DIAMOND DRILLING REPORT

for

Mitchell 1, Central 1 and Sulphurets 1
Claim Groups

Mineral Claims: Arbee 35, 39, 54, 55, Dawson-Ross 1, 3, Ed 1, 2, Iron Cap 1-5, Ice 1, 2, Tedray 1-3, 6-13, Xray 1-9

Skeena Mining Division
104B, 8E, 8W, 9E, 9W
56° 30' N, 130° 15' E

Claims owned by: Granduc Mines Limited;
Esso Resources Canada Limited; and
Sidney F. Ross

Operated by: Esso Minerals Canada
600-1281 West Georgia Street
Vancouver, B.C. V6E 3J7

Report by: Dane A. Bridge
Morley G. Brown
Larry J. Ferguson

Submitted: September 30, 1980

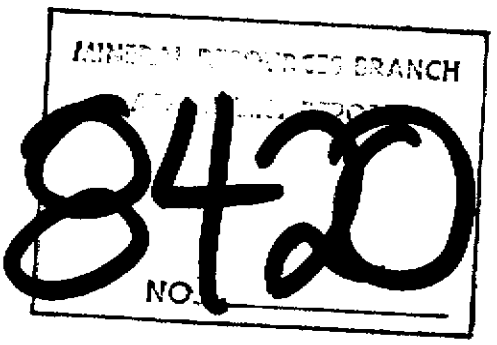


TABLE OF CONTENTS

INTRODUCTION

Location

The Sulphurets property is located approximately 65 km north west of Stewart, B.C. and 20 km north of the Granduc Mine. It is at the headwaters of Mitchell Creek and Sulphurets Creek and extends southerly and south easterly. The property is centered at 56° 30' N and 130° 15' E. It covers parts of 104B/8E, 8W, 9E, 9W.

Access

Access to the property is from the Esso camp located on the north side of Mitchell Creek a few hundred metres east of McTagg Creek. The camp is serviced by helicopter from Stewart.

Claims

The Sulphurets property consists of claims held by Granduc Mines Limited, Sidney F. Ross and Esso Resources Canada Limited. The property is being operated by Esso Minerals Canada, 600-1281 West Georgia Street, Vancouver, under option from Granduc and S.F. Ross.

The following is a list of the claims, number of units and record numbers for the Sulphurets property:

Held by Granduc Mines Limited:

Ed 1		2	150
Ed 2		1	151
Iron Cap	1	2	315
" "	2	1	316
" "	3	2	317
Red River		14	314
Tedray	1	2	153
"	2	1	154
"	3	3	155
"	6	15	158
"	7	2	159

Tedray	8	1	160
"	9	9	161
"	10	3	162
"	11	4	163
"	12	15	164
"	13	8	165
Xray	1	1	1861
"	2	2	1862
"	3	2	1863
"	4	6	1864
"	5	2	1865
"	6	2	1866
"	7	2	1867
"	8	2	1868
"	9	2	1869

Held by Sidney F. Ross:

Arbee	35	1	two-post claim	19124
"	39	1	" "	19128
"	54	1	" "	19143
"	55	1	" "	19144
Dawson-Ross	1	1	two-post claim	19887
	3	1	" "	19889

Held by Esso Resources Canada Limited:

Ice 1	2	2411
Ice 2	3	2412
Iron Cap 4	1	2409
Iron Cap 5	1	2410
Tedray 14	2	2413

The mineral claim Red River, record number 314, held by Granduc Mines Limited, also constitutes part of the Sulphurets property. However, it is apparently not contiguous with the claims discussed in this report.

GEOLOGY AND ECONOMIC ASSESSMENT

The first record of work on bedrock mineral prospects was done in the Sulphurets Creek area in 1935. The property was explored by prospecting, some magnetometer surveying and drilling by Newmont Mining Corporation from 1959 to 1962. Granduc Mines Limited has done trenching, diamond drilling, mapping and lithogeochemical sampling from 1967 to 1977.

The Sulphurets property consists of volcanic and sedimentary rocks intruded by dioritic to granitic plutonic rocks. The volcanic rocks have been intensely altered to quartz and albite $\pm$ sericite + pyrite rocks.

The property has potential for porphyry type Mo, Cu, Cu + Au and Cu + Mo deposits. The Iron Cap area has potential for low grade Au-Ag deposits. Cu - bearing volcanogenic exhalite deposits and lode Au - Ag deposits also occur but appear to have little economic potential.

DRILLING

This report documents 1073.5 m of diamond drilling in 5 holes in 3 zones or areas of mineralization. The detailed drill logs with assay results are in the Appendix.

The locations of the holes and the locations of all the claims can not be shown precisely at this time. There is no grid on the property and two of the holes were drilled in locations that are below the glacial ice levels on the old air photographs. The legal corner posts were not located for all of the pre-existing claims.

Esso flew an air photo survey of the property in August, 1980. When the results of the survey are available the author will submit a map

showing the locations of the holes drilled by Newmont, Granduc and Esso which will be filed for PAC credit at a later date. This map will also show the relations of the holes to located claim legal corner posts.

The core for all Esso holes is stored at the Esso camp.

MOLY ZONE

The Moly Zone consists of interbedded volcanic and lesser sedimentary sequences intruded by granite and hornblende porphyry. All the rocks are intensely altered by the process of silicification, pyritization, sericitization and chloritization. Generally the primary textures, structures and original composition of the rocks has been masked by the alteration. They appear commonly as medium to fine grained light gray green quartzo-feldspathic rocks intercollated with very fine grained light grey siliceous rocks. They typically contain between 3%-5% pyrite. However, 5%-10% is not uncommon locally within the more silicified horizons.

Extensive shearing and faulting over most of the zone has resulted in a discrete foliation within the rocks and appears to bear some relationships to the alteration. Foliation trends vary locally but two pervasive directions, 60^{o}-80^{o} and 100^{o}-120^{o}, have been recognized. Within the shear zones the rocks are essentially quartz sericite schists.

Quartz veining is common throughout and locally intense within sheared and faulted zones. At least two phases can be recognized, a light grey to greyish blue colored phase cross cut by a milky white coarser grained phase. The light grey quartz veins generally intrude parallel to subparallel foliation, are less than 1.5 cm thick, although veins up to 6 cm in thickness occur, and contain up to 5% pyrite. The younger milky white phase generally is void of mineralization and trends primarily N-S.

Molybdenite mineralization occurs primarily in association with the older quartz veining. In general, very thin quartz stringers containing varying amounts of molybdenite occur randomly throughout the entire zone. Finely disseminated molybdenite mineralization is also common within highly silicified granitic rocks. The best mineralization appears to be related to the fault zones where the quartz veining is densest. The molybdenite occurs both within the quartz veins and as remobilized fractions along the shear planes. However, these mineralized zones within the shears are generally very localized and not extensive.

Minor chalcopyrite and associated malachite staining occurs within the volcanic rocks locally, but are not of economic significance.

The molybdenite mineralization within the Moly Zone occurs sporatically within quartz veins throughout the entire area. The best mineralization is localized within major shear zones where quartz veining is more prolific. These zones were extensively prospected and tested by drilling at two locations but failed to detect significant mineralization.

DDH 9 AND 13

Two diamond drill holes, DDH 9 and DDH 13, were drilled to test the best molybdenite mineralization within a fault zone along the south side of the Mitchell glacier. Both holes intersected trace molybdenite within a quartz sericite schist rock that graded at depth into non mineralized quartzo-feldspathic rocks of probably volcanic origin. A summary of both holes is given below:

DDH 9

Metres	Geology
0=77.5	QTZ-Sericite Schist: Well foliated, blocky and fragmented core with numerous fracture zones. Trace Mo within QTZ veins Py 10%.

Metres	Geology
77.5-210.0	QTZO-Feldspathic Rock: More competant grey green rock, medium grained, foliation less instense. No visible Mo. Py content 5%-10%, locally 15%.

DDH 13

Metres	Geology
0-78.33	QTZ-Sericite Schist: Well sericitized fragmented and foliated. Good quartz veining with minor Mo.
78.33-129.6	QTZO-Feldspathic Rock: Granular texture, medium to fine grained, foliation moderately developed Py 5% locally between 5% and 10%. Trace Mo.
129.6-230.75	QTZO-Feldspathic Rock: (Altered Tuff). Light grey green, some fragments angular and parallel foliation. Segments of intense quartz veining. Py 3%-5%, locally 5%-10%. No Vis Mo.
230.75-275.84	QTZO-Feldspathic Rock: Granular textured as for 78.22-129.6 m. No Vis Mo.

IRON CAP ZONE

The Iron Cap Area appears to be underlain by an intensely altered sequence of volcaniclastics, immature clastic sediments and lesser feldspar and hornblende porphyry intrusives. The alteration consists of pervasive silicification, pyritization and lesser sericitization and chloritization. The rocks typically contain 3% to 5% pyrite in disseminations and fractures. Fracturing and quartz veining is common and locally intense. Exploration by previous companies indicated that anomalous amounts of gold and silver are present in both the quartz veins and altered host rocks.

DDH 10 AND 11

Two holes were drilled to test two parallel quartz veins and their host rocks for their gold and silver content. The holes intersected the veins and located low precious metal contents in the veins and very low to trace contents in the host rocks.

Geological summaries of DDH 10 and 11 are as follows:

DDH 10

Meterage	Geology
0 to 2.52	overburden
2.52 to 49.61	Moderately to Intensely silicified and pyritized conglomerates and finer grained clastic sediments.
49.61 to 51.71	Quartz vein.
51.71 to 96.87	Moderately to Intensely silicified and pyritized clastic sediments(?).
96.87 to 101.47	Quartz vein.
101.47 to 169.77 (End)	Moderately to Intensely silicified and pyritized clastic sediments (?) and thin conglomeratic zones

DDH 11

Meterage	Geology
0 to 3.60	Overburden.
3.60 to 35.2	Moderately to Intensely silicified and pyritized conglomerates and finer grained clastic sediments.

Meterage	Geology
35.2 to 37.3	Quartz Vein.
37.3 to 57.1	Moderately silicified and pyritized clastic sediments.
57.1 to 61.65	Quartz vein.
61.65 to 65.4	Silicified sediments and quartz veins.
65.4 to 70.1	Quartz vein.
70.1 to 74.7	Silicified sediments and quartz veins.
74.7 to 131.22	Moderately to intensely silicified and pyritized conglomerates and finer grained clastic sediments.
131.22 to 132.95	Quartz Vein with chalcopyrite, sphalerite and galena.
132.95 to 230.2	Similar to 74.7 to 131.22 with intense shear zone from 223.2 to 230.2.
230.2 to 252.68 (End)	Moderately silicified and weakly pyritized and sericitized hornblende (?) porphyry intrusive.

MAIN COPPER ZONE

The Main Copper Zone is an extensive area of quartz-albite-pyrite rock and moderately altered quartz-albite-pyrite-chalcopyrite rock. Both are apparently hydrothermal alteration products of intermediate volcanic rocks intruded by syenites and granites.

The area has been trenched and drilled where the greatest concentrations of chalcopyrite and minor molybdenite occur.

DDH 12

DDH 12 was drilled to provide assessment work on the Sulphurets 1 Group and to test a very pyritic area for its gold content. The hole intersected intensely to moderately altered intermediate volcanic rocks with an average pyrite content of 15%-20%. Minor sections contained disseminated chalcopyrite.

The following is a summary of DDH 12:

Meterage	Geology
0.0 - 4.81	overburden and broken rock.
4.81 - 15.36	quartz-albite rock
15.36 - 22.36	quartz-albite rock and minor relict intermediate volcanic rock.
22.36 - 23.89	moderately altered andesite.
23.89 - 32.00	quartz-albite rock.
32.00 - 33.80	moderately altered andesite.
33.80 - 50.50	quartz-albite rock.
50.50 - 54.00	moderately altered andesite.
54.00 - 147.60	quartz-albite rock.
147.60 - 166.24	moderately to intensely quartz-albite altered rock.
166.24 - 166.73	intermediate volcanic rock.

SUMMARY OF COSTS

1. Fuel costs are costs of fuel plus helicopter transportation to camp or fuel cache area.

2. The mobilization-demobilization costs for the drill are proportioned according to the Footage of each hole as a part of the 6000 feet of planned drilling. The total cost is estimated as follows:

Mob-demob as per contract	$6,875.00
Mob, labour 193 hr. at $19.00	3,667.00
Mob, helicopter 6.4 hr. at $385.00	2,464.00
Mob, helicopter 7.6 hr. at $525.00	3,990.00
Estimated demob, labour 80 hr. at $19./hr	1,520.00
Estimated demob, helicopters, same as for Mob	6,454.00
Total mob-demob cost	24,970.00

3. Helicopter costs are for the contract rate plus fuel consumed:

206B, $300./hr. + $85./hr for fuel	$385./hr.
206L-1, $400./hr + $125./hr for fuel	$525./hr.

4. Camp costs are estimated as follows:

   Total camp cost $75,000. Camp to be used for 100 days per season over 3 years. Daily cost is then $250. Groceries plus delivery cost approximately $4200./month or $140/day. Total room and board costs are $250. + $140. = $390./day. There are normally 14 men in camp so cost per man per day is $28.00.

5. Camp support costs are $252./day based on one cook at $65./day, one first aid attendant at $75./day, and room and board at $28./day for cook, first aid attendant, helicopter pilot and helicopter engineer.

D. Bridy

COST STATEMENT, DDH 9

DDH	9, 689 Ft. (210.01 m)
Dates Drilled	July 17-23, 1980
Group	Central 1
Claim	Ice 2

Drilling 0-500 Ft. at $17.50/Ft.	$8,750.00
500-689 ft. at $18.00/Ft.	3,420.00
Labour 108 hr. at $19.00/hr.	2,052.00
Fuel 217 gal. at $3.60/gal.	781.20
Mob-Demob 11.48% of $24,970.	2,866.56
Survey Instrument 7 days at $25./day	175.00
Helicopter 15.7 hr. at $385./hr.	6,044.50
Assays 49 at $12.00	588.00
Geologist & Assistant 14 days at $90.avg./day	1,260.00
Room and Board 6 men, 7 days at $28./day	1,176.00
Camp Support Cost 7 days at $252./day	1,764.00
TOTAL:	$28,877.06
Total drilling cost per foot:	$41.91
Total drilling cost per metre:	$137.46

COST STATEMENT, DDH 10, 11

DDH	10, 557 Ft. (169.77 m)
Dates drilled	July 24-30, 1980
DDH	11, 824 Ft. (251.16 m)
Dates drilled	July 31-August 7, 1980
Group	Mitchell 1
Claim	Tedray 1

Drilling 1000 Ft. at $17.50/Ft.	$17,500.00
318 Ft. at $18.00/Ft.	5,724.00
Labour 266 hr. @ $19.00/hr.	5,054.00
Fuel 415 gal. at $3.60/gal.	1,494.00
Mob-Demob 21.97% of $24.970.00	5,485.91
Survey Instrument 15 days at $25./day	375.00
Helicopter 24.7 hr. at $385.00/hr.	9,509.50
Assays 126 at $8.75	1,102.50
22 at $3.25	71.50
9 at $6.50	58.50
Geologist & Assistant 30 days at $90.avg./day	2,700.00
Room & Baord 6 men, 15 days at $28.00/day	2,520.00
Camp Support Costs 15 days at $252./day	3,780.00
TOTAL:	$55,374.91
Total drilling cost per foot:	$42.01
Total drilling cost per metre:	$137.84

COST STATEMENT, DDH 12

DDH	12, 547 Ft. (166.73 m)
Dates Drilled	Aug. 8-12, 1980
Group	Sulphurets 1
Claim	Ed 1

Drilling 500 Ft. at $17.50/Ft.	$8,750.00
47 Ft. at $18.00/Ft.	846.00
Labour 124 hr. at $19.00/hr.	2,356.00
Fuel 172 gal. at $3.60/gal	619.20
Mob-Demob 9.12% of $24,970.00	2,277.26
Survey Instrument 5 days at $25./day	125.00
Core Boxes 23 at $5.00/ea.	115.00
Helicopter 9.7 hr. at $385./hr.	3,734.00
Assays 56 at $15.25	854.00
Geologist & Assistant 10 days at $90 av./day	900.00

D. Brisby

Room & Board 6 men, 5 days at $28.00/day	840.00
Camp Support Costs 5 days at $252./day	1,260.00
TOTAL:	$22,676.96
Total drilling cost per Foot:	$41.46
Total drilling cost per Metre:	$136.01

COST STATEMENT, DDH 13

DDH	13, 905 Ft. (275.84 m)
Dates Drilled	August 13-23, 1980
Group	Central 1
Claim	Ice 2

Drilling 0-500 Ft. at $17.50/Ft.	$8,750.00
500-905 at $18.00/Ft.	7,290.00
Labour 128 hr. at $19.00/hr.	2,432.00
Fuel 285 gals. at $3.60/gal.	1,026.00
Mob-Demob 15.08% of $24,970.	3,765.48
Survey Instrument 11 days at $25./day	275.00
Core Boxes 36 at $5.00 ea.	180.00
Helicopter 15.9 hr. at $385./hr.	6,121.50
Assays 90 at $5.50/ea.	495.00
Geologist & Assistant 22 days at $90 avg./day	1,980.00
Room & Board 6 men, 11 days at $28./day	1,848.00
Camp Support Costs 11 days at $252./day	2,772.00
TOTAL:	$36,935.48
Total cost per Foot:	$40.81
Total cost per Metre:	$133.90

D. Bisby

STATEMENT OF QUALIFICATIONS

I, Dane A. Bridge, hereby certify that I received my B.Sc. Honours in 1969 and M.Sc. in 1972 from the University of Manitoba. I have been practicing as a geologist for 12 years.

