FOX GEOLOGICAL CONSULTANTS LTD.

LOG NO: Feb 13/91 RD.
ACTION:
FILE NO:

DRILLING REPORT ON THE SHIK 1 TO 7 CLAIMS REDGOLD PROSPECT CARIBOO MINING DIVISION BRITISH COLUMBIA

NTS 93A6

52°28'N 120°28'W

20,930

by

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

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for

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Project 163

Work paid for by Phelps Dodge Corporation of Canada, Limited

February 5, 1991

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1. SUMMARY

This report summarizes drilling conducted on the Shik 1 to 7 claims (Redgold property) located thirty kilometres north of Horsefly, B.C. Work was done between September 15th and October 6th, 1990. The program of 536 metres of diamond drilling was done to evaluate induced polarization surveys conducted over 35 kilometres of the grid earlier in the year. These surveys outlined three large anomalies as well as several second order ones. Anomaly #1, located over the northwest portion of the grid, measures some 900 metres by 1200 metres and is open to the north. It is composed of a broad +12 millisecond I.P. anomaly. Anomaly #2, located along the basalt-felsic breccia contact, measures 200 metres by 650 metres and consists of a coincident copper and gold geochemical and I.P. geophysical anomalies. This area is believed to be an extension of the Redgold showing, 1,000 metres to the south. Anomaly #3 measures 400 metres by 600 metres and lies over the northeastern edge of the Shiko stock, in the central portion of the grid. The diamond drill program tested the western edge of Anomaly #1, the centre of Anomaly #2 and the north end of Anomaly #3.

DDH 90-5 and 8 collared in the centre of Anomaly #2, returned 1,045 ppm copper over 14 metres and 1,010 ppm copper over four metres, respectively. Several local two-metre intersections returned concentrations greater than .2% copper. Gold values in these holes were erratic, with a high of 1,220 ppb gold. DDH 6 and 7 were drilled in Anomaly #3. DDH 6 returned anomalous intersections ranging from 4,254 ppm copper over two metres to 459 ppm copper over 24 metres. DDH 7 cored felsic breccia and basalt. The only significant result was a two-metre sample which returned 1,493 ppm copper. Gold values were generally less than 100 ppb gold. DDH 4, on the eastern side of Anomaly #1, intersected felsic breccia throughout. A two-metre sample returned 1,883 ppm copper and 200 ppb gold and a 12-metre intersection returned 457 ppm copper.

2. INTRODUCTION

This report summarizes the 1990 drilling program on the Redgold property, Cariboo Mining Division, located near Horsefly, B.C. Accommodations were at Mitchell Bay Landing located on Quesnel Lake. The program consisted of five diamond drill holes comprising 536 metres of drilling.

3. LOCATION AND ACCESS

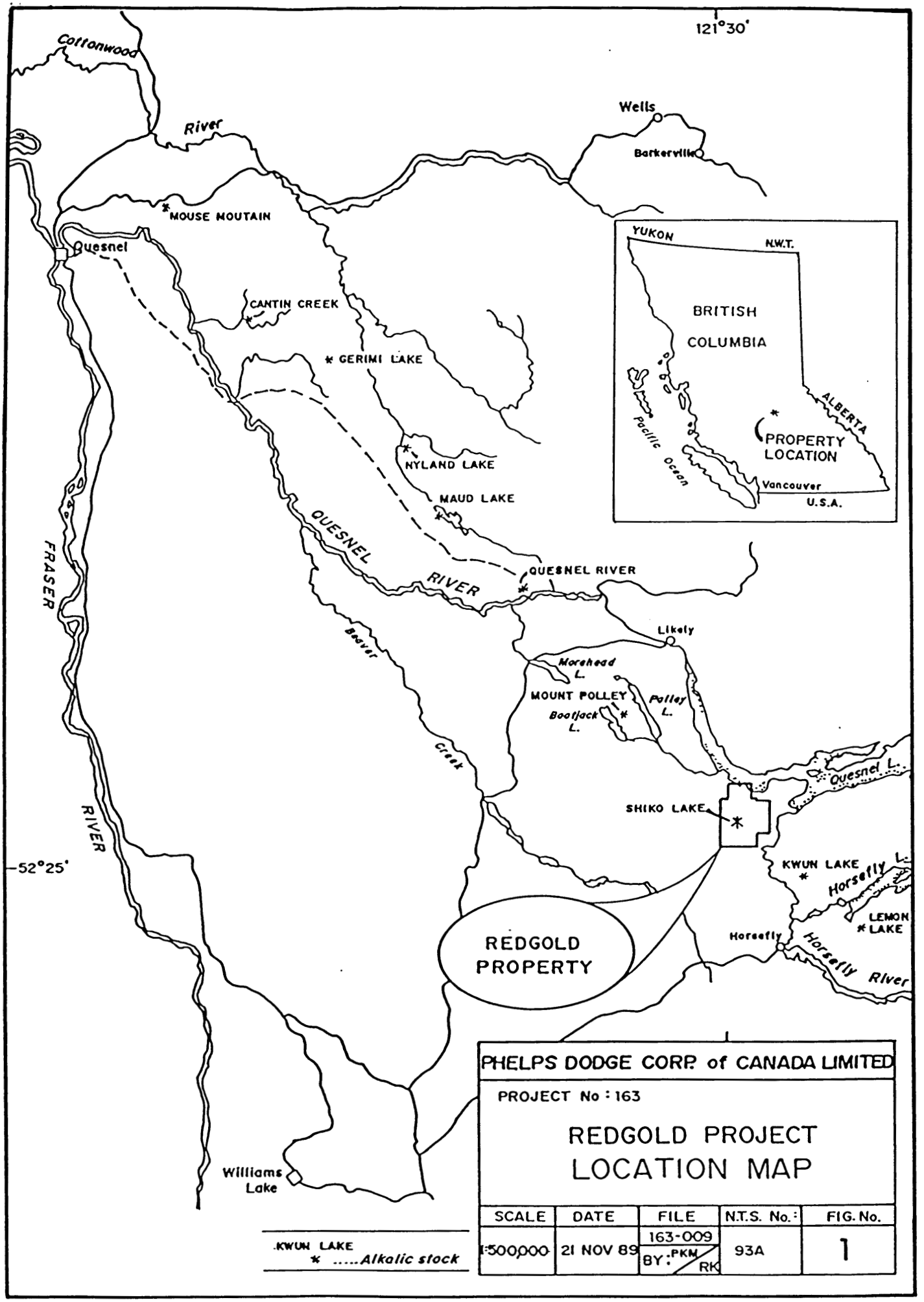
The Redgold property is located in central British Columbia approximately 60 kilometres northeast of Williams Lake (pop. 10,280) and 13 kilometres north of the small community of Horsefly (Figure 1). The property is located on NTS mapsheets 93A/5 and 6 centred at 52°28'N latitude, 121°30'W longitude. Magnetic declination is approximately 23°41'E. Access to the property is via all weather gravel roads north from Horsefly and then by a network of logging road spurs into clearcuts, which cover sixty percent of the claims. Horsefly is situated in the interior plateau country of central B.C. typically having gentle topography.

4. CLAIM INFORMATION

The Redgold property consists of the SHIK 1 to 7 mineral claims totalling 109 units (Table I) located in the Cariboo Mining Division. Ownership of the Redgold property was transferred to Phelps Dodge Corporation of Canada Ltd. in accordance with an option agreement between Phelps Dodge and J. W. Morton and R. M. Durfeld dated October 1, 1989.

Table I
Claim Information

Group	Claim Name	Record No.	Units	Expiry Date
Redgold A	SHIK 1	4331	16	31/05/94
Redgold B	SHIK 2	4332	12	01/06/93
Redgold A	SHIK 3	10313	16	01/12/94
Redgold A	SHIK 4	10314	12	01/12/94
Redgold A	SHIK 5	10315	15	01/12/94
Redgold A	SHIK 6	10316	20	01/12/94
Redgold A	SHIK 7	10317	18	30/11/94

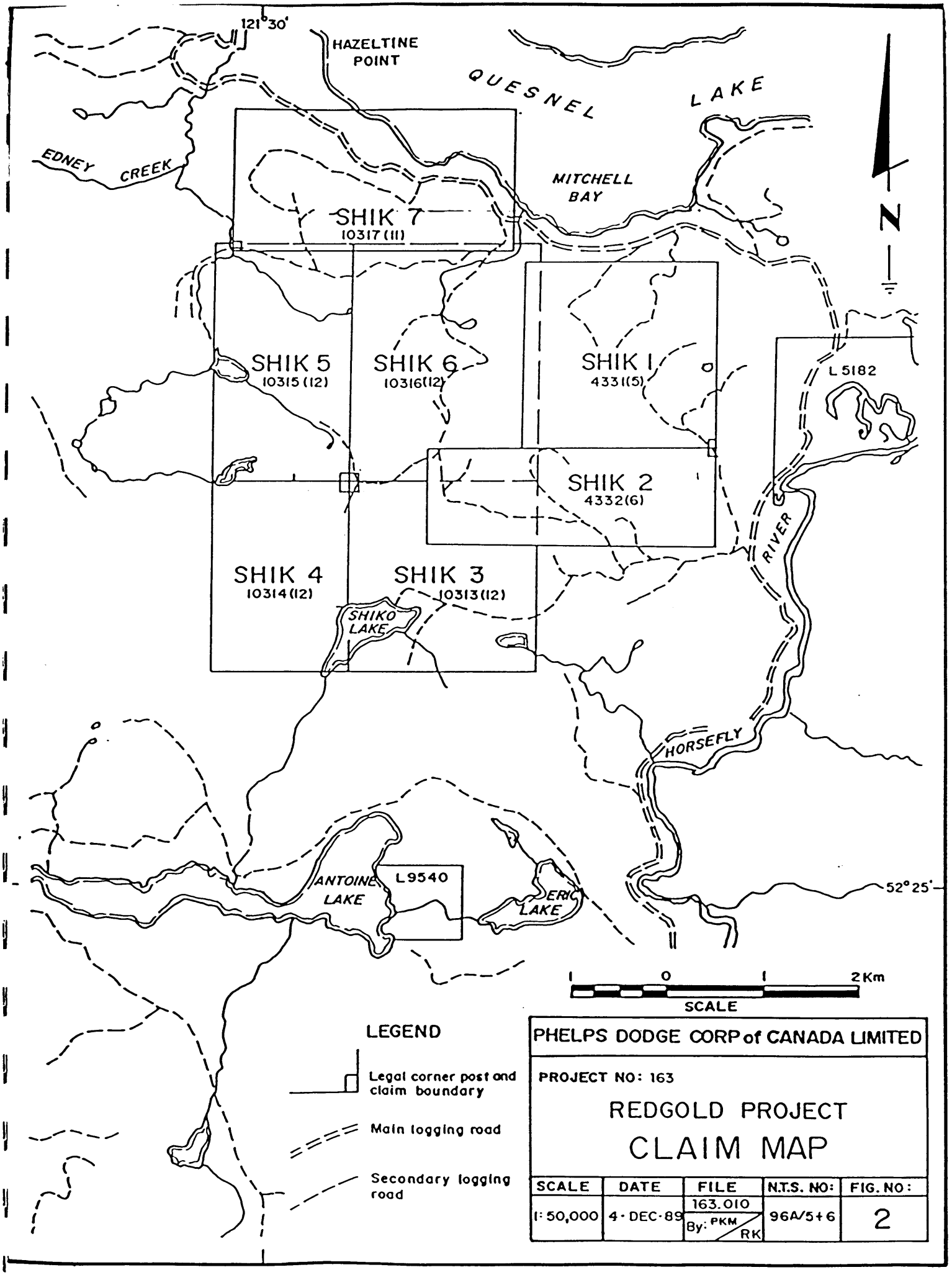


PHELPS DODGE CORP. of CANADA LIMITED

PROJECT No : 163

REDGOLD PROJECT
LOCATION MAP

SCALE	DATE	FILE	N.T.S. No.:	FIG. No.
1:500,000	21 NOV 89	163-009 BY: PKM / RK	93A	1


121°30'
HAZELTINE POINT
QUESNEL LAKE
EDNEY CREEK
MITCHELL BAY
N
SHIK 7
10317 (11)
SHIK 5
10315 (12)
SHIK 6
10316(12)
SHIK 1
4331(5)
L 5182
SHIK 2
4332(6)
SHIK 4
10314(12)
SHIK 3
10313(12)
SHIKO LAKE
RIVER
HORSEFLY
ANTOINE LAKE
L9540
ERIC LAKE
52°25'
1 0 1 2Km
SCALE
LEGEND
Legal corner post and claim boundary
Main logging road
Secondary logging road
PHELPS DODGE CORP of CANADA LIMITED
PROJECT NO: 163
REDGOLD PROJECT
CLAIM MAP
SCALE | DATE | FILE | N.T.S. NO: | FIG. NO:
1:50,000 | 4-DEC-89 | 163.010 By: PKM/RK | 96A/5+6 | 2

5. HISTORY

Exploration in the Cariboo district of B.C. has been on-going since the discovery of placer gold at the junction of Cariboo and Quesnel Rivers in 1856. In the mid-1960's several major mine companies were active in exploration of porphyry-style copper deposits throughout the Quesnel Trough. Two areas, Cariboo-Bell (Mt. Polley) owned by Imperial Metals and Mt. Milligan owned by Placer Dome Inc., are at the production decision stage. A third deposit, the QR deposit owned by QPX Minerals Inc, is geologically similar to Redgold and the other porphyry systems but is a skarn-type deposit in which that the chief economic mineral is gold.

6. PREVIOUS WORK

Ground surrounding the Shiko Stock has been staked since 1969. Various owners and operators worked on the prospect and are outlined below.

