8	1.1	22.4	2.80	2.38	.12	163	.58	.120	17.3	160.9	2.43	47.2	.089	1	2.83	.007	.05	<.2	14.4	.47	.06	87	3.6	.15	9.0	15
77871	12.78	442.40	36.31	518.6	870	138.0	98.7	2960	9.33	71.6	1.0	8.7	1.1	33.1	4.27	3.81	.23	179	.81	.110	17.5	128.5	2.59	41.0	.083	1	3.02	.007	.04	<.2	16.0	.36	.05	58	6.0	.20	10.2	15
77872	4.65	420.88	17.83	313.2	320	84.4	79.7	2642	9.43	29.2	.4	12.6	.6	33.6	1.55	1.93	.13	239	.85	.090	8.9	63.1	2.52	39.9	.223	2	3.43	.006	.05	<.2	19.1	.14	.02	53	2.3	.12	14.5	15
77873	.82	341.13	6.05	183.0	100	63.2	75.9	2966	10.00	3.8	<.1	4.3	.3	62.1	.50	.45	.06	272	1.39	.048	4.7	31.6	3.48	63.6	.307	2	3.80	.005	.02	<.2	25.1	.14	<.01	26	.5	.04	17.2	15
77874	4.95	153.63	6.31	140.9	221	29.5	24.2	1704	8.63	7.1	.4	5.4	3	32.1	.59	1.21	.10	339	.67	.078	3.5	47.3	1.51	89.1	.326	<1	2.90	.007	.03	<.2	8.2	.15	.07	61	1.0	.05	15.3	15
77875	13.29	460.72	31.63	646.7	567	99.6	90.0	2927	8.90	87.3	1.4	10.2	.5	26.2	5.09	4.65	.25	304	.59	.153	19.8	79.0	1.74	63.2	.095	1	3.51	.005	.05	<.2	15.7	.26	.07	65	4.3	.22	12.7	15
77876	4.53	417.64	26.94	333.7	392	99.8	87.6	2849	8.82	38.4	.7	4.8	.9	33.4	1.81	1.73	.20	281	.87	.124	17.0	118.7	2.47	63.7	.140	2	3.66	.006	.05	<.2	29.5	.25	.03	43	1.8	.13	14.4	15
77877	30.58	633.29	49.30	711.0	1233	112.7	135.4	4191	12.49	62.2	1.9	9.9	.5	17.4	5.32	4.65	.33	226	.35	.588	32.7	71.1	1.63	71.9	.070	1	3.45	.004	.05	<.2	16.5	.51	.10	79	11.5	.21	11.6	15
STANDARD DS2	14.57	127.00	34.25	161.3	269	35.8	12.2	829	3.08	58.8	19.1	199.2	3.6	27.3	10.42	9.64	10.92	73	.53	.090	15.7	157.0	.60	152.2	.091	2	1.70	.026	.16	6.6	3.0	1.78	.03	244	2.2	1.85	5.5	15

GROUP 1F15 - 15.00 GM SAMPLE, 90 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 300 ML, ANALYSIS BY ICP/ES & MS.
UPPER LIMITS - AG, AU, HG, W, SE, TE, TL, GA, SN = 100 PPM; MO, CO, CD, SB, BI, TH, U, B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.
- SAMPLE TYPE: SOIL SS80 60C Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 31 2000 DATE REPORT MAILED: Sept 14/00 SIGNED BY. C. Leong ..D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Data ___ FA ___

APPENDIX III

Geophysical Survey Methods and Results

Phelps Dodge Corporation of Canada, Limited
1409-409 Granville Street, Vancouver, BC V6C 1T8
Telephone (604) 669-2954 Fax (604) 681-3920

A LOGISTICAL REPORT

ON

MAGNETIC AND ELECTROMAGNETIC SURVEYING

Pass Property, B.C.

FOR

PHELPS DODGE CORPORATION OF CANADA, LIMITED

Toronto, Ontario

BY

PETER E. WALCOTT & ASSOCIATES LIMITED

Vancouver, British Columbia

SEPTEMBER 2000

INTRODUCTION.

On July 23th, 2000, Peter E. Walcott and Associates undertook a small electromagnetic and magnetic test survey over four grids on the Pass property, located in the Johannson Lake area of British Columbia, for Phelps Dodge Corporation of Canada, Limited.

The survey was to test the strike extent of a massive sulphide showing discovered in 1999.

Measurements of the vertical gradient over a 0.5 metre interval and the total intensity of the earth's magnetic field were obtained at 12.5 metre intervals over the grid established by the operator and Phelps Dodge personnel.

Measurements of amplitude ratio were made at three frequency pairs, 337/112, 1012/112, 3037/112 Hz using an S.E. 88 electromagnetic unit employing a coil separation of 50 metres.

