DIAMOND DRILL HOLE REPORT FOR GROUPVIII SUPP. ON JEFF 74, 80-89, 91-100, 117-134 AND REX 2 Fr. MINERAL CLAIMS

Liard Mining Division
104 I / 1W
58° 12' N; 128° 21 W

for

Esso Minerals Canada
#314-1281 W. Georgia
Vancouver, B.C.

by

Dane A. Bridge

November 8, 1978

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DDH 85	34 pages
DDH 87	38 pages
DRILL HOLE LOCATION MAP	in pocket

DIAMOND DRILL HOLE REPORT
FOR GROUP III SUPP. ON JEFF 74,
80-89, 91-100, 117-134 AND
REX 2 Fr. MINERAL CLAIMS

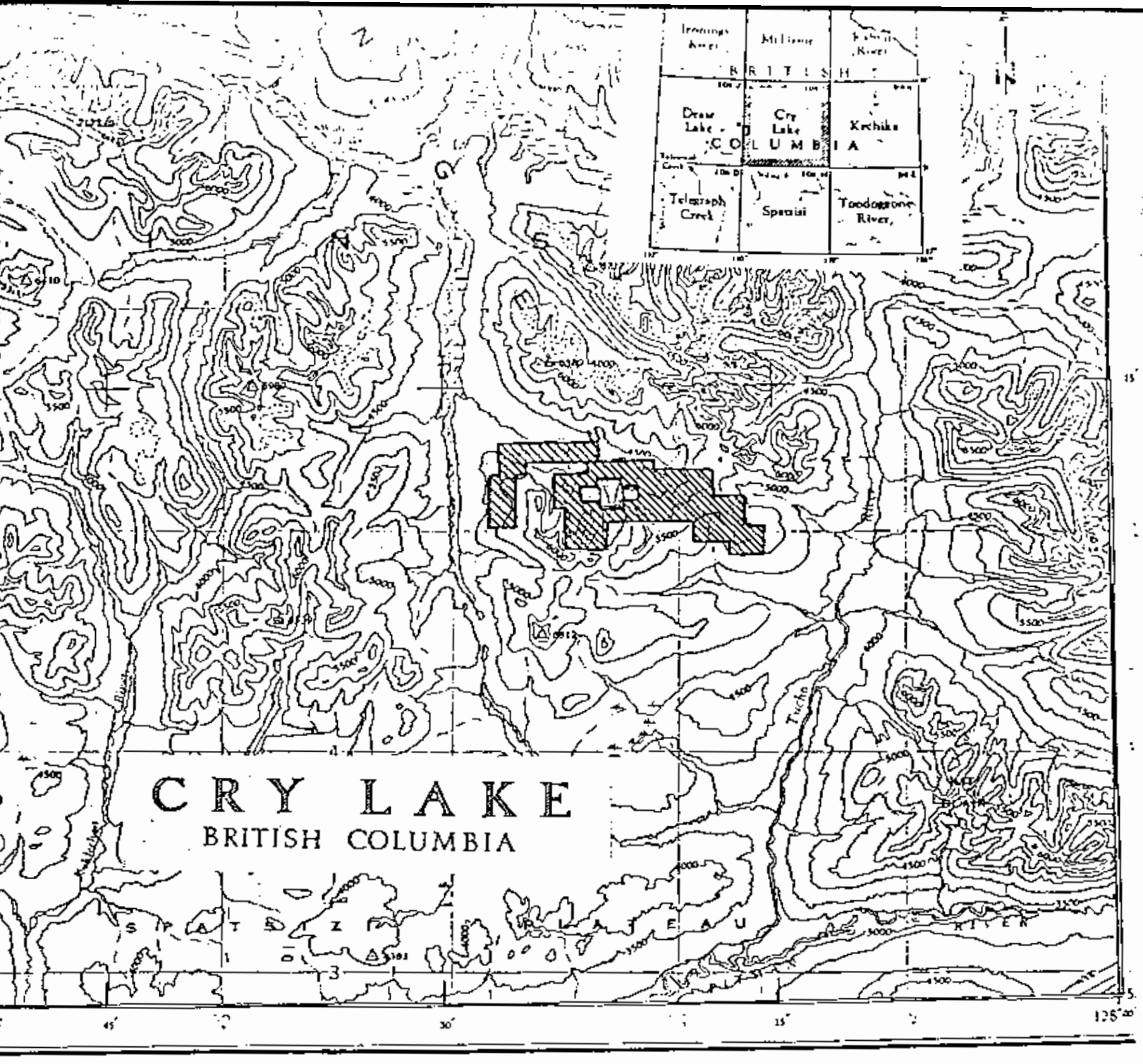
INTRODUCTION:

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-south-east of Rainbow Lake and 9 km east-south-east 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 Mineral's claims is shown on Index Map No. 1.

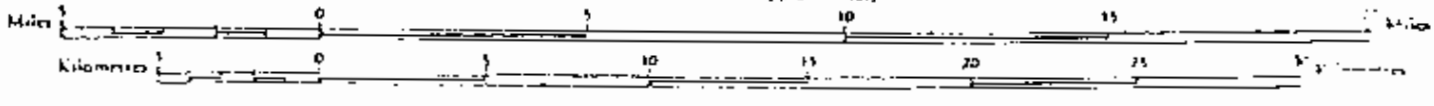
The property is owned and operated by Esso Minerals Canada, a division of Esso Resources Canada Limited.

