FOX GEOLOGICAL CONSULTANTS LTD.

DRILLING REPORT ON THE SHIK 1 TO 7 CLAIMS REDGOLD PROSPECT

CARIBOO MINING DIVISION

BRITISH COLUMBIA

NTS 93A6

52°28'N 121°28'W

by

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1. SUMMARY

This report summarizes the 1991 diamond drill program conducted on the Redgold property located near Horsefly, B.C. The purpose of the program was to test a large IP anomaly and three other smaller targets for a large tonnage copper-gold porphyry deposit together with fringing high grade copper gold skarns.

The Redgold property covers an alkalic intrusion, known as the Shiko stock, and a series of Mesozoic volcanic and sedimentary rocks. The volcanic unit is composed of augite basalt, which consists of interlayered basaltic wackes and calcareous submarine flows and flow breccias. These rocks are green or maroon, containing prominent, coarse to very coarse grained augite phenocrysts. They are overlain by felsic rocks consisting of massive tuff breccias. Both units are propylitized to varying degrees. Dark grey siltstone overlies the lower members of the felsic unit. The youngest lithologic unit on the Redgold property is maroon basalt 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 pyroxenite and augite gabbro that grade inward to augite diorite, monzonite and syenite. Mafic and felsic dykes commonly cut the volcanic strata east and west of the stock.

Field work in 1990 and 1991 concentrated on altered and pyritic rocks east and north of the Shiko stock and on the Exo and Redgold prospects to the southeast. The volcanic rocks are propylitized and potassic altered within a broad alteration halo that lies east and north of the Shiko stock.

The Redgold property has the signature of a classic alkalic copper-gold system where 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 skarns lying along the basalt-felsic breccia contact.

Geochemical and geophysical surveys conducted in 1990 outlined three distinct target areas. Anomaly #1 in felsic breccia units at the northwest corner of the grid, Anomaly #2 at the felsic breccia-basalt contact near the eastern margin and Anomaly #3 in the north-central grid area immediately north of the Shiko Stock.

The 1991 work was performed between October 15 and November 12. A total of 1,458 metres of NQ core was drilled in twelve holes to test broad coincident IP chargeability and soil geochemical anomalies (Anomalies #1 and #2) as well as showings in the Exo and Redgold areas.

The 1990 and 1991 drill programs tested the IP and geochemical anomalies peripheral to the Shiko Stock. The IP response is due primarily to the high pyrite contents in volcanic, sedimentary and intrusive units.

2. INTRODUCTION

This report summarizes the 1991 diamond drill program conducted on the Redgold property, Cariboo Mining Division, Horsefly, B.C. The program consisted of 1,458.1 metres of NQ wireline diamond drilling in twelve holes and was designed to test broad I.P. and geochemical anomalies outlined in the 1990 work program.

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°28'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. The claims are situated immediately south of Quesnel Lake and west of Horsefly River (Figure 2). Assessment credits have been applied to the claims to extend the expiry dates until 1996.

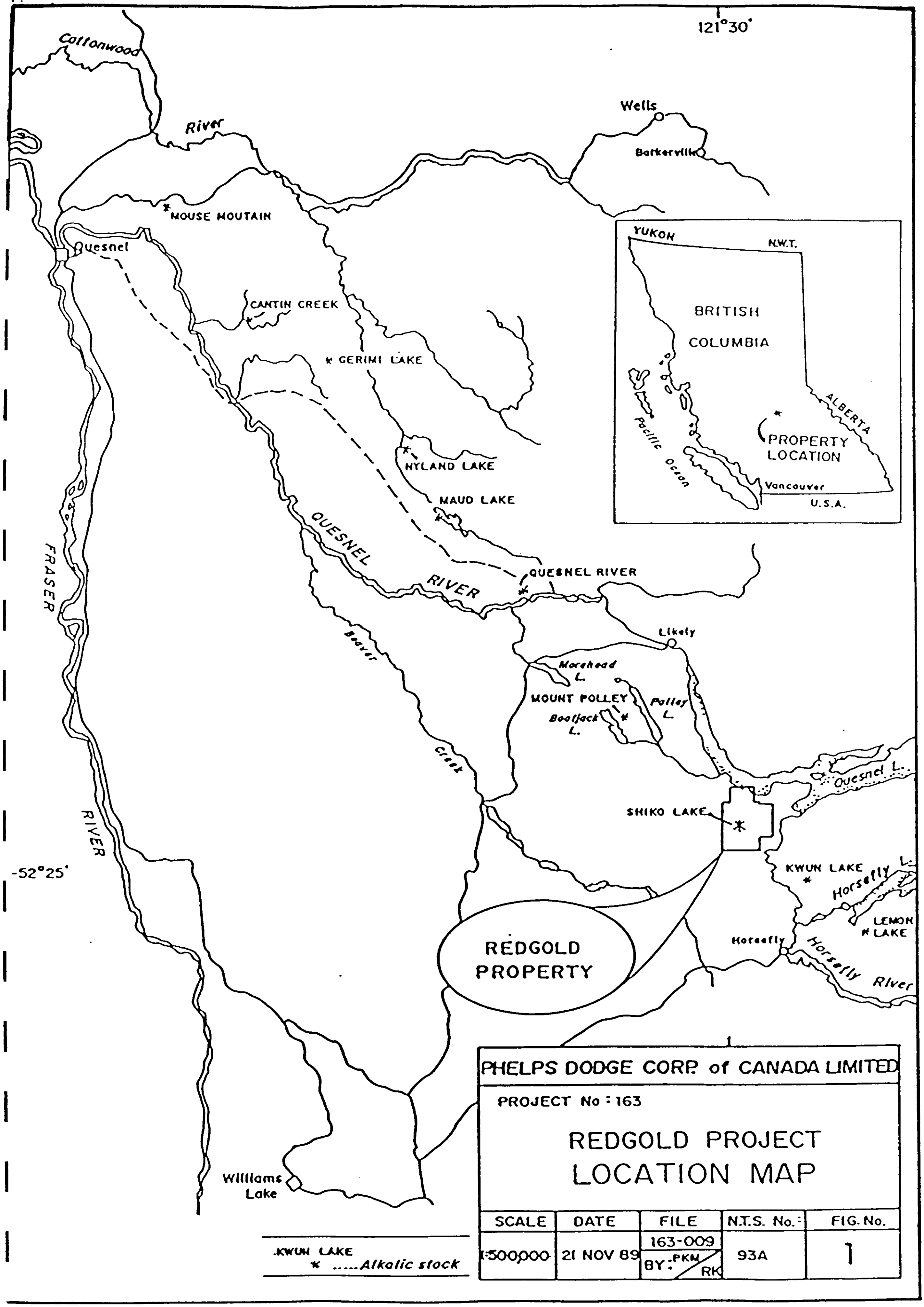

121°30'
Cottonwood
River
Wells
Barkerville
MOUSE MOUTAIN
Quesnel
CANTIN CREEK
GERIMI LAKE
NYLAND LAKE
MAUD LAKE
QUESNEL RIVER
QUESNEL RIVER
FRASER RIVER
Beaver Creek
Likely
Morehead L.
MOUNT POLLEY
Polley L.
Bootjack L.
Quesnel L.
SHIKO LAKE
KWUN LAKE
Horsefly L.
LEMON LAKE
Horsefly
Horsefly River
-52°25'
REDGOLD PROPERTY
Williams Lake
YUKON
N.W.T.
BRITISH COLUMBIA
ALBERTA
Pacific Ocean
PROPERTY LOCATION
Vancouver
U.S.A.
KWUN LAKE
* .....Alkalic stock
PHELPS DODGE CORP. of CANADA LIMITED
PROJECT No : 163
REDGOLD PROJECT
LOCATION MAP
SCALE 1:500,000
DATE 21 NOV 89
FILE 163-009
BY: PKM RK
N.T.S. No.: 93A
FIG. No. 1

Table I
Claim Information

Group	Claim Name	Record No.	Units	Expiry Date
Redgold A	SHIK 1	4331	16	31/05/96
Redgold B	SHIK 2	4332	12	01/06/96
Redgold A	SHIK 3	10313	16	01/12/96
Redgold A	SHIK 4	10314	12	01/12/96
Redgold A	SHIK 5	10315	15	01/12/96
Redgold A	SHIK 6	10316	20	01/12/96
Redgold A	SHIK 7	10317	18	30/11/96

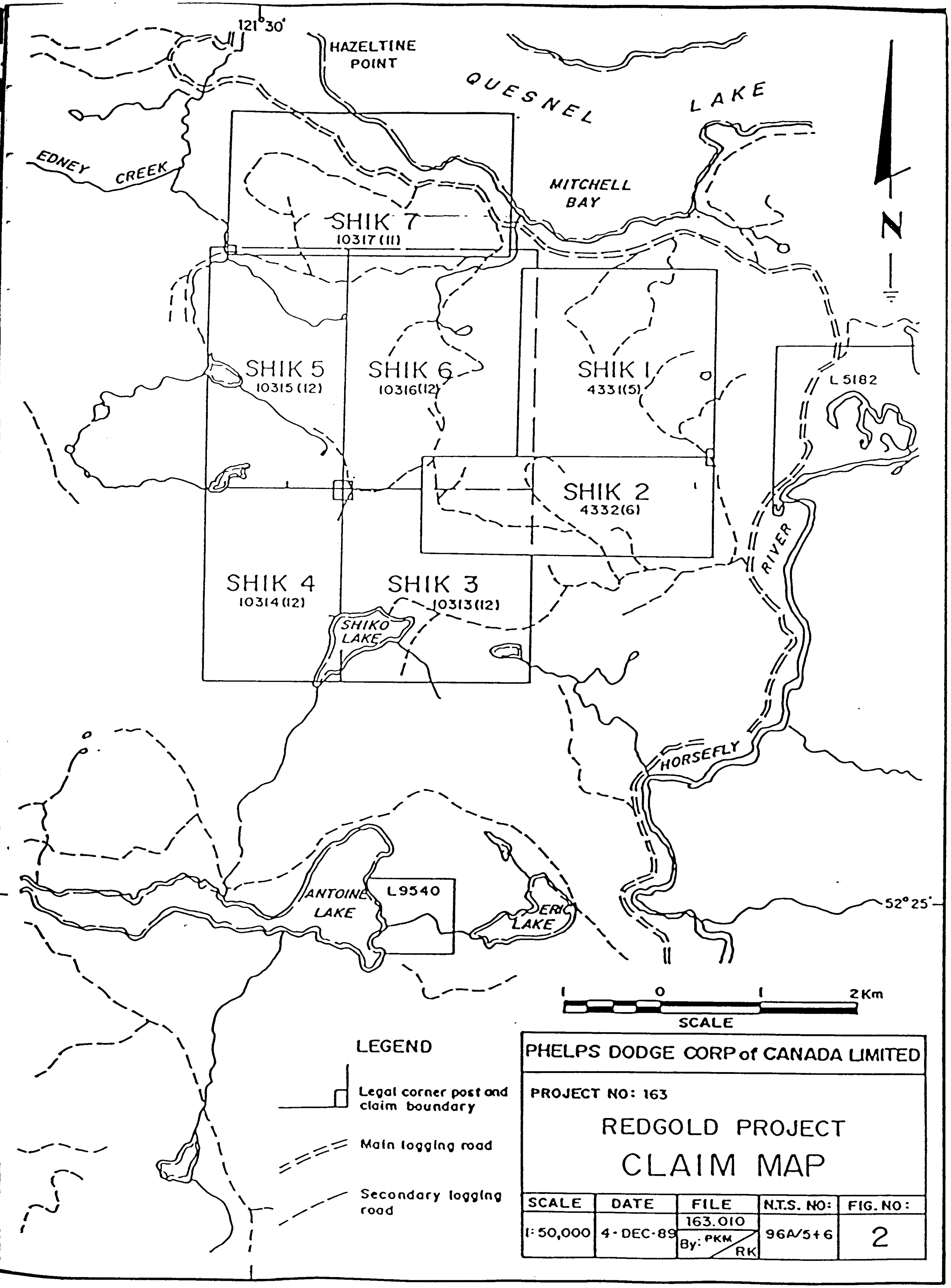
5. HISTORY

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.

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


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 1:50,000
DATE 4-DEC-89
FILE 163.010
By: PKM RK
N.T.S. NO: 96A/5+6
FIG. NO: 2

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 within 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
	-	total of $35,000 expended
1989	-	Phelps Dodge optioned property from Morton and Durfeld
	-	staked overlapping Shik claims
	-	established and sampled 16 kilometres of grid
	-	geological mapping
1990	-	50 kilometres of grid preparation
	-	mapping, soil sampling, geophysical survey and diamond drilling

7. 1991 WORK PROGRAM

A twelve hole, 1458.1-metre diamond drill program was conducted on the Redgold property between October 15 and November 12, 1991. All work was performed under permit MX-10-117. J. T. Thomas Diamond Drilling Ltd. of Smithers, B.C. was the drill contractor. Accommodations, core logging and splitting and core storage was at Mitchell Bay Landing on Quesnel Lake. Core was logged and RQD measurements taken. Core was split in half and sampled at two- and three-metre intervals. Samples were shipped to Acme Analytical Laboratories Ltd. in Vancouver, B.C. and analyzed for 30 elements by ICP methods and for gold by geochemical atomic absorption procedure. Pulps from 44 samples were submitted to Chemex Labs in North Vancouver, B.C. as a check. Drill logs are provided in Appendix I and assay certificates are in Appendix II. Core from all drill programs is currently stored at Mitchell Bay Landing.

8. REGIONAL GEOLOGY

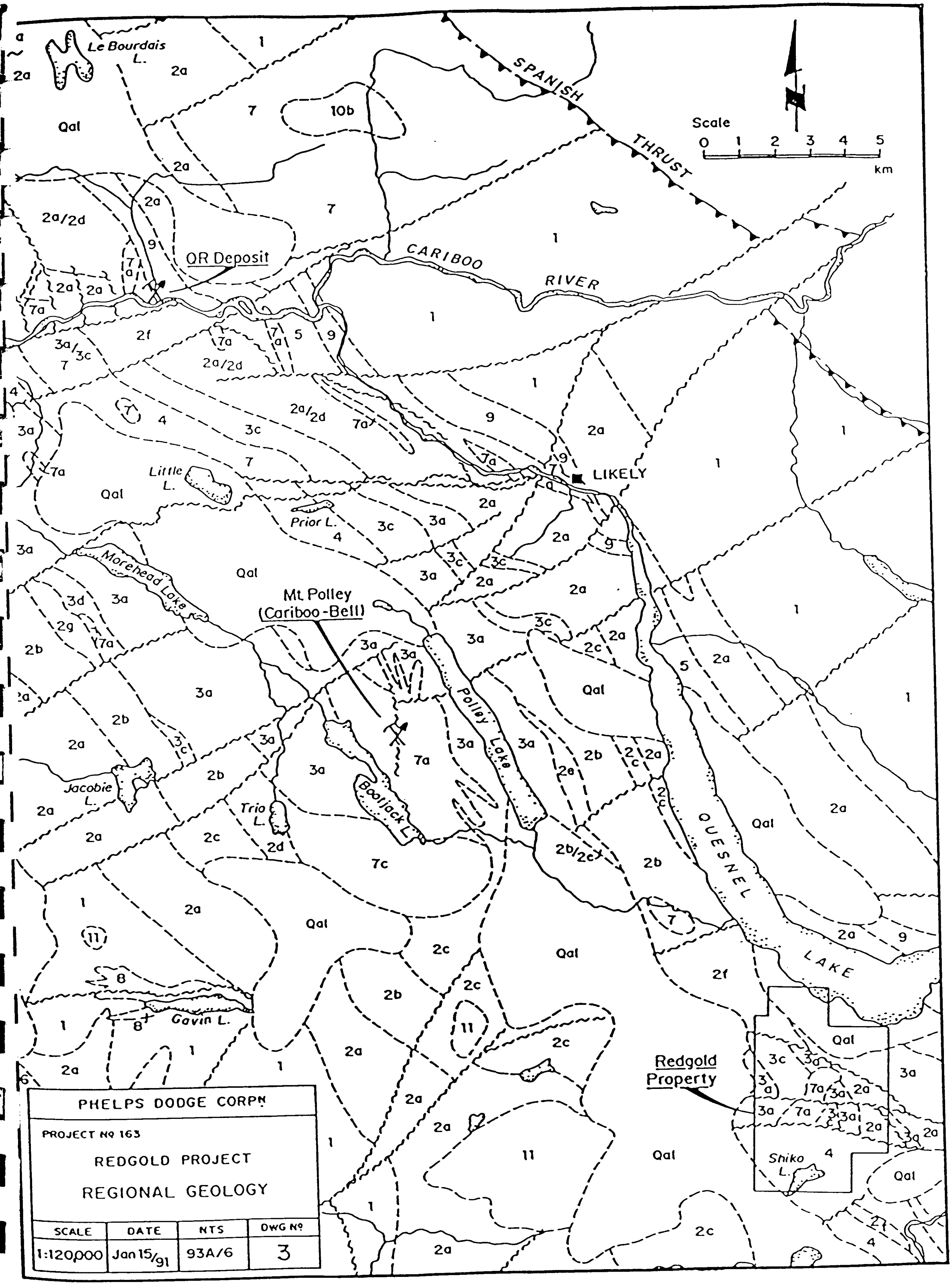
In the vicinity of the Redgold property a narrow belt of mafic and felsic volcanic rocks, comagmatic dioritic stocks, and a variety of sedimentary rocks form the Quesnel Trough (Figure 3). The belt is crudely symmetrical about a central axis of felsic volcanic rocks flanked to the east and west in turn 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 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 gold skarn and fringing 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 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)


Le Bourdais L.
SPANISH THRUST
Scale
0 1 2 3 4 5
km
QR Deposit
CARIBOO RIVER
LIKELY
Little L.
Prior L.
Morehead Lake
Mt Polley
(Cariboo-Bell)
Polley Lake
Bootjack L.
Jacobie L.
Trio L.
QUESNEL LAKE
Gavin L.
Redgold
Property
Shiko L.
Qal
PHELPS DODGE CORPN
PROJECT No 163
REDGOLD PROJECT
REGIONAL GEOLOGY
SCALE
1:120,000
DATE
Jan 15/91
NTS
93A/6
DWG No
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, geophysics and drill hole locations is presented in Figure 4.

The 1991 drill program concentrated on the broad IP chargeability and geochemical anomalies in the northern claim area, as well as testing the Exo and Redgold showings. The volcanic rocks here are propylitized and skarned (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. The northern IP anomaly appears to be caused by high pyrite content in the siltstone, mafic dykes and felsic breccia units. The mafic dykes, averaging 5 to 10 metres thick, are quite extensive and intrude all geologic units in this area.

Mineralization

The Redgold property has the signature of a classic alkalic copper-gold signature. The intensity of propylitic and potassic alteration is related to the Shiko stock and a smaller stock to the southeast. Copper is present dominantly as chalcopyrite with local occurrences of bornite, native copper, malachite and azurite. Gold concentrations are recovered from high sulphide skarns developed along the basalt-felsic breccia contact. Sulphide mineralization occurs within the stock and intruded volcanic and sedimentary units. Intense propylitic alteration and skarn with massive epidote and chlorite was encountered in the Redgold Showing (drill hole 9-20). Trace to 2% medium to coarse grained chalcopyrite was disseminated throughout this hole. Concentrations of copper, zinc and gold obtained in hole 91-20 were associated with coarse grained chalcopyrite and sphalerite within calcite aggregates and veinlets.

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 1991 diamond drill program conducted on the Redgold property was designed to test a broad high contrast IP chargeability-soil geochemical anomaly (Anomaly #1) outlined from the 1990 work program. All twelve holes were logged and sections from all holes except 91-18 were split in half and sampled on two- and three-metre intervals. A drill plan is shown in Figure 5.

Following is a brief summary of each drill hole.

Hole 91-9

Drill hole 91-9 (Figure 6) was drilled at a -50° angle towards 060° azimuth and was located 120 metres northwest of holes 90-5 and 90-8. It was drilled to test the northerly extension of mineralization encountered in the 1990 drill program.

Bedrock was encountered at 3.0 metres and felsic breccia (Unit 2) was cored to 82.3 metres. The felsic breccia unit shows weak propylitic alteration and contains 1% to 3% fine grained pyrite. From 82.3 metres to 92.4 metres fine grained, light grey coloured siltstone (Unit 3) was cored. Augite basalt (Unit 1) was cored to 110.0 metres and contained 1% to 3% pyrite with trace amounts of chalcopyrite. The hole was terminated at 121.3 metres in a felsic dyke (Unit 5).

Hole 91-10

Drill hole 91-10 (Figure 7) was located 160 metres southeast of holes 90-5 and 90-8 to test the extent of mineralization encountered in the 1990 drill program. The hole was drilled at a -50° angle towards 060° azimuth. Bedrock was encountered at 3.0 metres and felsic breccia (Unit 2) was cored to 23.6 metres. This unit was similar to that cored in hole 91-9 and contained 1% to 5% disseminated pyrite and trace amounts of epidote. From 23.6 metres to the end of the hole at 133.5 metres, augite basalt (Unit 1) was cored. This unit contains 1% to 5% disseminated fine grained pyrite, trace amounts of chalcopyrite and is weakly propylitic.

Hole 91-11

Drill hole 91-11 (Figure 8) was located in the northwest area of the property and was drilled to test the broad high contrast IP chargeability anomaly outlined in 1990. The vertical hole encountered bedrock at 6.1 metres and cored siltstone (Unit 3) and hornblende dykes (Unit 6) to the end of the hole at 121.9 metres. The siltstone unit was moderately well bedded at 40° to 60° to core axis and contained 1% to 3% medium grained disseminated pyrite. The hornblende dykes contained medium grained hornblende phenocrysts and 1% to 3% disseminated pyrite. No significant mineralization was intersected.

Hole 91-12

Drill hole 91-12 (Figure 8) was a vertical hole located 580 metres west of hole 91-11, also test the IP anomaly. The hole encountered bedrock at 13.7 metres and cored felsic breccia (Unit 2) and hornblende dykes (Unit 6) to 47.2 metres. From 47.2 to 115.3 metres, the Unit 1 basalt was cored. This unit contained 1% to 2% fine grained disseminated pyrite and trace amounts of epidote. Minor calcite veinlets were intersected. From 115.3 metres to the end of the hole at 121.9 metres, siltstone (Unit 3) was cored. No significant mineralization was encountered.

Hole 91-13

Drill hole 91-13 (Figure 9) was drilled on the west side of the large IP anomaly, 210 metres south of hole 91-12. It was drilled at a -90° angle, encountered bedrock at 4.6 metres and cored felsic breccia (Unit 2) and hornblende dykes (Unit 6) to the end of the hole at 155.4 metres. Pyrite concentrations of 1% to 5% occurred as disseminations and infilling calcite veinlets. Trace to 2% amounts of disseminated chalcopyrite were observed locally. Weak potassic alteration was noted along local fractures and veinlets.

Hole 91-14

Drill hole 91-14 (Figure 9) was drilled within the IP anomaly, 340 metres east of hole 91-13. The vertical hole encountered bedrock 4.3 metres and cored siltstone (Unit 3) and hornblende dykes (Unit 6) to the end of the hole at 121.9 metres. Trace to 2% amounts of pyrite was disseminated throughout the moderately bedded siltstone unit and 1% to 3% pyrite was contained in the hornblende dykes. No significant mineralization was noted and the representative 21 metres of core which was sampled did not return any significant values.

Hole 91-15

Drill hole 91-15 (Figure 10) was located 340 metres south of hole 91-13 on the west side of the IP anomaly. The vertical hole encountered bedrock at 12.2 metres and cored felsic breccia (Unit 2) and hornblende dykes (Unit 6) to the bottom of the hole at 61.0 metres. The hole was lost due to excessive cave and pressure on the roads. Both rock units were moderately chloritic and contained local gouge zones. Trace to locally 5% amounts of pyrite were disseminated throughout.

Hole 91-16

Drill hole 91-16 (Figure 11) was located 350 metres southeast of hole 91-15 in the southern portion of the IP anomaly. Bedrock was encountered at 7.6 metres and a gabbro unit (Unit 4a) was cored to the end of the hole at 98.5 metres. The gabbro is moderately to highly chloritic, contains trace to 2% amounts of disseminated pyrite and has local calcite and rare quartz veinlets.

Hole 91-17

Drill hole 91-17 (Figure 10) was located 215 metres east of hole 91-15 in the centre of the IP anomaly. Only 1.5 metres of overburden was cased and felsic breccia (Unit 2) and hornblende dykes (Unit 6) was cored to the end of the hole at 128.0 metres. The felsic breccia is weak to moderately magnetic and contains trace to 3% fine grained pyrite, disseminated and infilling calcite veinlets.

