

83-#453-#11323

DIAMOND DRILLING ASSESSMENT REPORT
KUTCHO CREEK PROPERTY
GROUP KUTCHO 83, 83A AND UNGROUPED CLAIMS

Jeff, Jenn, Andrea, Kris, Lin, Stu, et.c.

LIARD MINING DIVISION
1041/1W, 1E
58°12'N, 128°21'W

for

Esso Minerals Canada
600-1281 W. Georgia St.
Vancouver, B.C.
V6J 1E7

by

Dane Bridge

August, 1983

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,323

*part 1
of 2*

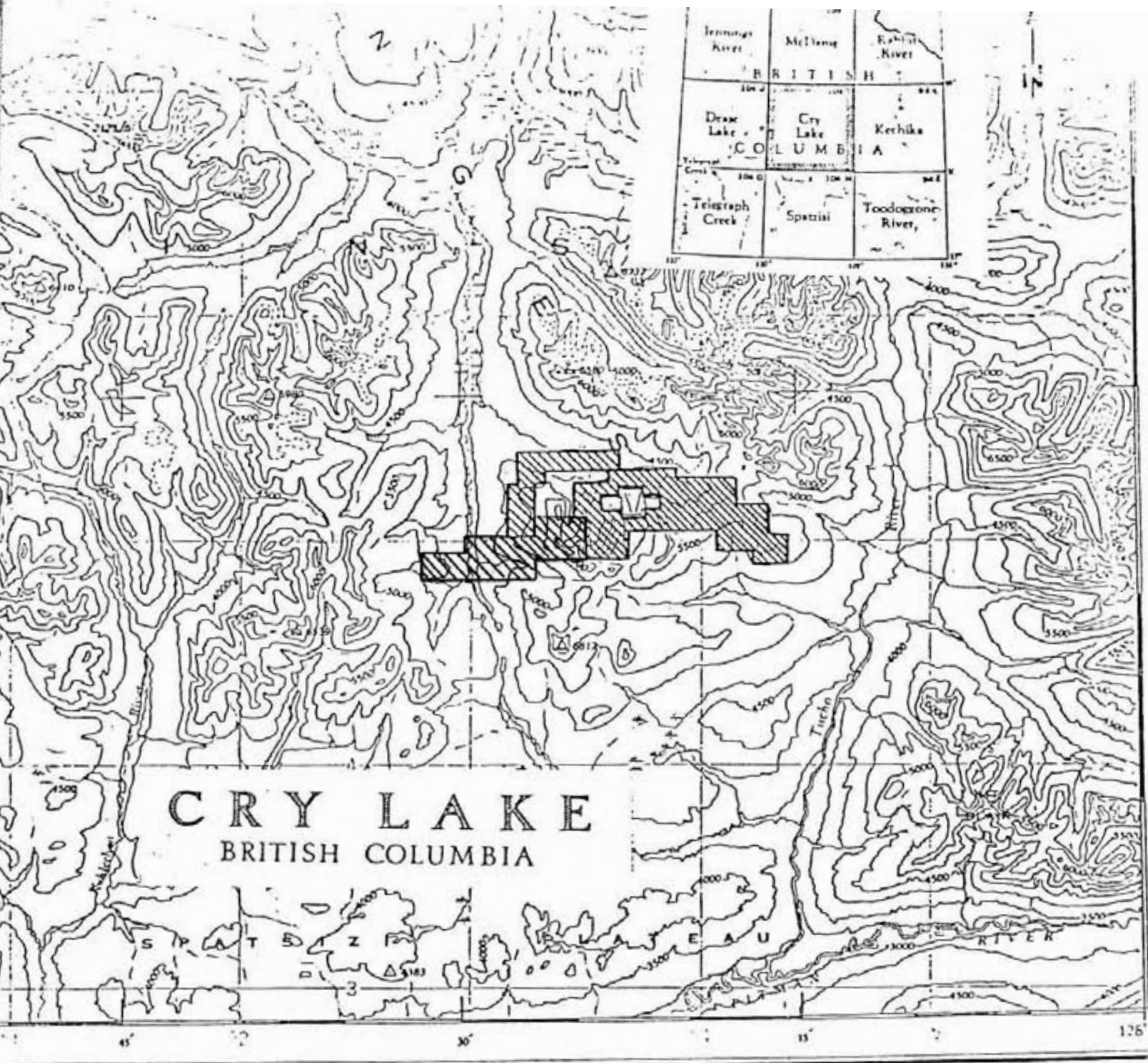
TABLE OF CONTENTS

	Page
Introduction.....	1
Property Location Map.....	2
Geology.....	3
Diamond Drilling.....	6
Claims.....	9
Cost Statements.....	13
Statement of Qualifications.....	17
Drill Logs and Additional Multi-Element Analyses	
Diamond Drill Hole Location Maps (two)	(in pocket)

Introduction

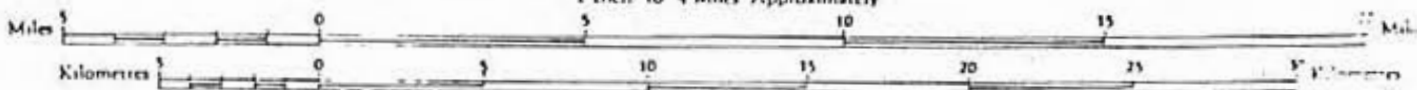
The Kutcho property is located at $58^{\circ}12'N$, $128^{\circ}21'W$ about 200 km south of Watson Lake, Yukon. Access is from the Kutcho air strip on the west side of Kutcho Creek. Sumac Mines Limited built a road in 1982 from the airstrip to the central part of the property. The property is owned and operated by Esso Minerals Canada and includes adjacent and internal claims held by Sumac Mines Limited.

This report describes 2840.5 m of BQ diamond drilling in 17 holes drilled in June and July, 1983.



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



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 reycrystallized 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 chlorite 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 - feldspar - sericite - chlorite 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 - 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 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

In the 1983 field season eight exploration holes totalling 2222.4 m and nine ore reserve fill-in holes in the Kutcho Zone totalling 618.1 m were drilled. The exploration holes were drilled in geological, lithogeochemical and geophysical targets that had developed since 1974 but had not been previously or adequately tested.

Outcrop and three short drill holes on turam anomalies (DDH 18, 19 and 20) in the Twenty Creek area indicated a large area with alteration characteristics in hanging wall rocks similar to those occurring within 300 m of known massive sulphide zones. The alteration is characterized by the absence of epidote and clinozoisite, presence of sericite and depletion of Na_2O with slight enrichment in K_2O .

DDH 103 and 104 were drilled to explore the area of alteration which occurred southwest of known massive sulphide zones. DDH 103 and 104 intersected a zone of intense sericitic alteration with minor disseminated pyrite. In both holes the altered section was within the QFCT section and not directly above the ore horizon. DDH 103 intersected the ore horizon and encountered minor mineralization with high Zn:Cu ratios indicating that the intersection was distal from any significant massive sulphide zones. DDH 104 was collared and bottomed in hanging wall QFCT. The hole apparently was running across an anticlinal axis and was terminated due to severe caving in the zone of intense sericitic alteration.

DDH 105 was drilled to test a ground checked airborne electromagnetic conductor in a valley bottom with no outcrop. The hole intersected a section of felsic tuffs with multiple bands of black argillite. The argillite-bearing section corresponded to the known electromagnetic anomaly. The felsic tuff-argillite section was within epidote-altered intermediate tuffs.

DDH 106 was drilled through the hanging wall basic flows about 2 km east of the east end of the Kutcho Zone. Basic flows consisting mainly of hornblende-plagioclase porphyritic basalt occupy the stratigraphic position of the ore zone hanging wall silicic pyroclastic rocks (QFCT and LCT) for about 6 km along strike to the east from the Kutcho Zone. A very weak turam anomaly occurs for about 1 km directly beneath the contact of the basic flows and footwall-type rhyolitic lapilli tuffs in the vicinity of DDH 106. Two short holes had been drilled along this turam anomaly (DDH 16 and 41) but both had very poor core recovery in a fault zone. DDH 106 penetrated the basic flows and intersected the apparent stratigraphic equivalent of the ore horizon containing the Kutcho, Sumac West and Esso West Massive Sulphide Zones. The ore horizon in DDH 106 consisted of two, thin, barren massive pyrite lenses with minor disseminate sphalerite and chalcopyrite above and below the massive pyrite sections. The mineralization at the ore horizon in DDH 106 appears to represent massive sulphide facies exhalite distal to an unknown vent source or significant sulphide zone.

DDH 107 and 108 were drilled in the extreme easterly part of the property 25 m at 020° from DDH 22. The purpose of the two holes was to duplicate the copper-bearing pyritic zones in DDH 22 so that charge potential surveying could be done in the area. Both holes intersected thin zones of disseminated to semi-massive pyrite with chalcopyrite mainly in rhyolitic, fine-grained crystal tuff.

