

DIAMOND DRILL REPORT ✓

ON THE

YELLOW GROUP .VE No.3, VE No.7 claims ✓

Cariboo Mining Division ✓

93 B/~~9~~9W ✓

(Latitude 52° 31', Longitude 122° 17')

OWNER AND OPERATOR

GIBRALTAR MINES LIMITED

GEOLOGICAL BRANCH ✓  
ASSESSMENT REPORT ✓  
COXEY LAKE, B.C.

FILMED

14-763

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Submitted: May 7, 1986 ✓

TABLE OF CONTENTS

1 INTRODUCTION . . . . . 1 /

2 MINERAL CLAIMS . . . . . 2 /

3 DRILL PROGRAM . . . . . 4 /

    3.1 Objectives . . . . . 4 /

    3.2 Results . . . . . 4 /

    3.3 Interpretation and Conclusions . . . . . 6 /

4 STATEMENT OF EXPENDITURES . . . . . 7 /

FIGURES

Area Location Map . . . . . (In text) /

Yellow Group Claim Map . . . . . (In Pocket) /

Drill Hole Location Map . . . . . (In Pocket) /

APPENDICES

APPENDIX I. Statement of Qualifications . . . . . 9 /

APPENDIX II. List of Abbreviations . . . . . 10 /

Drill Log: Hole 86-04 . . . . . (In Pocket) /

Drill Log: Hole 86-05 . . . . . (In Pocket) /

Drill Log: Hole 86-06 . . . . . (In Pocket) /

Drill Log: Hole 86-07 . . . . . (In Pocket) /

Drill Log: Hole 86-08 . . . . . (In Pocket) /

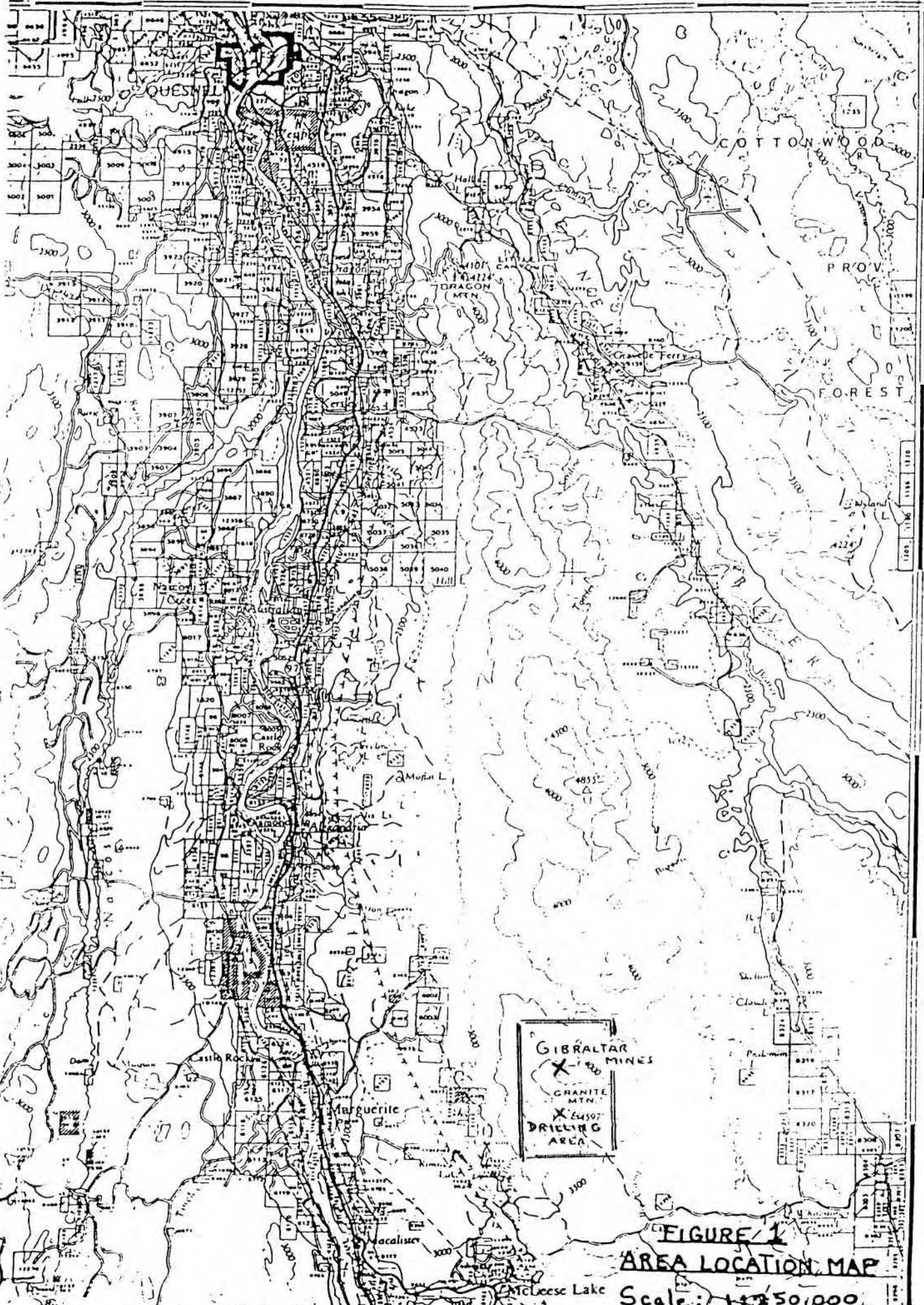
Drill Log: Hole 86-09 . . . . . (In Pocket) /

