87-73-15569
3/88

DIAMOND DRILL REPORT

ON THE

ZE GROUP

Cariboo Mining Division

93 B/9W

(Latitude 52° ~~51'~~ 37.4', Longitude 122° ~~47'~~ 18.1')

OWNER AND OPERATOR

GIBRALTAR MINES LIMITED

McLEESE LAKE, B.C.

Author: G. D. Bysouth

Submitted: February 25, 1987

TABLE OF CONTENTS

1 INTRODUCTION

The Ze Group lies about 6.5 km. north of the Gibraltar Mines plantsite at an elevation of 1100 to 1500 meters. The claims cover a series of low rocky hills separated by broad tracts of poorly drained ground. Access is via a network of logging and exploration roads which link up with the Gibraltar Mines tailings pond road just north of the pond. General location of the claims is shown in Figure 1.

The original claims of the Ze Group were first staked in 1977 to cover a large I.P. anomaly. Drilling in 1978, 1981, and 1985 revealed the anomaly was caused by a graphitic argillite unit which also contained abundant pyrite mineralization of possible syngenetic origin. Widespread gold anomalies developed in soils overlying the graphitic rocks, large zones of zinc enrichment associated with the syngenetic pyrite and pervasive quartz-ankerite veining developed in the argillite and adjacent rocks, provided the chief impetus for continued exploration. These drilling programs have been covered in four assessment reports.*

This report deals with a 1986 drill program aimed at testing a strong E.M. conductor. Three short vertical N.Q. diamond drill holes totalling 1048-feet (320-meters) were completed during the period August 30 to September 5 by J. T. Thomas Diamond Drilling Ltd. of Smithers, B.C. The core is stored at Gibraltar Mines Limited.

* Assessment Reports by G. D. Bysouth

1. Percussion Drilling Report, Ze Mineral Claims, July 1978
2. Diamond Drill Report, Ze Group, 1981
3. Diamond Drill Report, Ze Group, 1985
4. Diamond Drill Report, Ze Group, 1986

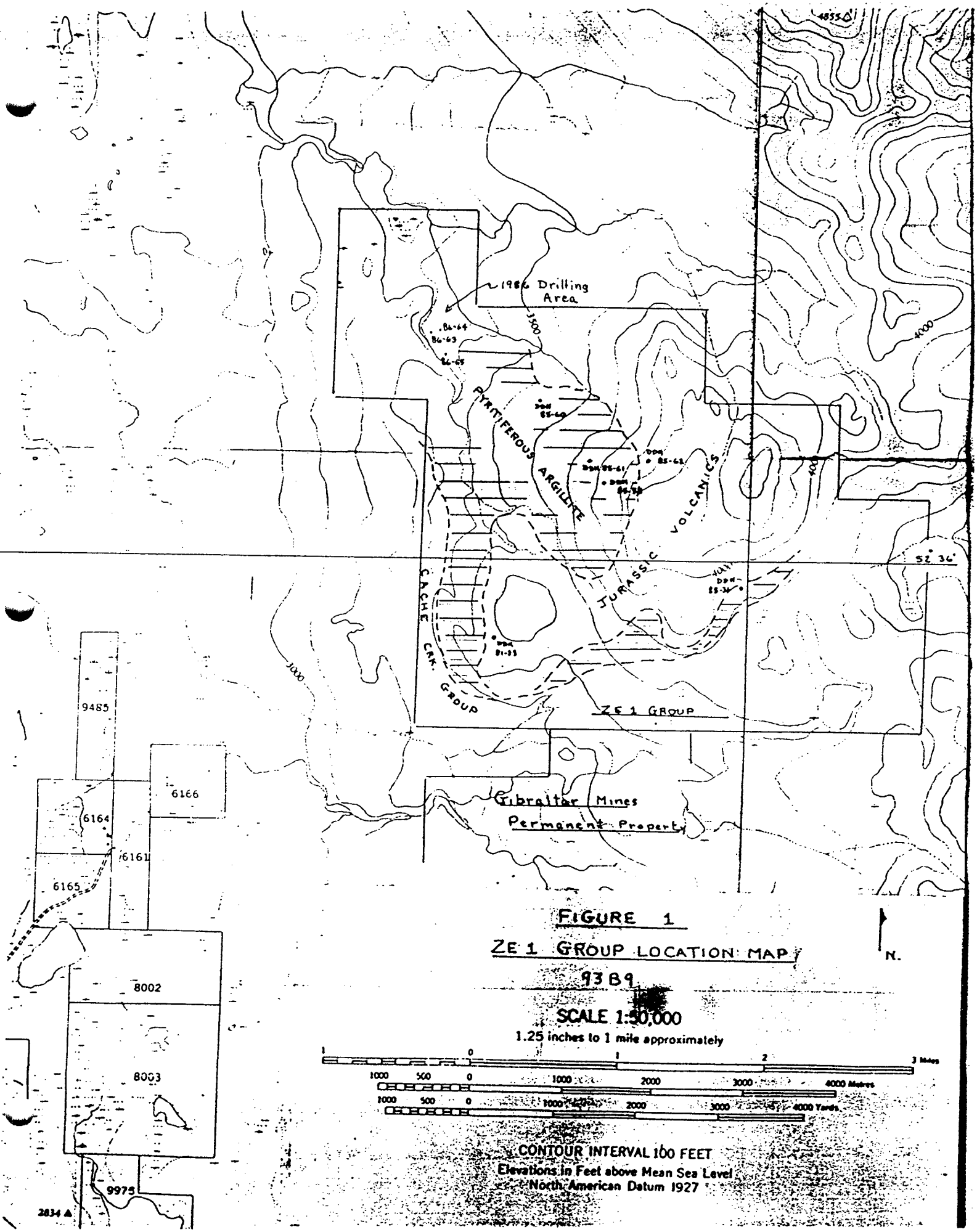

FIGURE 1

ZE 1 GROUP LOCATION MAP

93B9

SCALE 1:50,000

1.25 inches to 1 mile approximately

1 0 1 2 3 Miles

1000 500 0 1000 2000 3000 4000 Metres

1000 500 0 1000 2000 3000 4000 Yards

CONTOUR INTERVAL 100 FEET

Elevations in Feet above Mean Sea Level

North American Datum 1927

2 MINERAL CLAIMS

The Ze 1 Group mineral claims are shown in Figure 2. Claim details are provided below:

