DIAMOND DRILLING REPORT

on the

CUT 1 to 8 MINERAL CLAIMS
CUTOFF PROPERTY

Omineca Mining Division
British Columbia

NTS 93F10
53° 39' North Latitude
124° 44' West Longitude

by

P.E. Fox., Ph.D., P.Eng.

FOX GEOLOGICAL SERVICES INC.
#1409 - 409 Granville Street
Vancouver, BC V6C 1T8

Work paid for by
PHELPS DODGE CORPORATION OF CANADA, LIMITED

December 1, 1997

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SUMMARY

The Cutoff Property consists of 8 claims, located 70 kilometres southwest of Vanderhoof in central British Columbia. Access from Vanderhoof is via the Kenney Dam Forest Service and Nechako Reservoir Roads. A series of secondary roads provides good access to the property.

The claims are underlain by compositionally assorted volcanic flow, pyroclastic, volcaniclastic and minor sedimentary rocks belonging to the Hazelton, Kasalka, Ootsa Lake and Endako Groups. Small felsite stocks cut the volcanic units. The property lies on the Trout Lake Lineament, a major structure that trends northeasterly through the property and is the locus for several occurrences of epithermal mineralization.

The Trout prospect, discovered by Kerr Addison Mines Ltd. in 1984, is hosted in a distinctive silica-adularia altered polymictic breccia/conglomerate unit. Gold mineralization is associated with fine-grained silica forming veins, fracture coatings, breccia matrices and intergranular fillings. Drilling to date has established the presence of gold mineralization up to 3.2 gpt gold over 22 metres in the immediate vicinity of the discovery outcrop, surrounded by lower grade mineralization for over 100 metres. Mineralization is open to the northwest where the host breccia unit is concealed by a thick mantle of till for several hundred metres. Rock samples collected during 1996 indicate that gold mineralization may continue for 300 metres in this direction.

Work in 1997 consisted of 615.1 metres of diamond drilling in four holes to test for extensions of the Trout mineralization along dip of the altered breccia/conglomerate unit. Drilling intersected mostly andesitic flows, failing to intersect the breccia/conglomerate. The best intersection was a 26-metre section of altered andesite with calcite +/-quartz-adularia veins and breccias in DDH97-3, which averaged 262 ppb gold.

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INTRODUCTION

This report details an diamond drill program conducted on the Cutoff property between August 22 and 31, 1997. Four drill holes, totalling 615.1 metres, were drill to test possible extensions of the Trout mineralized zone. Results of this work are tabulated herein.

LOCATION, ACCESS AND PHYSIOGRAPHY

The Cutoff property is located approximately 70 kilometres southwest of Vanderhoof in central British Columbia. It is situated on the Nechako Plateau, part of the Interior Plateau of the Canadian Cordillera, between the Nechako River and Big Bend Arm of Knewstubb Lake (Figure 1). The claims are centred at 53° 39' 09" north latitude and 124° 44' 20" west longitude. Access to the property is obtained by travelling southwest from Vanderhoof along the Kenney Dam Forest Service Road to kilometre 70 where a series of secondary roads provides access to the drill area.

Topography is gentle, with isolated low-lying hills dissected by the northeasterly drainages of Cutoff and Swanson Creeks and numerous subsidiary creeks. Several small lakes are present and swampy ground is common.

CLAIM INFORMATION

The Cutoff property consists of eight modified grid claims, totalling 140 units, recorded in the Omineca Mining Division and shown on NTS map sheet 93F/10 (Figure 2). All claims are in good standing and appear to have been staked in accordance with the mineral act. Claim details are set out below.

CLAIM DATA			
Claim Name	**Tenure No.**	**Units**	**Expiry Date**
Cut 1	313251	20	Sept. 4, 1998
Cut 2	313252	20	Sept. 4, 1998
Cut 3	313253	15	Sept. 4, 1998
Cut 4	313828	20	Sept. 25, 1998
Cut 5	315029	16	Dec. 3, 1998
Cut 6	314671	15	Nov. 13, 1998
Cut 7	314672	16	Nov. 13, 1998
Cut 8	314673	18	Nov. 14, 1998

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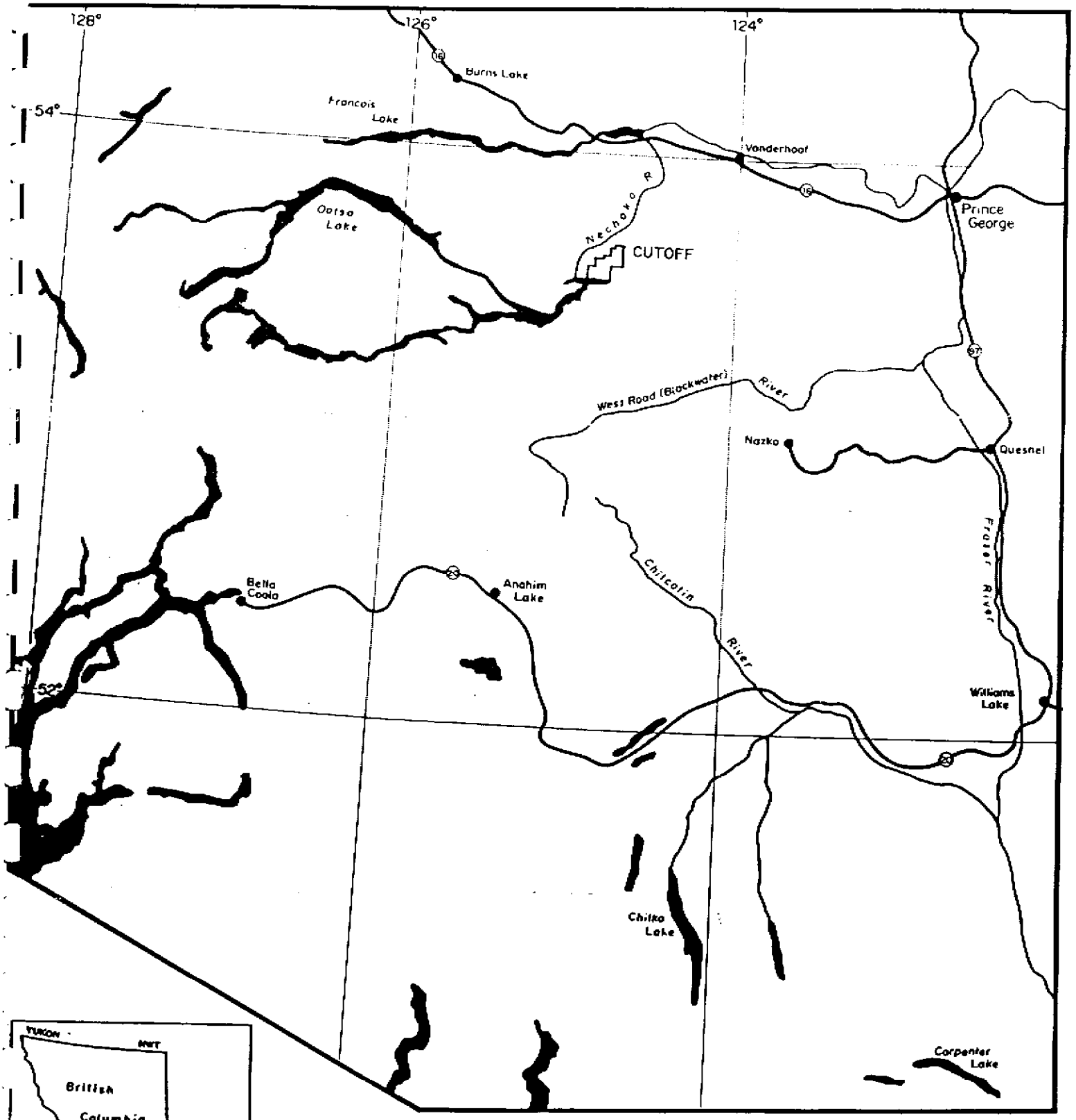
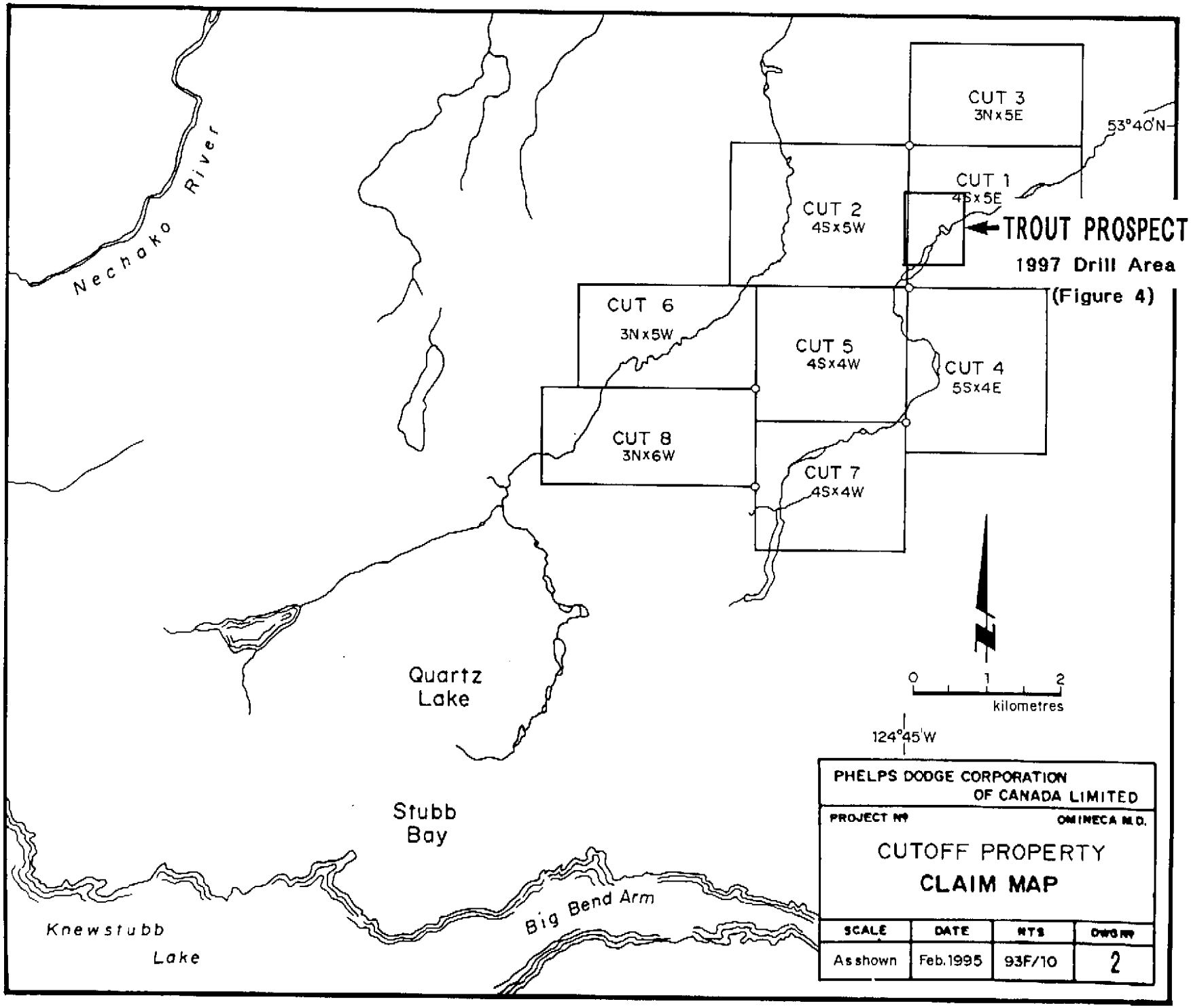