## 1 INTRODUCTION

The Yellow Group of mineral claims is part of the Gibraltar Mines Limited permanent property. It is accessed along a mine haul road and lies approximately 1.75 miles (2.8 Km.) from the plant site. The general location is shown in Figure 1.

The 1986 drilling on this group took place along the east and south edges of the Granite Lake Pit. These areas were previously tested by Canex in 1969, and by Gibraltar Mines in 1979, 1982, 1984, and 1985. Drill locations are shown in Figure 3.

Drilling was carried out by G. & D. Diamond Drilling of 5425 Dallas Drive, Kamloops, B.C. during the period April 12 to April 22, 1986. Six vertical N.Q. wireline diamond drill holes were completed for a total of 1,717 feet (523.34 m.). Core was not split. The whole core was sent to the assay lab for analysis. The ground core is stored at the Gibraltar Mines plant site for a period of one year.



GIBRALTAR MINES  
 X E 4550  
 GRANITE MTN.  
 X E 4557  
 DRILLING AREA

FIGURE 1  
 AREA LOCATION MAP  
 Scale: 1:250,000

2 MINERAL CLAIMS

The Yellow Claim Group has mineral leases grouped with mineral claims. Particulars of each claim are listed below. Some of the claims are owned by Cuisson Lake Mines Limited but Gibraltar Mines Limited has full administrative rights over all of these claims. Mineral claim locations are shown in Figure 2 (in pocket).

