

LOG NO: 11-21	RD.
ACTION:	
FILE NO:	

DIAMOND DRILL REPORT
ON THE
SAWMILL ZONE

Cariboo Mining Division
93 B8

(Latitude 52° 30', Longitude 122° 15')

OWNER AND OPERATOR
GIBRALTAR MINES LIMITED
McLEESE LAKE, B.C.

20,514

GEOLOGICAL BRANCH
ASSESSMENT REPORT

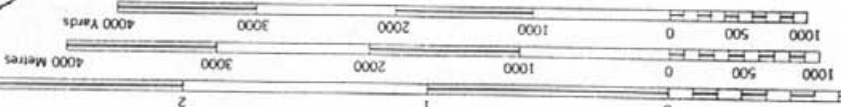
Author: Garry D. Bysouth

Submitted: November 14, 1990

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Elevations in Feet above Mean Sea Level
North American Datum 1927
CONTOUR INTERVAL 100 FEET



SCALE 1:50,000
1.25 inches to 1 mile approximately

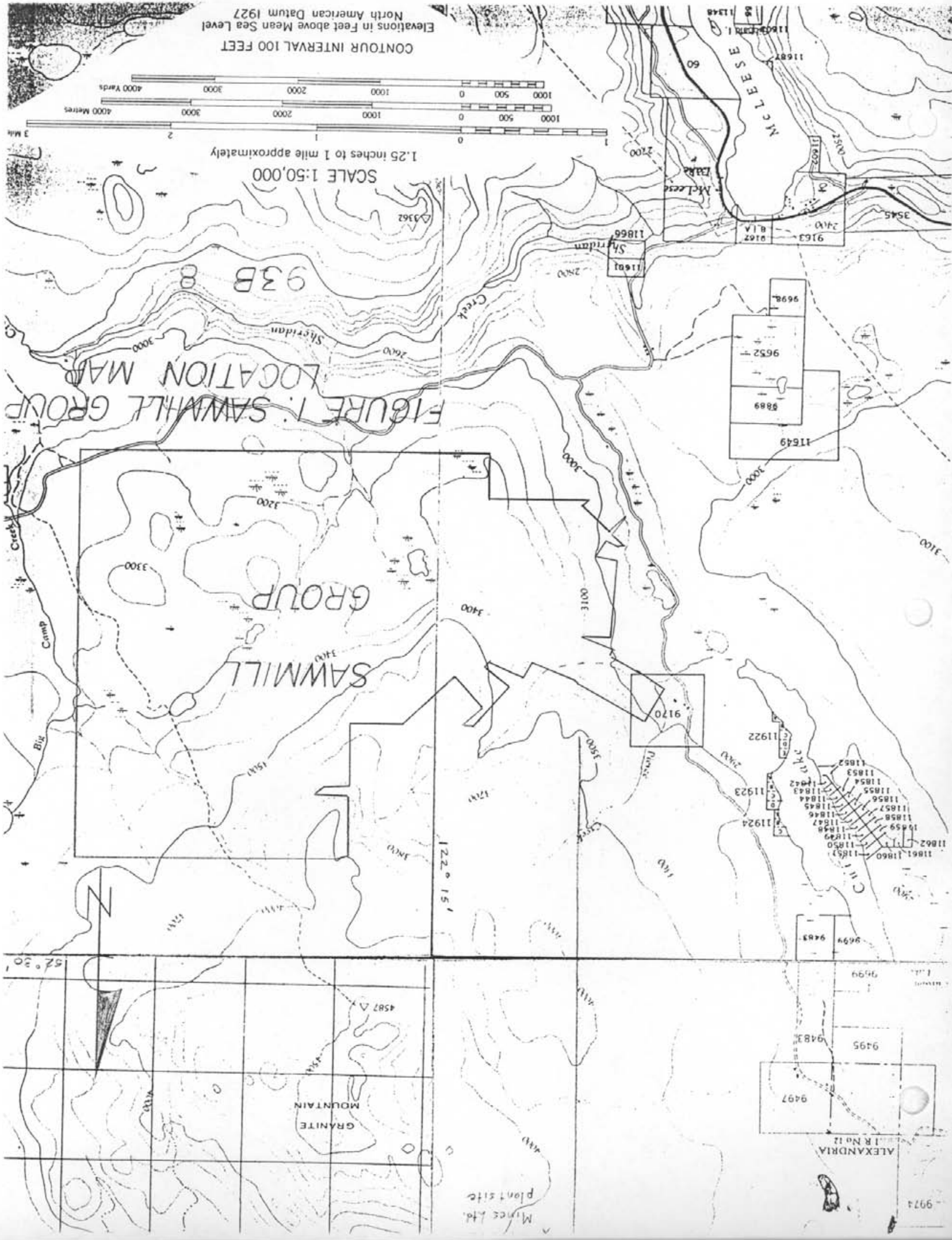


FIGURE 1. SAWMILL GROUP
LOCATION MAP

Mines Ltd.
plant site

1. Introduction

The Sawmill Group lies about 4.0 miles (6.44 km.) south of the Gibraltar Mines concentrator, along the southern flank of Granite Mountain at approximately the 3500-foot (1067 m.) elevation. Access is via a network of old logging roads which link the property to the paved road leading to Gibraltar Mines. General location of the claims is shown in Figure 1.

The first claims of the Sawmill Group were staked in 1978 to cover a large I.P. anomaly and several older copper prospects. Of the prospects, the most important was the Iron Mountain property on which the first recorded work dates back to 1925. The chief focus of work for Gibraltar Mines was the I.P. anomaly which was located west of Iron Mountain over an area of very limited rock exposure. The anomaly had been outlined in 1978 and was attributed to a graphitic source rather than sulphide mineralization. Diamond drilling in 1979 by Gibraltar Mines however, revealed that extensive pyrite and chalcopyrite mineralization occurred within the I.P. zone, and by 1981, approximately 30 million tons of open pit inventory had been outlined, which graded at 0.28% total copper and 0.022% molybdenite. More diamond drilling and I.P. surveys followed from 1982 to 1986, but little change was made in the inventory. Most of the above work is covered in Minister of Mines Reports and assessment reports. (See attached bibliography).

This report covers a diamond drill program conducted in 1990 within the Sawmill Zone. Four vertical N.Q. diamond drill holes, totalling 2,455 feet (748.28 meters) were completed. Drilling was done by L. D. S. Diamond Drilling Ltd. of Site 5, Comp. 13, R.R.#2, Kamloops, British Columbia during the period June 5, 1990 to June 22, 1990. The whole core was assayed except for a two-inch segment per ten-foot section which was retained and stored at Gibraltar Mines.

2. Mineral Claims

The mineral claims of the Sawmill Group are shown in Figure 3 (in pocket). Information on these claims is tabulated below:

CLAIM NAME	RECORD NO.	NO. OF UNITS	ANNIVERSARY DATE
Tim 1	815	2	28 Aug 78
Cole 1	816	9	28 Aug 78
Geoff 1	1009	9	29 May 79
Ryan 1	1048	1	26 Jul 79
Aaron 1	1049	1	26 Jul 79
Doug 1	1047	3	26 Jul 79
Brent 1	1330	6	14 Nov 79
Barb 1	1329	12	14 Nov 79
Janis 1	1331	3	14 Nov 79
Kate 1	3799	12	29 Jun 81
WD 1	3800	6	29 Jun 81
Bruce 1	3801	12	29 Jun 81
Paul 1	3802	12	29 Jun 81

3. Geology

The Sawmill covers a broad contact zone formed between the Permian Cache Creek Group and the Upper Triassic Granite Mountain pluton. Within the claim area, the Cache Creek Group consists of volcanic flows, tuffs, breccia and sediments mainly of andesitic to dacitic composition, with minor interbeds of graphitic schist and impure limestone. These rocks have been regionally metamorphosed to the Greenschist Facies and have undergone a much higher grade of metamorphism along the contacts of the Granite Mountain pluton. The plutonic rocks underlying the Sawmill Group consist mainly of diorites of variable texture and composition which have been collectively referred to as the Border Phase Diorite. As the name implies, an assimilative origin is assumed for these rocks. The actual contact zone, which is about a mile wide, consists of a bewildering array of dioritic rocks and recrystallized andesitic and dacitic rocks of the Cache Creek Group, all having a similar composition and texture. To add to this complexity, two other plutonic rock types have been recognized along the northwestern side of the claim group. One is a white quartz porphyry which has been interpreted to be a hypabyssal intrusion related to some period of acidic volcanism. It forms a small body along the northeast side of the Sawmill ore zone, and also occurs as small dykes scattered throughout the property. The other is a quartz diorite which forms a large body along the northern edge of the deposit. It is correlative with the Mine Phase Quartz Diorite which is the host rock for the Gibraltar ore body, and is of particular interest because it is closely associated with the best grade mineralization of the Sawmill ore zone.

A large pyrite zone has been outlined within the Sawmill Group. It covers all rock types but appears strongest along the Cache Creek side of the contact. Chalcopyrite and molybdenite occur throughout the pyrite zone and in a general way the copper and molybdenite grades increase as pyrite concentrations decrease. In the Sawmill ore zone, which is located along the northwestern edge of the pyrite zone, the best grade ore occurs when the pyrite concentrations decrease to below three percent. This figure is taken as the boundaries of the pyrite zone.

The ore and gangue mineralogy of the Sawmill ore zone is very similar to that of the Gibraltar deposits. Pyrite, chalcopyrite and molybdenite occur in veins and shears accompanied by various combinations and concentrations of quartz, chlorite, carbonate, sericite and epidote. There is however, one ore type not found at Gibraltar. This has been referred to as a quartz-gypsum zone which is characterized by gypsum veins and often strong chalcopyrite mineralization accompanied by minor bornite. Pyrite is invariably weak or absent, and the zone is interpreted to represent the extreme low sulphide end of the pyrite-chalcopyrite zoning system.

