DIAMOND DRILLING REPORT

for

Brucejack 1 Group, Sulphurets Property

Mineral Claims: Ice 2, 3, 5; Iron Cap 1; Red River,
Red River 2, 4, 8, 9, 10, 11;
Tedray 1, 8, 12, 20, 21

Skeena Mining Division

104B/8E

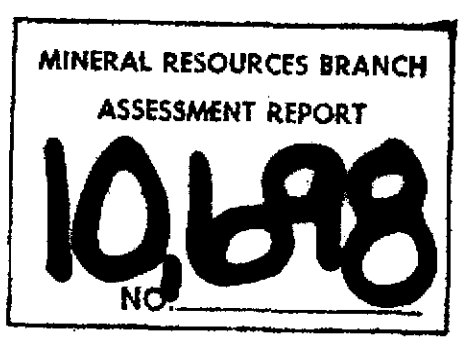
56° 30' N, 130° 15' E

Claims owned by: Granduc Mines Limited (NPL) and
Esso Resources Canada Limited

Operated by: Esso Minerals Canada

600 - 1281 West Georgia Street

Vancouver, B.C. V6E 3J7



Report by: Dane A. Bridge

Submitted: October 4, 1982

TABLE OF CONTENTS

MAPS

INTRODUCTION

This report documents diamond drilling for vein-type gold and silver mineralization in the southern portion of the Sulphurets property on the Red River claims. Assessment work is filed for holes 45 to 62. Holes 40 to 76 and 80 to 95 were drilled in the 1982 season.

LOCATION

The Sulphurets property is located approximately 65 km northwest of Stewart, B.C. and 20 km north of the Granduc Mine. It is at the headwaters of Mitchell and Sulphurets Creeks. The property is centered at $56^{o}30'N$ and $130^{o}15'E$. It covers parts of 104B/8E, 8W, 9E, 9W.

ACCESS

Access to the property is by helicopter from the Esso exploration camp located on the north side of Mitchell Creek about 200 m east of McTagg Creek.

CLAIMS

The Sulphurets property consists of 248 units, including 3 fractional claims and 6 two-post claims. The claims are held

by Granduc Mines, Limited (NPL), Esso Resources Canada Limited and Sidney F. Ross. The property is being operated by Esso Minerals Canada under option from Granduc and S. Ross.

The following is a list of the Sulphurets property claims giving claim name, record number, number of units, record date and expiry date prior to the filing of this report. Assessment work in this report advances the expiry year on Red River 8, 9, 10, 11, Tedray 20, 21 and Ice 3, 5 to 1992:

Claim Name	Record No.	No. of Units		Record Date	Expiry Date
Sulphurets - 2153	Arbee 35	19124		June 016/60	1991/06/16
Sulphurets - 2153	Arbee 39	19128		June 016/60	1991/06/16
Sulphurets - 2153	Arbee 54	19143		June 014/60	1991/06/14
Sulphurets - 2153	Arbee 55	19144		June 16/60	1991/06/16
Sulphurets - 2153	Dawson-Ross 1	19887		July 24/61	1992/07/24
Sulphurets - 2153	Dawson-Ross 3	19889		July 24/61	1992/07/24
Sulphurets - 2153	Ed 1	150	02	Aug 26/75	1992/08/26
Sulphurets - 2153	Ed 2	151	01	Aug 26/75	1992/08/26
Sulphurets - 2153	Ice 1	2411	02	June 30/80	1991/06/30
Sulphurets - 2153	Ice 2	2412	03	June 30/80	1992/06/30
Sulphurets - 2153	Ice 3	2647	02	Nov 3/80	1985/11/03
Sulphurets - 2153	Ice 4	3111	12	June 30/81	1992/06/30*
Sulphurets - 2153	Ice 5	3112	12	June 30/81	1992/06/30*
Sulphurets - 2153	Iron Cap 1	315	02	Sept 7/76	1991/09/07
Sulphurets - 2153	Iron Cap 2	316	01	Sept 7/76	1991/09/07
Sulphurets - 2153	Iron Cap 3	317	02	Sept 7/76	1991/09/07
Sulphurets - 2153	Iron Cap 4	2409	01	June 30/80	1991/06/30
Sulphurets - 2153	Iron Cap 5	2410	01	June 30/80	1991/06/30
Sulphurets - 2153	Iron Cap 6	2584	02	Sept 23/80	1991/09/23
Sulphurets - 2153	Iron Cap 7	2585	02	Sept 23/80	1991/09/23
Sulphurets - 2153	Red River	314	14	Sept 15/76	1991/09/15
Sulphurets - 2153	Red River 2	2555	04	Sept 2/80	1991/09/02
Sulphurets - 2153	Red River 3	2556	02	Sept 2/80	1991/09/02
Sulphurets - 2153	Red River 4	2649	12	Nov 3/80	1991/11/03
Sulphurets - 2153	Red River 5	2650	02	Nov 3/80	1991/11/03
Sulphurets - 2153	Red River 6	3109	12	June 30/81	1991/06/30
Sulphurets - 2153	Red River 7	3110	04	June 30/81	1991/06/30
Sulphurets - 2153	Red River 8	3236	02	Sept 29/81	1992/09/29*
Sulphurets - 2153	Red River 9	3237	02	Sept 29/81	1992/09/29*
Sulphurets - 2153	Red River 10	3516	12	July 12/82	1992/07/12*
Sulphurets - 2153	Red River 11	3517	06	July 12/82	1992/07/12*
Sulphurets - 2153	Sulphurets 1 Fr.	2582		Sept 23/80	1991/09/23
Sulphurets - 2153	Sulphurets 2 Fr.	2583		Sept 23/80	1991/09/23
Sulphurets - 2153	Sulphurets 3 Fr.	2648	01	Nov 3/80	1991/11/03
Sulphurets - 2153	Tedray 1	153	02	Aug 26/75	1991/08/26
Sulphurets - 2153	Tedray 2	154	01	Aug 26/75	1991/08/26
Sulphurets - 2153	Tedray 3	155	03	Aug 26/75	1991/08/26
Sulphurets - 2153	Tedray 6	158	15	Aug 26/75	1992/08/26
Sulphurets - 2153	Tedray 7	159	02	Aug 26/75	1992/08/26
Sulphurets - 2153	Tedray 8	160	01	Aug 26/75	1992/08/26
Sulphurets - 2153	Tedray 9	161	09	Aug 26/75	1992/08/26
Sulphurets - 2153	Tedray 10	162	03	Aug 26/75	1992/08/26
Sulphurets - 2153	Tedray 11	163	04	Aug 26/75	1991/08/26
Sulphurets - 2153	Tedray 12	164	15	Aug 26/75	1991/08/26
Sulphurets - 2153	Tedray 13	165	08	Aug 26/75	1992/08/26
Sulphurets - 2153	Tedray 14	2413	02	June 30/80	1985/06/30

Claim Name	Record No.	No. of Units		Record Date	Expiry Date
Sulphurets - 2153	Tedray 15	2586	04	Sept 23/80	1991/09/23
Sulphurets - 2153	Tedray 16	2643	12	Nov 3/80	1991/11/03
Sulphurets - 2153	Tedray 17	2644	04	Nov 3/80	1991/11/03
Sulphurets - 2153	Tedray 18	2645	04	Nov 3/80	1991/11/03
Sulphurets - 2153	Tedray 19	2646	02	Nov 3/80	1991/11/03
Sulphurets - 2153	Tedray 20	3113	04	June 30/81	1992/06/30*
Sulphurets - 2153	Tedray 21	3114	02	June 30/81	1992/06/30*
Sulphurets - 2153	Tedray 22		18	Oct /82	1983/10/
Sulphurets - 2153	Xray 1	1861	01	Oct 12/79	1991/10/12
Sulphurets - 2153	Xray 2	1862	02	Oct 12/79	1991/10/12
Sulphurets - 2153	Xray 3	1863	02	Oct 12/79	1990/10/12
Sulphurets - 2153	Xray 4	1864	06	Oct 12/79	1990/10/12
Sulphurets - 2153	Xray 5	1865	02	Oct 12/79	1991/10/12
Sulphurets - 2153	Xray 6	1866	02	Oct 12/79	1990/10/12
Sulphurets - 2153	Xray 7	1867	02	Oct 12/79	1992/10/12
Sulphurets - 2153	Xray 8	1868	02	Oct 12/79	1992/10/12
Sulphurets - 2153	Xray 9	1869	02	Oct 12/79	1992/10/12

HISTORY

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

Esso Minerals Canada has explored the Sulphurets property from 1980 to 1982. Exploration in 1980 concentrated on Mo and Mo-Cu-Au-Ag areas and quartz-pyrite-Au-Ag veins in the northeastern portion of the property. Exploration in 1981 concentrated on zones of low-grade disseminated Au along the north side of Sulphurets Glacier and two areas around Brucejack Lake were also drilled. Exploration in 1982 was confined to Au and Ag-bearing vein systems in the Brucejack Lake area at the southern end of the property.

SUMMARY OF COSTS

1. Fuel costs are the cost of fuel plus cartage to the Granduc mill site and transportation to camp by helicopter.

2. Helicopter costs for the contract 206B are the contract rate plus fuel consumed. The helicopter hourly cost is $542.00 per hour based on a $425.00 per hour rate and an average fuel cost of $117.00 per hour. The hourly cost for the 206-L1 is $698.00 per hour.

3. Camp costs are estimated at $30.00 per man-day as follows:

   Total camp cost was estimated at $75,000.00 in 1980. The camp is being used for about 100 days per field season over three years. The daily camp cost is therefore $250.00. Groceries plus delivery and expediting cost about $6,000.00 per month or $200.00 per day. Total camp, room and board costs are thus $450.00 per day. There are normally 15 men employed in camp so the cost per man-day is $30.00.

4. Camp support costs are $190.00 per day based on a cook-first aid attendant at $100.00 per day and room and board at $30.00 per day for cook, helicopter pilot and helicopter engineer.

Donna A Bingo

COST STATEMENT

Drilling of diamond drill holes 45 to 62, July 20 to August 7, 1982:

3058.6 feet at $15.00/ft.	$45,879.00
fuel, 550 gallons at $3.60/gal.	1,980.00
helicopter, 26.4 hr at $542/hr.	14,308.80
helicopter, 1.0 hr at $698/hr.	698.00
assays, 361 at $21.00	7,581.00
core boxes, 125 at $5.00	625.00
geologist, 19 days at $170.00	3,230.00
assistant, 19 days at $50.00	950.00
room and board, 114 man-days at $30.00	3,420.00
camp support costs, 19 days at $190.00	3,610.00
TOTAL	$82,281.80

Cost per foot drilled	26.90
Cost per metre drilled	88.26

Dan A Bailey

Geology and Economic Assessment

Three main types of mineralization occur on the Sulphurets property. These are Cu and/or Mo porphyry-type mineralization, disseminated Au-pyrite mineralization and Au-Ag-bearing quartz veins. North and south of the Mitchell Glacier low-grade disseminated Cu-Mo-Au-Ag mineralization occurs associated with sub-alkaline syenites. Quartz-pyrite-Au-Ag veins occur adjacent to the porphyry mineralization in the north east part of the property.

Along the north side of Sulphurets Glacier there is an extensive area of quartz-pyrite-sericite rock derived mainly from monzonite and syenite intrusive breccias and hornblende-plagioclase porphyry dikes and to a lesser extent from andesites and clastic sedimentary rocks. Zones of low-grade disseminated Au associated with 15 to 40% pyrite occur peripheral to zones of disseminated Cu-Mo-pyrite mineralization.

An extensive area of quartz-sericite-pyrite alteration in the vicinity of Brucejack Lake occurs in intermediate volcanic rocks, clastic sedimentary rocks and fine-grained hornblende syenite intrusive rocks. Gold and silver-bearing quartz veins, vein and stockwork masses and quartz stockwork or sheeted zones occur within, and commonly near the periphyry of the quartz-sericite-pyrite alteration zone. Most of the quartz

veins within the central area of the alteration zone do not contain significant Au-Ag values.

Diamond Drilling

Drilling in 1982 was confined to the vein-type Au-Ag mineralization in the Brucejack Lake area. The claim map shows the location of drill holes 45 to 62. Holes 45 to 48 were drilled on a showing called the 5.9 vein. Holes 49 to 51 were drilled on a showing called the 0.5 vein. Holes 52 and 53 were drilled on a vein showing called the Galena showing. Holes 54 to 62 were drilled on a linear vein and vein stockwork zone called the west Brucejack Zone. The drill logs give the bearings, angles and lengths of the holes along with detailed geological and mineralogical descriptions and assays.

This report covers 3058.6 feet or 932.26 metres of drilling done from July 20 to August 7, 1982 using a JKS 300 operated by Ultra Mobile Diamond Drilling. The holes were drilled on Red River and Red River 3 and 4 mineral claims. Split core is stored at the Esso camp on Mitchell Creek. Five to ten centimetre sections of core collected at 1.5 metre intervals are stored in Vancouver.

5.9 VEIN

The 5.9 vein is a rubbly, weathered, showing within a stockwork or sheeted vein zone. The 5.9 vein assayed 5.9 oz/t Au and 664.0 oz/t Ag over about 0.2 m. Thin, mainly 0.5 to 1.0 cm quartz veins in the area contain minor disseminated pyrite, sphalerite, galena and tetrahedrite.

Four short holes, DDH 45 to 48 were drilled from two locations 20 m apart across the 5.9 showing. The holes intersected intensely quartz, sericite, pyrite altered intermediate tuffs with weak to intense quartz veining and local massive quartz veins. The thin, 0.5 to 2.0 cm quartz veins contained minor to semi-massive pyrite, sphalerite and tetrahedrite. Trace chalcopyrite occurred in some veins in DDH 45. No electrum or potentially silver-bearing minerals other than tetrahedrite were observed in core.

0.5 VEIN

The 0.5 vein is a poorly exposed quartz vein which can be traced for only 17 m in glacial till. The best assays on the vein were 1 m of 0.50 oz/t Au and 8.02 oz/t Ag at the west end and 0.18 oz/t Au and 13.90 oz/t Ag at the east end. The vein

contained pyrite, tetrahedrite, sphalerite and galena .

DDH 49, 50 and 51 were drilled from one location north of the vein. DDH 49 and 50, drilled at 220° intersected sericitic tuffs with a weak quartz vein stockwork. The quartz veins contained pyrite, sphalerite, tetrahedrite and argentite. The section from 26.95 to 30.33 m in DDH 49 contained 1 to 10 mm thick quartz-calcite veins with minor to semi-massive argentite.

DDH 51, drilled at 135°, intersected a weak quartz stockwork in tuffs and three quartz-sulphide veins from 0.5 to 2.2 m thick. These veins contained about 50% combined pyrite, galena, sphalerite and tetrahedrite.

GALENA SHOWING

The Galena showing is an isolated patch of mineralized quartz vein which may be on strike to the west of the quartz-sulphide stockwork drilled in DDH 33 to 36. The best individual assays on the trench across the vein were 0.06 oz/t Au and 5.10 oz/t Ag.

DDH 52 and 53 were drilled from one location north of the showing. Both holes intersected a thick quartz vein or massive vein stockwork with fine disseminated pyrite, trace sphalerite

and tetrahedrite and a single observation of electrum in DDH 53. On the north side of the quartz vein, quartz, quartz-sulphide and quartz veins with electrum formed a stockwork or sheeted vein zone in intermediate tuff.

WEST BRUCEJACK ZONE

The West Brucejack Zone is a linear quartz vein to vein stockwork zone which appears to have a strike length of 300 m and a strike of 140^{0} with vertical to sub-vertical veins. The vein system is mainly within fine-grained intermediate crystal tuffs and some clastic sedimentary rocks. The host volcanic rocks and vein system are mainly surrounded by fine-grained hornblende syenite intrusive rocks.

DDH 54, 55 and 56 on line 3.3 S intersected a zone of intensely brecciated and quartz veined sericitized tuff with scattered thick quartz veins. The quartz veins contained minor disseminated pyrite, sphalerite, galena, tetrahedrite, pyrargyrite, argentite and electrum.

DDH 57, 58 and 59 on line 38.7 S intersected a quartz-sulphide stockwork in sericitic tuff. A 0.97 m quartz vein in DDH 58 within the quartz-sulphide vein stockwork contained 15% sphalerite, 5% pyrite, 5% argentite,

5% pyrargyrite, 5% tetrahedrite, 1% galena and scattered flakes of yellowish electrum.

DDH 60, 61 and 62 on line 49.3 N intersected a massive quartz vein or multiple vein with a halo of intense quartz stockwork. The massive to stockwork quartz veins contained trace to minor pyrite, sphalerite, tetrahedrite, argentite and pyrargyrite and rare galena, chalcopyrite and electrum.

STATEMENT OF QUALIFICATIONS

I, Dane A. Bridge, certify that I received my B.Sc. Honours in Geology in 1969 and my M.Sc. in Geology in 1972, both from the University of Manitoba.

