

## DIAMOND DRILLING

TOWNOHID: HOBLITZELL

REPORT NO: 22

 $^{\text{LI}}$ OR $^{\text{V}}$  PEPFORMED FOR: Esso Resources Canada Ltd.

RECORDED HOLDER: Same as Above [xx]

0ther [ ]

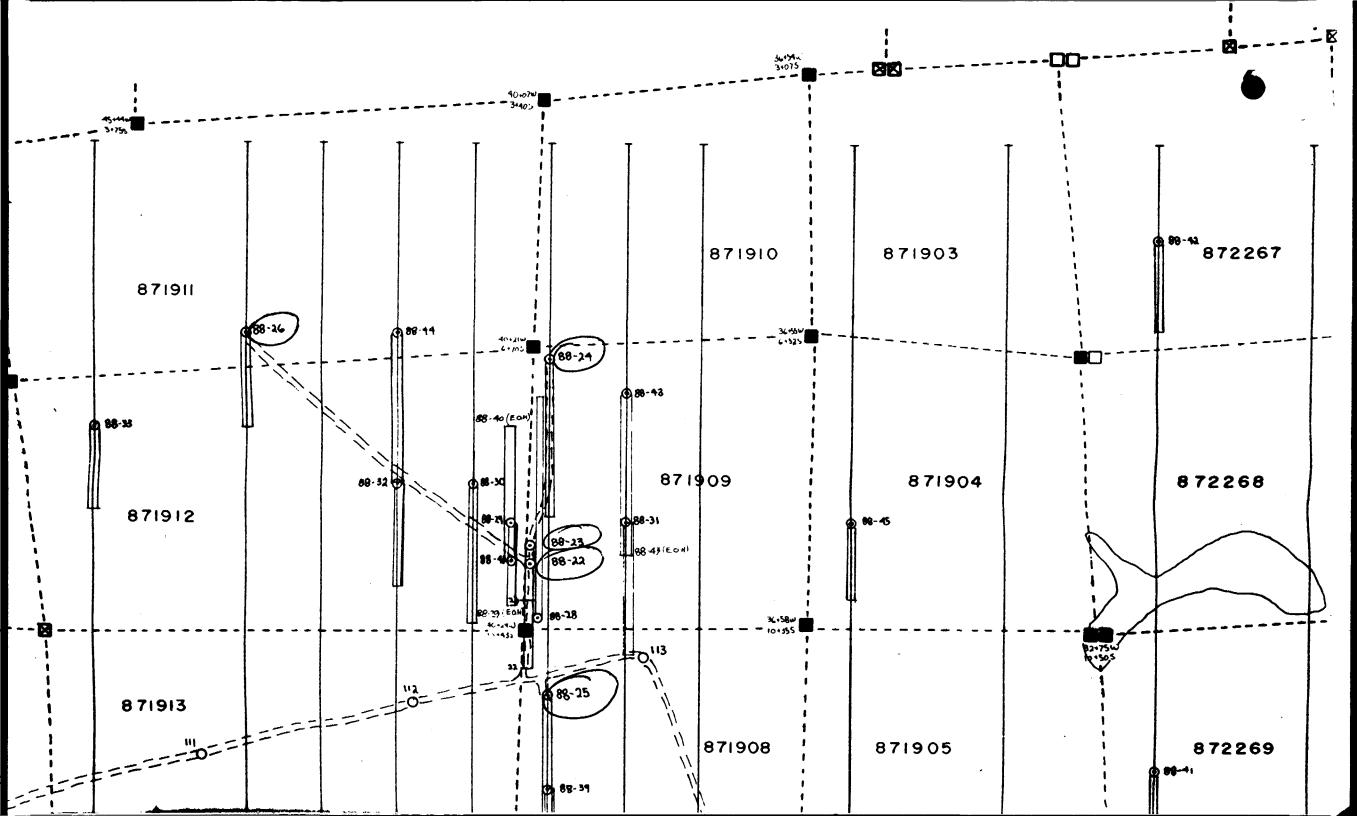
Claim No.	<u>Hole</u> No.	Footage	<u>Date</u>	<u>Note</u>
L 968393 L 872017 L 872019 L 848121 L 848119 L 848106	HN88-17 HN88-18 HN88-19 HN88-20 HN88-21 HN88-27	136.06m 151.22m 166.46m 139.02m 123.75m 154.23m	Jan/88 Jan/88 Jan/88 Jan/88 Jan/88	(1) (1) (1) (1) (1) (1)

HN PROJECT (1677)
1988 DIAMOND DRILL HOLES

Drill Ho Number		Hole Locat ng, Northi		itude th/Dip)	Depth (Metres)	Claim	
IIN88-17 <i>i</i>	L44+0	OE, 11+8	5N 180'	° -46°	22.0 Abandoned in OB	968393	
HN88-17	L44+0	OE, 11+6	ON 180°	° -50°	138.1 not claimed.	968395	
IIN88-18	L 4+0	OE, 6+0	ON 180'	° -44°	151.2	872017	496.06
HN88-19	L 7+0	OW, 4+3	5N 180°	° -45°	166.5	872019	546.25
HN88-20	L10+7	5E, 5+0	os 180°	• -43°	139.0	848121	456.03
HN88-21	L10+0	OE, 2+0	ON 180°	° -45°	123.8	848121	406.16
IIN88-22	L40+2	6W, 9+5	3S 180°	• -45°	18.3 Abandoned in Bedrock	871909	, , , , ,
HN88-22	L40+2	6W, 9+5	3S 182°	° -48°	202.7	871909	665.02
HN88-23	L40+2	6W, 9+3	os 180°	° -62°	128.6	871909	421.91
HN88-24	L40+0	OW, 6+8	5S 183°	° -48°	282.2	871909_)	925.85
HN88-25	L40+0	OW, 11+2	5S 180°	° -45°	233.5	871908-	766.07
- HN88-26	L44+0	OW, 6+5	0S 180°	° -46°	175.6	871911-	576.11
IIN88-27	L 8+0	OW, 2+5	ON 180°	° -48°	154.2	848106	505.90
				TOTAL	1932.7 metres (6348.8 feet)	· ·	5765.4

Exclusing holds not counted:

1757,3 m = 5-165.4' + 727.4 from W8908.093



Hobitzee

# ESSO MINERALS, CANADA SUMMARY DRILL LOG

Hole Number: HN88-17
Logged By: M.H. Lenters
Date: February, 1988
Claim Number: 968393 (new)
Length (m): 136.06

<u> </u>		( )	
From	То	Description	Gold Assays
(m)	(m)		(g/tonne)
0.00	41.10	Overburden (Vertical Depth = 31.5 metres)	
41.10	65.75	Interbedded Quartz-Feldspar Crystal Tuffs and Minor Ash Tuffs Light greenish grey, weakly sericitic, well foliated tuffs, generally containing abundant feldspar grains and minor blue quartz eyes. Minor to 5% quartz and calcite veining, 2 to 7% finely disseminated pyrite.	0.01 to 0.18
65.75	85.17	Interbedded Feldspar Crystal Tuffs and Metasediments  Dark grey-green, fine grained, weakly magnetic, well foliated chlorite-silica-plagioclase schistose metasediments, interbedded with medium grey-green, well foliated tuffs containing abundant feldspar crystals and minor blue quartz eyes.  Foliation at 50 to 60° to the core axis. Minor to moderate amount of quartz veining. 1 to 3% pyrite.	0.01 to 0.12
85.17	96.08	Interbedded Feldspar Crystal Tuffs and Metasediments, Including Minor, Banded Iron Formation Horizons As above, with metasediments containing minor, thin, weakly to moderately magnetic, well laminated, magnetite-bearing chert horizons.	0.02 to 0.21
96.08	135.06	Interbedded Felsic Metavolcanic Lapilli Tuffs and Feldspar Crystal Tuffs, with Minor Metasediment  Medium to dark grey-green to green-grey, moderately well foliated tuffs, locally containing abundant feldspar crystals and minor blue quartz eyes. Lapilli tuffs contain abundant, well flattened volcanic fragments. Minor quartz veining. 1 to 5% pyrite.	0.01 to 0.14
	135.06	END OF HOLE	·
1	1		

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JUL 1 / 1989

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H-N PROJECT (Ont. 77) BSSO NINBRALS CANADA Hole: HR88-17 DIAMOND DRILL RECORD Page: Drilled by: Atlas Drilling Limited Azimuth: 180 Claim No: L-968393 Dip: Hole Size: BQ -50 Grid: Central L44+00B Core Size: Basting: Casing removed Northing: L11+60N Casing: Acid Tests: Blevation: Level Started: Jan. 21, 1988 Jan. 23, 1988 Pinished: Test IP Anomaly on L44B at 10+85N Depth Az. Dip Purpose: 135.06 -19.0 Logged by: M.H.Lenters Length: 135.06Metres Date logged: Pebruary 1988 Vert. Proj: 102.5 Netres Logging Method: Log II Hor. Proj: \$7.75Metres Measurement System: Metric Ovb. Depth: 31.5 metres Description Sample Interval Length Au Ag Te Pyrite ALTERATION Interval

(Metres) (Metres) (q/t) (ppm) (ppm) (t)

SIL CARB

n/a 2-7%

n/a 5-10%

n/a 3-5%

n/a 3-41

n/a 2-3%

n/a 5-7%

n/a 5-7%

n/a 3-5%

51

3-5%

21

n/a

n/a

n/a

n/a

.50

1.30

.80

.50

#### .00 41.10 OVERBURDEN

(Metres)

.00 18.00 Sand with gravel seams.

18.00 22.00 Boulders.

22.00 36.00 Silt and clay.

36.00 41.10 Basal till (with gravel and boulders).

#### 41.10 56.50 QUARTZ-PBLDSPAR CRYSTAL TUPP

Interbedded Quartz-Peldspar Crystal Tuffs and Ash Tuffs. MS 41.10 56.50 15.40 n/a Light slightly greenish grey, to medium slightly blueish grey with a 205 41.10 42.45 1.35 .03 mottled colouring due to colour banding in finer ash sections, and white 206 42.45 42.75 .30 .17 feldspar grains in crystal tuff sections. 207 42.75 44.00 1.25 .11 Most of the unit has a slightly wavy banded, tuffaceous texture 208 44.06 45.27 1.27 .16 , .70 .80 containing variable amounts of feldspar crystals (2 to 50%), and minor 209 45.27 46.75 1.48 .11 (2 to 5%), blue quartz eyes. The feldspar grains are subhedral, white, 210 46.75 47.41 .66 .16 1.60 and generally 1 to 3 mm, but up to 5 mm in size. The quartz eyes are 211 47.41 48.15 .74 .15 1.70 ovoid and occasionally form elongate blebs. The finer ash groundmass 212 48.15 49.50 1.35 .15 1.70 between the larger light coloured crystals is generally dark in colour 213 49.50 50.00 .50 .08 .70 giving the unit a mottled appearance. 214 50.00 51.00 1.00

ESSO MINERALS CANADA DIAMOND DRILL RECORD Hole: Page: HN88-17

SER

Interval (Metres)	Description	Sample No.		rval res)	Length (Metres)	Au (g/t)	Ag (ppm)	Te (ppm)	Pyrite ( <b>\</b> )	AL SIL	TERATION CARB
	Several more massive sections lack any wavy banding and consist of	215	E1 AA	C2 A1	1.00	.03	.70	. / .	3-51		
	abundant (50 to 80%) feldspar crystals.				0 1.00	.04	1.30	n/a n/a	5-6%		
	Generally the ash and crystal tuffs are moderately schistose and weakly				1.00	.06	.80	n/a	5-61		
	to moderately sericitic. This appears to be metamorphic rather than		•		5 1.45	.03	1.00	n/a	3-41		
	hydrothermal sericite.	219	55.45	56.50	1.05	.02	.40	n/a	5-71		
	Poliation is at 50 to 60 degrees to the core axis.									•	•
	Minor (1 to 3%) quartz-calcite podding/lensing occurs throughout the										
	unit. This veining tends to be somewhat vuggy due to the removal of										

Gradational contacts between subunits.

throughout the unit as outlined further below.

calcite.

surfaces.

41.10 42.45 Mottled, medium grey feldspar crystal tuff, with 5 to 20% feldspar crystals and trace amounts of blue quartz eyes.

Moderate foliation at 60 degrees to the core axis.

Unit is moderately broken (5 to 20cm spacing), along schistosity parallel

Unit is weak to moderately calcitic, with sericitic ash tuffs strongly calcitic and massive feldspar crystal tuffs only weakly calcitic.

Generally contains minor (2 to 5%) amounts of finely disseminated pyrite

42.45 42.75 Light greenish to greyish white, quartz sericite schist (ash tuff), with 5 to 7%, finely disseminated pyrite, often in foliation parallel bands. Poliation at 55 degrees to the core axis. Section is moderately calcitic.

42.75 46.75 Medium grey, mottled, quartz-feldspar crystal tuff consisting of numerous interbanded crystal poor and crystal rich zones that are 5 to 20 cm in width. These bands have gradational contacts. Poliation in crystal poor sections is 55 degrees to the core axis. Contains several, 1 to 20 cm, irregular, quartz-calcite patches with coarse grey quartz and white calcite, and coarse books of biotite/chlorite. These patches are vuggy due to partial removal of calcite. The veining patches appear to bleach thin (1 to 3cm) zones of the adjacent rock. 2 to 54 finely disseminated pyrite.

46.75 47.41 Light grey ash tuf with minor (3%) blueish quartz eyes. Well developed foliation at 55 degrees to the core axis. Moderately sericitic with some thin (mm), very talcy,

ESSO MINERALS CANADA DIAMOND DRILL RECORD

Bole: Page: RN88-17

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Interval	Description	Sample	Interval	Léngth	Au	Ag	7e	Pyrite	AL	TERATION	
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm)	(\$)	SIL	CARB	SER

sericitic horizons. Abundant very finely disseminated pyrite. Section is moderately calcitic.

47.41 56.50 Mottled, light to medium greby, quartz-feldspar crystal tuff and ash tuff. Generally contains 1 to 3%, 1 to 2mm, blue quartz eyes, and small (1 to 10cm) patches with abundant (10 to 50%) feldspar crystals. Section has a wavy banded appearance that is enhanced by thin (hairline), discontinuous streaks and laminae of light creamy buff coloured sericite that generally parallels schistosity. 5%, small (lmm to 5cm), irregular grey quartz and calcite veining, patches as well as schistosity parallel veins that are somewhat boudinaged. Larger (5 to 10cm) vein patches occur between 47.75 and 47.85, 48.10 and 49.15, as well as 51.55 and 51.60 metres. 3 to 74 finely disseminated pyrite, and some coarse (1/2 to 1mm) pyrite cubes. The fine pyrite appears to be orientated in bands parallel to the schistosity and the coarser pyrite often occurs near quartz veining and patches. Minor folding noted at 51.80m, but most of unit only exhibits a weak wavyiness along the planar schistosity surfaces.

#### 56.50 62.20 QUARTI-PELDSPAR CRYSTAL TUPP

Well sheared section of light to medium grey, quartz-feldspar crystal-poor tuffs, consisting mostly of larger (1/4 to 1/2mm) ash material with a few sections having some feldspar crystals and minor (2 to 3%) amounts of blue, ovoid quartz eyes.

Shearing is concentrated along numerous thin (1mm to several cm), generally foliation parallel zones, but also in some planar zones at an angle to the foliation. They are soft, clay-rich, and are very calcitic, and constitute 20 to 30% of the section between 56.50 and 59.80. Below this the unit is slightly more competent with a few thin broken sections of core between 61.20 and 62.20.

Well developed foliation at 50 to 60 degrees to the core axis.

Unit contains several large (2 to 10cm) quartz veins, as well as minor (2%), irregular, quartz veinlets and pods throughout. Poliation tends to

NS 56.50 62.20 5.70 2-41 n/a n/a n/a 220 56.50 57.00 .50 .05 1.50 2-3% n/a 221 57.00 58.54 1.54 1.10 n/a 2-4% 222 58.54 59.76 1.22 .02 1.00 n/a 2-41 223 59.76 61.20 1.44 .02 .30 2-31 n/a 224 61.20 62.20 1.00 3-4% .90 n/a

BSSO MINBRALS CANADA DIAMOND DRILL RECORD

Hole:

HN88-17

Page:

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Interval (Metres)	Description			Length (Metres)				Pyrite (%)		RATION CARB
	swirl around some irregular quartz pods.  Upper section (56.50 to 57.00) contains two 10cm, irregular quartz veins at both ends, with a rusty stained section of moderately silicified tuffs between. The veining contains minor pyrite, traces of chalcopyrite and numerous sericitized and silicified wallrock fragments. Small (1cm) quartz bleb at 61.00 metres has 3 mm chalcopyrite bleb.  2 to 4% finely disseminated pyrite throughout, with some as coarser (1 to 2mm) cubes.  Unit is well broken with numerous, soft, shear seams where rock has broken down into clay minerals.									
62.20 64.3	O ASH TUFF / FINE LAPILLI TUFF (MINOR QUARTZ BYES)  Mostly a well foliated, light to medium grey fine lapilli ash tuff.  Unit contains 2 to 3%, small (2 to 3mm), ovoid, blue quartz eyes.  Thin, salmon pink coloured feldspar flood zone between 62.80 and 62.85.  Minor quartz pods and pockets with some sericite, calcite and chlorite, often enclosed in thin zones of tuffs with a swirled foliation.  Well developed foliation at 60 to 65 degrees to the core axis.  Unit locally exhibits good wispy laminated tuffaceous texture below 63.00.  Moderately calcitic with some thin (1 mm), white lenses of calcite.  2 to 5% finely disseminated pyrite, sometimes concentrated along foliation parallel laminae.  Relatively competent core with 5 to 25 cm breakage, mainly along the plane of foliation.	225	62.20 64 62.20 63 63.00 64	00 .80	n/a .03 .02	n/a .60 > 1.00	n/a n/a n/a	2-41 2-41 3-51	V.VK	
64.30 65.7	5 QUARTZ-PELDSPAR CRYSTAL TUPP  Medium grey, quartz-feldspar crystal tuff containing 2 to 3t, blue, ovoid quartz eyes, and 40 to 60t subhedral, white, small (2 to 3 mm), feldspar crystals.  Weak foliation at 60 to 70 degrees to the core axis.  Minor quartz and calcite pods, irregular veining and lenses, including a 3 cm patch of very light pinkish orange calcite, as well as a small quartz vein with minor chalcopyrite between 64.60 and 64.70.  One thin (3mm), irregular, green chloritic band near 65.15m.		64.30 65. 64.30 65.		n/a .07	n/a n/a	n/a n/a	3-5 <b>\</b> 3-5 <b>\</b>		

BESO MINERALS CANADA DIAMOND DRILL RECORD Role: Page: HN88-17

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Interval	Description		Sample	Interval	Length	λu	λg	te	Pyrite	λL	TERATION	
(Metres)	•	•	No.	(Metres)	(Metres)	$\{g/t\}$	(ppm)	(ppm)	(\$)	SIL	CARB	SER

Relatively competent core with 10 to 30 cm breakage, generally parallel to foliation.

Core. Unit has a moderate porosity, or fine vugginess due to the removal (weathering) of calcite(?).

Lower contact sharp at 60 degrees to the core axis.

#### 65.75 85.17 UNDIPPERENTIATED NETASEDINENTS (MAPIC COMPOSITION)

Interbedded Tone of Volcanic-derived Metasediment and Peldspar Crystal Tuff.

Interbeds generally range from 10 cm to several metres in width and have sharp contacts that parallel the foliation.

