85-149-13536

Province of British Columbia — Ministry of Energy, Mines and Petroleum Resources

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S)	TOTAL COST
DIAMOND DRILLING AND PERCUSSION DRILLING	$49,450.88

AUTHOR(S) J.A. Fleming SIGNATURE(S) J.A. Fleming

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED February 18, 1985 YEAR OF WORK 1984

PROPERTY NAME(S) BAY ~~COVE~~

COMMODITIES PRESENT Cu, Mo

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN 92L 135

MINING DIVISION Nanaimo NTS 92L/12E

LATITUDE 50° 38' N LONGITUDE 127° 31 1/2' W

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)]:

Kol 15-38, 40-44; Kol 1Fr-9Fr; Coir 1,2,7; Bay 22, 50, 52-63, 68-70, 86-88, 92, 94-100; Cove 17-20; Coir Fr.; Cork Fr; Ben Fr; Bar Fr; Art 10Fr; Long Fr.

OWNER(S)

(1) UTAH MINES LTD. (2) GORDON MILBOURNE

MAILING ADDRESS

BOX 370
PORT HARDY, B.C. VON 2PO

c/o LADNER DOWNS
2100 - 700 WEST GEORGIA STREET
VANCOUVER, B.C.

OPERATOR(S) (that is, Company paying for the work)

(1) UTAH MINES LTD. (2)

MAILING ADDRESS

BOX 370
PORT HARDY, VON 2PO, B.C.

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size and attitude):

The area is underlain by the Upper Triassic to Lower Jurassic volcanic and sedimentary succession of the Vancouver and Bonanza Groups and the Cretaceous sedimentary cover. Mid-Jurassic granodioritic stocks (Quatse Stock), and quartz-feldspar porphyry dykes cut the succession. Hydrothermal alterations and mineralization are associated with the porphyry dykes in the Bonanza tuffs. The succession dips gently to the southwest. Four prominant fracture directions are present on the property at 020°, 060°, 090° and 130°. The dykes are present along the 060° and 130° fracture directions. Hornblende (feldspar) porphyry dykes and sills in the area are believed to be co-magmatic with the Bonanza Volcanics tuffs.

REFERENCES TO PREVIOUS WORK

Assessment Reports, #5265, #7427, #11366, and Report on Diamond Drilling Sunset Group, October, 1984.

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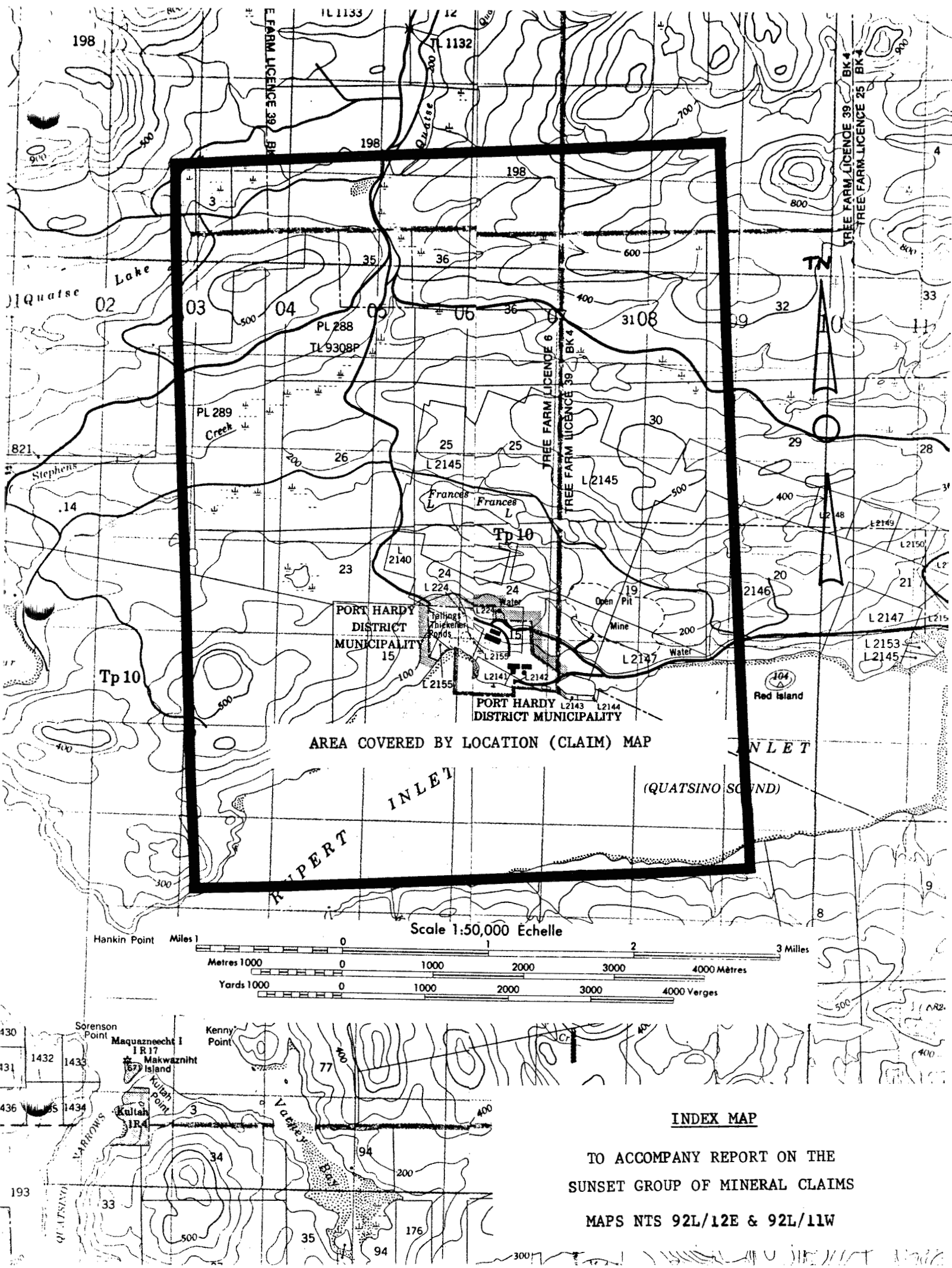


INDEX MAP

TO ACCOMPANY REPORT ON THE

SUNSET GROUP OF MINERAL CLAIMS

MAPS NTS 92L/12E & 92L/11W

INTRODUCTION

Between the 18th of July and 16th of August, 1984, two diamond drill holes and six percussion drill holes totalling 246.7 meters (809.5 feet) and 481.9 meters (1581 feet) respectively were drilled within the limits of the Sunset Group of claims. This formed part of the drilling program in the area in 1984 carried out in exploration for a near surface porphyry copper - molybdenum deposit. Some weak copper and molybdenum mineralization was previously encountered in the area along with quartz-feldspar porphyry dykes and associated hydrothermally altered rocks favourable for an Island Copper type deposit.

PROPERTY DESCRIPTION

The Sunset Group (Map 2) consists of 77 two-post claims contiguous to the west boundary of the Utah Mines Ltd., Island Copper Mine mineral leases. The property measures approximately 3.6 km east-west by 6.7 km north-south.

PHYSIOGRAPHY

The area is characterized by low, rolling hills with maximum relief of 120 meters. Stephen's Creek fed from Joe's Lake through Stephen's Swamp, cuts across the group and drains into Coal Harbour. The low ground around the swamp has a maximum width of about 600 meters.

ACCESS

Access to the area is by paved road from Port Hardy located some 8 km to the north and by the paved mine access road. A number of logging roads suitable for two-wheel vehicles cross the area.

PREVIOUS WORK

The north half of the group has been a focus of recent exploration activity around Island Copper Mine. Work has involved line-cutting, geochem soil surveys, I.P., mag and VLF geophysical surveys, geological mapping and diamond drilling. This supplemented work performed in the 1960's in the original Island Copper exploration activities. Reports submitted for assessment credit on recent work are:

1) Geologic Report on Sunset Group, G.L. Holland, June, 1983 (#11366)
2) Drilling on Sunset Group, J.A. Fleming, May, 1984
3) Drilling on Sunset Group, J.A. Fleming and G.L. Holland, October, 1984.

The previous work indicated that quartz-feldspar porphyry dykes, hydrothermal alteration minerals (e.g. chlorite, sericite, silica, garnet) and low grade, spotty copper and molybdenum mineralization are present in the north half of the group in the Bonanza volcanics. The area round W-8 had a single station IP. anomaly and spot geochem copper highs that were unexplained. Holes E-60 and E-61 were drilled on an east-west trending mag anomaly falling between the northwest corner and Bay Lake anomaly centers. They intersected low grade copper and molybdenum associated with quartz-pyrite veins, brown biotite alterations and silicification in the Bonanza fragmental andesites. In addition, a number of narrow quartz-feldspar porphyry dykes were intersected indicating the presence of a dyke system and perhaps underlying stock in the area.

OBJECTIVE

The objective of all drilling was to intersect a near surface porphyry copper-molybdenum mineral deposit, or at least favourable rock types and alterations to guide future exploration in the area. The percussion holes were drilled to fill the gaps between existing drill holes. Hole E-62 was a follow-up hole to E-60 and E-61 testing the mag anomaly while hole W-8 was a drill test of I.P. and geochem spot anomalies in the Stephen's Swamp area.

WORK PERFORMED

The following drill holes were completed on the group:

Hole	Claim	Claim#	Mine Grid Coordinates North	East	Elev. (Meters) Above SL	Length
A) D.D. Holes						
W-8	Bay 55	17759	11792	13712	71.0M	294'(89.6M)
E-62	Bay 60	17764	14042	17294	61.0M	515.5(157.1)
b) Percussion Holes						
WP-2	Bay 56	17760	15799	15427	85.7	300 (91.4)
-5	Bar FR	27500	16809	17038	62.2	110 (33.5)
-6	Bay 59	17763	16557	16722	60.1	300 (91.4)
-7	Bay 58	17762	14707	15991	54.6	300 (91.4)
-10	Cove 20	18123	14234	15620	54.3	300 (91.4)
-11	Cove 18	18121	12819	16871	70.1	271 (82.6)

Drill core from Holes W-8 and E-62 were logged, photographed and measured for recovery, RQD and magnetic susceptibility. The core was split and sampled in ten foot intervals. All samples were assayed for copper and molybdenum. Hole E-62 had several forty-foot composite samples assayed for gold. The drill core is stored on racks in the upper core shack at the Island Copper Mine site.

The percussion samples were collected at the drill with a 12 volt splitter box with an 8:1 sample split ratio. Percussion drilling was performed with water. After being dried at room temperature a portion of each sample was screened using 8, 20 and 50 mesh screens. Enough material starting with the coarse faction was affixed to a card with contact cement to fill a 5 by 5 cm square. These chip cards were used for logging. A binocular microscope with 20X and 40X powers was used to log the chips. The cards are stored in the upper core shack at the Island Copper Mine site.

The core was logged by G.L. Holland and the percussion chips were logged by G.A. Clarke. Both are staff geologists employed by Utah Mines Ltd.

RESULTS - Diamond Drilling

Hole E-62

The hole penetrated 44.8 meters (147 feet) of overburden. From 44.8 meters to 83.2 meters (273 feet) the hole intersected moderately to strongly fractured, dark green to brownish, weakly to moderately chlorite and magnetite, and weakly biotite, silica and epidote altered andesite. Chlorite and magnetite alterations are pervasive with the others fractured controlled. Fractures are about 40-50 percent healed, with pyrite (2-3 percent) and quartz-carbonate as main fracture fillings. Minor molybdenum and chalcopyrite are associated with the quartz and quartz-carbonate veins. Silicification increases with depth.

