010

DIAMOND DRILLING

TOWNSHIP: BLAKELOCK TWP. REPORT NO: 23

WORK PERFORMED FOR: Esso Resources Canada Ltd.

RECORDED HOLDER: Same as Above [xx]
: Other [ ]

Claim No.	Hole No.	Footage	Date	Note
L 871909	HN-88-28	374m	Sept/88	(1) (2)
L 871912	HN-88-32	179m	Sept/88	(1) (2)
	HN-88-33	141.1m	Sept/88	(1) (2)
L 871915	HN-88-37	149m	Oct/88	(1) (2)
L 871916	HN-88-38	191m	Oct/88	(1) (2)
L 871908	HN-88-39	194m	Oct/88	(1) (2)
L 817912	HN-88-40	242m	Oct/88	(1) (2)
L 872269	HN-88-41	221m	Oct/88	(1) (2)
L 872267	HN-88-42	155m	Oct/88	(1) (2)
L 871909	HN-88-43	267m	Oct/88	(1) (2)
L 871911	HN-88-44	266m	Oct/88	(1) (2)
L 871904	HN-88-45	150m	Oct/88	(1) (2)

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(1) W8908.093, date filed May/89

(2) Similar drill logs added July 90 from OM88-6-C-236

ESSO MINERALS CANADA

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DANE A. BRIDGE
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HN PROJECT SUMMARY DRILL LOGS

HN88-28, 32 to 45

ESSO MINERALS CANADA

SUMMARY DRILL LOG

Project Name: HN Blakelock

Hole Number: HN88-28

Project Number: 1677

Logged By: M.H. Lenters

NTS: 42H/8

Date: September 1988

Location: L40+12.5W, 10+25S

Claim Number: L-871909

Azimuth: 002° Dip: -45°

Length (m): 374

PURPOSE: Test mineralized zones encountered in DDH's HN88-22,23 & 24

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMAINS	
0.0	22.90	Overburden	
22.90	118.00	Relatively Unaltered to Weakly Altered Quartz Diorite Intrusive Generally pink to pink-grey, coarse-grained, massive to weakly foliated, feldspar porphyritic granodiorite to quartz diorite with some light grey weakly silicified ± sericitized sections, and a few, thin (10's cm) moderately altered sections. The latter generally occur in thin zones adjacent to quartz veining and flooding. Minor, thin (10 cm) shear bands, and minor to 5% quartz veining. Minor to 1% finely disseminated pyrite, but locally up to 6% in well altered zones, which generally also contain trace to 0.5% disseminated metallic grey minerals. 100.20-101.80 Fine-grained metasediment inclusion.	0.01 - 2.04 (103)
118.00	132.00	Moderately Silicified and Weakly Sericitized Quartz Diorite Intrusive Generally grey-white, moderately silicified and weakly seriticitized, with local patches and bands that are white and intensely silicified and moderately sericitized. No significant quartz veining. 0.5 to 1% pyrite with intensely altered zones containing up to 5%. Minor to locally 1% disseminated, grey metallic minerals.	0.01 - 0.20 (21)
132.00	146.75	Schistose Mafic Metavolcanic Dark brown, very fine-grained, calcareous, non to weakly magnetic, sheared/schistose at 15° to 20° to CA. 5% calcite fracture veinlets, and 3 to 5% quartz veining. 0.5 to 1% pyrite.	0.02 - 0.17 (5)
146.75	151.20	Moderately Carbonate-Epidote Altered Mafic Metavolcanic Mottled dark green and light yellowish-green, fine-grained, non-magnetic, irregularly patchy altered mafic metavolcanic. Foliation at 20° to 40° to CA. Minor calcite veinlets. 5%, small quartz veins. Minor pyrite and trace chalcopyrite.	0.01 - 0.04 (3)
151.20	158.30	Weak to Moderately Silicified Granodiorite/Quartz Diorite Similar to section between 118.00 to 132.00 metres.	0.01 - 0.10 (7)
158.30	160.65	Shear Mafic Metavolcanic and Intrusive Dyke Material Medium to dark green, fine-grained, well foliated and sheared at 30° to CA, mafic metavolcanic with several irregular dyke fragments forming approximately 25% of the unit. Abundant calcite patches and tension veining. 5%, broken and sheared quartz veining. 1 to 3% pyrite.	0.01 - 0.02 (2)
160.65	180.50	Weak to Intensely Epidote-Carbonate Altered Mafic Metavolcanic Similar to 146.75 to 151.20 metres.	0.01 - 0.18 (6)

From (m)	To (m)	Description HN88-28 (page 2)	Gold Assays (g/tonne)
180.50	180.70	Fault Zone 50%, broken wallrock fragments surrounded by coarse quartz and and calcite veining. Contacts are irregular but at approximately 40° to CA. Fault edges are moderately (2 to 6%) pyritic.	0.20 (1)
180.70	182.30	Intensely Epidote-Carbonate Altered Mafic Metavolcanic Medium cream, pink and buff coloured, fine-grained, contorted, unit with weak foliation at 0° to 20° to CA. Minor offset and broken quartz veining. 5 to 6% disseminated pyrite.	0.61 - 0.68 (2)
182.30	184.00	Mylonite Light pastel multicoloured, finely laminated, shear banded at 20° to CA. Intensely carbonate altered mafic metavolcanic with numerous rotated fragments in finer cataclastic banded matrix. Minor veining. 2 to 4% finely disseminated pyrite.	0.30 - 0.83 (2)
184.00	185.15	Intensely Epidote-Carbonate Altered Mafic Metavolcanic Similar to 180.70 to 182.30 metres	0.41 (1)
185.15	194.70	Moderately Sheared Mafic Metavolcanic Intruded by Variably Altered Quartz Diorite Dykes/Plugs Green, moderately foliated/sheared at 20° to 45° to CA. Minor to 3% calcite fracturing and quartz veining. 2 to 6% finely disseminated pyrite. Intruded by several 1 to 4 metre wide, silicified and sericitized quartz diorite dykes with 2 to 3% pyrite and minor metallic grey, minerals.	0.01 - 2.80 (10)
194.70	199.45	Intensely Altered and Fractured Mafic Metavolcanic Medium grey-green, irregularly foliated, moderately to intensely brecciated, and 20% light yellow-green carbonate-epidote altered. 15% offset and broken quartz veining. 1 to 3% pyrite.	0.02 - 0.20 (4)
199.45	201.10	Weakly Silicified and Sericitized Quartz Diorite Intrusive Similar to 118.00 to 132.00 metres.	0.49 (1)
201.10	208.75	Intensely Sheared Mafic Metavolcanic with Mylonite Zones Intensely brecciated and epidote-carbonate altered mafic metavolcanic locally shear foliated into a mylonite with foliation at 0° to 30° to CA. Includes a few thin clay gouge shear/fault zones. Unit contains several, broken quartz vein fragments. 2 to 6% pyrite.	0.01 - 13.85 (11)
208.75	374.00	Variably (Weak to Intense) Epidote-Carbonate Altered Mafic metavolcanic Intruded by Variably (Unaltered to Moderately) Altered Granodiorite to Quartz Diorite Porphyry Dykes and Plugs 208.75-264.75 Weak to intensely epidote-carbonate altered, and locally brecciated mafic metavolcanic. Minor to 5% quartz veining. 0.5 to 4% pyrite. Includes intrusive dykes between: 215.40-217.15 Weak to mod. altered 222.20-228.10 Very weakly altered 230.25-233.10 Relatively unaltered 241.50-244.40 Relatively unaltered 249.90-251.35 Very weakly altered 252.50-253.05 Unaltered to weakly altered 261.95-264.75 Relatively unaltered 264.75-283.50 Dark green, magnetic, massive to weakly foliated at 0° to 30° to CA, relatively unaltered mafic metavolcanic. 3 to 5% quartz ± calcite veining. Minor pyrite. Includes one unaltered intrusive dyke between 271.75 to 273.15 metres. 283.50-287.70 Weak to moderately carbonate altered mafic metavolcanic, with thin unaltered zone exhibiting ovoid amygdules. Minor quartz veining. Minor to 1% pyrite. 287.70-310.50 Weak to moderately silicified ± sericitized quartz diorite intrusive. Similar to 118.00 to 132.00 metres. 310.50-316.35 Relatively unaltered mafic metavolcanic similar to 264.75 to 283.50 metres. 316.35-321.50 Weak to moderately altered quartz diorite intrusive. Similar to 118.00 to 132.00 metres.	0.01 - 0.33 (80)

From (m)	To (m)	Description HN88-28 (page 3)	Gold Assays (g/tonne)
		321.50-346.90 Weak to moderately epidote-carbonate altered mafic metavolcanic. Foliation at 0° to 30° to CA. 5% irregular quartz veining. Minor to 1% pyrite.	
		346.90-356.15 Relatively unaltered quartz diorite intrusive. Similar to 22.90 to 118.00 metres.	
		356.15-374.00 Moderately epidote-carbonate altered/banded mafic metavolcanic. Cut by three thin intrusive dykes. Foliation and alteration banding at 30° to 45° to CA. Minor quartz veining. Minor pyrite.	
	374.00	END OF HOLE	

H-N PROJECT (Ont. [redacted])

ESSO MINERALS C[redacted]A
DIAMOND DRILL R[redacted]D

Hole: HN88-28
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	2	Claim No:	L-871909
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	40+12.5W
Casing:	Casing Remains			Northing:	10+25S
		Acid Tests:		Elevation:	Level
Started:	Sept. 7, 1988				
Finished:	Sept. 12, 1988	Depth Az. Dip		Purpose:	Test mineralized zone in HN88-22
		23.00	-46.0		
Logged by:	M.H.Lenters	125.00	-38.5	Length:	374.00Metres
Date logged:	September 1988	223.00	-36.5	Vert. Proj:	220.0 Metres
Logging Method:	Log II	323.00	-28.0	Hor. Proj:	299.0 Metres
Measurement System:	Metric	371.00	-24.0	Ovb. Depth:	16.4 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)		Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 22.90	OVERBURDEN											
22.90 100.20	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED	NS	22.90	100.20	77.30	n/a	n/a	TRACE	0.5-5%	UN-WK	UN-V.WK	
	Relatively fresh to weakly altered, with thin (10's of cm wide) moderately altered zones. The latter are generally centred by quartz veining and flooding, although more planar/discrete quartz veins cut through both the relatively unaltered and weakly altered zones. Contacts between the subunits listed below are gradational, and represent changes in alteration intensely and/or color.	801	22.90	24.00	1.10	.03	1.20	-	1%			
		802	24.00	25.00	1.00	.02	1.50	-	0.5-1%			
		803	25.00	26.00	1.00	.06	1.40	MINOR	0.5-1%			
		804	26.00	27.00	1.00	.02	1.50	-	0.5-1%			
		805	27.00	28.00	1.00	.01	1.40	-	0.5-1%			
	22.90 28.65 Pink to pink grey, coarse grained, massive to locally well foliated, relatively unaltered feldspar porphyritic granodiorite to quartz diorite. 70 to 75% plagioclase, as large (2 to 5mm), white, subhedral, often partially zoned, phenocrysts and smaller groundmass grains. 5 to 10% quartz, as 0.5 to 2mm, subrounded, phenocrysts. 15 to 20% biotite that is locally somewhat chloritic. 2 to 4% quartz veining, generally as 0.5 to 1cm, subplanar veins that are orientated at 40 to 60 degrees to the core axis, and often offset by	806	28.00	28.65	.65	.04	1.30	-	0.5-1%			
		807	28.65	30.10	1.45	.01	2.30	TRACE	1-2%			
		808	30.10	31.30	1.20	.02	1.40	MINOR	1-2%			
		809	31.30	32.30	1.00	.02	.70	-	0.5-1%			
		810	32.30	33.35	1.05	.03	1.30	-	3-4%			
		811	33.35	34.10	.75	.20	1.60	-	5%			
		812	34.10	34.75	.65	2.04	7.20	-	5-6%			
		813	34.75	35.25	.50	.43	3.50	-	6-7%			
		814	35.25	36.25	1.00	.03	.40	-	2%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	fracturing at an angle to the veining. Quartz veins are slightly bluish white and relatively clean, containing a few wallrock fragments and minor pyrite. 1cm quartz vein at 25.1 metres, oriented at 50 degrees to the core axis, and offset by several vuggy fractures oriented at 0 degrees to the core axis (perpendiclar to strike of vein) contains trace amounts of a metallic grey minerals. 0.5cm vuggy quartz vein oriented at 50 degrees to the core axis contains 1 to 3% pyrite, and 1 to 3% metallic grey minerals, both as thin wisps and bands that are concentrated at the vein edges. This vein is offset by fracturing subparallel to the core axis. Minor white-grey silica flood shear zone from 26.80 to 27.00m, with shearing oriented at 30 to 45 degrees to the core axis. Section generally contains 0.5 to 1% finely disseminated pyrite that is also concentrated along some chloritic fractures. Weak shearing/foliation locally oriented at 35 to 45 degrees to the core axis, but most of section is massive. Well fractured both subparallel to the core axis, and at 40 to 50 degrees to the core axis, producing relatively broken core. Section broken into 3 to 10 cm pieces with some small rubble zones. Some fractures are somewhat vuggy. Competent section.	815	36.25 37.00	.75	.04	.90	TRACE	1%			
		816	37.00 38.00	1.00	.01	.60	TRACE	1%			
		817	38.00 38.90	.90	.06	8.20	-	2-3%			
		818	38.90 39.90	1.00	.12	1.30	-	1%			
		819	39.90 40.25	.35	.03	1.50	MINOR	2-3%			
		820	40.25 41.00	.75	.02	1.70	-	0.5-1%			
		821	41.00 42.00	1.00	.04	1.40	-	0.5-1%			
		822	42.00 43.00	1.00	.02	1.40	-	2%			
		823	43.00 44.40	1.40	.01	1.70	TRACE	0.5-1%			
		824	44.40 45.20	.80	.02	.50	-	5%			
		825	45.20 46.00	.80	.01	1.10	-	1-2%			
		826	46.00 47.00	1.00	.04	1.30	-	3-4%			
		827	47.00 48.00	1.00	.02	1.40	-	0.5%			
		828	48.00 49.00	1.00	.01	.80	-	0.5-1%			
		829	49.00 50.00	1.00	.03	1.00	-	0.5%			
		830	50.00 50.90	.90	.02	1.60	-	0.5%			
		831	50.90 52.00	1.10	.18	2.30	TRACE	1-2%			
		832	52.00 53.00	1.00	.02	.80	-	0.5%			
		833	53.00 54.00	1.00	.03	1.30	-	0.5-1%			
		834	54.00 55.00	1.00	.02	.50	-	0.5%			
		835	55.00 55.60	.60	.01	.30	-	0.5-1%			
		836	55.60 56.00	.40	.13	5.20	MINOR	3-4%			
28.65 33.35	Light to medium grey to pink-grey relatively unaltered to weakly silicified, medium to coarse grained, weakly feldspar porphyritic. Massive to weakly foliated. Unaltered zones are similar to the overlying section, while silicified zones, lack the porphyritic texture, contain 10 to 15% and locally greater silica flooding, are light grey with biotite partially chloritized and weakly schistose with some sericite. Section contains 10 to 20% quartz veining and silica flooding mostly oriented at 40 to 60 degrees to the core axis, although some more irregular veins are oriented at 20 to 30 degrees to the core axis. Locally the silica flood bands are somewhat swirled and horsetailed. Veins are often offset by late fractures. Veins are slightly blue-white, coarse grained, contain minor, small wallrock inclusions,	837	56.00 56.45	.45	.02	.80	-	1%			
		838	56.45 57.00	.55	.48	3.30	-	2%			
		839	57.00 57.60	.60	.37	1.40	-	1%			
		840	57.60 58.50	.90	.04	1.20	-	2-3%			
		841	58.50 59.40	.90	.21	8.20	MINOR	2-3%			
		842	59.40 60.00	.60	.03	.90	-	3-4%			
		843	60.00 61.10	1.10	.05	.80	-	1-4%			
		844	61.10 61.75	.65	.04	2.30	MINOR	3-4%			
		845	61.75 62.30	.55	.02	1.60	-	2-3%			
		846	62.30 63.50	1.20	.01	.80	-	1-2%			
		847	63.50 64.40	.90	.02	.90	-	2-3%			
		848	64.40 65.00	.60	.01	1.10	TRACE	1-2%			
		849	65.00 65.50	.50	.23	1.70	MINOR	3%			
		850	65.50 66.00	.50	.02	2.80	-	3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	traces of pyrite, and occasionally very fine grains of metallic grey minerals. Grey minerals noted at 30.25m in a 0.5cm quartz vein oriented at 45 degrees to the core axis (trace), at 31.00 to 31.20m in an irregular 1cm vein oriented 25 degrees to the core axis (minor amounts of individual grains and needles), and at 32.50 to 32.60m in an irregular silica flood zone. Unaltered zones contain 0.5 to 1%, and silicified portions contain 1 to 2% finely disseminated pyrite. Pyrite locally forms small concentrations and stringers along fractures. Competent unit that is well fractured both subparallel to the core axis, and at 45 to 90 degrees to the core axis. Section is generally well broken into 5 to 10cm pieces, although the unit contains some thin (10 to 30cm) rubble zones.	851	66.00	66.50	.50	.03	1.30	-	2-3%			
		852	66.50	67.00	.50	.02	1.60	TRACE	3%		
		853	67.00	67.50	.50	.49	17.70	0.5%	3-5%		
		854	67.50	68.00	.50	.03	3.70	0.25%	3-4%		
		855	68.00	69.00	1.00	.09	2.90	MINOR	3-5%		
		856	69.00	70.00	1.00	.02	1.40	TRACE	3-5%		
		857	70.00	71.00	1.00	.03	.60	-	2-4%		
		858	71.00	71.80	.80	.02	.80	TRACE	2-3%		
		859	71.80	72.50	.70	.03	1.20	-	1%		
		860	72.50	73.00	.50	.04	1.20	-	0.5-1%		
		861	73.00	74.00	1.00	.18	1.10	-	0.5%		
		862	74.00	75.00	1.00	.03	.80	-	1%		
		863	75.00	75.70	.70	.02	.80	-	1%		
		864	75.70	76.15	.45	.03	1.00	-	0.5-1%		
33.35 34.75	Light to medium grey, mottled, moderately to intensely silicified, and moderately sheared/foliated. Section exhibits vague plagioclase phenocrysts in well silicified zones, and irregular chloritic/sericitic laminae parallel to shearing oriented at 40 to 45 degrees to the core axis. Locally silica flooding forms bands/veins that parallel the shear direction. 3 to 5% finely disseminated pyrite, as well as thin (mm), stringers and irregular bands that are oriented along fractures and parallel to the shearing direction. Moderately fractured subparallel to shearing at approximately 45 degrees to the core axis, and irregularly fractured at 25 to 35 degrees to the core axis. Competent section, but moderately well broken.	865	76.15	77.15	1.00	.12	1.00	-	0.5%		
		866	77.15	78.00	.85	.05	.90	-	1-2%		
		867	78.00	79.00	1.00	.03	.80	-	3%		
		868	79.00	80.00	1.00	.79	3.30	TRACE	2-3%		
		869	80.00	80.60	.60	.02	.60	-	0.5-1%		
		870	80.60	81.80	1.20	.03	.80	-	0.5-1%		
		871	81.80	82.30	.50	.17	1.60	-	0.5-1%		
		872	82.30	83.00	.70	.34	2.60	TRACE	3-5%		
		873	83.00	83.50	.50	.05	3.80	TRACE	1-2%		
		874	83.50	84.00	.50	.03	2.00	TRACE	1-2%		
		875	84.00	84.50	.50	.02	1.10	MINOR	2-3%		
		876	84.50	85.00	.50	.03	1.40	-	3-5%		
		877	85.00	85.75	.75	.04	3.30	MINOR	1-2%		
34.75 36.25	Medium grey to medium reddish-grey, fine to medium grained (0.5mm), massive intrusive. Above 35.25m it is grey and weakly to moderately silicified, and below 35.25m it is relatively unaltered with fresh biotite. Section is finer grained, and not porphyritic like the typical intrusive. No significant quartz veining. Above 35.25 metres, the section contains 6 to 7% finely disseminated pyrite in patches, blebs and along fractures. Section is moderately fractured at 35 to 60 degrees to the core axis. Competent section, broken	878	85.75	86.70	.95	.01	1.10	-	0.5-1%		
		879	86.70	87.50	.80	.06	4.10	MINOR	2%		
		880	87.50	88.75	1.25	.13	2.20	-	2%		
		881	88.75	89.00	.25	.19	8.00	MINOR	1%		
		882	89.00	90.00	1.00	.02	1.20	-	1%		
		883	90.00	91.00	1.00	.04	1.00	TRACE	2%		
		884	91.00	92.00	1.00	.01	1.70	TRACE	1-2%		
		885	92.00	93.00	1.00	.03	1.50	TRACE	2-3%		
		886	93.00	94.00	1.00	.02	.80	-	2%		

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	into 10 to 25cm pieces.	887	94.00 95.00	1.00	.04	.90	-	2-3%			
36.25 38.00	Pink, coarse grained, feldspar porphyritic, massive to very weakly shear foliated. Relatively fresh to weakly silicified (silica flooded and veined). Section consists mainly of plagioclase, as coarser (1 to 4mm), white, subhedral, subzoned phenocrysts in matrix of pink very fine plagioclase. 5 to 10% subrounded, quartz grains, and 5 to 10%, biotite (very weakly chloritized). 2 to 3% quartz veining as 0.5 to 2cm planar veins oriented at 45 degrees to the core axis. These are coarse grained, slightly blue-white with minor pyrite, and traces of grey metallic mineral. Weak shearing/foliation is locally evident and generally oriented parallel to quartz veining at approximately 45 degrees to the core axis. 1% disseminated and fracture controlled pyrite. Section is well fractured at various angles to the core axis, but concentrated subparallel to the core axis, and at 35 to 50 degrees to the core axis. Competent section, but well broken along fractures into 3 to 10 cm pieces.	888	95.00 96.00	1.00	.01	1.30	-	2%			
		889	96.00 97.00	1.00	.02	1.00	-	1-2%			
		890	97.00 98.55	1.55	.10	1.60	-	1%			
		891	98.55 100.20	1.65	.08	1.60	-	0.5-1%			
38.00 38.90	Similar to section between 34.75 to 36.25. Grey, very weakly silicified, fine grained, massive with 2 to 3% pyrite as fine disseminations and fracture filllings. No significant quartz veins.										
38.90 44.40	Typical pink, coarse grained, massive, plagioclase porphyritic intrusive containing thin, grey silica flooded zones between 39.90 and 40.25, and 42.25 and 42.80 metres. 3 to 5%, subplanar quartz veining variably oriented but concentrating between 30 and 45 degrees to the core axis. Quartz veining concentrated in flood zones, with 25% veining between 39.90 and 40.25m, containing minor, needle-like, grey metallic minerals. Veining offset on thin fractures. Veining and flooding oriented at 45 degrees to the core axis. Veins rimed by thin (1 to 3mm) zones having dark pink colour. 0.5 to 1% disseminated and fracture controlled pyrite, with 2 to 4% in silica flood zones. Competent section, but well fractured at various angles to core axis resulting in broken recovery, and generally 3 to 10cm core										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SBR

pieces. 2cm quartz vein at 43.10m oriented at 45 degrees to the core axis, and containing minor to 0.5% blue-grey mineral.