Structural controls have not yet been worked out for the Sawmill ore zone. Much of the ore is confined to westerly and northwesterly striking shear zones which dip southerly, but the gross configuration of rock units and ore types also suggest fold structures have been operative. In a general way, the ore zone lies along the contact formed between the Mine Phase Quartz Diorite and the older rocks. The ore is not confined to any one rock type but is best developed in the Mine Phase and weakest in the Quartz Porphyry.

The Sawmill ore zone is cut off towards the northwest by a large fault system which has been referred to as the West Boundary Fault. This fault is considered to be a wide complex north trending system with numerous individual zones separating wedges and blocks of displaced rock.

4. Drill Program

4.1 Objectives

Each drill hole of the program had separate objectives:

1. Drill Hole E90-1 was located east of the ore zone to test an outlying I.P. anomaly.
2. Drill hole E90-2 was located east of the ore zone to test the grade and thickness of a quartz-porphyry body.
3. Drill hole E90-10 was positioned along the southwest flank of the ore zone to provide further ore definition.
4. Drill hole E90-11 was located northwest of hole E90-1 to test for any possible connection between the main ore zone and ore outlined in hole E90-1.

3.2 Results

The drill hole locations are shown in Figure 2. Drill sites were located by hip chain and compass from surveyed control points. Drill holes E90-1, E90-2 and E90-11 were on the Cole 1 Mineral Claim. Drill hole E90-10 was on the Aaron 1 Mineral Claim. Drill logs are included in the pocket of this report. All copper concentrations reported here and in the logs are for total copper. All molybdenum reported is MoS_2 . All pyrite concentrations are visual estimates. An outline of pertinent results is provided in the following table and descriptions.

Hole No.	Collar Elev.	Depth	Casing	Ore Intersection		Width	%TCu	%MoS ₂
				From	To			
E90-1	2973'	644'	22'	450'	570'	120'	0.24	0.006
E90-2	3081'	707'	82'	0'	0'	-	-	-
E90-10	2906'	502'	70'	70'	250'	180'	0.25	0.016
E90-11	2962'	602'	22'	380'	530'	150'	0.19	0.007

Core is sampled in 10-foot (3.048m.) sections, crushed and passed through a Jones Splitter. The product is pulverized to minus 100 mesh and rolled. A 1/2 gram sample is weighed out and digested in a mixture of Potassium Chlorate, Nitric Acid, and Sulphuric Acid for a period of 30 minutes. Following digestion, each sample is bulked to 10% HCl

and assayed in a Perkin Elmer 3030 Atomic Absorption Spectrophotometer.

Drill hole E90-1 was confined entirely to metavolcanic rocks of the Cache Creek Group. A 10-foot scarn zone carrying about 25% combined pyrite and magnetite, and .35% copper was intersected at 170-feet. The scarn was contained within an unusually barren host rock. A second scarn was intersected at 280-feet which also marked the beginning of weak pyrite and chalcopyrite mineralization. The top of the ore zone and the main concentration of pyrite was intersected at 450-feet. At 570-feet both the pyrite and chalcopyrite showed an abrupt decrease in concentration.

Drill hole E90-2 was confined entirely to a white barren quartz porphyry. The hole was assayed down to 260-feet without any ore grade copper or molybdenite being encountered - the remainder of the hole appeared equally barren. Weak pyrite mineralization was noted throughout the hole, either as disseminated grains, or as a common constituent of quartz veins.

Drill hole E90-10 intersected Border Phase Diorite throughout its length. An ore zone, associated with about 3.0% pyrite, was encountered directly beneath the overburden cover and traced to a depth of 250-feet. Weak pyrite and chalcopyrite mineralization underlies the ore zone to a depth of at least 500-feet.

Drill hole E90-11 went through a metavolcanic sequence down to 358-feet, followed by Border Phase Diorite from 358-feet to the end of the hole at 602-feet. A ten-foot scarn zone containing about 4.0% sulfides and grading at .20% copper was encountered at 108-feet. The main pyrite and chalcopyrite concentration however, was found to begin at the Border Phase contact and to extend to about 550-feet.

3.3 Interpretation

The Sawmill copper-molybdenum mineralization is related to a large pyrite zone which can be outlined by a 3.0% pyrite concentration contour. Drill hole E90-1 intersected the pyrite zone at a depth of 450-feet, and hole E90-11, which was collared at a similar elevation, intersected the same zone at 370-feet. In both cases, a significant width of ore grade mineralization was found which was contained entirely within the pyrite zone. These holes confirm an earlier interpretation which suggested the southeast flank of the pyrite zone plunged to the southeast at about 30- to 40- degrees. Of interest also, are the scarn zones intersected in each hole. These are interpreted as bands of reactive rock which had trapped copper mineralization under temperature and pressure conditions not otherwise conducive to copper concentration. From a prospecting viewpoint, the scarns may be considered outliers of more extensive mineralization.

Drill hole E90-10 was collared over an area of projected mineralization. A 180-foot section of near surface ore was encountered which generally confirms this projection, however, only the bottom part of the system appears to be present. That is, in this area, the upper portion of the ore is accompanied by heavy pyrite mineralization which was not intersected in the hole. The pyrite content encountered was about 3.0% which is normal

for the lower part of the ore body.

Drill hole E90-2 provided some change to the geological model of the Sawmill Zone. The length of the quartz porphyry encountered was more than expected, which suggests the body has either a steeper dip or greater thickness than originally predicted.

4. Statement of Expenditures

1990 Diamond Drill Program, Sawmill Group

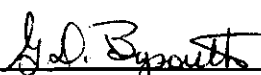
1. Site Preparation Costs		
Duckworth Lake Logging Ltd.		
D8 Cat Bulldozer, 3 hrs. @ \$125. per hr.		\$375.00
2. Diamond Drill Costs		
LDS Diamond Drilling Ltd.		
748.28m. of drilling at \$38.04 per meter		28,464.57
3. Personnel Costs		
1. Field Work		
G. Barker, May 2 - June 22, 1990		
26 hrs. @ \$27.38 per hour	\$711.88	
2. Supervision and Core Logging		
G. Bysouth, April 30 - June 29, 1990		
68 hrs. @ \$38.54	2,620.72	

		3,332.60

		\$32,172.17
		=====

5. Conclusions

The near surface ore outlined by drill hole E90-10 will cause a small increase in ore reserves. The ore encountered in drill holes E90-1 and E90-11 is too deep to be included in a mineable reserve. In general, this drilling program has not changed the mining feasibility of the Sawmill Zone.



 G. D. Bysouth
 Senior Geologist

7. Bibliography

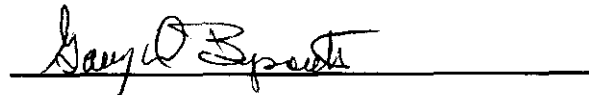
1. B. C. Minister of Mines Annual Report
 - 1925, pp. 156
 - 1956, pp. 33
 - 1957, pp. 16
 - 1972, pp. 135
2. Assessment Reports - Gibraltar Mines Limited, Cariboo Mining Division
 - (1) Bysouth, G. D., Diamond Drill Report on the Cole Claim, August, 1979.
 - (2) Bysouth, G. D., Diamond Drill Report on the Cole Claim, April, 1980.
 - (3) Bysouth, G. D., Diamond Drill Report on the Ross Group, November, 1980.
 - (4) Walcott and Associates Limited, A Report on an Induced Polarization Survey, Sawmill Claims, February, 1982.
 - (5) Bysouth, G. D., Diamond Drill Report on the Sawmill Zone, February, 1987.

APPENDICES

APPENDIX 1. Statement of Qualifications

I, Garry D. Bysouth, of Gibraltar Mines Limited, McLeese Lake, British Columbia, do certify that:

1. I am a geologist.
2. I am a graduate of the University of British Columbia, with a B.Sc. degree in Geology in 1966.
3. From 1966 to the present I have been engaged in mining and exploration geology in British Columbia.
4. I personally logged the core and assessed the results of this drill program.

A handwritten signature in black ink, appearing to read "Garry D. Bysouth", is written over a solid horizontal line.

Garry D. Bysouth

APPENDIX II. List of Abbreviations

ank	ankerite
bo	bornite
cal	calcite
carb	carbonate
chl	chlorite
cp	chalcopyrite
dissem	disseminated
ep	epidote
foln	foliation
gg	gouge
gm	grained
gyp	gypsum
hem	hematite
lim	limonite
mal	malachite
mag	magnetite
py	pyrite
qtz	quartz
rx	rock
ser	sericite
str	strong
stkwk	stockwork
wk	weak
Wt. Q.D.	White Quartz Diorite = Leucocratic Phase

APPENDIX III. Drill Logs.

GIBRALTAR MINES LIMITED

HOLE NO. E 90-1
SHEET NO. 1 OF 11

LOCATION SAWMILL ZONE BEARING — LATITUDE 31820N behaviour CORE SIZE N.O.W. LOGGED BY G. Bysouth
DATE COLLARED June 5, 1990 LENGTH 644' LONGITUDE 49525S Survey SCALE OF LOG 1"=10' DATE June 6, 1990
DATE COMPLETED June 7, 1990 DIP -90° ELEVATION 2973 top of hole REMARKS hole was confined to a meta-volcanic

Meters	Feet	ROCK TYPES AND ALTERATION	TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS				
									LEACH CAP	LIM. ZONE				88'	SUPERGENE	SAMPLE NUMBER	% Cu	% Mo
0.00	0	Casing To 22'									22							
		<u>META ANDESITE?</u> (22'-97')			70-80x6 30 5"	1/2-1/4 5" 14"	qtz-carb qtz-carb qtz-carb					80						
3.05	10	- resembles a foliated fine-med grt diorite	To Mod	30							27			59776	2.01	1.001		.05
		mainly a dark green foliated fine-med grt rock with alternating bands, laminae and wisps of dark chl-plag and light plag-qtz.	80 Mod	40		10'	zone of iron qtz-carb in places bc veins qtz-carb	<.5			37			59926	2.01	1.001		.05
6.10	20	- carb-(ankerite?) occurs throughout the rock as veinlets and segs - the carb. oxidizes to a deep brown - the rock is gen. soft (v.s)	65 Mod	50		5'	iron qtz-carb (mag)	<.5						59927	.01	1.002		.05
9.14	30	- the rock is cut by numerous light colored zones - mainly qtz-carb - spar ± minor py, mag. and rare sphat.	80 wk.	60		11'	broken qtz ((carb)) vein				17							
12.19	40	- note that Feldspars are not visible				5'	pale gray qtz-carb-spar zone (fpy) - a cil	<.5						59928	1.01	1.001		.05
		may be carb-act. shear zone cutting normal shear zone				7'	pale gray qtz-carb-spar zone with a 10% chl and minor diorite mag	<.5						59929	2.01	1.001		.05
15.24	50		70 Mod	70		3" 2 1/2"	qtz qtz				67							