Dane A. Bridge

D. A. Bridge

STATEMENT OF QUALIFICATIONS

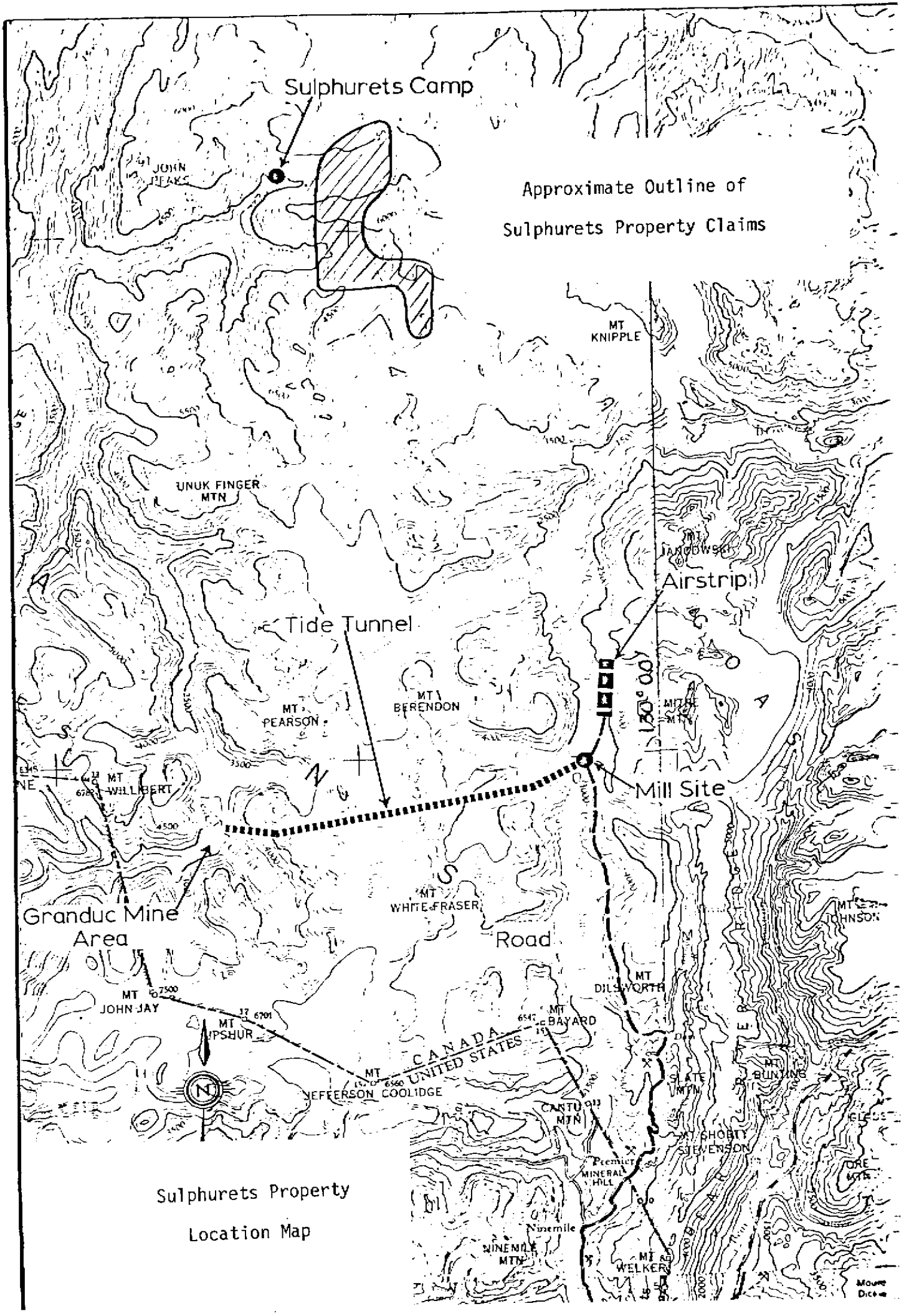
I, Morley G. Brown, hereby certify that I received my B.Sc. from the University of Saskatchewan in 1977 and have been practicing as a geologist for 3 years.

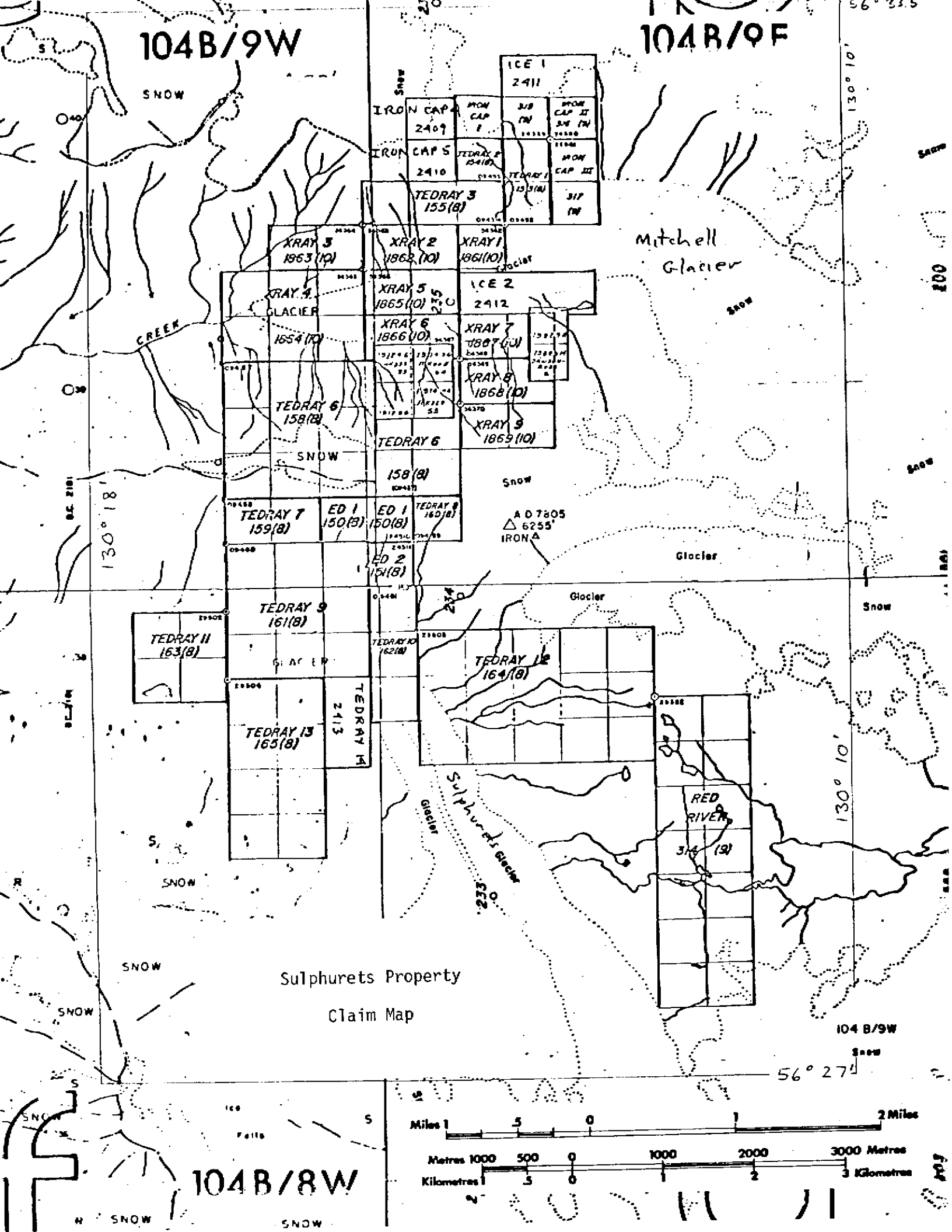
M. G. Brown

STATEMENT OF QUALIFICATIONS

I, Larry J. Ferguson, hereby certify that I received my B.Sc. Honours in 1974 from Carleton University and my M.Sc. in 1977 from the University of Western Ontario. I have been practicing as a geologist for 7 years.

L. J. Ferguson


Sulphurets Camp
Approximate Outline of
Sulphurets Property Claims
JOHN PEAKS
MT KNIPPLE
UNUK FINGER MTN
MT JANNOWSKI
Airstrip
Tide Tunnel
MT PEARSON
MT BERENDON
MT WILLIBERT
Mill Site
Granduc Mine Area
MT WHITE-FRASER
Road
MT JOHNSON
MT DILLSWORTH
MT JOHN JAY
MT BAYARD
MT IPSHUR
CANADA
UNITED STATES
MT JEFFERSON COOLIDGE
SLATE MTN
MT BUNTING
CANTU MTN
MT SHORTY STEVENSON
Premier
MINERAL HILL
ORE MTN
Ninemile
NINEMILE MTN
MT WELKER
Mount Dic
Sulphurets Property
Location Map


104B/9W
104B/9E
104B/8W
SNOW
ICE 1
2411
IRON CAP 4
2409
IRON CAP 5
2410
IRON CAP I
IRON CAP II
IRON CAP III
TEDRAY 3
155(8)
XRAY 3
1863 (10)
XRAY 2
1862 (10)
XRAY 1
1861(10)
Mitchell
Glacier
XRAY 4
1864 (10)
XRAY 5
1865(10)
ICE 2
2412
XRAY 6
1866 (10)
XRAY 7
1867 (10)
XRAY 8
1868(10)
XRAY 9
1869(10)
TEDRAY 6
158(8)
TEDRAY 7
159(8)
ED 1
150(8)
ED 2
151(8)
TEDRAY 9
161(8)
TEDRAY 11
163(8)
TEDRAY 12
164(8)
TEDRAY 13
165(8)
TEDRAY H
2413
A D 7805
6255'
IRON
RED
RIVER
314 (9)
Sulphurets Glacier
Sulphurets Property
Claim Map
104 B/9W
56° 27'
130° 18'
130° 10'
Miles 1 .5 0 1 2 Miles
Metres 1000 500 0 1000 2000 3000 Metres
Kilometres 1 .5 0 1 2 3 Kilometres

WP-6275A

IMPERIAL OIL LIMITED

MINERALS SECTION

DRILL LOG

PROJECT: SULPHURETS	GROUND ELEV.: 3430' 1045 m
HOLE NO.: DDH # 9	BEARING: ~150° Az
LOCATION: MOLY ZONE ICE EDGE, NEAR SAMPLE MB 22	DIP: -60°
	TOTAL LENGTH: 210 meters
LOGGED BY: MORLEY G. BROWN	HORIZONTAL PROJECT
DATE	VERTICAL PROJECT
CONTRACTOR: ARTIC DIAMOND DRILLING	ALTERATION SCALE
CORE SIZE: BQ	
DATE STARTED: MOBILIZATION JULY 11 - JULY 18; 1980 BEGAN DRILLING JULY 19th	
DATE COMPLETED: JULY 23 = 2:30 PM	TOTAL SULPHIDE SCALE

absent
slight
moderate
intense

traces only
< 1%
1% – 3%
3% – 10%
> 10%

DIP TESTS	19.5m	44.96	75.44	105.92	145.54	175.87	206.5
	47.5'	147.5'	247.5'	347.5'	477.5'	577'	677.5'
DIP	61.5	64.6	64.5	55.3	47.2	43.2	40.2'
BEARING	149.5	150.0	133.0	134.5	142.0	152.0	153.5

COMMENTS

LEGEND

WP-6275B

PAGE 2 OF 15 | PROJECT: | HOLE NO. 9

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				0.0 - OVERBURDEN	
				3.2 - 42.0 QTZ-SERICITE Schist	
				PROBABLY DERIVED FROM QTZ ARENITE	
				- LIGHT TO MEDIUM GREY TO LIGHT GREENISH GREY	
				- WELL FOLIATED, FISSILE	
5				- MINOR QTZ VEINS, GENERALLY PARALLEL TO FOLIATION	
				- MINOR GRAPHITE NOTED ALONG FOLIATN AND FRACTURE PLANES	
			Fr 20°	- TWO PERIODS IN QTZ VEINS - CROSS CUTTING AND // FOLIAT.N	
				CROSS CUTTING WHITE, GENERALLY FRESHER	
				5.2 - 6.1 FRACTURED CORE (POSSIBLE LOSS OF CORE ?)	
				- RUBBY, BROWN - EXTENSIVELY ALTERED AND LEACHED	
				- PYRITE ALTERED TO HEMATITE - DIFFUSIVE FE STAINING	
				8.80 - 9.14 - FRACTURED CORE -	
10				- WELL LEACHED SERICITIZED	
			Fr 10°	11.3 - 11.5 - FRACTURE @ 10° TO CA.	
			Fr 2°	18.50 - 17.5 - FRACTURE	
				- 2 cm wide UPTO 3cm IN LOCAL HORIZONS	
				- INFILLED WITH HEMATITE - VUGGY	
			Fl 20°		
15					
			Fl 21°		
			Fr 60°	18.25 - 18.26 FRACTURE - HEMATITE FILLED	
			Fr 60°	18.30 - 18.32 (?) FRACTURE POSSIBLE CORE LOSS	
				- HEMATITE STAINED - OPPOSITE TO ABOVE FRACTURE DIRECTN	
				- MINOR LIMONITE	
			Fr 21°	18.47 - 18.72 - FRACTURE	
				- MINOR LIMONITE & HEMATITE	
20			Fr 61°	20.90 - 20.83 - FRACTURE	
				- HEMATITE, LIMONITE STAINED	
			Fl 20°		
			Fr 80°	22.30 - 22.51 - FRACTURE - MINOR CORE LOSS ?	
				- LIMONITE, HEMATITE STAINED	
			Fr 25°	23.42 - 23.49 - FRACTURE	
				- LIMONITE - HEMATITE STAINED - POSSIBLE CORE LOSS ?	
			Fl 25°	23.60 - 23.65 - FRACTURE 42° to C.A.	
				23.87 - 24.13 - FRACTURED / BLOCKY CORE	
25			Fr 44°	24.15 - 24.18 - FRACTURE } LIMONITE HEMATITE STAINED	
				24.20 - 24.24 - FRACTURE }	
			Fr 10°	24.47 - 24.66 - FRACTURE - WELL DEFINED NEAR // FOLIATN	
				- WELL SERICITIZED, HEMATITE - LIMONITE	
	Qtz 15°		Fl 25°	25.92 - 25.97 - QTZ VEIN = 1cm THICK	
	Qtz 45°			26.19 - 26.25 QTZ VEIN 1-2cm WIDE	
				27.49 - 27.60 FRACTURE	
			Fr 60°	27.70 - 27.73 FRACTURE - 5-10° TO CA - HEMATITE STAINED	
				28.30 - 29.10 FRACTURE - < = 0-10° TO C.A SERICITIZED, CLAY FILLED	
				POSSIBLE CORE LOSS	

WP-6275C

PAGE 3 OF 15 | PROJECT: | HOLE NO. 9

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	% Mo	oz/ton Au	oz/ton Ag	COMPOSITE ASSAYS
3.2 - PYRITE - DISSEMINATED THROUHOUT AV = 5-7% - LOCALLY UP TO 20-25% WITHIN QTZ VEINS PARALLEL TO FOLIATION		6.0	3.0	0079 NO LOSS			.006	.005	.01	
8.80 - 9.14 - FRACTURE ZONE WITH TRACE MOLY		9.0	3.0	0080 NO LOSS			.020	.069	.01	
12.50 - 17.50 FRACTURE ZONE WITH EXTENSIVE HEMATITE, 10 TO 15% PYRITE TR MOLY		12.0	3.0	0081 NO LOSS			.007	.015	.01	
		15.0	3.0	0082 1.1m LOSS			.015	.003	.02	
		18.0	3.0	0083 1.1m LOSS			.009	.006	.03	
		21.0	3.0	0084 NO LOSS			.005	.007	.01	
		24.0	3.0	0086 NO LOSS			.006	.006	.02	
25.98 - 25.97 - QTZ VEIN, YOUNG, WITH 15% PYRITE NO MOLY		27.0	3.0	0086 0.39 LOST			.009	.002	.01	
		30.0								

