

DIAMOND DRILL HOLE REPORT FOR GROUP I
ON JEFF 1-4, 6, 13-17, 25-30, 41-44,
57-62, 65-78 MINERAL CLAIMS

LIARD MINING DIVISION
104 I/1W
58°12'N 128°21'W

for
ESSO MINERALS CANADA
314-1281 West Georgia Street
Vancouver, B.C.

by
DANE A. BRIDGE

May, 1979

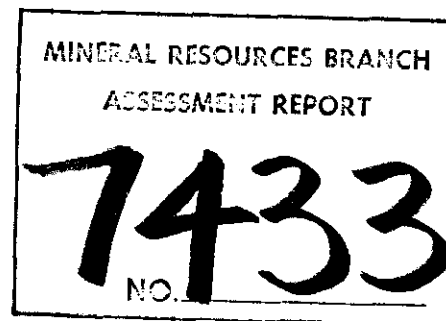


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DIAMOND DRILL HOLE REPORT FOR GROUP I

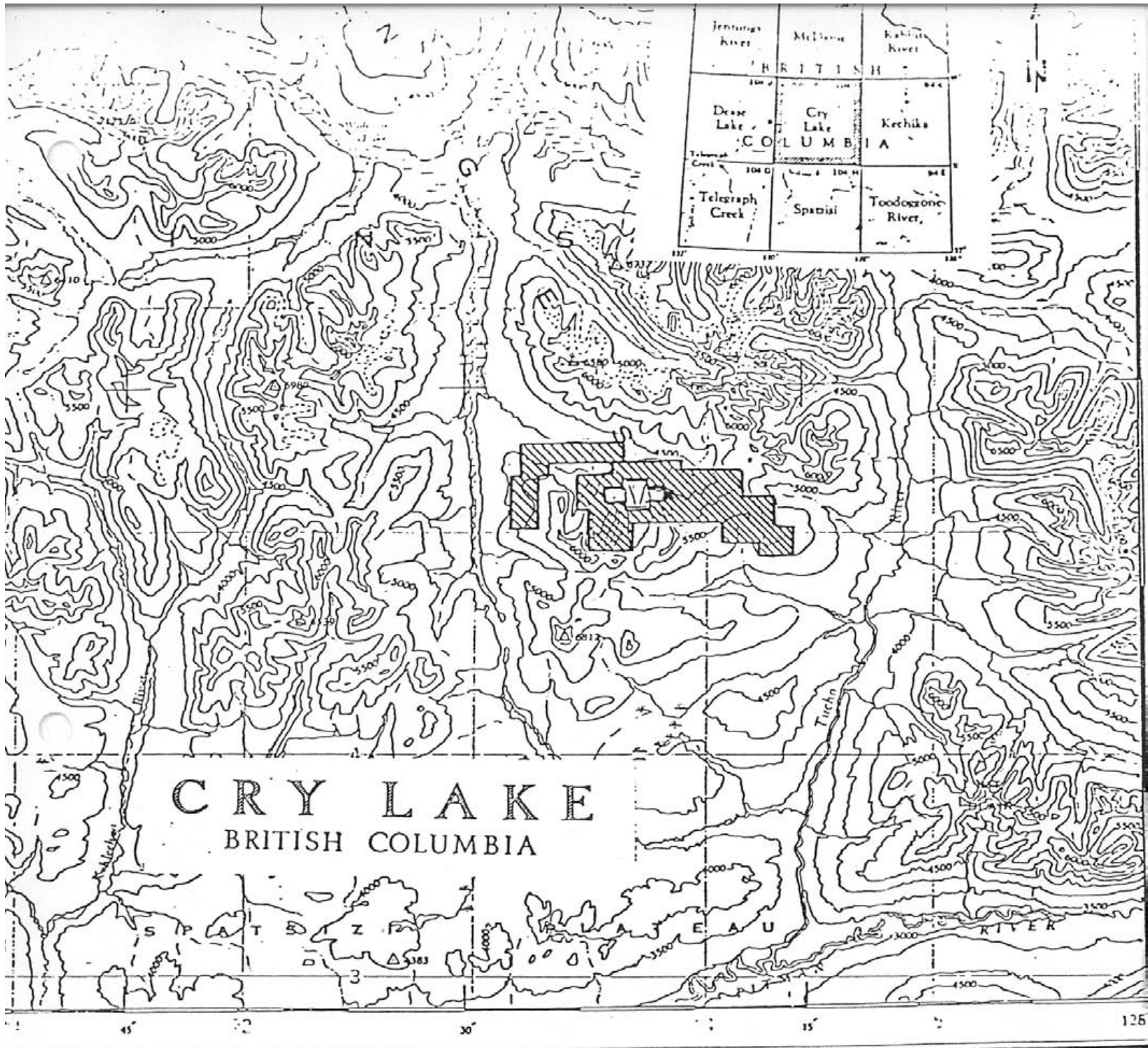
INTRODUCTION

The Kutcho Creek property is located in mountainous terrain in the Cassiar Mountains. The exploration camp is located at an elevation of 1530 m on the south side of a tributary of Kutcho Creek. Exploration is done at or above tree line from elevations of 1500 to 1650 m.

The property is centered about 21 km south-southeast of Rainbow Lake and 9 km east-southeast of the Kutcho Creek airstrip. Access is by plane to the airstrip from Watson Lake, Yukon and from the strip to camp by helicopter. The location of Esso Minerals' claims is shown on Index Map No. 1.

The property is owned and operated by Esso Minerals Canada, a division of Esso Resources Canada Limited.

