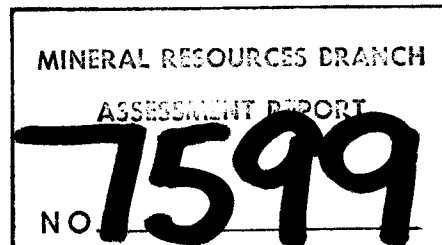


DIAMOND DRILL HOLE REPORT  
ON JEFF 63-64, 101-116, 135-138  
AND MOE 1 MINERAL CLAIMS, GROUP XI

LIARD MINING DIVISION

58° 12'N 104 I/W 128° 21'W

FOR  
ESSO MINERALS CANADA  
314-1281 WEST GEORGIA  
VANCOUVER, B.C.



by  
DANE A. BRIDGE  
September 11, 1979

TABLE OF CONTENTS

	<u>Page No.</u>
INTRODUCTION	1
INDEX MAP NO. 1	2
INDEX MAP NO. 2	3
GEOLOGY	4
DIAMOND DRILLING	7
COST STATEMENTS	8
STATEMENTS OF QUALIFICATIONS	10
LEGEND FOR DETAILED DRILL LOGS (1 each for T. Terriff and D. Bridge)	12
APPENDIX: DETAILED DRILL LOGS DDH 90 - 12 pages DDH 91 - 8 pages	
DRILL HOLE LOCATION MAP	In Pocket

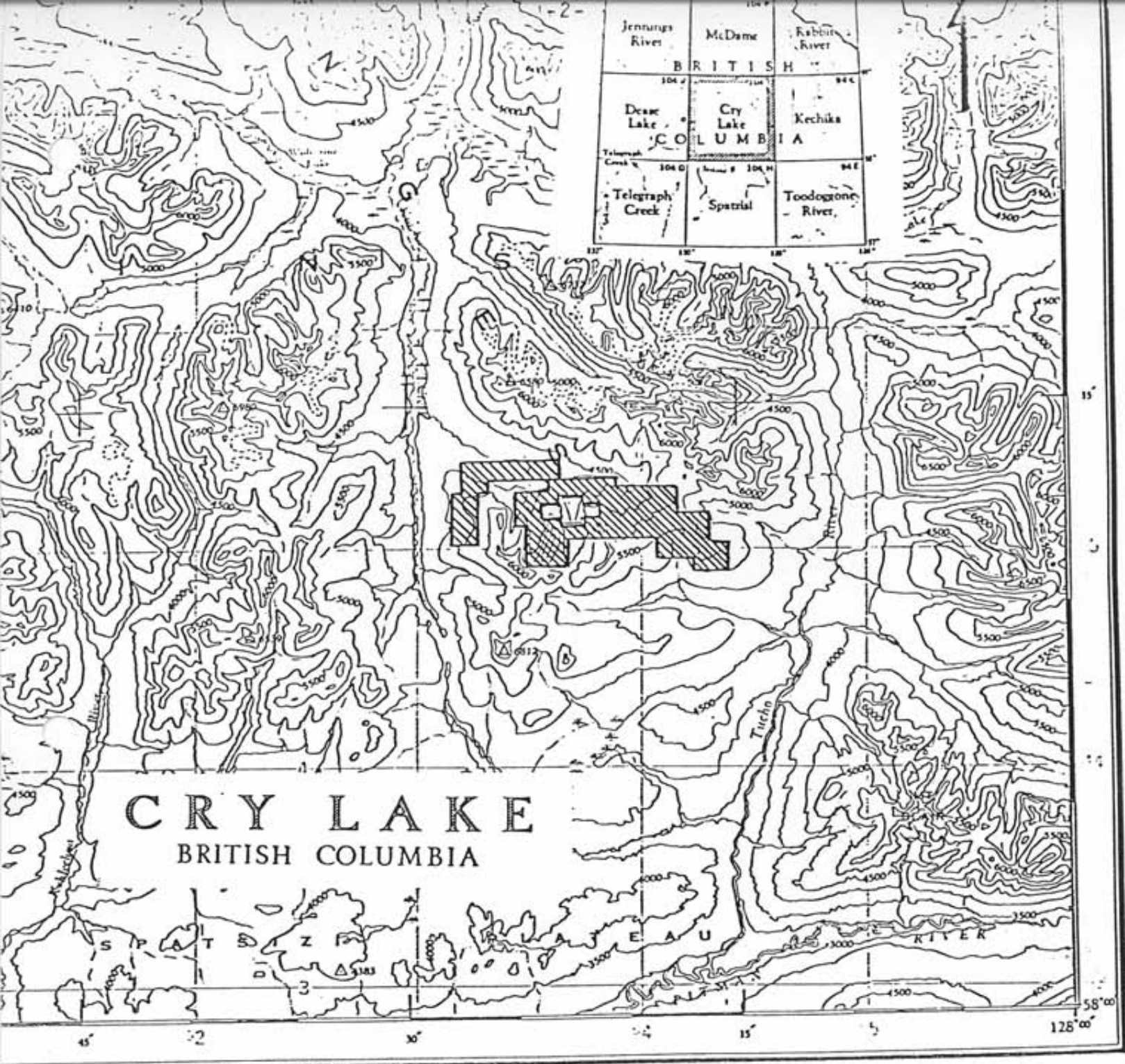
## INTRODUCTION

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 from the airstrip to camp is 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 describes 367.6 m of BQ diamond drilling on the Jeff 109 mineral claim. Two holes DDH 90 and 91 were drilled from the same location.