WP-6275B

PAGE 4 OF 15 | PROJECT: | HOLE NO. 9

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
			Fr 0°	29.37-29.57 : FRACTURE, LIMONITE HEMATITE STAINED - POSSIBLE CORE LOSS	
				30.07-30.37 : FRACTURE, BLOCKY - BROKEN CORE & UNDISCERNABLE	
		QTZ 46°	Fl 20°	31.82 : QTZ VEIN < 1cm THICK CROSS CUTTING 40° TO C.A	
		QTZ 21°		31.92 : QTZ VEIN < 1cm THICK // FOLIATION	
			Fl 20°	34.37 : QTZ VEIN - // FOLIATION < 1.0 - 1.0cm THICK	
		10° QTZ 21°		34.97 : QTZ VEIN - PARTLY CROSS CUTTING PARTLY // TO FOLIATION	
35		QTZ 20°	Fl 20°	36.40 - 36.58 : QTZ VEIN // FOLIATION < 1cm THICK, INTERCOLLATED WITH QTZ SERICITE SCHIST	
		QTZ 20°		36.87 - 37.37 : QTZ VEINING, INTERCOLLATED WITH QTZ SERICITE SCHIST // FOLIATION	
		QTZ 20°	Fl 20°	38.71 : QTZ VEIN // FOLIATION } BOTH < 1cm WITH GOOD PYRITE MIN.	
				38.91 : QTZ VEIN // FOLIATION }	
		QTZ 35°		39.21 : QTZ VEIN ⊥ TO C.A. - WHITE "FRUSH" VEIN	
			Fr 28°	39.95 - 39.98 : FRACTURE 28° MINOR LIMONITE HEMATITE	
40			Fl 21°	41.56 - 42.16 : QTZ VEINING, INTERCOLLATED WITH QTZ SERICITE SCHIST - VEIN THICKNESS < 10cm	
				CORE FRACTURED AND RUBBLY POSSIBLE SECTION OF LOSS ≈0.11m.	
				* 42.00 - 77.5 QTZ SERICITE SCHIST	
				- AS ABOVE BUT CONTAINS MORE INTERCOLLATED QTZ VEINS ; PYRITE CONTENT INCREASED	
			Fr 13°	42.75 - 42.81 - FRACTURE, HEMATITE LIMONITE STAINED	
45		QTZ 21°		45.81 : QTZ VEIN CROSS CUTTING, WHITE, COARSE GR. - GOOD PYRITE < 1cm THICK	
		QTZ 21°	Fr 60°	46.31 - 46.38 : FRACTURE - LIMONITE AND HEMATITE STAINED/CORE LOSS	
				46.60 - 46.62 : QTZ VEIN // FOLIATION	
		QTZ 83 QTZ 81	Fl 20°	47.50 : QTZ VEIN - WHITE IRREGULAR - CROSS CUTTING	
				47.55 : QTZ VEIN - WHITE // FOLIATION - 1cm THICK	
				48.38 - 48.45 : FRACTURE < ? - RUBBLY CORE POSSIBLE LOSS	
			K?	49.10 - 50.80 EXTREMELY FRACTURED AND RUBBLY CORE - WELL SERICITIZED WITH NUMEROUS "MUD SEAMS"? LOST CORE	
50			S	50.90 : QTZ VEIN - IRREGULAR SUB // TO FOLIATION	
			S	50.95 * 51.50 BLOCKY CORE FOLIATION STILL DISCERNABLE	
			S Sl?	MINOR QTZ VEINS // TO FOLIATION	
			S Sl?	51.50 - 56.35 EXTREMELY FRACTURED AND RUBBLY CORE ZONE COMPLETELY SERICITIZED WITH WELL	
			S	DEVELOPED "MUD SEAMS" EASILY CRUMBLED	
			S	BY HAND. FOLIATION DISCERNABLE ALONG	
			Fl 20	SOME FRAGMENTED BLOCKS. SOME	
55			S	QTZ VEINS PRESERVED BUT LOCATION, RELATION	
			S	AND SIZE NOT DISCERNABLE	
			Sl?	56.45 - 56.56 : FRACTURED - NO CORE ONLY MINOR MUD	
				57.01 - 57.58(?) FRACTURED AND RUBBLY CORE - AREA OF LOST CORE	
				58.0 - 60.0 ? FRACTURED AND RUBBLY CORE . MINOR HEMATITE AND LIMONITE STAINING, < ? FOLIATION	
				DISCERNABLE ON SMALL BLOCKS	

WP-6275C

PAGE 5 OF 15 | PROJECT: | HOLE NO. 9

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	% Mo	oz/ton Au	oz/ton Ag	COMPOSITE ASSAYS
31.82 - QTZ VEIN, GOOD PYRITE CONTENT 15-20%			3.0	0087 0.11 LOSS			.003	.007	.01	
		33								
34.37 QTZ VEIN, VERY GOOD PYRITE 20-25% - WITHIN 1 AROUND QTZ			3.0	0088 0.13 LOST			.003	.003	.01	
36.40 - 36.58 PYRITE IN ASSOCIATION WITH QTZ VEINING 15-20%		36								
36.87 - 37.37 : PYRITE MINERALIZATION 15-20% WITH QTZ VEIN			3.0	0089 NO LOSS			.015	.002	.01	
39.21 : PYRITE 20-25% IN ASSOCIATION WITH QTZ VEIN		39								
41.56 - 42.16 PYRITE 15-20% TRACE MOLY IN ASSOCIATION WITH QTZ - FOLIATION RELATIONSHIP NOT DISCERNABLE.			3.0	0090 NO LOSS			.003	.002	.01	
12.00 PYRITE CONTENT INCREASE TO AVERAGE 20%		42								
			3.0	0091 0.10 LOST			.003	.002	.01	
		45								
46.60 - 46.61 - QTZ VEIN WITH TRACE MOLY			3.0	0092 NO LOSS			.004	.001	.01	
		48								
50.90 - QTZ VEIN GOOD PYRITE - TRACE MOLY ALONG FOLIATION PL.			3.0	0093 0.50 LOST			.003	.002	.02	
		51								
TRACE MOLY ALONG FOLIATION PLANES			3.0	0094 0.40 LOST			.003	.001	.02	
		54								
			3.0	0095 2.2 M LOST			.005	.003	.02	
TRACE MOLY ALONG FOLIATION PLANE		57								
			3.0	0096 0.7 LOST			.003	.003	.02	

WP-6275B

PAGE 6 OF 15 | PROJECT: | HOLE NO. 9

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				60.40 - 63.42 : FRACTURE - RUBBLY + BROKEN/FRAGMENTED MUDSEAMS, < UNRECOVERABLE LOST CORE	
				QTZ VEIN WITHIN SMALL FRAGMENT; RELATION THICKNESS AND EXTENT ?	
				64.12? - 64.62 : FRACTURE LOST CORE AS ABOVE.	
			Fl 80	64.62 - 66.45 : BLOCKY CORE	
65					
			Fr 39	66.75 - FRACTURE LIMONITE - HEMATITE STAINED SUB// TO FOLIATION 39°	
			A 20°		
		QTZ 36°		67.10 ? QTZ VEIN SUB// FOLIATION	
		QTZ 29	A 20°	70.18 QTZ VEIN // FOLIATION	
70		QTZ		71.40 - QTZ VEINS ONE // FOLIATION ONE CROSS CUTTING @ 29 } <1cm 71.45 QTZ VEIN SUBPARELLEL AND IRREGULAR TO FOLIATION }	
		QTZ 60°	Fr 10°	72.0 - QTZ VEINS CROSS CUTTING FOLIATION < 1cm THICK 72.5 - QTZ VEIN CROSS CUTTING @ 5° TO C.A 1.5cm THICK	
		QTZ 15°	Fl 20°	73.5 - FRACTURE - HIGHLY SERICITIZED - SUB // FOLIATION @ 19°	
			F 20	74.5 - 2 QTZ VEINS ONE SUB// TO FOLIATION - ONE CROSS CUTTING	
				75.4 ± ? - ? FRACTURED CORE - FRAGMENTED - < ? POSSIBLE LOSS OF 0.25 m CORE.	
75			F 20		
			F 20	77.5 - 78.0? FRACTURE - ROCK SOFT AND WELL SERICITIZED (LOST CORE)	
				78.6 - ? FRACTURE - END DRILL RUN - LOST CORE - FRAGMENTED RX.	
			Fr	78.6 - 80.1 - FOLIATION DISPLAYS SLIGHT FOLDING -	
			F 21		
80				79.8 - 81.0 FRACTURE - BROKEN + FRAGMENTED CORE < 10° TO C.A. SUB// FOLIATION - MINOR LIMONITE	
			F 22	81.15 - 81.75 FRACTURE - AS ABOVE - WELL SERICITIZED - CORE LOSS	
				* 77.5 - 93.5 - QTZO - FELSPATHIC UNIT - GRADATIONAL CONTACT - FOLIATION INTENSITY DIMINISHING - LESS QTZ VEINING NOTED, ROCK DISPLAYS MORE COMPETENCY (LESS CRUMBLY AND SOFT HORIZONS). FRACTURES NARROWER WITH LITTLE OR NO HEMATITE +/OR LIMONITE	
			F 22		
85					
			F 22	84.55 - 85.67 FRACTURE - WELL SERICITIZED, FRAGMENTED CORE + "MUD" SEAMS 0.65 meters WIDE. LOSS CORE.	
			F 23	87.0 - 93.45 - BLOCKY CORE DRILL RUNS SHORT - NUMEROUS FRACTURES WHERE CORE IS FRAGMENTED. GENERALLY SUB// TO FOLIATIONS.	
			24°		

WP-6275C

PAGE 7 OF 15 | PROJECT: | HOLE NO. 9

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	% Mo	oz/ton Au	oz/ton Ag	COMPOSITE ASSAYS
			3.0	0097 2.2 m LOST			.003	.009	.02	
		63								
			3.0	0098 0.65 LOST			.002	.013	.02	
		66								
TRACE MOLY ALONG FOLIATION PLANES			3.0	0099 0.K LOST			.005	.008	.01	
		69								
			3.0	00100 2.07 LOST			.003	.006	.01	
72.5 V.G. PYRITE MIN. IN ASSOCIATION WITH QTZ VEIN		72								
			3.0	4951 NO LOSS			.003	.008	.01	
		75								
77.5 PYRITE CONTENT DECREASED TO 10-15% AV. QTZ VEINS LESS PREVOLENT			3.0	4952 NO LOSS			.002	.006	.01	
		78								
			3.0	4953 0.24 LOSS			.002	.027	.01	
		81								
			3.0	4954 NO LOSS			.002	.009	.01	
		84								
			3.0	4955 0.43 LOSS			.003	.012	.01	
		87								
			3.0	4956 0.62			.003	.003	.01	

WP-6275B

PAGE 8 OF 15 | PROJECT: | HOLE NO. 9

DEPTH (METRES)	%Core Recv	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
			F.25		
			F.25		
				* 93.50 - 137.12 QTZO-FELOSPATHIC UNIT	
				- LIKE SECTION 77.5-93.5 BUT CORE NOT BLOCHY OR FRAGMENTED. WELL CORED WITH NO NOTABLE FRACTURES. FOLIATION INCREASING WITH DEPTH NO QTZ VEINS, PYRITE CONTENT 5-10% SLIGHTLY LESS THAN ABOVE SECTION	
95			F.25		
			F.25		
		QTZ VEIN		97.01 - 97.05 QTZ VEIN - WHITE, COARSE GRAINED WITH NO VISIBLE MINERALIZATION ASSOCIATED (CLEAN) 1-2cm WIDE, RANDOMLY X CUTTING.	
100			F.30		
			F.38		
105					
			F.45		
110			F.45		
			F.30		
115					
			F.25		

WP-6275C

PAGE 9 OF 15 | PROJECT: | HOLE NO. 9

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	% Mo	oz/T Au	Ag	COMPOSITE ASSAYS
93.50 - 137.12			3.0	4957 NO LOSS			.002	.008	.01	
PYRITE CONTENT REMAINING		93								
FAIRLY CONSTANT @ 10-15%.			3.0	4958 NO LOSS			.001	.009	.01	
DISSEMINATED THROUGHOUT ROCK										
INCREASED TO 20% AND BETTER		96								
IN AND AROUND QTZ VEINS			3.0	4959 NO LOSS			.002	.010	.01	
		99								
			3.0	4960 NO LOSS			.003	.003	.01	
		102								
			3.0	4961 NO LOSS			.002	.007	.01	
		105								
			3.0	4962 NO. LOSS			.002	.002	.01	
		108								
			3.0	4963 NO LOSS			.004	.003	.01	
		111								
			3.0	4964 NO LOSS			.002	.002	.01	
		114								
			3.0	4965 NO. LOSS			.001	.008	.02	
		117								
			3.0	4966 NO. LOSS			.002	.003	.02	

WP-6275B

PAGE 10 OF 15 | PROJECT: | HOLE NO. 9

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				126.05 QTZ VEIN // FOLIATION - PYRITE ≈ 25%, < 1cm THICK CHLORITE ALTERATION ALONG FLANKS	
		QTZ			
			F1=36		
125			F1=60	127.25 - 128.23 FRACTURE - SHEAR: ROCK IS WELL SERICITIZED & EASILY CRUMBLED BY HAND - CORE WELL RECOVERED; NO LOSS	
			F1=60		
			F3=65		
			F1 65°		
			60°F1		
130			F=55	132.81 - ? FRACTURE, < ? - RUBBLY CORE, WELL SERICITIZED AND CRUMBLY - POSSIBLE LOSS OF 0.55m.	
			F=55		
			F=32		
135		QTZ		136.80 QTZ VEIN - GOOD PYRITE, CHLORITE ALTERATION ALONG EDGE X CUTTING @ 60°	
		QTZ	F1 53	137 - 154.0 QTZO - FELDSPATIC UNIT	
			53° F1	AS ABOVE - QTZ VEINING MORE PROLIFIC, PYRITE CONTENT SLIGHTLY MORE INCREASED	
140				TEXTURALLY ROCK IS STILL THE SAME AND STILL COMPETANT (EXCEPT ALONG FRACTURES	
		QTZ		137.05 QTZ VEIN // FOLIATION - CLEAN (NO MINERALIZATION) SLIGHTLY CHLORITIC ALONG EDGE	
				137.5 - 137.55 FRACTURE SHEAR - WELL SERICITIZED // FOLIATION	
				139.85 - 139.61 SHEAR // FOLIATION (SCHISTOSITY) - CORE IS VERY FRIABLE - EASILY BROKEN BY HAND	
		QTZ		WELL SERICITIZED - PYRITE CONTENT CONSISTANT	
				140.20 - 140.25 FRACTURE // SCHISTOSITY	
145				140.80 - 141.05 QTZ VEINING, CLEAN WHITE, CHLORITIC ALTERATION ALONG EXTREMITIES. IRREGULAR (OR) MIGMATITIC IN APPEARANCE. - MAY OR MAY NOT // FOLIATION	
				141.20 - 142.15 - BROKEN AND BLOCKY CORE, FRACTURED WITH MUD (SERICITE) INFILL. MORE RESISTANT QTZ VEINS BRECCIATED.	
				143.70 - 143.90 - QTZ VEINS - IRREGULAR (MIGMATITIC?)	
				144.15 "2" QTZ VEINS < 1cm wide X cutting @ 80° & 75°	
				144.50 QTZ VEIN - PYRITE RICH X cutting @ 25°	

WP-6275C

PAGE 11 OF 15 | PROJECT: | HOLE NO. 9

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	% Mo	oz/t Au	oz/t Ag	COMPOSITE ASSAYS
			3.0	4967 NO LOSS			.003	.002	.01	
		123								
			3.0	4968 NO LOSS			.002	.002	.01	
		126								
127.25 - 128.23 - SHEAR, PYRITE CONTENT ± 15 %			3.0	4969 NO LOSS			.002	.005	.01	
		129								
			3.0	4970 NO LOSS			.002	.006	.01	
		132								
			3.0	4971 0.35 LOSS			.002	.007	.01	
		135								
137.0 - PYRITE CONTENT SLIGHTLY INCREASED TO AT 15-20%			3.0	4972 NO LOSS			.001	.007	.01	
		138								
			3.0	4973 NO LOSS			.002	.003	.01	
138.86 - 139.51 SHEAR PYRITE ± 15%										
		141								
			3.0	4975 NO LOSS			.001	.008	.02	
		144								
			3.0	4976 NO LOSS			.001	.004	.01	
		147								
			3.0	4977 NO LOSS			.001	.009	.01	