DDH 119 was drilled west of DDH 107 and 108 to test a charge potential indication of a continuation of electrically chargeable sulphides to the west northwest of DDH 107 and 108. DDH 119 only intersected a 2 cm band of massive pyrite. Charge potential down the hole later indicated that the zone of greatest chargeability was still below the bottom of the hole.

DDH 109 was drilled in the east end of the Kutcho Zone. The hole was located to penetrate the footwall pyritic disseminated zone and the entire footwall lapilli tuff section to test for stacked sulphide zones and structures related to ore zone feeders. DDH 109 intersected a pyritic basaltic ash tuff in the rhyolite lapilli tuff section but the Lower Sulphide Zone, which locally occurs below the basaltic ash tuff, was not present. The hole bottomed in relatively unaltered dacitic or rhyolitic tuffs with fine quartz phenocrysts. No significant mineralization has been located on the property below the sericitic footwall lapilli tuff.

DDH 110 to 118 were drilled to improve the confidence level of ore reserve calculations in the Kutcho Zone. The holes filled in areas which had not been adequately drill tested.

Detailed drill logs for DDH 103 to 118 are in the appendix along with additional multi-element data for DDH 103 to 109 and 119. The core is stored at the Sumac camp on the Kutcho property.

Claims

Esso's Kutcho property consists of 273 full size old claims and individual units of new claims and 10 fractional claims. The following is a list of Kutcho property claims with record number, number of units if greater than one, month and day of recording and expiry dates.

Kutcho - 2122	Andrea	444	14	July 27	1993/07/27
Kutcho - 2122	CGL 001	560	12	June 26	1993/06/26
Kutcho - 2122	CGL 002	561	08	June 26	1991/06/26
Kutcho - 2122	CGL No 1 Fr.	1088		Oct 22/79	1989/10/22
Kutcho - 2122	Jeff 001	70301		Aug 27	1991/08/27
Kutcho - 2122	Jeff 002	70302		Aug 27	1993/08/27
Kutcho - 2122	Jeff 003	70303		Aug 27	1991/08/27
Kutcho - 2122	Jeff 004	70304		Aug 27	1993/08/27
Kutcho - 2122	Jeff 005	70305		Aug 27	1993/08/27
Kutcho - 2122	Jeff 006	70306		Aug 27	1993/08/27
Kutcho - 2122	Jeff 007	70307		Aug 27	1993/08/27
Kutcho - 2122	Jeff 009	70308		Aug 27	1993/08/27
Kutcho - 2122	Jeff 013	70309		Aug 27	1991/08/27
Kutcho - 2122	Jeff 014	70310		Aug 27	1991/08/27
Kutcho - 2122	Jeff 015	70311		Aug 27	1991/08/27
Kutcho - 2122	Jeff 016	70312		Aug 27	1991/08/27
Kutcho - 2122	Jeff 017	70313		Aug 27	1993/08/27
Kutcho - 2122	Jeff 018	70314		Aug 27	1993/08/27
Kutcho - 2122	Jeff 019	70315		Aug 27	1993/08/27
Kutcho - 2122	Jeff 020	70316		Aug 27	1993/08/27
Kutcho - 2122	Jeff 021	70317		Aug 27	1993/08/27
Kutcho - 2122	Jeff 022	70318		Aug 27	1993/08/27
Kutcho - 2122	Jeff 024	70319		Aug 27	1993/08/27
Kutcho - 2122	Jeff 025	70320		Aug 27	1989/08/27
Kutcho - 2122	Jeff 026	70321		Aug 27	1989/08/27
Kutcho - 2122	Jeff 027	70322		Aug 27	1989/08/27
Kutcho - 2122	Jeff 028	70323		Aug 27	1989/08/27
Kutcho - 2122	Jeff 029	70324		Aug 27	1989/08/27
Kutcho - 2122	Jeff 030	70325		Aug 27	1989/08/27
Kutcho - 2122	Jeff 031	70326		Aug 27	1993/08/27
Kutcho - 2122	Jeff 032	70327		Aug 27	1993/08/27
Kutcho - 2122	Jeff 033	70328		Aug 27	1993/08/27
Kutcho - 2122	Jeff 034	70329		Aug 27	1993/08/27
Kutcho - 2122	Jeff 035	70330		Aug 27	1993/08/27
Kutcho - 2122	Jeff 036	70331		Aug 27	1993/08/27
Kutcho - 2122	Jeff 037	70332		Aug 27	1993/08/27
Kutcho - 2122	Jeff 038	70333		Aug 27	1993/08/27
Kutcho - 2122	Jeff 039	70334		Aug 27	1993/08/27
Kutcho - 2122	Jeff 040	70335		Aug 27	1993/08/27
Kutcho - 2122	Jeff 041	70336		Aug 27	1991/08/27
Kutcho - 2122	Jeff 042	70337		Aug 27	1991/08/27
Kutcho - 2122	Jeff 043	70338		Aug 27	1991/08/27
Kutcho - 2122	Jeff 044	70339		Aug 27	1991/08/27
Kutcho - 2122	Jeff 045	70340		Aug 27	1991/08/27
Kutcho - 2122	Jeff 046	70341		Aug 27	1991/08/27
Kutcho - 2122	Jeff 047	70342		Aug 27	1991/08/27
Kutcho - 2122	Jeff 048	70343		Aug 27	1991/08/27
Kutcho - 2122	Jeff 049	70344		Aug 27	1991/08/27
Kutcho - 2122	Jeff 050	70345		Aug 27	1993/08/27
Kutcho - 2122	Jeff 051	70346		Aug 27	1993/08/27
Kutcho - 2122	Jeff 052	70347		Aug 27	1993/08/27
Kutcho - 2122	Jeff 053	70348		Aug 27	1993/08/27
Kutcho - 2122	Jeff 054	70349		Aug 27	1993/08/27
Kutcho - 2122	Jeff 055	70350		Aug 27	1993/08/27
Kutcho - 2122	Jeff 056	70351		Aug 27	1993/08/27
Kutcho - 2122	Jeff 057	70352		Aug 27	1993/08/27
Kutcho - 2122	Jeff 057 Fr.	1574		Sept 5/80	1993/09/05
Kutcho - 2122	Jeff 058	70353		Aug 27	1991/08/27
Kutcho - 2122	Jeff 059	70354		Aug 27	1991/08/27
Kutcho - 2122	Jeff 060	70355		Aug 27	1991/08/27
Kutcho - 2122	Jeff 061	70356		Aug 27	1991/08/27

Kutcho - 2122	Jeff 062	70357	Aug 27	1991/08/27
Kutcho - 2122	Jeff 063	70358	Aug 27	1991/08/27
Kutcho - 2122	Jeff 064	70359	Aug 27	1991/08/27
Kutcho - 2122	Jeff 064 Fr.	1975	Aug 4/81	1991/08/04
Kutcho - 2122	Jeff 065	70360	Aug 27	1991/08/27
Kutcho - 2122	Jeff 066	70361	Aug 27	1991/08/27
Kutcho - 2122	Jeff 067	70362	Aug 27	1991/08/27
Kutcho - 2122	Jeff 068	70363	Aug 27	1991/08/27
Kutcho - 2122	Jeff 069	70364	Aug 27	1991/08/27
Kutcho - 2122	Jeff 070	70365	Aug 27	1991/08/27
Kutcho - 2122	Jeff 071	70366	Aug 27	1991/08/27
Kutcho - 2122	Jeff 072	70367	Aug 27	1991/08/27
Kutcho - 2122	Jeff 073	70368	Aug 27	1991/08/27
Kutcho - 2122	Jeff 074	70369	Aug 27	1989/08/27
Kutcho - 2122	Jeff 075	70370	Aug 27	1991/08/27
Kutcho - 2122	Jeff 076	70371	Aug 27	1989/08/27
Kutcho - 2122	Jeff 077	70372	Aug 27	1991/08/27
Kutcho - 2122	Jeff 078	70373	Aug 27	1989/08/27
Kutcho - 2122	Jeff 079	70374	Aug 27	1991/08/27
Kutcho - 2122	Jeff 080	70375	Aug 27	1991/08/27
Kutcho - 2122	Jeff 081	70376	Aug 27	1991/08/27
Kutcho - 2122	Jeff 082	70377	Aug 27	1991/08/27
Kutcho - 2122	Jeff 083	70378	Aug 27	1991/08/27
Kutcho - 2122	Jeff 084	70379	Aug 27	1991/08/27
Kutcho - 2122	Jeff 085	70380	Aug 27	1991/08/27
Kutcho - 2122	Jeff 086	70381	Aug 27	1991/08/27
Kutcho - 2122	Jeff 087	70382	Aug 27	1991/08/27
Kutcho - 2122	Jeff 088	70383	Aug 27	1991/08/27
Kutcho - 2122	Jeff 089	70384	Aug 27	1991/08/27
Kutcho - 2122	Jeff 090	70385	Aug 27	1993/08/27
Kutcho - 2122	Jeff 091	70386	Aug 27	1991/08/27
Kutcho - 2122	Jeff 092	70387	Aug 27	1991/08/27
Kutcho - 2122	Jeff 093	70388	Aug 27	1991/08/27
Kutcho - 2122	Jeff 094	70389	Aug 27	1993/08/27
Kutcho - 2122	Jeff 095	70390	Aug 27	1991/08/27
Kutcho - 2122	Jeff 096	70391	Aug 27	1993/08/27
Kutcho - 2122	Jeff 097	70392	Aug 27	1991/08/27
Kutcho - 2122	Jeff 098	70393	Aug 27	1993/08/27
Kutcho - 2122	Jeff 099	70394	Aug 27	1991/08/27
Kutcho - 2122	Jeff 100	70395	Aug 27	1991/08/27
Kutcho - 2122	Jeff 101	70496	Sept 7	1991/09/07
Kutcho - 2122	Jeff 102	70497	Sept 7	1991/09/07
Kutcho - 2122	Jeff 103	70498	Sept 7	1991/09/07
Kutcho - 2122	Jeff 104	70499	Sept 7	1991/09/07
Kutcho - 2122	Jeff 105	70500	Sept 7	1991/09/07
Kutcho - 2122	Jeff 106	70501	Sept 7	1991/09/07
Kutcho - 2122	Jeff 107	70502	Sept 7	1991/09/07
Kutcho - 2122	Jeff 108	70503	Sept 7	1991/09/07
Kutcho - 2122	Jeff 109	70504	Sept 7	1991/09/07
Kutcho - 2122	Jeff 110	70505	Sept 7	1991/09/07
Kutcho - 2122	Jeff 111	70506	Sept 7	1991/09/07
Kutcho - 2122	Jeff 112	70507	Sept 7	1991/09/07
Kutcho - 2122	Jeff 113	70856	Nov 13	1991/11/13
Kutcho - 2122	Jeff 113 Fr.	1973	Aug 4/81	1991/08/04
Kutcho - 2122	Jeff 114	70857	Nov 13	1991/11/13
Kutcho - 2122	Jeff 114 Fr.	1974	Aug 4/81	1991/08/04
Kutcho - 2122	Jeff 115	70858	Nov 13	1991/11/13
Kutcho - 2122	Jeff 116	70859	Nov 13	1991/11/13
Kutcho - 2122	Jeff 117	70860	Nov 13	1991/11/13
Kutcho - 2122	Jeff 118	70861	Nov 13	1992/11/13