CLAIM NAME	RECORD NO.	NO. OF UNITS	ANNIVERSARY DATE
Ze 1	458	15	July 22
Ze 2	6621	20	Nov. 01
Ze 3	3927	20	Aug. 17
Ze 4	6620	10	Nov. 01
Ze 5	07101	6	Aug. 16
Ze 6	07099	10	Aug. 16
Ze 7	07100	2	Aug. 16
Ze 8	07190	12	Oct. 25

3 DRILL PROGRAM

1 ft = 30.5 cm

3.1 Objectives

The purpose of this program was to explore a strong E.M. conductor located upstream from a large copper-zinc drainage anomaly. The geochemical anomaly was of particular interest because it appeared to be down stream from a pyritiferous zinc-bearing argillite. It was hoped the anomaly was a reflection of a copper-rich phase of the argillite sequence. Hole locations are shown in Figure 2.

3.2 Results

Drill hole 86-63 was cased to 171-feet. From 171-feet to the bottom of the hole at 305-feet, a medium grained quartz diorite was intersected which, in both composition and general appearance, resembled the quartz diorite host rock of the Gibraltar ore bodies. The rock was totally barren. The only structure of interest was an eight-foot quartz-ankerite zone which contained about one percent specularite. The core was not assayed.

Drill hole 86-64 was cased to 147-feet. From 147- to 184-feet, a limonite stained fault zone was intersected. Rock fragments within the fault appeared to have been acid leached; this plus the abundant limonite suggested the presence of oxidized sulphides. From 148-feet to the bottom of the hole at 439-feet, a quartz diorite identical to that of 86-63 was encountered. This hole was also barren but did contain several leucocratic zones, which in the mine area, are indications of mineralized systems. The zones have gradational boundaries and consist essentially of quartz, ankerite, white feldspar and about one percent specularite. They appear to be alteration zones rather than intrusive dykes. The core was not assayed.

Drill hole 86-65 was cased to 60 feet. From 60-feet to 111-feet, a quartz diorite was intersected which was similar to that of holes 86-63 and 86-64. This hole however, appeared silicified, and at about 80- to 96-feet showed a gradual transformation to a molybdenite-bearing leucocratic zone. A well-defined leucocratic zone was encountered from 111- to 209-feet which also contained significant molybdenite mineralization, associated with quartz veining. From 209-feet to the end of the hole at 304-feet a silicified quartz diorite was again intersected which also showed several gradations to leucocratic zones. The leucocratic zones in all cases appeared to consist essentially of quartz. white feldspar and ankerite. The core was assayed down to 160-feet which gave 100-feet of 0.051% molybdenite but only negligible copper.

3.3 Interpretation

The results obtained in this program were totally unexpected. The E.M. anomaly and the copper-zinc drainage anomaly were originally interpreted as being caused by the sulfide-bearing black argillite unit. The relationship between the argillite and quartz diorite is at this point unknown. The argillite is interpreted to be the basal member of a Jurassic(?) sequence of sedimentary and volcanic rocks, and is also interpreted to stratigraphically overlie metavolcanic rocks of the Cache Creek Group. The quartz diorite appears correlative with the Gibraltar host rock, and may therefore be of Upper Triassic age. If this is so, these quartz diorites may also be overlain by the argillite. The lack of any hornfelsic alteration in nearby argillite exposures adds some support to this idea.

The quartz diorite has obviously undergone some sort of silica-carbonate alteration which was also responsible for the molybdenite and specularite mineralization. Trenches several hundred feet south of hole 86-65 have shown similar alteration patterns but with abundant pyrite and chalcopyrite rather than molybdenite. A significant mineralized system has therefore, been indicated but the amount of sulfide seen does not account for the E.M. anomaly. The fault zone intersected in hole 86-64 may have acted as a conductor, but since it was intersected in only one hole, this is not a satisfactory explanation.

4 STATEMENT OF EXPENDITURES

(1) Drilling Costs

Direct Footage Charges			
Hole 86-63	305' @ $13.50/foot	=	$ 4,041.25
Hole 86-64	433' @ $13.50/foot	=	$ 5,737.25
Hole 86-65	498' @ $13.50/foot	=	$ 4,028.00
	1,042'		$13,806.50
Man and Machine Hours			
33 man hours @ $21.00/hr.		=	$ 693.00
11 machine hours @ $40.00/hr.		=	$ 440.00
Water Truck		=	$ 4,500.00
			$ 5,633.00
Lost Equipment		=	$ 1,570.00
Total Drilling			$21,009.50

(2) Supplies
Core boxes: 50 boxes @ $6.00/box $ 300.00

(3) Vehicle Costs
Rental 4x4, 1986 pick-up
4 days @ $35.40/day $ 141.60

(4) Assay Costs
10 Cu-MoS2 assays at $4.40/assay $ 44.00

(5) Personnel Costs

Core Logging and Supervision

G. D. Bysouth
Dec 4 8 hrs.
Dec 11 8 hrs.
Feb 10 8 hrs.
24 hrs. @ $31.00/hr. = $ 744.00

Field Work and Core Preparation

B. Locke
Sep 2 8 hrs.
Sep 4 4 hrs.
12 hrs. @ $14.29/hr. = $ 171.48

Total Personnel Costs $ 915.48

TOTAL EXPENDITURE $22,410.58
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5 CONCLUSIONS

This drill program has not adequately explained the E.M. conductor, but it has raised the possibility of there being a porphyry-type mineralized system within the Ze Group. This possibility must be investigated further.