A medium to coarse grained quartz-feldspar porphyry with quartz eyes to 4 - 6 mm was intersected from 83.2 to 86.1 meters (273-282.5 feet) with weak chlorite-sericite alterations. Pyrite occurs associated with mafic phenocrysts and in fractures to two percent.

Below the dyke to the end of the hole is andesite similar to that above the dyke but with moderate to strong silicification and moderate chloritization, with a moderately developed quartz stockwork and weakly developed quartz-carbonate stockwork. Quartz-moly veins are common with chalcopyrite also present.

A quartz healed fault zone extends from 91.4 to 94.4 meters (300-310 feet) with individual shears at 25° to 40° to the core axis. Another zone extends from 43.8 to 147.5 meters (472-484 feet).

The hole averaged 0.11% Cu with a range of 0.04 - 0.24% Cu, and .011% Mo with a range of 0.004 - 0.027% Mo.

Hole W-8

The hole hit bedrock at 8.5 meters (28 feet) and intersected 81.1 meters (266 feet) of dark green to purple, to pale green-reddish, weakly to very weakly chlorite, magnetite, epidote and sericite altered volcanic breccia (formational) with locally weak to moderate hematite alteration. Several sections of andesite porphyry 1.8 to 5.5 meters (6-18 feet) thick occur within the volcanic breccia. The fracture density is low with calcite, pyrite and epidote as the main fracture fillings. Pyrite runs less than one percent and there is no visible chalcopyrite or molybdenite.

RESULTS - Percussion Drilling

The logs are summarized below and grades summarized in Table 1.

Hole WP-2

The overburden depth was 23.2 meters (76 feet). The chips from the hole indicate that the hole intersected moderately to strongly chlorite, magnetite altered andesite with weak to moderate epidote alteration. Black (primary ?) biotite flakes are found throughout. Main vein materials are quartz, carbonate, pyrite and zeolite, and locally some pyrobitumen (gilsonite ?). The sulphide content ranges from one to three percent with minor chalcopyrite noted.

Hole WP-5

Bottomed in overburden at 35.1 meters (110 feet).

Hole WP-6

Overburden was 21.3 meters (70 feet) thick. A grey-green, weakly to moderately chlorite-sericite altered andesite was encountered from 21.3 to 82.3 meters (70-270 feet) with mixed dark and light alterations to the end of the hole. Black biotite flakes and brown biotite (?) both are present. Main veins or fracture fillings are pyrite, zeolite, calcite and epidote. Minor hematite was noted from 82.3 meters (270 feet) to the end of the hole. Chalcopyrite and molybdenite are common with total sulphides ranging from less than one percent to five percent. Minor galena was noted at 33.5 meters (110 feet).

Hole WP-7

The hole intersected 30.6 meters (100 feet) of overburden. Medium to dark green-grey to brownish chlorite-sericite altered andesite extends to 54.8 meters (180 feet). The brownish alteration (biotite ?, garnet ?) is weak to moderate with possibly some primary biotite present. The rock is lighter in colour with increased quartz-sericite alterations to the end of the hole with a high quartz content from 67.1 - 73.1 meters (220-240 feet) indicating a possible intrusive. Pyrite content varies from one to four percent. Main veins or fracture fillings are pyrite, calcite and pink zeolite.

Hole WP-10

The hole intersected 23.2 meters (76 feet) of overburden. From there to 51.8 meters (170 feet) the rock is a medium grey-green to brownish, chlorite, sericite, biotite (?), garnet (?), epidote altered andesite. The pyrite content is high at five to ten percent. From 51.8 to 76.2 meters (170-250 feet) the rock is more siliceous, possibly an altered intrusive. The calcite content is moderate to locally high. From 76.2 (250 feet) to the bottom the rock is moderately to strongly sericite and moderately chlorite altered andesite.

Hole WP-11

Overburden in 24.7 meters (81 feet) thick. A medium to dark green, weakly silicified, chloritized and seriticized, weakly to moderately porphyry magnetite altered porphyritic andesite extends to 61 meters (200 feet). The rock to the end of the hole is lighter coloured with weak to moderate quartz-sericite alterations and spotty magnetite alteration. Main veins or fracture fillings are pyrite (2-10 percent), calcite and pink zeolite.

Table 1

Hole	Cu (%)		Mo (%)	
	Mean	Range	Mean	Range
WP-2	0.04	0.02-0.09	0.002	0.001-0.010
WP-6	0.14	0.10-0.20	0.017	0.006-0.032
WP-7	0.10	0.07-0.17	0.013	0.004-0.044
WP-10	0.03	0.01-0.06	0.001	0.001-0.003
WP-11	0.09	0.05-0.16	0.002	0.001-0.004

DISCUSSION

The percussion holes showed evidence of weak to moderate and locally strong hydrothermal alterations (e.g. chlorite, magnetite, silica, sericite, biotite), that indicates the intrusive/hydrothermal system carries through from the Bay Lake area to the northwest. Two of the holes had siliceous sections (WP-7 and WP-10) that may be chips of intrusive rock. Hole WP-10 also had a high pyrite content to ten percent. Hole WP-6 had the highest average copper and moly grades at 0.14% Cu and 0.017% Mo.

Hole E-62 was drilled to test for eastward continuity to mineralization and the porphyry intersected in hole E-61. It confirmed the continuity of the intrusive system, alterations and weak mineralization.

Hole W-8 lying to the south is removed from the mineralized intrusive system. Silicification and magnetite alteration of Bonanza fragmental andesites to the east could be related to a deeper, undetected stock/dyke.

CONCLUSIONS

The program found evidence of the dyke system extending from the Bay Lake area through to the northwest part of the group with related hydrothermal alterations and weak copper and moly mineralization. It did not intersect a near surface prophyry copper-moly deposit and has significantly reduced the discovery potential for such deposit in the area.

COST STATEMENT

HOLES W-8 AND E-62

Contractor Charges

A. Diamond Drilling Contractors

Overburden			
130' @ $16.75	$2,177.50		
47' @ $17.50	822.50		
		$ 3,000.00	
Rock			
617' @ $16.75	$10,344.75		
15.5 @ $17.50	271.25		
		$10,606.00	
Field Costs			
6 Hours @ $60/Hour	$ 360.00		
32.5 Hours @ $50/Hour	1,625.00		
16.0 Hours @ $25/Hours	400.00		
		$ 2,385.00	
Other Charges			
Casings and Shares	$ 520.63		
Mobilization	404.00		
Core Boxes 36 @ $5.36	192.96		
Supplies, Freight	923.73		
		$ 2,041.32	$18,032.32

B. Other Contractors

1) D-6 Cat and Operator		
Move and Prepare Site 27½ Hours @ $60/Hour.	$ 1,650.00	
Build Cat Trails	1,440.00	
Standby - 8 Days @ $120/Day	960.00	
2) Low Bed and Highboy Trailers, Tractor and Operator - Move D-6 Cat and Drill from Sites 12½ Hours @ $65.00	$ 812.50	
		$ 4,862.50
TOTAL CONTRACTOR COSTS:		$22,894.82

COST STATEMENT

PERCUSSION HOLES WP-2,.5, 6, 7, 10, 11

Percussion Drilling Contractors

Overburden			
502 ft. @ $7.80/ft.	$ 3,915.60		
Rock			
1079 ft. @ $7.80/ft.	$ 8,416.20		
		$12,331.80	
Field Costs			
25.5 Hours @ $95/Hour	$ 2,422.50		
16.0 Hours @ $50/Hour	800.00		
5.0 Hours @ $25/Hour	125.00		
		$ 3,347.50	
Other Costs			
Casings, Shoes	$ 1,028.69		
Mob/Demob - 6 Holes @ $300/Hole	1,800.00		
Bags	32.37		
Water Truck Drivers	272.25		
		$ 3,133.31	
			$18,812.61

Other Contractors

1)	D-6 Cat and Operator Site Prep. 1 Hour @ $60.	60.00	
2)	Lowbed Trailer, Tractor and Operator Move Cat 1 Hour @ $62.50	62.50	
3)	Water Truck and Operator Supply Water to Drills 7.3 Hours @ $35/Hour	256.45	
4)	980 Loader and Dump Truck Load Gravel and Prepare Site 2 Hours @ $91/Hour	182.00	
	Haul Gravel 5½ Hours @ $55/Hour	302.50	
			$ 863.45

TOTAL CONTRACTOR COSTS: $19,676.06

UTAH COSTS

Diamond Drilling			
Core House Labour	$ 600.00		
Supervision and Core Logging	1,100.00		
Co. Overhead @ 25% Supervision and Labour	425.00		
Core Storage 632 feet @ $0.40/ft.	250.00		
Sample Assays			
65 @ $10/Sample	650.00	$3,025.00	
Percussion Drilling			
Core House Labour	$ 200.00		
Supervision and Chip Logging	1,700.00		
Co. Overhead @ 25% Supervision and Labour	475.00		
Sample Assays 108 @ $10/Sample	1,080.00		
		$3,455.00	
Report Preparation		400.00	$ 6,880.00
TOTAL COST OF PROGRAMS			$49,450.88

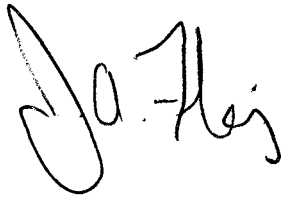
STATEMENT OF QUALIFICATIONS

I submit that I am qualified to prepare and present this report for assessment credit. My qualifications are as follows:

1) I have a B.Sc., (Major Geology) 1971 from McGill University.

2) I have been employed as a geologist continuously since June, 1968, and am presently Chief Geologist, Island Copper Mine, Utah Mines Ltd.

3) I have been a Fellow of the Geological Association of Canada since 1974.

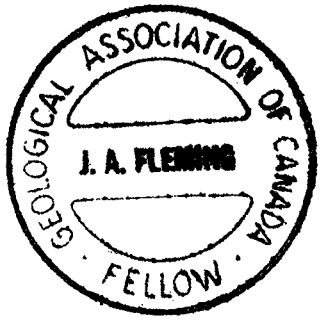


J.A. Fleming, B.Sc.,

Chief Geologist.

Island Copper Mine

Utah Mines Ltd.