The data are presented in profile form on plan maps of the line grid at a scale of 1:2500. In addition the total field data are also presented in contour form at the same scale.

SURVEY SPECIFICATIONS.

The basic principle of any electromagnetic survey is that when conductors are subjected to primary alternating fields secondary magnetic fields are induced in them. Measurements of these secondary fields give indications as to the size, shape and conductivity of conductors. In the absence of conductors no secondary fields are obtained.

The electromagnetic survey was carried out using an SE 88 Genie electromagnetic system manufactures by Scintrex Limited of Metropolitan Toronto, Ontario. The operation of this system is based on the simultaneous transmission of two pre selected, well separated frequencies from the transmitter, and the simultaneous reception and amplitude comparison of the resultant signals by a single receiver. There is no cable or radio link between the coils, and since there are effectively no coil geometry errors, the instrument is very effective in rugged topography and heavily forested areas. In the

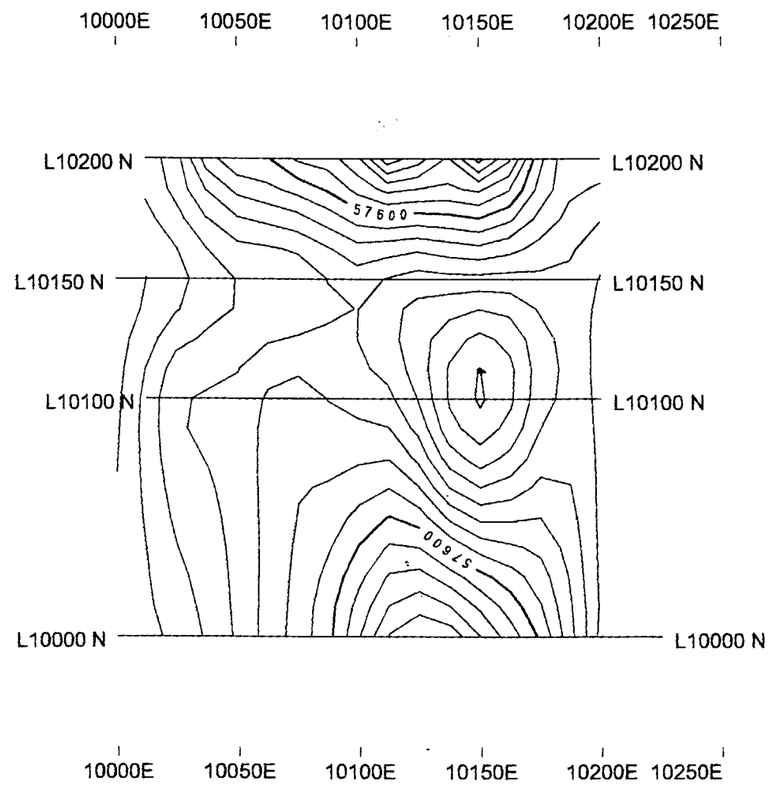
absence of atmospheric noise useful amplitude ratio changes may be made up to a transmitter-receiver separation of 150 metres.

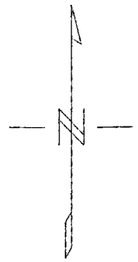
On this survey measurements were made at three frequency pairs, 337/112, 1012/112 and 3037/112 Hz, at a 50 metre coil separation.

The magnetic survey was carried out using an Omni proton precession magnetometer manufactured by EDA Instruments of Metropolitan Toronto. The instrument measures variations in the total intensity of the earth's magnetic field to an accuracy of plus or minus 1 gamma. Corrections for diurnal variations of the earth's field were made by comparison with a similar base instrument.

Measurements of the vertical gradient were also obtained by using a second sensor 0.5 metres apart and recording the difference in intensity in nanoteslas per metre measured at the mid point of the sensor spacing.

In all some 1.0 kilometres of magnetic and 0.625 km of electromagnetic surveying were carried out using the above described methods.