WP-6275B

PAGE 12 OF 15 | PROJECT: | HOLE NO. 9

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
		Fl=35		149.0 QTZ VEINS < 1cm THICK, VG PYRITE CONTENT SUB // FOLIATION	
				149.35 · QTZ VEIN // FOLIATION @ 55° < 1cm THICK	
				149.56 QTZ VEIN SUB // FOLIATION	
				150.05 QTZ VEIN BOTH CROSS CUTTING AND // FOLIATION VG PYRITE	
				151.0 - 151.25 QTZ VEINS // FOLIATION VG. PYRITE	
				153.0 - 153.15 LARGE IRREGULARLY CROSS CUTTING QTZ VEIN. EXTENSIVE SERICITE CHLORITE ALTERATION ON EITHER SIDE.	
155					
		Fl=35	*	154 - 172m QTZ SERICITE SCHIST - as above - FOLIATION NOT AS well developed - WEAK at 55° - QTZ veining not as prolific as above section but still evident (DENSITY OF ≈ 6-8 vein°/m) - ALL ≤ 1cm width and vary FROM X cutting, sub // to // WEAK foliation.	
		Fl=35			
		Fl=35			
160					
		56 Fl			
		Fl=55			
165					
		B=55			
				168.48 - 168.54 FRACTURE "ZONE" NOT DISCERNABLE - WELL SERICITIZED CORE POWDERY "(AS PER MUDDY)	
		Fl=65			
170					
			*	172.0 - 206.86 QUARTZO-FELDSPATHIC UNIT	
				- INTERCOLLATED HORIZONS OF SERICITIC SCHIST ROCK - VARYING FROM < 0.05 - < 0.70 meters IN WIDTH. CONTACTS GRADATIONAL REFLECTING VARING DEGREES IN ALTERATION	
175				- FOLIATION BETTER DEVELOPED IN VERY SERICITIC HORIZON AND LESS SO IN FELDSPATHIC HORIZONS	
				- SERICITE ALTERATION FORMS IRREGULAR PATTERNS ACCORDING TO ALTERATION INTENSITY OUTLINING A "MARBLY" TEXTURE TO CORE. - MASKS FOLIATION	
				- QTZ VEINING IS PROLIFIC AS CROSS CUTTING NETWORKS, // to SUB // TO FOLIATION AND (AS MORE COMMON) IN THE FORM OF IRREGULAR PATCHWORKS FURTHUR ADDING TO THE "MARBLY" APPEARANCE OF THE ROCK.	
				- CHLORITE ALTERATION AROUND QTZ VEINS ALONG FOLIATION	

WP-6275C

PAGE 13 OF 15 | PROJECT: | HOLE NO. 9

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	% Mo	oz/TN Au	oz/TN Ag	COMPOSITE ASSAYS
			3.0	4978 NO LOSS			.002	.006	.01	
		153								
154-172 - PYRITE CONTENT CONSISTANT AT 15-20% DECREASING GRADATIONALLY NEAR MORE SERICITIC SECTIONS @ 172 meters			3.0	4979 NO LOSS			.001	.008	.01	
		156								
			3.0	4980 NO LOSS			.002	.002	.01	
		159								
			3.0	4981 NO LOSS			.003	.002	.01	
		162								
			3.0	4982 NO LOSS			.001	.001	.01	
		165								
			3.0	4983 NO LOSS			.001	.002	.01	
		168								
			3.0	4984 NO LOSS			.002	.001	.01	
		171								
172 - 206.86 PYRITE CONTENT DECREASED SLIGHTLY TO 5-10% WITHIN SERICITIC HORIZONS AND CONSISTANT BETWEEN 10-15% WITHIN LESS ALTERED QTZ SERICITE HORIZONS. VARY RARELY >15% EXCEPT WITHIN SOME QTZ VEINS			3.0	4985 NO LOSS			.001	.002	.04	
		174								
			3.0	4986 NO LOSS			.002	.002	.04	
		177								
			3.0	4987 NO LOSS			.002	.002	.01	

WP-6275B

PAGE 14 OF 15	PROJECT:	HOLE NO. 9

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
185			65		
			65 F1		
				194.60 – 194.77 QTZ VEIN, CLEAN, WHITE, NO PYRITE CHLORITIC ALTERATION ALONG AND WITHIN.	
190			55 F1		
			55 F1		
195					
200				206.66 – 210.00 QTZ SERICITE SCHIST LIKE SECTION 154.0 + 178.0	
			F1:55	- PYRITE CONTENT INCREASED.	
			F1:55	206.66 – 207.18 – SHEAR – CORE EXTENSIVELY SERICITIZED. SOFT & CRUMBLY.	
			F1:55		
205					
				210 – END HOLE	

WP-6275C

PAGE 15 OF 15 | PROJECT: | HOLE NO. 9

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	% Mo	oz/tn Au	oz/tn Ag	COMPOSITE ASSAYS
			3.0	4988 NO LOSS			.002	.002	.03	
		183								
			3.0	4989 NO LOSS			.002	.002	.01	
		186								
			3.0	4990 NO LOSS			.002	.002	.01	
		189								
			3.0	4991 NO LOSS			.001	.003	.01	
		192								
			3.0	4992 NO LOSS			.05	.008	.05	
		195								
			3.0	4993 NO LOSS			.002	.002	.01	
		198								
			3.0	4994 NO LOSS			.002	.002	.02	
		201								
			3.0	4995 NO LOSS			.003	.001	.03	
		204								
206 - 210 PYRITE CONTENT INCREASED TO 15-20%			3.0	4996 NO LOSS			.082	.003	.02	
		207								
			3.0	4997 NO LOSS			.002	.002	.01	

WP-6275A

IMPERIAL OIL LIMITED

MINERALS SECTION

DRILL LOG

PROJECT: Sulphurets 2153	GROUND ELEV.: 4825 Ft 1471m
HOLE NO.: 10	BEARING: 105°
LOCATION: Iron Cap Area 26 metres west of Granduc Trench 4 on a bearing of 290°	DIP: -55
	TOTAL LENGTH: 169.77
LOGGED BY: L. J. Ferguson Geologist Esso Minerals	HORIZONTAL PROJECT
DATE: July 31/80	VERTICAL PROJECT
CONTRACTOR: Arctic	ALTERATION SCALE: absent, slight, moderate, intense
CORE SIZE: BQ	
DATE STARTED: July 24 Drill move July 27; 11 AM approx	TOTAL SULPHIDE SCALE: traces only, < 1%, 1% – 3%, 3% – 10%, > 10%
DATE COMPLETED: July 30; 8 AM	

DIP TESTS

	17m	45m	75m	106m	136m	167m
Dip	-54.7	-55	-55	-54	-53	-51.3
Bearing	105.5	106.5	105	104.5	110.5	101.5

COMMENTS

[redacted]
Low Assays throughout

LEGEND

WP-6275B

PAGE 2 OF 13 | PROJECT: | HOLE NO. 10

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
			Overburden	0 - 1.89	
			Boulders	1.89 - 2.52 (cored)	
			Altered sediment	Grey to greyish grn, fine to medium grained qtz-feldspathic unit; silicified, pyritized, weakly sericitized; local weak chloritization, typically lacks fabric, relict sedimentary debris common, (clastic crystals); differential alteration common, results in irregular patterns of zonations,	
5				3.31 - qtz-calcite vein (1cm)	
				erratic qtz-py fracture fillings; clots common	
				5.79 - pale brown disseminated sericite scattered circular & ovoid structures with zoned alteration (qtz, py)	
			60°/ft fracture (conglomerate)	8 - 8.8 : oxidized shear with limonite	
				8.9 - 9.3 : green sericitic clasts up to 5cm	
			± 1°/ft vein fractures	9.9 - 10.4 : irregular fracture subparallel - oxidized	
10			60°/ft qtz-py zone		
			30°/ft alteration layering	11.34 - 12.05 : irregular patchwork zone of varying alteration (qtz-rich throughout) - sericitic (grey) & pyrite-sericite-chlorite? (dark grey)	
				12.90 small porphyry clasts	
				13-17 : chlorite as interstitial & clast replacement material probably chloritic 13-17	
				13.03 - qtz-py replaced cephalopod?	
15			(conglomerate)	14 - 14.6 : pebbly structure preserved	
				18.3 - 20.0 : alteration intensity & types results in patchwork & locally layered (vein?) pattern (as for 11.34 - 12.05)	Siliceous, Sericitic Patchwork? 18 - 20
20					
				21.5 - 21.7 : brecciated host, infilled by py-qtz and minor calcite	
				21.95 - 22.05 : as for 21.5 - 21.7	
25				25.2 - 169.77 white qtz veinlets & fracture fillings common; mostly 5 to 10/metre.	
				≈ 25.2 - 30.3 : fine grained siliceous alteration with disseminated grained py & scatter, sericitic alteration spots.	Highly Silicified 25.2 - 30.3
			55°/ft foliation	28.87 - 29.27 : fault zone; breccia with loose debris and mud seams.	

WP-6275C

PAGE 3 OF 13 | PROJECT: | HOLE NO. 10

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	~~%~~ g/Ton Ag	~~%~~ g/Ton Au	%			COMPOSITE ASSAYS
Pyrite, only sulphide except where noted; Variable 1-10%, fine grained disseminated, frequently in small clots & clusters, and also fractures.		-2.52	1.75	1326	.06	.002				
3.81 - cpy grain in Qtz veinlet	5%	-4.27								
4.62 - oxidized py-rich zone 1cm wide (shear?)			3.05	1327	.05	.002				
7.1 : small dark patches of very fine grained pyrite	2-3%	-7.32								
8.0 : fine py stringers & 4-5 several 1mm wide (<1cm) f. to m.g. pyrite fractures			3.04	1328	.11	.008				
9.0 : limonitic py; several py-bearing fractures										
9.32 : 1cm vein of white to dark grey pyrite										
10.84 : 1cm py-qtz zone 65° c/A	1%	-10.36								
			3.05	1329	.02	.005				
	2-3%									
		-13.41								
	1-2%		3.05 (93% recvy)	1330	.06	.007				
		-16.46								
17.06-19.11 : scattered white to dark qtz veinlets; steep visible angle to c/A.	5%	-19.51	3.05	1331	.05	.018				
20.59 : 4cm structure - core of cpy py surrounded by white qtz			3.06	1332	.06	.009				
	2-3%									
		-23.47		~~1335~~						
			3.05	1333	.07	.003				
	2-3%									
		-26.52								
			3.05	1334	.40	.011				
	3-5%	-29.57								

WP-6275B

PAGE 4 OF 13 | PROJECT: | HOLE NO. 10

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
30			(Conglomeratic)	30.3-33.5: fine grained grey to dark grey altn; gradational upper contact? Variable clasts up to 3cm white feldspars common; scattered chloritized-pyritized clasts	
				33.5-33.78 = oxidized fracture subparallel c/A.	
				34.1 = blue qtz grains up to ½ cm	
35					
			25°c/A lower vein contact	37.19-37.91: grey, cherty zone sharp lower contact; diffuse upper contact; sericitic fractures; probable vein	highly silicified 37, 39.4
				38.31-39.11: as for 37.19-37.91; badly fractured & highly oxidized; uncommon py veinlets	
				39.11-41.76: highly silicified, fractured - oxidation & limonite; may include introduced qtz; gradational upper & lower boundaries	
40				39.50-39.71: brecciated zone	
				42.1-42.4: small feldspars common 42.43-42.83 bleached silicified zone with limonitic	
			30°c/A (Bedded layering sedimentary)	fractures; gradational contacts 43.30: ½ cm layering - grains sericite & chlorite f.g.	
			locally conglomeratic	more siliceous layers, primary layering? 43.7-44.1: as for 43.30; primary sedimentary layering	
45				44.5-56: abundant clastic debris - mostly qtz & rock fragments	
				45.61-46.01: white bleached, silicified zone with limonitic fractures	
				48-49.61: variable bleached to grey & white colours, several limonitic fractures	
				49.61-51.71: milky white to glassy grey qtz vein; broken core in contact areas; local fractures;	qtz vein 49.61-51.71
50				local sulphate; white & grey qtz - gradational & 2 separate phases	
			50°c/A veinlets	51.71-51.90: qtz-py veinlets with host	
				53.04-53.26: intrusive breccia (qtz in host sediment)	
55				55: silicified, pyritized clasts in slightly sericitic, qtz-feldspathic clastic host; clasts up to 4 cm, clast & host very similar appearance	
			35°c/A qtz vein	55.36-55.50: oxidized fracture zone; limonite clays	
			50°c/A Tuff	55.58: 3 cm qtz vein 55.78: 2 cm sericitized volcanic tuff layer? with altered shards?	
			Volcaniclastic	56.1-57.1: distinctive unit of interbedded sediments & tuffaceous layers; latter with pale green, sericitic shards & feldspars	
			Bedding? 50-60°c/A	57.1-59.5: conglomeratic or volcaniclastic	

WP-6275C

PAGE 5 OF 13 | PROJECT: | HOLE NO. 10

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	% Au g/t	% Au oz/t	%			COMPOSITE ASSAYS
			3.05	1335	.12	.004				
		-32.61								
			3.05	1336	.12	.003				
35.26 ½ cm py vein	5-8%	-35.66								
			2.05	1337	.08	.003				
py content higher above + near qtz vein (5-10%); 38.21-40.23 minor to trace py only		-38.21	0.40	1338	.08	.009				
		-38.71	0.40	1339	.09	.003				
		-39.11								
40.23-41.76: py gives unit a ttgd appearance; may be slight altn halos around py		-41.76	2.65	1340	.06	.003				
			3.05	1341	.06	.006				
44.01 2cm qtz-py vein at 60°c/r	3-5%	-44.81								
			3							
			3.05	1342	.09	.009				
		-47.86								
48.99-50.99: 20-25% py rite			1.75	1343	.12	.007				
49.61-51.71 - qtz vein with py; py in greyish qtz; erratic distribution as veinlets + patches in vein	5%	-49.61	1.30	1344	.20	.019				
		-50.91								
		-51.71	0.80	1345	.21	.010				
			2.05	1346 (92% recvy)	.11	.007				
		-53.96								
			2.12	1347 (92% recvy)	.07	.003				
56.1-60.5: overall higher py content; average 5-10% py with frequent patches + zones of up to 25%		-56.08	0.93	1348	.07	.006				
		-57.01								
			2.13	1349	.10	.016				
59.5-59.75: 10-15% py interstitial to sericitized volcanic debris		-59.13	2.92	1350	.10	.008				

WP-6275B

PAGE 6 OF 13 | PROJECT: | HOLE NO. 10

DEPTH (METRES)	%Core Recv	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
60				56.5-59.75 : as for 56.1-57.1	
				Altered sediment	
65				64.7 : cellular alteration structures with chl-py-qtz cores surrounded by qtz-sericitic rims 65.3-65.8 : broken, sericitic fracture zone	
				68.65-68.76 : Qtz zone with chl+py marginal to qtz	
70				70.49-73.44 : lighter grey & finer grained & more siliceous than overlying material; also some slightly chloritized-sericitized material present 70.76-71.25 : fractured & broken	Highly Silicified 70-73
				73.44-80.05 : extremely siliceous, light grey to white, relict blue to white silicified clasts vague; gradational upper contact; ill-defined lower contact.	Highly silicified 73-80
75					
				77.7-78.13 : broken core; py in abundant small clusters; host is grey & glassy as around py (leaching effect?)	
			60° c/a Foliation	78.6 - broken core	
				79.33-79.66 : broken core	
80				80.05-80.65 : broken core, sericitic, limonitic	Mixed very siliceous & Siliceous 80-101
				80.05-101.49 : very siliceous to siliceous silt; mixture of both with no apparent contacts; very siliceous zones are less pyritic (<1%).	
				82.7-83.1 : some green sericite associated with qtz veining	
85					
			60° c/a foliation	88.7 : brown sericite or clay in qtz veinlet; also possible zeolite	

WP-6275C

PAGE 7 OF 13 | PROJECT: | HOLE NO. 10

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	oz/T Ag	oz/T Au	% Mo	% Ag	% Cu	COMPOSITE ASSAYS
		60.05								
			3.04	1351	.07	.008				
		63.09								
			3.05	1352	.08	.006				
66.44 : py fractures		66.14	3.05	1353	.10	.007				
		69.19								
			3.05	1354	.09	.006				
		72.24								
73.44-77.5 : minor to trace py only			3.04	1355	.04	.006				
		75.28								
			3.05	1356	.01	.009				
77.7-78.13 : py in small clusters		78.33								
79.85-80.05 : 15% py 80.05-80.65 : py veinlets			3.05	1357	.13	.008	.002			
		81.38								
82.7-83.1 : a few pyritic veinlets			3.04	1358	.11	.016	.002			
		84.42								
			3.04	1359	.10	.007	.002			
		87.48								
88.4-92.2 : a few thin moly-bearing qtz-py veinlets; trace moly in host; trace galena in veinlets			3.05	1360	.21	.009	.002			

WP-6275B

PAGE 8 OF 13 | PROJECT: | HOLE NO. 10

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
90					
				91.2: scattered green sericitic fragments - may in part be tuffaceous	
				92.3-92.75: altered broken muddy limonitic	
			50-60° c/f veinlets	93.87-96.87: Qtz veinlets common most at 50-60° c/f; pale green sericite locally	
95					
			50° c/f Qtz vein & foliation	96.87-101.47: Qtz vein. white to grey qtz (white > grey); appears to leave contacts by gradational through increasing number of qtz veinlets; pale green sericite in wisps locally; white & grey qtz both gradual + separate phases; py in grey qtz	Qtz Vein 96.87-101.47
100					
				101.4-101.6: limonitic oxidized fractures	
				101.47-102.40: scattered qtz veinlets	
				101.47-111.8: intense microfracturing	Highly Silicified 101-154
				101.47-159.25: very siliceous, no primary features usually apparent.	
105					
				106.32-113.5: small feldspars locally common; typical in small clusters; probably alt? feature	
				108.28-108.53: fractured, broken oxidized core	
				109.86-110.21: as for 108.28-108.53	
110					
				111.68-113.10: fractured broken zone	
				113.36: brown sericite on clay on fractures	
				114-~152: fractures with py, sericite common; qtz veinlets with minor calcite common; intense fracturing locally	
115					
				115.16-115.46: broken with several qtz veins	
			45° c/f alt layering	119.01: layering - py-rich layers reflects primary layering ??	