44.40 45.20 Identical to section between 38.00 and 38.90m, except this section contains slightly more pyrite, often concentrated along vuggy fractures, and this section contains a few quartz veins that are offset along fractures.

45.20 47.00 Pink to creamy grey, relatively unaltered to weakly silicified and locally moderately silicified, coarse grained intrusive. About 60% weak to moderately silicified zones. Silicified portions contain broken and offset/sheared quartz veins (0.5 to 1.5cm wide) in irregularly swirled orientations subparallel to shearing/slippage at low (0 to 40 degree) angles to the core axis. Altered (silicified) zones contain 2 to 4% pyrite concentrated along fractures, some of which cut across and locally offset quartz veining. Well fractured and broken section with fractures oriented at various angles to the core axis.

47.00 55.60 Pink, relatively unaltered, coarse grained, massive, plagioclase porphyritic intrusive, with a few, local, thin, light pinkish grey, weakly silicified zones. 70 to 75% plagioclase, including some 1 to 3mm and occasionally up to 5mm, subhedral, often weakly zoned phenocrysts, and mostly very fine grained, pink groundmass grains. 10%, subrounded, 1 to 2mm, bluish-clear quartz phenocrysts, and 10 to 15% biotite. 5%, irregular to subplanar, coarse grained, bluish-white, clean, quartz veins, generally oriented at 40 to 50 degrees to the core axis, but some at shallower angles. Veins locally branched and/or intersecting, offset, fractured, and occasionally have thin (1mm), pink feldspar rims (altered wallrock contact). Veins contain minor pyrite. Trace metallic grey minerals found in 2cm, irregular, vuggy quartz vein at 51.40 metres, within a 10cm wide grey, silicified zone. Section contains 0.5 to 1.0% disseminated pyrite, also concentrating along fractures. Competent section, but well fractured and broken into 5 to 10cm pieces with some fractured rubble zones.

Interval (Metres)		Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
55.60	56.00	Medium grey, moderately silicified zone, with 20%, irregular quartz veining and 20% quartz flooding. Quartz veining/flooding is irregular with no dominant orientation apparent in the recovered fragments. 3 to 4% disseminated and thin (hairline) fracture controlled pyrite. Veining is very clean, coarse grained, white, and contains several small (1 to 3mm), wispy/buckshot/puffs of grey metallic minerals. Hard zone, but well fractured and broken into 0.5 to 3cm rubble zones.										
56.00	56.45	Pink-grey, very weak to weakly silicified, massive, coarse grained, plagioclase porphyritic intrusive. Zone has a hard, siliceous appearance, and biotite is weakly chloritized. A few, thin (0.5cm), slightly wavy/wormy quartz veins oriented at 30 to 45 degrees to the core axis. 1% finely disseminated and fracture controlled pyrite.										
56.45	57.00	Grey, weakly silicified, massive, coarse grained, plagioclase porphyritic intrusive. Minor quartz veining with two, 0.5cm, planar veins oriented at 45 degrees to the core axis, but perpendicular to each other. 2% finely disseminated pyrite with some blebs and hairline, fracture filling veinlets. Hard zone, but well fractured and broken into 1 to 10cm pieces										
57.00	57.60	Pink, coarse grained, massive, plagioclase porphyritic, relatively unaltered intrusive. No quartz veining. 1% finely disseminated and hairline fracture controlled pyrite. Hard zone, but moderately fractured and broken into 5 to 15 cm pieces.										
57.60	59.40	Medium grey, weak to locally moderately silicified, weakly to moderately sheared intrusive. Coarse grained texture partly preserved, but locally destroyed by weak shearing. Biotite partly chloritized/sericitized. 20% Quartz veining, as thin (0.5cm) to thick (5cm), cross-cutting and branching veins variably oriented at 20 to 60 degrees to the core axis. Veins consist of relatively clean, bluish white, coarse grained quartz with minor pyrite and occasionally trace amounts of grey metallic minerals. Quartz veins occur at 57.75m (2cm at 35 degrees to the core axis), 58.00m (5cm, irregular										

Interval (Metres)		Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
		orientation), 58.20m (4cm at 60 degrees to the core axis), 58.40m (1cm at 60 degrees to the core axis), 58.55 (2cm at 40 degrees to the core axis), and 58.55 to 58.80m (a 7cm quartz vein oriented at 40 degrees to the core axis, and a thin vein oriented at 0 to 20 degrees to the core axis). The latter two veins contain numerous small (1 to 2mm), puffs of metallic grey minerals. 2 to 3% finely disseminated pyrite often forming small blebs, or occuring along fractures. Relatively well fractured section with strong fracture orientation at 45 degrees to the core axis having chloritic parting surfaces. Weak shearing, where evident, is oriented at 40 to 45 degrees to the core axis. Competent section, but well broken into 1 to 5cm pieces often as rubble.										
59.40	60.00	White-grey, mottled, moderately to intensely silicified, weakly carbonatized, and weak to moderately sericitized intrusive. Massive, coarse grained texture still evident but somewhat subdued. Biotite completely chloritized/sericitized. Strongly silica veined (20 to 30%) and flooded by an irregular network of thin (hairline to 3cm), branching and anastomosing veins tending to be oriented at 40 degrees to the core axis. 3 to 4% pyrite as finely disseminated grains, small blebs, and discontinuous hairline fracture fillings. Moderately competent section, but moderately fractured and broken.										
60.00	61.10	Mostly medium grey, weak to moderately sillicified intrusive, as between 57.60 to 59.40m, but containing two moderately to intensely silicified (altered) zones as occurs in the section between 59.40 to 60.00 metres. The latter occur between 60.30 to 60.40 and 60.55 to 60.75 metres. No metallic grey minerals apparent in veining within this section										
61.10	61.75	Same as section between 59.40 to 60.00m, including metallic grey mineral in thicker (3 to 5cm) quartz veins.										
61.75	62.30	Similar to 57.60 to 59.40 metres. Medium grey, but generally moderately silicified with strong quartz flooding, and local spots of moderate to intense silicification.										
62.30	63.50	Pink, coarse grained, massive, plagioclase porphyritic										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	intrusive with typical plagioclase, quartz and biotite contents. Minor, irregularly branching, 0.5 to 1cm quartz veining oriented at 40 to 60 degrees to the core axis. Veins have opaque, bluish clear-white quartz, with some thin (1 to 2mm), pink, plagioclase reaction rims/bands. Section contains 1 to 2% pyrite disseminated throughout, but concentrated on fractures. Well fractured section, broken into irregular, 1 to 5cm pieces and slices.										
63.50 67.00	Alternating zones of pink, very weakly silicified, and greenish grey, weakly silicified, with local bands of moderately silicified and weakly to moderately sericitized intrusive. More altered zones are generally cut by quartz veining that tends to be 0.5 to 10cm wide, subplanar, and oriented at 40 to 50 degrees to the core axis, although various orientations and crosscutting relationships occur. Probably 5% veining throughout section. Veining often centres thin (2 to 5cm), silica flood zones occasionally containing traces of grey metallic minerals. Grey minerals noted at 64.80m in 1cm quartz vein oriented at 50 degrees to the core axis, and between 65.40 and 65.50m in an irregularly veined flood zone where it is relatively abundant as very small blebs. Biotite is generally unaltered in pink sections, and slightly to mostly sericitized in altered sections, particularly along fractures. 1% pyrite in pink sections, and 2 to 4% pyrite in altered zones, generally as disseminations and blebs, and as discontinuous veinlets along fractures. Local shearing in thin, fanning (non-parallel) bands oriented at 45 to 60 degrees to the core axis. Extremely broken section, into 1 to 3cm irregular pieces.										
67.00 69.00	Mottled white-grey, moderately to intensely silicified, weakly carbonatized, and weak to moderately sericitized. Biotite locally evident, but mostly chloritized/sericitized. Massive, coarse grained texture is generally well preserved. Section contains 15 to 30%, irregular quartz flood zones/bands that pervasively alter the intrusive, and form,										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	or are centred by, small (0.5 to 1cm), irregular, wavy to anastomosing branching and crosscutting quartz veinlets. Section contains minor fuchsite as small (1 to 2mm) grains. Silica flood zones contain numerous very small clusters or puffs of metallic grey minerals, which occur throughout section. 3 to 5% pyrite as fine disseminations often concentrated along fractures, as well as several larger (0.5 to 1cm), irregular clusters of pyrite. Section is moderately competent, slightly vuggy, extremely well fractured, and well broken into 1 to 5cm, irregular shaped pieces.										
69.00 71.80	Medium grey, weakly silicified with a few, thin (1 to 5cm), strongly silicified zones adjacent to quartz veins. Plagioclase porphyritic texture is well perserved, and biotite mostly unaltered. Weak shearing locally developed and oriented at 40 to 50 degrees to the core axis. Minor to 5%, thin (0.5 to 2cm), quartz veins generally oriented subparallel to shearing at 40 to 50 degrees to the core axis. 2 to 5% pyrite as fine disseminations, as larger blebs, and as hairline fracture veinlets. Extremely well fractured and broken section.										
71.80 76.15	Pink to slightly greyish pink, relatively unaltered, feldspar porphyritic, coarse grained, massive to weakly foliated at approximately 30 degrees to the core axis. Biotite is black and unaltered. Several, thin (hairline), black, slip surfaces. Many small quartz veins are offset and appear pulled apart. Slips parallel shearing orientation at 30 degrees to the core axis. 5%, thin (0.1 to 3cm), subplanar quartz veins, generally oriented at 25 to 45 degrees to the core axis. 0.5 to 1% pyrite as fine disseminations often lining fractures. Competent section, generally with 10 to 25cm breakage along fractures oriented at 45 to 65 degrees to the core axis.										
76.15 77.15	Creamy pinkish brown, weakly foliated at 10 degrees to the core axis. Zone appears weakly to possibly moderately silicified and carbonatized?. No biotite evident. 0.5% finely disseminated pyrite. Section is somewhat vuggy, and										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	exhibits hairline carbonate? veining subparallel to foliation/shear orientation. No significant quartz veining. Several chloritic fractures are oriented at 15 to 25 degrees to the core axis, with slickensides oriented at 45 degrees on the planar surfaces. Competent section, but broken into 5 to 10cm, irregular pieces along fractures.										
77.15 80.60	Medium grey to mottled medium grey-white, weak to locally moderately silicified and weak sericitized. Biotite locally present, but mostly chloritized/sericitized. Massive with coarse grained, plagioclase porphyritic texture well preserved. 10%, 0.5 to 1cm, milky bluish white, quartz veins that are somewhat irregular and branching, but with a preferred orientation at 30 to 40 degrees to the core axis. Veins have somewhat diffuse contact margins and the adjacent rock is partially pervasively silicified. 2 to 3% pyrite, as fine disseminations often concentrated along fractures. Trace metallic grey mineral occurs near one quartz vein. Dominant fracturing direction oriented at 20 to 25 degrees to the core axis. Fractures often have open vugs that locally occur in parallel sheeted sets. These fracture sets are subperdendicular to the orientation of quartz veins. Competent section, well broken along fractures into less than 10 cm pieces with some rubble zones.										
80.60 82.30	Grey-pink to pink, massive, coarse grained, porphyritic intrusive. Very weakly silicified to unaltered. Minor, 0.5cm, irregular quartz veins, generally with shallow orientations to the core axis. 0.5 to 1%, finely disseminated pyrite. Competent section, but broken into less than 5cm pieces.										
82.30 85.75	Mottled medium grey-white to creamy grey-white, weakly to locally moderately silicified and very weak to weakly carbonatized and sericitized, although the biotite is locally relatively unaltered. Generally 15 to 20%, though locally more concentrated diffuse silica veining and flooding that is generally oriented at 10 to 30 degrees to the core axis. Quartz flooding/veining locally gives section a										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

foliated appearance. Veining and adjacent flood zones contain numerous very small grains of metallic grey minerals. 3 to 4% pyrite as fine disseminations, as well as several clots and blebs up to 1cm in size occuring along fractures or veining. Relatively vuggy and broken section, generally broken into less than 10cm pieces with several short (10 cm) rubble zones.

85.75 86.70 Light pink-grey to slightly pinkish grey, massive, coarse grained, plagioclase porphyritic relatively unaltered section. 5%, subplanar, 0.5 to 1cm, bluish white quartz veins that are irregularly branching and generally oriented at 40 degrees to the core axis. Some veins are slightly (0.5 to 1cm) offset across thin fractures. Section contains several fractures oriented at 45 degrees to the core axis (perpendicular directions), as well as some irregular fractures oriented approximately perpendicular to the core axis. 0.5 to 1% pyrite as fine disseminations, as well as concentrations along fractures.

86.70 98.55 Medium grey to mottled medium grey-white, very weakly altered, but well quartz veined, to weakly altered (veined and pervasive) and locally weak to moderately silicified (veined and pervasive). Plagioclase porphyritic texture generally well preserved with euhedral grains up to 7mm, but commonly 3 to 4mm. Biotite locally relatively unaltered, but generally chloritized/sericitized. Section is generally massive and only locally weakly foliated in quartz flood zones with orientations at 30 to 35 degrees to the core axis.
Less altered silicified zones contain minor (2 to 5%) amounts of planar, sharp bounded, quartz veins, while more altered sections contain 5 to 15%, subplanar to highly irregular veining with diffuse contacts that grade into silica flood zones. Locally the veining is highly irregular with various curving and crosscutting and branching relationships. Veins are locally offset along fractures. Veins are mostly oriented at 30 to 45 degrees to the core axis, although a vein oriented subparallel to the core axis

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	occurs between 90.50 to 91.00 metres. Quartz veins are generally 0.5 to 3cm in width, and consist of coarse white quartz containing minor, very small wallrock impurities, and trace to minor amounts of pyrite. A few of the larger veins also contain trace to minor amounts of grey metallic minerals, generally as fine explosion puffs, and/or needles. Section is moderately well fractured, generally at 45 to 60 degrees to the core axis, although most orientations occur. Competent section with 10 to 25 cm breakage, generally along fractures. 1 to 3% pyrite as fine disseminations, and concentrated into local blebs and along fractures.										
98.55 100.20	Pink, relatively unaltered, coarse (0.5 to 2mm) grained, with 5%, small (2 to 5mm), euhedral, zoned plagioclase phenocrysts, 5 to 10%, 1 to 2mm, subrounded quartz grains, and 10 to 15% biotite (chloritized) in a fine grained plagioclase dominant matrix. A few, thin (1 to 2mm), bluish white quartz veinlets oriented at 35 to 40 degrees to the core axis. Minor to 1%, finely disseminated pyrite and also as concentrations on slip fractures. Several chloritic slip fractures with lineations orientated at 20 degrees on slip planes which are oriented at 20 to 30 degrees to the core axis. Competent section, but moderately broken into 5 to 10cm pieces with a rubbly lower contact zone. Lower contact with volcanic inclusion oriented at 40 degrees to the core axis.										
100.20 101.80	FINE-GRAINED METASEDIMENT INCLUSION Dark greenish-black to brownish-black, very fine grained, moderately foliated/schistose/phyllitic with foliation oriented at 25 to 30 degrees to the core axis at top and bottom, and 5 degrees to the core axis in the central section. Section has local banded character, consisting of coarser, darker, magnetic bands, within finer grained, phyllitic material that is generally weakly magnetic. Unit is generally moderately reactive to HCl.	NS 892	100.20 101.80 100.20 101.80	1.60 1.60	n/a .05	n/a .60	- -	0.5% 0.5%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Minor quartz veining and intrusive material occurs as thin (1 to 2mm), discontinuous to boudinaged/strectched/sheared veins oriented parallel to the foliation, and as occasional irregular and often offset blebs up to a few cms. Offsets are generally on slips subparallel to foliation. Possibly volcanic in origin, but varying grain size in bands, strongly magnetic bands, brownish colour, and lack of any epidote alteration suggest that it is a sediment. Includes hairline network fracturing throughout unit (late fractures). 0.5% Pyrite mostly as very fine disseminations, but incuding several small areas with 1mm cubic crystals. Upper contact is sharp and oriented at 40 degrees to the core axis, and lower contact is in poorly recovered rubble zone with indeterminate contact orientation although foliation is oriented at 25 to 30 degrees to the core axis.										
101.80 132.00	FELDSPAR PORPHYRITIC QUARTZ DIORITE INTRUSIVE - UNALTERED	NS	101.80	132.00	30.20	n/a	n/a	TR-MNR	0.5-1%	UN-MOD	UN-WK	UN-WK
101.80 118.00	Pink with minor pinkish grey sections, relatively unaltered, massive, coarsely (1 to 2mm) feldspar porphyritic, with a few larger (2 to 5mm), subhedral to euhedral phenocrysts, many that are partially resorbed. 5%, Subrounded quartz grains, and 10% fine patchy biotite. 3 to 5% quartz veins as 1mm to 2cm, subplanar veins oriented at various angles to the core axis, but concentrated at 30 degrees to the core axis. Veins are white with little or no inclusions or mineralization. Quartz veins are locally offset (1 to 5mm) along slips and fractures. Some veins have thin (1mm) red alteration bands. 0.5 to 1% finely disseminated pyrite with concentrations along fractures. Moderately fractured at various angles to the core axis, but concentrating at 10 to 30 degrees and at 60 and 70 degrees to the core axis. These fractures are often chloritic, pyritic and weakly vuggy, locally with calcitic coatings. Unit is weakly vuggy throughout. A grey to weakly silicified zone occurs between 110.20 to 111.50 metres. Relatively competent unit, but well fractured and broken into pieces less than 5 cm with several short (5 to 20cm) rubble sections.	893	101.80	103.00	1.20	.10	5.00	-	1%			
		894	103.00	104.00	1.00	.40	3.40	-	1%			
		895	104.00	105.00	1.00	.22	7.60	-	1-2%			
		896	105.00	107.00	2.00	.10	1.50	-	0.5-1%			
		897	107.00	108.50	1.50	.01	1.40	-	0.5-1%			
		898	108.50	110.00	1.50	.01	1.10	-	0.5-1%			
		899	110.00	111.50	1.50	.02	1.50	TRACE	1-2%			
		900	111.50	113.00	1.50	1.06	5.50	-	0.5-1%			
		901	113.00	114.50	1.50	.07	2.00	-	0.5%			
		902	114.50	116.00	1.50	.01	1.50	-	0.5-1%			
		903	116.00	118.00	2.00	.01	1.50	-	0.5-1%			
		904	118.00	119.00	1.00	.01	1.50	MINOR	1-2%			
		905	119.00	120.00	1.00	.01	1.30	TRACE	1-2%			
		906	120.00	120.50	.50	.02	1.70	0.5%	2-4%			
		907	120.50	120.80	.30	.01	1.30	TRACE	1-2%			
		908	120.80	121.00	.20	.01	1.10	0.5%	2-4%			
		909	121.00	122.00	1.00	.03	1.30	TRACE	2-3%			
		910	122.00	122.50	.50	.18	1.30	1-1.5%	2-3%			

Interval (Metres)	Description
118.00 132.00	Generally mottled grey-white, moderately silicified and weakly sericitized with local patches (10's of cm) and bands (a few cm) that are white and intensely silicified and moderately sericitized.
	Thin (1 to 5cm) alteration bands appear to grade outward in intensity from small fracture zones that are often oriented at 10 to 45 degrees to the core axis. These fractures locally contain thin (1 to 2mm), wavy, chloritic, alteration fringes, some of which surround calcite fragments that are cm sized.
	Larger alteration zones are pervasively silicified with sericitization of biotite, but contain no significant quartz veining.
	This section also contains 20% relatively unaltered to weakly silicified, slightly pinkish to purplish grey, intrusive. Typical granodiorite/quartz diorite. Coarse grained, plagioclase porphyritic, with minor quartz phenocrysts, and 10% black, unaltered biotite. Core recovered was very broken through the altered sections. Changes from unaltered to altered sections are often transitional over a few cm, but also rather sudden.
	The white moderate to intensely silicified sections contain zones of silica flooding that contain minor to locally 1%, fine grey metallic minerals. These are usually small (visible in handlense), however several fractures between 122 to 122.5m contain smeared fracture coatings of a soft purplish grey mineral that appears to be molybdenite. These fractures are oriented at 5 to 25 degrees to the core axis.
	No significant quartz veining through the unit.
	Pyrite constitutes 0.5 to 1% of the relatively unaltered intrusive sections, and 2 to 5% in moderately to intensely altered zones. Pyrite is finely disseminated throughout and occurs as concentrations along most fractures, particularly through intensely altered zones. Pyritic hairline fractures through altered zones are often jagged, irregular and discontinuous.
	Moderately foliated band 3cm wide and oriented at 25 degrees to the core axis occurs at 133.80 metres.
	Section is well fractured, generally at 10 to 45 degrees to the core axis. Fractures often planar, but altered zones are fractured/broken along irregular fracture orientations.

Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
911	122.50 122.75	.25	.08	.80	-	2%			
912	122.75 123.00	.25	.01	1.00	TRACE	2-3%			
913	123.00 123.50	.50	.01	1.00	0.5%	2-3%			
914	123.50 124.00	.50	.01	1.20	-	1-2%			
915	124.00 125.00	1.00	.01	1.30	MINOR	1-2%			
916	125.00 126.00	1.00	.01	1.20	-	1-2%			
917	126.00 127.00	1.00	.01	1.10	MINOR	1-3%			
918	127.00 127.70	.70	.01	1.00	-	2-3%			
919	127.70 128.00	.30	.01	1.10	MNR-0.5	2-3%			
920	128.00 129.00	1.00	.20	.80	MNR-0.5	2-3%			
921	129.00 130.00	1.00	.05	.90	MNR-0.5	2-4%			
922	130.00 130.70	.70	.18	.70	-	2%			
923	130.70 131.00	.30	.10	1.10	0.5-1%	2-4%			
924	131.00 132.00	1.00	.02	.90	0.5%	2-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Chlorite, calcite, and minor sericite occur on some fractures. Section is well broken, particularly in altered zones where it often forms irregular chips and rubble. Small mafic volcanic inclusion occurs between 122.50 to 122.75 metres. Dark brown, fine grained, schistose with foliation oriented at 40 degrees to the core axis. Upper contact parallel to foliation at 40 degrees to the core axis and lower contact subparallel to the core axis at 70 degrees. Upper contact transitional. Lower contact oriented at 30 to 40 degrees to the core axis.										
132.00 146.75	SHEARED/SCHISTOSE MAFIC METAVOLCANIC Dark brownish black and locally greenish black, very fine grained, schistose/sheared metavolcanic. Weakly reactive to HCl with local highly reactive sections. Generally non-magnetic with local magnetic patches. Shearing foliation well developed throughout upper part of unit and oriented at 15 to 20 degrees to the core axis. Lower few metres contains a few more massive sections with volcanic textures, and minor lime-yellow green epidote-carbonate alteration that is well developed in the underlying unit. Rest of this unit is not altered. Unit contains 5%, thin (hairline to 1mm), discontinuous calcite lined fractures, occasionally stretched parallel to foliation, but mostly as short, irregular to ladder sets of tension gash fillings. Unit contains 3 to 5% quartz veins and quartz calcite laminae. The quartz-carbonate (calcite) veinlets are mostly thin (hairline), stretched out, and slightly boudinaged veinlets (laminae) oriented subparallel to the shear foliation. The quartz veins are 0.5 to 2cm and form irregular, disjointed, pinch and swell to boudinaged broken veins generally at 10 to 45 degrees to the core axis. Locally these are offset across thin fractures. These are generally clean white veins, occasionally with carbonate along the edges or in pressure shadows. 0.5 to 1% pyrite as fine disseminations often concentrated in laminae parallel to the shear foliation. Small weakly altered intrusive dyke from the overlying intrusive occurs	NS 925 926 927 928 929	132.00 146.75 132.00 133.00 133.00 134.00 134.00 134.85 134.85 136.00 141.25 141.60	14.75 1.00 1.00 .85 1.15 .35	n/a .17 .04 .05 .04 .02	n/a .80 1.30 1.00 1.00 1.20	- - - - - -	0.5-1% 0.5-1% 0.5-1% 1-2% 0.5-1% 2-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	between 134.00 to 134.85 metres. Contacts are highly sheared and oriented at 25 to 40 degrees to the core axis. Smaller intrusive dyke that is relatively fresh but irregular (caught in swirled schistose section) from 141.25 to 141.60m occurs as several broken pieces. Relatively competent unit, but moderately broken along shear foliation and several fractures generally into 10 to 50cm pieces. Upper contact is sharp, but wavy and oriented at 30 to 40 degrees to the core axis. Lower contact is sharp and oriented at 25 degrees to the core axis.										
146.75 151.20	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS Mottled light yellowish-lime epidote green to dark green, with 50% lighter coloured altered sections occuring as patches and somewhat irregular squares within network of darker bands of less altered mafic volcanic. No pervasive reaction to HCl. Light coloured altered patches are massive, non-magnetic, with no preserved original textures, while dark green weak to unaltered portions exhibit fine grained volcanic texture and are moderately magnetic, massive to moderately foliated at 20 to 40 degrees to the core axis. Unit contains a few percent irregular, hairline, calcite fracturing, but not as pervasive as in the overlying sheared unit. 5% Quartz veining like the overlying unit, and although slightly (1 to 2cm) offset on fractures, are not stretched and boudinaged like in the overlying unit. Trace pyrite and one chalcopyrite grain noted in quartz veins. Veins all oriented at 30 to 50 degrees to the core axis, and are generally planar. Veining cuts both altered and unaltered volcanic sections. Minor pyrite, generally as fine disseminations in wallrock adjacent to quartz veins. Competent unit with fractures generally oriented at 45 degrees to the core axis, and core broken along fractures into 20 to 100cm pieces. Lower contact with intrusive not recovered.	NS	146.75 151.20	4.45	n/a	n/a	-	MINOR			
		930	148.00 149.00	1.00	.01	1.60	-	MINOR			
		931	149.00 150.00	1.00	.04	1.70	-	MINOR			
		932	150.00 151.20	1.20	.02	1.40	-	MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
151.20 158.30	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED Mostly weak to moderately silicified and very weakly sericitized, but containing a large section between 157.0 and 158.3m at the bottom that is relatively fresh. Biotite is generally unaltered to weakly chloritized throughout unit. Altered zones have preserved the original coarse grained, plagioclase porphyritic texture, are mottled medium grey in colour, and massive to weak and locally moderately sheared/foliated at 20 to 25 degrees to the core axis. A few thin (1cm), planar quartz veins oriented at 20 to 30 degrees to the core axis, and some minor quartz patches and silica flood zones. The latter occasionally contain minor amounts of grey metallic minerals. Unit is moderately vuggy. Altered zones contain 2 to 4% pyrite as fine disseminations, often concentrated on fractures. Moderately fractured at shallow and subperpendicular angles to the core axis, with altered zones having more fracturing and orientations at 15 to 30 degrees to the core axis, and unaltered zones containing less fractures that are generally oriented at 45 to 70 degrees to the core axis Altered zones are well broken with several rubble sections, and unaltered zones are competent with 10 to 50cm breakage along fractures. Upper contact not recovered. Lower contact is sharp and somewhat sheared and undulating with orientation at 25 to 30 to the core axis.	NS	151.20	158.30	7.10	n/a	n/a	TRACE	1-3%	WK	-	V.WK
		933	151.20	152.00	.80	.01	1.10	-	2-3%			
		934	152.00	153.00	1.00	.01	1.00	TRACE	2-3%			
		935	153.00	154.00	1.00	.02	1.00	-	2%			
		936	154.00	155.00	1.00	.10	1.00	TRACE	2-3%			
		937	155.00	156.00	1.00	.08	.90	-	2%			
		938	156.00	157.00	1.00	.01	2.20	TRACE	1-2%			
		939	157.00	158.30	1.30	.01	1.30	-	1%			
158.30 160.65	SHEARED/SCHISTOSE MAFIC METAVOLCANIC Medium to dark green, well foliated/sheared, fine grained, laminated/sheared mafic volcanic, including several irregular intrusive dyke fragments occurring between 158.50 to 158.60, 159.10 to 159.20, 159.25 to 159.30 and 159.50 to 159.85 forming approximately 25% of unit. Shearing orientation in the mafic volcanic is at 30 degrees to the core axis, although somewhat swirled and irregular. Very weakly epidote altered in shear/foliation parallel, laminae/bands, consisting mainly of carbonate/epidote/plagioclase. Abundant calcitic patches/networking and thin (hairline to 2mm),	NS	158.30	160.65	2.35	n/a	n/a	-	MINOR			
		940	158.30	159.85	1.55	.01	1.20	-	1%			
		941	159.85	160.65	.80	.02	.90	-	MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	irregular tension gash fillings. 5% Quartz veining, mostly as broken vein fragments separated along slips and shears, many with no continuity of the original vein apparent. Intrusive fragments are unaltered to weakly altered, containing 1 to 3% pyrite, and having irregular contacts. Minor pyrite in mafic volcanic. Competent unit with 25 to 75cm breakage along fractures generally oriented at 45 to 60 degrees to the core axis. Lower contact is sharp along a quartz vein oriented at 40 degrees to the core axis, into underlying epidote altered mafic volcanic.										
160.65 180.50	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS Similar to unit between 146.75 to 151.20 metres. Dark green with volcanic texture consisting of fine plagioclase in chloritic matrix. Fresh sections are rare but highly magnetitic and massive. Most of rock is weakly to intensely epidote-carbonate altered with the latter consisting of light cloudy pinkish to yellow-lime green coloured patches, irregular zones and bands. Pinkish alteration also forms bands along fractures and quartz veins. Altered zones are generally well foliated at 0 to 40 degrees to the core axis, but mostly at approximately 20 degrees to the core axis. Minor hairline calcite veinlets along late tension fractures. Abundant (5 to 15%) quartz veining, as 1 to 2cm, subplanar, but somewhat irregular and branching veins all offset along slips and fractures over distances of 1 to 3cm and occasionally up to 10 cm. Veins are bluish white and clean, generally with sharp contacts. Locally some veins exhibit fleshy pink, calcitic reaction bands a few mm wide. Veins appear to have preferred orientations at 40 to 60 degrees to the core axis. Generally minor amounts of finely disseminated pyrite, but some veins and fractures have somewhat greater (1 to 3%) concentrations. Several thin (3mm to 1cm), intrusive dykelets cut the volcanic. These are planar and have various orientations between 20 and 45 degrees to the core axis, and at an angle to the quartz veining.	NS 942 943 944 945 946 947	160.65 180.50 160.65 162.00 176.00 177.00 177.00 178.00 178.00 179.00 179.00 180.00 180.00 180.50	19.85 1.35 1.00 1.00 1.00 1.00 .50	n/a .01 .05 .01 .04 .02 .18	n/a 1.60 2.00 1.80 1.70 .40 1.90	- - - - - - -	0.5-1% MINOR 0.5% 0.5% 0.5% 0.5% 2-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
180.50 180.70	FAULT ZONE Small fault zone with 50%, small (less than 1cm), broken wallrock fragments surrounded by quartz and coarse calcite. Central part of zone is a vuggy, irregular quartz-calcite vein. Edges of fault are moderately pyritic, and the underlying pink coloured, pyritic altered volcanic adjacent to this fault seems to occur between this fault and the mylonite occurring further below. Contacts of the fault somewhat irregular but oriented at approximately 40 degrees to the core axis.	NS 948	180.50 180.70 180.50 180.70	.20 .20	n/a .20	n/a 1.90	- -	2% 2%			
180.70 182.30	INTENSELY EPIDOTE-CARBONATE ALTERED METAVOLCANIC Pervasively and intensely altered volcanic lying below the overlying fault, and underlying mylonite. Medium creamy to purplish to pinkish buff colours. Zone is generally fine grained with highly contorted appearance due to broken and offset quartz veins, alteration banding, and pyritic fracture fillings. However, it is only weakly foliated at 0 to 20 degrees to the core axis above 181.5m, and more or less massive below. Above 181.5 it is also more altered, contorted and pyritic. Minor quartz veining, now as small broken offset fragments. 5 to 6% pyrite as fine disseminations concentrated on and along fractures forming irregular network patterns across the section. Hard competent section generally breaking into 10 to 100 cm pieces. Upper contact along fault at 40 degrees to the core axis. Lower contact with mylonite zone at 25 degrees to the core axis.	NS 949 950	180.70 182.30 180.70 181.50 181.50 182.30	1.60 .80 .80	n/a .61 .68	n/a 5.20 2.40	- - -	3-6% 5-6% 3-4%			
182.30 184.00	MYLONITE ZONE Finely laminated/banded, multicoloured, well sheared mylonite zone. Light yellow-green, to purplish, to pink, to buff grey, weakly calcitic, strong carbonate altered. Upper part contains numerous 3mm and smaller rotated fragments in finer cataclastic matrix.	NS 723 951	182.30 184.00 182.30 183.50 183.50 184.00	1.70 1.20 .50	n/a .83 .30	n/a 7.80 .30	- - -	2-5% 4-5% 2-4%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Several small (less than 3cm) quartz vein fragments caught in irregulaly swirled mylonite sections. Well banded shearing oriented at 20 degrees to the core axis, although it is somewhat undulating and nonparallel. 2 to 4% finely disseminated pyrite. Relatively soft section, broken into 10 to 50cm pieces along shear foliation. Upper contact, wavy and undulating at 25 degrees to the core axis. Lower contact, wavy and undulating at 25 to 30 degrees to the core axis.										
184.00 185.15	INTENSELY EPIDOTE-CARBONATE ALTERED METAVOLCANIC Similar to unit between 180.70 to 182.30 metres. Creamy pinkish purplish to buff coloured, fine grained, intensely altered mafic volcanic. Also similar to overlying mylonite except this is massive to weakly foliated at 20 to 30 degrees to the core axis. Overlying mylonite unit is the cataclastically sheared portion of the volcanic unit on either side. Contains a few, small (1 to 2mm) quartz veins that are weakly stretched/elongated due to weak shearing and offset a few cm along fractures. 2 to 3% finely disseminated pyrite concentrated along fractures. Minor, hairline, calcitic tension fractures. Includes a few irregular, diffuse intrusive patches occupying 10% of the zone below 184.75 metres. Relatively competent core with 10 to 50cm breakage, often along weak foliation orientation. Lower contact is an irregular intrusive dyke, below which this unit grades into less altered, but well sheared mafic metavolcanics.	NS 952	184.00 185.15 184.00 185.15	1.15 1.15	n/a .41	n/a .90	- -	2-3% 2-3%			
185.15 185.85	SHEAR ZONE Medium green to buff green, intensely sheared metavolcanic. Fine grained, moderately calcitic, non-magnetic. No original volcanic textures. Shear surfaces somewhat calcitic and containing minor sericite.	NS 953	185.15 185.85 185.15 185.85	.70 .70	n/a 2.80	n/a 8.30	- -	1% 1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Well developed shear foliation oriented at 20 degrees to the core axis. Minor, thin (0.5cm) pieces of broken quartz veins. 1% Pyrite as fine disseminations often concentrated along shear planes and calcitic fractures. One large (2 x 5mm) bleb of chalcopyrite occurs along a vuggy calcitic fracture. Moderately competent unit with breakage along shear foliation.										
185.85 194.70	WEAKLY BRECCIATED MAFIC METAVOLCANIC WITH EPIDOTE-CARB. BANDS										
	Moderately sheared mafic metavolcanic intruded by several granodiorite/quartz diorite dykes.	NS	185.85	194.70	8.85	n/a	n/a	-	2-3%		
	185.85 186.55 Feldspar Porphyritic Quartz Diorite Dyke. Medium grey, weakly to moderately silicified, massive to sheared intrusive including several long (2cm x 20cm), irregular, highly altered mafic volcanic fragments oriented parallel to irregular shear foliation at 0 to 20 degrees to the core axis. Sericite occurs along shear fragments. Upper and lower contacts are oriented at 20 degrees to the core axis, but highly irregular (broken and sheared).	954	185.85	186.55	.70	1.42	4.90	-	2-3%		
		955	186.55	187.00	.45	1.52	3.50	-	5-8%		
		956	187.00	187.75	.75	.71	1.90	-	1-2%		
		957	187.75	188.80	1.05	.36	.60	-	0.5%		
		958	188.80	190.00	1.20	.27	1.10	MINOR	3-4%		
		959	190.00	191.00	1.00	.01	1.00	-	1-2%		
		960	191.00	192.00	1.00	.01	.90	-	1-2%		
		724	192.00	193.60	1.60	.18	2.30	-	3-4%		
		961	193.60	194.70	1.10	.06	1.20	-	2%		
	186.55 187.00 Medium green, moderate foliated/sheared mafic metavolcanic containing 5 to 6% disseminated pyrite. Foliation and contacts oriented at 20 degrees to the core axis. Minor calcitic fracturing.										
	187.00 187.75 Feldspar Porphyritic Quartz Diorite Dyke. Same as intrusive between 185.85 to 186.65m, although more sheared.										
	187.75 188.80 Dark green, moderately foliated/sheared mafic metavolcanic containing 15%, thin (1 to 2mm), discontinuous fracture gashes, forming an intense network of calcite veining yielding a pseudobrecciated appearance. Well sheared at 10 to 20 degrees to the core axis, with upper and lower contacts sharp but unulating at 20 to 30 degrees to the core axis. Section contains several broken pieces of offset and boudinaged quartz veining.										
	188.80 192.00 Feldspar Porphyritic Quartz Diorite Dyke. Mostly grey, biotitic, relatively unaltered, massive, coarse grained, porphyritic intrusive, but with a zone between 189 and 190m										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	that is mostly weak to moderately altered. Local intensely silicified/silica flood zones adjacent to several fractures oriented at 40 degrees to the core axis. The latter are bleached white and contain 0.5 to 1% very finely disseminated grey metallic minerals. Fractures are vuggy with chloritic fringing of some calcite grains and fractures noted in overlying altered intrusive at 124 metres. 3 to 4% pyrite occurs as fine disseminations, and along small fractures throughout the altered sections, and 1 to 2% pyrite as disseminations throughout unaltered intrusive sections. Lower contact of unaltered intrusive highly sheared across 20cm zone and oriented at 20 to 45 degrees to the core axis.										
192.00 193.60	Dark green, moderately foliated/sheared mafic volcanic with foliation oriented at 20 to 35 degrees to the core axis. 10%, hairline, calcitic tension microfracture network, and several large pieces of broken and boudinaged quartz veins. 2% pyrite as disseminations concentrated along shear foliation parallel laminae. Lower contact oriented at 45 degrees to the core axis.										
193.60 194.70	Feldspar Porphyritic Quartz Diorite Dyke. Mottled pinkish to greenish grey, weakly silicified and sericitized intrusive. Massive with subdued/clouded/resorbed/altered, coarse grained texture. 5%, subplanar to irregular, thin (1 to 10cm) quartz veins often offset along fractures. Fractures are often sericitic giving section a light green colour. Upper and lower contacts are oriented at 40 and 50 degrees to the core axis. 2%, pyrite occurs as disseminations concentrated on fractures.										
194.70 199.45	WEAKLY BRECCIATED MAFIC METAVOLCANIC WITH EPIDOTE-CARB. BANDS										
	Medium grey-green, irregularly swirled and moderately to intensely brecciated and fractured, with 20% light yellow-green epidote-carboante alteration bands, and generally an overall moderate to intense carbonate alteration.	NS	194.70	199.45	4.75	n/a	n/a	-	1-3%		
		962	194.70	196.00	1.30	.20	1.10	-	1-3%		
		725	196.00	197.00	1.00	.02	1.70	-	2-4%		
		726	197.00	198.50	1.50	.03	1.90	-	1-2%		

