

2.21878

SUMMARY REPORT OF 2000 GEOLOGICAL MAPPING, AND SOIL SAMPLING PROGRAM

ELDORADO PROPERTY

MADOC Township, ONTARIO

NTS 31/C12

DISTRIBUTION:

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MYLES JOHNSON PROJECT GEOLOGIST EASTERN DISTRICT PHELPS DODGE CORPORATION OF CANADA, LIMITED AUGUST, 2000



MADOC



GEOSCIENCE ASSESSMENT OFFICE

31C12SE2004 2.21878

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ACCOMPANYING MAP (in rear pocket)

Eldorado Property Geology & Soil sample locations, Scale 1:2500

1.0 INTRODUCTION

This report summarizes preliminary geological mapping and soil sampling completed on the Eldorado property during the summer of 2000 and makes recommendations for future work.

2.0 LOCATION AND ACCESS

The property is located approximately 8 km north of the town of Madoc, Ontario, in and west of the hamlet of Eldorado. More precisely it is located at latitude of 44^0 ,35' and longitude of 77^0 , 31' on NTS map sheet 31C/12.

Eldorado is easily accessed from Highway 62 which cuts though the property. The western half of the property can be accessed from the abandoned C.N.R. railway track that now serves as a recreational trail The east half of the property is located in Eldorado.

3.0 CLAIM INFORMATION

The property includes 2 separate claims located within Con 5 and 6 and Lot 17of Madoc Township and recorded in the name of Phelps Dodge Corporation of Canada, Limited (PDC). (refer to Figures 2).

Table1: LIST OF CLAIMS

CLAIM NUMBER	NUMBER OF UNITS
1230908	1
1230909	1





ELDORADO PROPERTY CLAIM MAP 1:2500

4.0 **PREVIOUS WORK (from Dadson, 1992 and Hewitt, 1968)**

- 1901 The Coe Iron mine (later named Eldorado) was opened. Red hematite ore was mined from 3 pits; mining continued in 1902 and 1903.
- 1904 Chalcopyrite mineralization discovered ~ 75 feet down. Reported grades of chalcopyrite and chalcocite mineralization range from 4-10% copper.
- 1906 Copper smelter built on the Eldorado property.
- 1907 The Eldorado mine ceases production.
- 1907 The Eldorado mine is sold to the Ontario Copper Company.
- 1956 The property is re-examined by Picton Uranium Minerals Inc. and the shaft is de-watered.
- 1968 Regional scale mapping; Ontario Department of Mines, Geological Report 73 and adjoining geological map # 2154 of Madoc Township and North Part of Huntington Township.
- 1992 Peter Dadson, re-evaluates potential for economic mineralization in the Eldorado and Richardson mines as part of a O.P.A.P funded prospecting/mapping program geared toward gold-copper mineralization in the area.

4.1 PREVIOUS WORK BY PHELPS DODGE

The Eldorado property was first visited and sampled by Craig Waldie and Nawojka Wachowiak as part of a regional scale investigation of old Fedeposits in the Madoc area.

5.0 PRESENT PROGRAM

Between May 31 and June 4, 2000 the eastern portion of the Eldorado property adjoining the Eldorado Mine property was mapped and soil sampled by Myles Johnson, with the assistance of Nawojka Wachowiak. A total of 15 B-horizon soil samples and 5 rock grab were collected and submitted to the XRAL laboratory in Don Mills ,Ontario for ICP analysis. Mapping and soil and rock sampling of the property was completed on pace and compass flagged lines (refer to map in rear pocket).

6.0 **REGIONAL GEOLOGICAL SETTING (after Hewitt, 1968)**

Regionally the claim group is situated within the Central Metasedimentary Belt of the Proterozoic Grenville Province. The underlying rocks comprise a sequence of bimodal volcanics of the Tudor Formation. They are comprised of massive, pillowed and amygdaloidal mafic volcanics with lessor aphanitic and fragmental felsics.

The Dungannon Formation comprising calcitic and dolomitic marbles, metasandstones and metasiltstone unconformably overlies the Tudor Formation. Intrusive into the Tudor and the Dungannan are numerous felsic plutons, notable the Deloro Granite and the Gawley Creek Syenite.