YELLOW GROUP MINERAL CLAIMS					
=====					
NAME	RECORDED DDMMYY	RECORD NUMBER	UNITS	MINERAL LEASE	OPTIONED FROM
BUD #1	230574	71611	1		
BUD #2	230574	71591	1		
BUD #3	230574	71599	1		
BUD #4	230574	71603	1		
CAROL #4 FR	120768	46104	1		CLM
CAROL #6 FR	120768	46106	1		CLM
CAROL #7 FR	120768	46107	1		CLM
EV #1	230574	71594	1		
EV #2	230574	71595	1		
EV #3	230574	71598	1		
EV #4	230574	71614	1		
FFEE #13	160566	35766	1		CLM
FFEE #14	160566	35767	1		CLM
FFEE #15	160566	35768	1		CLM
FFEE #16	160566	35769	1		CLM
FFEE #17	160566	35770	1		CLM
FFEE #19	160566	35772	1		CLM
FI #2 FR	230574	71601	1		
FI #4 FR	230574	71602	1		
FLO #1 FR	230574	71603	1		
GIB #15 FR	030971	64566	1		
GIB #20 FR	240672	56782	1		
GJ #20 FR	080274	71325	1		CLM
HAS #2	161068	48026	1		CLM
HAS #12	161068	48031	1		CLM
HAS #13	161068	48032	1		CLM
HAS #14	161068	48033	1		CLM
HAS #15	161068	48034	1		CLM
HAS #16	161068	48035	1		CLM
HAS #17	161068	48036	1		CLM
HAS #18	161068	48037	1		CLM
HAS #19	161068	48038	1		CLM
HAS #20	161068	48039	1		CLM
HO #4	051066	37784	1		CLM
HO #6	051066	37785	1		CLM
HO #7	051066	37786	1		CLM
HO #8	051066	37787	1		CLM
HO #20	051066	37797	1		CLM
SAP #22 FR	030971	64568	1		CLM
SAP #23 FR	030971	64569	1		CLM
SAP #25 FR	240672	56783	1		CLM
VEN #21	280469	50695	1		CLM
VEN #22	280469	50694	1		CLM
ZIP #1 FR	120276	00139	1		
EST NO #3 FR	200571	62401	1	3604 M42	
LYNNE #3	130766	36599	1	3604 M42	
RUM #30 FR	031270	61406	1	3604 M42	
VEN NO #1	140266	34947	1	3604 M42	
VEN NO #2	140266	34943	1	3604 M42	
VEN NO #3	140266	34949	1	3604 M42	



### 3 DRILL PROGRAM

#### 3.1 Objectives

As stated in earlier assessment reports dealing with this area, faulting is quite severe and has caused much shifting of the ore. In this type of environment, tight drill spacing is essential. To this end, six more holes have been drilled to check the validity of ore projections in the south and to check the extension of the ore system to the east of the pit.

#### 3.2 Results

The drill hole locations are shown in Figure 3. The locations were surveyed with an E.D.M. AGA survey instrument. Drill logs are included in the pocket of this report. All copper values reported here are for total copper. The logs report total copper and, in some cases, oxide copper (included malachite and azurite), and chalcocite. All molybdenum reported is  $\text{MoS}_2$ .

All holes intersected "Mine Phase Quartz Diorite", a medium grained rock, comprised of about 30% to 35% quartz, 45% to 50% light green, saussuritized feldspar, and about 20% green chloritized mafics. "Dark Alteration Zones" mentioned in the drill logs are zones of further alteration in which the epidote content of the saussurite has been re-mobilized out of the dark zones to form clots and veins of epidote near the borders of the dark zones. The feldspar in these dark zones is a grey color and there is often a higher concentration of chlorite and sericite associated with these zones. These dark alteration zones were encountered in all of the drill holes in this drill program along with narrow intersections of quartz-chlorite-sericite shear and quartz-chlorite-carbonate-sericite shears. Some seriate-textured "Leucocratic Phase" rock was intersected in the holes drilled to the south. This rock type is very quartz-rich with euhedral feldspars and very little chlorite.

Holes 86-04, 86-05, 86-08 and 86-09 were drilled east of the Stage 1 Granite Lake Pit. Holes 86-06 and 86-07 were drilled to the south of the pit.

Hole 86-04 was collared at 4,073.43' elevation and drilled to 248'. There was 44' of overburden with ore starting immediately below it to a depth of 210-feet. This yields an intersection of 166-feet of 0.03% copper and 0.030%  $\text{MoS}_2$ . No leach cap was intersected. The oxide zone extended to 57-feet, and supergene continued to 200-feet. Copper minerals were in the form of chalcopyrite, chalcocite, and bornite.