HOLE NO.: WP-2
CASING COLLAR ELEV.: 1281 GROUND ELEV.:
COORDINATES: 1579 N. 15427 E.
INCLINATION: -90° BEARING:

PROJECT: ISLAND COPPER
DATE STARTED: JULY 13, 1984
DATE FINISHED: JULY 14, 1984
TOTAL DEPTH: 300

PAGE NO: 1 OF 4
REF. TO CLAIM CORNER:
SCALE: 1" = 10'
LOGGED BY: GAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
					DESCRIPTIVE GEOLOGY								
					0-76' overburden - no samples.								
70					76-80' Dk grey grn andesite - chips 5-8mm. andesite is f.g. felt inreg, poorly developed xtals to .5mm, mostly qtz, with interstitial mafics shown, wk-mod chl alt" and blk bio (primary) v. minor epi, and some zeo on fract.								
80					80-90 similar to 76-80'. mod-str mag alt", mod chl, minor zeo		<1%						<.05%
90					90-100 same as 76-80 mod-str mag. poss frag of qtz VN cutting andesite. olivine? 10-15% qtz		<1%						<.05%
100					100-110 same as 76-80 mod-str chl/mag alt". spotty py 5-10% pale pnk zeo. py may be in qtz py VNS.		3%						<.05%
110					110-120 same as 76-80 str mag/chl alt" of mafics minor epi (possibly olivine but unlikely) 5-10% pale pnk zeo		1%						<.05

HOLE NO. WP-2 | PROJECT: | PAGE NO: 2 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: GAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu.
120					COMMENTS: AVE CORE REC'Y / HOLE							
					120-130 same as 76-80 mod chl, mod mag alt° 5-10% qtz minor geo	3-4% Py						.05
130					130-140 same as 76-80. some qtz VN frags (1mm thick) wk. mod mag. slt ly more slcs than 76-80 little visible bio.	<1% Py						.02
140					140-150 same as 130-140. chip size 3mm. no qtz VNS. wk-mod mag, mod chl.	.5% cPy Py						.1
150					150-160 similar to 130-140 but very abund qtz chips. (30%-40%)	3%						<.05
160					160-170 same as 150-160 60/40 light/dark split in chips, (30-40% qtz) mod mag, chl 5-10% pale pnk geo, minor epi	2-3%						
170					170-180 same as 140-150 minor pale pnk geo (likely frac fling v minor epi wk-mod mag, mod chl slcs with 10-15% milky grey qtz.	1-2%						<.05

HOLE NO. WP 2 | PROJECT: | PAGE NO: 3 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: GAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
180					AVE CORE REC'Y / HOLE							
					180-190 Sl.s andesite similar to 76-80. f.g. med grey grn mod chl alt'n. minor mag. possible HCO_x - ppx lost to some zeo and calcitoid blk coating on ~~gtz~~ frags (non-mag) 10-15% qtz chips.	2% Py						
190					190-200 Same as 180-190 mod chl, mod mag. v. minor epi 5% pale pnk zeo	<.5 Py						.02
200					200-210 Same as 180-190. wk mag and mod chl alt'n of mafics minor ser'n of felsics. mod zeo (3-5%) probably free plngs.	.5% Py						.05
210					210-220 same as 200-210. minor (2%) calcite with v.good cleavage. (that's what she said)							
220					220-230 same as 210-220 but very little mag. @ 10% qtz chips.	1%						
230					220-230 same as 180-190, no HCO_x - flecks bio (primary?) mod mag.	1%						

HOLE NO. WP-2 | PROJECT: | PAGE NO: 4 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: GAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED %
240					240-250 f.g. wk-mod chl alt^{n} andesite? abund (15%) milky qtz (vn?) frags as well as sls looking and. frags. Some well developed pyroxene xtals to 1mm, trace mag, cpy. Abund v. black vitreous bio(?) minor epi alt^{n}. 5% zeo as trac flng		<1%						.1
250					250-260 similar to 240-250 but finer chip size and ∴ higher qtz + zeo / dk mineral content. poss wk ser alt^{n} (chips .0.2 - 1.0 mm)		<.1						.01
260					260-270 similar to 240-250 andesite more sls, poss minor calcite.		<.1						.01
270					270-280 v.f.g. chip size - (80% < .1 mm) chips are 70-80% light minerals - 50% qtz, 20-30% fsp and/or zeo with poss calcite. dk g chips likely andesite same as 240-250		.1 to .3						.01
280					280-290 same as 270-280, even finer grained (50% < .05 mm) mostly (80%) qtz, fsp + zeo.		.1						.01
290					290-300 same as 270-280 poss mag acc pnk zeo or fsp 1-2% calc		.1						.01
300													

HOLE: DP-2

O/B 76'

ASSAY TAG.	FOOTAGE	MAG.	K-CAD	%Cu	%Mo	%Pb	%Zn	%Fe	%Co	%S	ppm Au	ppm Ag					
6633	76-80			.022	.001			6.7	2.6	.34							
6634	80-90			.053	.004			7.1	2.3	.43							
6635	90-100			.039	.002			7.5	2.0	1.0							
6636	100-110			.039	.001			8.4	2.0	.80							
6637	110-120			.056	.002			8.0	2.3	.39							
6638	120-130			.035	.001			8.3	2.0	.30							
6639	130-140			.029	.001			9.2	1.8	.33							
6640	140-150			.060	.010			7.5	2.0	.95							
00726	150-160			.023	.001			6.9	1.8	2.5							
00727	160-170			.030	.001			6.6	1.8	2.1							
00728	170-180			.034	.001			7.2	1.9	1.7							
00729	180-190			.065	.001			6.9	1.9	2.4							
00730	190-200			.081	.001			7.2	1.9	1.3							
00731	200-210			.092	.001			8.1	1.7	0.9							
00732	210-220			.053	.001			7.9	1.8	1.0							
00733	220-230			.031	.001			8.0	1.7	1.2							
00734	230-240			.017	.001			7.4	1.8	0.7							
00735	240-250			.017	.001			7.9	1.6	0.7							
00736	250-260			.015	.001			7.9	1.7	0.8							
00740	260-270			.040	.001			8.6	1.6	1.6							
00737	270-280			.013	.001			9.5	1.5	1.0							
00738	280-290			.012	.001			8.4	1.5	0.9							
00739	290-300			.014	.001			7.3	1.7	0.8							
			X	.038	.002												

Depth 380
o/B 70'

LOT: WP-6

ASSAY TAG.	FOOTAGE	MAG.	R.QD	%Cu	%Mo	%Pb	%Zn	%Fe	%Cu	%S	ppm Au	ppm Ag					
396	70-80			0.14	.015			5.4	1.81	2.92							
397	80-90			.10	.006			6.3	1.90	2.22							
398	90-100			.14	.015			6.1	2.15	2.92							
399	100-110			.12	.018			5.2	1.99	2.80							
400	110-120			.12	.020			5.5	1.77	2.32							
301	120-130			.14	.015			5.6	1.93	1.93							
302	130-140			.11	.009			5.7	2.27	1.76							
303	140-150			.14	.021			5.5	2.28	1.38							
304	150-160			.20	.032			6.3	1.92	1.46							
305	160-170			.15	.020			5.8	2.21	1.34							
306	170-180			.14	.021			5.8	2.20	1.89							
307	180-190			.17	.021			6.1	2.10	1.57							
308	190-200			.15	.028			6.2	1.91	2.32							
309	200-210			.13	.016			6.5	1.84	1.83							
310	210-220			.12	.016			6.6	1.90	1.11							
311	220-230			.13	.018			6.3	1.99	1.17							
312	230-240			.13	.016			6.5	1.93	1.06							
313	240-250			.13	.015			6.6	1.90	1.21							
314	250-260			.12	.012			6.7	1.89	0.99							
315	260-270			.13	.013			6.5	1.95	1.10							
316	270-280			.13	.013			6.3	1.87	1.19							
317	280-290			.13	.012			6.4	1.88	1.37							
318	290-300			.15	.016			6.0	2.03	1.61							
(22)			$\bar{x}$	.14	.017												

HOLE: WP-7

Depth: 300'
0/B 70'

ASSAY TAG.	FOOTAGE	MAG.	R.QD	%Cu	%Mo	%Pb	%Zn	%Fe	%Cu	%S	ppm Au	ppm Ag					
	70-80																
	80-90																
	90-100																
376	100-110			.17	.015			6.4	1.49	2.01							
377	110-120			.09	.009			6.2	1.77	2.31							
378	120-130			.14	.004			6.5	1.69	4.14							
379	130-140			.08	.007			6.0	1.88	2.01							
380	140-150			.13	.004			5.9	1.85	2.97							
381	150-160			.13	.009			6.1	1.73	3.25							
382	160-170			.11	.006			6.4	1.67	2.92							
383	170-180			.12	.027			5.6	1.57	2.47							
384	180-190			.11	.013			5.8	1.76	3.04							
385	190-200			.11	.009			5.8	1.60	3.01							
386	200-210			.10	.041			5.8	1.38	3.02							
387	210-220			.09	.044			5.6	1.38	2.18							
388	220-230			.09	.020			6.1	1.28	3.75							
389	230-240			.07	.012			5.7	1.44	3.66							
390	240-250			.08	.004			6.7	1.09	6.88							
391	250-260			.09	.007			6.0	1.32	5.48							
392	260-270			.11	.009			6.6	1.08	5.66							
393	270-280			.12	.007			6.6	1.16	4.71							
394	280-290			.09	.006			6.3	1.32	4.28							
395	290-300			.078	.004	.001	.01	5.67	1.39	4.01							
			$\bar{X}$	.10	.013												

Hole: WP-10

Depth 300
OIB 76'

ASSAY TAG.	FOOTAGE	MAG.	R.QD	%Cu	%Mo	%Pb	%Zn	%Fe	%Ca	%S	ppm Au	ppm Ag					
322	76-80			.01	.001	.001	.02	6.0	2.26	1.41							
323	80-90			.01	.001	.002	.01	5.4	2.30	4.27							
324	90-100			.03	.001	.004	.01	6.0	1.88	6.35							
325	100-110					.002	.02										
289	110-120			.05	.001	.003	.01	7.4	1.29	11.14							
290	120-130			.03	.001	.002	.01	6.2	1.96	8.97							
291	130-140			.06	.001	.001	.01	6.1	1.94	7.01							
292	140-150			.05	.001	.002	.01	6.9	1.25	8.59							
293	150-160					.002	.01										
294	160-170			.01	.001	.003	.01	5.7	1.42	6.02							
295	170-180			.02	.001	.002	.01	6.1	1.08	7.03							
296	180-190			.02	.001	.002	.01	6.4	0.92	8.57							
297	190-200			.02	.001	.003	.01	5.2	2.09	4.82							
298	200-210			.01	.001	.003	.01	6.2	0.76	7.88							
299	210-220			.02	.001	.003	.01	5.4	1.28	4.32							
300	220-230			.02	.003	.001	.01	4.7	1.14	3.08							
351	230-240			.02	.001	.002	.01	6.1	0.96	8.82							
352	240-250			.06	.001	.002	.01	8.1	0.40	11.79							
353	250-260			.03	.001	.002	.01	6.9	1.34	5.45							
354	260-270			.06	.001	.004	.03	8.3	1.03	10.84							
355	270-280					.002	.01										
356	280-290			.05	.001	.003	.01	8.1	0.86	12.65							
38400	290-300			.02	.001	.002	.01	6.5	1.84	5.56							
			X	.03	.001												
	(23)																

HOLE: UP-11

Depth - 271
O/B 81

ASSAY TAG.	FOOTAGE	MAG.	R.QD	% Cu	% Mo	% Pb	% Zn	% Fe	% Cu	% S	ppm Au	ppm Ag					
239	81-90			.092	.001			6.86	1.84	3.36							
240	90-100			.115	.005			6.52	1.71	2.59							
241	100-110			.090	.001			7.04	1.77	4.52							
242	110-120		10/60	.156	.003			6.66	1.81	3.44							
243	120-130			.106	.003			6.36	1.76	2.79							
244	130-140			.082	.004			6.03	1.95	1.69							
245	140-150			.094	.001			6.61	1.76	3.67							
246	150-160			.065	.001			6.54	2.01	1.42							
247	160-170			.066	.001			7.21	1.76	2.46							
248	170-180			.052	.002			6.58	1.99	1.43							
249	180-190			.062	.004			6.42	1.95	1.95							
250	190-200			.076	.002			6.37	1.97	2.28							
251	200-210			.073	.003			6.07	1.97	2.18							
252	210-220			.079	.003			6.28	1.91	2.72							
253	220-230			.078	.002			6.31	1.86	3.39							
254	230-240			.082	.002			6.58	1.71	3.32							
255	240-250			.099	.001			7.06	1.76	3.74							
256	250-260			.096	.002			6.61	1.87	3.11							
257	260-270			.092	.002			6.73	1.85	2.98							
258	270-271			.081	.001			6.53	1.86	2.94							
			x	.086	.002												