This report documents 328 m of NQ diamond drilling in 2 holes drilled on Jeff 6 mineral claim

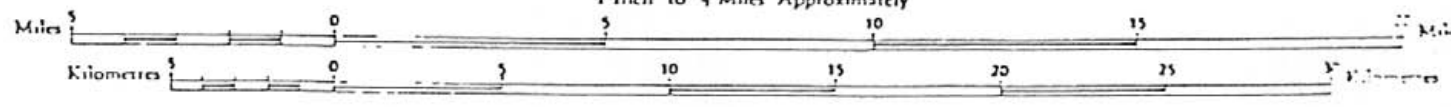


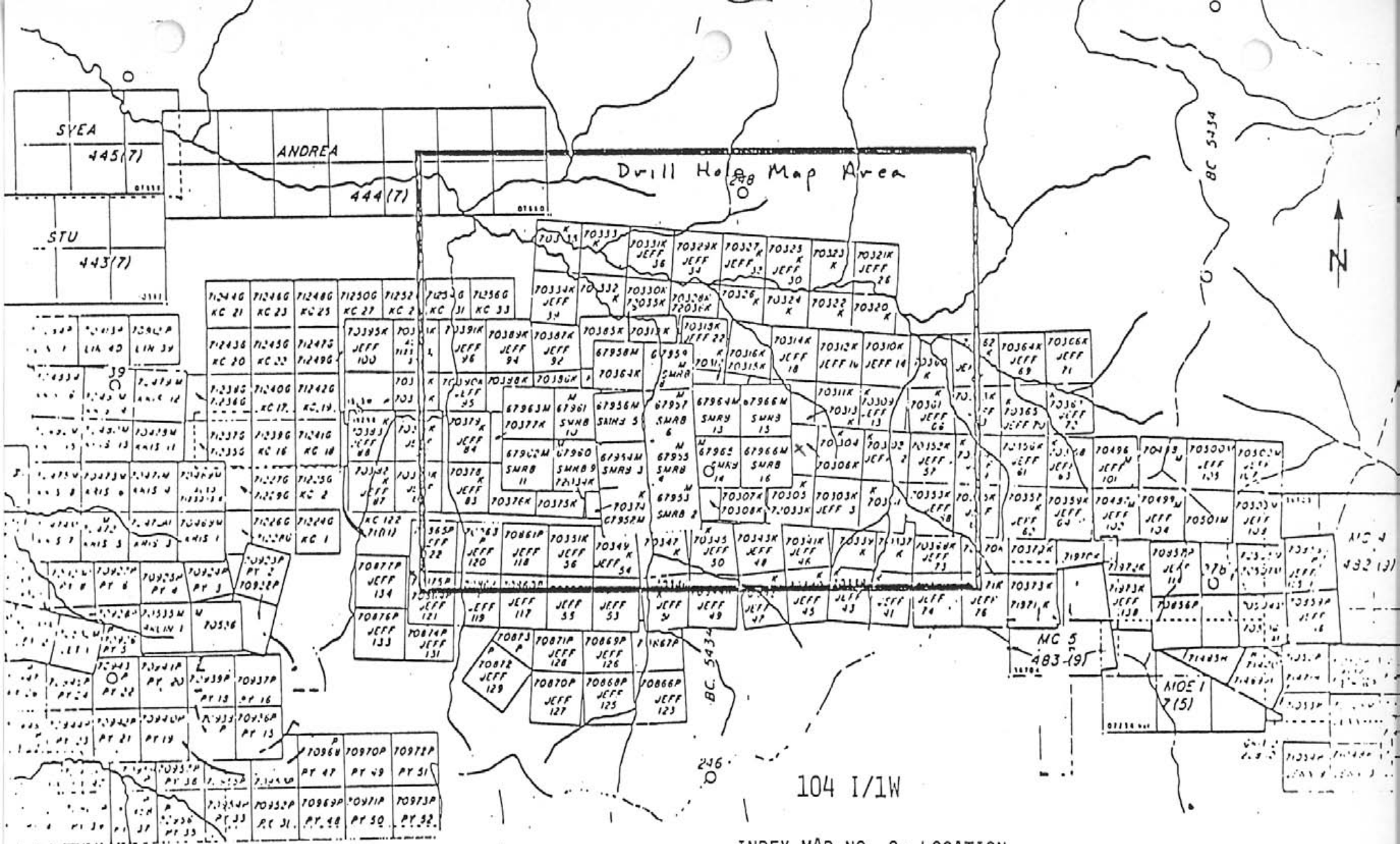
CRY LAKE
BRITISH COLUMBIA

INDEX MAP NO. 1: LOCATION OF ESSO
MINERALS CANADA'S KUTCHO CREEK
MINERAL CLAIMS IN 104 I.

7433

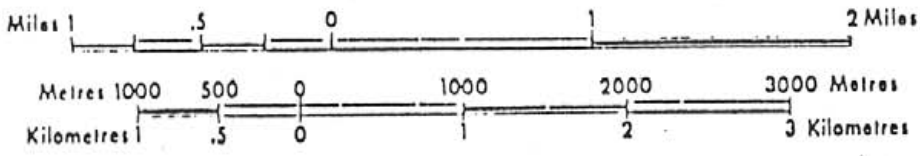
Scale 1 : 250,000
1 Inch to 4 Miles Approximately





104 I/1W

INDEX MAP NO. 2: LOCATION
MAP FOR DIAMOND DRILL HOLE
LOCATION MAP.



GEOLOGY

Mineralization at Kutcho Creek consists of stratiform, volcanogenic massive pyrite with base metal sulphides. The sulphides occur near the transition from volcanic to mixed volcanic and sedimentary rocks within the Triassic or older Kutcho assemblage.

The following is a description of the lithologic units encountered in drilling on the Kutcho property. They are arranged from youngest to oldest which is the sequence in which they are encountered in drilling. The quoted thicknesses are the maximum apparent true thicknesses encountered in drilling prior to 1979 or an estimate:

Limestone, 125 m

Massive recrystallized limestone.

Conglomerate, 150-160 m

Strongly foliated polymictic conglomerate composed of predominately silicic clasts derived from the volcanic pile. The base of the conglomerate unit has been intersected in 6 holes. It is always underlain by rocks of the basic unit.

Tuff Argillite Unit, 350 m in area north of Esso's camp to 440 to 470 m thick 3 km west

This unit represents a conformable transition from the underlying silicic volcanic rocks to very fine-grained, silicic, graded water-lain tuffs, argillite, siltstone and epiclastic rocks. It consists mainly of tuffs and slightly argillaceous tuffs metamorphosed to quartz-chlorite-sericite-biotite schists. Fine laminations, graded bedding and quartz phenocrysts are unaffected by the development of foliation.