GIBRALTAR MINES LIMITED

HOLE NO. E 90-1
SHEET NO. 2 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG Foliation Alteration Footage Structure	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS						
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade	
0.00	0																			
3.05	10		20 Str Creel		70	1/2 1/2	qtz-chl-(pr) qtz-chl-ep	4.5			77	95		59930	2.01	< .001		.05		
6.10	20		50 Mod		80	5'	pale grey qtz-ser-carb zone with 1-3% chl and brown carb.	4.5			87	100		59931	.01	.001		.05		
9.14	30		60 Mod		35-30 10	1/4 x 1/5	carb-py ex qtz-carb-py-cphal*	4.5	* resinose orange-yellow mineral		97	98		59932	.01	.001		.05		
12.19	40	<u>META VOLCANIC</u> <u>SEQUENCE (97-265')</u> a complex unit of variable texture and composition, but mainly of dioritic composition. A typical variation is: - med grn 1/4 dia and equigranular - 2 to 4% w/ ragged chl. grains - 50 saus plag. - 25-10% interstitial qtz Another variation is a plng. porp. with 30% anisocl. saus plag up to 1/4" dia in a fine grn matrix of chl. and saus.			60-70% 70	3%+ 2%*	qtz-ep-podmantite qtz													
15.24	50				40 50 70	1/2 2" 2"	qtz qtz qtz-carb	4.5			107	98		59933	.01	.002		.05		
18.29	60				70	8"	chl-ep-qtz	4.5			117	100		59934	.01	.001		.05		
						5'	qtz-chl-ep-poit (pr)*	4.5	* approaching a clean zone		127	95		59935	.01	.002		.05		

GIBRALTAR MINES LIMITED

HOLE NO. E90-1
SHEET NO. 3 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS				
									LEACH CAP	LIM. ZONE				Supergene	Remarks	Blocks	SAMPLE NUMBER	% Cu
0.00	0	- the meta andesite unit of 22'-97' may be a carb. alt'd shear zone cutting this zone. Typical dioritic rx's occur which likely are not a plutonic rocks but rather a recrystallized sequence of volcanic and volcanoclastic sediments of pred. dioritic or andesitic comp.	80 WR		40+70	1/2" X 1/2"	qtz-ep-rs	2.5			137	95		59936	.03	.002		.05
3.05	10		50 WR		50	8"	chl-ep-py	0.5			147	95		59937	.02	.002		.05
6.10	20		ND		20-50	2 1/2"	ep-chl-qtz-py (cp)	0.5			157	95		59938	.02	.002		.05
9.14	30		ND		30 ²	6"	ep-pied-garnet scarn	2.5			167	98		59939	.01	.001		.05
12.19	40		ND		30	1 1/2"	qtz				177	98		59940	.35	.002		.55
15.24	50		70 WR		50 ²	12"	ep-pred-garnet-chl-py-mag (cp) scarn	10% Py 40-45 1/2 mag			187	98		59941	.02	.002		.08
18.29	60				45	7"	chl-ep-qtz (ps)	0.5			197	98						

GIBRALTAR MINES LIMITED

HOLE NO. E 90-1
SHEET NO. 4 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10		70 SP	200				<.5			197	78		59942	2.01	1001			.05
6.10	20		NO	210	8	10"	qtz-chl-ep (sep)	<.5			207	100		59943	1.06	1001			.08
9.14	30		NO	220	45 ?	2' 1 1/2' 2'	chl-ep zone ep-pred-(py) (sep) chl-ep-qtz? carb (ev)	0.5			217	98		59944	1.05	1001			.08
12.19	40		NO	230		7'	mottled ep.chl zone -poss an alt'd volc. bx	0.5			227	98		59945	1.01	1002			.05
15.24	50		NO	240	60 20-22	1/2 2" x 1"	qtz-carb qtz-carb vx	<.5			237	95		59946	1.01	1001			.05
18.29	60			250		4'	mottled ep-chl zone	<.5			247	85		59947	1.01	1001			.05

GIBRALTAR MINES LIMITED

HOLE NO. 590-1
SHEET NO. 5 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10	SCARN ZONE (240-280) - from 260-280' is a mottled chl-ep zone with short scarn at scarn - the contact with the scarn zone at 280' is gradual.	50 50%	260	15' 20'	2" qtz + ep 2'	qtz-scarn-py-mag	.5			257	95		59948	.01	.002		.05	
6.10	20	- this appears to be a part of limy Sediments and impure limestone lenses 5-20' thick.	70 70%	270	80' 5'	1/4 1/3	ep-py chl-py-ep	1.0			261	93		59949	.03	.002		.08	
9.14	30		70 60%	280	80' 70' 70'	1/4-1/4 x 4 1/4 x 1/3	chl-pyx chl-pyx	1.5			277	98		59950	.05	.002		.05	
12.19	40		80	290	7'	10'	ep-py + green py (ep) scarn	2.5	ep appears to be coarse with ep and qtz scarnlets as coarse pyrite		287	100		41701	.15	.002		.15	
15.24	50		80	300	5.5' 4.5'	5.5' 4.5'	mottled chl-ep (py) scarn ep-chl-scarn	0.5	- is 10" diameter throughout scarn		297	95		41702	.01	<.001		.05	
18.29	60		80	310	10'	10'	chl-ep-py + mag (ep) scarn	1.0 (60% mag)			307	100		41703	.10	.001		.14	

GIBRALTAR MINES LIMITED

HOLE NO. 590-1
SHEET NO. 6 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG Foliation Alteration Footage Structure	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10		Nb.	325	? 45x10x2	5 1 1/2 x 1/10	chl-ep-mag (cp) scars qtz-carb-py-x2 } mottled ep-chl-ep zone	3.3			317	75		41704	.20	.001		.12	
6.10	20	cherty zone - poss. a sed. band-bedding appears - 80°	80 Wk	330	15x4 10x5 65x3 5x2	1/10-1/3 x 1/4 3/4 x 1/2 1/10 x 3 1/20 x 2	qtz-py (cp) x 4 qtz-py-cp x 2 qtz-py x 2 py x 3	3.0			327	100		41705	.06	.001		.15	
9.14	30	Similar to above but with bands of meta-andesite	80 Wk	340	20x2 40x2 80x4	1/10 x 2 1/8 x 2 1/16 x 4	qtz-py x 2 qtz-ser-py x 2 py x 2	1.5			337	95		41706	.03	.001		.08	
12.19	40	<u>META VOLCANIC SEQUENCE</u> (340-444) typical assemblage of variable textured andesitic rocks which appear to be reeq. thin beds of volc. breccia, flows, and various pyroclastic sediments much of which now resembles diorite - volcanic paragneiss is displayed in many of the variations most notable of which is a cp-chl breccia consisting of ep clots	80 Wk	350	60x6 40 45 50 60x3	1/16-1/8 x 1/16 1 1/2 2" 2" 1/10 x 3	py x 6 qtz-ser-py-cp qtz-ser-py (cp) qtz-ser-py-cp qtz-py	2.0			347	100		41707	.14	.002		.14	
15.24	50		75 Mnd	360	45x5 60x2	1/10 x 3 1/10 x 3	qtz-chl-py x 2 qtz-chl-py x 2	1.5			357	95		41708	.05	.002		.08	
18.29	60		75 Mnd	370	40x10 50x20 60	1/2 x 2" 1/16 x 2 1/10	qtz-ser-chl-py x 2 py x 2 chl-py	1.0			367	75		41709	.07	.002		.05	

GIBRALTAR MINES LIMITED

HOLE NO. E 90-1
SHEET NO. 7 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	V TO CORE FOLIATION	GRAPHIC LOG Foliation Alteration Footage Structure	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10	up to 2" dia in a swirled dark green chloritic matrix.	To Mod	380	?	4'	pale grey qtz-ser-carb-py zone	1.0			377	95		41710	.11	.002		.05	
6.10	20		To Mod	390	30	1/4	qtz-py	1.5			387	98		41711	.07	.006		.05	
9.14	30	mainly a chl-ep-bz zone from 297 to 400	So we	400	40	1"	qtz-ep-py-ep	2.5			397	98		41712	.21	.025		.15	
12.19	40		No	410	30+15	1/4 x 2	chl-carb-ep	1.5			407	100		41713	.19	.016		.14	
15.24	50	from 412 to 430, bands and clots of med-coarse gr. hb-susc segregations in dense finer gr. chloritic matrix - hb tends to be subhedral to euhedral and black	So we	420	40	3"	qtz-py qtz-ep	.5			417	98		41714	.09	.011		.05	
18.29	60			430	40	8"	qtz	.5			427	78		41715	.05	.008		.05	

GIBRALTAR MINES LIMITED

HOLE NO. E 90-1
SHEET NO. 8 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG Foliation Alteration Footage Structure	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10	zones of cp-chl breccia	70 wk	440	10 45	2 1/2 1/20	qtz-py chl-cp	1.0			95		41716	.13	.019		.10		
6.10	20		40-50 wk	450	70 30	1/20 1/8	chl-py qtz-chl-py	1.5			447	95		41717	.10	.007		.08	
9.14	30		80 mod	460	10-30 20	1/20 x 2 2 1/2'	chl-py x 3 qtz-py chl-ep-mag (py) (cp) scarn	3.5			98		41718	.15	.007		.10		
12.19	40		60 wk	470	40-50 x 6	1/10-1/20 x 6 3'	chl-py x 6 gg-bx	2.0			90		41719	.21	.013		.08		
15.24	50		40	480	35 55-70 x 8	8" 1/20-1/20 x 8	qtz-py chl-py x 8	2.5			95		41720	.20	.009		.12		
18.29	60			490	45 70 x 4	1/2 1/20 x 4	qtz-chl-py chl-py x 4						477						
					65 x 2 10" 80 20	1/20 x 2 1/2 1 1/2' 3' 2'	py-ep x 2 chl (py) (cp) chl-ep chl-carb (py) (cp) gg-bx chl-carb-py	3.0				75		41721	.43	.004		.14	