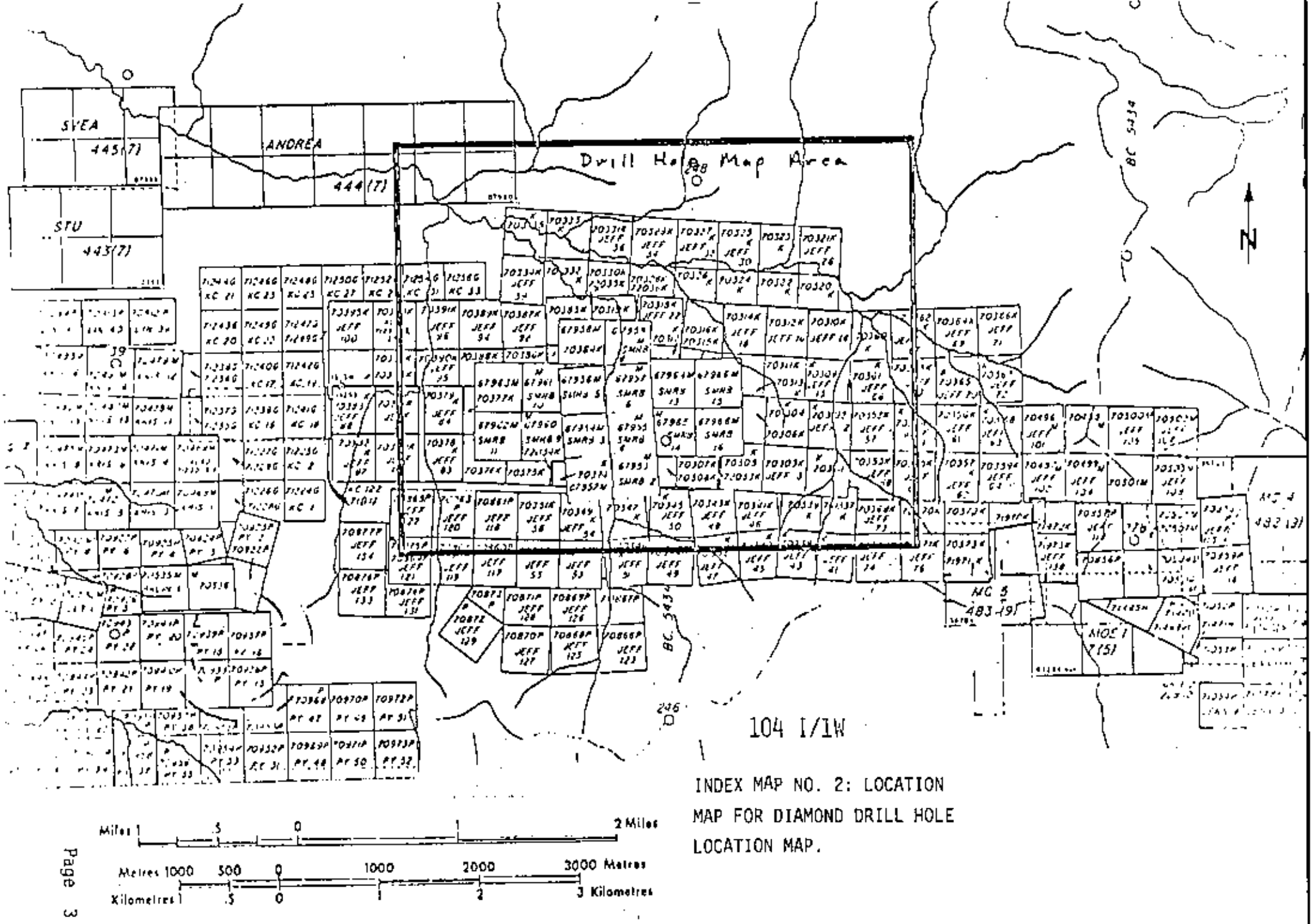
This report documents 968.65 m of BQ diamond drilling in 2 holes drilled from the same set-up on JEFF 91 mineral claim.



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

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





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 1978 or an estimate:

Limestone, 125 m

Massive recrystallized limestone.

Conglomerate, 100 m

Strongly foliated polymictic conglomerate composed of clasts derived from the volcanic pile.

Tuff Argillite Unit, 350 m

This unit represents a transition from the underlying silicic volcanic rocks to graded water-lain tuffs, argillite, siltstone and epiclastic rocks. It consists mainly of quartz $\pm$ chlorite $\pm$ sericite schist with abundant 1 to 3 mm

and up to 10 mm quartz phenocrysts. This is interbedded with fine argillaceous laminations to thick sections of graphitic argillite. Higher in the unit the main lithology is fine-grained and is probably a siliceous siltstone containing minor biotite.

Metagabbro, variable thickness

A group of rocks loosely called metagabbro and including hornblendite, chlorite-actinolite-sericite schists and feldspar porphyries, has intruded the section from the base of the conglomerate to slightly below the massive sulphide horizon. It is most abundant within the tuff argillite unit and commonly occupies > 50% of that stratigraphic interval.

Rhyolite Tuff Unit, 135 m

A rhyolitic to dacitic lapilli tuff consisting of closely-packed elongate fragments. Minor quartz phenocrysts occur throughout and locally the unit contains crystal tuffs. Colors vary from cream to medium green and from pink and purple to hematite.

Quartz Feldspar Crystal Tuff, 200 m

A homogenous quartz $\pm$ feldspar + sericite $\pm$ chlorite $\pm$ carbonate schist with abundant quartz phenocrysts, commonly up to 1 cm, and fewer small plagioclase phenocrysts.

The quartz phenocrysts are sub-rounded and partly replaced by dolomite. The plagioclase phenocrysts are heavily altered to sericite and dolomite.

Locally the unit consists of a coarse breccia with fragments up to 1 meter. The fragments and matrix are texturally similar to crystal tuff. Clinozoisite and epidote are commonly abundant in the breccia phase.

The quartz feldspar crystal tuff unit and rhyolite tuff unit occur at a similar stratigraphic level and probably interfinger. Crystal tuff is more common directly overlying massive sulphide lenses. Rhyolite tuff commonly occurs north of the massive sulphide lenses and in part overlies the crystal tuff unit.

Sericite Schist, 300 m

A rhyolitic lapilli tuff metamorphosed to quartz + sericite $\pm$ chlorite $\pm$ 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 unit and at the top of the massive sulphide horizon.

The quartz phenocrysts are sub-rounded and partly replaced by dolomite. The plagioclase phenocrysts are heavily altered to sericite and dolomite.

Locally the unit consists of a coarse breccia with fragments up to 1 meter. The fragments and matrix are texturally similar to crystal tuff. Clinozoisite and epidote are commonly abundant in the breccia phase.

The quartz feldspar crystal tuff unit and rhyolite tuff unit occur at a similar stratigraphic level and probably interfinger. Crystal tuff is more common directly overlying massive sulphide lenses. Rhyolite tuff commonly occurs north of the massive sulphide lenses and in part overlies the crystal tuff unit.

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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 unit 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 pyrite with disseminated sphalerite, chalcopyrite, bornite and chalcocite.

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

DIAMOND DRILLING

The purpose of the drill holes discussed in this report was to intersect the massive sulphide horizon. A brief description of the geology and results of each hole is given. The detailed drill logs are in the Appendix.

The drill core is stored on the property. The massive sulphide intersections are stored at 1281 West Georgia Street, Vancouver.

DDH 85:

0.0	-	5.5 m	Overburden
5.5	-	326.7	Tuff-Argillite Unit and Metagabbro
326.7	-	373.6	Quartz Feldspar Crystal Tuff
373.6	-	409.0	Metagabbro or Basic Crystal Tuff
409.0	-	419.7	Rhyolite Lapilli Tuff
419.7	-	420.8	Sericite Schist
420.8	-	425.3	Massive Sulphide Horizon: minor disseminated sulphides in sericite schist
425.3	-	449.9	Sericite Schist

Mineralization:

420.8 - 425.3: 0.06% Cu, 0.04% Zn, 0.01% Pb,

0.09 oz/ton Ag, 0.006 oz/ton Au

DDH 85 intersected the massive sulphide horizon up-dip from, or to the south of economically significant sulphide mineralization.

DDH 87:

0.0	-	4.9 m	Overburden
4.9	-	422.6	Tuff Argillite Unit and Metagabbro
422.6	-	471.2	Quartz Feldspar Crystal Tuff
471.2	-	477.2	Rhyolite Lapilli Tuff
477.2	-	478.3	Quartz and Dolomite
478.3	-	495.6	Massive Sulphide Horizon: disseminated sulphides in schist and dolomite
495.6	-	518.8	Sericite Schist

Mineralization:

478.3 - 495.6: 0.81% Cu, 0.17% Zn, 0.01% Pb,

0.48 oz/ton Ag, 0.008 oz/ton Au

DDH 87 intersected disseminated mineralization within or along the east end of a massive sulphide zone.