Hole 86-05 was collared at 4062.88', cased to 60' and drilled to 305'. Two feet of cored boulders were recovered at the top, so overburden extended to 62'. Again, there was no leach cap; oxide extended to 85' (ie. strong limonite zone), and

the supergene zone extended to 140'. A much weaker ore system was intersected here extending from 70' to 290', for 220' of 0.27% copper and 0.015%  $\text{MoS}_2$ . Again, the ore was in the form of chalcopyrite, chalcocite, and bornite, but a pyrite zone extended from the top down to about 110'. Mineralization in this zone was partially due to chalcocite coating pyrite. A sand seam was intersected from 132' to 137'.

Hole 86-08 was collared at 4120.71' elevation, cased to 30', and drilled to 301'. No leach cap existed. Oxide extended to 50' and supergene to 180'. Mineralization was in the form of chalcopyrite, chalcocite, and bornite. A good ore system extended from 50' to 270' for 220' of 0.83% copper and 0.024%  $\text{MoS}_2$ . Weak pyrite existed to about 100'.

Hole 86-09 was collared at 4102.92' elevation, cased to 36' and drilled to 356'. No leach cap existed and limonite extended to 58'. Some covellite and possible chalcocite were identified but they were not abundant enough to warrant calling this a supergene zone. Pyrite was weak on top, increasing from 70 to 160 feet and decreasing to 0% under the fault that forms the upper limit of a chalcopyrite-bornite ore system. This zone extends from 200' to 310' for 110' of 0.54% copper and 0.034%  $\text{MoS}_2$ . The fault controlling this ore is believed to strike  $045^\circ$  and dip quite steeply to the southeast. This is believed to be the remnant portion of the down dip extension of the ore intersected in 86-08.

Hole 86-06 was collared at 3960.00' elevation, cased to 80', and drilled to 255'. Again, there was cored boulders recovered at the top of the hole so overburden is indicated to 81'. There is no leach cap, oxide zone, or supergene zone in this hole. The hole is entirely waste except for a 30' zone from 220' to 250' of 0.52% copper and 0.011%  $\text{MoS}_2$ . Copper was in the form of chalcopyrite. Pyrite was strong throughout most of the hole with two separate stronger zones, at the top and the bottom of the hole. This hole proved that ore intersected in an earlier drill hole, 85-58, has been cut off by a fault and cannot be projected into this area.

Hole 86-07 was collared at 3980.00' elevation, cased to 80', and drilled to 252'. No leach cap, oxide zone or supergene zone were intersected. Two narrow zones of broken, gougy core and a sand seam were intersected above the ore zone which started at 130' and extended to the bottom of the hole for an intersection of 122' of 0.64% copper, 0.020%  $\text{MoS}_2$ . Copper mineralization was in the form of chalcopyrite. A pyrite zone extended down to the top of the ore. This hole proves the projection of ore from the earlier hole, 85-58, though it appears to be in a fault block that is down-dropped about 45'.



### 3.3 Interpretation and Conclusions

The ore intersected to the east of the pit was a well mineralized zone with a strike length of at least 500' (between faults). It is striking east-west and dipping about 30-degrees to the south. The down-dip extension is further complicated by a fault believed to be striking 045-degrees and dipping steeply to the southeast. More drilling should be done around 86-08 to tighten up the drill spacing and further define the extent of the ore system.

No further drilling is required in the south area as drilling to the south cuts off the ore body, as do faults to east and west. The ore system is confined within these bounds and extends into the Stage 1 pit to the north.

SUBMITTED BY:

GIBRALTAR MINES LIMITED

*Madeline R. Thon*

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Madeline R. Thon  
Mine Exploration Geologist

## 4 STATEMENT OF EXPENDITURES

April 1986 Diamond Drilling, Yellow Group.