1969 to 1971	-	Kerr Addison Mines, Dusty Mac Mines
	-	completed 26 kilometres of I.P. survey
	-	500 metres bulldozer trenching
	-	geochemical sampling
	-	approximate expenditures $15,000
1972 to 1974	-	Cariboo Syndicate (Dome Mines, Newconex - managed by Fox Geological Consultants Ltd.)
	-	16 kilometres of I.P. and magnetometer surveys
	-	soil and rock geochemical sampling
	-	trenching
	-	280 metres of percussion drilling in seven holes
	-	$65,000 expended
1980	-	Terramer Resource Corp.
	-	completed 320 metres of diamond drilling with syenite stock
1982 to 1989	-	J. W. Morton and R. M. Durfeld
	-	staked Shik 1 and 2 claims
	-	geological mapping, geochemical soil and rock sampling
	-	6.5 kilometres of I.P., mag and VLF surveys
	-	Sedona Resources Corp. optioned ground and dropped option after $17,000 in expenditures

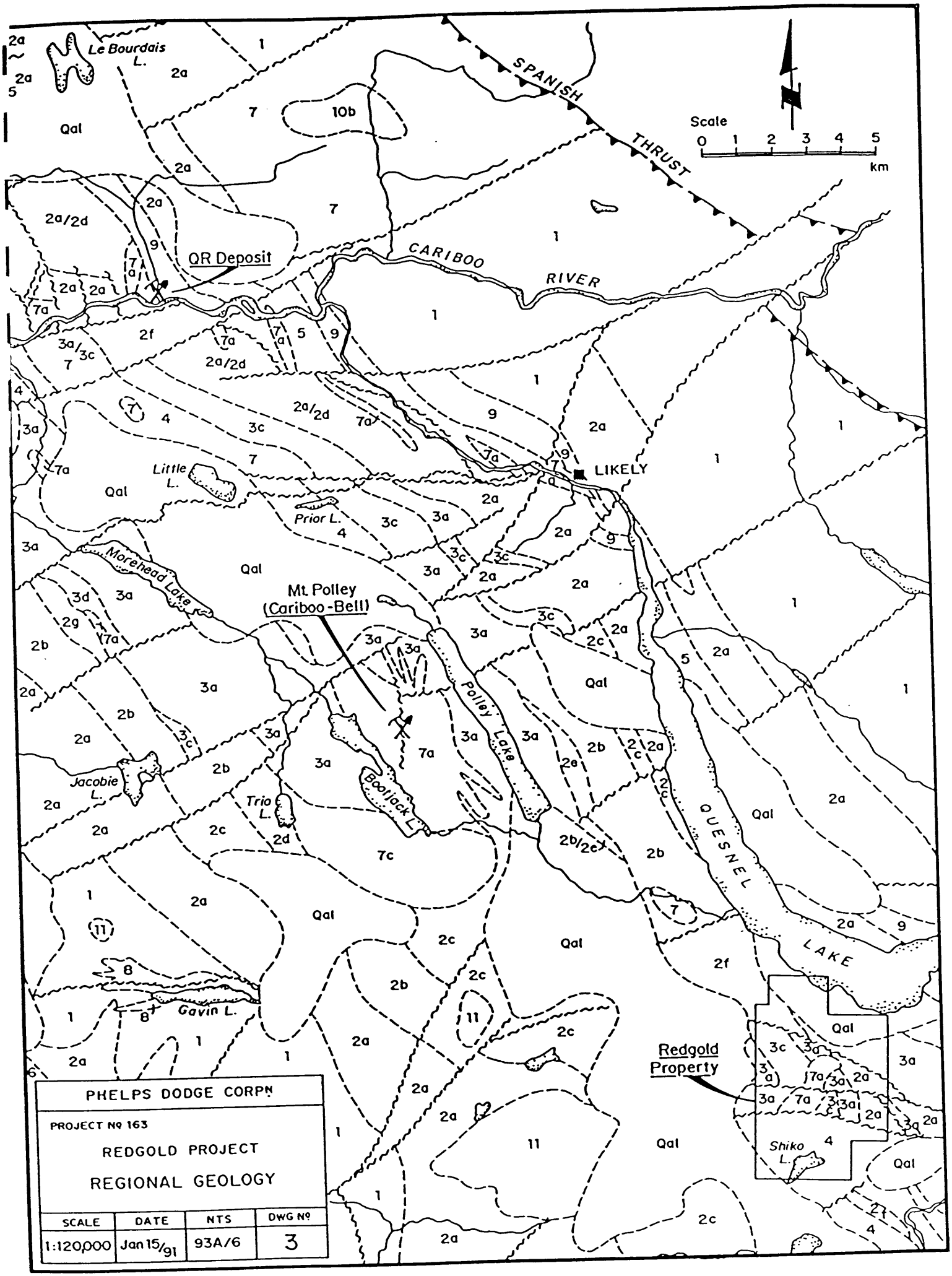
1989	-	Phelps Dodge optioned property from Morton and Durfeld
	-	staked overlapping Shik claims
	-	established and sampled 16 kilometres of grid
	-	geological mapping
1990	-	mapping, soil sampling, geophysical survey and diamond drilling of this report

7. 1990 WORK PROGRAM

The diamond drilling program was completed between September 25th and October 6th, 1990. All work was done under Permit MX10-117. A total of 536.5 metres of NQ core was drilled in five holes by J. T. Thomas Diamond Drilling of Smithers, B.C. Core was logged, split and sampled at two-metre intervals and submitted to Acme Analytical Laboratories for analysis of 30 elements by ICP techniques and gold by geochemical FA/AA methods. Drill logs are provided in Appendix II. Core is stored at Mitchell Bay Landing Resort just north of the property on Quesnel Lake. All drill sites and roads were cleared of debris, levelled and seeded consistent with MEMPR guidelines.

8. REGIONAL GEOLOGY

A narrow belt of mafic and felsic volcanic rocks, comagmatic dioritic stocks, and a variety of sedimentary rocks form the Quesnel Trough (Figure 3) in the vicinity of the Redgold property. The belt is crudely symmetrical about a central axis of felsic volcanic rocks flanked to the east and west in turn by mafic volcanics and flyschoid sediments. The oldest rocks in the Quesnel Trough are basaltic sandstone and conglomerate, minor volcanic breccia, limestone and argillite. These rocks make up much of the eastern flank. Overlying these sediments and comprising much of the central volcanic belt are some 5,000 metres of mafic volcanic rocks of shoshonitic composition. These rocks are green and maroon autobreccias, pillow breccias, pillow lavas and massive flows all overlain by a thin succession, as much as 300 metres thick, of shelf-like limestone, calcareous argillite, siltstone and calcite-cemented basaltic tuff and breccia. This sedimentary member, poorly represented on the Redgold property, is covered by a thick sequence of felsic breccia up to 2,500 metres thick in which massive flows and compact monolithologic breccias predominate. These proximal facies rocks merge outward from eruptive centres to heterolithic epiclastic breccias and sediments. A regional geological map is given in Figure 3, property plan complete with the collar positions of holes 4



PHELPS DODGE CORPN			
PROJECT Nº 163 REDGOLD PROJECT REGIONAL GEOLOGY			
SCALE	DATE	NTS	DWG Nº
1:120,000	Jan 15/91	93A/6	3

LEGEND

QUATERNARY AND TERTIARY

Qal	*Unconsolidated glacial and fluvioglacial gravel and sand*
11	*Purple and grey vesicular olivine basalt.*
10 a	*Grey, mauve trachyandesite, trachyte, latite tuff breccia; minor flows.*
10 b	*Grey and cream sandstone, mudstone, minor conglomerate.*

CRETACEOUS

8	*Hornblende granodiorite, quartz monzonite.*

JURASSIC

9	*Conglomerate*
7c	*Hornblende pyroxene nepheline syenite*
7b	*Syenite*
7a	*Syenite, monzonite, diorite*
6	*Siltstone*
5	*Sandstone, commonly pyrititic*
4	*Maroon analcite olivine basalt*
3c	*Feldspathic siltstone*
3b	*Tuff breccia*
3a	*Maroon volcanic breccia, felsic*

TRIASSIC

2h	*Brown sandstone*
2g	*Limestone*
2f	*Mafic sandstone*
2e	*Analcite pyroxene basalt breccia*
2d	*Maroon hornblende pyroxene basalt breccia*
2c	*Maroon mafic breccia*
2b	*Maroon basalt flows and breccia*
2a	*Augite basalt*
1	*Siltstone; mafic volcanics*

REDGOLD PROJECT

REGIONAL GEOLOGY

through 8 in Figure 4 and cross sections in Figure 5. Drill logs and geochemical assays for copper and gold are given in Appendix I.

A linear belt of alkalic stocks composed of diorite, monzonite and syenite lie within the volcanic strata and is believed to mark various eruptive centres of the felsic rocks. These stocks intrude their felsic extrusives and commonly alter the surrounding rocks. The stocks are the hosts for several alkalic suite porphyry style mineral deposits.

9. PROPERTY GEOLOGY

The Redgold property covers an alkalic intrusion, known as the Shiko stock, and a series of Mesozoic volcanic and sedimentary rocks (Figure 4). The basal unit consisting of the volcanic sequence is composed of augite basalt (Unit 1) which consists of interlayered basaltic wackes (Unit 1a) and calcareous and noncalcareous submarine flows and flow breccias (Units 1b, 1c). These rocks are green or maroon, containing prominent, coarse to very coarse grained augite phenocrysts. They are overlain by felsic rocks (Unit 2) consisting of massive tuff breccias. Units 1 and 2 are commonly propylitized to varying degrees. Dark grey siltstone (Unit 3) overlies the lower members of Unit 2. The youngest lithologic unit on the Redgold property is maroon basalt (Unit 4) comprising analcite-bearing flows and flow breccias. Rocks strike northerly and dip westerly at 30 to 60 degrees.

The Shiko stock, lying in the central part of the property, is a concentrically zoned intrusive complex consisting of augite gabbro (Unit 5a) that grades inward to augite diorite (Unit 5b), monzonite (Unit 5c) and syenite (Unit 5d). Mafic (Unit 7) and felsic (Unit 6) dykes commonly cut the volcanic strata east and west of the stock, generally striking northwest and northeasterly. A compilation map showing geology, geochemistry, geophysics and drill hole locations is presented in Figure 5.

Field work in 1990 concentrated on the area near the Shiko stock and north of the Redgold prospect. The volcanic rocks are propylitized (chlorite, epidote, calcite and pyrite) and potassic altered (potassium feldspar and biotite) within a broad alteration halo that surrounds the Shiko stock. Rocks within and adjoining the stock show decreased pyrite contents and increased quantities of chalcopyrite. Drilling has indicated weak to moderate silicification within the felsic breccia and augite basalt units.

Mineralization

The Redgold property has the signature of a classic alkalic copper-gold system. The intensity of propylitic and potassic alteration is related to the Shiko stock. Copper is present dominantly as chalcopyrite with local occurrences of bornite, native copper, malachite and azurite. Gold concentrations are recovered from high sulphide rock samples. Sulphide mineralization occurs within the stock and intruded volcanic and sedimentary rock units. Grab samples from previously excavated trenches returned concentrations of copper as high as 1.08% copper and gold to 1,600 ppb gold.

Structure

Three small to moderate displacement right lateral normal faults strike northwest through the Redgold property. The most significant of these is the centrally located Redgold Fault which displaces the felsic breccia-basalt contact (which hosts the Redgold showing) some 2,100 metres southeast. Another normal fault bisects the Shiko stock with an apparent down dip displacement on the north side of the fault. The one other significant fault is poorly exposed on the southern portion of the property and juxtaposes maroon basalts (unit 7) against the northerly-trending lower Jurassic and Triassic sedimentary and volcanic rock.

10. RESULTS

The geochemical and geophysical surveys conducted in 1990 on the Redgold property outlined three distinct target areas. Anomaly #1 is in felsic breccia units at the northwest corner of the grid, anomaly #2 is at the felsic breccia-basalt contract near the eastern margin of the grid and Anomaly #3 in the north-central grid area immediately north of the Shiko Stock.

A five hole, 565.8-metre diamond drill hole program was conducted on the Redgold property from September 25 to October 6, 1990. The drill program was designed as a preliminary test of the targets noted above. To expediate permitting, drillsites were selected along existing roadways to minimize surface disturbance.

Hole 90-4

Drill hole 90-4 (Figure 5), located in the northern end of the grid in the area of geochemically anomalous copper and gold concentrations and chargeability high of Anomaly #1, intersected the felsic breccia (Unit 3) for the entire length. A high value of 1,883 ppm copper with 200 ppb gold was encountered over a two-metre sample length. An average of 457 ppm copper was achieved over a twelve-metre intersection.

Hole 90-5

Drill hole 90-5 (Figure 5), a vertical hole on the eastern portion of the grid, was located over coincident copper-gold and chargeability anomalies adjacent to the felsic breccia-basalt contact (Anomaly #2). The hole collared in felsic breccia and remained in this unit to 68.0 metres. The breccia unit is weakly to moderately fractured with calcite, quartz and locally potassium feldspar infilling the fractures. A weak propylitic alteration was observed locally. Sulphides consisted of trace amounts to 2% disseminated pyrite with rare traces of disseminated chalcopyrite. From 68 metres to 91.1 metres a light grey, fine grained siltstone (Unit 2) was encountered. Alteration consisting of calcite, epidote and K-spar was evident throughout. At 123.7 metres, basalt (Unit 1) was cored. The basalt is fine to medium grained with subhedral dark green augite phenocrysts supported in a calcareous matrix. Several chlorite gouge zones were observed in this unit. Fine grained disseminated pyrite and chalcopyrite to 2% occurs throughout the lower portion of this hole. The hole stopped in mineralized basalt at 123.7 metres. The last fourteen metres of the hole averaged 1,045 ppm copper and 157 ppb gold.

Hole 90-6

Drill hole 90-6 (Figure 5) was located on the northeast side of the Shiko stock in felsic breccia (Anomaly #3). It was located on the flank of a large coincident copper-gold anomaly within a chargeability anomaly. The hole was drilled to a depth of 126.8 metres and remained in felsic breccia the entire length. Anomalous intersections in this hole include a six-metre interval of 647 ppm copper, an eight-metre interval of 551 ppm copper, a 24-metre interval of 459 ppm copper and a two-metre sample of 4,254 ppm copper with 950 ppb gold.

Hole 90-7

Drill hole 90-7 (Figure 5), located 80 metres south of 90-6, was collared in felsic breccia. The felsic breccia unit was cored to 67.8 metres and contained local zones of massive propylite. Augite basalt (Unit 1) was intersected from 67.8 metres to the end of the hole at 96.3 metres. No significant intersections of copper were outlined, with the high value being 1,493 ppm copper over two metres.

Hole 90-8

Drill hole 90-8 (Figure 5) was drilled from the same site as 90-5, at a -45° angle towards the southeast to intersect the basalt contact. This hole cored felsic breccia to 36.9 metres and then basalt to the end of the hole at 78.0 metres. A six-metre intersection across the felsic breccia-basalt contact returned 503 ppm copper. A four-metre intersection of 1,010 ppm copper and 350 ppm gold was encountered lower down in the basalt unit.

11. CONCLUSIONS

The 1990 drill program was designed to be a preliminary test of accessible areas of Anomalies #2 and #3. Two holes, DDH 90-5 and DDH 90-8, intersected anomalous concentrations of copper and gold at the felsic breccia-basalt contact in Anomaly #2.

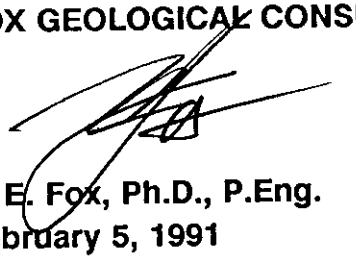
Results of the 1990 work program has confirmed that the Redgold property has a classic large scale copper-gold porphyry deposit signature; an alkalic stock intruding volcanic stratigraphy with disseminated copper in appreciable amounts.

12. DISBURSEMENTS

Accommodation & Board - 28 mandays			$ 1,574.80
Assays and Geochemistry			3,174.44
Automobile Expense			247.00
Drafting			344.00
Drilling			37,515.25
Equipment Rentals			740.00
Field Supplies			559.94
Lease Vehicles			700.00
Salaries	- Geologist 14 days @ $350	4,900.00	
	- Assistant 14 days @ $250	3,500.00	8,400.00
Maps, Reproductions			409.27
Telephone			145.00
Travel Expense			399.40
Total Disbursements			**$ 54,209.10**

Prepared by:

FOX GEOLOGICAL CONSULTANTS LTD.



P. E. Fox, Ph.D., P.Eng.
February 5, 1991

13. CERTIFICATE

I, Peter Edward Fox, certify to the following:

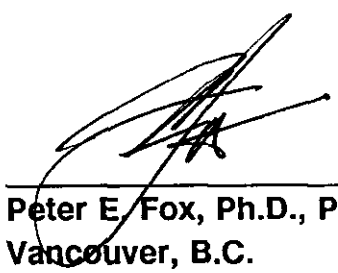
1. I am a consulting geologist residing at 890 Farmleigh Road, West Vancouver, B.C.

