

DIAMOND DRILL REPORT
ON THE
COLE CLAIM

CARIBOO MINING DIVISION

93 B 8

(LATITUDE 52 30', LONGITUDE 122 15')

OWNER AND OPERATOR

GIBRALTAR MINES LIMITED

MCLEESE LAKE, B.C.

Author: G.D.Bysouth

Submitted: 30 April 1980

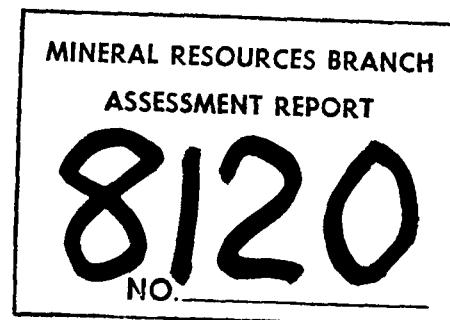


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1.0 INTRODUCTION

The Cole claim lies approximately 4 miles (6.44 km) south of the Gibraltar Mines concentrator and about 1.5 miles (2.42km) east of the southern end of Cuisson Lake. It is situated along the southern flank of Granite Mtn. at approximately the 3500-foot elevation. Access is via a 4 wheel drive-type road which links the claim to the Gibraltar Mines road to the west. General location of the claim is shown in Figure 1.

The property has been staked numerous times since the 1960's due mainly to the exploration activity around Iron Mtn. to the east.

- Over 90% of the property is covered by glacial till and outwash. Underlying bedrock geology appears to be dominated by a broad contact zone formed between Permian Cache Creek Group rocks to the south and Triassic Diorite Plutonic rocks to the north. The property has not been extensively explored due to the overburden cover but several surface copper showings have been explored by trenching. In 1967, Mc Phar Geophysics Limited carried out an I.P. Survey for Cominco Limited over a large area which also included the ground presently held by the Cole claim. An I.P. anomaly was established over this ground and ground to the west. The Cole claim and all the claims shown in Figure 2 are owned by Gibraltar Mines Limited.

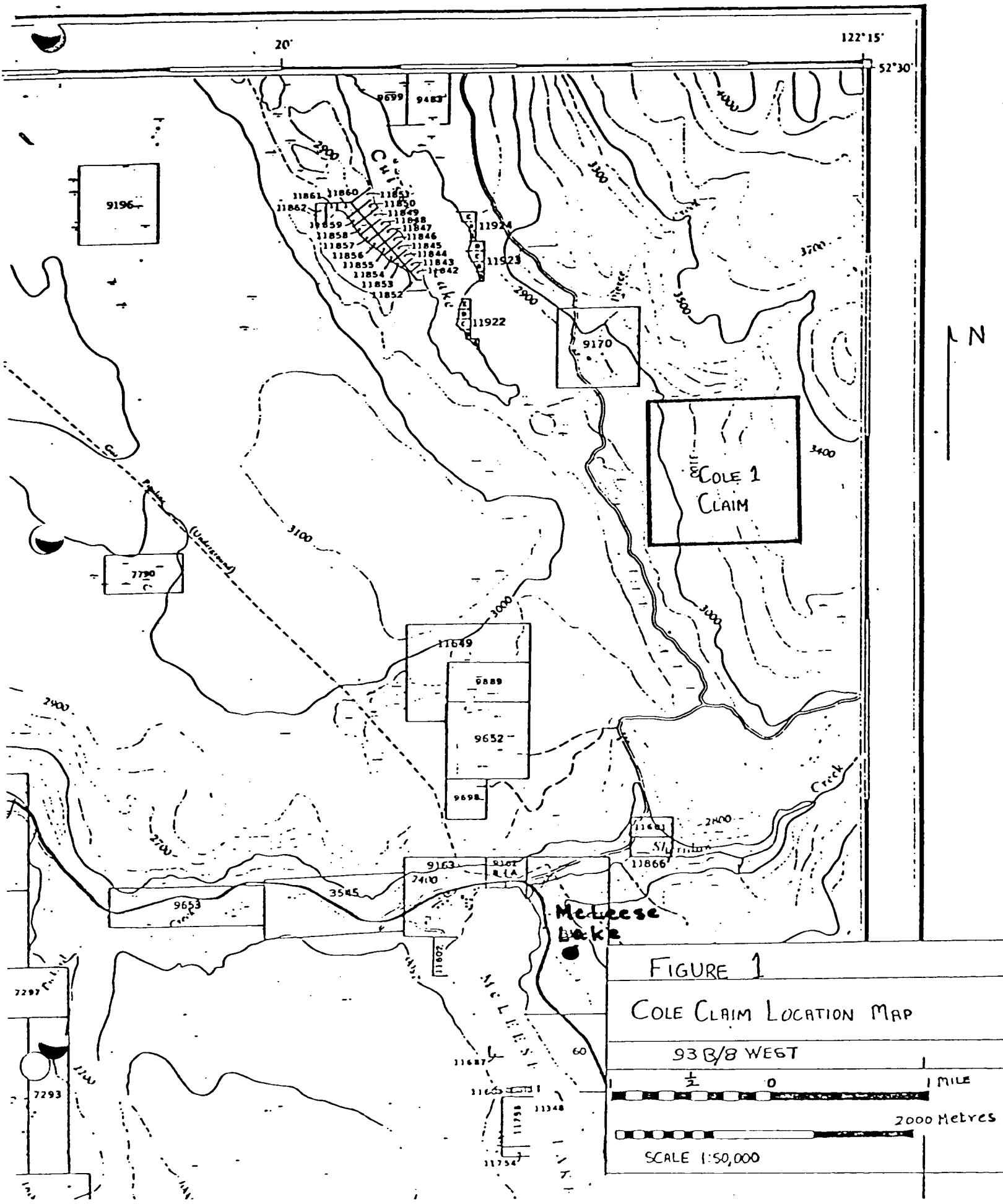
In May 1979, three vertical N.Q. wireline diamond drill holes totaling 1,503 feet (458.11m) were drilled to test an I.P. anomaly in the area of the Cole claims. Results from this program were recorded in an assessment report submitted on August 16, 1979.

This report covers a second drill program designed to follow-up the earlier drilling and further test the I.P. anomaly. J.T. Thomas Drilling was contracted during the period September 29 to October 7, 1979 to drill five vertical N.Q. wireline diamond drill holes totalling 2,707 feet (850.30 m). Core is stored at Gibraltar Mines plant site.