## (a) Drilling Costs

## Direct Footage Charges:

86-04	248'	@ \$13.50/foot	=	\$ 3,348.00
86-05	305'	@ \$13.50/foot	=	\$ 4,117.50
86-06	255'	@ \$13.50/foot	=	\$ 3,442.50
86-07	252'	@ \$13.50/foot	=	\$ 3,402.00
86-08	301'	@ \$13.50/foot	=	\$ 4,063.50
86-09	356'	@ \$13.50/foot	=	\$ 4,806.00
	<u>1,717'</u>			<u>\$23,179.50</u>

## Equipment and Material Lost:

Casing:	130'	@ \$130.65/10'	=	\$ 1,698.45
Shoes:	3	@ \$162.84 ea.	=	\$ 488.52
				<u>\$ 2,186.97</u>

\$25,366.47

## (b) Site Preparation

Feb. 7	TD20C	6 hrs.	@ \$74.75/hr.	\$ 448.50
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## (c) Vehicle Costs

4x4 1980 Suburban,	Mar. 10, Apr. 14-18,			
Apr. 21-22:	8 days	@ \$20.00/day		\$ 160.00

## (d) Assay Costs

141 Cu - MoS <sub>2</sub>	assays @ \$4.40/assay	\$ 620.40
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## (e) Supplies

Core boxes:	70 boxes @ \$6.00/box	= \$420.00
Tags, bags, etc.		= 40.00
		<u>\$460.00</u>

\$ 460.00

## (f) Personnel Costs

## Core Logging, Sample Preparation, Interpretation

## M. R. Thon

Apr. 14-18	32 hrs.
Apr. 20-25	48 hrs.
May 1	8 hrs.
	<u>88 hrs.</u>

88 hrs. @ \$22.02/hr. = \$1,937.76

## Field Work

## E. M. Oliver

Mar. 10	8 hrs.
Apr. 14-18	20 hrs.

Apr. 21-22	8 hrs.		
	<u>          </u>		
	36 hrs.	@ \$19.64/hr.	= \$ 707.04
			<u>          </u>
			\$2,644.80
			<u>          </u>
			\$ 2,644.80
			<u>          </u>
			<u>          </u>
		TOTAL DRILLING COST	\$29,700.17
			<u>          </u>
			<u>          </u>

## APPENDIX I. Statement of Qualifications

I, Madeline R. Thon, 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 Geological Science in 1978.
3. From 1978 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.

*Madeline R. Thon*

Madeline R. Thon

## APPENDIX II. List of Abbreviations

cal.....	calcite
carb.....	carbonate
chl.....	chlorite
cp.....	chalcopyrite
dissem.....	disseminated
ep.....	epidote
foln.....	foliation
grn.....	grained
lim.....	limonite
mal.....	malachite
mag.....	magnetite
py.....	pyrite
QSP.....	quartz-sericite-pyrite
qtz.....	quartz
rx.....	rock
ser.....	sericite
str.....	strong
stkwk.....	stockwork
wk.....	weak
Wt. Q.D.....	White Quartz Diorite = Leucocratic Phase

