FOX GEOLOGICAL CONSULTANTS LTD.

LOC MO: JAN C 7 1994 RD.
COTION:
FILE NO:

### **GEOCHEMICAL REPORT**

#### ON THE

#### **MAC CLAIMS**

Cariboo Mining Division
NTS 93B13W, 93C16E
123°55'W Longitude 52°58'W Lattitude

Annual Work Approval Number PRG-1993-1101250-4-5549

by

Geoffrey N. Goodall, B.Sc., P. Geo. Fox Geological Consultants Ltd. 1409 - 409 Granville Street Vancouver, B.C. V6C 1T8

for

Phelps Dodge Corporation of Canada, Limited Suite 912 - 120 Adelaide Street West Toronto, Ontario M5H 1T1

December 22, 1993
GEOLOGICAL BRANCH
ASSESSMENT REPORT

1409 - 409 Granville Street, Vancouver, B.C. (604) 669-5736 Fax (604) 681-3920



# TABLE OF CONTENTS

SUMMARY	
INTRODUCTION	1
LOCATION AND ACCESS	1
CLAIM INFORMATION	1
REGIONAL GEOLOGY	1
PROPERTY GEOLOGY	5
1993 WORK PROGRAM	5
RESULTS	7
CONCLUSIONS	7
RECOMMENDATIONS	7
DISBURSEMENTS	7
CERTIFICATE	8
List of Figures	
Figure 1 - Property Location Map	2
Figure 2 - Location and Access Map	3
Figure 3 - Claim Map	4
Figure 4 - Regional Geology and Mineralized Zones	6
Figure 5 - Sample Location Plan poc	ket
Figure 6 - Soil Geochemistry Plan - Au, Ag poc	ket
Figure 7 - Soil Geochemistry Plan - As, Sb poc	ket

# **Appendices**

Appendix I - Assays Results with Field Notes	9
Appendix II - Assay Certificates	10

#### **SUMMARY**

An exploration program was conducted on the Mac claims in 1993 to assess source rocks for anomalous stream sediments collected in this area in 1992. A total of 155 soil samples were collected from 7.5 kilometres of flagged grid. In addition, seventeen rock samples were collected from bedrock materials throughout the claim area. Weakly anomalous soil samples were obtained along one grid line but no significant anomaly was detected. Three samples of bedrock returned 17 ppb gold. Small zones of silicic and argillic-altered rhyolite tuffs and breccias were noted on the east and north areas of the claims otherwise bedrock materials, where exposed, are barren and unaltered.

No further work is recommended for the property. The claims should be allowed to lapse.

#### INTRODUCTION

This report summarizes the results of geological and geochemical work conducted on the Mac claims situated in central British Columbia. Eleven man days were spent collecting 155 soil and 17 rock samples and conducting preliminary geological investigations. The Mac claims were staked in October, 1992 to cover drainages which contained several anomalous silt samples. Work done this year is compiled herein and recommendations made to discontinue work.

#### **LOCATION AND ACCESS**

The Mac claims are located on the Interior Plateau of central British Columbia, approximately 25 kilometres from the locality of Nazko and 100 kilometres from the town of Quesnel, B.C. (Figure 1). The claims are located on NTS mapsheets 93B/13W and 93C/16E at 123° 55' west longitude and 52° 58' north latitude. Access to the property is by paved highway from Quesnel to Nazko, then by a series of all-weather gravel roads which lead to the central area of the property. The claims are in an area of active logging with spruce and pine timber the predominant species. Topography is gentle with elevations ranging from 1,200 metres to 1,500 metres. Location and access to the Mac claims are shown in Figure 2.

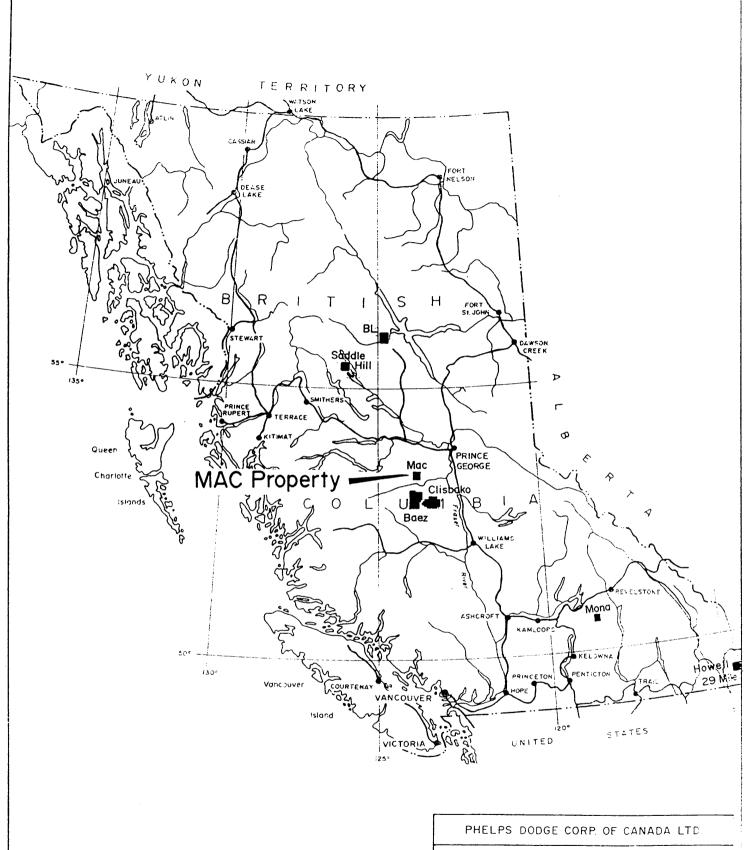
#### **CLAIM INFORMATION**

The Mac 1 to 4 claims were staked in October, 1992 to cover drainages which returned anomalous concentrations of indicator elements. Claim data are presented below. A claim map is provided in Figure 3.

Claim Name	No. of Units	Record Numbers	Expiry Date
Mac 1	20	314038	October 10, 1994
Mac 2	20	314039	October 10, 1994
Mac 3	20	314040	October 5, 1994
Mac 4	20	314041	October 5, 1994

#### **REGIONAL GEOLOGY**

The Mac claims are centrally located in the Interior Plateau of British Columbia. The plateau covers some 120,000 square kilometres of area between the Coast Mountains to the west and the Quesnel Highlands to the east.



200 MILES

300 86 **30**0 86

PHELPS DODGE CORP. OF CANADA LTD.

PROJECT Nº 204 CARIBOO M.D.