COLUMBIA LANDS AND FORESTS

FIRST EDITION

SHEET 93 B/8 WEST



2.0 MINERAL CLAIMS

The Cole and adjoining claims are shown in Figure 2. Information on these claims is tabulated below.

<u>Claim Name</u>	<u>Number of Units</u>	<u>Date Recorded</u>	<u>Record #</u>
Cole 1	9	August 28, 1978	816
Tim 1	2	August 28, 1978	815
Geoff 1	9	May 29, 1979	1009
Ryan 1	1	July 26, 1979	1048
Aaron 1	1	July 26, 1979	1049
Doug 1	3	July 26, 1979	1047
Janis 1	3	November 14, 1979	1331
Barb 1	6	November 14, 1979	1329
Brent 1	12	November 14, 1979	1330

All of these claims belong to Gibraltar Mines and adjoin to the north and west, 2-post claims of the Gibraltar Mines permanent property.

3.0 DRILL PROGRAM

3.1 OBJECTIVE

The purpose of this drill program was to follow-up holes drilled in May of 1979 and to further test the established I.P. anomaly.

3.2 RESULTS

The drill hole locations are shown in Figure 2. All holes intersected extensive pyrite mineralization and weak chalcopyrite mineralization. Oxide and supergene effects were negligible. All copper values reported here and in the logs are for total copper, all pyrite concentrations reported are visual estimates and all molybdenum reported is MoS_2 .

Hole 79-14 was cased to 32 feet. No significant copper mineralization was intersected. Weak pyrite mineralization was noted throughout the hole. 100 feet of 0.018% MoS_2 was intersected at 370-480 feet.

Hole 79-16 was cased to 50 feet. Between 200 and 470 feet, a 270 feet wide zone of 0.28% copper, 0.018% MoS_2 was intersected. A pyrite zone extended from the top of the hole to 284 feet.

Hole 79-17 was cased to 38 feet. Between 180 and 470 feet, a 290 feet wide zone of 0.30% Cu, 0.022% MoS_2 was intersected. Very high pyrite was intersected at the top of the hole.

Hole 79-18 was cased to 28 feet. Two zones of copper mineralization were encountered, separated by 140 feet of relatively barren rock. Between 50 and 170 feet, a 120 feet wide zone of 0.23% Cu and 0.026% MoS_2 was intersected, and between 310 and 460 feet at the base of the hole, 150 feet of 0.30% Cu and 0.028% MoS_2 were intersected. Only minor amounts of pyrite were encountered.

Hole 79-19 was cased to 30 feet and intersected a 150 feet wide zone, from 450 to 596 feet at the base of the hole, of 0.18% Cu, 0.019% MoS_2 . A pyrite zone was intersected at 241 to 525 feet.

Hole 79-14 was drilled into a quartz-feldspar-porphyry rock and a quartz-porphyry rock. This may represent a small igneous plug. The remaining four holes were in a fine to medium grained foliated diorite which contains numerous zones of a banded and sheared chlorite-sericite-carbonate-quartz assemblage. In hole 79-18 these zones are intensely crenulated and folded. They range from a few feet to 190 feet in thickness. Sulphides within the zones and in the host rock between them generally occur in quartz and/or carbonate veinlets parallel to, and cross-cutting foliation planes. There is often sericite, chlorite and sometimes epidote included in these veinlets.

3.3 INTERPRETATION

Drill results from this report suggest a sulphide zone has been intersected which has a known strike length of approximately 1400 feet. A pyrite zone about 250 feet thick overlies a copper zone about 200 feet thick. Molybdenum values are low but roughly increase with increased copper concentrations. A second zone of copper mineralization occurred in hole 79-18 at the base of the hole. Further drilling is required to determine the extent and direction of this intersection.

The host rock has been tentatively correlated with the Border Phase Diorite of the Granite Mtn. pluton. It has been cut by numerous shear zones along which the rock has been deformed, altered and mineralized. These zones dip between 40 and 60 degrees and contain most of the sulfide concentration they are clearly the principle structural controls for the mineralization and alteration.

4.0 STATEMENT OF EXPENDITURES

September - October 1979 Diamond Drilling, Cole, Tim M.C.'s

a.	Site Preparation				
	TD 15C Bulldozer	September 5 - 7	23 hours		
		September 10 - 11	9 hours		
			32 hours @ \$48/hour	\$1,536.00	
b.	Drilling Costs				
	Moving		120.00		
	Drilling: 79-14	\$7,224.00			
	79-16	7,084.00			
	79-17	8,610.00			
	79-18	6,440.00			
	79-19	8,344.00			
		<u>\$37,702.00</u>	37,702.00		
	Materials		<u>2,970.00</u>		
			\$40,792.00	40,792.00	
c.	Vehicle Costs				
	4x4 1979 Bronco Rental	29 Sept. - 7 Oct.			
	9 days @ \$19.33/day				173.97
d.	Assay Costs				
	223 assays @ \$4.00/assay				892.00
e.	Miscellaneous Costs				
	140 core boxes @ \$4.60/box		644.00		
	Sample bags, tags, etc.		<u>150.00</u>		
			794.00	794.00	
f.	Personnel Costs				
	Core Logging & Supervision				
	G.D. Bysouth	Oct. 3 - 10	56 hours @ \$14.42/hour		807.52
	Field Work & Organizing				
	E. Oliver	Aug. 29 - 31	24 hours		
		Sep. 29 - 30	16 hours		
		Oct. 1 - 7	<u>56 hours</u>		
			96 hours @ \$9.05/hour		868.80
	P. Barnes	Aug. 29 - 31	24 hours @ \$7.14/hour		171.36
	Core Splitting				
	G.D. Bysouth	Nov. 1 - 2	16 hours		
		Nov. 5 - 9	40 hours		
		Nov. 12 - 16	<u>40 hours</u>		
			96 hours @ \$14.42/hour		1,384.32

E. Oliver	Nov. 1 - 2 16 hours	
	Nov. 5 - 9 40 hours	
	Nov. 12 - 16 <u>40 hours</u>	
	96 hours @ \$9.05/hour	<u>868.80</u>

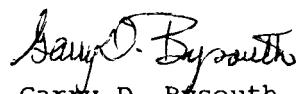
TOTAL DRILLING COST

\$48,288.77

5.0 CONCLUSIONS

Drill results from this report and the report submitted on August 19, 1979, indicate that the I.P. anomaly outlined by McPhar in 1967 was caused mainly by pyrite mineralization which forms a body having a proven strike length of 3100 feet and an apparent thickness of 250 feet.