2. I am a Professional Engineer registered in the Association of Professional Engineers in 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.
February 5, 1991

APPENDIX I

Diamond Drill Logs

LOCATION	11900	8650	LENGTH(m)	111.5	LOGGED BY	PROJECT	163
AZIMUTH			CORE SIZE	NQwl	DATE LOGGED / /	PROPERTY	REDGOLD
DIP	-90		DATE STARTED	09/26/90		HOLE NO	90-4
ELEVATION	883.0		DATE COMPLETED	09/27/90			

FROM	TO	DESCRIPTION	SAMPLE	TO	LENGTH	Cu (ppm)	Au (ppb)
	5.2			5.2			
5.2	111.5	Felsic Breccia - dark green matrix, fine grained non to weakly calcareous white sub-hedral to euhedral feldspar laths to 2mm, 5% to 20% of matrix, disseminated fine grained pyrite trace to 2% locally forms small aggregates to 5mm, pyrite along fractures locally, subrounded to subangular breccia fragments, some material as groundmass, locally very fine grained, locally white colour, trace epidote along fractures, calcite locally infills fractures and in veinlets to 5mm, pink k-spar alteration along fractures locally matrix weakly magnetic with magnetite in fractures locally.	224201	8.0	2.8	955	410
			224202	10.0	2.0	569	220
			224203	12.0	2.0	279	14
			224204	14.0	2.0	177	15
			224205	16.0	2.0	333	53
			224206	18.0	2.0	233	18
			224207	20.0	2.0	196	24
			224208	22.0	2.0	605	110
			224209	24.0	2.0	95	11
			224210	26.0	2.0	179	15
			224211	28.0	2.0	109	8
			224212	30.0	2.0	83	3
			224213	32.0	2.0	376	25
			224214	34.0	2.0	521	27
		7.6m to 7.9m - trace malachite and chalcopyrite.	224215	36.0	2.0	345	12
		11.0m to 12.1m - moderately fractured, open cavities, rust stain, local calcite infilling.	224216	38.0	2.0	91	8
			224217	40.0	2.0	138	16
		13.0m to 14.2m - massive, very fine grained grey basalt, augite phenocrysts to 5%, disseminated pyrite to 2%.	224218	42.0	2.0	301	18
			224219	44.0	2.0	192	23
			224220	46.0	2.0	107	7
		20.5m to 22.0m - calcite-cemented breccia, small (5mm to 20mm) angular fragments, local pink k-spar fragments.	224221	48.0	2.0	122	16
			224222	50.0	2.0	73	7
			224223	52.0	2.0	107	9
		39.0m to 40.3m - one fracture per 10 cm in-filled with k-feldspar and calcite.	224224	54.0	2.0	290	21
			224225	56.0	2.0	242	2
		42.6m - malachite in fractures.	224226	58.0	2.0	155	34
		44.2m to 45.3m - augite-hornblende pegmatite euhedral phenocrysts to 20mm.	224227	60.0	2.0	312	64
			224228	62.0	2.0	158	15
		59.0m to 104.m - quartz-calcite veinlets two to four per 10cm, 3mm to 15mm wide, locally form stockwork, locally contain pyrite and magnetite, trace chalcopyrite, chlorite in matrix and on fracture surfaces.	224229	64.0	2.0	380	51
			224230	66.0	2.0	158	11
			224231	68.0	2.0	204	19
			224232	70.0	2.0	346	35
			224233	72.0	2.0	336	25
			224234	74.0	2.0	519	51
			224235	76.0	2.0	1012	110
			224236	78.0	2.0	640	69
			224237	80.0	2.0	1223	200
			224238	82.0	2.0	779	81
			224239	84.0	2.0	638	180
			224240	86.0	2.0	486	74
			224241	88.0	2.0	344	62
			224242	90.0	2.0	371	5
		92.0m to 94.5m - weakly calcareous matrix, weakly chloritic.	224243	92.0	2.0	188	22
			224244	94.0	2.0	597	37
		91.8m to 108.7m - k-feldspar on fracture selvages, locally to 20cm between large quartz veins, weak argillic alteration.	224245	96.0	2.0	1133	250
			224246	98.0	2.0	513	84
			224247	100.0	2.0	826	110

FROM	TO	DESCRIPTION	SAMPLE	TO	LENGTH	Cu (ppm)	Au (ppb)
			224248	102.0	2.0	374	18
			224249	104.0	2.0	320	43
		106.7m - fault gouge, moderately fractured and broken rock, local open space cavities infilled with calcite.	224250	106.0	2.0	533	82
			224251	108.0	2.0	818	56
			224252	110.0	2.0	591	35
		107.7m to 111.5m - massive felsic breccia, few calcite quartz veinlets (one per 20cm), trace disseminated chalcopyrite, augite and feldspar phenocrysts are euhedral - no diffuse crystal i.e. unaltered, trace chlorite and epidote along fractures.	224253	111.5	1.5	449	46
		111.5m - end of hole 90-4.					

LOCATION	11300 9550	LENGTH(m)	123.7	LOGGED BY	
AZIMUTH		CORE SIZE	NQwl	DATE LOGGED	/ /
DIP	-90	DATE STARTED	09/27/90		
ELEVATION	952.0	DATE COMPLETED	09/28/90		

PROJECT							163	
PROPERTY							REDGOLD	
HOLE NO							90-5	

FROM	TO	DESCRIPTION	SAMPLE	TO	LENGTH	Cu (ppm)	Au (ppb)
	9.4			9.4			
9.4	68.0	FELSIC BRECCIA - dark green, fine to medium grained, non to weakly calcareous matrix, 5% to 10% dark green subhedral to euhedral augite phenocrysts, 5% to 8% white feldspar laths, subangular to subrounded homolithic fragments, weakly to moderately fractured, calcite, quartz and k-feldspar infilling locally, trace to 2% chlorite throughout matrix and along fractures, trace epidote in matrix, trace to 2% disseminated pyrite, rare trace chalcopyrite.	224254	12.0	2.6	147	19
			224255	14.0	2.0	1124	70
			224256	16.0	2.0	401	52
			224257	18.0	2.0	232	14
			224258	20.0	2.0	169	13
			224259	22.0	2.0	198	12
			224260	24.0	2.0	450	56
			224261	26.0	2.0	338	68
			224262	28.0	2.0	555	75
			224263	30.0	2.0	1151	120
			224264	32.0	2.0	149	30
		9.4m to 13.0m - hematite on fractures.	224265	34.0	2.0	654	1
		18.2m to 24.0m - disseminated magnetite to 2%.	224266	36.0	2.0	1030	100
		26.1m to 26.3m - massive epidote with 3% pyrite, trace chalcopyrite.	224267	38.0	2.0	132	1
			224268	40.0	2.0	370	3
		32.3m to 35.4m - highly fractured, broken rock, moderately chloritic.	224269	42.0	2.0	18	14
			224270	44.0	2.0	9	1
		34.5m - 10cm chlorite fault gouge.	224271	46.0	2.0	61	1
		36.5m to 38.3m - moderately fractured and broken.	224272	48.0	2.0	34	8
			224273	50.0	2.0	18	1
		39.6m to 45.2m - moderately fractured, fractures infilled with k-feldspar and calcite.	224274	52.0	2.0	90	8
			224275	54.0	2.0	76	4
		48.9m to 56.7m - weak, argillic, alteration feldspar laths clay altered, white-yellow, soft epidote throughout.	224276	56.0	2.0	143	43
			224277	58.0	2.0	142	30
			224278	60.0	2.0	106	4
		55.3m to 59.7m - disseminated magnetite to 5%.	224279	62.0	2.0	119	2
		67.8m - 20cm fractured, broken rock, minor chlorite.	224280	64.0	2.0	130	1
			224281	66.0	2.0	87	1
68.0	91.1	SILTSTONE - light to medium grey-green colour, very fine grained, weakly fractured, calcite infilling fractures and crosscutting veinlets, trace to 2% disseminated, fine grained pyrite, groundmass non to very weakly calcareous, trace epidote in coarser grained sections.	224282	68.0	2.0	292	36
			224283	70.0	2.0	82	1
			224284	72.0	2.0	102	3
			224285	74.0	2.0	223	16
			224286	76.0	2.0	225	19
			224287	78.0	2.0	99	1
		75.6m to 79.5m - moderately fractured, brecciated, k-spar veinlets locally.	224288	80.0	2.0	122	1
			224289	82.0	2.0	182	1
			224290	84.0	2.0	98	16
			224291	86.0	2.0	107	1
			224292	88.0	2.0	203	14
			224293	90.0	2.0	143	5
91.1	123.7	BASALT - dark green, fine to medium grained, weakly calcareous matrix, subhedral to euhedral augite phenocrysts to 5mm, 3% to 15% weakly to moderately fractured, chlorite, calcite k-feldspar along fractures, trace epidote, magnetite locally, disseminated pyrite trace to 3%.	224294	92.0	2.0	343	1
			224295	94.0	2.0	322	48
			224296	96.0	2.0	148	4
			224297	98.0	2.0	72	2
			224298	100.0	2.0	135	2
			224299	102.0	2.0	84	6
			224300	104.0	2.0	327	2

FROM	TO	DESCRIPTION	SAMPLE	TO	LENGTH	Cu (ppm)	Au (ppb)
			224301	106.0	2.0	763	57
			224302	108.0	2.0	298	39
			224303	110.0	2.0	386	39
			224304	112.0	2.0	1094	52
		113.5m to 113.8m - chloritic fault gouge 30° to core axis.	224305	114.0	2.0	2628	320
			224306	116.0	2.0	1608	59
		115.1m - 10cm chloritic gouge.	224307	118.0	2.0	2831	1220
		117.4m - 20cm chloritic gouge, epidote-rich.	224308	120.0	2.0	2285	310
		117.7m to 118.2m - mafic dyke or flow unit dark green fine grained matrix, pale green subrounded amygdules? epidote in core locally, fine grained disseminated pyrite to 2%, fine grained disseminated chalcopyrite 2%.	224309	122.0	2.0	1327	41
			224310	123.7	1.7	2856	200
		123.7m - end of hole 90-5.					

LOCATION	11200	9025	LENGTH(m)	126.8	LOGGED BY	PROJECT	163
AZIMUTH			CORE SIZE	NQwl	DATE LOGGED / /	PROPERTY	REDGOLD
DIP	-90		DATE STARTED	09/28/90		HOLE NO	90-6
ELEVATION	967.0		DATE COMPLETED	09/28/90			

FROM	TO	DESCRIPTION	SAMPLE	TO	LENGTH	Cu (ppm)	Au (ppb)
	4.0			4.0			
4.0	49.8	FELSIC BRECCIA - medium to dark grey-green, fine to medium grained, non-calcareous matrix, 3% to 5% white feldspar laths, 1% to 5% dark green augite phenocrysts, subrounded to sub-angular homolithic fragments, weakly fractured, throughout, calcite infilling fractures and in veinlets, k-spar veinlets throughout, trace to 3% disseminated fine grained pyrite, trace chalcopyrite, trace epidote along fractures and vein selvages locally, 3mm to 10mm wide pyrite +/- magnetite infilling fractures locally, pink k-spar rims fragments locally.	224311	6.0	2.0	759	22
			224312	8.0	2.0	566	23
			224313	10.0	2.0	648	44
			224314	12.0	2.0	559	29
			224315	14.0	2.0	1598	11
			224316	16.0	2.0	1225	19
			224317	18.0	2.0	1057	37
			224318	20.0	2.0	508	29
			224319	22.0	2.0	711	24
			224320	24.0	2.0	533	1
			224321	26.0	2.0	703	1
			224322	28.0	2.0	703	1
			224323	30.0	2.0	672	8
			224324	32.0	2.0	850	3
			224325	34.0	2.0	462	5
			224326	36.0	2.0	820	1
			224327	38.0	2.0	212	1
			224328	40.0	2.0	265	26
			224329	42.0	2.0	357	26
			224330	44.0	2.0	628	61
			224331	46.0	2.0	140	25
			224332	48.0	2.0	654	51
49.8	51.6	FELSIC DYKE - orange-pink colour, medium grained, weakly trachytic white feldspar laths, sharp upper and lower contacts 45° to core axis, weakly fractured, locally infilled with calcite, rarely magnetite, trace to 2% disseminated fine grained pyrite.	224333	50.0	2.0	700	45
			224334	52.0	2.0	514	34
			224335	54.0	2.0	1060	65
			224336	56.0	2.0	858	59
			224337	58.0	2.0	1534	200
			224338	60.0	2.0	956	38
51.6	126.8	FELSIC BRECCIA - as above. Medium grey, non-calcareous matrix, white euhedral feldspar laths, pink k-spar on fracture selvages, rare epidote chalcopyrite locally in fracture fillings and k-spar selvages.	224339	62.0	2.0	781	13
			224340	64.0	2.0	570	47
			224341	66.0	2.0	552	45
			224342	68.0	2.0	403	12
			224343	70.0	2.0	391	26
		59.7m to 60.0m - hornblende porphyry dyke.	224344	72.0	2.0	155	10
			224345	74.0	2.0	237	5
			224346	76.0	2.0	1136	29
		79.1m to 81.1m - felsic dyke, as above, local angular xenoliths of felsic breccia.	224347	78.0	2.0	1045	28
			224348	80.0	2.0	666	51
		83.2m to 85.5m - hornblende porphyry dyke diffuse contacts, 10% dark green hornblende phenocrysts weakly fractured, pyrite, calcite infilling fractures.	224349	82.0	2.0	1233	34
			224350	84.0	2.0	1158	70
			224351	86.0	2.0	557	62
			224352	88.0	2.0	291	34
			224353	90.0	2.0	764	35
			224354	92.0	2.0	1374	33
			224355	94.0	2.0	599	17
			224356	96.0	2.0	1159	57
			224357	98.0	2.0	1028	40

FROM	TO	DESCRIPTION	SAMPLE	TO	LENGTH	Cu (ppm)	Au (ppb)
			224358	100.0	2.0	520	37
			224359	102.0	2.0	317	7
			224360	104.0	2.0	153	7
			224361	106.0	2.0	119	12
			224362	108.0	2.0	434	40
		111.5m to 112.0m - augite porphyry, large subhedral to euhedral augite phenocrysts to 10mm, trace epidote, aggregates of pyrite 1cm.	224363	110.0	2.0	367	23
			224364	112.0	2.0	176	12
			224365	114.0	2.0	852	150
			224366	116.0	2.0	289	100
			224367	118.0	2.0	288	67
			224368	120.0	2.0	4524	950
		122.7m to 123.0m - augite porphyry.	224369	122.0	2.0	766	48
			224370	124.0	2.0	563	73
			224371	126.0	2.0	766	24
		126.8m - end of hole 90-6.	224372	126.8	0.8	214	27

LOCATION	11240 9000	LENGTH(m)	96.3	LOGGED BY	
AZIMUTH		CORE SIZE	NQwl	DATE LOGGED	/ /
DIP	-90	DATE STARTED	09/28/90		
ELEVATION	967.0	DATE COMPLETED	09/29/90		