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Locally intensely sheared at 20 degrees to the core axis, near both contacts. Altered sections of the volcanic unit are themselves brecciated and broken Several fractures have carbonate-sericitic slip surfaces. Generally 1%, and locally up to 3%, pyrite as fine disseminations and fracture linings. Relatively broken unit, often broken along irregular, as well as planar sericitic fractures. The latter are generally oriented at 20 to 40 degrees to the core axis. Lower contact along sharp chloritic slip at 20 degrees to the core axis.	727	198.50 199.45	.95	.06	1.30	-	2-3%			
199.45 201.10	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED Mottled medium grey and grey-green, weakly silicified but moderately sericitized and brecciated. Vague, coarse grained, massive texture evident, but mostly fine grained quartz-carbonate-plagioclase-sericite schist. Well mottled texture due to brecciation, silica flooding, and sericitization. No significant quartz veins, although silica flood zones often form irregular silica bands 0.5 to 2cm wide. 2% Pyrite as fine disseminations and fracture linings. Moderately competent unit, but moderately broken along carbonate-sercite-talc lined fractures at 20 to 40 degrees to the core axis. Lower contact occurs along an irregularly brecciated quartz vein, separating intrusive from intensely sheared mylonitic mafic volcanics below.	NS 963	199.45 201.10 199.45 201.10	1.65 1.65	n/a .49	n/a 1.90	- -	2% 2%			
201.10 208.75	SHEAR ZONE Intensely altered and sheared mafic metavolcanic with soft banded clay gouge zones between 202.50 to 204.00, and 208.60 to 208.70 metres. The mylonite/clay gouge zones are soft and claylike with multicoloured, light pink to grey to green banding (1mm laminations). Several thin (1 x 5mm) quartz vein fragments occur in the fault gouge parallel to the	NS 964 728 729 730	201.10 208.75 201.10 202.35 202.35 203.00 203.00 203.50 203.50 204.00	7.65 1.25 .65 .50 .50	n/a 13.85 6.74 7.86 3.22	n/a 42.60 5.30 29.50 11.90	- - - - -	1-5% 3% 5-6% 3-4% 3-4%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	shear foliation, which varies between 0 to 20 degrees to the core axis. The larger upper zone also includes a friable, altered, 3cm x 3cm, irregular, intrusive fragment. Gouge is relatively pyritic containing 1%, to locally 5%, finely disseminated pyrite above 202.50 metres. The unit is well sheared much like the mylonite adjacent to it, but not sheared into gouge. Section contains 15%, large, broken fragments of quartz veining and 3 to 4% pyrite. Section is somewhat similar to mylonite between 182.30 and 184.00 metres. Shear folition is wavy and irregular, and swirled around quartz vein fragments, but generally ranges between 0 and 30 degrees to the core axis Between the two gouge zones the volcanic is moderately to intensely brecciated, and similar to zone between 194.70 and 199.45m with 10% epidote-carbonate mottling. Some darker, less altered, brecciated sections of this zone are locally magnetic, with 0.5% pyrite. Unit is mostly massive and brecciated, but locally weakly sheared with well developed foliation oriented at about 20 degrees to the core axis. Soft, well broken to rubbly unit.	731	204.00 204.50	.50	.34	2.10	-	3-4%			
		732	204.50 205.00	.50	.26	2.70	-	3-4%			
		733	205.00 205.50	.50	.14	3.00	-	2-3%			
		734	205.50 206.00	.50	.03	2.00	-	1%			
		735	206.00 207.00	1.00	.02	1.70	-	1-2%			
		736	207.00 208.00	1.00	.01	1.70	-	1-2%			
		737	208.00 209.00	1.00	.02	1.90	-	2-4%			
208.75 287.70	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS										
	Variably altered (weak to intense) mafic volcanic, intruded by variably altered (unaltered to locally moderate or intense) granodiorite to quartz diorite.	MS	208.75 287.70	78.95	n/a	n/a	-	0.5-2%			
	208.75 213.75 Intensely altered and brecciated, mottled medium to dark green and grey mafic volcanic adjacent to the overlying mylonite zone, grading into a well altered (epidote-carbonate) mafic volcanic that is more massive, but still slightly brecciated/deformed as shown by offset (1 to 3cm) quartz veining. Unit mostly altered to light green-yellow epidote patches, but a few dark green, fine grained, magnetic, unaltered mafic volcanic remnant fragments remain. 5%, intense, thin (1mm), calcitic, tension microfracture networking. 5%, 0.5 To 2cm,	738	209.00 210.00	1.00	.04	2.00	-	3-4%			
		739	210.00 211.00	1.00	.03	2.40	-	2-3%			
		740	211.00 212.00	1.00	.02	2.30	-	1-2%			
		741	212.00 213.00	1.00	.01	2.20	-	1-2%			
		742	213.00 213.75	.75	.01	2.40	-	2-3%			
		965	213.75 215.40	1.65	.07	1.40	-	2%			
		966	215.40 216.55	1.15	.01	1.20	-	2%			
		743	216.55 217.15	.60	.02	1.20	-	1-2%			
		744	217.15 218.00	.85	.02	2.20	-	1-2%			
		745	218.00 219.00	1.00	.04	196.60	-	2-3%			
		746	219.00 220.00	1.00	.03	2.40	-	2%			
		967	220.00 221.00	1.00	.21	1.90	-	1-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	core axis. Weak alteration banding is often irregular but	968	222.20 223.00	.80	.10	2.00	-	1-2%			
	mostly oriented at 20 degrees to the core axis.	969	227.35 228.10	.75	.03	1.40	TRACE	1-2%			
213.75 215.40	Intrusive/mafic metavolcanic contact zone. 50%, irregular,	970	233.10 234.00	.90	.04	1.50	-	0.5-1%			
	intrusive blocks as below with 50% mostly intensely	971	234.00 235.00	1.00	.06	1.50	-	0.5-1%			
	epidotized, lime green to salmon pink coloured altered	972	241.50 243.00	1.50	.02	1.40	-	0.5%			
	mafic metavolcanic. Section is well fractured with sharp,	973	243.00 243.55	.55	.07	1.00	-	TRACE			
	but irregular to somewhat subdued (metasonatized) contacts.	974	243.55 244.40	.85	.01	1.30	-	1%			
215.40 217.15	Quartz diorite intrusive. Slightly greenish to reddish	975	244.40 245.50	1.10	.19	.80	-	4-5%			
	medium grey, weakly to moderately carbonate and epidote	976	248.00 249.00	1.00	.11	1.00	-	4-5%			
	altered, coarse grained, feldspar porphyritic intrusive.	977	249.00 249.90	.90	.01	1.90	-	1%			
	30 to 40%, euhedral to subhedral, often zoned, 1 to 3mm and	978	249.90 251.00	1.10	.12	1.50	-	0.5%			
	up to 1cm, white plagioclase phenocrysts, and 5%,	8546	251.00 252.50	1.50	.02	1.20	-	0.5%			
	subrounded, 2 to 5mm quartz phenocrysts in finer grained	979	252.50 253.05	.55	.01	1.40	-	1-2%			
	plagioclase rich matrix that is carbonatized and	980	253.05 254.00	.95	.09	1.20	-	3-4%			
	epidotized. Only minor unaltered biotite is evident.	981	254.00 255.00	1.00	.19	.90	-	2-3%			
	Intrusive is massive and contains a few well altered,	8547	255.00 256.00	1.00	.04	1.30	-	1%			
	pyritic volcanic wallrock fragments that are intensely	8548	256.00 257.00	1.00	.03	1.20	-	1-2%			
	microfractured. No significant quartz veining. 2% pyrite	8549	257.00 258.50	1.50	.07	1.30	-	1%			
	as fine disseminations and fracture fillings. Competent	8550	258.50 260.00	1.50	.22	1.20	-	1%			
	section, with 5 to 50 cm breakage along fractures generally	8551	260.00 261.35	1.35	.21	1.30	-	1-2%			
	oriented at 45 degrees to the core axis. Lower contact is	982	261.35 261.95	.60	.25	1.80	-	1-2%			
	sharp and oriented at 35 degrees to the core axis.	8552	261.95 263.00	1.05	.01	.80	-	1%			
217.15 221.15	Intensely altered mafic metavolcanic. 10%, dark green,	8553	263.00 264.75	1.75	.01	1.10	-	1%			
	magnetic, unaltered remnants, 50%, weak to moderately	8554	264.75 266.00	1.25	.33	1.60	-	0.5%			
	carbonate and epidote altered sections having a irregular,	8555	266.00 267.50	1.50	.06	1.30	-	0.5%			
	patchy, cream to light yellow-green colour, and 20%,	8556	267.50 269.00	1.50	.04	1.10	-	1%			
	intensely light-yellow epidote altered sections with small	8557	269.00 270.50	1.50	.01	.90	-	0.5%			
	irregular intrusive dykelets and veining. Section is	8558	270.50 271.80	1.30	.09	.90	-	1-2%			
	moderately to intensely fractured/brecciated, with 5%,	8559	271.80 273.15	1.35	.03	1.00	-	MINOR			
	calcite filling thin, irregular, tension fracture	8560	273.15 275.00	1.85	.10	.80	-	0.5-1%			
	networking. Minor, irregular, broken and offset quartz	8561	275.00 276.50	1.50	.05	.90	-	0.5-1%			
	veining. 1 to 2% finely disseminated pyrite. Competent	8562	276.50 278.00	1.50	.02	.80	-	0.5-1%			
	section but moderately well fractured at various angles to	983	285.90 287.70	1.80	.03	1.50	-	0.5-1%			
	the core axis. Lower contact is an irregular transition										
	zone into intrusive.										
221.15 222.20	Transitional contact between mafic metavolcanic and										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Intrusive. 60%, intensely altered mafic volcanic as above, and 40%, slightly deformed intrusive as below, with irregular to sheared contact edges between rock types.										
222.20 228.10	Quartz diorite intrusive. Medium pink to purplish pink, relatively fresh to weakly altered with local sheared zones. Upper part is weak to moderately carbonate altered with little unaltered biotite. Central part is mostly relatively fresh with large plagioclase phenocrysts, minor quartz veining, and local weakly silicified zones. Lower part (227.60 to 228.10m) of this section is locally moderately sheared at 50 to 60 degrees to the core axis, and weak to moderately silicified. Lower contact is sharp and oriented at 40 degrees to the core axis. Unaltered intrusive contains 0.5%, finely disseminated pyrite, with 2 to 3% in the lower altered portion. 226.70 to 226.80m is an irregular, creamy grey, intensely altered, pyritic (2%), mafic volcanic wallrock fragment.										
228.10 230.25	Weak to moderately altered mafic metavolcanic. Medium to dark green to grey-green, fine grained, weak to moderately magnetic sections, with 50%, patchy grey silicification adjacent to the upper contact, and 50%, yellow-green, irregularly banded to patchy, weak to moderately epidote alteration throughout most of the rest of the section. Dark green less altered zones are weakly banded at 20 to 30 degrees to the core axis, and exhibit fine volcanic flow textures. Epidote banding often at 20 to 50 degrees to the core axis, but mostly irregular and strongest adjacent to silica veinelts. Carbonate-epidote banding occasionally contains minor porphyroblastic garnet in small (0.5cm), irregular clusters. Minor, thin (less than 0.5cm), subplanar, but irregular quartz veining, generally with numerous offsets along parallel fractures. Minor, irregular network of calcite fracturing. Upper contact is a sharp, planar intrusive contact oriented at 40 degrees to the core axis. Lower contact is a sharp, irregular contact oriented at 40 degrees to the core axis, truncating										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

compositional and alteration banding within the volcanic.

230.25 233.10 Relatively unaltered quartz diorite intrusive. Medium grey to medium pinkish grey, typical, massive, coarse grained, plagioclase porphyritic, biotite quartz diorite. Contains 3 to 5%, thin (1mm to 2cm), quartz vein bands with somewhat nonparallel and diffuse contacts, locally giving them a flood band appearance. Quartz veining is white, coarse grained, with some salmon pink (K-spar) laminae and contact bands along the edges of veins. Veins have various orientations, but mostly between 0 and 45 degrees to the core axis. 1 to 2% pyrite as fine disseminations and small, partial fracture fillings. Moderately fractured unit, generally oriented at 10 to 25 degrees, or 40 to 50 degrees to the core axis. Upper and lower contacts are sharp, but undulating, intrusive contacts oriented at 30 to 40 degrees to the core axis.

233.10 241.50 Weak to moderately altered mafic volcanic. Between 233.10 and 235.00 metres this section is mottled to weakly banded, medium grey-green to green-grey, with 15%, blue-white, irregular, 0.5 to 3cm, quartz blebs, and discontinuous to boudinaged veins. Weak shear banding oriented at 20 to 30 degrees to the core axis. Below 235 metres, this section consists of 50%, dark green, very magnetic, massive to weakly foliated zones, and 50%, medium green to light yellow-green, weak to moderately and locally strongly, epidote-carbonate altered with minor pink garnet porphyroblasts. Unaltered zones exhibit flow breccia or flow top textures. Alteration is patchy to irregularly banded at 10 to 40 degrees to the core axis. 5 to 10%, 0.5 to 10cm, subplanar, quartz veining oriented at 20 to 70 degrees to the core axis, but generally broken and offset along fractues. Generally minor to 0.5% pyrite as fine disseminations, but locally up to several percent along fractures, quartz veining, and the lower intrusive contact.

Quartz veins in volcanic near the lower contact are cut by the underlying intrusive. Lower contact sharp, but

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

irregular and undulating at 10 degrees to the core axis.

241.50 244.40 Relatively unaltered, coarse grained, plagioclase porphyritic, biotite, quartz diorite intrusive. Medium grey, unaltered or very weakly altered, massive to weakly foliated. Large quartz vein between 243.00 and 243.55 metres. Vein is watery white, coarse grained, and clean, and oriented at 10 degrees to the core axis.

244.40 249.90 Weak to moderately altered mafic metavolcanic, with 40% unaltered intrusive dykes. Medium to dark green, magnetic, mottled, and network fractured, with medium grey, weak and locally moderately epidote-carbonate altered zones. Unit is well fractured by thin network calcite veining, and intruded by 30 to 40%, irregular, unaltered intrusive dykelets (1 to 50cm wide), and some irregular quartz veins. Veining and dykes generally oriented at 0 to 40 degrees to the core axis. 1 to 5%, pyrite as fine disseminations, often concentrated in irregular bands in dark green mafic volcanic sections, as well as in fractures throughout unit. Moderately broken section, generally along fractures into pieces 10 to 50cm. Lower contact is a sharp, but irregular intrusive contact oriented at 20 degrees to the core axis.

249.90 251.35 Relatively unaltered to weakly silicified quartz diorite intrusive. Medium grey, typical, coarse grained, plagioclase porphyritic, biotitic quartz diorite, but with a slight washed out, pervasive silicification appearance. Massive and locally weakly foliated/sheared. Includes a few, 1 to 1.5cm white plagioclase megacrysts. Upper contact is sharp and curving from 20 to 60 degrees to the core axis. Lower contact is sharp, but irregular at 20 degrees to the core axis. Minor quartz veining, generally oriented at 45 to 60 degrees to the core axis.

251.35 252.50 Weak to moderately altered mafic metavolcanic. Similar to volcanic section between 244.40 and 249.90m, with slightly more (5%), thin calcite network tension microfracturing. Foliation/banding oriented at 20 to 30 degrees to the core

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	axis. Lower contact oriented at 25 degrees to the core axis.										
252.50 253.50	Relatively unaltered to weakly silicified quartz diorite intrusive. Similar to dyke between 249.90 to 251.35m, but slightly more foliated at 10 to 20 degrees to the core axis, particularly near the the lower contact which is intensely carbonate altered.										
253.05 261.95	Weak to moderately carbonate-epidote to carbonate altered mafic metavolcanic. Mostly dark greenish, hard, fine grained, moderately magnetic, weakly and thickly banded mafic metavolcanic, with an upper contact zone that is medium grey and moderately carbonate altered, and several patchy zones, and bands of light yellow-green epidote-carbonate alteration through the rest of the unit. Minor pink garnet porphyroblasts. Upper carbonate altered zone contains 5%, thin (hairline to 1mm), network of calcitic tension microfracturing, and 2 to 5%, finely disseminated pyrite. Dark green, relatively unaltered volcanic contains thin (0.5 to 1cm), lighter coloured bands at shallow (5 to 25 degree) angles to the core axis, that may be pillow selvages. Minor to 5%, thin (1mm), network to calcite tension fracturing. 3 to 5%, thin (0.5 to 2cm), irregular, blue-white quartz veining, often branching and at various angles to the core axis. 0.5 to 2% and locally to 3 or 4%, fine pyrite mostly along fractures. 5cm, grey, typical intrusive dyke occurs between 261.10 to 262.30m, and is oriented at 20 degrees to the core axis. Competent unit, with 25 to 75 cm breakage along fractures. Lower contact is sharp at 15 degrees to the core axis, with adjacent mafic volcanic that is well carbonate altered and moderately pyritized.										
261.95 264.75	Medium grey, typical, massive, coarse grained, plagioclase porphyritic, quartz diorite intrusive with 3 to 5% quartz veining generally oriented at 50 to 70 degrees to the core axis. One, thin (1cm), green to salmon pink, epidote altered fracture at 263.55m oriented at 45 degrees to the core axis. Minor silicification in thin (1cm) bands										

Interval (Metres)		Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
		adjacent to some fractures. Good euhedral, zoned plagioclase phenocrysts. 1 to 2% pyrite as fine disseminations, small clots, and fracture linings/fillings. Competent core, with 10 to 50cm breakage along fractures generally oriented at 45 to 80 degrees to the core axis. Lower contact is sharp and planar and oriented at 30 degrees to the core axis.										
264.75	271.85	Relatively unaltered mafic metavolcanic. Dark green, weak to moderately magnetic, fine grained, mafic metavolcanic flow. Massive to weakly foliated at 0 to 30 degrees to the core axis, with well developed (5%), network of hairline calcite tension microfracturing. 3 to 5%, thin (1mm to 2cm), subplanar, blue-white quartz veining offset along parallel fractures, as well as some irregular, now vuggy, quartz-calcite veins/lenses. Minor, thin, wispy bands of epidote-carbonate alteration. Competent unit, with 20 to 50cm breakage. Lower contact is a sharp, planar intrusive contact oriented at 50 degrees to the core axis.										
271.75	273.15	Relatively unaltered quartz diorite intrusive. Similar to section between 261.95 to 264.75m, but quartz veining is vuggy and oriented at 30 to 50 degrees to the core axis, and including two, large (2 x 5cm), intrusive wallrock fragments. Lower contact is a sharp, planar intrusive contact oriented at 20 degrees to the core axis.										
273.15	281.85	Relatively unaltered mafic metavolcanic. Similar to section between 264.75 to 271.85m, but including several, thin to thicker, intrusive dykelets.										
273.40	273.50	4cm, white quartz vein oriented at 20 degrees to the core axis.										
273.90	273.95	4cm, white quartz vein oriented at 45 degrees to the core axis.										
275.20	275.30	0.5cm intrusive dykelet oriented at 20 degrees to the core axis, and cut by an S folded, 3cm, blue quartz vein at an opposite, shallow angle to the core axis.										
276.70	276.75	1cm intrusive dyke oriented at 25 degrees to the core axis.										
276.80	276.85	2cm, white quartz vein oriented at 45 degrees to the core										