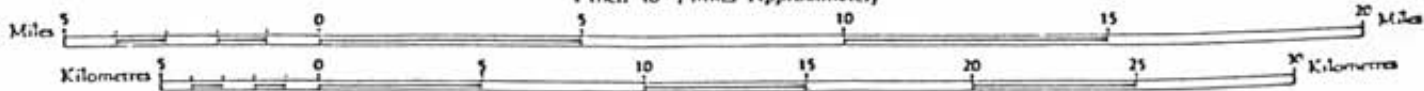


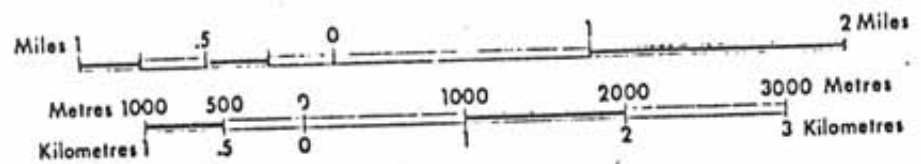
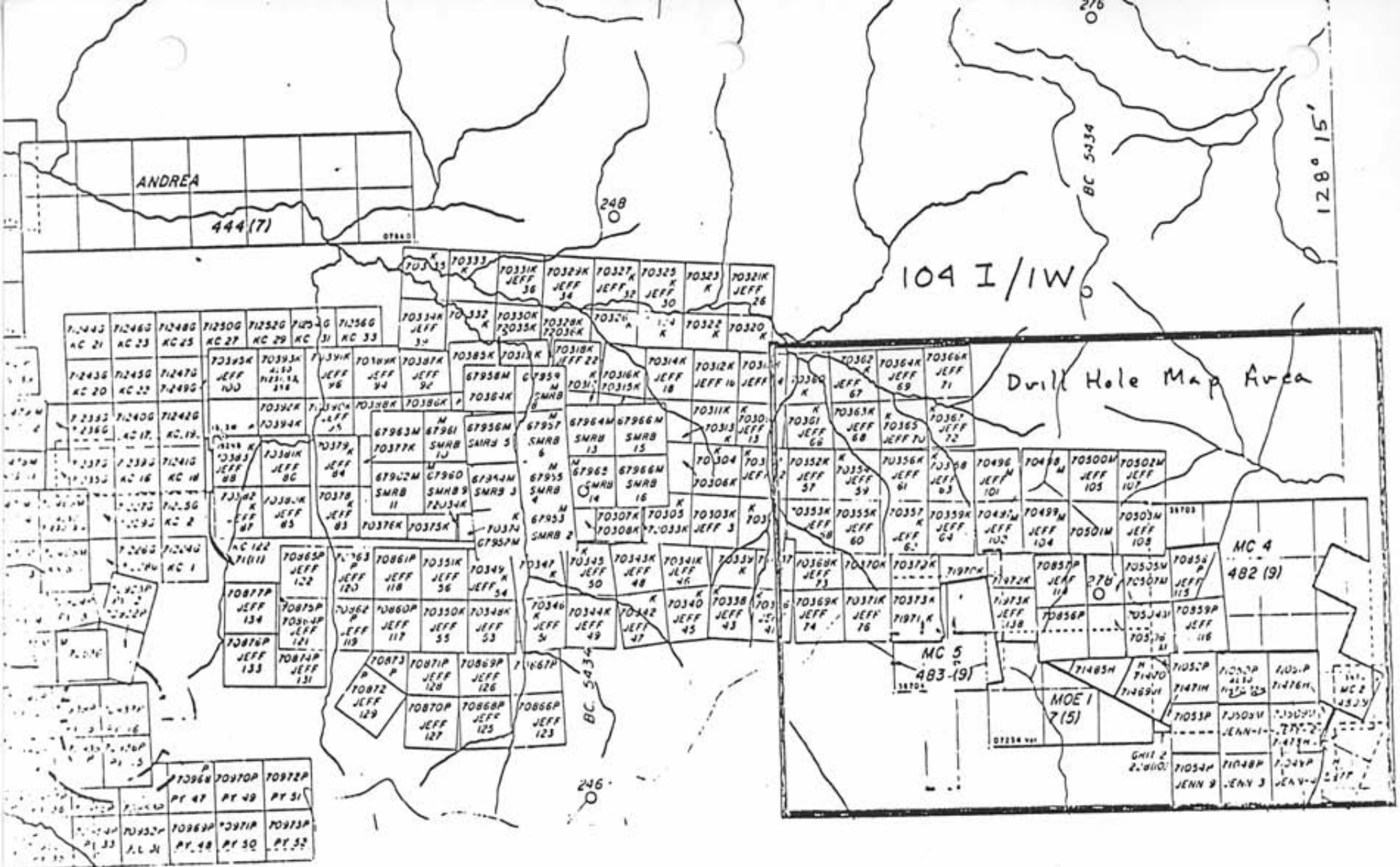
INDEX MAP NO. 1  
 LOCATION OF ESSO MINERALS CANADA'S KUTCHO CREEK  
 MINERAL CLAIMS IN 104 I.