Hole 91-18

Drill hole 91-18 (Figure 10) was located 440 metres west of 91-17 to test the eastern edge of the IP anomaly and to determine the geological orientation of the siltstone unit. It cored into the siltstone unit (Unit 6) after 4.6 metres of overburden. The siltstone is fine grained, moderately hornfelsed, contain 1% to 5% disseminated pyrite is moderately well bedded. Minor hornblende dykes were also encountered to the end of the hole at 77.7 metres.

Hole 91-19

Drill hole 19-19 (Figure 12) was located 500 metres east of the Shiko Stock on the Exo Showing. The vertical hole cased 3.0 metres of overburden and cored augite basalt (Unit 1) to 128.3 metres. The weakly calcareous matrix supports 3% to 10% euhedral augite phenocrysts, 2% to 5% subhedral feldspar laths, 1% to 4% fine grained pyrite and trace to 1% coarse grained chalcopyrite. Weak to moderate propylitic and weak potassic alteration is evident locally throughout the unit. Calcite veinlets occur throughout and locally contain pyrite and traces of chalcopyrite. From 128.3 metres to 158.5 metres, felsic breccia (Unit 2) was cored. This unit is fine to medium grained with 5% to 15% white feldspar laths, 1% to 3% disseminated pyrite and trace amounts of disseminated chalcopyrite.

Hole 91-20

Drill hole 91-20 (Figure 13) was located on the Redgold Showing. The vertical holes penetrated 6.1 metres of overburden and cored into augite basalt (Unit 1) for the entire length to a depth of 158.5 metres. The basalt unit here was moderate to intensely propylitically altered with a fine to medium grained, weakly calcareous matrix, weak to moderately chloritic and contained 1% to 5% fine grained pyrite in disseminations, in small aggregates and infilling calcite veinlets locally. Trace to 2% chalcopyrite was observed locally disseminated and forming aggregates within calcite blebs. Trace to 5% yellow andradite garnet and trace to 2% sphalerite were also observed associated with the calcite/chalcopyrite aggregates.

11. CONCLUSIONS

The 1991 drill program on the Redgold property failed to return significant concentrations of copper or gold over reasonable lengths. Several three-metre samples returned moderately anomalous concentrations of copper and/or gold-particularly hole 91-20 but potential for a large tonnage deposit near this showing appears low. The broad high contrast IP chargeability anomaly in the norther portion of the property is due to high pyrite content in the siltstone, felsic breccia and mafic dyke units. Results from drill samples in this area were low.

12. DISBURSEMENTS

Direct drill charges on the Redgold property in 1991 amounted to $86,677.32 and has been submitted for assessment credits to maintain the Shik 1 to 7 claims in good standing until 1996.

Drilling (J. T. Thomas Invoices #91-10, 91-11)	$ 84,061.17
Water Hauling (J. T. Thomas Invoice #91-12)	2,616.15
Total Disbursements (Drilling)	**$ 86,677.32**

Prepared by:

FOX GEOLOGICAL CONSULTANTS LTD.

G. N. Goodall, B.Sc., P. Geo.

P. E. Fox, Ph.D., P. Eng.
January 7, 1992

13(a) 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 and Geoscientists of the Province 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.
January 7, 1992

13(b) CERTIFICATE

I, Geoffrey N. Goodall, of the City of North Vancouver, British Columbia, do hereby certify that:

1. I am a Professional Geoscientist registered in the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

2. I graduated from the University of British Columbia in 1984 with a Bachelor of Science degree in geology.

3. I have been practising my profession as a geologist since 1984.

4. I am a Fellow of the Geological Association of Canada.

Geoffrey N. Goodall, B.Sc., P. Geo.
Vancouver, B.C.
January 7, 1992

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APPENDIX I

Diamond Drill Logs

LOCATION 11420 9475 | LENGTH(m) 121.3 | LOGGED BY GOODALL | PROJECT 163
AZIMUTH 60 | CORE SIZE NQw1 | DATE LOGGED 10/23/91 | PROPERTY REDGOLD
DIP -50.0 | DATE STARTED 10/19/91 | HOLE NO 91-9
ELEVATION 944.9 | DATE COMPLETED 10/20/91

FROM	TO	DESCRIPTION	SAMPLE	TO	Ep	Car	Chl	Py	Ksp	Bi	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
0	3.0	OVERBURDEN		3.0															
3.0	52.2	FELSIC BRECCIA - dark green, fine	229601	5.0	0	3	2	1	0	0	1	49	9	31	0.1	4.20	3	2	29.0
		grained, weakly calcareous matrix,	229602	7.0	0	3	2	1	0	0	1	46	5	26	0.1	3.76	5	2	8.0
		narrow calcite veinlets, parallel	229603	9.0	0	3	2	1	0	0	1	36	6	23	0.1	4.20	2	2	12.0
		and perpendicular to core axis, weakly	229604	11.0	0	3	2	1	0	0	1	97	24	116	0.1	3.60	7	2	14.0
		chloritic, 5% to 10% dark green	229605	13.0	0	3	2	1	0	0	3	463	11	27	0.1	3.56	6	2	132.0
		subhedral augite phenocrysts, 3% to 10%	229606	15.0	0	3	2	1	0	0	1	216	10	25	0.1	3.91	5	2	34.0
		white euhedral feldspar laths, 1% to	229607	17.0	0	3	2	1	0	0	1	189	5	26	0.1	4.03	8	2	32.0
		3% disseminated fine grained pyrite,	229608	19.0	0	3	2	1	0	0	1	220	12	38	0.1	3.94	3	2	22.0
		moderately to highly fractured, ground	229609	21.0	0	3	2	1	0	0	1	149	11	68	0.1	4.00	6	2	22.0
		and broken core to 10.8m.	229610	23.0	0	3	2	1	0	0	3	135	8	35	0.2	4.38	7	2	13.0
		Homolithic breccia fragments, subrounded	229611	25.0	0	3	2	1	0	0	1	125	7	23	0.1	3.94	4	2	12.0
		to subangular, 5mm to 20mm wide.	229612	27.0	0	3	2	1	0	0	1	72	8	21	0.1	3.91	2	2	9.0
		28.8m to 29.4m - weakly propylitic, 10%	229613	29.0	2	3	2	2	0	0	16	508	4	19	0.1	3.77	8	2	75.0
		to 30% epidote, 5% to 10% disseminated	229614	31.0	2	3	2	2	0	0	1	416	6	23	0.1	3.95	16	2	49.0
		fine grained pyrite, 20% calcite in	229615	33.0	2	3	2	1	0	0	1	89	16	37	0.2	2.59	9	2	14.0
		matrix.	229616	35.0	2	3	2	2	0	0	1	77	2	22	0.1	3.93	6	2	11.0
			229617	37.0	2	3	2	1	0	0	1	122	12	38	0.1	2.82	11	2	5.0
			229618	39.0	0	3	1	1	0	0	5	32	2	23	0.1	2.83	3	2	6.0
			229619	41.0	1	3	2	1	0	0	2	445	4	21	0.2	3.81	10	2	77.0
		46.3m to 50.2m - polylithic breccia	229620	43.0	0	3	1	1	0	0	1	43	8	21	0.1	4.41	2	2	9.0
		fragments, pink-orange, white, grey,	229621	45.0	0	3	1	1	1	0	1	181	2	15	0.1	3.76	3	2	20.0
		dark green coloured, all contain white	229622	47.0	0	3	1	1	1	0	1	312	3	19	0.2	4.39	2	2	37.0
		feldspar laths.	229623	49.0	0	3	1	1	0	0	1	135	8	21	0.1	3.65	2	2	16.0
			229624	51.0	0	3	1	1	0	0	1	19	9	22	0.1	4.05	2	2	10.0
52.2	56.4	MASSIVE PROPYLITE	229625	52.2	0	3	1	1	0	0	1	300	9	36	0.1	3.92	2	2	16.0
		Light to medium green, very fine to	229626	53.0	5	4	2	2	0	0	1	235	7	39	0.1	6.19	2	2	19.0
		fine grained, moderately calcareous	229627	55.0	5	4	2	2	0	0	1	811	7	22	0.1	6.76	2	2	16.0
		matrix, massive epidote, chlorite on	229628	56.4	4	4	2	2	0	0	1	318	7	81	0.1	6.79	2	2	25.0
		fractures surfaces, 3% to 10%	229629	58.0	0	3	1	1	0	0	1	31	8	27	0.2	1.80	5	2	24.0
		disseminated fine grained pyrite,	229630	60.0	0	3	1	1	0	0	2	14	4	26	0.1	1.57	3	2	3.0
		trace disseminated chalcopyrite.	229631	62.0	1	2	1	1	1	0	4	65	7	40	0.2	2.47	2	2	260.0
		Sharp upper contact, 90 degrees to	229632	64.0	0	2	1	1	1	0	1	51	9	32	0.1	2.03	3	2	12.0

FROM	TO	DESCRIPTION	SAMPLE	TO	Py	Po	Cp	Sph	Gn	Qtz	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
		core axis, no distinct lithologic	229633	66.0	1	2	1	1	0	0	1	58	6	44	0.1	1.74	5	2	7.0
		break, i.e. subrounded to subangular	229634	68.0	1	2	1	1	0	0	1	232	6	39	0.3	2.51	3	2	100.0
		breccia fragments in felsic matrix.	229635	70.0	1	2	1	1	0	0	6	77	6	32	0.2	2.14	2	2	10.0
56.4	82.3	FELSIC BRECCIA	229636	72.0	1	2	2	2	0	0	1	178	8	29	0.1	1.95	2	2	10.0
		As above, very fine grained light to	229637	74.0	1	2	2	2	0	0	1	144	9	79	0.2	4.97	2	2	13.0
		medium green, non to weakly calcareous	229638	76.0	1	2	2	2	0	0	1	42	2	36	0.1	1.55	2	2	2.0
		matrix.	229639	78.0	1	2	2	2	0	0	1	261	7	41	0.1	3.59	3	2	7.0
		60.6m to 61.1m - massive propylite with	229640	80.0	1	2	2	2	1	0	1	652	5	38	0.5	3.54	5	2	123.0
		5% disseminated pyrite, locally forms	229641	82.3	0	0	1	1	1	0	10	440	5	32	0.3	1.87	8	2	32.0
		10mm to 20mm aggregates of massive	229642	84.0	0	0	1	1	0	0	9	349	2	21	0.2	1.29	4	2	25.0
		pyrite.	229643	86.0	0	0	1	1	1	0	5	273	2	21	0.2	2.19	6	2	13.0
		61.6m to 65.8m - 3% to 10% pink-orange	229644	88.0	0	0	2	1	0	0	2	228	8	22	0.1	2.50	3	2	7.0
		potassic feldspar in matrix.	229645	90.0	0	0	1	2	0	0	4	283	2	18	0.1	3.28	2	2	24.0
82.3	92.4	SILTSTONE	229646	92.0	0	0	2	2	0	0	4	1218	4	27	0.4	3.81	5	2	67.0
		Light grey, light green, dark green,	229647	93.0	0	0	2	2	0	0	5	1606	2	17	0.5	2.62	4	2	130.0
		pink and white beds, 3mm to 15mm wide	229648	95.0	0	0	2	1	0	0	4	927	2	16	0.1	3.18	2	2	52.0
		60 degrees to core axis, sharp upper	229649	97.0	0	0	2	1	0	0	6	1049	2	19	0.1	3.54	5	2	82.0
		contact at 60 degrees to core axis,	229650	99.0	1	0	3	1	0	0	7	1491	6	33	0.3	2.52	7	2	142.0
		very fine grained, non to weakly	229651	101.0	1	0	3	1	0	0	6	1099	2	29	0.3	3.54	8	2	105.0
		calcareous groundmass, trace chlorite	229652	103.0	2	0	3	1	2	0	1	65	26	96	0.4	5.03	2	2	13.0
		on fractures and vein selvages.	229653	105.0	2	0	2	1	2	0	1	36	14	53	0.1	2.89	12	2	9.0
92.4	110.0	AUGITE BASALT	229654	107.0	2	0	2	1	1	0	2	246	23	50	0.5	3.41	22	2	58.0
		Medium to dark green, fine to medium	229655	109.0	2	0	2	1	1	0	1	38	6	47	0.4	3.77	21	2	8.0
		grained, non to weakly calcareous matrix,	229656	111.0	2	1	2	1	1	0	1	68	20	72	0.5	4.80	21	2	8.0
		weakly chloritic, 5% to 20% euhedral	229657	113.0	0	0	2	1	0	0	17	205	2	35	0.1	2.81	2	2	32.0
		augite phenocrysts 1mm to 5mm wide,	229658	115.0	0	0	2	1	1	0	7	532	4	23	0.2	2.36	4	2	70.0
		white to pink-orange feldspar laths to	229659	117.0	0	0	2	1	0	0	1	58	7	45	0.1	3.14	2	2	12.0
		3% locally, trace to 5% disseminated	229660	119.0	0	0	2	1	0	0	1	58	5	30	0.1	3.62	2	2	14.0
		epidote, trace to 3% fine grained pyrite,	229661	121.3	0	0	2	1	0	0	1	110	4	33	0.1	3.32	4	2	15.0
		disseminated and along fractures, weak																	
		potassic alteration in matrix, locally,																	
		rare trace chalcopyrite.																	
		98.0m - 15cm highly chloritic basalt, calcite																	
		infilling shear, probably fault gouge.																	
110.0	121.3	FELSIC DYKE																	
		Dark grey, green, fine grained, non-calcareous																	

FROM	TO	DESCRIPTION	SAMPLE	TO	Py	Po	Cp	Sph	Gn	Qtz	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
		matrix, 5% to 15% white euhedral feldspar microlites, 3% to 8% dark green hornblende phenocrysts, locally show trachytic textures, calcite veinlets throughout at 1 per 10cm. 110.0m to 111.5m - calcite veinlet parallel to core axis with 3% coarse grained chalcopyrite. 111.5m to 114.5m - siltstone, light grey, very fine grained, local calcite and k-spar veinlets. 114.8m to 115.2m - highly fractured rock, local gouge. 118.0m - 10cm chloritic gouge. End of hole 91-9 at 121.3m.																	

LOCATION	11150 9625		LENGTH(m)	133.5		LOGGED BY	GOODALL		PROJECT	163	
AZIMUTH	60		CORE SIZE	NQw1		DATE LOGGED	10/27/91		PROPERTY	REDGOLD	
DIP	-50.0		DATE STARTED	10/20/91					HOLE NO	91-10	
ELEVATION	981.5		DATE COMPLETED	10/22/91							

FROM	TO	DESCRIPTION	SAMPLE	TO	Ep	Car	Chl	Py	Ksp	Bi	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
0	3.0	CASING		3.0															
3.0	23.6	FELSIC BRECCIA	229662	5.0	1	2	1	1	0	0	1	54	7	21	0.1	1.67	11	2	7.0
		Light green, fine to medium grained,	229663	7.0	1	2	1	1	0	0	2	382	10	38	0.4	5.74	10	2	29.0
		non to weakly calcareous matrix,	229664	9.0	1	2	1	1	0	0	2	58	5	22	0.1	3.22	7	2	15.0
		few calcite veinlets, 1 to 2 per 10cm,	229665	11.0	1	2	1	1	0	0	2	116	10	23	0.1	2.99	8	3	19.0
		45 to 60 degrees to core axis, trace	229666	13.0	1	2	1	1	0	0	2	241	6	25	0.1	3.35	9	2	17.0
		epidote disseminated pyrite, 3% to 5%	229667	15.0	1	2	1	1	0	0	1	202	7	23	0.1	2.12	9	2	9.0
		augite phenocrysts, subrounded to	229668	17.0	1	2	1	1	0	0	1	299	3	25	0.1	2.84	12	2	22.0
		rounded, 3mm to 5mm fragments, weakly	229669	19.0	1	2	1	2	0	0	2	379	11	21	0.1	3.06	13	2	10.0
		fractured, chlorite on fracture	229670	21.0	1	2	1	2	0	0	2	602	8	27	0.1	3.27	7	2	15.0
		selvages.	229671	23.0	1	2	1	2	0	0	2	726	6	24	0.2	3.32	9	3	16.0
23.6	133.5	AUGITE BASALT	229672	25.0	0	2	1	1	0	0	1	458	3	28	0.1	4.03	8	2	7.0
		Dark green, medium to coarse grained,	229673	27.0	0	2	1	1	0	0	1	30	6	25	0.1	3.92	8	2	3.0
		non to weakly calcareous matrix,	229674	29.0	0	2	1	1	0	0	2	179	4	31	0.1	5.08	9	3	2.0
		large 3mm to 8mm euhedral augite	229675	31.0	1	2	1	1	0	0	2	452	2	28	0.1	3.58	11	2	17.0
		phenocrysts 5% to 15%, white euhedral	229676	33.0	1	2	1	1	0	0	3	600	4	24	0.1	2.73	11	2	38.0
		feldspar phenocrysts 1% to 5%, 1% to 3%	229677	35.0	1	2	1	1	0	0	1	443	7	25	0.1	4.37	5	2	75.0
		disseminated fine grained pyrite, few	229678	37.0	1	2	2	1	0	0	1	378	4	26	0.1	4.49	9	2	42.0
		calcite veinlets 1 per 10cm.	229679	39.0	1	2	1	1	0	0	1	1115	12	34	0.4	5.70	10	2	56.0
		Local quartz veinlets, trace to 5%	229680	41.0	1	2	1	1	0	0	2	294	9	36	0.2	9.82	5	2	31.0
		epidote, disseminated and in patches.	229681	43.0	0	2	2	1	0	0	1	212	11	31	0.3	7.96	11	2	34.0
			229682	45.0	0	2	2	1	0	0	2	264	7	39	0.5	8.97	11	2	23.0
			229683	47.0	0	2	2	1	0	0	2	294	9	36	0.2	10.08	5	2	34.0
			229684	49.0	1	2	2	1	0	0	2	345	10	35	0.2	9.73	9	2	10.0
			229685	51.0	1	2	2	1	0	0	2	154	4	32	0.4	8.00	15	2	12.0
			229686	53.0	1	2	2	1	0	0	2	207	4	30	0.1	4.82	13	2	11.0
			229687	55.0	1	2	2	1	0	0	1	166	7	28	0.1	3.60	15	2	97.0
			229688	57.0	1	2	2	1	0	0	2	239	2	27	0.1	3.42	10	2	10.0
			229689	59.0	0	2	2	1	0	0	3	344	6	27	0.2	3.93	18	2	17.0
			229690	61.0	0	2	2	1	0	0	2	535	9	32	0.3	7.01	16	2	91.0
			229691	63.0	0	2	2	1	0	0	2	314	11	38	0.3	5.69	20	2	42.0
		64.9m - 10cm chloritic fault gouge.	229692	65.0	0	2	2	1	0	0	6	570	6	36	0.6	6.32	27	2	17.0
			229693	67.0	0	2	2	1	0	0	2	172	4	33	0.1	4.05	24	2	29.0

HOLE NO 91-10

FROM	TO	DESCRIPTION	SAMPLE	TO	Py	Po	Cp	Sph	Gn	Qtz	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
			229694	69.0	0	2	2	1	0	0	1	43	5	22	0.1	3.17	29	2	38.0
			229695	71.0	0	2	2	1	0	0	1	320	7	29	0.1	3.61	11	2	14.0
			229696	73.0	0	2	2	1	0	0	1	73	2	26	0.1	2.87	31	2	10.0
			229697	75.0	0	2	2	1	0	0	2	342	7	38	0.2	4.85	15	2	36.0
			229698	77.0	0	2	2	1	0	0	4	959	2	30	0.2	7.85	9	2	209.0
			229699	79.0	0	2	2	1	0	0	1	513	8	30	0.2	9.38	5	2	69.0
			229700	81.0	1	2	2	1	0	0	1	721	3	29	0.1	7.05	7	2	79.0
			229701	83.0	1	2	2	1	0	0	2	858	8	33	0.2	10.31	12	2	121.0
			229702	85.0	0	2	2	1	0	0	1	257	2	29	0.2	7.01	13	2	56.0
			229703	87.0	0	2	2	1	0	0	6	76	2	26	0.1	4.53	9	3	21.0
			229704	89.0	0	2	2	1	0	0	1	52	2	28	0.8	4.56	5	2	10.0
			229705	91.0	0	2	2	1	0	0	1	13	5	25	0.1	4.52	4	2	11.0
		93.1m to 93.4m - large 3mm to 10mm	229706	93.0	0	2	2	1	0	0	1	12	5	23	0.1	4.34	11	3	4.0
		calcite crystals infilling, open space	229707	95.0	0	2	2	1	0	0	1	8	3	24	0.1	4.17	12	2	5.0
		vein cavity.	229708	97.0	0	2	2	1	0	0	1	14	2	26	0.1	4.08	5	3	7.0
			229709	99.0	0	2	2	1	0	0	1	10	2	26	0.1	4.43	12	2	4.0
			229710	101.0	0	2	2	1	0	0	1	7	2	22	0.1	3.44	7	3	7.0
		103.0m to 133.5m - weak potassic	229711	103.0	1	2	2	1	1	0	1	27	7	27	0.1	4.98	6	6	8.0
		alteration, k-spar in veinlets, local	229712	105.0	1	2	2	1	1	0	1	106	2	25	0.1	6.44	14	2	41.0
		orange-pink colour in matrix.	229713	107.0	1	2	2	1	1	0	1	101	3	24	0.1	10.44	17	2	26.0
			229714	109.0	1	2	2	1	1	0	1	171	3	23	0.1	9.96	21	2	40.0
			229715	111.0	1	2	2	1	1	0	1	284	9	23	0.1	8.65	18	2	41.0
			229716	113.0	1	2	2	1	1	0	1	242	6	27	0.1	6.40	15	3	30.0
			229717	115.0	1	2	2	1	1	0	1	181	2	21	0.1	4.14	11	2	39.0
			229718	117.0	1	2	2	1	1	0	1	77	2	19	0.1	3.65	14	2	18.0
			229719	119.0	1	2	2	1	1	0	1	155	2	20	0.1	3.85	11	4	19.0
			229720	121.0	1	2	2	1	1	0	1	647	3	21	0.2	3.46	9	2	63.0
			229721	123.0	1	2	2	1	1	0	1	357	2	20	0.1	3.26	15	2	44.0
			229722	125.0	1	2	2	1	1	0	1	299	5	19	0.2	3.54	13	2	30.0
			229723	127.0	1	2	2	1	1	0	1	468	8	25	0.1	4.69	14	2	90.0
			229724	129.0	1	2	2	1	1	0	1	489	5	26	0.1	6.53	20	2	96.0
			229725	131.0	1	2	2	1	1	0	1	624	2	26	0.1	6.58	12	2	105.0
		End of hole 91-10 at 133.5m.	229726	133.5	1	2	2	1	1	0	1	348	2	25	0.1	5.46	19	3	21.0

LOCATION 11760 8225 | LENGTH(m) 121.9 | LOGGED BY GOODALL | PROJECT 163

AZIMUTH | CORE SIZE NQw1 | DATE LOGGED 10/31/91 | PROPERTY REDGOLD

DIP -90.0 | DATE STARTED 10/22/91 | HOLE NO 91-11

ELEVATION 887.0 | DATE COMPLETED 10/23/91

FROM	TO	DESCRIPTION	SAMPLE	TO	Ep	Car	Chl	Py	Ksp	Bi	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
0	6.1	CASING		6.1															
6.1	121.9	SILTSTONE (6) AND HORNBLENDE DYKE		9.0	0	2	0	1	0	0									
		Light grey, very fine grained, non		12.0	0	2	0	1	0	0									
		calcareous groundmass, poor to		15.0	0	2	0	1	0	0									
		moderately well bedded, 40 to 60 degrees		18.0	0	2	0	1	0	0									
		to core axis, 1mm to 5mm bedding laminae,		21.0	0	2	0	1	0	0									
		locally with pyrite and/or calcite		24.0	0	2	0	1	0	0									
		along bedding planes.		27.0	0	2	0	1	0	0									
		6.1m to 26.8m - moderately to highly		30.0	0	2	0	1	0	0									
		fractured.		33.0	0	2	0	1	0	0									
		26.8m to 28.2m - hornblende dyke, light		36.0	0	2	0	1	0	0									
		grey, aphanitic to fine grained matrix,		39.0	0	2	0	1	0	0									
		5% to 15% dark green euhedral hornblende		42.0	0	2	0	1	0	0									
		phenocrysts, 1% to 3% pyrite	229727	45.0	0	2	0	1	0	0	1	103	6	41	0.1	2.90	3	2	14.0
		disseminated and in veinlets, local	229728	48.0	0	2	0	1	0	0	1	127	5	35	0.1	3.03	8	2	28.0
		calcite veinlets.	229729	51.0	0	2	0	1	0	0	1	89	10	77	0.2	3.32	11	2	138.0
		34.0m to 35.0m - hornblende dyke, as	229730	54.0	0	2	0	1	0	0	1	85	26	161	0.1	3.21	39	2	49.0
		above. Sharp contacts 45 degrees to core	229731	57.0	0	2	0	1	0	0	1	73	92	412	0.4	3.33	84	2	41.0
		axis.	229732	60.0	0	2	0	1	0	0	2	101	6	94	0.2	3.57	24	2	32.0
		39.3m to 45.1m - hornblende dyke, as	229733	63.0	0	2	0	1	0	0	1	87	20	69	0.2	3.97	23	2	96.0
		above, local 1cm wide calcite veins,	229734	66.0	0	2	0	1	0	0	2	53	38	191	0.3	3.28	73	2	34.0
		sampling started at 42.0m.	229735	69.0	0	2	0	1	0	0	2	191	61	304	0.6	4.32	68	2	49.0
		54.1m to 54.8m - calcite vein breccia	229736	72.0	0	2	0	1	0	0	1	138	41	215	0.4	3.82	17	2	63.0
		with fragments of siltstone.	229737	75.0	0	2	0	1	0	0	2	107	18	99	0.3	2.97	5	2	745.0
		61.3m to 66.1m - hornblende dyke as	229738	78.0	0	2	0	1	0	0	2	146	13	59	0.1	3.02	15	2	13.0
		above.		81.0	0	2	0	1	0	0									
		68.3m - 15cm chloritic fault gouge.		84.0	0	2	0	1	0	0									
		68.5m to 78.4m - hornblende dyke, as		87.0	0	2	0	1	0	0									
		above, sampling completed at 78.0m.		90.0	0	2	0	1	0	0									
		90.1m to 92.2m - hornblende dyke.		93.0	0	2	0	1	0	0									
		96.3m - 10cm chloritic gouge in siltstone.		96.0	0	2	0	1	0	0									
		98.6m to 101.0m - hornblende dyke.		99.0	0	2	0	1	0	0									
				102.0	0	2	0	1	0	0									