A black, calcareous, graphitic argillite commonly occurs a few meters above the base of the unit. A mixed unit of argillite and argillaceous tuff commonly occurs approximately 100 to 150 m above the base of the tuff-argillite unit. The main lithology in the upper portion of the unit is a silicic siltstone with minor megascopically visible biotite. Minor disseminated pyrrhotite ± pyrite is ubiquitous in the tuff-argillite unit.

Basic Unit, Variable Thickness

Basaltic to andesitic flows and tuffs? occur from immediately below the ore horizon to the base of the conglomerate unit. They are most abundant within the stratigraphic interval of the tuff-argillite unit. Here they account for 33 to 82% of the section and generally make up >50% of the section directly overlying the ore horizon.

The basic unit rocks were previously called metagabbro. They include massive basalt, basic schists, amphibolitic flows, amphibolitic flows with plagioclase phenocryst, plagioclase porphyries and plagioclase porphyries with minor quartz phenocrysts. Variations from massive, amphibolitic units to plagioclase porphyries are the most common rocks in the basic unit.

The basic rocks are commonly weakly foliated and contain chlorite, epidote-clinozoisite and biotite. Locally they are intensely altered to carbonate-sericite.

Quartz Feldspar Crystal Tuff (QFCT), 200 m

The QFCT and Rhyolite Tuff units overlie the ore horizon. The ore zones occur slightly up-dip (south) of a facies change between the QFCT and Rhyolite Tuff units. The QFCT unit is graded and tuffaceous at the top but could be a flow.

Two main phases occur in the QFCT. The most abundant phase is a very homogeneous quartz-feldspar-sericite-chlorite-carbonate schist with abundant quartz phenocrysts, commonly up to 1 cm, and fewer plagioclase phenocrysts. The rock has a distinctive porphyritic or crystal tuff texture and is variably sericitic or chloritic. Immediately above ore it is intensely sericitized.

A coarse breccia phase occurs in the middle to upper parts of the unit but is not always present. It contains small to 1 m fragments texturally identical to the matrix and minor fine-grained chloritic fragments. The breccia phase is commonly heavily altered to epidote-clinozoisite.

Rhyolite Tuff, 135 m

This unit is facies equivalent with the QFCT unit. It develops along the down-dip (north) edge of the massive sulphide zones and commonly occupies most of the interval between the ore horizon and the Tuff-Argillite unit north of the sulphide zones.

The Rhyolite Tuff unit consists of quartz and sericite + chlorite and carbonate schists. It has a relict fragmental texture and minor, large quartz phenocrysts, commonly altered to carbonate. Colors vary from white to green and it commonly has a pink to purple tone due to hematite.

Sericite Schist, 300 m

A rhyolitic lapilli tuff metamorphosed to quartz + sericite + chlorite + carbonate schist. The unit consists of lustrous, white to medium green schists with a relict fragmental texture and rare, fine quartz phenocrysts.

A quartz-chlorite schist and a rhyolite breccia horizon have been observed near the middle of the sericite schist unit.

Dolomite lenses are common within the upper 30 m of the sericite schist and at the top of the massive sulphide horizon.

Massive Sulphide Horizon, 29 m

A main massive sulphide lens and thin, discontinuous, hanging wall lenses occur near or at the top of the sericite schist unit. Mineralization consists of massive and disseminated sphalerite, chalcopyrite, bornite and chalcocite.

Distal to the sulphide zones the ore horizon consists of minor, disseminated, sphalerite and chalcopyrite with pyrite in schist or carbonate.

Disseminated pyrite with a very minor base metal content occurs in the sericite schists below the massive sulphide body.

Diamond Drilling

DDH 83 and 84 were drilled to obtain NQ diameter drill core for metallurgical test work. The assayed sections of the holes were shipped unsplit to Lakefield Research, Lakefield, Ontario for assaying and metallurgical testing. The portions of the holes which were not assayed are stored on the property.

A brief description of the geology and assays of each hole is given. The detailed logs are in the Appendix.

DDH 83

0.0 - 3.4	overburden
3.4 - 93.0	quartz feldspar crystal tuff
93.0 - 101.0	sericite schist
101.0 - 140.5	massive sulphide
140.5 - 149.0	sericite schist

Mineralized section:

101.0 - 134.3	2.45% Cu, 2.13% Zn, 62.06 g/ton Ag
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DDH 84

0.0 - 4.9	overburden
4.9 - 108.8	quartz feldspar crystal tuff
108.8 - 119.6	sericite schist
119.6 - 160.2	massive sulphide zone
160.2 - 178.9	sericite schist

Mineralization section:

119.6 - 154.3	1.35% Cu, 1.43% Zn, 14.06 g/ton Ag
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James A. Burtz

COST STATEMENT

Dates Drilled : Sept. 10-Sept. 20, 1978

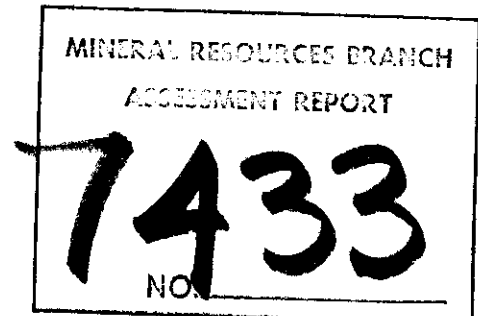
Holes Drilled: DDH 83 and 84

Direct Drilling Costs:

1000' @ \$12.70/ft.	\$12,700.00
76' @ 13.20/ft.	1,003.20
Labour: 118 hrs. @ \$15.50/hr	1,829.00
Machine Standby: 5 hrs. @ \$9.00/hr.	45.00
Casing in Holes:	758.65
Assay Costs: 36 @ \$18.00	648.00
Fuel: 360 gal. @ \$2.25/gal.	810.00
Helicopter: 14 hrs. @ \$250/hr.	3,500.00
Helicopter Fuel: 315 gal. @ \$2.25 gal.	708.75
Geologist: 14 days @ \$65.00/day	910.00
First Aid Person: 4 days @ \$53.00/day	212.00
Camp Costs: 62 days @ \$20.00/day	1,240.00
Preparation and Secretarial Costs	<u>250.00</u>

TOTAL

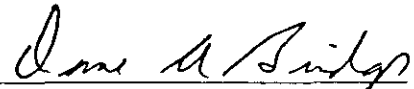
\$24,614.60



STATEMENT OF QUALIFICATIONS

I, Dane A. Bridge, of West Vancouver, British Columbia, hereby certify the following qualifications:

- (a) I obtained a B.Sc. Hons., in 1969, and a M.Sc., in 1972, in geology from the University of Manitoba, Winnipeg, Manitoba
- (b) I have been practising my profession as a geologist in Canada for ten years.