Kutcho - 2122	Jeff 119	70862	Nov 13	1991/11/13
Kutcho - 2122	Jeff 120	70863	Nov 13	1991/11/13
Kutcho - 2122	Jeff 121	70864	Nov 13	1991/11/13
Kutcho - 2122	Jeff 122	70865	Nov 13	1991/11/13
Kutcho - 2122	Jeff 123	70866	Nov 13	1991/11/13
Kutcho - 2122	Jeff 124	70867	Nov 13	1991/11/13
Kutcho - 2122	Jeff 125	70868	Nov 13	1991/11/13
Kutcho - 2122	Jeff 126	70869	Nov 13	1991/11/13
Kutcho - 2122	Jeff 127	70870	Nov 13	1991/11/13
Kutcho - 2122	Jeff 128	70871	Nov 13	1991/11/13
Kutcho - 2122	Jeff 129	70872	Nov 13	1991/11/13
Kutcho - 2122	Jeff 130	70873	Nov 13	1991/11/13
Kutcho - 2122	Jeff 131	70874	Nov 13	1991/11/13
Kutcho - 2122	Jeff 132	70875	Nov 13	1991/11/13
Kutcho - 2122	Jeff 133	70876	Nov 13	1991/11/13
Kutcho - 2122	Jeff 134	70877	Nov 13	1991/11/13
Kutcho - 2122	Jeff 135	71970	Aug 20	1991/08/20
Kutcho - 2122	Jeff 136	71971	Aug 20	1991/08/20
Kutcho - 2122	Jeff 137	71972	Aug 20	1991/08/20
Kutcho - 2122	Jeff 138	71973	Aug 20	1991/08/20
Kutcho - 2122	Jenn 001	70508	Sept 7	1991/09/07
Kutcho - 2122	Jenn 002	70509	Sept 7	1991/09/07
Kutcho - 2122	Jenn 003	71048	Nov 13	1991/11/13
Kutcho - 2122	Jenn 004	71049	Nov 13	1991/11/13
Kutcho - 2122	Jenn 005	71050	Nov 13	1991/11/13
Kutcho - 2122	Jenn 006	71051	Nov 13	1991/11/13
Kutcho - 2122	Jenn 007	71052	Nov 13	1991/11/13
Kutcho - 2122	Jenn 008	71053	Nov 13	1991/11/13
Kutcho - 2122	Jenn 009	71054	Nov 13	1991/11/13
Kutcho - 2122	Kris 001	70468	Sept 7	1993/09/07
Kutcho - 2122	Kris 002	70469	Sept 7	1993/09/07
Kutcho - 2122	Kris 003	70470	Sept 7	1993/09/07
Kutcho - 2122	Kris 004	70471	Sept 7	1993/09/07
Kutcho - 2122	Kris 005	70472	Sept 7	1993/09/07
Kutcho - 2122	Kris 006	70473	Sept 7	1993/09/07
Kutcho - 2122	Kris 007	70474	Sept 7	1993/09/07
Kutcho - 2122	Kris 008	70475	Sept 7	1993/09/07
Kutcho - 2122	Kris 009	70476	Sept 7	1993/09/07
Kutcho - 2122	Kris 011	70478	Sept 7	1993/09/07
Kutcho - 2122	Kris 012	70479	Sept 7	1991/09/07
Kutcho - 2122	Kris 013	70480	Sept 7	1993/09/07
Kutcho - 2122	Kris 014	70481	Sept 7	1991/09/07
Kutcho - 2122	Kris 015	70482	Sept 7	1993/09/07
Kutcho - 2122	Kris 016	70483	Sept 7	1993/09/07
Kutcho - 2122	Lin 001 Fr.	929	Aug 20	1991/08/20
Kutcho - 2122	Lin 039	70912	Nov 13	1991/11/13
Kutcho - 2122	Lin 040	70913	Nov 13	1991/11/13
Kutcho - 2122	Lin 011	70884	Nov 13	1993/11/13
Kutcho - 2122	Moe 001	00007	06 May 12	1991/05/12
Kutcho - 2122	Py 66	1909	12 May 15/81	1993/05/15
Kutcho - 2122	Py 67		06 June 21/83	1987/06/21
Kutcho - 2122	Py 68		14 June 21/83	1987/06/21
Kutcho - 2122	Py 69		09 June 21/83	1987/06/21
Kutcho - 2122	Py 70		18, June 21/83	1987/06/21
Kutcho - 2122	Rex 001 Fr.	72033	Aug 27	1993/08/27
Kutcho - 2122	Rex 002 Fr.	72034	Aug 27	1991/08/27
Kutcho - 2122	Rex 003 Fr.	72035	Aug 27	1993/08/27
Kutcho - 2122	Rex 004 Fr.	72036	Aug 27	1993/08/27
Kutcho - 2122	Stu	443	06 July 27	1991/07/27
Kutcho - 2122	Svea	445	06 July 27	1993/07/27

COST STATEMENTS

Mobilization of drill to property:

Contractor charges, 50% of \$6500	\$ 3,250.00
Air transport, 60% of \$12,052	7,231.20
Labour, 56 hr at \$29.00	1,624.00
Total	12,105.20
Mobilization cost per foot drilled based on the first 6536.5 ft of drilling	1.85

DDH 103 and 104, Jeff 95 Claim, June 13-June 30:

Direct drilling costs	
2000 ft at \$16.50	33,000.00
1274 ft at 17.50	22,295.00
Labour, 202 hr at \$29.00	5,858.00
Fuel, 16 drums at \$150	2,400.00
Helicopter, 31.3 hr at \$540 with fuel	16,902.00
Mobilization, 3274 ft at \$1.85	6,056.90
Survey Instruments 18 days at \$55.00	990.00
Assays, 58 at \$22.00	1,276.00
3 at \$34.00	102.00
Core Boxes 131 at \$6.00	786.00
Geologist 18 days at \$150.00	2,700.00
Assistant 18 days at \$70.00	1,260.00
Camp Costs 108 man days at \$45	4,860.00
Parts left in holes	750.00

Subtotal (for Group Kutcho 83) \$99,235.90

DDH 105, Jeff 124 Claim, July 1-3:

Direct drilling costs	
347 ft at \$16.50	5,725.50
Labour, 68 hr at \$29.00	1,972.00
Fuel, 2 drums at \$150.00	300.00
Helicopter, 7.6 hr at \$540.00	4,104.00
Mobilization, 347 ft at \$1.85	641.95
Survey Instrument, 3 days at \$55.00	165.00
Assays, 5 at \$22.00	110.00
Core boxes, 14 at \$6.00	84.00
Geologist, 3 days at \$150	450.00
Assistant, 3 days at \$70	210.00
Camp Costs, 18 man-days at \$45.00	810.00