GIBRALTAR MINES LIMITED

HOLE NO. E90-1
SHEET NO. 10 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	V TO CORE FOLIATION	GRAPHIC LOG Foliation Alteration Footage Structure	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	Remarks	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0				20x2 40x50	1/10 x 1/8 1/2 x 3/8	qtz-chl-carb-py ex chl-carb-py (ep) ex												
3.05	10		60-80 Med		30x2 30	1/8 x 2 1 1/2	chl-carb-py ex chl-carb-py	3.5			557	100		41728	.22	.008		.14	
6.10	20		40-70 WR		10x10x2 40x2 20 8x 15-20x4	1/10 x 3 1/10 x 3 2" 4" 1" 1/2 x 1/2	qtz-chl-py ex qtz-chl-py ex qtz-chl-carb-py chl-(ep) qtz-py (ep)	4.0			567	98		41729	.20	.004		.12	
9.14	30	From 567 to 570 the rx resembles a sheared and crushed diorite or qtz-diorite with stringers of ep talc + qz foln planes - numerous ep-py veinlets to 2.04	30 to 80 str		20 40 5 15	1/8 1/4 1/8 1/8	chl-carb-py qtz-chl-py qtz (py) qtz-chl-py	2.0			577	95		41730	.09	.003		.08	
12.19	40	From 570 to 580 the rx is a typical meta volcanic with rapid variations in text. ie, ep-chl bx, banded ep-chl, med grn diorite, - a crushed diorite similar to 227-228 occurs between 605 and 620	50 str.		80x3 40 5x3	1/10 x 3 1/8 x 2 1/10 x 3	qtz-chl-py ex chl-py ex chl-carb-py ex	2.5			587	98		41731	.16	.006		.08	
15.24	50		80 Med		70-80x6 50 80x2	1/10 x 1/8 x 0 1/2 1/2 x 2	ep-py ex qtz qtz ex	2.0			597	95		41732	.07	.002		.08	
18.29	60				40 50 30 20	1/8 1/4 1/4 1/2	qtz-ser-py qtz qtz-chl-py qtz-chl-py	3.0			607	98		41733	.08	.003		.05	

GIBRALTAR MINES LIMITED

HOLE NO. E90-1
SHEET NO. 11 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS			
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu
0.00	0				50x2 50"	1/10 x 2 2K"	qtz-chl-py-x qtz-py-mag	2.0				95		41734	.07	.001	.05
3.05	10			620	80	1/2	qtz				617						
6.10	20			630	70-80x2 8x6 ? 30x60	1/8-1/4 x 2 1/10 x 6 ? 1/2 x 2"	qtz-x carb-x bx zone heated by qtz qtz-carb-x	1.0				95		41735	.08	.003	.05
9.14	30			640	50x2-50	1/8 x 2	qtz-x	0.5			637	98		41736	.07	.005	.05
12.19	40	EOH 644'			5 50x2 ?	1/10 1/4 x 2 ?	chl-py-cp qtz-chl-cpx bx zone heated by qtz-carb	0.5			644	95		41737	.20	.005	.20
15.24	50																
18.29	60																

SOS.

GIBRALTAR MINES LIMITED

HOLE NO. E 90-2
SHEET NO. 1 OF 11

APPROX. VALUES *100*

LOCATION SAWHILL ZONE BEARING - LATITUDE 32665 N CORE SIZE N.Q.W. LOGGED BY G. Bysouth
 DATE COLLARED 7 June 1990 LENGTH 707' LONGITUDE 50550E chain & compass survey SCALE OF LOG 1"=10' DATE June 1990
 DATE COMPLETED 9 June 1990 DIP -90° ELEVATION 3081 ? from topo map REMARKS _____

Meters	Feet	ROCK TYPES AND ALTERATION	V TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS				
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo
0.00	0	Casing To 82'									82							
3.05	10	<u>QUARTZ PORPHYRY (82-707')</u> a pale grey rock with rounded phenocrysts of grey qtz, ~ 1/10" dia, which form about 35-40% of the total. Matrix appears to be composed of white feldspar and qtz with minor sericite. Chl. occurs in some sections up to 50% but is generally absent.	10-15 Mod	90	1/2 2" 3"	10° 1/2 x 1/2 1/2 x 1/2	qtz-py gg-lim gg-lim	1.5			87	80		44676	.08 OX (.06)	.002		.05
6.10	20		40-45 Mod	100	4 x 5 4 x 8	10° 1/2 x 1/2	gg-lim qtz-py (ep) s	2.5			97	95		44677	.13 OX (.02)	.013		.08
9.14	30		45 Mod	110	4 x 5 20 30 40 45 x 7	10° 1/2 1/2 2" 2" x 1/2	qtz-py qtz-py-cp qtz-py-cp qtz-ser-py (ep) qtz-ser-py	4.5			107	95		44678	.11 OX # (.01)	.006		.18
12.19	40	appear aligned along fol. planes. Only the definite veins are described.	40 Mod	120	20 30 x 10 30	10° 1/2 x 1/2 2"	qtz-py-cp qtz qtz-carb-py-cp qtz	4.0			117	93		44679	.05	.006		.14
15.24	50		50 Mod	130	45 x 5 60 50	10° 2" 12° 3"	qtz-ser-py (ep) qtz-py-cp qtz-ser-py qtz-ser-py	4.0			127	93		44680	.08	.007		.10

* 2.0' on core remainder of hole

GIBALTAR MINES LIMITED

HOLE NO. E 90-2
SHEET NO. 3 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	Remarks	Blocks	SAMPLE NUMBER	% Cu	% Mo
0.00	0																		
3.05	10	fine ragged flakes of chl.	30 WK	200	50 50 x 3 50 50 x 2	1/10 12" 1/2 x 2 1/2 1/4 1/10 x 2	qtz-py gg-lm qtz-carb-py x 3 qtz-py qtz-py x 2	2.5			107	90		44687	.05	.003		.05	
6.10	20		60 WK	210	60 80 45 40	1/8 2" 2" 1/3	qtz-carb-py(cp) qtz qtz-py qtz-py	1.5			207	95		44688	.03	.003		.08	
9.14	30		60 WK	220	50 45 45 x 3	1/4 1/4 1/10 x 3	qtz-cp qtz-py-cp qtz-py x 3	1.5			217	98		44689	.11	.002		.10	
12.19	40		60 WK	230	60 80 x 4	1" 3" 1/10 x 4	qtz-py qtz-per-py qtz-py x 4	2.0			227	95		44690	.04	.002		.08	
15.24	50		50 WK	240	50 x 3 40	1/10 x 3 1/8	qtz-py qtz-py (M)	1.5			237	98		44691	.05	.002		.05	
18.29	60		60 WK	250	30 x 20 80 45	1/4 - 1/10 1/4 1/4	qtz-ser-py x 2 qtz-py(cp) qtz-py	1.5			247	100		44692	.05	.004		.08	

GIBKALTAR MINES LIMITED

HOLE NO. E 90-2
SHEET NO. 4 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG Alteration Footage Structure	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10		50 WE	260	60x2 80 80 40	1/16x2 2" 2 1/2" 2"	qtz-py qtz qtz qtz-carb-py	2.5			257	95		44693	.07	.007		.08	
6.10	20		50 WE	270	45 30 30	4" 5" 1/2"	gg-bc gs qtz-cl-py	1.0			267	95						.05	
9.14	30	Pyrite decreases at 275 and from 270 to 310' rock is becoming coarser and with qtz phenocrysts up to 1/2" dia and sections of minor pink anhedral spar phenocrysts occur.	70 WE	280	65	1/4	qtz-py (H2O)	1.0			277	90						.05	
12.19	40		Hb	290				0.5			287	98						.05	
15.24	50		50 WE	300	90x2 25	1/16x2 1/8	qtz-py-xz qtz-py-gs	1.0			297	95						.05	
18.29	60		60 WE	310	45	1/8	qtz-py-gs	0.5			307	95						.05	

GIBRALTAR MINES LIMITED

HOLE NO. E 90-2
SHEET NO. 5 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG Foliation Alteration Footage Structure	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10		Wk	320	50 40 30	1/4 1/2 1/8	qtz-ser-py qtz-ser-py qtz-py	1.0			317	98							.05
6.10	20		Nb	320	70 80	1" 6"	qtz-py qtz-py	2.5			327	90							.05
9.14	30		Wk	320			qtz-ser-ep	0.5			337	100							.05
12.19	40		Nb	340	70 30	1/2 1/8	qtz-py qtz-ser-ep-py	1.0			347	100							.10
15.24	50		Nb	350	70 60 50	1/2 1/2 1/2	qtz-ep-py qtz-py qtz-py	1.0			357	100							.05
18.29	60		Nb	360	40 50 50 45	7" 1/2 1/2 2"	qtz-ep qtz-ep-ep qtz-ep qtz-ser-ep	1.0			367	95							.18