Dane A. Bridge, Geologist
Esso Minerals Canada

I, Paul A. Godkin, of Morris, Manitoba, hereby certify the following qualifications:

- (a) I obtained a B.Sc. Hons., in 1977, in geology from the University of Manitoba, Winnipeg, Manitoba
- (b) I have been practising my profession as a geologist in Canada for one year.



Paul A. Godkin, Geologist
Esso Minerals Canada

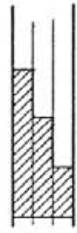
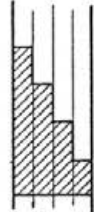
LEGEND FOR DETAILED DRILL LOGS

The detailed drill logs are at a scale of 1 inch to 10 feet. All main units have been converted to meters.

The following is a list of abbreviations used in the drill logs:

aph	aphanitic	ls	limestone
arg	argillite	med	medium
b	bedding	mgb	metagabbro
brn	bornite	pheno	phenocryst
bx	breccia	plag	plagioclase
c > s	schist with chlorite > sericite	po	phrrhotite
c >> s	schist with chlorite >> sericite	py	pyrite
cal	calcite, calcareous	QFCT	Quartz Feldspar Crystal Tuff
carb	carbonate	qz	quartz vein
cgl	conglomerate	rhy	rhyolite
clino	clinozoisite	s > c	schist with sericite > chlorite
chl	chlorite	s >> c	schist with sericite >> chlorite
cp	chalcopyrite	s ^ c	schist with sericite ^ chlorite
dac	dacite	ser	sericite
dk	dark	sph	sphalerite
dolo	dolomite	trh	tetrahedrite
ep	epidote	v.f.g.	very fine-grained
fd	folded	w	with
feld	feldspar	xline	crystalline
f.g.	fine-grained		
f	foliation		
fr	fracture		
frag	fragment		

IMPERIAL OIL LIMITED
MINERALS SECTION
DRILL LOG

PROJECT Kutchuk Creek	GROUND ELEV. 1615.09m 5298.78'
HOLE NO. 83	BEARING 180°
LOCATION 22,505.36m N ; 38,491.79m E 73,835.58 FT N ; 126,283.70 FT E 107.2'E of line 34E, at 6160 N	DIP -90°
LOGGED BY P. Godwin	TOTAL LENGTH 489'
DATE Sept 10-16, 1978	HORIZONTAL PROJECT 61.78 ft.
CONTRACTOR Arctic Diamond Drilling	VERTICAL PROJECT 483.25 ft.
CORE SIZE NQ	ALTERATION SCALE  absent slight moderate intense
DATE STARTED Sept 10, 1978	TOTAL SULPHIDE SCALE  traces only < 1% 1% - 3% 3% - 10% > 10%
DATE COMPLETED Sept 14, 1978	
DIP TESTS 22' -89.4° 197° 147.5' -86.6° 182° 307.5' -80.3° 186° 467.0' -75.7° 187°	
COMMENTS	LEGEND

PAGE 1 OF 12		PROJECT:			HOLE NO. 33						
DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY	
					A	B	C	D	E		
				metres							
				0-11 overburden							
20				11-305.0: 2tz-Fldsp x th Tuff colour is variable from light grey to medium grey or medium green - clc totally masked when limonite alteration is present; minor qtz veining, locally minute hematite stringers & 1% fg epid.							
40				11-82 light grey clc, avg 173 light grey 1-11mm wided qtz eyes; locally sericite is present							
60											
80											
				82-126 medium green clc; c>75; avg 15% blue grey wided 1-10mm qtz eyes; limonite stringers & fracture coatings throughout, locally minor hematite							

2 x 6cm long green, vol. frag

DEPTH (T)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
100				< 1% fg epid.						
120										
140				126-305 light grey clc 15% light grey (some bluish-grey) 1-9mm med to eyes; minor sericite is visible; 1-3mm white carb alteration patches exist locally.						
160										
180				gauge w broken core						
180				gauge w broken core						
180				178-200 avg 10% 1-3 mm feldspar g ^x						

P. Godkin

DEPTH (FT)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
200				broken core						
220				broken core						
240				gauge in broken core						
260										
280				273-305 sericite becomes very abundant - g-fet unit begins to show F ₁ planes, S>>C; core appears light green, light yellow in clr						

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PAGE 3 OF 12		PROJECT:							HOLE NO. 73		
MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS			
					Cu	Zn		g/tonne Ag	%S	%Fe	
		300									
305-317.5											
< 1 wt% Fe Py coated as coarse bands											
		320									
317.5-322.6											
<< 1 wt% fg Py											
		328.0									
322.6-331.3											
< 1 wt% fg Py along F ₁ planes; << 1 wt% CPy as local coarse patches											
		331.3	3.3			0.14	0.075		tr	1.58	1.53
331.3-340.2											
90 wt% fg Py w/ 3 wt% fg CPy disseminated within Py - some coarse CPy within upper gtz vein; 0.3-0.4 wt% Bn as coarse patches in gtz vein & local 1 mm patches within Py; 0.1 wt% chalcocite as coarse patches in gtz vein & fracture coating w/in Py; 5 wt% fg sphalerite											
		340.2	8.9			9.72	6.20		92.61	42.30	35.40
		348.0	7.8			1.87	4.97		41.50	32.10	27.50
340.2-357.5											
40-50 wt% fg & uf g Py; < 1 wt% CPy as coarse patches; ~1 wt% Bn as < 1-3 mm patches; ~1.5 wt% fg Sphalerite (light brown & dark grey); Trace Chalcocite											
		357.5	9.5			2.43	5.71		45.28	28.90	24.30
357.5-367.7											
Trace py											
		367.7	10.2			0.037	0.11		tr	1.31	1.65