HOLE: W-8

(MAG. SUSCEP. $\times 10^{-3}$ CGS UNITS) RQD (%≥4")

ASSAY TAG.	FOOTAGE	MAG.	R.QD	%Cu	%Mo	%Pb	%Zn	%Fe	%Ca	%S	ppm Th	ppm Ag					
overburden	0-28																
casing bedrock	28-30																
456	30-40	.82	33.6	.02	.003			6.8	1.83	0.10							
457	40-50	.14	51.2	.01	.002			6.7	2.09	.00							
458	50-60	.44	38.8	.01	.002			6.4	2.17	0.10							
459	60-70	.42	14.6	.01	.001			6.3	2.29	0.13							
460	70-80	.80	34.6	.01	.002			7.5	1.93	.00							
461	80-90	.50	31.6	.01	.002			7.4	1.34	.00							
462	90-100	1.52	31.2	.01	.000			7.9	1.21	.00							
463	100-110	1.80	43.5	.01	.000			7.0	2.06	.00							
464	110-120	1.30	14.5	.01	.002			7.2	1.83	.01							
465	120-130	.64	32.4	.01	.002			6.9	1.74	.01							
466	130-140	2.40	25.5	.01	.001			6.7	2.26	.00							
467	140-150	.24	56.5	.01	.001			5.7	2.49	1.10							
468	150-160	.92	38.4	.01	.001			8.2	1.91	0.43							
469	160-170	.42	20.6	.01	.001			7.4	1.93	0.63							
470	170-180	.78	17.5	.01	.001			7.5	1.82	.21							
471	180-190	.50	29.4	.01	.001			7.0	1.95	.05							
472	190-200	.10	67.8	.01	.002			6.4	2.26	0.35							
473	200-210	.08	85.9	.01	.002			6.8	1.99	0.39							
474	210-220	.02	61.1	.01	.003			6.2	2.30	0.57							
475	220-230	.14	51.9	.01	.002			7.0	1.91	0.50							
476	230-239	.12	35.9	.01	.001			6.9	1.69	0.14							
477	239-250	.98	48.2	.01	.003			6.2	1.93	.01							
478	250-260	.12	61.9	.01	.002			6.5	1.81	0.21							
479	260-270	.20	42.0	.01	.003			5.3	2.36	.27							
480	270-280	0.0	38.9	.01	.004			6.3	1.76	0.00							
481	280-290	.10	44.0	.01	.004			5.8	1.99	.01							
482	290-294	.13	31.3	.02	.003			6.5	1.87	0.22							

HOLE: E-62

MAG. SUSCEP. $\times 10^{-3}$ CGS UNITS

RQD (90 ≥ 4")

ASSAY TAG.	FOOTAGE	MAG.	RQD %	%Cu	%Mo	%Pb	%Zn	%Fe	%Ca	%S	ppm Au	ppm Ag	Au conf				
193	147-150	2.20	73.3	.19	.015	.002	.01	6.5	1.47	1.23							
194	150-160	1.30	73.1	.15	.013	.002	.01	6.7	1.73	1.67							
195	160-170	2.20	53.3	.16	.018	.002	.01	6.7	1.72	1.53							
196	170-180	1.60	5.6	.13	.014	.002	.01	6.7	1.63	1.04							
197	180-190	4.76	8.6	.09	.007	.003	.01	7.1	1.70	1.05							
198	190-200	5.84	17.6	.09	.007	.003	.01	7.5	1.59	0.96			.030/				
199	200-210	2.60	31.6	.13	.027	.003	.01	7.4	1.71	1.58			.02				
200	210-220	4.48	25.7	.11	.011	.008	.02	7.3	1.89	1.52							
426	220-230	5.90	45.2	.11	.007	.003	.01	7.3	1.50	2.00							
427	230-240	2.26	43.3	.08	.006	.003	.01	6.6	1.82	1.63							
428	240-250	0.62	43.7	.07	.005	.002	.01	6.8	1.50	1.74							
429	250-260	0.74	45.9	.05	.005	.002	.01	6.9	1.62	1.00							
430	260-270	1.84	37.9	.09	.009	.002	.01	7.3	1.40	2.24							
431	270-280	0.76	58.3	.05	.009	.001	.01	5.5	1.35	0.99							
432	280-290	1.63	63.0	.08	.010	.002	.01	6.7	1.37	2.20							
433	290-300	6.64	44.0	.13	.012	.003	.01	7.6	1.33	3.95							
434	300-310	2.42	53.0	.13	.012	.003	.01	6.9	1.78	3.32							
435	310-320	2.54	31.7	.06	.007	.002	.01	6.5	2.12	1.81							
436	320-330	3.96	37.6	.12	.014	.002	.01	7.2	1.46	2.99							
437	330-340	2.34	29.8	.09	.011	.002	.01	7.0	1.37	2.20							
438	340-350	2.16	26.1	.07	.004	.002	.01	7.2	1.76	1.39							
439	350-360	1.36	28.3	.23	.015	.002	.01	7.1	1.55	3.63			.016/				
440	360-370	1.21	27.3	.24	.010	.002	.01	6.7	1.38	4.39			.02				
441	370-380	1.24	24.1	.11	.009	.002	.01	6.5	1.63	3.55							
442	380-390	1.76	11.9	.07	.006	.002	.01	6.8	1.68	2.81							
443	390-400	0.82	15.8	.19	.012	.002	.01	6.8	1.47	3.23			.023/				
444	400-410	1.48	40.9	.21	.019	.004	.01	7.2	1.38	8.00			.025				
445	410-420	0.80	39.1	.10	.007	.013	.01	6.8	1.66	4.20							
446	420-430	2.56	32.1	.12	.009	.004	.01	6.6	1.60	4.45							

HOLE: E-62

ASSAY TAG.	FOOTAGE	MAG.	R.QD	% Cu	% Mo	% Pb	% Zn	% Fe	% Ca	% S	ppm Pt	ppm Au	Au Comp				
447	430-440	1.20	27.5	.09	.013	.003	.01	7.1	1.39	4.17							
448	440-450	2.30	26.1	.11	.004	.003	.01	7.0	1.54	3.86							
449	450-460	3.74	14.9	.08	.004	.003	.01	7.1	1.39	4.08							
450	460-470	5.46	9.9	.08	.003	.003	.01	7.4	1.54	3.16							
451	470-480	2.00	11.5	.14	.017	.003	.01	6.7	1.57	4.85			.022/				
452	480-490	4.44	2.9	.07	.019	.003	.01	6.9	1.85	1.52			.025				
453	490-500	1.47	15.4	.12	.018	.003	.01	6.4	1.25	1.93							
454	500-510	5.14	40.5	.06	.008	.003	.01	6.4	1.66	3.55							
455	510-515.5	6.65	36.0	.04	.003	.003	.01	7.3	1.84	1.83							
			$\bar{x}$	.11	.011												

HOLE NO. WP-5
CASING COLLAR ELEV.: 1204 GROUND ELEV.:
COORDINATES: 16809 N. 17038 E.
INCLINATION: -90° BEARING:

PROJECT: ISLAND COPPER
DATE STARTED: JULY 18, 1984
DATE FINISHED: JULY 24, 1984
TOTAL DEPTH: 110' ABANDONED.

PAGE NO: 1 OF 1
REF. TO CLAIM CORNER:
SCALE: 1"=10'
LOGGED BY: GAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTI-MATED

0-110' overburden.
cased to 100' and drilled to approx 110' without hitting bedrock.
abandoned at 110 feet

HOLE NO. WP-6 | PROJECT: ISLAND COPPER | PAGE NO: 1 OF 4

CASING COLLAR ELEV.: 1197 | GROUND ELEV.: | DATE STARTED: July 25, 1984 | REF. TO CLAIM CORNER:

COORDINATES: 16557 N. 16,722 E. | DATE FINISHED: July 26, 1984 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 300 | LOGGED BY: GAC

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,536

SECTION	ALTERATION: CHLORITE	ALTERATION: SERICITE	ALTERATION: MAGN	ALTERATION: BIO (EPI)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE: % SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	REC'Y. SAMP. INT.	ESTIMATED
								0-70' O.B. no samples.							
70	W		(M)	(M)				70-80 slcs f.g and: red gry-grn wk chl, mod epi alt^n minor mag vlts and poss. mag replacing py. minor orange/pnk zeo.	3-5% py.						
80	W		M	(M)			(Py)	80-90 same as 70-80 - less mag. some good cpy with py/epi	3-5%						
90	W			(C)				90-100 similar to 70-80. chl alt^n no epi or mag. v. minor cpy acc blk bio? v. little zeo.	3% py						
100	M	M					Pb Sp	100-110 gry f.g. slcs and. mod ser/chl alt^n py largely on fracs. poss galena	2% py						
110	M	M						110-120 same as 100-110 incl poss PbS poss zeo (white) frac flng.							

HOLE NO. WP-6 | PROJECT: | PAGE NO: 2 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: GAC

SECTION	ALTERATION (CRB SER MAG BIO)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
120	W Ø			Ø	120-130 Same as 100-110 except no PbS. poss v.f.g. cpy Chl pseudomorph after hbl or pyr, no visible mag.		1-2% py						
130	M W W Wp			Ø	130-140 grn-grey and. sics, mod chl alt'n, 2-5% primary(?) biotite minor mag. no vis cpy wk ser alt'n.		1-2% py						
140	M W M			cpy	140-150 same as 130-140 · minor cpy. mod mag.		1%						·1%
150	M W W			cpy	150-160 same as 130-140 finer grained sample, higher % white fragms. low py content, some vfg cpy v.minor epi. wk mag alt'n		1-2%						·1-2%
160	M M				160-170 v.f.g. sample. med grey and. abund ll colourless fragms poss cpy · vfg mod ser chl alt'n.		<1%						
170	M M Ø (W)				170-180 same as 160-170 · non-mag silty limy v.minor epi. minor ?oo		<1%						

HOLE NO. WP-60 | PROJECT: | PAGE NO: 3 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: GAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
180	M Wk Ser				180-190 - same as 170-180 - v. little geo. mod cpy wk ser, mod. chl alt", poss. mag.		<1% py+cpy						.15
190	M W				190-200 same as 170-180. slight brn hue (hem?). mod qtz minor geo v. low sulphides		<.5%						.1
200	M M		Mp	M	200-210 generally v.f.g. (<.2mm) but occ chip to 2.5mm) mod gn and. mod ser, chl alt". coarser chips have 1-2% py ± cpy and slcs grey appearance. f.g. chips have < 5% sulph. mod bio (primary)		<.5%						
210	M M		Mp		210-220 - same as 200-210 slcs v. low sulph, non limy		.2%						
220	M M		Mp		220-230 same as 200-210 - less bio, v. minor sulph. occ pink fsp" and white geo. occ patch brn stn. Note brn and "garnet" as noted 220-300 is likely rust off the drill-steering		<.5% py						
230	M M		Mp		230-240 same as 220-230, poss garnet, 5-10% bio (primary?) GARNET? occ speck cpy.		<.5% py						