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45000

40000

40000

35000

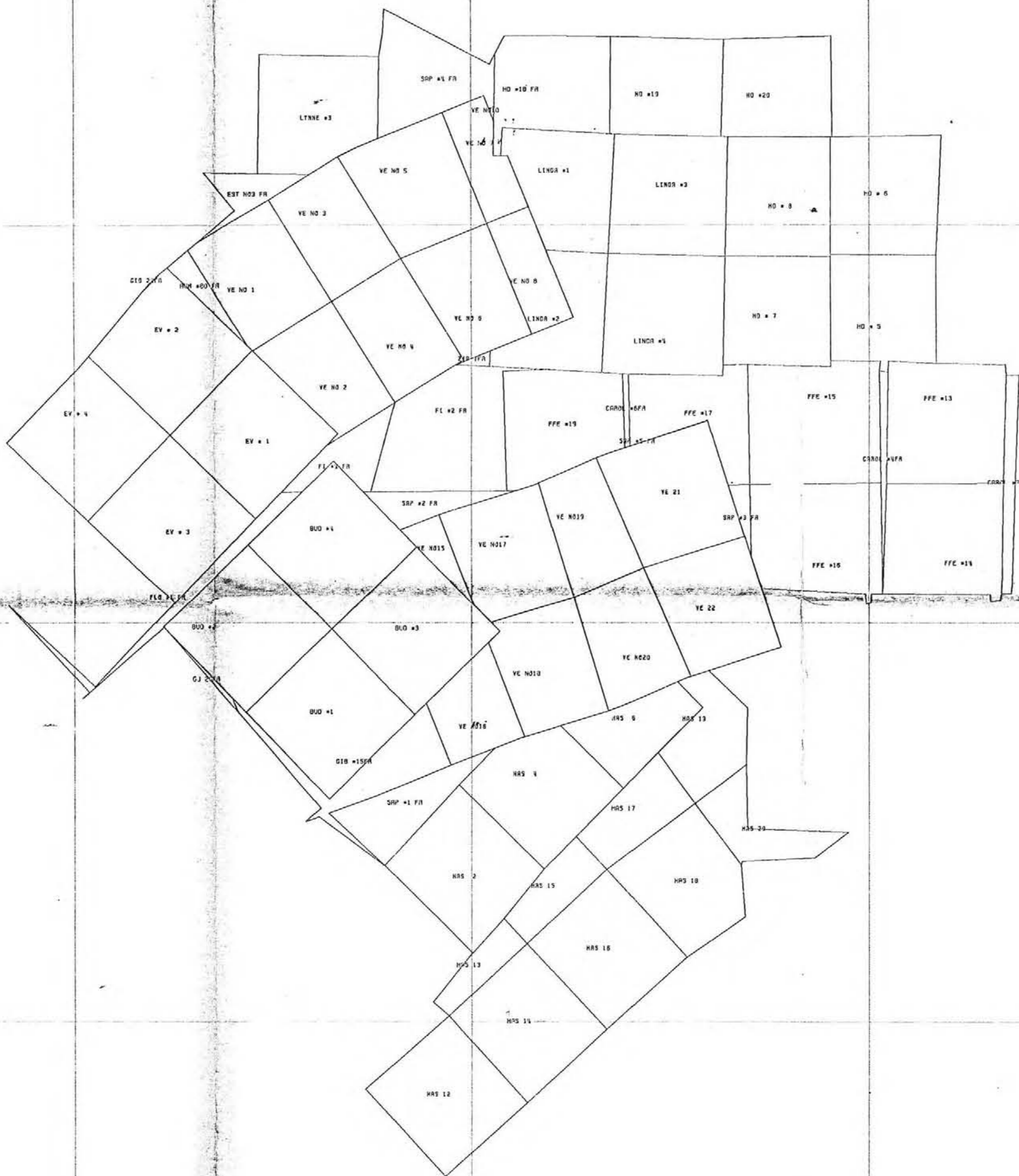
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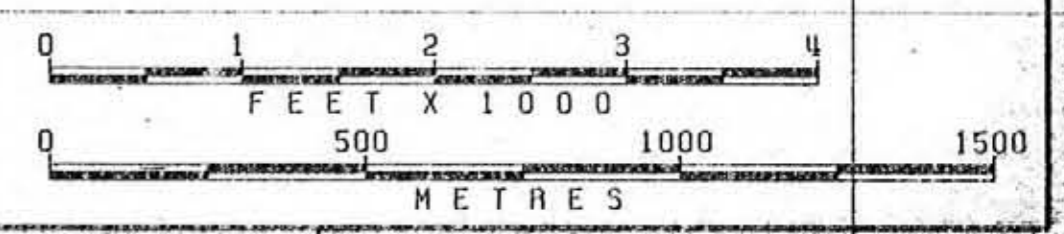


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ASSESSMENT REPORT

14-763

FIGURE 2.