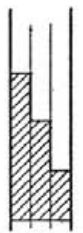
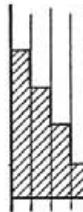
PAGE 9 OF 12		PROJECT:			HOLE NO. 33						
DEPTH (FT)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY	
					A	B	C	D	E		
				altered siliceous vol ^c clasts							
386				367.7- 377.5 semi-massive sulphide unit in light grey moderately carb altered sericite schist gangue (368.6-370.3) in a medium grey aphanitic siliceous gangue (370.3- 377.5)							
400		35		377.5- 383.2 pale green massive (no visible fragments) aphanitic, locally siliceous, s2c, sericite schist (377.5- 380.7) overlying a light grey to white gtz-carbonate unit							
		38									
		33		383.2- 389 semi-massive sulphides within a medium grey very siliceous sericite schist. 6% gtz veining present; locally a medium grey siliceous aphanitic gangue replaces sericite schist.							
		34									
		54									
		55									
420				389- 417.5 Sericite Schist (w.s); s2c; composed of closely packed light grey < 6cm long siliceous vol ^c fragments; well-developed F ₁							
		55									
440				417.5- 429.8 Sericite schist s2c medium grey clr; composed of closely packed < 2 1/2 cm medium grey & light grey (occasionally moderately carb. altered) siliceous vol ^c clasts; 2% buff colored carb. stringers (w.s)							
		44									
		48									
		45									
460				429.8- 440.7 semi-massive to massive Py within a minor gangue of medium grey sericite schist							
		48									
		45									
				440.7- 448.4 Sericite Schist medium grey clr; composed of < 2cm closely packed light g							

P. Rodkin

PAGE 10 OF 12		PROJECT:							HOLE NO. 83		
MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%			COMPOSITE ASSAYS			
					Cu	Zn	%	3/4 tone Ag	%S	%Fe	
367.7-377.5 20 wt% fg Py as massive sections, disseminated, & 1-3 mm streaks x-cutting core; 5 wt% Bx as coarse patches & irregular veinlets; ~2 wt% CPy as coarse patches; 0.6 wt% Cc as fine & coarse patches; <<1 wt% Sph.		377.5	9.8		8.39	2.86		196.88	18.90	13.90	
377.5-383.2 1-2 wt% fg Py conct'd in coarse patches in s. schist; 3 wt% Bx <2 wt% Chalcocite, 0.1 wt% CPy as coarse patches mainly within gty-section		383.2	5.7		3.43	0.59		111.82	3.50	2.95	
383.2-389 10-15 wt% (avg 13%) fg Py; 4 1/2 wt% fg dark grey & light brown sph; 4 wt% Bx as very coarse patches; 1.5 wt% CPy as coarse patches; 2.5% very coarse Cc		389.0	5.8		12.20	5.35		245.59	19.10	13.80	
389-417.5 10-15 wt% fg Py conct'd along F ₂ planes, <<1 wt% coarse CPy		408.0	9.0		0.65	0.42		8.58	5.29	1.28	
417.5-427.8 20 wt% fg Py; 0.2 wt% fg diss. & small (1-2mm) patches of CPy		427.8	10.0		.080	.037		tr	5.62	5.24	
427.8-429.8 40 wt% fg Py; 7 wt% light brown massive sph; 1.5-2 wt% CPy in 1-3 mm patches; 0.4 wt% Bx in 1-3 mm patches		429.8	9.5		.018	.011		tr	10.50	9.61	
429.8-440.7 70-90 wt% fg Py in 0.2 wt% 1mm diameter Bx patches; 0.5 wt% fg diss. sph; 0.8 wt% fg diss. CPy		440.7	10.3		0.24	.090		tr	19.50	19.60	
440.7-448.4 15-20 wt% fg Py (avg 18%) <<1 wt% 1-2 mm Bx patches		448.4	8.7		2.92	1.15		44.25	36.0	31.60	
448.4-461.1 65 wt% fg Py; Trace of light brown sph. patches; 0.1 wt% 1-2 mm Bx patches; <0.1 wt% 1-2 mm CPy patches		461.1	4.2		1.66	1.55		30.18	43.50	40.00	
			7.7		0.84	0.12		13.72	25.3	22.50	
			12.7		0.097	0.66		tr	38.90	33.50	

DEPTH (FT)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
			12	medium grey siliceous vol ^{ic} frag - locally w th minor carb. alteration; 577C, (w.s)						
			12							
			51	440.7-461.1 semi-massive R ₂ within a medium grey sericite schist gangue, 577C; no visible fragments						
			52							
480			14	461.1-465.3 Sericite schist (w.s), 577C; locally minor light grey sil. vol ^{ic} frag visible						
			54							
				465.3-489 Sericite Schist light grey clr; composed of abundant ~3mm light grey clr compacted siliceous volcanic fragments						
500				489 End of Hole						

DRILL LOG

PROJECT <i>Kutcho Creek</i>		GROUND ELEV. <i>1615.99m 5301.74'</i>	
HOLE NO. <i>84</i>		BEARING <i>180°</i>	
LOCATION <i>22,519.76 m N ; 38,419.81 m E</i> <i>73,882.83 FT N ; 126,047.71 FT E</i> <i>69.3' E of line 35W, at 6+95.2' N</i>		DIP <i>90°</i>	
LOGGED BY <i>P Godkin</i>		TOTAL LENGTH <i>587'</i>	
DATE <i>Sept. 16-21, 1978</i>		HORIZONTAL PROJECT <i>84.77'</i>	
CONTRACTOR <i>Arctic Diamond Drilling</i>		VERTICAL PROJECT <i>578.02'</i>	
CORE SIZE <i>NQ</i>		ALTERATION SCALE	
DATE STARTED <i>Sept 15, 1978</i>		 <ul style="list-style-type: none"> absent slight moderate intense 	
DATE COMPLETED <i>Sept. 20, 1978</i>		TOTAL SULPHIDE SCALE	
DIP TESTS <i>33.5' - 89.1° 143°</i> <i>123.0' - 57.7° 159°</i> <i>373.0' - 79.4° 163°</i> <i>573.0' - 73.7° 172°</i>		 <ul style="list-style-type: none"> traces only < 1% 1% - 3% 3% - 10% > 10% 	
COMMENTS		LEGEND	