The mafic volcanic-derived sediments are dark grey-green to green, or slightly blueish grey, fine grained, chloritic, and well foliated. Poliation is somewhat wavy, but generally orientated between 50 to 60 degrees to the core axis. Sections have a banded appearance with minor (5 to 10%), thin (1 to 10mm), foliation parallel, slightly blue grey, very magnetic bands/lenses containing very fine grained magnetite. Locally, vague outlines of flattened (now 1 to 5mm by 3 to 10mm) volcanic clasts are apparent. 2 to 5%, small (1 to 3mm), discontinuous (0.5 to a few cm), quartz, quartz-calcite, and calcite, as boudinaged lenses, laminae and veins, that are mostly foliation subparallel. Calcite lenses have a mottled grey, irregular appearance. Generally 3 to 5%, fine to coarse (1mm) grained pyrite, generally in concentrations around quartz blebs or foliation parallel laminae, but also disseminated throughout. Moderately competent core, with 5 to 10 cm breakage, generally parallel to the foliation.

the feldspar crystal tuffs are medium grey and generally contain minor (2 to 3%), 2 to 3mm, blue, ovoid quartz eyes, and 30 to 60%, 1 to 3 mm, subhedral, white plagioclase. The plagioclase occasionally forms crystals up to 5 mm in size. Sections have a weak to moderately well developed foliation a 50 to 60 degrees to the core axis. Generally 1 to 3% very fine to finely disseminated sulphides (py) concentrated on foliation parallel laminae. Locally, the sections are pervasively silicified and albilized(?). The latter form small (1 to 10cm), salmon pink. albite-rich sections that are often yuggy, and have increased

ns	65.75	85.17	19.42	n/a	n/a	n/a	1-5%
102	65.75	67.50	1.75	.02	n/a	n/a	2-31
103	67.50	68.35	.85	.01	n/a	· n/a	1-24
104	68.35	69.25	.90	.02	n/a	n/a	2-4%
105	69.25	70.40	1.15	.12	n/a	n/a	1-24
106	70.40	71.40	1.00	.02	⊾n/a	n/a	2%
107	71.40	71.85	.45	.04	n/a	n/a	. 28
108	71.85	12.78	.93	.01	n/a	n/a -	2-31
109	72.78	73.24	.46	.01	n/a	n/a	4-51
110	73.24	14.44	1.20	.01	n/a	n/a	31
111	74.44	75.10	.66	.02	n/a	n/a	3-41
227	75.10	15.77	.67	.02	.80	n/a	2%
228	75.77	76.77	1.00	.01	1.30	n/a	3-41
112	76.77	77.70	.93	.01	n/a	n/a	4-6%
113	77.70	79.61	1.91	.04	n/a '	n/a	1-21
114	79.61	\$0.61	1.00	.01	n/a	n/a	1-61

BSSO MINERALS CANADA DIAMOND DRILL RECORD

Hole:

HN88-17

Page:

Interval	Description	Sample	Interval	Length	λu	Ag	₹e	Pyrite	AL	TERATION	
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	{ppm}		SIL	CARB	SER

amounts of finely disseminated pyrite, a crackling of thin (hairline) epidote veinlets, and contain minor irregular white quartz pods. Moderately competent, generally with 5 to 30 cm breakage.

Winor (2 to 3%) quartz veining, often up to 10 or 20 cm in width, cuts both of the interbed types. The quartz veins are generally white, coarse grained, and relatively clean, but locally contain minor chlorite, tourmaline, pyrite and chalcopyrite.

65.75 67.50 Well foliated, strongly magnetic metasediment derived from mafic volcanics. Minor boudinaged quartz veinlets.

67.50 68.35 Peldspar crystal tuff with one foliation parallel shear zone between 67.85 and 67.93.

68.35 69.25 Peldspar crystal-poor tuff with several 1 cm, foliation parallel, white quartz veins.

69.25 71.40 Well foliated, strongly magnetic sediment derived from matic volcanics. Minor, irregular, quartz, quartz-calcite and calcite lenses/veinlets parallel to foliation.

71.40 71.85 Small section of intensely silicified feldspar crystal tuff, cut by large, irregular quartz vein, orientated at 20 degrees to the core axis. Quartz is mostly milky white and includes two, large (1 to 3cm), radiating fans of thin tourmaline needles. It also exhibits minor salmon pink colour and chlorite development along the vein edges.

71.85 72.05 Mafic volcanic derived metasediment.

72.05 72.15 Peldspar crystal tuff.

72.15 72.27 Mafic volcanic derived metasediment.

72.27 72.58 Feldspar crystal tuff.

72.58 72.70 Mafic volcanic derived metasediment.

72.70 72.76 Peldspar crystal tuff.

72.76 72.78 Thin band of mafic volcanic derived metasediment.

72.78 73.24 Peldspar-poor crystal tuff.

73.24 74.44 Mafic volcanic derived metasediment including one irregular quartz bleb (73.60 to 73.66) with a salmon-pink colour and minor amounts of chalcopyrite, as well as a thin (5cm) band with a crystal tuff component that also has a weak salmon pink colour.

74.44 75.10 Peldspar crystal toff.

ESSO MIMERALS CANADA DIAMOND DRILL RECORD

Hole:

HN88-17

Page:

W00-T

Interval Description Sample Interval Length Au Ag Te Pyrite ALTERATION (Metres) (Metres) (g/t) (ppm) (ppm) (%) SIL CARB SER

75.10 75.77 Mafic volcanic derived metasediment.

75.77 77.70 Feldspar crystal tuff that is moderately silicified and weakly albitized. Intense zone of albitization between 76.15 and 76.35 with strong salmon pink colour, 5t finely disseminated pyrite, fine (hairline) crackling of epidote veinlets, and weak patchy silicification. Several larger albite crystals (3 to 5mm) also exhibit a faint salmon pink colour. Ione parallels foliation and has fairly distinct contacts. Massive white, coarse grained quartz vein from 76.77 to 76.87 at 45 to 60 degrees to the core axis with discontinuous pyrite bands adjacent to the contacts. Below the quartz vein the section is intensely silica flooded with foliation parallel silica blebs giving the section a coarse lapilli tuff appearance.

77.70 78.40 Wafic volcanic derived metasediment.

78.40 78.50 Peldspar crystal tuff band.

78.50 78.80 Mafic volcanic derived metasediment.

78.80 79.45 Feldspar crystal tuff with nonparallel foliation from 40 to 55 degrees to the core axis.

79.49 79.57 Wafic volcanic derived metasediment.

79.57 79.61 Feldspar crystal tuff. Foliation at 50 to 55 degrees to the core axis.

79.61 80.61 Mafic volcanic derived metasediment with minor quartz veining and abundant pyrite.

80.61 81.96 Quartz-feldspar crystal tuff. Moderately sheared appearance with foliation wrapping around quartz eyes. A few larger feldspar grains are well flattened. Minor offsetting and folding is evident in the section. Well developed tuffaceous texture and foliation orientated at 45 to 50 degrees to the core axis.

81.96 83.65 Mafic volcanic derived metasediment. Poliation orientated at 50 to 60 degrees to the core axis.

83.65 84.15 Quartz feldspar crystal tuff. Poliation orientated at 60 degrees to the core axis.

84.15 85.17 Mafic volcanic derived metasediment.

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BSSO MINBRALS CANADA DIAMOND DRILL RECORD Role: HK88-17 Page: 8

Interval (Metres)	Description	Sample No.			Length (Metres)	Au (g/t)	Ag (ppm)	Te (ppn)	Pyrite (%)	ALTERATION SIL CARB	SBI
85.17 85.4	2 CHERTY, BANDED IRON FORMATION  The overlying interbedded sequence of metasediments derived from mafic volcanic material (volcaniclastics), and quartz/feldsar crystal and fine lapilli tuffs gradationally changes into a weakly banded silica magnetite iron formation, and this is the first of these bands. This unit has a more pronounced magnetite banding than in the overlying metasediments. The magnetite bands are variably coloured in greys, greens, whites and salmon pink, and are hard (cherty) and competent. This thin unit is not as well banded or magnetic as the larger underlying unit.  Foliation orientated at 60 to 70 degrees to the core axis, parallel to bedding.	229	85.17	85.47	2 .25	.02	1.40	n/a	4-51		
85.42 85.4	5 QUARTI-PELDSPAR CRYSTAL TUFF As above.	KS	85.42	85.4	5 .03	n/a	n/a	n/a	3-5%		
85.45 86.4	5 UNDIFFERENTIATED HETASEDINENTS (MAPIC COMPOSITION) As above.	NS	85.45	86.4	5 1.00	n/a	n/a	n/a	3-41		
86.45 86.9	5 QUARTI-PELDSPAR CRYSTAL TUPP As above.	NS	86.45	86.9	5 .50	c n/a	n/a	n/a	3-41		
86.95 88.6	O PINE-GRAINED, SCHISTOSE METAVOLCANIC WITH BPIDOTE-CARBONATE BANDS Dark green, fine (1/2 to lmm) grained chlorite, amphibole, plagioclase composition. Weakly foliated at 55 to 75 degrees to the core axis. Minor epidote alteration and quartz and calcite pods and lenses. Minor reddish coloured (stained) mineral surrounding quartz veinlets/lenses.	WS	86.95	88.6	0 1.65	n/a	n/a	n/a	31		
88.60 88.7	O CHERTY, BANDED IRON FORMATION Light grey to white, 2 to 3 mm, cherty bands separated by hairline width	NS	88.60	88.7	0 .10	n/a	n/a	n/a	51		

BSSO MINERALS CANADA DIAMOND DRILL RECORD Role: NH88-17 Page: 9

Interval (Metres)	Description	Sample No.			Length (Metres)		Ag (ppm)	Te (ppm)	Pyrite (%)	ALTERATION SIL CARB	SE
P	pyritic laminae.										
). V	QUARTI-PELDSPAR CRYSTAL TUPF As above, but containing a thin (88.93 to 88.98) horizon of mafic volcanic derived sediment. Foliation orientated at 70 degrees to the core axis.	BS	88.70	89.20	.50	n/a	n/a	n/a	2-31		
8 8 9 9 9 9 9 1	CHERTY, BANDED IROW FORNATION  Medium to light grey-green and green-grey, with numerous white, peach and salmon pink coloured cherty bands giving the unit a laminated/banded appearance.  Bands are hairline to several mm, and rarely 1 cm, wide and parallel the foliation orientation.  Most of the unit is not a good IF, but consists of lapilli tuff and metasediment with thin (1 to 10mm), magnetite rich horizons, and discontinuous boudinaged light grey cherty bands. Locally the latter appear to be streched pebbles giving sections a lapilli tuff appearance. Much of the matrix material within these zones is mafic volcanic derived metasediments with a dark green chloritic composition.  Throughout much of the unit are thin zones with light vari-coloured cherty bands and darker steely grey magnetic bands. The former have pencil sharp band contacts but the latter have more diffuse contacts.  Foliation is genyorid at 50 to 60 degrees to the core axis, but is locally swirled or folded.  Unit contains minor calcite pods and discontinuous lenses (1 to 2 by 3 to 5mm), as well as somewhat larger quartz veining and podding.  Several percent pyrite occurs throughout the unit as fine wispy, foliation subparallel blebs. These tend to concentrate on certain horizons forming pyritic laminations.  Core is hard, and moderately competent with 5 to 50 cm breakage.	115 116 117 230 231	89.20 90.20 91.20 92.20 93.20	90.20 91.20 92.20 93.20 94.70	6.88 1.00 1.00 1.00 1.00 1.50 1.38	n/a .01 .03 .21 .04 .19	n/a n/a n/a 1.70 1.00	· n/a n/a n/a n/a n/a	3-6% 3-4% 3-6% 3-5% 4-6% 3-4%		

Light to medium grey, massive to moderately banded, lapilli and

# BSSO MINERALS CANADA DIAMOND DRILL RECORD

Hole:

Page:

TH88-17

10

Te Pyrite Interval Description Sample Interval Length (Metres) (Metres) (q/t) (ppm) (ppm) (%) CARB (Netres) feldspar-quartz crystal tuff. Very few sections contain significant 118 96.08 97.48 1.40 1-61 .01 n/a n/a feldspar crystals, but most sections contain occasional to a few 3-51 233 97.48 99.00 1.52 .03 n/a n/a percent, blue, ovoid quartz eyes. 234 99.00 100.40 1.40 .08 n/a n/a 1-71 Unit has a wavy foliated tuffaceous texture, with foliation orientated at 235 100.40 101.40 1.00 .06 n/a 3-51 n/a 60 to 70 degrees to the core axis. 236 101.40 102.44 1.04 .03 n/a 5-71 n/a Pelsic lapilli are all well flattened into thin (1 to 5mm) bands. 7-101 237 103.85 104.80 .95 .09 n/a n/a The rock is relatively hard and generally exhibits a weak pervasive 238 107.00 108.54 1.54 .03 n/a 6-8% n/a silicification and sericitization that is locally intense. 239 108.54 109.10 .56 .01 n/a n/a 3-5% Some sections exhibit a weak albitization, particularly in zones with a 240 109.10 110.00 .90 .08 n/a n/a 5-6% salmon pink colour. 241 110.00 111.60 1.60 .02 n/a n/a 2-31 Intense sericitization occurs between 109.40 and 109.60. Silicified sections have a fine, granular sugary appearance. Locally, very light apple green sericite-epidote occurs in thin crackle fractures. Minor (3 to 5%) coarse, white quartz blebs, lenses, veins and spheroids from 1 to 20 mm in size form irregular patches throughout the unit. Poliation often swirls or is folded around quartz pods. Pyrite is common (3 to 6%) throughout as fine disseminations forming wispy laminae that are often concentrated on foliation planes. 108.54 109.10 Salmon pink, albitized, feldspar crystal tuff with some (1 mm), black magnetite laminae orientated subparallel to foliation. Unit is relatively competent, generally with 10 to 50 cm breakage subparallel to foliation. 111.60 113.90 UNDIFFERENTIATED METASEDIMENTS (MAPIC COMPOSITION) Dark grey to dark grey-green, and moderately banded parallel to foliation WS 111.60 113.90 2.30 n/a n/a n/a 2-5% VEAK at 60 degrees to the core axis. 242 111.60 112.70 1.10 .01 n/a n/a 2-41 Unit generally has a chloritic, mafic volcanic metasediment appearance, 243 112.70 113.90 1.20 .11 n/a 3-51 but also includes a few, thin (1 to 5cm), hard, cherty bands with a lighter grey to creamy or salmon pink colour. The latter colour also has minor associated epidote in crackle fractures. Unit is very magnetic, and contains abundant thin, black magnetite laminae 2 to 3%, irregular, wispy calcite blebs (1 to 2cm, by 3 to 10cm) and irregular quartz pods, lenses, and veins that are generally subparallel

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matrix.

ESSO MINERALS CANADA DIAMOND DRILL RECORD

HN88-17 Hole: Page:

11

Description Interval Sample Interval Length Au No. (Metres) (Metres) (g/t) (ppm) (ppm) (t) (Metres) to foliation. Pine to medium (1 mm) grained pyrite occurs as disseminations that are generally concentrated along foliation planes. Relatively competent core with 10 to 40 cm breakage, generally at low angles to foliation/bedding. 113.90 114.50 OUARTZ-PELDSPAR CRYSTAL TUFF Dark grey with slight greenish to orange hue, hard and massive with minor 244 113.90 114.50 .60 .02 n/a MINOR blue quartz eyess and vaque outlines of subhedral feldspar crystals evident across the unit. Unit contains very little pyrite which is uncharacteristic of the felsic volcanics in this hole. Very weak foliation orientated at 70 degrees to the core axis. Unit has a pervasive silicified appearance, giving it an intrusive dyke appearance. 114.50 115,90 UNDIFFERENTIATED NETASEDIMENTS (MAPIC COMPOSITION) Dark green-grey moderately foliated at 60 to 70 degrees to the core axis. 245 114.50 115.90 1.40 :03 n/a n/a 1-31 Very chloritic, and contains abundant (10%) irregular patches of whitish calcite-rich lenses/bands that are flattened in the plane of foliation producing a thin (1 to 5mm), wispy, discontinuous networking. Numerous, thin (2 to 10mm), black, moderately magnetic, foliation parallel bands that contain abundant finely disseminated magnetite. These bands have diffuse contacts. 1 to 3%, fine to medium (1 mm) grained pyrite. Competent core, generally with 20 to 50 cm breakage. 115.90 119.55 OUARTI-PRIDSPAR CRYSTAL TUPP Medium, slightly bluish grey, massive unit with weak foliation at 65 to WS 115.90 119.55 3.65 n/a 2-41 246 115.90 116.90 1.00 75 degrees to the core axis. n/a n/a 2-41 3%, Large (2 to 3mm), blue quartz eyes and 40 to 60%, white, subhedral plagioclase crystals in fine grained, wispy laminated felsic volcanic

ESSO MINERALS CANADA DIAMOND DRILL RECORD Hole:

RN88-17

Page:

12

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)		Ag (ppm)		Pyrite (%)	SIL	TERATION CARB	SER
	2 to 4% finely disseminated pyrite.  Ninor calcite often as very small grains (0.1 mm) adjacent to the edge of plagioclase crystals.  Very competent core, generally with 30 to 100 cm breakage parallel to foliation, or along the occasional joint at 25 degrees to the core axis.										
110 77 107 0	A NAME AND A STATE AND										
119.55 126.2	ASH TUPF / PINE LAPILLI TUPF (MINOR QUARTZ BYES)  Medium grey with lighter and darker banding parallel to foliation at 60 to 65 degrees to the core axis. Interbedded ash to fine lapilli tuff with 1 to 3 mm particles now all well flattened into the plane of foliation producing a wavy tuffaceous appearance. Locally larger flattened fragments that were probably originally 1 to 2 cm in size are discernable as contrasting compositional banding.  Abundant (5%) quartz blebs and pods form 1 to 3mm by 2 to 10mm ovoids parallel to the foliation.  2% Quartz veinlets, often occuring with calcite and epidote as irregular, 0.5 to 3 cm wide veins and patches. Poliation often swirls or is folded adjacent to quartz veins.  3 to 5%, fine, wispy pyrite that is elongated in the plane of foliation. Unit appears weakly sericitic throughout, particularly along fractures parallel foliation.  Moderately competent core, generally with 5 to 25 cm breakage.	TS 1	19.55 126.2	2 6.67	n/a	n/a	n/a	3-5%			
126.22 134.4	5 UNDIFFERENTIATED METASEDIMENTS (MAPIC COMPOSITION) Interbedded Felsic Volcanic Lapilli Tuff and Mafic Volcanic Derived Metasediments.		26.22 134.4 29.20 130.2		n/a .02	n/a n/a	n/a n/a	2-4 <b>%</b> 5-7 <b>%</b>	WBAK	•	AK-HOD
	Pelsic volcanic lapilli tuffs are much like those in the overlying unit although they contain many more sections with larger (0.5 to 5cm) lapilli that are now flattened into lensoidal bands. Most sections have	120 1	32.00 133.0	0 1.00	.01	n/a	n/a	2-4%			

a wavy tuffaceous appearance with bedding and foliation orientated at 55 to 70 degrees to the core axis. Foliation is locally swirled or weakly

contorted. These sections generally exhibit a very weak pervasive silicification and weak sericitization, that is locally intense producing thin, pyritic quartz-sericite schist bands. Generally 2 to 5%

BSSO MINERALS CANADA DIAMOND DRILL RECORD Hole:

(Metres) (Metres) (g/t) (ppm) (ppm) (t)

Sample Interval Length Au

HR88-17

Te Pyrite

SIL CARB

Page:

13

Interval (Metres)	Description
	pyrite as fine vispy disseminations parallel to foliation.  Mafic volcanic derived metasediments are dark grey-green, fine grained, chloritic to biotitic, and moderately well foliated. They contain minor flattened, lighter coloured mafic volcanic fragments (pebbles). These sediments contain numerous thin (2 to 10mm) zones that are moderately magnetic, as well as 2 to 44 finely disseminated pyrite.  Whole unit contains numerous (54) irregular quartz blebs, pods and lenses that range from mm to cm size. Nowhere do they look like veins but the blebs could be parts of boudinaged veins?. The quartz is coarse grained, bull white, generally with coarser grained chlorite, biotite, pyrite and calcite forming along vein edges. Minor amounts of an unknown red mineral (carbonate or garnet?) occur adjacent to quartz veins.  Unit is moderately broken, generally in 2 to 20 cm pieces parallel to foliation, but also along fracures usually orientated at 25 to 30 degrees to the core axis.  Upper and lower contacts are slightly gradional to sharp and parallel the foliation orientation.  Generally a dominant lithology can be determined within the interbeds as outlined below, but some sections are undiscernable, consisting of a patchy boudinaged intermix of the two rock types.  126.22 126.35 Metasediment.  126.35 126.37 Quartz bleb.  126.37 126.49 Pelsic tuff.  126.58 126.90 Pelsic tuff.  126.58 126.90 Pelsic tuff.
	126.98 127.12 Felsic tuff with 10% quartz blebs/veins. 127.12 127.28 Hetasediment. 127.28 127.37 Felsic tuff. 127.37 127.87 Hetasediment with 10% quartz blebs/veins. 127.87 130.53 Felsic tuff with 5% quartz blebs/veins, and locally with a well swirled foliation. Includes a small quartz-sericite schist zone between 130.00 and 130.20.