TO ACCOMPANY REPORT BY DANE A. BRIDGE - SEPT. 1979

Scale 1:250,000

1 Inch to 4 Miles Approximately





INDEX MAP NO. 2  
 LOCATION OF DIAMOND DRILL HOLE MAP  
 TO ACCOMPANY REPORT BY DANE A. BRIDGE  
 SEPT. 1979

## 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

Two holes were drilled from the same location to intersect a charge potential anomaly generated by charging a thin sulphide horizon drilled in DDH 78 in 1978. DDH 90 drilled at  $75^{\circ}$  on a bearing of  $030^{\circ}$  intersected basic units from 1.2 to 80.8 m and rhyolite ash and lapilli tuffs with minor dike rocks from 80.8 to 212.8 m. DDH 90 appears to have intersected the sulphide horizon at 86.1 to 91.9 m. The zone contained about 10% disseminated pyrite and was not assayed. A minor zone at 124.3 to 127.5 m contains minor disseminated chalcopyrite.

DDH 91, collared at  $90^{\circ}$ , intersected basic units to 65.3 m and rhyolite ash and lapilli tuffs from 65.3 to 154.8 m. It intersected a zone with 2-3% disseminated pyrite from 67.6 to 71.3 m which may correlate with the sulphide horizon.

Detailed drill logs are in the appendix.

The core is on the property. Analyzed core is in Vancouver office  
JER

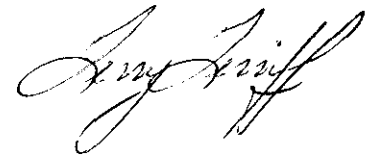
COST STATEMENT - For Work Done Prior to August 20, 1979

Dates Drilled:	August 13-19, 1979	
Holes Drilled:	DDH 90, 0-212.7 m and DDH 91, 0-102.1 m	
Direct Drilling Costs:		
	835 ft. at \$12.70	\$10,604.50
	198 ft. at \$13.20	2,613.60
Labour:	92 hr. at \$17.50 per hr.	1,610.00
Parts Left in Hole:		300.00
Assays:	3 at \$28.00	84.00
Fuel:	90 gal. at \$2.50 /gal.	225.00
Helicopter:	16.2 hr. at \$270/hr.	4,374.00
Helicopter Fuel:	335 ga. at \$3.00/gal.	1,005.00
Geologist:	7 days at \$100.00/day	700.00
First Aid Person:	3.5 days at \$85.00/day	297.50
Assistant:	3.5 days at \$35.00/day	122.50
Camp Costs:	49 man days at \$25.00/day	1,225.00
		<hr/>
TOTAL		<u>\$23,161.10</u>



COST STATEMENT - For Work Done After August 20, 1979

Dates Drilled:	August 20-21, 1979	
Holes Drilled:	Completed DDH 91, 102.1 m - 154.8 m	
Direct Drilling Costs:		
	165 ft. at \$12.70	\$2,095.50
	8 ft. at \$13.20	105.60
Labour:	52 man hr. at \$17.50	910.00
Casing and shoe left in hole:		300.00
Fuel:	25 gal. at \$2.50/gal.	62.50
Helicopter:	2.7 hrs. at \$270/hr.	729.00
Helicopter Fuel:	60 gal. at \$3.00/gal.	180.00
Geologist:	3 man days at \$100/day	300.00
First Aid Person:	1 day at \$85/day	85.00
Assistant:	1 day at \$35/day	35.00
Camp Costs:	15 man days at \$25/day	375.00
TOTAL		<u>\$5,177.60</u>

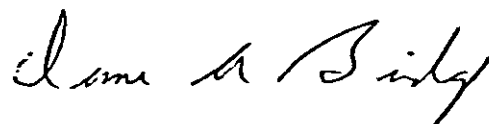


STATEMENT OF QUALIFICATIONS

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

I obtained a B.Sc. Honours in 1969 and  
a M.Sc. in 1972, both in geology from the University  
of Manitoba, Winnipeg, Manitoba.

I have been practising my profession as a  
geologist in Canada for 10 years.



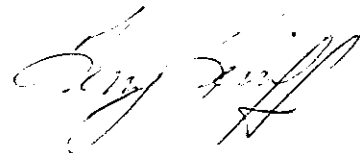
Dane A. Bridge, Geologist  
Esso Minerals Canada

STATEMENT OF QUALIFICATIONS

I, Terry R. Terriff of Calgary, Alberta hereby certify the following qualifications:

I obtained a B.Sc. in 1975 in geology from the University of Calgary, Calgary, Alberta.