PHELPS DODGE CORP. OF CANADA LTD.			
PROJECT Nº 140		OMINECA M.D.	
CUTOFF			
LOCATION & ACCESS			
Fox Geological Consultants Ltd.			
SCALE	DATE	NTS	Dwg Nº
1:2,000,000	Jan. 1995	93F/10	1


CUT 3
3N x 5E
CUT 1
4S x 5E
CUT 2
4S x 5W
TROUT PROSPECT
1997 Drill Area
(Figure 4)
CUT 6
3N x 5W
CUT 5
4S x 4W
CUT 4
5S x 4E
CUT 8
3N x 6W
CUT 7
4S x 4W
53°40'N
Nechako River
Quartz Lake
Stubb Bay
Big Bend Arm
Knewstubb Lake
0 1 2
kilometres
124°45'W
PHELPS DODGE CORPORATION OF CANADA LIMITED
PROJECT No
OMINECA M.D.
CUTOFF PROPERTY
CLAIM MAP
SCALE
As shown
DATE
Feb. 1995
NTS
93F/10
DWG No
2

HISTORY

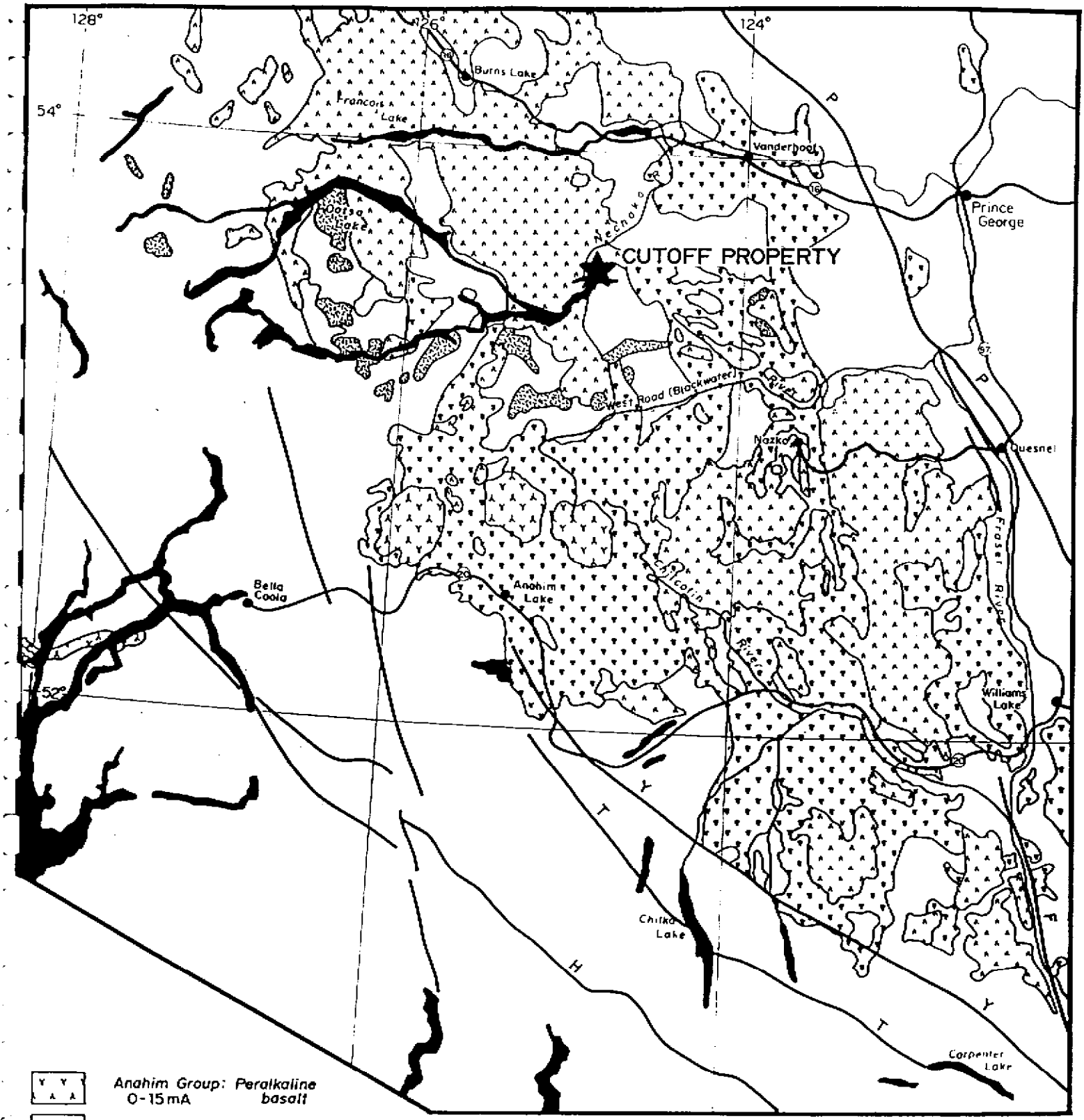
Mineralization in what is now known as the Trout Showing (Cut 1 claim) was first discovered during a regional reconnaissance program conducted by Kerr Addison Mines Ltd. in 1984. Work conducted during the 1980's by Kerr Addison and later by Welcome North Mines and Goldrite Mining Corp. included soil sampling, magnetometer and induced polarization surveys, trenching, 20 diamond drill holes and 13 reverse circulation holes, all on the Trout prospect. Drill intersections returned up to 3.8 gpt gold over 20 metres in hole RDH 87-3, however, subsequent attempts to extend the mineralized zone were a disappointment and the project was abandoned.

Cogema Resources staked the Cut 1-8 claims over the Trout prospect in 1993. During 1993 and 1994, they performed airborne and ground surveys and 11 diamond drill holes. Phelps Dodge Corporation of Canada, Limited acquired the property in 1995 and performed geological mapping, prospecting, rock and soil sampling, an Induced Polarization survey and relogged drill core from previous drill campaigns. Trout Deposit was determined to be open along strike to the northwest where the host silica-adularia altered breccia is concealed by a thick mantle of till. Rock samples collected during 1996 indicate that gold mineralization could continue for 300 metres in this direction.

REGIONAL GEOLOGY

The Cutoff property is located in the Interior Plateau of British Columbia, within the Intermontane Belt, which consists of late Palaeozoic to late Tertiary sedimentary and volcanic rocks belonging to the Stikinia, Cache Creek and Quesnellia Terranes. The claims lie in the Nechako Arch, near the eastern edge of the Stikine Terrane which locally consists of three volcanic-stratigraphic groups ranging in age from upper Cretaceous to Miocene (Figure 3). The oldest of these, Eocene and possibly Oligocene Ootsa Lake Group rocks, consist of rhyolitic to dacitic tuff, flows and breccias with minor amounts of andesite, basalt, conglomerate and tuffaceous shale. Pliocene to Pleistocene Chilcotin group vesicular andesite and basalt flows, breccias and cinder cones conformably overlie the Ootsa Lake Group. An arcuate belt of Paleocene Nanika and Quanchus quartz monzonite and granite intrudes Ootsa Lake Group and older rocks. Pre-Tertiary rocks include lower Cretaceous Skeena Group, an assemblage of easterly derived back arc clastics, middle Jurassic Hazelton Group alkaline to calc-alkaline volcanics and volcaniclastics and granitic rocks of the Jurassic to Cretaceous Coast Plutonic Complex.

Chief structural elements of the Nechako Arch are northwest and easterly-trending faults that develop a number of faulted bedrock segments. Uplift of the Arch probably took place along these faults leaving thick volcanic complexes, the Cheslatta and



Anahim Group: Peralkaline basalt 0-15 mA

Chilcotin Group: Backarc alkaline/tholeiite basalt 2-10 mA

Nanika, Quanchus Intrusives: Quartz monzonite, granite 60 mA

Ootsa Group: Calc-alkaline felsic volcanics 35-70 mA

Pre-Tertiary rocks and Coast Intrusions

Fault

H - Harrison F - Fraser
T - Tchaikazan P - Pinchi
Y - Yalakom

Scale 1:2,000,000

0 50 100 km

PHELPS DODGE CORP. OF CANADA LTD.

PROJECT Nº 205 OMINECA M.D.

CUTOFF PROPERTY
REGIONAL GEOLOGY

Fox Geological Services Inc.

SCALE	DATE	NTS	FIG Nº
1:2,000,000	Sept. 1995	93E/10	3

Mount Dent Complexes respectively, to the north and south. Northwesterly faults, typical of the region, appear to have segmented the Nechako Arch into northwest-striking basin and range-type terranes.

PROPERTY GEOLOGY

The Cutoff property is underlain by volcanic, pyroclastic and sedimentary assemblages of upper Jurassic to Eocene in age, which generally trend northeasterly and dip gently west. The Trout Lake Lineament, a major northeast trending structure which bisects the claims, locally offsets lithologies.

The Trout area (Figure 4) is underlain by a bimodal sequence of Kasalka Group rhyolitic to andesitic volcanic rocks. Andesitic rocks consists of lapilli tuff, flows and flow breccia. Flows are generally light green to dark grey, moderately magnetic and locally vesicular with feldspar, hornblende and augite phenocrysts. Thick sequences of maroon to green, monolithic lapilli tuff are intercalated with the flows. Lapilli are angular to subrounded fragments of andesite porphyry, up to 5 centimetres in size. An important constituent of the Kasalka Group is a polymictic breccia/conglomerate unit that hosts the Trout showing and extends northwesterly for several hundred metres. This unit ranges in width from 700 metres in the south, widening to approximately 2000 metres some 2.5 kilometres to the north.

Just south of the Trout prospect, Kasalka Group rocks are juxtaposed against older Canyon Creek (mJCc) volcanic rocks of the Hazelton Group along a northeast trending fault. Canyon Creek rocks consist of felsic ash tuff, lapilli tuff, and flow breccia which are locally flow-banded with minor interbedded sedimentary rocks.