Metamorphic grade is variable but is generally greenschist to lower amphibolite.

Structurally, the area has undergone several phases of folding and subsequent brittle and ductile deformation.

To the south of the map area Paleozoic sediments of Devonian age unconformably overlie the Proterozoic sequence.

7.0 **PROPERTY GEOLOGY**

The property is underlain by east-west trending, steeply north-dipping sequence of dolomitic marble in contact with a small granitic intrusion on the northern portion of the claim group. Near the contact between marble and granite there is a marked increase in magnetite and hematite. Massive magnetite/hematite with variable pyrite and chalcopyrite was observed in large pits just to the west of the property at the old Eldorado mine which was mined first for iron then for copper in the early 1900's. On the north portion of the claim group hematite and magnetite and trace pyrite occurs as pit and trench rubble. (see map in rear pocket).

9.0 **GEOCHEMISTRY**

SOIL SAMPLING PROGRAM

A total of 15 B-horizon soil samples were taken on the Eldorado Property. The soil profile was well formed showing a distinct white leach horizon underlain with reddish-brown sandy clay with occasional pebbles. Sampling on the property was completed using pace and compass traverses starting at a known locality such as a Line or Claim Posts. (see map in back pocket)

9.0 SOIL SAMPLING RESULTS:

Results from the soil sampling on the Eldorado property range from 8.6 ppm to 485 ppm Cu. Generally values are in the >10 ppm range for copper (refer to appendix 3). The highest Cu values are located in the area of known magnetite/hematite pits and trenches.

9.0 ROCK ASSAY RESULTS:

A total of 5 rock assay samples were taken on the Eldorado property. ICP results reveal no anomalous values. Values range from 3 to 95.5 ppm Cu. (refer to appendix2).

9.0 CONCLUSIONS AND RECOMMENDATIONS:

The Eldorado property hosts elevated Cu in soil values near hematite/magnetite rubble associated with historic pitting and trenching at the granite limestone contact. This suggests a possible magnetite/hematite/copper relationship similar to that at the nearby Eldorado Mine where Cu values of up to 10% in the form of chalcopyrite and chalcocite were found at depth and mined.

It is recommended that one diamond drill hole be directed under the magnetite/hematite pits at the contact of the limestone and granite. The drill hole should test the 100m level of the contact, which would be well below any historic drilling depths. If no copper mineralization is intersected then the property should be abandoned.

Drilling will be done on private property, therefore the concerns of the local property owner, should be addressed before any drilling is started. All segments of the drill program will have to be completed in the most environmentally friendly fashion possible.

Respectfully submitted

Mvles R. Johnson

Project Geologist Phelps Dodge Corporation of Canada, Limited

10.0 REFERENCES

Dadson, P.A. 1992, Mineral Exploration Exploration, Eldorado Area, OPAP Grant OP- 91-334

Hewitt, D.F. 1968, Geology of Madoc Township and the North Part of Huntingdon Township, Hastings County, Ontario Department of Mines, Geological Report 73

APPENDIX 1

Hand Specimen Locations and Descriptions

ELDORADO ROCK GRAB SAMPLES (2000)

SAMPLE NUMBER	EASTING	NORTHING	DESCRIPTION						
41951	18-299335	4939935	~13m S of claim post #4. Pink coloured granite.						
41952	45 m S of post #4 on CL		calcereous limestone with red staining and magnetite in a muck pile						
41953	~ 10M w of 1+00E	106 m N (of railway)	altered limestone in old pit. Minor sulphides and non- magnetic						
41954	10 m W of 1+00 E	150 n N (of railway)	limestone with variable amounts of pyrite and no magnetite. Sample was high graded to check for copper						
41955	railroad showing, 50 mS of 300701	49431148	highly sheared calcareous amphibolite. May be pelitic.						

Appendix 2

Soil Sample Locations

.