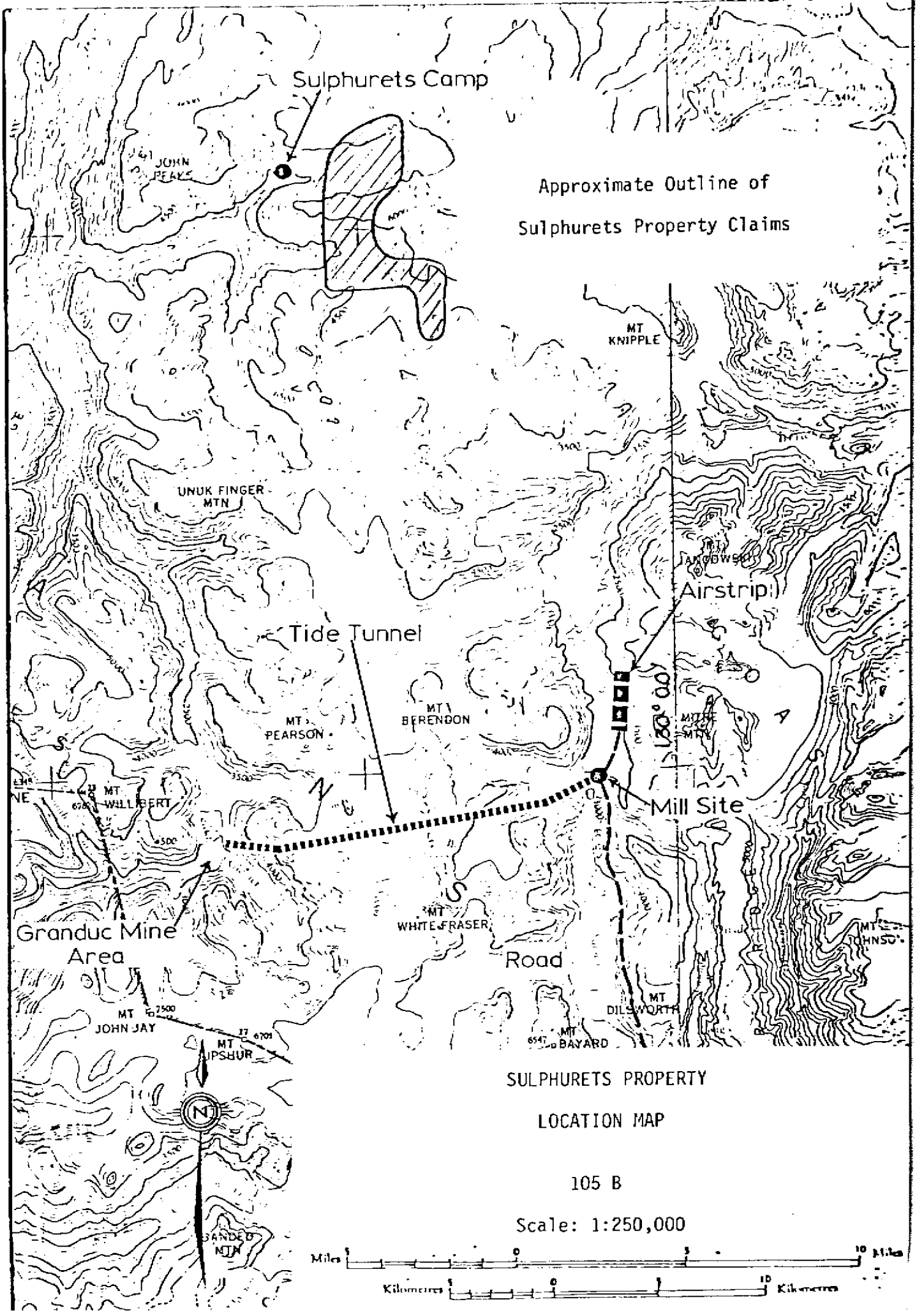
DANE BRIDGE

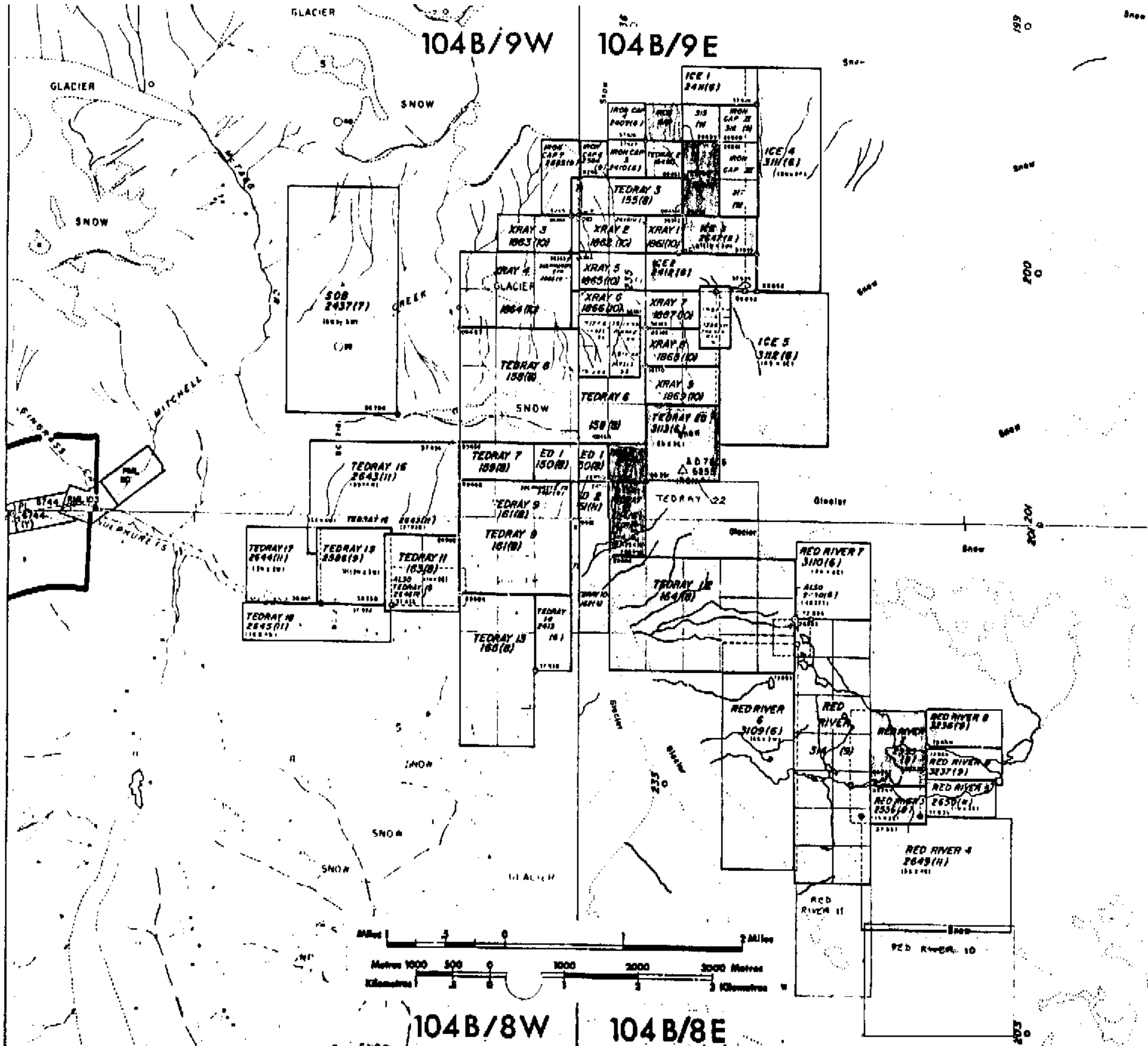
I, Walter Melnyk, certify that I received my B.Sc. Eng. in 1972 from the University of Saskatchewan, Saskatoon. I am a registered professional engineer in the province of Ontario and British Columbia.

WALTER MELNYK

I, William Ferreira, certify that I received my B.Sc. in Geology from the University of Minnesota, Duluth, Minnesota. I am currently completing a M.Sc. in Geology at the University of Manitoba.

WILLIAM FERREIRA


Sulphurets Camp
Approximate Outline of
Sulphurets Property Claims
JOHN PEAK
MT KNIPPLE
UNUK FINGER MTN
Airstrip
Tide Tunnel
MT PEARSON
MT BERENDON
MT WILLIBERT
Mill Site
Granduc Mine Area
MT WHITE-FRASER
Road
MT JOHN JAY
MT DILWORTH
MT BAYARD
MT JOHNSON
MT IPSHUR
SANDED MTN
SULPHURETS PROPERTY
LOCATION MAP
105 B
Scale: 1:250,000
Miles
Kilometres


104B/9W
104B/9E
104B/8W
104B/8E
GLACIER
SNOW
ICE 1
ICE 4
ICE 5
TEDRAY 3
XRAY 3
XRAY 2
XRAY 1
XRAY 5
XRAY 7
XRAY 9
SOB
2437(7)
CREEK
MITCHELL
TEDRAY 6
TEDRAY 7
TEDRAY 9
TEDRAY 13
TEDRAY 16
TEDRAY 17
TEDRAY 18
TEDRAY 22
ED 1
RED RIVER 7
RED RIVER 6
RED RIVER 4
RED RIVER 8
RED RIVER 10
RED RIVER 11
Glacier
Miles
Metres
Kilometres

Appendix to

1982 Diamond Drilling Report

Brucejack 1 Group, Sulphurets Property

104B/8E

Diamond Drill Logs for DDH 45 to 62

Assays for Au and Ag are reported in ounces per ton. Au assays are by fire assay. Ag assays are by acid digestion and AAS. The first Au and Ag assays are by the Canada Wide Mines lab at the Granduc Mine. The second Au and Ag assays, in brackets following the first set, are by Min-En Labs Ltd., North Vancouver. If only one set of assays are reported for a complete drill hole they are by Min-En Labs.

All other elements are reported in ppm.

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: 2153 Sulphurets	GROUND ELEV.
HOLE NO.: 45	BEARING: 180°
LOCATION: South Brucejack 20m west of 53 vein	DIP: -45°
	TOTAL LENGTH: 100' 30.5m
LOGGED BY: W. Melnyk	HORIZONTAL PROJECT: 21.4m
DATE: July 22, 1982	VERTICAL PROJECT: 21.4m
CONTRACTOR: Ultra Mobile Diamond Drilling	ALTERATION SCALE
CORE SIZE: BQ	
DATE STARTED: July 20, 1982	
DATE COMPLETED: July 20, 1982	TOTAL SULPHIDE SCALE
DIP TESTS: none	
COMMENTS	LEGEND

Walter Melnyk

PAGE 1 OF 4 | PROJECT: | HOLE NO. 45

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION % veining intensity A <1	B 1-10	C >10	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.0 - 0.53 : Stickup							
				0.53 - 9.90 : Mafic tuff and/or flows. light, pale green to greenish grey, slot phased. Contains odd ghostly fragment outlines (slight increase in chlorite making frags darker.) Rock is intensely alt'd - quartz, sericite, pyrite constituents are too fine grained and matted to differentiate.						
5				Rock is characterized by a peppering of pyrite euhedral grains to .5mm.	109	13	—				
			/20	q.v. tuffaceous fragments to 2cm, lenticular							
			/40	q.v.							
			/40	q.v.							
10			/30	q.v. 9.90 - 30.48 : Mafic tuff and or flows.							
			/45	q.v. Very similar to previous section except that this section is a lighter grey color.							
				Pyrite content may drop off somewhat quartz veining increases, but many of these are barren.	72	12	3				
			/35	q.v. 10.92 - 11.83 : q.v. milky white quartz 1-5cm frags country rock.							
15			/30	q.v. 12.50 - 12.73 : q.v. pieces country rock.							
				15.24 - 30.48							
				Rock maintains similar character, quite siliceous, pale green-grey							
			/35	q.v. reasonably good quartz veining but							
			/30	q.v. mostly barren.							
				17.75 - 18.25 : quartz vein 35° only known pc							
20					266	32	4				
			/40	q.v.							
				23.31 - 23.63 : q.v. contains							
				q.v. irregular pieces of country rock							

PAGE 2 OF 4 | PROJECT: | HOLE NO. 45

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	Ag	Cu	Pb	Zn	Hg
Section contains 6% by weight py as disseminated grains. Grains often < 5mm. Also scattered aggregates of pyrite to 2mm in diameter.											
at 3.85 q.v. 1.5cm with trace Tetra at 40° w.c.A.											
at 6.3m q.v. 3cm at 10° w.c.a. contains good Tetra + py only have soft sectile mineral present		6.00	8.00	2.00	5339	.072	5.92	180	1050	560	280
at 7.4m q.v. .8cm 30% py. Tr. Tetra. at 7.97m q.v. .7cm 50% Tetra. py + Sphal at 40° w.c.A		8.00	9.30	1.90	5340	.023	.29	40	30	61	250
at 9.90 q.v 11cm 40° w.c.A. trace country rock barren											
10.4, 2.5cm q.v 30° 30% Sulfide Tetra, Sphal Tr. Py.		9.90	12.00	2.10	5341	.070	1.32	75	245	3570	5000
10.6, .5cm q.v 30° 5% Tetra + Tr. py											
12.1 1cm q.v 45 30% Sphal, 5% Tetra											
12.19 - 12.29, 10cm Tetra Sphal.											
12.4, 1cm q.v. 50° Tetra Sphal											
12.5 - 12.73, 23cm, 35°, Tetra, Tr. Sphal, Tr py											
12.92, 2x.3cm, Tetra, Tr. Cpy		12.00	15.00	3.00	5342	.079	6.18	382	800	1060	3200
13.33 - 14.16, 30° Tr. Tetra, Tr. py											
14.5, 25cm, 30° Tr. Tetra											
Many barren q.v. approx 6% py by weight in rock											

N2/E2

PAGE 3 OF 4 | PROJECT: | HOLE NO. 45

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION: Quartz Vein Intensity 0-1 A	1-10 C	>10 C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
			40 q.v.	24.09 - 24.15 : q.v. Trace f.g. py							
25			49 q.v.	25.84 - 25.92 : q.v. 25.60 - 30.48 : Tiny hair line fractures lined with pyrite 1st w.c.a. 27.3 - 3.5cm band f.g. py. contains rounded qtz grains .5cm. subangular country rock clasts.							
			50 q.v.								
				29.19 - 30.48 : silicified zone contains pieces of country rock (<.5cm to 1 cm)							
30				30.15 - 30.40 scattered patches of Tetra xph							
				30.48 END OF HOLE							

PAGE 4 OF 4	PROJECT:	HOLE NO. 45

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	Ag	Cu	Pb	Zn	Hg
25.84 - 25.92 . g.v. 15% sulfides Tetra + sphal, T. py											
26.7 , 1cm band f.g. py. 45° w.c.A. 27.3 , 3.5cm band f.g. py. 80° w.c.A.		25.80	27.00	1.20	5343	.190	8.08	35	830	1400	3250
		27.00	29.00	2.00	5344	.015	.60	19	67	109	1100
		29.00	30.48	1.48	5345	.129	6.40	32	340	1590	8800
30.15 - 30.40 - scattered patches of Tetra + sphal.											

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: 2153 Sulphurets	GROUND ELEV.
HOLE NO.: 46	BEARING: 180°
LOCATION: South Brucejack 20m west of 5.9 vein 5.9 Vein Zone	DIP: -65° TOTAL LENGTH: 140' 42.7 m
LOGGED BY: W. Melnyk	HORIZONTAL PROJECT
DATE: July 22, 1982	VERTICAL PROJECT
CONTRACTOR: Ultra Mobile Diamond Drilling	ALTERATION SCALE 0 1 2 3 absent slight moderate intense
CORE SIZE: BQ	
DATE STARTED: July 21, 1982	TOTAL SULPHIDE SCALE
DATE COMPLETED: July 21, 1982	0 1 2 3 4 traces only < 1% 1% – 3% 3% – 10% > 10%
DIP TESTS: none	
COMMENTS	LEGEND

W. Melnyk

PAGE 1 OF 4	PROJECT:	HOLE NO. 46

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Quartz veining intensity 0-1cm)	ALTERATION B (1-10cm)	ALTERATION C (>10cm)	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				0.00-0.72 : Stick-up							
				0.72-20.04 : Mafic tuff and/or flow. Intensely altered. Rock constituents are quartz, sericite, pyrite, f.grained, matted, fairly hard, light pale green to grey, fragments visible throughout. Veined with quartz, non-foliated							
				0.72-7.31 : section contains several q.v. some of which are mineralized	75	3	–				
			30° q.v.								
5			40 q.v.								
			35 q.v.	6.50 : chloritized, serpent., silicified, frags .4 - 1cm. Silicic frags are rounded, brownish-pink, Serp frags are angular dark green							
			20° q.v.	7.31-8.72 : Quartz vein contains angular frags (20%) of country rock, pieces to 7cm							
				8.72-15.82 : Same rock as above, ghostly tuffaceous. Mineralized section q.v. increases							
10											
			45 irreg q.v.	11.60-12.12 : quartz vn contains frags of country rock.	116	9	4				
			15 q.v.								
			10° q.v.								
			45 q.v.								
15			24 q.v.								
			30 q.v.								
				15.82-20.04 : Same as first section, quartz veining drops off. thin hairline fractures are healed with f.g. py. Rock is still pale green-grey, hard and f.grained.	65	4	0				
20											
			45 q.v.	20.04-27.12 : Mafic tuff and/or flows Similar to previous section except this section has pinkish tinge. Odd visible fragment is pink, rounded. Quartz veining is decreasing							
			45 q.v.								
			10° q.v.								

PAGE 2 OF 4	PROJECT:	HOLE NO. 46

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	Ag	Cu	Pb	Zn	Hg
Section contains to 6% by weight disseminated py, <1mm euhedral grains, some clots to 2mm.											
		5.50	6.00	0.50	5346	.061	5.49	52	430	1540	3800
		6.00	7.50	1.50	5347	.081	2.09	64	210	485	2400
7.31-8.72 : Quartz vein, Trace py. Bull white quartz. 8.72-15.62 : Mineralized zone, q.v. with Tetra, sphal, +py.		7.50	9.00	1.50	5348	.011	.57	17	36	134	550
		9.00	11.00	2.00	5349	.036	.22	11	40	65	350
11.00-11.20 : q.v. 15° w.c.a Tr. Tetra, speckled with fg. pyrite. 11.32 : 2cm q.v. 15° w.c.a Tr. Tetra + py 11.60-12.12 : q.v. Tr. py		11.00	12.50	1.50	5350	.070	1.03	93	215	442	1100
13.1-13.3 : q.v. 10° w.c.a Tr. Tetra, Tr. py.		12.50	14.00	1.50	5351	.078	.63	63	87	264	1000
14.84-14.95 : q.v. 45° w.c.a Tr. Tetra. 14.25, 14.36, 14.66, 15.07, q.v. Tr. py.		14.00	16.00		5352	.027	.89	26	154	1075	1500
<1cm all 45° w.c.a contain blebs sphal. 15.14 : q.v. 1cm 25° w.c.a Tr. Tetra 15.40 : q.v. 1cm 30° w.c.a. Tetra, Tr. py.											
Pyrite content is 6% by weight disseminated. 20.50 : 2.5cm q.v. 45° w.c.a Tetra, stringy sectile mineral. 21.52 : 2.5cm q.v. 45° w.c.a barren 22.70 : 4 cm q.v. 10° w.c.a. Tr. py											

PAGE 3 OF 4 | PROJECT: | HOLE NO. 46

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
			/35 q.v.								
			/30 q.v.								
				24.15 : Several 1-3 mm q. stringers parallel w c.a. Several pyritic veinlets & patches	129	11	0				
25											
				27.13 - 42.67 : Mafic Tuff and/or flows. Similar to initial section, pale green, grey in color, siliceous, sericitic, pyritic. Thin quartz stringers are common < 1cm. Most of these are barren. they have a general trend of 45° w.c.a.						
30											
				Widely scattered trace amounts of tetrahedrite do occur in this section but of no significance.							
					290	19	2				
35											
40											
				41.15 - 42.67 : Silicified zone, good deal of qtz veining minor pyrite only.							
				42.67 END OF HOLE							

PAGE 4 OF 4	PROJECT:	HOLE NO. 46

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS			
23.2 : 4cm q.v. 35° w.c.a. Tetr, py, sphal									
24.05 : 4cm q.v. 30° w.c.a. Tr. py.									
24.15 : Several py veinlets + patches at 50° w.c.a.									
Pyrite still constant at about 6% by weight. Quartz veins are present most are <1cm, majority are barren.									

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: 2153 Sulphurets	GROUND ELEV.
HOLE NO.: 47	BEARING: 180°
LOCATION: South Bracejack 5.9 vein 5.9 Vein Zone	DIP: -45 TOTAL LENGTH: 140' 42.67 m
LOGGED BY: W. Melnyk	HORIZONTAL PROJECT: 30.2 m
DATE: July 24, 1982	VERTICAL PROJECT: 30.2 m
CONTRACTOR: Ultra Mobile Diamond Drilling	ALTERATION SCALE
CORE SIZE: BQ	
DATE STARTED: July 22, 1982	
DATE COMPLETED: July 23, 1982	TOTAL SULPHIDE SCALE
DIP TESTS: None	
COMMENTS	LEGEND

absent

slight

moderate

intense

traces only

< 1%

1% – 3%

3% – 10%

> 10%

W. Melnyk

PAGE 1 OF 4	PROJECT:	HOLE NO. 41

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION: Quartz veining intensity 0-1cm A	1-10cm B	>10cm C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.00 - 0.33 stand-up							
				0.33 - 31.70 m: Mafic Tuffs and/or Flows. Pale green, grey, fine grained, non foliated rock composed of quartz, sericite, and pyrite. Rock is quite hard							
				0.33 - 2.59: Slightly coarser grained, darker, may have greater chlorite content.							
			/50 q.v.	1.59 - 20.58: light pale green-grey, f-m grained, contains occassional Serpen-chloritized fragment, .8-3cm, angular, pyritic.							
5			q.v.								
			py.								
			Irr. q.v.	This section is characterized by hairline fractures containing f.g. pyrite.							
					155	19	3				
			/35 q.v.	9.24 - 12.45: numerous thin qtz vns weakly pyritic.							
10											
			/35 q.v.								
				12.98 - 13.90: Several thin q.v. 3mm and larger, sil patch 13.75 - 13.90, scattered Tetra grains + py.							
				Quartz veining appears to X-cut py veining.							
15											
			/35 q.v.								
			Irr. S.v.								
			/80 q.v.								
20											
				20.58 - 31.70: This section is relatively best mineralized of hole. Section contains significant q.v. and sil zones, with Tetrahedrite, sphal, and pyrite. Rock may be pervasively silicified. Retains much of previous							
			q.v.								
			Irr. q.v.								

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	Ag	Cu	Pb	Zn	Hg
4-6% by weight pyrite, euhedral crystals, disseminated, minor pyritic veining does occur particularly initial 12 m.											
Pyritic veinlets + quartz 1mm to 4mm down to 16.5m, most are at v. steep angle to C.A. 4.5: q.v. 50° w.c.a. 4cm py. 4.6 - 5.0: q.v. parallel, Tr. sphal. Tr. Tetra. 5.1 - 5.55: Py-py vn parallel .5 to 1cm. 5.8: 4 py vns 3mm 1st w.c.a. 8.99: Irreg q.v. Tr. py, Tr. Tetra, Piece of host.		2.00	4.00	2.00	5353	.021	.20	10	17	65	600
		4.00	7.00	3.00	5354	.086	.29	20	68	212	4500
		7.00	10.00	3.00	5355	.020	.91	34	28	66	800
9.29: q.v. 1cm 35° Tr. Tetra Tr. py.											
		10.00	13.00	3.00	5356	.029	.29	33	33	104	800
12.45: q.v. 8mm 35° Tr. py Tetra 13.75 - 13.90: Siliceous patch, contains scattered Tetra grains tpy											
		13.00	16.00	3.00	5357	.015	.92	25	27	164	750
16.90: 1.2cm q.v. 35° w.c.a. Tr. py.		16.00	18.80	2.80	5358	.012	.19	24	12	57	550
17.75 - 17.88: Irreg. q.v. Contains pieces of country rock. Tr. Tetra, Tr. py. 18.13: q.v. 2cm 80° barren 18.8 - 18.98: Silic zone, pieces of country rock 45° specks sphal + Py.		18.80	20.60	1.80	5359	.014	.22	21	16	78	530
Pyrite - diss. 4-6% by volume, minor Py vnlets		20.60	22.00	1.40	5360	.021	.72	20	22	78	750
20.58 - 21.03 q.v. parallel 7cm q.v. Tetra, py											
23.1 - 23.65: Irreg. Si patch specks Tetra, Sphal Py.											