MINERALIZATION

The Trout prospect, located on the Cut 1 claim, lies in a porous, moderately-dipping polymictic breccia/conglomerate unit of the Kasalka Group. Gold mineralization is associated with fine-grained silica forming veins, fracture coatings, breccia matrices and intergranular fillings. Past work indicates that the highest gold tenors, up to 19 gpt over 5 metres and 3.8 gpt over 20 metres, occur in a clast-supported conglomerate rich in banded quartz, adularia and chalcedony. Drilling on the Trout showing has established the presence of gold mineralization of good grade and width in the immediate vicinity of the discovery outcrop and of lower grade within an area measuring approximately 100 by 150 metres and to a depth of about 120 metres. To the southeast, the lower limit of the mineralization seems to be a fault, which separates the Kasalka group rocks from the Hazelton Group basement. The Trout prospect is open along strike to the northwest and to depth.

1996 WORK PROGRAM

The 1997 diamond drill program, conducted between August 22 and 31, focused on testing the favorable polymictic breccia/conglomerate unit for possible extensions of mineralization to the northwest. L.D.S. Diamond Drilling Ltd. of Kamloops drilled four holes of NQ core for a total footage of 615.1 metres. Drill hole locations and other pertinent data are tabulated below and drill sites are plotted on Figure 4.

Hole Number	Location		Orientation		Hole Length
	UTM North	UTM East	Azimuth	Dip	
97-1	5946122	384462	219°	-55°	203.3
97-2	5946009	384554	225°	-55°	175.9
97-3	5946009	384554	045°	-55°	84.4
97-4	5946246	384496	045°	-55°	151.5

Drill core for holes 1, 3 and 4 was split, sampled in 2 metre intervals and sent to Acme Analytical Laboratories Ltd. at 852 West Hastings Street, Vancouver, B.C. Core for holes 1 and 4 were composited into 6-metre samples for analysis, core for hole 3 was analysed in 2-metre intervals. Geochemical analyses consisted of Ultratrace ICP for 34 elements and geochemical gold analysis. Core is stored in the core storage facility located on the property near hole 97-1.

RESULTS

Drilling intersected mostly andesitic flows with minor tuff and lapilli tuff. DDH97-2 intersected a thick section of polylithic lahar overlying andesite flows and tuffs. The polymictic breccia/conglomerate unit which hosts the Trout mineralization was never intersected.

Gold in drill holes 97-1 and 97-4 was present in background concentrations only. Drill hole 97-3 contained slightly elevated concentrations of gold throughout, ranging up to 594 ppb gold for a 2-metre sample. The best intersection was a 26-metre section (32 to 58 metres depth) of clay altered andesite flows crosscut by calcite +/- quartz-adularia veins and breccias, which averaged 262 ppb gold.

CONCLUSIONS

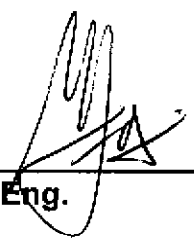
The Trout prospect lies in a unique stratigraphic unit which appears to continue for at least 3.5 kilometres, largely covered by a mantle of till. Drill hole 97-3, collared 1 kilometre northwest of the high grade core of mineralization in the Trout deposit, returned 262 ppb gold over 26 metres, consistent with low grade mineralization in the perimeter of the deposit. Exploratory holes further to the northwest failed to intersect gold mineralization.

DISBURSEMENTS

Expenditures for the 1997 work program on the Cutoff property total $56,368.00 as tabulated below.

L.D.S. Diamond Drilling Ltd.		
615 metres drilling @ $63.00/metre		$ 38,745.00
Geochemical Analyses		
Ultratrace ICP	73 samples @ $15.95/sample	1,164.00
Sample Preparation	163 samples @ $3.62/sample	590.00
Compositing	135 samples @ $.25/sample	34.00
Composite Preparation	45 samples @ $1.70/sample	77.00
Labour		
R. Cameron	1 day @ $325.00/day	325.00
T. Archibald	1 day @ $295.00/day	295.00
S. Wetherup	10 days @ $295.00/day	2,950.00
S. Boyd	7 days @ $295.00/day	2,065.00
C. Roe	7 days @ $225.00/day	1,575.00
Accommodation and Board	26 mandays @ $80.00/manday	2,080.00
Truck, gas	10 days @ $65.00	650.00
ATV	5 days @ $25.00/day	125.00
Copies, maps, publications		130.00
Communications		360.00
Shipping		203.00
Report		5,000.00
TOTAL		**$56,368.00**

Prepared by:



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December 1, 1997

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CERTIFICATE

I, Peter Edward Fox, certify to the following:

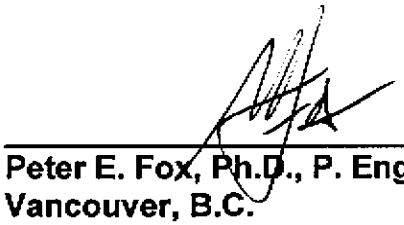
1. I am a consulting geologist residing at #902 - 2077 Nelson Street, Vancouver, B.C.

2. I am a Professional Engineer registered in the Association of Professional Engineers and Geoscientists of British Columbia.

3. My academic qualifications are:

   B.Sc. and M.Sc., Queens University, Kingston, Ontario
   Ph.D., Carleton University, Ottawa, Ontario

4. I have been engaged in geological work since graduation in 1966.



Peter E. Fox, Ph.D., P. Eng.
Vancouver, B.C.
December 1, 1997

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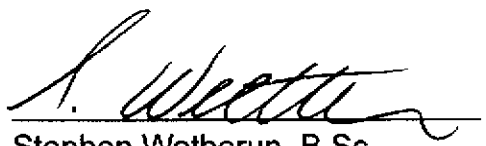
CERTIFICATE

I, Stephen Wetherup, of the City of Winnipeg, Manitoba, do hereby certify that:

1. I am temporarily a consulting geologist working out of 1409-409 Granville Street, Vancouver, B.C., 669-5736, while completing a Master's Thesis at the University of Alberta in the Department of Geology.

2. I graduated (with Distinction) from the University of Manitoba in 1995 with a Bachelor of Science degree in geology.

3. I have worked summers with the Geological Survey of Canada since 1994.



Stephen Wetherup, B.Sc.
Winnipeg, Manitoba.
September 23, 1997

APPENDIX I

DIAMOND DRILL LOGS

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

PROPERTY: CUTOFF
PROJECT No: 248
Location: 5946122N, 384462E
Azimuth: 219
Dip: -55
Start Date: August 22, 1997, 2:00 AM
Complete Date: August 24, 1997, 4:30 AM

DRILL HOLE NO: 97-1

Length(m): 203.3
Core Size: NQ

Elevation:
Claim No:
Section:

Dip Tests:

Date Logged: August 25, 1997
Logged by: Steve Weatherup

Purpose: To test the west side of a north-south fault

From (metres)	To (metres)	Description	Colour	Sample No	From (metres)	To (metres)	Length (metres)	Comments	Clay	Gyp	Au (ppb)
0	43.9	Casing									
43.9	99.3	ANDESITE FLOWS: Green to brick brown	dark green	518501	44	46	2	small fault zone	4	1	1
		-Most flows are amygdaloidal with dominantly seladonite infillings although locally	green	518502	46	48	2		3	1	
		chlorite or gypsum infills are found.	green	518503	48	50	2		3	1	
		-Most flows are aphyric	brown	518504	50	52	2		3	1	1
		-Uncommon autobreccia sections and rare tuffaceous units.	brown	518505	52	54	2		2	1	
		-Alteration is restricted to hematite oxidation adjacent to gypsum +/- celadonite veins or fractures.	brown	518506	54	56	2		3	2	
		-Gypsum +/- celadonite veins are common, 1mm to 4mm in width and from 2 to 20 per metre.	brown	518507	56	58	2		3	1	0
		-Bedding (amygdule flattening or flow contacts) parallel to 30 to core axis.	green	518508	58	60	2		3	1	
		-some gypsum veins with drusy gypsum	green	518509	60	62	2	autobreccia unit	2	1	
			brown	518510	62	64	2		2	1	2
			brown	518511	64	66	2		2	1	
			brown	518512	66	68	2		3	2	
			brown	518513	68	70	2		3	2	1
			brown	518514	70	72	2		2	1	
			green	518515	72	74	2		3	1	
			green	518516	74	76	2		3	1	2
			dark green	518517	76	78	2		2	1	
			green	518518	78	80	2	Autobrecciated unit	2	1	
			mauve	518519	80	82	2	1.5cm thick	3	1	2
			mauve	518520	82	84	2	celadonite vein,	2	1	
			green	518521	84	86	2	subparallel to core	3	1	
			green	518522	86	88	2	axis	3	1	3
			green	518523	88	90	2	some brown (altered)	2	1	
			mauve	518524	90	92	2	pyrite phenocrysts	3	1	
			mauve	518525	92	94	2	(1-2mm, ~5%)	3	1	0
			green	518526	94	96	2		2	1	
			mauve	518527	96	98	2		2	2	
			dark green	518528	98	99.3	1.3		3	1	0
99.3	112	ANDESITE LAPILLI TUFF:	brick brown	518529	99.3	102	2.7		4	0	
		-brick brown fine grained matrix	brick brown	518530	102	104	2		4	0	
		-1-2% biotite, 1mm in size, 1-2% quartz, 1mm in size	brick brown	518531	104	106	2		4	0	0
		-Some compressed pumice fragments	brick brown	518532	106	108	2		4	0	
		-20-35% white lapilli fragments, most rounded and crystal aggregates, very soft, possible zeolites	brick brown	518533	108	110	2		5	0	
		-Very few typsum veins or clay minerals, alteration along veins	brick brown	518534	110	112	2		5	0	2
		-Matrix is very fiable and almost mud-like.									
112	118	ANDESITE FLOWS:	dark green	518535	112	114	2		1	2	
		-dark green to mauve, aphanitic, generally aphyric rock.	dark green	518536	114	116	2		1	2	
		-Some small autobreccia zones	dark green	518537	116	118	2		1	2	2
		-Similar veining to the first andesite flows except for less celadonite and chlorite									
		-Local gypsum healed breccia zones with common drusy open space typsum infillings.									
		-Rare amygdaloidal flows.									
118	122.9	FAULT GOUGE	rusty brown	518538	118	120	2		5	tr	
		-Comminuted andesite fragments, very mud-like, can break with your hands.	rusty brown	518539	120	122.9	2.9		5	tr	
122.9	145.4	ANDESITE FLOWS	green	518540	122.9	125	2.1		1	2	3

			green	518541	125	127	2		1	2	
			green	518542	127	129	2		1	2	
			green	518543	129	131	2		2	2	2
			green	518544	131	133	2		1	3	
			green	518545	133	135	2		1	3	
			green	518546	135	137	2		2	3	2
			green	518547	137	139	2		2	3	
			green	518548	139	141	2		2	3	
			green	518549	141	143	2		2	1	3
			green	518550	143	145.4	2.4		2	1	
145.4	150.1	FAULT GOUGE	brown	518551	145.4	147	1.6		5	0	
			brown	518552	147	150.1	3.1		5	0	2
150.1	186.3	ANDESITE FLOWS	mauve	518553	150.1	152	1.9	Heavily hematite	2	1	
			green	518554	152	154	2	stained	1	1	
			green	518555	154	156	2		2	1	3
			green	518556	156	158	2		3	1	
			green	518557	158	160	2		2	1	
			green	518558	160	162	2		2	2	2
			green	518559	162	164	2		2	3	
			green	518560	164	166	2		2	3	
			green	518561	166	168	2		2	3	1
			green	518562	168	170	2		2	2	
			green	518563	170	172	2		2	2	
			green	518564	172	174	2		2	2	0
			green	518565	174	176	2		3	1	
			green	518566	176	178	2		3	1	
			green	518567	178	180	2		3	1	0
			green	518568	180	182	2		3	2	
			green	518569	182	184	2		3	1	
			green	518570	184	186.3	2.3		2	2	1
186.3	188.3	FAULT GOUGE	brown	518571	186.3	188.3	2		5	0	
188.3	203.3	ANDESITE FLOWS	green	518572	188.3	190	1.7		3	3	
			green	518573	190	192	2		3	2	0
			green	518574	192	194	2		2	2	
			green	518575	194	196	2		2	2	
			green	518576	196	198	2		2	2	0
			green	518577	198	200	2		2	2	
203.3		END OF HOLE	green	518578	200	203.3	2.3		2	2	