130.53 134.45 Well intermixed zone of felsic tuff and metasediments

including lensoid patches where thin (0.5 to 2cm) bands are boudinaged parallel to the plane of foliation.

ESSO MINERALS CANADA DIANOND DRILL RECORD Hole:

HH88-17

Page:

14

											•••••
Interval	Description	Sample In	nterval	Length	Au	λg	Te	Pyrite	Yr.	TERATION	
(Metres)		• • • • • • • • • • • • • • • • • • • •		(Metres)	(g/t)	(ppm)	(ppm)	(1)	SIL	CARB	SER

Contains 54, quartz blebs/veins, often with minor amounts of a red coloured mineral. This mineral forms small (0.25 mm) spheroids and may be an iron stained carbonate mineral or possibly a small poikioblastic garnet.

### 134.45 135.06 ASH TUPP / PINE LAPILLI TUPP (MINOR QUARTE BYES)

Light greenish grey to greenish white, well weathered, crumbly quartz-sericite schist with 5 to 7% finely disseminated pyrite.
Well developed wavy foliation orientated at 50 to 60 degrees to the core axis.

Core is very vuggy, soft and crumbly, and possibly occurs near a small fault that has alllowed some weathering of this unit. However, there is no gouge or other evidence of a fault zone in this section of core.

135.06 (443 feet) end of hole.

121 134.45 135.06 .61 .14 n/a n/a 5-7% WK-MOD -

## ESSO MINERALS CANADA SUMMARY DRILL LOG

Project Name: HN	Hole Number: HN88-18
Project Number: 1677	Logged By: M.H. Lenters
NTS: 42H/8	Date: February, 1988
Location L4+00E, 6+00	Claim Number:
Azumith: Dip:	Length (m): 151.22

PURPOSE: Test IP Anomaly on L4E at 5+25N

	,		
From (m)	To (m)	Description	Gold Assays (g/tonne)
0.00	9.15	Overburden (Vertical Depth = 6.4 metres)	
9.15	10.00	Mafic Metavolcanic Dark green, fine grained, with weak foliation at 70° to the core axis. Minor quartz veining. Minor pyrite.	0.02
10.00	73.87	Metasediments With Minor, Thin Intrusive Dykes  Medium to dark, green to brown, fine grained, chloritic to biotitic, phyllitic to schistose with foliation 60 to 70° to the core axis. Generally appears to be metasediments but could include metavolcanics. Minor quartz and calcite veining. Minor pyrite. Also cut by a few, thin (10 to 50 cm), silicified and quartz veined, leucocratic feldspar porphyry dykes, locally containing minor pyrite and galena.	0.01 to 0.05
73.87	91.10	Interbedded Sequence of Sulphide-Poor to Massive Sulphide (PY), Sulphide (PY & PO) Carbonate and/or Silica Facies Iron Formation, Black Argillite and Minor Metasediment Well bedded and foliated at 50 to 75° to the core axis, but locally contorted. 3 to 20% pyrrhotite and pyrite, but locally up to 70% sulphides.	0.01 to 0.20
91.10	108.58	Coarse-Grained Clastic Metasediments (Metaconglomerate) Well flattened, granule to pebble metaconglomerate with abundant, thin, psammitic arenite interbeds. Minor quartz veining. Minor pyrite.	Not Assayed
108.58	151.22	Felsic Metavolcanic Quartz Crystal and Lapilli Tuff Medium grey, well foliated with 5 to 10%, ovoid, blue quartz eyes and abundant flattened lapilli fragments. 2 to 3% quartz veining. Minor pyrite.	Not Assayed
	151.22	END OF HOLE	
		ONTARIO GEOLOGICAL SURVEY ASSESSMENT FILES OFFICE JUL 1 / 1989 RECEIVED	

ESSO MINERALS CANADA DIAMOND DRILL RECORD

Hole: Page: HN88-18

Drilled by:

Atlas Drilling Limited

Azimuth: 180 Claim No:

L-872017

Role Size:

Dip:

Grid:

Central

Core Size:

BO

-44

Az. Dip

Basting:

4+00B

Casing:

Casing Removed

Northing: 6+00N Level Blevation:

Started: Pinished: Jan. 25, 1988 Jan. 26, 1988 Acid Tests:

Depth

Purpose:

Test IP & EM Anomalies on L4B at 5+25N

Logged by:

M.H.Lenters

151.22 -39.0

151.22Metres Length:

Date logged:

Pebruary 1988

Vert. Proj: 100.0 Metres

Logging Method:

Log II

Hor. Proj: 113.25Metres

Measurement System: Metric

Ovb. Depth: 6.4 Metres

						~~~~~					
Interval	Description	Sample	Interval	Length	Au	Àg	te Pyr	ite	ALT	ERATION	
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm) (%	)	SIL	CARB	SER

#### .00 9.15 OVERBURDEN

.00 7.00 Sand and gravel.

7.00 9.15 Large granitic cobbles and boulders, including one hornblende syenite boulder.

#### 9.15 10.00 MAPIC METAVOLCANIC PLOWS (PE THOLEIITE)

Dark green, fine grained to aphanitic, locally exhibiting a very weak foliation orientated at 70 degrees to the core axis. Unit is not reactive to HCl, and does not contain calcite laminae.

No visible sulphides in the volcanics.

Minor (2 to 3%), small (2 to 4mm wide), irregular, discontinuous quartz lenses (sweats), locally containing minor amounts of pyrite and chalcopyrite.

Core is relatively competent, but well broken into 2 to 20 cm pieces, possibly due to being near the overburden surface.

Lower contact not observed due to missing core because of a core barrel mislatch.

WS 9.15 10.00 .85 n/a MINOR n/a n/a 122 9.15 10.00 .02 n/a n/a MINOR

ESSO MINERALS CANADA DIAMOND DRILL RECORD

Hole: Page: RN88-18

							*****				
Interval	Description	Sample	Interval	Length	Au	λg	<b>Te</b>	Pyrite	λL	TERATION	
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm)	(*)	SIL	CARB	SER

10.00 11.00 LOST CORB

Core barrel mislatch.

11.00 40.30 SILTSTONE

Very fine grained, with an irregular laminated/banded to patchy appearance due to a subtle grading between grey-green and brown colour bands. Colour changes are gradational, never complete (partial), and very patchy reflecting differees in the amount of biotite (brown) and chlorite (green). Locally an interbanding/lamination is apparent that parallels the foliation.

Foliation at 60 to 70 degrees to the core axis is well defined by the orientation of micaceous minerals. Unit breaks well along cleavage surfaces that parallel the foliation orientation.

5 to 7%, white, quartz-calcite laminae, veinlets (up to 0.5cm), and patches. Laminae and veinlets are often subplanar and orientated parallel to the foliation. Very thin (hairline), laminae tend to be discontinuous, and composed of calcite. Locally the veining occurs as small, irregular branching blebs, that are often surrounded by a swirled foliation, occasionally exhibiting tight minor folds.

A few, thin (1 to 10cm) bands contain abundant (10%), fine (0.25 to 0.50mm), rounded garnet polkioblasts as buckshot type, individual grains, in foliation parallel bands, showing no apparent preference for either the chlorite or biotite dominant rock type. The garnet bands constitute only about 1% of the unit with no garnets apparent outside the few thin bands where they are common. No reason or compositional distinction, is apparent that could account for the selective banding. Locally, coarse (1 to 2mm), dark green chlorite forms thin (1 to 10mm)

Locally, coarse (1 to 2mm), dark green chlorite forms thin (1 to 10mm) bands that crosscut foliation, or intrude as veins parallel to the foliation/cleavage orientation.

Unit contains a few zones with several thin (1 to 3mm), light grey silica-bands that appear to have been sandy interbeds/laminae.

Cleavage surfaces have a phyllitic to slightly schistose appearance. Unit does not appear to have any visible disseminated sulphides, but contains several zones with minor to several percent sulphides as

NS	11.00	40.30	29.30	n/a	n/a	n/a	2 <b>3</b> P0
123	22.00	23.00	1.00	.02	n/a	n/a	2%
124	26.00	27.00	1.00	.05	n/a	n/a	3-41P0
125	27.00	28.00	1.00	.03	n/a	n/a	4-6120
126	31.50	32.00	.50	.01	n/a	n/a	4-61PO

ESSO MINERALS CANADA DIAMOND DRILL RECORD

Hole: Page: HN88-18

Interval Length Au Ag Te Pyrite ALTERATION
(Metres) No. (Metres) (g/t) (ppm) (ppm) (%) SIL CARB SER

foliation parallel blebs, bands and stringers. Pyrrhotite is the most common (80%), with lesser amounts of pyrite in bands/stringers. The two sulphides seem to form separate bands that rarely occur together. Minor chalcopyrite occurs locally with the pyrrhotite. The sulphides also form a few larger (0.5 to lcm) patches that occur adjacent to to a few of the larger quartz veins/patches.

Sulphides are not evenly distributed through the section. They are rare above 22 metres, and constitute about 2% of the unit below 22 metres, with local concentrations as indicated in the sections sampled for assay. Unit is relatively competent, generally with breakage parallel to the foliation and 25 to 100 cm spacing.

Lower contact is gradational.

#### 40.30 42.20 PSANNITIC ARBNITE

(Similar to the overlying unit, but slightly coaser grained). Nostly a fine quartzose-feldspathic arenite with a medium golden brown colour due to minor amounts of biotite. Only very locally is there any green chlorite colour, generally in finer grained silty sections.

Unit contains abundant (5 to 7%) calcite laminae, and small (1 to 5mm) quartz +/- calcite veinlets. The former are often planar and discontinuous, often orientated parallel to the foliation, but more commonly they form irregular, flattened veining networks and patches accounting for 5 to 10% of the unit.

Unit also contains several (2 to 20mm), coarse, white quartz veins, as well as several (2 to 10cm), foliation/bedding parallel quartz arenite/pebble beds that are partially amalgamated into a grainy looking, mottled quartz bands. These bands contain (1 to 3mm) quartz grains/granules.

A single, 2 x 4 cm, round quartz pebble occurs within brown arenite.

Bedding and foliation are parallel and distinct at 65 to 70 degrees to the core axis. Minor folding of the foliation is evident surrounding some quartz vein blebs.

Pyrite is disseminated throughout the entire section, particularly the coarser sections, where it accounts for 4 to 7, and locally 10%, of the unit. The large quartz vein blebs occasionally contain large (up to 2

MS 40.30 42.20 1.90 n/a n/a n/a 3-5% 127 40.30 41.35 1.05 .01 n/a n/a 3-5% 128 41.35 42.20 .85 .02 n/a n/a 2-4%

ESSO MINERALS CANADA DIAHOND DRILL RECORD

Hole: Page: HH88-18

Description Sample Interval Length Te Pyrite ALTERATION Interval (Metres) (Metres) (g/t) (ppm) (ppm) (%)(Metres) CARB cm) pyrite masses, often as cubic crystals. Unit is relatively competent, generally with 20 to 50 cm breakage parallel to foliation, as well as along quartz vein contacts (the latter often exhibits minor grinding of core). Lower contact is gradational. 42.20 45.90 SILTSTONE (Identical to unit between 11.00 and 40.30 metres). NS 42.20 45.90 3.70 n/a n/a n/a MINOR Very fine grained, laminated/bedded with patches/bands of green, chloritic and brown biotitic compositions, often changing across sharp to indistinct bedding/foliation planes. Bedding/foliation is orientated at 65 to 70 degrees to the core axis. Contains numerous, thin (hairline to lmm), discontinuous, foliation parallel, white calcite laminae, as well as several larger (2 to 20mm) quartz veins. The latter consist of coarse milky to greyish white quartz, with few inclusions or impurities that are generally orientated parallel to foliation. One small (20 cm wide) zone exhibits 2 to 3%, fine (0.25 to 0.5mm) garnet Minor amounts of disseminated pyrrhotite and pyrite, with visible amounts of coarser pyrrhotite and pyrite occuring around a few quartz Competent core, generally with 50 to 100 cm breakage parallel to foliation Upper and lover contacts are gradational. 45.90 52.20 PSAMMITIC ARBNITE (Identical to unit between 40.30 and 42.20, but including a thin porphyry NS 45.90 52.20 6.30 n/a n/a 2-4% n/a dyke zone). 129 45.90 46.35 .45 .02 1,20 n/a 2-3% Medium golden brown to dark greyish brown colour. 130 46.35 47.50 1.15 1.20 n/a 10% .01 Grades from a very fine, well laminated siltstone/sandstone to medium (1 131 47.50 48.50 1.00 1-2% .03 1,10 n/a mm) grained, light golden brown quartzose-feldspathic arenite with 132 48.50 50.00 1.50 .02 1.20 n/a 3-5%/PO abundant (5 to 10%) pyrite. .60 133 50.00 51.15 1.15 .01 n/a 21/PO

134 51.15 52.20 1.05

.03

1.00

n/a 4-6%/PO

50.00 51.15 Peldspar Porphyry Dyke. Section contains mostly coarse, white

quartz and lesser feldspar phenocrysts in a contorted and

ESSO MINERALS CANADA DIAMOND DRILL RECORD Hole: Page: HN88-18

5

Interval	Description	Sample	Interval	Length	Au	λg	Te	Pyrite	AL.	TERATION	
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm)	(4)	SIL	CARB	SER

metamorphosed silicified feldspar porphyry dyke, as suggested by a few, thin better preserved sections. The central part of this dyke appears to have annealed into an indistinct milky white quartz vein. The dyke contains numerous irregular wallrock fragments, as well as 2 to 4% disseminated pyrite and pyrrhotite. The included wallrock fragments are golden brown in colour and are calcitic. Upper contact is sharp at 30 to 40 degrees to the core axis. Lower contact is sharp at 25 degrees to the core axis.

Unit contain 5 to 10%, irregular, vispy branching, and flattened white throughout, much like the overlying units. The unit also contains 2 to 3%, small (2 to 10mm), elongate quartz blebs.

Well developed bedding, subparallel to foliation.

Poliation varies slightly, but is generally orientated at 45 to 60 degrees to the core axis, with several folded and microfaulted (offset bedding) zones.

Relatively competent core, generally with 10 to 100 cm breakage. Upper and lower contacts are gradational into finer grained siltstones.

#### 52.20 68.35 PSANNITIC ARRNITE

Nottled to banded, medium grey-green to brown silty arenite, to very fine grained arenite.

Foliation is moderately well developed at 60 to 70 degrees to the core axis, due to alignment of biotite and chlorite.

Bedding is not readily evident due to a homogeneous nature of the unit, but where beds are apparent, due to contrasting grain size, they appear to parallel the foliation/cleavage orientation.

Unit contains several patchy zones of white, irregular silica banding that are often intensely swirled and folded. These do not appear to indicate folded bedding. This patchy veining/banding is not as common (possibly constituting 3 to 54), or as evenly distributed as in the above unit. These zones appear to be concentrated in 1 to 50 cm bands, and then absent in bands of similar width throughout the unit.

Minor dark green, coarse grained, small (2 to 10mm), irregular, crosscutting chlorite veins, that are often associated with small

NS 52.20 68.35 16.15 0.5% n/a n/a n/a 135 54.75 55.75 1.00 1**1**P0 n/a

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: Page:

HN88-18 6

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Interval	Description	Sample	Interval	Length	Au	λg	Te	Pyrite	AL	TERATION	
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm)	(%)	SIL	CARB	SER

coarse, white calcite veins/pods. No quartz veining (apart from the patchy pervasive network intergrowths noted above) occurs within the unit. 0.5 to 1% disseminated pyrrhotite and pyrite, commonly near silica-calcite patches.

A few, thin (hairline to 3mm), subplanar calcite veinlets orientated parallel to foliation. These cut across the irregularly folded calcite-silica patches/bands.

Core is competent with 20 to 100 cm breakage, generally along cleavage surfaces.

Upper and lower contacts are gradational.

#### 68.35 73.87 PSAMMITIC ARRESTE

(Same as arenite unit between 45.90 and 52.20, including several porphyry dykes).

Arenite is medium grey-green to medium golden brown, very fine to fine grained, well bedded/laminated generally at 55 to 65 degrees to the core axis. Colour changes are somewhat mottled, and do not strictly follow bedding/foliation bands.

Unit is calcitic, with 3 to 5%, irregular wispy lenses of white calcite, as is typical in other sections of the overlying clastic metasediments. Unit also contains 2 to 3%, thin (1 to 5mm), subplanar and foliation parallel, quartz/calcite veinlets.

The coarser (fine grained) arenites tend to be brown and contain 0.5 to 1%, and locally up to 5%, disseminated to network veined, pyrrhotite and pyrite.

The very fine grained, silty arenites exhibit the grey-green/brown colour, and contain only minor amounts of disseminated sulphides.

The arenite is intruded by several small (10 to 100cm), feldspar porphyry dykes that are moderately to intensely silicified, and weakly sericitized. The dykes contain 15 to 35%, irregular quartz veining, generally orientated at 60 to 70 degrees to the core axis. Original composition of the dykes is similar to those encountered in the western part of the claim group. It appears to be a biotitic (5%), feldspar porphyry with a quartz dioritic to granodioritic composition. The dykes are weakly foliated at 55 to 70 degrees to the core axis, with irregular

NS	68.35	73.87	5.52	n/a	n/a	n/a	0.5-1%
136	68.35	69.12	.11	.01	.90	n/a	1 <b>1/</b> P0
137	69.12	69.72	.60	.02	.20	n/a	1-21
138	69.72	71.00	1.28	.02	.60	n/a	MINOR
139	71.00	72.10	1.10	.03	. 10	n/a	1-24
140	72.10	73.37	1.27	.01	1.00	n/a	0.5%/PO
141	73.37	73.87	.50	.02	.80	n/a	2-3%PO

ESSO MINERALS CANADA DIAHOND DRILL RECORD Hole: Page: HN88-18

Interval	Description	Sample	Interval	Length	Au	Ag	Te	Pyrite	λL	TERATION	
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm)	(\$)	SIL	CARB	SER

and diffuse contacts. Dykes contain minor to 1%, finely disseminated printe, and me Mon cone with 3 to 54 milyslexite.

The menite mits locally exhibit well preserved lanisated belling. These tend to be intensely folded. One well laminated zone, between 69.45 and 69.12m is magnetic and similar to the banded iron formation horizon in HN88-17.

Core is relatively competent with 5 to 100 cm breakage parallel to foliation, and several fractures orientated at 30 to 45 degrees to the core axis.

Upper and lower contacts are comformable and gradational.