GIBALTAR MINES LIMITED

HOLE NO. F 90-2
SHEET NO. 6 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG Foliation Alteration Footage Structure	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS						
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade	
0.00	0				45 45 x 4	1/10 x 2 1/2 x 2 + 1/8 x 2	qtz-py x 2 qtz-py x 4													
3.05	10		NO	375	45 45 45	2" 1/2 1/2	qtz-ser-py(cp) qtz-cp qtz-py(cp)	3.0			377	98								.15
6.10	20		NO	375	40+45 5 15 45 45+2	1/10 x 2 1/2 2" 1/4 1/10	qtz-py x 2 qtz-carb(py)(cp) qtz-py(cp)(CuMo) qtz-py qtz-py	1.5			367	95								.10
9.14	30		ND	305	60 5	1" 1/4"	qtz-carb-py qtz-py(cp)	1.0			397	95								.08
12.19	40		NO	415	35 40 80	1/2 1/10 2"	qtz-py(cp)(CuMo) qtz-py(CuMo) qtz-cp	1.0			407	98								.12
15.24	50		NO	425	60+10 65	7' 1/10 + 1" 3/4	gg-bx (steep fault) qtz x 2 qtz	0.5			417	90								.05
18.29	60			385	50 60 35 80	1/10 1/2 1/2 10"	qtz(CuMo) qtz(CuMo) qtz(vugs) qtz	0.5			427	95								.05

core has a pale green
sericite alt'd appearance

GIBRALTAR MINES LIMITED

HOLE NO. 690-2
SHEET NO. 10 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS				
									LEACH CAP	LIM. ZONE				SUPERGENE	Remarks	SAMPLE NUMBER	% Cu	% Mo
0.00	0				40 45x2	2" 1/2+1"	qtz-ser-py qtz-py-x2	1.0				95						.05
3.05	10		NB	620	60	1/8	qtz-py	0.5				95						.05
6.10	20	from 630' to 657' the core has a greenish hue - wk saus ?? or Sericite?		630	60-70x2	1/2x2	qtz-py-x3					70						
9.14	30		70? str.	640			broken zone of lost core. pea green zone with numerous py blebs at 60-70'	1.0				85						.05
12.19	40		75 wk-Mod	650	60	6"	qtz	0.5				95						.05
15.24	50		80 wk	660	70 85 80 60x2	1/10 2" 2 1/2 1/2+1"	qtz (cp) qtz-ep qtz-py (Mo) qtz-py-x2	1.5				95						.05
18.29	60		NB	670	70 80 65	2" 1/8 1/2	qtz-ser-py (Mo) qtz (Mo)-py qtz-py	1.0				98						.05

GIBRALTAR MINES LIMITED

HOLE NO. E 90-2
SHEET NO. 11 OF 11

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				Supergene	Remarks	Block	SAMPLE NUMBER	% Cu	% Mo
0.00	0																		
3.05	10		ND	680	80 5 6 + 4.5 + 5 50 x 2 70	2% 1/10 1/10 x 3 1/10 + 1/10 1/10	qtz qtz-py qtz-py + s qtz-py (u) + 2 qtz-cp (u)	1.0			677	98							.08
6.10	20		80 WH	690	80 50 x 2	1/10 1/10 x 2	qtz (u) qtz-py x 2	0.5			687	100							.05
9.14	30		ND	700	60 + 5 + 45 15 5 2 30 x 2 40 7 x 2 70 70	1 1/2% 1/10 + 1/10 x 2 1" 10" 2 1/2% + 1/10 1/2 12"	qtz-py x 4 uqtz-py qtz (u) uqtz-py x 2 uqtz-py qtz-cp-py x 2 qtz-py qtz	3.5			697	98							.10
12.19	40		ND		80 + 70	1/10 x 2	qtz-py x 2	0.5			707	100							.05
15.24	50																		
18.29	60																		

EOM 707'
803.

GIBRALTAR MINES LIMITED

HOLE NO. E 90-10
SHEET NO. 1 OF 8

APPROX. VALUES *1/8*

LOCATION SAWMILL ZONE BEARING - LATITUDE 32° 75' N CORE SIZE N.O.W. LOGGED BY G.D. BYSOUTH
 DATE COLLARED June 20, 1990 LENGTH 502' LONGITUDE 48° 105' E SCALE OF LOG 1" = 10' DATE June 22, 1990
 DATE COMPLETED June 21, 1990 DIP -90° ELEVATION 2906' REMARKS chain & compass survey from topo map

Meters	Feet	ROCK TYPES AND ALTERATION	TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0	Casing To 70'																	
3.05	10	<u>BORDER PHASE DIORITE (70'-502')</u> this is a plutonic rx grading between diorite and quartz diorite. It has a general "crushed" appearance - often "healed" by ep veinlets and gashes. The crushing, foln, and veining generally obscure the plutonic nature of the rock. It is fine to med. grn - 1/10-1/8" dia grs. - avg comp. is : qtz - 20-25% chl 25-30% Saus 15% The qtz. is not readily visible without magnification	NO	70	5-30x4 40 15-80x70	1/8-1/2 x 4 1/2 1/10 x 2	qtz-py + qtz-py(ep) qtz-py + 3	3.5			70	17	44751	.19	.013		.12		
6.10	20		NO	80	?	7'	chl-ep-bs py(ep) zone (ep clots in chl-rich matrix)	4.0	mineralization on this piece is gen. fine grn and dist along micro shears and veinlets - there are numerous fine qtz. veinlets - grade estimates are difficult		95	27	44752	.30	.038		.17		
9.14	30		NO	90	5x2 80	1/8-1/10 1/10	qtz-py-ep(Mo) + 2 qtz-ep + mag		- only the larger veins are listed		95	20	44753	.43	.028		.22		
12.19	40		NO	100	40 50 40x2 10 5x4 5	1/2 3" 1/10x2 1/8 1/10x4 1/8	qtz-chl qtz-chl-py ep-cp + 2 qtz(ep) qtz-ahl-py(ep) + 4 qtz-chl-ep	3.0			97								
15.24	50			110	80x2 40 35x0x2 70-50x2 60 40	1/10x2 1/8 1/10x2 1/10x2 3" 1/2	qtz-mag + 2 qtz-chl-py(ep) chl-ep(ep) + 2 chl-ep-py + 2 ep (chl) qtz-py	5.0			107	27	44754	.42	.032		.16		

GIBRALTAR MINES LIMITED

HOLE NO. E 90-10
SHEET NO. 2 OF 8

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	Remarks	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10		20	120	10 10 5 30 5x3 5-10x3	1/8 1/10 1/8 1/8 1/10x3 1/8 1/8-1/16x3	qtz-py qtz-rr qtz-mag qtz-mag(ep) chl-py(ep)+3 gg-bx qtz-py	2.0			117	90	0	44755	.22	.015	.325	.14	
6.10	20		HD.	130	30x3 4x 4x150	1/8 2" 1/4x2 3'	chl-py qtz-chl-py qtz-mag-py+2 gg-bx	2.0			127	90	10	44756	.15	.017		.10	
9.14	30		HD	140	30x2 3x2 20 20x2-80x2 60-70x2 20x2 50	1/8x2 1/10x2 1/8 1/10x4 1/8-1/10x2 1/10x2 12"	qtz (py)+2 qtz-py (vug) qtz qtz-chl-py+4 qtz+3 qtz+2 qtz+cp	1.5			127	95	33	44757	.20	.013		.10	
12.19	40		45 WX	150	70-80x5 45x3 50 90 45	1/10x5 1/10x3 3' 1/8 2"	qtz+5 qtz+3 qtz-chl-carb-py (cp) qtz-carb qtz-chl-py	2.0			147	90	20	44758	.16	.010		.12	
15.24	50		48 WX	160	50-70x5 5x90 ? 30 10x3	1/10x5 1/2x6 2" 12" 1/10x3	qtz+5 qtz-chl-carb-py (cp) qtz-py qtz-chl-carb-py (cp)(Mo) qtz-chl-py (cp) +3	3.5			157	90	27	44759	.16	.009		.14	
18.29	60		N2.	170	60 10+60x2 5x3 40+20x50 40 50x2+70	1/8 1/20x2 1/10x2 1/8x3 1/8 1/8x2	qtz chl-carb+cp+3 qtz-carb-py (cp)+2 qtz+3 qtz-py+cp qtz+2	3.0			167	95	27	44760	.23	.009	.175 .155	.15	

GIBRALTAR MINES LIMITED

HOLE NO. E 90-10
SHEET NO. 3 OF 3

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10		40 WK	180	5" 1/2 3" 1/2 20+20+10 10x2 5" 7" 20x2 1/2x2	1/8 1/4 1/8x3 1/8x2 1/8 1/8 1/4x2	chl-py qtz-chl-py(cp) qtz-chl-py(cp) qtz-s chl-cp-x qtz-chl-py(cp) qtz-py qtz-s	3.0			177	95	27	44761	.33	.019		.18	
6.10	20		30 WK	190	20-60x6 30x2 45x2+20 45x3 2"	1/2x10x6 1/2x10 1/2x2 1/2x2 2"	qtz-chl-py-x qtz(wsg)(py) qtz-chl-py-x qtz-chl-py(cp)-x qtz-py	4.0			187	98	27	44762	.40	.019		.17	
9.14	30		ND	200	5-10x5 4x3 4'	1/2x5 1/2x3 4'	qtz-chl-py-x qtz-chl-py-x leucocratic zone (py)	3.0			197	98	23	44763	.16	.011		.10	
12.19	40		40 WK	210	20 40x2 40+60x2 90x4 90+20 30-60x10 70 40	1 1/2 1/2x2 1/2x1/2 1/2x4 1/2x2 1/2x10 1/2 1/2	broken zone qtz-chl-cp (20) chl-cp-x qtz-x chl-py-x qtz-chl-py(cp)-x qtz-x qtz-py(cp) qtz-chl-cp	3.5			207	95	17	44764	.27	.008	.285	.12	
15.24	50		ND	220	45+50 10-60x5 45 20x5 40-50x5 40x2	1/2x10 1/2x5x5 1/2 1/2x5x5 1/2x1/2x6 1/2x2x2	qtz-chl-py qtz-x qtz-chl-py qtz-x qtz-chl-py-x qtz-x	3.5			217	90	17	44765	.19	.008		.10	
18.29	60		45 Str	230	40-45x4 45 60x3	1/2x1/2x4 6' 1/2x3	qtz-x qtz-carb-chl-(py)(cp) qtz-chl-py-x	2.0			227	90	30	44766	.18	.015		.15	