PHELPS DODGE CORPORATION OF CANADA, LIMITED

PROPERTY: CUTOFF
PROJECT No: 248 DRILL HOLE NO: 97-2
Location: 5946009N, 384554E
Azimuth: 225 *Length(m):* 175.9 *Elevation:*
Dip: -55 Core Size: NQ Claim No:
Start Date: August 25, 1997, 12:00 noon Section:
Complete Date: August 27, 1997, 9:00 AM Dip Tests:
Date Logged: August 29, 1997
Purpose: To test the west fault zone Logged by: Steve Weatherup

From (metres)	To (metres)	Description	Colour	Sample No	From (metres)	To (metres)	Length (metres)	Comments	Clay	Gyp
0	47.2	Casing								
47.2	53.0	*POLYLITHIC ANDESITE LAHAR* -Clast supported -Clasts are all subangular to subrounded andesite clasts, 3mm to 40 mm -Clasts are dark maroon to dark grey (green) with a brick red muddy matrix -Crosscut by wispy, irregular calcite veins, 1mm to 3mm								
53.0	54.9	FAULT GOUGE -Brown, clay-rich zone								
54.9	63.1	POLYLITHIC ANDESITE LAHAR -As above								
63.1	77.4	BROWN POLYLITHIC ANDESITE LAHAR -Clast are subrounded to rounded, 1 to 15 mm -Light brown to dark brown muddy matrix, matrix supported								
77.4	80.8	FAULT GOUGE								
80.8	84.8	DARK BROWN POLYLITHIC LAHAR -As above								
84.8	113.0	VERY LIGHT MAUVE POLYLITHIC LAHAR -Matrix supported, very light green to very light mauve mud matrix -Andesite clasts are subrounded to rounded, 1 to 10mm -Very friable								
113.0	118.5	ANDESITE -Greyish green, locally amygdaloidal -Crosscut by gypsum/calcite veins with some caladonite/chlorite.								
118.5	123.3	LIGHT GREY FELSIC TUFF -15-25% devitrified pumice, 2-4mm -Minor pyrite,								
123.3	175.9	ANDESITE FLOWS -Dark grey to greenish grey to greyish mauve, aphyric, occasionally amygdaloidal flows -*Amygdules filled with chlorite/celadonite* -Crosscut by wispy irregular gypsum +/- calcite veins -Local flow breccia zones								
175.9		End of hole.								

PHELPS DODGE CORPORATION OF CANADA, LIMITED

PROPERTY: CUTOFF
PROJECT No: 248
Location: 5946009N, 384554E
Azimuth: 045
Dip: -55
Start Date: August 27, 1997
Complete Date: August 29, 1997

DRILL HOLE NO: 97-3

Length(m): 84.4
Core Size: NQ
Dip Tests:

Elevation:
Claim No:
Section:

Date Logged: August 29, 1997
Logged by: Steve Weatherup

Purpose: To test the north-south length of the ore zone

From (metres)	To (metres)	Description	Colour	Sample No	From (metres)	To (metres)	Length (metres)	Comments	Clay	Py	Si	Cal	Au (ppb)
0.0	29.6	CASING											
29.6	60.0	ANDESITE	mauve	518580	29.6	32	2.4	Several large calcite	1	tr	2	3	81
		-Mauve to green	light green	518581	32	34	2	veins and breccias	2	tr	1	2	594
		-10% plagioclase phenocrysts, 1-2 mm	light green	518582	34	36	2		3	tr	tr	1	137
		-Local chlorite/celadonite filled amygdules	light green	518583	36	38	2		4	tr	tr	1	70
		-Crosscut by a multitude of calcite +/- quartz/adularia veins and breccias	light green	518584	38	40	2		2	tr	tr	1	38
		-Local clay altered zones reducing the rock to a light green clay rich rock	light green	518585	40	42	2		3	tr	tr	1	204
			mauve	518586	42	44	2		1	1	2	2	204
			mauve	518587	44	46	2	Calcite & minor qtz	1	1	2	3	150
			mauve	518588	46	48	2	breccia at 45.5-45.7	1	1	2	3	459
			mauve	518589	48	50	2		1	1	2	2	238
			mauve	518590	50	52	2		1	1	2	2	360
			mauve	518591	52	54	2		1	1	2	2	262
			mauve	518592	54	56	2		1	tr	2	2	215
			mauve	518593	58	58	2		2	tr	1	2	104
			mauve	518594	58	60	2		3	tr	1	1	64
60.0	68.1	MONOLITHIC DACITE BRECCIA	light green	518595	60	62	2		4	1	tr	tr	105
		-Light green	light green	518596	62	64	2		4	1	tr	tr	91
		-Very few calcite +/- quartz veins	light green	518597	64	66	2		4	1	tr	1	59
		-Light green clasts with light green matrix	light green	518598	66	68	2		3	1	1	1	38
68.1	84.4	MAUVE ANDESITE	mauve	518599	68	70	2		2	tr	1	1	13
		-5-15% plagioclase phenocrysts, similar to the first andesite	mauve	518600	70	72	2		1	tr	2	1	97
		-Quartz lines the outsides of veins with the calcite in the centre	mauve	518601	72	74	2		1	tr	1	2	70
			mauve	518602	74	76	2	Increased quartz	1	1	3	2	235
			mauve	518603	76	78	2		1	1	3	2	23
			mauve	518604	78	80	2		1	1	3	2	21
			mauve	518605	80	82	2		1	1	3	2	1
84.4		End of hole.	mauve	518606	82	84.4	2.4		1	1	3	3	147

PHELPS DODGE CORPORATION OF CANADA, LIMITED

PROPERTY: CUTOFF
PROJECT No: 248
Location: 5946246N, 384496E
Azimuth: 045
Dip: -55
Start Date: August 29, 1997
Complete Date: August 31, 1997

DRILL HOLE NO: 97-4

Length(m): 151.5
Core Size: NQ

Elevation:
Claim No:
Section:

Dip Tests:

Date Logged: August 31, 1997
Logged by: Steve Weatherup

Purpose: Searching for the gold bearing rhyodacite unit.

From (metres)	To (metres)	Description	Colour	Sample No	From (metres)	To (metres)	Length (metres)	Comments	Clay	Py	Cal	Si	Au (ppb)
0.0	38.4	Casing											
38.4	62.0	MAUVE ANDESITE	mauve	518607	38.4	40	1.6		3	0	1	0	0
		-10-15% feldspar phenocrysts, 1 to 3 mm	mauve	518608	40	42	2		3	0	1	0	
		-Local minor autobreccia and agglomerate zones	mauve	518609	42	44	2		3	0	tr	0	
		-Few green clay altered zones, possibly tuffaceous horizons	mauve	518610	44	46	2		4	0	tr	0	20
		-Calcite veins, 0 to 10 per metre, occasional calcite breccias, 1 to 2 cm in size	light green	518611	46	48	2		4	0	tr	0	
			mauve	518612	48	50	2	Some light green	3	0	tr	0	
			mauve	518613	50	52	2	fragments	3	0	tr	0	8
			mauve	518614	52	54	2	(agglomerate)	3	0	1	0	
			mauve	518615	54	56	2		3	0	1	0	
			mauve	518616	56	58	2		3	0	tr	0	1
			mauve	518617	58	60	2		3	0	tr	0	
			mauve	518618	60	62	2		3	0	tr	0	
62.0	69.5	LIGHT GREEN TUFF	light green	518619	62	64	2		5	1	tr	0	10
		-Pervasively clay altered (smectite)	light green	518620	64	66	2		5	1	tr	0	
		-Minor pyrite	light green	518621	66	68	2		5	1	tr	0	
		-May be either andesitic or dacitic in composition											
69.5	84.6	FAULT GOUGE	light green	518622	68	70	2		5	1	tr	0	9
		-Muddy brown, fiable matrix	brown	518623	70	72	2		5	tr	1	0	
		-Dominated by broken fragments of andesite and the light green tuff	brown	518624	72	74	2		5	tr	2	0	
		-Many wispy 1mm calcite veinlets throughout	brown	518625	74	76	2		5	tr	2	0	21
			brown	518626	76	78	2		5	tr	2	0	
			brown	518627	78	80	2		5	tr	1	0	
			brown	518628	80	82	2		5	tr	1	0	3
			brown	518629	82	84	2		5	tr	1	0	
84.6	134.0	MAUVE TO GREY ANDESITE LAHAR	mauve	518630	84	86	2	Andesitic tuff	5	0	1	0	
		-0 to 25% andesite fragments, 1 to 30mm, subangular	mauve	518631	86	88	2	Andesitic tuff	5	0	1	0	2
		-Mauve fine grained mud matrix with 5-15% feldspar crystals	mauve	518632	88	90	2	Fault gouge 87.9-89	5	0	tr	0	
		-Numerous calcite veins and local breccia zones	mauve	518633	90	92	2		4	0	tr	0	
		-Some flow or tuffaceous units within the lahar flows no more than 1mm wide	mauve	518634	92	94	2	Fault gouge 93.3-95	5	0	tr	0	4
		-Pervasively clay altered	mauve	518635	94	96	2		5	0	tr	0	
			mauve	518636	96	98	2		5	0	tr	0	
			mauve	518637	98	100	2		5	0	tr	0	1
			mauve	518638	100	102	2		5	0	tr	0	
			mauve	518639	102	104	2		5	0	1	0	
			mauve	518640	104	106	2		5	0	tr	0	1
			mauve	518641	106	108	2		5	0	tr	0	
			mauve	518642	108	110	2		5	0	tr	0	
			mauve	518643	110	112	2		5	0	1	0	1
			mauve	518644	112	114	2		5	0	2	0	
			mauve	518645	114	116	2		5	0	2	0	
			mauve	518646	116	118	2		5	0	2	0	1
			mauve	518647	118	120	2		5	0	2	0	
			grey	518648	120	122	2		4	0	2	0	
			mauve	518649	122	124	2		4	0	2	0	1

			mauve	518650	124	126	2	Few calcite bx zones	5	0	2	0	
			grey	518651	126	128	2	Few calcite bx zones	4	0	2	0	
			grey	518652	128	130	2		4	0	2	0	1
			mauve	518653	130	132	2		4	0	2	0	
			grey	518654	132	134	2		4	0	2	0	
134.0	151.5	GREY TO GREYISH MAUVE ANDESITE	grey-mauve	518655	134	136	2		4	0	2	0	5
		-0.5 to 1mm acicular plagioclase phenocrysts, 5-20%	grey-mauve	518656	136	138	2		4	0	2	0	
		-Crosscut by wispy and irregular calcite, 20-30 mm, local breccia zones	grey	518657	138	140	2		4	0	2	0	
			grey-mauve	518658	140	142	2		4	0	2	0	1
			grey-mauve	518659	142	144	2		4	0	1	0	
			grey-mauve	518660	144	146	2		4	0	2	0	
			grey-mauve	518661	146	148	2		4	0	2	0	0
			grey-mauve	518662	148	150	2		4	0	2	0	
151.5		End of hole.	grey-mauve	518663	150	151.5	1.5		4	0	2	0	