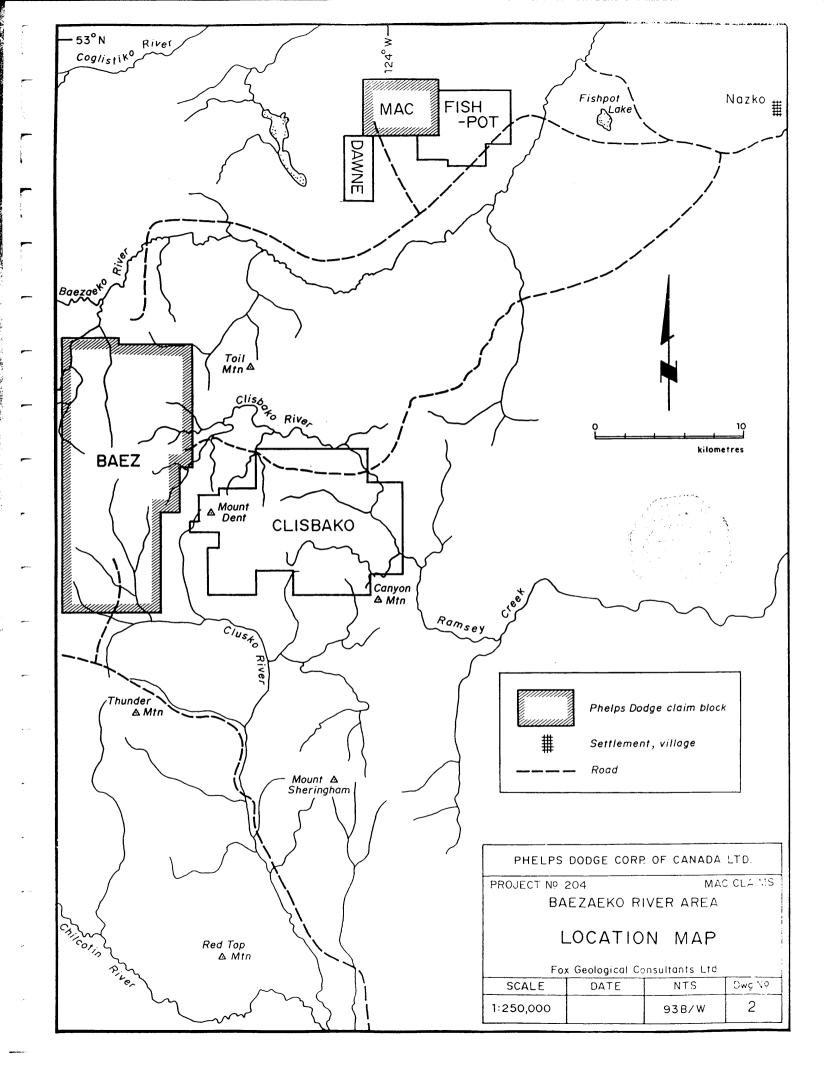
MAC CLAIMS

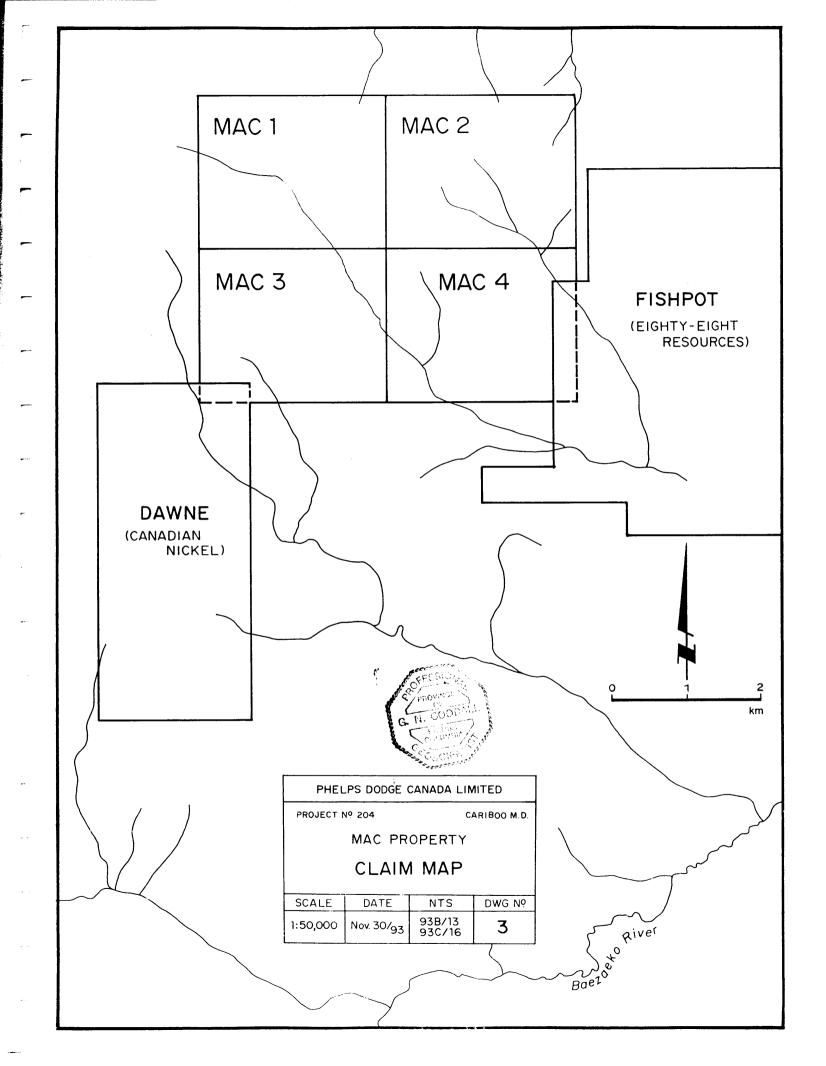
PROPERTY LOCATION PLAN

FOR CHARGO CANADA LTD.

DATE NTS DATE

Dec. 1993





The project area lies within the Intermontane Belt which is locally comprised of Stikinia, Cache Creek and Quesnellia Terranes. These terranes are composed of late Paleozoic to mid-Mesozoic marine volcanic and sedimentary rocks and mid-Mesozoic to late Tertiary marine and non-marine sedimentary and volcanic rocks. Two large scale transcurrent faults bound the plateau to the northeast and southwest. A third fault has been inferred from oil exploration data to bisect the plateau. The Anahim Volcanic Belt crosses the Chilcotin Plateau in an east-west direction and is comprised of a series of alkaline and peralkaline volcanoes of Miocene to Quaternary age which young from west to east.

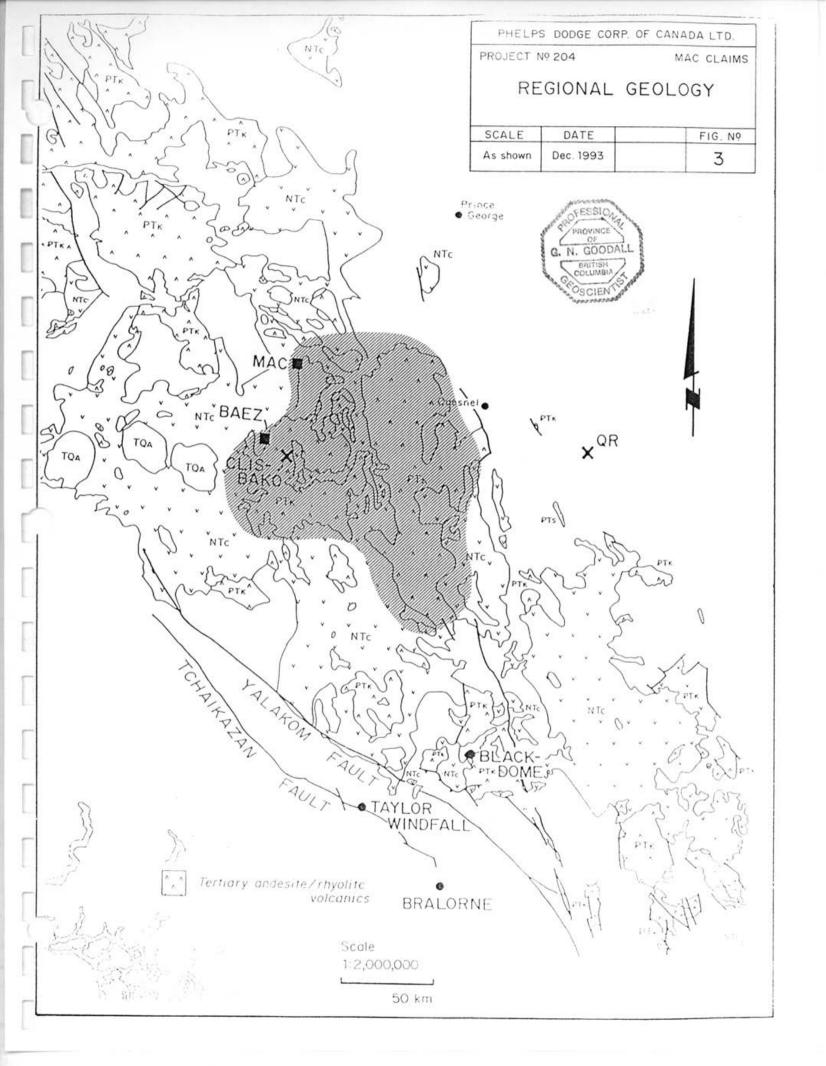
Extensive faulting of the Eocene volcanics has resulted in an array of variably tilted blocks. The entire region appears to be a large dissected caldera complex, part of an extensive assemblage of Tertiary volcanic centres and flow-dome complexes encompassing much of the surrounding plateau region. Broad aprons of felsic tuffs and flows had spread out from a variety of vents within that region. Epithermal gold deposits are known at Clisbako just to the south and farther north on the Wolfe claims. Figure 4 is a map of the regional geology of the Mac claim area.

#### **PROPERTY GEOLOGY**

The Mac claims cover the contact between Lower Jurassic Hazelton Group volcanic rocks and Upper Cretaceous Ootsa Lake Group felsic tuffs and flows. Centrally located on the claims is a small quartz monzonite porphyry intrusion. Andesite to basalt flows and pyroclastic rocks of the Hazelton Group lie near the north and east boundary of the claims. These rocks locally exhibit weak to moderate propylitic alteration. Overlying this unit are dacitic to rhyolitic flows and tuffs of the Ootsa Lake Group. These rocks show moderate to locally intense argillic alteration. Trace to 5% pyrite was noted throughout the felsic rocks which locally produce small gossans on weathered exposures.

#### **1993 WORK PROGRAM**

Between August 17 and 24, 1993, 11 man days were spent on the Mac claims collecting soil samples, rock samples and conducting preliminary geological investigations. A recestyle grid was established parallel to an anomalous drainage using chain and compass methods. Stations were established at 50-metre intervals along lines spaced 500 metres apart. A total of 155 soil samples were collected from the B horizon, where possible, along 7.5 kilometres of the grid. Seventeen rock samples were collected from throughout the claims. Analyses and field notes are given in Appendix I and ICP analyses in Appendix II. Results are plotted in Figures 5, 6 and 7.



## **RESULTS**

Seventeen soil samples from the northeastern grid line returned weakly anomalous concentrations of at least one indicator element. Three contained greater than 5 ppb gold, with a high concentration of 17 ppb gold. Five rock samples contained greater than 10 ppm antimony, with a high of 34 ppm. These weakly anomalous rocks are all from exposures of rhyolite breccia which exhibits weakly developed epithermal-style alteration in the form of drusy quartz veins and argillic alteration.

#### CONCLUSIONS

The work program conducted on the Mac claims in 1993 did not return significant results and failed to define a viable target. No further work is warranted.

### **RECOMMENDATIONS**

No further work is recommended for the property. The claims should be allowed to lapse in October, 1994.

## **DISBURSEMENTS**

Expenditures to December 31, 1993 for the Mac property are \$6,636.00 as tabulated below.

Land Maintenance	\$ 810
Geochemistry	1,874
Labour Contract - General	3,180
Publication and Maps	241
Supplies and Services - Field	148
Management Fee	<u>483</u>
Total Disbursements	\$ <u>6,636</u>

## Prepared by:

FOX GEOLOGICAL CONSULTANTS LTD.

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

**December 22, 1993** 

### CERTIFICATE

- I, Geoffrey N. Goodall, of the District of North Vancouver, British Columbia, do hereby certify that:
- 1. I am 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 graduation.
- 4. I am a Fellow of the Geological Association of Canada.

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

Vancouver, B.C.

**December 22, 1993** 

## APPENDIX I

## **Analytical Results**

0.5 gm sample is digested with 3 mls 3-1-2  $\rm HCl-HN0_3-H_20$  at 95 degree cent. for one hour and is diluted to 10 mls with water. This leach is near total for base metals, partial for rock forming elements and very slight for refractory elements. Solubility limits Ag, Pb, Sb, Bi and W for high grade samples.