GIBRALTAR MINES LIMITED

HOLE NO. E 90-10
SHEET NO. 5 OF 8

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10		NS	300	70-80x6 30 40-60x8 60 80 10x3	6" 1/4-1/2x2 1/2 1/2x8 1/2x6 1/2x2 1/2x2 1/2x2	chl-(py) chl-py (sp)x6 qtz chl-py (sp)x8 qtz x 2 chl-py (sp)x2	3.0		297	95	20	44773	.14	.007		.15		
6.10	20	- beginning of the gyp zone. - end of ep(ep) type gash veining	NO	310	10x2 60 30x3 40x2 5 20x3	1/2 1/2+1/2 1/2 1/2x2 1/2 1/2x3	qtz-py qtz-carb-py (sp) x2 chl-lls qtz x 2 gyp x 2 qtz gyp x 2	2.0		307	90	37	44774	.14	.008		.14		
9.14	30		NO	320	80x3 30+30x2 5x30 stackwork	1/2x2 1/2+1/2x2 1/2x2 1/2-1/3	gyp x 2 qtz x 2 qtz-chl-py x 2 qtz stockwork + gyp veins	1.5		317	98	93	44775	.12	.007		.10		
12.19	40		ND	330	30+60 10x2 60 30x2 60-75x6 45-55x9	1/2+1/2 1/2x2 2" 1/2x2 1/2x2 1/2+1/2x2	gyp x 2 gyp x 2 qtz (py) qtz-chl-py x 2 qtz-chl-py (sp) x 6 chl-py (sp) x 9	1.5		327	98	97	44776	.13	.010		.12		
15.24	50		NO	340	10+70x10 5-70x6 45+80x3 50-70x6 80x2	1/2+1/2x2 1/2+1/2x6 1/2 x 4 1/2x6 1/2x2 2 1/2'	qtz-chl-py x 2 qtz x 6 gyp x 4 qtz x 6 qtz-chl-py (sp) x 2 qtz-gyp stockwork	1.0		337	98	97	44777	.17	.024		.16		
18.29	60		70-80 STR	350		3/2	gts and gyp veins forming strkws.	1.0		347	100	93	44778	.11	.010		.10		

GIBRALTAR MINES LIMITED

HOLE NO. E 70-10
SHEET NO. 6 OF 8

Meters	Feet	ROCK TYPES AND ALTERATION	V TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Fy	BOTTOM DEPTHS		Estimated Core Recovery	R.Q.D.	ASSAY RESULTS						
									LEACH CAP	LIM. ZONE			Supergene	Remarks	Feet	Blocks	SAMPLE NUMBER	% Cu	% Mo
0.00	0																		
3.05	10		95 Str.	350	90	10'	qtz-ser-chl-carb-gyp (py) zone	1.0			95	87	44779	.09	.011			.08	
6.10	20		70-80 Str.	370	70-80	10'	qtz-ser-chl-carb-gyp (py)	1.5			93	93	44780	.11	.011			.10	
9.14	30		80 Str.	380	80	10'	qtz-ser-chl-carb-gyp (py)	1.0			93	93	44781	.11	.017			.08	
12.19	40		80 Str.	390	80	8'	qtz-chl-carb (py)	1.0			100	97	44782	.09	.008			.08	
15.24	50		80 Mat.	430	80	20'	qtz-chl-carb (py)	1.0			100	90	44783	.07	.008			.08	
18.29	60		70-80 Str.	410	70-80	7'	qtz-chl-carb (py)	.5			85	13	44784	.09	.007			.10	

GIBRALTAR MINES LIMITED

HOLE NO. E23-10
SHEET NO. 7 OF 8

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG Foliation Alteration Foliation Structure	Veins < to Core Axis	Width of Vein	Mineralization	Est % Fy	BOTTOM DEPTHS		Footwall Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10		70-80 Str.	430	70-80	8'	qtz-chl-carb-py (cp)	1.5				70	50	44785	.10	.006		.12	
6.10	20		70 Mod	430	70x2 30x20 15 10x10x3 30x70 40x3 20 25x20	1/2x2 1/2x2 1/2x2 1/2x2 1/2x2 1/2x2	gyp x 2 qtz-chl-py gyp-hem x 2 qtz x 2 gyp x 2 qtz-chl-py qtz-mag x 2	1.0				95	87	44786	.15	.004		.14	
9.14	30		ND	430	10x20 45 50x6	1/2x1/2 1/2 1/2x1/2	gyp x 2 qtz-py (cp) qtz atkule	1.0				98	77	44787	.14	.003		.16	
12.19	40		ND	440	30x2 70x2 35x4+70x2	1/2x1/2 1/2x3 1/2x1/2x6	qtz-chl-py gyp x 3 qtz x 6	2.0				95	77	44788	.11	.005		.10	
15.24	50		ND	450	20x20 70x4 45x20x2 60x70	1/2x1/2 1/2x4 1/2x10x4 1/2x2	qtz-chl-py (cp) x 2 gyp x 4 qtz-chl-py x 3 qtz-py	1.0				98	93	44789	.09	.007		.08	
18.29	60		70 Mod-Str	470	10-80x6 45 80-70x4 5' 80x6 70 60-70x4 70	1/2x1/2x6 1/2 1/2x4x4 2' 1/2x1/2x6 1/2 1/2x1/2x4 6'	qtz x 6 qtz-chl-py qtz x 4 qtz-feldspar porph. qtz x 6 qtz-mag qtz x 7 qtz-chl-carb-py (cp)	2.0				98	67	44790	.11	.010		.12	

GIBRALTAR MINES LIMITED

HOLE NO. F 90-10
SHEET NO. 8 OF 8

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Fy	BOTTOM DEPTHS		Estimated Recovery	R.Q.D.	ASSAY RESULTS			
									LEACH CAP	LIM. ZONE			SUPERGENE	Remarks	SAMPLE NUMBER	% Cu
0.00	0				40x3x2 30-55x15 50-60x15	1/16x1/2 1/4-3/8x10 1/2-2"x15	qtz-chl-py+ qtz x 10 qtz x 15	.2			90	50	44791	.07	.005	.10
3.05	10			480	50-60x4 70	1/4-3/4x4 8"	qtz+ qtz-chl-chl-py qtz stock wks	1.0			95	53	44792	.10	.008	.05
6.10	20			490	40-65x12 25	1/10-1/2x12 1/2	qtz x 12 qtz-py				60					
9.14	30			500	? 40-50x3	5' 1/2x1/2	zone of gg-be and lost core qtz x 2	1.0			495	10	44793	.06	.014	.05
12.19	40					1/2	leucocratic zone with N ₂ slips and py-cp along folia planes				95					
15.24	50															
18.29	60															

E.O.H 502'
bqs.

GIBRALTAR MINES LIMITED

HOLE NO. E 90-11
SHEET NO. 1 OF 10

APPROP. VALUES

LOCATION SAWMILL ZONE BEARING — LATITUDE 32095 N CORE SIZE N.Q.W. LOGGED BY G.D. Bysouth
 DATE COLLARED June 21, 1990 LENGTH 602' LONGITUDE 49215 E *chain & compass survey* SCALE OF LOG 1"=10' DATE June 27, 1990
 DATE COMPLETED June 22, 1990 DIP -90° ELEVATION 2262' *from topomap* REMARKS _____

Meters	Feet	ROCK TYPES AND ALTERATION	V TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0	Casing To 22'																	
3.05	10	<u>META VOLCANIC SEQUENCE (22'-358')</u> a complex assemblage of r.s. varying over short sections in texture and general appearance but predom. dark green in color and andesitic or dioritic in composition. A typical member is a dark green plag.	80	30	80	12"	fine grn q.d.	<.5	lim. weak to 40'		27	75	17	80201	.01	<.001		.05	
6.10	20	textured and general appearance but predom. dark green in color and andesitic or dioritic in composition. A typical member is a dark green plag.	80	40	7	5'	gg-bx - lost core (lim)	<.5	dioritic rock		37	60	27	80202	.03	<.001		.05	
9.14	30	Porphyry with 1/2-1/4" dia. sauss. phenocr in a chloritic matrix. Another is a chl-ep breccia consisting of ep clots up to 1" in a swirled chl matrix. Fine grn	65	50	80	1"	qtz	.05				47	80	67	80203	.03	<.001		.05
12.19	40	dense dark green beds are also common, showing variable degrees of lamination of dark and lighter green material. Includes also are numerous zones of medium grn.	NO TO WK	60	40	1/3	qtz	<.5	mainly a chl-ep breccia		57	85	50	80204	.01	<.001		.05	
15.24	50	diorite - which may be rearg. andesite or possibly - these zones range from inches to tens of feet in width. Much of this material is identical to Border Phase Diorite	NO	70				<.5				67	15	87	80205	.08	<.001		.08

GIBRALTAR MINES LIMITED

HOLE NO. E90-11
SHEET NO. 2 OF 10

Meters	Feet	ROCK TYPES AND ALTERATION	V TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10	The zone from 4' to 8' prob. represents a bed of meta. limy volcanoclastic sed. - the same applies to ~100' to 120'	40 Mod to HD	80	40	2 1/2"	ep-garnet-chl(py)(ep)scarn chl-ep assemblage with minor pyrochroite.	.5			77	78	83	80206	.06	.001		.10	
6.10	20		HD	90	50 ?	12" 2 1/2"	chl-qtz-ep (Pr)(So) chl-qtz-ep (Pr)	.5			87	98	57	80207	.02	<.001		.08	
9.14	30		50 Mod	100	40	3"	ep(Py)	<.5			97	98	83	80208	.08	<.001		.08	
12.19	40		50 Mod.	110	30-40x3	1/2" x 3/8"	ep-qtz-py x 3	.5			107	100	87	80209	.04	<.001		.05	
15.24	50		50? wk	120	45	2'	chl-ep-qtz-(Pr) scarn	40			117	95	93	80210	.29	.002		.20	
18.29	60		45 Mod	150	50	1/8"	qtz-py } cherty light green zone	<.5			127	100	80	80211	.03	<.001		.05	