- 68.35 68.50 Brown arenite.
- 68.50 68.60 FP Quartz Diorite Intrusive Wk to Mod Altered. Moderately silicified and very weakly sericitized.
- 68.50 68.78 Grey-green to brown, well bedded silty arenite.
- 68.78 68.88 PP Quartz Diorite Intrusive Wk to Mod Altered, Moderately silicified and very weakly sericitized.
- 68.88 69.05 Dark green-black to brown siltstone.
- 69.05 69.12 Well banded/laminated, multicoloured weakly magnetic iron formation/mudstone.
- 69.12 69.72 PP Quartz Diorite Intrusive Wk to Mod Altered. Moderately (30%) silica veined and silicified, and very weakly sericitized.
- 69.72 69.90 Golden brown, fine to medium grained arenite.
- 69.90 71.00 Grey-green to medium goden brown, fine grained arenite.
- 71.00 72.10 PP Quartz Diorite Intrusive Wk to Mod Altered, Moderately (20%) quartz veined and silicified, and very weakly sericitized, with 1 to 2% disseminated sulphides and 10cm band containing 3 to 5% coarse molybdenite.
- 72.10 73.20 Golden brown, fine to medium grained arenite.
- 73.20 73.37 PP Quartz Diorite Intrusive Wk to Mod Altered. Intensely quartzose with milky to bluish-grey massive appearance.
- 73.37 73.88 Medium golden brown to grey-green fine to very fine grained arenite. The brown coarser material locally contains 5% disseminated pyrrhotite and pyrite.

BSSO MINERALS CANADA DIAMOND DRILL RECORD Hole: HN88-18 Page: 8

Interval (Hetres)	Description	Sample No.			Length (Metres)				Pyrite (%)	SIL	LTERATION CARB	SB
73.87 79.93	CARBONATE- AND/OR SILICA-SULPHIDE FACIES IRON FORMATION Interbedded sequence of sulphide-poor to massive sulphide (py), sulphide-carbonate (calcite) and sulphide-silica facies iron formation, black argillite, and minor siltstone/arenite.  73.87 74.20 Black argillite with sulphide bands. Black, slightly graphitic, slightly contorted, but well laminated at 70 degrees to the core axis. Locally exhibits a slight bronzy colour suggesting abundant extremely finely disseminated sulphides. Also contains several 0.5 to 1 cm, foliation/bedding parallel semi-massive pyrrhotite/pyrite/calcite bands. Competent core with foliation parallel breakage. Upper and lower contacts are conformable and sharp at 70 to 75 degrees to the core axis.  74.20 76.70 Silica-sulphide band. Light to medium grey, irregular, coarse grained silica, that is generally well banded. Unit has a slight chaotic appearance, like a breccia or fossiliferous debris accumulation, except for the lower part of the section, between 76.50 and 76.70, which is well laminated at 50 to 70 degrees to the core axis, with only a slight wavy folding. The silica pseudo-breccia portion contains 10 to 25%, coarse, interstitial pyrrhotite and pyrite, locally forming a networking stockwork infilling. The laminated portion contains 5 to 7% very fine pyrite, plus or minus pyrrhotite, along bedding planes. Section is hard and competent.  76.70 77.62 Black argillite. Black, well laminated, slightly graphitic	142 143 144 145 146	73.87 74.20 15.55 76.70 77.62	74.20 75.55 76.70 77.65 78.65	3 6.06 3 .33 5 1.35 1.15 2 .92 5 1.03 3 1.28	n/a .04 .02 .98 .02 .03	n/a 2.40 2.10 2.20 1.00 .80	n/a n/a n/a n/a n/a	1-25% 10%/P0 20%/P0 15%/P0 5%/P0 8%/P0			
	arillite. Section is well contorted and offset along small faults. Section contains a few, 1 to 3 by 3 to 5 cm quartz pods/lenses, often with a few percent, large pyrrhotite grains. Argillite laminations marked by abundant (3 to 5%), extremely finely disseminated pyrite. Moderately competent core.						٠					
	77.62 78.65 Pyritic arenite/siltstone. Hedium brownish-grey, very fine grained and locally laminated in some sections, and somewhat like the coarser silica-sulphide band between 74.20 and 76.70 in other places. Section contains 3 to 5% vispy, irregular											

BSSO HINERALS CANADA DIAMOND DRILL RECORD

Hole: Page: HN88-18

Interval	Description	Sample	Interval	Length	λu	λg	Te Pyrite	ÿ,	LTERATION	
(Hetres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm) (%)	SIL	CARB	SER

calcite network veining. 4 to 8% finely disseminated pyrite and pyrrhotite, and a few, scattered larger grains. Laminated/bedding at upper contact orientated at 65 degrees to the core axis. Thin black argillite interbed between 78.17 and 78.23 exhibits folded laminations. Relatively competent core.

78.65 79.93 Black graphitic argillite and green-grey siltstone. Black argillite is well laminated and has several polished, graphitic cleavage surfaces. The slightly graphitic sections contain 1 to 2% very finely disseminated pyrrhotite and pyrite. Foliation/lamination orientated at 65 to 80 degrees to the core axis. One 3 to 7 cm wide argilite band exhibits a broad, open folding along a 20 cm section of core. Siltstone is grey-green, and appears slightly siliceous containing several, small silica blebs (0.5 to 1cm), and 5%, irregular, branching/wispy calcite, that forms foliation parallel networking patches. Section contains minor pyrite. Competent core, and conformable contacts at 70 degrees to the core axis.

78.65 78.90 Argillite.

78.90 79.30 Siltstone.

79.30 79.47 5 to 7 cm wide folded argillite bed.

79.47 79.93 Siltstone.

### 79.93 85.95 CARBONATE- AND/OR SILICA-SULPHIDE FACIES IRON FORMATION

Silica-carbonate-sulphide beds.
Hedium slightly brownish grey.

Hedium slightly brownish grey, with a few slightly greenish grey zones.

Hostly very fine to fine grained, and well bedded/laminated silica-carbonate (calcite +/- iron carbonate) beds, that are highly reactive to HCl.

Abundant fine, as well as coarser, pyrite and pyrrhotite.

Planar bedding/laminations sections generally orientated at 50 to 70 degrees to the core axis, but locally the unit is folded and contorted. Grey-green beds contain much less carbonate and sulphides in the sections between \$1.85 and \$2.20, as well as between \$3.20 and \$4.60.

NS	79.93	85.95	6.02	n/a	n/a	n/a	MINOR
148	79.93	81.10	1.17	.02	1.20	n/a	15%/90
149	81.10	81.85	.75	.02	1.20	n/a	121/P0
150	81.85	82.20	.35	.03	1.10	n/a	HINOR
151	82.20	83.20	1.00	.02	1.20	n/a	6%/PO
152	83.20	84.60	1.40	.02	1.00	n/a	MINOR
153	84.60	85.95	1.35	.01	1.20	n/a	15%/PO

R-N	PRO	JECT	(Ont.	771

# BSSO MINERALS CANADA DIAMOND DRILL RECORD

HN88-18 10 Hole: Page:

ALTERATION

CARB

SER

SIL

Interval (Metres)	Description	Sample No.		rval res)	Length (Metres)	Au (g/t)	Ag (ppm)	Te (ppm)	•
	A reddish brown carbonate? mineral is locally present in the carbonate rich sections, including the one between 80.90 and 81.00. Core is competent.  Upper and lower contacts are comformable. Upper contact is orientated at 65 degrees to the core axis, and lower contact is orientated at 80 degrees to the core axis.								
85.95 86.5	CARBONATE- AND/OR SILICA-SULPHIDE FACIES IRON FORMATION Semi-massive sulphide band. 50 to 70%, massive, fine to medium grained, shiny pyrite with intermixed light grey silica-carbonate and black argillite. Both of the latter exhibit lamination/banding at 65 to 75 degrees to the core axis with the pyrite occuring as an overgrowth. Competent core. Upper contact is sharp at 70 degrees to the core axis. Lower contact is sharp at 50 degrees to the core axis.		85.95 85.95			n/a .16	n/a 1.70		50-70% 50-70%
86.50 87.5	5 CARBONATE- AND/OR SILICA-SULPHIDE FACIES IRON FORMATION Silica-carbonate-sulphide, and semi-massive sulphide bands. Well broken unit, similar to above two units, containing light brown-grey silica/carbonate with 10 to 25% pyrite, as well as semi-massive (50 to 75%) crystalline pyrite. Locally this unit contains a few broken argillite fragment zones 5 to 20 cm in width, and at least one core fragment with brecclated massive sulphide surrounded by interstitial argillite material. Core is well fractured and broken.		86.50 86.50			n/a .05	n/a 2.20		40-50% 40-50%
87.55 88.9	O CARBONATE- AND/OR SILICA-SULPHIDE FACIES IRON FORMATION Semi-massive to massive sedimentary sulphide band. Dark earthy brown, sooty pyrite (pyrite is not crystalline as in the overlying units). Pyrite appears to be extremely finely intermixed with argillite (mud) material, locally exhibiting a 0.5 to 1 cm colloform growth pattern. These zones appear to consist, more or less, entirely of		87.55 87.55		1.35	n/a .20	n/a 3.60		60-75 <b>%</b> 60-75 <b>%</b>

BSSO MINERALS CANADA DIAMOND DRILL RECORD

Hole: Page: HN88-18

n/a 10-15%

n/a 10-15%

n/a 10-15%

2.00

2.30

.04

11

.

Interval	Description	Sample	Interval	Length	λu	λq	Te	Pyrite	NL.	TERATION	
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm)	(1)	SIL	CARB	SER

massive earthly pyrite, but probably contains in the order of 60 to 75% pyrite.

Unit contains some well sheared, graphitic argillite fragments, as well as a well broken argillite horizon between \$8.05 and \$8.40 metres.
Unit contains no veining, and is weak to moderately reactive to HCl.
Core is moderately broken due to the soft nature of the pyrite bands, and brittle nature of the graphitic argillites. Where the core holds together a fracture orientation at 45 degrees to the core axis, with a 20 to 50 cm spacing is evident.

Upper and lower contacts are sharp and conformable at 50 and 80 degrees to the core axis respectively.

#### 88.90 91.10 CARBONATE- AND/OR SILICA-SULPHIDE PACIES IRON PORMATION

Weakly brecciated silica-carbonate-sulphide and argillite band.
Grey silica +/- carbonate band that is weakly reactive to HCl.
With minor argillite and sulphide horizons giving rock a well laminated appearance. Unit also includes several, thin (1mm to 20cm), black graphitic argillite horizons. Thicker argillites are well broken, brittle, graphitic with coaly looking polished shear surfaces that parallel an irregular to wavy foliation/bedding orientation at 60 to 80 degrees to the core axis.

Parts of the silica-carbonate bands are well brecciated with offset broken blocks separated by minor fracture voids often filled by crystalline massive sulphides, as well as squeezed in argillite material. Lover contact is sharp at 80 degrees to the core axis.

#### 91.10 108.58 MRTACONGLOWERATE WITH ARRHITE INTERBEDS

Medium shades of purplish/brown, grey-green, purplish-grey, and slightly darker purplish grey giving unit a vari-coloured banded appearance.

Most of the unit consists of an intensely flattened (into plane of foliation) metaconglomerate that is streaky banded, but locally includes sections with better preserved, subrounded silica pebbles that are up to 1 cm thick and at least as wide as the drill core.

The granule/pebble composition seems to be dominantly carbonate-silica

WS 91.10 108.58 17.48 n/a n/a n/a MINOR

NS 88.90 91.10 2.20

157 88.90 90.20 1.30

158 90.20 91.10 .90

BSSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: Page: HN88-18

17

Interval	Description	Sample	Interval	Length	Au	λg	Te	Pyrite	AL	TERATION	
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm)	(\$)	SIL	CARB	SER

material. The conglomerates contain no sulphides as is common in the overlying silica carbonate beds.

Unit is reactive to HCl and contains 5%, irregular, small quartz and calcite blebs, pods, and wispy, discontinuous, flattened network veining. Quartz veining is locally boudinaged into discontinuous blebs. Unit includes several, thin to thick (1cm to 1m), purplish grey, well sorted, coarse (0.5 to 1mm) grained, psammitic arenite horizons, and several streaky banded and purplish pastel coloured, cherty horizons that are generally 1 to 10 cm wide.

Below 94 metres, the unit is, more than less, planar bedded and includes distinctive sedimentary textures. Poliation/bedding is orientated at 70 to 80 degrees to the core axis.

Above 94 metres, the unit is more contorted, sedimentary features are not as distinct, and the unit is more reactive to MCl.

Unit includes minor amounts of pyrite.

Bedding is parallel to the foliation orientation at 70 to 80 degrees to the core axis, and exhibits sharp to gradational, conformable changes. Unit is moderately competent with 5 to 20 cm breakage, generally parallel to bedding/foliation.

#### 108.58 151.22 ASH TUPP / PINB LAPILLI TUPP (MINOR QUARTE BYES)

Quartz-eye lapilli tuff.

Medium grey, with extremely well developed black wispy, nonparallel tuffaceous texture.

Very homogeneous, unmistakable quartz-eye tuff unit.

5 to 10%, opal blue, 2 to 5 mm, ovoid quartz eyes orientated parallel to the foliation direction.

Unit contains very few feldspar crystals, but seems to be composed mainly of small (<3 mm), flattened lapilli and ash tuff material.

Poliation is well developed at 70 to 80 degrees to the core axis. Unit contains minor amounts of finely disseminated pyrite.

2 to 3% quartz blebs/veins often containing minor chlorite. The blebs/veins are 0.5 to 1.5 cm wide and irregularly pinched or boudinaged. Occasionally they form complete veins that parallel the foliation orientation. Locally the tuff adjacent to quartz veins exhibit

MS 108.58 151.22 42.64 n/a n/a n/a MINOR

ESSO MINERALS CANADA DIAMOND DRILL RECORD

Hole:

HN88-18

Page:

13

Interval	Description	Sample	Interval	Length	λu	λg	Te	Pyrite	XI.	TERATION	
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm)	) (%)	SIL	CARB	SER

a weak salmon pink colour.

Unit is weakly magnetic due to very small disseminated magnetite grains. Locally, the unit includes a few, thin (0.1 to lcm) clay or gouge/crush zones that parallel foliation.

Unit is moderately competent with 3 to 20 cm breakage, generally parallel to foliation.

Unit contains two, thin mafic volcanic horizons between 124.42 and 124.45 orientated at 75 degrees to the core axis, and between 128.80 and 129.15 orientated at 70 degrees to the core axis.

Lower part of unit contains some finer, more wavy banded, tuffaceous sections containing smaller, almost flattened, blue guartz eyes.
151.22 (496 Feet) End of Role.

# ESSO MINERALS CANADA SUMMARY DRILL LOG

Project Name:HN	ONTARIO GEOLOGICAL SURVEY
Project Number, 1677	ASSESSMENT FILES OFFICE
NTS: 42H/8	.HII 1 1 1989
Location 17+00W, 4+35	RECEIVED

Dip: \_-45°

Azumith: 180°

Hole Number: HN88-19

Logged By: M.H. Lenters

Date: February, 1988

Claim Number: 872019

Length (m): 166.46

PURPOSE: Test coincident IP anomaly and EM conductor on L7W between 3+50 and 3+75N

From	То	Description	Gold Assays
(m)	(m)		(g/tonne)
0.00	18.45	Overburden (Vertical Depth = 13.0 metres)	· ;
18.45	52.20	Intermediate Metavolcanics	
		Medium to dark grey-green to green-grey, fine grained, moderately foliated at 70 to 80° to the core axis. Local, purplish grey siliceous zones, and minor amphibole porphyroblasts. Minor (3 to 5%) quartz veining. 1 to 6% pyrrhotit and pyrite.	0.01 to 0.04
52.20	56.60	Cherty, Pyritic Argillite Brecciated graphitic argillite and dark blue-grey silica, adjacent to small fault zone (55.50 to 56.10 m). Well fractured locally vuggy and containing 2 to 10% finely crystalline pyrite	
56.60	62.20	Interbedded Pyritic Silica-Carbonate Beds and Contorted, Siliceous Argillite	
		Creamy brown, medium crystalline, massive silica-carbonate beds containing 5 to 6% pyrite; and black, well laminated, sheared and contorted argillite horizons containing 5 to 15% finely disseminated pyrite and minor pyrrhotite.	0.01 to 0.06
62.20	67.10	Fine-Grained, Siliceous Metasediments Dark grey, well laminated, magnetitic, cherty siltstones and psammitic arenites. Foliation at 70 to 80° to the core axis. 1 to 5% coarse pyrite and pyrrhotite.	0.01
67.10	71.75	Intermediate Metavolcanics As above, but with less (1 to 2%) sulphides.	0.01 to 0.02
71.75	78.33	Interbedded Pyritic, Cherty Metasediments, Silica Bands and	
		Argillite Light to medium purple to brownish grey, well laminated, but intensely contorted, cherts containing abundant, small (1 to 20 mm) ameboid silica patches and larger blue-grey black, silica bands, as well as interbeds of black, slightly graphitic argillite. Generally moderately magnetic, containing 5 to 10% pyrrhotite and minor pyrite as disseminations and laminations in sediments and fracture fillings in silica bands.	0.01 to 0.21
78.33	118.60		0.01
118.60	120.40	Psammitic Arenite  Medium brown, fine grained, weakly foliated at 80° to the core axis. Minor (3 to 5%) calcite and quartz veins and patches. Minor pyrite.	Not Assayed
		,	

	,	From	То	Description	Gold Assays
`		(m)	(m)		(g/tonne)
(		120.40	130.10	Intermediate Metavolcanics As above, with minor pyrite.	Not Assayed
		130.10	1 <b>6</b> 6.46	Intercalated Fine-grained Clastic Metasediments and Felsic to Intermediate Metavolcanics.  Light to medium brownish grey to green-grey, well laminated and/or foliated (at 60 to 75° to the core axis) plagioclase-silica-chlorite +/- biotite schists. 3 to 5% calcite patches, and minor quartz and calcite veining. Minor disseminated pyrite.	0.01
	٠		166.46	<u>.</u>	
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H-W PROJECT (Ont. 77) BSSO NINBRALS CANADA Hole: HN88-19 DIAHOND DRILL RECORD Page: L-872019 Atlas Drilling Limited Claim No: Azimuth: 180 Drilled by: Dip: -45 Grid: Central Hole Size: BQ 7+00W Basting: Core Size: BO Casing Removed Northing: 4+758 Casing: Acid Tests: Blevation: Level Started: Jan. 28, 1988 Jan. 29, 1988 Purpose: Test IP & BM Anomalies on L7V at 3+50N Depth Pinished: Az. Dip 166.46 -43.0 Length: 166.46Metres M.B.Lenters Logged by: Pebruary 1988 Vert. Proj: 116 Metres Date logged: Hor. Proj: 120 Metres Logging Method: Log II Ovb. Depth: 13.0 Metres Measurement System: Metric

Sample Interval Length Au

No.

(Metres) (Metres) (g/t) (ppm)

Te Pyrite

(ppm) (%)

ALTERATION

#### .00 18.45 OVERBURDEN

Interval

(Metres)

.00 14.00 Sand and gravel.

14.00 15.20 Cobbles (mostly granitic).

15.20 16.40 Large mafic volcanic boulder, or bedrock block.

Description

16.40 18.45 Basal till.