G. D. Bysouth

G. D. Bysouth
Senior Geologist
Gibraltar Mines Limited

APPENDIX I. 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.

Garry D. Bysouth

Garry D. Bysouth

APPENDIX II. List of Abbreviations

alt'd.....altered

cal.....calcite

carb.....carbonate

chl.....chlorite

cp.....chalcopyrite

cren.....crenulated

dissem.....disseminated

foln.....foliation

grn.....grained

h.....hardness

py.....pyrite

qtz.....quartz

rx.....rock

sphal.....sphalerite

str.....strong

stkwk.....stockwork

wk.....weak

x-cutting.....cross-cutting

1 foot = 30.5 cm

GRID ____

GIBRALTAR MINES LTD.

HOLE No. 86-63
SHEET No. 1 of 3

LOCATION: Ze GROUP	BEARING: –	LATITUDE:	CORE SIZE: N.Q.W.	LOGGED BY: G.D.B.
DATE COLLARED: 30-Aug-86	LENGTH: 305'	DEPARTURE:	SCALE OF LOG: 1" = 10'	DATE: Dec. 11 1986
DATE COMPLETED: 31-Aug-86	DIP: -90°	ELEVATION:	REMARKS:	

BOTTOM DEPTHS	
LEACH CAP	0
LIM. ZONE	0
SUPERGENE	0

ROCK TYPES & ALTERATION	∠ to Core Foliation	Graphic Log Footage	Veins ∠ to Core Axis	Width of Vein	Mineralization	Estimated % Pyrite	Remarks	Footage Blocks	Estimated Core Recovery %	RQD	Sample Number	% Cu	% Mo	Estimated Grade
Casing To 171'		170												
QUARTZ DIORITE (171' – 305) - poss. Mine Phase - grn size ranges	ND	180				0	- very barren core with very little vein structure of shearing. - geol. appear ident. to that of 86-84	173 / 177	95					.01
1/20 – 1/8, avg 1/10" ~ 15% ragged chl ~ 30% qtz – tends to be intersitual to [illegible] and not readily visible.	ND	190	15	1/3	qq-hem	0		187	98					.01
~ 50% saus plag. – often as subhedral prisms.	ND	200	5 x 3 / 40? / 5	[illegible] / 2 1/2 / 1/4	[illegible] / leucocratic zone with qtz-carb and carb-spec. / qtz-carb	0		197	100					.01
	ND	210	25?	1/2"	qq-hem-ox	0		203 / 207	80 / 95					.01

GRID _____

GIBRALTAR MINES LTD.

HOLE No. 86-43
SHEET No. 2 of 3

ROCK TYPES & ALTERATION	∠ to Core Foliation	GRAPHIC LOG: Foliation Alteration	GRAPHIC LOG: Footage	GRAPHIC LOG: Structure	Veins ∠ to Core Axis	Width of Vein	Mineralization	FRACTURE ANGLE TO CORE AXIS -FREQUENCY-	ESTIMATED % PYRITE	BOTTOM DEPTHS: LEACH CAP / LIM. ZONE / SUPERGENE / REMARKS	Footage Diam.	Estimated Core Recovery %	R Q D	ASSAY RESULTS: Sample Number	% Cu	% Mo		Estimated Grade
	ND		220					0 10 20 30 40 50 60 70 80 90	0		217	95						.01
	ND		230		45? / 10	8' / ¼₀	qtz-ank (spec.) zone (appears to be a leucocratic zone well-mineralized with dk. brown carb., qtz and disseminated metallic hem.) hem	0 10 20 30 40 50 60 70 80 90	0		221	95						.01
	ND		240		60	3"	qtz-ep	0 10 20 30 40 50 60 70 80 90	0		236 / 237	98 / 100						.01
	ND		250		50	¼₀	chl	0 10 20 30 40 50 60 70 80 90	0		247	100						.01
	ND		260					0 10 20 30 40 50 60 70 80 90	0		257	100						.01
			270		30	¼₀	carb-hem	0 10 20 30 40 50 60 70 80 90			267	98						

GRID _____ GIBRALTAR MINES LTD. HOLE No. 86-63
SHEET No. 3 of 3

ROCK TYPES & ALTERATION	∠ to Core Foliation	GRAPHIC LOG Foliation Alteration	Footage	Structure	Veins ∠ to Core Axis	Width of Vein	Mineralization	FRACTURE ANGLE TO CORE AXIS -FREQUENCY-	ESTIMATED % PYRITE	BOTTOM DEPTHS: LEACH CAP / LIM. ZONE / SUPERGENE — REMARKS	Footage Diam.	Estimated Core Recovery %	R Q D	ASSAY RESULTS: Sample Number	% Cu	% Mo		Estimated Grade
	ND		280		5	1½ / ½₀	broken core / carb-hem	0 10 20 30 40 50 60 70 80 90	0		275	85						.01
	ND		290					0 10 20 30 40 50 60 70 80 90	0		285	100						.01
	ND		300		45	¼	qtz-chl.	0 10 20 30 40 50 60 70 80 90	0		295	100						.01
EOH 305'								0 10 20 30 40 50 60 70 80 90			305	90						
B.D.B.								0 10 20 30 40 50 60 70 80 90										
								0 10 20 30 40 50 60 70 80 90										

1 foot = 30.5cm

GRID _____

GIBRALTAR MINES LTD.