WP-6275C

PAGE 9 OF 13 | PROJECT: | HOLE NO. 10

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	oz/T Ag	oz/T Au	% Mo	% W		COMPOSITE ASSAYS
90 88.4-92.2: overall higher py content 5 to 10%		-90.53								
			3.05	1361	.50	.019				
		-93.57								
95			3.05	1362	.39	.017				
96.87-101.47: Qtz vein with py; py in veinlets and patches in gray qtz 97.54: trace gal with sph? stringers		-96.62	2.51	1363	3.16	.027	.012			
99.13-99.28: 2.5% py in very patchy distribution		-99.13 -99.28 -99.67	0.15 0.39	1364 1365	1.12 .35	.039 .017	.002 .003			
			1.90	1366	.32	.021	.003			
101.47-111.86: py microfractures common; higher than average py content (5%)		-101.47	1.24	1367	.17	.011	.002			
		-102.71								
			3.06	1365	.11	.007	.001			
		-105.77								
			3.04	1369 (96% recovery)	.09	.009	.002			
		-108.81								
			3.05	1370	.29	.047	.012			
		-111.86								
			3.05	1371	.06	.012	.006			
115		-114.91								
116.13-116.23: minor moly patches in host			3.05	1372	.02	.006	.003	.002		
		-117.96								
				1373	.08	.009	.003	.002		

WP-6275B

PAGE 10 OF 13 | PROJECT: | HOLE NO. 10

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
120					
			50-60 c/a veincontacts	123.50-126.60: strong qtz veining (75%); veins up to 1/2 cm; grey qtz and host very similar appearance, typically sericite locally; white qtz > grey qtz	
125			40° c/a veins	131.4-131.9: regular pattern of qtz veinlets & wisps	
				128.0-130.35: broken fractured core	
130			40° c/a	131.4-131.9: regular pattern of qtz veinlets & wisps	
135					
				139.4: probable clasts present	
140			30-40° c/a shearing	140.4-140.9: sheared bleached zone; sericite+ clay? (intense pale yellow+buff in zone)	
				140.4-150.9: broken zones common, scattered throughout, locally abundant microfracturing	
				142.6-146.0: abundant white qtz veining - no pyrite; 10% veining; minor green sericite	
145					

WP-6275C

PAGE 11 OF 13 | PROJECT: | HOLE NO. (0

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	oz/T Ag	oz/T Au	% Mo	% W		COMPOSITE ASSAYS
120										
		121.01								
122.96: possible fine dissem. moly in patches			2.79	1374	.05	.006	.002	.003		
123.8-126.60: overall 1-5% py in irregular patchy veins		123.80	0.25	1375	.13	.008	.001	.001		
		124.05								
125			2.55	1376	.34	.023	.005	.002		
126.60-151: higher average py content (5% to 10% dissem.).		126.60	0.5	1377	.10	.009	.007	.003		
		127.10								
			3.05	1378	.08	.012	.002	.002		
		130.15								
			3.05	1379	.10	.006		.001		
		133.20								
			3.05	1380	.09	.002		.001		
		136.25								
			3.04	1381	.07	.008		.002		
		139.29								
			3.05	1382	.28	.008		.002		
			(74% recovery)							
		142.34								
			3.05	1383	.07	.009		.001		
		145.39								
			3.05	1384	.02	.008		.002		
		148.44								
				1385	.12	.023				

WP-6275B

PAGE 12 OF 13	PROJECT:	HOLE NO. 10

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
150					
				152 - 159.25 : zone of irregular patchwork alt'n greys to green; green areas are more sericitic	Silica-sericite Patchwork 152 - 159
155					
				159.25 - 163.37 : zone of stretched fragmental (conglomeratic) more sericitic - chloritic; locally dark grey colours; ribbon structure developed; moderate sericitic foliation; probable mylonite	Sericite - Chlorite 159 - 163
160			steps c/f foliation Shearing		
				163.37 - 169.77 : light grey very siliceous, green sericitic clots locally	Highly silicified 163 - 169.77
				164.9 : cellular alt'n - qtz core & sericite rim	
165			50-60° c/f	weak elongation of sericitic clots	
				166.0 - 166.9 : broken core	
			45° c/a foliation		
				169.77 EOH	

WP-6275C

PAGE 13 OF 13 | PROJECT: | HOLE NO. 10

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	~~%~~ oz/T Ag	~~%~~ oz/T Au	%			COMPOSITE ASSAYS
150										
		151.49								
			3.05	1386	.14	.008				
		154.54								
			3.05	1387	.07	.006				
		157.59								
			3.05 (96% recry)	1388	.11	.009				
		160.64								
			3.05 (99% recry)	1389	.15	.006				
		163.69								
			3.04	1390	.01	.012				
		166.73								
			3.04 (90% recry)	1391	.03	.041				
		169.77	ECH							

A. Ferguson
Geologist Esso Minerals

WP-6275A

IMPERIAL OIL LIMITED

MINERALS SECTION

DRILL LOG

PROJECT: Sulphurets 2153	GROUND ELEV.: 4600 Ft. 1402 m
HOLE NO.: 11	BEARING: 110°
LOCATION: Iron Cap Area 42 m at 305° from trench 6	DIP: -55°
	TOTAL LENGTH: 252.68
LOGGED BY: L. Ferguson Esso Minerals	HORIZONTAL PROJECT
DATE: August 10/80	VERTICAL PROJECT
CONTRACTOR: Fretz	
CORE SIZE: BQ	
DATE STARTED: July 31/80 Drill Move	
DATE COMPLETED: Aug. 7/80	

DIP TESTS

	29.65m	65.23m	101.80	138.38	174.96
Dip	-54	-52.0	-52.8	-52.2	-50.7
Direction	113.0	120.5	122.5	123.0	124.0

COMMENTS

	211.53	248.11
Dip	-48	-47.8
Direction	120.0	121.0

ALTERATION SCALE

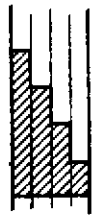
absent

slight

moderate

intense

TOTAL SULPHIDE SCALE



traces only

< 1%

1% – 3%

3% – 10%

> 10%

LEGEND

WP-6275B

PAGE 1 OF 18	PROJECT: Sulphurets	HOLE NC 11

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				Overburden 0-3.66: Casing, No core recovery	
				Altered Sediment? Pale grey to pale green moderately feldspathic - siliciate rock; generally lacks talc(?) or primary textures, locally pale chlorite in shatter zones; qtz-calcite veinlets common throughout averaging 5 to 6 per metre; fine to medium grained	Pyritized, Pyrite in fractures from 3.6 - 8 / very pale green
5			Some clay fracturing	4.7-5.3: broken core, fracturing	
			Some clay fracturing	6.3-7.4: zone with qtz veins, oxidized fractures, local strong clay sericite	
				8.2-8.4 } py-chlorite-qtz veinlets and patches 8.55-9.0 }	
				9.2: py-chl patch	
10				10.7: py-chl vein	Quartz-feldspar porphyry, grey green, bleached throughout, altered throughout, chlorite-sericite fracturing and patchy bleaching
			(conglomeratic?)	very vague fine grained clasts in medium grained matrix; sericitic matrix; py most common in matrix.	
				12.4: 3cm circular structure: py core rimmed by qtz and chl-rich layers	
			Some clay fracturing, py veinlets	13.1-13.3: broken core	
15					
				17.7-17.9: chl-qtz-py vein?	
				18-25 (approx): very few qtz veinlets	
20			Some clay fracturing, py veinlets		
				21.6-21.7: broken oxidized core; clay alt'n probably fault gouge.	
25					
			Conglomeratic	26.6-29.15: coarser-grained silicified zone; altered clasts apparent - less than 1cm (some qtz-rich, some schiste-rich, some foliation porphyry clasts locally apparent); a few clasts 3 to 4cm.	
30					

WP-6275C

PAGE 2 OF 18 | PROJECT: | HOLE NO. 11

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	% Cu	% Pb	% Zn	g/Ton Ag	g/Ton Au	COMPOSITE ASSAYS
Pyrite virtually present throughout; only sphalerite exceeds 1% where it totals typically		- 3.60								
less than 5% in fine grained disseminations, small granular clots, veinlets and										
fracture fillings; Py strongly oxidized (limonite) frequently	1-2%		2.4	1392				.18	.007	
6.55 - small patches of pyrite-quartz Py in qtz vein		6								
7.3-7.45: two large patches of Py-qtz surrounded by qtz in turn rimmed by sericite; probably part of qtz vein	1-2%		3	1393				.13	.007	
	3%	9								
			3	1397				.09	.002	
		12								
			3	1395				.03	.002	
		15								
locally small areas of up to 10% disseminated Py	10% locally									
			3	1396				.08	.003	
		18								
			3	1397				.09	.001	
		21								
			3	1395				.09	.002	
		24								
			3	1399				.10	.008	
6.6-29.15: Py concentrated in small clots and patches scattered throughout; Py concentrated in matrix	3-5%	27								
			3	1400				.08	.011	
		30								

WP-6275B

77

PAGE 3 OF 18	PROJECT:	HOLE NO. 11

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
			45° c/A py-filled veins		
				35-112 (approx): intense silicification	Intense silicific 35-112.2
35				35.14-35.28: Grey qtz-rich zone; intense silicification with small fibrous spots (probable alteration feature) (zeolite?)	Qtz veining 35.2-37.3
				35.2-37.3: scattered qtz-py veins; certainly ill defined because of intense silicification of host	
40					
			Erratic fracturing throughout	41.7-51.5: broken core; zones of intense fracturing (probably) Slight sericitization associated with fracturing	
				42.7-43.4: pale grey to white; very fine grained; very siliceous	
45					
				46.5-47.2: pale green sericite development marginal to fractures; also present to lesser extent throughout zone of fracturing	
				48.45-48.55: heterogeneous qtz-py-ser (alt. ?) zone; probably vein qtz-ser in granular intergrowth	
50				49.2-49.6: zone rich in small (<1 mm) sericitic feldspar? - some Fe-Mg content; calcite; probable alteration feature; possible zeolite rather than feldspar?	
			20-25° c/A py veins		
				54.5-54.7: clay-sericite fault gouge; muddy	
55				55.2-55.9: scattered nuggets qtz-veins	
				57.1-61.65: Quartz vein; upper contact; broken core; milky white qtz with py; pale green sericite locally with py	Quartz vein 57.1-61.65

WP-6275C

PAGE 4 OF 18 | PROJECT: | HOLE NO. 11

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	% Mo	%	%	g/ton Ag	oz/ton Au	COMPOSITE ASSAYS
30-35: scattered py-clt-sericite-rx bmin and zones	1%									
31.55: 2-3cm vein of py-clt lenses of 5% 60-70% py	10%		3	1401				.08	.002	
		33								
			3	1402	.005			.11	.007	
35.2-37.3: numerous qtz-py veins most less than 2-3cm wide										
		36								
36.25-36.55: mostly qtz vein but may include host	5%		3	1403	.007			.18	.009	
		39								
41-51.5: py in fractures common			3	1404	.004			.17	.003	
41.1: fine grained Moly in fracture	5%									
		42								
			3	1405	.003			.12	.007	
		45								
	5%		3	1406	.003			.10	.005	
	2-3%	48								
			3	1407	.001			.20	.003	
		51								
52.5-52.6: py veining; about 25% py			3	1408				.13	.009	
		54								
55.5-55.6: 15-20% py			3	1409				.21	.019	
		57								
57.1-61.65 Qtz vein with py: py generally in irregular stringers & patches only locally are there disseminations.	5-10%		2.44	1410				.18	.038	
59.44-60: 10-15% mgn; 15-20% py										
59.15-59.8: py strongly oxidized to black granules py locally		59.44 60	0.56	1411				.12	.078	

WP-6275B

PAGE 5 OF 18 | PROJECT: | HOLE NO. 11

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
60					
			30-60c/ft py wisps	61.65-65.4: probably includes silicified host and internal qtz veining	
			conglomeratic	62.4-65.4: clasts include sericitic to qtz-rich; less than 2cm; subrounded; dark to grey than light grey matrix;	
65				65.4-70.1: predominantly qtz-py veining with 20% host	Qtz veining 65.4-70.1 (to 71.7?)
				65.3-65.4: broken; fault gouge	
			5% c/ft sericitic layering	69.3: sea-green sericite seam	
				69.3-70: green sericite common	
70				70.1-74.7: qtz vein and host; o/c's of each are uncertain; complex zone silicified pervasive retrobleich-vein/breccia textures common d/k grey & glassy qtz dominant; late white unmineralized qtz & plag generally with calcite; early white qtz appears stained by greyish py. 1/2 core is mostly qtz vein.	
				74.7-79.7: intensely silicified host with small scattered patches of pale green sericite	
75				75.6: conglomeratic? or brecciated?	
			50c/ft sericitic py wisps		
			45c/ft chaotic/inflexed	79.7-80.0: conglomeratic bed: clasts up to 3cm include sediments and volcanic clasts - chlorite & porphyry; matrix is pyritic; clast margin is sharp to slightly diffuse; clasts subrounded & many are elongated; irregular contact? sharp planar contact/fracture; clast elongation due to compaction? porphyry clasts also pyritic; material above and below is finer grained sediment.	Less alteration 79.7-80.0
80			CONGLOMERATE ? altered sediment?		
				83.6: conglomeratic? very vague clasts (silicified) in siliceous host	
				84.8-85.5: qtz-calcite vein - fractures subparallel c/ft	
85					
				86.7-87.5: broken core	
				88.2-90.1: locally conglomeratic; vague feldspar? porphyry clasts apparent, typically slightly darker, than matrix but just as siliceous as matrix; altered feldspars in matrix	

WP-6275C

PAGE 6 OF 18 | PROJECT: | HOLE NO. 11

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	%	oz/ton Ag	oz/ton Au	COMPOSITE ASSAYS
59.47-60.4: mgn common mixed in with py; brassy as sm			1.26	1412			E	.16	.040	
independent clots; black fine gr. typically at/near py blebs		61.26	0.46	1413				.41	.070	
61.26-61.72: about 30-40% py.		61.72	1.28	1414				.29	.019	
61.72-63: 10-15% py with 2.15 m of about 30% py		63								
63.05 - minor galena			3	1415				1.06	.037	
65.4-66: 25% py in irregular patches and fractures		66								
66-67.86: 10-15% py concentrated in zones of stronger py veining		67.86	1.86	1416				3.29	.159	Ag 3.50 Au .136 / 6m
67.86-69: 25% py as veins and scattered fracture fill			1.14	1417				3.56	.143	
68.76-68.89: 60-70% pyrite		69								
68.35: well developed intrusive breccia (qtz fragments healed by pyrite)			3	1418				3.61	.119	
69-72: 15-20% py.		72								
72-75: 15-20% py includes patches up to local of 40-50% py.			3	1419				1.53	.053	
		75								
75.8-78: — minor py only, fine grained; dissem 1-2% typical with local patches of <5% py.			3	1420				.33	.020	
		78								
			3	1421				.06	.008	
		81								
			3	1422				.05	.009	
		84								
			3	1423				.16	.010	
		87								
			3	1424				.08	.020	
		90								

WP-6275B

97

PAGE 7 OF 18	PROJECT:	HOLE NO. 11

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
			60°/A cylindrical	92.5-96 = Scattered patches & veins with py-ser-chlorite	
95				uniform very siliceous material with local patchy development due to slight variations in alteration intensity & composition	
				93.8-107.3: Scattered carbon zones	
100					
				104.8: patchy alteration	
105					
			Conglomerate	112.2-122.2: Coarse conglomerate; similar to 79.7-86.6 except base some clasts	
			45°/A chilled cont.	>10 cm pebble; grain zone slightly more intensely silicified; fragmental zone very weathered to poor clast detection; difficult on fresh surface; lower contact ? fault ? contact	
			50°/A bedding?		
115					
				118.2-118.9: sub parallel shear; some sericite developed	
120				118.4: heavy secondary qtz + py in matrix	

WP-6275C

PAGE 8 OF 18 | PROJECT: | HOLE NO. 11

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	%	oz/Ton Ag	oz/Ton Au	COMPOSITE ASSAYS
90										
			3	1425				.32	.020	
		93								
			3	1426				.10	.007	
		96								
			3	1427				.07	.009	
		99								
			3	1428				.18	.011	
101-13.22: zone of patchy 20 to 5% py locally		102								
			3	1429				.09	.007	
		105								
106.06-106.6: about 25% py disem. throughout			3	1430				.17	.012	
		108								
			3	1431				.07	.005	
		111								
			3	1432				.11	.003	
		114								
			3	1433				.20	.006	
		117								
			3	1434				.12	.007	
		120								