### 18.45 52.20 SCHISTOSE MAPIC METAVOLCANIC WITH AMPHIBOLE PORPHYROBLASTS

C VELYANDOVALC ALLA VASALBADA LAKKUIKADAV919							
edium-dark, slightly purplish grey to green-grey, fin	e NS	18.45	52.20	33.75	n/a	n/a	n/a 0.5-5%
y homogeneous unit.	159	25.20	26.22	1.02	.04	n/a	n/a MINOR
ll developed foliation (phyllitic to schistose appearance o	n 160	37.00	38.00	1.00	.01	'n/a	n/a 0.5%/PO
aces) at 75 degrees to the core axis.	161	38.00	39.00	1.00	.01	n/a	n/a 0.5%/PO
original textures are apparent within the unit. The	e 162	39.00	40.00	1.00	.02	n/a	n/a 0.5-1 <b>%</b>
olish hue and medium green-grey colouring, and hardnes	s 163	40.00	41.46	1.46	.02	n/a	n/a 2-3%/PO
ine silica component and possible siltstone origin, but m	0 164	41.46	43.00	1.54	.01	n/a	n/a 2%
tions or other sedimentary textures are evident.	165	43.00	44.50	1.50	.04	n/a	n/a 3-51/PO
banding within the unit appears more like flow banding.	166	14.50	45.50	1.00	.01	n/a	n/a 5-6%/PO
ne unit is generally slightly darker coloured, locall	y 167	45.50	47.00	1.50	.01	n/a	n/a 4-5%/PO
		47.00	48.20	1.20	.02	n/a	n/a 4-5%/PO
	edium-dark, slightly purplish grey to green-grey, fin y homogeneous unit.  11 developed foliation (phyllitic to schistose appearance o aces) at 75 degrees to the core axis.  original textures are apparent within the unit. The lish hue and medium green-grey colouring, and hardnes ne silica component and possible siltstone origin, but not tions or other sedimentary textures are evident.  banding within the unit appears more like flow banding.  e unit is generally slightly darker coloured, locall	edium-dark, slightly purplish grey to green-grey, fine y homogeneous unit.  159 ll developed foliation (phyllitic to schistose appearance on aces) at 75 degrees to the core axis.  161 original textures are apparent within the unit. The lish hue and medium green-grey colouring, and hardness ne silica component and possible siltstone origin, but no tions or other sedimentary textures are evident.  163 banding within the unit appears more like flow banding.  164 lish did not sedimentary textures are evident.  165 banding within the unit appears more like flow banding.  166 lish did not sedimentary textures are evident.  167 lish did not sedimentary textures are evident.	edium-dark, slightly purplish grey to green-grey, fine y homogeneous unit. 159 25.20 11 developed foliation (phyllitic to schistose appearance on aces) at 75 degrees to the core axis. 160 37.00 original textures are apparent within the unit. The 162 39.00 lish hue and medium green-grey colouring, and hardness 163 40.00 ne silica component and possible siltstone origin, but no 164 41.46 tions or other sedimentary textures are evident. 165 43.00 banding within the unit appears more like flow banding. 166 44.50 te unit is generally slightly darker coloured, locally 167 45.50	y homogeneous unit. 159 25.20 26.22 11 developed foliation (phyllitic to schistose appearance on aces) at 75 degrees to the core axis. 161 38.00 39.00 original textures are apparent within the unit. The lie2 39.00 40.00 lish hue and medium green-grey colouring, and hardness 163 40.00 41.46 ne silica component and possible siltstone origin, but no tions or other sedimentary textures are evident. 165 43.00 44.50 abanding within the unit appears more like flow banding. 166 44.50 45.50 47.00	edium-dark, slightly purplish grey to green-grey, fine y homogeneous unit. 159 25.20 26.22 1.02 11 developed foliation (phyllitic to schistose appearance on aces) at 75 degrees to the core axis. 160 37.00 38.00 1.00 original textures are apparent within the unit. The lish hue and medium green-grey colouring, and hardness 163 40.00 41.46 1.46 ne silica component and possible siltstone origin, but no 164 41.46 43.00 1.54 tions or other sedimentary textures are evident. 165 43.00 44.50 1.50 abanding within the unit appears more like flow banding. 166 44.50 45.50 1.00 te unit is generally slightly darker coloured, locally 167 45.50 47.00 1.50	edium-dark, slightly purplish grey to green-grey, fine y homogeneous unit. 159 25.20 26.22 1.02 .04 11 developed foliation (phyllitic to schistose appearance on aces) at 75 degrees to the core axis. 161 38.00 39.00 1.00 .01 original textures are apparent within the unit. The 162 39.00 40.00 1.00 .02 lish hue and medium green-grey colouring, and hardness 163 40.00 41.46 1.46 .02 ne silica component and possible siltstone origin, but no 164 41.46 43.00 1.54 .01 tions or other sedimentary textures are evident. 165 43.00 44.50 1.50 .04 banding within the unit appears more like flow banding. 166 44.50 45.50 1.00 .01 e unit is generally slightly darker coloured, locally 167 45.50 47.00 1.50 .01	edium-dark, slightly purplish grey to green-grey, fine y homogeneous unit. 159 25.20 26.22 1.02 .04 n/a 11 developed foliation (phyllitic to schistose appearance on aces) at 75 degrees to the core axis. 160 37.00 38.00 1.00 .01 n/a original textures are apparent within the unit. The 162 39.00 40.00 1.00 .02 n/a lish hue and medium green-grey colouring, and hardness 163 40.00 41.46 1.46 .02 n/a ne silica component and possible siltstone origin, but no 164 41.46 43.00 1.54 .01 n/a tions or other sedimentary textures are evident. 165 43.00 44.50 1.50 .04 n/a banding within the unit appears more like flow banding. 166 44.50 45.50 1.00 .01 n/a n/a unit is generally slightly darker coloured, locally 167 45.50 47.00 1.50 .01 n/a

ESSO MINERALS CANADA DIAMOND DRILL RECORD Hole: HN88-19 Page: 2

Interval (Ketres)	Description	Sample Ko.	Interval				λg		Pyrite	ALTERATION		
			(Xet	(Metres)	(Metres)	{g/t}	(ppm)	(ppm)	(\$)	SIL	CARB	SER
	phyllitic (sedimentary) character, and contains 3 to 5%, small (3 to 10mm long), dark green, acicular amphibole porphyroblast needles, which give the unit an intermediate volcanic appearance. Minor to 0.5%, disseminated pyrite and pyrrhotite, and small (hairline) veinlets of pyrite.  Below 40m the unit is lighter, and bluish to purplish grey coloured, is less phyllitic, more siliceous, weakly magnetic and contains increasingly more disseminated pyrite and pyrrhotite, as well as some large pyrrhotite blebs, and small pyrite veinlets. Sulphides are concentrated around silica vein/patches.  Unit contains 3 to 5% quartz and quartz-calcite in small, irregular veins, ptygmatic blebs and patches, as well as minor, thin (1mm) cross-cutting subplanar calcite veinlets, and some light coloured very diffuse irregular patches of calcite. Unit is generally weakly to moderately reactive to HCl, particularly along hairline fractures.  Sulphides tend to concentrate around some quartz patches, forming large pyrrhotite plus or minus pyrite grains, particularly below 40 metres. Unit is relatively competent and hard (siliceous), with 5 to 50 cm breakage parallel to foliation, and along fractures orientated at 40 to 50 degrees to the core axis.  Lower contact lost due to ground core.	170		50.90	1.00 1.70 1.30	.04	n/a n/a n/a	n/a	4-5%/P0 4-5%/P0 -10%/P0			
.20 56.6	O ARGILLITE  Dark cloudy blue-grey, fine grained, massive silica, with argillaceous partings, and large (0.5 to 2cm), vuggy fractures often containing finely crystalline pyrite blebs and seams.  Unit is brecciated and infilled with irregular network of black argillite and grades into sections where black graphitic argillite contain angular breccia fragments of the massive silica.  Argillite is very graphitic, locally exhibiting irregular polished foliation/fracture surfaces orientated at 15 to 60 degrees to the core axis. Unit contains minor amounts of finely disseminated sulphides.  Argillite also contains a few, large (0.5 to 1cm), finely crystalline boxwork pyrite structures where calcite has been removed.  Breccia zones exhibit foliation/bedding that is swirled to chaotic.	172 173 174 175 176	52.20 52.80 53.66 55.25 55.50	52.80 53.66 55.29 55.50 56.10	5 .86 5 1.59 0 .25	n/a .05 .02 .01 .04 .05	n/a .n/a n/a n/a n/a n/a	n/a n/a n/a n/a n/a n/a	3-10% 5-10% 6-7% 4-6% 5-7% 1-2% 3-4%			

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B-W PROJECT (Ont. 77)

BSSO HINERALS CANADA DIAMOND DRILL RECORD Hole: Page: HN88-19

Interval (Metres)	Description	Sample No.			Length Metres)		Ag (ppm)		Pyrite (%)	BRATION CARB
	Locally the more siliceous sections exhibit weak laminations, suggesting a cherty sedimentary deposit, but most are massive and except for the colour appear more like silica veins.									
	White quartz vein with abundant graphitic argillite inclusions occurs between 55.75 and 55.90.									
	Two small clay gouge seams recovered from 55.95 to 55.98, and 56.07 to 56.10 at top of a small fault zone.									
	Below the lower gouge seam, is a broken section of well laminated argillite containing no silica fragments. The wavy bedding lamination is									
	orientated at 65 degrees to the core axis.  Lower contact is orientated at 70 degrees to the core axis.  52.20 52.80 Well banded, sooty brown argillite, and silica-argillite that									
	is moderately contorted and brecciated. 52.80 53.66 Blue-grey, massive silica band, locally brecciated and filled									
	by (15 to 20%) black argillite. 53.66 55.25 Black graphitic argillite that is extremely contorted,									
	brecciated and contains (25 to 30%) large, angular blue-grey silica fragments.									
	55.25 55.50 Contorted black argillite. 55.50 56.10 Fault Ione. Contorted black argillite in fault zone with 10									
	to 30%, small (<1 cm), rotated, angular breccia fragments, as well as two small recovered clay gouge zones from 55.95 to									
	55.98, and 56.07 to 56.10. Section also includes a late, white, irregular quartz vein with numerous graphitic argillite wallrock fragments that cuts through (and									
	subparallel to) the fault zone. 56.10 56.60 Well laminated, pyritic, cherty argillite, with no massive silica fragments.						•			
56.60 62.21	D CARBONATE- AND/OR SILICA-SULPHIDE PACIES IRON PORMATION									
	Interbedded silica-carbonate-pyrite beds and contorted siliceous argillite. Silica-carbonate-pyrite beds are very homogeneous, fine to medium crystalline (grained), and have the appearance of a well sorted arenite.	178	56.60 56.60 57.70	57.70	1.10	n/a .02 .01	n/a n/a n/a	-	3-4% 10-12% 5-7%	
	These have a medium tan to olive grey-brown colour, are moderately reactive to HCl, hard, and contain 5 to 6%, finely disseminated pyrite,	180	58.76 59.76	59.76	1.00	.06	n/a n/a	n/a	10-15% 7-10%	

H-W PROJECT (Ont. 77)

BSSO MINERALS CANADA DIAMOND DRILL RECORD Kole: Page: RN88-19

Interval (Metres)	Description	Sample No.			Length (Ketres)		, {ppm}		Pyrite (%)	SIL	LTERATION CARB	SE
	and no veining or other impurities.  These beds are not foliated, and are broken along fracture surfaces orientated at 40 to 50 degrees to the core axis.  Above have distinct bedding contacts with black, well laminated argillite and siltstone, generally with irregular, very wavy bedding laminations that are in part siliceous and in part sulphide horizons. This unit also exhibits less distinct transitions from the silica-carbonate-pyrite beds into argillite/siltstone.  A few, large (1 to 5cm), siliceous pods/patches occur within the unit.  5 to 174 finely disseminated pyrite, occurring mostly in the silica-carbonate-sulphide beds, as well as some pyrrhotite and/or magnetite in argillite/silstone beds.  Silica-carbonate-pyrite horizons are hard and competent with breakage along fractures.  Argillite/siltstone unit is well broken parallel to the foliation orientation, and along fractures.  Interbed contacts within the unit are gradational to sharp, and often wavy and irregular (nonplanar).  Upper contact is sharp at 70 degrees to core axis.  Lover contact is sharp at 60 degrees to core axis.  56.60 57.60 Homogeneous, medium crystalline (grained), medium olive-brown silica-carbonate-pyrite bed.  57.60 62.20 Interbedded and intermixed silica-carbonate-pyrite and argillite-siltstone.	182	60.76	62.20	1.44	.03	n/a	n/a	7-10\$			
2.20 67.10	This unit is similar to the one between 71.75 and 78.33. These two units are separated by a silicified felsic volcanic unit that is similar to the over and underlying felsic to intermediate volcanic units. Interbedded, well laminated cherty siltstones, and fine grained arenites. The former locally appear like BIF.  Sediments consist mainly of medium to dark grey as well as black, wavy laminated, cherty siltstones in 5 to 25 cm thick beds, often separated by coarser siltstone to arenite beds.  The finely laminated siltstone beds are generally magnetic, and may	183 184 185 186	62.20 63.20 64.65 65.35	63.20 64.65 65.35 66.01	0 4.90 0 1.00 5 1.45 5 .70 0 .65 0 1.10	n/a .01 .01 .01 .01	n/a n/a n/a n/a n/a	n/a n/a n/a n/a	1-6% 3-5%P0 3-5%P0 1-2%P0 4-6%P0 1-2%P0			

H-N PROJECT (Ont. 77)

ESSO NINERALS CANADA DIAMOND DRILL RECORD

Hole: Page: HN88-19 5

Interval	Description	Sample	Interval	Length	λu	λg	Te	Pyrite	AL	TERATION	
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm)	(4)	SIL	CARB	SER

contain fine magnetite in the thin, black laminations, but they all also contain minor fine pyrrhotite that may totally account for the magnetism. The unit includes several brownish laminations/bands that are due to biotite.

Laminations are generally orientated at 75 to 80 degrees to the core axis. They are subplanar, and often chaotic over short intervals with intense microfolding.

Pine grained arenite beds are medium, slightly brownish grey, very hard and not calcitic. Locally they contain 5 to 10%, very small (lmm), blue quartz grains that are only slightly larger than the 0.5 to 1 mm grain size of the sections. These beds are well sorted siliceous, homogeneous, and generally grade into the finer laminated siltstones. Arenite beds have a moderately well developed foliation orientation at 70 to 75 degrees to the core axis, but exhibit no recognizable bedding. They contain minor amounts of small (lmm) garnet porphyroblasts.

Unit contains abundant, finely disseminated, as well as coarser blebs of pyrrhotite within both the siltstone and arenite.

54, Irregular, swirled silica blebs and patches, often with associated coarser pyrrhotite, and large (1 to 10cm) patches of finely crystalline pyrite.

#### 67.10 71.75 SCHISTOSE MAPIC METAVOLCANIC WITH AMPHIBOLE PORPHYROBLASTS

Slightly purplish to greenish grey, aphanitic to fine grained volcanic. Massive with a weak to moderate foliation at 70 to 80 degrees to the core axis. Grain size is mainly evident as dark green, 1 to 2 mm amphibole porphyroblasts?, generally occuring in a purplish siliceous aphanitic matrix. Minor amounts of large (1 to 4mm), generally oblong pinkish, polkioblastic garnet porphyroblasts occur in clusters throughout the unit.

3 to 5% irregular, banded/patchy, light coloured calcite and silica-calcite zones.

Unit includes a few, thin (5 to 10cm), laminated siltstone horizons typical of the adjacent units.

Unit contains no major veining.

Generally mixed disseminated sulphides (py and po), but includes a few,

NS	67.10	71.75	1.65	n/a	n/a	n/a	1-21
188	67.10	68.10	1.00	.02	n/a	n/a	1%/PO
189	68.10	69.50	1.40	.02	n/a	n/a	1-2 <b>1/</b> P0

190 69.50 70.75 1.25 .01 n/a 1%/PO 191 70.75 71.75 1.00 n/a 2-31/PO H-N PROJECT (Ont. 77)

### ESSO MINERALS CANADA DIAMOND DRILL RECORD

Hole: Page: HN88-19

Interval	Description	Sample	Interval	Length	λυ	λg	†e	Pyrite	<b>A</b> L	TERATION	
(Metres)		No.	(Metres)	(Metres)	$\{g/t\}$	(ppm)	(ppm)	(1)	SIL	CARB	SBR

thin (2 to 10cm) zones containing 5 to 10% disseminated pyrrhotite. Unit is siliceous, hard and competent with 10 to 100 cm breakage. Upper contact is diffuse and probably gradational. Lower contact is sharp and orientated at 80 degrees to core axis.

#### 71.75 78.33 CHERTY, BANDED IRON FORMATION

Siliceous (cherty) sediment, black argillite, and silica bands.

Generally a light purplish grey to olive-green/brown grey, siliceous, laminated cherty siltstone. Locally the laminations are intensely folded and contorted. The unit contains abundant, small (1 to 20mm), ameboid silica patches, as well as several large bands of cloudy blue-grey silica. The unit also contains several sections of black, slightly graphitic argillite containing thin (1 to 3mm), blue-grey silica laminations and banding, as well as abundant pyrrhotite.

The unit is moderately to strongly magnetic and contains abundant (5 to 10%) pyrrhotite, generally as disseminations and laminations in the argillite and cherts, as well as in fracture filling veins in the silica bands. Argillite bands also contain several percent pyrite as laminations within the more siliceous beds, and as fracture fillings.

Laminations and banding are subplanar and orientated at 70 to 80 degrees to the core axis.

Unit is generally competent with 5 to 30 cm breakage, except for the argillite beds which are usually well broken.

71.75 72.60 Banded siliceous chert.

72.60 73.20 Mottled grey silica band (vein?), with minor black argillite bands at lower end.

73.20 74.45 Creamy brown carbonate?-silica band, exhibiting contorted

74.45 75.85 Black argillite with minor chert bands and silica (quartz vein?) bands.

75.85 76.95 Banded siliceous chert.

76.95 78.33 Transitional between the banded siliceous chert and the underlying volcanics. Section contains large zones with abundant garnet and amphibole porphyroblasts.

Lower contact is orientated at 80 degrees to the core axis.

MS	71.75	78.33	6.58	n/a	n/a	n/a	1-15%
192	71.75	72.60	.85	.03	n/a	n/a	4-71/PO
193	72.60	73.20	.60	.21	n/a	n/a	6-9%/PO
194	73.20	74.45	1.25	.06	n/a	n/a	9-15%PO
195	74.45	74.92	.47	.02	n/a	n/a	4-71/PO
196	74.92	75.85	.93	.10	n/a	n/a	5-9%/20
197	75.85	76.95	1.10	.01	n/a	n/a	2-3%/PO
198	76.95	78.33	1.38	.01	n/a	n/a	1-2%/PO

H-M PROJECT (Ont. 77)

ESSO MINERALS CANADA DIAMOND DRILL RECORD

Hole: Page: HK88-19

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Interval (Metres)	Description	٧o	(Notree	l Length ) (Metres)				Pyrite (%)	SIL	LTBRATION CARB	SER
78.33 94.50	SCHISTOSE MAPIC METAVOLCANIC WITH AMPHIBOLE PORPHYROBLASTS  Pale to medium grey-green to green-grey with darker sections exhibiting a minor to moderate (1 to 5%) amount of dark green, 1 to 3 mm, amphibole porphyroblasts in a finer grained, hard, massive, weak to moderately foliated matrix.  Unit includes minor zones (5 to 20cm wide) of cherty flow banded felsic volcanic or chert.  Poliation generally planar, with no folding, at 75 to 80 degrees to the core axis.  Locally the unit has a slight wavy, tuffaceous laminated appearance.  Unit contains a few slightly browner sections with fine biotite, however thin (hairline), wispy, discontinuous, foliation parallel biotite laminae are common throughout the unit.  Unit contains the occasional band with minor amounts of small to medium (1 to 4mm), round, light pink garnet porphyroblasts.  Relatively abundant amount of thin, irregular foliation subparallel, network calcite patches.  One large (20cm at 88.00 to 88.20 m) bull white, coarse grained quartz vein/patch, and several smaller (2 to 15mm) ones, often with minor amounts of calcite.  Minor finely disseminated pyrite.  Competent core, generally with 50 to 200 cm breakage.  Upper and lower contacts are gradational.	199 200	78.33 79 79.00 80	.50 16.17 .00 .67 .00 1.00 .00 1.00	n/a .01 .01	n/a n/a n/a n/a	n/a	MINOR MINOR MINOR			
94.50 118.60	SCHISTOSE MAPIC METAVOLCANIC WITH AMPHIBOLE PORPHYROBLASTS  Medium to medium-dark grey-green, fine to medium (0.5 to 1mm) grained, massive, weak to moderately foliated.  Poliation is orientated at 70 to 80 degrees to core axis.  Well developed fine intergrowth of plagioclase and ferromagnesian minerals is evident in most of unit, although this has been overprinted by development of secondary metamorphic minerals, including coarser (1 to 3mm) amphibole, chlorite and minor biotite. Lower part of unit (below 112m), has greater biotite content and contains several zones that are	202	98.00 99	.60 24.10 .00 1.00 .75 1.00	n/a .01 .01	n/a n/a n/a	n/a n/a n/a	MINOR MINOR MINOR			

H-N PROJECT (Ont. 77)

ESSO MINERALS CANADA DIAMOND DRILL RECORD

Hole: Page: HN88-19

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Interval	Description	Sample	Interval	Length	λu	λg	Te	Pyrite	λL	TERATION	
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm)	(\$)	SIL	CARB	SER

more schistose and have a brownish green-grey colour giving the unit more of a coarse clastic sediment composition/appearance.