YELLOW GROUP  
MINERAL CLAIMS  
GIBRALTAR MINES LIMITED  
10-OCT-84 SCALE=1:12000

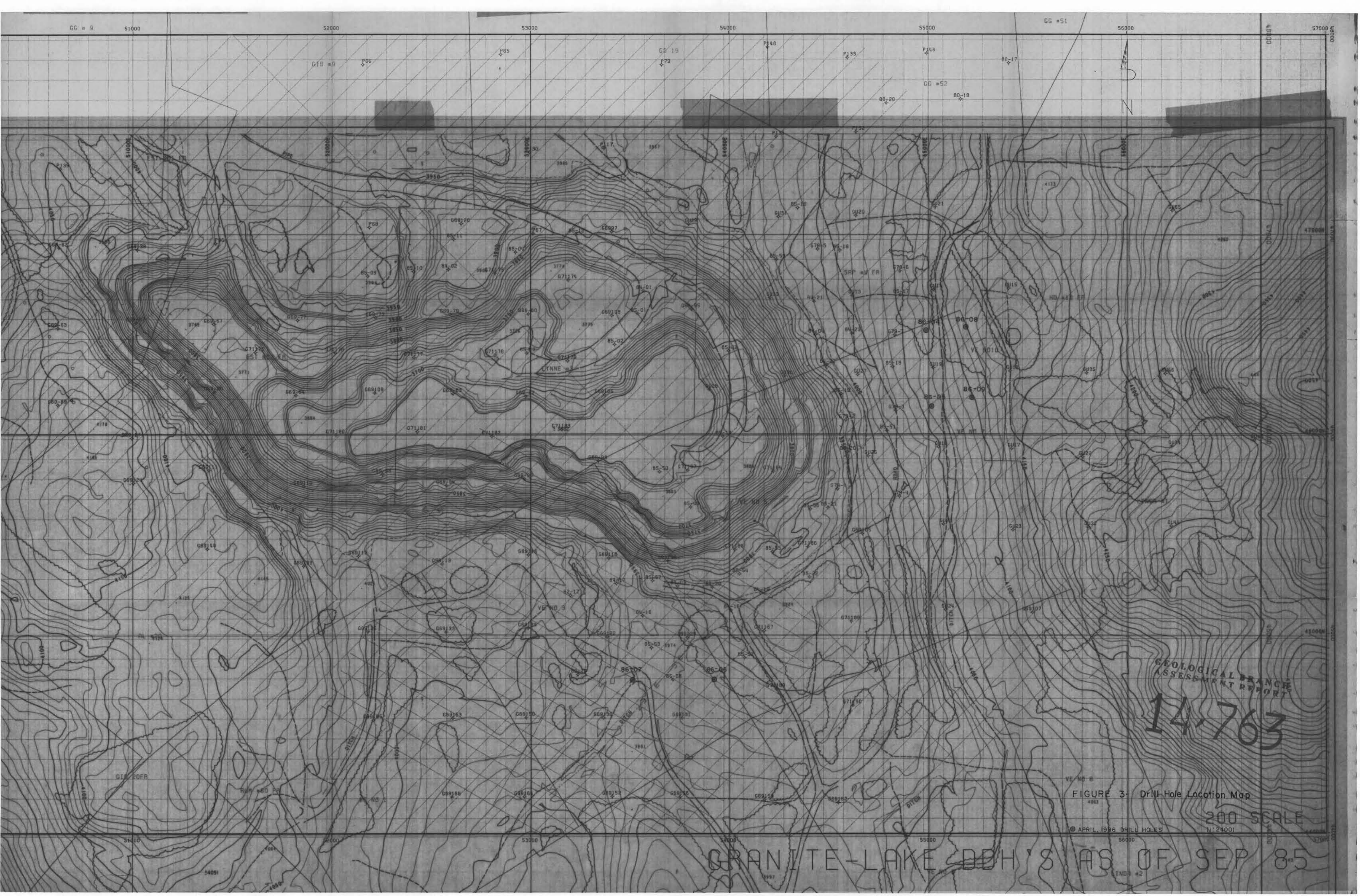


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ASSESSMENT REPORT

14-763

FIGURE 3- Drill Hole Location Map

200 SCALE

APRIL, 1986 DRILL HOLES

GRANITE LAKE DDH'S AS OF SEP 85