COST STATEMENT

Dates Drilled: September 13 - October 2, 1978

Holes Drilled: DDH 85 and 87

Direct Drilling Costs:

1000'	@ $ 12.20/ft.		$ 12,200.00
1000'	@ 12.70/ft.		12,700.00
976'	@ 13.20/ft.		12,883.20
202'	@ 13.70/ft.		2,767.40
Mini-Deve Core Barrel: 3178'	@ $ 0.85/ft.		2,701.30
Labour and Standby:	216.5 hr. @ $15.50/hr.		3,355.75
Machine Standby:	79.0 hr. @ $ 9.00/hr.		711.00
Casing in Hole:			673.20
Assay Costs:	9 @ $26.90		242.10
Fuel:	1035 gals. @ $2.25		2,328.75
Helicopter:	32 hrs. @ $250.00/hr.		8,000.00
Helicopter Fuel:	720 gal. @ $2.25/gal.		1,620.00
Geologist:	14 days @ $65.00		910.00
Assistant:	7 days @ $35.00		245.00
First Aid Person:	7 days @ $53.00		371.00
Camp Costs:	80 man-days @ $20.00		1,600.00
TOTAL:			$ 63,308.70

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 metres.

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

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

WP-6275A

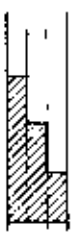
IMPERIAL OIL LIMITED

MINERALS SECTION

DRILL LOG

PROJECT: Kutcho Creek	GROUND ELEV.: ≈ 1532.9 m
HOLE NO.: 85	BEARING: [illegible]
LOCATION: ≈ 23,219.54 N ; 36,143.86 E claim Jeff 91	DIP: [illegible]
	TOTAL LENGTH: 1476' [illegible]
LOGGED BY: D. Bridge	HORIZONTAL PROJECT: 145 m
DATE: Sept 16 - 24, 1978	VERTICAL PROJECT: 418.6 m
CONTRACTOR: Arctic Diamond Drilling	
CORE SIZE: BQ	
DATE STARTED: Sept 13, 1978	
DATE COMPLETED: Sept 23, 1978	
DIP TESTS	

ALTERATION SCALE



absent

slight

moderate

intense

TOTAL SULPHIDE SCALE

traces only

< 1%

1% – 3%

3% – 10%

> 10%

COMMENTS

collar of 85 and 87 is 3.9 m at 253° from surveyed pin IP 'T'.

LEGEND

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PAGE / OF | PROJECT: | HOLE NO. [illegible]

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				metres						
				0.0 – 5.5 | 0.0 – 18.0' overburden						
				5.5 – 164.4 | 18.0 – 539.3' metagabbro						
				18.0 – 203.5' metagabbro						
20				medium grain, fine grained with ~ 20% coarse grained part(s), subhedral and elongate, euhedral hb grains, minor plag grains, commonly [illegible]%						
			10 / 5	avg 2-3% quartz [illegible] and pyrite [illegible] veins, commonly [illegible] foliation plane but also at high angles [illegible]						
40										
60			10 / 50 / 70							
80										

[signature]

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PAGE 2 OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
		20								

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PAGE 3 OF | PROJECT: | HOLE NO. 3E

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				80 – 539.3 metagabbro						
100										
120										
140										
160										
180										

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
		100								

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PAGE 5 OF	PROJECT:	HOLE NO. [illegible]

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				150.2 - 539.3' metagabbro						
200			20	202.5 - 510.0': dark green metagabbro w/ 25-40% slightly chloritized [illegible] grains, locally, groundmass [illegible] up to 15%. Finely disseminated yellow-green epidote, locally, minor pyr. Minor quartz veining throughout, avg [illegible] qz veins						
			35							
220										
240										
260										

d. [illegible] (signature)

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PAGE 6 OF | PROJECT: | HOLE NO

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS

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PAGE 7 OF | PROJECT: | HOLE NO. [illegible]

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRAC INTENSITY
				5.0 - 537.3 [illegible]						
260										
300										
320										
340										
360										

D. Bailey

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
		180								

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PAGE 7 OF | PROJECT: | HOLE NO.

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACT INTENSITY
				518.0 - 529.3 : metagabbro						
380										
400										
420										
440										

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
		180								

D. Bailey

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DEPTH (FEET)	% Core Recv	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				518.0 – 539.3 : metagabbro						
460										
500			35							
520			45	518.0 – 539.3 : transition to mixed medium green and medium grey - brown rock w avg 15% moderately chloritized and / or bleached lith phases						
			25	avg 5 10% qz veins 1mm to 10mm, mainly in foliation, locally up to 50% qz veins over 1 foot						
560			50							
			35							
580										
600										

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PAGE 2 OF | PROJECT: | HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
		466								

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PAGE 3 OF | PROJECT: | HOLE NO. 95

DEPTH (FEET)	% Core Recv	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
			164.9 - 178.9	539.3 - 587.0 : tuff or siltstone light gray to light greenish gray; aphanitic to fine-grained siliceous tuff. Faintly well-laminated by minor, white, slightly arenaceous beds, locally, as much as 5 mm probably of phenocrysts. Contains minor, very fine-grained brittle, locally, thin brittle-rich beds, rarely, thin chlorite-rich beds						
560										
580										
			178.9 - 198.2	587.0 - 624.0 : tuff transitional into light, greenish gray very fine-grained hard siliceous tuff, avg 30% 35 - 15 mm, commonly ≥0.5 mm ϕ = ? phenocrysts, or grains, finely disseminated and locally, concentrated into thin beds,						
600										
620										

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS
539.3 - 557.0 : avg < 1% py								
		560						
557.0 - 624.0 avg ≈ 1% py; 1 - 2 mm octahedrons of recrystallized py								

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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				190.2 - 204.2 624.0 - 670.1 : tuff mixed light gray-green to medium green tuff, very fine grained to aphanitic, avg 15% 1-2 mm ntombic dolomite grains, medium green sections contain up to 50% dolomite grains no definite bedding					
600										
660										
				204.2 - 210.6 670.1 - 690.5 : argillaceous tuff mainly black, highly argillaceous tuff and minor argillite, avg 20% 1-2 mm white-gray, subrhombic to irreg dolo grains					
680										
				210.6 - 213.2 690.5 - 699.6 : tuff light greenish gray, aphanitic to fine grained, 15-30% 1-2 mm dolomite grains					
700										
				213.2 - 215.3 699.6 - 706.6 : feldspar crystal tuff or msb light gray-green w 25% 1-5 mm subhedral plag phenos, 1-2% qz phenos, 25% rhombic carbonated grains, trace black hematite					
720										

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
670.1 – 690.8 : 1% py										
690.8 – 691.0 : 2-3% py										