•	SAMPLE NUMBER	EASTING	NORTHING
	EL-01	1+00 E (100mof	0+00 N (Railway)
l	EL-02	1+00 E	0+25N
1 -	EL-03	1+00 E	0+50N
	EL-04	1+00 E	0+75N
	EL-05	1+00 E	1+00N
	EL-06	1+00 E	1+25N
	EL-07	1+00 E	1+50N
	EL-08	0+00E (claim lin	0+00S
	EL-09	0+00E (claim lin	0+25S
	EL-10	0+00E (claim lin	0+50S
	EL-11	0+00E (claim lin	0+75S
4	EL-12	0+00E (claim lin	1+00S
1	EL-13	0+00E (claim lin	1+25S
	EL-14	0+00E (claim lin	1+50S
	EL-15	0+00E (claim lin	1+75S
		•	
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1			

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XRAL Laboratories Results for Hand Specimens



Work Order:	059810	Da	ite: C	5/07/00	FINAL				Page 2 of 3							
Element. Method. Det.Lim. Units.	Ng ICP70 0.01 %	Al ICP70 0.01 %	P ICP70 0.01 %	K ICP70 0.01 %	Ca ICP70 0.01 %	Sc ICP70 0.5 ppm	Ti ICP70 0.01 %	V ICP70 2 ppm	Cr ICP70 1 ppm	Mn ICP70 2 ppm	Fe ICP70 0.01 %	Co ICP70 1 ppm	Ni ICP70 1 ppm	Cu ICP70 0.5 ppm	Zn ICP70 0.5 ppm	As ICP70 3 ppm
41951	0.07	0.22	0.04	0.12	0.73	< 0.5	< 0.01	8	83	71	0.89	2	3	10.0	6.1	< 3
41952	0.67	0.40	< 0.01	0.08	13.2	1.3	0.02	13	46	474	4.22	4	3	5.2	10.8	< 3
41953	0.69	0.65	0.15	0.30	1.09	4.3	0.15	45	54	67	2.62	50	24	12.5	11.6	19
41954	6.26	0.60	< 0.01	0.47	11.0	0.7	0.02	8	32	2770	4.60	9	16	3.0	32.9	< 3
41955	2.10	3.16	0.08	0.11	5.03	8.7	< 0.01	105	72	893	5.88	36	48	95.5	87.9	< 3



Work Order:	059810	D	ate: (05/07/00	FINAL					Page 1 of 3						
				4												
Element.	Au	SiO2	Al2O3	CaO	MgO	Na2O	K2O	Fe2O3	MnO	TiO2	P2O5	Cr2O3	LOI	Sum	Be	Na
Method.	FA301	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	XRF100	1CP70	ICP70
Det.Lim.	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01A	0.01	0.5	0.01
Units.	թթե	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	%
41951	6	. 69.4	14.9	1.48	0.52	5.45	2.03	3.70	0.01	0.494	0.10	0.02	1.90	100.0	< 0.5	0.04
41952	10	n.a.	n.a.	n.a.	n.a.	п.а.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.3	< 0.01
41953	22	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	< 0.5	0.02
41954	16	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	< 0.5	0.02
41955	4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	< 0.5	0.01



Work Order:	059810	Da	ate: 0.	5/07/00		FIN	AL					F	3		
Element.	Sr	Y	Zr	Мо	Ag	Cd	Sn	Sb	Ba	La	w	РЬ	Bi	Cu	Zn
Method.	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICAY50	ICAY50
Det.Lim.	0.5	0.5	0.5	· 1	0.2	1	10	5	1	0.5	10	2	5	0.01	0.01
Units.	ppm	ppm	ppm	ppm	ppm	ррш	ppm	քքու	ppm	ррш	քքու	ppm	ppm	%	%
41951	8.6	7.4	13.7	<1	< 0.2	< 1	< 10	< 5	52	15.6	<10	<2	<5	n.a.	n.a.
41952	60.5	6.4	5.5	<1	< 0.2	1	<10	< 5	10	9.8	< 10	5	< 5	n.a.	n.a.
41953	34.9	4.8	5.9	<1	< 0.2	<1	<10	< 5	158	3.4	< 10	<2	< 5	n.a.	n.a.
41954	113	7.7	9.9	< 1	< 0.2	1	<10	<5	477	8.9	< 10	3	< 5	n.a.	n.a.
41955	31.5	17.8	2.2	<1	0.2	2	< 10	< 5	18	2.9	< 10	5	< 5	n.a.	n.a.