HOLE No. 86-64
SHEET No. 1 of 6

LOCATION Ze GROUP | BEARING — | LATITUDE | CORE SIZE N.Q.W. | LOGGED BY G.D.B.
DATE COLLARED 01-Sep-86 | LENGTH 439' | DEPARTURE | SCALE OF LOG 1"=10' | DATE Dec. 11, 1986
DATE COMPLETED 03-Sep-86 | DIP -90° | ELEVATION | REMARKS

BOTTOM DEPTHS: LEACH CAP —; LIM. ZONE 220'; SUPERGENE —

ROCK TYPES & ALTERATION	∠ to Core Foliation	GRAPHIC LOG: Foliation Alteration	GRAPHIC LOG: Footage	GRAPHIC LOG: Silicification	Veins ∠ to Core Axis	Width of Vein	Mineralization	FRACTURE ANGLE TO CORE AXIS -FREQUENCY-	ESTIMATED % PYRITE	REMARKS	Footage Blocks	Estimated Core Recovery %	R Q D	ASSAY RESULTS: Sample Number	% Cu	% Mo		Estimated Grade
Casing To 147'											147							
FAULT ZONE			150		?	3'	gg-lim											
(147'-184')												70						
fragments are both dioritic and leucocratic rxs - both appear acid leached (bleached) and clayey - some lim.-stained qtz-veins are also present	?		160		10?	10'	gg-bx-lim-hem		0		155	40						.01
	?		170		?	10	gg-bx-lim (~6' lost core)		0		161 166	50 5						.01
	?		180		?	10'	(gg)-bx-hem (~8' lost core)		0		171 177 180	10 40						.01
					40?	4'	bx(gg)-hem				184	70 98						
QUARTZ DIORITE (184-234')			130															

GRID _____

GIBRALTAR MINES LTD.

HOLE No. B6-64
SHEET No. 2 of 6

ROCK TYPES & ALTERATION	∠ to Core Foliation	GRAPHIC LOG Foliation / Alteration / Geology / Structure	Veins ∠ to Core Axis	Width of Vein	Mineralization	FRACTURE ANGLE TO CORE AXIS -FREQUENCY-	ESTIMATED % PYRITE	BOTTOM DEPTHS: LEACH CAP / LIM. ZONE / SUPERGENE; REMARKS	Footage Discrete	Estimated Core Recovery %	R Q D	ASSAY RESULTS: Sample Number	% Cu	% Mo		Estimated Grade
this rx resembles Mine Phase ~ 15 % chl, usually as ragged clots. ~ 30% qtz - generally interstitial to other grns but in some sections forms large (¼") clots. ~ 30% saus. plag as subhedral prisms – avg grn size is about 1/16" (range 1/20 – 1/8")	ND	200	40 x 2 50 35	¼ x 2 ⅓ 1"	lim-spec x2 qtz-lim-vug carb-spec } hem stained core	0		194	95						.01
	ND	210	45 ?	5" 3" 2'	qtz-ank* ank-spec ank-spec } leucocratic zone } hem stained core	0	* deep brown weathering carb.	204	100						.01
– rx is mineralized with two types of hem – a red powdery hem and a metallic hem which is often spec. – in this log the powdery var. will be referred to as hem. and the metallic var. as spec.	ND	220	20	⅛	gg-hem	0		214	95						.01
		230	5x 4 60	1/20 x 4 1/10	hem-carb x4 carb-spec	0		224	98						.01
234 LEUCOCRATIC ZONE (234-251)		240	70 60 x 2	1/4 1/10 x 2	qtz-carb qtz-carb x 2	0		234	98						.01
This appears to be an alteration in which plag and cal have been totally replaced or partially replaced by qtz & carb (light brown also present is disseminated metallic hem (2.5-10%) – There are various		250	40	1½	carb-spec	0		244	98						.01

GRID ____

GIBRALTAR MINES LTD.

HOLE No. 86-64
SHEET No. 3 of 6

ROCK TYPES & ALTERATION	∠ to Core Foliation	GRAPHIC LOG: Foliation, Alteration, Footage, Structure	Veins ∠ to Core Axis	Width of Vein	Mineralization	FRACTURE ANGLE TO CORE AXIS -FREQUENCY-	ESTIMATED % PYRITE	BOTTOM DEPTHS: LEACH CAP / LIM. ZONE / SUPERGENE; REMARKS	Footage Blocks	Estimated Core Recovery %	R O D	ASSAY RESULTS: Sample Number	% Cu	% Mo		Estimated Grade
Stages of alth - the end product is a pale grey rx consisting of white plag and grey qtz (~50:50) which is often laced by qtz-carb. veinlets	0	260	45	½	gg-chl } hem stained core	0 10 20 30 40 50 60 70 80 90	0		251	90						.01
QUARTZ DIORITE (251-287) as above	0	270	45×2	½0×2	hem-carb×2	0 10 20 30 40 50 60 70 80 90	0		264	95						.01
	0		5	½0	qtz				267	100						
	0	280	10	3"?	qg-bx-hem } hem stained core	0 10 20 30 40 50 60 70 80 90	0		276	98						.01
	0		70	6"	ep-qtz zone											
	0	290	60	2"	ep-qtz	0 10 20 30 40 50 60 70 80 90	0		286	95						.01
	0		5×3	½0+½5-½0	carb-hem-spec. ×2	0 10 20 30 40 50 60 70 80 90	0		295	98						.01
LEUCOCRATIC		300	20	⅛	qtz(vug)											
ZONE (297-338') (same as 254'-251') ~ 1.0% dissem hem.	15-25 Cren ∫∫	310	15-25	5'	qtz-carb (ser) zone	0 10 20 30 40 50 60 70 80 90	0		305	100						.01