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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
			55 55	215.3 - 220.4 706.0 - 723.0 : tuff very light greenish gray fine grained homogeneous tuff, avg 20% 1mm planes or carbonate grains, 1% qz phenos up to .5 mm, no bedding						
				220.4 - 234.0 723.0 - 767.7 : tuff pearl, light to medium green and lesser light gray tuffs, commonly w 10-35% 1mm chamber carbonate grains, local zones w. fragments of mod-dk chloritic schist, finely disseminated chlorite and minor qz phenos up to 3 mm						
760			65 65	no bedding, in part epiclastic 744.5 - 767.7 locally strong textural changes which may be bedding						
				755.6 - 767.7 alternating light gray and light green tuff, locally fol w the bedding 760.0 : bedding 70°						
			15°-60°	772.0 - 774.0 : gouge and broken rock						
780				774.0 - 792.3 767.7 - 795.0 : tuff light gray - green, aphanitic siliceous tuff, 5-10% 1mm wh grains, locally 1-10mm qz and fold phenos						
				792.3 - 797.4 795.0 - 810.0 : feldspar crystal tuff or metagabbro						
800										

D. Hanley

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS

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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				817.9 - 818.3 : qz vein						
820			248.3 - 273.9	795.0 - 910.0 FCT or mgb light to medium greenish gray rock w. aphanitic, slightly schistose ground mass and avg 30% 1-10 mm subhedral plag phenos, 15% 1-3 mm beige-colored carbonate altered grains, avg 1% disseminated red-brown to black hematite and would normally be logged as bleached metagabbro but appears to be conformable						
840				853.0 - 905.5 : avg 2% hematite						
860										
880				889.0 - 895.6 : irregular qz-calcite vein in mgb						
900										

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS
890.0 - 910.0 : avg. 10-15% py, 1mm cubes to patches of 10mm cubes, veined.		690						

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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
			40	277.4 - 283.1	910.0 - 928.7 : tuff light gray green, aphanitic, siliceous, hard tuff w. avg 10% 1-2 mm rhombic to sub-rhombic dolomite grains						
920			35	283.1 - 288.3	928.7 - 946.0 : argillaceous tuff mainly medium gray-green aphanitic tuff w. 10-15% 1-2 mm dolomite grains and interbedded w minor black argillaceous tuff						
940			25	288.3 - 295.7	946.0 - 970.0 : argillite 946.0 - 956.0 gray, clastic tuff w fragments up to 5 mm and 2% black argillite fragments. black, calcareous, graphitic argillite, 5% calcite laminations, 2% interbedded gray clastic tuff						
960			45	295.7 - 307.1	970.0 - 1007.6 : tuff very light gray, hard, aphanitic, siliceous tuff, or massive rhyolite, avg 15% 1-2mm fuzzy, probably carbonate altered phenocrysts unit is more translucent and siliceous than normal ≤1% 3-4 mm. qz phenos						
980			35								

D. Enright

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS
910.0 - 915.5 : 2% py								
915.5 - 928.7 : avg 2-3% py, w. minor py, trace cp, seams in fol. & fract. and minor seams in fractures								
928.7 - 946.0 : avg 1% po + py								
946.0 - 970.0 : avg 1% po, <1% py & fract.								

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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
1000										
			45/40	307.1 - 312.3 1007.6 - 1024.7 : argillaceous tuff mixed unit of medium gray tuff to black argillaceous tuff locally contains 5% 1-3 mm qz and qz-carbonate phenos						
1020				312.3 - 326.7 1024.7 - 1072.0 : tuff mainly light gray, light grey-green, light green aphanitic tuffs, with minor to 15% 1-3 mm qz phenos, locally 20% 2-9 mm irregular dark gray carbonate augens.						
1040			65/38	1032.9 - 1035.0 : medium gray-black slightly arg tuff, possible bedding from argillaceous bands						
				1042.5 - 1053.0 sheared core and minor fault gouge						
1060			75/35	1065.2 - 1072.0 local zones v abundant 1-3 mm qz phenos						
				3267 - 3736 1072.0 - 1225.7 : QFCT						
1080										

A. Smith

WP-6275C

PAGE 29 OF | PROJECT: | HOLE NO. 85

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
		1000								
		1100								
1053.5 - 1068.8: avg 2% seams and grains of coarse recrized pp.										

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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
			3267-3736	1072.0 - 1225.7 : QFCT_						
				1072.0 - 1132.5 mainly light to medium gray-green QFCT except as noted, normal texture w avg 25% 1-10 mm sub-rounded qz phenos, avg <5% 1-3 mm subhedral, light green plag phenos, groundmass very fine grained, slightly schistose, w very minor fine dissem chlorite and rare chloritic bands						
1100				1094.5 - 1098.0 avg 2% dissem black hematite						
1120										
				1132.5 - 1135.0 : dirty gray-green, more schistose unit w 20% mm milky qz phenos and minor up to 3mm qz phenos, 5% fine dissem chlorite						
1140				1132.5 - 1183.3 : QFCT as at 1072.0 - 1132.5 and 5% fine-grained bands, common, 2-6 cm thick.						
1160										

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS

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DEPTH (FEET)	% Core Recv	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
1180										
				1183.3 - 1195.0 : medium greenish grey QFCT w. 20% 1-2 mm gz phenos, 5% 1-3 mm green plag phenos, 10% irregular to subrhombic creamy white carbonate grains						
				1195.0 - 1225.7 : medium green to medium-dark green chloritic QFCT, avg ≈ 20% 2-8 mm gz phenos, commonly ≈ 3-5 mm in diameter, avg 10%? plag phenos, diffuse to distinct, locally 5% small felty chlorite grains, avg 15% dissem. chlorite, locally heavy chlorite						
1200										
			40							
				1195.0 - 1205.0 : 5% 1-3 mm carbonate grains						
1220										
				3736 - 105.2 1225.7 - 1324.5 : metagabbro or basic feldspar porphyry.						
			40	1225.7 - 1226.6 : contact zone, med. green, chloritic, deformed mgb w diffuse, altered, chlorite speckled plag phenos.						
1240										
			30-35	1226.6 - 1249.0 : medium-dark green, finer grained chlorite rich, weakly schistose matrix w. 35% 1-12 mm, sub-rounded to subhedral and tabular gray plag phenos. avg 2% black hematite						
			92 v, 12cm bleached mgb	color & texture very similar to above QFCT						
1260										

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PAGE 28 OF | PROJECT: | HOLE NO. [illegible]

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS
	1180						
	1200						
1210.8 - 1225.7 cvs 1% py							

WP-6275B

PAGE 29 OF | PROJECT: | HOLE NO. 85

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
1280										
1300				1299.0 - 1329.5: transitional rock ranges to bleached mgb, rock changes to light greenish gray, groundmass is speckled w 10-20% 1-3 mm carbonate ? grains probably replacing both plag phenos and groundmass, avg 15% distinct light gray rounded to tabular plag phenos						
				1299.0 - 1324.3: avg 2% phen.						
1320				1324.3 - 1329.5: transition to light gray-green plag porphyry ~ 30% 1-8 mm tabular light gray plag phenos						
				405.2 - 406.8 1329.5 - 1334.5 Feldspar porphyry transitional w. above, 35% tabular plag, 2% qz phenos						
				406.8 - 409.0 1334.5 - 1342.0 Feldspar porphyry 30% dulc altered plag, 5% 1 - 2 mm qz phenos, light greenish gray schistose groundmass						
1340				409.0 - 415.8 1342.0 - 1369.3 rhyolite lapilli tuff (3v, w.s.)						