FROM	TO	DESCRIPTION	SAMPLE	TO	Py	Po	Cp	Sph	Gn	Qtz	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
				105.0	0	2	0	1	0	0									
				108.0	0	2	0	1	0	0									
		113.5m to 115.8m - hornblende dyke.		111.0	0	2	0	1	0	0									
				114.0	0	2	0	1	0	0									
				117.0	0	2	0	1	0	0									
		119.0m to 121.9m - hornblende dyke.		120.0	0	2	0	1	0	0									
		End of hole 91-11 at 121.9m.		121.9	0	2	0	1	0	0									

LOCATION	11760 7640	LENGTH(m)	121.9	LOGGED BY	GOODALL	PROJECT	163
AZIMUTH		CORE SIZE	NQw1	DATE LOGGED	11/01/91	PROPERTY	REDGOLD
DIP	-90.0	DATE STARTED	10/23/91			HOLE NO	91-12
ELEVATION	883.9	DATE COMPLETED	10/24/91				

FROM	TO	DESCRIPTION	SAMPLE	TO	Ep	Car	Chl	Py	Ksp	Bi	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
0	13.7	CASING IN OVERBURDEN		13.7															
13.7	47.2	FELSIC BRECCIA AND HORNBLENDE DYKE	229739	17.0	1	3	1	2	0	0	1	177	8	72	0.2	4.96	9	2	20.0
		Dark grey-green colour, very fine to	229740	20.0	1	3	1	2	0	0	1	55	12	53	0.2	5.02	11	2	13.0
		fine grained, weakly calcareous matrix,	229741	23.0	1	3	1	2	0	0	1	12	6	48	0.1	4.56	2	2	4.0
		1% to 3% minute white feldspar laths,	229742	26.0	1	3	1	2	0	0	5	187	13	98	0.3	11.64	14	2	65.0
		1% to 3% fine grained augite phenocrysts	229743	29.0	1	3	1	2	0	0	1	237	8	59	0.5	6.36	6	2	7.0
		2% to 5% epidote, along fractures and	229744	32.0	1	2	1	2	0	0	1	27	8	40	0.1	5.28	8	2	16.0
		rimming fragments locally, 1% to 3% fine	229745	35.0	1	0	1	2	0	0	1	60	5	54	0.1	4.27	12	2	6.0
		grained pyrite, disseminated along	229746	38.0	1	0	1	2	0	0	1	68	10	60	0.1	4.63	9	2	4.0
		fractures and with epidote locally, few	229747	41.0	1	2	1	2	0	0	1	29	5	68	0.2	4.45	3	2	7.0
		fragments, subrounded to 2cm, weakly	229748	44.0	1	2	1	2	0	0	1	11	7	55	0.1	4.27	4	2	3.0
		fractured, few calcite veinlets, local	229749	47.0	1	2	1	2	0	0	1	13	5	53	0.1	4.40	2	2	7.0
		quartz chalcedony-calcite veins.	229750	50.0	1	2	1	2	0	0	1	113	9	92	0.1	5.55	3	2	7.0
		31.8m to 37.4m - hornblende dyke, dark	229751	53.0	1	2	1	2	0	0	1	66	13	170	0.2	4.98	6	4	9.0
		grey, very fine grained, non calcareous	229752	56.0	2	2	1	2	0	0	1	34	7	68	0.1	6.19	6	5	4.0
		matrix, 5% to 10% dark green euhedral	229753	59.0	2	2	1	2	0	0	1	29	6	54	0.1	4.59	9	3	5.0
		hornblende phenocrysts to 15mm long,		62.0	1	2	1	1	0	0									
		2% to 5% fine grained disseminated pyrite.		65.0	1	2	1	1	0	0									
47.2	115.3	BASALT		68.0	1	2	1	1	0	0									
		Maroon to dark grey, aphanitic to fine		71.0	0	2	1	1	0	0									
		grained, 3% very fine grained augite		74.0	0	2	1	1	0	0									
		phenocrysts, 1% to 2% very fine grained		77.0	0	2	1	1	0	0									
		disseminated pyrite, trace disseminated		80.0	0	2	1	1	0	0									
		epidote, local small rounded fragments.		83.0	0	2	1	1	0	0									
		66.0m to 67.1m - hornblende dyke, as above.		86.0	0	2	1	1	0	0									
		62.2m - 3cm wide calcite vein with 20% pyrite.		89.0	0	2	1	1	0	0									
		70.5m to 73.0m - calcite vein flooded area,		92.0	0	2	1	1	0	0									
		veinlets, subparallel to 45 degrees to core		95.0	0	2	1	1	0	0									
		axis.		98.0	0	2	1	1	0	0									
		79.2m to 83.5m - hornblende dyke.		101.0	0	2	1	1	0	0									
		106.2m to 109.7m - hornblende dyke as above.		104.0	0	2	1	1	0	0									
		87.5m to 115.3m - 1mm to 5mm rounded		107.0	0	2	1	1	0	0									
		fragments, felsic to mafic locally with		110.0	1	2	1	1	0	0									

FROM	TO	DESCRIPTION	SAMPLE	TO	Py	Po	Cp	Sph	Gn	Qtz	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
		trace epidote and pyrite.		113.0	1	2	1	1	0	0									
115.3	121.9	*SILTSTONE*		116.0	1	2	1	1	0	0									
		Very fine grained, dark grey groundmass,		119.0	0	2	1	1	0	0									
		1% to 3% disseminated fine grained pyrite,		121.7	0	2	1	1	0	0									
		few calcite veinlets subparallel to core axis, 1 to 3 per 10cm, bedding 45 degrees to core axis.																	
		End of hole 91-12 at 121.9m.																	

LOCATION	11510 7725	LENGTH(m)	155.4	LOGGED BY	GOODALL	PROJECT	163
AZIMUTH		CORE SIZE	NQw1	DATE LOGGED	11/02/91	PROPERTY	REDGOLD
DIP	-90.0	DATE STARTED	10/24/91			HOLE NO	91-13
ELEVATION	893.1	DATE COMPLETED	10/26/91				

FROM	TO	DESCRIPTION	SAMPLE	TO	Ep	Car	Chl	Py	Ksp	Bi	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
0	4.6	CASING IN OVERBURDEN		4.6															
4.6	155.4	FELSIC BRECCIA WITH HORNBLENDE DYKE	229754	8.0	1	2	1	2	0	0	3	48	5	31	0.2	3.95	10	2	84.0
		Fine grained, light to medium grey	229755	11.0	1	2	1	2	0	0	2	10	7	21	0.1	4.05	9	2	64.0
		colour, weakly calcareous matrix, 5% to	229756	14.0	1	2	1	2	1	0	1	4	7	19	0.1	4.14	7	2	22.0
		10% minute white feldspar laths, 2% to	229757	17.0	1	2	1	2	0	0	2	9	7	36	0.3	4.95	11	2	12.0
		3% dark green augite phenocrysts, trace	229758	20.0	1	2	1	2	0	0	1	20	5	17	0.1	3.75	6	2	38.0
		to 5% epidote, disseminated in veinlets	229759	23.0	1	2	1	2	1	0	1	4	5	25	0.1	4.14	9	2	14.0
		and surrounding fragments, 1% to 5%	229760	26.0	1	2	1	2	2	0	1	2	17	147	0.1	3.33	8	2	7.0
		fine to medium grained pyrite,	229761	29.0	1	2	1	2	2	0	1	4	5	29	0.1	4.40	6	2	32.0
		disseminated, in small aggregates and in	229762	32.0	1	2	1	2	1	0	1	7	7	24	0.1	3.96	4	2	50.0
		veinlets, local weak to moderate	229763	35.0	1	2	1	2	0	0	2	52	9	23	0.1	3.86	5	2	40.0
		potassic alteration, orange-pink colour	229764	38.0	1	2	1	2	0	0	1	22	2	16	0.1	3.79	9	2	30.0
		in matrix, commonly associated with	229765	41.0	1	2	1	2	0	0	1	17	7	29	0.1	4.23	8	2	53.0
		calcite veinlets, 1 to 3 per 10cm,	229766	44.0	1	2	1	2	0	0	1	33	8	16	0.1	3.67	8	2	58.0
		weakly fractured, fractures 45 to 60	229767	47.0	1	2	1	2	0	0	1	34	2	14	0.1	3.61	6	2	41.0
		degrees to core axis.	229768	50.0	1	2	1	2	0	0	1	46	9	18	0.1	3.27	3	2	9.0
		5.5m to 19.3m - hornblende dyke, dark	229769	53.0	1	2	1	2	0	0	1	11	9	19	0.1	3.81	8	2	18.0
		grey, fine grained non-calcareous	229770	56.0	1	2	1	2	0	0	1	27	5	26	0.1	5.37	4	3	10.0
		matrix, 5% to 12% dark green euhedral	229771	59.0	1	2	1	2	0	0	1	12	11	33	0.1	4.90	10	3	12.0
		hornblende phenocrysts 3mm to 7mm long,	229772	62.0	1	2	1	2	0	0	1	7	7	22	0.1	4.43	8	2	14.0
		3% to 5% disseminated fine grained	229773	65.0	1	2	1	2	0	0	1	11	4	20	0.1	4.22	10	2	11.0
		pyrite, trace to 2% disseminated epidote	229774	68.0	1	2	1	2	0	0	1	29	7	20	0.1	4.54	6	2	38.0
		local 1cm to 3cm wide xenoliths.	229775	71.0	1	2	1	2	1	0	1	133	4	25	0.1	4.73	4	2	11.0
		39.3m to 39.9m - open cavity, no core	229776	74.0	1	2	1	2	1	0	2	324	6	14	0.2	3.72	9	2	720.0
		recovery, hole made water.	229777	77.0	1	2	1	2	1	0	1	284	6	23	0.1	4.06	5	2	240.0
		63.2m to 66.4m - hornblende dyke, as	229778	80.0	1	2	1	2	1	0	1	251	4	19	0.2	4.18	7	2	350.0
		above.	229779	83.0	1	2	1	2	1	0	3	352	5	22	0.3	3.84	8	2	420.0
		70.9m to 80.8m - hornblende dyke, as	229780	86.0	1	2	1	2	1	0	1	193	3	32	0.1	5.82	2	4	250.0
		above, weak potassic alteration.	229781	89.0	1	2	1	2	1	0	2	34	3	30	0.1	4.34	5	2	15.0
		91.8m - 10cm chloritic fault gouge.	229782	92.0	1	2	1	2	1	0	1	98	5	29	0.1	4.52	8	2	200.0
		91.9m to 97.5m - hornblende dyke, as	229783	95.0	1	2	1	2	1	0	2	55	3	20	0.1	4.09	9	2	290.0
		above, with local subrounded fragments	229784	98.0	1	2	1	2	1	0	2	100	4	18	0.1	3.60	7	2	75.0
		of felsic breccia, hornblende	229785	101.0	1	2	1	2	1	0	1	241	2	19	0.1	3.44	9	2	220.0

FROM	TO	DESCRIPTION	SAMPLE	TO	Py	Po	Cp	Sph	Gn	Qtz	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
		phenocrysts subaligned.	229786	104.0	1	2	1	2	0	0	1	110	5	21	0.1	3.44	11	2	52.0
		97.5m to 99.7m - felsic breccia with	229787	107.0	1	2	1	2	1	0	1	218	6	28	0.2	2.88	6	2	37.0
		fragments of hornblende dyke, weak	229788	110.0	1	2	1	2	1	0	1	56	2	22	0.1	3.83	4	2	31.0
		potassic alteration in matrix.	229789	113.0	1	2	1	2	0	0	1	54	2	20	0.1	4.19	2	2	36.0
		99.7m to 102.3m - hornblende dyke, as	229790	116.0	1	2	1	2	0	0	1	82	3	32	0.1	3.92	2	2	84.0
		above, local aggregates of pyrite.	229791	119.0	1	2	1	2	0	0	1	46	3	32	0.1	3.37	2	2	31.0
		102.3m to 108.9m - felsic breccia, 3% to	229792	122.0	1	2	1	2	0	0	1	10	2	33	0.1	3.71	2	2	9.0
		10% disseminated epidote, 2% to 5%	229793	125.0	1	2	1	2	0	0	1	16	4	24	0.1	5.58	2	2	19.0
		fine grained pyrite, disseminated in	229794	128.0	1	2	1	2	0	0	1	17	6	26	0.1	6.38	2	2	10.0
		aggregates and in veinlets, weak	229795	131.0	1	2	1	2	0	0	1	7	4	18	0.1	10.02	9	2	20.0
		potassic alteration, locally moderately	229796	134.0	1	2	1	2	0	0	1	46	3	26	0.1	5.94	2	2	25.0
		to highly siliceous matrix.	229797	137.0	1	2	1	2	0	0	1	117	4	24	0.1	7.06	6	2	21.0
		108.9m to 112.1m - hornblende dyke, as	229798	140.0	1	2	1	2	0	0	1	83	2	24	0.1	5.85	4	2	17.0
		above.	229799	143.0	1	2	1	2	0	0	1	108	2	17	0.1	3.60	14	2	19.0
		129.0m to 139.6m - bedded tuff?, very	229800	146.0	1	2	1	2	0	0	1	82	2	20	0.1	3.54	5	2	27.0
		fine grained, dark purple and green	229801	149.0	1	2	1	2	0	0	1	13	2	25	0.1	4.40	2	2	10.0
		mottled colour, trace to 2% minute	229802	152.0	1	2	1	2	0	0	1	11	2	17	0.1	4.78	3	2	13.0
		white feldspar laths, bedding 25 to	229803	155.4	1	2	1	2	0	0	1	14	2	23	0.1	5.04	2	2	11.0
		40 degrees to core axis, locally with																	
		disseminated pyrite along bedding planes.																	
		144.2m to 146.0m - hornblende dyke.																	
		End of hole 91-13 at 155.4m.																	

LOCATION	11510 8060	LENGTH(m)	121.9	LOGGED BY	GOODALL
AZIMUTH		CORE SIZE	NQw1	DATE LOGGED	11/04/91
DIP	-90.0	DATE STARTED	10/26/91	PROJECT	163
ELEVATION	908.3	DATE COMPLETED	10/27/91	PROPERTY	REDGOLD
				HOLE NO	91-14

FROM	TO	DESCRIPTION	SAMPLE	TO	Ep	Car	Chl	Py	Ksp	Bi	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
0	4.3	CASING IN OVERBURDEN		4.3															
4.3	121.9	SILTSTONE AND HORNBLENDE DYKE		6.0	1	1	0	1	0	0									
		Light to dark grey, very fine to fine		9.0	1	1	0	1	0	0									
		grained, non-calcareous groundmass,		12.0	1	1	0	1	0	0									
		locally well bedded, .5cm to 3cm wide,		15.0	1	1	0	1	0	0									
		bedding 30 degrees to core axis, trace		18.0	1	1	0	1	0	0									
		to 2% pyrite, disseminated, along		21.0	1	1	0	1	0	0									
		bedding planes and in veinlets, local		24.0	1	1	0	1	0	0									
		calcite veinlets, local patches		27.0	1	1	0	1	0	0									
		epidote.		30.0	1	1	0	1	0	0									
		21.3m to 23.2m - hornblende dyke, medium		33.0	1	1	0	1	0	0									
		grey, fine to medium grained, 5% to 10%	229804	36.0	1	1	0	1	0	0	4	187	3	54	0.2	3.30	10	2	14.0
		dark green hornblende phenocrysts, 1%	229805	39.0	1	1	0	1	0	0	2	126	5	44	0.1	4.31	9	2	19.0
		to 3% pyrite.	229806	42.0	1	1	0	1	0	0	1	136	2	24	0.1	3.78	5	2	13.0
		27.4m - 15cm ground core.	229807	45.0	1	1	0	1	0	0	3	92	2	25	0.1	3.66	13	2	31.0
		31.6m to 32.5m - hornblende dyke.	229808	48.0	1	1	0	1	0	0	4	62	2	10	0.1	2.69	2	2	1.0
		35.2m to 43.1m - hornblende dyke, as	229809	51.0	1	1	0	1	0	0	4	85	2	8	0.1	2.21	2	2	10.0
		above, local 1cm to 2cm aggregates of	229810	54.0	1	1	0	1	0	0	2	9	2	9	0.1	1.81	2	2	4.0
		pyrite.		57.0	1	1	0	1	0	0									
		58.2m - bedding 45 degrees to core axis.		60.0	1	1	0	1	0	0									
				63.0	1	1	0	1	0	0									
				66.0	1	1	0	1	0	0									
				69.0	1	1	0	1	0	0									
		70.0m to 72.8m - hornblende dyke.		72.0	1	1	0	1	0	0									
				75.0	1	1	0	1	0	0									
		77.3m to 80.4m - hornblende dyke.		78.0	1	1	0	1	0	0									
				81.0	1	1	0	1	0	0									
				84.0	1	1	0	1	0	0									
		88.4m to 92.5m - hornblende dyke.		87.0	1	1	0	1	0	0									
				90.0	1	1	0	1	0	0									
				93.0	1	1	0	1	0	0									
				96.0	1	1	0	1	0	0									
				99.0	1	1	0	1	0	0									

HOLE NO 91-14

FROM	TO	DESCRIPTION	SAMPLE	TO	Py	Po	Cp	Sph	Gn	Qtz	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
				102.0	1	1	0	1	0	0									
				105.0	1	1	0	1	0	0									
				108.0	1	1	0	1	0	0									
				111.0	1	1	0	1	0	0									
				114.0	1	1	0	1	0	0									
		117.7m to 121.9m - hornblende dyke.		117.0	1	1	0	1	0	0									
		End of hole 91-14 at 121.9m.		121.9	1	1	0	1	0	0									

LOCATION	11200 7700	LENGTH(m)	61.0	LOGGED BY	GOODALL	PROJECT	163
AZIMUTH		CORE SIZE	NQw1	DATE LOGGED	11/05/91	PROPERTY	REDGOLD
DIP	-90.0	DATE STARTED	10/27/91			HOLE NO	91-15
ELEVATION	893.0	DATE COMPLETED	10/27/91				

FROM	TO	DESCRIPTION	SAMPLE	TO	Ep	Car	Chl	Py	Ksp	Bi	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
0	12.2	CASING		12.2															
12.2	61.0	HORNBLENDE DYKE AND FELSIC BRECCIA	229811	15.0	0	1	3	2	0	0	1	110	6	65	0.1	4.17	4	2	9.0
		Dark grey, fine grained, non-calcareous	229812	18.0	0	1	3	2	0	0	1	80	8	60	0.2	3.68	2	2	20.0
		matrix, weakly to moderately chloritic,	229813	21.0	0	1	3	2	0	0	2	69	4	55	0.1	3.72	2	2	34.0
		several calcite veinlets, 3 to 5 per	229814	24.0	0	1	3	2	0	0	1	96	3	44	0.1	3.82	3	2	35.0
		10cm, highly fractured and broken core,	229815	27.0	0	1	3	2	0	0	1	75	2	41	0.1	4.24	4	2	9.0
		RQD 0 to 30%, 1% to locally 5%	229816	30.0	0	1	3	2	1	0	1	54	5	38	0.1	5.40	2	3	12.0
		disseminated pyrite, rare trace epidote,	229817	33.0	0	1	3	2	1	0	1	102	4	57	0.1	5.12	2	2	11.0
		3% to 5% anhedral hornblende	229818	36.0	1	1	3	2	0	0	1	100	6	43	0.1	4.91	2	2	19.0
		phenocrysts, 1% to 3% anhedral augite		39.0	0	1	3	2	0	0									
		phenocrysts, contacts between dyke and		42.0	0	1	3	2	0	0									
		volcanic are obscure.		45.0	0	1	3	2	0	0									
		Hole lost at 61.0m due to excessive cave,		48.0	0	1	3	2	0	0									
		140 foot rods in hole.		51.0	0	1	3	2	0	0									
				54.0	0	1	3	2	0	0									
				57.0	1	1	3	2	0	0									
				60.0	0	1	3	2	0	0									
		End of hole 91-15 at 61.0m.		61.0	0	1	3	2	0	0									

LOCATION	10880 7875	LENGTH(m)	98.5	LOGGED BY	GOODALL	PROJECT 163
AZIMUTH		CORE SIZE	NQw1	DATE LOGGED	11/07/91	PROPERTY REDGOLD
DIP	-90.0	DATE STARTED	10/27/91			HOLE NO 91-16
ELEVATION	899.2	DATE COMPLETED	10/28/91			

FROM	TO	DESCRIPTION	SAMPLE	TO	Ep	Car	Chl	Py	Ksp	Bi	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
0	7.6	CASING IN OVERBURDEN		7.6															
7.6	98.5	GABBRO	229819	10.0	0	0	3	1	1	0	1	163	2	38	0.1	5.22	6	5	15.0
		Dark green, medium grained, non-	229820	13.0	0	0	3	1	1	0	1	266	2	56	0.1	6.96	5	2	11.0
		calcareous matrix, moderately to	229821	16.0	0	0	3	1	1	0	1	220	2	67	0.1	6.90	2	8	10.0
		highly chloritic, 3% to 5% anhedral	229822	19.0	1	0	3	1	1	0	1	389	9	40	0.1	6.36	12	5	33.0
		white feldspar phenocrysts, rare trace	229823	22.0	0	0	3	1	1	0	1	325	2	34	0.1	5.05	11	2	39.0
		epidote, trace to 2% disseminated	229824	25.0	0	0	3	1	1	0	1	176	2	58	0.1	6.06	5	2	13.0
		pyrite, weak to moderately fractured,	229825	28.0	0	0	3	1	1	0	1	131	2	51	0.1	5.10	3	2	9.0
		chlorite on fracture surfaces, few	229826	31.0	0	0	3	1	1	0	1	125	2	47	0.1	4.81	2	2	8.0
		calcite veinlets, 1 per 10cm, rare	229827	34.0	0	0	3	1	1	0	1	187	2	51	0.1	5.18	2	2	8.0
		quartz veinlets, 5% to 15% augite		37.0	0	0	3	1	1	0									
		phenocrysts, subhedral to euhedral,		40.0	0	0	3	1	1	0									
		weakly to moderately magnetic		43.0	0	0	3	1	1	0									
		throughout.		46.0	0	0	3	1	1	0									
		35.6m - 15cm chloritic gouge.		49.0	0	0	3	1	0	0									
				52.0	0	0	3	1	0	0									
				55.0	0	0	3	1	0	0									
				58.0	0	0	3	1	0	0									
				61.0	0	0	3	1	0	0									
		64.0m to 68.6m - highly fractured and broken.		64.0	0	0	3	1	0	0									
				67.0	0	0	3	1	0	0									
				70.0	0	0	3	1	0	0									
				73.0	0	0	3	1	0	0									
				76.0	0	0	3	1	0	0									
				79.0	0	0	3	1	0	0									
				82.0	0	0	3	1	0	0									
				85.0	0	0	3	1	0	0									
				88.0	0	0	3	1	0	0									
				91.0	0	0	3	1	0	0									
				94.0	0	0	3	1	0	0									
				97.0	0	0	3	1	0	0									
		End of hole 91-16 at 98.5m.		98.5	0	0	3	1	0	0									