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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
				metres						
				0-16 overburden						
20				8cm gauge 16-357.0: 2tz - Fldsp x ^{TL} Turf avg 12% 1-8mm rounded light grey qtz eyes; ~ 7% 1-2mm anhedral Fldsp grains; relatively sericite rich; no visible primary structures						
40										
60				source to broken core						
80				broken core						

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
				(QFCT cont'd)						
			broken core							
100				104-198 noticeable increase to an average 15% in fold-per cent.						
				109-122.8 appearance of 15% 1-2mm blue-green gtz eyes along w 12% light grey gtz eyes						
120										
140										
160										
			broken core							
180										

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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
180				g.fct cont'd						
				185-198 2% 1-3mm carb patches						
200				gauge in broken core						
				gauge in broken core						
220				228 beyond this depth sericite is of minor percentage & occurrence; g.fct becomes more noticeably siliceous; locally carbonate +/or epidote is visible $\leq 1\%$ (228-285)						
240				241-252 minor gty-carb veining @ 30-45° dip to core axis						
260										

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
			51.5	in purple bands (fg diss. hem.); 1% avg <1cm diameter slightly carb. altered siliceous vol'ic frag, 3% buff cored carb stringers; locally F ₁ planes display chevron folds  ; C>S						
			68							
			62							
			56							
380				366.7-378.7 light grey clc (w.s); S>Tc; composed of closely packed 3.3cm long light grey siliceous vol'ic frag, 4% buff cored carb stringers; medium green bands due to C>S; locally very siliceous 5-18cm unit (gtz veins in sec. sch. xenoliths?)						
				end of hem						
400				378.7-392.3 light to medium grey clc; S>Tc; composed of ~50% <1cm diameter gtz frag w local 2-7cm siliceous vol'ic frag within a matrix of buff cored carb stringers						
				392.3-396.3 sulphide within a medium grey gtz-carbonate gangue						
				396.3-412.3 gtz-carbonate unit white coloured; locally 1-15mm solution uugs						
420				403.3-405.0 massive sulphides within a gtz-carbonate gangue						
				405.0-415.4 gtz-carbonate unit white cored; local section of 6% 1-10mm light to medium grey gtz fragments						
				broken core						
				415.4-424.6 gtz-carbonate section white cored						
440				424.6-426.9 medium green aphanitic (C>S) unit w 10% light grey 1-12mm carb rhombs & g ^x						

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PAGE 15 OF 14		PROJECT:					HOLE NO. 34				
MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%		g/tonne			COMPOSITE ASSAYS	
					Cu	Zn	Ag	%S	%Fe		
260.1-266.5 fg massive Py (122-128); Trace fg Py through out rest of unit											
266.7-378.7 <1wt% fg Py											
378.7-392.3 massive fg Py (283.9-285.1) w. <1wt% fg Py throughout rest of unit		383.9	8.4		0.51	1.77	5.83	10.3	8.82		
392.3-396.3 9.7 wt% fg Py; 3 wt% CPy as coarse irregular patches; 0.7 wt% Ba as 1-12mm patches; <1wt% Sph.		392.3	4.0		4.53	7.16	29.49	13.4	10.00		
396.3-403.3 <1wt% fg Py 1wt% CPy as 1-2mm irregular patches; 2.4wt% Ba as 1-4mm patches		405.0	8.7		1.67	1.49	27.10	13.5	11.9		
403.3-405.0 85wt% fg Py; 0.7 wt% fg disseminated CPy; 0.8wt% Ba interstitial network among fg Py; 1/2wt% dark grey & light brown sph.		415.4	10.4		0.48	3.21	4	3.28	2.02		
405.0-415.4 4% wt% sph as isolated irregular interweaving networks; ~1wt% CPy as 1-20mm patches; 3-4wt% fg Py		424.6	5.7		1.83	2.57	10.98	9.79	12.40		
415.4-424.6 35 wt% fg Py; 4wt% CPy as coarse patches; <1wt% fg sph; 6wt% 1-9mm Bn patches		430.3	9.1		0.30	1.16	4	4.89	4.76		
424.6-426.9 6wt% fg Py; 0.5 wt% CPy as 1-7mm patches		446.0	6.6		0.36	2.20	4.63	9.04	5.89		

PAGE 11 OF 14		PROJECT:		HOLE NO. 34							
DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY	
					A	B	C	D	E		
				426.9 - 428.2 semi-massive sulphides within gtz-carbonate unit 24 empty vein in carb. patches							
460			38 42	430.3 - 435.5 aphanitic (S>>S) medium green unit w/ local conct of 15% 1.4mm carb. shanks; 6% buff clred carb stringers conct ed within 21cm; 2x6cm diameter white wellbedded gtz-carb patches; minor gtz veining							
480				435.4 - 454.4 Sericite Schist light or medium grey clc; S>>C; composed of locally visible <4cm long siliceous vol ^{ic} frag - locally w/ minor carb alteration; w/ 3% buff clred carb stringers (438.439.2 siliceous aphanitic greyish-green subunit)							
500				454.4 - 462.3 semi-massive sulphides within a light to medium grey sericite schist w/ S>>C, minor buff clred carb stringers, locally <2cm long vol ^{ic} frag.							
				462.3 - 467.8 sericite Schist medium grey clc, composed of light grey elongate (<2cm long) compacted siliceous vol ^{ic} frag.							
520				467.8 - 476.4 gtz-carbonate unit white clred w/ locally visible light grey irregular gtz patches, minor solution vugs							
				476.4 - 479.8 massive sulphides							
				479.8 - 485.3 Sericite Schist light & medium grey mottled appearance; very siliceous, locally sericite rich; (may be classified as gtz-carb unit)							
540				485.3 - 491.6 massive sulphide							