HOLE NO. WP-6 | PROJECT: | PAGE NO: 4 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: GAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED %Cu
240	wk/M		Wp		240-250. same as 200-210, occ hem stn on frags. (due to drilling?) poss mag. mod ser, wk chl alt'n		<.5%						
250	w M		Wp Ws		250-260 Vf.g sample. grg grn and. sks. mod ser ± chl alt'n. minor pnk fsp = (or zeo?) 5-10% bio (primary) plus sl brn stn (2nd'y bio) 50/50 split light & dark frags.		<.2%						
260	M M				260-270 same as 250-260. mod chl alt'n poss mag. occ hem stn frag.		<.6%						
270	M				270-280 mixed similar to 260-260 60/40 split light/dark chips mod chl alt'n. light chips 2:1 qtz/fsp+Bio minor hem., occ grain epi.		<.1%						
280				Cpy	280-290 mixed similar to 250-260. mod-str ser alt'n 60/40 lt/dk frag split. occ spack cpy		<.2% <.1						.1
290					270-300 mixed same as 250-260 60/40 lt/dk ratio mod ser minor hem.		<.2%						

HOLE NO. WP-7 | PROJECT: ISLAND COPPER | PAGE NO: 1 OF 4

CASING COLLAR ELEV.: 0 | GROUND ELEV.: 1179 | DATE STARTED: JULY 24, 1984 | REF. TO CLAIM CORNER:

COORDINATES: 14,707 N. 15,991 E. | DATE FINISHED: JULY 25, 1984 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 300 | LOGGED BY: GAC

SECTION	ALTERATION (Ep)	ALTERATION (Qtz-Ser)	ALTERATION (Mod)	ALTERATION (Bio) (Ser)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
								0 - 100' overburden - not sampled. (may have been soft bedrock 70-100' but was sampled)								
100	M			(Wk)			OPX	100-110 med - dk grey andesite. coarse (+8mm chips) mod silic minor cpy, mod chl alt', sl bxn stn (2°ry bio?) Some epi		2%						.2%
110	M							110-120 Same as 100-110, mod chl alt'n. minor Zeo and calcite.		3-5%						.1
120	M	W		(W) Bio (Ser) M				120-130 Same as 100-110 chips to 4mm 10-15% bio (primary) wk ser alt'n		3-5% PY						.1
130	M							130-140 Same as 100-110 - occ pyroxene xtal. mod chl alt'n, minor v. pale pnk Zeo. Very little epi		3-5%						.05

HOLE NO. WP-7 | PROJECT: | PAGE NO: 2 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: CAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
140	M (W)				140-150 same as 100-110. poss pyroxene or chl after pyroxene. wk ser altn.		2% py						.10
150	M (W)				150-160 similar to 100-110 more slcs, finer chips (2.5mm) mod ser,		2% py						.15
160	M (M)				160-170 similar to 100-110. abund brn (bio? or gils?) stn. as well as 10% (primary?) bio minor calcite. no vis sph.		1-2% py						.05
170	M W				170-180 similar to 100-110 - more slcs. mod ser, wk ser altn. poss mag.		3% py						.07
180	M (W)				180-190 Lt grey grn andesite 50/50 split light/dark chips. wk brn stn mod chl altn ±20% q/z frags. minor ser trace calcite. chip size 1-2 mm		1-2% py						.1
190					190-200 same as 180-190. minor sph		1% py						<.05

DRILL NO. WP-7 | PROJECT: | PAGE NO: 3 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: GAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
200	M W (M)				200-210 Same as 180-190. mod chl, bio alt^n. 40/60 lt/dk frag ratio wk ser alt^n		2% Py						<.05
210	M W				210-220 same as 180-190 wk-mod ser, mod chl alt^h 5-10% pale pnk 3oo 60/40 lt/dk +plit.		2%						
220	M (M) W				220-280 V-qtz rich - 30-50% of chips are wht. qtz. intrusive? dk frags similar to 180-190 - mod chl (+bio?) ~~alt^d andesite~~ poss minor mag chip size notably coarser - 3-4mm.		4%						.08
230	W				230-240 similar to 220-230. grains to 8mm coarser grains appear to be ser (+chl, ± bio) alt^d intr with fsp + qtz Xtals in mafic gd mass. Xtals ~ 0.3 to 0.4mm minor mag.		3%						<.05
240	(M)				240-250 Coarse grained (to 1cm) chips. similar to 230-240 except less qtz (15%) probably f.g. alt^d intr.		5%						.1
250	M W (M)				250-260 finer chips (1-1.5mm) with occ larger one. Larger chips resemble those 230-240, smaller ones mod chl, bio, wk ser with mod 3oo + some fsp. 10-20% qtz.		1-2%						<.05

HOLE NO. WP-7 | PROJECT: | PAGE NO: 4 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: CAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
260	(W)				260-270 v.f.g chips mostly <.5 mm U grg-tan with 70-80% f chips light colored (qtz / fsp / geo + ser alt^{n}) dk frags chl (+ ser?) alt^{d} wk brn bio sfn. + ser alt^{n}.		1% py						
270					270-280 same as 260-270 chips 0.2 to 0.4 mm, largely light coloured. occ larger (1-3 mm) bio alt^{d} chip minor cpy		<1%						.10
280					280-290 same as 270-280, no cpy, poss epi?		<.5%						<.05
290					290-300 not enough sample to screen & mount for examination. "no/sample"								
300					end of hole								

HOLE NO.: MAP-10
GROUND ELEV.: 478 GROUND ELEV.:
COORDINATES: 14,234 N. 15,620 E.
INCLINATION: -90° BEARING:

PROJECT: ISLAND COPPER
DATE STARTED: JULY 28, 1984
DATE FINISHED: JULY 28, 1984
TOTAL DEPTH: 300

PAGE NO: 1 OF 4
REF. TO CLAIM CORNER:
SCALE: 1"=10'
LOGGED BY: SAL

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED

0-76' Overburden.

X-80 - megascopic - dk grey-grn to blk - lg chips to ½cm
- micro & hand lens - f.g. dk grey. 30% dk minerals - hbl, poss biot
weak chl alt^n, minor epi
1 or 2 lithic tuff chips.
slightly calcareous 1% py

80-90 mega: - med grey grn - andesite - f.g. 3-4% py minor epi.
micro: and 50% plag occ alt^d & chl. V. minor epi 3-5% py
as dins sub to euhedral Xtals. Slty calc.

90-100 f.g. med. grey-grn and. - 1mm chips
10% qtz, 20% dk minerals, 5-6% py as disseminations
wk chl alt^n. Poss sphalerite

100-110 f.g. med grey and? sl brownish overall hue.
10% dk min^s 5-7% py as diss, v. vlcs.
wk chl alt^n

110-120 V.f.g. lt grey grn andesite. wk chl alt^n - minor calcite (3-5%)
may indicate fracturing. 10% py. occ lim. stain (HCO_3) or
garnet?)

HOLE NO. BSP-10 | PROJECT: | PAGE NO: 2 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: GAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTI-MATED
120					120-130: V.f.g. and. mod chl alt^n 7-10% py · poss minor garnet. minor calc. spec cpy 1 hbl xtal 5mm × 1.5mm. (maj indicate paph^s nature).								
130					130-140 as above. 6% py, euhedral (cleaved?) talc. no hbl.								
140					140-150 f.g. and. sl. brn. o.a. hue (bio or garnet?) v.minor epi, 5% py, poss mag stringers wk calcite response.								
150					140-150 as above, poss cpy, very little brn stain. wk sericite alt^n.								
160					150-120 as 140-150 - minor ser.cite., no visible mag. abund white vein^s qtz + fldsp poss chl alt^n								
170					170-180 1 lg chip (5mm) sles and talk ± blk (mag?) matrix. otherwise sics, lt gn - lt brn and, bly cles., poss bio?. N.B. 170-250 may be sics intrusive								

HOLE NO.: WP-10 | PROJECT: | PAGE NO: 3 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: GAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
180					180-190 same as 170-180. slightly more brn (garnet?) stain 3% Py, wk calc.								
190					190-200 calcitic and. - abund calc. wk ser, chl alt^n. slight brn stain 2-3% Py								
200					200-210 v.fine sample size. same as 190-200 - calcic andesite chl.-ser alt^n 2-3% Py minor brn alt^n.								
210					210-220 same as 200-210 - 5% Py 1 frag rdd purple and or basalt ± fsp phenos to .5mm. 1 frag (4mm) possible tuff texture ± clasts to 1^{mm} - ser alt^n. Little brn stain.								
220					220-230 same as 200-210. occ dk. gn. frag - chl alt^d and. minor hem on some frags								
230					230-240 - same as 200-210 mod qtz. mod chl. wk ser alt^n poss v. minor mag								

HOLE NO.: WP-10 | PROJECT: | PAGE NO: 4 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: GAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
240					240-250 vf-g sample. and? - light gry-grn chl alt^n + wk ser alt^n. v.minor epi 5% py poss 3py.								
250					250-260 mod gry-grn and poss lith tuff frags mod chl/ser alt^n 2-3% py some 3py. v.minor epi.								
260					260-270 same as 250-260 - finer particles. minor mag and occ bio "books" 5% py. no epi ser 1 blb xtal (.5mm)								
270					270-280 - v fine particles. - similar to 250-260 - str ser alt^n. - light (qtz/fsp) grains more abundant than 250-260 due to finer size. occ mag^c grain. poss +pack cpy. 1% py								
280					280-290 same as 250-260 str ser, mod chl alt^n 6-8% py. good calc, minor epi. f.g sample grains ? high light/dark mineral ratio.								
290					290-300 same as 280-290, 1% py. minor 3py.								
300													

HOLE NO. WP-11 | PROJECT: ISLAND COPPER | PAGE NO: 1 OF 4

CASING COLLAR ELEV.: 1230 | GROUND ELEV.: | DATE STARTED: JULY 31, 1984 | REF. TO CLAIM CORNER:

COORDINATES: 12,819 N. 16,871 E. | DATE FINISHED: AUGUST 1, 1984 | SCALE: 1":10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 271 | LOGGED BY: GAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: DESCRIPTIVE GEOLOGY	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE LOSS	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED %Cu
					AVE CORE REC'Y / HOLE GEOLOGICAL ASSETS 13,536							
0					0-81' overburden - no samples							
80					81-90 fresh looking med-dk grn v.f.g. andesite. slcs grey aphanitic gdmass with occ pyroxene or plag. xtal. up to @.5mm. xtals poorly developed or possibly altly alt'd. wk chl alt'n, poss v.wk ser alt'n trace mag.	7-10%						.02
90					90-100 same as 81-90. 3-5% f.g. blk bio (.2mm) py xtals to .5mm	3%						.05
100					100-110 same as 81-90 2ndry(?) py xtals to .5mm	5-7% py						.05
110					110-120 similar to 81-90. more slcs., occ c.g. (to.5mm) cpy possibly assoc. with mag.	3-5%						.1
120					120-130 similar to 81-90. weaker mag occ diorite looking mags with plag xtals to .3mm and pyroxene + bio (+mag?) interstitial. minor mag	3%						.05