PROJECT	163
PROPERTY	REDGOLD
HOLE NO	90-7

FROM	TO	DESCRIPTION	SAMPLE	TO	LENGTH	Cu (ppm)	Au (ppb)
	3.4			3.4			
3.4	67.8	FELSIC BRECCIA - medium to dark grey colour	224373	5.0	1.6	207	24
		locally mottled green, fine to medium grained,	224374	7.0	2.0	583	19
		5% to 15% white feldspar laths, trace to 5%	224375	9.0	2.0	436	12
		dark green augite phenocrysts, subangular	224376	11.0	2.0	188	17
		fragments, locally white to pink colour, non-	224377	13.0	2.0	123	34
		calcareous matrix, trace to 2% disseminated	224378	15.0	2.0	111	9
		pyrite, weakly magnetic matrix.	224379	17.0	2.0	62	4
		6.0m to 7.9m - epidote to 30%, weakly	224380	19.0	2.0	469	49
		calcareous, pyrite to 5%, trace chalcopyrite.	224381	21.0	2.0	464	23
		9.8m - 10cm massive propylite.	224382	23.0	2.0	263	19
		10.7m to 11.9m - epidote to 30%, locally	224383	25.0	2.0	333	35
		massive propylite.	224384	27.0	2.0	439	33
		17.9m to 18.7m and 19.3m to 29.8m - tuff, very	224385	29.0	2.0	157	14
		fine grained, dark grey, weakly fractured,	224386	31.0	2.0	99	11
		calcite and pyrite infilling fractures, trace	224387	33.0	2.0	182	6
		epidote and k-feldspar, white rounded amygdules	224388	35.0	2.0	109	34
		to 1%, trace augite phenocrysts.	224389	37.0	2.0	85	8
		20.7m to 22.1m - hornblende porphyry dyke,	224390	39.0	2.0	159	5
		light to medium grey, medium to coarse grained,	224391	41.0	2.0	304	63
		white to grey feldspar laths to 15%, dark	224392	43.0	2.0	353	32
		green euhedral hornblende phenocrysts 5% to	224393	45.0	2.0	116	5
		20%, 3mm to 10mm long, 2% disseminated pyrite,	224394	47.0	2.0	89	42
		trace epidote.	224395	49.0	2.0	132	27
		26.7m to 28.2m - hornblende porphyry dyke as	224396	51.0	2.0	402	41
		above.	224397	53.0	2.0	111	37
		34.3m to 37.1m - felsic dyke, dark grey, fine	224398	55.0	2.0	161	180
		grained, 20% feldspar laths to 2mm, weakly	224399	57.0	2.0	1493	200
		fractured, pyrite, calcite, trace epidote	224400	59.0	2.0	47	25
		infilling fractures, chilled margins.	224401	61.0	2.0	86	36
		39.1m to 41.1m - hornblende porphyry dyke as	224402	63.0	2.0	45	210
		above, local felsic xenoliths, disseminated	224403	65.0	2.0	167	40
		pyrite to 5%, trace chalcopyrite fracture at	224404	67.0	2.0	325	89
67.8	96.3	lower contact 60° to core axis, infilled with	224405	69.0	2.0	218	56
		pyrite, trace chalcopyrite, calcite and epidote.	224406	71.0	2.0	79	56
		41.1m to 43.2m - tuff, very fine grained, dark	224407	73.0	2.0	168	31
		grey, weakly fractured, locally infilled with	224408	75.0	2.0	196	64
		pyrite and magnetite.	224409	77.0	2.0	240	56
		66.7m to 67.8m - disseminated pyrite to 5%	224410	79.0	2.0	277	41
		epidote to 15%.	224411	81.0	2.0	514	67
67.8	96.3	AUGITE BASALT - dark green, fine to medium	224412	83.0	2.0	285	41
		grained, non to weakly calcareous, 5% to 20%	224413	85.0	2.0	796	44
		euhedral augite phenocrysts to 15mm, 3% to	224414	87.0	2.0	655	55
		10% euhedral dark green hornblende phenocrysts	224415	89.0	2.0	142	79
		to 15mm, disseminated pyrite to 5%,	224416	91.0	2.0	370	90
		disseminated chalcopyrite locally, weakly	224417	93.0	2.0	454	68
		fractured, calcite, pyrite and locally	224418	95.0	2.0	678	65
		magnetite infilling fractures, trace epidote.	224419	96.3	1.3	362	50

FROM TO DESCRIPTION SAMPLE # LENGTH

70.0m to 71.7m - hornblende porphyry dyke, light grey-green matrix, 15% dark green hornblende phenocrysts, disseminated pyrite to 3%. Matrix locally pale green, soft, argillic alteration, feldspar show diffuse boundaries, soft kaolinite?
96.3m - end of hole 90-7.

LOCATION	11300	9550	LENGTH(m)	78.0	LOGGED BY		
AZIMUTH	60		CORE SIZE	NQwl	DATE LOGGED	/ /	
DIP	-45		DATE STARTED	09/30/90			
ELEVATION	952.0		DATE COMPLETED	09/30/90			

PROJECT	163
PROPERTY	REDGOLD
HOLE NO	90-8

FROM	TO	DESCRIPTION	SAMPLE	TO	LENGTH	Cu (ppm)	Au (ppb)
	6.1			6.1			
6.1	36.7	FELSIC BRECCIA - medium to grey-green, mottled fine to medium grained 5% to 15% white feldspar laths, trace to 5% augite phenocrysts, weakly fractured, calcite infilling fractures and in veinlets, trace epidote throughout, 1% to 5% disseminated pyrite.	224420	8.0	1.9	408	65
			224421	10.0	2.0	205	16
			224422	12.0	2.0	921	170
			224423	14.0	2.0	346	18
			224424	16.0	2.0	351	15
			224425	18.0	2.0	250	30
			224426	20.0	2.0	434	39
		10.7m to 11.1m - highly fractured, broken rock, trace chlorite on fractures.	224427	22.0	2.0	1266	130
			224428	24.0	2.0	306	72
		21.5m to 22.6m - hornblende porphyry dyke, dark green, fine grained matrix, 10% dark green hornblende phenocrysts, disseminated pyrite to 2%.	224429	26.0	2.0	365	50
			224430	28.0	2.0	40	11
			224431	30.0	2.0	21	4
			224432	32.0	2.0	18	9
			224433	34.0	2.0	142	25
36.7	78.0	AUGITE BASALT - light to medium green, medium grained, non to weakly calcareous matrix, 15% to 20% dark green euhedral augite phenocrysts, 2mm to 10mm, 2% to 5% disseminated pyrite. Pyrite locally in aggregates interstitial to augite phenocrysts, trace epidote, calcite infilling fractures locally, magnetite to 10% locally, disseminated and along fractures.	224434	36.0	2.0	895	280
			224435	38.0	2.0	1008	92
			224436	40.0	2.0	1112	150
			224437	42.0	2.0	456	20
			224438	44.0	2.0	487	9
			224439	46.0	2.0	297	8
			224440	48.0	2.0	429	89
			224441	50.0	2.0	1950	820
		47.4m to 49.7m - magnetite to 10%, forms thin bands, 15° to core axis, epidote to 5% weakly calcareous matrix.	224442	52.0	2.0	105	8
			224443	54.0	2.0	30	6
			224444	56.0	2.0	2768	1010
		54.9m to 55.1m - chloritic fault gouge.	224445	58.0	2.0	1273	390
		55.8m to 56.1m - hematite on fractures.	224446	60.0	2.0	100	210
			224447	62.0	2.0	57	10
			224448	64.0	2.0	929	150
		65.8m - mislatch 20cm lost core.	224449	66.0	2.0	712	290
			224450	68.0	2.0	168	45
			224451	70.0	2.0	154	18
		71.8m to 73.9m - white feldspar laths to 5% 1mm to 5mm long.	224452	72.0	2.0	74	19
			224453	74.0	2.0	20	13
		72.5m to 78.0m - hematite to 3% throughout matrix.	224454	76.0	2.0	18	6
			224455	78.0	2.0	55	18
		78.0m - end of hole 90-8.					

AN ICA ABOR RIE D. 852 E HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Phelps Dodge Corp. PROJECT 163 File # 90-5182

1409-409 Granville St., Vancouver BC V6T 1T2 Submitted by: G. GOODALL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au 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	Au* ppb
224262	8	555	7	49	.9	74	43	395	3.85	11	5	ND	1	118	.2	2	2	77	3.18	.091	4	92	1.21	32	.10	6	2.14	.04	.04	1	75
224263	2	1151	3	56	.6	94	56	391	4.71	7	5	ND	2	151	.4	2	2	73	4.35	.078	3	72	1.01	14	.08	4	2.45	.02	.03	1	120
224264	1	149	4	17	.2	42	10	346	3.79	7	5	ND	1	65	.2	2	2	93	3.03	.091	4	98	.86	31	.12	8	2.13	.05	.06	1	30
224265	12	654	2	18	.3	54	13	403	5.17	16	5	ND	1	67	.2	2	2	178	2.47	.097	4	121	1.75	57	.25	8	2.45	.04	.06	1	1
224266	1	1030	2	19	.6	80	25	340	5.33	8	5	ND	2	103	.3	2	2	130	2.74	.092	4	108	1.19	75	.16	8	2.21	.04	.06	1	100
224267	1	132	2	25	.2	48	13	464	5.23	6	5	ND	2	81	.2	2	2	146	2.68	.105	4	92	1.59	73	.15	10	2.55	.04	.06	1	1
224268	2	370	8	38	.2	57	29	362	3.85	8	5	ND	1	96	.2	2	2	83	3.32	.093	4	77	.97	32	.11	7	2.26	.05	.05	1	3
224269	1	18	4	18	.1	26	5	356	3.02	6	5	ND	1	95	.2	2	2	92	3.61	.085	4	82	.96	75	.11	10	2.32	.06	.06	1	14
224270	1	9	4	15	.1	31	6	307	3.02	6	5	ND	1	86	.2	2	2	93	2.70	.082	5	75	.75	62	.12	7	1.83	.08	.08	1	1
224271	2	61	4	23	.2	51	10	387	3.45	7	5	ND	1	75	.2	2	2	89	3.76	.084	5	79	.99	45	.10	8	2.59	.05	.05	1	1
224272	2	34	3	20	.1	49	8	427	3.40	13	5	ND	1	73	.2	2	2	97	3.58	.086	5	81	1.18	48	.12	10	2.82	.05	.04	1	8
224273	1	18	5	22	.1	40	6	422	2.80	3	5	ND	1	66	.3	2	2	86	4.31	.086	5	59	1.12	43	.10	8	2.97	.05	.04	1	1
224274	1	90	4	25	.2	58	10	380	4.00	12	5	ND	1	63	.3	2	2	104	3.53	.093	5	93	.85	50	.12	10	2.36	.06	.05	1	8
224275	4	76	2	28	.1	79	9	457	4.14	5	5	ND	1	88	.3	2	2	102	3.75	.094	5	100	1.04	19	.11	7	2.53	.06	.02	1	4
224276	2	143	3	38	.1	93	10	459	3.98	6	5	ND	1	57	.2	2	2	95	4.47	.089	5	96	.96	25	.12	7	2.85	.05	.02	1	43
224277	5	142	2	36	.1	129	13	645	8.08	4	5	ND	1	127	.8	2	2	108	5.36	.086	9	118	1.35	7	.11	4	3.41	.02	.01	1	30
224278	5	106	2	29	.2	70	5	559	7.85	6	5	ND	1	79	.5	2	2	118	4.94	.082	6	127	1.17	9	.11	3	3.15	.02	.02	1	4
224279	1	119	3	30	.2	68	9	474	3.39	9	5	ND	1	59	.4	2	2	80	4.67	.101	5	92	1.08	18	.12	7	2.85	.04	.04	1	2
224280	1	130	4	39	.1	99	14	392	1.92	2	5	ND	1	50	.4	2	2	67	4.18	.102	5	76	.88	24	.13	9	2.46	.05	.04	1	1
224281	1	87	6	32	.1	79	10	513	3.30	5	5	ND	1	51	.3	2	2	91	5.21	.114	5	94	1.30	9	.11	8	3.21	.03	.01	1	1
224282	1	292	6	65	.2	85	22	547	2.87	15	5	ND	2	60	.5	2	2	86	5.58	.104	5	83	1.18	13	.13	12	3.21	.04	.02	1	36
224283	10	82	19	60	.1	25	8	524	1.77	9	5	ND	1	47	.4	2	2	66	5.32	.143	5	55	1.32	11	.14	8	2.97	.04	.01	1	1
224284	7	102	5	48	.1	34	9	393	1.55	5	5	ND	1	40	.3	2	2	62	4.33	.132	6	54	.88	11	.15	9	2.39	.06	.02	1	3
224285	1	223	6	41	.2	34	13	329	1.56	13	5	ND	1	32	.3	2	2	53	3.02	.121	5	33	.68	19	.11	9	1.96	.06	.04	1	16
224286	8	225	5	22	.1	38	11	325	1.52	9	5	ND	1	54	.2	2	2	58	3.99	.128	5	41	.74	50	.13	7	2.22	.05	.03	1	19
224287	3	99	4	41	.2	55	10	499	2.28	10	5	ND	1	84	.2	2	2	88	6.85	.128	7	91	1.29	43	.11	10	4.10	.03	.01	1	1
224288	1	122	4	41	.3	67	11	358	1.87	2	5	ND	1	38	.3	2	2	70	4.56	.116	6	71	.99	14	.11	6	2.93	.05	.03	1	1
224289	1	182	12	71	.1	37	19	349	2.02	18	5	ND	1	42	.7	2	2	60	4.34	.131	6	45	.87	32	.09	9	2.91	.05	.02	1	1
224290	2	98	12	57	.2	25	12	245	1.43	15	5	ND	1	53	.4	2	2	48	2.09	.128	6	29	.60	41	.12	6	1.57	.09	.05	1	16
224291	1	107	7	33	.1	39	10	409	2.70	16	5	ND	1	101	.4	2	2	84	4.05	.185	7	51	1.11	26	.12	7	2.56	.05	.03	1	1
STANDARD C/AU-R	18	57	41	131	7.1	73	31	1051	3.95	35	22	7	39	52	18.9	15	17	59	.45	.097	39	60	.89	183	.07	32	1.89	.06	.13	12	530

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 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 AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: CORE AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: OCT 9 1990 DATE REPORT MAILED: Oct 12/90 SIGNED BY: C. Leong D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