PAGE 3 OF 4 | PROJECT: | HOLE NO. 47

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION Quartz veining Intensity 0-1cm A	1-10 B	>10cm C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				Sections characteristics							
				23.65 - 26.20: Section contains several angular blocks 3-10cm of soft, dark green serpentinized material, very pyritic, by frags							
			80° q.v.								
25			75 q.v.								
				26.75 - 27.2: q.v. 30° w.c.a.	145	16	5				
			30 q.v.	Several 3cm frags of country rock near bottom							
			45 q.v.								
			q.v.								
			45 q.v.								
30				30.08 - 31.70: Rock has a distinct pink soft. Contains 2-3mm reddish fragments. Rock may be more siliceous possibly finer grained.							
			45 q.v.								
			35 q.v.								
				31.70 - 42.67: Mafic Tuffs. In part well bedded, coarser grained than previous sections, contains fragments, exhibits irregular bedding. Much darker green & much softer than previous section.							
				31.70 - 39.80: Soft, serpentinitic material							
35			45 bedding	bedding ~45°. Bottom contact 30° w.c.a							
				39.80 - 42.67: Med-coarse grained, med to dark green. Fragments 1-10mm commonly < 2mm, white, others dark green. Quartz veining is par.	26	5	1				
40											
				42.67 END OF HOLE							

PAGE 4 OF 4	PROJECT:	HOLE NO. 47

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	TO	WIDTH	SAMPLE NUMBER	ASSAYS Au	Ag	Cu	Pb	Zn	Hg
23.25 - 23.42 : Sil patch, grey, sil weak Tetra py.		22.00	23.50	1.50	5361	.010	.17	23	25	53	330
24.66 : q.v. 3cm, 80° sphal tetra.		23.50	25.00	1.50	5362	.014	.96	33	165	305	2100
25.73 : q.v. 1cm, 35° Tetra, py 26.0-26.19 : sil patch 30° Specks Tet, py		25.00	26.75	1.75	5363	.011	.58	21	74	134	850
26.75 - 27.2 : q.v. 30° specks tetra, tpy 27.5 - 27.87 : sil zone specks tetra, sphal py		26.75	28.10	1.35	5364	.014	1.05	205	190	265	3100
28.0 - 28.06 : q.v. 45° blebs tetra, Tr py, sphal		28.10	29.50	1.40	5365	.011	.47	58	37	126	930
29.35 - 29.65 : q.v. ∥ℓ 1-2cm Tr. Tetra 29.9 - 30.08 : q.v. 45° Tr. Tetra, Tr py. 30.48 - 30.90 : 3 sil patchs 5cm each Tetra, py 31.42 : q.v. 3cm 45° Tr. Tetra, py 31.62 : q.v. 1cm 35° Tr. Tetra, sphal. 31.93 - 32.5 : sil zone pyritic poss Tr. Tetra		29.50	31.70	2.20	5366	.013	.82	34	118	273	800

Py 12% by weight

N2/E2

R. D. PENHALL LTD., MADE IN VANCOUVER, CANADA DUKSBAK WATERPROOF

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: 2153 Sulphurets	GROUND ELEV.
HOLE NO.: 48	BEARING: 180°
LOCATION: South Bruce Jack 5.9 vein 5.9 Vein Zone	DIP: -60° TOTAL LENGTH: 170', 51.8m
LOGGED BY: W. Melnyk	HORIZONTAL PROJECT
DATE: July 24, 1982	VERTICAL PROJECT
CONTRACTOR: Ultra Mobile Diamond Drilling	**ALTERATION SCALE** 0 1 2 3 absent slight moderate intense
CORE SIZE: Bq.	
DATE STARTED: July 23, 1982	**TOTAL SULPHIDE SCALE** 0 1 2 3 4 traces only < 1% 1% – 3% 3% – 10% > 10%
DATE COMPLETED: July 23, 1982	
DIP TESTS: None.	
COMMENTS	LEGEND

W. Melnyk

PAGE 1 OF 6	PROJECT:	HOLE NO. 48

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ
				Quartz veining Intensity 0-1cm 1-10 10							
				0 - 0.80m : stand-up							
				0.8 - 45.04m : Mafic Tuffs and/or Flows - Fine grained pale green - grey rock, quite hard, consists of quartz, sericite and pyrite. Pyrite occurs as diss. and hairline fracture fillings - quite characteristic non-foliated, speckled with pyrite.							
				Quartz veining is moderate through section consisting mainly of thin < 1 cm veinlets.							
5			/45 q.v.								
				0.80 - 33.80 : This zone appears to be barren of tetra and sphal except for isolated spot occurrences.							
				0.80 - 4.85 : Section is darker than rest of rock, fine grained, greater mafic content.							
			/10 q.v.								
10											
			/25 q.v.								
					285	25	4				
15											
20											
			/15 q.v.	21.00 : 2cm strip of hypabyssic mafic(?) near q.v.							

PAGE 2 OF 6	PROJECT:	HOLE NO. 48

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
pyrite veinlets + dissemination's. 6-10% by weight. pyritic veinlets 1-3mm extend down to approx 23m.										
5.85 : q.v. 7.5cm 45° white f.g. py.										
4.85-6.10 : Several low angle q.v. .5cm Net vein.										
7.70 : q.v. ~ 5cm 10° Tr. fg py.										
11.2 : q.v. 25° 9cm, barren										
11.2 - 11.37 : Sil patch weakly pyritic										
13.80 - 14.02 : q.v. Tr py hairline fract's										
16.00 - 17.75 : Well veined section, No tetra or sphal.										
21.00 : q.v. 3cm, 15° w.c.a. Tr py. Several specks Tetra. Strg. 2cm adjacent vein.										

PAGE 3 OF 6 | PROJECT: | HOLE NO. 48

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
					Quartz veining intensity. 0-1cm	1-10	>10cm				
			/10	q.v.							
25											
			/30	q.v.							
30				31.5-33.1 : Rock assumes chaotic appearance 3 separate areas 15cm long which are serpentinized. V. soft. foliation 20-25° w.c.a. Some q.v Tr py only. [Similar to DDH 47 23.65-26.20]							
			/40	33.50-43.90 : Rock maintains similar characteristics to previous sections, however this section does contain Tetra tsphel.							
35			/40	Approx 20 q.v. contain sphal and Tetra in this zone. Veins from 3mm to 20cm.							
					119	10	L				
40											
			/40	q.v. 43.92-45.04 : Transition zone from siliceous to less sil. breccia. Contains q.v. V.f.g. banded py. clots of py.							
45											

 PROJECT: HOLE NO. 48

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag	ASSAYS Cu	ASSAYS Pb	Zn	Hg
25.1 - 25.4 : q.v. 10°, 3cm. thin banded whisps of pyrite through vein.											
28.1 : 2cm q.v. 30° undulating contacts Tr. Tetra.											
29.35 - 29.93 : Stockwork q.v. Tr. py. host rock increases in py. v.f.g. dark grey black. Most veins 45°.											
35.27 : Tet-sphal veinlet 5mm 40°		33.80	36.00	2.20	5367	.063	4.11	162	500	1180	850
36.50 : Tet-sphal veinlet 2mm 40°											
		36.00	38.00	2.00	5368	.011	.58	56	90	256	800
		38.00	40.00	2.00	5369	.013	.26	28	21	67	470
40.1 - 40.34 : quartz-flooded bx zone - some tetra-sphal, frags rotated, bonded by milky qtz		40.00	42.00	2.00	5370	.039	2.42	68	225	424	1400
42.85 - 43.3 : Bx zone healed by qtz. + black f.g. py.		42.00	43.90	1.90	5371	.014	.85	20	70	270	650
43.46 - 43.90 : Stockwork zone, tiny q.v. 40° Some carry sphal + tetra		43.90	45.00	1.10	5372	.059	1.16	104	67	162	970

PAGE 5 OF 6 | PROJECT: | HOLE NO. 48

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION Quartz veining intensity 0-1cm A	1-10 B	>10 C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				45.04 - 51.82 : Mafic Tuffs (?) Rock is coarse grained, slightly foliated at 40° w.c.a., dark - med. green, less intensely altd. Quartz veining is insignificant, parallel with foliation.							
				grain size varies considerably, fragments generally < 1cm, most ≤ 1mm. Some angular dark green (larger ones), white fragments 5mm.	25	1	0				
50				51.82 END OF HOLE							

PAGE 6 OF 6	PROJECT:	HOLE NO. 48

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
Pyrite as stringers and whisps 10% by weight.										

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: Sulphurets 2153	GROUND ELEV. 0.7m casing stick-up
HOLE NO.: 49	BEARING: 220°
LOCATION: South Brucejack 0.5 vein 0.5 Vein Zone	DIP: -45° TOTAL LENGTH: 99.5 ft. 30.33m
LOGGED BY: D. Bridge	HORIZONTAL PROJECT
DATE: July 26/82	VERTICAL PROJECT
CONTRACTOR: Ultra Mobile	ALTERATION SCALE 0 1 2 3 absent slight moderate intense
CORE SIZE: BQ	
DATE STARTED: July 24/82	TOTAL SULPHIDE SCALE 0 1 2 3 4 traces only < 1% 1% – 3% 3% – 10% > 10%
DATE COMPLETED: July 25/82	
DIP TESTS: none	
COMMENTS	LEGEND

Dave A Bridge

PAGE 1 OF 4	PROJECT: 2153	HOLE NO. 49

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (qz <1)	B (veining 1-10 cm)	C (veining >10)	D	E	FRACTURE INTENSITY	% VEIN QTZ.
					0.0 - 1.52 : stick-up and over-burden							
					1.52 - 8.40 : sericitized tuff : light green, fine-grained, moderately sericitic tuff,							
			25	3 cm qz-py v.	probably originally of intermediate composition; the only textures not destroyed by sericite are rare, <1 cm clasts; weakly							
			45		qz veined.	70	7	0				
5				1 cm qz-py v								
			35 / 50	2 cm qz-py v								
			55	2 - qz-py-sph-argentite v.								
			60									
			60	60 cm qz-py v	8.40 - 9.40 : qz-sulphide vein and stockwork : mainly gray-white qz w. minor silicified tuff			vein				
			irreg		inclusions, avg. 75% qz v.							
10					9.40 - 10.95 : qz-sulphide stockwork avg 20% qz veins containing about 10-15% pyrite, in moderately sericitized tuff.	65	8	1				
			45	qz-tet v								
					10.95 - 21.90 : sericitized tuff light green, homogeneous tuff, moderately sericitized, moderately qz veined, avg 5% qz veining							
15												
						140	13	0				
					17.10 - 18.00 : 5% elongate, rounded inclusions of waxy, chloritic tuff w. feld phenos.							
20												
			55	qz-tet vs.								
			45									
			25	1 cm qz-cal-sph-tet-arg. v.								

PAGE 2 OF 41	PROJECT: 2153	HOLE NO. 49

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS oz/t Au	ASSAYS Ag
1.52 - 5.20 : avg 5% py, mainly fine-grained, dissem in tuff, minor dissem in veinlets at 2.75 : 2cm qz-py v.		1.52					
				3.68	5373	0.018	0.09
5.20 - 5.95 : avg 5% dissem and veinlet py, 2 - 1 to 2 cm qz-py v. w. 50 - 90% py.		5.20					
5.95 - 7.40 : avg 5% py, mainly dissem in tuff, 7 - thin, 2 - 10 mm qz-py veinlets		5.95		0.75	5374	0.016	0.11
				1.45	5375	0.010	0.08
7.40 - 8.40 : avg 5% py in tuff and qz veins, 2 - 7mm qz v. w. py, sph, argentite, tet.		7.40					
				1.00	5376	0.018	0.22
8.40 - 9.40 : avg 15% py med-g, 1% sph, <1% argentite		8.40					
				1.00	5377	0.915	2.07
9.40 - 10.95 : avg 5-7% py, minor tet, sph, mainly in qz v.		9.40					
				1.55	5378	0.070	0.59
10.95 - 13.35 : avg 5% py, dissem and in qz v, 2 - 5mm qz v. w. argentite, local tr. tet. in qz veins.		10.95					
				2.40	5379	0.074	0.29
13.35 - 15.35 : avg 5% dissem py, 2 veins w. tr tet, one w. trace argentite		13.35					
				2.00	5380	0.018	0.18
15.35 - 21.28 : avg 5% dissem py, one vein at 20.65 w. tr argentite		15.35					
				4.15	5381	0.006	0.47
		19.50					
21.28 - 21.95 : 5% py, 3 qz veins w. minor tet, one - 1cm qz-calcite v. w. 10% sph, 2% tet, 2% argentite (silver		21.28		1.78	5382	0.087	0.47
gray, polished on core surface)		21.95		0.67	5383	0.070	0.05

PAGE 3 OF	PROJECT: 2153	HOLE NO. 49

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
					21.90 – 30.33 : sericitized tuff light green, fine-grained w. low intensity of qz veining and minor qz-calcite-argentite-sphalerite							
25			35									
			35	12 cm qz-py sph-tet-py/arg. v.	veins., avg 3% qz-calcite veins, calcite is beige in							
			35	35° qz-cal-arg.	color but effervesces in cold HCl section contains 12 veins w. argentite - steel gray-black	59	3	1				
			65, 50, 30, 50, 50, 65	qz-cal-arg.	color, hardness ~4-5, slightly ductile, polished on core surface, cut qz and qz-py veins							
30					30.33 end of hole							
35												
40												
45												

PAGE 4 OF 4	PROJECT: 2153	HOLE NO. 49

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS oz/T Au	ASSAYS T Ag			
21.95 - 25.05 : avg 3-5% py, disem, tr. tet in 2 qz veins.				3.10	5384	0.009	0.45			
25.05 - 26.95 : avg 3-5% py, 5 thin qz-calcite veins w. minor argentite at 25.05 : 12 cm qz v. w. 5% py, 1% sph, 1% tet, <1% pyrargyrite ?		25.05		1.90	5385	0.054	3.04			
		26.95		1.50	5386	0.056	0.06			
26.95 - 28.45 : 3 qz-calcite - argentite veins, 1-10mm, minor tr 25% avg.		28.45								
28.45 - 30.33 : 5 qz-cal - arg veins, 4 ave 3-5 mm thick w. 10 - >25% argentite.				1.88	5387	0.009	0.12			
		30.33								

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: Sulphurets 2153	GROUND ELEV. 0.7m casing stick-up
HOLE NO.: 50	BEARING: 220°
LOCATION: South Bruncjack 0.5 Vein same location as DDH 49 0.5 Vein Zone	DIP: -65°
	TOTAL LENGTH: 150 ft. 45.72m
LOGGED BY: D. Bridge	HORIZONTAL PROJECT
DATE: July 26 / 82	VERTICAL PROJECT
CONTRACTOR: Ultra Mobile	ALTERATION SCALE 0 1 2 3 absent slight moderate intense
CORE SIZE: BQ	
DATE STARTED: July 25/82	TOTAL SULPHIDE SCALE 0 1 2 3 4 traces only < 1% 1% – 3% 3% – 10% > 10%
DATE COMPLETED: July 26/82	
DIP TESTS: none	
COMMENTS	LEGEND

Dan A Bridge

PAGE 1 OF 4 | PROJECT: 2153 | HOLE NO. 50

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION qz <1 A	ALTERATION veining 1-10 cm B	ALTERATION veining >10 C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				0.0 - 1.08: casing stick-up and overburden	0						
				1.08 - 10.55: sericitized tuff: light green fine-grained, homogenous tuff, moderately sericitic, moderately qz veined, avg < 5% qz veins and minor veined silicified zones, very minor calcite veins.							
5			35 shearing and qv veins		111	6	0				
				10.55 - 19.60: sericitized tuff: as above but m. intensely veining by thin qz veins and minor, late calcite veins, sulphides present in qz veins, avg 5-7% qz veins, very random orientation of late qz-sulphide, minor calcite veins.	113	3	0				
10											
				19.60 - 45.72: sericitized tuff							
15			30 shear	19.60 - 17.15: moderately qz veined, 3-4% qz veins	49	2	0				
				17.15 - 26.95: uniform, sericitic tuff, weakly qz veined, avg 1% qz veining, minor patches w. medium green color, waxy texture	57	1					
20			30 shear								

PAGE 2 OF 4	PROJECT: 2153	HOLE NO. 50

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS oz/T Au	ASSAYS Ag
		1.08					
1.08 - 7.40 : avg 5% py, mainly disseminated in tuff,							
minor py in 2 qz v. zones				3.52	5388	0.012	0.10
		4.60					
				2.80	5389	0.009	2.43
7.40 - 10.55 : avg 5% py, 2 veins w. minor		7.40					
py patches, 3 veins w. minor disseminated sph and tet				3.15	5390	0.007	0.37
10.55 - 13.30 : avg 5-8% py, disseminated and in		10.55					
veinlets and in qz veins,							
12 fine veins w minor sph, tet and argentite, tr. disseminated				2.75	5391	0.015	0.25
argentite, sulphides in latest veins							
		13.30					
13.30 - 14.60 : avg 5% py, 2 veins w. tr sph,				1.30	5392	0.210	0.21
tet.		14.60					
14.60 - 17.15 : avg 8% fine to med-grained							
disseminated py, 2 veins w. tr. tet				2.55	5393	0.019	0.28
		17.15					
17.15 - 26.95 : avg 5% py,							
mainly disseminated in							
tuff							

PAGE 3 OF 4 | PROJECT: 2153 | HOLE NO. 50

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
25				26.95 - 32.05: moderately intense qz veining, about 10% qz veins by volume, very irregular vein patches with wallrock inclusions							
					76	12	0				
30				32.05 - 33.90: low vein							
				py on frs. intensity and 1% qz veining by volume. Fine, hairline pyritic fractures, spaced ½-1 cm apart and at 10-20° to core axis.	13	0	0				
35			c 50 / 30	35.53 - 36.08: soft, medium green, intensely sericitic zone shear							
				33.90 - 39.62: low intensity of qz veining, 1-2% veins by volume	36	0	0				
40				39.62 - 45.72: moderately intense qz veined section, about 10% veining and minor silicified zones, veins irregular and at 20-45° to core axis.	73	9	1				
45				45.72 end of hole							

PAGE 4 OF 4	PROJECT: 2153	HOLE NO. 50

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS oz/t. Au	ASSAYS Ag			
26.95 - 32.05 : avg 5-8% py, mainly med-grained dissem in tuff, one vein w. minor sph.		26.95								
				5.10	5394	0.009	0.22			
32.05 - 33.90 : avg 5% py, dissem and on hairline frs. 2 thin veins w. minor tetrahedrite		32.05								
				1.85	5395	0.009	0.12			
		33.90								
33.90 - 39.62 : avg 5% py, F-med-grained dissem.										
39.62 - 45.72 : avg 5% py in tuff, minor py in a few qz veins, tr. sph in one vein										

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: Sulphurets 2153	GROUND ELEV. 0.75m stickup
HOLE NO.: 51	BEARING: 135°
LOCATION: South Bruce Jack 0.5 vein 0.5 Vein Zone	DIP: -45° TOTAL LENGTH: 198.5 Ft 60.50m
LOGGED BY: W. Ferreira	HORIZONTAL PROJECT
DATE: July 28/82	VERTICAL PROJECT
CONTRACTOR: Ultra Mobile	ALTERATION SCALE: 0 1 2 3 — absent, slight, moderate, intense
CORE SIZE: B9	
DATE STARTED: July 26/82	TOTAL SULPHIDE SCALE: 0 1 2 3 4 — traces only, < 1%, 1% – 3%, 3% – 10%, > 10%
DATE COMPLETED: July 27/82	
DIP TESTS: none	
COMMENTS	LEGEND

Will L. Ferr.