HOLE NO. WP-11 | PROJECT: | PAGE NO: 2 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: GAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
130					130-140 same as 81-90 minor mag. , some pale pnk Zeo - likely and calcite. fract flags. Commonly cubic py (to .1mm) assoc with Zeo								
140					140-150 same as 81-90 minor calc mod mag		< 2%						<.05
150					150-160 same as 81-90 - mod chl, occ qtz bleb (or underdeveloped K tal) to 1.5mm. patchy mag.		<2%						
160					160-170 sample lost.								
170					170-180 same as 81-90. patchy mod-str mag wk ser wk-mod chl		3%						
180					180-190 same as 81-90 wk-mod chl, mag alt^{n}. mod sics chip size 1-3mm.		2%						.02

HOLE NO. WP-11 | PROJECT: | PAGE NO: 3 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: CAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
190					190-200. similar to 180-190 slcs with abund grey qtz. minor calcite. minor mag.		2%						.02
200					200-210 Same as 180-190. finer chip size (.5-2mm) more abund qtz + light coloured chips. mod ser alt^n. wk. mag.		3%						.05
210					210-220 same as 200-210, minor 3eo. occ blk bio.		5%						.05
220					220-230 Same as 200-210 mod mag. 3eo and v.pale pnk. minor calc.		3-4%						.02
230					230-240 vfg chip size (50% < .5mm). similar to 200-210 but more slcs and qtz + 3eo (and fsp.?) chips		3%						
240					240-250 v similar to 230-240 minor calc., mod ser alt^n		3%						

HOLE NO. WP-41 | PROJECT: | PAGE NO: 4 OF 4

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: GAC

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
250					250 - 260 same as 230-240 (composition same as 81-90 but chips smaller & higher proportion of q/z chips) occ flecks mag. wk ser/chl alt'n		6-7%						
260					260-270 same as 250-260 occ pnk fsp, mod mag.		5%						
270					270-271 same as 260-260. mod mag/ser alt'n fine chip size (60% < 4mm) due to short sample interval. nmrs mag flecks & grains.		5%						.1
280													

HOLE NO. W-8 | PROJECT: Island Copper | PAGE NO: 1 OF 5

CASING COLLAR ELEV.: | GROUND ELEV.: 1233.1 | DATE STARTED: July 23, 1984 | REF. TO CLAIM CORNER:

COORDINATES: 11 792.5 N. 13712.7 E. — | DATE FINISHED: July 25, 1984 | SCALE: 1" = 10'

INCLINATION: -60° | BEARING: 198° | TOTAL DEPTH: 294' | LOGGED BY: G.L. Holland

SECTION	ALTERATION: chlorite	ALTERATION: sericite	ALTERATION: epidote	FRACTURING	MINERAL	GEOLOGY
0						
10						
20						
30	weak	V. weak (phenos)	weak (frts)	weak	Pyrite	
40						
50						
60						

COMMENTS:

RQD = 40 % (>4")

AVE CORE REC'Y / HOLE 97 %

DESCRIPTIVE GEOLOGY

0-1 Stick-Up

1-28 – Overburden

"Casing not left in hole"

28-30 – CASING IN BEDROCK

30'

30'-294' – FRAGMENTAL BRECCIA w minor Andesite Porphyry

- is a Formational Volcanic breccia
- it is possible that the And. Porph. zone are fragments
- color variation is dark green to purple to pale green, the dark grn has hematitic (purple) staining. The darker the color the more hematite present.
- altn is weak to v. weak - minor chl in matrix; chl-ser in phenos
- strong epid on frts in the pale grn colored rock.
- dk green & purple colored rocks ± weakly magnetic.
- Up to 20% phenos - 3-4mm - all fsp.
- ... oal vining or frt healing present.
- fr'ting weak
- no sulphides in the porphyry and <1% v.f.g. diss py in the breccia
- altn is regional (lower) greenschist facies - not hydrothermal

30-48 – Andesite Porphyry – dk green to purple matrix w 20% fsp. phenos, ¼" in aphanitic matrix

48-72 – Fragmental Breccia – pale green matrix w 70% dk green to purple, subrounded fragments up to 4cm in size. Minor hem staining of matrix present. Epidote on fractures.

1cm cal vnlt.

SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
<0.5%	35	83	NQ wireline	40		<0.05
	38	92				
	44	100				<0.05
	51	100		50		
<1%		100				<0.05

HOLE NO. W-8 | PROJECT: I.C. | PAGE NO: 2 OF 5

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION | ALTERATION: chlorite, sericite, epidote | FRACTURING | MINERAL | GEOLOGY | COMMENTS: | AVE CORE REC'Y / HOLE | % SULPHIDES | DRILLING INTERVAL | % CORE RECOVERED | CORE SIZE | SAMPLE INTERVAL | % REC'Y. SAMP. INT. | ESTIMATED % Cu

DESCRIPTIVE GEOLOGY

FRAGMENTAL BRECCIA cont.

ALTERATION: weak chlorite; v. weak (phenos) sericite; weak (frts) epidote

FRACTURING: weak

MINERAL: pyrite

60

70

72-87 - Intense hemetitic staining of the fragmental brxx

1cm cal vn.

* Calcite on frts.

80

5cm shear @ 30° to C.A.

87.0 - shear zone. w pale green gouge.

90

87.0 - 103.5 - dk green to purple colored fragmental brxx.
- mod hemetite staining of matrix

100

103.5 - 117.0 - dark to pale green Andesite Porphyry w epid alt'n of the phenos.

110

117 - 123 Intense hemetitic staining of the fragmental Brxx.

120

< 1%

DRILLING INTERVAL: 65, 73, 85, 89, 96, 106, 113.5

% CORE RECOVERED: 95, 100, 100, 77, 95, 100, 100, 100

CORE SIZE: NQ wireline

SAMPLE INTERVAL: 70, 80, 90, 100, 110

ESTIMATED % Cu: <0.05, <0.05, <0.05, <0.05, <0.05, <0.05

HOLE NO. W-8 | PROJECT: I.C. | PAGE NO: 3 OF 5

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

ALTERATION: chlorite, sericite, epidote | FRACTURING | MINERAL | GEOLOGY | COMMENTS: | AVE CORE REC'Y / HOLE | % SULPHIDES | DRILLING INTERVAL | % CORE RECOVERED | CORE SIZE | SAMPLE INTERVAL | % REC'Y. SAMP. INT. | ESTIMATED % Cu

DESCRIPTIVE GEOLOGY

FRAGMENTAL BRECCIA cont.

123.0 - 128.5 - dk green colored fragmental Brxx

128.5 - 135 - dk green colored Andesite Porphyry ω epid and chl alt'n of the fsp phenos

135 - 138 - Str. hemetite staining of the frag. brxx

138 - 142 - Fault zone ω strong calcite healing

Fault zone @ 35° to C.A

142 - 233 - Pale green matrix ω frags of red stained and dark green tuffs. Minor zones of dk green colored matrix. 1 cm calcite veins common

* Breccia is a formational Brxx.

* Fragments after reach 5-6 cm in size. All subrounded.

SECTION: 120, 130, 140, 150, 160, 170, 180

ALTERATION: chlorite — weak; sericite — weak (phenos); epidote — V. weak (phenos)

FRACTURING: weak; str; weak

MINERAL: pyrite

GEOLOGY: Fault zone @ 35° to C.A

% SULPHIDES: < 1%

DRILLING INTERVAL: 126, 133, 140, 146, 156, 160.5, 170, 176

% CORE RECOVERED: 100, 100, 97, 100, 100, 100, 96, 100, 100

CORE SIZE: NQ wireline

SAMPLE INTERVAL: 130, 140, 150, 160, 170

% REC'Y. SAMP. INT.

ESTIMATED % Cu: <0.05, <0.05, <0.05, <0.05, <0.05, <0.05

HOLE NO. W-8 | PROJECT: I C | PAGE NO: 4 OF 5

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

ALTERATION: chlorite — weak; epidote — weak

FRACTURING: weak; str

MINERAL: pyrite

GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE

DESCRIPTIVE GEOLOGY

% SULPHIDES: < 1%

DRILLING INTERVAL | % CORE RECOVERED | CORE SIZE: NQ wireline | SAMPLE INTERVAL | % REC'Y. SAMP. INT. | ESTIMATED % Cu

FRAGMENTAL BRECCIA cont

- pale green colored matrix w subrounded purple and dark green frags ranging from 5mm to 5-6 cm in size. Minor pyrite in the matrix
  - Some frags are strongly epid. alt'd

* weak regional lower greenschist alteration.

* pretty dry rock.

5cm cal vn

233-237 - shear zone

shear zone - no angle noted.

237-258 - dk green to purple frag. brxx.

Section	Drilling Interval	% Core Recovered	Estimated % Cu
180	182	100	< 0.05
	187		
190		83	< 0.05
	197		
200		100	< 0.05
	205		
210		100	< 0.05
	215		
		100	
	219		
220		96	< 0.05
	225		
230		100	< 0.05
	234	90	
	237		
240		100	

HOLE NO. W-8 | PROJECT: I.C. | PAGE NO: 5 OF 5

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: chlorite	ALTERATION: epidote	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
240	weak	weak	weak	pyrite	Δ	FRAGMENTAL BRECCIA cont.		< 1%	240½		NQ wireline			
					Δ					100				<0.05
									248					
250					Δ					100			250	
					Δ				255					<0.05
						258-268 - pale green colored fragmental breccia				95				
260					Δ				261½				260	
						← 3cm cal unit.				84				<0.05
					Δ	268-291 - dark green to purple colored breccia			269					
270										95			270	
									275					<0.05
					Δ	@ 280 the epid around the frts increases								
280										100			280	
					Δ									<0.05
									286					
					Δ	291-294 - pale green colored breccia.				95				
290													290	<0.05
						294 End of hole								

HOLE NO. E-62
CASING COLLAR ELEV.: GROUND ELEV.:
COORDINATES: 14042 N. 17294 E. 1200'
INCLINATION: -062° BEARING: 198°

PROJECT: Island Copper
DATE STARTED: Aug 13, 1984
DATE FINISHED: Aug. 16, 1984
TOTAL DEPTH: 515.5'

PAGE NO: 1 OF 8
REF. TO CLAIM CORNER:
SCALE: 1"=10'
LOGGED BY: G.L. Holland.

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: AVE RQD. (≥4") = 32%	AVE CORE REC'Y / HOLE 94 %	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTI-MATED

DESCRIPTIVE GEOLOGY

0

0-147' Overburden

Casing removed from hole

-plastic pipe put down for geophysical perposes.

Break in footage on log sheet

120

HOLE NO. E-62 | PROJECT: Island Copper. | PAGE NO: 2 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: silica	sericite	chlorite	sec. bio.	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
120																
130																
140																
150	V. weak	V. weak	moderate	weak	moderate	pyrite - (cpy) - (MoS_2)		147' - 273' ALTERED ANDESITE		1-2%		87	NQ wireline			<0.10
								- mod to str alt'n - clasts often visible								
								- wk potassic phase - pervasive chlorite predominates ω sec. bio as selvages around fractures. V. weak silicification. Epidote is present with the pyrite in fractures								
								- color - dk green ω a brownish tge where sec-bio present								
								- fracturing moderate ω most frts healed ω qtz; py and qtz-carb. - 40-50% of fractures are open.								
								- moderate pervasive magnetite ω numerous mag rich vns.								
								- sulphides generally confined to frts, but in short sections of strong alteration the pyrite is disseminated as well								
								- Minor MoS_2 ? cpy assoc ω the larger qtz ? qtz-carb vns								
								- qtz s/w weakly developed								
160								* Minor sericite present ω chl on minor frts			157	100				<0.10
170								171-213 - Several broken up section in the core			167	65				<0.10
180								177 - Possible shear ω qtz-carb healing.			175	100				<0.10

1.5cm qtz-carb vn.