E A TIC LABO ORI TD. 85 . HU NGS VA VER C. IR PH(60 53- FA 04) -171

GEOCHEMICAL ANALYSIS CERTIFICATE

Phelps Dodge Corp. PROJECT 163 File # 90-5209 Page 1

1409-409 Granville St., Vancouver BC V6T 1T2 Submitted by: G. GOODALL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au 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	Au* ppb
224292	4	203	14	44	.3	34	33	230	1.93	25	5	ND	2	37	.4	3	2	48	2.90	.131	6	26	.66	39	.12	6	1.59	.06	.05	1	14
224293	4	143	2	19	.1	26	11	265	1.92	7	5	ND	2	30	.3	2	2	65	2.95	.120	7	29	.86	44	.14	9	2.00	.09	.06	1	5
224294	6	343	9	31	.4	64	24	354	3.77	17	9	ND	3	47	.7	3	2	78	4.22	.121	6	70	1.06	29	.12	16	2.60	.07	.05	1	1
224295	4	322	3	20	.3	119	19	338	3.06	8	5	ND	3	95	.6	2	2	109	3.75	.145	5	132	.89	120	.14	12	2.11	.09	.06	1	48
224296	4	148	4	23	.1	19	15	307	2.87	7	5	ND	2	27	.4	2	2	100	3.20	.120	6	21	.93	31	.16	9	1.98	.07	.06	1	4
224297	4	72	2	21	.2	32	8	282	2.60	8	5	ND	2	39	.6	2	2	103	3.60	.129	5	44	.78	35	.15	24	2.32	.07	.07	1	2
224298	1	135	4	34	.2	169	13	502	3.97	13	7	ND	3	65	.6	2	2	141	4.83	.166	5	262	1.82	18	.16	181	3.51	.05	.04	1	2
224299	2	84	3	33	.2	249	17	480	4.55	12	5	ND	2	69	.5	2	2	151	2.85	.158	5	265	1.82	39	.19	30	2.64	.07	.07	1	6
224300	2	327	16	50	.4	176	25	498	4.52	14	5	ND	3	83	1.1	2	2	146	4.38	.184	5	270	1.35	40	.16	50	3.17	.06	.05	1	2
224301	2	763	2	34	.7	288	33	539	4.65	11	5	ND	4	69	.5	4	2	153	4.00	.149	5	266	1.77	33	.20	40	3.24	.05	.05	1	57
224302	1	298	41	65	.2	240	35	617	4.29	11	10	ND	2	69	.6	2	2	139	4.13	.138	4	251	1.55	30	.18	75	2.82	.04	.04	1	39
224303	3	386	2	34	.3	283	40	411	4.58	14	5	ND	3	69	1.3	2	2	158	4.18	.172	4	283	1.55	41	.19	106	3.20	.06	.06	1	39
224304	2	1094	3	29	.4	245	28	401	4.55	15	5	ND	2	189	.2	2	2	155	3.63	.186	5	277	1.35	103	.17	45	3.07	.07	.06	1	52
224305	1	2628	2	34	.7	171	45	403	7.00	17	5	ND	2	237	.9	2	5	153	3.83	.181	4	236	1.06	94	.12	19	2.82	.08	.05	1	320
224306	1	1608	2	43	.6	114	55	566	11.63	23	5	ND	3	181	1.0	2	10	150	3.30	.167	6	230	.96	49	.10	17	2.53	.09	.04	2	59
224307	3	2831	2	47	.9	76	27	575	10.97	21	9	ND	4	69	1.0	2	6	180	5.14	.201	6	196	1.01	12	.10	18	3.05	.05	.03	4	1220
224308	3	2285	2	34	.8	87	25	485	9.04	20	5	ND	3	112	.8	2	2	170	3.80	.194	5	182	.84	33	.09	21	2.56	.07	.04	2	310
224309	2	1327	3	38	.8	107	24	418	4.48	17	10	ND	4	778	.9	4	2	138	4.65	.195	5	240	.88	172	.12	21	3.20	.09	.05	2	41
224310	5	2856	2	34	1.1	83	23	367	3.81	11	5	ND	4	1581	.9	2	2	157	4.45	.226	6	195	1.34	153	.14	16	4.09	.14	.09	1	200
224311	4	759	2	29	.3	58	22	327	3.86	7	5	ND	2	32	.4	2	2	117	2.09	.115	6	112	1.22	32	.22	10	2.08	.06	.16	1	22
224312	8	566	8	27	.5	67	17	345	4.77	5	14	ND	2	41	.4	2	2	138	1.81	.121	6	152	1.23	47	.23	11	1.87	.07	.18	2	23
224313	12	648	6	28	.2	74	23	323	4.59	8	5	ND	1	36	1.0	2	2	123	2.67	.116	6	149	1.25	34	.23	10	2.27	.06	.14	1	44
224314	7	559	2	23	.2	64	22	268	4.62	6	5	ND	1	68	.6	2	2	129	1.56	.105	6	134	1.16	71	.27	7	1.68	.07	.26	1	29
224315	8	1598	2	30	.1	75	36	345	7.10	13	5	ND	1	183	.5	2	5	73	2.74	.107	4	93	.58	21	.09	14	2.36	.09	.07	1	11
224316	7	1225	4	24	.6	52	21	318	5.67	7	7	ND	1	301	.6	2	4	72	3.07	.098	4	71	.44	18	.07	10	2.29	.11	.07	1	19
224317	4	1057	2	20	.3	46	24	264	4.85	8	10	ND	1	262	.2	2	2	89	2.38	.116	5	80	.55	34	.11	9	1.82	.07	.10	1	37
224318	4	508	2	23	.3	42	23	250	5.08	8	5	ND	1	77	.6	2	2	129	1.66	.114	5	69	.83	54	.24	7	1.62	.07	.23	1	29
224319	5	711	2	20	.1	62	22	208	4.04	5	5	ND	1	68	.8	2	5	104	1.47	.103	4	110	.91	54	.24	7	1.59	.08	.23	1	24
224320	2	533	2	20	.1	47	19	288	3.66	9	5	ND	1	186	.9	2	2	71	2.47	.101	4	55	.61	37	.15	13	2.23	.12	.14	1	1
224321	4	703	6	21	.2	44	21	299	3.78	11	5	ND	1	200	.2	2	2	56	3.17	.101	4	64	.37	24	.08	17	2.37	.12	.07	1	1
224322	22	703	3	22	.1	39	16	290	4.03	11	5	ND	1	74	.7	2	2	112	2.20	.107	6	96	.93	40	.23	12	2.02	.09	.19	1	1
224323	8	672	2	24	.3	63	21	362	4.36	7	9	ND	1	45	.5	2	2	111	2.32	.107	5	130	1.22	40	.22	12	2.26	.07	.19	1	8
224324	3	850	4	21	.2	56	20	342	3.89	8	7	ND	1	61	.4	2	2	71	2.27	.126	5	78	.73	19	.11	10	1.92	.07	.08	1	3
224325	3	462	2	23	.3	62	18	333	4.17	6	6	ND	1	27	.9	2	8	134	2.29	.105	6	166	1.31	53	.23	11	2.30	.07	.20	1	5
224326	9	820	5	26	.4	48	21	348	4.38	8	6	ND	2	50	.4	2	8	98	2.34	.109	5	106	1.11	25	.15	11	2.13	.06	.11	1	1
224327	9	212	5	26	.2	51	16	298	4.21	8	5	ND	1	32	.3	2	5	142	2.24	.107	6	140	1.10	55	.23	15	2.13	.08	.20	1	1
STANDARD C/AU-R	19	59	37	133	7.2	72	32	1050	3.95	42	23	8	40	50	19.1	14	19	57	.45	.098	39	59	.92	182	.08	33	1.89	.06	.13	12	530

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 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 AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: CORE

DATE RECEIVED: OCT 11 1990 DATE REPORT MAILED: Oct 16/90. SIGNED BY. C. Leong .D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au 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	Au* ppb
224328	54	265	6	25	.1	39	17	258	4.34	3	5	ND	1	29	1.1	2	9	141	2.06	.121	6	108	.97	41	.21	8	1.97	.06	.15	1	26
224329	9	357	7	26	.1	34	14	378	3.58	3	5	ND	1	28	1.1	2	2	114	3.50	.111	5	107	1.11	33	.17	11	2.74	.05	.13	1	26
224330	6	628	4	26	.2	42	19	424	3.39	2	5	ND	1	47	.4	3	2	87	2.32	.108	4	100	.94	20	.12	5	1.96	.07	.06	1	61
224331	4	140	8	17	.2	40	11	227	2.90	5	7	ND	2	25	.3	2	10	123	1.57	.103	6	148	.90	31	.22	7	1.60	.07	.16	1	25
224332	3	654	6	21	.4	44	19	194	3.40	10	5	ND	2	208	.8	2	4	81	2.22	.104	5	109	.38	48	.11	9	1.70	.08	.09	1	51
224333	6	700	7	22	.3	40	22	174	3.27	12	8	ND	2	367	.3	4	2	76	2.26	.109	5	74	.27	76	.09	10	1.81	.11	.08	1	45
224334	11	514	4	20	.1	13	14	206	3.29	3	5	ND	1	89	.4	2	2	118	1.75	.127	8	24	.51	60	.15	7	1.49	.07	.08	1	34
224335	6	1060	7	20	.2	41	23	227	3.81	5	5	ND	1	134	.5	2	3	86	2.52	.106	4	105	.40	48	.08	13	1.73	.07	.06	1	65
224336	7	858	12	23	.1	33	23	143	3.35	9	5	ND	1	105	.5	2	2	97	1.74	.110	5	70	.27	52	.10	10	1.27	.06	.07	1	59
224337	8	1534	8	17	.1	51	28	181	3.32	9	5	ND	1	110	.5	2	2	72	2.47	.099	5	90	.38	48	.10	6	1.43	.07	.08	1	200
224338	8	956	8	20	.1	59	19	197	3.23	7	5	ND	1	84	.6	2	7	105	1.62	.105	5	115	.69	35	.18	6	1.42	.07	.11	1	38
224339	5	781	6	21	.1	42	17	160	3.70	12	5	ND	1	103	.8	2	2	118	1.67	.107	5	107	.37	35	.14	4	1.39	.07	.10	1	13
224340	5	570	5	22	.3	41	17	197	3.26	8	6	ND	2	105	.8	2	6	106	1.89	.110	7	83	.59	42	.17	8	1.56	.08	.14	1	47
224341	9	552	9	20	.1	43	17	221	3.77	7	5	ND	1	62	.8	3	6	132	1.40	.116	7	146	.86	57	.23	7	1.42	.07	.16	1	45
224342	7	403	2	20	.1	68	19	245	4.13	8	5	ND	1	73	.9	2	7	152	1.64	.119	6	200	1.05	79	.25	10	1.75	.07	.26	1	12
224343	5	391	5	24	.3	44	15	225	3.69	9	5	ND	1	60	.6	2	6	129	1.40	.103	6	132	1.02	69	.26	8	1.52	.07	.26	1	26
224344	55	155	9	19	.1	41	14	217	3.44	10	5	ND	1	45	.7	2	2	124	1.19	.105	6	110	1.03	79	.26	2	1.47	.07	.32	1	10
224345	11	237	5	28	.3	49	14	211	3.70	10	6	ND	1	38	.8	2	2	144	1.42	.105	6	159	.81	48	.24	6	1.43	.08	.18	2	5
224346	3	1136	7	23	.2	41	19	258	3.53	18	5	ND	1	50	.6	2	4	85	3.25	.097	4	87	.37	14	.10	11	1.74	.07	.07	1	29
224347	6	1045	5	13	.2	51	22	189	3.88	9	7	ND	1	141	.5	2	2	100	1.89	.094	5	111	.42	33	.13	9	1.61	.08	.14	1	28
224348	12	666	2	23	.5	45	15	221	3.63	5	5	ND	2	83	.9	3	4	133	1.32	.102	6	111	.69	37	.20	8	1.39	.09	.21	1	51
224349	40	1233	10	22	.3	29	20	184	3.85	6	8	ND	1	70	.8	2	2	121	1.71	.105	7	57	.43	30	.14	6	1.33	.09	.11	1	34
224350	13	1158	9	27	.2	31	18	241	3.99	12	5	ND	1	35	1.0	2	2	160	2.29	.103	5	70	.83	61	.26	4	1.65	.08	.15	1	70
224351	6	557	9	18	.3	37	17	203	3.89	11	5	ND	1	67	.6	2	7	149	1.42	.110	5	86	.91	54	.27	7	1.58	.08	.22	1	62
224352	8	291	11	23	.2	43	13	225	3.47	7	5	ND	1	64	1.0	3	4	138	1.53	.106	6	149	1.15	36	.28	8	1.77	.07	.20	1	34
224353	9	764	6	23	.1	48	16	194	3.84	2	5	ND	1	105	1.3	2	4	115	1.51	.104	5	138	.75	40	.22	2	1.66	.10	.25	1	35
224354	6	1374	13	29	.1	50	28	134	4.35	6	5	ND	1	213	.4	2	8	79	1.89	.104	4	96	.17	25	.10	4	1.88	.17	.10	1	33
224355	8	599	8	24	.2	77	20	210	3.79	3	5	ND	1	93	1.5	2	5	130	1.28	.112	4	146	1.29	91	.28	2	1.84	.10	.51	2	17
224356	3	1159	6	28	.4	34	29	215	4.65	6	5	ND	1	59	1.1	2	2	116	1.34	.126	5	55	.82	63	.25	2	1.62	.10	.38	1	57
224357	3	1028	8	22	.2	40	25	164	4.44	8	5	ND	1	177	.5	2	2	102	2.32	.104	5	83	.14	15	.09	7	2.26	.18	.07	1	40
224358	2	520	10	22	.2	36	18	219	4.73	4	5	ND	1	114	.6	2	2	119	1.72	.113	4	57	.38	63	.16	5	1.99	.19	.20	1	37
224359	9	317	6	19	.2	42	18	182	3.63	8	5	ND	1	136	1.4	4	3	118	1.37	.108	6	88	.80	69	.24	3	1.70	.12	.31	1	7
224360	5	153	8	24	.1	38	15	230	3.99	15	5	ND	1	49	1.2	2	9	136	1.55	.110	7	108	1.00	71	.26	6	1.74	.09	.27	2	7
224361	8	119	7	20	.4	45	15	161	3.75	9	6	ND	1	64	.4	2	3	135	1.42	.115	6	128	.69	47	.21	3	1.48	.08	.19	1	12
224362	4	434	7	19	.2	43	27	171	4.55	7	5	ND	1	109	1.0	2	2	99	1.61	.101	5	104	.42	45	.16	8	1.66	.14	.18	1	40
224363	4	367	6	17	.2	32	15	159	3.78	5	5	ND	1	130	.8	2	2	82	1.86	.110	5	64	.19	36	.12	8	1.82	.19	.09	1	23
STANDARD C/AU-R	20	58	43	133	7.5	71	33	1050	3.95	43	22	8	40	51	19.5	15	22	59	.45	.094	40	59	.92	182	.08	32	1.90	.06	.13	13	530