PAGE 1 OF 6 | PROJECT: 2153 | HOLE NO. 51

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION Quartz veins/m: <1 A	1-10 B	>10 C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.00-2.74: casing stick up and not recovered.							
			30°/ pyrite veinlet, 2mm wide.	2.74-10.35: Intensely altered arkose 95%, quartz, sulphide veins 5%. Arkose pale green, no primary textures preserved, very soft, silicification more intense than							
5			60° Qtz vein, 3mm wide	silicification. Quartz veins mainly white, locally smoky colored, no carbonate.							
			pyrite, QTZ veins generally 20-60°		39	0	0				
			22°/ to core axis. pyrite-QTZ vein, 7mm wide.								
10			15/c. QTZ-Pb vein with wall rock	10.35-12.60: Intensely silicified arkose 2%, QTZ-sulphide							
			25/c. base metal rich vein	veins 98%. 10.35-11.80: Intense QTZ-sulphide veins. No carbonate or leached							
			32/c base metal rich vein	sections. 11.80-12.60: Intense quartz-sulphide veins, however, sulphides mainly leached out,							
			all lower contacts of	Poor core recovery.							
15			veins not recovered.	12.60-13.10: Intensely sericitized arkose 97%, QTZ veins 3%.	5	0	0				
				13.10-13.61: Sulphide-QTZ veins 100%.							
				13.61-15.83: Pale green intensely sericitized and silicified arkose 99%, QTZ veins 1%.	21	0	0				
			20/ base metal stringers, contact not recovered.	15.83-17.11: At least 40% core recovery, leached sulphide-QTZ veins and altered wallrock							
			25/ stringers within a base metal vein	17.11-18.29: QTZ-sulphide vein 100%, no carbonate or leading							
				18.29-43.62: Pale green arkose 95% QTZ and locally QTZ-carb-							
20				onate veins 5%. Arkose 50-80% green and yellow feldspar crystals up to 1mm long in a pale green matrix. Yellow feldspar is the result of alteration and occurs in bands up to 1 metre wide which							

PAGE 2 OF 6 | PROJECT: 2153 | HOLE NO. 51

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS oz/Ton Au	ASSAYS oz/Ton Ag	ASSAYS Cu	ASSAYS Pb	ASSAYS ppb Zn	ASSAYS ppb Hg
2·74-10·3: Wall rock disseminated pyrite 5% by weight, pyrite veinlets 3%. No other sulphide observed.		2·74		3·61	5396	0.009 (.012)	0.17 (.16)	25	172	153	310
		6·35									
				3·00	5397	0.006 (1.009)	0.08 (.14)	24	40	159	100
		9·35									
				1·00	5398	0.009	0.09	30	240	360	220
10·35-12·60: 1 m vein 50% sulphide.		10·35				(.009)	(.14)				
10·35-11·99: Pyrite veinlets and disseminated 20%, No other sulphide				1·45	5399	0.354 (.352)	4.30 (4.35)	1460	2900	6600	4800
11·99-11·45: Pyrite 35% disseminated and		11·80				(.755)	(7.68)				
veinlets, sphalerite veinlets 3%, galena trace,		12·60		0·80	5400	0.726	7.22	1610	11000	5600	4700
tetrahedrite 1% veinlets.		13·10		0·50	5401	0.093	0.68	340	1700	3350	850
11·45-11·80: Appears to be 1 vein. Pyrite 15%,		13·61		0·51	5402	0.650	6.35	7300	880	7300	54000
sphalerite 30%, galena 10%, tetrahedrite 30%.				(.625)	(.72)	(.625)	(9.90)				
11·80-12·60: Pyrite 2% disseminated and veinlets				2.22	5403	0.027	0.21	76	495	607	1100
1 m vein tetrahedrite trace, galena trace, sphalerite trace						1.018)	(.29)				
12·60-13·10: Diss. + veins of pyrite 5%, tet trace.		15·83									
13·10-13·61: Sphalerite 40%, galena 15%, tet 20%, pyrite 5%				1·28	5404	0.094	1.03	620	19000	4800	2300
13·61-15·83: Pyrite disseminated and in		17·11				(.038)	(.91)				
qtz veins 5%, Minor tet, no sphal.											
15·83-17·11: Pyrite 5%, minor sphal tet, trace galena				1·18	5405	0.255	5.32	5400	1000	7200	24000
17·11-18·29: 3 all vein, sphal 50%, galena 15, tet 7,		18·29				(.221)	(6.97)				
pyrite 3%				1·00	5406	0.035	0.62	820	2900	5300	1800
18·29-43·62: Wall rock pyrite		19·29				(.041)	(.63)				
3%. Minor pyrite.		NO	SAMPLE								
Nine tet and sphal in veins.											

N2/E2

PAGE 3 OF 6	PROJECT: 2153	HOLE NO. 51

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (QTZ veins <1)	B (1–10)	C (>10)	D	E	FRACTURE INTENSITY	% VEIN QTZ.
					probably reflect difference in alteration assemblage. Arkose intense silicification and sericitization.							
25												
			50°	QTZ vein 3mm wide		197	9	0				
30												
35			50°	QTZ – carb vein with tet and cphal. Vein is 4mm wide								
40			45°	Pyrite veinlets very consistent at this attitude								
			45 / 45	cream kaolinized fault zone	43.62–44.68: Fault zone: Pale green sericitized, silicified and locally kaolinized arkose 90%, QTZ-sulphide vein 10%.	4	1	0				
						QTZ vein count not representative due to broken core						
45												

PAGE 4 OF 6	PROJECT: 2153	HOLE NO. 51

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS oz/t Au	ASSAYS oz/t Ag	ASSAYS Cu	ASSAYS Pb	ASSAYS Zn	ASSAYS Hg
39.62 – 43.62: 5% pyrite veinlets in wallrock. Rare tetrahedrite in QTZ veins.		39.62									
				4.00	5407	0.099 (.030)	0.37 (.47)	75	260	585	260
43.62 – 44.68: Pyrite 7% disem. in wallrock and in QTZ veins. Minor sphal, tet in veins.		43.62									

PAGE 5 OF 6 | PROJECT: 2153 | HOLE NO. 51

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION QTZ ≥ veins <1 A	1-10 B	>10 C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
			45/	pyrite veinlets very consistent attitude.	43.62-43.85: Kaolinite 30%						
			40/		44.68-46.53: Pale green intensely sericitized and locally silicified arkose	2	1	2			
				QTZ-py-chal-gahn vein 25cm wide.	85%, QTZ-carb-sulphide and sulphide veins 15%						
					46.53-50.02: Pale green intensely altered arkose						
			39/	QTZ-py vein 1-1 cm wide.	96%, QTZ veins 4% with no carbonate.	3	9	2	0		
					Arkose sericitized, locally silicified, feldspars up to 3mm long.						
50			70/	chal-py-pyrite-galena vein 1.5cm wide.	50.02-51.46: Pale green intensely silicified arkose						
					40%, Quartz and minor carbonate veins						
			15/c	contact of QTZ-massive sulphide vein.	60%. Arkose occurs as piece in veins.						
					51.46-52.66: QTZ-sulphide vein 100%. No carbonate.						
			35/c	QTZ-sulphide vein-wall rock contact	52.66-55.69: Intensely sericitized arkose 80%, QTZ-carbonate veins 20% Arkose pale green color, fragments up to 1cm long	2	8	8	0		
55											
			85/c	Wall rock-QTZ vein contact.	55.69-56.19: Intensely sericitized arkose 25%, QTZ-sulphide veins 75%, with no carb.						
			35/c	QTZ-sulphide vein wall rock contact	56.19-60.00: Intensely sericitized arkose 95%, QTZ veins 5%. Arkose pale green locally with fragments up to 1.5cm long. No carb. in QTZ veins.	1	2	6	0		
60			28/c	QTZ-sulphide vein-wall rock contacts	60.00-60.50: Intensely silicified arkose 50%, QTZ-sulphide veins 50%						
			35/c								
					60.50 — end of hole. —						
65											

PAGE 6 OF 6 | PROJECT: 2153 | HOLE NO. 51

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	WIDTH	SAMPLE NUMBER	ASSAYS oz/T Au	Ag	Cu	Pb	Zn	Hg
44.68-46.53: Pyrite veinlets and diss. in wall rock 7% minor sphal, tet and galena QTz veins				3.00	5408	0.092 (.116)	1.30 (1.34)	190	1700	3750	1300
		46.62									
46.53-50.02: Wall rock 2% disseminated pyrite. 5 cm veins 15% sphal, 15% py, 15% tet, minor galena. Two massive base metal veins 1.5 and 1.0 cm thick.				3.40	5409	0.075 (.109)	0.51 (.75)	118	1200	3610	700
		50.02									
50.02-51.46: Wall rock pyrite diss. 2%, 5 cm vein minor tet, sphal, py.				1.44	5410	0.158 (.212)	2.84 (3.02)	137	1150	3320	1200
		51.46									
51.46-52.66: Sulphides occur as veins in QTz vein. Sphalerite 15%, tet 15%, pyrite 10%, minor galena.				1.20	5411	0.510 (1.872)	10.01 (12.20)	1280	2800	6800	10800
		52.66									
				3.03	5412	0.167 (1.029)	0.43 (.36)	73	88	386	380
		55.69									
55.69-56.19: Wall rock 2% pyrite. 5 cm vein sphal 5%, tet 2%, minor galena, sphal.		56.19		0.50	5413	0.572 (.430)	5.70 (6.74)	69	3700	4670	2500
56.19-60.00: Wall rock, minor pyrite disseminated and veinlets. 5 cm quartz veins have tet and pyrite.				3.81	5414	0.031 (.019)	0.38 (.30)	27	60	118	310
		60.00									
60.00-60.50: Wall rock 5% pyrite 5 cm vein 7% sphal, pyrite 5%, tet 2%, minor galena.		60.50		0.50	5415	0.268 (.413)	9.41 (11.25)	70	3500	6900	4800
— 60.50 end of hole —											

N2/E2

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT 2153 SULPHURETS	**GROUND ELEV.** 0.55m casing stick-up.
HOLE NO. 52	**BEARING** 180°
LOCATION South Brucejack Area - Galena Showing	**DIP** -45°
	TOTAL LENGTH 200 Ft. 60.96 m
LOGGED BY W. FERREIRA	**HORIZONTAL PROJECT**
DATE JULY 29. - 30 / 82	**VERTICAL PROJECT**
CONTRACTOR ULTRA mobile DIAMOND DRILLING	**ALTERATION SCALE**
CORE SIZE BQ	
DATE STARTED July 29/82	**TOTAL SULPHIDE SCALE**
DATE COMPLETED July 29 / 82	
DIP TESTS none	
COMMENTS 19.17 - 31.22 : qz vein stockwork w electrum	**LEGEND**

absent

slight

moderate

intense

traces only

< 1%

1% – 3%

3% – 10%

> 10%

Will L. Ferreira

PAGE	OF	PROJECT: 2153	HOLE NO. 52

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION QTZ veins A <1	B 1-10	C >10	D	E	FRACTURE INTENSITY	% VEIN QTZ
				0-1.43: Casing stick up and no core recovery							
				1.43-5.37: Tuff-breccia to lapilli tuff with a low degree of alteration 99%, QTZ-carb. veins 1%.	22	2	0				
5				Tuff-breccia dark green, monolithic, fragment boundaries blurred into matrix, mainly subrounded fragments up to at least 3 cm long. In matrix and fragments combined 30% feld. 1-2 mm. No bedding apparent							
				5.37-8.28: Pale green moderately silicified tuff-breccia 100% QTZ-carbonate veinlets <1%. About 40% fragments 2 to at least 40 mm long. Matrix light green silicified, fragments medium green sericitized. Upper contact gradational, lower abrupt.	17	1	0				
			60° contact marked by a rusty fracture	8.28-9.63: Dark green tuff-breccia 99%, Qtz-carb veins 1% Fragments dark green, 60% up to 7 cm long.	6	0	0				
10				9.63-12.71: Light-green intensely silicified and sericitized tuff-breccia 98% and QTZ-carb veins 2%. Locally patchy preservation of tuff breccia.	20	3	0				
			45 1.1 cm wide, carb-QTZ-chl-py-tet veins	12.71-17.70: Medium green lapilli-tuff to tuff-breccia 97%, carbonate QTZ veins 3% Tuff-breccia 50-70% matrix, fragments subangular up to at least 10 cm long, contain abundant carbonate, sericite, pyrite. Matrix silicified, min carb, ser, py. No bedding apparent.	31	3	0				
15											
			15 fault	17.70-19.77: Light green intensely silicified lapilli-tuff 70% quartz-carbonate veins 30% Lapilli-tuff no carbonate or primary textures	16	6	1				
20			50 QTZ vein with 2 specs elect.; 41	19.77-26.02: Medium green intensely silicified tuff-breccia 90%, QTZ-carb veins 10%. Tuff breccia no primary textures preserved, abundant carbonate, sericite.	61	8	0				
			40, 40 2.5 cm wide electrum vein; 60 1.5 cm wide electrum vein								

PAGE 2 OF | PROJECT: 2153 | HOLE NO. 52.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	WIDTH	SAMPLE NUMBER	ASSAYS oz/T Au	oz/T Ag	Cu	Pb	Zn	Hg
1·43-5·37: In wall rock, pyrite 3% disseminated. Rare pyrite in veins.		NO	SAMPLE								
5·37-8·28: In fragments 10% disseminated pyrite in matrix 2-3% disseminated and veinlets of pyrite. In qtz-carb vein no sulphides											
8·28-9·63: In fragments 20% disseminated pyrite in matrix and veinlets 2-3%. In QTZ veins no sulphides.											
9·63-12·71: In wall rock 4% disseminated pyrite. Minor pyrite veins.		NO	SAMPLE								
12·71-17·70: In wall rock 5% disseminated pyrite. In carbonate-QTZ veins minor pyrite, chal., tet.		13·87									
		16·87		3·00	5416	.045 (.041)	0.78	88	134	340	220
17·70-19·77: In wall rock 4% pyrite. In veins py 7%, minor chal, tet 2 apr. electrum. Vein with electrum 19·19-19·77.		19·17		2·30	5417	.058 (.041)	0.23	70	57	257	10
		19·87		0·70	5418	.059 (.091)	1.46	76	540	430	120
19·77-26·02: Wall rocks pyrite 5% diss. and veinlets. In QTZ-carb veins 5% pyrite, 2% tet. and 2 veins with electrum. Veins with electrum 2·5 and 1·5 cm wide. In 2·5 cm vein 3 apr., 1·5 cm vein 1 apr. elect.		20·41		0·54	5419	.120 (.072)	0.67	350	45	202	30
		21·41		1·00	5420	.141 (.321)	1.14	205	154	285	20

N2/E2

R. D. PENHALL LTD., MADE IN VANCOUVER, CANADA DUKSBAK WATERPROOF

PAGE 3 OF

PROJECT: 2153.

HOLE NO. 52

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (QTZ veins <1)	B (1-10)	C (>10)	D	E	FRACTURE INTENSITY	% VEIN QTZ.
25											
			36/	bedding 36°-38°							
			c	26·02-27·22: Thin bedded tuff							
			38/	2·2cm wide — to lapilli-tuff 100%,	9	0	0				
			c/45	[illegible] vein. QTZ - carbonate veins Trace. Beds							
			68/71	3·5cm wide [illegible] — generally 1-8cm thick, carb cement (DIKE).							
				3 joint planes — 27·22-31·77: Intensely altered tuff-							
				with slickensides — breccia 98%, QTZ-carb.							
				in 2 metres all — veins 2%. Tuff-breccia locally modest	56	7	0				
30				10-20° to core axis. — textural preservation, mostly silicified, fragments							
				py, carb, ser, up to atleast 7cm							
			40/	3mm wide [illegible] vein. — long. QTZ veins, dark QTZ 15° [illegible] hair-							
				line fractures.							
			53/c	31·77-52·61: Intensely altered tuff-breccia							
				40% floating in QTZ vein 60%.							
				31·77-47·57: Intensely silicified tuff-breccia							
				25% floating in QTZ vein 75%.							
				Tuff-breccia dark grey silicified to locally							
				dark green with minor sericite. This unit							
35				occurs as partially digested and altered							
				angular pieces up to 10cm long.							
				Vein qtz is white and medium grey. The							
				medium grey qtz is apparently digested							
				wall rock because it occurs in							
				angular patches which are usually adjacent							
				to wall rock. In QTZ veins minor							
				carbonate along hairline fractures, ie							
				carb is post QTZ veins.							
40											
45											

PAGE 4 OF	PROJECT: 2153	HOLE NO. 52

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	Ag	Cu	Pb	Zn	Hg
		24.41		3.00	5421	0.039 (.021)	0.09	59	42	86	40
				1.61	5422	0.032 (.029)	0.09	123	36	81	25
		26.02									
26.02-27.22: Dk wall rock 1-2% disseminated and veinlets of pyrite. Veins minor py, hematite.		27.22		1.20	5423	0.007 (.019)	0.01	34	32	96	30
27.22-31.77: Wallrock 8% pyrite dissem. and veinlets. Veins, minor tet, py, chal., galena? and 3 electrum veins; 2.5, 3.5 and 0.3 cm. wide, 2.5cm vein 1%		28.31		1.09	5424	1.975 (.607)	1.65	185	24	117	80
		29.31		1.00	5425	0.041 (.060)	0.06	34	36	136	20
electrum, 3.5 cm vein + patches 1 mm long, 0.3 cm patch 0.5 mm long. Elect veins, qtz gangue + rare py, rare other sulphides, 15% carb.		30.77		1.46	5426	0.064 (.057)	0.09	90	220	236	60
31.77-47.57: Dk wall rock 10% disseminated pyrite, rare epidote. Dk QTZ veins, minor pyrite rare epidote and tet.		31.77		1.00	5427	0.072 (.221)	0.44	110	78	376	130
		34.77		3.00	E428	0.039 (.030)	0.24	195	25	76	50
		37.77		3.00	5429	0.087 (.048)	0.58	64	120	287	150
		40.77		3.00	5430	0.037 (.022)	0.25	49	20	56	30
		43.77		3.00	5431	0.025 (.026)	0.17	22	30	60	110

PAGE 5 OF | PROJECT: 2153 | HOLE NO. 52

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION QTZ VEINS. <1 A	1-10 B	>10 C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				47.57-52.61: Light green intensely altered tuff-breccia 50%, QTZ vein 50%. Tuff-breccia mainly sericitized subsidiary silicification, non calcareous, original texture destroyed. QTZ vein white, 2-3% carbonate.							
50			QTZ vein-wall rock contact 34/C								
			40/ average attitude of qtz veins, very consistent.	52.61-56.44: Light green intensely altered volcanic fragmental 90%. QTZ veins 10%. Fragmental rock, no preserved primary texture; intense sericitization subsidiary silicification. QTZ veins white to light grey, commonly lined with sulphides along margins, no carbonate.	47	8	0				
55				56.44-60.32: Light green to light grey intensely altered volcanic fragmental 98%, QTZ veins 2%. Fragmental poorly preserved primary texture locally fragments up to 1cm, alteration intense sericitization, subsidiary silicification.	32		0				
			40° pyrrhotite stockwork veins consistent at this attitude contact very sharp. 90/								
60				60.32-60.96: Dark grey intensely altered volcanic fragmental 90%. QTZ veins 10%. Volcanic fragmental, silicification and sericitization about equally intense. QTZ veins light grey to white, no carbonate.							
				—60.96 end of hole—							

PAGE 6 OF	PROJECT: 2153	HOLE NO. 52

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	Ag	Cu	Pb	Zn	Hg
				3.00	5432	0.182 (.292)	0.48	62	22	52	30
		46.77									
47.57-52.61: 2% wallrock disseminated pyrite. 1% vein dendritic tet? filling hairline fractures usually near the margin of the veins. 1% vein minor tet, pyrite.				3.00	5433	0.042 (.050)	0.38	26	30	95	50
		49.77									
				3.00	5434	0.030 (.020)	0.30	48	25	69	60
		52.77									
52.61-54.49: 1% wall rock stockwork of pyrite veinlets. 1% wallrock py 7% veinlets + disc. 1% QTZ vein minor py, tet?				3.00	5435	0.146 (.121)	0.21	107	28	72	20
54.49-60.32: 1% wall rock 3-2% pyrite, disseminated locally about sections of vinlet stockwork. 1% QTZ vein minor pyrite, tet?		55.77									
				3.00	5436	0.086 (.090)	0.09	32	32	79	110
		58.77									
				2.19	5437	0.015 (.010)	0.16	17	44	132	60
60.32-60.96: 1% wall rock 5% disseminated pyrite. 1% QTZ vein minor pyrite, usually toward margin of veins.		60.96									
— 60.96 end of hole —											