Scale 1:2500

25 0 25 50 75 100

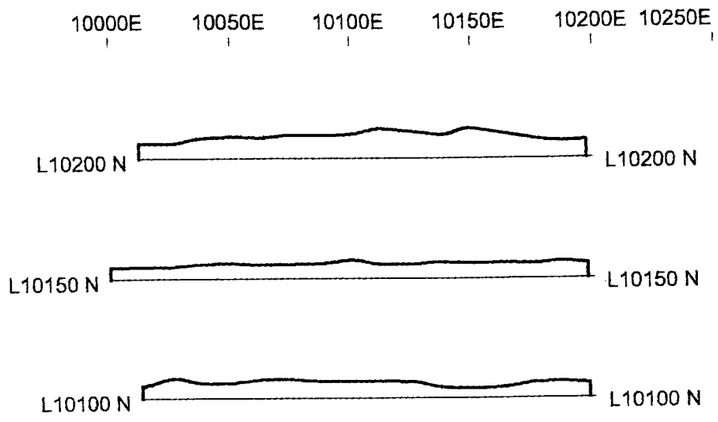
metre

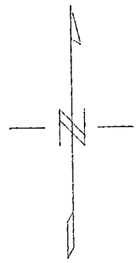
PHELPS DODGE CORPORATION

MAGNETIC SURVEY
CONTOURS OF TOTAL FIELD MAGNETICS

PASS GRID, CARRUTHERS PROPERTY
OMENICA M.D.
DATE: JULY 2000 Map No.

PETER E. WALCOTT & ASSOCIATES LIMITED





Scale 1:2500

25 0 25 50 75 100

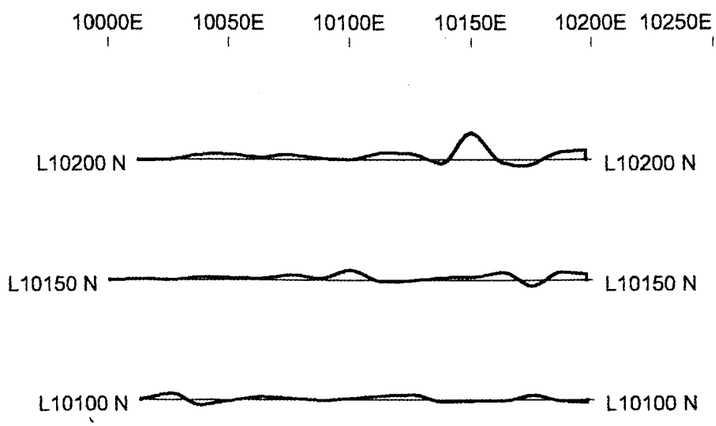
metre

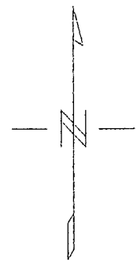
PHELPS DODGE CORPORATION

MAGNETIC SURVEY
PROFILES OF TOTAL FIELD MAGNETICS
Profile Base 57250 nT, Scale 1000 nT per CM

PASS GRID, CARRUTHERS PROPERTY
OMENICA M.D.
DATE: JULY 2000 Map No.

PETER E. WALCOTT & ASSOCIATES LIMITED





Scale 1:2500

25 0 25 50 75 100

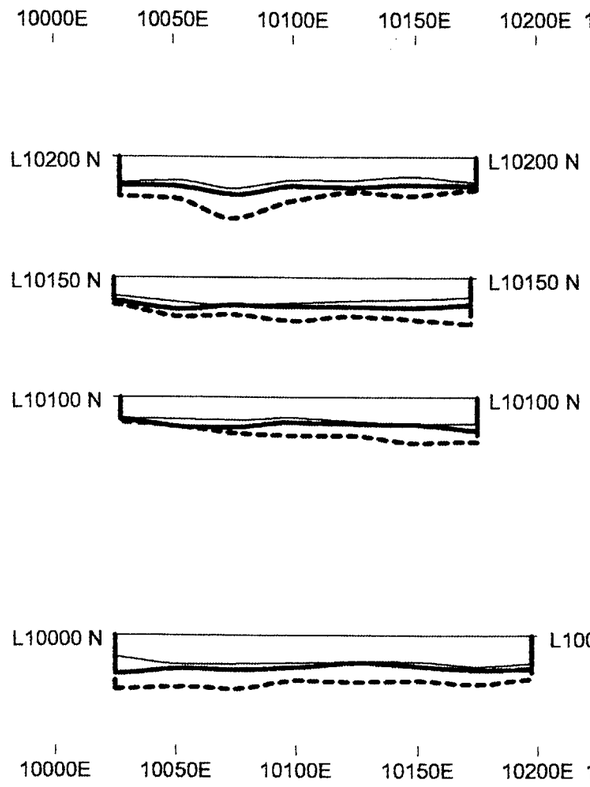
metre

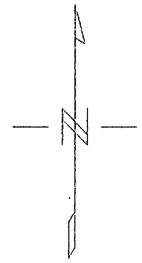
PHELPS DODGE CORPORATION

MAGNETIC SURVEY
PROFILES OF VERTICAL GRADIENT
Profile Base 0 nT, Scale 100 nT per CM

PASS GRID, CARRUTHERS PROPERTY
OMENICA M.D.
DATE: JULY 2000 Map No.