1			•	***			and the second s			de la	ericanti menin							
1	,	}	1	1	1	1	1 1	1	7	1 .	1	*** · · · · · ]		7	1		,	1
	Sċ .	Project	Property	Туре	Remarks			Grid	East	North	Ag	As	Sb	Au	Hg	•		,
	47349	204	MAC	GRAB	DIORITE M	ONZONITE WIT	H LIMONITIC VN				0.5	2	2	2.0				
	47350	204	MAC	GRAB	LIMONITIC	SILTSTONE					0.2	5	2	7.0				,
	47351	204	MAC	GRAB		BLE CONGLOME					0.3	13	3	5.0				,
	47352	204	MAC	GRAB			E CONGLOMERATE				0.3	11	2	3.0				!
	47353	204	MAC	GRAB	LIMONITIC	CHERT PEBBL	E CNGL/MUDSTONE				0.1	3	2	2.0	5			,
	47354	204	MAC	GRAB	QUARTZ, C	ARBONATE ATL	.'R ANDESITE		433662.0	5866386.2	0.1	2	2	1.0	10			
	47355	204	MAC	GRAB	SILICIFIE	D MUDSTONE			432888.1	586751.3	0.1	5	2	1.0	5			ŧ
	47356	204	MAC -	GRAB	SILICIFIE	D MUDSTONE			432729.0	5867831.6	0.1	20	2	2.0	5			
	47357	204	MAC	GRAB	ALTERED M	UDSTONE			432638.8	5868001.2	0.3	7	2	1.0	5			,
	47358	204	MAC	GRAB	LIMONITIC	CHERT PEBBL	LE CONGLOMERATE		433788.7	5867229.8	0.1	19	2	2.0	5			,
	47359	204	MAC	GRAB	MUDSTONE/	CHERT			433778.6	5867258.0	0.2	2	2	1.0	5			,
	47360	204	MAC	GRAB	LIMONITIC	CHERTPEBBLE	CONGLOMERATE		434539.8	5866928.2	0.2	6	2	1.0	5			,
	47370	204	MAC	GRAB	LIMONITIC	FINE GRAINE	ED ANDESITE		11537	10000	0.1	2	2	2.0	5			1
	47412	204	MAC	GRAB	DIORITE						0.1	2	2	2.0	5			,
	47413	204	MAC	GRAB			CARBONATE ALTD				0.1	2	2	1.0	70			ļ
	47416	204	MAC	GRAB	PEBBLE CO	NGLOMERATE					0.2	3	2	17.0				ļ
	47417	204	MAC	GRAB	RHYOLITE	BRECCIA					0.5	34	2	2.0				,
	47414	204	MAC	SOIL	TAN BROWN	TILL					0.2	34	2	3.0				,
	47415	204	MAC	SOIL							0.3	9	2	3.0	40			,
	47648	204	MAC	SOIL				Α	10500	10000	0.1	4	2	2.0	90			ļ
	47649	204	MAC	SOIL				Α	10500	10050	0.1	2	2	1.0	45			,
	47650	204	MAC	SOIL				Α	10500	10100	0.1	2	2	1.0	50			,
	47696	204	MAC	SOIL				Α	10500	10150	0.1	2	2	1.0	40			ļ
	47697	204	MAC	SOIL				Α	10500	10200	0.1	2	2	1.0	30			,
	47698	204	MAC	SOIL				Α	10500	10250	0.1	2	2	1.0	35			ļ
	47699	204	MAC	SOIL				Α	10500	10300	0.2	2	2	1.0	35			,
	47700	204	MAC	SOIL				Α	10500	10350	0.1	2	2	1.0	40			l
	47701	204	MAC	SOIL				Α	10500	10400	0.1	2	2	1.0	35			l
	47702	204	MAC	SOIL				Α	10500	10450	0.1	2	2	1.0	15			
	47703	204	MAC	SOIL				Α	10500	10500	0.2	2	2	1.0	70			l
	47704	204	MAC	SOIL				Α	10500	10550	0.2	2	2	1.0	35			
	47705	204	MAC	SOIL				Α	10500	10600	0.1	2	2	1.0	25			l
	47706	204	MAC	SOIL				Α	10500	10650	0.2	2	2	1.0	45			
	47707	204	MAC	SOIL				Α	10500	10700	0.2	2	2	1.0	65			l
	47708	204	MAC	SOIL				Α	10500	10750	0.1	2	2	1.0	30			ļ
	47709	204	MAC	SOIL				Α	10500	10800	0.1	2	2	1.0	40			l
	47710	204	MAC	SOIL				Α	10500	10850	0.1	2	2	1.0	35			
	47711	204	MAC	SOIL				Α	10500	10900	0.1	2	2	1.0	45			
	47712	204	MAC	SOIL				Α	10500	10950	0.1	2	2	1.0	35			
	47713	204	MAC	SOIL				Α	10500	11000	0.2	2	2	1.0	50			
	47714	204	MAC	SOIL				Α	10500	11050	0.1	2	2	1.0	40			
	47715	204	MAC	SOIL				Α	10500	11100	0.2	5	2	2.0	20			l
l	47716	204	MAC	SOIL				Α	10500	11150	0.1	2	2	1.0	20			l

11/16/93

	•	1	1 ,		1	•	) )		1	1		gen en monercha	<b>~</b>		, ,	1
	د غ3	Project	Property	Type Remarks	; <b>S</b>	!	Grid	East	North	I Ag	As	Sb	Au	j Hg		
	47717	204	MAC	SOIL			Α	10500	11200	0.1	2	2	1.0	30		
	47718	204	MAC	SOIL			A	10500	11250	0.4	2	2	1.0	25		
	47719	204	MAC	SOIL			A	10500	11300	0.1	2	2	1.0	25		
	47720	204	MAC	SOIL			A	10500	11350	0.1	2	2	1.0	15		
	47721	204	MAC	SOIL			A	10500	11400	0.1	2	2	1.0	40		
	47722	204	MAC	SOIL			Α	10500	11450	0.1	2	2	1.0	30		
	47723	204	MAC	SOIL			Α	10500	11500	0.1	2	2	1.0	30		
	47724	204	MAC	SOIL			Α	10500	11550	0.1	2	2	2.0	25		
	47725	204	MAC	SOIL			Α	10500	11600	0.8	2	2	2.0	55		
	47726	204	MAC	SOIL			Α	10500	11650	0.1	2	2	1.0	20		
	47727	204	MAC	SOIL			Α	10500	11700	0.1	2	2	1.0	20		
	47728	204	MAC	SOIL			Α	10500	11750	0.4	2	2	1.0	25		
	47729	204	MAC	SOIL			Α	10500	11800	0.5	5	2	1.0	35		
	47730	204	MAC	SOIL			Α	10500	11850	0.3	6	2	1.0	35		
	47731	204	MAC	SOIL			Α	10500	11900	0.3	2	2	1.0	25		
	47732	204	MAC	SOIL			Α	10500	11950	0.1	5	2	1.0	15		
	47733	204	MAC	SOIL			Α	10500	12000	0.1	7	2	1.0	30		
	47734	204	MAC	SOIL			Α	10500	12050	0.1	2	2	1.0	25		
	47735	204	MAC	SOIL			Α	10500	12100	0.1	2	2	1.0	30		
•	47736	204	MAC	SOIL			Α	10500	12150	0.1	4	2	1.0	20		
	47737	204	MAC	SOIL			Α	10500	12200	0.4	3	2	1.0	35		
	47738	204	MAC	SOIL			Α	10500	12250	0.3	4	2	1.0	20		
	47739	204	MAC	SOIL			Α	10500	12300	0.3	3	2	1.0	25		
	47740	204	MAC	SOIL			Α	10500	12350	0.3	2	2	1.0	20		
	47741	204	MAC	SOIL			Α	10500	12400	0.4	5	2	1.0	20		
	47742	204	MAC	SOIL			Α	10500	12450	0.3	4	2	1.0	20		
	47743	204	MAC	SOIL			Α	10500	12500	0.2	2	2	1.0	25		
	47744	204	MAC	SOIL			Α	10500	12550	0.3	4	2	1.0	20		
	47745	204	MAC	SOIL			Α	10500	12600	0.1	2	2	1.0	15		
	47746	204	MAC	SOIL			Α	10500	12650	0.4	2	2	1.0	25		
	47747	204	MAC	SOIL			Α	10500	12700	0.3	2	2	1.0	20		
	47748	204	MAC	SOIL			Α	10500	12750	0.2	2	2	1.0	15		
	47749	204	MAC	SOIL			Α	10500	12800	0.5	7	2	1.0	25		
	47750	204	MAC	SOIL			Α	10500	12850	0.1	2	2	1.0	25		
	47751	204	MAC	SOIL			Α	10500	12900	0.1	5	2	1.0	20		
	47752	204	MAC	SOIL			Α	10500	12950	0.2	2	2	1.0	25		
	47753	204	MAC	SOIL			A	10500	13000	0.2	5	2	1.0	20		
	47754	204	MAC	SOIL			A	10000	10000	0.2	2	2	1.0	15		
	47755	204	MAC	SOIL			A	10000	10050	0.2	2	2	1.0	20		
	47756	204	MAC	SOIL			A	10000	10100	0.1	3	2	1.0	10		
	47757	204	MAC	SOIL			A	10000	10150	0.1	3	2	1.0	20		
	47758	204	MAC	SOIL			A	10000	10200	0.1	2	2	2.0	15		
	47759	204	MAC	SOIL			Α	10000	10250	0.2	2	2	1.0	15		