Subtotal (for P.A.C.) \$14,572.45

DDH 106, Jeff 61 Claim, July 4-6:

Direct drilling costs	
755.5 ft at \$16.50	12,465.75
Labour, 86 hr at \$29.00	2,494.00
Fuel, 4 drums at \$150.00	600.00
Helicopter, 9.6 hr at \$540	5,184.00
Mobilization, 755.5 ft at \$1.85	1,397.67
Survey Instruments, 3 days at \$55.00	165.00
Assays 18 at \$22.00	396.00
10 at \$34.00	340.00
Core boxes 31 at \$6.00	186.00
Geologist 3 days at \$150	450.00
Assistant 3 days at \$70	210.00
Camp Costs 18 man-days at \$45.00	810.00
Parts left in hole	300.00
 Subtotal (for Group Kutcho 83A)	 24,998.42

DDH 107, 108, Jenn 3 Claim, July 7-9:

Direct drilling costs	
884 ft at \$16.50	14,586.00
Labour, 75 hr at \$29.00	2,175.00
Fuel, 4.5 drums at \$150.00	675.00
Helicopter, 8.8 hr at \$540.00	4,752.00
Mobilization, 884 ft at \$1.85	1,635.40
Survey Instruments 3 days at \$55.00	165.00
Assays, 16 at \$22.00	352.00
4 at \$34.00	136.00
Core Boxes, 36 at \$6.00	216.00
Geologist 3 days at \$150.00	450.00
Assistant 3 days at \$70.00	210.00
Camp Costs 18 man-days at \$45.00	810.00
Parts left in hole	600.00
 Subtotal (For Group Kutcho 83)	 \$26,546.40

DDH 109, Jeff 4 Claim, July 10-14:

Direct drilling costs	
1000 ft at \$16.50	16,500.00
277 ft at \$17.50	4,847.50
Labour, 76 hr at \$29.00	2,204.00
Fuel, 7 drums at \$150.00	1,050.00
Helicopter, 11.7 hr at \$540.00	6,318.00
Mobilization, 1277 ft at \$1.85	2,362.45
Survey Instruments, 5 days at \$55.00	275.00
Assays, 7 at \$44.00	308.00
35 at \$22.00	770.00
Core boxes, 51 at \$6.00	306.00
Geologist, 5 days at \$150.00	750.00
Assistant 5 days at \$70.00	350.00
Camp Costs, 30 man-days at \$45.00	1,350.00
Parts left in hole	350.00
 Subtotal (for Group Kutcho 83A)	 \$37,740.95

DDH 110 to 118, Jeff 4 and 6 Claims, July 15-24:

Direct drilling costs,	
2028 ft at \$16.50	33,462.00
Labour, 257 hr at \$29.00	7,453.00
Fuel, 11 drums at \$150.00	1,650.00
Helicopter, 23.0 hr at \$540.00	12,420.00
Survey Instruments, 10 days at \$55.00	550.00
Assays, 96 at \$44.00	4,224.00
Core boxes, 81 at \$6.00	486.00
Geologist, 10 days at \$150.00	1,500.00
Assistant, 10 days at \$70.00	700.00
Camp Costs, 60 man-days at \$45.00	2,700.00
Parts left in holes	3,400.00
 Subtotal (for P.A.C.)	 68,545.00

DDH 119, Jenn 1 Claim, July 25-27:

Direct drilling costs	
755 ft at \$16.50	12,457.50
Labour, 102 hr at \$29.00	2,958.00
Fuel, 4 drums at \$150.00	600.00
Helicopter, 6.4 hr at \$540.00	3,456.00
Survey Instruments, 3 days at \$55.00	165.00
Assays, 19 at \$22.00	418.00
Core Boxes, 31 at \$6.00	186.00
Geologist, 3 days at \$150.00	450.00
Assistant, 3 days at \$70.00	210.00
Camp Costs, 18 man-days \$45.00	810.00
Parts left in hole	300.00
 Subtotal (for P.A.C.)	 22,010.50
 Total for Group Kutcho 83	 \$125,782.30
 Total for Group Kutcho 83A	 \$62,739.37
 Total for Portable Assessment Credits on ungrouped claims and for work done after due dates of grouped claims	 \$105,127.95

STATEMENT OF QUALIFICATIONS

I, Dane A. Bridge, of West Vancouver, B.C. hereby certify the following qualifications:

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

I have been practising my profession as a geologist for 14 years.


Dane A. Bridge

I, Mel G. Lomenda, of Calgary, Alberta hereby certify the following qualifications:

I obtained a B.Sc.Hons. in geology in 1969 from the University of Manitoba and a M.Sc. in geology in 1973 from the University of Saskatoon, Saskatoon, Saskatchewan.

I have been practising my profession as a geologist for 14 years.


Mel G. Lomenda

(REPORT VALUES IN PPM)	AG	AS	CU	MO	PB	SS	ZN	SA	FE235	NA20	SR	ED
EE01	1.2	41	27	11	34	9	57	1150	47000	73700	594	14700
EE02	1.2	28	23	12	23	7	22	267	49200	26400	273	10500
EE03	1.3	29	15	5	17	6	24	309	53700	36900	314	15000
EE04	1.3	55	17	11	37	11	55	341	61300	33500	321	15200
EE05	1.5	37	20	9	27	8	46	259	47000	29400	327	17400
EE06	.9	0	24	4	0	1	27	243	46900	38300	360	19800
EE07	.9	0	15	1	0	0	10	173	43000	33900	333	17000
EE08	1.3	0	25	3	0	0	12	191	42300	47200	312	12400
EE09	.9	0	16	2	5	0	16	203	42200	40100	315	19000
EE10	.7	0	16	2	0	0	12	156	38300	32400	243	17100
EE11	1.0	3	25	4	2	0	16	178	43100	41700	259	17700
EE12	.8	0	15	2	2	0	18	228	43400	35900	238	21200
EE13	1.0	6	19	1	0	0	11	158	32400	36500	151	14800
EE14	1.3	0	20	2	0	0	10	234	42900	43600	230	18200
EE15	1.1	4	10	1	0	0	10	169	32300	35300	106	16800
EE16	.9	2	15	2	3	2	9	258	36900	37200	166	17000
EE17	1.8	4	330	18	78	20	72	399	105000	28100	427	35000
EE18	2.0	29	28	4	17	5	14	329	51600	44600	337	17200
EE19	2.8	52	287	18	74	20	88	369	100000	33400	507	32100
EE20	1.4	53	16	15	63	13	96	1080	61300	21700	263	34900
EE21	.9	37	13	24	56	12	88	762	68600	15200	428	23400
EE22	.3	4	16	18	58	12	109	381	62600	17900	457	11000
EE23	.6	18	23	16	49	10	148	378	63700	22400	451	8370
EE24	1.1	13	46	15	43	11	167	601	79400	23900	491	15400
EE25	.4	0	31	9	14	0	29	243	76500	48200	218	15900
EE26	1.6	0	30	11	42	13	31	264	73000	26200	139	17500
EE27	.7	1	47	11	31	10	48	171	67200	35800	108	15000
EE28	1.3	7	30	13	33	11	58	203	55700	37900	189	10800
EE29	1.1	65	85	52	48	14	121	627	68400	11400	196	20600
EE30	.6	12	53	18	48	13	122	241	49200	16700	174	9600
EE31	1.3	17	25	14	55	14	141	65	36800	21700	31	8790
EE32	1.2	36	26	16	48	11	114	195	46500	23200	21	8400
EE33	.9	11	23	5	11	6	27	241	45300	73900	234	12000
EE34	1.0	1	29	4	3	1	23	194	37000	45500	104	24800
EE35	.9	6	22	9	21	3	42	322	80300	64200	231	16300
EE36	.5	0	25	9	24	4	36	365	110000	79200	193	13400
EE37	.6	11	28	10	28	3	34	120	72200	40100	163	14300
EE38	1.0	36	16	7	22	8	28	172	56700	41900	182	12300
EE39	1.3	41	40	22	35	9	44	99	46700	39200	44	11800
EE40	.5	28	19	10	28	6	39	93	39000	42700	24	13900
EE41	1.0	25	32	6	21	6	26	111	36300	39000	53	16300
EE42	.7	15	7	2	7	2	12	212	40600	33200	81	29400
EE43	1.3	0	23	7	13	4	18	166	30900	35800	57	44100
EE44	.4	0	28	3	5	0	14	199	36900	36700	48	22500
EE45	.7	0	14	5	3	1	16	166	26100	35700	23	22600
EE46	.8	16	33	5	19	6	21	176	43900	39400	40	23700
EE47	1.2	2	28	5	1	1	14	246	38200	42300	15	25100
EE48	1.2	7	19	7	15	4	24	204	38600	41500	40	26800
EE49	1.8	27	19	8	32	7	36	238	46300	33500	62	21300
EE50	2.9	20	27	10	25	7	38	205	37700	33300	71	21900
EE51	1.3	14	48	17	47	13	39	159	65000	35600	87	15800
EE52	1.6	45	13	6	18	7	48	308	68300	45900	22	20600