WP-6275B

PAGE 9 OF 18 | PROJECT: | HOLE NO. 11

DEPTH (METRES)	%Core Recv	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				121.8: secondary qtz veins crosscut clasts & matrix	
			Altered sediment	121-123: intense qtz veinlets; may in part be brecciated	Moderately to strongly silicified
				123.1-123.4: fault / shear zone? marked with gouge	
				122.2-128.11: vaguely conglomeratic but may be vein feature only	
125				123-131.22: well fractured; brittle; qtz veinlets common	
			60°/lo contact/bedding?	128.11-128.61: dark grey silicified zone, numerous sericitic flakes; may be fine grained clastic (wacke?).	
	Altn				
130			conglomeratic	128.61-131.22: small clasts locally pisolitized	
			20°/lo vein contact	131.22-132.95: Quartz vein; milky white upper contact is zone of intrusion breccia	Quartz vein 131.22-132.95
			20°/lo vein contact	131.3: crosscutting qtz-calcite vein	
				local patches of pale green sericite	
				≈140-132.95: dark grey zone similar to 128.11-128.61 very fine disseminated pyrite abundant; may be conglomeratic locally; gradational lower contact	
135				134.5-135.5: broken core	
				133.05-133.05: qtz vein with 25% Lost; minor py only	
140					
145					
150					

WP-6275C

PAGE 10 OF 18 | PROJECT: | HOLE NO. 11

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	% Cu	% Pb	% Zn	g/Ton Ag	g/Ton Au	COMPOSITE ASSAYS
		120								
			3	1435				.27	.010	
		123								
			3	1436				.13	.011	
125										
		126								
			3	1437				.06	.009	
		129								
130			2.22	1438				.07	.009	
131.22-132.95: Qtz vein with patches of py, cpy; ——; also py+cpy in fractures; trace gal in fractures		131.22	.78	1439	.056	.01	.04	.11	.01	
		132	.45	1440	.694	.98	2.55	3.2	.062	
132.45-132.65: zone rich in patches of cpy-py-sph mineral & specularite?; sph varies from honey to grey veinlets; 2% gal; 25% cpy; 15% sph; 5-10% py		132.95	2.05	1441	.056	.01	.04	.12	.004	
		135								
Vein overall: 15% py. 132.95-141±: 5-10% fine grained pyrite			3	1442				.42	.023	
		138								
			3	1443				.14	.018	
		141								
			3	1444				.07	.018	
		144								
			3	1445				.04	.003	
		147								
			3	1446				.02	.002	
		150								

WP-6275B

PAGE 11 OF 18 | PROJECT: | HOLE NO. 11

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				Altered	
				Conglomerate: 150.5 - 155.6 ; Congl/mepate: coarse angular clasts including altered sediments and volcanics (porphyry) clasts silicified & sericitized; matrix more pyritic than clasts; chert size <1cm to >10cm; boulders probably present; larger clasts are porphyry less silicified than overlying beds due to some clasts & matrix being less siliceous.	
			30° to foliation/chert veining.	154.2-155 : foliated; clasts elongated parallel foliation; possible shear zone	
155				Altered sediment? typical grey fine to medium grained, "grainy" phyllopathic-sericitic unit; not intensely silicified.	Moderately silicified. Patchy sericitization locally
160					
			70° to foliation	163.5-163.9: well foliated; broken; probably shear foliation	
				conglomerate: 163.9-165.5: prob. conglomerate although includes abundant zones of milky qtz, so may in part be brecciated zone?	
165					
			60-70° to foliation	169-170.8: foliated and laminated probably related to shearing; sericite w/ ply laming	
170				169.5-170.8: strong sericitization with prob. clay gouge; well foliated; essentially sericite schist qtz. patches & wisps common; shearing part? qtz. veining	
				172.8-173.4: broken core	
				130.6-179 : includes clastic/foliated & probable brecciated zones	
175			30-40°c/A	175.86-176.46: Shear foliation developed	
180					

WP-6275C

PAGE 12 OF 18 | PROJECT: | HOLE NO. 11

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	%	oz/Ton Ag	oz/Ton Au	COMPOSITE ASSAYS
150										
			3	1447				.06	.004	
		153								
			3	1448				.10	.007	
155		156								
			3	1449				.01	.003	
		159								
160			3	1450				.03	.009	
		162								
			3	376				.12	.008	
		165								
			3	377				.11	.007	
		168								
			3	378				.10	.007	
170 Py common as blebs in groundmass and as fracture fillings		171								
			3	379				.06	.007	
		174								
175.5: minor py with py.			3	380				.14	.008	
		177								
			3	381				.10	.003	
		180								

WP-6275B

PAGE 13 OF 18 | PROJECT: | HOLE NO. 11

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
180					
				Pale grey-green phytoclastic - sericitic, grainy unit; probably altered sediment; not intensely silicified; patchy alteration pattern locally developed.	
				183 - 193 : scattered brecciated zones most less than .3m wide; py-ser-qtz veins; patches in silicified grey to pale green sediment?	
185					
190					
195					
				196.2 - 196.3. white qtz vein unoriented	
			60° to CA alternating		
200					
				203.8 - 204 : broken	
			50-60° to CA alternating		
205					
				206.55 - 210.10: Pale gray to white; intensely silicified	Intense silicification 206.55 - 210.10
210					

WP-6275C

PAGE 14 OF 18 | PROJECT: | HOLE NO. 11

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	%	oz/ton Ag	oz/ton Au	COMPOSITE ASSAYS
180		180								
			W	382				.10	.010	
		183								
py concentrate disseminated to brecciated fragments; only 1-2% py in the silicified unit			3	383				.10	.090	
185										
		186								
			3	384				.24	.019	
		189								
			3	385				.07	.006	
		192								
193 - EOH: Minor (1-2%) py only; typically disseminated			3	386				.02	.002	
		195								
			3	387				.02	.002	
		198								
			3	388				.06	.007	
		201								
			3	389				.09	.011	
		204								
			3	390				.19	.011	
		207								
			3	391				.06	.003	
		210								

WP-6275B

PAGE 15 OF 18	PROJECT:	HOLE NO. 11

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
210				210.1-230.2 : less silicified; includes several shear zones (sericite ± clay) & breccia zones	Moderate silicification 210.1-230.2
				210.3-211.1 : sericite shear zone	
215					
220					
				223.2-230.2 ; major shear zone; well developed shear foliation; clay-sericite rich; superimposed on silicification main fault gouge	Shear Zone 223.2-230.2 Shear related sericitization
225					
230			Altered intrusive porphyry	230.2-232.8 ; , silicified, probably altered intrusive; characterized by abnd 1-3mm tabular sericitized phyllosilicates? in a grey, qtz-feldspar-sericitic groundmass; no apparent orientation to crystals; vague foliation locally; loc. ill. crystals are more chloritic; crystals difficult to detect on broken surface	Moderate silicification 230.2-EOH
235			40-50° fracturation		

WP-6275C

PAGE 16 OF 18 | PROJECT: | HOLE NO. 11

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	%	oz/Ton Hg	oz/Ton Au	COMPOSITE ASSAYS
210										
			3.0	392				.08	.004	
		213								
			3	393				.02	.002	
215										
		216								
			3	394				.03	.003	
		219								
				395				.05	.002	
		222								
			3	396				.08	.009	
		225								
			3	397				.02	.002	
		228								
			3	398				.07	.002	
		231								
			3	399				.04	.003	
		234								
			3	400				.06	.009	
		237								
			3	1301				.06	.009	
		240								

WP-6275B

PAGE 17 OF 18 | PROJECT: | HOLE NO. 11

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
240					
				241.3-242.2 : fractured, broken core	
				244.4-246 : broken core with scattered sericite stains	
			35°/A'	244.9-245.55 : mylonite, white qtz vein	
245			vein contact	with py veinlets and fractures	
250					
252.68		E.O.H			

WP-6275C

PAGE 18 OF 18 | PROJECT: | HOLE NO. 11

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	%	oz/ton Ag	oz/ton Au	COMPOSITE ASSAYS
		240								
			3	1302				.08	.001	
		243								
			3	1303				.18	.020	
		246								
			3	1304				.04	.022	
		249								
248.8-249.0: 5% veinlets up to 2cm wide			3.68	1305				.02	.010	
		252.68								
		EOH	252.68							

S. Ferguson
Geologist Esso Minerals

WP-6275A

IMPERIAL OIL LIMITED

MINERALS SECTION

DRILL LOG

PROJECT: Sulphurets	GROUND ELEV.: ~ 5360' ~ 1634 m.
HOLE NO.: DDH 12	BEARING: 180°
LOCATION: Main Copper Zone assessment hole	DIP: -75°
	TOTAL LENGTH: 547 Ft., 166.73 m
LOGGED BY: Dane Bridge	HORIZONTAL PROJECT
DATE: August 12 - 13, 1980	VERTICAL PROJECT
CONTRACTOR: Arctic Diamond Drilling	ALTERATION SCALE
CORE SIZE: BQ	absent slight moderate intense
DATE STARTED: Aug 8, 1980	TOTAL SULPHIDE SCALE
DATE COMPLETED: Aug 12, 1980	traces only < 1% 1% – 3% 3% – 10% > 10%

DIP TESTS

89'	27.1m	173.0°	- 73.5°
239'	72.8m	183.0°	- 71.8°
389'	118.6m	181.0°	- 68.7°
539'	164.3m	180.0°	- 64.2°

COMMENTS

LEGEND

WP-6275B

PAGE 1 OF 12 | PROJECT: Sulphurets | HOLE NO. 12

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				0.0 - 4.81 : overburden and broken outcrop	
				4.81 - 15.36 : quartz - albite rock derived from intermediate volcanics, light gray to very slightly greenish, fine grained, granular, massive, composed of qz, alb, possibly trace sericite, local 'onion skin' texture exhibited by pyrite	
5			70° py vein		
			90° py vein		
10					
				12.86 - 15.36 : mottled barren and pyritic, barren patches contain 50% 1-2mm cloudy feldspar grains	
15				15.36 - 18.55 : mixed qz-alb rx and intermediate volcanics, sections of med green, fine grained andesite w. chloritized mafics in moderately altered groundmass	
				18.55 - 22.36 : mainly qz-alb rx, local patches of remaining moderately altered intermediate volcanics	
20			90°		
			90°		
				22.36 - 23.89 : andesite, weakly to moderately altered, med green, f.g., feldspathic rx w. 5-10% chlorite grains after mafics	
25				23.89 - 32.00 : qz-albite rx derived from intermediate volc. rx and minor moderately altered intermediate volc rx., lt gray & locally pale green, f.g., minor local chlorite	

D.S.

WP-6275C

PAGE 2 OF 12 | PROJECT: Sulphurets | HOLE NO. 12

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	% Cu	%	%	Au oz/ton	Ag	COMPOSITE ASSAYS
4.81 - 15.36 : avg 15% py, tr. of		5.0								
<5% py dissem, >10% py as										
thin to 10 cm seams and			3.0	2001	.096			.081	.03	
veins, mainly slightly		8.0								
irregular and along Fractures										
			3.0	2002	.053			.083	.01	
		11.0								
			3.0	2003	.185			.053	.01	
		14.0								
		15								
15.36 - 23.89 : avg 10% py,			3.0	2004	.059			.010	.01	
dissem, seams		17.0								
and veins up to 5mm, dissem										
along Frs and locally replacing			3.0	2005	.052			.019	.01	
py in intensely Fractured areas		20.0								
			3.0	2006	.035			.008	.01	
		23.0								
23.89 - 32.00 : avg 15% py,										
disseminated			3.0	2007	.042			.009	.01	
and irregular seams and		25								
Fracture Fillings, no visible		26.0								
sp			3.0	2008	.080			.009	.01	
		29.0								
DB.										

WP-6275B

PAGE 3 OF 12 | PROJECT: Sulphurets | HOLE NO. 12

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
			50	pyrite vein	
				grains after mafics	
				32.00 - 33.80 : moderately altered interm. volc,	
				med green, F.g., massive, 10%	
35				chlorite grains in groundmass of probably	
			80	albitized Feldspar	
				33.80 - 50.50 : qz-alb vx, very pale greenish	
			90	grey quartzo-Feldspathic vx	
				derived from intermediate volcanic vxr,	
40				mainly F.g., granular, locally coarse grained	
				and possibly tectonically crushed	
			50		
			60		
			70		
				10cm cal-qz v.	
50					
				50.50 - 54.00 : intermediate volc, med	
				green, very F.g., massive,	
				Feldspathic w. minor visible chloritized mafics	
				moderately qz-albite altered	
				54.00 - 62.97 : qz-alb. vx, v.g., lt. grey,	
				massive, very massive and	
			75	uniform, very light greenish grey	
			~80	py. v. 62.97 - 147.10 : qz-alb. vx, mainly w clastic	
				textures, lt grey, pyritic	
D.B.				62.97 - 67.20 : possible thin breccia	

WP-6275C

PAGE 4 OF 12 | PROJECT: Sulphurets | HOLE NO. 12

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	% Cu	%	%	oz/ton Au	oz/ton Ag	COMPOSITE ASSAYS
			3.0	2009	.043			.010	.01	
32.00 - 33.80 : avg 3-5% py,		32.0								
disseм and on frs										
33.80 - 50.50 : avg 20% py,			3.0	2010	.088			.007	.01	
~10% disseм		35.0								
py, extremely fine grained										
to fine grained, and ~10%			3.0	2011	.177			.023	.01	
vein and fracture pyrite,		38.0								
py seams commonly 2-5 mm, up										
to 5 cm.			3.0	2012	.108			.017	.01	
		41.0								
			3.0	2013	.086			.028	.02	
		44.0								
		45								
45.45 - 46.10 : avg ≤1% cp w			3.0	2014	.080			.022	.03	
py seams		47.0								
			3.0	2015	.116			040	.02	
50.50 - 197.10 : avg 15-20 % py,		50.0								
Fine - med										
grained, distributed about			3.0	2016	.102			.010	.02	
equally between disseм and		53.0								
pyrite veins., py veins										
are mainly 1 - 5 mm thick,			3.0	2017	.148			.012	.01	
locally up to 10 cm.		55								
		56.0								
57.70 - 58.90 : avg 0.2-			3.0	2018	.172			.036	.03	
0.3 % cp		59.0								
D.S.										

WP-6275B

PAGE 5 OF 12 | PROJECT: Sulphurets | HOLE NO. 12

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				horizon, close-packed 5mm - 2cm angular	
			50	pyrite vein siliceous clasts in siliceous-pyritic matrix,	
		to ?		may be tectonic	
		70		63.20 - 115.53 : clastic intermediate	
			30	volcanic rock almost totally converted	
65			55	to quartz-albite rock, contains 1-10%	
				clasts, mainly angular to subangular,	
				commonly small to 2-3 cm, most are	
				lt grey like the matrix, ≈ 10-15% of	
				the clasts are pale green to locally	
				medium greenish grey, the greenish	
			50	clasts are feldspathic and moderately	
				altered w. minor chlorite grains and	
				patches probably after mafics	
75					
			45		
			20		
			55		
			70		
			30		
85					
			45-50		

D.B.

WP-6275C

PAGE 6 OF 12 | PROJECT: Sulphurets | HOLE NO. 12

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	% Cu	%	%	oz/ton Au	oz/ton Ag	COMPOSITE ASSAYS
			8.0	2019	.094			.019	.01	
		62.0								
			3.0	2020	.048			.040	.02	
		65.0								
			3.0	2021	.007			.018	.01	
		68.0								
			3.0	2022	.053			.019	.01	
		71.0								
			3.0	2023	.051			.020	.01	
		74.0								
			3.0	2029	.097			.020	.02	
		77.0								
			3.0	2025	.090			.022	.09	
		80.0								
			3.0	2026	.045			.050	.01	
		83.0								
			3.0	2027	.061			.021	.01	
		86.0								
			3.0	2028	.038			.020	.03	
		89.0								
83.										

WP-6275B

PAGE 7 OF 12 | PROJECT: Sulphurets | HOLE NO. 12

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				note: very minor calcite-quartz veins occur throughout the hole, they show no preferred direction, are random distributed in both intensely and moderately altered rock, they appear to be late Fracture Fillings and are rarely mineralized w. cp, tr sph as noted	
95			75	py v.	
			30		
105			55	cal-qz v.	
			65	py v.	
			60		
			50		
115				115.53 - 115.72: f.g. breccia unit, possibly w. relict bedding preserved.	
		67 80			
			85	35° clear	

08.

WP-6275C

PAGE 8 OF 12 | PROJECT: Sulphurets | HOLE NO. 12

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	% Cu	% Zn	%	oz/ton Au	oz/ton Ag	COMPOSITE ASSAYS
			3.0	2029	.054			.023	.01	
		92.0								
			3.0	2030	.067			.022	.01	
		95.0								
			3.0	2031	.058			.029	.01	
		98.0								
99.65 - 104.85 : avg 0.2 - 0.5			3.0	2032	.091			.050	.01	
% cp, dissem w. py in seams		101.0								
and patches, none visible										
py dissem in rock.			3.0	2033	.301	.08		.020	.02	
		104.0								
		105								
104.85 - 105.30 : 2 - 3% cp,			3.0	2034	.508	.08		.052	.08	
<1% sph in thin calcite-qz		107.0								
veins in pyritic qz-alb rx										
105.30 - 106.20 : possible			3.0	2035	.063	.07		.143	.03	
tr sph on hairline frs.		110.0								
111.80 - 112.20 : 8 - 12 cm			3.0	2036	.029	.04		.109	.01	
thick seams of fine - med		113.0								
grained massive py.										
			3.0	2037	.006	.02		.020	.01	
		116.0								
			3.0	2038	.007			.033	.01	
		119.0								
OB										

WP-6275B

PAGE 9 OF 12 | PROJECT: Sulphurets | HOLE NO. 12

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
			85 pyrite vein	115.72 - 197.10 : mainly lt gray to locally mottled green-gray altered clastic intermediate volcanic rocks, minor clasts w. greenish color but no relict internal textures in a quartz-albite groundmass.	
			60		
			45		
125			35 + shear		
			75		
			80		
			30 + shear		
			80		
135			60		
			80		
			60		
145					
			60 + 20cm shear	197.10 - 197.60 : massive, very pale green, aphanitic qz-wb vx, intensely fractured w. minor qz-cal veining	

VB.