GRID _____ GIBRALTAR MINES LTD. HOLE No. 86-64 SHEET No. 4 of 6

ROCK TYPES & ALTERATION	∠ to Core Foliation	GRAPHIC LOG Foliation Alteration	Footage	Structure	Veins ∠ to Core Axis	Width of Vein	Mineralization	FRACTURE ANGLE TO CORE AXIS -FREQUENCY-	ESTIMATED % PYRITE	BOTTOM DEPTHS: LEACH CAP / LIM. ZONE / SUPERGENE; REMARKS	Footage Diesel	Estimated Core Recovery %	R Q D	ASSAY RESULTS: Sample Number	% Cu	% Mo		Estimated Grade
the carb spec veins consist of a fine spec dust in a carb. (or qtz-carb) matrix – without magnification the veins appear as a dk grey to bluish grey zone	15-ND				15-20	3'	qtz-carb-ser	0 10 20 30 40 50 60 70 80 90	0		315.6	98						.01
			320		20	2"	carb-spec											
	ND							0 10 20 30 40 50 60 70 80 90	0		326	98						.01
			330		5-20x2	1/4 + 1	carb. spec											
338' QUARTZ DIORITE (338-339) same as 251-297'	60 WK-Mod				45x2	6"+2	carb-spec x2	0 10 20 30 40 50 60 70 80 90	0		336	100						.01
			340		20+40	1/2 x 2	carb. spec											
	ND				20	2"	qtz-ep	0 10 20 30 40 50 60 70 80 90	0		346	100						.01
			350		30	1/4	qtz-carb											
	ND				15 x 2	1/20 x 2	carb-hem x 2	0 10 20 30 40 50 60 70 80 90	0		356	100						.01
			360															
	ND							0 10 20 30 40 50 60 70 80 90	0		346	98						.01
			370															

GRID _____

GIBRALTAR MINES LTD.

HOLE No. 86-64
SHEET No. 5 of 6

ROCK TYPES & ALTERATION	∠ to Core Foliation	GRAPHIC LOG: Foliation, Alteration, Footage, Structure	Veins ∠ to Core Axis	Width of Vein	Mineralization	FRACTURE ANGLE TO CORE AXIS -FREQUENCY-	ESTIMATED % PYRITE	BOTTOM DEPTHS: LEACH CAP / LIM. ZONE / SUPERGENE / REMARKS	Footage Blocks	Estimated Core Recovery %	R Q D	ASSAY RESULTS: Sample Number	% Cu	% Mo		Estimated Grade
	ND	380	45	3'	qtz-carb-spec	0 10 20 30 40 50 60 70 80 90	0		377	98						.01
	ND	390				0 10 20 30 40 50 60 70 80 90	0		386	95						.01
	ND	400	20×2 10 60+30	1/20×2 1/10 1/4 - 1/20	carb-hem ×2 carb-hem carb-hem×2	0 10 20 30 40 50 60 70 80 90	0		396	98						.01
	ND	410	5-10×3 20-30 ×3	1/20×3 1/20×3	carb-hem ×3 carb-hem×3	0 10 20 30 40 50 60 70 80 90	0		407	98						.01
	ND	420	40×2	1/2 +1	ep×2	0 10 20 30 40 50 60 70 80 90	0		417	100						.01
	ND	430	30	6"	qtz(ep)	0 10 20 30 40 50 60 70 80 90	0		427	100						.01

GRID _____

GIBRALTAR MINES LTD.

HOLE No. 86-64
SHEET No. 6 of 6

ROCK TYPES & ALTERATION	∠ to Core Foliation	GRAPHIC LOG: Foliation, Alteration, Footage, Structure	Veins ∠ to Core Axis	Width of Vein	Mineralization	FRACTURE ANGLE TO CORE AXIS -FREQUENCY-	ESTIMATED % PYRITE	BOTTOM DEPTHS: LEACH CAP / LIM. ZONE / SUPERGENE — REMARKS	Footage Blocks	Estimated Core Recovery %	R Q D	ASSAY RESULTS: Sample Number	% Cu	% Mo		Estimated Grade
EOH 439	ND					0 10 20 30 40 50 60 70 80 90	0		439	75						.01
B.O.B.						0 10 20 30 40 50 60 70 80 90										
						0 10 20 30 40 50 60 70 80 90										
						0 10 20 30 40 50 60 70 80 90										
						0 10 20 30 40 50 60 70 80 90										
						0 10 20 30 40 50 60 70 80 90										

1 foot = 30.5 cm

GRID

GIBRALTAR MINES LTD.