XRAL Laboratories Results for Soil Samples



Work Order:	059809	059809 Date: 28/06/00					FINAL						Page 1 of 8			
Element. Method. Det.Lim. Jnits.	Be ICP70 0.5 ppm	Na ICP70 0.01 %	Mg ICP70 0.01 %	Al ICP70 0.01 %	P ICP70 0.01 %	K ICP70 0.01 %	Ca ICP70 0.01 %	Sc ICP70 0.5 ppm	Ti ICP70 0.01 %	V ICP70 2 ppm	.Cr ICP70 1 ppm	Mn ICP70 2 ppm	Fe ICP70 0.01 %	Co ICP70 1 ppm	Ni ICP70 1 ppm	Cu ICP70 0.5 ppm
FL.I	0.7	< 0.01	0.56	1 57	0.05	0.12	0.45	48	0.04	36	22	1320	3.11	9	17	20.2
FL-2	< 0.5	0.01	0.50	1 32	0.05	0.12	1.04	4 1	0.05	36	21	1650	3.28	9	16	49.8
EL-3	< 0.5	0.01	0.45	1.45	0.05	0.06	0.24	2.6	0.06	36	18	836	2.08	9	11	8.6
EL-4	< 0.5	0.01	0.36	1.33	0.07	0.05	0.26	1.7	0.05	34	16	335	1.85	7	10	7.8
EL-5	< 0.5	0.01	0.47	1.49	0.07	0.06	0.32	2.4	0.05	37	17	604	2.32	9	11	11.5
EL-6	< 0.5	0.01	0.32	1.32	0.06	0.04	0.20	2.0	0.05	31	16	270	1.72	6	9	6.3
EL-7	< 0.5	0.01	0.32	1.59	0.06	0.04	0.51	2.0	0.06	35	15	249	2.93	19	11	485
EL-8	< 0.5	0.01	0.26	0.81	0.07	0.05	0.49	1.4	0.03	27	12	591	1.96	12	9	290
EL-9	< 0.5	0.01	0.24	1.06	0.07	0.05	0.31	1.7	0.04	29	14	477	1.70	6	8	16.1
EL-10	< 0.5	0.02	0.29	1.16	0.09	0.05	0.28	2.0	0.06	31	15	264	1.72	6	8	9.3
EL-11	< 0.5	0.02	0.38	0.96	0.08	0.07	0.29	1.9	0.05	31	16	392	1.76	6	10	11.3
EL-12	< 0.5	0.02	0.31	0.88	0.07	0.04	0.30	1.7	0.05	26	14	251	1.51	6	9	27.0
EL-13	< 0.5	0.01	0.31	1.35	0.05	0.05	0.34	2.1	0.05	31	. 17	245	1.86	6	10	11.6
EL-14	0.7	0.01	1.00	1.30	0.04	0.16	4.76	4.6	0.02	25	21	773	1.98	6	13	13.0
EL-15	< 0.5	0.02	0.38	1.26	0.06	0.06	0.50	3.4	0.04	30	20	342	1.94	8	11	17.8