N2/E2

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT 2153 Sulphurets	GROUND ELEV. 0.45m stick-up
HOLE NO. 53	BEARING 180°
LOCATION South Bruce/Jacke Area - Galena Showing	DIP -60°
	TOTAL LENGTH 260 ft. 79.25 metres.
LOGGED BY W. FERREIRA	HORIZONTAL PROJECT
DATE JULY 30	VERTICAL PROJECT
CONTRACTOR ULTRA MOBILE DIAMOND DRILLING	ALTERATION SCALE 0 1 2 3 absent slight moderate intense
CORE SIZE BQ	
DATE STARTED JULY 29.	TOTAL SULPHIDE SCALE 0 1 2 3 4 traces only < 1% 1% – 3% 3% – 10% > 10%
DATE COMPLETED JULY 30.	
DIP TESTS none	
COMMENTS	LEGEND

Will L. Fer

PAGE 1 OF 8	PROJECT: 2153	HOLE NO. 53

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION QTZ VEINS <1 (A)	1-10 (B)	>10 (C)	(D)	(E)	FRACTURE INTENSITY	% VEIN QTZ.
				0-0.94: Casing stick up and no core recovered.							
				0.94-6.87: Dark green tuff-breccia 98%, QTZ-carb veins 2%. Tuff-breccia, locally primary textures preserved, mainly angular fragments up to 4cm long, alteration: recrystallized subsidiary silicification, 25% carb patches probably pseudomorphing feldspars. In veins 25% carbonate, mainly white QTZ ball dark grey quartz.	19	2	0				
5			48° 1.5cm wide electrum-tet-epithd-QTZ-carb vein.	6.87-10.98: Tuff-breccia with a low degree of alteration 99%, QTZ-carb veins 1%. Tuff-breccia, well preserved textures, up to at least 10cm long fragments, matrix(carb) variable proportion average 30%. Veins white quartz, 20% carb. One black QTZ vein 3mm wide	25	3	0				
10			78° black QTZ vein 3mm wide								
			38 / 37 8cm wide sulphide-QTZ vein 1.5cm wide sulphide vein, attitude of sulphide veins very consistent.	10.98-13.51: Light green intensely silicified tuff-breccia 98%, QTZ-carb-sulphide veins 2%. Subsidiary ankerite and carbonate mainly in fragments, QTZ veins 20% carb., QTZ white and light grey	11	5	0				
				13.51-15.00: Dark green tuff-breccia 100%, QTZ veins Trace. 50% silicified rock, fragments recrystallized, carb, veinlets.	9	1	0				
15				15.00-32.36: Tuff-breccia 97% QTZ-carb veins 3%. Tuff breccia dark green to locally light green. Matrix (carb) generally silicified, fragments recrystallized, carbonate and pyrite. Patchy preservation of primary textures. QTZ veins, 15% carb., generally white QTZ.	89	10	1				
20											

 PROJECT: 2153. HOLE NO. 53.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS AU	ASSAYS Ag			
0.94-6.87: In wall rock 5% disseminated pyrite. In veins 2-3% pyrite, minor tet, galena?		NO	SAMPLE							
		5.87								
				1.00	5438	0.023 (.018)	0.03			
6.87-10.98: In wall rock 5% pyrite diss. and veinlets. In veins minor py, tet, galena and sphalerite, one 1mm patch of electrum in tet? - shal QTZ vein.		6.87								
		7.37		0.50	5439	0.485 (.194)	0.17			
		8.37		1.00	5440	0.028 (.020)	0.02			
		9.00		0.63	5441	0.172 (.173)	0.14			
				2.00	5442	0.017 (.011)	0.04			
10.98-13.51: In wall rock 8% pyrite mainly in fragments. In QTZ veins 10% pyrite, minor sphal, galena and tet. 5 ive QTZ sulphides 1-8cm wide		11.00		1.00	5443	0.038 (.029)	0.16			
		12.00								
				3.00	5444	0.022 (.011)	0.09			
13.51-15.00: In wall rock 8% diss. pyrite. In veins minor pyrite.		15.00								
15.00-32.36: In wall rock 5% pyrite mainly diss., minor veinlets. In QTZ veins minor tet, pyrite				3.00	5445	0.022 (.008)	0.00			
		18.00								
				3.00	5446	0.030 (.032)	0.04			
		21.00								

PAGE 3 OF 8	PROJECT: 2153.	HOLE NO. 53

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION QTZ VEINS A <1	B 1-10	C >10	D	E	FRACTURE INTENSITY	% VEIN QTZ.
25												
			35°	30cm wide QTZ - carb. - py+et vein								
30												
			45°/c		32.36-34.12: Dark green calcareous bedded tuff (dike) 100%, QTZ - carb veins trace. 15%, 1-2mm wide, locally a and carb amygdule-like patches.	7	0	0				
			55° / 52°	3cm wide QTZ - sulphide - breccia vein								
35			42°	1.5cm and 1.0cm wide breccia related veins.	34.12-36.88: Tuff - breccia 90%, QTZ - carb. - sulphide vein 10%. Tuff - breccia, dark green mainly sericitized and carbonate to locally light green mainly silicified.	21	2	1				
			40°	py vein very sharp contact.	36.88-37.83: Light green mainly silicified tuff-breccia 90% White QTZ - carb veins 10%	17	1	0				
			30°/c		37.83-58.65: Mainly dark green sericitized tuff breccia and white QTZ veins which locally contain sulphides. Tuff-breccia fragments are dark green sericitized commonly commonly with white carbonate patches and abundant pyrite. The matrix is light green silicified with abundant sericite, disseminated py and veinlets of py.							
40			25°	10cm wide sulph. vein								
					37.83-42.67: Tuff-breccia 90%, QTZ veins 10% Tuff-breccia dark green 80% fragments gradational lower contact. Veins mainly white QTZ, minor dark QTZ and carb.	49	6	1				
					42.67-44.43: Light green tuff-breccia 95%, QTZ veins 5% Tuff-breccia matrix 65%, fragment up to 8cm QTZ veins, white-greyish, 5% carb.	13	3	0				
45					44.43-47.30: Dark green tuff-breccia 95%							

PAGE 4 OF 8 | PROJECT: 2153 | HOLE NO. 53

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag			
				3.00	5447	0.016 (.044)	0.01			
		24.00								
				3.00	5448	0.233 (.049)	0.20			
		27.00								
				3.00	5449	0.040 (.033)	0.19			
		30.00								
				3.00	5450	0.052 (.028)	0.12			
32.36 - 34.12: Qv wall rock minor pyrite		32.40								
Qv vein minor pyrite - hematite				1.72	5451	.001 (.001)	0.12			
34.12 - 36.88: Qv wall rock 6% pyrite Qv vein sphal 10%, galena 1-2%, pyrite 5%, tet. 2-3%. Five base metal veins 0.2 - 10 cm thick.		34.12								
				2.72	5452	0.043 (.041)	0.12			
36.88 - 37.83: Qv wall rock 10% pyrite mainly veinlets, others diss. minor dark QTZ with pyrite veinlets. Qv QTZ veins minor pyrite.		36.88								
				0.95	5453	0.044 (.040)	0.23			
37.83 - 42.67: Qv wall rock 5% pyrite diss. and veinlets. Qv one vein 10cm wide: sphal 7%, py 15%, other veins minor dark QTZ, pyrite, tet?.		37.83								
				2.38	5454	0.034 (.028)	0.06			
		40.21								
				2.46	5455	0.044 (.032)	13.99			
		42.67								
42.67 - 44.43: Qv wall rock py 4% mainly diss., some veinlets. Qv veins minor sphal, galena, tet, py.				1.76	5456	0.108 (.033)	0.06			
44.43 - 47.20: Qv wall rock 3% py. mainly veinlets some diss.		44.43		0.79	5457	0.037 (.030)	0.04			

 PROJECT: 2153 HOLE NO. 53.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION QTZ vein <1 A	1-10 B	>10. C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
			45° dark QTZ veins 2-7mm wide	Tuff-breccia, one light green intensely silicified section where dark QTZ veins are, this silicification appears to include both fragments and matrix. QTZ veins mainly light grey.	42	3	0				
			[illegible] vein	Tuff-breccia 80-85% fragments							
			45° upper contact gradational, 45° lower sharp.	47.30-48.13: Light green silicified matrix and fragments 90%, light grey QTZ veins 10%	10	2	0				
50				48.13-54.39: Dark green tuff-breccia, 90%, QTZ-carb. veins 10%. Fragments 80-90% up to at least 10cm long, [illegible] QTZ veins white QTZ minor tet, galena, pyrite. Silicification is mainly restricted to the matrix.	79	10	0				
55				54.39-56.43: Light green tuff-breccia 85%, white to locally grey QTZ veins 15%. Silicified matrix and a section where silicification destroys original texture (55.70-56.43) 75%	24	6	0				
			45° 2cm wide QTZ-tet-py vein.								
				56.43-58.65: Dark green tuff-breccia 97% white and [illegible] QTZ veins 3%. Fragments 75%, at 58.00 original texture destroyed by silicification.	27	0	0				
				58.65-59.56: Light green tuff-breccia 95%, QTZ veins 5%, silicified matrix 70%, preserved texture							
60			32° 8cm wide dark QTZ vein.	59.56-69.20: Silicification related to large quartz vein at the bottom of the hole begins.							
				59.56-62.06: Light green silicified tuff-breccia 92%, QTZ veins 8%. Primary textures still [illegible], no [illegible] py.	28	3	0				
65			30° 25cm wide QTZ-chl vein.	62.06-69.20: Tuff-breccia, very light green 80%, QTZ-sulphide veins 28%. Primary textures generally obliterated completely due to silicification and [illegible] sericite. QTZ veins white and light gray, locally 25% chlorite, no carbonate.	84	25	5				
			35° QTZ-gal-chalco-tet-sphal vein 2cm wide.	Upper contact gradational over 40cm. Lower contact sharp. Chlorite veinlets cut QTZ veins.							

PAGE 6 OF 8 | PROJECT: 2153 | HOLE NO. 53

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag			
In QTZ veins minor tet, sphal.		45.22		0.50	5458	0.064	0.09			
45.22-45.72: Several 2-5mm dark grey		45.72				(.051)				
QTZ veins and one 1cm wide grey QTZ vein.				1.58	5459	0.042	0.08			
3% [illegible] wall.						(.032)				
		47.30								
47.30-48.13: In buff QTZ vein 6mm wide a 0.5mm		48.13		0.83	5460	0.226	0.23			
spec of electrum. In veins minor pyrite						(.110)				
48.13 - 54.39: In wall rock 3-4%										
pyrite disseminated.										
In veins minor galena, pyrite, tet,				3.00	5461	0.078	0.12			
disseminated.						(.059)				
		51.13								
				3.26	5462	0.051	0.29			
						(.040)				
		54.39								
54.39 - 56.43: In wall rock 3% py										
mainly disseminated.				1.31	5463	0.040	0.41			
In veins minor py, tet, galena, rare chalcopyrite						(.040)				
55.70-56.43: intense silicification destruction		55.70								
of textures.		56.43		0.73	5464	0.092	0.41			
56.43-58.65: In wall rock 5% diss py.						(.076)				
In veins minor galena, tet,				2.22	5465	0.044	0.12			
py and dark QTZ veins up to 5mm wide.						(.039)				
58.65-59.56: In wall rock 3% py diss.		58.65								
In veins minor py, tet,										
numerous dark QTZ veins 1-4mm wide.					5466	0.022	0.12			
59.56- 62.06: In wall rock 3% diss		59.56				(.020)				
py. In veins minor										
py, tet. Several 1-3mm dark QTZ veins.				2.50	5467	0.032	0.20			
						(.028)				
62.06 - 69.20: In wall rock 2-3%		62.06								
mainly in 5-10mm										
clusters and veinlets. In veins 3% sphal,										
3% gal, 5% tet, 3% py, rare chalco-				3.00	5468	0.031	2.51			
pyrite, abundant dark QTZ. Base						(.030)				
metal veins range from 0.5-25cm										
wide.		65.06								
				3.00	5469	0.036	0.87			
						(.021)				

N2/E2

R. D. PENHALL LTD., MADE IN VANCOUVER, CANADA DUKSBAK WATERPROOF

PAGE 7 OF 8 | PROJECT: 2153 | HOLE NO. 53

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (QTZ vein <1)	B (1-10)	C (>10)	D	E	FRACTURE INTENSITY	% VEIN QTZ.
70			45/C		69.20-75.19: Intensely silicified tuff-breccia 2%, QTZ-sulphide veins 98%. Tuff-breccia occurs as angular 1-10 cm pieces floating in QTZ-vein. QTZ vein white to locally grey near sulphide veins and wall rock, minor chl, carb.							
			90°	1.5 cm wide chl-gal-tet vein.								
75			40/C		75.19-76.58: Intensely silicified tuff-breccia 20%, dark grey to white QTZ 80%. Tuff breccia occurs as angular and rounded (majority of [illegible] and subrounded) pieces in the QTZ vein. White QTZ generally occurs as 5 cm patches in dark QTZ, locally.							
			32/	30 cm wide QTZ-chl vein	76.58-79.25: Tuff breccia 50%, QTZ veins 50%. Tuff-breccia light green, locally dark green due to chlorite. QTZ veins about 50% dark grey, 50% white, up to 50% chlorite.							
80												

— 79.25 end of hole —

PAGE 8 OF 8	PROJECT: 2153									HOLE NO. 53
MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	TO	WIDTH	SAMPLE NUMBER	ASSAYS AU	Ag	Cu	Pb	Zn / Hg As Sb
		68·06								
		69·20		1·14	5470	0·019 (.011)	0·87			
69·20 - 75·19: In wall rock 20% pyrite generally veinlets and clusters. In vein 1% sphal, 1% tet, minor galena, pyrite. Base metals occur in hairline veinlets to 1·5 cm veins.				3·00	5471	0·027 (.016)	0·2			
		72·20								
				2·79	5472	0·002 (.008)	0·33			
		75·19								
75·19 - 76·58: In wall rock 5% py diss. Rare galena, sphal, py.				1·39	5473	0·036 (.012)	0·17			
		76·58								
76·58 - 79·25: In wall rock 5% pyrite diss. and veinlets. In veins rare galena, sphal, py.				2·67	5474	0·038 (.028)	0·29			
— 79·25 end of hole —		79·25								

N2/E2

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: 2153 Sulphurets	GROUND ELEV. 0.70m stick-up 1415m
HOLE NO.: 54	BEARING: 050°
LOCATION: West Brucejack Area L 0+03.3S, 0+15W	DIP: -45°
	TOTAL LENGTH: 221.6 Ft. 67.59 m
LOGGED BY: D. Bridge	HORIZONTAL PROJECT
DATE: August 1/82	VERTICAL PROJECT
CONTRACTOR: Ultra Mobile	
CORE SIZE: BQ	
DATE STARTED: July 30/82	
DATE COMPLETED: August 1/82	
DIP TESTS: 130 Ft, 39.62m 53° west, 43.5° corrected	
COMMENTS	LEGEND

ALTERATION SCALE

absent

slight

moderate

intense

TOTAL SULPHIDE SCALE

traces only

< 1%

1% – 3%

3% – 10%

> 10%

Dan a Bridge

PAGE 1 OF 6 | PROJECT: | HOLE NO. 54

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.0 - 1.70 : overburden and casing							
				1.70 - 17.90 : quartz stockwork and mineralized zone							
				1.70 - 3.70 : 75% qz veining and silicification w. 25% mainly intensely sericitized wallrock, probably andesite w minor dk gray to blk siltstone or argillite							
5				3.70 - 8.70 : 75% qz veining and 25% waxy green sericitic to light gray silicified wallrock, wallrock is brecciated and clasts appear rotated by the intense qz stockwork, largest wallrock fragment is 4 cm, 6 minor qz veins							
			75 / 8 cm qz-sfv	1.70 - 7.50 : intense iron oxide staining on frs and minor staining on veins							
10			60	8.70 - 12.00 : zone of intensely silicified and locally green and sericitic wallrock, avg 15% thin to 1 cm qz veins, rock is shattered by veining and silicification, 6 minor qz veins.							
			40 / 10 cm qz-sfv								
			~70 / 20 cm qz-sfv								
			65 / qz-sf veins	12.00 - 17.90 : mineralized qz stockwork in intensely sericitic, locally silicified, andesite?, avg 20% qz infilling of brecciated andesite and at least 2 periods of 1 qz - py - tet - spk veins, thin to 3 cm, irregular orientations to core axis							
15			40 / 55	17.90 - 18.05 : intrusive breccia							
		40 / 70	60	50% angular minor clasts in f-g light gray green comminuted matrix, silicified							
				18.05 - 29.55 : intensely sericitized rock, unknown origin, light green to light gray, fine-grained, fragmental, w. fine to 5 cm greenish clasts, clasts							
20											

PAGE 2 OF 6	PROJECT:	HOLE NO. 54

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag
1.70 - 3.70 : avg 1% dissem py, tr sph, gal, tet in 4 qz veins.		1.70		2.00	5492	.059	1.40
3.70 - 6.20 : avg 20% py, mainly dissem in altered wallrock, very minor dissem sph, gal, tet, electrum in 10 veins, only one obs of galena and electrum.		3.70		2.50	5493	(.033) .118	(1.34) 3.00
6.20 - 8.70 : avg 2-3% py, dissem in wallrock		6.20		1.90	5494	(.090) .029	(2.78) 0.87
8.70 - 11.30 : avg 5% py, mainly local disseminations to 75% in clasts or patches, qz veins, thin to 1 cm w. 2% py, 1% sph, 2% tet, veins are late event and rather irregular		8.70		2.60	5495	.013	1.57
11.30 - 12.00 : avg 15-20% f.g. dissem py, one qz v. w. tr tet		11.30	12.00	0.70	5496	(.008) .036	(1.50) 1.51
12.00 - 12.20 : qz v., 5% py, 5% tet, 2% sph, 1% argentite, minor electrum, pyrargyrite		12.00	13.40	1.40	5497	(.030) .198 (.121)	(1.49) 19.29 (13.50)
12.20 - 13.40 : avg 3% py, dissem and veinlets, qz veins w. 2% tet.		13.40	15.24	1.84	5498	.029 (.011)	3.09 (2.93)
13.40 - 15.24 : avg 5% py, 3 veins and a 25 cm zone w. minor py, tet, sph, one small electrum				2.66	5499	.150	20.52
15.24 - 17.90 : 5% dissem py, 18 veins, thin to 33 cm, totaling 65 cm, avg 2% each py, sph, tet, one argentite grain		17.90	18.90	1.00	5500	.007	0.70
17.90 - 20.40 : avg 15% py, fine to med grained dissem in patches replacing clasts or none in brecciated zones and irregular veins		18.90	21.40	2.50	5501	.007	0.64

PROJECT:

HOLE NO. 54

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ
				preferentially replaced by pyrite, abundant, very fine irregular qz veins and minor massive white veins ≤ 20 cm,							
25			subparallel qz v. irreg. 20cm qz v.	about 3-5% qz veins by volume, unevenly distributed.							
				29.55 - 32.05 : mineralized vein stockwork plus diabase:							
				29.55 - 30.48 : 40% qz veins w. py, tet, pyrargyrite, sph.							
30		c / diab. / c	60 / 70	30.48 - 31.05 : diabase dike							
				31.05 - 32.05 : 90% qz veins w. py, argentite, tet, sph, one yellow electrum grain							
				32.05 - 38.63 : moderately sericitic, pyritic arkose?							
				medium grey green arkose? cracked veined w. abundant narrow qz veins, avg 3-5% veining by volume, minor 5-20							
35				mm qz veins, locally a fine breccia texture w. pyrite replacing some clasts							
				38.63 - 52.25 : moderately sericitic arkose:							
40				light green to light grey, very fine-grained to med-grained granular arkose, very minor quartz veining, avg 2% by volume							
				38.63 - 93.62 : mainly fine-grained, uniform sericitic arkose							
		c	25								
45											