WP-6275C

PAGE 10 OF 12 | PROJECT: Sulphurets | HOLE NO. 12

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	% Cu	%	%	oz/ton Au	oz/ton Ag	COMPOSITE ASSAYS
			3.0	2039	.051			.113	.01	
		122.0								
			3.0	2040	.035			.065	.01	
		125.0								
			3.0	2041	.037			.031	.01	
		128.0								
			3.0	2042	.007			.117	.02	
		131.0								
			3.0	2043	.007			.043	.02	
		134.0								
			3.0	2044	.036			.029	.03	
147.10 - 148.40 avg 3-4% py,		137.0								
disseminated along										
hairline frs			3.0	2045	.008			.042	.04	
148.40 - 166.29: avg 10% py,		140.0								
1% cp, cp										
is mainly disseminated in			3.0	2046	.012			.048	.03	
small patches assoc w. py,		143.0								
it is about equally distributed										
between intensely and moder-			3.0	2047	.012			.045	.02	
ately altered rock, locally		146.0								
it occurs in concentrations of		147.10	1.10	2048	.005			.038	.01	
up to 10% over 25 cm; a										
very minor amount is in		149.0	1.90	2049	.258			.010	.65	
calcite-qz veins. DB										

WP-6275B

PAGE 11 OF 12 | PROJECT: Sulphurets | HOLE NO. 12

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				197.60 - 166.29 : massive, intensely to moderately qz-albite altered intermediate volcanic rock, varies from aphanitic to fine grained felsic, mainly lt to med green w lt. grey, rarely relict feld visible, no visible chlorite or mafic relicts, minor qz-cal-chl veins, locally w. minor cp.	
155					
			qz-cal veins 5mm to 2cm		
			CO		
				166.29 - 166.73 : intermediate volcanic, med green, f.g. andesite?, massive, ~10% very fine elongate hb phenos in groundmass. F mainly <1mm to 1mm feldspar grains	
165					
166.73					

DB

WP-6275C

 PROJECT: Sulphurets HOLE NO. 12

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	% Cu	%	%	oz/ton Au	oz/ton Ag	COMPOSITE ASSAYS
			3.0	2050	.499			.027	.08	
		152.0								
			3.0	2051	.478			.027	.08	
		155.0								
			3.0	2052	.452			.033	.10	
		158.0								
			3.0	2053	.559			.024	.05	
		161.0								
			3.0	2054	.765			.028	.07	
		164.0								
164.23 – 166.73: tr. dissem py			2.24	2055	.838			.030	.07	
		166.24								
			0.49	2056	.014			.001	.09	
		166.73								

D.B.

WP-6275B

PAGE 12 OF 12	PROJECT: Sulphurets	HOLE NO. 12

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				back page	

WP-6275A

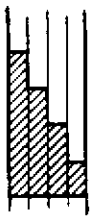
IMPERIAL OIL LIMITED

MINERALS SECTION

DRILL LOG

PROJECT: SULPHURETS #2153	GROUND ELEV.: 3400' 1036m
HOLE NO.: DDH #13	BEARING: 180° - 360°
LOCATION: MOLY ZONE 150 meters west of DDH #9	DIP: COLLARED @ 70°
	TOTAL LENGTH: 275.84 meters.
LOGGED BY: MORLEY G. BROWN	HORIZONTAL PROJECT
DATE: LOGGED AUG. 1980 to 28/80	VERTICAL PROJECT
CONTRACTOR: ARTIC DIAMOND DRILLING. Whitehorse, Yukon	ALTERATION SCALE
CORE SIZE: BQ	
DATE STARTED: AUGUST 13, 1980 - STARTED DRILL MOVE FROM DDH #12	
DATE COMPLETED: AUGUST 23, 1980 - DRILL MOVE TO DDH 14 STARTED	TOTAL SULPHIDE SCALE

absent
slight
moderate
intense



traces only
< 1%
1% – 3%
3% – 10%
> 10%

DIP TESTS

METRES:	18.29	60.96	76.2	275.84
DIP:	69°	68°	64°	22.5°
BEARING:	354°	358°	357°	042°

COMMENTS

LEGEND

WP-6275B

PAGE 2 OF 21 | PROJECT: SULPHURETS | HOLE NO. 13

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				0 - 5.10 - CASING - OVERBURDEN	
				5.10m - 78.73m QTZ SERICITE SCHIST	
				- Med grained, Lt grey	
				- Well foliated, Sericitized and friable.	
5				- Sections of complete clay with fractures	
				- NO RELICT PRIMARY FEATURES OR STRUCTURES	
				- 2% Vn-qtz parrallel < 1cm and // foliation	
				Minor random cross cutting veins	
				- Py = 5% is disseminated throughout Sect.	
				Locally high concentrations with qtz veins + as patches + or clots.	
			35	- IN GENERAL UNIT BLOCKY WITH VERY CRUMBLY + FRACTURED SEGMENTS - EVIDENCE OF EXTENSIVE SHEARING	
				- Abn. FRACTURE HEMATITE AND LIMONITE COATED	
10			35	6.24 FRACTURED - RUBBLY CORE - LIMONITE STAINED ?	
				8.20 - 9.10 FRACTURED AND RUBBLY CORE - LIMONITE STAINED	
				11.02 - 14.86 BLOCKY AND FRACTURED CORE	
				- FRAGMENTS generally consist of QTZ rich horizons + fragmented qtz veins - width and structural relation unknown	
15					
			25		
				19.73 - 23.58 WELL SERICITIZED - CLAY SEAMS [illegible] FRACTURED SECTIONS	
20					
25			60	26.60 - 28.96 WELL SERICITIZED - CLAY SEAMS WITHIN BLOCKY AND FRACTURED ROCK	

WP-6275C

PAGE 3 OF 21 | PROJECT: SULPHURETES | HOLE NO. 13

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	% Mo	%			COMPOSITE ASSAYS
5.28 - Moly within Qtz - small frag. of core										
5.96 Dissemination Moly on planes of cross cutting Qtz vein Py ≈ 10-15%										
7.43 - 8.03 Qtz veins ≈ 1cm wide + less with trace amounts Moly - generally within Shears along planes of veins		5.0								
			3.0	1201 2.92 Rec.		.035				
8.42 Small Qtz vein // foliation with minor Moly		8.0								
11.28 - 14.33 - Fragments of Core generally Qtz veins Presumed in Shearing & some contain minor amts Moly - Structural characteristics		11.0	3m	1202 1.85 Rec		.029				
			3.0 m	1203 1.80m Rec.		.036				
		14.0								
			3.0 m	1204 2.40m Rec		.029				
		17.0								
19.73 - 23.58 - Minor Moly within Presumed Qtz veins forming fragments in well Silicified Core			3.0 m	1205 1.8m Rec.		.027				
20.32 - Small Qtz vein trace Moly		20								
			3.0 m	1206 1.5 Rec		.031				
		23								
24.24 - Dissemination Moly in schist.			3.0 m	1207 3.0m Rec		.039				
25.08 - Dis. Moly in small Qtz vein 1cm // foliation										
		26								
6.54 - Qtz vein ≈ 1.5cm trace Moly										
28.96 - trace Moly in tiny Qtz seam // Fol.			3.0 m	1208 2.26 Rec		.016				
29.28 - Good Moly in 2cm minor Qtz vein // foliation		29								
29.84 - Trace Moly - small Qtz vein // Fol. 30.22 - "										

WP-6275B

PAGE 4 OF 21 | PROJECT: SULPHURETS | HOLE NO. 13

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
			60°		
				34.44 - 34.75 - WELL SERICITIZED, FRAG, CLAY SEAMS	
			65	35.85 - 35.98 - Irregular Kaolin QTZ vein - Clean No Sulfides	
35					
			65		
				38.41 - 38.72 - Well Sericitized and fractured core : FRAGS PRINCIPALLY BROKEN QTZ VEINS STRUCTURAL ASSOCIATION ? - MOLY IN SOME QTZ FRAGS.	
40					
				39.10 - 39.30 - FRACTURE - CORE SERICITIZED & FRIABLE	
				39.68 - 39.82 - FRACTURED CORE // FOLIATION (LIMONITIC HEMATITE)	
				41.46 - 41.78 - FRAGMENTED CORE - FRACTURE // FOLIATION - Small frag at 41.52 contains QTZ vein inch in by < 1cm @ 30° to Ca.	
			65		
				44.91 - 45.31 - FRACTURE ? - RUBBLY AND FRAG. CORE - VERY FRAGMENTED CORE	
45					
				47.85 - 48.25 - BLOCKY & RUBBLY CORE	
			65°		
				50.75 - 50.85 - SMALL SHEAR - WELL SERICITIZED - CORE VERY SOFT - CLAY SEAMS	
50				51.80 - 52.42 - FRACTURE - RUBBLY AND WELL SERICITIZED CORE V.G FY SEAM 51.80	
			65°		
				54.55 - 54.68 SHEAR - WELL SERICITIZED AND SOFT CORE	
				54.75 - 54.85 - QTZ VEINS // - SUB // FOLIATION - MOLY TRACE	
			65		
55				56.65 - 56.70 - - CLAY SEAM - SMALL SHEAR	
				57.40 - 57.52 - FRACTURE ? FRAGMENTED CORE	
			65°		

WP-6275C

PAGE 5 OF 21 | PROJECT: SULPHURETES | HOLE NO. 13

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	% Mo	%			COMPOSITE ASSAYS
			3.0	1209 No Loss		.033				
32.61 - small QTZ VEIN // FOLIATION TRACE MOLY		32								
32.78 - TRACE MOLY // FOLIATION										
			3.0 m	1210 2.1m REC		.022				
34.44 - 34.75 TRACE MOLY WITHIN QTZ ARAGS REMNANTS OF QTZ VEINS NOW DISTROYED BY SHEARING		35								
37.85 - QTZ VEIN WITH TRACE MOLY 2cm			3.0 m	1211 2.52m REC		.027				
38.10 - QTZ VEIN < 1cm TR. MOLY. // FOLIATION.		38								
			3.0 m	1212 No Loss		.029				
41.56 - SMALL QTZ VEIN 2mm wide with GOOD moly alloting // fol.		41								
41.96 - TRACE Mo IN QTZ VEIN 2cm WIDE - GOOD BY CROSS CUTS FOLIATION @ 25° TO CA			3.0 m	1213 2.66m REC		.023				
42.12 — 42.18 PY SEAM WITH QTZ VEIN ± 35% PY		44								
44.91 - 45.31 - TRACE Mo WITH FRACTURED SEGMENTS OF FRACTURED										
			3.0m	1214 1.45m REC		.012				
		47								
49.95 PY VEIN = 3cm WIDE - VFG MOLY - IN ASSOCIATION WITH QTZ VEIN.			3.0 m	1215 NO LOSS		.019				
53.95 - TRACE Mo IN SMALL QTZ VEIN 6 1cm wide.		50								
52.96 - PY VEIN = 2cm WIDE WITH TRACE moly - QTZ VEIN.			3.0m	1216 2.35 REC.		.025				
		53								
54.75 - 54.85 - TRACE MOLY ON FRINGES OF QTZ VEINS.			3.0 m	1217 2.64m REC.		.025				
		56								
			3.0 m	1218 2.21m REC.		.010				
		59								
60.10 - TRACE Mo IN QTZ VEIN // FOLIATION										

WP-6275B

PAGE 6 OF 21 | PROJECT: | HOLE NO. 13

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				60.05 - 60.45 FRACTURE - FRAG + RUBBLY CORE	
				61.16 - 63.10 - BROKEN AND CRUMBLY CORE - SOME NARROW CLAY SEAMS	
				63.55 - 63.98 - EXTENSIVELY SERICITIZED AND FRIABLE - LARGLY COMPOSED OF CLAY BIOTITE ? PROBABLY // FOLIATION	
65				66.24 - 66.94 - SHEAR ZONE - SERICITE CLAY WITH SMALL FRAGMENTS OF QTZO RICH VEINS PRESERVED WITHIN	
				69.25 - QTZ VEINS ± 3-4 cm WIDE - VEINS MOLY AND CHALCO STRUCTURE ? APPEARS // FOLIATION	
			60	69.45 - QTZ VEIN ± 6 cm WIDE // SUB // FOLIATION	
70			60	69.70 - 73.56 - VERY WELL SERICITIZED, WELL FOLIATED ROCK WITH NUMEROUS RUBBLY AND FRAGMENTED SEGMENTS. SMALL CLAY SEAMS NOTED WITH MORE SHEARED ZONES BUT NOT WELL DEVELOPED	
			45		
				74.39 - 74.49 - FRACTURE 20° TO CA	
75			45		
				76.51 - 76.61 - WELL SERICITIZED FRACTURE SOFT AND EASILY CRUMBLED	
			40		
				78.33 - 107.40 QTZO - FELDSPATHIC ROCK	
				- LT TO MEDIUM GR TO PALE GREEN GRAY, FINE TO MED GRAINED.	
				- FOLIATION MODERATELY DEVELOPED AND MORE NOTICEABLY DETECTED ALONG THE FINER GRAINED HORIZONS	
80				- QTZ VEINS MODERATELY DENSE - GENERALLY // FOLIATIONS > < 1cm - LOCALLY X CUTTING ± SOMEWHAT WIDER THAN 1cm BY BETWEEN 5-10% LOCALLY AS HIGH AS 15-20% FORMING MORE CONCENTRATED ZONES AND PATCHWORKS.	
				- HORIZONS OF MORE CHLORITIZED ALTERATION PRIMARILY IN FINER GRAINED SEGMENTS	
				- UNITS GRADES FROM SERICITE SCHIST Y PROBABLY REPRESENTS LESS SHEARED AND ALTERED EQUIVALENT.	
85				- SOME ANGULAR TO SUBROUNDED GRAINS NOW STRETCHED ALONG FOLIATION PLANES	
				- UNIT IS MORE COMPETANT WITH LITTLE OR NO FRACTURES	

WP-6275C

PAGE 7 OF 21 | PROJECT: SULPHURETES | HOLE NO. 13

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	% Mo	%			COMPOSITE ASSAYS
60.35 + 60.45 TRACE MOLY WITHIN QTZ VEINS <1cm WIDE			3.0 m	1219 1.05m REC		.013				
		62								
			3.0 m	1220 1.22m REC		.018				
		65								
69.25 QTZ VEIN WITH CU + MO 69.45 QTZ VEIN WITH VG. MO			3.0 m	1221 1.44 REC.		.013				
67.00 - 76.0 meters MOLY OCCURS AS DISSEMINATED GRAINS USUALLY WITHIN FOLIATION PLANES OF FINE ~~GRAIN~~ LAMINATED QTZ. - SOME MORE CONCENTRATED PATCHES NOTED WHERE QTZ VEINS ARE MORE STRONGLY DEV.		68								
		71	3.0 m	1222 2.46m REC		.011				
		74	3.0 m	1223 2.21m REC.		.016				
			3.0 m	1224 2.63m REC		.008				
		77								
			3.0 m	1225 2.24m REC.		.007				
78.23 V.G py ≈ 20% WITHIN QTZ VEIN		80								
			3.0 m	1226 2.72m REC.		.008				
84.93 - TRACE MOLY WITHIN QTZ VEIN // FOLIATION		83								
			3.0 m	1227 NO LOSS		.037				
85.36 - NARROW QTZ VEIN <1cm // FOLIATION WITH TR. MOLY		86								
87.0 - MOLY WITHIN QTZ VEIN SUB// FOL.			3.0 m	1228 No Loss		.012				
		89								

WP-6275B

PAGE 8 OF 21 | PROJECT: | HOLE NO. 13

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				90.03 QTZ VEIN 10° TO CA SUB // FOLIATION ± 1cm wide	
			35-40		
			35	93.47 QTZ VEIN // FOLIATION ± 1cm wide	
95				95.82 - 95.92 QTZ VEIN - IRREGULAR > PATCHY - GOOD PY ≈ 20%	
			35-40		
			35		
100			35		
				104.28 - 104.32 QTZ VEINS ± 1cm WIDE - // to SUB // FOLIATION NO ASSOCIATED MINERALIZATION	
			35		
			22	107.40 - 108.14m ALTERED TUFF	
105				- FINER GRAIN MORE CHLORITIC HORIZON FORMING IRREGULAR PATCHWORKS IN ALTERATION AND INTRUDED BY SMALL QTZ STRINGLETS GENERALLY < 1cm wide	
				- PATCHWORKS CONFORM TO FOLIATION. - POSSIBLE ALTERED TUFFACEOUS ROCK - SOME ELONGATE FRAGS. NOTED	
			35	- CONTACT WITH ABOVE UNIT GRADATIONAL AND APPEARS TO BE MASKED BY IRREGULAR QTZ VEINING NETWORKS BELOW	
110			45	108.14 - 129.6 ALTERED VOLCANICS (AS FOR 78.33 - 107.40m)	
			45	- SLIGHTLY MORE IMPREGNATED WITH QTZ VEINS NETWORKS	
				116.00 - 116.75 QTZ VEIN NETWORK - IRREGULAR - NO GOOD STRUCTURAL CHARACTERISTICS - TRANSGRESSES INTO MORE QTZ RICH HORIZON - MASKS FOLIATION	
115				119.96 FOLIATION BEGINS STEEPENING & QTZ VEINING BECOMES MORE PROLIFIC - VEINS GENERALLY < 1cm WIDE	
				- QTZ VEINS @ 5-10° TO CA AND MASK FOLIATION - IN SOME CASES THEY APPEAR TO BE RELATED TO FOLIATION CHANGE ?	