I have been practising my profession as a geologist in Canada for 4 years.

A handwritten signature in cursive script, appearing to read "Terry R. Terriff".

Terry R. Terriff  
Esso Minerals Canada

LEGEND FOR DETAILED LOGS - (T. Terriff)

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.

bk	black
bl	blue
born	bornite
cpy	chalcopyrite
c gr	coarse grained
epid	epidote
f gr	fine grained
folia	foliation
gn	green
gr	grain
gy	grey
hema	hematite
qtz	quartz
sil	siliceous, silicified
v f gr	very fine grained
w/	with
xtal	crystal
xtaline	crystalline
wh	white


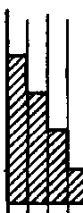
LEGEND FOR DETAILED DRILL LOGS - (D. Bridge)

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	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	pyrrhotite
c > > s	schist with chlorite >> sericite	py	pyrite
cal	calcite, calcareous	QFCT	Quartz Feldspar Crystal Tuff
carb	carbonate	qz v	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 <i>KUTCHO</i>	GROUND ELEV. <i>1746 m</i>																																				
HOLE NO. <i>90</i>	BEARING <i>030°</i>																																				
LOCATION <i>21,252 N , 12,168 E</i>	DIP <i>-75°</i>																																				
	TOTAL LENGTH <i>698.0' 212.75 m.</i>																																				
LOGGED BY <i>T. TERRIFF</i>	HORIZONTAL PROJECT																																				
DATE <i>17/8/79</i>	VERTICAL PROJECT <i>202.1 m.</i>																																				
CONTRACTOR <i>ARCTIC DIAMOND DRILLING.</i>	<p>ALTERATION SCALE</p>  <p>absent slight moderate intense</p>																																				
CORE SIZE <i>BQ.</i>																																					
DATE STARTED <i>16/8/79</i>																																					
DATE COMPLETED <i>18/8/79</i>	<p>TOTAL SULPHIDE SCALE</p>  <p>traces only &lt; 1% 1% - 3% 3% - 10% &gt; 10%</p>																																				
DIP TESTS																																					
COMMENTS																																					
<table border="0"> <tr> <td></td> <td><i>19.5</i></td> <td><i>75.1</i></td> <td><i>023.5</i></td> </tr> <tr> <td></td> <td><i>89.5</i></td> <td><i>76.2</i></td> <td><i>020</i></td> </tr> <tr> <td></td> <td><i>196.5</i></td> <td><i>97.1</i></td> <td><i>023</i></td> </tr> <tr> <td></td> <td><i>289.5</i></td> <td><i>80.3</i></td> <td><i>023.5</i></td> </tr> <tr> <td>COMMENTS</td> <td><i>389.5</i></td> <td><i>88.0</i></td> <td><i>343.5</i></td> </tr> <tr> <td></td> <td><i>489.5</i></td> <td><i>78.4</i></td> <td><i>225</i></td> </tr> <tr> <td></td> <td><i>589.5</i></td> <td><i>63.1</i></td> <td><i>218</i></td> </tr> <tr> <td></td> <td><i>689.5</i></td> <td><i>49.9</i></td> <td><i>214.</i></td> </tr> <tr> <td></td> <td>Footage</td> <td>dip</td> <td>bearing</td> </tr> </table>		<i>19.5</i>	<i>75.1</i>	<i>023.5</i>		<i>89.5</i>	<i>76.2</i>	<i>020</i>		<i>196.5</i>	<i>97.1</i>	<i>023</i>		<i>289.5</i>	<i>80.3</i>	<i>023.5</i>	COMMENTS	<i>389.5</i>	<i>88.0</i>	<i>343.5</i>		<i>489.5</i>	<i>78.4</i>	<i>225</i>		<i>589.5</i>	<i>63.1</i>	<i>218</i>		<i>689.5</i>	<i>49.9</i>	<i>214.</i>		Footage	dip	bearing	LEGEND
	<i>19.5</i>	<i>75.1</i>	<i>023.5</i>																																		
	<i>89.5</i>	<i>76.2</i>	<i>020</i>																																		
	<i>196.5</i>	<i>97.1</i>	<i>023</i>																																		
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	<i>689.5</i>	<i>49.9</i>	<i>214.</i>																																		
	Footage	dip	bearing																																		





MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%		COMPOSITE ASSAYS
256.2-265.2 - occ. embedded py + occ. f.g. py patches along frac		260							
265.2-282.2 - minor 1-2 mm patches of f.g. py along frac									
282.2-301.5 avg 10% f.g. py found along bedding planes py decreases to ~5% near bottom		280							