DDH 103

(REPORT VALUES IN PPM)

Sample ID	Value (PPM)
8801	51
8802	29
8803	24
8804	12
8805	46
8806	42
8807	7
8808	3
8809	42
8810	23
8811	11
8812	2
8813	3
8814	33
8815	12
8816	19
8817	28
8818	49
8819	36
8820	23
8821	11
8822	12
8823	10
8824	25
8825	32
8826	12
8827	3
8828	52
8829	37
8830	15
8831	31
8832	26
8833	16
8834	59
8835	33
8836	12
8837	8
8838	22
8839	20
8840	12
8841	41
8842	22
8843	110
8844	18
8845	33
8846	46
8847	31
8848	20
8849	37
8850	41
8851	32
8852	31

(REPORT VALUES IN PPM)	AS	AS	CU	MO	PB	SB	ZN	BA	FE203	NA2O	SR	100
8853	0	29	35	13	37	7	110	312	44200	17500	0	25100
8854	0	3	19	7	13	3	99	301	27500	22200	0	25100
8855	0	0	11	2	6	1	3	54	21900	32500	0	17000
8856	0	0	13	3	3	0	4	65	21700	42800	14	17800
8857	0	0	14	4	6	2	108	85	36100	35800	49	19300
8858	0	0	12	2	12	0	4	126	25300	38000	47	21900
8859	0	0	12	3	1	0	2	52	17500	39300	0	11200
8860	0	3	13	3	2	2	3	87	22600	38900	46	0
8861	0	0	13	4	7	2	8	81	33000	47400	63	14500
8862	0	0	9	4	20	3	12	84	18700	26700	28	20200
8863 <i>qtz</i>	.3	3	10	6	21	3	8	121	19500	17700	0	25500
8864 <i>"</i>	.2	0	10	7	22	3	21	168	17900	4230	0	31100
8865 <i>LT</i>	.5	20	63	13	39	7	209	244	28000	6590	0	32800
8866 <i>OH</i>	2.4	34	375	11	31	8	4020	198	35300	7310	10	22200
8867 <i>LT (OH)</i>	1.4	20	250	11	38	7	3470	199	35900	11400	41	18700
8868 <i>"</i>	.8	19	115	9	28	8	364	199	31600	15000	65	20500
8869 <i>LT</i>	.8	26	16	11	40	7	180	88	33600	13400	95	10400
8870 <i>LT DDH 103</i>	.5	14	94	11	43	9	291	42	35600	13000	49	7040
308502 <i>LT-607</i>	.3	0	13	7	34	8	87	245	39500	24900	32	15300 .62
308503 <i>QEP</i>	0	13	12	2	8	3	48	278	28900	38700	10	13900 .74
308504 <i>QFC7</i>	.3	0	26	7	8	0	42	131	73800	34900	93	7950 .87
308505 <i>ze (OH)</i>	0	0	23	4	0	0	28	223	54900	34100	143	14200 .71
308506 <i>int LF</i>	.6	0	30	6	0	0	40	47	92900	49100	119	700 .99
308507 <i>int-lact LF</i>	.2	0	28	5	0	0	58	83	130000	36000	123	1340 .96
308508 <i>QFC7 (OH)</i>	.5	0	10	4	11	3	44	360	51700	49000	347	5880 .89
308509 <i>int LF</i>	.2	0	50	6	0	0	54	155	159000	30900	170	7940 .80
308510 <i>QFC7 (OH)</i>	.5	0	11	6	8	3	38	213	48000	48500	119	9630 .83
308511 <i>char LF</i>	0	13	15	2	2	2	45	11	41600	49000	67	1360 .97
308512 <i>char LF</i>	0	10	8	7	23	6	17	34	39000	53800	102	1750 .97

11
 11-K

DDH 103

COMPANY: ESSO MINERALS
PROJECT No: KUTENO 2122
ATTENTION: D. BRIDGES

MIN-EN LABS ICP REPORT
705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-8814 OF (604)988-7527

(ACT:GEO3) PAGE 2 OF 2
FILE No: 3-434/PG-4
DATE: JULY 5, 1987

REPORT NUMBER IN PPM	PPM
8853	42
8854	21
8855	19
8856	12
8857	16
8858	28
8859	44
8860	9
8861	7
8862	31
8863	38
8864	16
8865	74
8866	2
8867	3
8868	11
8869	3
8870	17
308502	16
308503	20
308504	10
308505	28
308506	14
308507	10
308508	4
308509	3
308510	3
308511	2
308512	21

DDH 103

(REPORT VALUES IN PPM)	AS	AS	CU	MO	PB	SB	ZN	BA	FE203	K2O	NA2O	RB
8871	3.8	0	24	1	391	0	56	98	38600	15100	35400	7
8872	1.3	0	10	0	50	0	20	99	26400	11100	34900	32
8873	1.4	0	10	0	17	0	35	94	29600	9200	30700	9
8874	.7	0	14	0	17	0	30	139	42000	13500	34900	22
8875	.4	3	19	10	5	0	39	90	33400	13900	25100	2
8876	.5	22	12	3	39	1	44	55	34400	17200	26800	49
8877	.4	4	38	9	83	3	45	44	77700	9100	34300	42
8878	1.3	74	46	8	55	8	66	73	49700	9100	41000	29
8879	.3	73	29	9	34	6	106	416	46800	24800	8110	50
8880	.4	58	11	5	22	2	34	165	25900	18800	21400	35
8881	0	45	4	2	15	2	29	145	27200	14300	21200	19
8882	.5	30	1	4	23	3	16	108	26400	17000	16000	14
8883	.3	30	2	8	28	1	15	119	30800	23600	18200	11
8884	.3	11	0	4	22	1	12	115	32200	17000	17500	33
8885	0	24	0	5	19	0	19	141	25600	24800	19500	5
8886	0	7	0	2	21	0	15	110	32800	19100	28700	2
8887	0	9	0	3	24	0	20	174	43100	15800	35500	3
8888	0	12	1	5	28	0	22	154	40900	21300	32300	2
8889	0	2	2	4	24	0	24	220	43600	20900	37600	28
8890	0	7	1	4	15	0	36	185	36200	15900	37100	13
8891	0	0	164	7	42	0	54	590	121000	26700	35500	112
8892	0	31	5	4	31	1	49	74	30400	13300	10900	3
8893	0	34	57	9	40	3	86	112	33700	17700	5410	21
8894	.1	28	22	6	38	3	76	116	30700	14900	14800	22
8895	1.0	31	10	5	117	2	95	115	26700	14700	12400	17
8896	.6	0	204	7	50	0	58	553	107000	22400	34100	44
8897	.7	95	35	9	63	8	196	483	45200	32000	7930	40
8898	.7	33	112	11	83	13	867	273	80400	21900	16000	26
8899	.8	143	39	13	64	10	310	173	47800	24100	5550	39
8900	.9	168	190	25	77	19	165	181	137000	21300	3520	47
8901	1.1	79	338	12	86	13	298	97	67800	16800	9120	21
8902	1.2	97	608	10	51	7	505	144	30000	20200	12000	13
8903	.6	30	68	6	44	3	60	49	20000	14600	17200	20
8904	.9	45	49	6	45	6	69	48	2000	15800	7630	42
8905	.3	55	21	6	70	6	591	230	26000	27900	7050	4
8906	.4	67	86	7	83	5	664	270	38000	24800	11800	12
8907	.4	47	108	8	50	5	2150	237	42200	18800	16200	32
8908	.6	71	225	12	30	7	4400	174	38400	16000	23900	3
8909	.2	23	189	5	16	4	452	203	27900	15900	36000	41
8910	.4	54	161	3	18	3	176	138	18700	10200	37300	17
8911	.4	134	60	5	22	3	155	302	25200	14100	37500	10
8912	2.1	81	188	9	84	16	110	236	94300	9700	17300	21
8913	1.8	81	191	12	82	15	105	124	87000	4000	20400	9
8914	.3	94	484	11	37	8	386	384	56500	16800	19800	32
8915	.8	0	417	1	0	0	2470	33	82400	1800	21600	18
8916	.7	0	1270	3	0	0	3230	27	96300	400	18400	6
8917	1.5	32	39	10	75	12	251	134	57900	6700	22700	19
8918	1.5	49	76	12	41	6	385	763	31100	15800	24700	17
8919	.5	0	19	12	68	7	128	163	82300	5200	27200	12

DDM 109, 105

COMPANY: ESSO MINERALS
PROJECT No: KUTCHO 2122
ATTENTION: D. BRIDGE

MIN-EN LABS ICP REPORT
705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

(ACT:GE03) PAGE 2 OF 2
FILE No: 3-522A/P1+2
DATE: JULY 21, 1983

REPORT VALUES IN PPM	SR
8871	140
8872	118
8873	128
8874	151
8875	122
8876	151
8877	179
8878	164
8879	202
8880	186
8881	218
8882	190
8883	239
8884	244
8885	250
8886	106
8887	85
8888	75
8889	34
8890	44
8891	546
8892	46
8893	29
8894	107
8895	90
8896	502
8897	132
8898	170
8899	158
8900	62
8901	43
8902	36
8903	55
8904	18
8905	24
8906	34
8907	112
8908	89
8909	93
8910	57
8911	45
8912	363
8913	345
8914	32
8915	66
8916	129
8917	70
8918	21
8919	99