PAGE 4 OF 6	PROJECT:	HOLE NO. 59

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag		
					5502	.006	0.70		
24.40 – 28.00 : avg 5-7% dissem		24.40							
py, in grains									
and in patches, 3 minor qz									
veins w. tr tet or argentite,									
one w. minor sph.				4.15	5503	.006	0.59		
28.00 – 28.55 : as above but w.									
tr. reddish veins,		28.55							
possible fine dissem pyrargyrite				1.00	5504	.013	1.46		
28.55 – 29.55 : 5% dissem and		29.55				(.004	0.62)		
veinlet py, minor						(.110	31.20)		
reddish veins				1.50	5505	.134	31.48		
29.55 – 30.48 : 4% py, 2% tet,		31.05				(.882	129.0)		
1% pyrargyrite,		31.55		0.50	5506	2.561	118.35		
1% sph in qz veins		32.05		0.50	5507	(.010 / 0.047	1.50) / 1.46		
30.48 – 31.05 : barren diabase				1.10	5508	(.012 / 0.009	5.76) / 4.34		
31.05 – 31.55 : 18 cm v., 5% py, 2%		33.15							
avg, 2% tet, 1%									
sph, 3-1mm veins w. argentite seams				2.35	5509	0.001	1.11		
* 31.55 – 32.05 : 10% py, one qz v.,									
w. electrum, sph,									
pyrargyrite		35.50							
32.05 – 33.15 : 15% dissem py,									
3 thin qz v. w									
tet, one w py, pyrargyrite				3.13	5510	0.001	0.73		
33.15 – 38.63 : avg 15%									
dissem py,									
2 qz veins w. tr tet?									
		38.63							
38.63 – 52.25 : avg 1-2%				2.37	5511	0.002	0.23		
dissem py.									
		41.00							
				3.00	5512	0.004	0.47		
		44.00							

N2/E2

R. D. PENHALL LTD., MADE IN VANCOUVER, CANADA DUKSBAK WATERPROOF

PAGE 5 OF 6 | PROJECT: | HOLE NO. 54

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
			55 qzv.	43.62 - 52.25 : Fine to medium grained arkose with a distinct granular texture and minor fine chlorite? Flakes, locally trace 1-5%.							
50			20 c	52.25 - 53.15 : dacite dike? aphanitic, light green, mottled unit, scratches with knife, w minor pyrite and chlorite patches and wisps, contains wallrock clasts at contact and a pyritic seam at lower contact.							
			35 c	53.15 - 56.30 : qz stockwork : 30% irregular qz veining and silicification, thin to 30 cm qz zones, minor slightly purplish and grey qz patches, wallrock is sericitic arkose.							
55				56.30 - 67.54 : weakly sericitic arkose :							
60				Light grey, fine grained arkose w/ sericitic alteration, moderately intense qz veining, avg 3-5% veins by volume							
65				end of hole 67.54 m							

PAGE 6 OF 6	PROJECT:	HOLE NO. 54

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag			
at 45.0 m: 5 mm qz. w tr tet.				3.00	5513	0.005	0.41			
at 46.20 m: 1 cm qz vn. 10% py, 3% tet., vein cuts a minor py seam.		47.00								
				3.00	5514	0.006	0.47			
		50.00								
				2.25	5515	0.003	0.41			
52.25 - 53.15: avg 1% py		52.25								
		53.15		0.90	5516	0.003	0.47			
53.15 - 56.30: avg 3% py in andesite, minor 1 cm to 5 cm py in a few qz veins				3.15	5517	0.007	0.52			
		56.30								
56.30 - 61.00: avg 3-4% py, disem in minor patches and veinlets				4.30	5518	0.002	0.41			
61.00 - 67.59: avg 2% py:		61.00								
				3.00	5519	0.001	0.23			
		64.00								
				3.59	5520	0.001	0.27			
		67.59								

E1

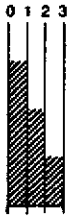
ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: 2153 Sulphurets	GROUND ELEV. 0.8m casing stick-up 1415m
HOLE NO.: 55	BEARING: 050°
LOCATION: West Bruncjack Area L 0+03.35, 0+15 W	DIP: -60°
	TOTAL LENGTH: 180 Ft. 54.86m
LOGGED BY: D. Bridge	HORIZONTAL PROJECT
DATE: August 2 - 3/82	VERTICAL PROJECT
CONTRACTOR: Ultra Mobile	
CORE SIZE: B9	
DATE STARTED: August 1/82	
DATE COMPLETED: August 1/82	
DIP TESTS: 180 Ft, 54.86m 67° read, -60° corrected	

ALTERATION SCALE



absent

slight

moderate

intense

TOTAL SULPHIDE SCALE

traces only

< 1%

1% – 3%

3% – 10%

> 10%

COMMENTS

LEGEND

Dana Bridge

PAGE 1 OF 6 | PROJECT: 2153 | HOLE NO. 55

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.00 - 1.25 : casing and overburden 1.25 - 21.90 : quartz stockwork and mineralized zone: 1.25 - 3.50 : 75% qz veining and 25% intensely sericitized wallrock, mainly dk grey siltstone 3.50 - 5.20 : 50% quartz veining in light grey, sericitic arkose ?, 3 qz veins w. minor calcite							
5				5.20 - 19.05 : avg 50% qz veining, mainly thin, irregular veins, in brecciated and silicified arkose or siltstone very intensely silicified w. minor patches of sericitic, unsilicified rock. the silicification consists of abundant, fine, irregular qz veins sections with mineralized quartz veins cutting vein stockwork and breccia-silicification at 5.20 - 8.90 and 10.85 - 12.19 and 13.35 - 19.05							
10			50 / 30	40 cm qz-cf. v.							
15			35 / 45	fractures	19.05 - 18.78 : moderately sericitic siltstone, mainly reddish brown to light grey, locally w. minor clasts to 3 cm, moderately qz veined w. 15% thin qz veins by volume.							
20			40 / C	contact and foliation	18.78 - 21.90 : sericitic to silicified siltstone or arkose w. 50% irregular mineralized qz veins, abundant highly irregular qz veins in stockwork silicification. weakly foliated at lower contact							

PAGE 2 OF 6	PROJECT: 2153	HOLE NO. 55

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag
1.75 - 5.20 : avg 3-4 % py, mainly disseminated in veinlets, 3 qz veins w. tr py, sph, tet		1.75		1.75	5521	.056	1.22
5.20 - 7.15 : avg 3-4 % py, disseminated and in minor, elongate patches, one qz v.w. argentite, 8 thin veins w. minor tetrahedrite		3.50		1.70	5522	(.063) .024 (.028)	(1.53) 0.79 (0.89)
7.15 - 8.40 : avg 5% disseminated py, 12 qz veins, 2 - 10 mm thick w 1-2% tet, 2 w minor sph, one w. minor argentite		5.20 7.15		1.95	5523	.017 (.013)	1.67 (1.48)
8.40 - 10.85 : avg 2% disseminated py, 2 qz veins w minor tet.		8.40		1.25	5524	.027 (.023)	4.29 (9.76)
				2.45	5525	.003 .019	2.61 (1.93)
10.85 - 12.19 : avg 3% py, 10 qz veins and zones w. 1-2% tet, <1% sph.		10.85		1.34	5526	.033 (.024)	6.21 (5.98)
12.19 - 13.38 : avg 10% py in disseminated veinlets		12.19					
13.38 - 19.05 : vein zone w 90cm of 2% tet, 1% py, minor argentite		13.38		1.19	5527	.021 (.011)	1.40 (1.51)
19.05 - 15.75 : 2% disseminated py, 10 qz veins 2-5mm w. 1% tet, tr argentite ?		19.05		0.67	5528	.125 (.098)	24.06 (30.55)
				1.70	5529	.018	2.13
15.75 - 18.78 : 2% disseminated py, 4 thin qz veins w. < 1% tet.		15.75		3.03	5530	(.011) .006 (.009)	(1.69) 0.85 (0.73)
18.78 - 20.75 : avg 5% py, 3 qz veins w. minor py, tet.		18.78		1.97	5531	.008 (.007)	2.03 (1.85)
* 20.75 - 21.90 : 10-15 % disseminated py, 19 irregular veins w. 1-2% tet, one with minor pyrargyrite and one grain of yellow electrum		20.75		1.15	5532	.041 (.047)	6.13 (6.57)
		21.90		1.00	5533	.011	0.54

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
			sheared and broken	21.90 - 27.94 : intensely sericitic arkose?							
			40 Foliation	mottled light gray w gray to green patches which appear to be alteration zones and pyritic							
25				zones, some may be due to brecciation., moderately qz veined, avg 3% veining, locally weakly foliated.							
			90	27.94 - 27.94 : diabase dike;							
			diabase	dk green, F.g.							
			90	diabase, very sharp contacts, upper contact chilled and bleached creamy green for 9 cm							
30			65 2cm qz v.w. tet-aurantite	27.94 - 36.75 : intensely sericitic arkose?							
				mottled medium green and gray, pyritic arkose, mainly brecciated with mainly sub-							
				angular clasts which are commonly greener than the matrix, brecciation is probably tectonic but could be primary							
35				very weakly qz veined, about 1% veins, mainly thin and irregular.							
				36.75 - 38.50 : qz veined and silicified zone.							
				3, 10-20 cm qz-sulphide veins in mainly silicified and moderately qz veined arkose?, 35-40%							
				qz veining, miniz. veins cut silicification at irregular angles							
40				38.50 - 59.86 : sericitic brecciated arkose							
				indistinct to very well developed fragmental texture, fragments are commonly sub-angular,							
				greener than the matrix, and more pyritic, locally the fragments are the same color as the matrix and are							
45				rimmed by pyrite, there may							

PAGE 4 OF 6 | PROJECT: 2153 | HOLE NO. 55

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag
21.90 - 27.44: avg 10-15% Fine-grained pyrite, disseminated in patches, mainly appears to be replacing clasts.		22.90					
				1.00	5534	<.001	.53
		23.90					
				3.54	5535	.006	.44
27.44 - 27.94: barren diabase		27.44					
		27.94		0.50	5536	.002	.08
27.94 - 31.70: avg 15% dissem py, 5 thin qz veins w <1% tet, tr sph, one w. minor argentite at 30.50				3.76	5537	.011	.93
31.70 - 36.75: avg 10% py, dissem, 7 minor qz veins w. tr tet, tr sph.		31.70					
				2.30	5538	.002	.21
		34.00					
				1.75	5539	.006	.53
* 36.75 - 37.63: 50cm of qz veining in 3 veins, avg. 5% py, 2% sph, 2% tet, 1% argentite, minor white electrum and pyrargyrite in one vein, 20% py in wallrock		35.75					
		36.75		1.00	5540	(.003 .007	.44) .37
		37.63		0.88	5541	1.180 .130	48.69) 47.75
37.63 - 38.50: 10% py, 2 v.w. tet				0.87	5542	.013 (.008	3.91 3.06)
		38.50					
38.50 - 93.20: avg 10% py, mainly dissem in patches, 3 qz veins, 1-9 cm thick w. 1% tet, tr sph.				1.00	5543	.004 (.002	.71 .80)
		39.50					
				3.70	5544	.125 (.069	.85 .82)
43.20 - 95.85: 5% py, 10 thin qz veins w. minor 1-1% tetrahedrite, one w. 10% sph.		43.20					
				2.65	5545	.005	1.17

PAGE 5 OF 6 | PROJECT: 2153 | HOLE NO. 55

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ
				be frequently on path crns from intersecting pyrite veinlets. weakly qz veined, avg 1% qz veining							
50			20	Fractures							
			40 85	minor Fr or shear							
				59.86 end of hole							

PAGE 6 OF 6	PROJECT: 2153	HOLE NO. 55

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag			
45.85 - 54.86 : avg 5% py, 2 gz, pins w. minor tetrahedrite		45.85								
				3.15	5546	.001	.53			
		49.00								
				3.00	5547	.002	.59			
		52.00								
				2.86	5548	.004	.63			
		54.86								

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: 2153 Sulphurets	GROUND ELEV. 0.8m casing stick-up 1415m
HOLE NO.: 56	BEARING: 050°
LOCATION: West Bruce Jack Area L 0+03.35, 0+15W	DIP: -68°
	TOTAL LENGTH: 159 Ft 48.96m
LOGGED BY: D. Budge	HORIZONTAL PROJECT
DATE: August 3/82	VERTICAL PROJECT
CONTRACTOR: Ultra Mobile Diamond Drilling	
CORE SIZE: BQ	
DATE STARTED: August 2/82	
DATE COMPLETED: August 2/82	
DIP TESTS: 159 Ft, 48.96m, 74° read, 69° corrected	

ALTERATION SCALE

absent

slight

moderate

intense

TOTAL SULPHIDE SCALE

traces only

< 1%

1% – 3%

3% – 10%

> 10%

COMMENTS

LEGEND

Don A Budge

PAGE 1 OF 4 | PROJECT: 2153 | HOLE NO. 56

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.0 - 2.10 : casing and overburden 2.10 - 29.00 : quartz stockwork and mineralized zone: 2.10 - 9.60 : massive qz vein and qz w. minor dark gray to black siltstone clasts, 80% qz vein and 20% wall rock 9.60 - 6.50 : intensely sericitized andesite or siltstone w. 90% qz veining, one mineralized vein at 6.9°.							
5			15 crude Foliation 30 10 cm qz-sfv. 50	6.50 - 15.70 : mainly intensely silicified and locally sericitic siltstone and andesite with 60% qz veining, local quartz-sulphide veins and vein zones cut all other stockworks							
10			50 qzv								
15			20 fractures	15.70 - 16.75 : massive quartz vein zone w. 10% wall rock 16.75 - 29.00 : light, grey, green to reddish brown siltstone and/or andesite, mainly intensely sericitic, locally silicified, moderately quartz veined, about 15% veins							
20			20 Foliation								

PAGE 2 OF 4	PROJECT:	HOLE NO. 56

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag			
2.10 - 6.00 : avg 3% dissem py in wallrock		2.10								
		4.60		2.50	5549	.037 (.030	.82 .78)			
6.00 - 6.50 : 10% dissem py, 10 cm qz v. w. 5% py, 2% sph, 2% tet, 1% arg en tite, one yellow electrum grain		6.00		1.40	5550	.026 (.032	1.24 1.30)			
		6.50		0.50	5551	.167 (.100	14.53 15.80)			
6.50 - 8.60 : avg 3-5 % py, 5 thin qz veins w. minor tetrahedrite		8.60		2.10	5552	.017 (.017	1.31)			
8.60 - 9.50 : avg 1% py, 4 qz v, 0.5 - 3 cm w 2% sph, 2% tet, 1% py, <1% pyrargyrite		9.50		0.90	5553	.040 (.031	6.14 4.85)			
9.50 - 12.00 : avg 2% py, 5 minor qz veins w. 1% tet, tr sph, pyrargyrite		12.00		2.50	5554	.048 (.030	2.10 2.23)			
12.00 - 13.85 : 1% py, 6 qz veins, 1 to 50 cm w 1% tet, 1% sph, 1% gal, minor pyrargyrite, argentite		13.85		1.85	5555	.092 (.030	13.06 15.64)			
13.85 - 15.70 : 10% dissem py, 9 qz veins w. minor tetrahedrite, sph.				1.85	5556	.053 (.038	3.03 3.34)			
15.70 - 16.75 : semi-massive qtz v. w. <1% py.		15.70		1.05	5557	.013 (.009	2.92 2.89)			
16.75 - 20.80 : avg 3% dissem py, mainly in arkose, 6 minor qz veins w. trace tetrahedrite		16.75		4.05	5558	.003 (.002	1.28 1.31)			
20.80 - 24.00 : avg 5% py, 11 qz veins and zones, common 1 cm thick w. minor tet, one vein w. minor arg en tite		20.80			5559	.004 (.002	1.41 1.29)			

PAGE 3 OF 4 | PROJECT: | HOLE NO. 55

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ
			35	24.00 - 27.25 : intensely sericitized arkose, brecciated in appearance w. chloritic-pyritic clasts in a sericitic matrix, weakly qz veined, avg 3% qz veining							
25			40	25.35 - 26.10 : sheared and broken core, about 4 cm of diabase dike							
			30 / 40 qz veins	27.25 - 34.38 : mainly silicified arkose : mottled light grey, light green, to medium grey, mainly f-g, silicified, locally varying to intensely sericitic, very weakly qz veined w. thin to 5mm veins, avg 3% veining							
30			30 qz veins / 40	34.38 - 43.20 : silicified arkose w. qz stockwork : mainly moderately silicified to locally sericitic arkose, weakly qz veined w. 0.5 - 10 cm qz and qz-sulphide veins, mainly at 30 - 40° to core axis, avg 5-10 % qz veins							
35				39.68 - 41.70 : avg 15% irregular qz and qz-sulphide veins, wallrock clasts between multiple intersecting veins							
40			40	43.20 - 48.46 : sericitic arkose foliation? light grey, fairly uniform, avg 2% qz veining, 1% hairline calcite veining							
45											

PAGE 4 OF 4	PROJECT:	HOLE NO. 56

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS A_u	ASSAYS A_g
		24.00					
24.00 - 27.25 : avg 15% fine-grained, dissem py, mainly as disseminations of up to 85% py, preferentially replacing clasts or patches, one 2mm qz v.v. tr tet.		27.25		3.25	5560	.010	.58
27.25 - 31.45 : avg 10% py, dissem in patches and minor veins, one qz v.v. tr tet				4.20	5561	.007	.41
31.45 - 34.38 : avg 10% py, 8 qz veins, 2-6 mm v. minor tetrahedrite, one v. tr spl, minor purplish-red color from dissem hematite? in scattered sections		31.45		2.93	5562	.007	.42
34.38 - 36.60 : 10% dissem py, 8 qz veins, 1-10 cm, v. 1% py, 1% tet, tr. pyrargyrite		34.38		2.22	5563	.010	.72
36.60 - 39.68 : 10% dissem py, 2 qz veins v. minor spl.		36.60					
39.68 - 91.70 : 10% py, 8 veins and vein zones, up to 6 cm, v. avg 1% tet, 1% pyrargyrite, tr. avg antite		39.68	3.08		5564	.007	.37
91.70 - 94.55 : avg 15% pyrite		91.70		2.02	5565	.028 (.020)	5.82 6.60)
				1.50	5566	.020	1.93
		93.20				(.013	2.17)
94.55 - 98.46 : avg 5% py		94.55		1.35	5567	.001	.44
				3.91	5568	.002	.73
		98.46					

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: 2153 Sulphurets	GROUND ELEV. 1.0m casing stick-up 1418 m
HOLE NO.: 57	BEARING: 050°
LOCATION: West Bruvejack L 0+38.7 S, 0+9.7 W	DIP: -45°
	TOTAL LENGTH: 240 ft 73.15m
LOGGED BY: D. Bridge	HORIZONTAL PROJECT
DATE: August 4/82	VERTICAL PROJECT
CONTRACTOR: Ultra Mobile Diamond Drilling	ALTERATION SCALE: 0 1 2 3 — absent; slight; moderate; intense
CORE SIZE: BQ	
DATE STARTED: August 2/82	TOTAL SULPHIDE SCALE: 0 1 2 3 4 — traces only; < 1%; 1% – 3%; 3% – 10%; > 10%
DATE COMPLETED: August 3/82	
DIP TESTS	
COMMENTS	LEGEND

Diane A Bridge

PAGE 1 OF 8 | PROJECT: 2153 | HOLE NO. 57

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
			60 Foliation	0.00 - 0.90: casing and broken rock 0.90 - 2.50: coarse arenite or grit: white, very siliceous, consists of 1mm to 10mm siliceous fragments and grains, weakly foliated, 5% qz veins.							
5				2.50 - 7.23: arkose? variably intensely silicified to moderately sericitic, brecciated and weakly qz veined, contains minor pyritized siliceous clasts, avg 3% qz veining, minor calcite in frs in some qz veins							
				7.23 - 15.08: arkose w. quartz-sulphide stockwork: fine-grained, granular arkose, mainly moderately sericitic locally silicified, moderate intensity of qz veining, avg 10% qz veins							
10			~60 10 cm qz-sfv								
			50 15 cm qz-sfv								
15				15.08 - 25.65: arkose light gray, fine to medium grained, uniform arkose, weakly quartz veined, trace calcite on frs in qz veins, avg 2% qz veining							
20			11 17								