Submitted by,


Garry D. Bysouth
Senior Geologist

GIBRALTAR MINES LIMITED

APPENDIX A

STATEMENT OF QUALIFICATION

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

1. I am a geologist.
2. I am a graduate of the University of B.C., 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 B.C.
4. I personally supervised this drill program, logged the core and assessed the results.

Garry D. Bysouth
Garry D. Bysouth

APPENDIX B

ABBREVIATIONS USED IN DRILL LOGS

cal	calcite
carb.	carbonate
chl.	chlorite
cp.	chalcopyrite
cren.	crenulated
dissem.	disseminated
ep	epidote
foln.	foliation
grn.	grained
lim.	limonite
mal.	malachite
mag.	magnetite
py	pyrite
QSP	quartz-sericite-py
qtz.	quartz
rx.	rock
ser.	sericite
str.	strong
stkwk	stockwork
wk	weak

BIBLIOGRAPHY

Bysouth, G.D., Diamond Drill Report on the Cole Claim, Cariboo Mining Division,
16 August, 1979

- GRID _____

CANEX AERIAL EXPLORATION LTD.

LOCATION COLE CLAIM
DATE COLLARED Sept 29, 1979
DATE COMPLETED Sept 30, 1979

BEARING _____
LENGTH 516'
DIP -90

LATITUDE _____
DEPARTURE _____
ELEVATION _____

CORE SIZE N Q W
SCALE OF LOG 1" = 10'
REMARKS _____

HOLE No. 79-14
SHEET No. 1 of 8

GRID _____

CANEX AERIAL EXPLORATION LTD.

HOLE No. 79-1A
SHEET No. 4 of 8

CANEX AERIAL EXPLORATION LTD.

ROCK TYPES & ALTERATION					GRAPHIC LOG Foliation Foliation Foliation Structure	Veins L to Core Axis	Width of Vein	Mineralization	Sericite Zone	Remarks	Footage Blocks.	Composites	Estimated Core Recovery %	ASSAY RESULTS					
Ogr.	Plaq.	K-Spec.	Metic	Texture	Hardness									Sample Number	%	Cu.	Mo.	Co.	Mo.
						90x2 50 90 20 50x2 30 80x3	h1e+2 1/10 hle hle 1/10x2 1/20 1/20x2	qf3-py(Mo)x3 cp py py qf3-(py)(cp)(Mo) pyx2 Mo py(Ho)(cp)x3 14"			296				24604	.10	.010		
						300		99											
								7'	qf3			306				24605	.17	.010	
						310	10 40 30	1/4 1/4 1/10	qf3-cp py(cp) py										
						320	90 45 90 ? 50x2 80x2 30 60	1/10 1/10 1/10 2" 1/20x2 1/20x2 1/10x2	qf3 qf3-py-cp py-cp qf3-cp-Mox2 qf3-py(Mo) qf3-py-cp			316				24606	.08	.012	
						330	45x2+20 45 90 70x3+20 40 80x3 30 45	1/20x3 1/2 2" 1/20x3+10 12" 1/20x3 1/10 1/8	py-cp(Mo)x3 py qf3-(cp)(bo) vuggy qf3-py-cp(Mo)x4 qf3(cp)(bo) py-cpx3 qf3-cp qf3-py(Mo)			326				24607	.15	.012	
						340	45x3 30 45 50 45x3 45	h1e+3 h1e hle hle 1/20x3 1/10	qf3-py x3 qf3-py qf3-py qf3-cp qf3-cp-py(Mo)x3 py			336				24608	.07	.005	
						350	45 30 30 25 90x2 30 40x2 30	2" 1/10 1/10 1/10 1/20x2" 1/4 h1e x2 2"	py cp qf3-py qf3-cp(Mo) py+qf3 cp-Mo x2 osp			346				24716	.04	.014	
						360	10 70 80 30 80 80 20 82	1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10	qf3-py-cp(Mo) qf3-py qf3-py qf3-py qf3-py qf3-py qf3-py qf3-py osp			356				24717	.03	.008	

ROCK TYPES & ALTERATION						Angle to Core Foliation	Graphic Log Foliation Alteration Footage	Veins L to Core Axis	Width of Vein	Mineralization	Sericite Zone	Remarks	Footage Blocks.	Composites	Estimated Core Recovery %	ASSAY RESULTS				Estimated Grade								
Alt.	Plag.	K-Spat.	Matrix	Texture	Hardness								Sample Number				% Cu.		Mo.									
													Cu.	Mo.	Cu.	Mo.												
										gt3-py-cp (Mo) x3 gt3-py-cp (Mo) x2 Mo gt3-cp (Mo) Mo gt3-Mo-Cp			436				24785	.11	.020									
							410			90 30x5 90 30x3 10x2	1/20x3 1/20x2 1/8 1/4 1/8 1/10																	
										gt3-py(Mo)x5 Mo gt3-Mo-cp x2 gt3-Mo x2			446				24786	.10	.018									
										80x3 125 80 80 80 30x3 80 80x6	1/16x3 1/4 1/16 1/20 1/4+1/10 1/8 1/20x6																	
							460			gt3-cp (Mo) gt3-(Mo) gt3-(Mo) gt3-cp gt3-cp-Mo x6			456				24787	.10	.022									
										45x2 70x3 70 45x4 90 30 20	1/10x2 1/20x3 1/10 1/20 1/20 2" 1/4																	
							470			gt3 (Mo)x2 gt3 (Mo)x3 gt3 (Mo) gt3 (Mo) gt3 (Mo) gt3 (Mo) gt3-Py-cp (Mo)			466				24788	.13	.026									
										20 50+90 30+90 90+30+40 ? 60 80x2 60	1/4 1/10x2 1/20x2 1/20x3 6" 1/20 1/10x2 1/10																	
							480			gt3-cp (Mo) gt3-cp (Mo)x2 gt3-cp (Mo)x2 gt3-cp (Mo)x3 gt3 gt3 (Mo) gt3-py-cp gt3-py-cp			476				24789	.11	.018									
										80x2 80 80 5 5 1" 1" 1" 90	1/10x2 1/16 1/10 6" 99 gt3(cp-Mo) uggy cp(bd) gt3		Broken Core	486				24609	.20	.014								
										(15 15 90+30 90 90 500-90x2	1" 1/16 1/10x2 1/10 12" 1/10+1"																	
										gt3 Cp-bd gt3-py(Mo)x2 gt3-cp-py-ser gt3 gt3-cp-Mo-py x2			496				24610	.08	.010									

GRID.