DDH 109,105

COMPANY: ESSO MINERALE
 PROJECT No: KUTCHO 2122
 ATTENTION: DANE BRIDGE

MIN-EN LAES ICP REPORT
 705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
 (604)980-5814 OR (604)988-4524

(ACT:6E03) PAGE 1 OF 2
 FILE No: 3-556R/P1+2+
 DATE: JULY 25, 1983

(REPORT VALUES IN PPM)	AG	AS	CU	MO	PB	SB	ZN	BA	FE203	K2O	NA2O	RB
DDH 8920	.4	39	40	16	42	9	44	109	19600	11800	52700	21
8921	.4	39	240	26	73	26	914	318	72800	33200	21200	68
106 8922	1.9	20	251	24	84	25	2060	192	67500	21900	20200	25
8923	1.2	69	435	23	69	19	1380	381	56600	26200	18500	44
8924	10.7	104	7350	26	70	37	2200	471	97100	32600	11800	45
8925	1.1	64	130	27	72	22	1840	355	58100	26200	23100	50
8926	4.2	278	351	70	156	58	1990	266	207000	18900	16500	14
8927	1.4	93	116	26	64	21	238	405	62500	32900	29900	40
8928	1.3	83	201	20	54	15	1080	449	46400	39900	4620	45
8929	3.5	178	2110	30	80	37	472	399	118000	45000	3180	58
8930	.7	69	99	16	45	14	583	384	40600	37800	19300	42
8931	0	11	123	24	68	30	255	131	83400	15200	18600	29
8932	.2	33	25	13	35	12	167	136	36400	21000	31300	34
8933	.2	40	6	11	26	9	31	74	21800	10200	34500	19
8934	0	0	81	24	87	36	446	62	91900	3100	34400	2
DDH 8935	0	0	62	10	0	0	12	417	112000	32400	27200	77
106 8936	0	0	200	16	37	9	32	307	105000	33000	20100	80
8937	0	0	245	20	52	15	76	345	113000	22900	22700	54
107 8938	0	51	8	14	31	13	11	104	35700	5200	45700	26
8939	0	61	9	14	34	15	9	108	36000	6700	45700	15
8940	0	0	16	17	51	23	67	287	55100	19000	19300	27
8941	0	32	25	16	46	20	34	172	53100	13000	33100	14
8942	0	21	24	15	39	16	43	160	46300	12600	29300	10
8943	.2	46	37	12	29	13	46	177	45300	11800	23900	21
8944	0	68	79	18	47	26	28	378	84500	29300	9340	31
8945	0	47	3440	27	71	34	98	196	103000	22100	5660	17
8946	.4	105	8520	32	58	41	75	191	153000	19800	4640	9
8947	0	130	383	21	38	31	25	195	123000	23300	9700	34
8948	0	5	101	13	32	8	39	154	75900	16700	37300	30
8949	.1	158	77	26	48	32	63	152	198000	10900	27700	6
8950	0	0	67	14	21	0	57	80	59900	7100	41600	4
8951	0	3	60	14	19	0	47	228	73900	20200	26200	5
8952	.2	0	37	15	25	0	128	380	59200	21600	27200	32
107 8953	0	21	54	18	55	5	105	181	88400	20800	17800	20

DDH 106, 107

(REPORT VALUES IN PPM)	SR
8920	133
8921	163
8922	227
8923	168
8924	149
8925	156
8926	186
8927	169
8928	155
8929	187
8930	157
8931	200
8932	146
8933	117
8934	212
8935	900
8936	379
8937	470
8938	145
8939	87
8940	204
8941	219
8942	208
8943	241
8944	186
8945	168
8946	186
8947	178
8948	163
8949	254
8950	244
8951	204
8952	226
8953	188

DDH 106, 107

(REPORT VALUES IN PPM)	AG	AS	CU	MO	PB	SS	ZN	BA	FE203	V2O	NO2O	FE		
8962	1.0	233	619	28	97	35	568	734	188000	21100	8310	22		
8963	.5	271	119	28	89	36	94	661	264000	23200	7440	29		
8964	1.3	208	94	29	107	31	133	546	178000	21000	6050	41		
8965	.4	142	127	22	53	21	42	327	113000	17200	7750	50		
8966	1.2	101	111	19	62	15	183	348	74000	20900	6940	37		
8967	.9	223	455	28	62	30	36	400	191000	28000	7560	25		
8968	1.1	94	245	21	65	17	455	164	60500	10200	10300	41		
8969	.5	32	106	12	39	7	119	265	35800	19800	5660	22		
8970	1.6	5	1290	20	82	19	1470	61	90600	50000	1630	6		
8971	143.2m	1.1	154	255	23	59	24	344	134000	9300	10200	13		
8972	.1	110	49	53	65	21	304	160	114000	6700	8730	9		
8973	0	60	162	27	98	25	285	85	232000	2900	2870	2		
8974	.8	123	42	21	68	18	99	519	96700	21800	6230	24		
8975	0	59	27	15	60	14	68	432	83000	21900	7250	11		
altered less altered	8976	231.6	0	110	38	16	64	18	20	487	122000	19100	8350	24
8977	.2	16	124	15	44	8	40	207	41200	10100	13700	10		
8978	1.1	41	735	19	56	12	481	229	50800	15000	6260	26		
8979	0	0	46	14	63	12	298	117	69400	9800	9400	51		
8980	0	0	360	10	41	8	111	276	41900	21000	6780	38		
8981	.2	0	309	12	57	8	670	184	42000	17300	5110	22		
8982	0	0	313	13	59	11	124	229	42600	12900	11700	17		
8983	0	0	38	12	55	7	101	230	42000	13900	19500	21		
8984	.4	48	15	12	46	9	59	202	46100	15800	13400	24		
8985	0	0	9	11	51	9	43	161	36200	12900	23300	12		

8967-8985

DDH 109 dry fw hole,
positive below car level

DDH 109

(REPORT VALUES IN PPM)	SR
8962	136
8963	193
8964	141
8965	191
8966	142
8967	154
8968	146
8969	145
8970	162
8971	141
8972	183
8973	261
8974	160
8975	236
8976	238
8977	179
8978	131
8979	149
8980	179
8981	114
8982	175
8983	143
8984	122
8985	157

DDHL 109

(REPORT VALUES IN PPM)	AS	AS	CU	MO	PB	SB	ZN	BA	FE2O3	K2O	NA2O	BR
8896	0	0	11	12	48	6	32	55	31000	16500	21900	11
8897	0	0	9	11	42	6	29	54	31500	12200	22300	20
8898	.1	39	25	10	53	9	31	32	39300	8900	36400	12
8899	0	25	23	10	44	6	21	172	32000	13700	38600	5
8890	109	11	15	9	42	6	36	15	26500	6400	36700	4
8891	15.9	221	44900	285	493	64	40900	695	275000	7500	15900	39
8892	41.8	628	26400	110	234	89	17500	96	530000	3300	1670	22
8893	11.1	456	15600	169	325	60	18600	554	443000	8900	6150	30
8894	7.6	464	4720	64	310	59	2880	226	486000	8800	1940	45
8895	2.9	369	2700	42	103	49	323	392	481000	11800	3700	19
8896	4.3	207	556	51	254	27	412	307	169000	9700	4150	5
8897	4.1	190	3740	229	553	32	22600	244	160000	7100	20500	42
8898	3.5	183	3540	193	721	30	34300	686	155000	10900	19100	11
8899	29.1	642	13800	153	339	70	37700	2	564000	1800	501	7
8900	13.3	706	12800	155	427	75	77400	3	527000	1900	650	20
2851	3.6	221	3200	42	204	33	2170	1690	232000	26300	14900	18
2852	15.0	183	43600	98	662	70	35700	506	274000	8700	8250	20
2853	10.9	285	4490	33	86	42	630	1090	339000	15300	5860	50
2854	4.9	59	4030	41	219	19	1100	832	77700	10800	15600	14
2855	28.4	596	19700	204	1550	85	62000	6	592000	1100	2710	5
2856	31.0	614	20400	126	492	74	47000	1	578000	2000	0	6
2857	31.3	687	24700	196	272	83	56400	2	573000	2300	291	12
2858	38.2	475	20800	78	120	60	25400	196	550000	3900	2860	19
2859	4.0	151	8550	21	86	26	1860	1400	153000	14900	17800	22
2860	11.1	545	18300	65	169	64	1080	526	577000	3900	2410	38
2861	5.5	292	10100	55	106	39	8920	1530	246000	14600	16500	13
2862	1.3	133	449	19	46	16	407	899	144000	17700	4880	2
2863	9.3	173	20300	408	134	40	6400	352	207000	9300	11400	6
2864	3.9	85	793	118	100	13	720	522	62400	11800	25600	33
2865	4.0	91	663	34	135	10	719	207	56200	4800	5360	10

8891-9000 and 2851-2865 are on MS sections
 in development holes, were not requested
 as + MS are interesting.