LOCATION	11200 7925	LENGTH(m)	128.0	LOGGED BY	GOODALL	PROJECT	163
AZIMUTH		CORE SIZE	NQw1	DATE LOGGED	11/07/91	PROPERTY	REDGOLD
DIP	-90.0	DATE STARTED	10/29/91			HOLE NO	91-17
ELEVATION	912.9	DATE COMPLETED	10/30/91				

FROM	TO	DESCRIPTION	SAMPLE	TO	Ep	Car	Chl	Py	Ksp	Bi	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
0	1.5	CASING IN OVERBURDEN		1.5															
1.5	128.0	FELSIC BRECCIA AND HORNBLENDE DYKE	229828	4.0	0	1	2	2	0	0	1	155	4	36	0.1	4.91	2	3	42.0
		Medium to dark grey, very fine to	229829	7.0	0	1	2	2	0	0	1	144	2	25	0.1	4.95	3	2	47.0
		fine grained, non-calcareous matrix,	229830	10.0	0	1	2	2	0	0	1	142	2	30	0.1	4.89	4	2	39.0
		weak to moderately magnetic, trace to	229831	13.0	0	1	2	2	0	0	1	231	3	30	0.1	4.84	4	2	43.0
		3% fine grained pyrite, disseminated	229832	16.0	0	1	2	2	0	0	1	148	4	39	0.1	4.71	2	2	37.0
		and in veinlets, local calcite veinlets,	229833	19.0	0	1	2	2	0	0	1	147	2	41	0.1	5.18	4	2	26.0
		5% to 15% dark green to black fragments,	229834	22.0	0	1	2	2	0	0	1	156	2	44	0.1	5.78	2	2	23.0
		trace to 2% brick red fragments. Local	229835	25.0	0	1	2	2	0	0	1	164	2	44	0.1	5.68	2	2	26.0
		subangular felsic fragments, trace	229836	28.0	0	1	2	2	0	0	1	133	3	39	0.1	5.40	2	2	43.0
		epidote locally.	229837	31.0	0	1	2	2	0	0	1	99	2	44	0.1	5.15	2	2	21.0
			229838	34.0	0	1	2	2	0	0	1	198	2	36	0.1	6.02	7	2	43.0
		37.3m to 39.7m - pyrite, disseminated	229839	37.0	0	1	2	2	0	0	1	67	3	37	0.1	5.99	2	2	43.0
		in aggregates and veinlets.	229840	40.0	1	1	2	2	0	0	1	301	3	51	0.1	8.70	7	2	123.0
			229841	43.0	0	1	2	2	0	0	1	156	2	40	0.1	5.96	5	2	33.0
			229842	46.0	0	1	2	2	0	0	1	111	2	31	0.1	5.89	4	2	75.0
			229843	49.0	0	1	2	2	0	0	1	110	2	30	0.1	5.45	2	2	46.0
			229844	52.0	0	1	2	2	0	0	1	108	2	30	0.1	5.23	3	2	30.0
			229845	55.0	0	1	2	2	0	0	1	99	2	31	0.1	5.61	2	2	59.0
			229846	58.0	0	1	2	2	0	0	1	132	2	37	0.1	5.77	10	2	38.0
			229847	61.0	0	1	2	2	0	0	1	144	2	38	0.1	5.10	2	2	31.0
		68.6m to 70.5m - felsic dyke, light	229848	64.0	0	1	2	2	0	0	3	126	2	30	0.1	4.80	9	2	35.0
		grey, medium grained matrix, 10%	229849	67.0	0	1	2	2	0	0	1	95	2	41	0.1	5.77	6	2	50.0
		dark green euhedral augite phenocrysts,	229850	70.0	0	1	2	2	0	0	1	103	2	40	0.1	5.88	6	2	38.0
		2% disseminated pyrite.	229851	73.0	0	1	2	2	0	0	1	173	2	43	0.1	5.68	3	2	26.0
			229852	76.0	0	1	2	2	0	0	1	186	2	35	0.1	5.12	2	2	39.0
			229853	79.0	0	1	2	2	0	0	1	129	2	36	0.1	5.32	2	2	41.0
			229854	82.0	0	1	2	2	0	0	1	140	2	44	0.1	6.54	2	2	42.0
			229855	85.0	0	1	2	2	0	0	1	89	2	40	0.1	5.37	2	2	28.0
			229856	88.0	0	1	2	2	0	0	2	93	2	36	0.1	5.06	2	2	34.0
			229857	91.0	0	1	2	2	0	0	1	152	2	38	0.1	6.40	2	2	31.0
			229858	94.0	0	1	2	2	0	0	1	81	2	37	0.1	5.84	2	2	38.0
		98.3m to 99.1m - hornblende dyke, dark	229859	97.0	0	1	2	2	0	0	1	40	2	34	0.1	5.65	2	2	34.0

HOLE NO 91-17

FROM	TO	DESCRIPTION	SAMPLE	TO	Py	Po	Cp	Sph	Gn	Qtz	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
		grey, fine grained, weakly chloritic	229860	100.0	0	1	2	2	0	0	1	91	2	38	0.1	6.04	2	2	36.0
		matrix, 3% to 10% dark green euhedral	229861	103.0	0	1	2	2	0	0	2	1304	3	40	0.8	5.58	4	2	1050.0
		hornblende phenocrysts, subaligned.	229862	106.0	0	1	2	2	0	0	2	1521	2	34	0.5	4.87	4	2	1020.0
		100.4m to 110.0m - local 5mm to 15mm	229863	109.0	0	1	2	2	0	0	1	829	2	33	0.3	5.58	2	2	480.0
		wide aggregates of pyrite.	229864	112.0	0	1	2	2	0	0	1	817	6	28	0.2	5.54	2	2	470.0
		110.5m - 5cm chloritic gouge.	229865	115.0	0	1	2	2	0	0	1	173	2	29	0.1	5.43	2	2	39.0
			229866	118.0	0	1	2	2	0	0	1	122	3	26	0.1	4.98	6	2	37.0
			229867	121.0	0	1	2	2	0	0	1	81	4	31	0.1	5.10	2	2	27.0
			229868	124.0	0	1	2	2	0	0	1	50	2	24	0.1	5.58	2	2	40.0
		End of hole 91-17 at 128.0m.	229869	128.0	0	1	2	2	0	0	1	119	2	31	0.1	5.74	2	2	84.0

LOCATION 11100 8360
AZIMUTH
DIP -90.0
ELEVATION 912.9

LENGTH(m) 77.7
CORE SIZE NQw1
DATE STARTED 10/30/91
DATE COMPLETED 10/31/91

LOGGED BY GOODALL
DATE LOGGED 11/08/91

PROJECT 163
PROPERTY REDGOLD
HOLE NO 91-18

FROM	TO	DESCRIPTION	SAMPLE	TO	Ep	Car	Chl	Py	Ksp	Bi	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
0	4.6	CASING IN OVERBURDEN		4.6															
4.6	77.7	SILTSTONE		7.0	0	0	1	2	0	0									
		Light to medium grey, locally maroon		10.0	0	0	1	2	0	0									
		and brown coloured, very fine grained,		13.0	0	0	1	2	0	0									
		non-calcareous groundmass, very hard,		16.0	0	0	1	2	0	0									
		cherty appearance, 1% to 5% fine		19.0	0	0	1	2	0	0									
		grained pyrite, disseminated and		22.0	0	0	1	2	0	0									
		along fractures, and bedding planes,		25.0	0	0	1	2	0	0									
		moderate to well bedded, bedding 1mm		28.0	0	0	1	2	0	0									
		to 10mm wide, 45 degrees to core axis.		31.0	0	0	1	2	0	0									
		local calcite stringers, weak to		34.0	1	0	1	2	0	0									
		moderately fractured.		37.0	0	0	1	2	0	0									
		4.6m to 81.m - hornblende dyke, dark		40.0	0	0	1	2	0	0									
		green, fine grained matrix, 3% to 10%		43.0	0	0	1	2	0	0									
		dark green hornblende phenocrysts, 2%		46.0	0	0	1	2	0	0									
		disseminated fine grained pyrite.		49.0	0	0	1	2	0	0									
		35.8m to 39.7m - hornblende dyke as		52.0	0	0	1	2	0	0									
		above.		55.0	0	0	1	2	0	0									
		58.3m to 58.7m - highly fractured,		58.0	0	0	1	2	0	0									
		broken rock, moderately chloritic.		61.0	0	0	1	2	0	0									
		64.5m - 15cm ground core, moderately		64.0	0	0	1	2	0	0									
		chloritic.		67.0	0	0	1	2	0	0									
				70.0	0	0	1	2	0	0									
				73.0	0	0	1	2	0	0									
				76.0	0	0	1	2	0	0									
		End of hole 91-18 at 77.7m.		77.7	0	0	1	2	0	0									

LOCATION	10420 9030	LENGTH(m)	158.5	LOGGED BY	GOODALL	PROJECT	163
AZIMUTH		CORE SIZE	NQw1	DATE LOGGED	11/08/91	PROPERTY	REDGOLD
DIP	-90.0	DATE STARTED	11/01/91			HOLE NO	91-19
ELEVATION	990.6	DATE COMPLETED	11/02/91				

FROM	TO	DESCRIPTION	SAMPLE	TO	Ep	Car	Chl	Py	Ksp	Bi	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
0	3.0	CASING IN OVERBURDEN		3.0															
3.0	128.3	AUGITE BASALT	229870	6.0	3	3	2	2	0	0	1	313	4	74	0.1	4.78	9	2	27.0
		Dark green, fine to medium grained,	229871	9.0	3	3	2	2	0	0	1	155	5	57	0.1	3.94	8	2	14.0
		weak to moderately calcareous matrix,	229872	12.0	3	3	2	2	0	0	3	423	4	68	0.3	4.55	7	2	37.0
		3% to 10% dark green euhedral augite	229873	15.0	3	3	2	2	0	0	1	59	5	74	0.1	4.33	12	2	53.0
		phenocrysts, 2% to 5% euhedral to	229874	18.0	3	3	2	2	0	0	3	143	3	79	0.2	4.08	11	2	90.0
		subhedral feldspar laths, weakly	229875	21.0	3	3	2	2	1	0	1	675	2	59	0.3	3.94	13	3	185.0
		chloritic, weak to moderate propylitic	229876	24.0	3	3	2	2	1	0	1	46	4	64	0.1	3.91	11	2	84.0
		alteration, 5% to 30% epidote, 5% to	229877	27.0	3	3	2	2	0	0	1	115	6	48	0.1	4.35	11	2	45.0
		10% calcite, trace potassic alteration,	229878	30.0	2	3	2	2	1	0	1	163	2	47	0.1	4.88	6	2	54.0
		1% to 4% fine to medium grained pyrite,	229879	33.0	2	3	2	2	1	0	2	390	4	70	0.3	4.83	7	2	94.0
		disseminated and along fractures and in	229880	36.0	3	3	2	2	1	0	1	208	2	65	0.1	4.40	7	2	370.0
		1cm to 3cm aggregates, few calcite	229881	39.0	3	3	2	2	1	0	1	613	13	51	0.5	4.37	10	2	87.0
		veinlets, 1 per 10cm, locally 5cm wide,	229882	42.0	2	3	2	2	1	0	1	760	4	52	0.3	4.92	9	2	171.0
		rarely with coarse pyrite and	229883	45.0	2	1	2	2	0	0	1	661	3	50	0.5	4.24	8	2	85.0
		chalcopyrite, trace to 1% disseminated	229884	48.0	2	1	2	2	0	0	1	158	2	62	0.1	4.46	8	2	16.0
		coarse grained chalcopyrite.	229885	51.0	2	1	2	2	0	0	1	479	2	54	0.3	4.50	9	2	141.0
		18.9m - 3cm wide calcite vein with	229886	54.0	2	1	2	2	0	0	1	245	3	63	1.5	6.76	9	2	1830.0
		coarse pyrite and chalcopyrite to 10%.	229887	57.0	3	3	2	2	1	0	1	107	5	95	0.2	5.28	22	2	102.0
		25.4m to 27.6m - hornblende dyke,	229888	60.0	3	3	2	2	1	0	1	244	32	174	0.3	3.71	18	2	52.0
		dark grey-green, fine grained, non to	229889	63.0	3	3	2	2	2	0	1	119	7	163	0.2	3.44	12	2	23.0
		weakly calcareous matrix, 3% to 8% dark	229890	66.0	2	3	2	2	2	0	2	179	16	147	0.4	4.36	13	2	116.0
		green euhedral coarse hornblende	229891	69.0	1	1	2	2	2	0	1	44	15	217	0.6	6.21	8	2	63.0
		phenocrysts, trace patchy epidote, 2%	229892	72.0	1	1	2	2	2	0	2	42	4	54	0.1	5.87	3	2	26.0
		coarse grained pyrite, locally with	229893	75.0	1	3	2	2	2	0	1	23	7	146	0.1	6.57	3	2	29.0
		fragments and clasts of augite basalt.	229894	78.0	1	1	2	2	2	0	2	131	3	88	0.1	5.54	10	2	69.0
		33.1m - trace disseminated chalcopyrite.	229895	81.0	1	3	2	2	2	0	1	454	10	99	0.5	5.42	13	3	150.0
		42.7m to 43.1m - 1% coarse grained	229896	84.0	3	3	2	2	2	0	1	114	2	52	0.3	5.70	6	2	68.0
		chalcopyrite in veinlets and coarse	229897	87.0	3	3	2	2	2	0	1	238	2	43	0.1	4.57	8	2	39.0
		grained pyrite aggregates.	229898	90.0	3	3	2	2	2	0	1	380	2	36	0.4	3.98	8	2	150.0
		51.8m to 55.0m - hornblende dyke, as	229899	93.0	3	3	2	2	2	0	1	233	2	43	0.1	3.75	8	2	35.0
		above, locally aphanitic to very fine	229900	96.0	3	3	2	2	2	0	1	163	4	72	0.1	3.72	13	2	35.0
		grained.	229901	99.0	3	3	2	2	2	0	1	34	2	76	0.1	4.00	10	2	6.0

FROM	TO	DESCRIPTION	SAMPLE	TO	Py	Po	Cp	Sph	Gn	Qtz	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
		55.3m to 65.0m - weak potassic	229902	102.0	3	3	2	2	2	0	1	720	6	67	0.7	4.54	17	2	168.0
		alteration matrix and fragments show	229903	105.0	3	3	2	2	2	0	2	375	4	87	0.3	3.82	12	2	53.0
		orange-pink colour, local traces	229904	108.0	3	3	2	2	2	0	2	257	7	119	0.1	4.43	14	2	64.0
		coarse grained chalcopyrite.	229905	111.0	3	3	2	2	2	0	1	174	8	119	0.1	4.45	13	2	15.0
		65.0m to 66.2m - hornblende dyke, as	229906	114.0	3	3	2	2	2	0	1	191	2	91	0.2	4.18	14	2	78.0
		above.	229907	117.0	3	3	2	2	2	0	1	190	2	58	0.1	3.73	12	2	18.0
		66.2m to 83.2m - felsic dyke, medium	229908	120.0	3	3	2	2	2	0	1	40	2	23	0.2	1.80	16	2	45.0
		grey, fine to medium grained matrix,	229909	123.0	3	3	2	2	2	0	1	415	2	33	0.3	2.33	16	2	112.0
		5% to 10% subhedral white feldspar	229910	126.0	1	3	2	2	2	0	1	408	2	52	0.1	4.14	15	2	45.0
		laths, 1% disseminated pyrite.	229911	129.0	3	3	2	2	2	0	1	52	2	75	0.1	3.69	18	2	67.0
		78.3m to 79.3m - highly fractured and	229912	132.0	2	3	2	2	0	0	1	69	2	66	0.1	4.54	12	2	36.0
		broken, moderately chloritic.	229913	135.0	1	3	2	2	1	0	1	54	2	87	0.1	3.73	18	2	22.0
		78.6m - 10cm chloritic fault gouge.	229914	138.0	1	3	2	2	1	0	1	318	24	149	0.3	4.35	20	2	109.0
		84.7m to 85.0m - local coarse grained	229915	141.0	1	3	2	2	0	0	1	165	2	79	0.1	3.95	21	2	47.0
		chalcopyrite.	229916	144.0	1	3	2	2	0	0	3	92	5	89	0.7	4.01	12	2	21.0
		103.9m to 124.0m - weak potassic	229917	147.0	1	3	2	2	0	0	1	124	2	81	0.5	3.73	10	2	31.0
		alteration, weak propylitic alteration,	229918	150.0	1	3	2	2	0	0	1	137	2	53	0.1	4.09	5	2	27.0
		trace to 2% disseminated coarse grained	229919	153.0	1	3	2	2	0	0	1	131	2	49	0.1	3.90	10	2	26.0
		chalcopyrite.	229920	156.0	1	3	2	2	0	0	1	138	2	74	0.1	3.85	11	2	30.0
		117.2m to 122.1m - intense propylitic	229921	158.5	1	3	2	2	0	0	1	122	2	52	0.2	3.92	5	2	66.0
		alteration, massive epidote, 2% coarse																	
		grained chalcopyrite.																	
		143.3m - mislatch, .7m core lost.																	
		143.4m - 5cm chloritic fault gouge.																	
128.3	158.5	FELSIC BRECCIA																	
		Increase in feldspar content, 5% to 15%																	
		white coarse grained euhedral feldspar																	
		laths, 3% to 10% dark green subhedral																	
		augite phenocrysts, trace disseminated																	
		chalcopyrite.																	
		150.1m - calcite vein 1cm wide, 45 degrees																	
		to core axis, 2cm potassic feldspar on																	
		selvages either side of vein, subangular																	
		to angular fragments .5cm to 3cm wide.																	
		End of hole 91-19 at 158.5m.																	

LOCATION	10100 9990	LENGTH(m)	158.5	LOGGED BY	GOODALL	PROJECT	163
AZIMUTH		CORE SIZE	NQw1	DATE LOGGED	11/09/91	PROPERTY	REDGOLD
DIP	-90.0	DATE STARTED	11/02/91			HOLE NO	91-20
ELEVATION	975.4	DATE COMPLETED	11/03/91				

FROM	TO	DESCRIPTION	SAMPLE	TO	Ep	Car	Chl	Py	Ksp	Bi	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
0	6.1	CASING IN OVERBURDEN		6.1															
6.1	158.5	AUGITE BASALT	229922	9.0	5	4	2	2	1	0	7	64	9	144	0.4	3.71	36	2	55.0
		Light to medium grey and grey, fine to	229923	12.0	5	4	2	2	1	0	16	125	5	126	0.1	3.95	25	2	24.0
		medium grained, weak to moderately	229924	15.0	5	4	2	2	1	0	1	300	5	437	0.4	2.42	12	2	70.0
		calcareous, weakly chloritic matrix,	229925	18.0	5	4	2	2	1	0	1	32	16	133	0.6	2.06	16	2	136.0
		5% to 10% euhedral coarse grained	229926	21.0	5	4	2	2	1	0	1	12	5	72	0.2	1.62	9	2	18.0
		augite phenocrysts, 1% to 5% fine	229927	24.0	5	4	2	2	1	0	2	24	8	90	0.1	2.12	12	2	30.0
		grained pyrite, disseminated and in	229928	27.0	5	4	2	2	1	0	2	170	14	102	0.1	2.45	13	2	52.0
		small aggregates, trace chalcopyrite,	229929	30.0	5	4	2	2	1	0	10	128	38	76	0.5	1.82	18	2	211.0
		locally within pyrite aggregates and	229930	33.0	3	4	2	2	1	0	1	199	83	80	0.4	1.84	20	2	87.0
		in calcite veinlets, moderate to intense	229931	36.0	4	4	2	2	1	0	1	80	7	173	0.1	3.20	19	2	6.0
		propylitic alteration, 20% to massive	229932	39.0	5	4	2	2	1	0	2	144	19	171	0.3	2.67	33	2	14.0
		epidote, 5% to 30% calcite in matrix,	229933	42.0	5	4	2	2	1	0	1	27	11	152	0.1	1.84	10	2	27.0
		local calcite veins contain pyrite and	229934	45.0	5	4	2	2	1	0	1	412	15	295	2.9	4.80	84	2	1540.0
		chalcopyrite aggregates, weak potassic	229935	48.0	3	1	2	2	1	0	1	88	7	165	0.2	2.33	11	2	92.0
		alteration.	229936	51.0	2	1	2	2	1	0	2	70	5	242	0.1	2.95	16	2	19.0
		8.3m to 12.1m - hornblende dyke, very	229937	54.0	2	1	2	2	1	0	1	63	21	157	0.1	3.36	24	2	380.0
		fine grained, medium to dark grey, non-	229938	57.0	2	1	2	2	1	0	1	365	26	234	0.6	3.26	35	2	136.0
		calcareous matrix, 1% disseminated	229939	60.0	4	3	2	2	1	0	7	18	4	143	0.1	3.15	33	2	4.0
		pyrite, 10% dark green, euhedral	229940	63.0	4	3	2	2	1	0	1	395	24	448	0.7	2.34	33	2	92.0
		hornblende phenocrysts.	229941	66.0	5	3	2	2	1	0	1	27	10	151	0.1	2.09	13	2	4.0
		36.6m to 36.8m - calcite vein with 5%	229942	69.0	5	3	2	2	1	0	7	34	15	122	0.1	2.79	27	2	19.0
		yellow andradite garnet, trace chalco-	229943	72.0	5	3	2	2	1	0	1	560	16	393	0.5	2.76	49	2	310.0
		pyrite.	229944	75.0	5	3	2	2	1	0	1	4	4	30	0.1	1.42	11	2	5.0
		44.0m - 5cm wide calcite vein, with 20%	229945	78.0	5	3	2	2	1	0	3	14	5	57	0.1	2.26	38	2	26.0
		massive pyrite, 1% coarse grained	229946	81.0	5	3	2	2	1	0	15	23	18	96	0.1	2.43	19	2	19.0
		chalcopyrite, trace garnet and chlorite.	229947	84.0	1	0	2	2	0	0	21	914	8	334	0.7	4.01	35	2	136.0
		75.9m - 15cm chloritic fault gouge.	229948	87.0	1	1	2	2	0	0	9	1025	14	205	1.0	4.03	43	2	240.0
		82.3m to 85.5m - felsic dyke, dark grey	229949	90.0	4	3	2	2	1	0	1	4385	74	2083	3.3	3.71	79	2	1980.0
		aphanitic to fine grained, non-	229950	93.0	4	3	2	2	1	0	3	1478	17	589	0.7	2.68	24	2	570.0
		calcareous matrix, 3% white anhedral	229951	96.0	4	3	2	2	1	0	1	605	26	341	0.2	2.44	19	2	1150.0
		feldspar laths, 5% coarse grained	229952	99.0	4	3	2	2	1	0	22	48	8	122	0.1	1.99	12	2	37.0
		disseminated pyrite.	229953	102.0	4	3	2	2	1	0	3	207	39	135	0.4	1.78	14	2	78.0

HOLE NO 91-20

FROM	TO	DESCRIPTION	SAMPLE	TO	Py	Po	Cp	Sph	Gn	Qtz	Mo	Cu	Pb	Zn	Ag	Fe	As	Sb	Au
		89.0m - 3cm wide calcite vein with 5%	229954	105.0	4	3	2	2	1	0	5	259	39	177	0.1	1.83	13	2	30.0
		pyrite in aggregates, trace to 1%	229955	108.0	5	3	2	2	1	0	1	108	23	254	0.2	1.51	27	2	84.0
		chalcopyrite, 3% garnet.	229956	111.0	5	3	2	2	1	0	1	88	100	479	0.1	1.68	34	2	62.0
		102.2m - stain of augite basalt with	229957	114.0	5	3	2	2	1	0	1	1078	211	1358	0.5	1.96	54	2	125.0
		weak potassic alteration, matrix stains	229958	117.0	5	3	2	2	1	0	1	403	169	1238	0.4	1.54	34	2	240.0
		light yellow, euhedral feldspar laths	229959	120.0	5	3	2	2	1	0	1	151	50	637	0.1	1.61	38	2	103.0
		stain mustard yellow.	229960	123.0	5	3	2	2	1	0	1	176	59	398	0.1	1.70	19	2	25.0
		106.3m to 158.5m - intense propylitic	229961	126.0	5	3	2	2	1	0	1	317	103	292	0.1	1.68	20	2	34.0
		alteration, local 1 to 5cm wide patches	229962	129.0	5	3	2	2	1	0	1	249	81	394	0.1	1.58	18	2	250.0
		of calcite occasionally with pyrite,	229963	132.0	5	3	2	2	1	0	1	144	120	538	0.1	1.50	15	2	32.0
		chalcopyrite and andradite garnet.	229964	135.0	5	3	2	2	1	0	1	59	41	307	0.1	1.57	19	2	22.0
		157.5m to 158.5m - 10% calcite patches	229965	138.0	5	3	2	2	1	0	1	42	32	260	0.1	1.46	19	2	23.0
		infilled with 30% garnet, 2% coarse	229966	141.0	5	3	2	2	1	0	3	56	74	452	0.1	1.62	33	2	21.0
		grained chalcopyrite, chalcopyrite	229967	144.0	5	3	2	2	1	0	1	9	17	230	0.1	1.38	31	2	19.0
		locally rimmed with unidentified black,	229968	147.0	5	3	2	2	1	0	1	20	17	184	0.1	1.27	16	2	22.0
		non-magnetic mineral.	229969	150.0	5	3	2	2	1	0	1	312	60	629	0.1	1.60	28	2	230.0
			229970	153.0	5	3	2	2	1	0	1	424	63	1287	0.1	1.68	38	2	480.0
			229971	156.0	5	3	2	2	1	0	12	282	23	425	0.1	2.19	19	2	28.0
		End of hole 91-20 at 158.5m.	229972	158.5	5	3	2	2	1	0	6	2408	64	2908	1.1	1.94	105	2	189.0

APPENDIX II

Assay Certificates

... AI TIC. ABO)RIE TD. 85 . H/ NGS VA IVEF ... 1R ... P...(60..253-... F...(604)...-171..