HOLE No. 86-65
SHEET No. 1 of 5

LOCATION Ze Group
DATE COLLARED 03 - Sep - 86
DATE COMPLETED 04 - Sep - 86
BEARING —
LENGTH 304'
DIP -90°
LATITUDE
DEPARTURE
ELEVATION
CORE SIZE N.Q.W
SCALE OF LOG 1" = 10'
REMARKS
LOGGED BY G.D.B.
DATE Dec. 4, 1986

BOTTOM DEPTHS: LEACH CAP 0; LIM. ZONE 69'; SUPERGENE

Graphic Log Footage	Rock Types & Alteration	∠ to Core Foliation	Veins ∠ to Core Axis	Width of Vein	Mineralization	Estimated % Pyrite	Remarks	Footage Blocks	Estimated Core Recovery %	R.Q.D.	Sample Number	% Cu	% Mo		Estimated Grade
0–60	Casing To 60'							60							
60–70	MEDIUM GRN QUARTZ DIORITE this is a hard compact rx - appears altered, possibly silicified in that the grain boundaries are	ND	20×3 5 15×2	1/4×3 1/10 1/8-1/4	qtz-carb ×3 qtz (Mo) qtz (carb)* } fine dissem py(60) mainly along chl-ble frac.s	<0.5	weak lim. to 69' * carb is pale brown weathering - all other carb reported is also brownish.	64 70	70 95		96562	.06	.026		.01
70–80	indistinct - qtz. cannot be distinguished from spar without magnification. Chl. occurs as ragged clots with fuzzy boundaries - under mag. the chl. appears corroded and embayed by qtz. and in part replaced by	ND	20 50×3 5-10 60	1/4 1/4-1/8×3 1/3 1/8	qtz qtz-carb-chl. ((mag))×3 qtz qtz-chl-carb-py (cp)	<0.5		77	95		96563	.05	.002		.01
80–90	some pale pink mineral, a pale mica (sericite?) and pyrite or chalcopyrite. In places, the rx is obviously silicified and grade to various leucocratic zones. General comp. of least alt'd rx is :	ND	50 30 80+90 15 60×2	1/8 1/8 hle×2 2 1/2 1/4 hle×2	qtz-gg-(Mo)(cp) qtz-carb (Mo) Mo×2 high broken zone + some gg qtz-chl-carb Mo×2	<0.5	} leucocratic zone - appears to be an alt'n zone rather than a dyke - chl. has been almost totally lost and remains only as [illegible] relict spots. - some pale brown carb. has been added along micro frac's - qtz-carb-alt'n?	84 87 89	95 60		96564	.03	[illegible]		.01
90–100	30% chl. 60-70% combined qtz and spar which form a hard pale green (saus?) matrix for the chl. (60' - 111')	50 wk.-Mod	15 30 30? 80 90+70	1/3 1/20 3' hle hle ×2	qtz-carb. qtz-Mo qtz-carb-bx zone healed with Mo ((cp)) Mo Mo ×2	<0.5		96 97 100	90 70 90		96565	[illegible]	[illegible]		.08 (.10 Mo)

GRID _____

GIBRALTAR MINES LTD.

HOLE No. 86-65
SHEET No. 2 of 5

BOTTOM DEPTHS: LEACH CAP | LIM. ZONE | SUPERGENE

ROCK TYPES & ALTERATION	∠ to Core Foliation	GRAPHIC LOG: Foliation Alteration	Footage	Structure	Veins ∠ to Core Axis	Width of Vein	Mineralization	FRACTURE ANGLE TO CORE AXIS -FREQUENCY-	ESTIMATED % PYRITE	REMARKS	Footage Blocks	Estimated Core Recovery %	R Q D	ASSAY RESULTS: Sample Number	% Cu	% Mo		Estimated Grade
	ND		110		20 10 5 70	3' ¼ 1" 1/10 4'	qtz-carb zone chl-carb qtz-carb-chl qtz-py highly broken zone	0-90	<0.5		107 103	95 70	96566		.01	.004		.01
111' LEUCOCRATIC ZONE (111'-209') - a pale hard rx composed of qtz and white 'spar + ~10-15% brown weathering carb	ND		120		30 80 30 70+80 70 30? 10 40x2+60	½ hle ½ ½+1 hle Mo 2' 6" 1+2+3	qtz Mo qtz-(carb) qtz x2 Mo qg-ba qtz-carb (Mo) qtz x 3	0-90	<0.5		113 117	85 80	96567		.01	.008		.01
- assumed to be an alt'd Q.D. - relict chl patches as evident (brownish ragged clots) - cut by numerous qtz ± qtz-carb veins. - prob. the chl. has been largely replaced by carb.	ND		130		20 15 ±5 70 ±2 70 60 70	½ ½ + 2" ¼ + ⅛ 6" ½ 2"	qtz-ser-(Mo)(py) - green ser.? qtz (Mo) + qtz * qtz-Mo x 2 qtz-Mo } shattered qtz healed qtz-Mo } by Mo qtz	0-90	<0.5	* two gen. of qtz are present - ∝ grey qtz-Mo veins cut by white boll qtz. - this veln is seen throughout the Mo zone	125 130	95 90	96568		<.01	.088		.01 (.10Mo?)
3' zone of Q.D.	ND		140		40 70 60+50 ?	2" ½? 1½+⅓ 6"	qtz (carb) vug qtz-Mo-gg qtz (Mo)) x2 qtz (Mo)	0-90	<0.5		127	85	96569		<.01	.034		.01 .02 Mo
	ND		150		60 70 60±2 5+60	1" 1" ¼+2 3' ⅓x2	ep-chl-hem-py qtz-Mo qtz x2 highly broken zone qtz x2	0-90	<0.5		143 147	90 85	96570		<.01	.024		.01
3' zone of Q.D.	ND		160		? 60 45	6" 3' 1/10 1½'	qtz (Mo) broken qtz-carb-gg ((Mo)) zone Mo qtz (Mo)	0-90	<0.5		153 160	90 80	96571		.01	.110		.01 .02 Mo

GRID______

GIBRALTAR MINES LTD.