Interval (Metres)		Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
		axis.										
278.75	281.85	Weak to moderately epidote-carbonate altered zone of mafic volcanic, containing 5% quartz veining, and abundant (10 to 15%), thin, calcite tension microfracturing in parallel ladders, as well as irregular intrusive fragments between 279.70 to 279.85, 280.10 to 280.25, 280.35 to 280.50, 280.60 to 281.00, and 281.20 to 281.30, and quartz veins at 280.00 to 280.05 (at 40 degrees to the core axis), and 281.30 to 281.35 (irregular quartz fragment). Lower contact is sharp and oriented at 40 degrees to the core axis										
281.85	283.50	Chlorite-biotite-plagioclase-calcite schist. Dark green-black, non-magnetic, relatively coarse (1mm) grained, with well developed schistose foliation oriented at 40 to 55 degrees to the core axis. Unit contains 5%, thin and irreuglar, white calcite patches and discontinuous veins. Section is pervasively reactive to HCl. Biotite is coarse grained (porphyroblastic), and except for the strong foliation gives section a semi-lamprophyric appearance. No significant quartz veining. Relatively competent section with 20 to 50cm breakage. Lower contact is sharp but undulating at 10 degrees to the core axis.										
283.50	287.70	Weak to moderately carbonate altered mafic metavolcanic. Above 285.90m, the section is relatively unaltered to weakly epidote-carbonate altered with the latter forming lighter green network fracturing as well as small blebs/patches in dark green, fine grained unaltered metavolcanic. Unaltered zone at 285m exhibits small (0.5 to 1mm), ovoid amygdules. Minor calcite microfracturing, and minor, 1 to 3cm, irregular quartz blebs and patches, locally containing crystalline pyrite within the adjacent wallrock. Below 285.90m, the section is fine grained, weak to moderately magnetic, and intensely carbonate altered, particularly adjacent to the underlying intrusive. This section has strong medium yellow-green to buff-green mottling, with microfractured pseudobreccia appearance. Between 87.20 and 87.40m is a thin well altered, intrusive										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	ALTERATION CARB	ALTERATION SER
	dyke occurring within well foliated/sheared carbonate altered mafic volcanic. Dyke contacts and volcanic foliation oriented at 45 to 60 degrees to the core axis. Quartz veining and intrusive dykelets are boudinaged into small discontinuous lensoids that parallel to the shear foliation within this zone. Minor large (0.5 to 2.0cm), quartz veining within the upper less altered zone is partly boudinaged, generally at 20 to 30 degrees to the core axis, locally offset along fractures, and exhibits partially resorbed reaction rim contacts. Relatively competent unit with 10 to 30cm breakage, generally along fractures oriented at 40 to 50 degrees to the core axis. Lower contact is a sharp, planar intrusive contact oriented at 55 degrees to the core axis.										
287.70 310.50	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED										
	Mottled light to medium grey, weak to moderately silicified and sericitized, with some very weak to weakly altered, medium pinkish grey zones, and a few white, moderately to intensely altered bands.	NS	287.70	310.50 22.80	n/a	n/a	TRACE	1-4%	WK-MOD	WK-MOD	V.WK
	The unit is a typical, although altered, massive, coarse grained, plagioclase porphyritic, biotite intrusive plug.	984	287.70	289.40 1.70	.01	1.60	-	0.5-1%			
	The less altered pinkish zones are massive and coarse grained, with a weak silicified, resorbed, or faded appearance of the plagioclase phenocrysts although biotite is still relatively unaltered to weakly chloritized.	985	289.40	290.00 .60	.02	1.60	-	1%			
	Weak to moderately altered zones are often weakly foliated, with minor, thin quartz veining and flooding. Biotite is still locally evident but generally chloritized/sericitized.	986	290.00	291.00 1.00	.03	2.20	MINOR	2-3%			
	Moderate to intensely altered zones are white, often well foliated and quartz veined, with abundant silica flooding, as well as sericite replacing all original biotite.	987	291.00	291.50 .50	.02	1.50	TRACE	2%			
	5% Quartz veining throughout unit as very irregular branching veins, generally oriented at 0 to 40 degrees to the core axis. Veining often centres moderate to intensely altered bands a few 10's of cm wide but also cuts more sharply across the less altered zones. Several quartz	988	291.50	292.00 .50	.12	1.70	-	2-3%			
		989	292.00	293.00 1.00	.03	1.30	MINOR	2-3%			
		990	293.00	294.00 1.00	.09	1.30	-	2-3%			
		991	294.00	295.00 1.00	.02	1.30	-	1-2%			
		992	295.00	296.00 1.00	.01	1.10	TRACE	2%			
		993	296.00	297.00 1.00	.02	1.40	-	2%			
		994	297.00	298.00 1.00	.02	1.50	-	1%			
		995	298.00	298.50 .50	.03	1.50	-	2%			
		996	298.50	299.00 .50	.06	1.80	TRACE	2%			
		997	299.00	300.00 1.00	.04	1.90	-	2-3%			
		998	300.00	301.00 1.00	.08	1.90	TRACE	2-3%			
		999	301.00	302.00 1.00	.22	22.30	-	1-2%			
		1000	302.00	303.00 1.00	.06	2.00	-	1%			
		1301	303.00	304.00 1.00	.11	2.30	-	2%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	veins, particularly those within well altered sections, contain minor amounts of a fine metallic grey minerals. The best mineralized zone occurs within an intensely altered and quartz veined section between 290.40 to 291.00 metres, with other grey mineral locations identified on the sample description sheets.	1302	304.00 305.00	1.00	.04	1.30	-	1-2%			
		1303	305.00 306.00	1.00	.09	1.40	-	0.5-1%			
		1304	306.00 307.00	1.00	.02	4.00	-	1-2%			
		1305	307.00 308.00	1.00	.13	1.50	-	1-2%			
		1306	308.00 309.00	1.00	.01	1.40	-	1-2%			
	1 to 4% pyrite as fine disseminations often concentrated along fractures.	1307	309.00 310.00	1.00	.10	8.40	-	2%			
	Greater amounts of pyrite generally occur within the altered intrusive sections.	1308	310.00 310.50	.50	.03	5.40	-	1-2%			
	Weakly to moderately competent unit and moderately broken along fractures into 2 to 10cm pieces with less altered zones having 20 to 50cm breakage, and more altered zones forming 1cm rubble/friable zones. Several fractures are coated with thin, chloritic and/or sericitic surfaces.										
	Near the upper contact is an intensely foliated shear zone between 289.40 and 290.00 metres. Above this is the only relatively unaltered intrusive in this unit. Shearing and foliation oriented at 30 degrees to the core axis.										
	Lower contact is a planar, sharp, 1cm wide shear zone oriented at 40 degrees to the core axis.										
310.50 316.35	MAFIC METAVOLCANIC FLOWS (PR THOLEIITE)										
	Dark green, fine grained, weak to moderately magnetic, massive to weakly foliated/banded at 0 to 25 degrees to the core axis, with some thin bands resembling pillow selvages.	NS	310.50 316.35	5.85	n/a	n/a	-	1%			
		1309	310.50 312.00	1.50	.11	1.50	-	1%			
	Abundant fine (hairline to 1mm), calcitic tension microfracturing in network and en echelon discontinuous veining patterns.										
	5%, Very irregular, 0.5 to 2cm, boudinaged and offset quartz veins/lenses/blebs mostly oriented at shallow (0 to 40 degee) angles to the core axis, although somewhat undulating and discontinuous.										
	Upper and lower contact zones contain thin (20 to 50cm) zones of medium green, moderately carbonatized and sheared (40 to 45 degrees to the core axis) metavolcanic adjacent to sharp intrusive contacts parallel to the shearing orientation.										
	Relatively competent unit with 25 to 50cm breakage along fractures generally oriented at 40 to 45 degrees to the core axis.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	ALTERATION CARB	ALTERATION SER
316.35 321.50	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED Above 320m, the unit is similar to the mottled, white, weak to moderately silicified intrusive zones between 287.70 to 310.50m, except with local salmon pink colour to some plagioclase phenocrysts within the white altered zones. This section contains minor (5%) quartz veining occasionally with minor metallic grey mineralization. Below 320m, it is slightly pinkish medium grey, and very weakly altered to relatively unaltered. Section is weakly sheared in more altered zones at 40 degrees to the core axis. Moderately broken core (1 to 10cm) in altered zones, and relatively competent with 10 to 30cm breakgage in unaltered zones. Lower contact is sharp and planar at 40 degrees to the core axis, subparallel to the foliation orientation in the adjacent mafic volcanics.	NS	316.35	321.50 5.15	n/a	n/a	TRACE	1%			
		1310	316.35	317.00 .65	.02	1.60	-	1%			
		1311	317.00	318.00 1.00	.04	1.30	MINOR	2-3%			
		1312	318.00	319.00 1.00	.01	1.40	TRACE	2-3%			
		1313	319.00	320.00 1.00	.02	1.30	-	2-3%			
		1314	320.00	321.50 1.50	.02	1.50	-	1-2%			
321.50 346.90	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS Generally dark green, with minor to moderate light green speckling, and well developed irregular banding that is often concentrated in thin (10 to 30cm), mostly light yellow-green epidote-carbonate altered patches. Locally, these form as small (10 to 50cm) patches and bands that are moderate to strongly altered. Banding may be in part original compositional, but is mostly due to alteration. Dark green less altered zones are fine grained, often with fine volcanic textures as well as pillow selvages? evident. Weakly to moderately magnetic. Colour/alteration/compositional banding generally oriented at 10 to 30 degrees to the core axis, and locally weakly sheared at 0 to 20 degrees to the core axis. Unit is well microfractured with 5%, very irregular, network of calcitic tension microfracturing, and minor offset quartz veining. Lower contact has intense microfractured band 50cm wide. 5%, Very irregular, broken, offset and occasionally swirled, thin (0.5 to 2cm), blue-white quartz veining.	NS	321.50	346.90 25.40	n/a	n/a	-	MNR-0.5			
		1315	329.00	330.00 1.00	.06	.40	-	MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	A few fractures oriented at 30 degrees to the core axis have thin (1 to 3mm), calcite-sericite-talc coatings. Minor disseminated pyrite with local concentrations, generally forming adjacent to quartz veining. Unit includes a grey, plagioclase porphyritic (1 to 3mm), unfoliated dyke between 335.00 to 335.35m, with sharp contact edges at 30 degrees to the core axis, subparallel to foliation in the volcanic. Relatively competent unit with 20 to 75cm breakage. Lower contact is sharp, planar intrusive contact oriented at 50 degrees to the core axis.										
346.90 356.15	FELDSPAR PORPHYRITIC QUARTZ DIORITE INTRUSIVE - UNALTERED										
	Mostly medium grey to slightly pinkish grey, coarse grained, plagioclase porphyritic, bioite intrusive, with minor quartz veining, and minor weakly silicified zones. Two larger (1cm), irregular quartz veins oriented at 10 degrees to the core axis occur between 351.00 to 351.50 and 353.60 to 354.00 metres. Large volcanic xenolithic inclusion with 15cm quartz vein occurs between 355.15 to 355.45 metres. Competent unit, but relatively well fractured with 3 to 10cm breakage.	NS 1316	346.90 356.15 353.00 354.00	9.25 1.00	n/a .01	n/a 1.50	- -	1-3% 2%	UN-WK	UN-WK	UN-V.WK
356.15 374.00	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS										
	Mostly mottled to banded sequence of dark green, fine grained, weakly magnetic, and light yellow-green, non-magnetic altered bands and patches that are often irregularly swirled and contorted. Minor garnet porphyroblasts occur within the intensely altered zones. Unit has weak compositional and alteration banding oriented at 30 to 45 degrees to the core axis. Unit includes 3 mafic dykes between. 356.65 357.20 Feldspar Porphyritic Quartz Diorite Dyke. Upper contact oriented at 20 degrees to the core axis and lower contact perpendicular oriented at 45 degrees to the core axis. 357.50 357.65 Feldspar Porphyritic Quartz Diorite Dyke. With parallel contacts at 30 to 40 degrees to the core axis.	NS 1317	356.15 374.00 356.65 357.20	17.85 .55	n/a .04	n/a 1.60	- -	MINOR MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
367.00 369.30	Feldspar Porphyritic Quartz Diorite Dyke. With upper and lower contacts at 45 degrees to the core axis, and including 20%, large volcanic wallrock inclusions.										
	Dykes are dark grey in colour with 50%, uniform, 1mm, subhedral, weakly zoned plagioclase phenocrysts in black, aphanitic, weakly foliated, and weakly magnetic groundmass. Dykes are massive with no veining and contain minor pyrite.										
	Unit contains minor quartz veining, but well developed, hairline width network and en echelon calcitic tension microfracturing. Some epidote-carbonate altered zones contain thin (1 to 10mm), irregular, silica flood veinlets.										
	Minor pyrite as fine disseminations.										
	Relatively competent unit with 20 to 75cm breakage along fractures generally oriented at 45 to 60 degrees to the core axis.										
	Lower contact not encountered.										
374.00	End of Hole.										

ESSO MINERALS CANADA

SUMMARY DRILL LOG

Project Name: HN Blakelock

Hole Number: HN88-32

Project Number: 1677

Logged By: M.H. Lenters

NTS: 42H/8

Date: September 1988

Location: 42+00W, 8+50S

Claim Number: L-871912

Azimuth: 180° Dip: -45°

Length (m): 179.00

PURPOSE: Test Mag. low and high background IP chargeability response west of HN88-22

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.0	7.00	Overburden	
7.00	23.60	Mafic Metavolcanic Flow (Relatively Unaltered) Dark green, fine-grained, weakly magnetic, and relatively unaltered, with minor, hairline epidote-carbonate fracturing. Weak to moderately well developed schistosity and foliation oriented at 60° to 80° to CA. Minor quartz veining and cherty bands. Minor to 1% pyrite.	Not Assayed
23.60	41.00	Weak to Moderately Carbonate-Epidote Altered and Brecciated/ Fractured Mafic Metavolcanic Mottled to irregularly banded, light to medium green, buff and cream coloured, weak to moderately carbonate-epidote altered and weak to locally moderately brecciated. Fine-grained, non-magnetic, and cut by several, small quartz vein breccia zones. 0.5% pyrite.	0.01 - 0.15 (9)
41.00	49.00	Quartz Vein and Intrusive Breccia Zone Brecciated, carbonate altered, silicified, and quartz flooded/ veined mafic metavolcanic and intrusive, including large quartz vein zones containing abundant altered and partially assimilated wallrock fragments. Minor fault zone rubble and clay gouge zone with some lost core. Minor pyrite.	0.01 - 0.03 (8)
49.00	57.85	Mafic Metavolcanic Generally dark green-black, weak to moderately magnetic, fine-grained, massive, locally plagioclase phyric mafic metavolcanic, with a few weak to moderately epidote-carbonate altered zones, and one small fault zone. 51.70-52.10 Fault Breccia.	0.01 - 0.04 (3)
57.85	124.60	Variably Altered Quartz Diorite Intrusive 57.85-106.55 Light to medium grey to greenish white, generally weakly to moderately silicified and sericitized, coarse-grained, feldspar porphyritic intrusive with local intensely altered zones, often adjacent to quartz veining, and a few, thin, pinkish, relatively unaltered zones. Minor to 5%, irregular quartz veining. 1 to 5% pyrite and minor grey metallic mineralization. 106.55-124.60 Generally pinkish to purplish, medium-grey coloured, coarse-grained, plagioclase porphyritic, biotite, quartz diorite that is relatively unaltered to very weakly silicified, with local zones/bands of weak silicification and sericitization. Minor to 5% quartz veining. 1 to 3% pyrite.	0.01 - 0.28 (75)

From (m)	To (m)	Description HN88-32	Gold Assays (g/tonne)
124.60	179.00	Mafic Metavolcanic Pillowed Flow 124.60-131.00 Mottled and banded medium to dark green, epidote-carbonate altered mafic metavolcanic. Foliation and banding oriented at 60° to 70° to CA. Moderate calcitic microfracturing. Minor quartz veining. Several thin (5 to 50 cm) intrusive dykes. Minor to 1% pyrite +/- minor pyrrhotite and chalcopyrite 131.00-179.00 Dark green, moderately magnetic, fine-grained with minor epidote-carbonate alteration stringers and patches. Pillow selvages, and amygdules locally evident. Minor quartz veining. Minor to 1% pyrite +/- minor pyrrhotite and chalcopyrite	0.01 - 1.05 (10)
	179.00	END OF HOLE	

H-M PROJECT (Ont[illegible])

ESSO MINERALS [illegible]A
DIAMOND DRILL [illegible]ORD

Hole: HM88-32
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871912
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	42+00W
Casing:	Casing Removed			Northing:	0+50S
		Acid Tests:		Elevation:	Level
Started:	Sept. 21, 1988				
Finished:	Sept. 22, 1988	Depth Az. Dip		Purpose:	Test Mag Low & IP West of HM88-22
		7.00	-45.0		
Logged by:	M.H.Lenters	137.00	-40.0	Length:	179.00Metres
Date logged:	September 1988	179.00	-39.5	Vert. Proj:	120.0 Metres
Logging Method:	Log II			Hor. Proj:	133.0 Metres
Measurement System:	Metric			Ovb. Depth:	5.0 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 7.00	OVERBURDEN										
7.00 23.60	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE) Dark green to greyish green, fine grained, weakly magnetic, with abundant, thin (hairline to 2mm), light green, epidote-carbonate altered fracture stringers, locally anastomosing and coalesing into weakly altered bands or zones. Compositional banding, alteration banding, fracturing, and a weak to moderately developed phyllitic/schistose foliation are all oriented at 60 to 80 degrees to the core axis, although some alteration banding associated with fractures and quartz veins are oriented at somewhat shallower angles. Unit cut by a few, thin (1 to 0.5mm), subplanar, quartz veins with sharp contacts, and oriented at various angles to the core axis. 7.80 8.00 4cm quartz vein with epidote altered fractures, oriented at 20 degrees to the core axis. Unit contains two, thin, diffusely colour banded cherty horizons, with buff, tan, cream, salmon pink colours. These zones are hard,	MS	7.00 23.60	16.60	n/a	n/a	-	MNR-1%		