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	WIDTH	SAMPLE NUMBER	ASSAYS Au	Ag	Cu	Pb	Zn / Hg As Sb
0.90 - 2.50 : <1% disseminated py,		0.90								
3 qz veins, 5-15				1.60	5569	.001	0.35			
mm w trace tetrahedrite										
2.50 - 5.95 : avg 10% disseminated py,		2.50								
Fine to medium-										
grained										
				2.95	5570	.003	0.76			
5.95 - 7.23 : avg 15-20% disseminated										
py, one, 2cm qz v.		5.45								
w. 1% tet, tr pyrargyrite,				1.78	5571	.027	1.43	28	54	92 / 30 116 16
2% sph						(.024	1.38)			
7.23 - 8.05 : avg 5% py, 6 vein		7.23								
zones w. 2% sph,		8.05		0.82	5572	.062	4.73	30	300	1180 / 60 112 66
<1% tet <1% pyrargyrite,						(.037	4.88)			
trace galena				2.52	5573	.038	2.16	33	96	103 / 60 8 26
8.15 - 10.57 : avg 5% py, two						(.020	2.09)			
vein zones and 4										
minor qz veins w. minor		10.57								
sph, tet, pyrargyrite				1.36	5574	.185	16.31	294	440	1090 / 50 30* 198
10.57 - 11.93 : <5% py, 8 veins,						(.109	24.80)			
thin to 10 cm w.		11.93								
2% py, 1% tet, minor sph,										
trace pyrargyrite				2.39	5575	.020	1.62	36	66	240 / 30 12 19
11.93 - 19.32 : <5% py, 9 minor						(.013	1.56)			
qz v. w tr tet		14.32								
14.32 - 15.08 : leached core and										
a 15cm qz v. w		15.08		0.76	5576	.087	13.24	142	880	1770 / 100 7* 120
3% sph, 1% py and tet, tr pyrarg.						.060	20.3)			
15.08 - 25.65 : avg 5% py,				2.92	5577	.014	1.52	36	46	37 / 40 8 20
disseminated in						(.019	1.47)			
Fine Fractures, seven minor										
qz veins w. sph, tr tet.		18.00								
				3.00	5578	.005	.87			
20.25 - 21.80 : pyrite on										
thin Frs at 10° to core axis		21.00								
				3.00	5579	.001	.29			

PAGE 3 OF 8	PROJECT: 2153	HOLE NO. 57

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
25			45° c		25.65 – 26.18 : diabase dike : with sharp, unchilled contacts, lower contact ground.							
			0–10	Fracture and shear	26.18 – 34.10 : arkose Fine-grained, moderately sericitic, weakly qz veined, avg 2% qz veins,							
30			10°	fracture and qz v.	minor calcite on frs in qz veins							
			60–65°	Frs.	34.10 – 43.65 : arkose slightly more granular arkose, darker in							
35					color due to increased pyrite content and possibly some chloritic alteration, 3% qz veining, minor fractures and possibly slight foliation at 60–65°							
40					38.50 – 44.65 : avg 3-5% qz veins, some w. minor pyrite							
45					43.65 – 51.90 : arkose Fine-grained, uniform, light gray arkose,							

PAGE 4 OF 8	PROJECT: 2153	HOLE NO. 57

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag			
		24.00								
25.65 - 26.18 : barren diabase				3.00	5580	<.001	.17			
26.18 - 34.10 : avg 3-5% py, mainly dissem, minor py on frs.		27.00								
				3.00	5581	<.001	.23			
		30.00								
				3.00	5582	<.001	.23			
		33.00								
34.10 - 44.65 : avg 5-8% dissem py.				3.00	5583	.003	.41			
		36.00								
				3.00	5584	.001	.21			
		39.00								
at 41.00 : trace grey sulphide in qz v.				3.00	5585	.005	.52			
		42.00								
				3.00	5586	.002	.43			
at 44.50 : trace grey sulphide in qz vein		45.00								

PAGE 5 OF 8 | PROJECT: 2153 | HOLE NO. 57

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				mottled only by minor variations in pyrite content, weakly qz veined, avg 3% qz veining w. minor calcite on fx in qz veins, moderately sericitic							
50											
			irreg. contact	51.90 - 57.65 : arkose, brecciated light gray, arkose w. 1% angular clasts of green, chloritic arkose in moderately sericitic arkose							
55											
			40, 45 shears	at 57.30 : 2cm gouge at 57.65 : 1cm gouge 57.65 - 68.35 : brecciated arkose: light gray to							
60				light green, aphanitic to fine-grained arkose, moderately to intensely sericitic, avg 10% distinct clasts up to 8 cm, clasts vary from waxy green totally sericitized to green w. minor to 90% pyrite, clasts vary from sub-rounded to angular. avg 1% qz-calcite veins							
65											

PAGE 6 OF 8 | PROJECT: 2,53 | HOLE NO. 57

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag			
44.65 - 57.65: avg 5% disseminated py										
				3.00	5587	.001	1.14			
		48.00								
				3.00	5588	.001	0.47			
		51.00								
				3.00	5589	.001	0.34			
		~~51.00~~ 54.00								
				3.00	5590	.001	0.07			
		57.00								
57.65 - 69.00: avg 10% py, mainly disseminated in clasts and ground mass, minor py on frs				3.00	5591	<.001	0.37			
		60.00								
				3.00	5592	<.001	0.33			
		63.00								
		~~63.00~~								
				3.00	5593	<.001	0.03			
		66.00								

PAGE 7 OF 8 | PROJECT: | HOLE NO. 57

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
70			42 cs shear 35 cs	68.35 - 69.00 : arkose uniform granular arkose, intensely sericitic, w dark green sericitized Feldspar grains, 1% qz veining							
				69.00 - 73.15 : arkose : uniform, light gray to medium green, <1% qz veining							
				73.15m end of hole							

PAGE 8 OF 8	PROJECT: 2153	HOLE NO. 57

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS A_u	ASSAYS A_g			
				3.00	5594	<.001	.05			
69.00 - 73.15: avg 2% disseminated py		69.00								
				4.15	5595	.002	.03			
		73.15								

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT 2153	**GROUND ELEV.** 0.9m casing stick-up 1418 m
HOLE NO. 58	**BEARING** 050
LOCATION West Brucejack Area L 0+38.7S, 0+9.7W	**DIP** -60
	TOTAL LENGTH 89 Ft 27.13 m
LOGGED BY D. Bridge	**HORIZONTAL PROJECT**
DATE August 4/82	**VERTICAL PROJECT**
CONTRACTOR Ultra Mobile	**ALTERATION SCALE**
CORE SIZE BQ	
DATE STARTED August 3/82	**TOTAL SULPHIDE SCALE**
DATE COMPLETED August 3/82	
DIP TESTS none	
COMMENTS	**LEGEND**

absent

slight

moderate

intense

traces only

< 1%

1% – 3%

3% – 10%

> 10%

Dave A Bridge

PAGE 1 OF 4 | PROJECT: 2153 | HOLE NO. 58

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.00 - 0.90 casing and broken rock 0.90 - 3.15 : coarse arenite or grit: white grit consisting of 1-5mm siliceous grains, wk foliated, very hard and siliceous, avg 1% qz veining							
				3.15 - 8.05 : arkose? transitional contact to light to med gray, Fine-grained arkose? locally brecciated by silicification, varies from moderately silicified to locally moderately sericitic, average <1% to 2% qz veining.							
5				8.05 - 20.10 : arkose with qz-sulphide stockwork mainly moderately to intensely sericitized arkose w. minor patches of silicified arkose, generally moderately qz veined with about 1% qz veining. mineralized stockworks at							
			25/35	qz-fy foliations 8.05 - 11.33, 15.35 - 17.60, 19.75 - 20.10., individual veins do not regular contacts w. wallrock							
10											
			~45	15.35 - 17.60 : main qz-sulphide vein is at 16.03 - 17.00, consists of 10% wallrock patches and about 5% sulphides + electrum by weight in qz.							
			qz-sfv zone								
			~25								
15											
				20.10 - 22.95 : sericitic arkose moderately sericitic arkose, weakly qz veined, avg 2% qz veining							
20			C/70	22.95 - 23.95 : diabase dike							

PAGE 2 OF 4	PROJECT: 2153	HOLE NO. 58

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	Ag	Cu	Pb	Zn/Mo As Sb
0.90 - 3.15 : avg 1% py, two minor qz veins w. trace tet, 2% py		0.90		2.25	5595	.002	0.23			
3.15 - 8.05 : avg 5% py, mainly disseminated, 3, thin to 1cm py veins, two thin qz veins w. trace tet.		3.15		3.90	5597	.012	0.69			
8.05 - 11.33 : avg 5% py, 11 veins, 2mm - 10cm w. avg 1% py, trace tet and pyrargyrite, two w. 5% sph.		7.05		1.00	5598	.014	0.87			
		8.05		3.28	5599	.040 (.040	2.68 2.55)	85	312	1500/500
11.33 - 15.35 : avg 5%, <1% py in qz veins		11.33								
15.35 - 16.03 : 6 qz veins w. 1-3% tetrahedrite-pyrargyrite.		14.35		3.02	5600	.027 (.091 (.012	0.76 1.10) 0.41)	31	58	59/110
16.03 - 17.00 : qz v. w. 15% sph, 5% py, 5% argentite, 5% pyrargyrite, 5% tet?, 1% galena, <1% 1-2mm flakes of yellowish electrum		15.35		1.00	5601	.029	1.28	15	20	21/50
		16.03		0.68	5602	(.108 0.201	63.85) 63.59	131	212	222/
		17.00		0.97	5603	5.741 (8.600 (.259	433.78 600.0 29.10)	1300	17600	15400/
17.00 - 17.60 : 5% py, 1% tet.		17.60		0.60	5604	0.273	13.71	238	920	3700/
17.60 - 20.10 : trace tet, py in qz veins, 35cm zone at 19.75 - 20.10 w. 1% sph, 1% pyrargyrite, 1% tet.		18.60		1.00	5605	.011 (.031	1.27 2.70)	45	64	96/
		20.10		1.50	5606	.059 (.050	1.45 2.30)	22	108	95/50
20.10 - 22.95 : one qz vein, and one 20cm vein zone w. 2% sph, 2% tet.		21.95		2.85	5607	.077 (.050	6.93 5.42)	47	184	270/

PAGE 3 OF 4 | PROJECT: | HOLE NO. 58

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
25			70 / 25	diabase qz-sfv	23.45-27.13: sericitized aphyric: moderately sericitic, fine to medium-grained granular, feldspar grains visible for 30cm beyond lower diabase contact, weakly qz veined, avg 5%.						
			50 / 55	7cm qz-sfv							
					27.13 end of hole						

PAGE 4 OF 4	PROJECT:	HOLE NO. 58

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag	ASSAYS Cu	ASSAYS Pb	Zn / Mo / As / Sb
22.95 - 23.45: barren diabase										
23.45 - 27.13: avg 10% dissem py in quartose,				3.25	5608	.021 (.019	0.93 .79)	46	24	334 / x̄ x̄ x̄ x̄
at 23.70: 2cm qz v. w. 2% sph, tr tet		25.20		0.50	5609	.055 (.101	5.98 14.20)	47	328	382 / x̄ x̄ x̄ x̄
at 25.92: 7cm qz v. w. 2% py, 2% sph, 1% pyrrhotite, minor electrum		25.70		1.33	5610	.020 (.011	1.27 1.31)	26	28	22 / x̄ x̄ x̄ x̄
		27.13								

N2/E2

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: 2153	GROUND ELEV. 0.3m casing stick-up 1418m
HOLE NO.: 59	BEARING: 050°
LOCATION: West Brucejack Area L0+38.7S, 0+9.7W	DIP: -75°
	TOTAL LENGTH: 150 Ft 45.72m
LOGGED BY: D. Bridge	HORIZONTAL PROJECT
DATE: August 5/82	VERTICAL PROJECT
CONTRACTOR: Ultra Mobile	ALTERATION SCALE: 0 1 2 3 — absent; slight; moderate; intense
CORE SIZE: BQ	
DATE STARTED: August 4/82	TOTAL SULPHIDE SCALE: 0 1 2 3 4 — traces only; < 1%; 1% – 3%; 3% – 10%; > 10%
DATE COMPLETED: August 4/82	
DIP TESTS	
COMMENTS	LEGEND

Dave A Bridge

PAGE 1 OF 4 | PROJECT: 2153 | HOLE NO. 59

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.00 - 0.30 : casing 0.30 - 3.78 : quartz grit and conglomerate : white to light gray, very siliceous, gray to white quartz grains from 1 - 10 mm in silicified matrix, 3-5% qz veins							
			30 / Foliation / c 40	3.78 - 12.60 : sericitized andesite medium gray - green,							
5			25 / Thin shears / 38	intensely sericitized andesite, mainly brecciated with waxy green non-pyritic clasts to gray and green clasts floating in weakly silicified matrix, weakly qz veined, avg 1%, qz veins							
10			30 / Foliation / 38 / 25								
			25cm shear zone	12.60 - 16.15 : silicified andesite brecciated andesite, mainly moderately silicified, qz clasts or qz veins cut at low angles to core axis, 2% qz veining							
15			20 / 6cm / 2cm / 75 / zone	16.15 - 37.00 : andesite and minor stockwork. 16.15 - 18.52 : intensely							
			20 / 2cm	sericitized andesite w. 20% qz veins, mainly thick qz - minor sulphide veins and thin, 1-3 mm qz veins							
20				18.52 - 28.07 : andesite, variably silicified and sericitic, with moderately intense qz stockwork consisting of mainly thin qz veins, 1-5 mm and zones of qz floating causing							

 PROJECT: HOLE NO. 59

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	Ag	Cu	Pb	Zn / Hg As Sb
		0.30								
0.30 - 3.78 : avg 3% py, mainly disseminated 3 qz v w. tr tetrahedrite?				3.48	5611	.004	0.34			
3.78 - 12.60 : avg 10-15% py, fine-grained, dissem and in minor patches and veinlets.		3.78								
7.20 - 7.75 . 4 qz veins w. 1% py, minor tetrahedrite				4.44	5612	.008	1.03			
		8.20		3.65	5613	.013	0.63			
11.85 - 12.05 2 thin qz veins w. minor tetrahedrite		11.85		0.85	5614	.009	0.76			
12.60 - 16.15 : avg 5% py, one minor vein zone at 14.20 - 14.25 w. 1% tet - pyrargyrite		12.60		3.55	5615	.039	1.17	36	84	122/22 142 19
						(.037	1.90)			
16.15 - 18.52 : 5-10 % dissem py, 5 qz veins and vein zones, at low angles to core axis w. 1% py, <1% sph, 1% tet, minor pyrargyrite		16.15		2.37	5616	.020	1.11	23	100	74/120 176 22
						(.028	0.96)			
18.52 - 28.07 : avg 5% py, mainly dissem		18.52		3.48	5617	.008	0.52	19	18	44/25 144 13
						(.013	0.30)			
		22.00								

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
			60 / 0 / 55	a bleached appearance, about 10% qz veining 22.72 - 23.15: diabase dike 23.15 - 28.07: arkose, variably silicified and sericitic, mainly fine-grained granular, locally light green, aphanitic, intensely qz veined, avg. 10% qz veining							
25				28.07 - 30.65: intensely qz veined w. avg 20% qz veining, 3 mineralized qz veins.							
30			60 / qz-sfv.	30.65 - 37.00: section with good qz-sulphide veining, avg 25% qz veining in mainly int. sericitic arkose 30.65 - 33.22: arkose is							
			20 / qz-sfv. / 50 / qz-sfv / qz-sfv	mainly soft, light green w. 20% fragment-like patches and wisps of >50% py. - general: orientations of veins is highly irregular, the qz-sulphide veins cut the earlier fine qz veins							
35			30 / -25 / qz-sfv / -10	37.00 - 45.72: sericitized arkose intensely sericitic arkose, light to medium grey, uniform, granular texture, moderately qz veined, avg 10% qz veining							
40			qz-sfv. / 25								
			qz-sfv veins.								
45											

 PROJECT: HOLE NO. 59

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	WIDTH	SAMPLE NUMBER	ASSAYS Au	Ag	Cu	Pb	Zn/Hg As Sb
				3.00	5618	.019 (.008	0.29 0.34)	27	24	17/ 10 100 x
at 25.30: 5mm qz v. w. 3% sph, tr pyrargyrite		25.00								
				3.07	5619	.011 (.010	0.64 0.45)	21	32	34/ 50 60 23
28.07 - 30.65: avg 10% py, dissem and patchy, 3 qz veins, 2mm - 4cm w. minor tet, sph, py, pyrargyrite		28.07		2.58	5620	.614 (.326	8.34 3.72)	32	164	83/ 150 42 32
* 30.65 - 31.25: 60% qz veins w. 3% py, 2% sph-tet, 1% pyrargyrite, tr electrum		30.65								
		31.25		.60	5621	.999 (.433	9.56 12.85)	60	720	930/ 340 124 60
31.25 - 32.10: 10% py in patches										
32.10 - 33.22: 20% qz veins w. 1% each py, tet, sph, pyrargyrite		32.10		.35	5622	.054 (.040	2.39 1.56)	27	68	40/ 110 113 32
		33.22		1.12	5623	.078 (.117	10.03 5.26)	143	320	110/ 320 209 105
* 33.22 - 35.00: 50cm qz v. w. 2% py, 1% tet?, 95cm vein zone w. avg. 5-8% sph, 2-5% py, 2% each pyrar, argentite, <1% galena, scattered coarse yellow electrum				1.78	5624	2.651 (2.72	258.27 286.0)	1440	3000	13200/ [illegible]
		35.00		2.00	5625	.043 (.088	5.31 10.20)	67	520	1100/ [illegible]
* 35.00 - 37.00: 2 minor veins and a 30cm vein zone at 36.85 w. 3% py, 3% sph, 1% tet-pyrargyrite, tr. electrum		37.00								
37.00 - 38.50: avg 5% py, 2 qz v. w. 1% sph, one w. 2% py, <1% tet-pyrargyrite				1.50	5626	.045 (.019	0.77 1.26)	28	64	68/ [illegible]
		38.50								
38.50 - 41.05: avg 5% py, one qz v. at 40.65 - 41.05 w. 5% py, 1% tet-pyrargyrite				2.55	5627	.023	0.96			
		41.05								
41.05 - 45.72: avg 5% py, minor sph, tet in thin veins at 42.70 - 43.30, 2% sph, 1% tet-pyrargyrite in thin qz veins at 44.10 - 44.45				5.08	5628	.014	1.36			
		46.13								

N2/E2

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: 2153	GROUND ELEV.: 1408 m
HOLE NO.: 60	BEARING: 050°
LOCATION: West Bruce Jack Area L 0+49.3 N , 0+10.1 W	DIP: -45° TOTAL LENGTH: 67.06m (220')
LOGGED BY: W. Melnyk	HORIZONTAL PROJECT
DATE: Aug. 9, 1982	VERTICAL PROJECT
CONTRACTOR: Ultra Mobile Diamond Drilling	ALTERATION SCALE 0 1 2 3 absent slight moderate intense
CORE SIZE: BQ	
DATE STARTED: Aug. 5, 1982	TOTAL SULPHIDE SCALE 0 1 2 3 4 traces only < 1% 1% – 3% 3% – 10% > 10%
DATE COMPLETED: Aug 6, 1982	
DIP TESTS	
COMMENTS: Mineralized zone 8.37 - 26.93 m.	LEGEND

W. Melnyk

PAGE 1 OF | PROJECT: 2153 | HOLE NO. 60

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				0 - 4.48 Casing							
				4.48 - 8.37 : Siltstone - Argillite : Dark grey to black v. fine grained. Brecciated, fragments cemented with quartz. Rock is soft except where silicified. Section has been flooded with quartz.							
5											
				8.37 - 14.95 : Quartz vein : Bull qtz containing specks of Tetra, also several fragments of Arkose. Section is about 80% qtz.							
10				contains thin whispy v.f.g. black materials - py + tetra.							
				Final .8 meters contains 3cm frags of sil Arkose							
15			45°	14.95 - 18.09 : Arkose. Brecciated fine grained, grey, fragments from <1cm to >5cm, angular, altered cemented with qtz. 15.56 - 15.80 : Qtz vn. clasts of Arkose mineralized. Fragments bleached buff-tan.							
				18.09 - 19.30 : Quartz vn. contains several fragments of Arkose 10% well mineralized. 19.10 - 19.30 : Good mineralization							
20				19.30 - 20.96 : Arkose, chaotic contorted unit, variably colored. 20.96 - 21.49 : Tuffaceous Mudstone - 21.49 - 21.82 : Arkose 21.82 - 22.00 : Tuff Mudst. Small qtz crystals from specks + pebs							