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
		1280								
1338.0 - 1364.3 avg 1% py										
scattered fine - med - grained patches										D. Bishop

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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
			45	very pale greenish-gray to grey — sericite schist, well foliated, minor fragmental texture, avg 5% small to 15 mm irregular white dolomite grains, 2% 1-4mm slightly elongate, rounded qz. phenos.						
1360			45							
				418.8 - 419.2 1361.4 - 1375.9 : rhyolite lapilli tuff (3v s.s) medium green slightly granular sericitic qz. schist w 20% 2-10 mm qz phenos mainly replaced by irreg. cream-colored dolo grains, 5% irreg gray rhyolitic fragments						
			45							
1380			65							
				419.2 - 419.7 1375.9 - 1377.0 3v (w.s) creamy green-white w minor fine qz. phenos.						
			55	419.7 - 420.8 1377.0 - 1380.5 : 5v?c, light gray, hard, fractured rhyolite						
				0.9 1380.5 - 1385.0 : 3v?c rhyolite lapilli tuff metamorphosed to sericitic quartz schist consisting of small, closely-packed fragments, avg 1-2% 1-2mm qz. phenos, rarely 2-4mm.						
1400										
			55							
1420										
			55							
1440										

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Cu	% Zn	% Pb	oz/ton Ag	oz/ton Au	COMPOSITE ASSAYS ppm Co / Ni
1338.0 - 1369.3 ' avg 1% py										
1369.3 - 1380.5 ' 1-2% py										
		1360								
		1388.5 / 420.8m								
1380.5 - 1445 ' avg 3-7% fine-grained disseminated py			15.0	48	.059	.09	.01	09	.006	8 / 15
(925.0m) @ 1394.5 : minor sph py		1394.5 / 425.3m								

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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
			55	440.9 - 442.4 1445.0 - 1451.5 SSC very fine grained, homogenous medium grey, no fragmental texture						
1460			55	442.4 - 449.9 1451.5 - 1476.0 SSC very light grey & white, fragmental sericite schist						

Al Bridge

WP-6275C

PAGE 34 OF 34 | PROJECT: | HOLE NO. 85

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS
1445.0 - 1451.5: 1% py								
1451.5 - 1476.0 avg 5% py								
@ 1460.0 one coarse patch of cp		1460						
1476.0 end								

A. Bailey

WP-6275B

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (FEET)	% Core Recv	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY		

WP-6275A

IMPERIAL OIL LIMITED

MINERALS SECTION

DRILL LOG

PROJECT: Hutcho creek	GROUND ELEV.: ≈ 522.1 m
HOLE NO.: 87	BEARING: [illegible]
LOCATION: ≈ 23,219.54 N; 36,143.86 E claim: Jeff 9	DIP: −[illegible]°
	TOTAL LENGTH: [illegible]02' 51[illegible].6 m
LOGGED BY: D. Burridge	HORIZONTAL PROJECT: [illegible] m
DATE: Sept 25, 1978	VERTICAL PROJECT: [illegible] m
CONTRACTOR: Arctic Diamond Drilling	
CORE SIZE: BQ	
DATE STARTED: Sept 23, 1978	
DATE COMPLETED: Oct 2, 1978	
DIP TESTS:	

ALTERATION SCALE

absent

slight

moderate

intense

TOTAL SULPHIDE SCALE

traces only

< 1%

1% – 3%

3% – 10%

> 10%

COMMENTS:

plug at 1169'

same collar location as DDH 85

LEGEND

WP-6275B

PAGE 1 OF | PROJECT: | HOLE NO. 87

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				meters						
				0.0 - 4.9	0.0 - 16.0 : overburden					
				4.9 - 17.5	16.0 - 366.5 : metagabbro					
20				17.5 - 80.6	16.0 - 269.5 : medium greenish gray, fine-grained to aphanitic and slightly schistose groundmass 20% 1-8 mm, elongate, black ferromagnesian phenos, minor plag					
			05		avg 2-5% qz veins, variable thickness and orientation					
			08		160 - 185.0 : limonite staining on fx					
40					169 - 198.0 avg 2-5% qz veins					
			27							
60			15							
			05							
			25							
80										
			65		269.5 - 366.5 : broken core, limonitic qz veins along core axis					

A. Fahey

WP-6275C

PAGE 2 OF | PROJECT: | HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS

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PAGE 3 OF | PROJECT: | HOLE NO. 87

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				100 - 368.5 : meta gabbro						
100			05							
120			13 / 05 / 25							
140			35	136.5 - 144.5 : irregular chloritic altered zones around qz veins						
160										
180										

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PAGE 4 OF | PROJECT: | HOLE NO. 27

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS

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PAGE 5 OF | PROJECT: | HOLE NO. 97

DEPTH (FEET)	% Core Recv	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				160 - 365 : meta gabbro						
			45							
			20	10 cm qtz v						
200			25	2 cm qtz v						
			20	200.3 - 206.0 : slightly bleached, med. grey msb w chlorite mantling in the foliation						
			17							
220										
			15							
			10							
240										
260										
				80.6 - 95.6						
				264.5 - 313.5 : mixed unit predominately very dark grey to near black msb w. an						

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PAGE 6 OF | PROJECT: | HOLE NO. [illegible]

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS
200.2 - 206 [illegible] avg 10% py, 1-5 mm cubes of recrystalized py		200						

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WP-6275B

PAGE 7 OF	PROJECT:	HOLE NO.

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
			30		indistinct, hb-rich groundmass and 10% fine, irregular grains of white plag.						
280											
300			15								
		25	25	95.6 – 112.3	313.5 – 368.5 : mgl medium gray-green, mainly fine-grained and slightly granular. Hb grains are totally chloritized and indistinct, locally up to 10% small gray plag phenos.						
320			30, 20								
340			30, 30								
360											

WP-6275C

PAGE 8 OF | PROJECT: | HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS
		300						
314.0 - 322.0 avg 2% py 1-4mm, on grain cpy, asso. w qz veins								

WP-6275B

PAGE 9 OF | PROJECT: | HOLE NO. 87

DEPTH (FEET)	% Core Recv	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
		30		112.3-113.0	368.5 - 370.2 : tuff to siltstone fine-grained					
		32	x 30		dirty gray biotitic tuff w abundant 0.2-1mm gy phenos.					
				113.0 - 123.0	370.2 - 403.5 : metagabbro and tuff ≈ 90% medium					
380			10		gray mgb commonly w 20% slightly chloritized hb phenos, locally v abundant 1-7 mm, irreg, gray plag phenos, ≈10% thin to 4 cm bands of fine grained, gray, biotitic tuff.					
			20							
400										
	c	25	25	123.0-125.5	403.5 - 411.8 : tuff					
			35		dark gray-green to green-black fine-grained, biotitic, finely laminated and foliated tuff, minor mgb, bedding and foliation probably parallel, sharp contacts w mgb					
	c	15	15							
420				125.5-135.4	411.8 - 575.6 : metagabbro					
					411.8 - 441.3 : dark greenish gray, uniform, fine-grained w ≈ 10% elongate hb phenos, 1% fine yellow-green epidote grains					
440	c	18								
					441.3 - 575.6 : sharp contact to dark green w 40% chloritized hb phenos and 5-10% dirty gray plag phenos					