Abundant (5%), thin (hairline to 2mm), wispy, white calcite bands, and irregular network patches typical of metamorphosed plagioclase-rich volcanic and sedimentary rocks in the area.

A few, small (1 to 15mm) quartz/silica-calcite veins and lenses, but also several larger quartz veins including:.

97.81 97.83 Silica-carbonate vein at 50 degrees to the core axis.

98.24 98.28 Silica-carbonate patch.

98.48 98.49 Upper of two parallel silica-carbonate veins at 45 degrees to core axis.

98.55 98.56 Lower of two parallel silica-carbonate veins at 45 degrees to core axis.

98.60 98.90 Patchy silica vein with wallrock inclusions.

99.25 99.28 Silica-carbonate vein at 60 degrees to the core axis.

101.50 101.55 Silica-carbonate vein at 90 degrees to the core axis.

105.98 106.24 Silica vein with wallrock inclusion, orientated at 45 degrees to the core axis.

Unit contains minor finely disseminated pyrite, and minor amounts of coarser pyrite and pyrrhotite in association with some quartz veins.

Competent core, generally with 20 to 150 cm breakage along a few sleeply inclined (20 to 40 degree) fractures that parallel the foliation orientation.

Upper and lower contacts are gradational.

#### 118.60 120.40 PSAMMITIC ARBHITE

Medium brown, well sorted, very clean, fine grained, slightly psammatic arenite.

Poorly developed foliation orientated at 80 degrees to the core axis.

A few, finer grained silty sections exhibit a wavy bedding/lamination at 60 to 80 degrees to the core axis.

Unit contains 5%, irregular, patchy, white calcite banding/lenses and several thinner (1 to 3mm) slightly boudinaged silica laminae. The lower 10 cm consists of a hard, aphanitic, well banded, siliceous cherty horizon.

MS 118.60 120.40 1.80 p/a n/a n/a MINOR

H-M PROJECT (Ont. 77)

ESSO MINERALS CANADA DIAMOND DRILL RECORD

Hole:

HN88-19

Page:

Interval Description Sample Interval Length Au Ag Te Pyrite ALTBRATION
(Metres) (Metres) (g/t) (ppm) (ppm) (%) SIL CARB SER

One large quartz vein occurs between 116.60 and 116.70 metres. Minor disseminated pyrite, generally in association with small fractures. Competent core, generally with 40 to 100 cm breakage. Upper and lower contacts are gradational, and orientated at 80 degrees to the core axis.

#### 120.40 130.10 SCHISTOSE MAPIC METAVOLCANIC WITH AMPHIBOLE PORPHYROBLASTS

(Similar to unit between 94.50 and 118.60).

Medium to dark grey-green, with some sections having a slightly brownish green colour due to abundant fine biotite.

Unit is relatively hard, has a fine to medium (0.5 to lmm) grain size, and is relatively uniform and massive in character.

Moderate well developed foliation orientated at 70 to 80 degrees to the core axis.

2 to 3%, irregular, patchy, white calcite banding/lenses, concentrated in thin (1 to 3cm) zones throughout the unit.

Unit contains several, small (2 to 10mm), white coarse grained quartz veins/lenses, generally orientated subparallel to foliation.

121.30 121.66 Dark brown, fine (0.1 to 1mm) grained, biotite-plagioclase-quartz schist, including abundant blue quartz-eye material. Well developed schistose foliation at 80 degrees to the core axis.

Competent core, generally with 30 to 100 cm breakage. Upper and lower contacts are gradational.

#### 130.10 135.67 SILTSTONE

Light to medium grey, to grey-brown, laminated/banded siltstone.

Lamination/banding parallels foliation at 70 degrees to the core axis.

Unit is generally hard and locally siliceous with several light coloured banded sections having a cherty appearance.

Unit has a schistose/phyllitic character due to fine platy minerals paralleling foliation direction.

3 to 5%, irregular, light coloured, small (1mm to 1cm) calcite patches, blebs and veins orientated subparallel to foliation.

MS 120.40 130.10 9.70 n/a n/a n/a MINOR

204 132.00 133.00 1.00 .01 n/a n/a 13P

H-M PROJECT (Ont. 77)

ESSO MINERALS CANADA DIAMOND DRILL RECORD

Hole: Page: HN88-19 10

Interval	Description	Sample	Interval	Length	ku	уд	Te Pyrite	ALTERATIO	X
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm) (%)	SIL CARB	SER

Minor amounts of thin (1 to 10mm), quartz +/- calcite veins and lenses.

Minor to 1%, finely disseminated pyrrhotite, as well as thin, foliation parallel bands.

Relatively concetent core with 10 to 50 cm breakage.

Upper and lover contacts are sharp and conformable, and orientated at 75 degrees to the core axis.

#### 135.67 150.30 UNDIPPERENTIATED METASEDIMENTS (MARIC COMPOSITION)

Interbanded unit with various gradations between a slightly purplish brown, generally laminated/bedded, but occasionally massive, fine grained, well sorted, clean siltstone, and a medium to dark grey-green to slightly purplish green-grey, well foliated, schistose rock with a volcanic composition. Generally contains 5 to 15%, 1 to 3 mm, dark green amphibole porphyroblasts. Some of these units contain a minor amount of small (0.5 to 2mm), pink garnet porphyroblasts, often concentrated in thin (0.5 to 2cm) bands, but including one large (136.60 to 136.75) band with 30%, coarse (2 to 5mm), polkioblastic garnets. The siltstone bands also contain some garnets.

Contacts between the siltstone and schistose volcanic horizons are conformable and occasionally gradational, suggesting that they may be mostly volcaniclastic in origin.

5%, Irregular calcite patches and veining.

2 to 3% irregular to banded/lensoid, coarse, grey-white quartz veining, generally as 0.5 to 5cm blebs.

Well developed phyllitic to schistose foliation orientated at 70 to 80 degrees to the core axis.

Generally trace to minor amounts of disseminated pyrite, but several siltstone bands locally contain 1 to 2% wispy pyrrhotite laminations.

Competent core, generally with 30 to 100 cm breakage.

Bedding contacts within the unit are gradational to sharp and orientated at 70 to 80 degrees to the core axis.

Lower contact is gradational into the underlying wispy banded tuff unit.
Definite siltstone interbeds, generally occuring between the amphibole porphyroblastic volcaniclastics occur at:.
136.10 136.22 Siltstone.

MS 135.67 150.30 14.63 n/a n/a n/a MINOR

H-N PROJECT (Ont. 77)

BSSO MINERALS CANADA DIAMOND DRILL RECORD

Role:

HN88-19

Page:

11

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Interval	Description	Sample	Interval	Length	λu	λg	Te	Pyrite	AL'	TERATION	
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(bbm)	(1)	SIL	CARB	SER

136.39 136.60 Siltstone.

139.41 139.50 Laminated siltstone.

139.93 140.30 Siltstone.

140.56 141.33 Siltstone with minor pyrrhotite.

141.61 141.66 Siltstone.

#### 150.30 166.46 ASH TUPP / PINE LAPILLI TUPP (MINOR QUARTE BYES)

Light to medium brownish-grey to grey-green, wavy laminated tuffaceous unit.

Wavy laminations are often thin (hairline), chlorite +/- biotite parting surfaces that occur between bands of white plagioclase, and coarser (1 to 2mm long), elongate amphibole porphyroblasts.

Unit appears to be partially waterlain/volcaniclastic.

Wispy laminations are orientated at 60 to 75 degrees to the core axis.

No garnets evident within the unit.

Unit contains 3 to 5%, irregular calcite patches, and 3 to 5% small to large (2mm to 10cm), white quartz veins/lenses that parallel the foliation orientation.

Kinor disseminated pyrite, generally as small grains associated with quartz veining.

Competent core, generally with 30 to 100 cm breakage.

Upper contact is a gradational change from the overlying unit.

166.46 (546 Peet) Rnd of Hole.

MS 150.30 166.46 16.16 n/a n/a n/a MINOR

### ESSO MINERALS CANADA SUMMARY DRILL LOG

Project Name: HN	ONTARIO GEOLOGICAL SURVEY
Project Number 1677	ASSESSMENT FILES OFFICE
NTS: 42H/8	.1111 1 4 1989
Location L10+75E, 5+00S	REGEIVED
Azumith, 180°	Dip:

Hole Number: HN88-20

Logged By: M.H. Lenters

Date: February, 1988

Claim Number: L-848121

Length (m) 139.02

PURPOSE: Test IP anomaly on L11E between 5+50 and 6+00S

From	То	. Description	Gold Assays
(m)	(m)	Description	(g/tonne)
0.0	15.35	Overburden (Vertical Depth = 10.9 m)	
15.35	18.50	Felsic Volcanic Feldspar Crystal Tuff  Medium grey, medium grained, well foliated at 50 to 60° to the core axis and containing 5%, 0.5 to 2 mm, subhedral, white, plagioclase grains and blue-grey quartz eyes. Moderate (5 to 7%) amount of quartz veining, and 1 to 2% disseminated pyrite.	0.01 to 0.06
18.50	26.45	Coarse-grained Psammitic Arenite  Medium grey, coarse grained, well sorted, psammitic quartzose- feldspathic arenite, weakly foliated at 60 to 70° to the core axis. Moderate (5 to 10%) amount of quartz veining and minor to 1% pyrite.	0.04 to 0.42
26.45	32.80	Fine-Grained Psammitic Arenite  Medium grey, well sorted, fine grained, laminated/bedded at 50 to 60° to the core axis. No significant veining. Minor pyrite.	Not Assayed
32.80	75.95	Phyllitic Siltstone  Medium green-grey to grey-green, and finely laminated/bedded at 60 to 75° to the core axis. Minor (1-2%) veining. Minor Pyrite.	0.02
75.95	95.25	Coarse-grained Psammitic Arenite with Conglomerate Interbeds Medium brownish-grey, well sorted and weakly foliated/bedded at 60 to 80° to the core axis. Moderate (3-5%) veining. Minor pyrite.	0.01 to 0.02
95.25	115.58	Fine-grained Psammitic Arenite  Medium grey to slightly greenish grey and well laminated/bedded  at 65 to 70° to the core axis. Minor (1%) veining, and minor  finely disseminated pyrite.	Not Assayed
115.58	124.15	Granule-Bearing Aranite And Pebble Conglomerate  Brownish-grey to greenish-grey containing 20 to 70%, small (granule to pebble) well rounded but flattened, polymitic clasts in a coarse grained arenite matrix. Minor veining. Minor pyrite in arenaceous section.	Not Assayed
124.15	136.50	Fine-grained Psammitic Arenite As above.	0.01
136.50	139.02	Pebble Conglomerate with Arenite Interbeds Brownish-grey to greenish-grey, with abundant(30 to 80%), well rounded and well flattened (20:1), polymitic pebbles and cobbles.	Not Assayed
	139.02	END OF HOLE	

H-N PROJECT (Ont. 77) ESSO MINERALS CANADA Hole: HN88-20 DIAMOND DRILL RECORD Page: 1 Azimuth: 180 Claim No: L-848121 Drilled by: Atlas Drilling Ltd. Grid: Central Hole Size: Dip: -43 10+758 Basting: Core Size: BO Casing Removed Northing: 5+00S Casing: Blevation: Level Acid Tests: Jan. 30, 1988 Started: Pinished: Peb. 1, 1988 Depth Az. Dip Test IP Anomaly on L118 at 5+758 Purpose: 139.02 -38.0 Logged by: M.H.Lenters Length: 139.02Metres Date logged: Pebruary 1988 Vert. Proj: 90.0 Netres Logging Method: Log II Hor. Proj: 105.75Metres Measurement System: Metric Ovb. Depth: 10.9 Metres Interval Description Sample Interval Length Au te Pyrite ALTERATION (Metres) (Metres) (g/t) (ppm) (ppm) (%) (Metres)

#### .00 15.35 OVERBURDEN

#### 15.35 18.50 PELDSPAR CRYSTAL TUPP

Hedium grey, medium (0.5 to 2mm) grained, relatively hard, well foliated unit containing abundant, small (0.5 to 2mm), subrounded, blue-grey silica grains, and 5% white, subhedral fedspar crystals, often aligned in weak bands parallel to the foliation.

Unit has a wavy banded/schistose tuffaceous appearance, and a moderately well developed foliation at 50 to 60 degrees to the core axis, due to the alignment of blotite and chlorite.

A few, thin (0.5 to 2cm) bands with slight variations in composition suggest that the unit also contains larger volcanic lapilli/blocks that are now flattened into bands.

5 to 7% quartz +/- carbonate and chlorite, in veins irregularly orientated subparallel to foliation. Veining includes minor amounts of partly assimilated vallrock fragments, minor sericite, and 1% pyrite.

1 to 2% finely disseminated pyrite throughout unit.

Noderately fractured, but relatively competent core.

NS 15.35 18.50 3.15 n/a n/a n/a 1-24 247 15.35 17.00 1.65 .06 n/a n/a

248 17.00 18.50 1.50 .01 n/a n/a

H-M PROJECT IN	nt.	111
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### BSSO MINBRALS CANADA DIAMOND DRILL RECORD

Hole:

H888-20

Page:

Interval (Metres)	Description	Sample No.			Length (Metres)	Au (g/t)	Ag (ppm)	Te (ppm)	Pyrite (%)	SIL SIL	TERATION CARB	SER
	Lower contact somewhat transitional and obscurred by quartz veining.											
18.50 26.45	Medium grey, relatively coarse (0.5 to 1 mm) grained, well sorted, weakly calcitic psammitic arenite.  Generally quartzose-feldspathic material similar in composition to, and probably derived from, rock similar to the overlying felsic volcanic tuffs. Unit does not contain any visible feldspar crystals or lapilli fragments.  Weakly foliated/psammitic at 60 to 70 degrees to the core axis.  Bedding not obvious, but appears to be orientated subparallel to foliation 5 to 10% quartz +/- carbonate (including dark yellow-brown stained iron-carbonate) veining with minor sericite and pyrite along vein edges, within fractures, as well as in thin (1 to 5mm) bands in the adjacent wallrock. Most of the veins are relatively large and orientated subparallel to the foliation including veins at:.  21.80 22.15 Coarse white quartz vein at 20 to 45 degrees to the core axis.  22.45 22.70 Broken quartz vein fragments from sericitic vein containing 1 to 2% pyrite.  Numerous smaller fractures with thin (1 to 5mm), greenish (sericitic?) coatings.  Competent core, generally with 10 to 150 cm breakage.  Lower contact is a sharp bedding surface at 45 degrees to the core axis.	249 263 250	18.50 18.50 20.00 21.80 22.80	20.00 21.80 22.80	1.50 1.80 1.00	n/a .05 .06 .42 .04	n/a n/a n/a n/a	n/a n/a n/a n/a a/a	0.5-1	-	•	
26.45 32.80	PSANMITIC ARENITE  Medium grey, fine grained, non-calcitic, well sorted, and well laminated/bedded at 50 to 65 degree to the core axis.  Pinely psammitic to phyllitic with cleavage surfaces often exhibiting minor (1 to 3%) amounts of smeared/flattened pyrite. Matrix material is chloritic to slightly biotitic.  Unit includes granule to pebble bearing arenite horizon between 30.20 and 30.40, consisting mainly of 1 to 2mm granules and a few 1 cm thick, well flattened pebbles.  Unit contains no significant quartz veining.	#S	26.45	32.80	6.35	n/a	n/a	n/a	0.5%	•	-	₩.1

H-W PROJECT (Ont. 77)

BSSO MINERALS CANADA DIAMOND DRILL RECORD

Hole: Page: HN88-20

Interval Description Sample Interval Length Te Pyrite ALTERATION (Metres) (Metres)  $\{g/t\}$  (ppm) (ppm) (t) (Metres) SIL CARB Competent core, generally with 25 to 50 cm breakage along foliation/cleavage surfaces. Minor finely disseminated pyrite. Upper contact is a sharp bedding contact orientated at 45 degrees to the core axis. Lower contact exhibits a gradational change to finer grained clastic sediments. 32.80 75.95 SILTSTONE Medium green-grey to grey-green, finely laminated and bedded siltstone. NS 32.80 75.95 43.15 n/a · n/a MINOR Minor biotite evident within this unit as red-brownish bands. 252 73.00 74.00 1.00 A few sections are slightly harder and have a siliceous/cherty appearance. Minor (1 to 2%) quartz veining/pods/lenses generally with minor sericite, chlorite and pyrite. Veins range from small (mm size) lenses and pods to 10 to 15 cm wide veins. Unit is phyllitic with well developed foliation and cleavage at 60 to 70 degrees to the core axis. Minor finely disseminated pyrite, as well as minor pyrite along some fracture/cleavage surfaces. Competent core, generally with 20 to 100 cm breakage, mainly parallel to foliation/cleavage orien. Lower contact is sharp bedding surface at 70 degrees to the core axis. 75.95 95.25 PSAMMITIC ARRNITE WITH CONGLONERATE INTERBEDS Coarse grained arenite with minor conglomerate interbeds. WS 75.95 95.25 19.30 n/a 1-21 n/a Medium slightly brownish grey, relatively coarse (0.5mm) grained, 253 75.95 77.00 1.05 .01 n/a n/a generally homogeneous, psammitic arenite with some pebble interbands. 254 77.00 78.00 1.00 .01 n/a n/a Bedding, and weakly developed foliation, are orientated at 60 to 80 255 89.00 90.00 1.00 .01 n/a n/a degrees to the core axis. 256 90.00 91.00 1.00 n/a n/a .02 Slight brownish colour due to zones containing abundant fine biotite. The 257 91.00 92.00 1.00 .01 n/a n/a unit contains very little chlorite. 258 \$2.00 93.00 1.00 .02 n/a n/a Conglomerate horizons form a few, 10 to 20 cm wide bands as follows:.

79.80 80.10 1 to 2 cm wide polymictic pebble conglomerate with clasts in

grain contact, including well flattened mafic volcanic and

H-W PROJECT (Ont. 77)

ESSO MINERALS CANADA DIAMOND DRILL RECORD

Hole:

BN88-20

Page:

4

Interval	Description	•	Sample	Interval	Length	λu	Ag	te Pyr	rite	ALI	IBR ATION	
(Metres)			No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm) (1	1)	SIL	CARB	SER

metasediment pebbles, as well as well rounded felsic volcanic and porphyry pebbles that exhibit little or no flattening.

85.30 85.80 20 to 30% siltstone pebbles/ripup-clasts in an arenite.

Unit cut by 3 to 5%, thin (0.5 to 10 cm), white, coarse grained, subplanar and foliation parallel, quartz veins. Veining has minor amounts of associated sericite, as well as minor amounts of coarse pyrite along vein edges.

Kinor to 1%, finely disseminated pyrite with slightly coarser grained, and more abundant adjacent to to quartz veining.

Section between 89 and 90 metres exhibits a slight crackle texture, with the fractures having sericitic coatings.

Very competent core, generally with 50 to 100 cm breakage along foliation parallel cleavage surfaces.

Lower contact is a sharp bedding surface at 65 degrees to the core axis.

#### 95.25 115.58 PSANNITIC ARBBITS

Nedium grey to slightly greenish grey, fine grained, and well laminated/bedded at 65 to 70 degrees to the core axis.

Very clean, well sorted, with a few thin medium grained horizons, as well as few siltstone horizons.