APPENDIX II

ANALYTICAL METHOD AND CERTIFICATES

Analytical Method

Soil Samples

ICP A 30 gram sample is digested with 180 millilitres 3-1-2 HCL-HNo_3-H_2O at 95° C for one hour and is diluted to 600 millilitres with water. This each 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. Mo, Cu, Pb, Zn, Ag, As, Au, Cd, Sb, Bi, Tl, Hg, Se, Te and Ga are extracted with MIBK-Aliquat 336 and analysed by ICP. Elevated detection limits for samples contain Cu, Pb, Zn, As>1500 ppm, Fe>20%.

Au^+ Extracted by aqua-regia/MIBK extract with GF/AA finished.

Suite 1409-409 Granville Street, Vancouver, BC V6C 1T8
Telephone (604)669-2954 Fax (604) 681-3920

ACME ANALYTICAL LABORATORIES LTD. E. TIN T. TUNGSTEN 3C 1R P (604) 253-3 FAX (604) 253-1716

GEOCHEMICAL EXTRACTION-ANALYSIS CERTIFICATE

Phelps Dodge Corp. PROJECT 248 File # 97-4982

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	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	Tl ppm	Hg ppb	Se ppm	Te ppm	Ga ppm	Au+ ppb
518579	1.4	54.5	5.0	63.3	<30	37	19	1203	4.30	<.5	<5	<2	92	.03	<.2	<.1	134	2.01	.160	25	80	1.61	38	.37	4	2.04	.27	.05	<2	<.2	50	<.3	<.2	9.8	2
518580	.9	10.6	7.7	47.6	784	3	4	1319	1.96	14.8	<5	3	71	.06	.9	<.1	29	6.49	.072	13	8	.29	18	.05	<3	.57	.03	.07	2	<.2	23	<.3	<.2	2.4	81
518581	.6	20.7	173.1	354.9	2638	3	8	1010	2.32	101.8	<5	<2	30	1.13	11.1	<.1	40	1.43	.093	18	8	.78	30	.06	<3	.91	.02	.13	2	<.2	1368	.6	<.2	5.9	594
518582	.3	13.8	14.7	58.8	1822	2	8	995	2.35	108.5	<5	<2	31	.08	2.3	.1	38	1.10	.093	20	4	.75	22	.04	<3	1.00	.02	.13	2	<.2	37	.4	<.2	5.5	137
518583	.8	13.8	11.1	51.0	998	2	7	1047	2.20	51.0	<5	<2	41	.08	1.9	<.1	39	1.94	.106	24	4	.60	23	.05	<3	.90	.02	.14	<2	<.2	39	.3	<.2	5.3	70
518584	1.3	10.3	9.5	42.9	904	2	7	1015	2.24	39.5	<5	<2	26	.07	1.5	.1	41	1.41	.093	22	5	.52	23	.09	<3	.74	.02	.12	2	<.2	35	<.3	<.2	4.8	38
518585	.9	18.9	14.8	71.3	1891	2	7	1056	2.51	102.6	<5	2	24	.11	2.6	.1	44	1.84	.098	20	6	.55	21	.06	<3	.79	.02	.12	<2	<.2	72	.3	<.2	5.4	204
518586	.9	13.7	10.4	54.4	1310	3	6	716	2.55	61.3	<5	3	20	.04	1.7	.1	45	.94	.095	19	8	.35	23	.07	<3	.63	.03	.13	4	<.2	23	<.3	<.2	3.9	204
518587	1.4	11.0	9.5	46.9	865	3	5	773	2.09	40.7	<5	2	28	.04	1.7	.1	32	1.69	.089	17	7	.31	23	.06	<3	.84	.03	.10	2	<.2	40	<.3	<.2	4.8	150
518588	.7	11.1	8.4	36.2	1416	3	4	784	1.99	67.8	<5	<2	19	.03	1.7	<.1	24	1.86	.077	15	10	.30	22	.06	<3	.48	.02	.12	5	<.2	40	.3	<.2	3.7	459
RE 518588	.8	10.5	8.4	35.0	1361	3	4	749	1.91	62.4	<5	<2	18	.02	1.6	<.1	23	1.77	.075	14	11	.29	21	.06	<3	.46	.02	.11	4	<.2	38	<.3	<.2	3.6	465
RRE 518588	1.2	10.9	8.2	37.3	1501	3	5	772	2.03	68.0	<5	2	19	.04	1.9	<.1	25	1.71	.082	15	11	.31	22	.06	<3	.48	.02	.11	3	<.2	45	<.3	<.2	3.6	437
518589	1.7	13.8	13.9	67.7	1121	3	5	790	2.39	66.3	<5	2	18	.11	2.9	<.1	38	1.36	.091	20	9	.33	25	.08	<3	.53	.03	.13	4	<.2	231	<.3	<.2	4.1	238
518590	1.1	13.0	9.0	44.6	1523	3	5	789	2.16	91.5	<5	2	17	.06	2.1	.1	38	1.37	.087	18	8	.37	24	.07	<3	.54	.02	.12	3	<.2	36	<.3	<.2	4.6	360
518591	.5	16.6	9.5	46.0	2751	3	6	766	2.32	83.0	<5	<2	20	.05	2.1	<.1	43	1.23	.091	21	9	.52	23	.11	<3	.57	.03	.12	4	<.2	42	.4	<.2	5.5	262
518592	.8	12.0	8.4	42.1	2380	3	5	810	2.19	68.5	<5	<2	21	.05	1.5	<.1	39	1.17	.084	19	7	.53	18	.08	<3	.63	.02	.08	2	<.2	41	.3	<.2	5.3	215
518593	.8	14.4	10.4	53.4	2505	3	6	799	2.50	77.3	<5	<2	26	.06	2.0	<.1	40	1.14	.100	21	7	.64	22	.06	<3	.78	.03	.09	3	<.2	39	.3	<.2	7.7	104
518594	.6	13.4	10.6	66.9	1545	3	8	830	2.72	52.4	<5	<2	29	.08	1.4	<.1	42	.99	.095	24	4	.64	24	.06	<3	.95	.03	.10	2	<.2	26	.5	<.2	6.1	64
518595	.4	13.7	13.3	55.0	1692	2	8	790	2.57	124.4	<5	<2	30	.07	1.6	<.1	26	.66	.125	23	3	.63	24	.01	<3	1.11	.02	.19	<2	<.2	29	.3	<.2	5.7	105
518596	.4	13.6	12.7	58.1	1503	2	9	930	2.72	96.2	<5	<2	39	.04	1.7	.1	25	1.14	.115	24	2	.77	19	<.01	<3	1.33	.02	.17	<2	<.2	42	.3	<.2	6.7	91
518597	.2	15.5	13.7	53.8	907	2	9	727	2.71	42.7	<5	<2	42	.06	1.0	<.1	27	1.18	.109	24	2	.75	21	.01	<3	1.31	.02	.18	<2	<.2	24	.3	<.2	5.7	59
518598	.6	13.1	12.2	52.5	573	2	9	725	2.68	15.0	<5	2	40	.05	1.1	<.1	27	1.20	.107	24	2	.62	22	.02	<3	1.14	.02	.21	<2	<.2	21	<.3	<.2	5.0	38
518599	.7	13.8	10.9	58.7	541	2	9	683	2.71	13.1	<5	2	34	.08	1.3	<.1	34	.95	.105	25	2	.69	25	.05	<3	1.13	.02	.17	<2	<.2	39	<.3	<.2	5.5	13
518600	.9	16.1	8.7	64.4	751	2	5	596	2.51	11.3	<5	2	20	.05	2.2	<.1	44	1.02	.106	23	4	.58	24	.12	<3	.76	.04	.09	<2	<.2	10	<.3	<.2	4.2	97
RE 518600	1.0	16.5	9.3	66.1	843	3	5	607	2.55	12.7	<5	<2	21	.03	2.4	<.1	45	1.04	.108	24	4	.59	24	.12	<3	.77	.04	.09	2	<.2	19	<.3	<.2	4.8	127
RRE 518600	.9	16.0	9.2	65.9	690	2	5	602	2.54	12.6	<5	3	20	.02	2.1	<.1	45	.94	.106	23	4	.59	23	.12	<3	.76	.04	.09	<2	<.2	27	<.3	<.2	4.5	47
518601	1.3	16.3	10.5	64.6	727	3	3	488	2.55	8.6	<5	3	19	.07	2.7	<.1	48	1.00	.107	22	7	.46	27	.15	<3	.60	.04	.11	3	<.2	45	<.3	<.2	3.9	70
518602	.4	14.7	6.4	53.2	1074	2	4	684	1.99	18.7	<5	<2	19	.07	1.7	<.1	41	2.01	.095	17	7	.47	26	.13	<3	.65	.03	.11	3	<.2	51	<.3	<.2	3.7	235
518603	.9	12.9	5.6	51.0	384	2	4	608	2.06	9.4	<5	2	19	.03	1.6	<.1	29	1.08	.090	17	7	.54	29	.15	<3	.57	.03	.14	2	<.2	31	<.3	<.2	4.0	23
518604	.6	12.3	5.1	47.5	428	2	4	816	1.94	11.1	<5	<2	33	.08	2.3	<.1	26	2.04	.093	16	6	.50	24	.15	<3	.55	.03	.11	2	<.2	39	<.3	<.2	3.6	21
518605	.8	11.4	4.7	33.9	168	2	3	580	1.78	8.0	<5	<2	19	.03	2.4	<.1	21	1.12	.091	15	7	.42	26	.12	<3	.48	.03	.10	3	<.2	37	<.3	<.2	3.2	1
518606	.6	22.3	5.4	40.7	1899	3	5	525	2.08	12.9	<5	<2	49	.02	2.3	<.1	34	1.71	.099	16	7	.49	27	.15	<3	.51	.03	.12	4	<.2	31	<.3	<.2	3.6	147
STANDARD D	25.8	132.4	105.1	285.2	2218	33	18	1060	4.39	79.7	21	20	61	2.17	9.3	21.2	77	.71	.112	17	59	1.19	267	.15	29	2.42	.05	.75	25	2.6	479	.8	2.3	7.7	451

Standard is STANDARD D2/HG-500.