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PAGE 10 OF | PROJECT: | HOLE NO. [illegible]

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
		400								
[illegible] - 422.0 : 1%, disseminated [illegible] 1-4 mm cubes										

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D. Briggs

WP-62758

PAGE 11 OF	PROJECT:	HOLE NO. [illegible]

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				411.3 - 525.6 : metagabbro						
				continuing 1-2% qz veins in mgb, veins at 0-5-10° to 70°, no preferred orientation, poorly visible foliation in mgb.						
460										
480										
500										
520										
		30 / 50	15	1mm qtz v						
540										

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PAGE 12 OF	PROJECT:	HOLE NO. 87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS

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WP-6275B

PAGE 13 OF | PROJECT: | HOLE NO. 87

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
560										
580				175.4 - 182.5 | 575.6 - 598.6 : tuff medium brown to green fine grained crystal-lithic tuff, commonly < 5 mm to locally 20% 1-2 mm, qz and carbonate grains locally well laminated, bedding and foliation appear							
600				182.5 - 207.9 | 598.6 - 682.0 : metagabbro w tuff medium gray mafic w 20% slightly brown-colored bleached > mb phenos and minor irreg plag grains weakly to moderately foliated contains avg 5% zones of bleached tuff parallel to foliation, tuff sections are conformable to irregular thin to 10 cm thick							
620										

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PAGE 14 OF | PROJECT: | HOLE NO. 47

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS

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PAGE 15 OF | PROJECT: | HOLE NO. 37

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
640			26 / 30 / 25 / 40 / 35							
660			35							
			20 / 30							
680			28							
			25 / 25 / 25 / 30	207.9 - 216.9 (682.0 - 711.6) tuff medium to fine-grained, dark brown to brownish green biotite tuff, avg 10-20% 1 mm white qz grains or phenos, locally 1-3mm rounded qz phenos or porphyroblasts bedding massive to locally well defined, locally broken and distorted						
700			28 / 16 / 28 / 35							
720			35	216.9 - 222.8 (711.6 - 731.0) : tuff medium green, aphanitic to fine-grained, massive, commonly 10-15% 1mm						

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PAGE 16 OF	PROJECT:	HOLE NO

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS
		640						

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WP-6275B

PAGE 7 OF	PROJECT:	HOLE NO. 87

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				qz phenos rimmed by biotite, minor biotite + foliation, ... locally, mod green, calcitic, 20-25% qz. grains, 10-15% biotite						
			222.9 - 229.9	731.0 - 752.7 : tuff very light gray-green, aphanitic, hard, siliceous tuff, massive, rare bedding, avg 10% 1-2 mm chambered dolomite and sub-rounded qz-dolomite phenos.						
740										
			229.9 - 235.7	752.7 - 770.2 : tuff olive-colored light gray-white to light-med green aphanitic tuff, rr sharp bedding, commonly w avg 10% 1-4 mm qz and qz-dolomite phenos.						
760										
			235.7 - 246.6	770.2 - 809.2 : tuff medium green, very fine grained, chloritic, well foliated avg 15% 1-2 mm pauli, carbonate altered qz phenos						
780										
800										
			246.4 - 248.7	809.2 - 816.0 : quartz-rich to medium gray-green qz-feld tuff w 2% hem.						

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PAGE 18 OF | PROJECT: | HOLE NO

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS
3320 - 3450 : avg 1-2% diss py								
3450 - avg <1% py, trace sphal 1-8 mm cubes of recrystalized py.		346						

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DUNSBAR WATERPROOF

WP-6275B

PAGE 9 OF | PROJECT: | HOLE NO. [illegible]

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT. INTENSITY
				2457 - 2579 : 816.0 - 840.2 : Feldspar dust very fine-grained, light green-grey, schistose ground mass w minor to 20% subrounded plag phenos, minor qtz phenos						
820			22							
			30 40 35							
				816.0 - 840.0 : trace hematite						
			25	840.0 - 850.7 : avg 2% fissure black hematite, minor veining and possible fragments						
840			15							
				2579 - 2751 : 840.2 - 902.6 transition to felsic matrix avg 5-7% plag grains, 1-2% fine to medium chloritic grains which may be devitrified fiamme phenos						
			7	avg 1-2% black hematite						
			25	Tb = 860.0'						
860				unit transgresses into Tb host grey-green, weakly schistose metagabbro w 5-15% tabular chloritized hb and 5-10% grey plag grains						
880										
900										

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PAGE 20 OF | PROJECT: | HOLE NO 87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS
5190 - [illegible] avg 1% py 2-5 mm [illegible]								

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WP-6275B

PAGE 21 OF | PROJECT: | HOLE NO. 87

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
			20	275.1 - 276.3 902.6 - 906.6 : tuff very dark green chloritic tuff speckled w. 50% 1mm white to gray feldspar ? and qz phenos						
			25	276.3 - 301.1 906.6 - 987.8 : metagabbro medium gray w green hb to medium green meta gabbro weakly schistose, very fine grained w 10-20% hbl, chloritized hb, minor gray plag						
920			18							
940										
960										
980			20 / 25							
			45							

D. Bridges

WP-6275C

PAGE 22 OF | PROJECT: | HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
928.0 – 941.0 avg 1% py scattered 2–6 mm cubes of crystals and py										

[illegible signature]

WP-6275B

PAGE 23 OF | PROJECT: | HOLE NO. >7

DEPTH (FEET)	% Core Recv	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				301.1 - 311.2	987.8 - 1021.1 : tuff — mixed light green, med green, gray tuff, well laminated commonly w fine qz phases, local coarser gray zones w qz phases up to 8 mm bedding and foliation appear to be //						
1000			45								
			35								
			45								
			40								
			45								
1020				311.2 - 316.1	1021.1 - 1037.0 breccia aphanitic tuff light green-gray breccia w elongate green tuff fragments and 2-5 mm qz phases interbedded w minor aphanitic, light green tuff						
			55								
			40								
			60	316.1 - 329.0	1037.0 - 1079.5 : tuff — various tones of light green, aphanitic tuff w avg 5% 1-3 mm qz phases, well bedded, // foliation						
			15								
1040			50								
			45								
			70								
			52								
			40	321.3 - 321.4	1054.1 - 1054.5 fault gouge						
			10								
			1								
1060			20								
			65								
			46								
			25	1 cm gouge							
1080											

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PAGE 24 OF | PROJECT: | HOLE NO 87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS
		1060						
		1070						
1072.0 - 1077.5 avg 1% po		1080						
1077.5 - avg 2-3% po								