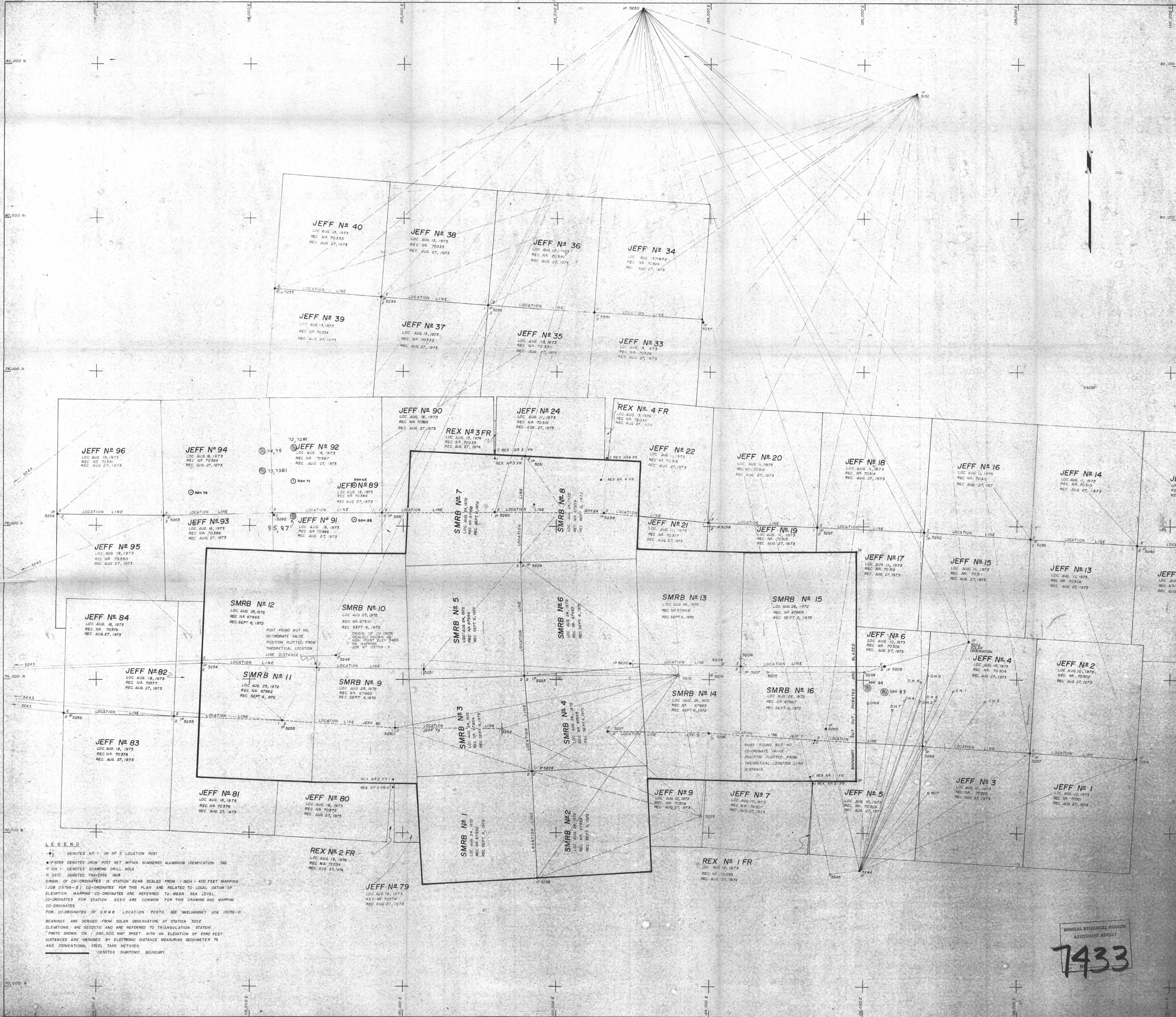
P. Godkin

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%			COMPOSITE ASSAYS		
					Cu	Zn	%	g/t Ag	% S	% Fe
426.9-430.3 20wt% fg Py; 4wt% coarse CPy patches; 0.8 wt% 1-6mm Bn patches; 3wt% fg sph; Trace Calc as small patches along side of Bn		154.4	8.4		0.034	0.075	tr	1.51	1.72	
		462.3	7.9		0.22	0.16	tr	31.90	27.30	
430.3-435.5 4wt% fg Py; 2.2 wt% small CPy patches		467.8	5.5		0.73	0.068	21.27	15.40	18.20	
439.4-440.2 massive section										
avg 45wt% massive sph; 30wt% fg Py; <1wt% Bn; <1wt% CPy as coarse patches; 435.4-454.4 15-20wt% fg Py; <<1wt% Bn as small patches; <<1wt% CPy as small patches; 1.2wt% fg sph. (isolated massive section)		476.4	8.6		0.96	2.92	tr	11.40	10.00	
442.5-442.8 80wt% fg Py		485.3	8.9		3.37	0.65	8.92	19.90	19.00	
454.4-462.2 75wt% fg Py; <<1wt% fg diss CPy		491.6	6.3		3.76	0.16	81.63	49.70	38.50	
462.3-467.8 40wt% fg Py; 0.4wt% CPy as <1-4mm patches; <0.1wt% 1-6mm Bn patches		498.7	7.1		0.97	0.08	12.01	46.40	40.50	
467.8-476.4 58wt% mainly very coarse CPy patches; 18wt% fg Py; 0.1wt% Bn as 1-9 mm patches		506.3	7.6		1.18	0.15	15.44	41.7	36.1	
476.4-479.8 80wt% fg Py; 4 wt% fg diss CPy		515.9	9.6		0.43	0.012	tr	49.2	41.7	
479.8-485.3 10-15wt% fg Py const'ed in 1-7mm wide irregular bands; 0.6wt% 1-3mm isolated (as within fg Py) CPy patches; 6 wt% sph as 1mm patches or sude stringers - 1x7cm massive section		525.7	9.8		0.02	0.17	tr	45.9	42.0	
		532.5	6.8		0.096	0.83	tr	30.3	26.1	
485.3-491.6 90wt% fg Py; 0.6wt% fg diss CPy; 1.5wt%		540								

PAGE 2 OF 19		PROJECT:				HOLE NO. 04				
DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
			54	491.6 - 498.7 massive sulphides						
			55	498.7 - 506.3 massive sulphide to medium grey to dark grey local sericite schist units						
			56	506.3 - 515.9 massive sulphide						
560			56	515.9 - 525.7 massive sulphide						
			57	525.7 - 587.0 F.W. Sericite Schist light grey calc; S??C; locally visible light grey siliceous <3cm long compacted vol'ic clasts						
			58							
			59							
580			57	587 end of hole						