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	microfractured, and well banded/bedded at 60 to 65 degrees to the core axis.										
	12.60 12.75 Cherty horizon.										
	13.00 13.05 Cherty horizon.										
	The two above bands could also be intensely silica-carbonate altered volcanic bands.										
	Unit has strong microfractured appearance, with some veining offset 1 to 10mm along fracture slips.										
	Minor to 1% pyrite as fine, often wispy, disseminations aligned parallel to the foliation. Locally minor amounts of coarser pyrite are disseminated in irregular patches.										
	Relatively competent core, with 10 to 75 cm breakage generally parallel to foliation at 60 to 80 degrees to the core axis.										
	Lower contact is transitional across a few metres into a weak to moderately epidote-carbonate altered mafic metavolcanic.										
23.60 41.00	WEAKLY BRECCIATED MAFIC METAVOLCANIC WITH EPIDOTE-CARB. BANDS										
	Weak to moderately epidote-carbonate altered, weak to locally moderately brecciated/fractured, and cut by several brecciated/faulted quartz veins/dykes.	NS	23.60	41.00 17.40	n/a	n/a	-	0.5-1%			
	Mottled to irregularly banded, light to medium green, buff and cream colours, fine grained, non magnetic, weakly to mostly moderately epidote-carbonate altered, and fractured/brecciated.	1583	25.00	26.00 1.00	.02	1.90	-	MINOR			
	Weakly altered zones are medium to dark green, with abundant hairline fracturing, as well as containing small brecciated fragments or patches/bands of light green epidote/carbonate altered rock.	1584	26.00	27.00 1.00	.01	2.00	-	MINOR			
	Moderately altered sections have pale pastel yellow and green colouring that is generally banded at 60 to 90 degrees to the core axis, but also somewhat irregular and often moderately brecciated/fractured, and containing thin, irregular quartz vein infilling. Alteration and brecciation is particularly strong adjacent to quartz veins and intrusive dykes, which are generally also brecciated.	1585	33.50	35.00 1.50	.15	2.10	-	0.5%			
	Significant quartz veins and intrusive dykes occur at:	1586	35.00	36.00 1.00	.01	2.90	-	MINOR			
	25.30 26.00 Thin (1 to 3 cm), salmon pinkish, brecciated, but rehealed quartz vein containing abundant, angular wallrock fragments.	1587	36.00	37.00 1.00	.03	2.10	-	0.5-1%			
		1588	37.00	38.00 1.00	.02	1.80	-	0.5-1%			
		1589	38.00	39.00 1.00	.01	1.80	-	0.5-1%			
		1590	39.00	40.00 1.00	.01	1.70	-	0.5-1%			
		1591	40.00	41.00 1.00	.03	1.80	-	0.5-1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	The adjacent mafic volcanics are well fractured/brecciated and intruded by quartz veinlets.										
29.80 29.85	2 cm wide, white quartz vein with minor wallrock inclusions oriented at 45 to 50 degrees to the core axis.										
33.90 34.20	Brecciated multiphase quartz vein oriented at 30 degrees to the core axis.										
36.00 41.00	Moderately to intensely epidote-carbonate+/-silica altered mafic metavolcanic containing 20 to 70%, light grey, sharp to subdued/resorbed and diffusely bounded porphyritic intrusive fragments. Band appears to be a fault/brecciated hybrid zone with composition between altered volcanic and intrusive. Locally the band appears to be an intrusive breccia zone, that has a subdued and assimilated/rehealed appearance.										
	Unit is moderately competent.										
41.00 49.00	QUARTZ VEIN & INTRUSIVE BRECCIA ZONE										
41.00 43.30	Medium greenish grey, epidote-carbonate altered intrusive with composition similar to the assimilated fragments in the overlying zone. Contains 15 to 20%, salmon pink, subhedral, 1 to 3mm, plagioclase phenocrysts, and no biotite, in fine grained altered groundmass. Zone is crackled and brecciated, and intruded either by volcanic and/or intrusive material. Zone itself is cut by some quartz veining/flooding, and includes a few, thin, quartz diorite intrusive fragments, or later, irregularly offset dykes. These are salmon pink in colour and also somewhat subdued/resorbed in appearance. The unit is possibly a sheared intrusive/metavolcanic contact zone	NS	41.00	49.00	8.00	n/a	n/a	-	MNR-1%		
		1592	41.00	42.00	1.00	.01	1.70	-	1-2%		
		1593	42.00	43.30	1.30	.01	1.80	-	MINOR		
		1594	43.30	44.00	.70	.01	1.40	-	MINOR		
		1595	44.00	45.20	1.20	.01	1.30	-	MINOR		
		1596	45.20	46.00	.80	.02	1.10	-	MINOR		
		1597	46.00	47.00	1.00	.01	.90	-	MINOR		
		1598	47.00	48.00	1.00	.03	1.30	-	0.5%		
		1599	48.00	49.00	1.00	.01	1.60	-	0.5%		
43.30 44.00	Quartz vein. White, coarse grained quartz vein containing 40% variably assimilated, altered wallrock fragments that are generally less than 1 cm in size. Vein also cut by a minor amount of diffuse, thin (1 to 3mm), irregular, grey quartz/silica veinlets. Contacts of quartz vein with the adjacent wallrock are irregular, brecciated zones, with the lower contact passing into the underlying fault gouge,										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	breccia and lost core zone.										
44.00 42.20	Lost core. 0.50m of recovered altered intrusive and brecciated/rehealed quartz vein rubble from below a 1 cm zone of hematitic, mud red, clay gouge along a thin (1 to 2cm), fault slip.										
45.20 49.00	Intrusive (brecciated, altered and quartz flooded). Light greenish grey to pinkish, intensely silicified/silica flooded, and locally quartz veined, epidote-carbonate altered, quartz diorite intrusive. Unit has a diffuse resorbed appearance, and is locally brecciated. The upper contact not recovered, and the lower contact is a brecciated/shear zone oriented at 45 degrees to the core axis. Relatively competent core.										
49.00 57.85	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS										
	Generally dark green-black, weak to locally moderately magnetic, fine grained and massive, locally exhibiting a few, small (1mm), greenish white, plagioclase phenocrysts.	MS	49.00	57.85	8.85	n/a	n/a	-	MINOR		
	Unit is locally well fractured and weakly to moderately epidote-carbonate altered particularly in the upper metre adjacent to the overlying fault zone, adjacent to a few thin intrusive dykes, and near the lower contact with the underlying quartz diorite intrusive body. Fracturing, as well as epidote veinlets and banding, tend to concentrate along a 50 to 70 degrees to the core axis orientation, although it is generally quite irregular.	1600	49.00	50.00	1.00	.01	1.90	-	MINOR		
		1601	50.00	51.00	1.00	.04	1.60	-	MINOR		
		1602	56.00	57.85	1.85	.03	1.50	-	MINOR		
51.70 52.10	Fault Zone. Small, relatively late fault breccia zone consisting of small (0.5 to 5cm), very angular volcanic fragments exhibiting varying intensities of alteration, and sharply bounded by finer matrix. Zone contains numerous incompetent clay slip surfaces. Fault zone appears to be 4 to 6 cm wide, and is oriented at 10 to 20 degrees to the core axis. Core is well broken along fractures at 0 to 20 degrees to the core axis.										
	Several, small, flesh coloured intrusive dykelets with subdued textures, but sharp contacts occur at:										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	50.25 50.40 Dyke at 30 to 35 degrees to the core axis. 52.40 52.50 Dyke at 35 degrees to the core axis. 53.30 53.40 Dyke at 30 to 35 degrees to the core axis. Unit contains a few, thin (0.5 to 1cm), quartz veins/bands that are oriented at various angles to the core axis. Minor finely disseminated pyrite. Upper part of unit is well fractured and broken into irregular 3 to 15 cm pieces, while the lower part is more competent and consists of 25 to 75 cm pieces. Lower contact is a sharp intrusive contact oriented at 25 degrees to the core axis.										
57.85 124.60	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED Generally weakly to moderately silicified and sericitized, with local intensely altered zones and a few very weakly altered zones above 106.55 metres, and very weakly to weakly altered with several relatively unaltered sections below 106.55 metres. Unit contains a large (between 58.20 to 58.70m) mafic volcanic wallrock inclusion near the upper contact. Relatively unaltered sections are pinkish, to purplish grey in colour, and generally exhibit the typical quartz diorite intrusive composition and texture, with minor quartz phenocrysts, 10 to 25%, white, plagioclase phenocrysts, and 10% biotite, in a medium to coarse grained, massive, feldspar dominant matrix. The altered zones become progressively more bleached (white) in colour, with biotite altering to chlorite and then to a light green sericite. Unit has less of a hard, silicified, silica flooded appearance than most other altered intrusive sections, and is more chalky white, porous and sericitic than HN88-31. Unit contains only minor amounts of irregular quartz veining, although locally up to 5% in several thin, more altered zones. Relatively unaltered zones contain 0.5 to 1% pyrite, with the pyrite content increasing to 5% with increasing alteration intensity (silicification and sericitization). Moderate to intensely altered zones are generally white to light grey,	NS	57.85	124.60	66.75	n/a	n/a	TR-MNR	0.5-4%		
		1603	57.85	58.70	.85	.02	1.20	-	0.5%		
		1604	58.70	59.50	.80	.01	1.40	-	0.5-1%		
		1605	59.50	60.50	1.00	.02	1.30	0.25%	2-3%		
		1606	60.50	61.90	1.40	.01	1.30	-	1-2%		
		1607	61.90	63.00	1.10	.01	1.30	0.5-1%	5-6%		
		1608	63.00	64.00	1.00	.01	1.20	-	1-2%		
		1609	64.00	65.00	1.00	.03	1.20	-	1-2%		
		1610	65.00	66.00	1.00	.02	1.20	-	0.5-1%		
		1611	66.00	67.00	1.00	.03	.80	-	0.5-1%		
		1612	67.00	68.00	1.00	.02	1.30	-	0.5%		
		1613	68.00	69.00	1.00	.06	1.30	TR-MNR	2-3%		
		1614	69.00	70.00	1.00	.11	.80	TRACE	1-2%		
		1615	70.00	71.00	1.00	.03	.80	TRACE	1-2%		
		1616	71.00	72.00	1.00	.06	1.00	-	1-2%		
		1617	72.00	72.75	.75	.03	1.10	TRACE	1%		
		1618	72.75	73.30	.55	.04	1.20	0.5%	2-3%		
		1619	73.30	74.50	1.20	.05	.60	TRACE	1-2%		
		1620	74.50	75.00	.50	.03	.80	0.5%	3-4%		
		1621	75.00	76.00	1.00	.02	.70	MINOR	2-3%		
		1622	76.00	77.00	1.00	.02	1.50	0.25%	3-4%		
		1623	77.00	78.00	1.00	.04	1.60	MINOR	3-4%		

Interval (Metres)	Description	Sample No.	Interval (Metres)		Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	with biotite altered to chlorite/sericite, locally contain minor to abundant very finely disseminated purplish grey mineralization in needle-like clusters that are concentrated along fractures, or along the wallrock edges adjacent to quartz veins, both of which often centre zones of increased alteration.	1624	78.00	79.00	1.00	.01	.60	TRACE	1-2%			
		1625	79.00	80.00	1.00	.02	.80	TRACE	1-2%			
		1626	80.00	81.00	1.00	.02	.80	TRACE	2-3%			
		1627	81.00	81.80	.80	.01	.90	-	1-2%			
		1628	81.80	82.50	.70	.01	.50	0.25%	2-3%			
	Locally the intrusive contains thin (1 to 5cm), silica/cherty bands oriented at 70 to 80 degrees to the core axis. These appear to be weak shear zones/bands, and occasionally contain slip surfaces coated with fine molybdenum.	1629	82.50	83.35	.85	.02	.90	TRACE	2-3%			
		1630	83.35	83.80	.45	.01	1.10	0.5%	3-4%			
		1631	83.80	85.00	1.20	.01	.50	TRACE	5-6%			
		1632	85.00	86.00	1.00	.03	.90	TRACE	3-4%			
	Unaltered zones are competent and broken into 25 to 50 cm pieces, generally along fractures at various angles to the core axis, but concentrating at 60 to 75 degrees to the core axis.	1633	86.00	86.70	.70	.01	1.00	MINOR	2-3%			
		1634	86.70	87.90	1.20	.03	.70	-	2%			
		1635	87.90	88.25	.35	.01	3.90	0.5%	3-4%			
	Altered zones are moderately competent and more broken with 5 to 25 cm sized pieces.	1636	88.25	89.00	.75	.02	.60	-	2-3%			
		1637	89.00	89.65	.65	.02	.90	-	1-2%			
	Near the lower contact zone the intrusive is subdued and finer grained, appearing much like smaller intrusive dykes, and may be a later, intrusive phase.	1638	89.65	91.00	1.35	.02	1.30	MINOR	2-4%			
		1639	91.00	92.00	1.00	.03	.90	TR-MNR	3-4%			
		1640	92.00	92.60	.60	.01	1.00	-	2-3%			
	Lower contact oriented at 60 degrees to the core axis.	1641	92.60	93.00	.40	.01	1.00	0.25%	4-5%			
		1642	93.00	93.50	.50	.02	3.90	0.5%	3-5%			
		1643	93.50	94.00	.50	.01	1.80	0.25%	2-3%			
		1644	94.00	94.50	.50	.02	1.00	0.5-1%	5%			
		1645	94.50	95.00	.50	.01	.70	MINOR	1-3%			
		1646	95.00	96.00	1.00	.03	4.70	MINOR	2-3%			
		1647	96.00	97.00	1.00	.02	1.00	0.25%	2-3%			
		1648	97.00	98.00	1.00	.01	.90	TRACE	1%			
		1649	98.00	99.00	1.00	.01	1.10	TRACE	1%			
		1650	99.00	100.00	1.00	.01	1.00	-	1-2%			
		1651	100.00	101.00	1.00	.02	1.30	TRACE	2-3%			
		1652	101.00	101.85	.85	.02	1.20	TRACE	2-3%			
		1653	101.85	103.00	1.15	.01	1.20	MINOR	2-3%			
		1654	103.00	104.00	1.00	.02	1.70	MINOR	2-4%			
		1655	104.00	104.90	.90	.02	2.20	TRACE	2-3%			
		1656	104.90	105.65	.75	.01	1.40	-	1-2%			
		1657	105.65	106.55	.90	.02	.90	MINOR	1-2%			
		1658	106.55	107.50	.95	.01	.90	MINOR	0.5-1%			
		1659	107.50	108.60	1.10	.05	.70	-	0.5-1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
		1660	108.60 109.50	.90	.01	1.40	MINOR	2-3%			
		1661	109.50 110.50	1.00	.04	1.40	-	1%			
		1662	110.50 111.50	1.00	.08	1.20	TRACE	1%			
		1663	111.50 112.00	.50	.04	2.50	TRACE	1-2%			
		1664	112.00 113.00	1.00	.28	2.10	0.25%	2-4%			
		1665	113.00 114.00	1.00	.12	2.10	-	1-2%			
		1666	114.00 115.00	1.00	.01	.80	-	1%			
		1667	115.00 116.00	1.00	.08	.60	TRACE	1%			
		1668	116.00 117.10	1.10	.01	.70	-	1%			
		1669	117.10 118.00	.90	.14	.80	-	2-3%			
		1670	118.00 118.70	.70	.01	.80	-	1-2%			
		1671	118.70 119.50	.80	.01	1.00	-	1-2%			
		1672	119.50 120.00	.50	.02	.70	-	3-4%			
		1673	120.00 120.90	.90	.01	1.00	-	2-3%			
		1674	120.90 122.00	1.10	.05	.90	-	1-2%			
		1675	122.00 123.00	1.00	.10	1.30	-	1-2%			
		1676	123.00 123.80	.80	.02	1.00	-	1-2%			
		1677	123.80 124.60	.80	.02	.90	-	0.5-1%			
124.60 179.00	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Generally relatively unaltered except above 131.00m, which is weakly epidote-carbonate altered and cut by several intrusive dykes.	MS	124.60 179.00	54.40	n/a	n/a	-	0.5-1%			
	Generally dark greenish black, very fine grained, massive, weakly to strongly magnetic, with minor to moderate, hairline, calcitic microfracturing, and a few weakly epidote-carbonate altered stringers and patches. Between 124.60 and 131.00m in the upper contact zone the epidote-carbonate alteration patches and anastomosing stringer bands are more numerous. These are often irregularly oriented, but concentrate in an orientation at 65 to 70 degrees to the core axis. This zone also exhibits a well developed calcitic microfracturing that locally gives the unit a pseudo-brecciated appearance.	1678	124.60 126.00	1.40	.01	1.20	-	1%			
		1679	132.05 133.25	1.20	.01	1.20	-	MINOR			
		1680	134.00 135.00	1.00	.01	.40	-	1-2%			
		8600	143.00 144.50	1.50	.01	1.00	-	1-2%			
		8601	144.50 146.00	1.50	.01	1.00	-	0.5%			
		1681	146.00 147.00	1.00	1.05	6.60	-	1%			
		8602	147.00 148.00	1.00	.01	.90	-	0.5%			
		8603	148.00 149.00	1.00	.01	1.40	-	0.5%			
		8604	149.00 150.50	1.50	.03	1.70	-	0.25%			
		8605	150.50 152.00	1.50	.01	1.00	-	0.25%			
	Dark green, massive unaltered zones contain several thin (1 to 5 cm), coarser grained, biotitic, more schistose bands that appear to be pillow selveges. These are definite pillow selveges between 132 and 134 metres. These bands are also often more pyritic, with the pyrite forming thin										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

bands/laminae. Unaltered massive zones also contain patches with small, ovoid, amygdules.
Weakly developed schistosity and foliation above 158m is oriented at 60 to 70 degrees to the core axis, but below 158m it is oriented at about 45 to 50 degrees to the core axis.
Minor, thin (2 to 10mm), quartz veining that is often irregular and discontinuous, as well as a few small (0.5 to 1cm), subplanar veins, locally containing minor pyrite, pyrrhotite and chalcopyrite.
Several diffuse or subdued, medium grey, fine grained porphyritic intrusive dykes with sharp contacts located between:
132.05 133.25 Dyke with chalcopyrite along fractures oriented at 40 degrees to the core axis, and with contacts oriented at 75 degrees to the core axis.
136.60 136.65 Dyke with irregular contacts.
136.95 137.20 Dyke with upper and lower contacts oriented at 50 and 65 degrees to the core axis.
Generally minor to 0.5% finely disseminated pyrite, locally as relatively coarse grains in irregular, coarser grained, often biotitic patches.
Lower part of unit contains some thicker, brownish, massive bands containing an increased biotite content, and also giving the unit a slightly coarser grain size, and better developed schistose foliation. These zones could be due to potassic alteration.
Competent core with 25 to 75 cm breakage.
Lower contact not encountered.
179.00 End of hole.

ESSO MINERALS CANADA

SUMMARY DRILL LOG

Project Name: HN Blabelocke

Hole Number: HN88-33

Project Number: 1677

Logged By: M.H. Lenters

NTS: 42H/8

Date: September 1988

Location: 46+00W, 7+75S

Claim Number: L-871912

Azimuth: 180° Dip: -43°

Length (m): 141.1

PURPOSE: Test mag. low, and anomalous IP chargeability response and IP resistivity high west of bottom of DDH HN88-26.

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.0	9.40	Overburden	
9.40	16.50	Mafic Metavolcanic Flow (Relatively Unaltered) Dark green-black, fine-grained, massive to weakly schistose and relatively unaltered. Includes a few, thin (5 to 10 cm), medium brownish red, moderately carbonate altered zones/patches, adjacent to a few, thin, weakly sheared zones below 14.00 m, particularly at the contact zone with the underlying quartz veined shear zones. Schistose foliation oriented at 60° to CA. Minor quartz veinlets. Minor to 1% disseminated pyrite.	0.01 - 0.02 (5)
16.50	20.55	Quartz Veined Shear/Fault Zone 16.50-17.40 70%, coarse-grained, quartz veining containing 30% medium green, moderately altered mafic metavolcanic wallrock inclusions and stylolitic laminae and parting surfaces. Foliation, shearing and veining oriented at 70° to 80° to CA. 2 to 5% finely disseminated pyrite and minor to 1% grey metallic minerals. 17.40-20.00 80 to 85%, medium grey-green, well foliated and moderately sheared/altered mafic metavolcanic containing 15 to 20% irregular to broken and boudinaged calcite ± quartz veining/patches. Shearing indicates N side up and S side down. 5 to 10% finely disseminated pyrite, and 0.5 to 1% grey metallic minerals including molybdenum. 20.00-20.55 Quartz viening with mafic metavolcanic wallrock inclusions, similar to 16.50 to 17.40, with lesser grey metallic minerals in quartz viening. 2 to 3% pyrite. Minor grey metallic minerals.	0.01 - 0.10 (6)
20.55	144.10	Mafic Metavolcanic Flows (Relatively Unaltered) Generally dark green, fine-grained, massive, unaltered, weak to moderately magnetic, with minor calcitic microfracturing and local zones/bands with brown colour, and weak schistosity due to minor biotite content (Potassic alteration?). Unit includes one thin, sheared felsic intrusive dyke or silicified band between 75.80 and 76.75. Minor quartz veining. Minor to 2% pyrrhotite and pyrite, often as thin fracture veinlets.	0.01 - 0.06 (25)
	144.10	END OF HOLE	

H-N PROJECT (On[illegible]7)

ESSO MINERALS [illegible]DA
DIAMOND DRILL [illegible]ORD

Hole: HN88-33
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871912
Hole Size:	BQ	Dip:	-43	Grid:	West
Core Size:	BQ			Easting:	46+00W
Casing:	Casing Removed			Northing:	7+75S
		Acid Tests:		Elevation:	Level
Started:	Sept. 23, 1988				
Finished:	Sept. 24, 1988	Depth Az. Dip		Purpose:	Test Mag Low & IP West of HN88-26
		10.00 -43.0			
Logged by:	M.H.Lenters	110.00 -40.0		Length:	141.10Metres
Date logged:	September 1988			Vert. Proj:	93.0 Metres
Logging Method:	Log II			Hor. Proj:	106.0 Metres
Measurement System:	Metric			Ovb. Depth:	7.1 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 9.40	OVERBURDEN										
9.40 16.50	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE) Generally dark green-black, fine grained, massive to weakly schistose, relatively unaltered mafic metavolcanic. Includes a few, thin (5 to 10cm), medium brownish red, moderately carbonate altered zones/patches surrounded by medium green, very weakly altered volcanic, adjacent to a few, thin, weakly sheared zones below 14.00m, particularly at the contact zone with the underlying quartz veined shear zone. Unit is very fine grained and massive above 12.00m, and medium grained, weak to modetately schistose between 12.50 and 13.50m, with the schistose foliation oriented at 60 degrees to the core axis. This zone contains minor, large (1mm), euhedral pyrite cubes. Below 14.00m the unit exhibits minor to moderate amounts of subhedral, small (less than 1mm), plagioclase phenocrysts, a weak to moderately developed foliation at 60 degrees to the core axis, and thin epidote-carbonate alteration bands that are also moderately pyritic (3 to 7% pyrite). Unit contains minor, thin (hairline to 2mm), planar, quartz veinlets and	NS	9.40	16.50	7.10	n/a	n/a	-	MNR-1%		
		1682	12.00	13.00	1.00	.01	1.20	-	1%		
		1683	13.00	14.00	1.00	.01	1.50	-	0.5-1%		
		1684	14.00	15.00	1.00	.01	1.20	-	MINOR		
		1685	15.00	16.00	1.00	.01	.90	-	0.5-1%		
		1686	16.00	16.50	.50	.02	.80	-	MNR-1%		