11/16/93 Page 2

د ۵	Project	Property	Type Remarks	Grid	East	North	Ag	As	Sb	Au	Hg	
7760	204	MAC	SOIL	A	10000	10300	0.3	2	2	1.0	20	
7761	204	MAC	SOIL	Α	10000	10350	0.3	2	2	1.0	15	
7762	204	MAC	SOIL	Α	10000	10400	0.2	2	2	1.0	20	
7763	204	MAC	SOIL	Α	10000	10450	0.3	2	2	1.0	20	
7764	204	MAC	SOIL	Α	10000	10500	0.3	2	2	1.0	30	
7765	204	MAC	SOIL	Α	10000	10550	0.3	2	2	1.0	25	
7766	204	MAC	SOIL	Α	10000	10600	0.4	4	2	2.0	25	
7767	204	MAC	SOIL	Α	10000	10650	0.1	4	3	2.0	25	
7768	204	MAC	SOIL	Α	10000	10700	0.1	2	2	2.0	35	
7769	204	MAC	SOIL	Α	10000	10750	0.1	2	2	1.0	15	
7770	204	MAC	SOIL	A	10000	10800	0.1	2	2	1.0	15	
7771	204	MAC	SOIL	A	10000	10850	0.1	2	2	1.0	15	
7772	204	MAC	SOIL	A	10000	10900	0.1	2	2	2.0	15	
7773	204	MAC	SOIL	A	10000	10950	0.1	2	2	1.0	15	
7774	204	MAC	SOIL	A	10000	11000	0.1	2	2	2.0	15	
7775	204	MAC	SOIL	A	10000	11050	0.1	2	2	4.0	15	
7776	204	MAC	SOIL	A	10000	11100	0.1	2	2	1.0	10	
7777	204	MAC	SOIL	A	10000	11150	0.1	2	2	1.0	30	
7778	204	MAC	SOIL	A	10000	11200	0.1	2	2	1.0	20	
7779	204	MAC	SOIL	Ä	10000	11250	0.1	2	2	2.0	15	
7780	204	MAC	SOIL	Ä	10000	11300	0.1	2	2	2.0	15	
7781	204	MAC	SOIL	Â	10000	11350	0.1	2	2	1.0	20	
7782	204	MAC	SOIL	Ä	10000	11400	0.1	2	2	1.0	30	
7783	204	MAC	SOIL	Ä	10000	11450	0.1	2	2	1.0	30	
7784	204	MAC	SOIL	Ä	10000	11500	0.1	3	2	2.0	30	
7785	204	MAC	SOIL	A	10000	11550	0.1	2	3	1.0	30	
7786	204	MAC	SOIL	Ä	10000	11600	0.1	2	2	3.0	20	
7787	204	MAC	SOIL	A	10000	11650	0.1	2	2	1.0	25	
7788	204	MAC	SOIL	A	10000	11700	0.2	3	2	1.0	30	
7789	204	MAC	SOIL	A	10000	11750	0.2	2	2	1.0	25	
.7790	204	MAC	SOIL	A	10000	11800	0.2	2	2	1.0	25 25	
7790	204	MAC	SOIL	A	10000	11850	0.1	2	2	1.0	30	
7792	204	MAC	SOIL		10000	11900		2	2	1.0	20	
7793				Α	10000		0.1	3	2			
	204	MAC	SOIL	Α .		11950	0.2			1.0	25 30	
7794	204	MAC	SOIL	Α	10000	12000	0.3	2	2	1.0	30	
7795	204	MAC	SOIL	Α .	10000	12050	0.1	2	2	1.0	20	
7796	204	MAC	SOIL	A	10000	12100	0.2	2	2	1.0	20	
7797	204	MAC	SOIL	A	10000	12150	0.1	2	2	1.0	20	
7798	204	MAC	SOIL	A	10000	12200	0.1	2	2	1.0	20	
7799	204	MAC	SOIL	A	10000	12250	0.2	2	2	1.0	60	
7800	204	MAC	SOIL	A	10000	12300	0.1	2	2	1.0	30	
7801	204	MAC	SOIL	Α	10000	12350	0.1	2	2	3.0	25	

1	. ""		-		n en	1 3 Pari - Pris 128 P				PROSE PROPERTY.					
1	1	1	1	١	1	1	7 . 1	1	1	7	7	•	7 -	7	1
	Sá :	Project	Property	Туре	Remarks		Grid	East	North	Ag	As	Sb	Au	Hg	
	47803	204	MAC	SOIL			Α	10000	12450	0.1	2	2	1.0	15	
	47804	204	MAC	SOIL			Α	10000	12500	0.1	2	2	1.0	20	
	47805	204	MAC	SOIL			Α	10000	12550	0.3	4	2	1.0	25	
	47806	204	MAC	SOIL			Α	10000	12600	0.1	2	2	1.0	25	
	47807	204	MAC	SOIL			Α	10000	12650	0.1	4	2	1.0	20	
	47808	204	MAC	SOIL			Α	10000	12700	0.1	2	2	1.0	25	
	47809	204	MAC	SOIL			Α	10000	12750	0.1	2	2	1.0	15	
	47810	204	MAC	SOIL			Α	10000	12800	0.1	2	2	1.0	25	
	47811	204	MAC	SOIL			Α	10000	12850	0.1	2	2	1.0	20	
	47812	204	MAC	SOIL			Α	10000	12900	0.1	2	2	1.0	20	
	47813	204	MAC	SOIL			A	10000	12950	0.1	2	2	1.0	20	
	47814	204	MAC	SOIL	FOL		A	10000	13000	0.1	2	2	1.0	20	
	47921	204	MAC	SOIL			A	11000	10000	0.1	7	2	1.0	25	
	47922	204	MAC	SOIL			A	11000	10050	0.1	2	2	1.0	65	
	47923	204	MAC	SOIL			A	11000	10100	0.1	2	2	1.0	20	
	47924	204	MAC	SOIL			A	11000	10150	0.1	10	2	1.0	15	
	47925	204	MAC	SOIL			A	11000	10200	0.1	2	2	1.0	15	
	47926	204	MAC	SOIL			A	11000	10250	0.2	5	2	1.0	25	
	47927	204	MAC	SOIL			A	11000	10300	0.1	2	2	1.0	10	
	47928	204	MAC	SOIL			A	11000	10350	0.1	4	2	1.0	20	
	47929	204	MAC	SOIL			Ā	11000	10400	0.1	7	2	1.0	25	
	47930	204	MAC	SOIL			Ā	11000	10450	0.2	9	2	1.0	30	
	47931	204	MAC	SOIL			Ā	11000	10500	0.2	2	2	1.0	15	
	47932	204	MAC		NO SAMPLE		Ā	11000	10550	0.2	_	_	1.0	1,5	
	47933	204	MAC		N/S AT 105+50N		Ā	11000	10600	0.4	3	2	1.0	15	
	47934	204	MAC	SOIL	1473 AT 103+3014		Ā	11000	10650	0.1	10	2	1.0	10	
	47935	204	MAC	SOIL			Ā	11000	10700	0.2	3	2	1.0	25	
	47936	204	MAC	SOIL			Ā	11000	10750	0.2	8	2	1.0	15	
	47937	204	MAC	SOIL			Ā	11000	10800	0.2	7	2	1.0	20	
	47937	204	MAC	SOIL			A	11000	10850	0.1	11	2	1.0	20	
	47936 47939	204	MAC	SOIL			A	11000	10900	0.1	2	2	1.0	25	
	47939 47940	204	MAC	SOIL			A	11000	10950	0.1	2	2	1.0	20	
					CREEK AT 110+03N		A	11000	11000	0.2	31	2	1.0	30	
	47941	204	MAC	SOIL			A	11000	11050	0.2	31	۷	1.0	30	
	47942	204	MAC		N/S AT 110+50N		A	11000	11100	0.7	19	2	1.0	60	
	47943	204	MAC		N/3 AT 110+30N					0.7	9	2	3.0		
	47944	204	MAC	SOIL			Α	11000 11000	11150 11200	0.2	2	2	1.0	20 20	
	47945	204	MAC	SOIL			A .								
	47946	204	MAC	SOIL			Α .	11000	11250	0.1	8	2	1.0	10 70	
	47947	204	MAC	SOIL			A	11000	11300	1.2	12	2	1.0	70 25	
	47948	204	MAC	SOIL			A	11000	11350	0.4	14	2	2.0	25	
	47949	204	MAC	SOIL			A	11000	11400	0.2	15	2	1.0	25	
	47950	204	MAC	SOIL	ro:		A	11000	11450	0.2	7 16	2	2.0	30	
	47951	204	MAC	SOIL	EUL		Α	11000	11500	0.1	16	2	1.0	45	

11/16/93

APPENDIX II

**Assay Certificates** 

OJE E. MASTINGS ST. V

DUVER B.C. V6A 1R6 PHONE (604) 253-3158

## GEOCHEMICAL ANALYSIS CERTIFICATE

Phelps Dodge Corp. PROJECT 192 File # 93-2050 1409 - 409 Granville St., Vancouver BC V6T 172 Submitted by: Geoff Goodall