HOLE No. 86-65
SHEET No. 3 of 5

ROCK TYPES & ALTERATION	∠ to Core Foliation	Graphic Log Footage	Veins ∠ to Core Axis	Width of Vein	Mineralization	Fracture Angle to Core Axis -Frequency-	Estimated % Pyrite	Remarks (Bottom Depths: Leach Cap / Lim. Zone / Supergene)	Footage Blocks	Estimated Core Recovery %	RQD	Sample Number	% Cu	% Mo		Estimated Grade
4' zone of Q.D.	ND	170	 ? 80 70	2' 12" 2" 2"	broken zone qq qtz qtz		<0.5		164 169	80 95						.01
	ND	180	80 80x2 70 70 8 ? 80 80	1" 2"+1½ 2" 1½ 2½ 12" 7" 2"	qtz-py-Mo qtzx2 qtz qtz qtz qtz-qq qtz qtz		<0.5		179	90						.01
	ND	190	 ? 80 90 80 80	2' 6" 1½' 4" 1" 5" 4"	broken zone qtz((Mo)) qtz qtz qtz qtz qtz		<0.5		182 183	90 95 95						.01
2' zone of QD	ND	200	? 45 ?s?	3' 5" 2"	broken qtz vein qtz qtz-carb		<0.5		193 197	85						.01
209	ND	210	? ? 80x2 ?	2½' 7" ½x2 4"	qtz-chl-carb qtz qtzx2 qtz		<0.5		207	95 85						.01
QUARTZ DIORITE (209'–304') Same as 60'-111'		220	10-20	10'	highly broken zone - [illegible] small [illegible] [illegible]				212 219	90						

GRID _____

GIBRALTAR MINES LTD.