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au 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	Au* ppb
224364	12	176	2	17	.1	59	12	107	3.22	2	5	ND	1	160	.5	2	2	121	1.38	.130	6	176	.47	61	.18	4	1.41	.14	.20	1	12
224365	3	852	2	14	.1	44	18	141	3.05	4	5	ND	1	181	.5	2	2	105	1.65	.115	4	66	.52	66	.19	9	1.66	.11	.22	1	150
224366	4	289	2	16	.1	38	19	221	4.95	2	5	ND	1	77	.8	2	2	216	1.08	.120	6	110	1.27	163	.36	7	1.50	.07	.53	2	100
224367	2	288	2	26	.1	23	13	214	4.11	6	5	ND	1	67	.8	2	2	151	1.93	.146	7	49	.72	87	.21	10	1.80	.10	.24	2	67
224368	2	4524	2	52	2.0	59	23	268	2.97	7	5	ND	1	308	.6	2	2	60	3.29	.114	4	48	.33	35	.09	10	2.42	.20	.06	1	950
224369	3	766	2	16	.3	82	27	226	4.43	5	5	ND	1	217	.5	2	3	77	3.22	.124	4	74	.34	44	.08	10	2.23	.15	.06	1	48
224370	4	563	2	19	.4	82	13	175	3.08	2	5	ND	1	111	.8	2	2	84	1.93	.131	5	104	.37	44	.13	7	1.72	.16	.10	1	73
224371	3	766	2	20	.2	92	29	271	5.13	6	5	ND	1	83	.6	2	2	113	2.94	.112	4	98	.65	31	.12	9	2.36	.09	.07	1	24
224372	5	214	2	15	.1	77	8	144	1.71	10	5	ND	1	86	.2	2	2	54	2.51	.106	5	78	.30	25	.11	13	1.95	.15	.08	1	27
224373	4	207	6	18	.1	56	15	218	3.11	2	6	ND	1	98	.3	2	4	71	1.69	.114	5	82	.44	29	.13	8	1.51	.11	.07	1	24
224374	64	583	2	27	.1	64	33	297	3.69	4	5	ND	1	136	.8	2	2	59	2.57	.098	4	60	.58	27	.12	7	1.93	.12	.06	1	19
224375	8	436	2	27	.3	65	33	247	3.56	4	5	ND	1	130	.7	2	6	38	2.46	.101	4	48	.50	27	.10	11	1.87	.12	.05	1	12
224376	28	188	4	34	.4	74	35	264	3.91	5	5	ND	1	81	.4	2	2	48	2.39	.108	4	54	.55	16	.12	14	1.91	.07	.05	2	17
224377	5	123	2	20	.3	57	25	231	4.53	2	6	ND	1	89	.2	2	2	57	2.06	.104	5	55	.43	23	.11	9	1.65	.10	.06	1	34
224378	5	111	2	17	.2	49	13	216	4.07	3	5	ND	1	72	.4	2	2	121	2.01	.112	5	93	.42	31	.15	11	1.64	.12	.08	1	9
224379	5	62	2	13	.1	33	13	192	3.45	3	5	ND	1	61	.6	2	2	101	1.70	.111	5	51	.33	22	.13	12	1.37	.10	.08	2	4
224380	8	469	2	19	.3	45	30	323	5.58	2	5	ND	1	139	.7	2	4	120	2.79	.106	4	43	.79	42	.17	10	2.07	.09	.07	2	49
224381	5	464	2	21	.2	53	27	361	5.09	6	5	ND	1	91	1.0	2	10	95	3.27	.112	4	62	.94	28	.16	18	2.32	.08	.06	1	23
224382	10	263	2	21	.1	51	25	292	3.66	3	5	ND	1	73	.4	2	2	67	3.11	.109	4	39	.75	22	.15	9	2.10	.10	.06	1	19
224383	29	333	2	18	.1	45	17	267	4.25	2	5	ND	1	217	.4	2	7	40	2.48	.096	4	41	.38	33	.09	13	2.00	.17	.04	1	35
224384	9	439	2	19	.3	47	25	318	4.44	4	7	ND	1	122	.4	2	2	52	2.75	.104	4	64	.72	21	.11	14	2.28	.13	.04	1	33
224385	56	157	2	17	.2	34	14	271	2.94	2	5	ND	1	143	.5	2	4	65	2.60	.117	4	36	.52	37	.15	11	1.88	.14	.06	1	14
224386	4	99	2	15	.1	61	15	219	3.04	2	5	ND	1	72	.4	2	2	88	1.87	.110	6	112	.43	31	.14	13	1.44	.13	.07	1	11
224387	42	182	2	20	.1	57	15	405	2.92	2	5	ND	1	133	.2	2	2	63	2.39	.120	5	67	.49	28	.13	7	1.76	.12	.05	1	6
224388	7	109	2	16	.1	54	17	206	3.68	3	5	ND	1	112	.2	2	2	103	1.40	.118	6	108	.52	64	.17	7	1.44	.14	.11	2	34
224389	3	85	6	22	.1	37	21	254	4.86	3	5	ND	1	79	.7	2	4	151	1.50	.125	5	61	.63	106	.21	4	1.60	.11	.15	1	8
224390	3	159	3	14	.1	52	12	171	2.65	2	5	ND	1	97	.2	2	3	74	1.57	.119	6	90	.21	32	.12	4	1.27	.14	.08	2	5
224391	3	304	8	18	.1	33	25	240	3.35	6	5	ND	1	76	.2	2	6	57	2.06	.110	5	26	.48	30	.16	10	1.66	.15	.08	2	63
224392	10	353	2	16	.5	27	27	248	4.20	3	5	ND	1	127	.5	2	2	89	2.09	.124	5	17	.45	42	.19	12	1.85	.17	.08	1	32
224393	2	116	2	19	.3	41	16	243	3.48	10	11	ND	2	73	.8	2	7	82	2.41	.118	5	53	.52	30	.14	13	1.82	.11	.08	1	5
224394	3	89	2	17	.3	48	13	194	3.17	2	5	ND	1	71	.4	2	2	91	1.81	.113	6	99	.36	34	.14	4	1.44	.13	.08	1	42
224395	1	132	3	17	.2	40	19	222	3.72	3	5	ND	1	109	.3	2	6	64	2.55	.125	5	42	.27	34	.11	6	2.02	.17	.06	1	27
224396	3	402	3	28	.5	51	35	252	4.30	5	5	ND	1	163	.2	2	6	57	2.35	.107	5	63	.31	45	.13	9	2.16	.20	.05	1	41
224397	2	111	2	18	.1	33	13	237	3.84	3	5	ND	1	69	.2	2	7	113	1.80	.109	5	75	.32	31	.15	5	1.48	.13	.07	1	37
224398	3	161	2	19	.1	43	14	210	3.50	5	5	ND	1	54	.2	2	5	107	1.79	.104	5	72	.32	29	.14	13	1.35	.11	.08	1	180
224399	78	1493	8	29	.6	48	33	333	3.90	5	8	ND	1	160	.6	2	3	70	3.48	.100	5	56	.55	36	.11	14	2.24	.14	.05	1	200
STANDARD C/AU-R	20	60	41	133	7.3	72	32	1052	3.94	40	23	8	40	53	19.2	14	21	59	.46	.098	39	58	.89	188	.08	33	1.89	.06	.13	12	550

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au 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	Au* ppb
224400	11	47	12	11	.1	37	12	287	3.58	2	5	ND	1	144	.2	2	2	108	2.53	.098	2	78	.45	26	.14	8	2.11	.15	.06	4	25
224401	2	86	3	11	.1	45	16	187	3.25	2	5	ND	1	77	.2	2	2	90	1.87	.098	5	62	.24	20	.12	2	1.28	.09	.06	1	36
224402	3	45	2	17	.1	45	12	211	3.49	2	5	ND	1	81	.4	2	2	105	2.10	.102	3	88	.29	25	.13	2	1.45	.12	.07	1	210
224403	8	167	3	16	.1	56	18	216	3.72	4	5	ND	1	214	.2	2	2	94	1.86	.109	3	77	.30	37	.12	2	1.53	.11	.06	1	40
224404	3	325	8	78	.3	71	16	288	2.70	8	5	ND	1	122	.2	2	2	54	2.39	.123	3	73	.34	23	.12	7	2.07	.18	.04	1	89
224405	3	218	3	24	.3	58	16	319	4.20	2	5	ND	1	113	1.2	2	2	86	2.51	.148	4	150	.54	32	.12	4	2.20	.15	.09	2	56
224406	8	79	17	27	.2	69	16	290	4.05	2	5	ND	1	132	.2	3	2	131	2.05	.161	5	178	.81	49	.20	3	2.06	.16	.19	1	56
224407	2	168	2	38	.1	87	24	306	3.86	6	5	ND	1	230	.2	3	2	92	2.89	.172	5	141	.53	38	.14	5	3.01	.27	.07	2	31
224408	3	196	2	17	.1	132	23	309	4.58	2	5	ND	1	334	.8	2	2	98	2.52	.169	4	165	.81	61	.15	4	2.89	.21	.17	1	64
224409	2	240	6	13	.1	134	17	314	3.88	2	5	ND	1	259	.6	2	2	81	2.84	.170	4	147	.63	34	.13	5	3.36	.27	.08	3	56
224410	4	277	4	25	.2	120	21	293	4.05	7	5	ND	1	284	.2	4	2	93	2.75	.179	4	161	.65	69	.14	5	3.25	.27	.08	1	41
224411	6	514	2	28	.3	134	34	278	5.51	2	5	ND	1	327	.2	2	2	76	2.83	.187	5	117	.36	50	.12	6	3.01	.25	.06	1	67
224412	1	285	8	19	.2	126	16	322	4.15	5	5	ND	1	282	1.0	3	2	119	2.50	.182	6	198	.92	95	.16	6	2.67	.17	.18	1	41
224413	3	796	12	16	.4	143	33	285	5.52	8	5	ND	1	248	.2	2	2	52	2.80	.184	4	92	.40	45	.10	5	2.86	.23	.05	1	44
224414	2	655	8	27	.6	117	28	360	4.10	8	5	ND	1	304	.9	3	2	58	2.68	.182	4	85	.74	61	.12	10	2.78	.21	.06	2	55
224415	2	142	6	12	.3	41	9	170	2.46	3	5	ND	1	321	.2	3	2	36	2.79	.189	3	46	.48	91	.09	8	2.29	.15	.07	1	79
224416	2	370	2	31	.3	99	20	237	3.68	11	5	ND	1	411	1.3	2	2	50	2.69	.187	2	70	.62	49	.11	10	2.11	.09	.06	2	90
224417	8	454	4	48	.3	147	26	429	3.26	14	5	ND	1	55	.8	3	2	88	3.89	.176	4	127	1.31	14	.15	22	3.36	.08	.04	3	68
224418	13	678	12	40	.4	152	32	324	3.70	16	5	ND	1	134	.2	2	2	60	3.61	.183	3	93	.76	35	.13	23	3.00	.14	.05	1	65
224419	3	362	9	38	.2	207	21	297	2.11	25	5	ND	1	211	.2	2	2	53	3.15	.184	3	77	.77	45	.10	19	3.03	.19	.06	1	50
224420	3	408	2	31	.1	79	10	379	3.26	10	5	ND	1	127	.2	2	2	84	2.96	.115	3	101	.92	116	.12	8	2.37	.07	.06	2	65
224421	4	205	10	23	.3	75	10	520	4.49	8	5	ND	1	64	.6	2	2	107	5.76	.104	4	106	1.35	38	.13	7	5.14	.05	.03	1	16
224422	6	921	6	36	.7	60	20	549	5.98	8	5	ND	1	53	.2	2	2	102	3.42	.110	4	116	1.14	15	.11	5	2.67	.04	.02	1	170
224423	8	346	2	47	.3	31	8	489	3.65	9	5	ND	1	55	.2	3	2	83	3.82	.100	3	93	1.05	22	.11	6	2.74	.05	.02	1	18
224424	8	351	15	57	.4	60	9	481	3.98	10	5	ND	1	68	.2	2	2	90	3.47	.104	3	88	1.00	40	.11	7	2.48	.07	.05	1	15
224425	10	250	11	25	.2	51	8	464	3.25	8	5	ND	1	139	.2	3	2	88	3.73	.100	4	86	.89	207	.11	9	2.40	.08	.04	1	30
224426	16	434	2	32	.3	49	5	398	1.59	4	5	ND	1	267	.2	2	2	54	4.09	.089	3	59	.75	129	.10	7	2.35	.08	.05	1	39
224427	6	1266	15	54	1.1	73	40	577	3.78	13	6	ND	1	77	1.1	2	2	86	4.60	.135	4	55	.91	95	.11	12	2.94	.04	.04	1	130
224428	3	306	2	16	.2	11	6	429	3.26	4	5	ND	1	69	.2	2	2	113	3.51	.159	4	10	.72	138	.13	18	2.41	.07	.06	1	72
224429	12	365	8	39	.3	32	11	532	2.92	6	5	ND	1	127	.2	3	2	86	3.91	.122	4	32	1.29	118	.16	12	3.22	.08	.06	1	50
224430	3	40	7	33	.4	20	10	548	2.98	14	5	ND	1	73	.2	2	2	93	3.70	.109	3	35	1.45	67	.16	9	2.60	.11	.11	1	11
224431	8	21	4	48	.1	20	12	665	3.34	21	6	ND	1	125	.5	2	2	91	5.68	.100	3	39	1.46	345	.12	15	2.93	.07	.13	1	4
224432	1	18	14	34	.1	17	9	556	3.30	23	5	ND	1	74	.2	2	2	98	3.47	.109	4	34	1.60	49	.16	15	2.83	.11	.10	1	9
224433	3	142	9	33	.1	22	12	517	3.95	13	5	ND	1	95	.8	2	2	100	3.13	.108	3	46	1.46	82	.16	9	2.42	.12	.10	2	25
224434	5	895	2	38	.6	23	12	515	4.04	5	5	ND	1	69	1.3	3	2	98	3.62	.107	4	31	1.33	38	.14	11	2.79	.10	.08	2	280
224435	14	1008	14	44	.7	138	33	524	6.10	9	5	ND	1	130	.4	3	2	143	3.40	.164	10	214	1.62	86	.15	8	3.28	.08	.07	1	92
STANDARD C/AU-R	18	63	44	132	7.3	73	31	1057	3.97	42	20	8	36	53	18.5	15	19	56	.45	.094	38	60	.89	181	.07	34	1.90	.06	.14	11	540

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au 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	Au* ppb
224436	4	1112	4	31	.7	68	15	437	3.80	12	10	ND	2	486	.5	4	2	114	3.71	.154	13	199	1.37	233	.14	13	2.95	.11	.09	1	150
224437	1	456	2	29	.3	61	13	441	4.68	13	5	ND	2	104	.5	2	2	129	4.38	.167	12	210	1.16	62	.15	16	2.99	.10	.07	1	20
224438	1	487	4	34	.4	69	15	410	8.71	6	8	ND	2	543	.9	2	2	160	3.42	.158	8	171	.80	225	.10	14	2.56	.15	.08	1	9
224439	1	297	2	26	.3	74	11	478	7.42	14	5	ND	1	199	.8	2	2	141	3.75	.152	6	210	.98	86	.11	15	2.67	.14	.05	1	8
224440	1	429	2	22	.5	98	13	458	10.55	2	7	ND	2	316	1.2	2	2	160	3.70	.142	5	208	.84	45	.11	7	2.47	.19	.05	1	89
224441	4	1950	2	22	1.1	147	55	488	12.06	23	9	ND	2	318	1.6	2	2	147	4.31	.130	6	195	.83	44	.12	7	2.40	.06	.04	1	820
224442	7	105	4	32	.2	115	8	531	4.33	8	5	ND	1	109	.6	4	2	122	3.82	.144	4	235	1.46	39	.15	18	2.93	.10	.06	1	8
224443	1	30	2	23	.1	92	16	526	3.75	14	5	ND	1	104	.4	2	2	119	4.82	.143	4	229	1.28	63	.15	19	2.84	.10	.07	1	6
224444	3	2768	2	25	1.4	130	23	536	10.26	16	5	ND	2	226	1.5	2	2	156	3.92	.152	4	204	1.15	12	.13	10	2.52	.04	.02	1	1010
224445	14	1273	7	44	.7	90	17	630	7.32	9	5	ND	2	228	.9	2	2	121	5.09	.154	5	211	1.11	41	.12	12	3.13	.07	.05	1	390
224446	19	100	6	44	.2	130	12	648	4.62	12	5	ND	1	140	.3	2	2	131	4.05	.155	4	227	1.34	69	.14	16	2.81	.10	.06	1	210
224447	9	57	3	38	.1	140	9	660	4.86	13	5	ND	1	104	.3	2	2	142	3.91	.159	4	227	1.60	29	.14	17	3.16	.12	.05	1	10
224448	158	929	6	44	.7	118	12	668	6.48	13	5	ND	1	109	.7	2	2	134	4.52	.142	5	229	1.26	15	.15	12	2.91	.06	.03	1	150
224449	42	712	2	31	.4	124	19	546	6.99	11	5	ND	1	157	.6	2	2	143	3.97	.151	4	230	1.06	30	.13	12	3.27	.12	.04	1	290
224450	15	168	2	31	.2	129	15	492	5.13	16	5	ND	1	219	.4	2	2	127	4.45	.152	6	208	1.03	36	.13	14	3.40	.15	.04	1	45
224451	1	154	3	28	.2	97	13	571	4.63	8	5	ND	1	131	.4	2	2	126	4.61	.149	8	215	1.28	21	.13	18	3.26	.09	.03	1	18
224452	1	74	3	27	.2	102	9	565	6.15	9	5	ND	1	187	.5	2	2	142	4.11	.150	4	229	1.16	32	.13	13	3.14	.15	.03	1	19
224453	7	20	2	27	.1	74	7	516	4.25	14	5	ND	1	281	.4	2	2	122	4.29	.157	4	234	1.07	31	.13	17	3.62	.22	.06	1	13
224454	1	18	2	33	.1	99	9	603	4.41	15	5	ND	1	190	.3	4	2	128	3.84	.156	4	237	1.28	26	.13	19	3.34	.15	.04	1	6
224455	1	55	2	35	.1	121	30	670	7.07	9	5	ND	1	223	.7	2	2	156	4.85	.152	4	232	1.24	27	.12	10	3.34	.15	.03	1	18
STANDARD C/AU-R	18	57	40	131	7.0	72	31	1052	3.95	41	21	7	38	53	19.6	15	18	57	.45	.095	38	57	.89	182	.07	34	1.89	.06	.13	11	530