4cm qtz vn.

2cm qtz-carb vn

2cm qtz-carb vn ω bmx

3cm qtz vn

3cm qtz vn ω MoS_2

2cm qtz-carb vn

10cm qtz-carb vn ω bmx'n.

2cm qtz vn ω MoS_2

HOLE NO. E-62 | PROJECT: I.C. | PAGE NO: 3 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

ALTERATION: silica, sericite, chlorite, sec. bio. | FRACTURING | MINERAL | GEOLOGY | COMMENTS: | AVE CORE REC'Y / HOLE | % SULPHIDES | DRILLING INTERVAL | % CORE RECOVERED | CORE SIZE | SAMPLE INTERVAL | % REC'Y. SAMP. INT. | ESTIMATED % Cu

DESCRIPTIVE GEOLOGY

ALTERED ANDESITE cont.

- 1cm qtz-carb vn ẅ epid
- 2cm shear ẅ brxx'n
- 3cm shear zone ẅ qtz-carb
- 1.5cm qtz vn ẅ MoS_2
- 2cm qtz-carb vn
- 2cm gauge zone
- 7cm qtz vn cut by 2cm qtz-carb vn
- 2cm qtz vn
- 3cm qtz-carb vns
- 2x 3cm shears
- 3cm qtz vn ẅ epy.
- 8cm shear ẅ qtz-carb
- 1cm qtz-carb vn.
- 2cm shear ẅ qtz-carb.

* Moderate alt'n. - weak potassic - epidote ẅ py on frts

* Rock is strongly broken up around the shear zones noted to a depth of 213'.

* Qtz s/w weakly developed.

Pyrite frts cut qtz-carb vns which cut qtz vns. - no offsets noted.

* Moderate pervasive magnetite

220 - increase in fracturing combined ẅ a minor alt'n change. End of sec. bio. and slight increase in sericite around the fractures ẅ chlorite - frts healed ẅ H/L qtz-carb vns.

235 - Increase in silication. Qtz-carb vns devel. a pinkish stain (laumontite?)

SECTION: 180, 190, 200, 210, 220, 230, 240

ALTERATION: v. weak; v. weak; moderate; weak; wk. weak

FRACTURING: moderate; strong; mod

MINERAL: pyrite - (cpy) - (MoS_2)

% SULPHIDES: 1-2%

DRILLING INTERVAL: 181, 185, 189, 191, 192, 197, 207, 212, 216, 226, 233

% CORE RECOVERED: 56, 86, 100, 85, 91, 97, 70, 100, 100, 100, 100

CORE SIZE: NQ wireline

SAMPLE INTERVAL: 190, 200, 210, 220, 230, 240

% REC'Y. SAMP. INT.

ESTIMATED % Cu: <0.10; 0.10; <0.10; 0.10; 0.10; <0.10

HOLE NO. E-62 | PROJECT: I.C. | PAGE NO: 4 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION | ALTERATION: silica, sericite, chlorite, sec. bio. | FRACTURING | MINERAL | GEOLOGY | COMMENTS: | AVE CORE REC'Y / HOLE | % SULPHIDES | DRILLING INTERVAL | % CORE RECOVERED | CORE SIZE | SAMPLE INTERVAL | % REC'Y. SAMP. INT. | ESTIMATED % Cu

DESCRIPTIVE GEOLOGY

240 — moderate silica, moderate sericite, weak chlorite, weak sec. bio., moderate fracturing, weak mineral

ALTERED ANDESITE cont.

* Pervasive silicification shows very gradual increase from 235' towards contact @ 273', sulphide content increases towards contact. More diss. than before.
- moderate pervasive magnetite

250 — moderate silica, weak sericite, moderate chlorite, weak sec. bio., moderate fracturing, weak mineral

Pyrite - (cpy) - (MoS_2)

str. qtz carb in frts.

2cm qtz-carb vn ± pink staining

3cm qtz vn

2x 3cm qtz vn.

1cm qtz-carb vn.

* Qtz s/w gradually increases towards contact.

260 — moderate silica, weak sericite, moderate chlorite, weak sec. bio., moderate fracturing, weak mineral

healed 7cm shear

2cm qtz-carb vn.

270 — moderate silica, weak sericite, moderate chlorite, weak sec. bio., moderate fracturing, weak mineral

intrusive CN @ 45° to C.A

273'

intrusive contact @ 45° to C.A.

273 - 282.5 - QUARTZ-FELDSPAR PORPHYRY

- 40-50% phenos - 20-30% fsp → ser (2-4mm)
  10% qtz eyes (5-6mm)
  10% mafics → chl + py (3-4mm)
- siliceous, aphanitic matrix ± pink staining
- qtz s/w weak, frting weak
- 2% sulph. (py) generally confined to alt'd mafic phenos ± minor vns + frt filling

Pyrite

1cm py vn

intrusive CN @ 80° to C.A

282.5'

280 — moderate silica, weak sericite, moderate chlorite, weak sec. bio., moderate fracturing, weak mineral

1.6cm qtz-carb vn.

2cm qtz vn ± mag

282.5 - E.O.H. ALTERED ANDESITE

- alteration same as above contact - strong silica - chl ± sec. bio as envelopes on frts
- pyrite vns in frts get larger - up to 0.9cm.
- qtz s/w moderately developed
- qtz-carb vns less devel. than above dyke.
- 2-3% py - mainly in frts but in stronger alt'd zones as disseminations

290 — moderate silica, weak sericite, moderate chlorite, weak sec. bio., moderate fracturing, weak mineral

Py - (cpy)

1.5cm py vn.

2cm qtz vn.

15cm shear healed ± qtz-carb. ± mag vn.

300

NQ wireline

Drilling Interval	% Core Recovered	% Sulphides	Sample Interval	% Rec'y. Samp. Int.	Estimated % Cu
240	94	2-3%	250		0.10
247	98		260		0.10
257	96		270		0.10
266½	100		280		0.10
272	100	2%	290		0.10
277	100		300		
287	98	2-3%			0.10
297	95				

HOLE NO. E-62 | PROJECT: I.C. | PAGE NO: 5 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

ALTERATION: silica, sericite, chlorite, sec. bio. | FRACTURING | MINERAL | GEOLOGY | COMMENTS: | AVE CORE REC'Y / HOLE | % SULPHIDES | DRILLING INTERVAL | % CORE RECOVERED | CORE SIZE | SAMPLE INTERVAL | % REC'Y. SAMP. INT. | ESTIMATED % Cu

DESCRIPTIVE GEOLOGY

ALTERED ANDESITE cont.

303-307 - Fault zone strongly healed ω qtz

301-341 - Silicification strong ω mod sec bio and str. mag.

310-311 - Fault zone ω qtz-healing

316 - 20 cm Fault zone ω str. qtz healing

317.5-318.5 - Fault zone ω str qtz healing

* Epidote still associated ω pyrite on frts

* Qtz s/w moderately developed

341 - decrease in alt'n strength.

357-360 - Breccia that is qtz healed.

Fault zone @ 35° to C.A. str qtz healing

2cm qtz vn.

Fault zone @ 35° to C.A.

Fault zone @ 40° to C.A.

Fault zone @ 25° to C.A.

3cm qtz-carb vns

str qtz s/w devel.

10cm qtz vn ω chl

4cm qtz vn

8cm qtz-carb vns ω bxxn.

3cm qtz vn

brxx ω str qtz

Section	Drilling Interval	% Core Recovered	Sample Interval	Estimated % Cu
300		95		0.10
	307		310	
310		88		0.10
	314	98		
	317½		320	
320		80		0.10
	324			
		100	330	
330	333			0.10
		100		
340	340		340	
		100		0.10
	346			
350		94	350	
	352			0.10
		100		
360			360	

Fracturing: strong to intense — moderate

Mineral: pyrite - (cpy)

Alteration: silica: strong — moderate — weak; sericite: moderate; chlorite: weak — moderate; sec. bio.: moderate — weak

% Sulphides: 2-3%

Core Size: NQ wireline

HOLE NO. E-62 | PROJECT: I.C. | PAGE NO: 6 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

ALTERATION: silica, sericite, chlorite, sec. bio. | FRACTURING | MINERAL | GEOLOGY | COMMENTS: | AVE CORE REC'Y / HOLE

DESCRIPTIVE GEOLOGY

ALTERED ANDESITE cont.

* Qtz s/w moderately developed

Magnetite decreases below 370'

* Pyrite ± cpy content increases due to presence in the qtz veins.

379-401 - Core broken up

Qtz-carb vning increasing, small qtz s/w vns decreasing.

* Alt'n moderately developed and very consistant. - upper phyllic.

Magnetite weak - confined to frts and around frts

414-427 - Numerous small shear zones

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu.
360	silica: moderate; sericite; chlorite: moderate; sec. bio.: v. weak	moderate	pyrite - (cpy) - (MoS_2)	2cm qtz vn cut by 1cm qtz-carb vn.	3-4%		100	NQ wireline			0.15
				2cm qtz vn ⊼ MoS_2		367					
370				3cm qtz vn ⊼ str. py-cpy.			100			370	
				2cm qtz-carb ⊼ MoS_2							0.15
				3cm shear zone.							
				5cm qtz vn ⊼ py-cpy							
				3cm qtz vn ⊼ py-cpy		377					
380							100			380	
						383					0.10
							92				
						387					
390				2x1cm qtz vns ⊼ MoS_2			98			390	
						395					0.10
				2cm qtz vn ⊼ MoS_2	2-3%		100			400	
400				3cm qtz vn							0.10
				2cm py vn ⊼ cpy.		404½					
410				str qtz-carb vns			100			410	
		str.		shear zone ⊼ qtz-carb		414½					0.10
				10cm shear							
420				30cm shear ⊼ qtz-carb			100			420	

HOLE NO. E-62 | PROJECT: I.C. | PAGE NO: 7 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

ALTERATION: silica, sericite, chlorite, sec. bio. | FRACTURING | MINERAL | GEOLOGY

COMMENTS: AVE RQD (≥4") - 32% | AVE CORE REC'Y / HOLE 94%

DESCRIPTIVE GEOLOGY

ALTERED ANDESITE cont.

* Magnetite weak

429 - End of shears

433 - Sec bio has dissappeared - gradually

Sulphides are 90% fracture controlled.

445 - Magnetite increasing towards fault @ 471
- starting to find laumonite stain ⊃ the qtz-carb.

Alt'n strong - phyllic phase.

471 - 484 - Fault Zone ⊃ large gouge zones in a V. strongly altered Andesite.
- weak magnetite
- gouge — clay + sericite.