DDM 109, 110, 111, 112, 113

PROJECT No: KUTCHIC 2122

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7K 1T2

FILE No: 3-697P2

ATTENTION: DANE BRIDGE

(604)990-5914 OR (604)988-4524

DATE: AUGUST 16, 1983

REPORT VALUES IN PPM)	SR
8986	49
8987	98
8988	94
8989	61
8990	112
8991	257
8992	227
8993	201
8994	208
8995	243
8996	85
8997	245
8998	232
8999	237
9000	301
2851	268
2852	213
2853	213
2854	224
2855	246
2856	226
2857	244
2858	217
2859	292
2860	304
2861	331
2862	182
2863	286
2864	319
2865	111

DDM 109, 110, 111, 112, 113

DDH 119

Top 5' hole

COMPANY: EBSO MINERALS

MIN-EN LABS OF REPORT

(ACT:600) PAGE 1 OF 2

PROJECT No: 2122

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE No: 3-727

ATTENTION: DANE BRIDGE

(604)990-5014 OR (604)998-4524

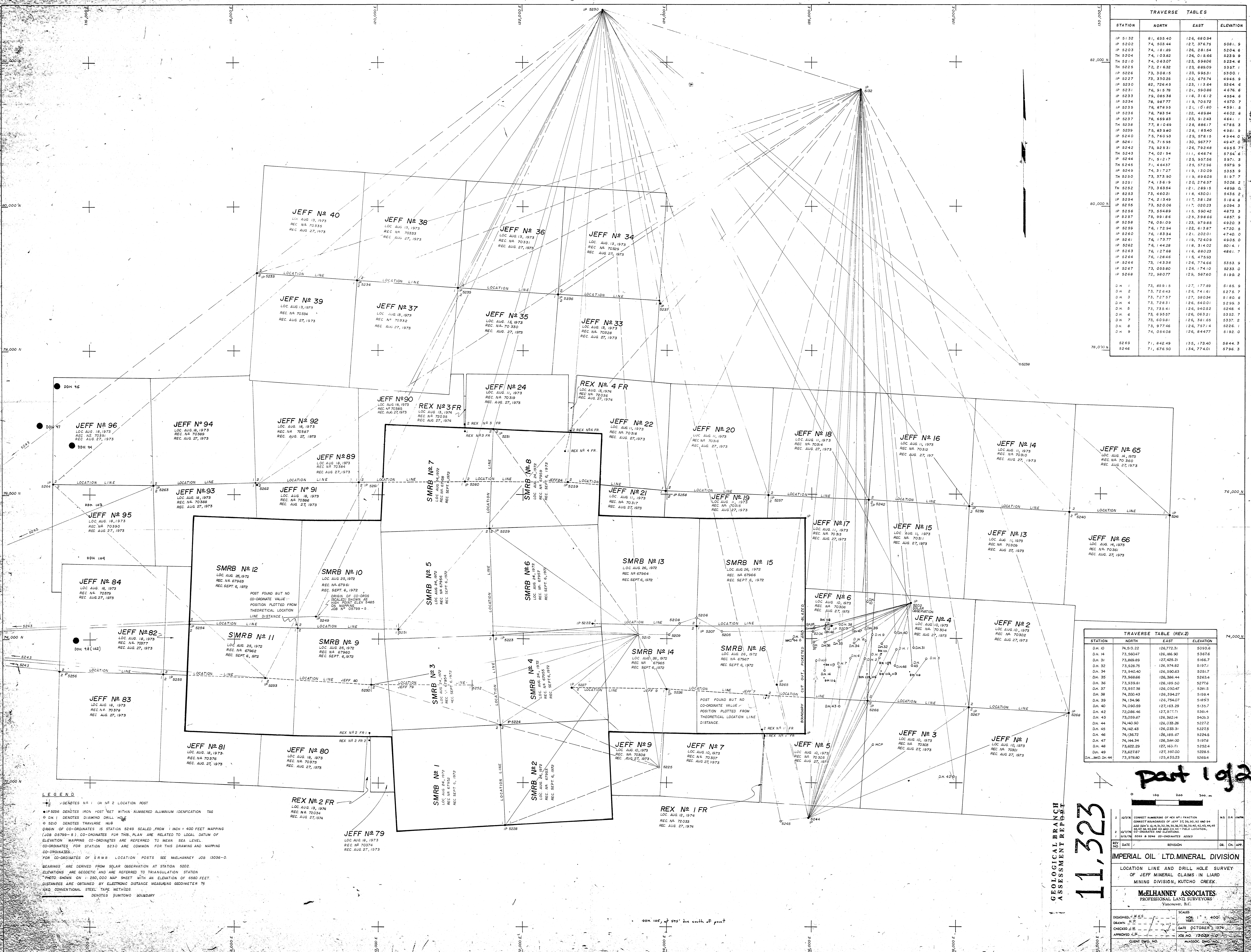
DATE: AUGUST 20, 1993

(REPORT VALUES IN PPM)	AS	AG	CU	MO	FB	SB	ZN	BA	FE200	K2O	NA2O	SR
9003	1.0	46	0	9	27	5	37	75	11100	8900	32200	32
9004	.5	38	0	9	23	6	31	76	10300	7000	41100	31
9005	.6	57	0	9	27	6	26	74	11500	6000	44100	30
9006	.9	52	0	10	31	5	23	75	12100	8200	41400	26
9007	.9	62	0	8	26	5	24	116	10500	9900	41100	28
9008	.6	39	0	9	35	6	27	106	10900	7900	42400	20
9009	1.3	54	0	10	35	6	30	58	10900	6000	39700	19
9010	1.3	55	4	11	38	7	37	73	12500	10200	37500	32
9011	1.4	87	3	23	81	15	105	61	33700	2300	38700	3
9012	1.5	65	0	26	82	13	50	26	33200	1000	44200	12
9013	.8	51	2	14	38	6	14	208	13200	14200	22800	29
9014	1.5	97	15	19	49	10	28	155	27900	11000	18000	14
9015	1.0	90	680	24	49	12	43	162	40200	12900	11400	28
9016	1.7	24	42	20	52	2	28	94	44900	10300	26000	20
9017	.7	36	75	26	72	2	215	61	58600	4100	31100	12
9018	1.0	136	41	36	69	14	59	315	93900	17600	23800	38
9019	.1	6	15	11	20	0	25	65	32600	4900	36100	19
9020	.1	37	11	23	84	7	58	96	53100	4900	25600	27
9021	.1	69	10	25	65	8	57	100	45000	7900	19800	31

DDH 119

REPORT VALUES IN PPM	SR
9003	41
9004	19
9005	77
9006	32
9007	32
9008	87
9009	13
9010	82
9011	49
9012	60
9013	31
9014	84
9015	78
9016	127
9017	161
9018	124
9019	135
9020	55
9021	140

DDH 119



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
TN 5204	74, 103.82	126, 101.62	5234.9
TN 5210	74, 063.07	123, 598.06	5234.8
IP 5225	72, 216.32	123, 885.09	5357.1
IP 5226	73, 308.15	123, 993.31	5300.1
IP 5227	73, 330.25	122, 874.74	4945.9
IP 5230	75, 725.45	123, 173.84	5264.6
IP 5231	76, 915.78	124, 590.86	4676.6
IP 5233	79, 085.38	118, 316.12	4554.6
IP 5234	78, 987.77	115, 705.72	4570.7
IP 5235	78, 889.59	121, 101.80	4591.5
IP 5236	78, 783.54	122, 488.84	4602.6
IP 5237	78, 655.83	123, 912.43	4641.1
TN 5238	77, 810.65	128, 886.17	4785.3
IP 5239	75, 835.80	128, 185.40	4981.9
IP 5240	75, 740.53	125, 576.15	4544.0
IP 5241	75, 715.55	130, 967.77	4947.0
IP 5242	75, 525.31	126, 752.48	4955.7
TN 5243	74, 021.54	111, 648.74	5754.6
IP 5244	71, 512.77	125, 597.56	5971.3
TN 5245	71, 443.57	125, 576.56	5975.9
IP 5249	74, 317.27	119, 130.09	5353.9
TN 5250	73, 373.50	119, 895.05	5197.7
IP 5251	74, 136.19	120, 276.57	5028.2
TN 5252	73, 363.54	121, 289.19	4899.0
IP 5253	73, 460.21	118, 430.01	5426.2
IP 5254	74, 213.49	117, 381.28	5184.8
IP 5255	73, 520.06	117, 020.23	5054.3
IP 5256	73, 554.89	115, 590.42	4873.3
IP 5257	75, 991.86	123, 594.66	4587.9
IP 5258	76, 051.09	123, 575.85	4520.3
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, 720.49	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, 128.46	115, 475.93	
IP 5266	73, 143.38	126, 774.66	5353.9
IP 5267	73, 055.80	126, 174.10	5233.0
IP 5268	72, 980.77	125, 567.60	5198.2
DH 1	73, 859.15	127, 177.89	5185.9
DH 2	73, 726.43	126, 741.61	5275.7
DH 3	73, 727.57	127, 890.04	5180.8
DH 4	73, 728.51	126, 540.01	5295.3
DH 5	73, 735.41	126, 940.52	5248.4
DH 6	73, 695.57	126, 083.21	5352.7
DH 7	73, 605.81	126, 381.65	5337.2
DH 8	73, 971.45	126, 757.14	5226.1
DH 9	74, 054.08	126, 844.77	5192.0
5269	71, 842.49	132, 173.40	5844.3
5246	71, 676.50	134, 774.01	5796.3