LOCATION SAWMILL ZONE

DATE COLLECTED Oct 3 1979

DATE COLLARED July 2, 1971

DATE COMPLETED Oct 3, 1979

BEARING.

LENGTH 506'

$\alpha_2 = 90^\circ$

BIP = 90

LATITUDE _____

DEPARTURE

DEFINITION

ELEVATION.

CORE SIZE _____

SCALE OF LOG $1'' = 10$

Journal of Health Politics, Policy and Law

REMARKS _____

HOLE No. R79-16

SHEET No. 1 of 7

ROCK TYPES & ALTERATION						γ to Core Foliation	GRAPHIC LOG		Mineralization	Sericite Zone	Remarks	Footage Blocks.	Composites	Estimated Core Recovery %	ASSAY RESULTS						
Ort.	Plag.	K-Spat.	Mafic	Texture	Hardness		Foliation Footage	Structure	Veins γ to Core Axis	Width of Vein					Sample Number	%	Cu.	Mo.	Estimated Grade		
50 %	40 %					ND			60 30x3 30+60 70 10 30 20x3	1/8 1/8x3 1/8x2 3" 1/8 1/8 1/4x3	PY PYx3 PYx2 gtz-ep PY PY PYx2 + gtz-chl.			106		95	.11	.002			
					numerous bleached (silicified?) zones and chl.-ep. bx zones.	ND	110		10x2 10x3 50 45x5 45x4 10x2	1/10x2 1/10x3 1/4 1/20x5 1/10x4 1/4 + 1/8	PYx2 PYx3 PY PYx5 PYx4 PY (zug) x2			116		95	.07	.001			
						ND			30x2 5x2 50 50 60 5+90 5x2	1/8x2 1/8x2 1/10 1/10 1/8 1/8x2 1/8x5	PYx2 PYx2 PY PY PY PYx2 PYx5	8%		121		95	.09	.002			
					128	ND	130		20 30 30 30 8"	2" 1/8 1/4 8"	gtz-chl. PY PY PY chl (cp)-ser			128		95	.05	<.001			
					Bx. Zone (128-135)	ND			20 30 30 30 8"	diss + bx. filling	PY			136		98	.05	<.001			
					Med Grn Grey Diorite (135-142)	ND	140		20 30 30 30 8"	2" 1/8 1/4 8"	gtz-chl (cp)-ser										
					Chl-Ep (Pied.) Bx. Zone (142-158)	ND			20 30 30 30 8"	diss + bx. filling	PY			146		98	.14	.004			
					158	ND	150		20 80 80 10x2 80x5	1/2 1/4 1" 1/10x2 1/10x5	PY PY PY PYx2 PYx5	4%	PY								
					Med Grn Grey Diorite (158-168)	ND	160		80	12"	ep				156		95	.11	.004		
					~ 60% chl.	ND			?	14"	gtz	50%	PY			166		95	.08	.002	
					168		170														

ROCK TYPES & ALTERATION

ROCK TYPES & ALTERATION							GRAPHIC LOG Foliation Foliation Footage Structure	Veins L to Core Axis	Width of Vein	Mineralization	Sericite Zone	Remarks	Footage Blocks.	Composites	Estimated Core Recovery %	ASSAY RESULTS											
Alt.	Pieg.	K-Spar.	Mafic	Texture	Hardness	Sample Number										% Cu. Mo. Cu. Mo.		Estimated Grade									
																Cu. Mo.											
						242			24"	gg					242												
						Quartz				Py					80	X	.08	.006									
						Porphyry (242-250)	ND	250	50 60 30	1/8 1/8 1/4	Py				2X30												
						250		250		Py																	
						Fine-Med Grn Grey			60	48"	chl/schist				251/6												
						Diorite (250-273)	ND	260	40 x 2 40	1/10 x 2 1/4	Py				256/6		80	.15	.010								
									30 10 5 45 50	1/4 1/10 1" 8" 1/4	gt3-py(cp) gt3(py) gt3-py-ser(cp) gt3-chl. gt3-py-cp																
								270							266		80	.29	.026								
									30	1/8 12"	Py gg + bs																
						273			50 60 50 40 x 2	2" 6" 1/4 1/10 x 2	gt3 gt3-chl. gt3-py(cp) Py x 2				273/6												
						Med Grn Grey Diorite	70 Mod.	280			Py (cp)																
						Chl. Carb. Zone	70 Mod.		70	5'	Chl.-Carb. Py (cp) along foln. planes.																
						284									283/6		80	.36	.029								
						Med Grn Grey Diorite	80 Mod.	290	50 30 30 + 20 x 2	1" 1/2 1/10 x 3	gt3-cp gt3-cp gt3-cp x 3																
						(284-297)			90 + 20 80 80 80	1/8 x 2 1/4 1/2 1"	Py-cp gt3-cp gt3-PY gt3				293		80	.23	.033								
						297	80 Mod	300																			
						Chl.-Ser.-Carb Zone					10/0																
						Ser > Chl. in places, a sheared diorite	80 to 40 Str.	310	40 30 90 x 2	1/4 1/8 1/8 x 2	Py-cp Py-cp gt3 x 2	fine Py (cp) along foln. planes				304		80	.38	.009							