SAMPLE#	Мо ррп	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 %	ppm B	Al %	Na %	K %	ppm W	Au* ppb
38300 47301 47315 47316 47326	3 2 2 2 1	37 38 15 23 8	2 <2 2 2	43 64 37 24 21	<.1 <.1 .2 .1	25 9 9 11 5	14 5 6 6 3	1607 5 267 2 305 1 302 1 94 1	.31 .61 .69	<2 9 4 9 <2	<5 5 <5 6 8	<2 <2 <2 <2 <2	5 4 2 2 3	39 31 53 67 32	<.2 <.2 <.2 <.2 <.2	<2 2 <2 <2 <2	<2 <2 <2 <2	58 22 33 29 46	.19 .61 .64	.074 .024 .078 .062 .014	19 8 18 14 16	35 15 13 12 11	.27 .05 .19 .24	127 62 78 95 60	.06 .04 .12 .13	2 2 <2 2 2	.78 .43 .78 .98	.08 .07 .15 .15	.08 .09 .12 .13	1 <1 1 1 <1	7 6 2 2 1
47336 47337 47340 47341 47349	1 1 1	13 13 21 18 107	4 <2 2 3 5	12 46 48 64 328	<.1 .3 .1 .4	6 3 5 4 34	4 3 5 7 22	839 1 96 1 181 2 272 2 1055 5	.15 .04 .78	6 3 <2 2 2 <2	9 <5 <5 7 <5	<2 <2 <2 <2 <2	2 5 3 3 <2	44 26 36 28 24	<.2 <.2 <.2 <.2	<2 <2 <2 <2	<2 <2 <2 <2 <2	25 60 62 70 81	1.04 .62 .43	.018 .269 .105 .064 .090	7 25 19 18 10	7 6 8 5 45	.43 .13 .33 .30 2.30	170 51 52 63 52	.11 .11 .11 .22 .22	<2 <2 4	1.42 .51 .66 .73 2.70	.08 .05 .10 .10	.12 .10 .17 .17 .23	1 1 1 <1 <1	1 <1 1 <1 2
47350 47351 47352 RE 47352 47401	1 4 4 5 3	60 67 40 41 27	7 9 9 8 4	431 142 59 60 45	.2 .3 .3 .3	169 58 49 50 27	17 8 5 5 18	411 4 222 2 265 2 274 2 2900 6	.16 .44 .50	5 13 11 9 5	<5 <5 <5 <5	<2 <2 <2 <2 <2	<2 <2 <2 <2 5	9 9 21 22 47	1.6 1.2 .2 .2 <.2	<2 3 <2 <2 <2 <2	<2 <2 <2 <2	56 33 23 23 62	.01 .06 .06	.028 .017 .030 .031 .072	4 3 8 8 21	101 54 64 62 36	.96 .16 .73 .75	37	.01 <.01 <.01 <.01	3 5		<.01 <.01 .01 .01	.08 .05 .10 .10	<1 <1 <1 <1	7 5 3 2 <1
47402 47403 47404 47405 47406	2 1 22 10 6	17 15 14 53 46	3 2 17 13 12	25 30 24 48 25	<.1 .6 1.0 3.3	7 5 9 9	3 4 2 4 5	190 1		5 7 277 221 724	<5 8 <5 <5 <5	<2 <2 <2 <2 <2	9 7 3 4 <2	15 19 10 11 9	<.2 <.2 .3 .2 <.2	<2 <2 4 5 17	<2 <2 <2 <2	16 26 3 14 21	.18 .03 .12	.029 .029 .009 .031 .035	13 10 8 18 10	7 6 8 14 19	.07 .09 .03 .17	83	.01 .05 <.01 <.01	3 2 4 <2 3	.58	.04 .05 <.01 <.01	.07 .11 .12 .19	1 <1 1 1	<1 <1 140 15 150
47407 47408 47409 47410 47411	4 32 25 45 6	6 7 14 8 3	3 6 7 5 <2	2 1 2 4 2	2.7 5.5 5.1 2.7 2.0	7 8 8 12 8	1 1 2 2 1	32 2 101 1	.98 .47	154 397 499 132 70	<5 <5 <5 <5	<2 <2 <2 <2 <2	<2 <2 <2 <2 <2	15 11 40 15 6	<.2 <.2 <.2 <.2 <.2	13 24 40 19 7	<2 <2 <3 <3	5 7 7 2 <2	.03 .01 .01	.012 .007 .036 .020 .005	4 9 9 5 2	11 11 9 15 10	.01 .02 .02 .01 <.01	65 68 54	<.01 <.01 <.01 <.01 <.01	3 2 <2 4 2	.27 .22 .13	<.01 <.01 <.01 <.01 <.01	.19 .23 .17 .12	1 1 1 2 2	53 260 31 240 320
47414 47416 47417 192 WR1 205 WR1	<1 3 12 3 1	144 45 8 31 16	4 <2 6 2 4	155 41 34 51 56	.2 .5 .2	103 79 3 16 19	33 8 4 7 14	842 5 292 2 116 3 153 2 587 3	.28 .08 .23	34 3 34 <2 <2	<5 <5 <5 7 <5	<2 <2 <2 <2 <2	<2 <2 8 6 5	24 40 170 43 65	1.3 .4 <.2 <.2 <.2	<2 <2 <2 <2	<2 <2 <2 <2	66 44 52 66 57	.37	.053 .021 .045 .077 .061	4 51 21 18	32 75 4 20 69	.08 .74 .16 .44	219 190 275 51 72	.01 .06 .07 .15	3 <2 <2	1.03 1.83 2.68 .71 1.75	.01 .13 .02 .18 .07	.03 .34 .14 .14	<1 1 <1 1 <1	3 17 2 <1 <1
STANDARD C/AU-R	20	62	43	134	6.9	73	32	1074 4	.09	44	20	7	39	54	19.0	15	19	59	.51	.087	40	62	.92	186	.10	34	1.94	.07	. 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. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: AUG 20 1993 DATE REPORT MAILED: 1 19 24 94.

SIGNED BY ....

SEL

GEOCHEMICAL ANALYSIS CERTIFICATE

Phelps: Dodge: Corps: PROJECT: 204 Fills: # 93-21182 Pa



	**************************************	****	8), T. C.).	400		<u> </u>		\$1.53												*****	32 ( 2 )	2.7.16(2	***	<b>39:333</b>	****	43 40 to	1000	73 ( X X	****	333,533	(:X:::X		*48/477.484
SAMPLE#						Nf		Mn										¥			La				Tf					W A		Hg	
	bbus b	ppn	ppm	ppm	ppm	ppm	ppm	ppm	<u>x</u>	ppm	ppm	ppm	ppm ;	ppm	ppm	bbu l	ppm.	bbu	<u> </u>		ppm	bbw		bbu	*	ppm	<u> </u>	<u> </u>	*	obu k	ppo_	ppo	
47648 47649 47650 47696 47697	1 2 1	142 31 22 29 27	7 6	186 209	.1	62 37 53	21 19 19	385 634 560	4.55 4.89 4.90 4.85 4.95	<2 <2	\$ \$ \$ \$ \$ \$	<2 <2	2 2 2	39 25 31	<.2 <.2	\$ \$ \$	<2 <2 <3	79 72 83	.70 .36 .22 .29	.203 .200 .162	6 5 5	49 44	1.11 .50 .20 .57	129 109 123	.34 .31 .35	5 3 5 3 4 2	.38 .08 .83	.07 .04 .02 .03	.06 .05 .06	त त त	2 <1 1 1	90 45 50 40 30	
47698 47699 47700 47701 RE 47701	1 1	23 27 19 22 23	6 6 5	165 205 139 177 190	.2 .1 .1	57 17 21	20 13 12	727 618 451	4.07 4.64 3.66 4.01 4.33	<2 <2 <2	<5 <5	<2 <2	3 <2 2	39 32 26	.3 <.2	2 <2 <2	<2 <3 <3	78 70 71	.21 .31 .30 .29	.290 .094 .119	6	46 33	.34 .58 .37 .43	135 68 79	.31 .27	5 2 3 1 3 1	.94 .60 .93	.03	. 05 . 04 . 05	<1 <1 <1 <1	1 1 <1	35 35 40 35 40	
47702 47703 47704 47705 47706	1 2	35 33 27 28 39	3 8 7	102 148 150 183 608	.2	19 25	19 14 17	379 614 735	5.81 6.39 5.06 4.86 4.44	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	<5 <5	<2 <2	2	34 23 33	<.2 <.2	<b>∢2</b> 2	<s <s< td=""><td>90 82 89</td><td>.38 .36 .25 .30 .28</td><td>.303 .291 .153</td><td>6 7 6</td><td>45 38 41</td><td>.52</td><td>117 106 122</td><td>.29 .25 .29</td><td>5 3 4 2 2 2</td><td>.94 .20 .17</td><td>. 02</td><td>.06 .06 .05</td><td>ব 1 ব ব ব</td><td>&lt;1 &lt;1</td><td>15 70 35 25 45</td><td></td></s<></s 	90 82 89	.38 .36 .25 .30 .28	.303 .291 .153	6 7 6	45 38 41	.52	117 106 122	.29 .25 .29	5 3 4 2 2 2	.94 .20 .17	. 02	.06 .06 .05	ব 1 ব ব ব	<1 <1	15 70 35 25 45	
47707 47708 47709 47710 47711	1 1	31 23 28 31 36	7 5 6	130 82	<.1 <.1	12 14 22	13 11 14	1063 544 625	5.14 3.88 4.14 4.88 5.24	₹2 2 2	<5 <5	<2 <2 <2	<2 <2 2	16 24	<.2 <.2 <.2	<2 <2	<2 <2 <2	77 80 86	.27 .17 .41 .33 .38	.094 .108 .088	5 5 5	34		56 65 91	.28	3 1 2 1 3 2	. 16 . 48 . 30	.02 .01 .02	.04 .03 .04	त त त त त	<1 <1	65 30 40 35 45	
47712 47713 47714 47715 47716	1 1 1 1	32 28 24 25 26	8 6 7	108 229 219 112 107	.1	22 20	18 16 19	803 1461 709	4.92 4.78 4.44 4.76 4.53	<2 <2 5	<5 <5 <5	<2 <2 <2	<2 <2	37 38 44	.2	\$ \$ \$ \$	<2 <2 <2	85 83 81	.38	.101 .089 .115	7 6 6	42 39 40 49 47	.59 .71	133 207 110	.27 .30	3 2 2 2 2 2	.27	.02 .02 .04	.07 .06 .07	त त त त त	<1 <1 2	35 50 40 20 20	
47717 47718 47719 47720 47721	1 1 41 1	27 29 41 22 26	3 6 5	94	.4 .1 4.1	45 39 34	19 16 12	370 534 281	4.55 4.86 4.44 3.96 5.22	<2 <2 2	<5 <5 <5	<2 <2	2 <2 <2	47 67 42	<.2 <.2 <.2	<b>₹</b> 2	<b>√2</b> <b>√2</b>	84 73 82	.28 .42 .68 .37	.120 .030 .031	6 17 5		.59 .64 .41	116 99 69	.37	2 2 2 2 1	.86	.07	.06	<1 <1 <1 <1	1 (1 (1	30 25 25 15 40	
47722 47723 47724 47725 47726	<1 1	29 74 44 107 31	3 4 3	93 102 93	1. 1. 8.	75	19 21 16	1409 1264 571	5.65 5.28 5.23 5.73 5.13	<2 <2 2	<5 <5	<s <s<="" td=""><td>₹2 ₹2</td><td>62 75 83</td><td>&lt;.2 &lt;.2</td><td>&lt;2 &lt;2 &lt;2</td><td>&lt;2 &lt;3 &lt;3</td><td>93 89 77</td><td>.87</td><td>.049 .049 .041</td><td>28 16 40</td><td>51</td><td>.63 .84 .88</td><td>117 90 122</td><td>.32</td><td>4 3 &lt;2 2 3 3</td><td>.31 .38 .51</td><td>.06 .07 .05</td><td>.06 .06 .07</td><td>&lt;1 &lt;1 &lt;1 &lt;1</td><td>&lt;1 2 2</td><td>30 30 25 55 20</td><td></td></s>	₹2 ₹2	62 75 83	<.2 <.2	<2 <2 <2	<2 <3 <3	93 89 77	.87	.049 .049 .041	28 16 40	51	.63 .84 .88	117 90 122	.32	4 3 <2 2 3 3	.31 .38 .51	.06 .07 .05	.06 .06 .07	<1 <1 <1 <1	<1 2 2	30 30 25 55 20	
STANDARD C/AU-S	18	63	37	131	6.6	67	31	1085	3.96	42	16	7	37	54	16.8	14	20	59	.50	.087	40	56	.91	186	.09	34 1	.88	.07	.14	10	49	1750	

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HMG3-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 8 W AND LIMITED FOR MA K AND AL.
- SAMPLE TYPE: SOIL AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. HG ANALYSIS BY FLAMELESS AA.