GEOCHEMICAL ANALYSIS CERTIFICATE

Phelps Dodge Corp. PROJECT 163 File # 91-5331 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
229601	1	49	9	31	.1	51	11	417	4.20	3	5	ND	1	129	.2
229602	1	46	5	26	.1	51	9	362	3.76	5	5	ND	1	42	.2
229603	1	36	6	23	.1	35	6	330	4.20	2	5	ND	1	52	.2
229604	1	97	24	116	.1	41	10	341	3.60	7	5	ND	1	57	.6
229605	3	463	11	27	.1	55	18	318	3.56	6	5	ND	1	61	.2
229606	1	216	10	25	.1	55	20	354	3.91	5	5	ND	1	55	.2
229607	1	189	5	26	.1	46	10	389	4.03	8	5	ND	1	68	.2
229608	1	220	12	38	.1	59	26	432	3.94	3	5	ND	1	57	.2
229609	1	149	11	68	.1	65	19	525	4.00	6	5	ND	1	66	.2
229610	3	135	8	35	.2	67	17	468	4.38	7	5	ND	1	76	.2
229611	1	125	7	23	.1	57	13	358	3.94	4	5	ND	1	193	.2
229612	1	72	8	21	.1	54	14	334	3.91	2	5	ND	1	145	.2
229613	16	508	4	19	.1	50	16	302	3.77	8	5	ND	1	122	.2
229614	1	416	6	23	.1	46	14	365	3.95	16	5	ND	1	112	.2
229615	1	89	16	37	.2	35	11	263	2.59	9	5	ND	1	108	.2
229616	1	77	2	22	.1	48	11	335	3.93	6	5	ND	1	103	.2
229617	1	122	12	38	.1	50	9	372	2.82	11	5	ND	1	100	.3
229618	5	32	2	23	.1	57	7	347	2.83	3	5	ND	1	130	.2
229619	2	445	4	21	.2	51	25	375	3.81	10	5	ND	1	92	.2
229620	1	43	8	21	.1	56	11	419	4.41	2	5	ND	1	182	.2
229621	1	181	2	15	.1	46	19	355	3.76	3	5	ND	1	77	.2
229622	1	312	3	19	.2	43	12	379	4.39	2	5	ND	1	58	.2
229623	1	135	8	21	.1	46	16	353	3.65	2	5	ND	1	54	.2
229624	1	19	9	22	.1	26	5	424	4.05	2	5	ND	1	56	.2
229625	1	300	9	36	.1	44	10	476	3.92	2	5	ND	1	58	.2
RE 229622	1	305	3	18	.2	45	12	394	4.39	2	5	ND	1	58	.2
229626	1	235	7	39	.1	50	26	723	6.19	2	5	ND	1	389	.2
229627	1	811	7	22	.1	49	23	573	6.76	2	5	ND	1	614	.2
229628	1	318	7	81	.1	86	23	968	6.79	2	5	ND	1	186	.2
229629	1	31	8	27	.2	28	5	488	1.80	5	5	ND	1	97	.2
229630	2	14	4	26	.1	23	3	451	1.57	3	5	ND	1	143	.2
229631	4	65	7	40	.2	50	7	609	2.47	2	5	ND	1	231	.2
229632	1	51	9	32	.1	31	7	518	2.03	3	5	ND	1	103	.2
229633	1	58	6	44	.1	40	3	457	1.74	5	5	ND	1	119	.2
229634	1	232	6	39	.3	53	7	479	2.51	3	5	ND	1	111	.2
229635	6	77	6	32	.2	47	8	444	2.14	2	5	ND	1	98	.2
229636	1	178	8	29	.1	35	5	433	1.95	2	5	ND	1	69	.2
STANDARD C/AU-R	18	59	43	131	6.6	70	33	1050	3.93	38	16	7	37	52	18.8

SAMPLE#	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
229601	2	2	111	1.98	.086	4	95	1.05	70	.19	11	1.84	.09	.08	1	29
229602	2	2	97	1.63	.092	4	101	.84	23	.21	10	1.40	.08	.08	1	8
229603	2	2	95	1.91	.111	5	40	.62	21	.15	10	1.65	.07	.09	1	12
229604	2	2	92	1.97	.108	5	74	.69	29	.18	11	1.54	.06	.08	1	14
229605	2	2	81	2.56	.109	5	70	.67	23	.18	8	1.83	.07	.08	1	132
229606	2	2	92	2.84	.101	5	90	.90	16	.21	9	2.04	.06	.06	1	34
229607	2	2	99	3.03	.097	4	93	.99	17	.21	11	2.08	.05	.06	1	32
229608	2	2	89	3.10	.098	4	88	1.06	11	.17	10	2.17	.05	.06	1	22
229609	2	2	97	3.20	.097	4	109	1.28	11	.22	9	2.85	.05	.06	1	22
229610	2	2	107	3.55	.092	4	108	1.23	17	.22	13	2.76	.06	.06	1	13
229611	2	2	94	2.81	.094	4	83	1.05	56	.23	13	2.19	.09	.08	1	12
229612	2	2	102	2.44	.084	4	82	1.29	31	.25	11	2.38	.12	.07	1	9
229613	2	2	81	3.11	.086	4	75	.83	21	.14	11	2.54	.07	.06	1	75
229614	2	2	91	3.36	.096	4	95	.92	23	.21	12	2.27	.07	.07	1	49
229615	2	2	76	2.41	.086	4	74	.72	22	.16	11	2.10	.08	.07	1	14
229616	2	2	92	2.73	.096	5	99	.69	28	.19	11	2.00	.09	.08	1	11
229617	2	2	76	2.85	.090	4	94	.99	19	.17	15	2.27	.10	.06	1	5
229618	2	2	81	2.06	.093	4	101	.98	35	.17	9	1.73	.11	.08	1	6
229619	2	2	84	3.44	.095	4	99	1.08	13	.18	12	2.50	.06	.06	1	77
229620	2	2	113	2.95	.092	4	96	1.55	32	.28	8	2.37	.11	.09	1	9
229621	2	2	85	4.00	.092	4	89	.81	14	.17	8	2.12	.06	.06	1	20
229622	2	2	93	4.20	.095	4	88	.73	10	.15	12	2.22	.07	.07	1	37
229623	2	2	85	3.40	.101	4	90	.69	17	.15	12	1.91	.06	.07	1	16
229624	2	2	96	3.77	.092	4	83	.69	18	.14	12	2.03	.06	.06	1	10
229625	2	2	79	3.17	.097	3	50	.81	20	.12	12	2.05	.05	.07	1	16
RE 229622	2	2	95	4.35	.096	4	89	.75	10	.15	12	2.30	.07	.07	1	24
229626	2	2	82	3.66	.092	3	96	1.11	4	.21	5	1.84	.05	.01	1	19
229627	2	2	92	4.88	.077	3	84	.67	4	.19	8	1.72	.02	.01	1	16
229628	2	2	77	2.42	.105	5	103	1.59	4	.24	6	1.75	.10	.01	1	25
229629	2	2	72	4.77	.094	4	100	.99	9	.18	14	2.74	.09	.03	1	24
229630	2	2	72	4.21	.094	4	101	1.01	10	.18	12	2.80	.14	.03	1	3
229631	2	2	61	3.56	.101	4	95	1.24	21	.19	10	2.62	.17	.03	1	260
229632	2	2	63	3.78	.097	4	75	1.01	28	.18	13	2.69	.11	.03	1	12
229633	2	2	70	4.45	.096	3	83	1.00	19	.17	10	2.82	.12	.04	1	7
229634	2	2	84	5.07	.095	3	90	.93	13	.15	14	2.89	.09	.02	1	100
229635	2	2	65	4.07	.096	4	94	.87	17	.16	13	2.44	.11	.04	1	10
229636	2	2	66	4.31	.095	4	100	.95	8	.15	12	2.54	.07	.02	1	10
STANDARD C/AU-R	16	22	55	.48	.089	37	58	.88	176	.09	34	1.87	.06	.15	11	510

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.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: CORE AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: OCT 31 1991 DATE REPORT MAILED: Nov 4/91. 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
229637	1	144	9	79	.2	88	10	568	4.97	2	5	ND	1	112	.3	2	2	86	4.94	.084	4	126	1.07	12	.15	14	2.55	.06	.04	1	13
229638	1	42	2	36	.1	31	4	445	1.55	2	5	ND	1	56	.2	2	2	54	3.35	.091	4	102	1.10	13	.16	11	2.13	.08	.04	1	2
229639	1	261	7	41	.1	68	9	449	3.59	3	5	ND	1	229	.2	2	3	84	5.25	.087	3	93	.85	11	.14	10	2.92	.04	.03	1	7
229640	1	652	5	38	.5	77	44	330	3.54	5	5	ND	1	234	.2	2	4	68	4.06	.086	4	77	.73	116	.14	11	2.61	.08	.06	1	123
229641	10	440	5	32	.3	60	20	246	1.87	8	5	ND	1	482	.2	2	2	54	3.22	.091	4	68	.44	256	.15	10	2.20	.14	.09	1	32
229642	9	349	2	21	.2	29	12	239	1.29	4	5	ND	1	122	.2	2	2	46	2.54	.128	6	33	.50	78	.14	9	1.62	.10	.10	1	25
229643	5	273	2	21	.2	32	12	239	2.19	6	5	ND	1	39	.4	2	4	57	2.91	.117	6	40	.53	31	.13	9	1.69	.08	.08	1	13
RE 229648	3	880	2	15	.1	62	11	202	3.07	3	5	ND	1	420	.2	2	2	113	2.75	.150	5	275	.98	61	.17	14	2.42	.09	.09	1	53
229644	2	228	8	22	.1	27	15	274	2.50	3	5	ND	1	43	.2	2	2	72	2.79	.124	7	47	.71	28	.14	9	1.61	.08	.07	1	7
229645	4	283	2	18	.1	20	11	232	3.28	2	5	ND	1	41	.2	2	4	82	3.12	.125	7	37	.51	22	.15	5	1.57	.06	.07	1	24
229646	4	1218	4	27	.4	31	27	303	3.81	5	5	ND	1	792	.2	2	4	76	3.20	.149	7	50	.55	127	.16	6	1.67	.14	.10	1	67
229647	5	1606	2	17	.5	45	9	182	2.62	4	5	ND	1	192	.2	2	7	90	2.01	.136	6	108	.52	47	.18	7	1.55	.11	.08	1	130
229648	4	927	2	16	.1	64	13	209	3.18	2	5	ND	1	437	.2	2	5	119	2.85	.155	6	313	1.01	59	.19	14	2.53	.09	.10	1	52
229649	6	1049	2	19	.1	46	11	253	3.54	5	5	ND	1	987	.2	2	7	124	3.86	.149	4	221	1.00	91	.17	13	4.05	.18	.10	1	82
229650	7	1491	6	33	.3	56	9	315	2.52	7	5	ND	1	116	.2	2	8	107	4.30	.155	4	196	.71	16	.14	16	3.32	.10	.08	1	142
229651	6	1099	2	29	.3	81	15	422	3.54	8	5	ND	1	714	.2	2	6	116	4.29	.150	4	260	.81	245	.16	18	3.91	.15	.07	1	105
229652	1	65	26	96	.4	65	9	817	5.03	2	5	ND	1	130	.9	2	2	117	4.69	.149	4	178	1.26	10	.11	13	3.69	.05	.02	1	13
229653	1	36	14	53	.1	75	6	584	2.89	12	5	ND	1	290	.2	2	2	93	3.46	.144	4	190	1.01	31	.16	19	3.20	.19	.04	1	9
229654	2	246	23	50	.5	85	8	494	3.41	22	5	ND	1	281	.7	2	2	104	4.04	.139	4	266	.90	20	.16	24	3.75	.19	.05	1	58
229655	1	38	6	47	.4	74	7	455	3.77	21	5	ND	1	385	.2	2	2	92	3.11	.135	4	280	.64	50	.16	23	3.08	.25	.06	1	8
229656	1	68	20	72	.5	53	13	537	4.80	21	5	ND	1	194	.7	2	2	112	3.85	.114	4	130	1.07	35	.20	372	3.56	.14	.06	1	8
229657	17	205	2	35	.1	19	16	430	2.81	2	5	ND	1	52	.2	2	3	96	4.04	.097	3	32	1.36	30	.22	38	3.22	.10	.08	1	32
229658	7	532	4	23	.2	11	12	267	2.36	4	5	ND	1	48	.2	2	3	75	4.16	.132	3	11	.60	50	.17	26	2.92	.10	.08	1	70
229659	1	58	7	45	.1	15	13	415	3.14	2	5	ND	1	58	.2	2	2	91	2.90	.099	3	35	1.24	44	.20	20	2.29	.11	.10	1	12
229660	1	58	5	30	.1	14	12	391	3.62	2	5	ND	1	62	.2	2	2	97	3.16	.098	3	34	1.21	53	.20	136	2.41	.14	.11	1	14
229661	1	110	4	33	.1	14	12	380	3.32	4	5	ND	1	60	.3	2	2	95	2.97	.099	4	32	1.11	47	.19	32	2.37	.13	.12	1	15
STANDARD C/AU-R	19	60	41	131	7.5	69	32	1053	3.94	39	17	7	38	52	18.9	15	21	56	.48	.090	39	58	.88	176	.09	32	1.87	.06	.15	12	460

Sample type: CORE. Samples beginning 'RE' are duplicate samples.

ME YTI LAF TOR LTD 8 E. I ING . V OUVI .C. A 1 NE(6 ,253- 8 (604), 3-17

GEOCHEMICAL ANALYSIS CERTIFICATE

Phelps Dodge Corp. PROJECT 163 File # 91-5419 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
229662	1	54	7	21	.1	102	6	235	1.67	11	5	ND	1	92	.3	2	2	70	2.26	.102	7	77	.64	32	.18	18	1.71	.09	.08	2	7
229663	2	382	10	38	.4	40	30	511	5.74	10	5	ND	1	178	.2	2	2	78	3.20	.094	8	99	.88	38	.14	19	2.50	.10	.06	2	29
229664	2	58	5	22	.1	30	6	386	3.22	7	5	ND	1	76	.2	2	2	81	3.54	.090	6	74	.80	28	.16	18	2.54	.08	.05	1	15
229665	2	116	10	23	.1	56	9	402	2.99	8	5	ND	1	39	.2	3	3	98	4.11	.096	7	105	.88	13	.16	20	2.59	.06	.04	2	19
229666	2	241	6	25	.1	48	24	356	3.35	9	5	ND	1	114	.2	2	3	85	3.87	.085	5	76	.83	45	.15	20	2.58	.08	.05	1	17
229667	1	202	7	23	.1	68	9	378	2.12	9	5	ND	1	62	.2	2	2	70	3.92	.092	6	56	.84	29	.17	25	2.50	.09	.07	1	9
229668	1	299	3	25	.1	51	29	469	2.84	12	5	ND	1	108	.2	2	3	66	4.02	.099	4	72	1.08	39	.18	19	2.50	.09	.05	1	22
229669	2	379	11	21	.1	42	41	334	3.06	13	5	ND	1	115	.3	2	3	42	3.38	.096	4	45	.67	29	.15	20	2.35	.11	.06	1	10
229670	2	602	8	27	.1	37	39	399	3.27	7	5	ND	1	158	.2	2	2	50	3.30	.093	5	55	.81	33	.13	13	2.15	.11	.04	1	15
RE 229675	2	425	9	27	.1	67	24	361	3.44	12	5	ND	1	148	.2	2	2	126	4.50	.202	6	186	.94	36	.13	21	3.13	.13	.05	1	11
229671	2	726	6	24	.2	71	33	370	3.32	9	5	ND	1	370	.3	3	8	58	4.22	.163	8	65	.61	125	.16	18	2.10	.09	.04	2	16
229672	1	458	3	28	.1	96	29	323	4.03	8	5	ND	1	332	.2	2	2	121	2.60	.228	8	245	1.42	101	.24	12	2.40	.14	.11	1	7
229673	1	30	6	25	.1	99	11	365	3.92	8	5	ND	1	125	.2	2	2	170	3.31	.226	7	329	1.52	65	.23	15	2.54	.09	.10	1	3
229674	2	179	4	31	.1	138	16	341	5.08	9	5	ND	1	119	.2	3	4	169	3.07	.220	8	319	1.17	36	.21	14	2.49	.12	.09	1	2
229675	2	452	2	28	.1	71	23	374	3.58	11	5	ND	1	156	.3	2	3	135	4.69	.212	7	226	.97	38	.16	25	3.45	.14	.06	1	17
229676	3	600	4	24	.1	37	20	342	2.73	11	5	ND	1	365	.2	2	4	154	3.17	.178	8	152	.93	118	.14	16	2.85	.16	.05	1	38
229677	1	443	7	25	.1	42	20	332	4.37	5	5	ND	1	600	.4	2	2	149	2.91	.152	9	160	.71	98	.13	15	3.00	.34	.05	1	75
229678	1	378	4	26	.1	47	15	361	4.49	9	5	ND	1	388	.6	2	2	120	2.90	.136	9	144	.73	59	.13	17	2.85	.29	.04	1	42
229679	1	1115	12	34	.4	71	36	485	5.70	10	5	ND	1	354	.6	2	7	189	3.76	.155	9	174	1.00	64	.13	17	3.32	.13	.04	3	56
229680	2	294	9	36	.2	67	21	494	9.82	5	5	ND	1	634	.3	2	7	145	3.02	.126	11	149	.76	87	.10	11	3.00	.17	.04	1	31
229681	1	212	11	31	.3	51	17	443	7.96	11	5	ND	1	507	.7	2	2	152	2.85	.147	11	145	.68	69	.13	18	2.85	.20	.05	1	34
229682	2	264	7	39	.5	57	14	612	8.97	11	6	ND	1	132	.6	2	3	145	3.50	.147	11	227	.93	25	.13	16	3.11	.09	.04	1	23
229683	2	294	9	36	.2	61	16	493	10.08	5	5	ND	1	449	1.3	2	2	156	2.77	.130	9	185	.62	102	.12	18	2.88	.19	.05	1	34
229684	2	345	10	35	.2	80	19	536	9.73	9	5	ND	1	300	1.1	2	2	159	3.62	.135	9	234	.77	62	.12	14	3.34	.20	.05	1	10
229685	2	154	4	32	.4	85	13	466	8.00	15	6	ND	1	412	.5	2	4	151	3.53	.138	10	255	.76	134	.13	17	3.03	.17	.06	1	12
229686	2	207	4	30	.1	87	14	413	4.82	13	5	ND	1	177	.4	2	2	129	3.40	.138	7	268	.83	55	.14	19	2.97	.15	.05	1	11
229687	1	166	7	28	.1	110	11	433	3.60	15	5	ND	1	117	.7	2	3	125	3.32	.144	6	268	1.07	55	.17	15	2.84	.12	.06	1	97
229688	2	239	2	27	.1	243	14	383	3.42	10	5	ND	1	148	.3	2	2	117	3.03	.162	8	267	1.08	56	.20	18	2.77	.14	.06	1	10
229689	3	344	6	27	.2	125	23	438	3.93	18	5	ND	1	110	.7	2	2	101	4.28	.199	9	170	1.12	42	.16	18	3.45	.07	.04	1	17
229690	2	535	9	32	.3	89	35	492	7.01	16	5	ND	1	102	.5	2	3	142	4.31	.189	8	167	1.14	23	.15	17	3.74	.06	.03	1	91
229691	2	314	11	38	.3	224	18	574	5.69	20	5	ND	1	69	.9	2	2	169	4.67	.173	6	307	1.49	23	.18	19	4.16	.06	.03	2	42
229692	6	570	6	36	.6	156	40	530	6.32	27	5	ND	2	106	1.2	2	3	136	5.26	.132	5	294	1.39	17	.17	21	4.51	.07	.03	2	17
229693	2	172	4	33	.1	120	12	553	4.05	24	5	ND	1	72	.4	2	2	128	5.17	.171	5	288	1.45	14	.15	19	4.14	.06	.03	1	29
229694	1	43	5	22	.1	75	5	412	3.17	29	5	ND	1	105	.8	2	2	121	2.90	.158	6	286	1.23	62	.18	16	2.60	.12	.08	2	38
229695	1	320	7	29	.1	106	9	423	3.61	11	5	ND	1	101	.7	2	3	127	3.95	.154	5	284	1.09	51	.17	15	3.25	.11	.06	1	14
229696	1	73	2	26	.1	98	7	407	2.87	31	5	ND	1	110	.8	2	2	111	2.90	.143	6	202	1.26	59	.19	20	2.75	.12	.08	2	10
229697	2	342	7	38	.2	135	14	424	4.85	15	5	ND	1	179	.8	2	4	133	3.32	.141	5	277	.88	77	.15	21	2.99	.13	.05	1	36
STANDARD C/AU-R	19	63	41	132	7.3	70	34	1044	3.99	42	22	7	36	53	18.9	15	21	54	.48	.090	37	58	.88	177	.09	34	1.89	.06	.15	11	490

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.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: CORE AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: NOV 7 1991 **DATE REPORT MAILED:** Nov 12/91. **SIGNED BY**.......... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