GIBRALTAR MINES LIMITED

HOLE NO. E 90-11
SHEET NO. 3 OF 10

Meters	Feet	ROCK TYPES AND ALTERATION	V TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10	much of the rock from ~118' to ~220 is fine grn and sl. cherty - often with streaks of pale grn qtz-spar material - poss. meta tuff beds. The recorded foln angle may be the bedding angle	ND	140	30 60 30 60 70 x 2	2" 1/2" 2" 6" 1/4 x 1/3	qtz-car-py (w) chl-py qtz chl-carb-py qtz x 2	1.0			137	90	47	80212	.04	1.001		.08	
6.10	20	sp-pied breccia + minor pale grey frags.	ND	150	45 x 2 40 x 2 40 x 2	2" 1/4 x 2 1/10 x 1	sp-pied (py) qtz-carb-chl-py (sp) x 2 qtz-chl-py x 1	1.0			147	100	40	80213	.02	.001		.08	
9.14	30	at ~160 the rock changes from a predom. s.s. phase to dark alt'n which persists to ~	ND	160	20 30 20 x 1 x 1 5-20 x 3 60 x 1	2" 3" 1/10 x 10 1/10 x 3 1/16 x 1/20 x 1	qtz qtz-ser-py (sp) chl-py-cp x 1 chl-py (sp) x 2 chl-py (sp) x 1	.5			157	98	67	80214	.05	1.001		.08	
12.19	40		60 WK	170	5-40 x 6 5 60 x 1	1/20 x 6 6" 1/16 x 1/20 x 1	chl-py x 6 qtz-chl-carb-py (sp) chl-py (sp) x 1	1.0			167	100	80	80215	.04	1.001		.12	
15.24	50		70 Mod	180	5-40 x 6 5	1/20 x 6 6"	chl-py x 6 qtz-chl-carb-py (sp)	1.0			177	100	73	80216	.02	1.001		.08	
18.29	60		65-70 Mod	190	5-20 x 6	1/20 x 6	qtz-chl-py x 6	1.0			187	95	60	80217	.04	1.001		.05	

GIBRALTAR MINES LIMITED

HOLE NO. E 90-11
SHEET NO. 4 OF 10

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10	zones (beds?) of cherty rx in places "streaky" with ragged felsic laminae in dark grey chlorite material. (196-228') - in places resembles a migmatite.	30 WE	200	5-20x2 5x3 ? 20	1/4 x 1/2 1/20 x 1/10 x 3 2' 1/4"	qtz-carb-chl-py (cp) x 2 py-chl-py (cp) x 2 chl (cp) chl-carb-py (cp)	2.0			197	98	63	80218	.06	.001		.14	
6.10	20		20 Med	210	15x3 3x2 5-10x5	1/8 x 1/16 1/10 x 2 1/20 x 5	qtz-chl-carb-py (cp) x 2 chl-py (cp) x 2 chl-py (cp) x 5	1.5			207	95	60	80219	.06	.002		.10	
9.14	30		30-40 Med	220	5x3 5x4 30-40x2	1/10 x 3 1/10 x 4 1/3 x 1/16 x 2	qtz-chl-py (cp) x 3 chl-py (cp) x 4 qtz-chl-py x 2	1.5			217	98	67	80220	.06	.001		.10	
12.19	40		50 Med	230	50x2 30 20 20-30x3	1/20 x 3 1/10 1/10 x 1/8 1/10 x 3	chl-py x 3 qtz-chl-carb-py chl-carb-py chl-py x 3	1.0			227	100	87	80221	.07	.001		.05	
15.24	50		50 WE	240	40x2 50x2 50 30+50 45	1/10 x 2 1/20 x 2 1/2 1/20 x 2 1/2	chl-carb-py x 2 qtz-carb-chl-py x 2 chl-carb-py qtz-carb-chl-py (cp) qtz-carb-py - cp x 2 qtz-chl-py	2.5			237	95	83	80222	.15	.001		.10	
18.29	60	Chl zone	50 WE	250	30-40x2 40x2 70 50 50x3 55	1/10 x 2 1/20 x 2 1/2 1/20 1/20 x 3 1/20 x 3	qtz-carb-chl-py (cp) x 2 qtz-carb-chl-py x 2 qtz-py qtz-carb-chl-py (cp) qtz-chl-carb-py x 2 chl-carb-py	2.5			247	95	83	80223	.08	<.001		.10	

GIBRALTAR MINES LIMITED

HOLE NO. 15 90 -11
SHEET NO. 5 OF 10

Meters	Feet	ROCK TYPES AND ALTERATION	V TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS			
									LEACH CAP	LIM. ZONE				SUPERGENE	Remarks	SAMPLE NUMBER	% Cu
0.00	0	chl zone			60-70x10	1/20-1/4	qtz-chl-carb-py (cp) x 10	2.0				95	40	80224	106	1001	.05
3.05	10	From ~ 240 to 356 the rock is mainly chlnic with abundant carb. - this may be a chl-carb altz zone or a meta basalt - in places, chl-carb. zones have been outlined but the entire 240-356 interval may be a chl-carb zone. Note that the incr. chl and carb actually starts at 100' with a loss of ep and SsS.	70 Nod	250	85x2	1/8x2	qtz-chl-py x 2	.5			257	95	50	80225	102	1001	.05
6.10	20		60 Str	270	70 60? 30"	1/8 2" 2'	qtz-carb-py chl (py) chl-carb. zone pink grey-brown weathering qtz-carb (chl)(py) zone*	1.5	* = 50% brownish carb		267	98	80	80226	101	1001	.05
9.14	30		15-80 Str	280	80-15	10'	qtz-(chl)ser-carb-py	1.0			277	100	97	80227	105	1001	.08
12.19	40		45 Str	290	45	9'	qtz-chl(ser)-carb-py	1.5			287	98	80	80228	122	1007	.14
15.24	50		45-80 Str	200	45-80	9'	qtz-carb-chl(ser)-py (cp)(chl)	1.0			297	100	97	80229	121	1008	.12
18.29	60		70 Wk	310	10+60 20x2	1/8x2 1/8x2	qtz-carb-py (cp) x 2 qtz-carb-py (cp) x 2 dark chl-rich zone with finely disse. py (cp)	2.0			307	100	97	80229	121	1008	.12

GIBRALTAR MINES LIMITED

HOLE NO. E 90-11
SHEET NO. 6 OF 10

Meters	Feet	ROCK TYPES AND ALTERATION	TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE			Footage Blocks	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade	
0.00	0																	
3.05	10		70-80 Wk	330	45 60 50-70 x 10 70	1/2 1 1/2 1/20 - 1/8 x 10 4'	chl-py (cp) chl-carb-py (cp) qtz-carb-chl-py x 10 chl-carb-py (cp)	25		217	98	87	80230	.12	.003		.14	
6.10	20		60 Wk-Med	350	70 30 x 3 50-60 x 4 60	1/8 1/20 x 3 1/8 x 4 5'	chl-py qtz-carb-py qtz-carb-py (cp) x 4 chl-carb(qtz)-py (cp) zone	20		327	98	80	80231	.08	.002		.12	
9.14	30		50-60 Med	340	50-60	7' 3'	chl-carb-qtz-py (cp) chl-carb (cp)	10		337	90	30	80232	.09	.004		.10	
12.19	40		50 Med	350	50	10'	chl-carb-py (cp)	10		347	95	27	80233	.10	.003		.15	
15.24	50	<u>BORDER PHASE</u>	60 Med	358	60-70 x 7	7' 1/2 x 7	chl-carb-py-ep chl-py x 7	15		357	90	17	80234	.12	.002		.16	
18.29	60	<u>DIORITE (358'-602')</u> a fine to med gr rx (avg. grn size ~ 1/20" dia) with a crushed and sheared texture over.	50 Wk	370	5-30 x 10 60 60 60	1/20 x 10 1/4 8" 1"	chl-py x 10 chl-py ep (py) chl-py	20		367	95	20	80235	.11	.003		.08	

GIBRALTAR MINES LIMITED

HOLE NO. E 90-11
SHEET NO. 8 OF 10

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10		ND	440	4c 4s 20x3 40 35 25x2 5x2 20x3	1" 1/4 1/10x3 1/4 1/4 1/8+1/4 1/10x3	qtz-ser-py-cp qtz qtz-py x 3 qtz-carb-py (cp) py qtz-ser-py (cp) qtz-chl-py qtz-ser-py x 2	3.5		457	96	63	80242	.15	.009		.16		
6.10	20		ND	450	70 20x3 20 40 15x2 10+5x3 45x2	1/4 1/10x3 1/4 1/4 1/4+1/2 1/2+1/10x3 1/10x2	qtz chl-py x 2 qtz-chl-py (cp) qtz-chl-py (cp) qtz-ser-py-cp qtz-ser-py + qtz-chl-py x 3 chl-py (cp) x 2	4.0		447	98	67	80243	.14	.006		.25		
9.14	30		ND	460	15x3 5x2+10 5x3 20x2 20 40 20+10	1/10x3 1/10x3 1/8+1/10x3 1/8x2 3" 1/2 1/10x2	chl-py (cp) x 3 chl-carb-py x 3 qtz-carb-chl-py x 3 qtz x 2 qtz-ser-py (cp) qtz qtz-chl-py x 2	3.6		457	100	40	80244	.12	.003		.14		
12.19	40		ND	470	5-10x5 5 10x2 20x2 45+5x2	1/10+1/5 1/8 1/8+1/4 1/4+1/8 1/4+1/8x2	chl-carb-py (cp) x 5 chl-carb-py carb-py x 2 chl-py x 2 chl-py (cp) x 2	4.0		467	95	57	80245	.11	.003		.12		
15.24	50		ND	480	20x3 30x2 5 10x2	1/10 x 3 1/10 x 2 1/4 1/10 x 2	qtz-chl-py x 3 qtz-chl-py x 2 qtz-chl-py (cp) qtz-chl-py x 2	3.5		477	95	57	80246	.14	.004		.10		
18.29	60		ND	490	5x2 5x3	1/4+1/10 1/10x3	chl-carb-py x 2 qtz-chl-py (vug) x 2	3.0		487	95	47	80247	.28	.006		.10		