Samples beginning 'RE' are duplicate samples,

DATE RECEIVED: AUG 27 1993 DATE REPORT MAILED

Phelps Dodge Corp. PROJECT 204 FILE # 93-2182

Page 2



ACHE AMETTICAL																																	ACH	C MMLTTEDIL
SAMPLE#	Мо	Cu	Pb	Z	n /	Ag	Ní	Co	Mn	Fe	As	U	Au	Th	Sr	Cq	SÞ	BÍ	٧	Ca	P	Le	Cr	Mg	Ba	Ti	В	AL	Na	K	WA	u*	Ng	
	ppm	ppm	ppm	рр	n p	ow t	ppm	ppm	ppm	×	ppm	ppm	ppm	ppm	ppm	ррт	ppm	ppm	ppm	X		ppm				X	ppn		×	X p	opm p	pb		
																																		<del></del>
47727	1	17	5	130	-	-										<.2								.74		.44	<2	2.31	.05	.05	1	1	20	
47728	1	24	5	7	-		33	13	545	4.34	2	5	<2	<2								14	57	.68	83	.43	2	1.87	.07	.05	<1	1	25	
47729	<1	34	5	8	6	.5	27	12	532	4.30	5	⋖5	<2	<2	65	<.2	<2	<2	69	.72	.023	13	56	.59	90	.36	<2	2.12	.06	.05	<1	1	35	
47730	<1	18	5	15	7	.3	37	15	710	4.39	6	ර	<2	<2	39	<.2	<2	<2	60	.36	.043	9	64	.50	78	.40	<2	2.32	.04	.05	<1	<1	35	
47731	1	20	2	13	3	.3	62	21	479	5.20	<2	<5	<2	<2	41	<.2	<2	2	85	.33	. 106	8	65	.70	120	.38	<2	3.04	.03	.07	1	<1	25	
47732	2	19	3	9	6	. 1	47	16	411	4.52	5					<.2						6	_				<5	2.72	.04	.06	<1	<1	15	
47733	3	19	4	8	9	. 1	87	24	332	5.27	7	<5	<2	<2	44	<.2	<2	<2	79	.31	. 132	6	66	. 79	225	.38	<2	4.09	.04	. 05	1	<1	30	
47734	1	18	<2	12	2	.1	80	22	509	5.28	<2	<5	<2	<2	38	<.2	<2	<2	87	.35	. 146	6	74	.66	133	.40	S	3.15	.04	.08	<1	<1	25	
47735	1	16	4	15			45	19	959	5.10	<2	<5	<2	<2	36	<.2	<2	<2	91	.34	.215	5	75	.39	102	.39	2	2.07	.03	.06	<1	<1	30	
47736	<1	21	3	10	1	.1	86	24	512	5.95						<.2	<2	<2	95	.36	. 151	7	76	1.04	127	.45	<2	3.11	.04	.07	1	<1	20	
47737	1	18	6	19	-	• •	36	20		5.04		-	<2		33		<\$		88	.37	. 193	6	71	.30	92	.38	<5	2.06	.03	.06	1	<1	35	
47738	<1	18	S	13			49	21		5.26						<.2					. 166	7	74	.46	96	.40	<2	2.33	.04	.05	<1	<1	20	
47739	2	21	7	20	2	.3	33	16	513	4.96	3	<5	<2	<2	26	.2	<2	<2	78	.25	.225	7	64	.34	127	.36	2	2.13	.04	.06	<1	<1	25	
47740	1	16	3	18	4	.3	53	19	370	5.24	<2	<5	<2	<2		<.2		<2	84	.36	.260	7	67	.45	116	.37	2	2.66	.03	.07	<1	<1	20	
47741	1	16	3	12	0	.4	49	19	451	5.08	5	<5	<2	<2	33	<.2	<2	<2	84	.31	.296	7	68	.44	105	.35	2	2.47	. 03	.07	<1	<1	20	
:																																		
RE 47741		17		11	-		51	19			_					<.2		_					69		106		_	2.53			2		15	
47742	1			7		_	55	21	_	4.95						<.2						9						3.04			1		20	
47743	2	18		12	-	.2	53			5.46						<.2						8	65							.07			25	
47744	1	19	3	11	4	.3	63			5.43						<.2														.07			20	
47745	1	20	2	8	8	.1	86	24	503	5.60	2	<5	<5	<2	48	<.2	<2	<2	86	.41	. 106	7	72	1.07	140	.40	2	3.02	.04	.07	<1	<1	15	
47746	١.	40	,			,		24	7/0									-3	60	76		_	-		427				٠,	0.7		-4	25	
		19	-	11	-	-	57	21		5.32						<.2							73							.07				
47747 47748	1		_	14	-		57	21		5.21		<5		<2		<.2					.197	7				.37				.07			20 15	
	1	21	_	7	_	.z	64	20		5.03				<2							.076	8	-		141					.06				
47749		20	_	12	-		55	21		4.94		<5			53						.157	9				.36				.09			25	
47750	2	18	5	14	3	.1	60	21	781	5.19	۷2	<\$	<b>&lt;</b> Z	<2	44	.2	<2	ζ2	87	.38	.166	8	70	.54	130	.38	<2	2.52	. 04	.08	<1	<1	25	
47751	١,	19	,	9	ve.	. 1	73	23	115	5.33	5	<b>∠</b> E	-3	-3	44	- 3	12	-23	*2		.102	b	71	01	178	70		7 47	. 04	.07	-4	-9	20	
47752	Ż			12	-		49	21		4.80				<2							.182	8				.35				.07		1	25	
47753			_	-								-																				•		
		20	-	12	-		76	25		5.44						<,2							72			.37				.06	<1		20	
47921	1				-		55			4.42						<.2						-	49					3.22				<1	25	
47922	1	21	4	17	4	.1	50	19	445	4.76	<2	<5	<2	<₹	3/	<.2	<2	<2	96	.41	.365	- 7	47	.51	150	.23	<2	3.4/	.03	.07	<1	<1	65	
47923	١,	20	4	15	7 -	4	42	17	460	4.47	• •	<5	-3	-22	32	. 9	12	-5	71	77	.167	7	50	1.4	125	71	,	ኛ በኛ	na.	.07	<b>~</b> 3	-1	20	
47924		22	-	9	-	.1		16		4.77	_	-									.089		63			.35				.07			15	
47925	,	24	-		_																.071		56									-	15	
47926		G		10			38			4.52		<5	~~										57			.33				.06			25	
	1 :		2	-	_	.2	29	10		4.41			<2								.032						_			.08	-			
47927	🔨	19	3	11	1 <	. 1	47	17	223	4.30	<2	<>	<2	<2	47	۲.2	<2	<∠	ľÜ	.45	.170	4	55	.5/	11/	.51	₹2	6.21	. 05	.06	<1	<1	10	
STANDARD C/AU-S	16	50	30	12	4 7		67	32	1045	3.04	30	1.8	7	35	52	18.4	14	18	55	. 52	.087	30	۸۵	.02	187	്വര	**	1.88	04	. 14	11	40	1600	
VINNAMA ALMO	<u> </u>			- 12	· · ·	<u> </u>	<u> </u>	<u> </u>	, 000	3,70	- 27					10.0	-14							.,,,	101	.07		1.00				77	1070	

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



## Phelps Dodge Corp. PROJECT 204 FILE # 93-2182

Page 3



CHE MARYTICAL																·																	₩L1110
SAMPLE#			-			Ni pom		Nn ppm			U ppm								Ca		Le ppm		-		Ti X		Al X		K		Au <sup>a</sup> ppb	Kg	
	1	MA:	labor.	PPI	PP	77-11	Poloni	P		ppu		100	PP-III 1	-	P	PP-III		7711			Mail I			P		PANI				рум	770	170	
47928	1	23	7	94	<.1	61	19	379	4.97	4	<5	<2	<2	40	<.2	<2	<2	76	.31	.101	6	60	.56	153	.37	3	3.33	. 03	.06	2	1	20	
47929	1	20	7	143	.1	61	18	653	5.26	7	<5	<b>√2</b>	<2	23	<.2								.53			_	2.78			<1	1	25	
47930	<1	24	5	78	.2	67	18		4.78	9	<b>&lt;</b> 5	<2			<.2						-		1.24				2.41			-	į	30	
47931	<1	21	4	73	.2	28	12	562	3.34	2	45		-		<.2					.047			.50				1.51				1	15	
47933	2		8	BO		39			4.29	3	-	_	_			<b>&lt;2</b>				.051			.81		.34		1.48				1	15	
4 202 /	١.					••					_	_	_		_	_	_				_					_							
47934		20	_	69		51			4.21		-	-			<.2	-			-		-		1.20	_		_	1.27			1	1	10	
47935	<1		•	78			11		3.76	3	_		_		<.2						• •					_	1.61			1	<1	25	
47936	<1			92		30	13	340		8	_	<5	2		<.2					.066	8	47	.51		.31	_	2.08				1	15	
47937	<1		_			38		465		7	<b>&lt;</b> 5				<.2					.033			.68		.34	3	1.62	.06	.05	<1	1	20	
47938	2	28	5	84	.1	55	17	483	4.33	11	5	<2	<2	58	<.2	<2	<2	76	.73	.065	14	62	.71	81	.38	S	1.57	.07	.06	<1	1	20	
47939	3	22	6	120	.1	79	22	533	5.07	2	<5	<2	<2	56	<.2	<2	<2	77	.64	.080	11	71	. 88	120	.39	2	2.44	. 05	-06	<1	1	25	
47940	2	20	•	93					3.76	_					<.2											_	1.80				1	20	
47941	111	33	-	72					3.86	-			<b>&lt;2</b>										.55			_	1.74				i	30	
RE 47941	13	==	_	68		47	• •		3.80		-		<2							.062							1.70				<1	25	
47943	1 3		•	130					5.32				2							.055										1	1	60	
	-		٠		• • •	٠.	••		,,,,,	••	•	-	-	• •		-			• • • • • • • • • • • • • • • • • • • •		-	•	• • •			•			•••	•	•	00	
47944	2	18	6	162	.2	62	19	343	4.63	9	<5	<2	<2	32	<.2	<2	<2	74	.30	.119	8	58	. 52	105	.34	<2	2.79	.03	.05	2	3	20	
47945	1	13	7	109	.1	45	17	867	4.38	2	<5	<2			<.2						6	62	.40	92	.37	2	2.15	.03	.07	<1	1	20	
47946	2	16	5	98	<.1		17	412	4.41	8	<5	<2	<2	27	<.2	<2	<2	79	.21	.057	6	57	.50	73	.37	<2	2.18	.03	.04	1	<1	10	
47947	2	50	8	94	1.2	74	21	824	5.57	12	5	<2	2	62	<.2	<2	<2	71	.67	.038	21	64	. 88		.32		2.71			<1	1	70	
47948	1	29	6	101	.4	67	20	540	5.36	14	<5	<2	<2	41	<.2	<2	<2	91	.37	.061	10		.77	113	.40	2	2.63	.04	.05	1	2	25	
12010	1.		-	407			40			4-		_	•				_				_					_					_		
47949	\$	26		107		66	-		4.60		-	_			۲.2		_					65		103			2.65				1	25	
47950	1 !	21	_	118					5.31	7		_	-	26						.113	-	76	.70		.42	_	2.43				Z	30	
47951	1.1	22		137					4.59		-	_			1.0		_			.125	-	58		123		_	3.03				. 1	45	
STANDARD C/AU-S	17	61	38	124	6.7	68	31	1074	3.96	37	17	7	36	52	18.8	14	19	56	.49	.086	40	60	.93	188	.09	33	1.88	.06	. 14	- 11	46	1640	