ICP - 30 GRAM SAMPLE IS DIGESTED WITH 180 ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 600 ML 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. SOLUTION ANALYSED DIRECTLY BY ICP. MO CU PB ZN AG AS AU CD SB BI TL HG SE TE AND GA ARE EXTRACTED WITH MIBK-ALIQUAT 336 AND ANALYSED BY ICP. ELEVATED DETECTION LIMITS FOR SAMPLES CONTAIN CU,PB,ZN,AS>1500 PPM,Fe>20%.

- SAMPLE TYPE: CORE AU+ - AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: SEP 2 1997 **DATE REPORT MAILED:** Sept 9/97 **SIGNED BY.** D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Data FA

ACME LYT LA TOP LTT E. INC T. OUV C 1RE PY (60 3-3 FX 04) 171

GEOCHEMICAL EXTRACTION-ANALYSIS CERTIFICATE

Phelps Dodge Corp. PROJECT 248 File # 97-4981 Page 4

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	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	Tl ppm	Hg ppb	Se ppm	Te ppm	Ga ppm	Au+ ppb
518501/518502/518503	.5	71.0	9.3	41.5	80	90	33	1801	5.76	1.1	<5	<2	421	.22	.2	<.1	162	2.39	.105	14	60	3.52	226	.11	5	3.91	.22	.37	<2	<.2	39	<.3	<.2	8.9	1
518504/518505/518506	.6	48.4	4.6	24.8	37	91	30	1051	4.82	1.1	<5	<2	421	.16	.2	<.1	152	2.55	.116	13	28	2.44	178	.14	<3	2.83	.30	.28	<2	.3	<10	<.3	<.2	6.4	1
518507/518508/518509	.3	47.0	5.7	32.1	35	72	27	976	4.61	.8	<5	<2	449	.15	<.2	.1	119	1.85	.096	14	28	2.53	123	.08	<3	3.15	.18	.28	<2	<.2	30	<.3	<.2	6.8	<1
518510/518511/518512	.2	62.2	4.4	26.3	<30	91	29	1036	5.20	.6	<5	<2	418	.11	<.2	<.1	135	2.23	.111	15	45	3.09	106	.07	3	3.88	.17	.33	<2	<.2	14	<.3	<.2	9.4	2
518513/518514/518515	.6	56.1	4.8	33.2	<30	82	30	1340	5.18	.7	<5	<2	312	.16	<.2	<.1	145	2.51	.116	15	42	2.95	69	.13	<3	3.47	.22	.30	<2	.2	16	<.3	<.2	8.3	1
518516/518517/518518	.3	41.8	3.7	41.3	<30	61	25	846	4.87	<.5	<5	<2	315	.09	<.2	<.1	136	1.81	.125	16	37	2.16	68	.17	<3	2.67	.24	.19	<2	<.2	<10	<.3	<.2	6.0	2
518519/518520/518521	.4	34.2	3.8	42.2	<30	49	23	630	4.37	.6	<5	<2	493	.08	<.2	<.1	122	1.92	.118	14	40	2.09	97	.13	<3	2.89	.24	.17	<2	<.2	13	<.3	<.2	7.5	2
518522/518523/518524	.9	37.2	3.8	40.0	<30	57	24	801	4.53	.5	<5	<2	408	.06	<.2	<.1	150	2.17	.136	15	45	1.99	83	.17	4	2.84	.44	.09	<2	<.2	<10	<.3	<.2	5.7	3
518525/518526/518527	.9	68.4	5.1	64.0	57	39	26	1731	5.17	.9	<5	<2	841	.20	<.2	<.1	188	2.59	.129	15	24	1.80	176	.16	<3	3.38	.41	.13	<2	<.2	<10	<.3	<.2	7.1	<1
518528/518529/518530	1.4	18.1	1.9	57.2	<30	16	15	510	3.15	.8	<5	<2	185	.06	<.2	<.1	75	1.83	.047	48	20	.61	53	.02	<3	2.48	.14	.18	<2	1.3	17	<.3	<.2	4.4	<1
518531/518532/518533	.8	9.4	4.6	24.9	32	7	8	201	2.08	.6	<5	5	117	.03	<.2	<.1	35	1.21	.010	37	7	.40	31	<.01	<3	2.63	.11	.16	<2	.2	<10	<.3	<.2	5.6	<1
518534/518535/518536	.9	40.9	5.9	41.8	38	43	20	1146	4.17	1.4	<5	<2	288	.12	.2	<.1	124	2.48	.090	17	28	1.35	63	.15	<3	3.61	.39	.23	<2	.3	<10	<.3	<.2	8.4	2
518537/518538/518539	.4	62.5	4.5	72.2	<30	45	31	1692	5.08	8.7	<5	<2	373	.12	.2	<.1	125	2.40	.112	22	31	1.71	88	.08	4	4.29	.20	.40	<2	.3	79	<.3	<.2	8.0	2
518540/518541/518542	.7	48.4	4.0	50.8	45	38	20	858	4.28	1.7	<5	<2	101	.05	.3	<.1	147	3.48	.113	19	69	2.13	25	.28	3	3.99	.28	.08	<2	.2	<10	<.3	<.2	11.2	3
518543/518544/518545	.9	43.8	3.5	50.8	37	38	20	874	4.24	1.3	<5	<2	93	.06	.3	<.1	138	3.76	.115	18	70	1.76	26	.31	<3	3.26	.29	.06	<2	.3	18	<.3	<.2	10.1	2
518546/518547/518548	.7	51.4	3.7	48.4	31	39	19	982	4.12	.6	<5	<2	194	.05	.2	<.1	134	3.23	.112	18	70	1.87	65	.31	<3	3.20	.33	.04	<2	.2	<10	<.3	<.2	9.3	2
RE 518546/518547/518548	.7	50.4	3.4	48.5	30	38	19	975	4.09	.6	<5	<2	193	.04	.2	<.1	133	3.20	.111	18	70	1.85	65	.31	<3	3.19	.33	.04	<2	.3	<10	<.3	<.2	8.5	1
518549/518550/518551	.4	45.0	4.7	62.3	<30	48	26	1008	4.88	.7	<5	<2	437	.03	<.2	.1	147	2.10	.084	20	75	1.28	152	.05	<3	4.00	.23	.15	<2	.3	13	<.3	<.2	7.9	3
518552/518553/518554	.6	44.5	5.9	61.7	<30	54	22	932	4.87	.9	<5	<2	388	.08	<.2	<.1	118	2.16	.111	25	69	1.29	151	.06	<3	3.52	.23	.22	<2	.4	19	<.3	<.2	8.4	2
518555/518556/518557	.8	30.9	4.3	60.1	32	39	21	1073	4.57	.6	<5	<2	578	.10	<.2	<.1	115	2.03	.139	25	69	1.74	214	.21	<3	2.82	.28	.14	<2	.4	<10	<.3	<.2	7.2	3
518558/518559/518560	1.1	37.5	3.2	62.9	<30	37	20	1442	4.77	1.5	<5	<2	566	.05	<.2	<.1	130	2.70	.158	26	76	1.93	226	.29	3	3.30	.41	.11	<2	.9	11	<.3	<.2	6.4	2
518561/518562/518563	1.1	38.8	4.5	51.6	<30	35	17	1180	4.18	<.5	<5	<2	124	.07	<.2	<.1	119	2.64	.138	23	68	1.70	52	.32	4	3.12	.36	.06	<2	.4	<10	<.3	<.2	9.7	1
518564/518565/518566	1.1	39.6	4.0	60.4	30	40	19	1618	4.56	<.5	<5	<2	119	.04	<.2	<.1	135	2.34	.153	26	76	1.91	48	.37	<3	2.73	.36	.07	<2	.3	<10	<.3	<.2	8.3	<1
518567/518568/518569	1.0	43.4	5.0	57.5	<30	38	19	1571	4.59	<.5	<5	<2	123	.14	<.2	<.1	134	2.20	.153	26	79	1.82	49	.37	<3	2.80	.30	.07	<2	.4	12	<.3	<.2	9.3	<1
518570/518571/518572	.6	48.4	4.1	59.8	<30	36	19	960	4.18	.7	<5	<2	600	.01	<.2	<.1	99	2.65	.130	25	60	1.53	229	.20	<3	3.90	.33	.19	<2	1.1	<10	<.3	<.2	7.4	1
518573/518574/518575	1.1	43.9	4.3	54.2	47	36	18	887	4.38	<.5	<5	<2	143	.04	.2	<.1	126	2.50	.140	25	70	1.57	56	.34	<3	2.90	.31	.06	<2	.3	<10	<.3	<.2	9.5	<1
518576/518577/518578	1.2	45.8	5.5	56.6	<30	36	19	860	4.48	<.5	<5	<2	105	.04	<.2	<.1	129	2.05	.147	25	77	1.61	42	.35	3	2.47	.28	.06	<2	.4	<10	<.3	<.2	11.0	<1
STANDARD D2/HG-500/AU-R	26.0	132.3	102.8	286.0	2177	32	18	1059	4.39	74.9	20	21	60	2.19	8.7	22.0	78	.72	.109	17	59	1.19	262	.15	26	2.38	.04	.74	21	3.1	471	.4	2.4	8.0	448

ICP - 30 GRAM SAMPLE IS DIGESTED WITH 180 ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 600 ML 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. SOLUTION ANALYSED DIRECTLY BY ICP. MO CU PB ZN AG AS AU CD SB BI TL HG SE TE AND GA ARE EXTRACTED WITH MIBK-ALIQUAT 336 AND ANALYSED BY ICP. ELEVATED DETECTION LIMITS FOR SAMPLES CONTAIN CU,PB,ZN,AS>1500 PPM,Fe>20%.
- SAMPLE TYPE: P1 TO P3 CORE P4 COMPOSITE AU+ - AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: SEP 2 1997 **DATE REPORT MAILED:** Sep9/97 **SIGNED BY** .....D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Data FA

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PH (604) 253-3158 FAX (604) 253-1716