Unit is generally phyllitic with a chlorite rich matrix, and only locally contains minor amounts of biotite.

1 to 2%, small (0.5 to 2 cm) quartz veins.

Minor amounts of finely disseminated pyrite. Some pyrite occurs as smears on phyllitic cleavage surfaces.

Competent core, generally with 20 to 50 cm breakage along foliation parallel cleavage surfaces.

Lower contact is gradational through granule bearing arenite beds into arenites with conglomerate interbeds.

WS 95.25 115.58 20.33 n/a n/a n/a MIHOR

115.58 124.15 NETACONGLONERATE WITH ARENITE INTERBEDS

Conglomeratic arenite with conglomerate interbeds. Medium brownish-grey to green-grey, but somewhat mottled due to variable colour of conglomerate clasts. MS 115.58 124.15 8.57 n/a n/a n/a MINOR

H-N PROJECT (Ont. 77)

BSSO MINBRALS CANADA DIAMOND DRILL RECORD

Hole: Page: HN88-20

TWOO.

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Te (ppm)	Pyrite (%)	SIL	ALTERATION CARB	SER
	Unit consists of coarse grained arenite matrix material, containing 20 to 70% clasts ranging in size from a few mms to several cms (granules to pebbles).  The matrix material is similar in composition and texture to the overlying arenite beds, being well sorted, quartzose-feldspathic and containing psammitic biotite with very minor chlorite.  Clasts are polymictic and were well rounded, although the sedimentary and mafic volcanic clasts are now well flattened, the felsic volcanic pyroclastic clasts are now moderately flattened, and the felsic porphyry and quartz vein clasts are largely undeformed. The latter are extremely well rounded suggesting all of the pebbles were originally quite well rounded.  Unit exhibits very weak foliation and bedding orientations at 70 to 80 degrees to the core axis.  Minor quartz veining.  Minor finely disseminated pyrite in the more arenaceous sections.  Competent core, generally with 15 to 75 cm breakage, usually parallel to foliation.  Lower contact is a sharp bedding surface.										
124.15 136.5	O PSAMMITIC ARBNITB Same as arenite unit occurring between 95.25 to 115.58 metres, including irregular quartz podding and veining from 135.88 to 136.50. Quartz is white, coarse grained and contains minor amounts of associated biotite, chlorite and calcite, and centers a 0.5 cm wide, light grey coloured alteration halo.		24.15 136.5 35.50 136.5		n/a .01	n/a · n/a	n/a n/a	18		• - •	-
136.50 139.0	2 METACONGLOMERATE WITH ARBHITE INTERBEDS  Conglomerate with minor coarse grained arenite interbeds.  Medium brownish (biotitic) grey, to green-grey, with strong mottling/banding, due to compositional differences in the large clasts.  Unit is composed of small (1/2 to 1cm) to large (10cm), well rounded, polymictic pebbles and cobbles. The unit contains well flattened (20:1) mafic volcanic and sedimentary clasts, moderately flattened felsic	¥S 1	36.50 139.0	2 2.52	n/a	n/a	n/a	MINOR	•	• •	-

H-W PROJECT (Ont. 77)

BSSO MINBRALS CANADA DIAMOND DRILL RECORD Hole:

HX88-20

Page:

Interval Description Sample Interval Length Au Ag Te Pyrite ALTBRATION
(Metres) No. (Metres) (Metres) (g/t) (ppm) (ppm) (%) SIL CARB SEI

volcanic tuff clasts, and undeformed porphyry, quartz vein, and granitic intrusive clasts.
Unit contains minor amounts of thin quartz veining.
Winor amounts of finely disseminated pyrite.
Competent core, generally with 25 to 75 cm breakage, usually parallel to foliation at 70 to 80 degrees to the core axis.
139.02 (465 feet) End of Hole.

## ESSO MINERALS CANADA SUMMARY DRILL LOG

	ONTABLE	Marie removed
Project Name: <u>HN</u>	ASSESSMENT FILES	RVEY-ble Number: HN88-21
Project Number <u>1677</u>	OFFICE:	Apgged By: M.H. Lenters .
NTS: 42H/8	JIIL 1 <u>4</u> 1989	date: February, 1988
	RECEIVED	
Location L10+00E, 2+00N	4	Claim Number: 848119
Azumith: 180°	Din: -45°	Length (m): 123.75 m

PURPOSE: Test IP anomaly on L10E at 1+25N

			•
From (m)	To (m)	Description	Gold Assays (g/tonne)
0.0	13.40	Overburden (Vertical Depth = 9.5 metres)	
13.40	28.70	Psammitic Arenite	
er (		Medium to dark grey, medium (0.5 to 1 mm) grained, well sorted. Locally contains thin reddish zones of hematitic altered magnetite. Minor pyrite	Not assayed
28.70	57.55	Psammitic Arenite	
		Weak to moderate development of hematitic alteration throughout Minor pyrite.	0.01 to 0.02
57.55	72.50	Psammitic Arenite	
		Weak to moderately sericitic and pyritic, with local sericite- carbonate schist zones. Contains minor amount of rose stained quartz veining and 1 to 3% (locally up to 10%) finely disseminated pyrite.	0.01 to 1.14
72.50	83.85	Sericite-Carbonate Schist (Psammitic Arenite)	•
		Light buff to very light greenish grey, well foliated, soft, porous, strongly sericitic and weakly hematitic. Contains a few thin, rose stained quartz veins, and 1 to 2% (locally up to 10%) finely disseminated pyrite.	0.03 to 0.1
83.85	123.75	Psammitic Arenite	
		Medium to dark greenish grey to grey, with local slightly reddish or brownish hues. Fine to medium grained, well sorted weak to well foliated/laminated. Minor pyrite.	0.13 to 0.48
	123.75	End of Hole	
٠			
			•

H-N PROJECT (Ont. 77	1)		BSSO NINBRALS CANAI DIAMOND DRILL RECOR				Nole: Page:	HN88-21 1	
i,									
Drilled by:	Atlas Drilling Limited		Azimuth: 1	10			Claim No:	L-848119	
Hole Size:	BQ		Dip:	15			Grid:	Central	
Core Size:	BQ		·				Basting:	10+00B	
Casing:	Casing Removed						Northing:	2+00H	
•	•		Acid Tests:		•		Elevation:	Level	
Started:	Peb. 1, 1988								
Pinished:	Peb. 2, 1988		Depth Az. D: 123.75 -44				Purpose:	Test IP Anomaly	on L10B at 1+25M
Logged by:	M.R.Lenters						Length:	123.75Metres	
Date logged:	Pebruary 1988						Vert. Proj:	86.5 Metres	
Logging Method:	Log II						Hor. Proj:	·88.25Netres	
Keasurement System:	Metric						Ovb. Depth:	9.5 Netres	•
Interval		Description		Sample	Interval L	ength	du dg	Te Pyrite	ALTERATION
(Metres)		•		No.				[ppm] (%) S1	

#### .00 13.40 OVERBURDEN

#### 13.40 123.75 PSANNITIC ARRVITE

Originally a very homogeneous arenite unit, but now the unit is somewhat variable due to differences in intensity of hematization, sericitization and pyritization, producing differences through the unit as described in the subunits further below.

Unit was magnetite-bearing (weakly to moderately magnetic), medium grey, medium (0.5 to lmm) grained, and moderately well sorted. Much of the magnetite has now been destroyed due to hematization and sericitization within some horizons. Composition seems to be mostly feldspathic with some carbonate (calcite), as most of the rock is moderately to strongly reactive to ECl. Minor chlorite, and locally minor biotite within the finer grained matrix material. The pyritic sericite-carbonate schist zones were probably partly derived from reworked felsic volcanic pyroclastic/toffaceous material.

Extremely consistent and well developed foliation at 65 to 10 degrees to the core axis. Poliation is very planar in less altered sections, and

H-W PROJECT (Ont. 77)

ESSO NIBERALS CARADA DIAMOND DRILL RECORD Hole: Page: HW88-21

CARB

Description Interval Sample Interval Length Au ALTERATION Te Pyrite (Metres) (Metres) (Metres) (q/t) (ppm) (ppm) (%)

wavy, or crenulated in the schistose sericite-carbonate borizons. Rock is generally slightly phyllitic/psammitic in the unaltered sections and schistose in the altered sections.

Bedding is not well developed or apparent due to the homogeneous nature of the entire unit. However, the unit has a well banded appearance due to the coincidence of the foliation, the main alteration banding, and the predominant veining orientations. Banding is also produced by colour variation of flattened pebbles.

Core is relatively competent, generally with 10 to 50 cm breakage at 65 to 70 degrees to the core axis, with lesser breakage along a few irregular fractures. However, the core is well broken in the sericitic horizon between 68 and 85 metres.

Minor (14), thin (hairline to 2 nm), calcitic bands, generally as subplanar, foliation parallel bands/veinlets.

Minor fracturing , generally at 30 to 50 degrees to the core axis in an opposite sense to the foliation orientation. Several fractures contain coarse muscovite grains as well as carbonate and quartz veinlets.

Minor, thin (hairline to 2 cm), subplanar and slightly boudinaged quartz veins, generally parallel to foliation.

#### 13.40 28.70 PSANNITIC ARRNITE

Arenite with minor hematitic alteration.

Dark grey with slight reddish tinge, to medium reddish brown-grey, medium grained, well sorted with a few flattened granule-bearing horizons Veak to moderately magnetic with darker zones containing magnetic, and reddish zones containing less magnetic suggesting hematization. Reddish zones are patchy and generally only partially replace magnetite bearing arenite horizons.

Several fractures exhibit irregular, 1/2 to 2 cm wide, lighter hemitized envelope bands. Practures are generally lined with carbonate, with some carbonate grains exhibiting a yellow weathering colour.

NS 13.40 28.70 15.30 V.VK. n/a MINOR n/a n/a

#### 28.70 57.55 PSAMMITIC ARBUITE

Arenite with moderate hematitic alteration.

H-M PROJECT (Ont. 77)

#### BSSO HINERALS CANADA DIAMOND DRILL RECORD

Hole: HN88-21 Page: 3

Interval (Metres)	Description	Sample Vo.			Length (Metres)	Au {g/t}	Ag (ppm)		Pyrite (%)	SIL	TERATION CARB	SBR
	Medium reddish to medium reddish brown-grey, non-magnetic to weakly	512	46.15	47.00	.85	.01	n/a	n/a	MINOR			
	magnetic, medium grained, and very homogeneous. Much like the above				1.00	.01	n/a	n/a	0.5%			
	section but with greater degree of hemetitic alteration.				1.00	.01	n/a	n/a	0.5%			
					1.00	.01 .02	n/a n/a	n/a n/a	0.5 <b>\</b> 1 <b>\</b>			
			79.97	J1, J.	.00	.02	II/ Q	u/a	11			
7.55 12.50	PSAMMITIC ARBUITB											
	Weak to moderately pyritic and sericitic altered arenite, locally				14.95	n/a	n/a	n/a	1-10%	-	V.VK	VK-XV
	containing sericite schist horizons.				1.45	.03	n/a	n/a	1\$			
	Dark grey-black and magnetite, to light to medium creamy buff and often				1.00	.02	n/a	n/a	2-34			
	slightly pinkish or greenish non-magnetic to weakly magnetic,				1.00	.01	n/a	n/a	2-31			
	sericitized zones. The latter may contain a tuffaceous component as it				1.50	.01	n/a	n/a	0.5%			
	has a wavy tuffaceous banded appearance.		62.50			.01	n/a	n/a	1-2%			
	The less altered zones contain chlorite and/or biotite as a matrix		63.25			.02	n/a	n/a	1-24			
	component.				1.00	.09	n/a	n/a	2-3%			
	The complete section contains 1 to 3%, and up to 7%, very finely				1.00	.02	n/a	n/a	1-21			
	disseminated pyrite often forming wipy banded grains orientated parallel				1.00	.03	n/a	n/a	1-21			
	to the foliation.				1.00	.09	n/a	n/a	18			
	2 to 3%, thin (1 to 3mm), quartz veinlets/pods often with a deep wine		68.00 68.45			.55 1.14	n/a	n/a	2-4 <b>%</b> 5-10 <b>%</b>			
••	red colouring due to hematization, and/or some garnet development. Minor garnet appears to develop within quartz veins in coarser biotitic rich		69.00			.18	n/a n/a	n/a n/a	3-5%			
	zones. The quartz veining is often boudinaged into pinch and swell bands		69.75			.21	n/a	n/a	6-81			
	that are subparallel to foliation.		70.25			.08	n/a	n/a	3-5%			
	61.00 62.50 Sericite-Carbonate Schist.				1.50	.09	n/a	n/a	3-41			
	68.10 68.90 Sericite-Carbonate Schist.	***	12144				,	,	•			
	This section includes two moderately to intensely sericitized zones											
	between 61.00 to 62.50, and 68.10 to 68.90 metres that are schistose and											
	exhibit minor siickenside surfaces with lineations perpendicular to the											
	down plunge trend on core foliation surfaces. The sericitic sones are											
	also weakly to moderately carbonatized and have a brownish to creamy											
	colour due to increased carbonate content.											
	1 to 3%, and locally up to 10%, finely disseminated pyrite. The pyritic,											
	sericitic horizons are often slightly vuggy/porous due to removal of		•									
	carbonate, mostly along foliation subparallel laminae.											

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H-M PROJECT (Ont. 77)

ESSO MINERALS CANADA DIAMOND DRILL RECORD Hole: HK88-21 Page: 4

Interval (Metres)	Description	Sample Vo.			Length (Netres)	Au (g/t)	Ag (ppm)		Pyrite (%)	SIL	ALTERATION CARB	SER
72.50 <b>83.8</b> 5	SERICITE-CARBONATE SCHIST											
•	Weak to moderately pyritic sericite-carbonate schist.				5 11.35	n/a	n/a	n/a	1-71	-	· v.vk-vk )	(OD-11
	Generally moderately to intensely sericitized, weak to moderately				5 1.25	.17	n/a	n/a	4-71			
	carbonatized, and weakly hematitic. Section is highly reactive to HCl.				0 1.25	.10	n/a	n/a	3-61			
	Light buff to greenish grey to cream coloured in alternating laminae,				0 1.00	.03	n/a	n/a	1-24			
	with some sections exhibiting a weak pink colour due to minor amounts of			76.8		.03	n/a	n/a	21			
	hematite.				3 1.22	.12	n/a	1/a	1-21			
	Several sections contain minor amounts (< 0.5%) of small (< lmm), visible, black magnetite grains, but most of the section is generally				5 1.12 6 1.31	.07 .11	n/a n/a	n/a	1-2 <b>%</b> 1-2 <b>%</b>			
	non-magnetic.				8 .62	.06	n/a n/a	n/a n/a	13		•	
	Contains several grey intensely sericitized zones with abundant (4 to				5 1.37	.17	n/a	. 0/a	13			
	7%), very finely disseminated pyrite. These sections of the core are				5 1.40	.11	n/a	n/a	1-24			
	soft, porous (due to the weathering/removal of calcite?), and are often well broken.					-	-,-	, -				
	Section is well laminated/banded parallel to foliation. Poliation has a well developed crenulation crinkling and locally exhibits a minor wavy folding.											
	Section contains minor, thin (hairline to a few mm), pinch and swell,											
	quartz and carbonate veinlets orientated parallel to the foliation, as well as a few, thin (1 to 10 cm) zones with rose coloured stained quartz vein rubble. The largest such section occurs between \$0.20 to \$0.30					•						
	metres.											
	Core is generally well broken, mostly into less than 2 cm, foliation parallel, thin discs, with some 10 to 50cm rubble sections.						•					
	Conatacts between various alteration zones are relatively sharp and distinct.						•					
<b>83.8</b> 5 123.75	PSANNITIC ARENITE											
	Arenite with minor hematitic alteration.	· NS	83.8	5 123.7	15 39.90	n/a	n/a	n/a	MINOR	-		٧.١
	Medium to dark green-grey to grey, locally with a slight brownish or				0 1.15	.13	n/a	n/a	14			
	reddish hue, fine to medium grained, well sorted, relatively				0 1.00	.48	n/a	n/a	0.5%			
	homogeneous, weakly to well laminated and generally moderately magnetic.				7 1.17	.14	n/a	n/a	0.5%			
	Some lamination banding may be due to inclusion of flattened.				20 1.03	.20	n/a	n/a	0.5%			
	granule/pebble horizons.	592	88.2	0 85.6	0 1.40	.19	n/a	n/a	0.5%			

B-W PROJECT (Ont. 77)

BSSO NIBERALS CANADA DIAMOND DRILL RECORD Hole:

HN88-21

Page:

5

Interval	Description	Sample	Interval	Length	λυ	λg	Te	Pyrite	λL	TERATION	
(Metres)		No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm)	(1)	SIL	CARB	SER

Moderately well developed psammitic foliation and compositional banding at 70 to 75 degree to the core axis. Minor, small quartz and carbonate quartz veinlets, laminations, and lenses. The laminae are generally discontinuous and parallel to foliation, and are often weakly folded. Minor, small (1 cm) quartz veins exhibit a boudinaged pinch and swell character. Unit contains minor amounts (< 0.5%) of very finely disseminated pyrite.

123.75 (407 feet) Bnd of Hole.

# ESSO MINERALS CANADA SUMMARY DRILL LOG

Project Name: HN		Hole Number: HN88-27
Project Number <u>, 1677</u> NTS: 42H/8	OFFICE	Logged By: <u>M.H. Lenters</u> .  Date: February, 1988
	7 7111 1 2 1989	
Location L8+00W, 2+50N	RECEIVED	Claim Number: 848106
Azumith: 180° Di	p: <u>-48°</u> ,	Length (m):

PURPOSE: Test weak IP anomaly on L8W between 1+50 and 1+75N.

From (m)	To (m)	Description	Gold Assays
0.0	14.35	Overburden ( Vertical Depth = 10.7 metres)	
14.35	46.15	Intermediate to Mafic Metavolcanic	
	-	Medium to dark green, fine to medium grained, weakly to moderately foliated with minor to moderate development of small (1-3 mm) euhedral amphibole porphyroblasts. Unit contains 5% irregular, generally thin calcite ± quartz blebs, pods, lenses and veinlets. Minor coarse pyrrhotite and finely disseminated pyrite.	0.01 to 0.0
		Unit includes one thin (25.20-27.85), fine grained, cherty interflow metasedimentary band.	
46.15	52.30	Feldspar Porphyry Dyke	
. · · · · · · · · · · · · · · · · · · ·		10-30%, 0.5 to 2 mm subhedral, partially zoned, white, plagioclase phenocrysts in dark grey, aphanitic to fine grained matrix. Minor pyrite.	0.01 to 0.0
52.30	93.47	Intermediate to Mafic Metavolcanic  As above.	Not Analyze
93.47	98.70	Coarse Grained Graule-Bearing Arenite  Medium to dark, slightly greenish to purplish grey, moderately foliated, granule-bearing silty arenite. Minor pyrite.	Not Analyze
98.70	102.25	Intermediate to Mafic Metavolcanic	
	. ·	As above.	Not Analyze
102.25	103.25	Fine-Grained Phyllic Arenite	
		Medium brownish grey, very fine grained quartz-plagioclase- biotite phyllite. Trace pyrite.	Not Analyze
103.25	154.23	Psammitic Arenite and Conglomerate	0.01 to 0.0
		Interbedded sequence of varicoloured, but generally medium brownish grey to grey, coarse grained psammitic arenites, granule-bearing and pebbly arenites and pebble conglomerate. Clasts are subrounded and generally well flattened, while finer grained material is biotitic to chloritic and occasionally hosts amphibole porphyroblasts. Minor to 1% pyrite.	0.01 60 0.0
	154.23	END OF HOLE	

H-M PROJECT (Ont. 77) ESSO MINERALS CANADA Hole: BW88-27 DIAMOND DRILL RECORD Page: Drilled by: Atlas Drilling Limited Azimuth: 111 Claim No: L-848106 Dip: -41 Grid: Central Tole Size: Basting: 8+00V Core Size: BQ Casing Removed Northing: 2+50# Casing: Acid Tests: Elevation: Level Started: 7eb. 26, 1988 Pinished: Feb. 27, 1988 Depth Az. Dip Purpose: Test IP Anomaly on LOV at 1+63N 151.23 -44.0 154.23Metres M.H.Lenters Leagth: Logged by: Pebruary 1988 Vert. Proj: 111.0 Netres Date logged: Nor. Proj: 107.25Metres Logging Method: Log II Measurement System: Netric Ovb. Depth: 10.7 Metres

Interval	Description	Sample	Interval	Length	λu	Ag	Te Pyrite	AL	TERATION	
(Metres)	•	10.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm) (1)	SIL	CARB	SER

#### .40 14.35 OVERBURDEN

14.35 25.20 SCHISTOSE MAPIC METAVOLCANIC WITH AMPHIBOLE PORPHYROBLASTS

Medium grained, recrystallized and porphyritic, weakly mottled, medium to dark green to grey-green, and weak to moderately foliated at 70 to 90 degrees to the core axis.