ACME ANALYTICAL

Phelps Dodge Corp. PROJECT 163 FILE # 91-5419

ACME ANALYTICAL

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
229698	4	959	2	30	.2	121	20	504	7.85	9	5	ND	1	119	.2	2	3	134	5.47	.179	6	240	1.05	24	.16	21	3.60	.09	.03	1	209
229699	1	513	8	30	.2	212	22	495	9.38	5	5	ND	1	131	.2	2	3	148	4.79	.165	6	232	.89	37	.15	19	3.27	.07	.03	1	69
229700	1	721	3	29	.1	131	28	477	7.05	7	5	ND	1	100	.2	2	2	132	5.09	.191	8	225	.96	15	.15	20	3.33	.06	.02	1	79
229701	2	858	8	33	.2	172	32	618	10.31	12	5	ND	1	139	.2	2	2	157	6.38	.176	6	236	1.13	12	.18	29	4.16	.05	.02	2	121
229702	1	257	2	29	.2	86	14	524	7.01	13	5	ND	1	110	.2	2	2	148	5.88	.179	7	215	1.10	15	.20	27	3.90	.08	.04	1	56
229703	6	76	2	26	.1	40	9	410	4.53	9	5	ND	1	88	.2	3	2	142	6.35	.158	6	135	1.52	18	.26	24	4.67	.09	.08	1	21
229704	1	52	2	28	.8	82	8	353	4.56	5	5	ND	1	95	.2	2	2	147	5.15	.108	5	133	1.27	111	.25	24	4.02	.08	.09	11	10
229705	1	13	5	25	.1	153	12	454	4.52	4	5	ND	1	52	.2	2	2	117	3.56	.086	2	216	1.97	15	.27	103	3.22	.05	.10	1	11
229706	1	12	5	23	.1	128	13	420	4.34	11	5	ND	1	54	.2	3	2	126	4.00	.086	3	174	1.70	15	.28	440	3.25	.04	.10	1	4
RE 229711	1	25	5	26	.1	178	22	475	4.89	6	5	ND	1	120	.2	6	2	126	3.84	.091	3	225	2.27	31	.28	88	3.54	.04	.09	1	5
229707	1	8	3	24	.1	108	14	399	4.17	12	5	ND	1	93	.2	2	2	129	4.43	.094	3	118	1.71	23	.28	426	3.63	.05	.11	1	5
229708	1	14	2	26	.1	153	19	450	4.08	5	5	ND	1	109	.2	3	2	114	4.19	.087	3	198	2.28	24	.27	348	3.62	.05	.11	1	7
229709	1	10	2	26	.1	233	26	368	4.43	12	5	ND	1	196	.3	2	2	110	2.67	.085	2	247	2.60	53	.28	41	3.21	.06	.21	1	4
229710	1	7	2	22	.1	128	15	366	3.44	7	5	ND	1	120	.2	3	2	114	4.89	.087	3	142	1.70	28	.28	337	3.80	.06	.11	1	7
229711	1	27	7	27	.1	180	23	481	4.98	6	5	ND	1	121	.2	6	2	128	3.84	.092	3	226	2.30	31	.29	86	3.60	.05	.10	1	8
229712	1	106	2	25	.1	120	11	461	6.44	14	5	ND	1	157	.2	2	2	136	5.19	.161	6	235	.97	18	.18	78	3.93	.09	.09	1	41
229713	1	101	3	24	.1	114	15	467	10.44	17	5	ND	1	236	.2	2	2	153	4.53	.175	7	203	.71	23	.13	197	3.44	.12	.05	2	26
229714	1	171	3	23	.1	153	14	486	9.96	21	5	ND	1	220	.2	2	2	148	4.54	.161	7	216	.76	24	.14	251	3.28	.10	.05	1	40
229715	1	284	9	23	.1	161	22	498	8.65	18	5	ND	1	136	.2	2	2	135	5.39	.154	5	201	.80	21	.14	101	3.38	.07	.05	1	41
229716	1	242	6	27	.1	103	18	596	6.40	15	5	ND	1	80	.2	3	2	138	5.46	.155	6	209	1.37	11	.17	243	3.44	.04	.04	2	30
229717	1	181	2	21	.1	137	12	428	4.14	11	5	ND	1	58	.2	2	3	144	3.51	.161	7	232	1.68	22	.27	42	2.82	.04	.08	1	39
229718	1	77	2	19	.1	103	8	406	3.65	14	5	ND	1	68	.2	2	2	131	4.18	.171	6	221	1.50	22	.19	373	2.96	.06	.07	1	18
229719	1	155	2	20	.1	102	9	486	3.85	11	5	ND	1	47	.4	4	2	155	5.28	.180	6	211	1.50	12	.17	113	3.51	.05	.05	1	19
229720	1	647	3	21	.2	136	14	430	3.46	9	5	ND	1	100	.2	2	2	159	5.21	.175	6	188	1.06	22	.16	274	3.33	.06	.05	1	63
229721	1	357	2	20	.1	139	15	418	3.26	15	5	ND	1	172	.2	2	2	124	4.67	.182	5	185	.97	23	.15	33	3.29	.12	.05	1	44
229722	1	299	5	19	.2	143	18	428	3.54	13	5	ND	1	83	.2	2	2	114	5.34	.168	5	170	.93	14	.13	55	3.33	.05	.03	1	30
229723	1	468	8	25	.1	88	12	479	4.69	14	5	ND	1	214	.2	2	2	137	5.55	.185	6	175	.82	37	.14	94	3.67	.11	.05	1	90
229724	1	489	5	26	.1	52	14	476	6.53	20	5	ND	1	208	.2	2	2	140	5.58	.159	6	174	.70	25	.14	47	3.79	.12	.07	1	96
229725	1	624	2	26	.1	52	24	490	6.58	12	5	ND	1	132	.2	2	2	128	4.38	.162	5	176	.85	16	.14	211	3.14	.07	.05	1	105
229726	1	348	2	25	.1	42	19	424	5.46	19	5	ND	1	338	.2	3	2	115	4.62	.150	5	155	.66	20	.13	184	3.57	.20	.04	2	21
229727	1	103	6	41	.1	35	11	435	2.90	3	5	ND	1	266	.3	2	2	47	3.19	.101	3	33	.77	48	.18	10	2.99	.34	.07	1	14
229728	1	127	5	35	.1	23	11	447	3.03	8	5	ND	1	94	.2	2	2	62	3.05	.084	7	25	.68	48	.19	13	1.96	.11	.06	1	28
229729	1	89	10	77	.2	26	15	555	3.32	11	5	ND	1	66	.4	2	2	58	3.57	.089	7	25	.64	29	.16	5	2.25	.05	.05	1	138
229730	1	85	26	161	.1	29	14	544	3.21	39	5	ND	1	44	.8	2	2	71	2.27	.081	6	25	.81	23	.17	6	2.05	.05	.05	1	49
229731	1	73	92	412	.4	22	12	739	3.33	84	5	ND	1	85	2.4	2	2	66	5.83	.065	5	25	.86	21	.12	6	3.48	.04	.05	1	41
229732	2	101	6	94	.2	26	14	466	3.57	24	5	ND	1	72	.5	2	2	54	3.75	.071	7	20	.60	31	.17	5	2.19	.09	.05	1	32
229733	1	87	20	69	.2	26	13	942	3.97	23	5	ND	1	71	.2	2	2	86	2.81	.103	5	31	1.10	39	.20	4	2.12	.12	.09	1	96
STANDARD C/AU-R	17	62	37	131	7.3	71	33	1036	3.97	41	16	6	37	51	18.7	15	19	57	.47	.090	36	57	.87	176	.09	33	1.87	.05	.15	11	460

Sample type: CORE. Samples beginning 'RE' are duplicate samples.

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
229734	2	53	38	191	.3	17	12	1014	3.28	73	5	ND	1	96	1.0	2	2	84	4.66	.087	4	22	1.11	25	.14	4	3.43	.09	.07	1	34
229735	2	191	61	304	.6	24	19	1127	4.32	68	5	ND	1	108	1.5	2	2	87	3.85	.073	5	23	1.09	36	.16	2	2.89	.12	.08	1	49
229736	1	138	41	215	.4	21	21	933	3.82	17	5	ND	1	163	1.5	2	2	67	3.09	.098	4	16	1.08	40	.18	4	2.47	.22	.09	1	63
RE 229741	1	13	6	48	.1	6	16	720	4.46	2	5	ND	1	112	.3	2	2	81	2.38	.048	2	9	1.45	57	.11	4	3.44	.28	.05	2	5
229737	2	107	18	99	.3	28	19	600	2.97	5	5	ND	1	305	.6	2	2	48	2.45	.091	3	15	.86	35	.16	7	2.70	.35	.07	1	745
229738	2	146	13	59	.1	27	19	518	3.02	15	5	ND	1	262	.5	2	2	45	2.66	.088	3	16	.81	40	.16	6	2.65	.30	.08	1	13
229739	1	177	8	72	.2	11	24	893	4.96	9	5	ND	1	152	.8	2	4	132	3.29	.105	5	14	1.72	85	.27	4	2.84	.14	.19	1	20
229740	1	55	12	53	.2	7	22	828	5.02	11	5	ND	1	137	.5	2	2	105	3.32	.053	2	9	1.41	47	.13	6	3.67	.22	.05	1	13
229741	1	12	6	48	.1	6	14	734	4.56	2	5	ND	1	115	.2	2	4	82	2.39	.048	2	7	1.47	58	.11	6	3.42	.29	.05	1	4
229742	5	187	13	98	.3	8	33	917	11.64	14	5	ND	1	103	1.2	2	5	328	2.40	.056	2	18	1.41	43	.35	4	2.49	.13	.03	1	65
229743	1	237	8	59	.5	5	21	894	6.36	6	5	ND	1	103	.5	2	3	152	3.77	.075	3	9	1.70	46	.21	3	2.78	.11	.05	1	7
229744	1	27	8	40	.1	8	21	563	5.28	8	5	ND	1	204	.4	2	2	144	2.34	.059	2	16	1.15	106	.18	4	2.85	.25	.11	2	16
229745	1	60	5	54	.1	15	16	725	4.27	12	5	ND	1	191	.3	2	2	100	3.52	.096	2	31	1.36	74	.21	2	2.84	.22	.09	1	6
229746	1	68	10	60	.1	39	19	813	4.63	9	5	ND	1	153	.4	2	2	107	3.50	.091	2	70	1.82	72	.17	2	2.91	.21	.11	1	4
229747	1	29	5	68	.2	8	15	747	4.45	3	5	ND	1	125	.5	2	2	103	3.01	.046	2	18	1.31	118	.12	2	4.27	.36	.08	1	7
229748	1	11	7	55	.1	6	14	738	4.27	4	5	ND	1	121	.5	2	4	89	2.92	.047	2	8	1.25	197	.12	2	3.67	.32	.05	1	3
229749	1	13	5	53	.1	5	15	699	4.40	2	5	ND	1	121	.2	2	2	107	2.74	.045	2	8	1.23	121	.13	3	3.32	.26	.07	1	7
229750	1	113	9	92	.1	12	23	802	5.55	3	5	ND	1	214	.3	2	2	153	2.22	.101	4	17	1.80	179	.30	3	2.73	.25	.77	1	7
STANDARD C/AU-R	19	61	39	133	7.1	70	31	1046	4.00	43	19	7	39	52	18.6	15	19	55	.48	.090	39	59	.88	179	.09	32	1.88	.06	.15	11	472

Sample type: CORE. Samples beginning 'RE' are duplicate samples.

GEOCHEMICAL ANALYSIS CERTIFICATE

Phelps Dodge Corp. PROJECT 163 File # 91-5458 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
229751	1	66	13	170	.2	19	17	771	4.98	6	5	ND	1	97	.2	4	2	202	1.96	.058	3	26	1.86	122	.22	5	3.44	.24	.32	1	9
229752	1	34	7	68	.1	15	12	880	6.19	6	5	ND	1	88	.2	5	2	155	1.68	.044	2	32	1.46	65	.21	5	3.34	.17	.14	1	4
229753	1	29	6	54	.1	21	15	821	4.59	9	5	ND	1	87	.2	3	2	89	2.95	.046	2	35	1.36	39	.12	5	3.05	.14	.04	1	5
229754	3	48	5	31	.2	9	20	220	3.95	10	5	ND	1	103	.2	2	2	49	1.95	.092	3	12	.49	34	.11	8	2.07	.21	.07	1	84
229755	2	10	7	21	.1	13	17	236	4.05	9	5	ND	1	83	.2	2	2	55	2.48	.093	4	16	.59	29	.12	10	1.96	.17	.07	1	64
229756	1	4	7	19	.1	19	13	285	4.14	7	5	ND	1	63	.2	2	2	74	2.56	.106	3	24	.82	31	.16	9	1.74	.10	.07	1	22
229757	2	9	7	36	.3	21	20	448	4.95	11	5	ND	1	46	.2	2	2	70	2.26	.106	4	30	1.00	25	.15	8	1.59	.11	.07	1	12
229758	1	20	5	17	.1	18	16	260	3.75	6	5	ND	1	160	.2	2	2	71	2.76	.101	3	26	.81	50	.15	11	2.07	.14	.08	1	38
229759	1	4	5	25	.1	12	18	355	4.14	9	5	ND	1	75	.2	2	2	52	2.26	.094	3	20	1.03	18	.10	9	2.15	.10	.05	1	14
229760	1	2	17	147	.1	8	11	389	3.33	8	5	ND	1	42	.9	2	2	44	1.58	.074	3	11	.85	20	.11	6	1.45	.07	.05	1	7
229761	1	4	5	29	.1	7	11	268	4.40	6	5	ND	1	80	.2	2	2	58	1.96	.067	2	12	.76	43	.13	11	2.02	.13	.07	1	32
229762	1	7	7	24	.1	6	11	291	3.96	4	5	ND	1	82	.2	2	2	42	2.45	.066	2	13	.94	36	.11	9	2.37	.14	.06	1	50
229763	2	52	9	23	.1	25	18	229	3.86	5	5	ND	1	116	.2	2	2	62	2.06	.096	3	31	.78	46	.15	6	2.04	.21	.08	1	40
229764	1	22	2	16	.1	33	21	213	3.79	9	5	ND	1	49	.2	2	2	60	1.91	.107	3	38	.77	28	.17	6	1.50	.12	.08	1	30
229765	1	17	7	29	.1	29	22	211	4.23	8	5	ND	1	102	.2	2	2	59	2.09	.099	3	31	.76	49	.17	6	1.60	.11	.08	1	53
229766	1	33	8	16	.1	22	18	232	3.67	8	5	ND	1	61	.2	2	2	67	2.09	.106	3	38	.68	33	.15	6	1.51	.13	.07	1	58
229767	1	34	2	14	.1	25	19	216	3.61	6	5	ND	1	75	.2	2	2	72	1.83	.104	3	38	.74	37	.17	5	1.42	.16	.08	1	41
229768	1	46	9	18	.1	53	20	225	3.27	3	5	ND	1	103	.2	2	2	59	2.14	.084	3	55	.87	35	.17	7	2.02	.19	.09	1	9
229769	1	11	9	19	.1	18	17	248	3.81	8	5	ND	1	61	.2	2	2	53	2.05	.092	3	26	.80	39	.17	9	1.62	.13	.07	1	18
229770	1	27	5	26	.1	12	22	344	5.37	4	5	ND	1	94	.2	3	2	94	2.21	.073	3	14	1.57	183	.25	7	3.40	.29	.38	1	10
229771	1	12	11	33	.1	6	17	381	4.90	10	5	ND	1	119	.2	3	2	71	2.70	.058	2	9	1.44	73	.15	7	3.31	.15	.10	1	12
229772	1	7	7	22	.1	23	18	295	4.43	8	5	ND	1	57	.2	2	2	65	3.23	.088	2	32	1.18	16	.15	7	2.45	.08	.04	1	14
229773	1	11	4	20	.1	24	22	258	4.22	10	5	ND	1	42	.2	2	2	72	2.13	.115	3	34	1.04	26	.21	10	1.65	.11	.08	1	11
229774	1	29	7	20	.1	15	17	290	4.54	6	5	ND	1	58	.2	2	2	78	2.34	.086	3	24	1.07	27	.22	9	2.24	.13	.07	1	38
229775	1	133	4	25	.1	8	13	316	4.73	4	5	ND	1	72	.2	2	2	92	1.93	.059	2	16	1.14	38	.23	9	2.36	.14	.08	1	11
229776	2	324	6	14	.2	9	22	271	3.72	9	5	ND	1	97	.2	2	2	71	2.49	.130	4	12	.84	30	.23	11	1.94	.13	.07	1	720
229777	1	284	6	23	.1	23	17	704	4.06	5	5	ND	1	75	.2	2	2	81	2.01	.123	3	39	1.16	40	.23	9	1.63	.12	.09	1	240
229778	1	251	4	19	.2	22	16	397	4.18	7	5	ND	1	90	.2	2	2	80	1.91	.120	3	36	1.07	33	.18	11	1.80	.15	.08	1	350
229779	3	352	5	22	.3	10	20	534	3.84	8	5	ND	1	47	.2	2	2	66	2.69	.124	4	17	1.22	47	.20	10	2.04	.06	.03	1	420
229780	1	193	3	32	.1	8	20	364	5.82	2	5	ND	1	67	.2	4	2	101	1.48	.079	3	8	1.61	117	.26	7	2.51	.18	.36	1	250
229781	2	34	3	30	.1	7	8	345	4.34	5	5	ND	1	43	.2	2	2	94	1.81	.105	4	17	1.14	46	.23	12	1.92	.10	.10	1	15
229782	1	98	5	29	.1	8	14	322	4.52	8	5	ND	1	70	.2	2	2	75	2.28	.064	2	14	1.04	74	.16	9	2.57	.19	.16	1	200
229783	2	55	3	20	.1	27	18	321	4.09	9	5	ND	1	38	.2	2	2	65	2.44	.101	2	33	1.01	27	.21	7	1.45	.12	.08	1	290
RE 229779	3	350	4	22	.3	9	20	531	3.79	7	5	ND	1	47	.2	2	2	67	2.71	.122	4	16	1.21	46	.22	10	2.02	.06	.04	1	420
229784	2	100	4	18	.1	37	19	299	3.60	7	5	ND	1	41	.2	2	2	84	1.80	.097	3	41	1.19	35	.24	7	1.35	.14	.10	1	75
229785	1	241	2	19	.1	30	18	349	3.44	9	5	ND	1	47	.2	2	2	74	2.19	.084	2	39	1.42	22	.23	8	2.01	.10	.06	1	220
229786	1	110	5	21	.1	19	19	320	3.44	11	5	ND	1	74	.2	2	2	58	2.67	.071	2	24	1.02	30	.18	9	2.03	.09	.05	1	52
STANDARD C/AU-R	17	57	45	127	7.3	69	31	1021	3.87	41	18	6	35	51	18.8	16	18	56	.47	.086	36	55	.87	179	.09	32	1.85	.06	.15	11	450

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.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: CORE AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: NOV 13 1991 DATE REPORT MAILED: Nov 15/91. SIGNED BY.......... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

ACME ANALYTICAL

Phelps Dodge Corp. PROJECT 163 FILE # 91-5458

ACME ANALYTICAL

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
229787	1	218	6	28	.2	5	13	303	2.88	6	5	ND	1	67	.2	2	2	54	2.42	.057	2	21	.85	57	.13	11	2.14	.19	.07	1	37
229788	1	56	2	22	.1	17	10	350	3.83	4	5	ND	1	91	.2	2	2	82	3.04	.090	2	32	1.22	45	.22	12	2.50	.20	.08	1	31
229789	1	54	2	20	.1	18	11	314	4.19	2	5	ND	1	95	.2	2	2	90	2.99	.091	2	37	1.13	32	.22	11	2.50	.24	.09	1	36
229790	1	82	3	32	.1	4	15	312	3.92	2	5	ND	1	84	.2	2	2	73	2.56	.051	2	19	1.04	64	.15	14	3.17	.27	.07	1	84
229791	1	46	3	32	.1	8	11	293	3.37	2	5	ND	1	79	.2	2	2	73	2.81	.044	2	24	1.12	75	.14	13	3.24	.41	.17	1	31
229792	1	10	2	33	.1	7	3	292	3.71	2	5	ND	1	90	.2	2	2	79	2.83	.050	2	17	1.17	73	.15	14	3.56	.29	.07	1	9
229793	1	16	4	24	.1	10	30	263	5.58	2	5	ND	1	82	.2	2	2	114	2.40	.063	2	32	.98	66	.20	11	2.83	.22	.07	1	19
229794	1	17	6	26	.1	9	15	255	6.38	2	5	ND	1	88	.2	2	2	150	2.50	.070	3	25	1.03	107	.23	11	3.00	.23	.13	1	10
229795	1	7	4	18	.1	11	28	216	10.02	9	5	ND	1	67	.2	2	2	166	2.27	.049	2	30	.57	43	.25	10	2.33	.22	.09	1	20
229796	1	46	3	26	.1	21	25	281	5.94	2	5	ND	1	71	.2	2	2	162	2.40	.061	2	49	1.17	43	.25	9	2.58	.18	.11	1	25
229797	1	117	4	24	.1	11	22	291	7.06	6	5	ND	1	93	.2	2	2	201	1.92	.060	3	29	1.18	87	.33	9	3.16	.31	.27	1	21
229798	1	83	2	24	.1	8	17	292	5.85	4	5	ND	1	102	.2	2	2	150	2.28	.067	3	25	1.06	103	.26	11	3.31	.31	.25	1	17
229799	1	108	2	17	.1	15	21	279	3.60	14	5	ND	1	63	.2	2	2	75	3.22	.094	3	25	1.07	20	.22	13	2.65	.19	.06	1	19
229800	1	82	2	20	.1	20	13	333	3.54	5	5	ND	1	82	.2	2	2	79	2.91	.099	3	31	1.12	28	.22	14	2.27	.16	.08	1	27
229801	1	13	2	25	.1	8	15	345	4.40	2	5	ND	1	75	.2	2	2	99	2.32	.089	4	20	1.35	49	.26	10	2.55	.18	.10	1	10
229802	1	11	2	17	.1	15	18	256	4.78	3	5	ND	1	84	.2	2	2	85	2.34	.092	3	25	1.05	53	.26	10	2.41	.22	.12	1	13
229803	1	14	2	23	.1	9	14	279	5.04	2	5	ND	1	135	.2	2	2	101	2.06	.092	3	27	1.36	66	.25	11	2.67	.21	.11	1	11
229804	4	187	3	54	.2	26	17	299	3.30	10	5	ND	1	103	.2	2	2	72	2.80	.103	5	19	.50	39	.21	7	2.29	.19	.07	1	14
229805	2	126	5	44	.1	29	20	361	4.31	9	5	ND	1	47	.2	2	2	75	2.89	.099	3	27	1.02	37	.23	13	2.22	.17	.13	1	19
229806	1	136	2	24	.1	23	18	315	3.78	5	5	ND	1	66	.2	2	2	69	2.63	.101	3	23	.87	38	.24	10	1.99	.20	.13	1	13
229807	3	92	2	25	.1	22	17	449	3.66	13	5	ND	1	49	.2	2	2	114	3.60	.132	6	34	.83	21	.23	11	1.84	.07	.06	1	31
RE 229804	4	188	3	54	.2	25	19	299	3.33	10	5	ND	1	103	.2	2	2	72	2.76	.102	5	18	.49	38	.21	12	2.27	.19	.08	1	13
229808	4	62	2	10	.1	16	6	308	2.69	2	5	ND	1	103	.2	2	2	74	2.80	.099	6	27	.54	29	.18	11	1.89	.20	.06	1	1
229809	4	85	2	8	.1	12	9	196	2.21	2	5	ND	1	66	.2	2	2	73	2.11	.116	7	23	.43	56	.14	14	1.35	.15	.09	1	10
229810	2	9	2	9	.1	12	2	239	1.81	2	5	ND	1	35	.2	2	2	106	2.04	.115	9	29	.60	66	.15	10	1.12	.11	.09	1	4
229811	1	110	6	65	.1	7	12	572	4.17	4	5	ND	1	74	.2	2	2	83	2.16	.057	5	18	1.11	29	.26	5	3.07	.09	.09	1	9
229812	1	80	8	60	.2	5	11	530	3.68	2	5	ND	1	64	.2	2	2	70	1.93	.037	4	14	1.02	23	.23	6	2.69	.08	.08	1	20
229813	2	69	4	55	.1	4	9	462	3.72	2	5	ND	1	72	.2	2	2	71	1.80	.033	4	11	.93	28	.23	6	2.45	.08	.08	1	34
229814	1	96	3	44	.1	6	11	398	3.82	3	5	ND	1	60	.2	2	2	77	2.37	.045	4	17	.98	19	.23	7	2.47	.08	.06	1	35
229815	1	75	2	41	.1	8	11	404	4.24	4	5	ND	1	65	.2	2	2	84	2.27	.045	3	17	1.10	19	.25	10	2.77	.07	.07	1	9
229816	1	54	5	38	.1	20	11	418	5.40	2	5	ND	1	68	.2	3	2	128	2.94	.107	4	41	1.28	19	.27	18	2.96	.07	.08	1	12
229817	1	102	4	57	.1	19	17	527	5.12	2	5	ND	1	83	.2	2	2	101	2.92	.090	4	32	1.30	26	.27	9	3.33	.10	.09	1	11
229818	1	100	6	43	.1	31	18	471	4.91	2	5	ND	1	66	.2	2	2	112	2.73	.092	4	55	1.40	23	.27	11	2.90	.09	.08	1	19
229819	1	163	2	38	.1	21	16	576	5.22	6	5	ND	1	44	.2	5	2	124	3.25	.121	7	53	1.81	15	.32	13	2.66	.06	.06	1	15
229820	1	266	2	56	.1	50	25	610	6.96	5	5	ND	1	41	.2	2	2	185	3.93	.136	5	121	2.28	9	.34	16	2.95	.03	.03	1	11
229821	1	220	2	67	.1	46	24	642	6.90	2	5	ND	1	38	.2	8	2	170	4.03	.132	5	114	2.10	13	.33	13	2.78	.03	.05	1	10
229822	1	389	9	40	.1	37	22	471	6.36	12	5	ND	1	96	.2	5	2	148	4.92	.103	4	79	1.57	12	.25	18	3.33	.04	.05	3	33
STANDARD C/AU-R	17	58	40	131	6.9	70	32	1041	4.00	40	18	8	35	52	18.9	14	19	56	.49	.093	36	58	.89	178	.09	32	1.90	.06	.15	11	480

Sample type: CORE. Samples beginning 'RE' are duplicate samples.

ACME ANALYTICAL

Phelps Dodge Corp. PROJECT 163 FILE # 91-5458

ACME ANALYTICAL

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
229823	1	325	2	34	.1	34	23	468	5.05	11	5	ND	1	80	.2	2	2	151	4.14	.097	4	72	1.50	25	.21	13	2.83	.05	.05	1	39
229824	1	176	2	58	.1	48	28	590	6.06	5	5	ND	1	43	.2	2	2	199	3.35	.115	4	137	2.20	30	.29	11	2.73	.04	.07	1	13
229825	1	131	2	51	.1	57	25	561	5.10	3	5	ND	1	46	.2	2	2	157	3.47	.084	4	175	2.19	28	.26	13	2.89	.05	.09	1	9
229826	1	125	2	47	.1	54	23	502	4.81	2	5	ND	1	38	.2	2	2	153	3.36	.082	4	159	1.94	17	.25	11	2.63	.03	.06	1	8
229827	1	187	2	51	.1	58	26	600	5.18	2	5	ND	1	47	.2	2	2	166	3.47	.094	4	170	2.11	29	.26	11	2.91	.05	.10	1	8
RE 229823	1	319	2	33	.1	33	22	456	4.88	11	5	ND	1	81	.2	2	2	149	4.05	.090	4	85	1.46	23	.21	12	2.65	.05	.05	1	58

Sample type: CORE. Samples beginning 'RE' are duplicate samples.