*[Handwritten signature]*

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
				M 91.9-96.2 301.5-315.7 lightgy, well bedded tuff, v.f. gr. w/ 1% ± 7mm cream carb. gn., lapilli frags tex w/ frags. being chyalitic / siliceous						
320				96.2-101.5 315.7-332.9 tuff is v.f. gr. w/ slight apple gn color caused by iron sericite alter. cream carb. gn still present but decr. H <sub>2</sub> O chyalitic frags increase. transitional change.						
340				101.5-115.2 332.9-378.0 Ash tuff. ophanitic - v.f. gr, lightgy, bedded. sericite present.						
360										
380				115.2-119.5 378.0-392.0 Hornblende Porphy med gr, ophanitic - f. gn matrix - aug. 5% chl alter. or partially chl alter hb, aug 1-3mm w/ occ 11mm, aug 20% < 1mm irreg. plaz in matrix + ~3% irreg. 1-3mm plaz, pheno						

*[Handwritten signature]*

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
301.5-315.7 - minor lenses of yel-br sph + 1% py in lenses and blebs										
332.9-378.0 avg 39% py found scattered about in min blebs or lenses and occ band		320								
343.0 - minn coarse gr. sph + 1% py										
346.6 - minn coarse gr. sph + 1% py										
347.1 - minn coarse gr. sph + 1% py										
348.0 - minor coarse gr. sph + 1% py										
		360								

*H. Hoff*

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
			M							
340	50	b		contact is abrupt but sl. irregular. 1195-131.0 3920-429.9 tuff. lt. gr. fgr. bedded - similar in some as tuff above dyke, occ. $\leq$ 5mm cream colored carb gr						
420	50	b								
440	50	b		131.0-156.6 429.9-513.7 tuff. textur- ally the same as the above tuff, fgr. bedded but has more of an apple green color due to incr. sericite, carb gr. increase to avg 1-2% cream colored, $\leq$ 1mm occ sections of tuff more gy colored than gr.						
460	50	b								
480	49	b								

*H. Hoff*

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%			oz / ton		COMPOSITE ASSAYS Co/Ni
					Cu	Zn	Pb	Ag	Au	
392.0-429.9 - 1-29% f.g. dissem py. 399.4 - minor patch cpy		400 402.7								
407.7-418.4 - ~39% med- coarse gr cpy in vsg blks and lenses; occ bands of lt yel br sph + minor black sph assoc. w/ the cpy		407.7	5.0	602	0.182	0.38	0.07	0.09	0.002	14/14
			10.7	603	0.805	0.06	0.01	0.19	0.003	10/16
		418.4								
			5.0	604	0.081	0.13	0.02	0.07	0.001	10/9
		423.4								
429.9-513.7 - 1-29% scattered blks + lenses of py.										
		440								

*Handwritten signature*

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
				M						
500										
520										
540										
560										

55/5

55/5

60/5

55/5

55/5

156.6-169.6

513.7-556.3 tuff

1194, fgn, lapilli frag tex, frags siliceous

- transitional change

169.6-199.9

556.3-590.3 tuff

apple gn color returns, fgn, minor carb. gr 5mm, siliceous, vague lapilli frag. tex.

*Handwritten signature*

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
		500								
513.7-556.3 ~ 170 scattered bands + blebs of py.										
		540								
553.7 - band of coarse gr. cp.										
556.3-590.3 ~ 190 py as blebs or lenses.										

*Handwritten signature*



DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
580										
600				179.9-185.7 590.3-609.2. transitional change to a light white, aphanitic-utgr, siliceous tuff (possible carb section), ecc carb. gr. - alteration zone beside dyke						
620				185.7-203.3 609.2-667.0 Feldspar Porphyry dyke - lt-gy-gr - med gr utgr-fgr matrix, ~50% wt, <1mm fld (ples), phenos, ecc carb gr slightly sericitic w/ occ minor patches of apple <sup>gr</sup> near top 611.7-619.4 2-3% discrete black hema gr. avg ~1% black hema thru section, locally absent.						
640										
660										

*[Handwritten signature]*





DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
				M 2021-2028 6631-665.4 Bull gtz vein upper contact abrupt, lower irreg						
				203.3-206.2 667.0-676.6 full, dirty wh bleached, v fgn matrix, siliceous lapilli frag tex, occ 1-4mm cr comb gr, color darkens down section, transitional contact (dyke alter.)						
680				206.2-212.75 676.6-698.0 S 77C bl-gy, v fgn, lapilli frag tex occ 1-4mm cr comb gr.						
698				212.75 698.0 END OF HOLE						

*H. Hoff*





PROJECT <i>KUTCHO</i>	GROUND ELEV. <i>1796m</i>
HOLE NO. <i>91</i>	BEARING <i>n/a</i>
LOCATION <i>21,252 N ; 12,168 E</i>	DIP <i>-90°</i>
	TOTAL LENGTH <i>508' 154.8</i>
LOGGED BY <i>T. TERRIFF</i>	HORIZONTAL PROJECT <i>31.35m 102.9ft</i>
DATE <i>18/8/99</i>	VERTICAL PROJECT <i>147.55m 484.1</i>
CONTRACTOR <i>ARCTIC DIAMOND DRILLING</i>	<p>ALTERATION SCALE</p>  <ul style="list-style-type: none"> <li>absent</li> <li>slight</li> <li>moderate</li> <li>intense</li> </ul>
CORE SIZE <i>B.Q</i>	
DATE STARTED <i>18/8/99</i>	<p>TOTAL SULPHIDE SCALE</p>  <ul style="list-style-type: none"> <li>traces only</li> <li>&lt; 1%</li> <li>1% - 3%</li> <li>3% - 10%</li> <li>&gt; 10%</li> </ul>
DATE COMPLETED <i>21/8/99</i>	
DIP TESTS <i>2 29.5 88.1 262 89.5 87.5 231 185.5 85.6 196 289.5 78.1 205</i>	
COMMENTS <i>389.5 68.0 198.5 489.5 52.6 201 Footage dip bearing</i>	LEGEND