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GEOCHEMICAL ANALYSIS CERTIFICATE

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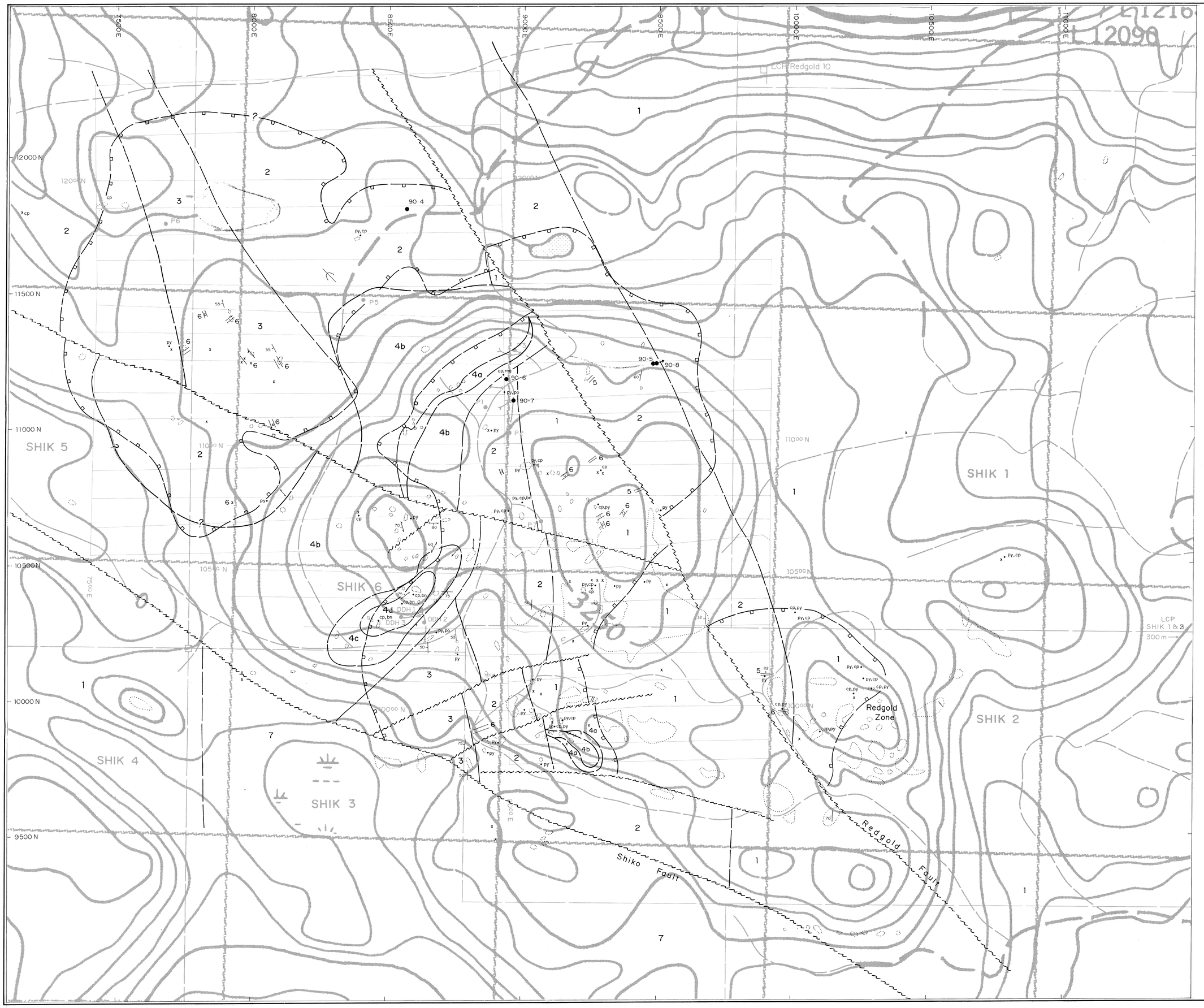
1409-409 Granville St., Vancouver BC V6T 1T2 Submitted by: G. GOODALL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au 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	Au* ppb
224201	35	955	9	17	.3	63	28	233	3.53	10	5	ND	1	120	.2	4	2	83	1.58	.089	4	87	.78	27	.14	2	1.56	.06	.07	1	410
224202	4	569	2	17	.1	55	24	195	4.10	9	5	ND	1	177	.3	2	2	103	1.47	.089	5	87	.49	35	.12	5	1.51	.06	.08	1	220
224203	7	279	6	18	.3	43	17	185	3.86	7	5	ND	1	93	.2	4	2	99	1.51	.096	5	87	.59	30	.12	3	1.58	.06	.07	1	14
224204	7	177	2	26	.4	14	13	262	4.39	11	5	ND	1	86	.2	5	2	134	1.99	.127	5	17	.91	39	.19	6	2.06	.06	.08	1	15
224205	15	333	6	30	.2	37	17	358	2.99	12	5	ND	1	168	.2	5	2	76	2.29	.105	6	57	.81	44	.13	4	2.06	.08	.08	1	53
224206	6	233	6	36	.1	27	11	537	3.93	13	5	ND	1	587	.3	3	2	82	3.97	.084	4	47	.99	51	.08	8	2.53	.08	.05	1	18
224207	22	196	2	20	.3	31	12	278	2.69	13	5	ND	1	240	.5	4	2	74	2.12	.091	5	55	.63	43	.09	7	1.75	.10	.06	1	24
224208	7	605	9	24	.1	46	26	478	5.56	15	5	ND	1	945	.5	3	2	176	2.93	.146	5	67	1.52	92	.11	2	2.56	.09	.06	2	110
224209	1	95	2	30	.1	32	17	555	4.27	18	5	ND	1	1098	.2	6	2	119	2.60	.106	5	32	.94	73	.09	6	2.75	.18	.06	1	11
224210	7	179	4	17	.2	39	16	315	3.43	9	5	ND	1	236	.2	2	2	107	2.38	.088	5	64	.78	30	.11	3	1.98	.07	.06	1	15
224211	5	109	2	14	.1	41	16	251	3.40	9	5	ND	1	118	1.1	4	2	113	1.97	.095	5	64	.77	30	.13	7	1.76	.07	.06	1	8
224212	3	83	2	11	.1	31	11	293	3.12	8	5	ND	1	77	.2	3	2	105	3.73	.094	5	48	.74	23	.13	3	1.64	.06	.06	2	3
224213	5	376	12	15	.3	41	20	293	3.64	13	5	ND	1	73	.5	2	2	97	3.51	.088	5	57	.72	22	.12	7	2.00	.08	.07	1	25
224214	6	521	10	17	.5	49	41	242	4.58	14	6	ND	2	83	.4	5	3	73	2.43	.096	5	50	.61	20	.12	10	1.96	.07	.07	1	27
224215	4	345	6	13	.2	40	22	191	3.27	8	5	ND	1	98	.2	4	2	76	1.86	.102	6	70	.48	31	.13	7	1.53	.08	.08	2	12
224216	3	91	3	13	.2	30	10	188	3.25	10	5	ND	1	183	.2	5	2	101	1.65	.100	6	53	.48	39	.12	5	1.65	.09	.07	1	8
224217	4	138	3	13	.3	46	16	200	3.16	9	5	ND	1	145	.2	4	2	93	2.02	.096	6	65	.52	31	.14	7	1.67	.10	.08	2	16
224218	3	301	2	14	.3	53	21	202	3.35	12	5	ND	1	73	.2	3	2	92	1.96	.094	5	66	.53	30	.14	7	1.62	.08	.08	1	18
224219	2	192	9	13	.2	43	16	190	3.43	9	5	ND	1	126	.2	2	2	119	1.76	.091	5	77	.53	32	.15	6	1.52	.09	.08	3	23
224220	2	107	3	16	.3	56	13	284	3.07	10	5	ND	1	67	.3	4	2	115	2.30	.118	6	139	.89	19	.14	8	1.88	.08	.07	1	7
224221	3	122	2	14	.1	40	11	199	2.97	8	5	ND	1	47	.2	4	2	102	2.03	.104	6	90	.49	26	.13	8	1.46	.07	.07	1	16
224222	3	73	2	12	.2	34	11	201	3.38	9	5	ND	1	117	.2	2	2	114	1.63	.103	6	50	.46	29	.13	4	1.50	.10	.08	1	7
224223	2	107	2	13	.1	40	12	206	3.42	11	5	ND	1	106	.4	3	2	120	1.86	.099	6	75	.48	22	.14	8	1.43	.07	.07	1	9
224224	2	290	3	18	.4	57	20	253	3.48	9	5	ND	1	119	.2	3	2	102	2.03	.097	6	80	.67	28	.14	8	1.68	.08	.07	1	21
224225	3	242	5	14	.3	50	18	208	3.57	9	5	ND	2	82	.4	5	2	117	2.16	.095	6	81	.55	26	.15	6	1.65	.10	.08	1	2
224226	2	155	10	14	.2	36	12	232	3.81	6	5	ND	1	89	.2	4	2	128	2.01	.096	6	60	.58	30	.16	6	1.64	.11	.09	1	34
224227	3	312	3	12	.3	38	11	160	2.95	5	5	ND	1	121	.2	2	2	126	1.74	.090	5	61	.48	29	.16	7	1.50	.11	.10	1	64
224228	2	158	5	13	.3	36	14	206	3.62	6	5	ND	1	62	.6	2	2	129	1.59	.096	6	64	.61	21	.17	3	1.47	.10	.08	2	15
224229	5	380	2	14	.3	43	16	152	2.54	6	5	ND	1	127	.2	4	2	76	1.58	.095	6	61	.44	34	.13	10	1.35	.09	.08	2	51
224230	2	158	9	12	.2	33	11	171	2.84	2	5	ND	1	116	.2	2	2	99	1.62	.094	6	53	.43	20	.14	3	1.27	.09	.07	1	11
224231	4	204	2	13	.2	44	16	160	2.99	7	5	ND	1	116	.2	4	3	93	1.50	.094	5	66	.41	23	.14	5	1.19	.09	.08	1	19
224232	2	346	5	10	.3	37	15	153	2.71	3	5	ND	1	157	.2	2	2	95	1.48	.094	6	61	.48	25	.14	5	1.25	.07	.07	1	35
224233	3	336	2	10	.2	45	15	159	2.52	6	5	ND	1	70	.2	4	2	87	1.62	.093	5	64	.49	29	.15	3	1.27	.10	.09	1	25
224234	1	519	3	10	.3	34	13	177	3.22	11	5	ND	1	81	.5	3	2	105	1.67	.089	5	41	.61	17	.16	6	1.40	.10	.08	1	51
224235	5	1012	7	12	.3	38	16	133	2.88	2	5	ND	1	86	.4	3	2	104	1.55	.089	5	66	.47	25	.16	6	1.28	.09	.08	1	110
224236	1	640	2	10	.4	31	18	142	3.25	6	5	ND	1	67	.2	2	3	95	1.70	.098	5	37	.41	17	.15	7	1.30	.10	.08	1	69
STANDARD C/AU-R	19	60	37	133	6.8	73	32	1048	3.94	42	21	7	38	55	18.1	15	19	57	.45	.096	38	58	.90	183	.08	34	1.86	.06	.14	12	520