TRAVERSE TABLE (REV.2)			
STATION	NORTH	EAST	ELEVATION
DH 10	74, 513.22	126, 772.31	5093.6
DH 11	73, 560.47	129, 486.30	5362.6
DH 12	73, 869.89	127, 425.51	5168.7
DH 13	73, 928.75	126, 974.82	5197.1
DH 14	73, 940.40	126, 590.63	5251.7
DH 15	73, 968.66	126, 386.44	5263.4
DH 16	73, 939.80	126, 169.50	5277.6
DH 17	73, 857.58	126, 030.47	5281.5
DH 18	74, 200.43	126, 394.27	5194.4
DH 19	74, 134.96	126, 754.07	5189.3
DH 20	74, 090.59	127, 163.29	5195.7
DH 21	72, 086.46	127, 117.11	5364.4
DH 22	73, 059.87	126, 382.44	5405.3
DH 23	74, 140.90	126, 033.26	5277.2
DH 24	74, 142.43	126, 033.31	5227.5
DH 25	74, 156.72	126, 189.07	5224.5
DH 26	74, 444.54	126, 588.00	5197.8
DH 27	73, 822.29	127, 163.71	5252.4
DH 28	73, 627.87	127, 597.00	5285.5
DH 29	73, 978.80	125, 855.23	5264.4

LEGEND

- DENOTES NO. 1 OR NO. 2 LOCATION POST
- IP 5256 DENOTES IRON POST SET WITHIN NUMBERED ALUMINUM IDENTIFICATION TAG
- DN 1 DENOTES DIAMOND DRILL HOLE
- S 5210 DENOTES TRAVERSE HUB
- ORIGIN OF CO-ORDINATES IS STATION 5249 SCALED FROM 1/4" = 400 FEET MAPPING (JOB 02799-5) 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 SMRB LOCATION POSTS SEE McELHANNAY JOB 13036-0
- 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 6580 FEET
- DISTANCES ARE OBTAINED BY ELECTRONIC DISTANCE MEASURING GEODIMETER 76 AND CONVENTIONAL STEEL TAPE METHODS
- DENOTES SUMMITO BOUNDARY

GEOLOGICAL BRANCH ASSESSMENT REPORT

11.323

part 1 of 2

DATE	10/27/74	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.			
McELHANNAY ASSOCIATES PROFESSIONAL LAND SURVEYORS Vancouver, B.C.			
DESIGNED BY	SCALE	DATE	1:400'
DRAWN BY		DATE	OCTOBER 1974
CHECKED BY		JOB NO.	13039-01
APPROVED BY		CLIENT DWG. NO.	

STATION	TRAVERSE TABLE		ELEVATION FEET
	NORTH METERS	EAST METERS	
IP 1670	24,882.27	38,622.35	5410.6
IP 1671	22,706.65	38,624.43	5081.9
IP 1672	21,796.91	38,591.86	5971.3
IP 1673	22,090.07	38,280.81	5353.9
IP 1674	21,996.76	41,201.80	5844.3
IP 1675	20,022.20	42,037.00	5682.0
IP 1676	20,513.03	42,694.50	5578.7
IP 1677	20,482.05	42,959.81	5548.7
IP 1678	20,069.06	42,400.35	5512.1
IP 1679	21,028.44	42,172.25	5472.0
IP 1680	21,200.01	42,166.05	5490.0
IP 1681	21,332.40	41,733.55	5297.9
IP 1682	21,186.16	41,692.23	5261.2
IP 1683	21,137.27	41,694.04	5332.4
IP 1684	21,197.82	42,469.82	5663.3
IP 1685	20,955.15	42,917.35	5596.1
IP 1686	21,000.20	42,870.30	5577.0
IP 1687	21,011.64	41,876.30	5276.0
IP 1688	21,025.00	41,320.90	5273.9
IP 1689	21,373.03	41,921.80	5527.3
IP 1690	21,385.73	40,838.85	5679.1
IP 1691	20,070.30	40,811.20	5433.4
IP 1692	20,624.29	41,297.55	5140.3
IP 1693	20,011.50	41,223.27	5128.3
IP 1694	21,382.50	40,409.91	5831.1
IP 1695	20,813.70	40,408.46	5673.3
IP 1696	20,848.85	39,960.82	5826.7
IP 1697	20,998.90	39,554.76	5533.0
IP 1698	21,398.10	39,891.00	5736.9
IP 1699	23,066.57	44,562.80	5682.8
IP 1700	23,542.80	42,234.98	6063.0
IP 1701	23,033.55	42,070.11	5225.9
IP 1702	22,074.17	42,446.53	5422.6
IP 1703	22,097.10	42,048.90	5817.9
IP 1704	22,116.68	41,592.60	5690.9
IP 1705	22,111.63	41,167.34	5650.7
IP 1706	22,809.65	41,959.80	5577.3
IP 1707	22,598.30	42,391.80	5332.3
IP 1708	22,411.65	42,782.15	5195.1
IP 1709	22,217.20	43,179.20	5059.1
IP 1710	22,013.40	43,575.90	4897.5
IP 1711	21,004.50	42,977.10	5452.2
IP 1712	21,236.60	43,370.97	5286.5
IP 1713	21,458.33	42,819.65	5387.9
IP 1714	21,279.95	43,222.90	5280.1
IP 1715	21,103.87	43,086.00	5333.2
IP 1716	20,916.33	43,387.50	5259.7
IP 1717	20,735.00	44,287.05	5203.5
IP 1718	20,546.20	44,782.45	5027.9
IP 1719	20,783.00	43,563.35	5456.5
IP 1720	20,779.50	43,508.27	5576.7
IP 1721	22,817.80	41,542.47	5421.1
IP 1722	22,850.45	41,075.00	5266.4
IP 1723	23,038.90	41,190.50	5268.1
IP 1724	20,342.33	43,372.97	5479.5
IP 1725	19,915.65	43,302.80	5182.5
IP 1726	19,903.78	43,732.87	5068.5
IP 1727	20,333.03	43,700.91	5280.4
IP 1728	20,208.80	43,764.80	5230.8
IP 1729	20,000.75	44,204.85	5040.5
IP 1730	20,401.48	43,316.90	5477.0
IP 1731	19,801.45	44,615.81	4868.9
IP 1732	19,493.37	43,297.85	4935.8
IP 1733	19,487.63	43,700.80	4841.9
IP 1734	20,239.95	42,860.84	5658.2
IP 1735	19,434.17	43,707.30	4825.6

N 23,000

N 22,000

N 21,000

N 20,000

N 19,000

N 18,000

N 17,000

N 16,000

N 15,000

N 14,000

N 13,000

N 12,000

N 11,000

N 10,000

N 9,000

N 8,000

N 7,000

N 6,000

N 5,000

N 4,000

N 3,000

N 2,000

N 1,000

N 0

N -1,000

N -2,000

N -3,000

N -4,000

N -5,000

N -6,000

N -7,000

N -8,000

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,323

part 1
of 2

0 100 200 300 meters

NO.	DATE	REVISION	DR.	CH.	APP.
1					

SUMITOMO METAL MINING CANADA LTD.

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

McELHANNAY ASSOCIATES
PROFESSIONAL LAND SURVEYORS
Vancouver, B.C.

DESIGNED: [Signature]
SCALE: HORIZ. 1:5000 (METRIC)
VERT. [Signature]

DRAWN: [Signature]
DATE: OCTOBER, 1976

CHECKED: [Signature]
JOB NO: 13036-0

CURVE DIVISION: [Signature]
M.A.S.S.O.C. DIV. NO. [Signature]
REV. [Signature]

LEGEND

2 2 DENOTES No. 1 OR No. 2 LOCATION POST

IP 1653 DENOTES IRON POST SET WITH NUMBERED PLASTIC OR ALUMINUM IDENTIFICATION TAG ATTACHED

TH 1894 DENOTES TRAVERSE SUB

16 R 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 OF ELEVATION.

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO TRIANGULATION STATION "PHOTO"

SHOWN ON 1:250,000 MAP SHEET WITH AN ELEVATION OF 6580 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.