Locally weakly magnetic.

Unit has a chloritic, and locally biotitic, schistosity within the more foliated zones, with a well developed scheen on schistose surfaces.

5 to 15%, 1 to 3 mm, subhedral amphibole blades with a random to weakly foliation parallel orientation.

Unit appears to consist of plagioclase, amphibole, chlorite, locally some biotite, as well as minor amounts of magnetite.

5%, Irregular, small (lmm to lcm), calcite stingers, lenses, and pods that are often somewhat swirled, horsetalled, and wavy folded. Veining appears slightly more common within the better foliated sections. Some veins contain minor amounts of blebby/boudinaged/broken quarts.

24.50 25.20 A few finer grained, grey, sedimentary bands of the

HS 14.35 25.20 10.85 m/a m/a m/a TRACE

I-I PROJECT (Oat. 77)

BSSO MINERALS CANADA DIAMOND DRILL RECORD Nole: Page: M#88-27

Interval (Metres)	Description	Sample To.		l Length ) (Metres)		Ag (ppm)		Pyrite (%)		LTERATION CARB	SER
	underlying unit are interbanded/folded/boudinaged with the mafic volcanics of this unit. Several zones exhibit indications of tight isoclinal folding. Relatively competent core with 5 to 50 cm breakage. Lower contact is relatively sharp at 70 degrees to the core axis.										
25.20 27.8	SINTERPLOW METASEDIMENT  Very fine grained, weakly laminated and bedded, with mottled and offset medium greyish-brown, banding.  Bedding appears to be oriented at 70 to 90 degrees to the core axis, but is locally folded and offset along minor fractures.  Thin (0.5 to 1cm), light brown, cherty bands form about 20% of the unit.  Unit is generally massive with weak psammitic testure due to minor amounts of biotite.  Ninor, thin (hairline to 1mm), irregular, discontinuous calcite veinlets.  Relatively competent core with 5 to 25 cm breakage.  Lower contact is relatively sharp and oriented at 70 to 80 degrees to the core axis.	574 575	25.20 27 25.20 26 26.25 26 26.75 27	.25 1.05 .75 .50	n/a .02 .01 .01	m/a m/a m/a m/a	n/a 9/a n/a a/a	TRACE TRACE TRACE TRACE	•		
27.85 46.1	SCHISTOSE MAPIC METAVOLCANIC WITH AMPHIBOLE PORPHTROBLASTS (Same as unit between 14.35 and 25.20, but slightly more felsic with some larger more massive as well as more foliated sections). Fine to medium grained, massive to moderately foliated, and strongly foliated/sheared adjacent to the underlying intrusive.  Medium to dark grey-green to slightly purplish brown. The greener, and generally more massive sections tend to contain more amphibole porphyroblasts.  Unit contains 0 to 50%, but generally 5 to 20%, 1 to 4 medium, ewhedral, bladed to sheaf-like, dark green, randomly oriented to foliation subparallel amphibole (hornblende) porphyrblasts.  Unit has about 40%, lighter and slightly purplish grey, more felsic appearing material, that contains much less amphibole porphyroblasts. Locally these zones appear to be interbanded sections of felsic to intermediate crystal/lapilli tuffs, but the degree of metamorphism has		27.85 46 45.55 46		n/a .02	n/a 2.10	n/a a/a	HINOR HINOR			

.

H-W PROJECT (Out. 77)

ESSO MINERALS CANADA DIAMOND DRILL RECORD Hole: Page: ##88-27

Interval Description Sample Interval Length Au Ag Te Pyrite ALTERATION (Netres) . Wo. (Netres) (Netres) (g/t) (ppm) (ppm) (%) SIL CARB SB

destroyed most of the original textures.
The unit is locally very yeakly magnetic.

Poliation is oriented at 60 to 85 degrees to the core axis, but is locally folded and irregular.

Composition is probably mostly plagicalase and amphibole, with some chlorite. Locally minor amounts of biotite occur within the more

schistose zones.

Minor coarse (1 to 5mm), ruby red, subhedral to elogate, garnet occurs in thin zones with intensely recrystallized concentrations of porphyroblastic amphibole.

54, Irregular, coarse grained, calcite +/- silica bands, blebs and veins that are often discontinuous, and concentrated along sones of differing composition. These often form swirled and pinched lenses, boudinaged veins, and discontinuous infilling/banding. The carbonate is mostly calcite and has a slight yellowish colour.

Minor coarse pyrrhotite, generally associated with coarsely porphyroblastic amphibole bands.

Minor disseminated pyrite.

Relatively competent core with 10 to 50 cm breakage.

45.85 46.15 Well foliated/weakly sheared (60 to 80 degrees to the core axis) mafic volcanic adjacent to the intrusive.

Lover contact is oriented at #0 degrees to the core axis.

#### 46.15 52.30 PELDSPAR PORPHYRITIC QUARTI DIORITE INTRUSIVE - UNALTERED

Dark grey, fine grained, massive to very weakly foliated groundmass with

10 to 20%, vague to well defined, enhedral, white, 0.5 to 2 mm

plagloclase phenocrysts. Locally the feldspar crystals are zoned.

Unit contains 5 to 10% weakly chloritized biotite.

Unit is weakly fractured (lined with chlorite-calcite) at various angles

to the core axis, but typically oriented at 20 to 45 degrees to the core

axis.

Solutions, 1 to 3 cm, broken quartz weins or quartz patches with somewhat

diffuse boundaries.

Solutions

4 .

Pyrite occurs locally as minor, coarse (lum), enhedral cubes, and as fine disseminations and fracture fillings.

MS 46.15 52.30 6.15 0.5% 1/4 D/a n/a 578 46.15 47.88 1.10 0.51 .01 1/4 579 47.00 47.60 1.20 n/a 0.5% .01 588 47.60 48.25 .65 1.10 0.5% .11 e/a 511 48.25 48.70 1.50 MINOR n/a 582 48.78 49.60 .90 1.30 8.51 n/a 583 49.60 58.60 1.00 .02 1.10 n/a 0.51 584 50.68 51.25 .65 .01 1.40 n/a 0.5% 585 51.25 52.30 1.85 .01 1.40 n/a 0.5% H-H PROJECT (Ont. 77)

ESSO HINERALS CANADA DIAMOND DRILL RECORD

Nole: Page: R#88-27

Interval Description Sample Interval Length Au Ag Te Pyrite ALTERATION (Metres) (Metres) (g/t) (ppm) (ppm) (%) SIL CARB SER

45.25 48.70 Well foliated at 70 degrees to the core axis, but slightly swirled, mafic volcanic xenolith with 28% large quartz and calcite veining.

Upper and lower contacts are sharp at 00 degrees to the core axis. Competent core with 5 to 50 cm breakage often along fractures at 20 to 45 degrees to the core axis.

#### 52.30 93.47 SCHISTOSE MAPIC METAVOLCANIC WITH AMPHIBOLE PORPHYROBLASTS

Mostly a medium green, weak to moderately foliated and fine grained, but with 5 to 20%, 1 to 2 mm, bladed, dark green amphibole porphyroblasts. Matrix consists mostly of fine plagioclase, chlorite and very minor biotite.

Poliation is generally oriented at 60 to 80 degrees to the core axis, and locally folded or wavy.

Unit contains several small sections of slightly more massive (less foliated), slightly purplish grey, hard, felsic to intermediate volcanic. These zones contain fine phyllitic biotite in the matrix with plagioclase, quartz?, minor chlorite and minor amphibole porphyroblasts. A large felsic zone, with transitional contacts occurs between 59.35 and 64.38.

Unit contains 5 to 10%, small, irregular grains, blebs, patches, lenses, and bands of metamorphic (sweat) calcite and quartz-calcite. These often form larger (8.5 to 2 cm), irregular, coarse grained, swirled patches that center dark green, coarsely recrystallized porphyroblastic amphibole bands/patches. These sweats are also common as foliation parallels disseminated grains or pervasive infillings in the well foliated zones, and as irregular foliation parallel bands/veins. These are often discontinuous, boudinaged, swirled, folded, and/or somewhat feathered, or horsetailed. The sweats are mostly calcite, but contain some quartz, mainly in the larger pods (up to 1 cm in size).

53.73 53.87 Large, coarsely crystalline, glassy white quartz wein containing minor chloritic wallrock fragments.

Unit contains minor amounts of coarse pyrrhotite, generally as blebs in coarsely recrystallized wallrock zones, adjacent to quartz-calcite veining.

MS 52.30 93.47 41.17 n/a n/a n/a MINOR

M-M PROJECT (Ont. 77)

BSSO MINERALS CANADA DIAMOND DRILL RECORD Nole: Page: H#88-27

Interval Description Sample Interval Length Au Ag Te Pyrite ALTERATION (Metres) (Metres) (g/t) (ppm) (ppm) (%) SIL CARB SE

Moderately competent core, generally with 5 to 30 cm breakage.
Unit contains minor amounts of coarse, ruby red garnets, concentrated in coarsely recrystallized amphibole zones.
Lower contact is somewhat diffuse/transitional, but parallel to the foliation orientation.

#### 93.47 98.70 PSAMMITIC ARENITS

Medium to dark slightly greenish to purplish grey, foliated, silty to granule bearing aremite.

Moderately well sorted, but varying somewhat throughout the section in both grain size and composition.

Most sections contain 20 to 60%, coarse (up to 1 x 3mm), elongate and foliation parallel sand grains and granules in a finer, foliated, silty matrix material.

Unit generally has a well developed foliation oriented at 70 to 80 degrees to the core axis.

Unit contains no amphibole porpyroblasts that are common in the overlying volcanic zones.

The unit locally contains minor amounts of small, blue quartz grains in aremite sections.

Various sections within the unit exhibit somewhat folded contacts, that generally parallel foliation.

Minor disseminated pyrite.

Unit is locally weakly magnetic.

Unit contains minor amounts of small, irregular calcite bands and patches, but these are much less abundant than in the overlying volcanic unit.

Lower contact is somewhat diffuse and transitional, but appears to be conformable and parallel to foliation.

#### 98.76 162.25 SCHISTOSE MAPIC METAVOLCARIC WITH AMPHIBOLE PORPHYROBLASTS

Medium to dark grey-green, weakly foliated, with some sections exhibiting an irregular and swirled foliation.

Unit contains 0 to 20%, 1 to 3 mm, enhedral, dark green, bladed amphibole

NS 93.47 98.70 5.23 m/a m/a m/a NIMOR

NS 98.70 102.25 3.55 n/a n/a n/a NINOR

H-M PROJECT (Ont. 77)

BSSO MINERALS CANADA DIAMOND DRILL RECORD Nole: Page: HH88-27

Interval (Metres)	Description	Sample Wo.	Interval (Metres)	Length (Metres)		Ag (ppm)		Pyrite (%)	SIL	LTERATION CARB	SER
	porphyroblasts in a very fine grained plagioclase-amphibole-chlorite t/-carbonate, with 5% irregular, patchy quartz-calcite blebs and boudinaged veialets.  Minor pyrite as very fine grains, that are generally coarser and visible					·					
	adjacent to veining.  Competent core, generally with 20 to 50 cm breakage.  Lover contact is transitional over a width of a few cm's.										
102.25 103.2	S PSANKITIC ARRUITE  Medium, slightly brownish grey, fine grained quarts-plagioclase-biotite phyllite, after arenite.  Unit is not reactive to HCl, is non-magnetic, and contains no veining or visible sulphides.	'. VS 1	02.25 103.2	5 1.00	n/a	n/a	2/2	TRACE			
	Poliation is oriented at 70 to 80 degrees to the core axis.  Competent core, generally with 10 to 30 cm breakage.  Lower contact is sharp and conformable at 70 degrees to the core axis.										
103.25 121.9	MEATCONGLONERATE										
	Vari-coloured medium grey and green-grey coloured unit. Pebbles are		13.25 121.9		2/2	n/a	n/a				
	generally lighter coloured, not foliated and grey, while groundmass matrix material is generally darker coloured, foliated and greem,		11.65 112.3 12.30 112.0		.01 .01	D/a D/a	n/a n/a	MINOR 13			
	containing 5 to 10%, dark green, 1 to 3 mm, bladed, subhedral to enhedral amphibole porphyroblasts.  Unit contains a few sections with very few clasts, but the unit generally contains 10 to 60%, small (2 to 10mm), but up to 50 mm, subrounded clasts that are moderately flattened into plane of foliation.  Nost of the clasts are light to medium grey, relatively hard, and felsic in appearance, and could represent a mixture of felsic to intermediate volcanic pyroclastic material within a finer grained, amphibole porphyroblastic matrix with a more mafic composition. The matrix material, where It does not contain a significant amount of clasts appears megascopically similar to the intermediate to mafic volcanic zones within the upper part of the hole, and includes 5%, Irregular calcite +/- quartz patches, wispy blebs and banding.		12.40 113.4		.42		n/a		•		

M-W PROJECT (Ont. 77)

ESSO MIMERALS CAMADA DIANOMO DRILL RECORD Nole: Page: HH88-27

Interval Description Sample Interval Length Au Ag Te Pyrite ALTERATION (Metres) (Metres) (g/t) (ppm) (ppm) (%) SIL CARB SE

Unit contains no large veining.

Unit generally contains minor amounts of pyrite, but contains 1t disseminated pyrite in a band of fine-grained arenite between 112.30 and 112.80; This section also contains minor biotite, no chlorite or amphibole, is brownish coloured, siliceous, and does not react with MCL. Unit contains a another fine grained arenite band that occurs between 117.70 and 118.10 metres.

Competent core, generally with 20 to 50 cm breakage.

Lover contact is sharp and conformable at 18 degrees to the core axis.

#### 121.90 154.23 PSAMMITIC ARRHITE WITH CONGLOMBRATE INTERBEDS

Interbedded unit of coarse clastic arenites, conglomerates, and minor volcanic sections.

Unit is varicoloured due to the conglomeratic nature of most of the unit, but generally has a medium, slightly brownish, grey colour. Arenites and clasts are typically medium grey, while the finer grained matrix material is a medium to dark grey, often containing 5 to 15%, small, 1 to 2mm, subhedral to euhedral amphibole porphroblasts.

Unit is moderately well foliated at 70 to 40 degrees to the core axis, defined by a paramitic foliation in the better sorted arenites, and by the alignment of flattened clasts and foliated matrix material in the conglomeratic units.

The coarse grained (1 nm) arenites, and pebbly-granule arenites are generally devoid of veining, whereas matrix rich conglomerates, and the volcanic sections contain 3 to 5%, irregular calcite patches that are typical of most of the other units in the the hole. These also contain a few larger (1 to 2cm), boudinaged quarts veins/pods. The veining appears to be a normal, local, metamorphic product, consistant with the development of middle amphibolite grade mineral assembleges.

121.90 126.52 Granule-bearing coarse grained arente to pebbly conglomerate. Moderately well sorted pebble/granule bearing arente containing 50 to 80%, 1 to 3 mm, flattened clasts with occasional clasts up to 10mm in size within a fine biotitic, phyllitic/schistose matrix containing very small amphibole porphyroblasts. Section contains 1%

WS 121.90 154.23 32.33 a/a n/a n/a 0.5%

H-H PROJECT (Ont. 77)

ESSO MINERALS CANADA DIAMOND DRILL RECORD Hole: Page: EX88-27

Interval	Description	Sample	Interval	Length	Au	Ag	Te	Pyrite	AL	TERATION	
(Metres)		lo.	(Netres)	(Metres)	(g/t)	(ppm)	(ppm)	(1)	SIL	CARB	SER

disseminated pyrite.

- 126.52 127.90 Medium to dark green-grey, weakly magnetic, containing 5 to 15%, 1 to 3 mm, embedral amphibole porphyroblasts, and 10% quartz +/- calcite blebs and pods.
- 127.90 134.10 Pebble conglomerate. 50 to 90%, 2 to 5 mm pebbles, with occasional clasts up to 3cm, in a silty/arenaceous matrix. Clasts are moderately flattened, subrounded, light to medium grey, and though somewhat polymictic, appear to mostly have a similar felsic to intermediate volcanic composition. Matrix varies from fine-grained, biotitic arenite, which appears somewhat phyllitic, to a chloritic arenite with small amphibole porphyroblastics in a more volcanic looking matrix that is schistose. Poliation is oriented at 70 to 40 degrees to the core axis, with clasts flatted into the plane of the foliation.
- 138.10 138.78 Coarse grained arenite. Medium to coarse grained (6.5 to lam), moderately well sorted, biotitic and slightly psammitic.
- 138.70 141.00 Granule-bearing arenite. Moderately well sorted coarse grained (1 to 3mm), granule aremite, with 10 to 25% fine biotite/chlorite/amphibole matrix material.
- 141.00 142.50 Pebble conglomerate. Same as section between 127.90 and 138.10 metres.
- 142.50 143.22 Intermediate to mafic volcanic. Same as section between 126.52 and 127.90 metres.
- 143.22 143.75 Coarse grained arenite. Same as section between 138.18 and 138.70 metres.
- 143.75 144.35 Intermediate to mafic volcanic. Same as section between 126.52 and 127.90 metres.
- 144.35 154.23 Conglomerate/volcanic conglomerate. 40 to 65%, 5 to 25 mm, somewhat polymictic, but dominantly light grey, subrounded felsic to intermediate volcanic clasts in a medium green, fine grained volcanic-looking schistose matrix containing 3 to 10%, 1 to 3 mm, bladed amphibole porphyroblasts. Pebbles/clasts are weakly flattened into the plane of foliation. Poliation generally oriented at 65 to 40

M-M PROJECT (Ont. 77)

BSSO MIMBRALS CAMADA DIAMOND DRILL RECORD Role:

H#88-27

Page:

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									~
Interval	Description	Sample	Interval	Length	λa	<b>l</b> g	Te Pyrite	ALTERATION	
(Metres)	•	No.	(Metres)	(Metres)	(g/t)	(ppm)	(ppm) (t)	SIL CARB	SER

degrees to the core axis, but is slightly wavy and often locally very irregularly swirled. 5 to 18%, irregular, wispy feathered, interstitial carbonate (calcite) and irregular blebs of quartz-calcite that are typical of the volcanic units in the upper part of the hole. Minor amounts of visible magnetite occur vithia coarsely recrystallized porphyritic amphibole zones. Minor amounts of pyrite and pyrrhotite are often associated with irregular veining.

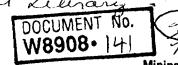
Contacts between the above subunits are generally conformable and parallel to foliation, but somewhat diffuse and transitional due to metamorphic effects.

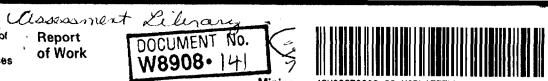
Competent core, generally with 20 to 100 cm breakage.

154.23 (506 Feet) End Of Hole.



Ministryof Natural Resources





Names and addresses of owner or operator

together with dates when drilling/stripping

Work Sketch (as

done.

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Type of equipment and amount expended.

within 30 days of recording.

Note: Proof of actual cost must be submitted

**Power Stripping** 