PAGE 1 OF 19		PROJECT:						HOLE NO. 54	
MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS	
BN interwoven amongst Py 9' 491.5-499.7 avg 7wt% massive & semi-massive fg Py; co. with BN. Trace CPy									
496.7-506.3 80-90 wt% fg Py; 2-3wt% fg diss. CPy; co. with fg diss. BN		560							
506.3-515.9 90wt% fg Py; Trace of CPy & BN									
515.9-525.7 80-90 wt% fg Py									
525.7-555.7 20-25wt% fg Py const'd along F ₁ planes; locally (2-4wt%) small CPy patches may occur.		580							
555.7-587.0 15-22wt% fg Py const'd along F ₁ planes									

TRAVERSE TABLES			
STATION	NORTH	EAST	ELEVATION
IP 5132	81, 835.40	128, 880.94	
IP 5204	74, 603.44	157, 276.25	5081.9
IP 5203	74, 181.89	126, 281.34	5104.6
IP 5208	74, 103.62	126, 015.66	5233.9
TH 5210	74, 043.00	125, 484.00	5233.8
TH 5228	72, 216.32	123, 188.00	5357.1
IP 5226	73, 308.15	123, 385.31	5500.1
IP 5227	73, 370.22	122, 675.74	4945.9
IP 5230	80, 726.70	123, 116.64	5384.6
IP 5231	79, 811.76	121, 502.86	4620.4
IP 5233	79, 085.38	118, 316.12	4954.6
IP 5234	78, 987.77	118, 702.72	4570.7
IP 5235	78, 874.00	121, 101.80	4591.5
IP 5236	78, 783.54	121, 463.84	4802.9
IP 5237	78, 659.03	123, 912.41	4641.1
TH 5238	77, 810.62	124, 880.17	4783.3
IP 5239	75, 835.80	128, 185.40	4361.9
IP 5240	75, 760.93	124, 578.16	4944.0
IP 5241	75, 715.85	125, 987.72	4947.0
IP 5242	75, 625.31	125, 792.88	4955.7
TH 5243	74, 021.54	114, 648.74	5784.6
IP 5244	71, 517.12	125, 957.56	5271.3
TH 5245	71, 444.37	125, 572.28	5273.9
IP 5246	74, 817.27	119, 110.02	5583.9
TH 5250	73, 373.90	118, 696.00	5197.7
IP 5251	74, 136.19	120, 276.07	6028.2
TH 5252	73, 369.84	121, 289.15	4889.0
IP 5253	73, 485.01	118, 485.01	5438.6
IP 5254	74, 815.49	117, 381.28	5184.8
IP 5255	73, 520.06	117, 020.83	5094.3
IP 5256	73, 558.89	115, 590.42	4873.3
IP 5257	75, 891.86	124, 398.86	4857.9
IP 5258	76, 051.94	123, 979.83	4920.3
IP 5259	76, 172.94	122, 613.87	4720.3
IP 5260	76, 183.34	121, 202.01	4740.0
IP 5261	76, 173.77	119, 724.09	4903.0
IP 5262	76, 144.28	118, 314.02	5014.1
IP 5263	76, 127.68	118, 680.23	4861.7
IP 5264	76, 126.48	115, 475.93	
IP 5266	73, 143.38	126, 774.66	5353.9
IP 5267	73, 058.80	124, 174.10	5233.0
IP 5268	72, 980.77	123, 502.60	5192.2
D.N. 1	73, 854.15	127, 777.89	5185.9
D.N. 2	73, 724.43	126, 741.01	5295.7
D.N. 3	73, 727.57	127, 590.34	5180.8
D.N. 4	73, 724.31	126, 340.01	5299.3
D.N. 5	73, 735.41	124, 940.62	5246.8
D.N. 6	73, 699.97	126, 093.21	5352.7
D.N. 7	73, 609.81	126, 361.85	5337.2
D.N. 8	73, 677.46	124, 707.14	5226.1
D.N. 9	74, 054.04	126, 484.27	5192.0



LEGEND

- DENOTES NO. 1 OR NO. 2 LOCATION POST
- IP 5256 DENOTES IRON POST SET WITHIN NUMBERED ALUMINUM IDENTIFICATION TAG
- DH 1 DENOTES DIAMOND DRILL HOLE
- S210 DENOTES TRAVERSE "HW"
- D.N. OF CO-ORDINATES IS STATION 5248 SCALED FROM 1 INCH = 400 FEET MAPPING
- CO-ORDINATES FOR THIS PLAN ARE RELATED TO LOCAL DATUM OF ELEVATION MAPPING CO-ORDINATES ARE REFERRED TO MEAN SEA LEVEL
- CO-ORDINATES FOR STATION 5230 ARE COMMON FOR THIS DRAWING AND MAPPING
- CO-ORDINATES FOR CO-ORDINATES OF SMRB LOCATION POSTS SEE MELHANNY JOB 10306-0
- BEARINGS ARE DERIVED FROM SOLAR OBSERVATION AT STATION 5202
- ELEVATIONS ARE GEODETIC AND ARE REFERRED TO TRIANGULATION STATION
- PHOTO SHOWN ON 1:250,000 MAP SHEET WITH AN ELEVATION OF 6500 FEET
- DISTANCES ARE OBTAINED BY ELECTRONIC DISTANCE MEASURING GEDMETER 76 AND CONVENTIONAL STEEL TAPE METHODS
- DENOTES SUMMITO BOUNDARY

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REV. NO.	DATE	REVISION	DR. CHK. APP.
IMPERIAL OIL LTD. MINERAL DIVISION			
LOCATION LINE AND DRILL HOLE SURVEY OF JEFF MINERAL CLAIMS IN LIARD MINING DIVISION, KUTCHO CREEK			
MELHANNY ASSOCIATES 14800			
DESIGNED BY	SCALE	DATE	NO. 1 - 450'
DRAWN BY	DATE	OCTOBER, 1974	
CHECKED BY	DATE		
APPROVED BY	DATE		
CLIENT Dwg. NO.	PROJECT Dwg. NO.		