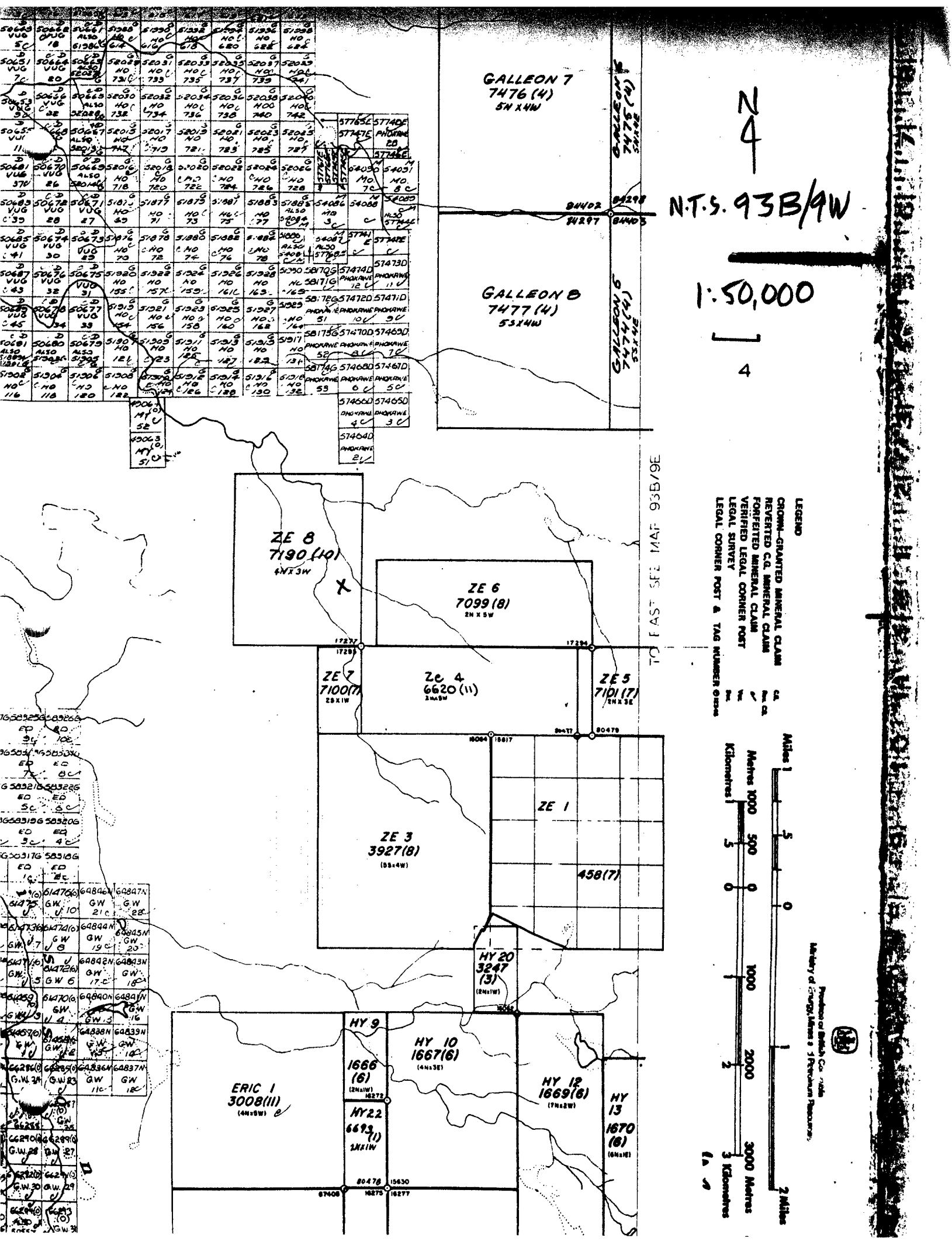
HOLE No. 86-65
SHEET No. 4 of 5

BOTTOM DEPTHS
LEACH CAP
LIM. ZONE
SUPERGENE
REMARKS

ROCK TYPES & ALTERATION	∠ to Core Foliation	GRAPHIC LOG: Foliation Alteration	GRAPHIC LOG: Footage	GRAPHIC LOG: Structure	Veins ∠ to Core Axis	Width of Vein	Mineralization	FRACTURE ANGLE TO CORE AXIS -FREQUENCY-	ESTIMATED % PYRITE	Footage Blocks	Estimated Core Recovery %	R Q D	ASSAY RESULTS: Sample Number	% Cu	% Mo		Estimated Grade
	ND		230		10-20	10'	steep fracture zone	0 10 20 30 40 50 60 70 80 90	0	223 225 230	90 85 80						.01
	ND		240		20 5	1" ½	qtz qtz-carb	0 10 20 30 40 50 60 70 80 90	0	237	95						.01
	ND		250		45 25 80	¼ ⅛ 1½	qtz qtz-carb qtz-chl	0 10 20 30 40 50 60 70 80 90	0	245	95 90						.01
4' leucocratic zone	ND		260		40 10	6" 1/10	qtz red hem	0 10 20 30 40 50 60 70 80 90	0	253 257	98						.01
5' leucocratic zone	ND		270		20 45	¼ ¼	carb carb	0 10 20 30 40 50 60 70 80 90	0	267	93						.01
	ND		280		30-40 < 3 40	1/10 x 3 ⅛	chl-cp-py < 3 qtz	0 10 20 30 40 50 60 70 80 90	0	274 280	90 93						.01

GRID _____ GIBRALTAR MINES LTD. HOLE No. 86-65
SHEET No. 5 of 5

ROCK TYPES & ALTERATION	∠ to Core Foliation	GRAPHIC LOG Foliation Alteration	Footage	Structure	Veins ∠ to Core Axis	Width of Vein	Mineralization	FRACTURE ANGLE TO CORE AXIS -FREQUENCY-	ESTIMATED % PYRITE	BOTTOM DEPTHS / LEACH CAP / LIM. ZONE / SUPERGENE / REMARKS	Footage Blocks	Estimated Core Recovery %	R Q D	ASSAY RESULTS Sample Number	% Cu	% Mo		Estimated Grade
a partial leucocratic zone – that is, an incomplete silicification of Q.D.	ND		290					0 10 20 30 40 50 60 70 80 90	0		287	95						.01
	ND		300		5+60+70+60	¼×5 / 1" / ¼ / 7"	qt3-carb>5 / qt3 / qt3 / qt3	0 10 20 30 40 50 60 70 80 90	0		296	90						.01
EOH 304					15 / 10	½ / ¼	qt3-carb / qt3	0 10 20 30 40 50 60 70 80 90			304	90						
A. D. B.								0 10 20 30 40 50 60 70 80 90										
								0 10 20 30 40 50 60 70 80 90										
								0 10 20 30 40 50 60 70 80 90										


N4
N.T.S. 93B/9W
1:50,000
GALLEON 7
7476 (4)
5N X 4W
GALLEON 8
7477 (4)
5N X 4W
GALLEON 9
7477 (4)
5N X 4W
GALLEON 10
7477 (4)
5N X 4W
ZE 8
7190 (10)
4N X 3W
ZE 6
7099 (8)
2N X 5W
ZE 7
7100(7)
2N X 1W
Ze 4
6620 (11)
2N X 5W
ZE 5
7101 (7)
2N X 3E
ZE 1
ZE 3
3927(8)
(5N x 4W)
458(7)
HY 20
3247
(3)
(2N x 1W)
HY 9
1666
(6)
(2N x 1W)
HY 10
1667(6)
(4N x 3E)
HY 12
1669(6)
(7N x 2W)
HY 13
1670
(6)
(6N x 1E)
HY22
6693
(1)
1N X 1W
ERIC 1
3008(11)
(4N x 5W)
TO EAST SEE MAP 93B/9E
LEGEND
CROWN-GRANTED MINERAL CLAIM
REVERTED C.G. MINERAL CLAIM
FORFEITED MINERAL CLAIM
VERIFIED LEGAL CORNER POST
LEGAL SURVEY
LEGAL CORNER POST & TAG NUMBER
Miles 1
Metres 1000 500 0 1000 2000 3000 Metres
Kilometres 1 0 1 2 3 Kilometres
2 Miles
Province of British Columbia
Ministry of Energy, Mines & Petroleum Resources

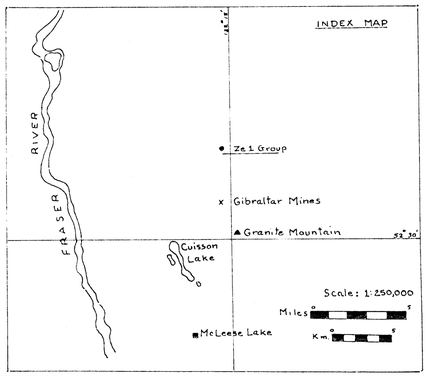
GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,569

DD-64
DD-63
DD-65

Ze 8 LCP
Ze 7 LCP
Ze 6 LCP
Ze 3 LCP LCP
Ze 1
Ze 4 LCP LCP Ze 5
LCP
Ze 2

New Access Road



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GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,569

Scale: 1 : 12,000

Feet 0 1000 2000 3000

Meters 0 500 1000

Control by chain and compass

DWN.	CHECK	APPR.	ISSUED FOR	DATE	REV.	DESCRIPTION

DWN.	CHECK	APPR.	ISSUED FOR	DATE	REV.	DESCRIPTION

REFERENCE	No.	DWG. No.

REFERENCE	No.	DWG. No.
SCALE 1 inch = 1000 feet		

GIBRALTAR MINES LIMITED

ZE 1 GROUP

DRILL HOLE LOCATIONS

FILE No.