ROCK TYPES & ALTERATION							GRAPHIC LOG	Foliation Alteration Footage	Veins ∠ to Core Axis	Width of Vein	Mineralization	Sericite Zone	Remarks	Footage Blocks.	Composite	Estimated Core Recovery %	ASSAY RESULTS					
Alt.	Pig.	K-Ser.	Mafic	Texture	Hardness	Structure											Sample Number	%	Cu.	Mo.	Cu.	Mo.
							Chl.-Ser.-Carb. Zone (297-355)	80 to 40 str.	80 30	6" 1/2"	gt ₃ -carb gt ₃ -cp	1% Cp+Py		314		85	243/11	.20	.021			
							Ser. > Chl.	70 Str.	320	1/2"	gt ₃ -cp			324/6		90	243/2	.26	.019			
							Chl > Ser	70 Str.	330	3"	gt ₃ (cp)(Mo) Cp+Py +(Mo)			334/6		85	243/3	.34	.014			
								30 to 50 Mod.	340	1/2	Cpx2	Finely cl. issem. along fold planes.	2% Cp+Py									
								350						344/9		85	243/2	.57	.011			
								355	40													
							Chl.-Ep-Bx. host rx.	Mod.	360	30x3 40x2	1/4x3 1/10x2	Py-cp x 3 Py-cp x 2			355		86	243/5	.58	.016		
							appears to be a med. grn diorite (Border Phase (355-385))	40 Maf.	370	1/2	gt ₃ -cp			365		85	243/6	.22	.006			
								50 Mod.	380	1/20	Py			375		85	243/7	.28	.023			
										1/20	gt ₃ -carb. gt ₃ -carb.											

ROCK TYPES & ALTERATION

SHEET No. 6 of 7

GRID.

LOCATION SAWMILL ZONE

Part A 1978

DATE COLLARED OCT 4, 1979

DATE COMPLETED Oct 5, 1979

BEARING

LENGTH 615'

LATITUDE

DEPARTURE

ELEVATION

87 .246 Cu
018 M.S.

HOLE No. R74-17
SHEET No. 1 of 9

CORE SIZE NOW

SCENE OF 108 $t'' = 10'$

61 7

REMARKS Strong Exp

LOGGED BY GDE

DATE Oct 5, 1979

ROCK TYPES & ALTERATION

ROCK TYPES & ALTERATION						Core Foliation Footage	GRAPHIC LOG STRUCTURE	Width of Vein Core Axis	Mineralization	Sericite Zone	Remarks	Footage Blocks.	Composites	Estimated Core Recovery %	ASSAY RESULTS											
Gr. Peg.	K-Spat.	Mafic	Texture	Hornfels	Sample Number										% Cu.		Estimated Grade									
															No.	Mo.										
					Fine - Med.																					
					Grn. DK Green Diorite (119-255)	ND			30 + 50 10 + 30 x 2 10 30 60 50 + 30	1/8 x 2 1/10 x 3 1/8 1/4 1/2 1/4 x 2	PY x 2 PY x 3 gt ₃ -cp gt ₃ -cp gt ₃ -cp (vuggy) gt ₃ -ep-cp-py		~ 5% PY (cp) (230-300)		75	2x3xs	.28	.016								
									240	1/20 + 10	1/4 x 2	PY-EP (CP) x 2			238											
						80	Wk.	1/5	1/4	1/8	gt ₃ -ep-py-cp (vuggy) gt ₃ -cp-py-cp (vuggy)	str. obscur. by broken core.	Broken Core	246		85	2x3x6	.41	.030							
						255	80	Wk.	1/250	1/5	1/8 x 4	PY-EP x 2 gg gt ₃ -ep-py x 4			255/6		85	2x3x7	.33	.008						
					Chl. - Ep Bx. Zone (255-270)				260	1/30 x 2 40 10 x 4 30 + 10 40 60 x 3	1/8 x 2 8" 1/8 x 4 1/10 x 2 1/2 1/10 x 3	PY-EP x 2 gg gt ₃ -ep-py x 4 gt ₃ -py-cp x 2 gt ₃ -py (cp) PY(CP) x 3														
						80	Wk.	1/270	1/5	1/8 x 3 6" 2" 1/4 1/10 - 1/8 x 3 80 x 3 80 1/2	1/8 x 3 2" 1/4 1/10 - 1/8 x 3 80 x 3 80 1/2	PY(CP) x 3 gt ₃ -cp-py PY-cp EP-cp PY-cp x 3 gt ₃ (py)(cp) gt ₃ =py (sp)	many hlc cp. on foln.		264		80	2x3x8	.38	.024						
					Med. Grn. Diorite Similar to 119-255 but low ep. 270-292	80	Wk	1/280	broken core mainly gt ₃ -cp	1/4-1" vuggy veins			Broken Core	274		85	2x3x9	.64	.046							
						80	Wk	1/290	80 80 x 5 50 40 10 45 50 x 3 50 x 2 50 + 35	6" 1/20 x 5 2" 1/4 1/4 1/10 x 3	EP-chl-bx-cp. chl-cp gt ₃ -py PY gt ₃ -py-cp (vuggy) gt ₃ -cp-py (cp) x 3 chl-py-cp x 2 gt ₃ -cp-cp x 2 (vuggy)	hlc cp-py on foln planes		284		90	2x3x10	.54	.043							
					Banded Chl-Ser.-Carb. Zone (292-303)	292		1/40	1/4	1/8 x 3	PY-cp.			291/3			85	2x3x11	.22	.029						
						80	Mod.	1/300	60 x 3	1/4	PY-cp															
											PY-cp															
											PY-cp															
											PY-cp															