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
				Casing 4.0' thru 0.8' on add. interval 2.0' added later.						
				1.2-16.3 4.0-214.4 Basals						
				1.2-5.5 4.0-18.2 Amph. bolite med-dk gr, f. gr matrix, ~20% 1-3mm relict mafics, ~30% ≤1mm plag phenos, ~25% f. gr epidote.						
				5.5-16.8 18.2-55.2 Feldspar Porphy - dk gr - bk, v. gr - f. gr. chl(?) matrix w/ avg. 25% ± 4mm plag phenos, generally they're ≤1mm.						
				16.8-61.3 55.2-201.0 Amph. bolite ~20% 1-3mm relict mafics, 5% chl altered Ab; but varies thru-out section, ~25% 1-3mm plag phenos generally ≤1mm w/ calc lathes; ~25% f. gr epid in matrix, but varies locally						
				61.3-64.0 201.0-210.0 Relict mafic content decr, and content decr; w/ f. gr. matrix, ~25% plag phenos & chl alter. f. lds, content varies, size generally ±1-2 mm, is essentially a feld. porphy.						
				64.0-65.3 210.0-214.4 - med gr basalt, f. gr matrix w/ ~25% wh. carb gr. seemingly replacing the plag						
210				65.3-67.6 214.4-221.7 Rhyolite Tuff lt. gy, f. gr, lapilli frog tex slightly sericitic; ~1% 1-3mm wh. carb gr, seen once replacing azte phenos, frogs siliceous						
220				67.6-71.3 221.9-233.8 Tuff - dk gy f. gr, lapilli frog tex, avg 7% 1-3mm dirty wh carb gr. contact slightly irreg						
				71.3-77.3 233.8-253.7 Tuff, lt gy f. gr, lapilli frog tex, siliceous, sericitic, and carb gr found near upper contact.						
240										

*Handwritten signature*





DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
				M						
	<del>47</del>			transitional change.						
260				79.3-85.8 2537-281.6 Ash tuff lt. gy, aphanitic-vgfgr, siliceous near dyke, slightly sericitic fairly massive.						
	<del>50</del>									
280	<del>52</del>			85.8-89.1 281.6-292.2 Hornblende Porphyry med gy, aphanitic fgn matrix avg 5% chl altered in, acc lathy chl altered fb. avg 1-3mm avg. 15% vt. fgn, avg plgs in matrix, acc frag. up 15mm contact a breccia						
300				89.1-101.1 292.2-331.8 Ash tuff lt. gy, aphanitic fgn slightly sericitic, siliceous, fairly massive.						
	<del>55</del>									
320										
	<del>50</del>			transitional change.						

*[Handwritten signature]*

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%			COMPOSITE ASSAYS
253.7-281.6 ~ 5% py occurring as bands & lenses.								
262.3 - minor py		260						
262.7 - minor py								
292.2-331.8 - 0-2% py, but varies thru section		300						
330.0 minor py								

*[Handwritten signature]*

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
340	<del>55</del>			<p>101.1-119.1 331.8 - 390.6 Tuff.</p> <p>wh of g d. type, w/ gn, lapilli frag            tex but frags interspersed (&lt; 5%)            but generally siliceous, 331.8-345.0            1-2 to 1-4 mm cream carb. gr.            gn color intensifies down            hole + eventually grades into            a med. gy color            a fls 345.0 occ. in an            area w/ ~1% carb. gr.</p>						
360	<del>55</del>									
380	<del>55</del>			transitional change.						
400	<del>55</del>			<p>119.1-135.3 390.6-443.9 Tuff</p> <p>lighter, bleached gy color, lapilli            frag tex slightly washed, bleache            ing &amp; washing effect intensify            near dike            w/ frag, siliceous, w/ occ            cream carb. gr.</p>						
420	<del>55</del>									
440										

*[Handwritten signature]*



DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					A	B	C	D	E	
				M						
440				- contact abrupt						
	<del>0%</del>			135.3-140.5 443.9-460.8 Feldspar Porphyry H gy-gr - med gr, vt gr-fgn matrix, ~40% wh <1mm plg occ carb gr. near upper contact. <1% black hemat. in section						
460				lower contact is abrupt but is very irregular						
	<del>70%</del>			140.5-147.3 460.8-483.2 Tuff dirty wh-med gy, ophan- itic-vt-gr, lapilli frag tex most frags are sil ceous sl. sericitic.						
480										
	<del>60%</del>			147.3-154.8 483.2-508.0 Tuff appley-gr, slightly sericitic. vt-fgn, lapilli frag tex frags sil., occ carb gr. present						
500										
	<del>15%</del>			508 EN D OF HOLE						