PAGE 2 OF	PROJECT:	HOLE NO. 60

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	Ag	Cu	Pb	Zn / Hg & Sb
		4.48								
4% diss. py in Argillite				2.02	5629	.009	0.51			
		6.50								
				1.87	5630	.008	0.41			
Fine grained py 1-2% through interval		8.37								
Traces Tetra.				1.63	5631	.041	0.69	29	28	25 / 105 As 108
		10.00				(.027	0.89)			
10.98 Traces Argentite, Malachite				2.00	5632	.358	6.81	53	48	34 / 15 Sx 31
Trace pyrrh.		12.00				(.359	7.75)			
				1.50	5633	.693	6.52	43	39	39 / 140 27 154
		13.50				(.394	5.68)			
				1.45	5634	.113	3.96	154	70	65 / 375 As 181
		14.95				(.066	5.72)			
				0.85	5635	.028	3.44	65	380	180 / 250 As 96
		15.80				(.020	3.43)			
15.56 - 15.80: 1% tetra, 2% sphal,				2.20	5636	.008	0.62	38	104	61 / 270 230 14
2% py, Tr. Argentite						(.008	6.61)			
		18.00								
fg. py 3%, 3% Tetra, Traces				2.20	5637	.069	11.14	605	520	415 / 210 80 165
sphal						(.052	17.05)			
19.10 - 19.30: 5% Tetra, <1% Arg, Tr. Cpy, 2% sphal										
2% sphal.		20.20								
20.13 - 20.24: g.v. Tr. Arg, Ele(?), Tetra 4%,										
Tr. Cpy, py 5%										
19.30 - 24.02: py 12% (lots of sulfide)										
Specks of sphalerite										

PAGE 3 OF 6 | PROJECT: 253 | HOLE NO. 60

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
			50° fol	22.00 - 22.34 : Arkose							
				22.34 - 22.83 : Tuff. Mudstone. 1-2mm Apple green clasts throughout.							
				22.83 - 24.02 : Arkose							
25			60° fol	24.02 - 24.58 : Diabase Dike : f-m gr. not mineralized.							
			bedding 70°	24.58 - 26.93 : Arkose : banded, maroon - grey - green, extensive q.v. pyritic							
			45° q.v.	26.93 - 34.25 : Arkose : med grey, weakly fol regularly spaced q.v. 2-3cm wide @ 70° w.c.a							
30											
			70° fol	34.25 - 42.15 : Arkose. Medium grained, shades of grey to green, weak suggestion of foliation or bedding @ 70°							
35			bedding 60-75°	Section is unique due to large amt of pyrite as veinlets + veins possibly parallel to bedding.							
				Unit contains some q.v. mainly as 1-4mm veinlets parallel with pyrite veinlets							
40											
				42.15 - 67.06 : Arkose : Section is characterized by a bleaching effect near qtz veins most of which are very thin.							
				Core is blotchy light pale whitish green to dark grey color where rock is not as intensely alt'd. Rock is siliceous + sericitic in bleached zones.							
45											

PAGE 4 OF 6 | PROJECT: 2153 | HOLE NO. 60

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	WIDTH	SAMPLE NUMBER	ASSAYS Au	Ag	Cu	Pb	Zn/Hg As Sb
				3.82	5638	.031	0.79	55	102	550/
		24.02				(.012	0.74)			
		24.58		0.56	5639	.108	0.18	163	35	68/
						(.011	0.13)			
24.58 - 25.50 . Disi tetra <1%, Specks sphal.				2.35	5640	.046	7.57	73	195	225/
31.27 - 4cm g.v. 2% pyrar, 3% sphal 70° u.c.a						(.033	9.97)			
32.25 - 1mm g.v. pyrar, sphal 45° u.c.a.		26.93								
33.53 - 34.25 : g.v. irregular - Small blebs pyrar sphal (1/2 to 1cm dia)										
				3.07	5641	.007	1.26	24	68	88/
Pyrite 1% as veins, veinlets thin v.f.g. wisps.						(.002	0.32)			
Trace sphal.		30.00								
				3.50	5642	.003	1.24	24	164	66/
						(.001	1.42)			
		33.50								
				0.75	5643	.001	0.76	20	130	540/
		34.25				(.002	0.94)			
				2.75	5644	.025	2.60	20	83	57/
						(.001	0.34)			
		37.00								
				3.00	5645	.002	0.34			
		40.00								
				2.14	5646	<.001	0.23			
		42.14								
Pyrite 5% : circular blebs, Severed odd veinlets - mainly blebs										
				2.86	5647	.001	.09			
		45.00								

PAGE 5 OF 6 | PROJECT: 2153 | HOLE NO. 60

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				Unit quite uniform. Quartz veining is weak, only 7 veins greater than 1cm and ≤ 3cm, most are barren at > 60° W.C.A. No economic sulfides observed							
50											
55											
60											
65				67.06 End of Hole							

PAGE 6 OF 6	PROJECT: 2153	HOLE NO. 60

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag			
				3.00	5648	.002	0.22			
		48.00								
				3.00	5649	.007	0.21			
		51.00								
				3.00	5650	.002	0.12			
		54.00								
				3.00	5651	<0.001	0.17			
		57.00								
				3.00	5652	.002	0.23			
		60.00								
				3.00	5653	<0.001	0.23			
		63.00								
				2.00	5654	<0.001	0.52			
		65.00								
				2.06	5655	0.001	1.306			
		67.06								

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: 2153	GROUND ELEV.: 1408m
HOLE NO.: 61	BEARING: 050°
LOCATION: West Brucejack Area L0+49.3N, 0+10.1W.	DIP: -60°
	TOTAL LENGTH: 48.77m (160')
LOGGED BY: W. Melnyk	HORIZONTAL PROJECT
DATE: Aug. 9, 1982	VERTICAL PROJECT
CONTRACTOR: Ultra Mobile Diamond Drilling	
CORE SIZE: BQ	
DATE STARTED: Aug. 6, 1982	
DATE COMPLETED: Aug. 7, 1982	
DIP TESTS	

ALTERATION SCALE

absent
slight
moderate
intense

TOTAL SULPHIDE SCALE

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

COMMENTS: Mineralized zone: 13.37 - 24.71
30.92 - 31.72

LEGEND

W. Melnyk

PAGE 1 OF | PROJECT: 2153 | HOLE NO. C1

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				0-5.10 : Casing							
5			30% q.v. 30% q.v.	5.10 - 9.24 : Siltstone - Argillite : Black, v.f.g. angular fragments commonly <1cm set in qtz matrix. Excellent qtz stock. Width 1-10 mm ptygmatic for most part. 30% qtz							
10				9.24 - 10.90 : Arkose : Brecciated, silicified, 40% qtz, grey f.g. rock fragments to 3 cm 10.90 - 11.95 : Quartz Vein : 80% qtz Arkose frags. grey ish qtz 11.95 - 13.37 : Quartz Vein : 60% qtz Arkose frags. Not mineralized.							
15				13.37 - 16.67 : Quartz Vein : 60% qtz, similar to previous section, mineralized							
			5% q.v.	16.67 - 18.30 : Quartz Vein : Bull qtz 100% qtz.							
20				18.30 - 20.97 : Arkose : light grey v.f. grained. Intensely silicified, flooded with qtz Well mineralized.							
				20.97 - 21.54 : Diabase Dike, contacts ground 21.54 - 24.71 : Arkose : same as 18.30 to 20.97 - Section well mineralized.							

PAGE 2 OF	PROJECT: 2153	HOLE NO. 61

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag
		5.10					
5.45 - 5.64 : Q.v., 30°, Tr. Arg + pyrar							
				1.30	5656	0.034	7.46
6.10 - 6.40 : Q.v., 30°, Tr. pyrar		6.40				(.027	6.95)
				2.84	5657	0.021	2.04
						(.019	1.76)
		9.24					
Pyrite disseminated 1-3%.							
				1.66	5658	0.022	0.93
		10.90				(.018	1.16)
Tr. py.							
				2.47	5659	0.021	0.35
13.37 - 13.85 : Tr. pyrar, tetra						.011	1.09)
		13.37					
				1.63	5660	0.018	2.64
		15.00				(.013	0.63)
15.35 : Small specks pyrar.							
15.90 : Specks Tetra					5661	0.034	1.05
16.20 : 2cm q.v. 90° Tr. Tetra		16.67		1.67		(.022	1.09)
16.67 - 18.30 : 1% tetra throughout.							
				1.63	5662	0.184	3.00
18.30 - 20.97 : Diss 1% Tetra, pyrar						(.111	4.63)
Traces Arg., pyrite 1-2% minor.		18.30					
				2.67	5663	0.010	0.41
						(.029	2.72)
		20.97					
		21.54					
21.54 - 24.71 : Diss 1% Tetra, pyrar,							
Tr. Arg. pyrite.				1.46	5664	0.044	2.58
						(.014	2.10)

PROJECT: 2153

HOLE NO. 61

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
			50°	23.30-23.90 : Q.Vn. 80% qtz.							
				24.71-26.05 : Arkose : Dull grey, fine							
25				grained, crudely banded ~50°, irregular							
				minor qtz sweats 1-3mm							
			45° lamin.	26.05-27.39 : Tuffaceous Mudstone							
				light creamy-grn, very finely lamin. v.f.g. whispy, frags							
				.5cm chl. elong. tiny qtz crystals, py.							
				26.15-26.72 : Arkose							
				27.39-30.92 : Arkose. Dark grey-grn, crudely							
				banded, bands of py 2cm wide.							
				28.48-28.70 Quartz vein, 70% qtz							
30				Arkose light grn, f-med gr. thin whisps py.							
				30.02-30.38 : core badly broken.							
			50° C	30.92-31.72 : Quartz vein, pieces of							
				Arkose							
				31.72-42.56 : Pebble Conglomerate / breccia							
				A chaotic mess of rock fragments of							
				various sizes to 13cm. Set in a							
				matrix of qtz-carbonate							
				Quartz veining is minimal but							
				have about 30% qtz-carb in matrix.							
35				Rock color variable, shades of dirty							
				white → faint pinkish-tan tinge some							
				arkose fragments							
				cherty pebbles 3cm, pieces of arkose							
				to 13cm. Several qtz pebbles to 3cm.							
			25°	37.70-38.20 : clay gouge.							
			q.v.								
			60° q.v.								
			70° q.v.								
40											
			45° C	42.56-42.75 : Qtz vein							
			q.v.	42.75-48.77 : Arkose : light grey-grn,							
			40° q.v.	fine-med grained, reasonably well							
				banded, section contains weak q.v.							
			45° py veinlets								
45											

PAGE 4 OF	PROJECT: 2153	HOLE NO. C1

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag
23.30 - 23.90 : Diss Tetra 1%, py.		23.00					
				1.71	5665	0.023	2.32
						(.020	3.22)
Py 1-2% thin wisps parallel to banding.		24.71					
				2.69	5666	0.018	0.89
						(.012	1.05)
		27.40					
28.48 - 28.70 : Specks Tetra				3.52	5667	0.033	1.63
						(.019	1.42)
< 1% pyior, 2% Tetra, Tr. Sphal, Tr. Ag, Py 3%		30.92					
		31.72		0.80	5668	0.074	26.23
						(.060	47.10)
it appears that 5668 and 5669 were switched after being assayed at Ovan Lue				2.00	5669	0.001	0.93
						(.013	1.13)
		33.72					
				2.28	5670	0.001	0.29
		36.00					
37.70 - 38.20 : Sc. Hazed grains tetra				3.00	5671	<0.001	0.41
38.20 - 38.30 : 9.v. irreg. Trace tetra.							
38.82 - 3mm q.v. 60° Tr. Tetra							
39.10 - 2mm q.v. 70° Tr. Tetra		39.00					
40.63 - 41.06 : Sil zone Tr. Tetra < 1%				3.00	5672	0.002	0.52
		42.00					
42.56 - 42.75 : Tr. Tetra							
43.25 - 4mm q.v. Irreg. blebs/clots tetra							
43.76 - 5mm q.v. 40° Coarse g. Tetra(Gn)				2.00	5673	0.004	0.70
		44.00					
Py - 8% thruout section 1mm to 1.5cm at 45° w.c.a.				2.00	5674	0.007	0.35

PAGE 5 OF 6 | PROJECT: | HOLE NO. 61

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
50				48.77 E.O.H.							

PAGE 6 OF 6	PROJECT:	HOLE NO. 61

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag			
46.25 - 46.45: sil section: Tr. Tetra and sphal		46.00								
				2.77	5675	0.007	0.32			
		48.77								

E1

ESSO RESOURCES CANADA LIMITED

ESSO MINERALS CANADA

DRILL LOG

PROJECT: 2153	GROUND ELEV.: 1408m
HOLE NO.: 62	BEARING: 050°
LOCATION: West Brucejack Area L 0+49.3N, 0+10.1W	DIP: -70° TOTAL LENGTH: 54.86m (180')
LOGGED BY: W. Melnyk	HORIZONTAL PROJECT
DATE: Aug 10, 1982	VERTICAL PROJECT
CONTRACTOR: Ultra Mobile Diamond Drilling	ALTERATION SCALE 0 1 2 3 absent slight moderate intense
CORE SIZE: BQ	
DATE STARTED: Aug 7, 1982	TOTAL SULPHIDE SCALE 0 1 2 3 4 trace only < 1% 1% – 3% 3% – 10% > 10%
DATE COMPLETED: Aug 7, 1982	
DIP TESTS	
COMMENTS: Mineralized zone : 10.43 - 21.24 30.85 - 35.70	LEGEND

Walter Melnyk

PAGE 1 OF 6	PROJECT: 2153	HOLE NO. 62

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				0 - 4.66 Casing							
				4.66 - 12.10 : Siltstone - Argillite.							
5				Black f.g. rock extensively brecciated.							
				fragment angular, cemented by qtz - carb.							
				Excellent qtz stwk. 40% qtz.							
				Veinlets <1mm to <1cm.							
				Several veins are mineralized.							
				mineralized section starts 10.43							
10											
				12.10 - 20.07 : Silicified zone, 70% qtz - carbonate. Small fragments Arkose.							
				Fragments are angular, resorbed, lenticular							
				grey ghost relicts.							
				Section is relatively well							
15				mineralized.							
20				20.07 - 20.69 : Diabase Dike							
			c / 85	upper contact 85° Joints oxidized							
			85 / Jnt. ox.	20.69 - 21.24 : Silzone Same as 12.10 - 20.07							
			35 \ qv	21.24 - 28.07 : Heterolithic Arkose :							
			45 \ qv.	Med to Coarse grained, poorly sorted, greyish							
				to purple grey - assorted frags + pebbles							

PAGE 2 OF 6 | PROJECT: 2153 | HOLE NO. 62

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag		
		4.66							
5.54 - 5.68 : 9.V. irreg. gnd tetra 3%				2.34	5676	0.036	1.50		
						1.002	1.14		
9.60 - 9.85 : 9.V. 40° Barren		7.00							
10.43 - 10.84 : 9.V. irreg. Tr. tetra, pyrar.									
Speck electrum				2.50	5677	0.013	0.43		
10.95 - 11.54 : 9.V. irreg. Tr. Tetra, Pyrar.						(.020	1.59)		
		9.50							
				0.93	5678	.011	0.51		
		10.43				(.010	0.55)		
				1.10	5679	.019	1.15		
		11.53				(.009	0.60)		
Pyrite 2-3% diss - quite low!									
				1.47	5680	.009	0.49		
Section relatively well mineralized		13.00				(.009	0.78)		
<1% tetra, spotty pyrar, diss									
Sphal.				2.00	5681	.019	0.69		
						(.007	0.75)		
		15.00							
				2.00	5682	.019	0.97		
						(.005	0.73)		
		17.00							
				3.07	5683	.019	0.99		
						(.020	1.26)		
		20.07							
		20.69							
20.92 : 3mm tetra inlet. 85° Specks electrum						.096	0.69		
		21.24		0.55	5684	(.078	0.81)		
21.65 - 21.75 : 9.V. 35° <1% diss tetra									
22.62 : 9.V. 45° Tr. Tetra << 1%				1.26	5685	.019	5.77		
		22.50				(.007	0.52)		

 PROJECT: 2153 HOLE NO. 62

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
			45 qv; q.v.; q.v.; q.v.	from 3mm to 5cm. Unit has mottled appearance with white, grey, pale green, dark green, purple fragments (pebbles). Quartz veining is poorly developed							
25											
			60 q.v.	28.07 - 30.85 : Arkose : fine grained grey, uniform contains 10% qtz-carb veinlets, most barren							
30				30.85 - 35.70 : Arkose : Intensely developed qtz stwk ~ 50% qtz. 3m flooded with qtz-carb veining + patches. rock is totally shattered. Section is well mineralized							
35			20 banding	35.70 - 38.92 : Tuffaceous Mudstone light pale green, light tan - creamy. v.f grained very well thinly laminated. Mottled initial .75m. Core surface speckled with dark green elongate particles 1-3mm. Banding 20° w.CA.							
				38.92 - 43.59 : Arkose : Variably coloured, dark green - grey - black f-med grained. splashes of qtz no veining							
40				39.34 - 39.40 : Tuff Mudstone							
				42.67 - 43.59 : rock badly broken 65cm recovered							
				43.59 - 54.86 : Pebble Conglomerate/breccia : Dark grey, light grey to pale green sections. Pebbles + fragments assorted sizes. Frags							
45											

PAGE 4 OF 6 | PROJECT: 2153 | HOLE NO. 62

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag		
23.00 - 23.04 : 3cm q.v. 45° ≤1% Tetra									
23.62 - 23.76 : q.v., irreg. 2% Tetra				1.50	5686	.010	1.11		
24.10 - 24.52 : q.v., irreg. 7% Tetra		24.00				(.006	1.27)		
24.71 - 24.88 : q.v. irreg. 3% Tetra-type		24.60		0.60	5687	.015	7.46		
						(.012	9.25)		
Py 3-4% (not much)									
				2.50	5688	.019	3.15		
						(.010	3.10)		
27.10 - 28.07 : Sil zone ~1% Tetra, Sphal		27.10							
				1.00	5689	.006	0.29		
		28.10				(.002	0.50)		
				2.75	5690	.007	0.64		
29.7 : 1.5cm q.v. 60°, Tr. cpy, Galena, C.G.						(.003	0.68)		
Py - 5% (low)									
		30.85							
Scattered Tetra, sphal, Arg, py									
				2.65	5691	.020	1.28		
						(.010	2.23)		
33.98 - 35.70 : Quartz vn(?) 2% tetra,		33.50							
2% sphal, <1% Arg, Tr. py rar.									
				2.20	5692	.026	3.50		
Py - 3%						(.001	0.12)		
		35.70							
Specks of sphal through section.									
				3.22	5693	.011	0.29		
						(.001	0.08)		
38.76. 2 specks cpy.									
		38.92							
Py ~ 7%									
				3.08	5694	.007	0.23		
		42.00							
~15% py				3.00	5695	.002	0.23		
		45.00							

PAGE 5 OF 6 | PROJECT: 2153 | HOLE NO. 62

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				range in size from several mm to 15-20 cm subangular to well rounded set in a light grey to dull white qtz-carb matrix.							
				Section is intensely pyritic mainly as blotchy replacing some fragments to 15 cm or cutting thru. Quartz veining is very weak							
50				Some banding at 25° w.c.a.							
				54.86 End of Hole							
55											

PAGE 6 OF 6	PROJECT: 2153	HOLE NO. 62

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au	ASSAYS Ag			
				3.00	5696	.002	0.17			
		48.00								
				3.00	5697	.002	0.17			
		51.00								
				2.00	5698	.001	0.35			
		53.00								
				1.86	5699	.002	0.35			
		54.86								

ICEFIELD
MORAINE
ICEFIELD
TEDRAY 17
2644
TEDRAY 18
2645
TEDRAY 13
165
RED RIVER 6
3109
RED RIVER 8
RED RIVER 5
2650
RED RIVER 11
RED RIVER 10
3518
4520±
7563
3000
2000
4500
5000
5500
3500
4000
4300
56° 30'
130° 15'
L.C.P. located and targeted on new airphotographs
L.C.P. located accurately relative to targeted
witness posted L.C.P.
L.C.P. not found in 1980, location is approximate
post for a 2 post claim, located and targeted on airphotography
accurate claim boundary
approximate claim boundary
diamond drill hole collar
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10698
NO.
Sulphurets Property
Claim Map, 104 B/8E, 8W
1:10,000
South Sheet of 2 Maps
Dec. 1980 / Sept. 1981, Oct. 1982