GEOCHEMICAL EXTRACTION-ANALYSIS CERTIFICATE

Phelps Dodge Corp. PROJECT 248 File # 97-4983

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	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	Tl ppm	Hg ppb	Se ppm	Te ppm	Ga ppm	Au+ ppb
518607/518608/518609	.4	8.8	11.2	66.2	75	3	8	1001	2.33	3.1	<5	2	155	.18	.6	<.1	56	4.02	.106	22	3	.35	330	.03	<3	1.63	.06	.23	<2	<.2	38	<.3	<.2	3.6	<1
518610/518611/518612	.9	18.8	10.3	61.3	226	3	9	955	2.48	23.2	<5	2	137	.13	1.9	<.1	56	2.81	.139	22	3	.37	119	.03	<3	1.34	.05	.28	<2	<.2	25	<.3	<.2	4.1	20
518613/518614/518615	1.6	14.7	10.4	54.5	69	2	6	867	2.65	2.5	<5	2	70	.08	2.1	<.1	54	2.67	.114	21	3	.16	88	.05	<3	.83	.05	.25	<2	.2	22	<.3	<.2	2.8	8
518616/518617/518618	1.2	14.4	10.2	59.3	196	2	7	928	2.51	2.1	<5	2	61	.10	1.0	<.1	54	2.51	.114	21	4	.16	75	.08	<3	.86	.05	.27	<2	<.2	28	<.3	<.2	2.6	1
518619/518620/518621	.5	19.9	9.3	68.3	324	3	10	900	2.62	11.1	<5	2	55	.17	.8	<.1	49	1.81	.131	20	3	.41	36	.05	<3	1.03	.04	.28	<2	<.2	18	<.3	<.2	4.1	10
518622/518623/518624	.2	50.4	5.8	64.6	156	7	14	807	3.90	11.6	<5	<2	132	.09	1.7	<.1	101	5.41	.111	15	11	.92	102	.22	<3	4.19	.12	.13	<2	<.2	16	<.3	<.2	11.2	9
518625/518626/518627	.1	48.7	47.5	164.2	149	10	17	963	4.62	18.5	<5	<2	174	.32	5.3	<.1	100	5.65	.127	16	14	1.19	95	.19	<3	4.42	.13	.14	<2	<.2	258	<.3	<.2	10.4	21
518628/518629/518630	.2	34.5	7.0	71.0	<30	8	17	880	4.25	12.7	<5	<2	168	.10	2.8	<.1	103	4.28	.116	19	11	1.04	75	.06	4	3.14	.10	.15	<2	<.2	<10	<.3	<.2	8.4	3
518631/518632/518633	.8	13.4	9.1	64.7	42	3	9	797	2.76	4.2	<5	2	139	.15	.9	<.1	79	4.53	.107	20	3	.70	61	.02	<3	2.37	.09	.18	<2	<.2	20	<.3	<.2	6.4	2
518634/518635/518636	1.2	6.9	7.8	42.5	60	3	6	480	2.39	10.0	6	2	98	.11	1.0	<.1	63	3.41	.110	21	2	.23	68	.04	<3	2.00	.09	.20	<2	<.2	10	<.3	<.2	4.7	4
518637/518638/518639	.9	11.0	7.3	34.2	67	2	5	538	1.89	13.0	<5	2	106	.07	3.3	<.1	41	2.25	.091	16	1	.21	62	.03	<3	1.89	.09	.13	<2	<.2	36	<.3	<.2	4.7	1
518640/518641/518642	.3	66.7	5.3	61.7	83	8	16	913	4.82	6.4	<5	<2	156	.07	2.0	<.1	159	2.52	.118	15	13	.71	66	.13	3	2.24	.11	.17	<2	<.2	28	<.3	<.2	7.0	1
RE 518640/518641/518642	.4	65.8	5.2	60.2	104	8	16	906	4.80	6.5	<5	<2	156	.07	2.0	<.1	158	2.50	.116	15	12	.71	65	.13	<3	2.24	.11	.17	<2	<.2	28	<.3	<.2	7.0	1
518643/518644/518645	.4	62.6	3.3	71.2	39	11	22	1262	5.60	7.5	<5	<2	227	.09	.6	<.1	198	3.93	.093	12	19	1.42	98	.19	4	3.14	.17	.18	<2	<.2	36	<.3	<.2	8.8	1
518646/518647/518648	.4	50.5	3.0	75.5	<30	16	24	1337	5.96	3.2	<5	<2	286	.09	.2	<.1	187	3.28	.122	14	26	1.20	139	.25	3	3.25	.19	.15	<2	<.2	18	<.3	<.2	8.5	1
518649/518650/518651	.4	95.5	4.2	60.3	79	19	23	1138	5.38	2.2	<5	<2	219	.10	.4	<.1	218	4.38	.127	14	28	1.33	83	.26	3	3.62	.20	.12	<2	<.2	24	<.3	<.2	9.1	1
518652/518653/518654	.3	61.6	3.3	64.4	35	15	21	741	5.43	1.6	6	<2	283	.05	.2	<.1	195	3.43	.121	13	23	1.51	82	.22	<3	3.64	.20	.13	<2	<.2	13	<.3	<.2	8.3	1
518655/518656/518657	.4	73.5	2.6	56.0	83	18	24	930	5.04	1.5	<5	<2	198	.08	.3	<.1	236	3.60	.120	13	25	1.23	54	.22	<3	2.83	.18	.10	<2	<.2	21	<.3	<.2	7.0	5
518658/518659/518660	.5	68.1	2.9	61.7	56	19	24	1122	5.07	1.4	<5	<2	226	.11	.2	<.1	216	3.32	.120	13	27	1.24	62	.27	3	2.82	.23	.11	<2	<.2	17	<.3	<.2	6.9	1
518661/518662/518663	.5	63.4	2.7	58.0	70	21	24	1348	5.47	1.2	<5	<2	231	.08	.3	<.1	213	3.36	.120	13	27	1.45	71	.32	3	3.20	.22	.11	<2	<.2	23	<.3	<.2	8.3	<1
STANDARD D2/HG-500	25.4	129.7	100.7	281.0	2243	31	17	1032	4.25	71.5	21	21	60	2.25	9.8	22.4	76	.67	.108	16	58	1.16	261	.15	26	2.32	.04	.74	23	2.8	450	.7	2.2	7.6	458

ICP - 30 GRAM SAMPLE IS DIGESTED WITH 180 ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 600 ML 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. SOLUTION ANALYSED DIRECTLY BY ICP. MO CU PB ZN AG AS AU CD SB BI TL HG SE TE AND GA ARE EXTRACTED WITH MIBK-ALIQUAT 336 AND ANALYSED BY ICP. ELEVATED DETECTION LIMITS FOR SAMPLES CONTAIN CU,PB,ZN,AS>1500 PPM,Fe>20%.
- SAMPLE TYPE: COMPOSITE CORE AU+ - AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: SEP 2 1997 DATE REPORT MAILED: Sept 9/97 SIGNED BY..D. Toye

D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Date 9/97 FA

0 100 metres

90-9 85-9 90-6 90-7 90-8 90-5 90-3 90-2 90-1 87-12 1990 Core 1985 Core 97-1 97-2 97-3 94-6 97-4 85-4 85-1 85-2 85-10 85-11 85-5 85-6 85-7 85-8 87-1 87-2 87-3 87-4 87-5 87-6 87-7 87-9 87-10 94-1 94-2 94-3 94-4 94-5 94-6 94-8 94-9 94-10 94-11 40 50 60

uKK,bx

uKK,Tr

uKK,v

mJcc

uKKlt

Andesite boulder

Andesite boulder with quartz and chalcedony

Strong crackle breccia, banded vuggy chalcedonic quartz

Local quartz-filled crackle breccia

Local weak bleaching and thin silica coatings on breccia fragments

Polylithic andesite porphyry breccia to cobble and pebble conglomerate, quartz stringers and coatings on clasts

Andesite with calcite veins

Local quartz stringers and coatings on clasts

Silica coatings and veinlets

Vuggy banded quartz stringers and open space fillings

Silica impregnations

Chlorite veinlets, minor pyrite

Banded chalcedonic quartz veins

Minor quartz veinlets

Silica flooded

Silica flooded

Polylithic sandstone ± pebble, siltstone & mudstone, locally cemented; chalcedonic quartz veins

Rhyolite and rhyolite breccia, flow banded fragments, local chlorite alteration and seams

Chlorite veinlets

90-1 Diamond drill hole

87-12 Reverse circulation drill hole

Road and drill pad

97-1 1997 diamond drill hole

Swampy ground

Fault (circle indicates downthrow side)

Geological boundary

60 Quartz vein in outcrop

UPPER CRETACEOUS

KASALKA GROUP, CUTOFF VOLCANICS:

uKK,Tr — Rhyodacite: pink to orange, fine grained, moderately to sparsely feldspar porphyritic, locally highly brecciated, local areas of intense fine grained silica-cemented breccia.

uKK,bx — Pyroclastic and volcaniclastic rocks: red, purple to maroon, includes poorly sorted tuffs and pyroclastic breccia, matrix supported and clast supported conglomerate and well sorted andesitic sandstone.

uKKlt — Andesitic lapilli tuff: red, purple and maroon.

uKKv — Andesite flows, flow breccia: red, purple and maroon, crowded to subcrowded feldspar +/- hornblende porphyry, commonly friable.

MIDDLE JURASSIC

HAZELTON GROUP, CANYON CREEK VOLCANICS:

mJcc — Felsitic ash tuff, lapilli tuff, breccia: white, creamy to beige, fine grained, aphyric, includes minor feldspar and quartz phyric volcanics, locally flow-banded, and felsic-clast volcanic sandstone with widespread chlorite development.