*[Handwritten signature]*





STATION	NORTH METERS	EAST METERS	ELEVATION FEET
IP 5132	24,882.47	38,672.35	5410.6
IP 5202	22,708.65	38,824.43	5291.9
IP 5244	21,796.91	38,391.88	5297.8
IP 5249	22,689.07	38,280.81	5353.9
IP 5287	21,896.75	41,201.85	5244.3
IP 1451	20,572.75	42,837.80	5682.0
IP 1452	20,513.03	42,884.90	5578.7
IP 1453	20,812.03	42,569.81	5548.7
IP 1454	20,968.58	42,402.55	5581.3
IP 1455	21,028.44	42,172.26	5472.0
IP 1456	21,001.01	42,144.05	5490.0
IP 1458	21,252.41	41,733.52	5397.9
IP 1459	21,186.16	41,692.29	5361.2
IP 1460	21,157.27	41,694.04	5382.4
IP 1461	21,197.82	42,468.82	563.3
IP 1462	20,955.15	42,817.38	5586.1
IP 1463	20,600.80	42,870.30	5577.0
IP 1465	21,011.84	41,876.39	5276.0
IP 1466	21,028.00	41,820.90	5373.9
IP 1467	21,373.70	41,261.88	5523.3
IP 1468	21,385.73	40,838.85	5579.1
IP 1469	20,970.30	40,841.22	5433.4
IP 1470	20,624.29	41,297.55	5403.3
IP 1471	20,011.50	41,232.27	5628.3
IP 1472	21,192.50	40,409.95	5631.1
IP 1473	20,913.75	40,408.45	5673.3
IP 1474	20,948.65	39,960.82	5687.7
IP 1475	20,798.90	39,526.69	5943.3
IP 1476	21,398.10	38,547.85	5553.0
IP 1477	21,400.47	39,381.90	5738.9
IP 1478	23,066.27	44,562.58	5682.8
IP 1479	23,422.80	42,234.95	6063.0
IP 1480	22,533.52	42,870.11	5525.9
IP 1481	22,074.17	42,446.63	5422.8
IP 1482	22,297.13	42,081.90	5417.9
IP 1483	22,116.68	41,592.80	5690.9
IP 1484	22,111.63	41,671.34	5650.7
IP 1485	22,409.65	41,558.50	5573.3
IP 1486	22,598.30	42,391.86	5352.3
IP 1487	22,411.68	42,782.15	5195.1
IP 1488	22,217.90	43,176.26	5099.4
IP 1489	22,013.42	43,575.90	4975.5
IP 1490	21,804.32	42,997.81	5452.2
IP 1491	21,236.80	43,370.97	5288.5
IP 1492	21,459.32	42,819.65	5387.9
IP 1493	21,276.32	43,222.34	5280.1
IP 1494	21,103.87	43,586.60	5353.2
IP 1495	20,961.33	43,987.84	5359.7
IP 1496	20,735.05	44,387.24	5203.6
IP 1497	20,546.23	44,782.45	5027.9
IP 1498	20,705.00	43,738.32	5453.5
IP 1499	20,779.50	43,308.27	5576.7
IP 1700	22,817.88	41,512.47	5421.1
TH 2882	22,850.48	41,075.10	5266.4
TH 2883	23,038.94	41,190.56	5268.1
TH 2884	23,342.33	43,312.97	5473.0
TH 2885	19,351.98	43,302.90	5182.8
TH 2886	19,903.78	43,732.87	5088.3
TH 2887	20,323.02	43,730.51	5289.4
TH 2888	20,208.85	43,784.88	5230.8
TH 2889	20,000.75	44,204.89	5043.0
IP 1870	20,401.80	43,166.50	5477.0
IP 1871	19,801.45	44,615.81	4868.9
IP 1872	19,493.75	43,297.85	4935.8
IP 1873	18,487.63	43,730.18	4841.9
IP 1874	20,239.95	42,880.84	5482.2
TH 4	18,434.17	43,707.10	4825.4

N 22,000'