GIBRALTAR MINES LIMITED

HOLE NO. E 90-11
SHEET NO. 9 OF 10

Meters	Feet	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOG Foliation Alteration Footage Structure	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS					
									LEACH CAP	LIM. ZONE				SUPERGENE	REMARKS	SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
0.00	0																		
3.05	10			500	5 60x10x2 15x2 15 60x70x2 15 5 40	1/10 1/4 x 1/2 x 2 1/6 x 2 1/4 1/10 x 3 1/10 1/2	qtz-py (cp) qtz (cp) x 3 qtz-mag x 2 qtz qtz-chl-py x 3 chl-py ep-py (cp) qtz-chl-py (ca)	2.5			497	78	33	80248	.24	.010		.12	
6.10	20			510	60 45 30? 45 5x4	2" 1/4 6" 1/8 1/10 x 4	chl-py qtz-ser-ep qtz-chl (cp) chl-carb-ep chl-pyx 4	3.0			507	78	53	80249	.21	.006		.20	
9.14	30			520	5x2 50 80 5x3 30x3 3 1	1/10 x 2 3" 1/2 x 1/10 1/10 x 3 1/2 2"	qtz-chl-pyx 2 leucocratic zone qtz-ep-chl-py chl-py (cp) x 3 chl-pyx 3 qtz-chl-py (mag) ep-qtz	3.5			517	78	50	80250	.17	.003		.10	
12.19	40			530	5 x 5 15 x 3 60 x 2 7 x 3 70-80 x 6	1/2 x 1/10 x 3 1/2 x 1/4 3" x 1 3 1/2 x 2 1/2 x 1/10 x 6	qtz-chl-py x 3 qtz-ser-py x 2 qtz-ser-py x 2 qtz-ser-py x 3 - breccia zone ep-ep x 6	4.5			527	78	43	80251	.19	.003		.10	
15.24	50			540	20x10x10x2 10x2 60x2 80x2 45x7	1/20 x 4 1/4 x 1/10 x 2 1/6 x 2 1/4 x 2 1/20 x 7	chl-py (cp) x 4 qtz-chl-ep-py (cp) x 2 qtz-ser-py x 2 qtz-chl-carb-py (cp) x 2 chl-py (cp) x 2	2.5			537	90	57	80252	.13	.003		.14	
18.29	60			550	20x30x30 30x3 20x30x6 15 5-10 x 8	1/20 x 4 x 2 1/4 x 3 1/10 x 1/4 x 6 1/2 1/20 x 1/8 x 8	qtz-chl-py (cp) x 3 qtz-chl-py x 3 qtz-chl-py (cp) x 6 qtz-ser-py qtz-chl-carb-py x 8	4.0			547	95	60	80253	.10	.002		.12	

The core contains numerous short veinlets and gashes of ep - sometimes wavy with qtz and fine ep - similar to E90-10 and the bottom of E90-1 (500 - 602')
- the ep forms 15-30% of the rx. and appears to incr. with depth

GIBRALTAR MINES LIMITED

HOLE NO. E 90-11
SHEET NO. 10 OF 10

Meters 0.00	Feet 0	ROCK TYPES AND ALTERATION	< TO CORE FOLIATION	GRAPHIC LOC Foliation Alteration Footage Structure	Veins < to Core Axis	Width of Vein	Mineralization	Est % Py	BOTTOM DEPTHS		Footage Blocks	Estimated Core Recovery	R.Q.D.	ASSAY RESULTS			
									LEACH CAP	LIM.-ZONE				SAMPLE NUMBER	% Cu	% Mo	Estimated Grade
									SUPERGENE								
3.05	10		NO	560	5x2 4x 3x 20x2 20x 5	1/2 1/2 1/2 1/2 1/2	chl-py qtz-chl-py(sp) qtz-chl-py-op qtz-chl-py-x3 chl-py qtz	3.0		564 565	80 55	7	80254	.07	.003		.05
6.10	20		NO	570	20x2 20x2 25x2 20x2	1/2 1/2 1/2 1/2	qtz-chl-py-x3 qtz-x2 qtz-chl-py-x3 qtz-chl-py(sp)-x2	2.5		567	100	73	80255	.10	.005		.05
9.14	30	chl-ep bc from 575 to ~590 with a few Q.P. frags.	NO	580	20x2 20x2 70 60x2 20x2 15	1/2 1/2 1/3 1/2 1/2 1/2	qtz-x2 qtz qtz-chl-py-x2 qtz-x3 qtz-py	1.5		577	18	67	80256	.08	.004		.05
12.19	40		NO	590	30 40 20x25	1/2 1/2 1/2	chl-py qtz-chl-py qtz-py (aug) x2	1.0		587	15	43	80257	.11	.007		.10
15.24	50		NO	600	15x20 20 20-30x3 20x2 30x20x2	1/2 1/2 1/2 1/2 1/2	qtz-chl-py qtz-chl-py qtz-x3 qtz-chl-py-x2 qtz-x3	2.0		594 595	98 95	33	80258	.17	.005		.05
18.29	60	E.O.H. 60%			20	1/2	qtz-chl-carb-py			602							

GIB

**GEOLOGICAL BRANCH
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20,514

TIM I

AARON I

COLE I

E90-10

E90-2

E90-11

E90-1

32000

32000

50000

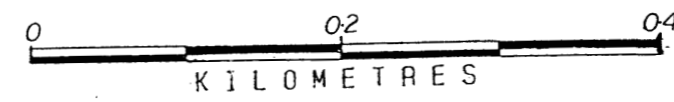
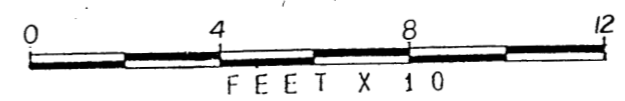
50000

Mine access road

Lake



Control by chain and compass
Scale 1:4800



**Figure 2.
Drill Hole Location Map**

**GIBRALTAR MINES LIMITED
SAWMILL ZONE**

November 14, 1990

GEOLOGICAL BRANCH
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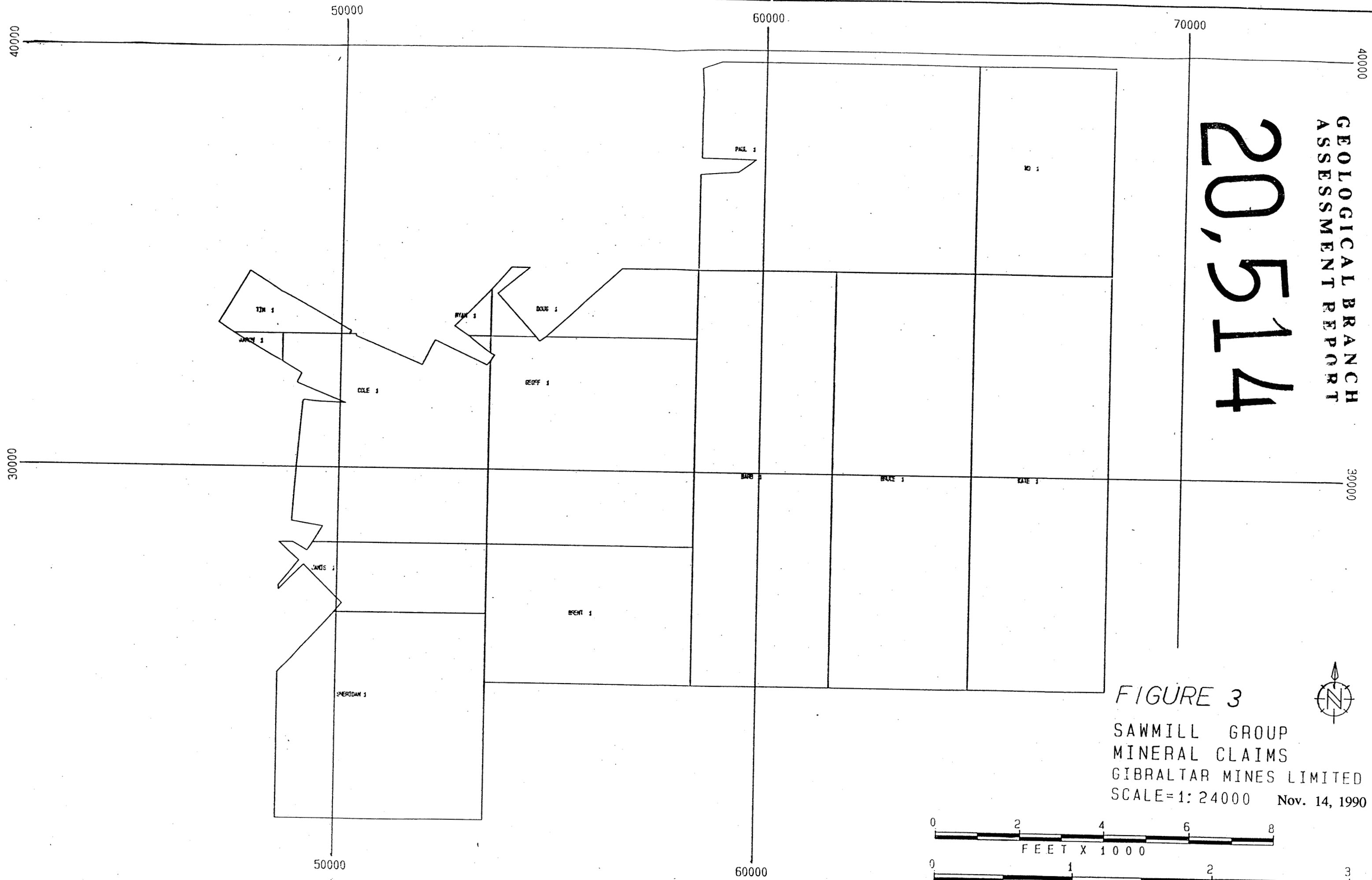


FIGURE 3
SAWMILL GROUP
MINERAL CLAIMS
GIBRALTAR MINES LIMITED
SCALE=1: 24000 Nov. 14, 1990