ACM ALY AL I RAT S L 2 E STI ST. ICOI B. V6A HON 4)2 158 AX(6 253 6

GEOCHEMICAL ANALYSIS CERTIFICATE

Phelps Dodge Corp. PROJECT 163 File # 91-5490 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	SAMPLE wt. lb
229828	1	155	4	36	.1	61	26	283	4.91	2	5	ND	1	66	.2	3	2	151	1.29	.075	4	82	1.75	163	.25	3	1.90	.19	.41	1	42	15
229829	1	144	2	25	.1	61	26	284	4.95	3	5	ND	1	91	.2	2	2	154	1.68	.082	4	102	1.89	185	.28	4	2.23	.24	.47	1	47	15
229830	1	142	2	30	.1	74	32	287	4.89	4	5	ND	1	56	.2	2	2	147	1.37	.068	4	90	2.05	157	.27	4	1.84	.13	.44	2	39	19
229831	1	231	3	30	.1	95	39	311	4.84	4	5	ND	1	49	.2	2	2	128	1.29	.047	2	103	2.61	172	.23	3	1.78	.16	.47	1	43	18
229832	1	148	4	39	.1	135	35	341	4.71	2	5	ND	1	67	.2	2	2	123	1.37	.054	2	181	3.09	217	.22	2	2.04	.18	.54	1	37	18
229833	1	147	2	41	.1	73	29	371	5.18	4	5	ND	1	69	.2	2	2	162	2.02	.069	3	102	2.14	126	.25	3	1.97	.17	.40	1	26	18
229834	1	156	2	44	.1	54	29	322	5.78	2	5	ND	1	92	.2	2	2	186	1.81	.092	4	73	1.76	115	.26	3	2.16	.22	.36	1	23	17
229835	1	164	2	44	.1	64	28	354	5.68	2	5	ND	1	90	.2	2	2	186	2.36	.078	4	83	1.82	117	.25	2	2.14	.20	.38	1	26	19
229836	1	133	3	39	.1	43	24	337	5.40	2	5	ND	1	71	.2	2	2	174	2.84	.084	5	70	1.37	68	.28	5	2.40	.13	.21	1	43	21
229837	1	99	2	44	.1	18	18	230	5.15	2	5	ND	1	80	.2	2	2	177	1.71	.113	7	29	.76	59	.23	5	1.71	.23	.23	1	21	23
229838	1	198	2	36	.1	27	30	243	6.02	7	5	ND	1	88	.2	2	2	173	2.00	.109	6	32	1.02	61	.26	5	1.91	.24	.24	1	43	22
229839	1	67	3	37	.1	35	21	290	5.99	2	5	ND	1	85	.2	2	2	185	2.42	.105	5	54	1.35	54	.31	6	2.43	.22	.26	1	43	17
229840	1	301	3	51	.1	64	54	304	8.70	7	5	ND	1	40	.2	2	2	94	2.37	.111	3	43	1.40	19	.22	3	2.02	.12	.11	2	123	18
229841	1	156	2	40	.1	41	28	352	5.96	5	5	ND	1	63	.2	2	2	154	3.05	.096	4	54	1.50	20	.31	8	2.61	.08	.16	1	33	21
229842	1	111	2	31	.1	38	18	321	5.89	4	5	ND	1	56	.2	2	2	172	2.79	.102	5	52	1.44	23	.32	7	2.46	.10	.18	1	75	20
229843	1	110	2	30	.1	56	38	310	5.45	2	5	ND	1	60	.2	2	2	127	2.46	.076	3	68	1.58	40	.28	5	2.34	.13	.23	1	46	23
229844	1	108	2	30	.1	65	33	280	5.23	3	5	ND	1	89	.2	2	2	142	2.08	.071	3	82	1.92	85	.28	5	2.25	.21	.36	1	30	22
229845	1	99	2	31	.1	55	31	329	5.61	2	5	ND	1	104	.2	2	2	157	2.91	.080	3	80	1.91	84	.31	6	2.72	.19	.28	1	59	21
229846	1	132	2	37	.1	36	32	395	5.77	10	5	ND	1	79	.2	2	2	149	3.35	.087	3	50	1.84	59	.32	8	2.68	.12	.26	1	38	17
229847	1	144	2	38	.1	63	27	317	5.10	2	5	ND	1	80	.2	2	2	151	1.98	.076	4	74	1.92	97	.25	4	2.09	.17	.40	1	31	18
229848	3	126	2	30	.1	39	22	363	4.80	9	5	ND	1	83	.2	2	2	139	3.31	.090	4	56	1.67	47	.27	6	2.49	.09	.20	1	35	18
229849	1	95	2	41	.1	43	30	362	5.77	6	5	ND	1	105	.2	2	2	143	2.73	.089	3	65	2.06	74	.34	8	2.78	.20	.31	1	50	17
229850	1	103	2	40	.1	44	26	357	5.88	6	5	ND	1	103	.5	2	2	148	2.43	.097	3	62	2.02	79	.34	8	2.72	.16	.33	1	38	20
229851	1	173	2	43	.1	51	29	302	5.68	3	5	ND	1	95	.2	2	2	143	2.50	.090	3	68	1.82	74	.31	9	2.66	.22	.32	1	26	21
229852	1	186	2	35	.1	54	24	243	5.12	2	5	ND	1	46	.2	2	2	148	1.71	.092	4	69	1.67	95	.26	6	1.94	.15	.37	1	39	20
229853	1	129	2	36	.1	68	30	313	5.32	2	5	ND	1	50	.2	2	2	152	1.78	.074	3	91	2.05	118	.33	4	2.16	.16	.49	1	41	18
229854	1	140	2	44	.1	74	28	320	6.54	2	5	ND	1	67	.2	2	2	210	1.47	.087	3	93	2.13	156	.33	3	2.10	.19	.59	1	42	17
RE 229850	1	95	2	38	.1	42	24	331	5.64	3	5	ND	1	98	.2	2	2	142	2.38	.096	2	59	1.96	74	.33	7	2.62	.16	.32	1	49	-
229855	1	89	2	40	.1	59	23	331	5.37	2	5	ND	1	86	.2	2	2	156	2.14	.081	4	73	1.88	85	.36	6	2.40	.20	.38	1	28	20
229856	2	93	2	36	.1	58	26	335	5.06	2	5	ND	1	80	.2	2	2	139	2.64	.081	3	76	1.86	59	.35	6	2.50	.19	.33	1	34	19
229857	1	152	2	38	.1	67	64	358	6.40	2	5	ND	1	86	.2	2	2	151	2.68	.074	3	86	1.99	71	.38	5	2.67	.20	.40	1	31	21
229858	1	81	2	37	.1	56	24	320	5.84	2	5	ND	1	86	.2	2	2	161	2.15	.086	4	77	1.94	99	.35	7	2.50	.22	.51	1	38	17
229859	1	40	2	34	.1	45	20	304	5.65	2	5	ND	1	131	.2	2	2	145	2.57	.080	3	74	1.87	37	.35	9	2.67	.21	.27	1	34	22
229860	1	91	2	38	.1	56	24	321	6.04	2	5	ND	1	98	.2	2	2	159	2.56	.088	4	80	1.96	64	.36	8	2.71	.22	.43	1	36	24
229861	2	1304	3	40	.8	63	43	301	5.58	4	5	2	1	53	.2	2	2	136	2.12	.079	3	77	1.87	48	.35	7	2.22	.18	.34	1	1050	21
229862	2	1521	2	34	.5	66	35	305	4.87	4	5	ND	1	50	.2	2	2	113	2.92	.087	3	79	1.71	30	.31	10	2.46	.18	.22	1	1020	19
229863	1	829	2	33	.3	63	25	357	5.58	2	5	ND	1	53	.2	2	2	151	2.10	.077	3	82	2.06	40	.38	8	2.40	.18	.30	1	480	16
STANDARD C/AU-R	18	58	38	131	6.9	69	31	993	3.90	37	18	6	37	50	18.4	16	19	55	.50	.086	35	56	.89	177	.08	34	1.85	.08	.15	13	480	-

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.
ASSAY *RECOMMENDED FOR ROCK AND CORE SAMPLES IF* CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: CORE AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: NOV 15 1991 DATE REPORT MAILED: Nov 19/91. 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	SAMPLE wt. lb
229864	1	817	6	28	.2	63	27	336	5.54	2	5	ND	1	48	.2	2	2	126	2.84	.100	3	77	1.82	28	.34	10	2.61	.12	.23	1	470	21
229865	1	173	2	29	.1	63	26	336	5.43	2	5	ND	1	57	.2	2	2	138	2.40	.088	3	79	1.92	44	.34	9	2.52	.11	.30	1	39	18
229866	1	122	3	26	.1	65	26	293	4.98	6	5	ND	1	98	.2	2	2	126	2.70	.095	3	88	1.79	33	.31	10	2.63	.13	.21	1	37	24
229867	1	81	4	31	.1	53	21	292	5.10	2	5	ND	1	96	.2	2	2	137	2.22	.084	4	86	1.71	46	.29	7	2.45	.16	.29	1	27	23
229868	1	50	2	24	.1	48	20	286	5.58	2	5	ND	1	121	.2	2	2	158	1.89	.092	3	64	1.71	121	.37	4	2.64	.22	.95	1	40	19
229869	1	119	2	31	.1	48	24	296	5.74	2	5	ND	1	103	.2	2	2	166	1.96	.087	3	58	1.70	105	.36	5	2.51	.18	.69	1	84	25
229870	1	313	4	74	.1	157	14	998	4.78	9	5	ND	1	60	.2	2	2	86	1.87	.150	2	202	2.44	47	.22	2	2.03	.07	.83	1	27	17
229871	1	155	5	57	.1	96	19	919	3.94	8	5	ND	1	123	.2	2	2	80	4.25	.155	2	168	2.12	54	.21	2	1.66	.05	.55	1	14	21
229872	3	423	4	68	.3	126	14	1048	4.55	7	5	ND	1	112	.2	2	2	90	3.29	.162	3	185	2.51	42	.22	2	2.01	.07	.85	1	37	19
229873	1	59	5	74	.1	113	27	1355	4.33	12	5	ND	1	128	.2	2	2	73	6.50	.122	3	132	2.28	19	.18	2	1.97	.03	.56	1	53	22
229874	3	143	3	79	.2	82	43	1373	4.08	11	5	ND	1	135	.2	2	2	79	8.20	.133	3	130	2.15	16	.15	3	1.87	.02	.09	1	90	18
229875	1	675	2	59	.3	109	32	1208	3.94	13	5	ND	1	158	.3	3	2	69	7.55	.158	2	133	1.83	25	.18	2	1.62	.02	.12	1	185	17
229876	1	46	4	64	.1	146	34	912	3.91	11	5	ND	1	102	.2	2	2	59	3.54	.154	2	153	1.98	29	.22	2	1.51	.05	.18	1	84	19
229877	1	115	6	48	.1	100	30	802	4.35	11	5	ND	1	128	.2	2	2	86	2.91	.113	2	112	2.01	80	.22	2	1.61	.08	.29	1	45	17
RE 229881	1	624	7	51	.5	96	73	746	4.44	10	5	ND	1	94	.2	2	2	82	2.34	.166	2	197	1.68	70	.22	3	1.37	.08	.48	1	92	-
229878	1	163	2	47	.1	113	27	996	4.88	6	5	ND	1	91	.2	2	2	97	3.22	.142	2	168	1.99	62	.22	2	1.84	.09	.91	1	54	19
229879	2	390	4	70	.3	112	42	1599	4.83	7	5	ND	1	103	.2	2	2	81	6.63	.140	3	163	2.11	35	.14	2	2.02	.04	.55	1	94	18
229880	1	208	2	65	.1	134	35	988	4.40	7	5	ND	1	95	.2	2	2	81	2.34	.153	2	201	1.88	65	.23	2	1.63	.07	.59	1	370	22
229881	1	613	13	51	.5	96	71	747	4.37	10	5	ND	1	93	.2	2	2	81	2.32	.169	2	191	1.67	72	.22	4	1.35	.08	.47	1	87	20
229882	1	760	4	52	.3	107	53	866	4.92	9	5	ND	1	94	.2	2	2	94	3.91	.162	3	190	2.01	50	.21	2	1.73	.07	.60	1	171	19
229883	1	661	3	50	.5	102	33	844	4.24	8	5	ND	1	105	.2	2	2	80	3.48	.151	2	198	1.72	58	.21	2	1.38	.06	.33	1	85	19
229884	1	158	2	62	.1	136	20	886	4.46	8	5	ND	1	79	.2	2	2	89	2.41	.159	3	205	2.26	63	.22	2	1.83	.08	1.07	1	16	18
229885	1	479	2	54	.3	110	41	1012	4.50	9	5	ND	1	97	.2	2	2	94	4.14	.160	3	195	2.20	57	.22	2	1.82	.07	.80	2	141	20
229886	1	245	3	63	1.5	145	138	989	6.76	9	5	ND	1	59	.2	2	2	100	1.82	.145	2	171	2.64	96	.23	3	1.91	.05	.65	1	1830	20
229887	1	107	5	95	.2	104	48	1128	5.28	22	5	ND	1	68	.2	2	2	92	1.64	.148	2	172	2.23	82	.21	5	1.97	.08	.33	1	102	18
229888	1	244	32	174	.3	109	15	1125	3.71	18	5	ND	1	129	.6	2	2	78	2.17	.155	2	191	1.86	53	.21	7	2.25	.20	.26	1	52	17
229889	1	119	7	163	.2	103	16	1070	3.44	12	5	ND	1	122	.6	2	2	65	2.81	.152	2	172	1.85	84	.19	7	1.95	.15	.16	1	23	19
229890	2	179	16	147	.4	59	20	1085	4.36	13	5	ND	1	102	.4	2	2	82	3.56	.140	3	119	1.54	42	.16	9	2.00	.14	.13	1	116	18
229891	1	44	15	217	.6	37	34	1084	6.21	8	5	ND	1	64	.9	2	2	107	3.45	.130	3	69	1.85	65	.22	5	1.79	.06	.20	1	63	18
229892	2	42	4	54	.1	28	25	684	5.87	3	5	ND	1	56	.2	2	2	133	2.29	.135	4	46	1.54	99	.23	9	2.02	.08	.27	1	26	21
229893	1	23	7	146	.1	61	26	1113	6.57	3	5	ND	1	79	.2	2	2	134	3.17	.154	3	97	1.94	112	.22	7	2.21	.09	.67	1	29	20
229894	2	131	3	88	.1	37	39	1082	5.54	10	5	ND	1	51	.2	2	2	115	2.68	.124	3	65	1.94	69	.24	5	1.91	.06	.20	1	69	22
229895	1	454	10	99	.5	37	43	1167	5.42	13	5	ND	1	67	.2	3	2	110	3.00	.126	3	69	2.04	52	.24	5	1.86	.04	.14	1	150	17
229896	1	114	2	52	.3	87	28	1128	5.70	6	5	ND	1	133	.2	2	2	115	3.40	.124	3	100	1.97	107	.23	4	1.70	.07	.62	1	68	18
229897	1	238	2	43	.1	111	6	1214	4.57	8	5	ND	1	88	.2	2	2	85	5.08	.141	3	196	2.13	32	.17	2	1.78	.05	.75	1	39	20
229898	1	380	2	36	.4	78	15	1113	3.98	8	5	ND	1	114	.2	2	2	85	5.74	.139	3	136	1.94	41	.21	3	1.65	.04	.30	2	150	20
229899	1	233	2	43	.1	114	9	927	3.75	8	5	ND	1	103	.2	2	2	70	3.75	.150	2	184	1.89	31	.20	2	1.51	.05	.47	1	35	17
STANDARD C/AU-R	18	60	38	139	7.1	74	33	1090	4.02	43	18	7	37	54	18.7	16	18	55	.51	.094	38	60	.90	185	.10	33	1.91	.06	.16	13	480	-

Sample type: CORE. Samples beginning 'RE' are duplicate samples.

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	SAMPLE wt. lb
229900	1	163	4	72	.1	101	21	1022	3.72	13	5	ND	1	118	.2	2	2	61	2.53	.129	2	200	1.88	36	.15	4	1.56	.10	.14	1	35	19
229901	1	34	2	76	.1	137	10	1115	4.00	10	5	ND	1	92	.2	2	2	68	2.36	.131	2	228	1.86	54	.15	3	1.60	.11	.15	1	6	20
229902	1	720	6	67	.7	96	27	918	4.54	17	5	ND	1	153	.2	2	2	101	3.24	.124	4	154	1.88	148	.19	9	2.23	.16	.21	2	168	17
229903	2	375	4	87	.3	94	14	1044	3.82	12	5	ND	1	127	.2	2	2	84	2.85	.133	3	161	1.97	75	.16	8	2.16	.24	.26	1	53	20
229904	2	257	7	119	.1	121	10	1183	4.43	14	5	ND	1	118	.2	2	2	93	2.38	.127	3	208	2.16	77	.18	9	2.52	.23	.31	1	64	18
229905	1	174	8	119	.1	104	10	1142	4.45	13	5	ND	1	175	.2	2	2	95	2.62	.139	3	248	2.03	62	.16	11	2.84	.43	.31	1	15	22
229906	1	191	2	91	.2	109	13	1164	4.18	14	5	ND	1	157	.2	2	2	88	3.24	.134	2	244	1.86	63	.17	9	2.54	.41	.27	1	78	18
229907	1	190	2	58	.1	119	6	955	3.73	12	5	ND	1	106	.2	2	2	73	3.27	.128	2	214	1.85	37	.17	4	1.57	.10	.24	1	18	19
229908	1	40	2	23	.2	56	19	642	1.80	16	5	ND	1	120	.2	2	2	40	4.96	.133	2	100	.82	15	.13	4	.73	.06	.07	1	45	17
229909	1	415	2	33	.3	80	11	741	2.33	16	5	ND	1	109	.2	2	2	44	4.64	.130	2	135	1.02	15	.13	3	.85	.06	.06	1	112	18
229910	1	408	2	52	.1	105	19	1010	4.14	15	5	ND	1	103	.2	2	2	89	5.31	.133	3	222	1.82	31	.16	5	1.72	.15	.19	1	45	21
229911	1	52	2	75	.1	115	21	983	3.69	18	5	ND	1	183	.2	2	2	82	3.20	.138	4	205	2.18	42	.15	12	2.64	.33	.24	1	67	19
229912	1	69	2	66	.1	129	14	1055	4.54	12	5	ND	1	120	.2	2	2	108	3.68	.136	5	283	2.36	77	.16	9	2.89	.60	.55	1	36	18
229913	1	54	2	87	.1	128	17	989	3.73	18	5	ND	1	114	.2	2	2	92	3.03	.135	3	244	2.05	44	.16	17	2.87	.31	.22	1	22	18
229914	1	318	24	149	.3	137	27	1175	4.35	20	5	ND	1	126	.3	2	2	102	3.47	.143	4	263	2.19	25	.17	20	3.18	.25	.09	1	109	19
229915	1	165	2	79	.1	110	16	978	3.95	21	5	ND	1	150	.2	2	2	96	3.72	.142	4	248	1.99	46	.16	16	3.32	.54	.30	1	47	19
229916	3	92	5	89	.7	116	19	894	4.01	12	5	ND	1	139	.2	2	2	92	2.73	.143	5	261	2.32	136	.16	15	3.18	.46	.54	3	21	17
229917	1	124	2	81	.5	117	21	855	3.73	10	8	ND	2	116	.2	2	3	92	2.45	.136	5	250	2.25	68	.18	16	2.83	.31	.62	1	31	19
229918	1	137	2	53	.1	113	15	835	4.09	5	5	ND	1	114	.2	2	2	101	3.09	.130	5	260	2.47	69	.18	5	2.27	.24	.82	1	27	18
229919	1	131	2	49	.1	110	16	825	3.90	10	5	ND	1	94	.2	2	2	101	3.70	.142	5	272	2.26	57	.18	10	2.32	.17	.66	1	26	17
229920	1	138	2	74	.1	116	18	867	3.85	11	5	ND	1	168	.2	2	2	92	2.85	.135	4	260	2.27	67	.17	20	3.28	.40	.53	1	30	19
229921	1	122	2	52	.2	119	21	819	3.92	5	5	ND	1	92	.2	2	2	95	3.89	.130	4	260	2.22	45	.19	13	2.50	.14	.44	1	66	18
229922	7	64	9	144	.4	128	159	1245	3.71	36	5	ND	1	205	.2	2	2	72	3.53	.140	2	137	2.01	65	.17	8	1.81	.09	.07	1	55	17
229923	16	125	5	126	.1	101	24	1345	3.95	25	5	ND	1	88	.2	2	2	91	2.58	.148	3	190	1.88	59	.17	18	2.47	.11	.09	1	24	18
229924	1	300	5	437	.4	63	24	1055	2.42	12	5	ND	1	237	1.4	2	2	46	3.54	.156	2	110	1.55	21	.16	4	1.27	.05	.04	1	70	19
229925	1	32	16	133	.6	60	36	754	2.06	16	5	ND	1	235	.5	2	2	48	3.11	.168	2	94	1.43	13	.20	5	1.17	.06	.03	1	136	19
229926	1	12	5	72	.2	38	24	646	1.62	9	5	ND	1	180	.2	2	2	46	2.76	.139	2	78	.95	14	.20	4	.96	.06	.04	1	18	22
229927	2	24	8	90	.1	49	32	1070	2.12	12	5	ND	1	183	.2	2	2	41	3.45	.128	2	92	1.46	24	.15	4	1.03	.06	.03	1	30	20
229928	2	170	14	102	.1	80	27	1174	2.45	13	5	ND	1	173	.3	2	2	50	2.65	.152	2	135	1.57	59	.18	5	1.38	.12	.04	1	52	21
229929	10	128	38	76	.5	51	54	671	1.82	18	5	ND	1	218	.2	2	2	38	3.75	.141	2	76	1.30	14	.16	4	.94	.06	.02	1	211	20
229930	1	199	83	80	.4	49	45	697	1.84	20	5	ND	1	238	.3	2	2	40	4.46	.152	2	65	1.28	16	.17	5	1.05	.05	.02	1	87	19
229931	1	80	7	173	.1	77	11	1510	3.20	19	5	ND	1	171	.5	2	2	68	4.21	.142	2	165	1.65	72	.19	8	2.14	.17	.09	2	6	19
229932	2	144	19	171	.3	65	102	1082	2.67	33	5	ND	1	154	.6	2	2	48	4.95	.138	2	107	1.17	75	.16	7	1.19	.08	.09	1	14	18
229933	1	27	11	152	.1	39	8	774	1.84	10	5	ND	1	253	.2	2	2	49	4.65	.157	2	70	1.15	13	.19	5	1.11	.06	.02	1	27	21
RE 229929	10	127	40	90	.5	48	51	654	1.78	18	5	ND	1	215	.2	2	2	38	3.66	.141	2	73	1.26	14	.17	4	.91	.05	.02	1	204	-
229934	1	412	15	295	2.9	147	727	917	4.80	84	5	ND	1	158	1.2	2	2	39	3.77	.137	2	75	.96	11	.19	3	.89	.06	.03	1	1540	19
229935	1	88	7	165	.2	63	20	1280	2.33	11	5	ND	1	154	.5	2	2	52	3.21	.138	2	111	1.53	38	.19	4	1.25	.12	.06	1	92	20
STANDARD C/AU-R	18	56	38	138	7.0	71	32	1056	4.04	41	18	6	37	51	18.4	15	18	57	.48	.093	38	58	.89	181	.09	32	1.92	.09	.16	11	460	-

Sample type: CORE. Samples beginning 'RE' are duplicate samples.