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DUNSMUIR WATERPROOF

WP-62758

PAGE 25 OF | PROJECT: | HOLE NO. 37

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				3290 - 3330 : 1079.5 - 1092.9 : tuff aphanitic, light gray to light green-gray tuff, varies from massive ash/lithic tuff ~ 10% 2-8 mm qtz phenos.						
				3330 - 422.6 : 1092.9 - 1386.9 : meta-gabbro						
1100				3330 - 3355 : 1092.9 - 1100.6 : bleached, felsic meta-gabbro light greenish gray w 15-20% large subhedral gray plag phenos, 10-15% 1mm irreg chlorite grains, steep contact at 1100.6						
				3355 - 391.4 : 1100.6 - 1120.2 : felsic mgb med to dark green ~ 20% 1-6 mm subrounded, gray plag phenos, abundant chlorite within hb.						
1120			15 cm qtz v.							
				341.4 - 351.5 : 1120.2 - 1153.3 : bleached mgb transitional from above, light green-gray, felsic mgb w 20% 1-3 mm & 30% ~ 8 mm plag grains, total 15% garnetiferous white carbonate grains, avg 2% disem. hematite						
1140										
				351.5 - 357.3 : 1153.3 - 1172.9 : felsic mgb transitional from above, dark green, abundant, indistinct plag phenos, some are rimmed by chlorite apparently no hematite						
1160										
			28							

D Bridge

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS
0795 - 1052 ft : avg 2% py, 1 ... 3 veins and ... veg patches in the ...								
		1105						

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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
			20	357.3 - 363.4	1192.9 - 1192.2 : bleached felsic metagabbro, transitional contact w above avg 1-2% hematite, slight						
1200											
		C 40		4.5' gouge 363.4 - 367.2	1192.2 - 1204.8 : bleached felsic metagabbro w zones of siliceous tuff, conformable to the foliation						
		C 40		367.2 - 416.2	1204.8 - 1365.9 : bleached felsic metagabbro w 2% 1-3cm light greenish, locally, fine-grained and tuffaceous appearance 25% 1-3 mm slightly carbonate altered plag phenos in v.f.g. matrix						
1220			25								
			25								
1240											
1260											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
		180								

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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
			416.2 - 404.5	1265.4 - 1327.2 : Foliated metagabbro, medium green Foliation mgh w abundant gray to dark green (chloritic) plag planes, 10-20% chlorite in groundmass						
1280				1288' lost water						
1300			75°							
			15 cm qtz							
1320			15 cm qtz-chl v							
			404.5 - 382.6	1327.2 - 1356.9 Foliated metagabbro, transitional contact medium gray-green mbg w avg 40% 2-8 mm subtabular slightly diffuse, moderately oriented plag phenos, local plag up to 10 x 15 mm avg 15% partly chloritized bb, distinct black grains w green chlorite avg 5% dissem chlorite						
1340										

D. Bright

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
		1280								

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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C Chem	D	E	FRACT INTENSITY
1360											
					@ 1371.5 minor gouge						
					1384.2 - 1386.4 minor QFCT fragments in metagabbro						
1380			74	4226 - 471.2	1386.4 - 1540.0 : QFCT						
				4226 - 471.2	1386.4 - 1410.0 medium greenish gray quartz feldspar crystal tuff, massive, hard, compact, siliceous, locally lighter grey						
1400					avg 25% 2-8 mm, blue, sub-rounded qz phenos, commonly no visible feldspar, locally, 25% 1-7 mm medium green subhedral plag phenos, avg 5%, fine dissem dark green chlorite grains						
		420									
1420				471.2 - 431.1	1410.0 - 1414.5 dark green QFCT, 25% dark gray qz phenos, in weakly schistose, chloritic groundmass						
				minor gouge 471.1 - 491.5	1414.5 - 1448.6 mixed light gray, dark green, and greenish red QFCT, dark green sections are heavily chloritic and finer-						
1440											

D. [illegible]

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
		1350								

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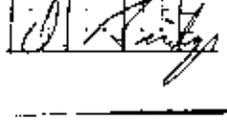
DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C hem	D chl.	E	FRACT INTENSITY
				grained, chlorite is ubiquitous except locally in light green zones, hematite is ubiquitous, section has overall red-brown tone						
			35	434.5 - 437.7	1425.5 - 1430.0: dark green chlorite rock sections					
				441.5 - 447.8	1448.6 - 1469.0: very light greenish white QFPT w minor pink-red hematite staining in the foliation					
1475			25		avg 10-20% 2-10mm rounded qz phenos, 5% 1-8 mm, commonly 1-2 mm light green pinch phenos, avg <5% rounded dolomite patches					
				447.8 - 453.4	1469.0 - 1483.5: variable, mainly medium green QFPT w avg 30% 1-6 mm qz phenos, 5-10% 1-3 mm green-pale pinch phenos, siliceous groundmass contains minor to abundant dolomite, minor red to black hematite with contacts transitional					
				453.4 - 467.0	1483.5 - 1532.2: very light reddish gray QFPT, 35% 1-10 mm qz phenos, avg 5% plus phenos					
1500					uniform, massive, weakly schistose groundmass. overall weak red-pink tint and 2% disseminated black hematite to 1522.3					
				453.4 - 461.3	1483.5 - 1512.5: red-pink tint					
1525				461.3 - 467.0	1512.5 - 1532.2: trace reddish hematite					



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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	COMPOSITE ASSAYS
@ 1497.5' 1% py patch in 2cm yellow-green zone in hematitic QFPT								
@ 1459.5' very fine-grained py, trace cpy in 3cm qz vein								
		1460						

VP-6275B

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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT. INTENSITY
				469.0 - 471.2 1532.2 - 1546.0 white to greenish white QFPT, 20-30% 1-3 mm qz. phenos, no visible plags, avg 20% 1-5 mm veins, white to beige dolomite stringers, sericitic.						
1540				470.3 - 471.2 1543.0 - 1546.0 qz veins and broken core						
			61	471.2 - 472.2 1546.0 - 1565.5 : rhyolite lapilli tuff (?) light greenish gray to medium gray sericite quartz schist, well foliated, avg 10% rhyolite and dolomite fragments, 5-10% 2-6 mm ovoid dolomite augens probably after qz phenos, 5% white beige dolomite beds						
1560			60								
			50	472.2 - 472.9 1565.5 - 1568.0 : massive quartz							
			55	472.9 - 478.3 1568.0 - 1569.1 : dolomite - qz - sericite rock							
				478.3 - 495.6 1569.1 - 1624.1 : massive sulphide horizon							
				478.3 - 480.8 1569.1 - 1577.5 : granular, recrystalized qz, dolomite, schist and massive qz - sulphides							
1580				480.8 - 481.8 1577.5 - 1580.8 : 5-7% minor granular qz and dolomite							
			60	481.8 - 495.6 1580.8 - 1624.1 : 5-7% normal : gld gray quartz - sericite schist derived from rhyolitic lapilli tuff protolith, original textural features well preserved							
			60								
1600			55								
1620											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Cu	% Zn	% Pb	oz/ton Ag	oz/ton Au	COMPOSITE ASSAYS ppm: Co / Ni
1537.0 – 1541.7 : minor patches of coarse, recrystallized py		1540								
1546.0 – 1558.5 : avg <1%, very fine grained dissem py										
1558.5 – 1565.5 : avg 1-2% fine grained, dissem. py		1560								
1565.5 – 1569.1 : avg 1-2% recryst. py, one cp patch		1565.5 – 1569.1	3.6	6890	.078	.08	.01	.07	.003	14 / 23
1569.1 – 1577.5 : 20% py, mainly interstitial to granular gz, 5% cp, med-coarse grained		1569.1 – 1577.5	8.4	6891	1.840	.04	.01	.27	.004	14 / 21
1577.5 – 1580.8 : 20-25% py, 5% cp, trace bornite		1577.5 – 1580.8	3.3	6892	1.105	.05	.01	.81	.012	9 / 16
1580.8 – 1626.1 : avg 20%, main fine-grained, locally medium, dissem fairly evenly in schist, mainly along foliation planes; avg 6% cp, fine-med-grained patches assoc. w py, trace sph.		1580.8 – 1592.0	11.2	6893	0.563	.11	.01	.77	.010	7 / 19
		1592.0 – 1602.0	10.0	6894	.519	.04	.01	.50	.009	8 / 14
		1602.0 – 1612.0	10.0	6895	.703	.16	.01	.32	.008	7 / 15
		1612.0 –	11.0	6896	.641	.09	.02	.35	.005	6 / 14