Interval (Metres)		Description	Sample No.	Interval (Metres)		Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
		tension fracture fillings oriented at various angles to the core axis. Unit generally contains minor amounts of very finely disseminated pyrite, except for the coarser crystalline (cubic) concentrations in thin altered shear bands. Moderately competent core with 5 to 25 cm breakage, generally along fractures oriented at 50 to 60 degrees to the core axis. Lower contact is a sharp, planar quartz vein surface oriented at 50 degrees to the core axis.											
16.50	20.55	QUARTZ VEINED SHEAR/FAULT ZONE											
	16.50 17.40	70%, coarse grained, cracked, ice-white quartz veining, containing 30% mafic volcanic wallrock inclusions, as both thin (1mm), vein parallel laminae that are occasionally weakly stylolitic, and as larger (0.5 to 10cm), well foliated bands. Locally the volcanic laminae and bands are irregular, but generally they are oriented at 60 to 80 degrees to the core axis. Quartz veining forms relatively clean bands containing minor, small, isolated volcanic wallrock pieces, and finely disseminated pyrite grains. Minor amounts of metallic grey minerals are often associated with the pyrite. Foliated mafic volcanic wallrock inclusions are medium green, and moderately altered containing 5 to 10%, fine, pyritic banding/laminae, often with thin purplish streaks of grey metallic (molybdenite) mineralization. Relatively competent core, but broken into 5 to 10 cm pieces along volcanic laminae in the quartz vein, and parallel to the foliation within volcanic inclusions. Upper contact is sharp and planar at 50 degrees to the core axis. Lower contact is undulating and sharp at 70 to 80 degrees to the core axis.	NS	16.50	20.55	4.05	n/a	n/a	MNR-1%	3-7%			
			1687	16.50	17.00	.50	.01	45.00	0.5%	5-6%			
			1688	17.00	17.40	.40	.02	51.00	0.5-1%	2%			
	17.40 20.00	80 to 85%, medium grey-green to green-grey, well foliated, moderately sheared mafic metavolcanic containing 15 to 20%, thin (hairline to 3mm), lensoid, discontinuous, calcitic veining, and a few, thin (1 to 20cm), broken and boudinaged quartz veins. Foliation, banding, and veining generally	1689	17.40	18.00	.60	.10	5.80	0.5%	5-10%			
			1690	18.00	19.00	1.00	.05	10.00	MINOR	5-7%			
			1691	19.00	20.00	1.00	.01	21.80	0.5%	4-6%			
			1692	20.00	20.55	.55	.01	28.60	MINOR	2-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	oriented at 55 to 70 degrees to the core axis, with small scale structures indicating N side up and S side down if core oriented with foliation plane E-W and dipping steeply north. Unit locally well shear banded, and includes a thin (1 to 3cm), poorly recovered fault gauge clay zone at about 18.75 metres. Shear/slip surfaces, are often well lineated and coated with greenish sericite-calcite. Generally abundant (3 to 7%), finely disseminated pyrite generally concentrated in laminae. Locally, this section contains thin (0.5 to 1cm), purplish bands indicating significant amounts of very finely disseminated molybdenum. Section contains thin (0.5 to 2cm), bands of broken and boudinaged quartz veining, generally containing 0.5% relatively coarse, irregular explosion puffs of metallic grey mineral. One larger (10 cm) quartz vein zone between 19.65 and 19.75 metres. Vein contact is irregular with swirled foliation in the adjacent mafic volcanics, athough the shear zone is relatively planar (competent unit in shear). Lower contact with quartz vein zone is oriented at 55 degrees to the core axis. Relatively incompetent broken zone with 1 to 5 cm breakage, including several rubble zones.									
20.00 20.55	70 to 80%, coarse grained, cracked ice-white quartz vein with 30% irregular blebs and thin, discontinuous laminae of mafic volcanic wallrock material. Similar to 16.50 to 17.40, with lesser amounts of grey mineral in quartz veining. Lower contact is a 30 cm fault breccia/shear zone with latest movement along 1 cm wide calcite breccia vein. Shearing and veining are planar and oriented at 30 to 45 degrees to the core axis. Volcanic adjacent to contact has abundant, anastomosing epidote veinlet banding parallel to shearing/faulting. Relatively broken core, generally with 5 to 10 cm pieces. Lower contact is calcite vein containing abundant, small, wallrock fragments, which is oriented at 30 degrees to the core axis.									

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
20.55 144.10	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Generally dark green, fine grained, massive, unaltered, weak to moderately magnetic mafic metavolcanic.	NS	20.55	141.10 120.55	n/a	n/a	-	MNR-1%			
20.55 23.00	Weak to moderately epidote veined, with irregular hairline tension fracturing. Moderate calcite, tension microfracturing throughout section, with slightly coarser grained biotitic bands adjacent to some zones of calcite fracturing (potassic altereation?). These zones also tend to contain more (1 to 2%), disseminated pyrite.	1693	20.55	21.25 .70	.01	2.10	-	MINOR			
		1694	21.25	22.00 .75	.01	1.90	-	1%			
		1695	22.00	23.00 1.00	.02	1.50	-	1%			
		1696	23.00	24.50 1.50	.06	1.40	-	MNR-0.5			
		1697	24.50	26.00 1.50	.01	1.20	-	MNR-0.5			
		1698	26.00	27.50 1.50	.01	1.40	-	MINOR			
		1699	27.50	29.00 1.50	.01	1.30	-	0.5-1%			
	Other larger biotitic patches and zones occur as follows.	1700	29.00	30.50 1.50	.01	1.40	-	0.5-1%			
30.50 32.00	Weakly schistose biotitic zone with minor silica patches/bands and increased (2 to 3%) pyrite content.	1701	30.50	32.00 1.50	.01	1.70	-	2-3%			
		1702	32.00	33.50 1.50	.02	1.70	-	MINOR			
38.40 38.45	5cm, light grey, calcitic/silicified band adjacent to fracture (calcitic) oriented at 40 degrees to the core axis, and containing 5 to 10% finely disseminated pyrite.	1703	38.00	39.00 1.00	.01	1.00	-	MNR-0.5			
		1704	48.50	50.00 1.50	.03	1.00	-	1-2%/PO			
		1705	53.00	54.00 1.00	.02	1.60	-	1-2%/PO			
55.00 56.00	Dark to medium grey to brownish grey, silicified and biotitic mafic metavolcanic.	1706	54.00	55.00 1.00	.03	1.00	-	1-2%/PO			
		1707	55.00	56.00 1.00	.01	1.30	-	2-4%/PO			
73.00 75.80	Mafic volcanic containing minor amphibole porphyroblasts in biotitic bands.	1708	56.00	57.00 1.00	.04	1.40	-	2-4%/PO			
		1709	73.00	74.00 1.00	.01	1.40	-	0.5%/PO			
		1710	74.00	75.00 1.00	.01	1.40	-	1%/PO			
75.80 76.75	Medium grey, well fractured and sheared, vuggy intrusive dyke or possibly an intensely silicified mafic volcanic band. Contacts and shear/slip surfaces oriented at 40 to 50 degrees to the core axis, parallel to the foliation in adjacent volcanics. Dyke contains vugs exhibiting finely crystalline epidote. Vugs probably due to the removal of calcite. Dyke contains 4 to 6% fine to coarse pyrite often in laminae parallel to shearing. Upper and lower contacts at 50 and 40 degrees to the core axis. No significant quartz veining. Relatively broken section of core, generally consisting of small rubble to 10cm pieces.	1711	75.00	75.80 .80	.04	1.20	-	0.5/PO			
		1712	75.80	76.75 .95	.01	1.30	-	4-6%			
		1713	76.75	78.00 1.25	.01	1.00	-	MNR-0.5			
		1714	99.00	100.00 1.00	.01	1.30	-	0.5%			
		1715	100.00	101.00 1.00	.02	1.10	-	0.5%/PO			
		1716	109.00	110.00 1.00	.01	1.60	-	2-3%/PO			
		1717	120.70	122.00 1.30	.01	2.50	-	1-2%/PO			
100.30 100.35	5cm quartz vein oriented at 70 degrees to the core axis.										
104.00 113.00	Several, thin (10 to 50cm), biotitic bands containing minor epidote carbonate altered patches with a few percent large garnets, as well as minor, geenish grey, weak silica flood bands.										
113.95 114.00	5cm quartz vein oriented at 60 degrees to the core axis.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

120.60 130.80 Large zone of relatively coarser grained, schistose, brownish with a fine white speckled appearance, biotite altered mafic metavolcanic. Relatively homogeneous zone with minor calcite fracturing. Includes a 5 cm quartz vein between 120.80 and 120.85 oriented at 60 degrees to the core axis. Biotitic foliation produces a weak to moderate schistosity oriented at 50 to 60 degrees to the core axis.

139.55 139.65 10cm, white quartz vein oriented at 45 degrees to the core axis.

Small patches (1 to 5cm) of biotitic alteration occur throughout the unit above 120.60m.

Locally, small (10 to 100cm) bands contain minor to moderate (15%) amounts of fine (0.5 to 1mm) slightly pinkish, garnet porphyroblasts above 120.60 metres.

Below 130.80 the unit is very fine grained, massive dark green and relatively unaltered with very little calcitic microfracturing. Unaltered mafic volcanic locally exhibits small (1mm), subrounded amygdules.

Minor to 2% pyrite and pyrrhotite, often as thin fracture veinlets.

Foliation and alteration banding well developed between 72.00 to 77.00 metres, and generally oriented at 50 to 60 degrees to the core axis.

Unit is competent, generally with 50 to 100 cm breakage at 45 to 70 degrees to the core axis parallel to foliation and main fracture orientation.

Lower contact not encountered.

141.10 End of hole.

ESSO MINERALS CANADA

SUMMARY DRILL LOG

Project Name: HN [illegible]. Hole Number: HN88-37.

Project Number: 1677. Logged By: M.H. Lenters.

NTS: 42H/8. Date: October 1988.

Location: L48+00W, 16+25S. Claim Number: L-871915.

Azimuth: 180°. Dip: -45°. Length (m): 149.

PURPOSE: Test anomalous IP chargeability response along edge of mag high, up-ice from bedrock chip gold value at RC-109.

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.0	25.00	Overburden	
25.00	40.10	Felsic to Intermediate Metavolcanic Flow Medium green, fine-grained, non-magnetic, weak to moderately phyllitic/schistose, with chloritic carbonate-plagioclase-silica composition, and local biotitic zones. Foliation oriented at 70° to 80° to CA. 3 to 5%, thin, irregular calcite patches/lenses, as well as calcite tension fracture veining. Minor to 1% finely disseminated pyrite.	0.01 - 0.02 (7)
40.10	135.00	Felsic Volcanic Crystal/Lapilli Tuff Medium grey, fine-grained, massive to weakly foliated, weak to moderately magnetic, weakly calcareous crystal, and fine lapilli tuff. Possibly somewhat reworked as a volcaniclastic. Local, coarser (0.5 to 2 cm), flattened lapilli tuff horizons. Foliation/schistosity oriented at 65° to 85° to CA. 3% calcite blebs and irregular patches, locally weathered out producing coarse vugs. Minor quartz veining. Minor to 0.5% disseminated pyrite.	0.01 - 0.21 (29)
135.00	143.00	Carbonate Facies Exhalite Horizon, or Carbonate Altered Ash Tuff Light yellowish-brown to creamy tan, massive to wispy laminated, fine-grained, non-magnetic, calcareous, with foliation oriented at 70° to CA. Local irregular silica flood zones/crackling. Minor to 1% disseminated pyrite.	0.08 - 0.90 (8)
143.00	149.00	Pebbly Arenite Medium grey, fine-grained arenite with pebbly sections containing 1 to 15%, small (1 to 20 mm), well flattened, polymictic pebbles. Weak to moderately magnetic. Minor irregular calcite patches/lenses. Foliation oriented at 50° to 70° to CA. Minor pyrite.	0.01 - 0.03 (4)
	149.00	END OF HOLE	

H-N PROJECT (Ont[illegible]77)

ESSO MINERALS [illegible]ADA
DIAMOND DRILL [illegible]RD

Hole: HN88-37
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871915
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	L48+00W
Casing:	Casing Removed			Northing:	16+25S
		Acid Tests:		Elevation:	Level
Started:	Oct. 1, 1988				
Finished:	Oct. 2, 1988	Depth Az. Dip		Purpose:	Test IP & Mag up-ice from RC-109
		25.00 -45.0			
Logged by:	M.H.Lenters	125.00 -39.0		Length:	149.00Metres
Date logged:	October 1988			Vert. Proj:	100.0 Metres
Logging Method:	Log II			Hor. Proj:	111.0 Metres
Measurement System:	Metric			Ovb. Depth:	17.8 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 25.00	OVERBURDEN										
25.00 40.10	FINE-GRAINED FELSIC VOLCANIC FLOW (EXTRUSIVE)										
	Generally medium green, fine grained, weakly foliated, with dull carbonate appearance.	NS	25.00	40.10 15.10	n/a	n/a	-	0.5%	WK	WK	
	Unit is moderately phyllitic/finely schistose, with chloritic, carbonate-plagioclase-silica composition, and local biotitic zones.	8498	26.00	27.00 1.00	.01	1.50	-	0.5%			
	Foliation generally oriented at 70 to 80 degrees to the core axis.	8499	27.00	28.00 1.00	.01	1.10	-	0.5-1%			
	Locally reactive to HCl.	8500	28.00	29.00 1.00	.01	.70	-	2-3%			
	Generally non-magnetic.	8501	29.00	30.50 1.50	.02	1.00	-	1-2%			
	26.00 27.00 Medium brown, biotitic band that is strongly reactive to HCl.	8502	30.50	32.00 1.50	.01	.60	-	1%			
	27.00 32.00 Weakly silicified zone, with local pseudobrecciation, and 1 to 3% finely disseminated pyrite.	8503	38.00	39.00 1.00	.01	.60	-	MINOR			
	Complete unit contains 3 to 5%, thin, irregular, white calcite patches/lenses that are oriented subparallel to foliation, and/or more irregularly crosscutting calcite tension filling veins/veinlets.	8504	39.00	40.10 1.10	.02	1.40	-	MINOR			
	No significant quartz veining.										
	Relatively competent unit, generally with 25 to 50cm breakage.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Lower contact relatively sharp, and oriented at 70 degrees to the core axis.										
40.10 135.00	FELDSPAR CRYSTAL/LAPILLI TUFF										
	Generally a medium grey, fine sandy texture. Weakly foliated to massive, weakly to moderately magnetic, and weakly calcareous crystal/lapilli tuff (possibly somewhat reworked in a shallow submarine environment).	NS	40.10 135.00	94.90	n/a	n/a	-	MNR-0.5	V.WK	WK	WK
		8505	40.10 41.00	.90	.03	1.30	-	1%			
		8506	41.00 42.50	1.50	.01	14.10	-	1%			
	Unit locally contains minor, coarser (0.5 to 2cm), well flattened, and metamorphic foliated/flattened, coarser lapilli tuff horizons, as well as minor, finely laminated tuff horizons, generally with gradational contacts.	8507	42.50 44.00	1.50	.02	7.60	-	1%			
		8508	44.00 45.50	1.50	.02	2.50	-	0.5%/PO			
		8509	45.50 47.00	1.50	.01	1.70	-	MINOR			
		8510	47.00 48.50	1.50	.01	1.30	-	MINOR			
	Foliation/schistosity generally oriented at 65 to 85 degrees to the core axis.	8511	48.50 50.00	1.50	.01	1.10	-	MINOR			
		8512	71.00 72.50	1.50	.01	1.00	-	MINOR			
	Unit generally contains 3%, small, elongate, calcite blebs/patches, but in the upper few metres these have been weathered out producing a relatively coarse vuggy appearance.	8513	72.50 74.00	1.50	.01	1.30	-	MINOR			
		8514	86.00 87.50	1.50	.02	.90	-	MINOR			
		8515	87.50 89.00	1.50	.01	.90	-	MINOR			
	Minor, small quartz veins, including a 10cm vein between 46.45 to 46.55m oriented at 35 degrees to the core axis.	8516	89.00 90.50	1.50	.01	.90	-	MINOR			
		8517	90.50 92.00	1.50	.02	1.00	-	MINOR			
	Most of unit has a fine (1 to 2mm), plagioclase arenitic appearance, although the composition and texture suggest it is a fine crystal/lapilli tuff. Unit also contains minor, small (1 to 3mm), subrounded, blue quartz eyes that are locally common (5%) across thin (cm) widths.	8518	92.00 93.50	1.50	.01	.80	-	MINOR			
		8519	107.00 108.50	1.50	.02	.70	-	0.5%			
		8520	108.50 110.00	1.50	.01	.90	-	0.5%			
		8521	110.00 111.50	1.50	.01	.90	-	0.5-1%			
		8522	111.50 113.00	1.50	.02	.80	-	0.5-1%			
	Generally massive, relatively hard and competent unit, with 5 to 100cm breakage along foliation planes oriented at 65 to 85 degrees to the core axis. Upper several metres is vuggy and more broken. Rest of unit contains some thin (1cm), incompetant zones adjacent to fractures, and a few weahthered/clay (sericite) altered incompetent zones, including a 40cm band between 92.00 and 92.40 metres.	8523	113.00 114.50	1.50	.01	.80	-	0.5%			
		8524	114.50 116.00	1.50	.01	.70	-	0.5%			
		8525	116.00 117.50	1.50	.02	.70	-	0.5%			
		8526	117.50 119.00	1.50	.01	.60	-	0.5%			
		8527	119.00 120.50	1.50	.01	.90	-	0.5%			
		8528	120.50 122.00	1.50	.01	1.60	-	MINOR			
	40.10 100.00 Mostly fine (1 to 2mm), sand-sized crystal/lapilli tuff, with minor ash tuff interbands.	8529	122.00 123.50	1.50	.02	.70	-	MINOR			
		8530	126.50 128.00	1.50	.16	1.00	-	0.5%			
	100.00 111.00 Generally coarse lapilli tuff, although metamorphism and compressional deformation have made separation/identification of lapilli and matrix locally difficult.	8531	131.00 132.50	1.50	.01	.80	-	MINOR			
		8532	132.50 134.00	1.50	.02	.70	-	MINOR			
		8533	134.00 135.00	1.00	.21	.70	-	MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	111.00 120.50 Mostly fine (1 to 2mm), sand-sized crystal/lapilli tuff, with minor ash horizons.										
	120.50 135.00 Medium grey to medium green, very fine grained, moderately phyllitic to moderately laminated ash tuffs. Green sections are generally phyllitic, while grey to creamy zones are non-magnetic and laminated.										
	Lower contact is gradational into more carbonate rich zone.										
135.00 143.00	CARBONATE FACIES EXHALITE HORIZON										
	Carbonate facies exhalite horizon, or carbonate altered ash tuff horizon.	NS	135.00 143.00	8.00	n/a	n/a	-	1%	WK MOD-INT		WK
	Light yellowish brown to creamy tan, fairly homogeneous coloured, mostly massive, but weakly phyllitic and wispy laminated.	8534	135.00 136.00	1.00	.23	2.10	-	1%			
	Unit is non-magnetic with moderate pervasive reaction to HCl.	8535	136.00 137.00	1.00	.33	2.30	-	1%			
	1%, Very finely disseminated pyrite concentrated in wispy laminations.	8536	137.00 138.00	1.00	.59	2.20	-	1%			
	Unit locally exhibits fine (hairline to a few mm), irregular branching, reddish, silica flood zones/crackling.	8537	138.00 139.00	1.00	.39	1.90	-	1%			
	Foliation is oriented at 70 degrees to the core axis.	8538	139.00 140.00	1.00	.37	1.90	-	1%			
	Locally foliation exhibits a tight swirling, and locally the unit exhibits minor pseudobrecciation.	8539	140.00 141.00	1.00	.40	1.30	-	1%			
	Unit locally exhibits fine yellowish colouration, which may indicate minor sphalerite content.	8540	141.00 142.00	1.00	.90	.80	-	MINOR			
	Competent unit, but relatively well broken into 5 to 10cm pieces, generally at 70 degrees to the core axis.	8541	142.00 143.00	1.00	.08	.05	-	MINOR			
	Lower contact is particularly well broken into a few rubble sections due to a few, late, calcite-lined fractures oriented at a shallow (10 to 25) angles to the core axis, and intersecting the foliation at right angles.										
	Lower contact zone exhibits a few, short intervals with foliation oriented at 0 degrees to the core axis, possibly indicating a small fault zone.										
143.00 149.00	PSAMMITIC ARENITE WITH PEBBLY INTERBEDS										
	Mottled, medium grey, fine grained arenite, with pebbly sections containing 1 to 15%, well flattened and metamorphically assimilated, small (1mm to 2cm), polymitic pebbles. Most are elongated beyond	NS	143.00 149.00	6.00	n/a	n/a	-	MINOR			
		8542	143.00 144.50	1.50	.01	.90	-	MINOR			
		8543	144.50 146.00	1.50	.03	.90	-	MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	recognition but were probably originally subrounded.	8544	146.00 147.50	1.50	.02	1.00	-	MINOR			
	Unit is weak to moderately magnetic, and moderately reactive to HCl, particularly in the matrix material.	8545	147.50 149.00	1.50	.01	1.10	-	MINOR			
	Minor irregular calcite patches/lenses.										
	Foliation/bedding oriented at 50 to 70 degrees to the core axis.										
	Competent unit, with 20 to 100cm breakage.										
	Lower contact not encountered.										
	149.00 End of Hole.										