ROCK TYPES & ALTERATION						L to Core Foliation	GRAPHIC LOG	Veins L to Core Axis	Width of Vein	Mineralization	Sericitic Zone	Remarks	Footage Blocks.	Composites	Estimated Core Recovery %	ASSAY RESULTS				
Oz.	Peg.	K-Spat.	Mafic	Texture	Hardness											Sample Number	%	Estimated Grade		
						Chl >> Ser. 303			40	2"	gt ₃ -Py-cp		3-5 % Pyrite (cp) (300-370)	301/3		90	2X352	.53	.028	
						Ser.-Chl.- Carb. Zone (303-318)	80 Mod	310	80 80 80 80	1/2 1/4 1/4	gt ₃ -Py-cp gt ₃ -Py-(cp) gt ₃ -Py (cp)	Vuggy Core								
						ser. >> chl. 1/10 - 1/20" blk. bands in pale grey matrix	80 Mod		80 80 80 80	1/4 1/8 1/4 1/2	gt ₃ -Py (cp) gt ₃ -Py gt ₃ -Py gt ₃ -Py gt ₃	with finely diss. Py-cp(Mo) on foln.	planes	311.6		75	2X353	.28	.020	
						Mixed Zones of Chl-Carb. and Fine Grn. Diorite (dk. green)	80 Mod	320	80x2	1/20x2	gt ₃ -Py (cp)x2			321/9		85	2X354	.37	.016	
						Ser.-Chl.- Carb. Zone (not banded) foln. defined	80 Mod	330	60 80x3 60x2 70 70 80x4 70x3	1/20 hex 1/20x2 1/4 1/4 1/10x4 1/10x3	gt ₃ -Py (cp) Cpx3 gt ₃ -Py (cp)x2 gt ₃ -Py gt ₃ -Py (cp)x4 gt ₃ -Py (cp)x3									
						by hle-1/20" laminæ of blk chlorite. (332-358)	80 Mod.	340	1/45 1/45 80x2 1/60 1/60	1/4 hle 1/10x2 1/4 1/4	gt ₃ -Py (cp) Cpx Pyx2 Py (cp) gt ₃ -Py (cp)	finely diss. Py (cp-Mo)		332		90	2X355	.20	.016	
									1/45 1/40 1/70 1/5 1/30 1/80	1/4 1/4 1/8 1/10 1/45 1/2	gt ₃ -Py-cp gt ₃ -Py gt ₃ -Py-cp gt ₃ -cp gt ₃ gt ₃ -Py	on foln. planes		342		90	2X356	.48	.016	
									1/5 1/70 1/90 1/70 1/90	1/8 2" 1/20 1 1/2 hle	gt ₃ -Py (cp) vuggy gt ₃ -carb-ser-Py Py-cp. gt ₃ -carb-ser-Py Cpx			346						
									1/60 1/70 1/80x3 1/80x2	1/4 1/8 hexx3 1/20x2	Py (cp) gt ₃ -Py (cp) Pyx3 Pyx2			356		90	2X357	.28	.050	
						Fine Grn. Dk. Green Diorite - plus minor bleached zones	ND	360	80	1/8	gt ₃ -Py		Broken Core 360-376	366		85	2X358	.17	.024	

ROCK TYPES & ALTERATION							GRAPHIC LOG	Angle to Core Foliation	Foliation Alteration	Footage	Structure	Width of Vein Angle to Core Axis	Mineralization	Sericite Zone	Remarks	Footage Block.	Composites	Estimated Core Recovery %	ASSAY RESULTS						
																		Sample Number	%	Cu.	Mn.	Cu.	Mn.	Estimated Grade	
01.	Plots.	K-Sper.	Mafic	Texture	Hardness																				
10- 20%	90	10% ep	35 %				Fine Grn. DK. Green Diorite (358-371)	371	ND		40x3+80x2 80x2 70x3 80x2 30 8 8"	1/10x5 hle x2 hle x3 hle x2 1/8 8"	PY x 5 PY x 2 PY (cp) x 3 PY x 2 gt3-PY gt3		1-30% PY (cp) 370-440	376		85			2x359		.33	.024	
							Fine-Med. Grn. Diorite 371-529 -med. grey. -poss.		ND		1/5 40 80 1/30 1/30+10 5+30	hle 1/8 2" 1/10 1/2+1/4 1/4x2	CP mag gt3 gt3-PY(cp) gt3-mag + gt3 gt3 x 2			386		90		2x360		.13	.033		
							Border Phase Diorite? - contains fine grn. gt3 + may grade to gt3-diorite-		ND		1/20 80x3 30 1/30	1/4 hle x 3 1" 1/2"	gt3 gt3-PY (vuggy) x 3 gt3-chl-py-cp (vuggy) chl-py-cp		Broken Core 396-410	396		95		2x361		.17	.032		
							- core slightly vuggy due to hle to K2O gt3- carb vuggy veins -		ND		1/50 1/10 1/80+30 80 1/80+30 1/5+80	1/4 1/4 1/10x2 1/10 1/10x2 1/4+hle	gt3 gt3 gt3-PY (cp) x 2 (vuggy) gt3-PY (cp) (vuggy) gt3-PY (cp) x 2 (vuggy) gt3 + PY (cp)			402		95		2x362		.19	.007		
							- finely diss. cp-py - some sections show blk mafics (unaltered?)		80 WK		1/70 1/70x2 1/70x2 1/5 1/90 1/80x2	1/20 1/20x2 hle x 2 1/8 2" hle x 2 1/10	CP x 2 vuggy-gt3 gt3-mag CP x 2 gt3			412		98		2x363		.22	.008		
																422		98		2x364		.13	.006		
																432		98		2x365		.40	.012		

ROCK TYPES & ALTERATION						GRAPHIC LOG	Angle to Core Foliation	Foliation Alteration	Footage	Veins Angle to Core Axis	Width of Vein	Mineralization	Sericite Zone	Remarks	Footage Blocks.	Composites	Estimated Core Recovery %	ASSAY RESULTS					
Oz.	Plg.	K-Spec.	Matrix	Texture	Hardness												Sample Number	Cu.	No.	Cu.	No.	Estimated Grade	
						Fine-Med. Grn. Grey Diorite (371-529) (Border Phase??)	80 Wk	30	1"	h1e x 3	gt ₃ (py)			1-2 % PY 440-510	442		98	2X366	.35	.012			
						random wk ep. zones. (480-500) (450-465)	80 Wk	450 460	1/5 + 80	1/4 x 2	gt ₃ x 2			(440-510)	452		95	2X367	.25	.010			
							80 Wk	470	1/30	1/2	gt ₃	gt ₃ -PY		Core contains numerous fine vuggy holes of gt ₃ -ep. + gt ₃ -carb + gt ₃ which also carry finely disseminated py - cp.			95?	2X368	.14	.012			
							80 Wk	480	1/30	1/20	cp	gt ₃ -py (cp)x2			473			95	2X369	.11	.006		
							80 Wk	490	1/90	1/20	py				483			95	24370	.13	.012		
							80 Wk	500	1/40	1/4	gt ₃												
							ND.	510	1/30	1/20	gt ₃ -mag	gt ₃ -py x3			493			98	21371	.19	.007		
									1/30	1/4	gt ₃					501			98	24372	.13	.010	

ROCK TYPES & ALTERATION

GRID.

LOCATION COLE CLAIM

DATE COLLARED Oct 5, 1979

Oct 1 1979

DATE COMPLETED OCT 6, 1979

BEARING

LENGTH 406.6

85

DIP -4

LATITUDE

DEPARTURE

LEVELS

CORE SIZE NQW

SCALE OF 1:100

SCALE OF EGG _____

OLE No. R79-18

SHEET No. 1 of 7

2023

LOGGED BY G.D.B.