J. Baird

WP-6275B

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DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
			40 / 76	495.6-518.8 (1626.7-1702.0) SSSC normal quartz-sericite schist, light gray						
1640			60 / 76							
1660			60							
1680										
1700			65							
				1702'						

D Birly

WP-6275C

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Cu	% Zn	% Pb	oz/ton Ag	oz/ton Au	COMPOSITE ASSAYS ppm Co / Ni
		1622.0								
1626.1 - 1635.6 : 20% py, one patch of med-grained py		1626.1	4.1	6697	.521	.40	.02	.50	.006	.0 / .5
1635.6 - 1702.0 avg 20% py, disseminated to fragmentals in foliation		1640								
		1702'								

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D. Bailey

VIP-6275B

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION b	ALTERATION C	ALTERATION D	ALTERATION E	FRACT INTENSITY

TRAVERSE TABLES

STATION	NORTH	EAST	ELEVATION
IP 5132	81, 635.40	126, 680.94	
IP 5202	74, 503.44	127, 376.75	5081. 9
IP 5203	74, 181.89	126, 281.54	5204. 6
TH 5204	74, 103.82	126, 015.66	5239. 9
TH 5210	74, 063.07	123, 598.06	5234. 8
TH 5225	73, 216.32	123, 889.09	5357. 1
IP 5226	73, 308.15	123, 995.31	5300. 1
IP 5227	73, 330.25	122, 675.74	4945. 9
IP 5230	82, 726.45	123, 113.64	5364. 6
IP 5231	76, 915.78	121, 590.86	4676. 6
IP 5233	79, 085.38	118, 316.12	4594. 6
IP 5234	78, 987.77	119, 705.72	4570. 7
IP 5235	78, 878.95	121, 101.60	4591. 5
IP 5236	78, 783.56	122, 489.84	4602. 8
IP 5237	78, 659.83	123, 912.43	4641. 1
TH 5238	77, 810.69	128, 886.17	4785. 3
IP 5239	75, 835.80	128, 186.40	4981. 9
IP 5240	75, 760.93	129, 578.15	4944. 0
IP 5241	75, 715.95	130, 987.77	4947. 0
IP 5242	75, 925.31	126, 792.48	4955. 7
TH 5243	74, 021.54	111, 648.74	5754. 6
IP 5244	71, 512.17	125, 957.56	5971. 3
TH 5245	71, 464.37	125, 572.96	5979. 9
IP 5249	74, 317.27	119, 130.09	5353. 9
TH 5250	73, 373.90	119, 896.05	5197. 7
IP 5251	74, 136.19	120, 276.57	5028. 2
TH 5252	73, 363.54	121, 289.15	4899. 0
IP 5253	73, 460.21	118, 436.01	5435. 2
IP 5254	74, 213.49	117, 381.28	5184. 8
IP 5255	73, 520.06	117, 080.23	5094. 3
IP 5256	73, 554.89	115, 590.42	4873. 3
IP 5257	75, 991.86	125, 398.66	4857. 9
IP 5258	76, 051.09	123, 979.85	4920. 3
IP 5259	76, 172.94	122, 613.87	4720. 5
IP 5260	76, 183.34	121, 202.01	4740. 0
IP 5261	76, 173.77	119, 724.09	4905. 0
IP 5262	76, 144.28	118, 314.02	5014. 1
IP 5263	76, 127.68	116, 880.23	4861. 7
IP 5264	76, 126.46	115, 475.93	
IP 5266	73, 143.38	128, 774.66	5353. 9
IP 5267	73, 055.80	128, 174.10	5233. 0
IP 5268	72, 980.77	129, 587.60	5199. 2
D.H. 1	73, 859.15	127, 177.89	5185. 9
D.H. 2	73, 726.43	126, 741.61	5275. 7
D.H. 3	73, 727.57	127, 580.34	5160. 8
D.H. 4	73, 728.51	126, 540.01	5295. 3
D.H. 5	73, 735.41	126, 940.52	5248. 4
D.H. 6	73, 695.57	126, 063.21	5352. 7
D.H. 7	73, 609.81	126, 381.65	5337. 2
D.H. 8	73, 977.46	126, 757.14	5226. 1
D.H. 9	74, 054.08	126, 844.77	5192. 0

LEGEND

- 1/2 DENOTES No 1 OR No 2 LOCATION POST
- ● IP 5256 DENOTES IRON POST SET WITHIN NUMBERED ALUMINIUM IDENFICATION TAG
- ⊙ DH 1 DENOTES DIAMOND DRILL HOLE
- ○ 5210 DENOTES TRAVERSE HUB

ORIGIN OF CO-ORDINATES IS STATION 5249 SCALED FROM 1 INCH = 400 FEET MAPPING (JOB 05799-5) 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 SRMB LOCATION POSTS SEE McELHANNEY JOB 13036-O

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 6580 FEET

DISTANCES ARE OBTAINED BY ELECTRONIC DISTANCE MEASURING GEODIMETER 76 AND CONVENTIONAL STEEL TAPE METHODS

——— DENOTES SUMITOMO BOUNDARY

0 100 200 300 meters

REV NO	DATE	REVISION	DR.	CH.	APP

IMPERIAL OIL LTD. MINERAL DIVISION

LOCATION LINE AND DRILL HOLE SURVEY OF JEFF MINERAL CLAIMS IN LIARD MINING DIVISION, KUTCHO CREEK

McELHANNEY ASSOCIATES
PROFESSIONAL LAND SURVEYORS
Vancouver, B.C.

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
7024
NO.

SCALES: HOR. 1" = 400' VERT. 1:4800
DESIGNED A.W.K.S.
DRAWN R.E.
CHECKED J.M.
APPROVED A.M.
DATE OCTOBER, 1974
JOB NO. 13039-O
CLIENT DWG NO.
McASSOC DWG NO.
REV.

MAP NO.1