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
420	silica: weak → strong → moderate; sericite: weak → strong; chlorite: moderate; sec. bio.: v. weak	strong	pyrite - (cpy) - (MoS_2)	shear @ 25° to C.A. Qtz vn. 2cm py vn. 10cm shear @ 35° to C.A. 1cm py vn.	2-3%	425	100	NQ wireline	430	430	0.10
430							100				
434½						434½					0.10
440				2cm qtz-carb vn. Zone of brxn'n 2cm shear zone			100		440	440	
444½						444½					0.10
445		moderate				449	100		450	450	
				10cm shear ⊃ gouge. 15cm qtz vn ⊃ chl. 0.6cm cpy vn ⊃ sec. bio envelope			100				0.15
457				3cm qtz vn.		457					
460				2cm qtz-carb vn			100		460	460	0.10
467						467					
470	weak → mod.	intense		3cm qtz vn ⊃ MoS_2 15cm qtz vn ⊃ cpy-py ± MoS_2. Fault zone @ 50° to C.A. str. gouge.		475	84 98		470	470	0.15
480										480	

HOLE NO. E-62 | PROJECT: I.C. | PAGE NO: 8 OF 8

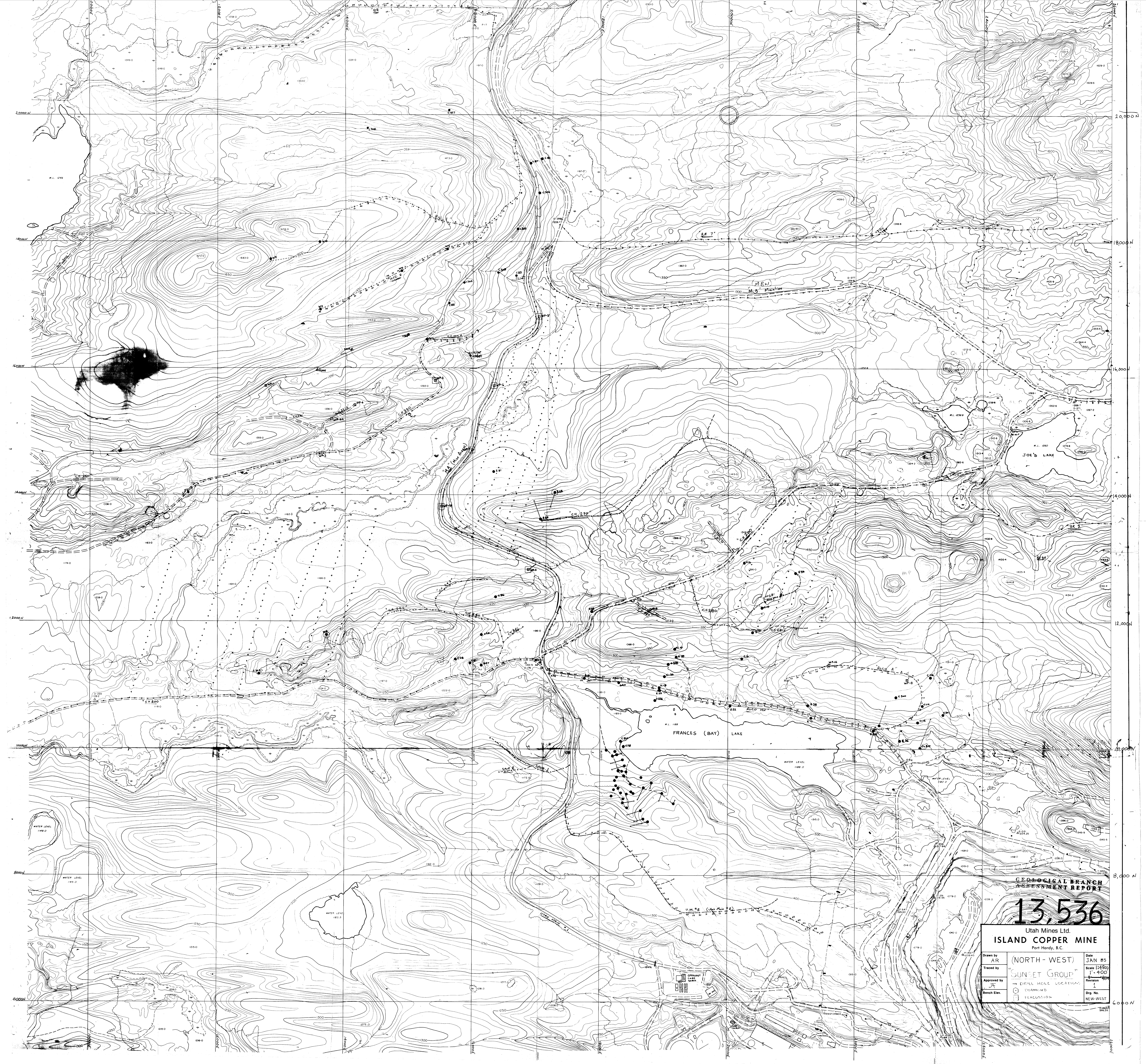
CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: silica	sericite	chlorite	sec. bio.	FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
480	wk	mod			int			DESCRIPTIVE GEOLOGY								
								ALTERED ANDESITE cont.			482					
								Fault zone @ 50° to C.A		2-3%		95				0.10
								2x2cm qtz-carb vns			487					
490								Alteration strong below the fault. -phyllic phase.							490	
												24				
								Strong magnetite * Sulphides all fracture controlled.								<0.10
											497					
500								20cm qtz vn							500	
								2cm qtz vn w MoS2								
								* Qtz s/w weakly devel., Qtz-carb weakly developed		1-2%		108				
								8cm shear zone								
											506					<0.10
								6cm qtz vn								
510								2cm qtz-carb vn.							510	
												98				<0.10
								515.5' E.O.H.								

mod-str | moderate | strong | moderate | Pyrite - (Cpy) - (MoS_2) | NQ wireline



GEOLOGICAL BRANCH
ASSESSMENT REPORT
13,536
Utah Mines Ltd.
ISLAND COPPER MINE
Port Hardy, B.C.
Drawn by AR
Traced by
Approved by
Bench Elev.
(NORTH - WEST)
"SUNSET GROUP"
→ DRILL HOLE LOCATIONS
DIAMOND
PERCUSSION
Date JAN 85
Scale 1:4800 1" = 400'
Revision 1
Drg. No. NEW-WEST
FRANCES (BAY) LAKE
JOE'S LAKE
20,000 N
18,000 N
16,000 N
14,000 N
12,000 N
10,000 N
8,000 N
6000 N

TO PORT HARDY

QUATSE LAKE

BAY 87 17833 APR. 10

BAY 88 17834 APR. 10

BEN FR 33594 MAR 3

BEN 1 FR 33595 MAR 3

BAY 86 17832 APR. 10

BAY 69 17773 FEB. 26

BAY 70 17774 FEB 26

BORK FR 31677 APR. 29

BAY 85 17831 APR. 10

BAY 68 17772 FEB 26

BAR 27499 JAN 23

BOB 2 33634 APR. 26

BOB 1 33633 APR. 26

BAY 84 17830 APR 10

BAY 56 17760 FEB 26

BAY 59 17763 FEB 26

WP5

{BAR 27500 FR JAN 23

WP2

WP6

BAY 83 17829 APR. 10

BAY 57 17761 FEB 26

BAY 61 17765 FEB 26

BAY 63 17767 FEB. 26

BAY 52 17756 FEB 26

BAY 50 17754 FEB 26

COAL HARBOUR ROAD

BAY 58 17762 FEB 26

WP7

BAY 60 17764 FEB 26

BAY 62 17766 FEB 26

BAY 53 17757 FEB 26

E62

COIR 4 17850 APR. 10

BAY 82 17828 APR. 10

BAY 54 17758 FEB 26

COVE 20 18123 AUG 10

WP10

COVE 18 18121 AUG 10

WP11

COIR 3 17849 APR. 10

BAY 81 17827 APR. 10

BAY 55 17759 FEB 26

W8

COVE 19 18122 AUG 10

COVE 17 18120 AUG. 10

COIR 2 17848 APR. 10

BAY 100 17846 APR. 10

BAY 98 17844 APR. 10

BAY 96 17842 APR. 10

BAY 22 17726 FEB 26

{ART 10 FR 27497 JAN 17

{ART 27230 JAN 23

ACCESS

COIR 1 17847 APR. 10

BAY 99 17845 APR. 10

LONG FR 33593 MAR 3

BAY 97 17843 APR. 10

BAY 95 17841 APR. 10

BAY 94 17840 APR. 10

{KOL 38 20071 SEPT 21

KOL 25 20058 SEPT. 21

KOL 26 20059 SEPT. 21

KOL 9 FR. 24876 MAY 27

KOL 37 20070 SEPT. 21

MINE

COIR 7 17886 APR. 30

COIR FR 17887 APR. 30

KOL 23 20056 SEPT. 21

KOL 24 20057 SEPT. 21

KOL 8 FR. 24875 MAY 27

KOL 35 20068 SEPT. 21

{KOL 36 20069 SEPT. 21

BAY 92 17838 APR. 10

KOL 21 20054 SEPT. 21

KOL 22 20055 SEPT. 21

KOL 7 FR. 24874 MAY 27

KOL 33 20066 SEPT 21

KOL 34 20067 SEPT 21

{KOL 44 20077 SEPT 21

KOL 1 FR 22948 FEB 5

M 37 (51.65 Acres) L. 2155 SEPT. 27

{KOL 2 FR 22949 FEB 5

KOL 43 20076 SEPT 21

KOL 42 20075 SEPT 21

KOL 19 20052 SEPT. 21

KOL 20 20053 SEPT 21

KOL 6 FR 24873 MAY 27

KOL 31 20064 SEPT. 21

KOL 32 20065 SEPT. 21

KOL 41 20074 SEPT. 21

KOL 3 FR 22950 FEB 5

KOL 40 20073 SEPT 21

KOL 17 20050 SEPT. 21

KOL 18 20051 SEPT. 21

KOL 5 FR. 24872 MAY 27

KOL 29 20062 SEPT. 21

KOL 30 20063 SEPT. 21

KOL 15 20048 SEPT 21

KOL 16 20049 SEPT 21

KOL 4 FR. 24871 MAY 27

KOL 28 20061 SEPT. 21

KOL 27 20060 SEPT. 21

FEET 0 1000 2000 3000 500 1000 (METERS)

RUPERT INLET

LAKE (16 UNITS) #15 (1975) JUNE 13 4N x 4W

JOE'S LAKE

RUBY (8 UNITS) #16 (1975) JUNE 13 4N x 2E

SPAM 1 23882 MAR 7

SPAM 17

SPAM 18 FR 23899 MAR 7

KEN 16 23881 MAR. 7

SPAM 19 FR 23900 MAR 7

KEN 15 23880 MAR. 7

SPAM 21 FR 24505 APR. 17

FRANCES LAKE

M 34 (1459.17 Ac) L. 2145 SEPT. 27

M 35 (889.14 Ac) L 2146 SEPT 27

M 31 (459.66 Ac) L 2140 SEPT 27

M 32 (24.09 Ac) L 2141, L 2142 SEPT. 27

DAM FR 35370 JUNE 30

M33 (3.42 A.) L. 2143, 44 SEPT. 27

ART 4 27229 OCT 23

ROAD 1 (COMINCO)

M 36 (807.43 Ac) L 2147 SEPT. 27

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,536

N

Utah Mines Ltd.

ISLAND COPPER MINE

Port Hardy, B.C.

Drawn by JF	SUNSET GROUP	Date 19/10/84
Traced by AR	RUPERT INLET 0 120 240 M	Scale 1" = 1000'
Approved by		Revision
Bench Elev.	SCALE 1:12 000	Drg. No.