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Work Order:	059809	Dat	e: 28	/06/00		FINA	L					Pa	ge 5 of 8		
Element. Method. Det.Lim. Units.	Zn ICP70 0.5 ppm	As ICP70 3 ppm	Sr ICP70 0.5 ppm	Y ICP70 0.5 ppm	Zr ICP70 0.5 ppm	Mo ICP70 1 ppm	Ag ICP70 0.2 ppm	Cd ICP70 1 ppm	Sn 1CP70 10 ppm	Sb ICP70 5 ppm	Ba ICP70 1 ppm	La ICP70 0.5 ppm	W ICP70 10 ppm	РЬ ICP70 2 ррт	Bi ICP70 5 ppm
Ct 1	36.5	6	9.1	18.7	5.6	C 1	<07	<u></u>	< 10	~5	216	40.1	< 10	ß	< 5
EL-1 EL 2	30.3	58	11.0	22.5	1.2		< 0.2		< 10	<5	210	74.4	< 10	g	< 5
EL-2 FL 3	40.9	- 3	6 8	0.1	74	< 1	< 0.2	< 1	< 10	< 5	185	13.1	< 10	8	< 5
EE-3 EL-4	30.0	<3	6.7	6.7	1.8		< 0.2	<1	< 10	< 5	137	10.7	< 10	4	< 5
EL-4 EL-5	39.2	<3	8.6	8.8	2.0	<1	0.2	<1	< 10	<5	157	12.1	< 10	8	<5
EL-6	30.8	< 3	5.5	8.7	3.2	< 1	0.3	< 1	< 10	< 5	120	12.1	< 10	3	<5
EL-7	37.0	< 3	43.4	9.3	2.7	<1	< 0.2	<1	< 10	< 5	400	11.8	< 10	12	< 5
EL-8	51.4	< 3	26.8	4.7	0.9	<1	< 0.2	<1	< 10	<5	345	8.6	< 10	15	< 5
EL-9	41.4	< 3	9.4	10.0	0.7	<1	< 0.2	<1	< 10	< 5	232	16.1	<10	7	< 5
EL-10	34.3	< 3	8.0	9.9	1.8	< 1	< 0.2	< 1	< 10	<5	128	15.1	<10	5	< 5
EL-11	28.5	< 3	8.2	8.5	2.5	<1	< 0.2	<1	< 10	< 5	127	13.1	<10	3	< 5
EL-12	25.8	< 3	7.7	8.5	1.6	<1	< 0.2	<1	< 10	< 5	116	12.5	<10	4	< 5
EL-13	25.8	< 3	7.8	10.9	1.8	<1	< 0.2	<1	< 10	< 5	229	13.3	<10	3	< 5
EL-14	22.7	<3	37.4	22.8	3.9	<1	< 0.2	<1	< 10	<5	339	23.8	<10	5	< 5
EL-15	29.2	< 3	8.8	19.3	2.1	<1	< 0.2	<1	< 10	<5	319	24.0	<10	6	< 5



Work Report Summary

Transaction No:	W0190.	30542		Sta	atus: APF	PROVED			
Recording Date:	2001-AI	UG-02		Work Done fr	rom: 200	0-JUN-02			
Approval Date:	2001-SI	EP-20			to: 200	0-JUL-30			
Client(s):									
1818	31 P		GE CORPOF	RATION OF CA	NADA, LI	NITED			
Survey Type(s):									
		ASSAY		GCHEM		GEOL			
Work Report De	tails:								
Claim#	Perform	Perform Approve	Applied	Applied Approve	Assign	Assign Approve	Reserve	Reserve Approve	Due Date
SO 1230908	\$0	\$0	\$800	\$800	\$0	0	\$0	\$0	2002-NOV-05
SO 1230909	\$2,740	\$2,740	\$400	\$400	\$800	800	\$1,540	\$1,540	2002-NOV-05
_	\$2,740	\$2,740	\$1,200	\$1,200	\$800	\$800	\$1,540	\$1,540	-

Status of claim is based on information currently on record.



31C12SE2004 2.21878 MADOC

Ministry of Northern Development and Mines

Date: 2001-SEP-21

Ministère du Développement du Nord et des Mines



GEOSCIENCE ASSESSMENT OFFICE 933 RAMSEY LAKE ROAD, 6th FLOOR SUDBURY, ONTARIO P3E 6B5

PHELPS DODGE CORPORATION OF CANADA, LIM 100 ADELAIDE ST. WEST,SUITE 601 TORONTO, ONTARIO M5H 1S3 CANADA Tel: (888) 415-9845 Fax:(877) 670-1555

Submission Number: 2.21878 Transaction Number(s): W0190.30542

Dear Sir or Madam

Subject: Approval of Assessment Work

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

If you have any question regarding this correspondence, please contact LUCILLE JEROME by email at lucille.jerome@ndm.gov.on.ca or by phone at (705) 670-5858.

Yours Sincerely,

n c c dir

Ron Gashinski Supervisor, Geoscience Assessment Office

Cc: Resident Geologist

Myles R. Johnson (Agent)

Phelps Dodge Corporation Of Canada, Limited (Assessment Office)

Assessment File Library

Phelps Dodge Corporation Of Canada, Limited (Claim Holder)



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General Information and Limitations

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