WP-6275C

PAGE 9 OF 21 | PROJECT: SULPHURETES | HOLE NO. 13

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	% Mo	%			COMPOSITE ASSAYS
			3.0 m	1229 No Loss		.009				
		92								
			3.0 m	1230 No Loss		.009				
95.72 - TRACE MOLY WITH FINE LAMINATED QTZ STRINGER // FOLIATION		95								
96.34 - TRACE MOLY IN ASSOCIATION WITH VERY THIN QTZ VEIN			3.0 m	1231 No Loss		.006				
97.82 - SMALL QTZ VEIN WITH TR Mo SUB // FOLIATION		98								
			3.0 m	1232 No Loss		.011				
101.82 - FINE GR. MOLY WITHIN SMALL X CUTTING QTZ STRINGER - CHL. ALTERATION AROUND QTZ.		101								
103.92 - 104 - TRACE MOLY WITHIN SMALL QTZ VEINS < 1cm WIDE CONFORMABLE TO FOLIATIONS - X CUTTING VEINS WHITER AND CONTAIN Py ≈ 10%		104	3.0 m	1233 NO LOSS		.012				
			3.0 m	1234 No Loss		.010				
108.75 - TUFFACEOUS ROCK - MINOR CHALC.		107								
109.28 - TRACE MO WITH THIN QTZ STRINGER // FOLIATION			3.0 m	1235 No Loss		.015				
		110								
111.46 - MINOR MOLY IN QTZ RICH SEG. OF QTZO FELDSPATHIC ROCK CONFORMABLE TO FOLIATION			3.0 m	1236 NO LOSS		.010				
		113								
			3.0 m	1237 No Loss		.006				
		116								
			3.0 m	1238 No Loss		.006				
		119								

WP-6275B

PAGE 10 OF 21 | PROJECT: | HOLE NO. 13

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
		QZ	20°	122.0 - 124.0 - QTZ VEIN OR VEINS ? RUNNING NEAR // TO CA ± 1CM WIDE WITH MINOR ASSOCIATED PY ~5-10% IN AND ALONG BOUNDARIES - SOME PATCHES AND PY. BLEBS NOTED LOCALLY/	
				124.05 - 124.12 QTZ VEIN, GREY WHITE WITH NO PY OR MIN. PALE GREEN ALTERATION ALONG FRINGE	
125					
				126.0 - 139.0 - VERY GOOD QTZ VEINING AT 20° TO CA. GENERALLY < 1CM WIDE AND LACK GOOD SULFIDE CONTENT. - SOME CONTAIN MO	
				129.6 - 230.75 ALTERED TUFFACEOUS Rx - (Lava Tuff ? -) - QTZO - FELDSPATHIC. - Lt. grey to medium grey patchy networks. - fine grained; some coarser grained segments. - Some frags preserved in qtz vein network in upper segment - become more definite where qtz veining less intense. Frags usually 1.3cm long x ± 0.8cm wide - Silicified + Chloritized Py ~ 3-5% - above contact masked by Qtz Veining - lower contact gradational with more grainy + QTZO-feld Rx	
130			15°		
				136.75 - 139.49 - DARK GREY TO LT GREY GREEN ROCK - QTZO FELDSPATHIC WITH GOOD CHLORITE ALTERATION IN CONJUNCTION WITH QTZ VEINS. QTZ VEIN FORM IRREG. NETWORKS. - SOME RELICT FRAGS ?	
135					
				135.80 - 135.85 - QTZ VEIN // FOLIATION - NO SULFIDE	
			75°		
140					
				142.92 - 142.54 - FOLIATION CHANGES TO BETWEEN 36-62° TO CA AROUND A WHITE CLEAN QTZ SULFIDES QTZ VEIN BETWEEN 142.10 - 142.20 m NO NOTED MOLY	
			ALTERED VOLCANIC BRECCIA ?	143.0 - 147.0 - DEFINITE ANGULAR FRAGS GREY GREEN DIFFERENT ALTERATION CHARACTERISTICS WITHIN FINE TO MED GRAINED QTZO-FELDSPATHIC ROCK OF SLIGHTLY LIGHTER COLOR. GREY. FRAG GENERALLY < ± 1CM AND PRIMARILY ELONGATE TO FOLIATION. - DIFFICULT TO TRACE DOWNER - APPEARS TO GRADE BACK TO QTZO FELDSPATHIC ROCK WITH LESS FRAGS AND GOOD QTZ VEINING NETWORK.	
145					
			0-5		
			0-5		

WP-6275C

PAGE 11 OF 21 | PROJECT: | HOLE NO. 13

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	% Mo	%			COMPOSITE ASSAYS
			3.0	1239 No Loss		.009				
		122								
			3.0 m	1240 No Loss		.008				
124.25. TRACE MOLY WITHIN QTZ VEIN										
		125								
125. TRACE Mo. WITHIN QTZ VEIN										
125.45 TRACE Mo WITHIN QTZ VEIN			3.0 m	1241 No Loss		.007				
		128								
127.0 - MOLY WITHIN VERY NARROW QTZ VEIN										
128.65, 128.82 TRACE MOLY WITH QTZ VEINS FORMING IRREG. NETWORKS			3.0 m	1242 No Loss		.003				
		131								
			3.0 m	1243 No Loss		.006				
		134								
136.15 - MOLY WITHIN QTZ VEIN,			3.0 m	1244 No Loss		.002				
		137								
			3.0 m	1245 No Loss		.009				
		140								
140.90 - 140.95 - QTZ VEIN WITH TR. Mo.										
142.20 TRACE MOLY ON SALVAGE OF CLEAN WHITE QTZ VEIN.			3.0 m	1246 No Loss		.018				
		143								
			3.0 m	1247 No Loss		.003				
		146								
			3.0 m	1248 No Loss		.001				
		149								

WP-6275B

PAGE 12 OF 21 | PROJECT: | HOLE NO. 13

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				149.5 - 154.1 - QTZ VEIN NETWORK LESS INTENSE - FRACS MORE DEFINED FOLIATION STILL STEEP	
		6°	6°		
155		120°	12°	157.1 CROSS CUTTING QTZ VEIN - <1cm WIDE - CLEAN WHITE NO SULPHIDE CONTENT.	
		55			
		8°	8°		
160					
			? 0	QTZ VEIN NETWORK GRADUALLY DIMINISHES and ABT REFLECTING HOST FOLIATION @ 164.54 - GRADATIONAL in Patchy ALTERATION SEGMENTS - QTZ VEINS MORE RANDOM and at Stallance 6 to C.A.	
165			42°	FOLIATION OF HOST ROCK NOT INTENSE AND DISTINGUISHED IN FEW SEGMENTS	
			62°	169.57 - 169.90 - Finegrained v Laminated Segment Pinked Feldspar v Qtz granules - Possible Lapilli TUFF? - CONTACT WITH MILKY WHITE QTZ. Foliation @ 62° to C.A.	
170			40	169.90 - 170.02 - Milky White Qtz Vein cutting core at 55° to CA -contains very little Sulphides.	
			38°	171 -	
175					
				177.15 - 177.22 Large Patchy Alteration - with irregular X cutting Qtz Veins - Py content is irregular forming small blotchy pods <as cm².	
		42°		178.25 - Milky white Qtz Vein @ 42° to CA	

WP-6275C

PAGE 13 OF 21 | PROJECT: | HOLE NO. 13

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	% Mo	%			COMPOSITE ASSAYS
			30 m	1249 No Loss		.001				
		152								
			30 m	1250 No Loss		.019				
		156								
			30 m	1251 No Loss		.003				
		158								
			30 m	1252 No Loss		.002				
160.62 - 160.82 - QTZ VEIN < 1cm @ 80° to CA with minor Mo		161								
			30 m	1253 No Loss		.002				
		164								
			30 m	1254 No Loss		.001				
		167								
			30 m	1255 No Loss		.001				
169.95 - Minor Chalcopyrite within QTZ VEIN.		170								
			30 m	1256 No Loss		.001				
		173								
			30 m	1257 No Loss		.002				
		176								
178.35 - 178.42 - Py - Chl ; Py = 20% - Minor Mo			30 m	1258 No Loss		.002				
		179								

WP-6275B

PAGE 14 OF 21 | PROJECT: | HOLE NO. 13

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				178.92 - 180.42 - Chl-Sericite patchy alteration - Some Rotted Frags "Zgular?	
				183.49 - Small fracture 23° to CA. - Appears // to Otz Vein ± 1.0cm wide with some py @ 10%	
185				184.60 - 185.11 - Py in host increased @ ± 10-15% blotchy	
				186.22 - Small chl py blebs < 1.5cm²	
			40° Ft		
190				191.0 - 191.1 Otz vein <1cm wide py ± 10% irregular to core Axis (Zig Zag nature)	
			Fc 3°	194.66 - Small fracture 3° to CA	
195					
			Fr 22°	200.15 - 200.45 - Fracture - Fault Gouge - 22° to CA. - Core Sericitized & friable	
200					
				203.30 - 203.92 - Fault GAUGE 18° to CA - very Crumbly & well serecitized core. More competent Otz Veins unaltered	
205					
				206.38 - 207 - Patchy altered core with py content Slightly increase within Chl zones ± 10% - locally blotchy at 15%	
				- some frags? "Zgular	

WP-6275C

PAGE 15 OF 21 | PROJECT: | HOLE NO. 13

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	% Mo	%			COMPOSITE ASSAYS
*			3.0 m	1259 No Loss		.001				
Py Content generally ≈ 5%		182								
Locally as high as 10% but not over any great width.			30 m	1260 No Loss		.002				
		185								
			30 m	1261 No Loss		.009				
		188								
			3.0 m	1262 No Loss		.012				
191.0 - Py ≈ 5-10% in association with small Qtz Stringers.		191								
			3.0 m	1263 No Loss		.011				
		194								
			30 m	1264 No Loss		.009				
197.65 - Blotchy Py in association with Qtz. networks ≈ 10%		197								
			3.0 m	1265 No Loss		.007				
		200								
			30 m	1266 No Loss		.002				
		203								
			3.0 m	1267 No Loss		.009				
206.45 - 206.92 - Py within Chl. patches ≈ 5-10%		206								
			3.0 m	1268 No Loss		.019				
		209								

WP-6275B

PAGE 16 OF 21 | PROJECT: | HOLE NO. 13

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION

215

216.22 QTZ VEIN MILKY WHITE - 75° to C.A.
NO SULPHIDE CONTENT - 2.5 cm wide.

218.65 - GRANULAR LOOKING QTZO FELDSPATHIC Rx - SOME Relict feldspars ≈ 3-4 mm²

219.45 QTZ VEIN WITH GOOD Py ≈ 10% < 1cm wide IRREGULAR X cutting.

220

221.60 - 222.20 Patchy alteration Section

224.75 - 225.35 - QTZ VEIN - BLUE GREY 5° - // C.A. generally < 1cm but may be ½ 1cm in spots - NO MIN.

225

227.70 - Milky white QTZ VEIN - 68° to C.A.

228.30 - 228.60 - QTZ VEIN NETWORK - IRREGULAR NO CORE.

230.64 - 275.84 QTZO - FELDSPATHIC Rx (AS FOR 78.33 - 107.40)

230

- Medium to Light grey - medium to fine grained
- Foliation intensity is poor and not usually detectable
- Relict Feldspar euhedral xtals
- Rx has "Salt + pepper" textural appearance.
- COMPETANT UNIT
- Py CONTENT ≈ 5-10% overall - Locally may be 15% in patchy blebs within narrow QTZ veins.
- PROBABLY ALTERED Volcanics
- MINOR FRAGMENTAL MTL NEAR BASE OF UNIT - RANDOM & UP TO 2.5 cm².

235

237.0 - QTZ VEIN < 1cm with associated Py irregular X cutting CORE

WP-6275C

PAGE 17 OF 21 | PROJECT: | HOLE NO. 13

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	% Mo	%			COMPOSITE ASSAYS
			30 m	1269 No Loss		.003				
		212								
			30 m	1270 No Loss		.010				
		215								
218.65 - Py patch within QTZ vein			30 m	1271 No Loss		.004				
		218								
			30 m	1272 No Loss		.001				
		221								
			30 m	1273 No Loss		.002				
		224								
224.75 - Patchy Py ≈ 5-10%			30 m	1274 No Loss		.001				
		227								
227.70 - Py ≈ 10% around Qtz Vein.			30 m	1275 No Loss		.001				
228.40 - Py Patchwork ≈ 10% IN associated with QTZ VEINING Network										
		230								
				* THE REMAINDER OF THE HOLE NOT SAMPLED AS THERE IS NO VIS MINERALIZATION						
~237.0 - Py with QTZ VEINING ≈ 10%										
239.80 - Py within Narrow QTZ vein										

WP-6275B

PAGE 18 OF 21 | PROJECT: | HOLE NO. 13

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				240.50 - 240.70 - QTZ VEINS <1cm forming IRREGULAR NETWORK py ≈ 5-10%	
				243.30 - Chl QTZ VEIN < 0.5cm - Calls within Fr.	
245				245.95 - FRACTURE < ? - CAUSE CORE WELL SERICITIZED SOFT - EASILY BROKEN IN HAND.	
250				252.68 - 254.50 - BLOCKY CORE. - py content increased to 5-10% and Locally patchy blebs ≈ 2 cm Wide @ 15% - GOOD QTZ VEINING NETWORK.	
		QTZ 3°		254.20 - FRACTURE 34° to CA.	
255		QTZ 3°		255.20 - 255.34 NARROW QTZ VEIN with good py ≈ 15%. at 3-5° to CA	
				259.97 QTZ VEIN CROSS CUTTING C.A @ 65° - py content ≈ 15%	
260					
				264.52 - FRACTURE 24° to CA.	
265					
				268.40 - 270 Chl pervasive as small blebs pervades rock edge giving core a salt + pepper look	

WP-6275C

PAGE 19 OF 21 | PROJECT: | HOLE NO. 13

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
244.15 - Moly within QTZ VEIN IRREGULARLY & CUTTING		245								
		250								
252.68 - 254 - Py CONTENT 10-15% within and around QTZ VEINING NETWORK.										
		255								
		260								
262 - 268 - Small irregular blebs of chloritic material random through out core sections + contain 10-15% Py.										
		265								

WP-6275B

PAGE 20 OF 21 | PROJECT: | HOLE NO. 13

DEPTH (METRES)	%Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION
				271.12 FRAGMENTS @ 1.5cm x 1.0cm - Chloritized Py.	
				272.56 FRACTURE - 22° to C.A.	
				273.85 - 273.90 QTZ VEIN CROSS CUTTING COR @ 85° to C.A. Py @ 15-20%	
275				275.84 - END OF HOLE	
				CORE CAMPED FOR W	
				HOLE CAUGD AT @ 76.2 Meters AND	
				@ BARRY SUN TEST NOT TAKEN	
				BETWEEN 76.2 & 275.84 m.	
				M.E. Brown	
				GEOLOGIST ESSO MINERALS	

WP-6275C

PAGE 21 OF 21 | PROJECT: | HOLE NO. 13

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLE INTERVAL	SAMPLE WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
273.22 - py blebbes with Chloritized host ≈ 15%		275								

ICEFIELD

ICEFIELD

ICEFIELD

ICEFIELD

F

F

F

IF

F

F

56° 30'

56° 30'

56° 30'

130° 15'

Sulphurets Property
Claim Map, 104B/9W
1:10,000
Nepal Sheet & 2 Maps

MINERALS BRANCH
ASSESSMENT REPORT
NO. 8420

(1)

56° 30'

130° 15'

MORAINE

ICEFIELD

TEDRAY 11
163

TEDRAY 12
164

TEDRAY 13
165

TEDRAY 14
166

TEDRAY 15

F

IF

3000

2000

4500

5000

3500

4000

5500

4300

4520'

RED RIVER 3

RED RIVER 3M

■ c.c.p. located and targeted on ground and photographs

◪ c.c.p. located accurately on ground but not targeted on photographs

□ c.c.p. shown on air photographs

□ witness posted c.c.p.

□ c.c.p. established in 1984, but not necessarily appropriate spot for a 2-post claim, identified and targeted on air photography

——— accurate claim boundary

– – – approximate claim boundary

◎ diamond drill hole collar

Sulphurets Property
Claim Map, 104B/8E, 8W
1:10,000
South Sheet of 2 Maps

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

8420