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 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 AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: CORE AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: OCT 3 1990 DATE REPORT MAILED: Oct 9/90. SIGNED BY. .....D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au 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	Au* ppb
224237	4	1223	3	8	.4	35	14	170	2.84	3	5	ND	1	38	.3	2	2	122	1.72	.087	4	71	.59	15	.17	7	1.32	.08	.08	1	200
224238	2	779	6	8	.3	40	20	176	3.64	2	5	ND	1	27	1.1	2	2	126	1.80	.091	4	58	.55	13	.16	3	1.34	.06	.08	1	81
224239	6	638	2	14	.4	37	12	179	2.93	2	5	ND	1	26	.4	2	2	148	1.78	.087	4	72	.93	12	.19	5	1.52	.06	.09	1	180
224240	2	486	3	11	.3	36	12	216	3.35	2	5	ND	1	36	1.7	2	2	147	1.83	.085	3	68	1.01	12	.19	4	1.64	.06	.07	1	74
224241	2	344	2	10	.2	53	13	225	3.23	2	5	ND	1	30	.8	3	2	129	3.45	.086	3	97	.90	7	.16	6	1.94	.05	.06	1	62
224242	1	371	4	10	.1	31	9	182	3.17	3	5	ND	1	95	.4	2	2	165	1.57	.088	4	71	.76	19	.18	5	1.27	.06	.08	1	5
224243	2	188	2	13	.2	32	10	209	3.39	2	5	ND	1	75	.8	2	2	150	1.99	.100	5	80	.84	18	.18	5	1.57	.08	.09	1	22
224244	3	597	2	12	.1	24	10	267	2.80	3	5	ND	1	86	.2	2	2	124	2.65	.089	4	56	.72	13	.13	6	1.32	.06	.06	1	37
224245	13	1133	6	22	.4	27	15	348	3.39	2	5	ND	1	144	.2	2	2	111	3.54	.078	3	70	.87	18	.10	4	1.44	.05	.05	1	250
224246	3	513	16	13	.2	23	10	325	3.01	2	5	ND	1	231	.9	3	2	138	3.78	.080	4	62	.96	33	.13	4	1.43	.06	.06	1	84
224247	4	826	3	10	.3	34	10	224	3.28	4	5	ND	1	55	.9	2	2	191	2.25	.082	4	82	1.08	15	.19	4	1.68	.05	.07	1	110
224248	5	374	8	12	.2	30	9	196	2.87	5	5	ND	1	167	.2	2	2	178	1.90	.085	4	70	.97	26	.18	5	1.35	.06	.08	1	18
224249	3	320	2	13	.2	27	9	143	2.64	3	5	ND	1	226	.2	2	2	151	1.37	.085	4	79	.78	31	.18	4	1.28	.07	.09	1	43
224250	7	533	6	8	.2	12	9	137	2.15	2	5	ND	1	72	.2	2	2	95	1.42	.076	4	17	.61	21	.16	3	1.15	.06	.08	1	82
224251	4	818	2	13	.3	19	12	133	2.36	2	5	ND	1	74	.2	2	2	116	1.42	.078	4	50	.77	26	.17	3	1.19	.06	.11	1	56
224252	1	591	5	19	.3	42	20	239	5.64	2	5	ND	1	153	1.2	4	2	178	1.69	.122	4	59	1.30	47	.23	5	1.90	.10	.29	1	35
224253	1	449	2	15	.1	51	15	245	5.64	2	5	ND	1	155	.5	3	2	169	2.30	.113	4	81	1.31	52	.21	3	2.16	.11	.21	1	46
224254	2	147	11	23	.2	6	14	393	5.24	43	5	ND	1	153	.2	4	2	120	4.09	.116	3	18	1.20	54	.16	21	3.43	.09	.08	1	19
224255	3	1124	7	26	.4	54	27	312	4.33	21	5	ND	1	114	.8	4	2	96	2.95	.106	3	78	1.13	68	.14	10	2.51	.07	.08	1	70
224256	9	401	7	20	.3	85	16	324	3.25	11	5	ND	1	115	.5	3	2	81	3.46	.109	4	70	.93	102	.12	9	2.38	.07	.06	1	52
224257	2	232	2	27	.2	63	18	395	3.98	7	5	ND	1	55	.5	4	2	93	3.71	.096	4	104	1.29	23	.14	7	2.48	.07	.06	1	14
224258	1	169	2	32	.2	54	12	383	3.16	3	5	ND	1	56	.6	2	2	85	3.32	.107	4	84	1.08	30	.13	6	2.14	.07	.07	1	13
224259	10	198	10	19	.2	39	13	345	2.96	5	5	ND	1	75	.2	3	2	80	3.55	.108	5	86	.99	43	.13	8	2.13	.08	.08	1	12
224260	9	450	2	61	.3	81	25	498	4.96	8	5	ND	1	115	.2	5	2	79	5.60	.108	4	123	1.29	19	.10	9	2.94	.05	.04	1	56
224261	1	338	7	32	.3	46	12	400	3.39	8	5	ND	1	62	.4	4	2	86	4.24	.103	4	102	1.24	27	.12	8	2.32	.05	.06	1	68
STANDARD C/AU-R	19	63	37	131	7.3	72	31	1058	3.98	39	19	8	37	53	19.0	14	21	56	.46	.095	37	61	.89	181	.07	34	1.90	.06	.14	12	530



LITHOLOGY

JURASSIC

- 7 — *MAROON BASALTS :* Maroon analcite-bearing flows and flow breccias.
- 6 — *MAFIC DYKES :* Gabbro
- 5 — *FELSIC DYKES :* a) diorite, b) monzonite, c) syenite, d) hornblende porphyry
- 4 — *SHIKO STOCK :* a) gabbro, b) diorite, c) monzonite d) syenite
- 3 — *SEDIMENTS :* dark grey siltstone
- 2 — *FELSIC BRECCIAS :* Massive, chaotic felsic tuff breccias and proximal dioritic breccias.

TRIASSIC

- 1 — *AUGITE BASALTS :* a) basaltic wacke, b) calc-areous flows and flow breccias, c non-calcar-eous flows and flow breccias.

SYMBOLS

- Claim boundary
- Legal corner post
- SHIK 2 — Claim name
- Road
- Trench
- 11000 N — Grid line and line number
- P1 — Percussion drill hole location
- DDH 1 — Diamond drill hole location
- Jointing (inclined, vertical), bedding (inclined, vertical)
- Foliation
- Float
- x — Outcrop
- Greater than 20% outcrop
- Ice direction
- Geological contact (defined, approx.)
- Limit of pyritic and hydrothermally altered rock (teeth point towards increasing alteration)
- Dyke (inclined, vertical, undetermined)
- py• — Mineral occurrence

az ... azurite mal ... malachite
bn ... bornite po ... pyrrhotite
cp ... chalco-pyrite py ... pyrite
mg ... magnetite
cu ... native copper

- Fault (defined, approximate)

Scale
100 0 100 200 300
metres

PHELPS DODGE CORP. OF CANADA LIMITED

PROJECT Nº : 163

REDGOLD PROJECT

GEOLOGY COMPILATION

SCALE	DATE	FILE	N.T.S	FIG. Nº
1:5,000	Dec '90	163-015 BY: dlp PEF	93A/6	4

8,500 E

8,600 E

8,700 E

Elev 950

Elev 900

Elev 850

Elev 800

Elev 750

Elev 700

90-4

Qd

Cu (ppm)	Au (ppb)
955	410
569	220
279	14
177	15
333	53
233	16
196	24
805	110
85	11
179	15
109	8
83	3
376	25
521	27
345	12
91	8
138	16
301	18
192	23
107	7
122	16
73	7
107	9
290	21
242	2
155	34
312	54
158	15
380	51
158	11
204	19
346	35
336	35
519	51
1012	110
640	69
1223	200
779	81
638	160
486	74
344	62
371	5
188	22
587	37
1133	250
513	84
826	110
374	18
320	43
533	82
818	56
591	35
449	46

2

LITHOLOGY

JURASSIC

7 MAROON BASALT

6 MAFIC DYKE

5 FELSIC DYKE

4 SHIKO STOCK

3 SEDIMENT

2 FELSIC BRECCIA

TRIASSIC

1 AUGITE BASALT

geologic contact

GEOCHEM DATA

rock unit	copper (ppm)	gold (ppb)
2	1233	34
	1158	70
	557	62
	281	34
	784	35
	1374	33
	599	17
	1159	57

section looks north

PHELPS DODGE CORPORATION of CANADA, LIMITED

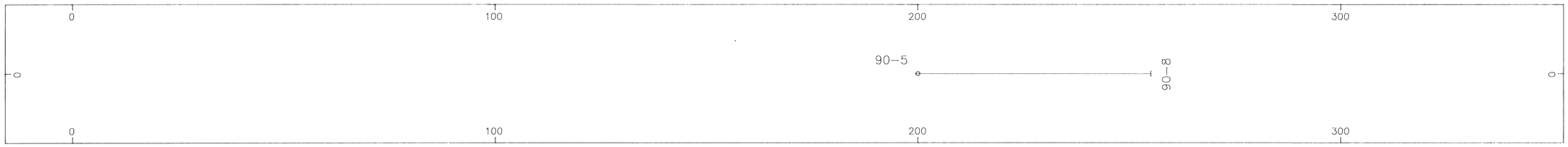
REDGOLD PROJECT
CROSS SECTION 119+00N
DRILL HOLE 90-4

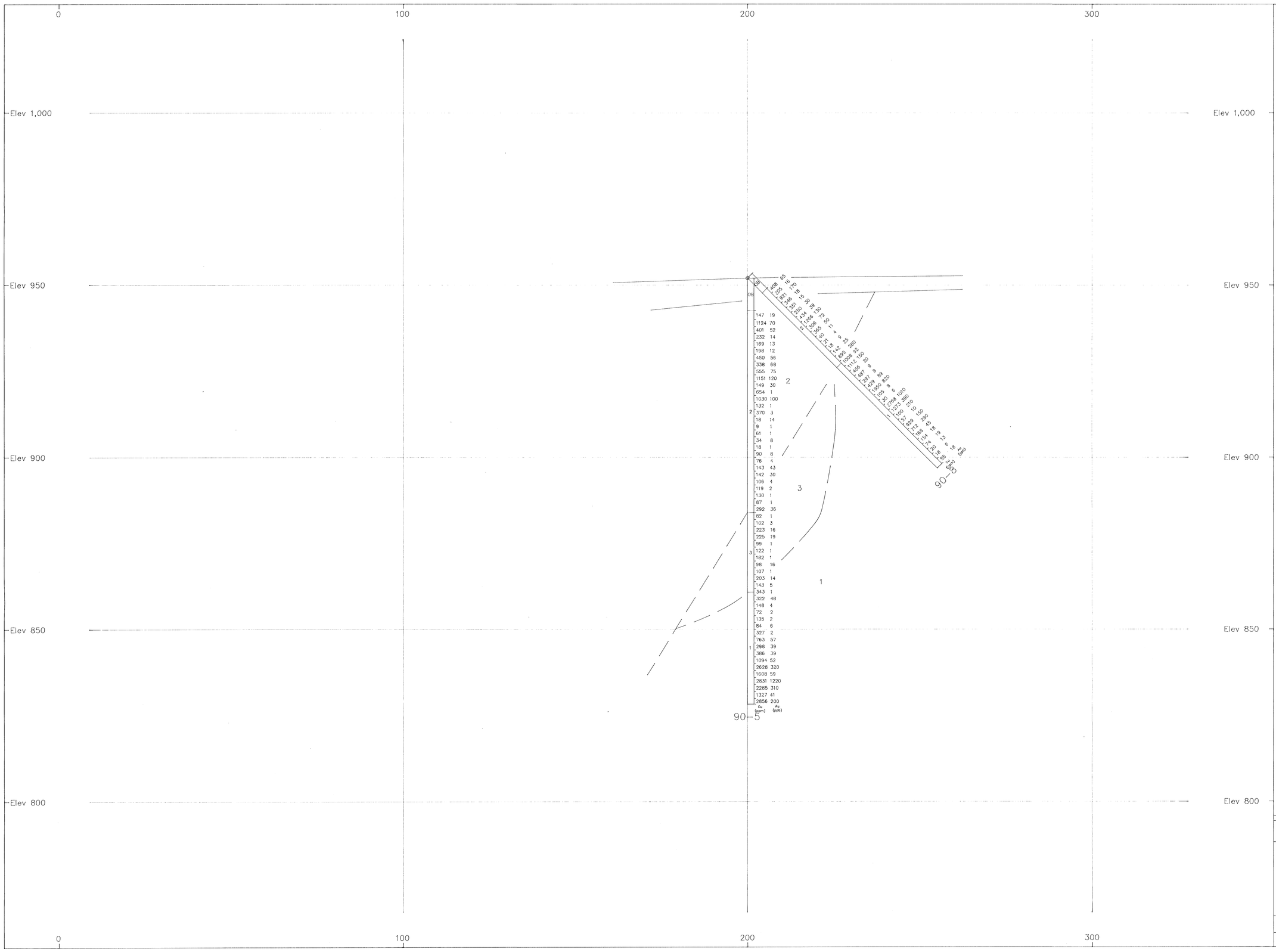
Scale 1: 500

0 10 20 30 40 M

Date: Dec 90 | NTS 93A/6 | Figure 5

FOX GEOLOGICAL CONSULTANTS





LITHOLOGY

JURASSIC

7 MAROON BASALT

6 MAFIC DYKE

5 FELSIC DYKE

4 SHIKO STOCK

3 SEDIMENT

2 FELSIC BRECCIA

TRIASSIC

1 AUGITE BASALT

geologic contact

GEOCHEM DATA

rock unit	copper (ppm)	gold (ppb)
2	1233	34
	1158	70
	557	62
	291	34
	784	35
	1374	33
	589	17
	1159	57

20,930

section looks 320 degrees

PHELPS DODGE CORPORATION of CANADA, LIMITED

REDGOLD PROJECT

CROSS SECTION A -- A'

HOLES 90-5 & 90-8

Scale 1: 500

0 10 20 30 40 M

Date: Dec 90 | NTS 93A/6 | Figure 5

FOX GEOLOGICAL CONSULTANTS

8,900 E

9,000 E

9,100 E

Elev 1,000

Elev 950

Elev 900

Elev 850

Elev 800

Elev 750

90-6

	Cu (ppm)	Au (ppb)
09	759	22
	566	23
	646	44
	559	29
	1598	11
	1225	19
	1057	37
	508	29
	711	24
	533	1
	703	1
2	703	1
	872	5
	800	3
	462	5
	820	1
	212	1
	265	26
	357	28
	621	61
	140	25
	854	51
	700	45
6	514	34
	1060	65
	858	59
	1534	200
	956	38
	781	13
	570	47
	552	45
	403	19
	391	26
	155	10
	237	5
	1136	29
	1045	28
	666	51
	1233	34
	1158	70
	557	62
	291	34
2	764	35
	1374	33
	599	17
	1159	57
	1028	40
	520	37
	317	7
	153	7
	119	12
	434	40
	387	23
	176	12
	852	150
	289	100
	288	67
	4524	950
	766	48
	563	73
	786	24
	214	27

LITHOLOGY

JURASSIC

- 7 MAROON BASALT
- 6 MAFIC DYKE
- 5 FELSIC DYKE
- 4 SHIKO STOCK
- 3 SEDIMENT
- 2 FELSIC BRECCIA

TRIASSIC

- 1 AUGITE BASALT

geologic contact

GEOCHEM DATA

rock unit	copper (ppm)	gold (ppb)
1	1233	34
	1158	70
	557	62
	291	34
2	764	35
	1374	33
	599	17
	1159	57

GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,930

section looks north

PHELPS DODGE CORPORATION of CANADA, LIMITED

REDGOLD PROJECT
CROSS SECTION 112+40N
DRILL HOLE 90-6

Scale 1: 500

0 10 20 30 40 M

Date: Dec 90 | NTS 93A/6 | Figure 5

FOX GEOLOGICAL CONSULTANTS

8,900 E

9,000 E

9,100 E

Elev 1,000

Elev 950

Elev 900

Elev 850

Elev 800

Elev 750

90-7

09

Cu (ppm)	Au (ppb)
207	24
583	19
436	12
188	17
123	34
111	9
82	4
489	49
464	23
283	19
333	35
439	33
157	14
99	11
182	6
109	34
85	8
159	5
304	63
353	32
118	5
89	42
132	27
402	41
111	37
181	180
1493	200
47	25
66	36
45	270
167	40
325	59
218	56
79	56
168	31
196	64
240	56
277	41
314	67
285	41
796	44
655	55
142	79
370	90
454	68
678	65
262	50

2

1

LITHOLOGY

JURASSIC

7 MAROON BASALT

6 MAFIC DYKE

5 FELSIC DYKE

4 SHIKO STOCK

3 SEDIMENT

2 FELSIC BRECCIA

TRIASSIC

1 AUGITE BASALT

geologic contact

GEOCHEM DATA

rock unit

copper (ppm)	gold (ppb)
1233	34
1158	70
557	82
291	34
784	35
1374	33
599	17
1159	57

2

section looks north

PHELPS DODGE CORPORATION of CANADA, LIMITED

REDGOLD PROJECT

CROSS SECTION 112+00N

DRILL HOLE 90--7

Scale 1: 500

0 10 20 30 40 M

Date: Dec 90 | NTS 93A/6 | Figure 5

FOX GEOLOGICAL CONSULTANTS

20930