DATE Oct 6 1979

ROCK TYPES & ALTERATION

ROCK TYPES & ALTERATION							L to Core Foliation Foliation Alteration Footage	GRAPHIC LOG STRUCTURE	Veins L to Core Axis	Width of Vein	Mineralization	Sericite Zone	Remarks	Footage Blocks.	Composite	Estimated Core Recovery %	ASSAY RESULTS			
Oz.	Plag.	K-Spat.	Mafic	Texture	Hardness									Sample Number	%	Cu.	Mo.	Co.	Mo.	Estimated Grade
						Banded Chl. Ser.-Carb. Zone (151-340)	230				2% Py-Cp			223		80	2x845		.35	.050
							240	40	1/8	cp.				233		90	2x846		.05	.008
							250	30	"	gt ₃				243			2x847		.07	.010
							260	30	1 1/2	gt ₃ (cp)			250-272 Badly broken Core.	252/6			2x848		.13	.025
							270	80				.5 % Py		254		40	2x848			
							280	30?	60"	gt ₃ +gg				260			2x848		.07	.010
							290	30	18"	gt ₃ +carb.				265/6		40	2x868			
									3"	gt ₃				271/6			2x849		.09	.52
									9"	gt ₃ -chl-uggy				285/6		90	2x850		.07	.022
						Host Rx. is def. Quartz Porp. (280-325)														

ROCK TIES & ALTERATION

ROCK TYPES & ALTERATION						GRAPHIC LOG Foliation Footage Structure	Veins L to Core Axis	Width of Vein	Mineralization	Sericite Zone	Remarks	Footage Blocks.	Composite	Estimated Core Recovery %	ASSAY RESULTS											
Ore.	Pleq.	K-Spar.	Mafic	Texture	Hardness										Sample Number		%									
															Cu.	Mo.	Cu.	Mo.	Estimated Grade							
						Banded Chl. Ser.-Carb. Zone (151-340)	/	50 40 40 40	14" 1/10 6" 1/10	gt ₃ (cp-py) gt ₃ -cp gt ₃ -carb cp			295/9		90	2X851	.11	.034								
						Def Quartz Porp. Host 280-325 + 329-340	/	30+80 5x2	1/2+1/4 1/20x2	gt ₃ -Py x2 py (cp, Mo) x2	.5% Py (cp)		305/3		95	2X857	.17	.016								
							/	310 ?	30"	gt ₃ -carb (cp-py-Mo)		Broken Core 310 - 315	314/3		85	2X853	.27	.040								
							/	320 30	1/2 3"	gt ₃ -carb (py-cp)																
							/	30-60 30 25	numerous hle-Y ₄ along foln. 1/2 hle	gt ₃ -carb-cp-py (Mo)			324/6		96	2X85X	.78	.047								
							/	30 30+10 30<5	1/2 hle x2 hle x5	Mo Mo x2 py-cp (Mo) x5	3% Py-Cp (Mo)		334/9		85	2X855	.17	.021								
						340	/	340	40 40 5	3" 1/2 1/2	gt ₃ -carb (cp-py) gt ₃ -carb (cp-py) gt ₃ -carb (cp)			344/6		86	2X856	.35	.040							
						Grey Med. Grn. Grey Diorite (340-381)	/	350	40	36"	gt ₃ -carb (cp-py)															
						Strong sheared talt'd (ser.+carb) ~ 20-50% Chl. no cp	/	350 80 40x3	3" 2" hle x3	gt ₃ -carb (cp-py) gt ₃ -carb (cp-py)			354/9		90	2X851	.60	.021								
							/	360	40x3	hle x3	cp x3		359/6													

ROCK TYPES & ALTERATION						Graphic Log Foliation Footage Structure	Veins L to Core Axis	Width of Vein	Mineralization	Sericite Zone	Remarks	Footage Blocks	Composite	Estimated Core Recovery %	ASSAY RESULTS														
Oz.	Peg.	K-Spar.	Mafic	Texture	Hardness										Sample Number		% Cu.		Estimated Grade										
															Cu.	Mn.	Cu.	Mn.											
						Grey Med									366		90	2x858		.34	.039								
						Grn Diorite (340-381)	Sl. Cren. 40	30 30 40x2 40x3 30 50	1" 1/4" Y ₂ x2 Y ₄ x3 1/4" 1/8"	gt ₃ -carb (cp) cp cpx2 py (cp)x3 cp cp																			
							50 Cren.	370	40	3"	chl (cp)	10% cp (py)	Severe Broken Core 375-386		376		50	2x859		.31	.034								
								380							379/6														
						Pale Grey Fine Grn. Diorite (381-430)	70 Cren.	70 70 80 80	6" 2 1/2" 8" 1"	gt ₃ -carb gt ₃ (cp) gt ₃ -carb (cp-py) gt ₃ -carb					381/6			2x860		.23	.026								
						5-10% Chl. 10% Seri. intensely foliated + prob. ser-carb	Cren.	390	60 150	8" 1/20	gt ₃ -carb py (cp)					386		70											
						alt'd.	50	125	1/10	py-cp					396		75	2x861		.14	.012								
							0-70 Str.	400 60	630	3"	gt ₃ -carb (cp) gt ₃ -carb (cp)	10% Py-Cp.			402		80	2x862		.18	.014								
								410 60	630	24	gt ₃ -carb (cp)				412		80	2x863		.16	.044								
							70 Maf	410 60 80		7'	gt ₃ (py-ep)				420														
							80 Mod	430	40	3 1/2"	gt ₃ -carb				426		75	2x864		.21	.008								