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

ACME: AN

ICAL LABORATORIES LTD

852 E. HASTINGS ST. V

VER BOC. VER IR

PHONE (604) 253-3158 PAX (60

GEOCHEMICAL ANALYSIS CERTIFICATE

Phelps: Dodge: Corp.: PROJECT: 204 File: # 93-21182

e #193-2182 Page



		43000	<b>* \$</b> : ? .	<u> </u>		10538	-::: <u>67</u>	\$\$.25		;***(;	<u> </u>	****	***:	<u> </u>	*****	******		\$ , x + 4 ¢	* ( ***)	*****	20100	3,1845	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	00:00	(121)	<b>*{</b> 750}	11937	V	****		40.		·(x.:/
SAMPLE#					_	Ni Popri		Mn ppm		As ppm	ppm U	Au Pipra i			Cq ppm	\$b ppm (		-	Ca X		La ppm :			Ba ppm	Tf %			Na X		A W page		Hg ppb	
47648 47649 47650 47696 47697	1	142 31 22 29 27	7	64 186 209 180 190	 1 1. <	62 37 53	21 19 19	385 634 560	4.55 4.89 4.90 4.85 4.95	4 42 42	ঠ ঠ ঠ ঠ ঠ	\$\$ \$\$ \$\$	2 2 2 2	86 39 25 31	.3 <.2 <.2 <.2 <.2	\$ \$ \$	<2	79 72 83	.36 .22 .29	.065 .203 .200 .162 .191	6 5 5	49 44 48	1.11 .50 .20 .57	140 129 109 123	.25 .34 .31 .35	7 5 5 5 6	3.38 3.08 2.83	.07 .04 .02 .03	.07 .06 .05	<1 <1	2 <1 1 1	90 45 50 40 30	
47698 47699 47700 47701 RE 47701	1 1 1 1	23 27 19 22 23	6	165 205 139 177 190	1	2 57 1 17 1 21	20 13 12	727 618 451	4.07 4.64 3.66 4.01 4.33	44	<5 <5 <5	_	3 <2 2	39 32 26	<.2 <.2 <.2 <.2	2 <2 <2	<2 <2 <2	78	.31 .30 .29	.134 .290 .094 .119 .127	6	43 46 33 36 37	.34 .58 .37 .43	135 68	.31 .27 .27	5 3 3	1.60 1.93	.03 .03 .02 .02	. 05 . 04 . 05	<1 <1 <1	<1 1 1 <1 <1	35 35 40 35 40	
47702 47703 47704 47705 47706	1 2	35 33 27 28 39	3 8 7	2 102 3 148 3 150 7 183 7 608	3 .3	2 41	19 14 17	379 614 735	5.81 6.39 5.06 4.86 4.44	\ \ \ \ \ \	ক ক	<2 <2 <2 <2 <2	2 42 5 2	23 33	.2 <.2 <.2 <.2	<2 <2	<5 <5 <5	101 90 82 89 59	.36 .25 .30	.098 .303 .291 .153 .153	6 7 6	41	.81 .62 .52 .61 .19	117 106 122	.29 .25 .29	5 :	3.94 2.20 2.17	.04 .02 .02 .02 .03	.06 .06 .05	<1 <1	1 <1 <1 <1	15 70 35 25 45	
47707 47708 47709 47710 47711	2 2 1 1 2	28 31	5 6	164 7 130 5 82 6 114 5 129	<.	1 14	13 11 14	1063 544 625	5.14 3.88 4.14 4.88 5.24	₹2 2 2	ও ও	<2	<2 <2 <2	16 24	.3 <.2 <.2 <.2	<2 <2	<2 <2		.17 .41 .33	.154 .094 .108 .088 .139	5 5 5		.64 .16 .58 .86	56 65 91	.28 .25 .28	3 2 3	1.16 1.48 2.30	.02 .02 .01 .02	.04 .03 .04	<1 <1 <1	<1 <1 <1 1	65 30 40 35 45	
47712 47713 47714 47715 47716	1 1 1	32 28 24 25 25	6	7 108 3 229 5 219 7 112 2 107	2	2 22 1 20 2 47	18 16 19	803 1461 709	4.92 4.78 4.44 4.76 4.53	<2 <2 5	<5 <5	<2 <3 <4 <5 <5 <5 <5 <5 <5 <5 <5 <5 <5 <5 <5 <5	₹2 ₹2	37 38 44	.2 <.2	200	42 43	85 83	.38 .40 .43	.106 .101 .089 .115	7 6 6	42 39 40 49 47	.63 .63 .59 .71 .67	133 207	.27 .30 .32	3 :	2.27 2.21 2.22	.02 .02 .02 .04	.07 .06 .07	41 41	<1 <1 <1 2 <1	35 50 40 20	
47717 47718 47719 47720 47721	1 1		3		3 2 . 6 ∢.	1 44 4 45 1 39 1 34 1 57	19 16 12	370 534 281	4.55 4.86 4.44 3.96 5.22	<2 <2 2	<5 <5 <5	\$\$ \$\$ \$\$	<2 <2	47 67 42		<2 <2 <2	<b>₹2</b> <b>₹2</b>	84 73 82	.42 .68 .37	.140 .120 .030 .031 .148	6 17 5	51	.59 .64 .41	116 99 69	.37 .41 .44	2 2	2.86 2.18 1.69	.03 .04 .07 .04	.06 .06 .04	<1 <1 <1	<1 <1 <1 <1	30 25 25 15 40	
47722 47723 47724 47725 47726	<1	25 74 1 44 1 107	, 4	2 119 3 93 4 102 3 93 5 134	3.	1 72 1 51 8 73	19 21 16	1409 1264 571	5.65 5.28 5.23 5.73 5.13	<2 <2	<5 <5 <5	<5 <5 <5	<2 2 <2	62 75	<.2 <.2	<2 <2 <2	<2 <3 <5	93 89	.87 .96 1.07	.127 .049 .049 .041 .106	28 16 40	51 50	.84 .88	117 90 122	.32 .39 .28	<b>√2</b> <b>3</b>	3.31 2.38 3.51	.04 .06 .07 .05	.06 .06 .07	<1 <1 <1	<1 <1 2 2 <1	30 30 25 55 20	
STANDARD C/AU-S	18	3 63	37	7 13	1 6.	6 67	31	1085	3.96	42	16	7	37	54	16.8	14	20	59	.50	.087	40	56	. 91	186	.09	34	1.88	.07	.14	10	49	1750	

ICP - .500 GRAM SAMPLE IS DIGESTED WITH BML 3-1-2 HCL-HN03-H20 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 MA K AND AL.
- SAMPLE TYPE: SOIL AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. HG ANALYSIS BY FLAMELESS AA.

Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: AUG 27 1993 DATE REPORT MAILED

Sept 1/93.