ACME ANALYTICAL

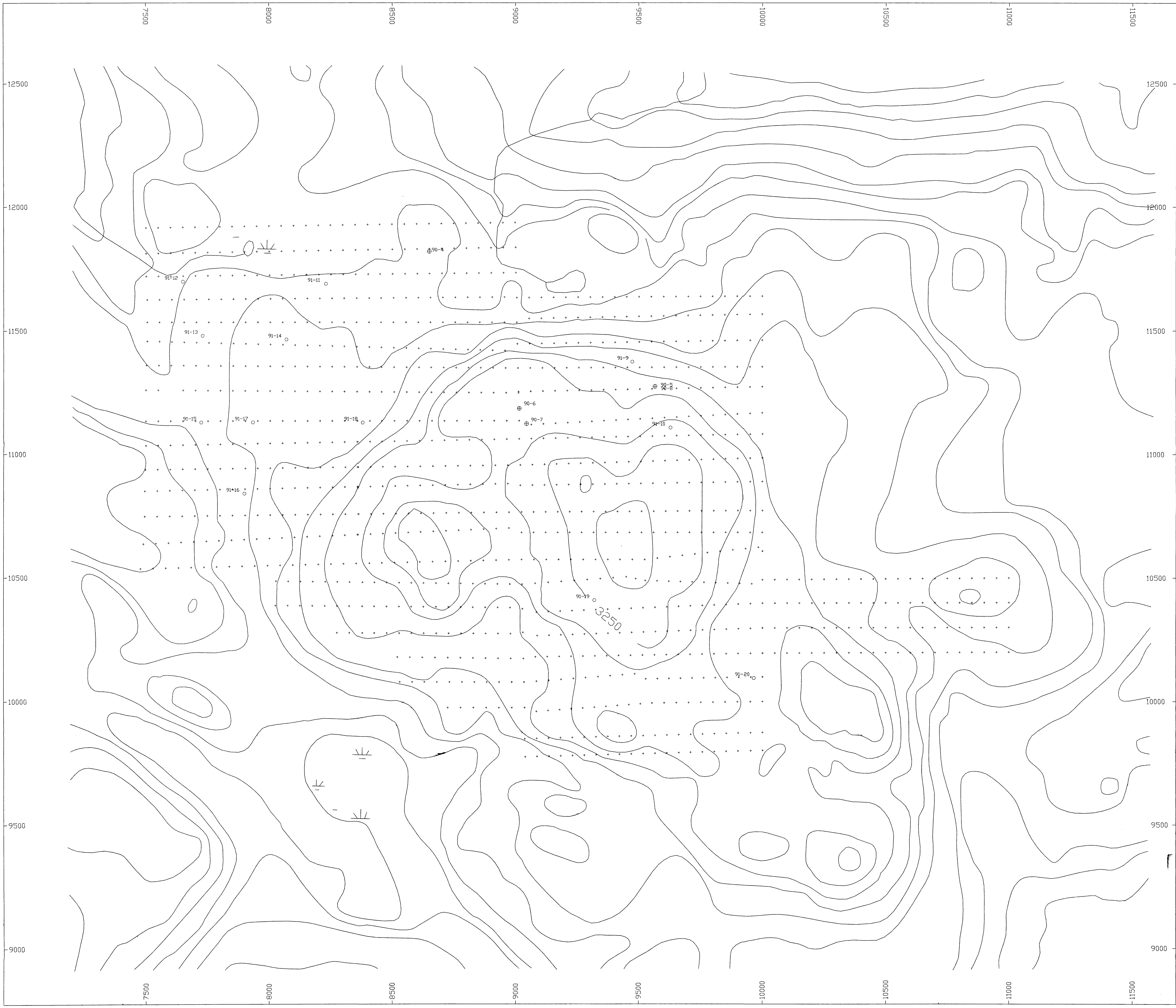
Phelps Dodge Corp. PROJECT 163 FILE # 91-5490

ACME ANALYTICAL

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	SAMPLE wt. lb
229936	2	70	5	242	.1	67	10	1478	2.95	16	5	ND	1	107	.5	2	2	63	3.27	.153	2	131	1.67	53	.21	8	1.67	.10	.09	1	19	19
229937	1	63	21	157	.1	61	56	1277	3.36	24	5	ND	1	163	.2	2	2	56	7.13	.165	2	98	1.19	35	.19	5	1.27	.06	.04	1	380	17
229938	1	365	26	234	.6	95	225	1198	3.26	35	5	ND	1	126	.6	2	2	51	3.05	.146	2	110	1.44	19	.21	7	1.23	.06	.03	1	136	18
229939	7	18	4	143	.1	113	7	1360	3.15	33	5	ND	1	85	.2	2	2	75	2.68	.160	2	142	1.87	68	.20	12	1.99	.10	.11	1	4	19
229940	1	395	24	448	.7	69	203	753	2.34	33	5	ND	1	173	2.1	2	2	42	5.98	.155	2	79	.95	6	.18	4	.94	.04	.01	1	92	18
229941	1	27	10	151	.1	54	13	1018	2.09	13	5	ND	1	144	.4	2	2	49	4.13	.145	2	91	1.28	20	.14	5	1.27	.05	.03	1	4	18
229942	7	34	15	122	.1	95	21	1231	2.79	27	5	ND	1	107	.2	2	2	78	3.82	.147	2	130	1.50	68	.19	12	1.93	.16	.11	1	19	17
229943	1	560	16	393	.5	120	78	1338	2.76	49	5	ND	1	99	1.1	2	2	50	3.17	.147	2	101	1.44	12	.20	4	1.57	.09	.03	1	310	19
229944	1	4	4	30	.1	43	2	743	1.42	11	5	ND	1	165	.2	2	2	41	4.29	.147	2	64	.75	8	.19	4	1.02	.05	.01	1	5	23
229945	3	14	5	57	.1	98	10	912	2.26	38	5	ND	1	195	.2	2	2	69	4.22	.141	2	108	1.34	43	.20	9	1.67	.10	.04	1	26	19
229946	15	23	18	96	.1	113	5	1044	2.43	19	5	ND	1	134	.2	2	2	60	2.66	.176	2	118	1.68	32	.20	12	1.76	.09	.07	1	19	18
229947	21	914	8	334	.7	125	27	1158	4.01	35	5	ND	1	145	.4	2	2	98	2.79	.152	2	136	2.04	112	.21	26	2.78	.17	.12	1	136	22
229948	9	1025	14	205	1.0	74	35	1141	4.03	43	5	ND	1	173	.2	2	2	105	2.72	.134	2	71	1.75	99	.26	15	2.57	.26	.17	1	240	24
229949	1	4385	74	2083	3.3	225	119	915	3.71	79	5	2	1	139	6.8	2	6	50	4.40	.145	2	91	1.42	19	.20	4	1.12	.09	.03	1	1980	19
229950	3	1478	17	589	.7	110	8	1013	2.68	24	5	ND	1	140	2.0	2	3	59	2.69	.173	2	114	1.51	32	.21	7	1.43	.09	.06	1	570	19
229951	1	605	26	341	.2	68	39	794	2.44	19	5	ND	1	136	1.0	2	2	47	4.13	.158	2	87	1.21	17	.20	2	1.07	.09	.04	1	1150	18
229952	22	48	8	122	.1	58	17	907	1.99	12	5	ND	1	126	.3	2	2	53	2.50	.174	2	105	1.38	26	.21	4	1.29	.10	.05	1	37	18
229953	3	207	39	135	.4	59	24	589	1.78	14	5	ND	1	214	.5	2	2	48	2.75	.178	2	70	1.13	87	.20	5	1.28	.06	.02	1	78	17
229954	5	259	39	177	.1	105	12	764	1.83	13	5	ND	1	161	.7	2	2	48	2.27	.160	2	97	1.40	18	.21	5	1.26	.09	.03	1	30	19
229955	1	108	23	254	.2	83	59	393	1.51	27	5	ND	1	201	.9	2	2	41	2.56	.166	2	65	.98	27	.21	3	1.06	.06	.02	1	84	18
229956	1	88	100	479	.1	97	26	607	1.68	34	5	ND	1	198	1.8	2	2	40	2.50	.187	2	72	1.40	206	.20	5	1.20	.07	.03	1	62	18
229957	1	1078	211	1358	.5	129	48	854	1.96	54	5	ND	1	171	5.6	2	2	42	2.55	.182	2	92	1.46	84	.20	5	1.22	.08	.05	1	125	19
229958	1	403	169	1238	.4	84	30	596	1.54	34	5	ND	1	210	4.9	2	2	38	2.64	.169	2	62	1.19	303	.18	3	1.14	.06	.02	1	240	22
229959	1	151	50	637	.1	95	30	742	1.61	38	5	ND	1	129	2.3	2	2	40	2.94	.172	2	82	1.03	24	.20	3	.99	.07	.04	1	103	20
229960	1	176	59	398	.1	66	8	746	1.70	19	5	ND	1	167	1.5	2	2	41	3.28	.151	2	72	1.02	28	.17	4	1.06	.05	.02	1	25	23
RE 229956	1	77	95	431	.1	92	24	579	1.60	34	5	ND	1	188	1.6	2	2	38	2.34	.170	2	70	1.33	188	.19	3	1.13	.07	.04	1	52	-
229961	1	317	103	292	.1	51	35	781	1.68	20	5	ND	1	165	1.2	2	2	38	4.52	.160	2	64	.68	15	.19	5	.88	.04	.02	1	34	21
229962	1	249	81	394	.1	58	16	731	1.58	18	5	ND	1	180	1.8	2	2	41	3.87	.167	2	70	.70	23	.19	4	.99	.05	.02	1	250	24
229963	1	144	120	538	.1	46	10	596	1.50	15	5	ND	1	212	2.1	2	2	45	3.91	.169	2	70	.75	36	.21	4	1.09	.05	.01	1	32	20
229964	1	59	41	307	.1	68	11	594	1.57	19	5	ND	1	204	1.2	2	2	46	2.94	.169	2	76	1.10	43	.22	3	1.14	.06	.02	1	22	21
229965	1	42	32	260	.1	73	10	547	1.46	19	5	ND	1	163	1.1	2	2	39	2.98	.157	2	63	.99	9	.20	3	1.05	.06	.02	1	23	20
229966	3	56	74	452	.1	85	16	612	1.62	33	5	ND	1	165	2.2	2	2	37	3.13	.159	2	65	1.01	11	.19	3	1.09	.06	.03	1	21	22
229967	1	9	17	230	.1	79	11	527	1.38	31	5	ND	1	189	.9	2	2	37	2.46	.169	2	66	1.11	8	.19	4	1.06	.05	.03	1	19	21
229968	1	20	17	184	.1	35	7	337	1.27	16	5	ND	1	202	.7	2	2	37	2.46	.178	2	59	1.04	4	.17	2	1.03	.06	.01	1	22	23
229969	1	312	60	629	.1	57	7	540	1.60	28	5	ND	1	218	2.5	2	2	45	2.37	.177	2	80	1.34	14	.21	4	1.25	.07	.03	1	230	20
229970	1	424	63	1287	.1	73	9	443	1.68	38	5	ND	1	231	5.0	2	2	44	2.84	.162	2	72	1.26	5	.20	3	1.25	.06	.01	1	480	21
229971	12	282	23	425	.1	82	4	1026	2.19	19	5	ND	1	116	1.6	2	2	54	1.89	.162	2	113	1.60	43	.21	4	1.36	.11	.07	1	28	19
229972	6	2408	64	2908	1.1	171	14	642	1.94	105	5	ND	1	163	11.8	2	4	38	3.81	.156	2	66	1.12	13	.15	2	.96	.06	.03	1	189	15
STANDARD C/AU-R	17	57	38	132	7.0	70	31	1047	4.00	43	18	6	35	52	18.7	15	19	56	.50	.090	36	57	.90	178	.09	32	1.92	.06	.15	13	490	-

Sample type: CORE. Samples beginning 'RE' are duplicate samples.


7500E
8000E
8500E
9000E
9500E
10000E
10500E
11000E
12000N
11500N
11000N
10500N
10000N
9500N
LCP Redgold 10
SHIK 1
SHIK 2
SHIK 3
SHIK 4
SHIK 5
SHIK 6
LCP SHIK 1 & 3
Redgold Zone
Shiko Fault
Redgold Fault
British Columbia
Prince George
Williams Lake
PROPERTY LOCATION
Vancouver
U.S.A.
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) calcareous flows and flow breccias, c non-calcareous flows and flow breccias.
SYMBOLS
Claim boundary
Legal corner post
SHIK 2 Claim name
Road, cat trail
Trench
11000 N Grid line and line number
P6 O, P1 Percussion drill hole location
91-10 DDH 1 Diamond drill hole location
Jointing (inclined, vertical), bedding (inclined, vertical)
Foliation
Float
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
bn....bornite
cp....chalcopyrite
cu.... native copper
mal...malachite
po... pyrrhotite
py.... pyrite
mg ... magnetite
Fault (defined, approximate)
GEOLOGICAL BRANCH ASSESSMENT REPORT
22,104
Scale
100 0 100 200 300
metres
PHELPS DODGE CORP. OF CANADA LIMITED
PROJECT Nº: 163
REDGOLD PROJECT
1991 DRILL PLAN
GEOLOGY COMPILATION
SCALE 1:5,000
DATE Dec. '90 Nov. 91
FILE 163-015
BY: dlp PEF
N.T.S. 93A/6
FIG. Nº 4



⊕ 90-7 — 1990 DIAMOND DRILL HOILES

○ 15 — 1991 DIAMOND DRILL HOLES

\+ \+ \+ \+ Survey stations

GEOLOGICAL BRANCH ASSESSMENT REPORT

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PHELPS DODGE CORPORATION of CANADA, LIMITED

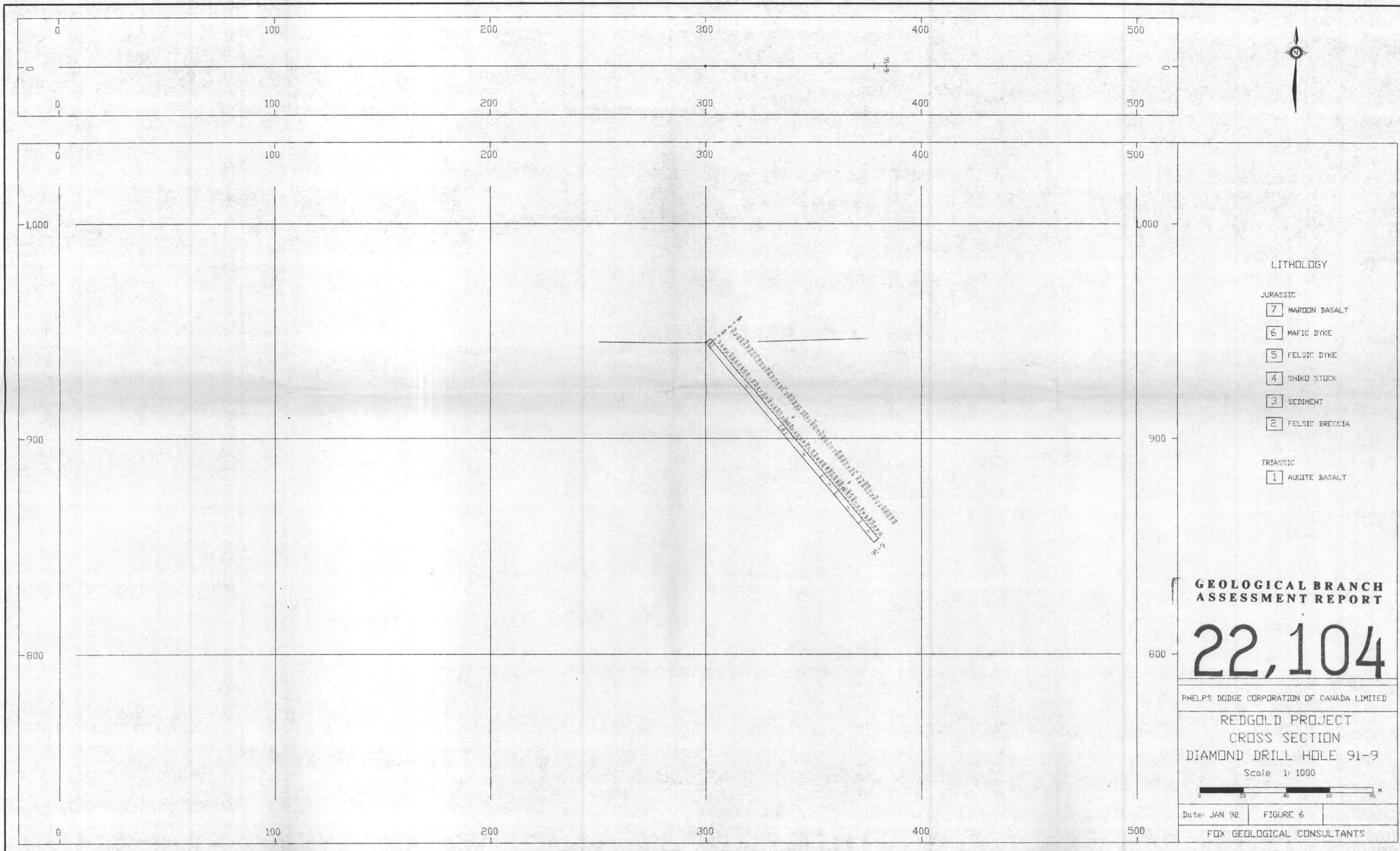
REDGOLD PROJECT DRILL PLAN

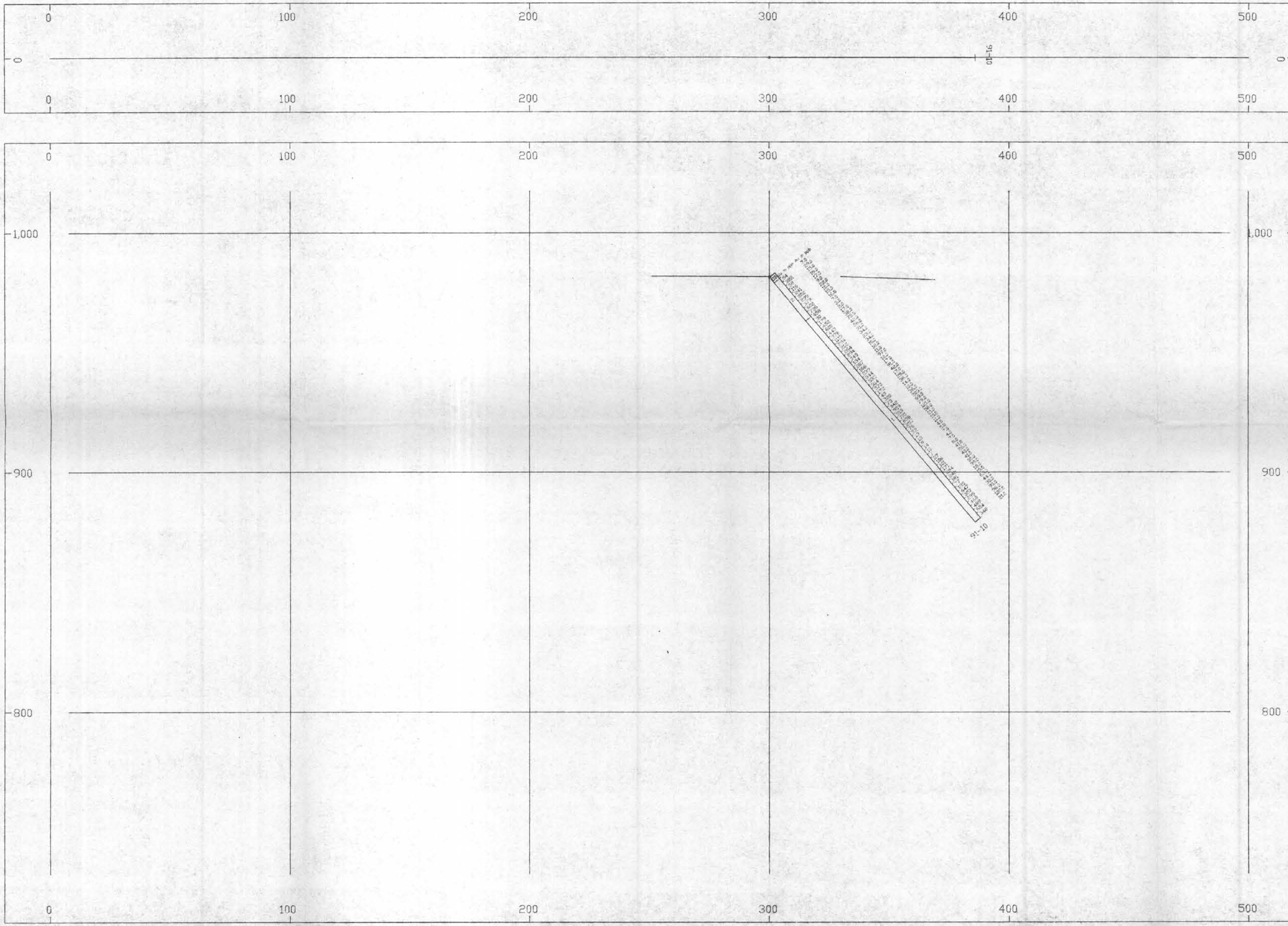
Scale 1: 5000

0 100 200 300 400 M

JAN 92	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
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,104
PHELPS DODGE CORPORATION OF CANADA LIMITED
REDGOLD PROJECT
CROSS SECTION
DIAMOND DRILL HOLE 91-9
Scale 1: 1000
Date: JAN 92
FIGURE 6
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

PHELPS DODGE CORPORATION OF CANADA LIMITED

REDGOLD PROJECT
CROSS SECTION
DIAMOND DRILL HOLE 91-10

Scale 1: 1000

0 20 40 60 80 M

Date: JAN 92	FIGURE 7

FOX GEOLOGICAL CONSULTANTS

7,600 E
7,700 E
7,800 E
7,900 E
8,000 E
8,100 E
8,200 E
8,300 E
91-12
91-11
N
900
800
700
Cu in ppm Au in ppb
LITHOLOGY
JURASSIC
7 MAROON BASALT
6 MAFIC DYKE
5 FELSIC DYKE
4 SHIKO STOCK
3 SEDIMENT
2 FELSIC BRECCIA
TRIASSIC
1 AUGITE BASALT
GEOLOGICAL BRANCH
ASSESSMENT REPORT
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PHELPS DODGE CORPORATION OF CANADA LIMITED
REDGOLD PROJECT
CROSS SECTION
DIAMOND DRILL HOLES 91-11 AND 91-12
Scale 1: 1000
0
20
40
60
80
M
Date: JAN 92
FIGURE 8
FOX GEOLOGICAL CONSULTANTS

7,600 E
7,700 E
7,800 E
7,900 E
8,000 E
8,100 E
8,200 E
8,300 E
11,500 N11,520 N
91-13
91-14
900
800
700
LITHOLOGY
JURASSIC
7 MAROON BASALT
6 MAFIC DYKE
5 FELSIC DYKE
4 SHIKO STOCK
3 SEDIMENT
2 FELSIC BRECCIA
TRIASSIC
1 AUGITE BASALT
GEOLOGICAL BRANCH
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REDGOLD PROJECT
CROSS SECTION
DIAMOND DRILL HOLES 91-13 AND 91-14
Scale 1: 1000
Date: JAN 92
FIGURE 9
FOX GEOLOGICAL CONSULTANTS


7,600 E
7,700 E
7,800 E
7,900 E
8,000 E
8,100 E
8,200 E
8,300 E
8,400 E
11,200 N
11,100 N
91-15
91-17
91-18
900
800
700
LITHOLOGY
JURASSIC
7 MAROON BASALT
6 MAFIC DYKE
5 FELSIC DYKE
4 SHIKO STOCK
3 SEDIMENT
2 FELSIC BRECCIA
TRIASSIC
1 AUGITE BASALT
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,104
PHELPS DODGE CORPORATION OF CANADA LIMITED
REDGOLD PROJECT
CROSS SECTION
DIAMOND DRILL HOLES 91-15, 17 and 18
Scale 1: 1000
Date: JAN 92
FIGURE 10
FOX GEOLOGICAL CONSULTANTS


7,600 E
7,700 E
7,800 E
7,900 E
8,000 E
8,100 E
8,200 E
8,300 E
91-16
900
800
700
LITHOLOGY
JURASSIC
7 MAROON BASALT
6 MAFIC DYKE
5 FELSIC DYKE
4 SHIKO STOCK
3 SEDIMENT
2 FELSIC BRECCIA
TRIASSIC
1 AUGITE BASALT
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,104
PHELPS DODGE CORPORATION OF CANADA LIMITED
REDGOLD PROJECT
CROSS SECTION
DIAMOND DRILL HOLE 91-16
Scale 1: 1000
0 20 40 60 80 M
Date: JAN 92
FIGURE 11
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

GEOLOGICAL BRANCH ASSESSMENT REPORT

22,104

PHELPS DODGE CORPORATION OF CANADA LIMITED

REDGOLD PROJECT
CROSS SECTION
DIAMOND DRILL HOLE 91-19

Scale 1: 1000

0 20 40 60 80 M

Date: JAN 92 | FIGURE 12

FOX GEOLOGICAL CONSULTANTS


9,600 E
9,700 E
9,800 E
9,900 E
10,000 E
10,100 E
10,200 E
10,300 E
10,100 N
91-20
1,000
900
800
LITHOLOGY
JURASSIC
7 MAROON BASALT
6 MAFIC DYKE
5 FELSIC DYKE
4 SHIKO STOCK
3 SEDIMENT
2 FELSIC BRECCIA
TRIASSIC
1 AUGITE BASALT
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,104
PHELPS DODGE CORPORATION OF CANADA LIMITED
REDGOLD PROJECT
CROSS SECTION
DIAMOND DRILL HOLE 91-20
Scale 1: 1000
Date: JAN 92
FIGURE 13
FOX GEOLOGICAL CONSULTANTS