PETER E. WALCOTT & ASSOCIATES LIMITED





PROFILE LEGEND

337 / 112 Hz
1012 / 112 Hz
3037 / 112 Hz

Scale 1:2500

25 0 25 50 75 100
metre

PHELPS DODGE CORPORATION

ELECTROMAGNETIC SURVEY
PROFILES OF RATIOS 337/112,1012/112 ,3037/112
50 METER COIL SEPARTION,5 Percent /Cm

PASS GRID, CARRUTHERS PROPERTY
OMENICA M.D.
DATE: JULY 2000 Map No.

PETER E. WALCOTT & ASSOCIATES LIMITED

Geological Units

- *m* — *Tectonic melange:* chaotic assemblage of limestone, siltstone, and andesitic igneous lenses within a contorted shale matrix.
- *di* — *Diorite:* medium to fine grained hornblende diorite.

Dewar Formation

- *PDa* — *Andesitic tuff, tuffite, and sills:* medium grained crystal tuff/tuffite, monomict andesitic conglomerate, and high-level fine-medium grained sills.
- *PDc* — *Chert/cherty siltstone:* layered white to light grey chert, and cherty siltstone.
- *PDs* — *Shale:* pyritic/pyrrhotitc black shale with rare semi-massive sulphide layers and/or pods.
- *PDsl* — *Siltstone:* laminated light-grey to dark grey, pyritic/pyrrhotitic siltstone.
- *PDchx* — *Chert Breccia:* coarsely bedded chert breccia and pebble conglomerate.
- *PDsw* — *Greywacke:* well bedded greywacke intercalated with siltstone and shale.

Geological Symbols

- *Bedding:* strike and dip
- *Joint set or fracture cleavage:* strike and dip
- *Fold axis:* plunging syncline
- *Geological contact (inferred)*
- *Thrust fault (inferred)*

Map Symbols

- *Streams*
- *Lakes/Ponds*
- *Elevation contour:* c.i. = 20 m
- *Reference contour:* c.i. = 100 m
- *UTM Grid:* Zone 9, 1x1 km grid
- *Claim Line:* with LCP and claim name .

0 500
SCALE IN METRES

Phelps Dodge Corporation of Canada Ltd.

PROJECT # 488 (PASS 1,2, and 3) — CHIBOUGAMAU MINING DIVISION

Pass Geology Map (1)

SCALE	DATE	BY	NTS	FIGURE
1 : 10,000	Nov.00	SWW	94 D/8	3

VANCOUVER OFFICE

Legend

Soil sample

□ 72942 (145, 121, 121)
Sample # (Cu ppm, Zn ppm, Ag ppb)

Rock sample

▲ 72942 (145, 121, 121)
Sample # (Cu ppm, Zn ppm, Ag ppb)

Geophysical Grid Lines

Map Symbols

Streams

Lakes/Ponds

Elevation contour: c.i. = 20 m

Reference contour: c.i. = 100 m

UTM Grid: Zone 9, 1x1 km grid

Pass 1 *Claim Line:* with LCP and claim name .

Area of Geophysical Survey

Pass 1 Pass 2

Pass 3

▲77787 (336, 38, 820)

▲77598 (83, 50, 58)

▲77790 (3974, 83, 631)

▲77866 (1452, 90, 137)

▲77867 (477, 34, 156)

▲77861 (20, 58, 54)

▲77597 (229, 1734, 77)

▲77596 (108, 8, 102)

76415 (88, 161, 1135)
77864 (188, 268, 316)

76414 (289, 85, 150)

▲77599 (20, 1, 44)

77869 (463, 273, 191)

77870 (467, 418, 652)

77871 (442, 518, 870)

77872 (428, 313, 320)

77873 (341, 183, 100)

77874 (153, 148, 221)

77875 (460, 546, 567)

77876 (417, 333, 312)

77878 (32, 56, 218)

77879 (266, 50, 400)

77880 (107, 33, 80)

77882 (8, 52, 64)

77593 (245, 118, 214)

77877 (433, 771, 1233)

▲77789 (5188, 36, 12660)

▲77788 (200, 67, 254)

77594 (387, 179, 162)

77593 (293, 271, 282)

77591 (400, 316, 333)

77590 (410, 354, 249)

77589 (518, 565, 1183)

77588 (327, 880, 2084)

▲77592 (42, 27, 418)

77587 (195, 348, 911)

77586 (160, 151, 177)

77585 (153, 151, 97)

77583 (47, 118, 91)

77584 (171, 219, 123)

77582 (20, 72, 238)

N

0 500

SCALE IN METRES

Phelps Dodge Corporation of Canada Ltd.

PROJECT 6-488 (PART 1,3, and 5) GRAPHICAL MAPPING DATABASE

Soil and Rock Sample Locations (2)

SCALE	DATE	BY	NTS	FIGURE
1 : 10,000	Nov.00	SWW	94 D/8	4

VANCOUVER OFFICE