# Phelps Dodge Corp. PROJECT 204 FILE # 93-2182

Page 2

Δ	Δ
L	L

ACHE ANALYTECAL																															ACH	-
SAMPLE#	Mo Cu	Pb	Zn	Ag	NÍ	Co	Mn	Fe	As	U	Au	Th	Sr	Cď	\$b	B1	٧	Ca	P	La	Ĉr	Ma	ta	Ti	B	AL	Na	K	W AL	<u>, *                                     </u>	Ng	
	ррт ррт	ppm	pom i	ppm (	ppm p	mqc	ppm	x	ppm	ppm	ppm (	ppm p	pm	ppm	POEN I	DPM (				obus t				`X			X		pm p	-	-	1
			<del></del>			·			·				<del></del>		<u></u>	······					<u> </u>		·						<u> </u>			
47727	1 17	5	130	.1	45	15	384	4.77	<2	<5			46	<.2	<2	2	77	.44	.074	8	64	.74	90	.44	<2	2.31	.05	.05	1	1	20	
47728	1 24	- 5	75	.4	33	13	545	4.34	2	5	<2	<2	57	<.2	<2	<2	76	.61	.031	14	57	.68	83	.43	2	1.87	.07	.05	<1	1	25	
47729	<1 34	. 5	86	.5	27	12	532	4.30	5	<5	<2	<2	65	<.2	<2	<2	69	.72	.023	13	56	.59	98	.36	<2	2.12	.06	.05	<1	1	35	
47730	<1 18	5	157	.3	37	15	710	4.39	6	વ્	<2	<2		<.2						9	64				<2	2.32	.04	.05	<1 4	<1	35	Į.
47731	1 20	2	133	.3	62	21	479	5.20	<2	45				<.2					. 106	8	65	.70				3.04			1 .	<1	25	ŀ
																									_		•					1
47732	2 19	3	96	.1	47	16	411	4.52	5	<5	<2	<2	42	<.2	<2	<2	76	.35	.121	6	64	.41	105	.38	<2	2.72	.04	.06	<1 4	<1	15	!
47733	3 19	4	89	.1	87	24	332	5-27	7	<5	<2	<2	44	<.2	<2	<2	79	.31	. 132	6	66	.79	225	.38	<2	4.09	.04	.05	1	<1	30	
47734	1 18	<2	122	.1	80	22	509	5.28	<2	<5	<2	<2		<.2					.146		74	.66				3.15			<1	<1	25	
47735	1 16	. 4	158	.1				5.10	-					<.2								.39				2.07			<1		30	
47736	<1 21	3	101	.1				5.95	4	<5		<2		<.2												3.11					20	
	\	_		• •					•	_	_	_			•	_				•	. •				_	••••	•••	•••	·			
47737	1 18	6	193	.4	36	20	915	5.04	3	<5	<2	<2	33	.2	<2	2	88	.37	. 193	6	71	.30	92	.38	<2	2.06	.03	.06	1	<1	35	
47738	<1 18	_	135	.3				5.26	4	<5				<.2					.166	7		.46		.40		2.33			<1	<1	20	
47739	2 21	-						4.96		<b>&lt;</b> 5	a		26	.2					.225			.34			_	2.13			<1		25	
47740	1 16		184	.3				5.24				<2		<.2								.45				2.66			<1		20	
47741	1 16	_	120	.4				5.08		<b>&lt;</b> 5				<.2					.296		_		105						<1	-	20	
		_		•	•				_	-	_	_			_	_						• • • •			_			•••	•	•	••	
RE 47741	1 17	2	119	.4	51	19	462	5.24	<2	<5	<2	<2	34	<.2	<2	<2	87	.32	.307	7	69	.44	106	.36	2	2.53	.03	.07	2	<1	15	
47742	1 21	5	79	.3	55			4.95	4	3	<2			<.2					. 180	ġ	64	.51		.36		3.04			ī	4	20	
47743	2 18	4	123	.2			476	5.46	<2	હ				<.2					.269							2.65			<1	<1	25	
47744	1 19	3	114	.3	63	22	567	5.43	4	<				<,2						7									<1	<1	20	
47745	1 20			.1				5.60	2	ત	<2			<.2					.106			1.07				3.02				<i< td=""><td>15</td><td></td></i<>	15	
	1								_		_				-						-				_							
47746	1 19	4	113	.4	57	21	769	5.32	<2	<5	<2	<2	45	<.2	<2	<2	89	.38	.115	9	73	.61	127	.42	<2	2.79	.04	.07	1	<1	25	
47747	1 16	3	145	.3	57	21	574	5.21	<2	<5	<2	<2	64	<.2	<2	<2	83	.51	. 197	7	67	.52	94	.37	2	2.77	.03	.07	<1	<1	20	
47748	1 21	3	73	.2	64	20	373	5.03	<2	<5	<2	<2	58	<.2	<2	<2	83	.41	.076	8	67	.84	141	.42	2	2.91	.05	.06	<1	<1	15	
47749	2 20	2	127	.5	55	21	706	4.94	7	<5	<2		53	.8			79	.44	.157	9	67		138			2.75			<1	<1	25	
47750	2 18	5	143	.1	60	21	781	5.19		<5	<2	<2	44	.2					.166		70		130		_	2.82				<1	25	
										•	_	_	•	-	_	_				-		•-•			_				•	•		
47751	1 19	4	96	.1	73	23	445	5.33	5	<5	<2	<2	66	<.2	<2	<2	82	.51	.102	9	71	.91	178	.40	3	3.47	.04	.07	<1	<1	20	
47752	2 18		121	.2				4.80											.182		67			-	_	2.71			<1	1	25	
47753	<1 20	-	128	.2				5.44	5										.173			.73				3.59				۲۱	20	
47921	1 20		244		-			4.42	7		<2	<u> </u>	72	<.2	(2	<b>42</b>	67	.70	.260		49	,51				3.22			•	લ	25	
47922	1 21					-		4.76		-				<.2					.365		47			.23		3.47				ä	65	
***	' -	•	,	• •		• •	4-7-2		_					-1-	_	_		,	,	•	71					3.71		,	-	•	-	
47923	1 20	6	153	<.1	42	17	460	4.47	2	<5	<2	<2	32	<.2	<2	<2	71	.32	. 167	7	50	.46	125	.31	2	3.03	.03	.07	<1	<1	20	
47924	1 22	_	92	.1	55			4.77	_	5									.089	11	-			.35		2.75		•	<1	-	15	
47925	<1 24		104	. 1				4.52	<₹	<ŝ									.071		56		88			2.18			रं	-	15	
47926	4 43	-	68	.2				4.41	5	7		2							.032		57					2.06			र्व		25	
47927	<1 15		171					4.36		•									.170		55			.31		2.21			-	સં	10	
	" "		•••	•••	71	••	,,,		-	~,	-	-	71		-			. 43	•	_	,,	,,,			-		. 47		•	- '		
STANDARD C/AU-S	16 59	39	124	7.4	67	32	1065	3,96	39	18	7	35	52	18.6	14	18	55	.52	.087	39	60	.92	187	.09	33	1.88	.06	. 14	11	49 1	690	
	1			<u> </u>							<u> </u>					<u></u>													<u> </u>			

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

ACTE MANUTIZE

## Phelps Dodge Corp. PROJECT 204 FILE # 93-2182

Page 3



AANDI EA	1 40	-		7-	4.0	N 4	~~	Mn	e a	4.0	14	Au	Th	6-	<u>۲</u>	Sb	• 1	٧	Ca		Le	<u></u>	Ma	Ba	7.6	_	AL	Na		W.	A LIR	Hø	
SAMPLE#	PO				-	Ni ppm				As ppm	-				ppm:			-	X		DDM I			ppm		ppm B	×		x	POTE		ppp	
	-		···														_									_				_	•	20	
47928	1	23	_			61		379			_	<b>«2</b>	_							.101			.56			_	3.33			2	1	20	
47929	1	20	7	143	• •					7	<5	-	-		<.2								.53			_	2.78			_	]	25	
47930	<1	24	5	78				467				<2			<.2						-		1.24			_	2.41				1	30	
47931	<1	21	4	73		28				2		<2	-							.047			.50			_	1.51			<1	1	15	
47933	2	19	8	60	.4	39	15	486	4.29	3	5	<2	2	50	.4	<2	2	64	.70	.051	10	55	.81	66	.34	4	1.48	.07	.05	<1	1	15	
47934	1 5	20	6	69	.1	51	16	488	4,21	10	<5	<2	<2	48	<.2	<2	<2	61	.68	.064	9	52	1.20	48	.34	3	1.27	.07	.05	1	1	10	
47935	<1	22	6	78	2	41	11	334	3.76	3	<5	<2	<2	57	<.2	<2	<2	56	.72	.050	11	51	.61	77	.34	<2	1.61	. 07	.05	1	<1	25	
47936	<1	21	7	92	.2	30	13	340	3.81				2	44	<.2	<2	2	58	.44	.066	8	47	.51	82	.31	<2	2.08	. 04	.06	<1	1	15	
47937	<b>&lt;</b> 1	23	8	74	.2	38	14	465	4.15	7	<5	٠2	<2	50	<.2	<2	<2	65	.62	.033	13	56	.68	73	.34	3	1.62	. 06	.05	<1	1	20	
47938	2	28	_	84	.1	55	17	483	4.33	11	5	<2	<2	58	<.2	<2	<2	76	.73	.065	14	62	.71	81	.38	5	1.57	.07	.06	<1	1	20	
47939	١,	22	6	120	.1	79	22	533	5.07	2	<5	<b>&lt;2</b>	<2	56	<.2	<2	<2	77	.64	.080	11	71	.88	120	.39	2	2.44	. 05	.06	<1	1	25	
47940	1 5	20	•	93				404		_	<5									.064		59	.53	95	.36	2	1.80	.07	.06	<1	1	20	
47941	111	33	-	72				454												.065		62	.55	95	.35	<2	1.74	.07	.06	<1	1	30	
RE 47941	13	35	_	68																.062		61	.54	92	.33	<2	1.70	.07	.06	<1	<1	25	
47943	3	53	•					1152				<b>&lt;2</b>								.055		67	. 76	126	.33	<2	2.61	.06	.07	1	1	60	
47944	2	18	6	162	2	62	19	343	4.63	9	<5	<b>&lt;2</b>	<2	32	<.2	<2	<2	74	.30	.119	8	58	.52	105	.34	<2	2.79	.03	.05	2	3	20	
47945	1	13	_	109	.1	45	17	867	4.38	2	<5	<2	<2	27	<.2	<2	<2	81	.24	.103	6	62	.40	92	.37	2	2.15	.03	.07	<1	1	20	
47946	2	16				45			4.41	_	_	₹2								.057			.50			<2	2.18	.03	.04	1	<1	10	
47947	2	50	_			74			5.57		5									.038		64			.32		2.71			<1	1	70	
47948	i	29	_			67		540												.061			.77	113	.40	2	2.63	.04	.05	1	2	25	
47949	3	26	7	107	2	66	19	377	4.60	15	<5	<b>&lt;</b> 2	2	31	<.2	<2	<2	81	.31	.098	8	65	.60	103	.35	2	2.65	.02	.07	1	1	25	
47950	1	21		118					5.31	• • •	45									.113		76	.70	81	.42	3	2.43	.03	.05	<1	2	30	
47951	1	22	_	137		75		1218			-	<2				_	_			.125		58		123		_	3.03				1	45	
STANDARD C/AU-S	17				6.7			1074			-	-	_	-			_			.086		60		188		_	1.88				46	1640	

Sample type; SOIL, Samples beginning 'RE' are duplicate samples.