after T. Richards, 1993

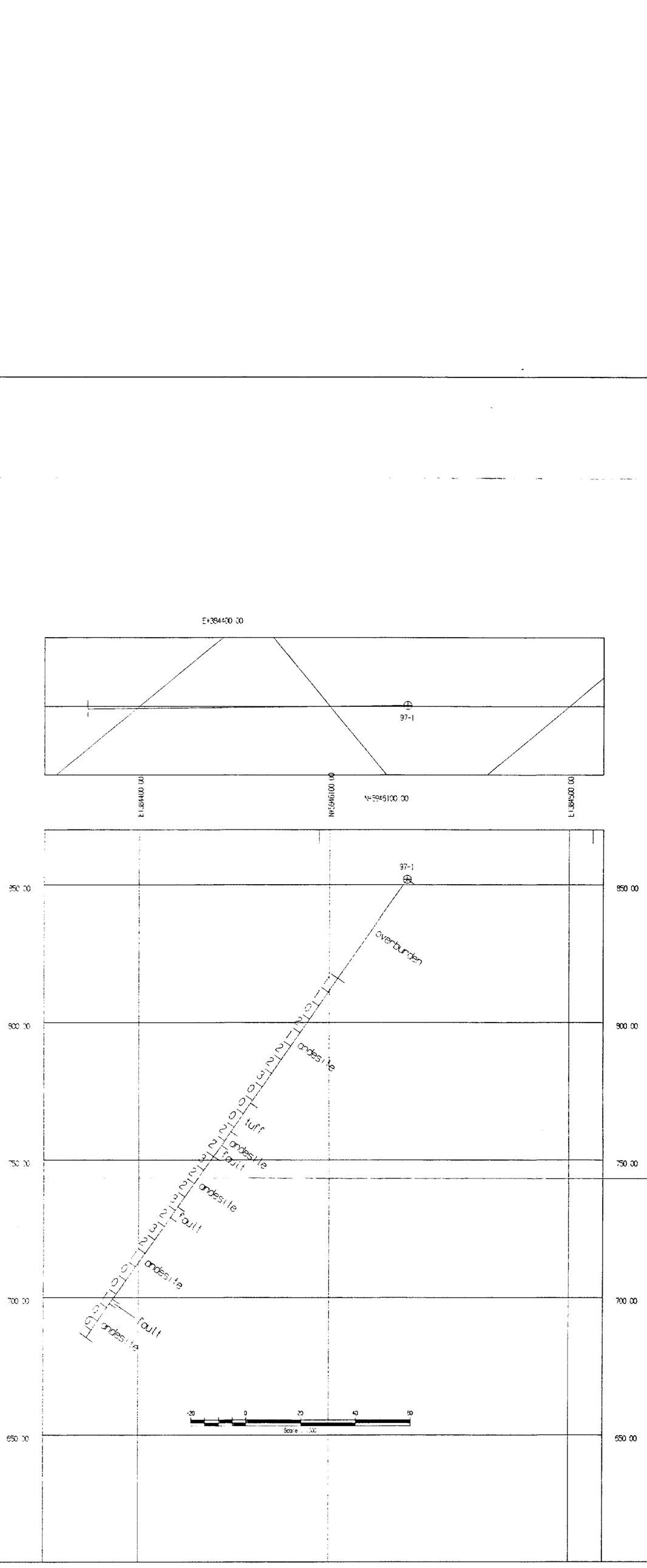
PHELPS DODGE CORP. OF CANADA LTD.

PROJECT Nº 248 OMINECA M.D.

CUTOFF PROPERTY
TROUT PROSPECT GEOLOGY & DRILL HOLE LOCATIONS

Fox Geological Services Inc.

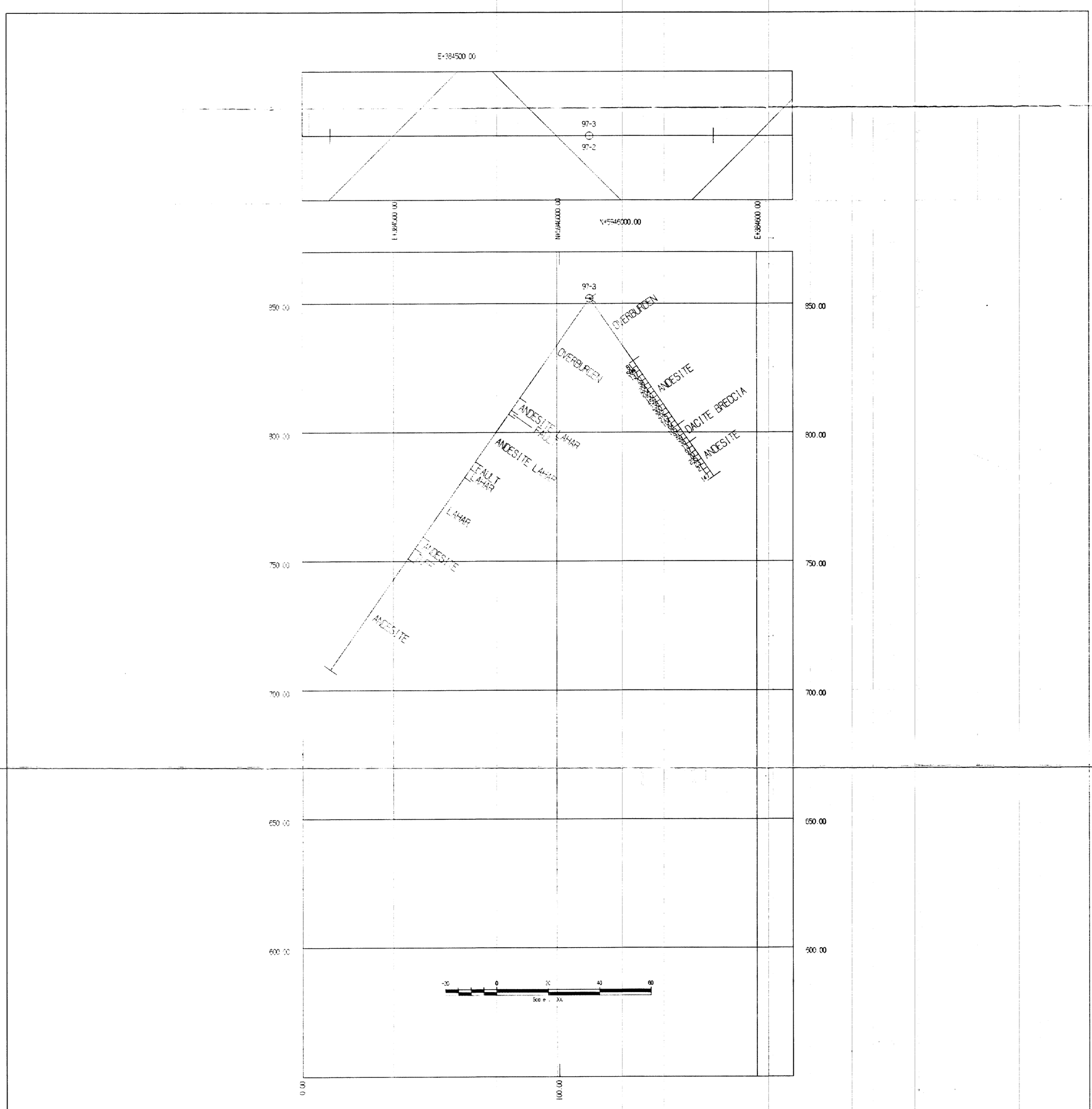
SCALE	DATE	FILE	NTS	DWG Nº
1:1000		248- BY: dlp CID	93F/10	4



Vancouver Office 1409 - 409 Granville Street Vancouver, BC V6C 1T8	Fox Geological Consultants Ltd.
UNITS : METRES DATE: 97/12/12 TIME: 12:19:22	TROUT ZONE CUTOFF PROPERTY SECTION 97-1 GOLD(PPB), LITHOLOGY
Drawn By :	

Software by GEOTEX Services Inc.

Figure 5a



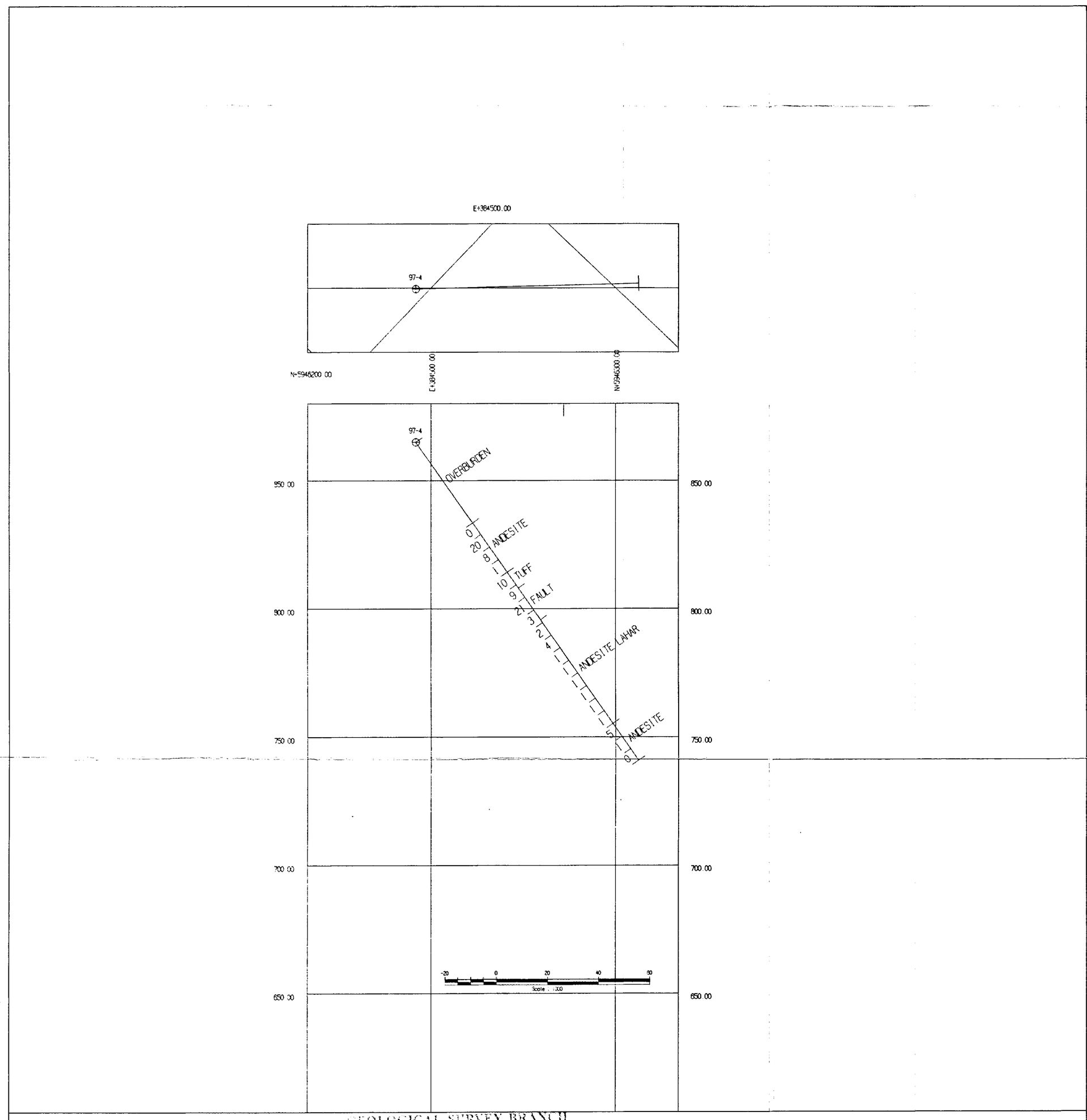
GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,275

Vancouver Office 1409 - 409 Granville Street Vancouver, BC V6C 1T8	Fox Geological Consultants Ltd.
UNITS : METRES DATE: 97/12/12 TIME: 14:04:52	TROUT ZONE CUTOFF PROPERTY SECTION 97-2,3 GOLD(PPB), LITHOLOGY
Drawn By :	

Software by GEMCOM Services Inc.

Figure 5b



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Vancouver, BC
V6C 1T8

UNITS : METRES DATE: 97/12/12 TIME: 12:17:16

Drawn By :

Fox Geological Consultants Ltd.

TROUT ZONE
CUTOFF PROPERTY

SECTION 97-4

GOLD(PPB), LITHOLOGY

Figure 5c