GRID —

LOCATION CODE CLAIM
DATE COLLARED Oct 7, 1974
DATE COMPLETED Oct 8, 1974

BEARING _____
LENGTH 596'
DIP -90

LATITUDE _____
DEPARTURE _____
 ELEVATION _____

CORE SIZE N Q W
SCALE OF LOG 1" = 10'
REMARKS

LE No. R74-19
EET No. 1 of 9

ROCK TYPES & ALTERATION							Core Foliation	Graphic Log	Foliation Alteration	Footage	Structure	Veins ∠ to Core Axis	Width of Vein	Mineralization	Sericite Zone	Remarks	Footage Blocks.	Composites	Estimated Core Recovery %	ASSAY RESULTS			
Oz.	Plgs.	K-Spgr.	Mafic	Texture	Hardness	Sample Number	%	Cu.	Mo.	Co.	Mo.	Estimated Grade											
							65 Wk.										85/6		90	2X381			
							70 Wk										96		96	2X382			
						100	100																
30 ??	50	10 ep	5-20 chl.			Med. Grey Fine Grn <u>Diorite</u> (100-135)	75 Wk	75	110	1/10	Py				Ground core.		106		90	2X383			
						Very hard compact rx.	70 Wk		120	1/40	1/20	Py					116		95	2X384			
							70 Wk		60 70	1/10 1/20	gtz-mag gtz-mag						126		90	2X385			
						135	ND		1/40	3"		Silicified Zone with $\frac{1}{4}$ " ch(kp) borders.					136		95	2X386			
						Similar to above. (135-204)											146		90	2X387			
							ND.																

ROCK TYPES & ALTERATION								Angle to Core Foliation	Graphic Log Footage Structure	Veins Angle to Core Axis	Width of Vein	Mineralization	Sericitic Zone	Remarks	Footage Blocks	Composites	Estimated Core Recovery %	ASSAY RESULTS															
Qz.	Plag.	K-Spat.	Mafic	Texture	Hardness										Sample Number		% Cu.		Cu.		Mo.		Mo.		Estimated Grade								
						ND									156		90	24388															
						grades to			160	60+40	1/20 x 2	Py (cp) x 2																					
						med. Grn. Grey Diorite??			ND	10 40 x 3 20 x 3 30 x 2 5	1/4 1/20 x 3 1/20 x 3 1/20 x 2 1/4	gt ₃ (vuggy), Py x 3 Py x 3 Py x 2 gt ₃ (vuggy)				165/6		90	24389														
									170	40	1/10	Py																					
						ND			180	40 30	1/4 1/10	gt ₃ Py				175/9		90	24390		.04	.004											
						ND			190	40 30 20 70	1/4 6" 7" hle hle	gt ₃ -Py gt ₃ (ser. contacts) chl-carb-py (cp) Py Py		10/0 Py		186		85	24391		.09	.006											
						ND			200	80 x 2 + 10 80	1/4 x 3 1/4	gt ₃ gt ₃				196		90	24392		.06	.006											
						70 wk			210	20 20 40 5 + 80	10" 1/8 7" 1/10 + 2"	chl-Carb-ser-Py Py gt ₃ -chl-carb-py (cp) chl-cp + gt ₃				206		90	24393		.04	.004											
						Med Grn. Grey Diorite (204-221)			80 wk	80	1/10	Py				216		90	24394		.04	.002											

ROCK TYPES & ALTERATION							GRAPHIC LOG	Foliation Footage	Structure	Veins to Core Axis	Width of Vein	Mineralization	Sericite Zone	Remarks	ASSAY RESULTS												
Qz.	Plg.	K-Spat.	Mafic	Texture	Hardness	L to Core Foliation									Sample Number		% Cu.		Estimated Grade								
															Cu.	Mo.	Cu.	Mo.									
						Breccia Zone (241-356)	ND	30±3	1/4 x 3	gt3-py x 3					296		90	2x20 ²	.25	.005							
							ND	30	1/2	gt3					306		90	2x20 ³	.16	.005							
							ND	15	1/10	gt3																	
							ND	35	2/5	gt3-py																	
							ND	30	1/4	gt3-maf																	
							ND	300	1/4	gt3																	
							ND	30	1/4	gt3-py (cp) uuggy																	
							ND	35	2"	chl-gt3 (py-cp) uuggy																	
							ND	15	1/10	gt3-py																	
							ND	40	1/4	gt3-py																	
							ND	30	1/4	gt3-maf																	
							ND	130	1/2	gt3-py																	
							ND	80+30x2	1/4x3	gt3-py+3																	
							ND	40x2	1/8x2	gt3x2																	
							ND	80x2	1/2x2	gt3x2																	
							ND	40x2	1/4x2	gt3x2																	
							ND	80	3"	py (cp)x2																	
							ND	320	1/4	gt3-py																	
							ND	80	1"	chl-ep-py (cp)																	
							ND	80	1"	gt3-py																	
							ND	80	1/2	gt3-py																	
							ND	25	2"	gt3-py																	
							ND	35	2"	gt3-py																	
							ND	30	2"	gt3-py																	
							ND	30	1/2	gt3-py																	
							ND	330	1/2	gt3-py																	
							ND	80	1"	chl-ep-py (cp)																	
							ND	80	1"	gt3-py																	
							ND	80	1/2	gt3-py																	
							ND	80	2"	gt3-py (uuggy)																	
							ND	80	1/10x2	gt3-py x 3 (uuggy)																	
							ND	80	1/2	gt3-py (cp)																	
							ND	80	1/10 + 1/2	gt3-py x 2																	
							ND	30	1"	gt3-py-cp																	
							ND	20	1/4	gt3-py																	
							ND	50x2	1/4x2	gt3x2																	
							ND	5	1/2	gt3-ep (cp) uuggy																	
							ND	15	1/8	gt3-py (cp)																	
							ND	50x3	1/8x3	gt3-py x 3																	
							ND	5x3	1/10x3	gt3-py (cp)																	
							ND	80	3"	gt3-ep																	
							ND	5	1/4	gt3-py																	
							ND	340	1/2	gt3-py																	
							ND	30	1/4	gt3-py																	
							ND	30	1/4	gt3-py																	
							ND	20	1/4	gt3-py																	
							ND	50x2	1/4x2	gt3x2																	
							ND	5	1/2	gt3-ep (cp) uuggy																	
							ND	15	1/8	gt3-py (cp)																	
							ND	50x3	1/8x3	gt3-py x 3																	
							ND	5x3	1/10x3	gt3-py (cp)																	
							ND	80	3"	gt3-ep																	
							ND	5	1/4	gt3-py																	
							ND	340	1/2	gt3-py																	
							ND	5	1/4	gt3-py																	
							ND	356	1/2	gt3-py																	
							ND	360	1/2	gt3-py																	

ROCK TYPES & ALTERATION

ROCK TYPES & ALTERATION

ROCK TYPES & ALTERATION