TO IP 5244

TO IP 5249

TO IP 5287

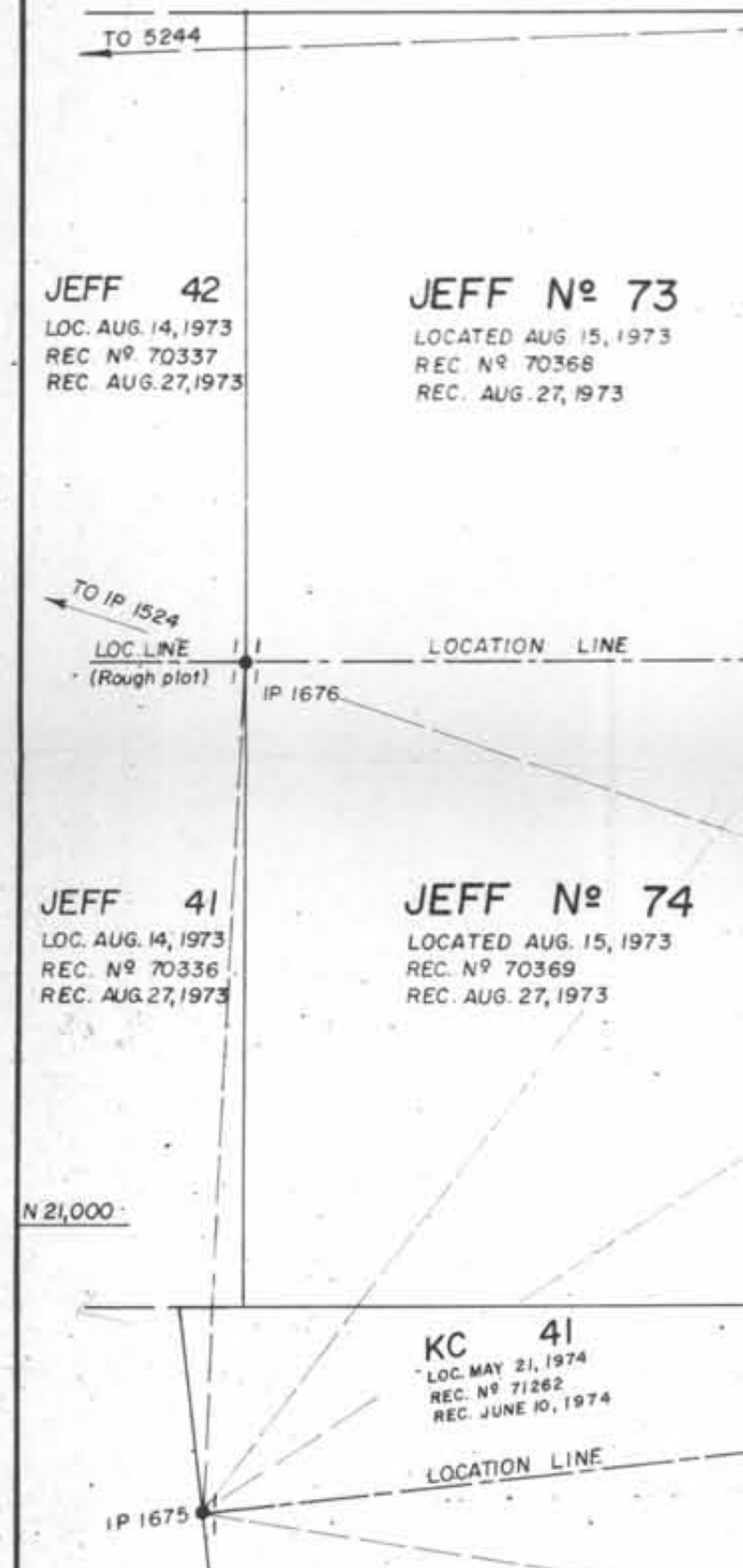
TO IP 5132

TO IP 5244

TO IP 5249

TO IP 5287

TO IP 5132



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**7599**  
NO. 7599

0 100 200 300 meters

REV. NO.	DATE	REVISION	DR.	CH.	APP.
1					
2					

SUMITOMO METAL MINING CANADA LTD.

LOCATION LINE SURVEY OF KC, JEFF, JENN AND MOE #1 GROUPS OF MINERAL CLAIMS IN LIARD MINING DIVISION, KUTCHO CREEK.

McELHANNY ASSOCIATES  
PROFESSIONAL LAND SURVEYORS  
VANCOUVER, B.C.

DESIGNED BY M.S. SCALE 1:5000 (METRIC)

DRAWN BY M.S. DATE OCTOBER, 1976

CHECKED BY J.W.B. DATE OCTOBER, 1976

APPROVED BY J.W.B. JOB NO. 13036-O

CLIENT DWG. NO. M.ASSOC. DWG. NO. 2

- LEGEND**
- DENOTES No. 1 OR No. 2 LOCATION POST
  - IP 1853 DENOTES IRON POST-SET WITH NUMBERED PLASTIC OR ALUMINUM IDENTIFICATION TAG ATTACHED
  - TH 1894 DENOTES TRAVERSE HUB
  - IP DENOTES IDENTIFICATION POST
- ORIGIN OF CO-ORDINATES IS STATION 5249 SCALED FROM 1 FT. = 430 FT. MAPPING (JOB 05799-5)
- CO-ORDINATES FOR THIS PLAN ARE RELATED TO LOCAL DATUM OR ELEVATION.
- ELEVATIONS ARE SENSITIVE AND ARE REFERRED TO TRIANGULATION STATION "PHOTO" SHOWN ON 1:250,000 MAP SHEET WITH AN ELEVATION OF 6540 FEET.
- BEARINGS ARE DERIVED FROM SOLAR OBSERVATION AT STATION 5202. DISTANCES ARE OBTAINED BY ELECTRONIC DISTANCE MEASURING HEWLETT-PACKARD 3800 AND CONVENTIONAL STEEL TAPE METHODS.