ESSO MINERALS CANADA

SUMMARY DRILL LOG

Project Name: HN Blackrock

Hole Number: HN88-38

Project Number: 1677

Logged By: M.H. Lenters

NTS: 42H/8

Date: October 1988

Location: L48+00W, 13+75S

Claim Number: L-871916

Azimuth: 180° Dip: -45°

Length (m): 191

PURPOSE: Test Mag. low and anomalous IP chargeability response up-ice from RC-109 (anomalous bedrock gold value)

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.0	26.00	Overburden	
26.00	191.00	Mafic Metavolcanic Pillowed Flows (Relatively Unaltered) Generally dark green to green-grey, very fine-grained, massive, unfoliated, chloritic, non-magnetic and non-calcareous, but including several biotitic (potassic altered?) bands and patches. These zones are brownish coloured, coarser-grained, weakly foliated/schistose at 60° to 75° to CA, often calcitic, and locally magnetic. Locally these zones also contain minor amphibole and garnet porphyroblasts. The unit appears to be a pillowed flow sequence locally exhibiting pillow selvages and amygdules. Unit is moderately fractured by thin (hairline to 1 mm) calcite veinlets and some thicker, irregular calcite patches/veining. Minor quartz veining. Trace to minor disseminated pyrite, but locally 1 to 5% pyrrhotite in thin bands or laminae.	0.01 - 2.60 (39)
	191.00	END OF HOLE	

H-N PROJECT (Ont[illegible]87)

ESSO MINERALS [illegible]DA
DIAMOND DRILL R[illegible]ORD

Hole: HN88-38
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871916
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Basting:	48+00W
Casing:	Casing Removed			Northing:	13+75S
		Acid Tests:		Elevation:	Level
Started:	Oct. 2, 1988				
Finished:	Oct. 4, 1988	Depth Az. Dip		Purpose:	Test Mag Low & IP Up-ice from RC-109
		26.00 -45.0			
Logged by:	M.H.Lenters	126.00 -42.0		Length:	191.00Metres
Date logged:	October 1988	191.00 -38.0		Vert. Proj:	129.0 Metres
Logging Method:	Log II			Hor. Proj:	141.0 Metres
Measurement System:	Metric			Ovb. Depth:	18.5 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 26.00	OVERBURDEN										
26.00 191.00	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Generally dark green to green-grey, very fine grained, massive, unfoliated, chloritic, non-magnetic and non-calcareous mafic volcanic flow cut by a few porphyry dykes. Generally unaltered, but includes a few biotitic (weakly potassic altered?) zones.	NS	26.00	191.00165.00	n/a	n/a	-	M-2%/PO			
		1864	35.00	36.50 1.50	.01	1.30	-	MINOR			
		1865	36.50	38.00 1.50	.01	1.50	-	MINOR			
		1866	64.00	65.00 1.00	.02	.50	-	MINOR			
	Above 48.50 metres the unit contains 10 to 25%, very weak to weak, brownish-grey, biotitic bands/zones, ranging from thin fracture bands to larger swirled irregular zones that are several 10's of cm wide. These zones contain fine biotite, as well as up to 10% coarse (1 mm) biotite books, and rarely, 1 mm, pinkish garnet porphyroblasts, or small (0.5mm), black magnetite grains. Biotitic zones are also generally calcitic. Locally, the brown biotitic bands and patches appear like pillow selvages, and/or irregular flow top zones.	1867	68.00	69.00 1.00	.01	1.00	-	MINOR			
		1868	69.00	69.65 .65	.03	1.00	-	0.5%/PO			
		1869	69.65	70.40 .75	.01	.70	-	1%PO			
		1870	70.40	71.00 .60	.01	.70	-	1%PO			
		1871	74.00	75.00 1.00	.02	.80	-	MINOR			
		1872	75.00	75.50 .50	.03	1.00	-	0.5%			
		1873	75.50	76.40 .90	.01	1.30	-	0.5%			
		1874	76.40	77.00 .60	.01	1.30	-	MINOR			
	Between 48.50 to 74.00 metres the unit contains fewer (5 to 10%) biotitic-calcitic bands, but these often have a moderately developed schistosity oriented at 60 to 70 degrees to the core axis. Locally,	1875	77.00	77.50 .50	.07	1.30	-	0.5%PO			
		1876	77.50	79.00 1.50	.02	1.20	-	MINOR			
		1877	79.00	80.00 1.00	.02	1.00	-	MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	small garnets and amphibole crystals (blades) occur within these recrystallized zones. These zones are generally irregularly swirled and patchy. Biotitic zones often have a somewhat variable and swirled foliation, but are generally oriented at 60 to 75 degrees to the core axis Trace to minor disseminated pyrite, locally concentrated along fractures. Pyrrhotite is common between 64.00 and 90.00m especially between 69.00 to 71.00 and 82.00 to 84.00m, as thin bands, wavy stringers/laminae, and blebs in slightly siliceous bands 1 to 5 cm wide containing 1 to 5% pyrrhotite. Bands are spaced 0.5 to 2 metres apart and may be altered flow edges?. A few of the bands contain fine grained semi-massive pyrrhotite.	1878	80.00 81.00	1.00	.01	1.30	-	MINOR			
		1879	81.00 82.00	1.00	.01	1.30	-	MINOR			
		1880	82.00 83.00	1.00	.02	1.20	-	3-4%PO			
		1881	83.00 84.00	1.00	.01	.60	-	5-10%PO			
		1882	84.00 85.00	1.00	.01	.90	-	1%PO			
		1883	85.00 86.00	1.00	.02	1.00	-	MINOR			
		1884	86.00 87.50	1.50	2.60	1.70	-	0.5%PO			
		1885	87.50 89.00	1.50	.02	.80	-	0.5%PO			
		1886	89.00 90.00	1.00	.03	.90	-	1%PO			
		1887	100.00 101.00	1.00	.02	1.50	-	1-2%PO			
		1888	104.30 105.10	.80	.01	.80	-	2-3%PO			
74.00 129.50	The unit is brownish grey to greenish grey with large zones of weak to moderately pervasively biotitic (potassic) altered mafic metavolcanic containing a minor to moderate amount of fine, calcite tension fracturing. Section is massive, fine grained and non-magnetic.	1889	105.10 107.00	1.90	.03	1.00	-	0.5%PO			
		1890	128.00 129.00	1.00	.01	1.80	-	MINOR			
		1891	129.00 129.50	.50	.02	1.60	-	1%			
		1892	129.50 130.00	.50	.01	1.50	-	MINOR			
		1893	140.00 141.50	1.50	.01	1.20	-	0.5%PO			
129.50 139.50	Dark green, fine grained, massive, relatively unaltered with a minor to moderate amount of calcitic fracturing that is locally intense, forming a 10 to 20cm wide pseudobreccia zone.	1894	141.50 142.50	1.00	.01	.50	-	MINOR			
		1895	142.50 143.30	.80	.02	1.00	-	2%			
		1896	143.30 144.30	1.00	.02	1.20	-	2%			
		1897	144.30 145.30	1.00	.01	.50	-	MINOR			
139.50 151.00	Mottled medium green, calcitic mafic volcanic with abundant small (3mm long), amphibole porphyroblasts and weak biotitic alteration with a foliation orientation at 50 to 60 degrees to the core axis.	1898	145.30 146.00	.70	.01	1.00	-	MINOR			
		1899	146.00 146.90	.90	.03	.30	-	1%PO			
		1900	160.00 161.00	1.00	.01	.50	-	MINOR			
		1901	161.00 162.00	1.00	.01	1.40	-	5-6%PO			
151.00 164.50	Dark green, fine grained, massive, relatively unaltered mafic metavolcanic.	1902	162.00 163.00	1.00	.02	.40	-	MINOR			
164.50 191.00	Minor dark green, massive, fine grained, relatively unaltered zones with large patches of dark brownish grey, weakly schistose biotitic (potassic) altered mafic metavolcanic. Biotitic altered zones are weakly schistose and often have abundant needle-like, dark green amphibole porphyroblasts, although the latter also occur in some fine grained, massive, chloritic mafic volcanic sections.										
	Intrusive dykes occur between:										
	53.30 53.55 Sharp contacts oriented at 70 degrees to the core axis.										
	75.00 76.40 Sharp contacts oriented at 80 degrees to the core axis, and										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

25cm wide foliated biotite altered schist contact zones.
142.50 144.30 Sharp contacts oriented at 80 degrees to the core axis, and containing 1 to 2% finely disseminated pyrite.

The above dykes are very hard and massive, consisting of 20 to 30%, 1 to 3mm, subhedral to euhedral, white, plagioclase in medium to dark brownish-grey, very fine grained to aphanitic groundmass. Larger dykes also exhibit 5%, 1 to 2mm wide biotite books, and contain somewhat coarser, and lighter coloured, plagioclase in the groundmass.

Unit is moderately (5 to 10%) fractured by thin (hairline to 1mm), subplanar, calcitic veinlets, and thicker calcitic patches and anastomosing veining/alteration. Most are tension fractures forming herring bone and en echelon fracture patterns at various orientations to the core axis. Occasionally the fractures centre, thin (1cm) biotite altered bands. Locally calcitic fracturing is intense forming pseudobreccia zones.

No significant veining, but a few veins with widths greater than 0.5 cm occur between:

62.80 62.90 Quartz vein with irregular contacts.
134.75 134.90 Irregular coarse grained quartz vein with contacts oriented at 75 degrees to the core axis.
175.40 175.45 Irregular quartz vein with contacts oriented at 45 degrees to the core axis.
177.90 177.95 Coarse grained quartz vein with contacts oriented at 45 degrees to the core axis.

Between 85 and 110m the unit is very massive and fine grained, locally exhibiting small zones with amygdules and minor, small (1mm), subhedral, white plagioclase phenocrysts.

129.50 130.00 Section containing several large (1 to 5mm), calcite amygdules.

Competent core, generally with 25 to 100 cm breakage along fractures oriented at 45 to 80 degrees to the core axis.

Lower contact not encountered.

191.00 End of hole.

ESSO MINERALS CANADA

SUMMARY DRILL LOG

Project Name: HN Blackcloud

Hole Number: HN88-39

Project Number: 1677

Logged By: M. H. Lenters

NTS: 42H/8

Date: October 1988

Location: L40+00W, 12+50S

Claim Number: L-871908

Azimuth: 180°. Dip: -44°.

Length (m): 194

PURPOSE: Extend N-S drill fence along L40W south of DDH HN88-24

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.0	7.00	Overburden	
7.00	11.25	Mafic Metavolcanic with biotitic, schistose bands Very fine-grained, wavy banded and laminated, weakly phyllitic, hard, dense, and non-calcareous. Composed of 50%, massive, dark green, mafic metavolcanic bands, and 50%, dark grey to sandy brown, cherty/siliceous interflow(?) metasediment, or schistose metavolcanic bands. Banding and foliation generally oriented at 70° to 80° to CA. 5% calcite, tension and crackle microfracturing. Several, 1 to 5 cm wide bands with 1 to 30%, finely laminated to fracture filling pyrrhotite, as well as minor pyrite and chalcopyrite.	0.01 - 0.02 (6)
11.25	22.25	Plagioclase-Chlorite-Amphibole Schist Fine-grained, weakly schistose, plagioclase-silica-chlorite (amphibole) unit, intermottled with medium-grained, weak to moderately schistose plagioclase-silica-biotite sections, producing irregularly alternating bands/patches 1 to 50 cm wide, with a fairly homogeneous, dark green-brown to grey-brown colour. Weak to moderately foliated at 60° to 80° to CA. No significant veining. Generally minor pyrite, but with thin zones containing 1 to 3%.	0.01 - 0.02 (2)
22.25	33.50	Mafic Metavolcanic with biotitic, schistose bands 22.25-30.80 Similar to unit between 7.00 and 11.25 metres. 5% calcite microfracturing. Minor pyrite. 30.80-33.50 Same as upper section, but pyritic (2 to 3%), locally magnetic, and weakly carbonate (calcite) and sericite? altered.	0.01 - 0.03 (3)
33.50	36.50	Carbonate-and/or Silica-Sulphide Facies Iron Formation 33.50-35.00 Medium brown-green to creamy brown, well laminated/banded, carbonate-rich section, containing 5 to 10%, finely disseminated and wispy laminated pyrite. Foliation/laminations oriented at 70° to CA. 35.00-36.50 Dark grey to black, hard, cherty, moderately to strongly schistose/sheared? section, containing 1 to 3% finely disseminated pyrite. Foliation/banding at 60° to 70° to CA.	0.01 - 0.03 (4)
36.50	59.30	Schistose, Biotitic Mafic Metavolcanic Intermottled, very fine-grained, medium to dark green, massive, moderately magnetic, chloritic mafic metavolcanic, with abundant, brown, fine-grained, calcareous, biotitic zones/patches. 3 to 5% fine calcite fracturing. Minor pyrite. 44.00-46.00 Fault Breccia. Abundant, subangular, cherty and intrusive fragments in dark, fine-grained well foliated/sheared matrix.	0.01 - 0.03 (9)

From (m)	To (m)	Description HN88-39	Gold Assays (g/tonne)
		52.60-57.20 Interflow Metasediment Medium to dark brown, fine-grained, non-magnetic, non-calcareous, well laminated siltstone and fine-grained sandstone with minor grey, chert horizons. No veining. 0.5% pyrite	
59.30	104.00	Schistose Mafic Metavolcanic with Minor Epidote-Carbonate Alteration Bands Generally dark greenish-black to brownish-black, fine-grained, non-magnetic to magnetic, non-calcareous and variably silicified. Weakly foliated and epidote-carbonate altered/banded at 40° to 60° to CA. One 2 metre intrusive dyke. No significant veining although there is abundant silica-calcite tension fracturing. Minor to 3% disseminated pyrite.	0.01 - 0.14 (27)
104.00	185.30	Weak to locally Moderately Altered Quartz Diorite Intrusive Biotite, plagioclase porphyritic quartz diorite. Variably altered, ranging from relatively unaltered, to weakly silicified with minor quartz veining, and locally moderately to intensely silicified +/- sericitized with 5 to 15% quartz veining. Generally coarse-grained, vuggy, well broken unit with transitional contacts between variations in alteration intensity. Minor to abundant (10-20%), irregular to subplanar quartz veining. Minor to 4% disseminated pyrite, and locally minor to 0.5% grey metallic minerals, generally associated with quartz veining in white, silicified sections of the intrusive 176.00-185.30 Shear foliated intrusive with Quartz Vein Breccia/Fault Zone between 180.20 to 183.05	0.01 - 1.40 (80)
185.30	194.00	Sheared/Schistose Mafic Metavolcanic Dark greenish black, fine-grained, weakly magnetic, weak to moderately shear foliated at 55° to 70° to CA. Locally weakly carbonate-epidote altered. Minor quartz-calcite veining. Minor pyrite.	0.01 - 0.10 (7)
	194.00	END OF HOLE	

H-N PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HN88-39
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871908
Hole Size:	BQ	Dip:	-44	Grid:	West
Core Size:	BQ			Easting:	40+00W
Casing:	Casing Removed			Northing:	12+50S
		Acid Tests:		Elevation:	Level
Started:	Oct. 13, 1988				
Finished:	Oct. 15, 1988	Depth Az. Dip		Purpose:	Extend L40W Drill Fence
		23.00 -44.0			
Logged by:	M.H.Lenters	107.00 -40.0		Length:	194.00Metres
Date logged:	October 1988	194.00 -39.0		Vert. Proj:	127.0 Metres
Logging Method:	Log II			Hor. Proj:	146.00 Metres
Measurement System:	Metric			Ovb. Depth:	5.0 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 7.00	OVERBURDEN										
7.00 11.25	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE) Very fine grained, wavy banded and laminated, weakly phyllitic, hard, dense and non-calcareous. Minor to moderate development of thin (hairline), tension microfracturing containing white calcite. Composed of 50%, massive, dark green, very fine grained, mafic metavolcanic bands, and includes 50%, dark grey to sandy brown, cherty, interflow? metasediment horizons. The metasediments range from thin laminae to bands a few cm thick, but are wavy to irregular, and locally patchy and/or anastomosing. Where the laminated brown-grey siliceous bands are well developed, the unit appears sedimentary, but where it is patchy, it appears that it could also be altered metavolcanic bands. The grey-brown metasediment bands are slightly siliceous, and exhibit a weak phyllitic appearance due to biotite content. Banding and foliation within the unit are generally oriented at 70 to 80 degrees to the core axis, but the irregular wavy character has a range between 50 to 90 degrees to the core axis.	NS	7.00	11.25 4.25	n/a	n/a		- 1-5%PO			
		1903	7.00	7.60 .60	.02	.90		- 5-12%PO			
		1904	7.60	8.00 .40	.02	1.50		- 2%/PO			
		1905	8.00	9.00 1.00	.02	1.40		- 2-4%/PO			
		1906	9.00	9.40 .40	.01	.50		- 8-12%PO			
		1907	9.40	10.00 .60	.02	1.20		- 0.5%/PO			
		1908	10.00	11.25 1.25	.02	1.10		- 0.5%/PO			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Unit contains 5%, tension and crackle microfracturing, in irregular ladder and en echelon patterns. Unit contains several, 1 to 5 cm wide zones/bands containing abundant (1 to 30%), finely wispy laminated/disseminated, to discontinuous fracture filling pyrrhotite, as well as minor pyrite, and trace chalcopyrite. Where best developed the sulphides occur as swirled, wispy laminations. These zones are moderately to strongly magnetic, within a generally non-magnetic unit. No significant veining. Hard, competent unit, generally with 10 to 50 cm breakage along fractures oriented at 30 to 90 degrees to the core axis. Lower contact is transitional.										
11.25 22.25	PLAIGIOCLASE-CHLORITE-AMPHIBOLE SCHIST Fine grained (up to 1mm), generally weakly schistose, plagioclase-silica-chlorite (amphibole) unit, intermottled with medium grained, weak to moderately schistose plagioclase-silica-biotite sections, producing irregularly alternating bands/patches 1 to 50 cm wide, with a fairly homogeneous, dark green-brown to grey-brown colour. The unit also contains a few, thin (1 to 10cm), dark grey, aphanitic, siliceous, massive bands/patches similar to those in the overlying unit. The various rock compositions form irregular bands and patches that grade both quickly and/or slowly, and often irregularly into one another. Weak to moderately well developed compositional banding and foliation oriented at 60 to 80 degrees to the core axis. Unit contains minor, thin (1 to 5mm), light green, pinch and swell, epidote-carbonate-garnet alteration bands that parallel foliation. Wavy patchy compositional banding gives the unit a layered appearance that is mostly metamorphic in origin, but could parallel original metasediment/tuff compositional banding. Dark green, very fine grained, massive sections exhibit a well developed, calcite microfracturing, while the coarser, more schistose sections contain 2 to 5%, more irregular, diffuse and patchy, thin (hairline to 2 mm), calcite veining. Unit is non-magnetic.	NS 1909 1910	11.25 14.00 21.50	22.25 15.00 22.50	11.00 1.00 1.00	n/a .01 .02	n/a .90 1.30	- - -	0.5%/PO 0.5%/PO MINOR		

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	No significant veining. Generally trace to minor pyrite, although a few, dark green, fine grained, massive zones similar to those in the overlying unit contain 1 to 3%, wispy disseminated pyrrhotite and pyrite. Relatively competent unit, generally with 10 to 100 cm breakage along foliation or fractures oriented at 40 to 70 degrees to the core axis. Lower contact is transitional.										
22.25 30.80	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Similar to unit between 7.00 and 11.25 metres. Dark green, very fine grained, massive, homogeneous, chloritic, mafic metavolcanic with dark grey, aphanitic, weakly biotitic and phyllitic, siliceous/cherty interbands. The latter constitute about 75% of the unit above 25.50m, and about 25% of the unit below 25.50 metres. The grey, cherty interbands/patches are less planar and less distinct than in the upper unit, and are often irregularly anastomosing, locally appearing to pervasively alter the massive, fine grained, green sections. Unit has a weak to moderately swirled and mottled appearance, but banding and foliation are generally oriented at 65 to 80 degrees to the core axis Unit also includes a few bands/patches of coarser grained, schistose silica-plagioclase-biotite altered rock that is more common in the overlying unit. Unit is generally non-magnetic, but includes a few, thin (1cm), magnetic bands near the lower contact zone. The grey cherty bands locally give the unit a metasedimentary appearance, but the dark green, fine grained massive sections appear to be mafic volcanic in origin. Locally, the latter exhibit variable, but pervasive, alteration changes to the grey cherty bands suggesting that these may be metamorphic and not sedimentary in origin. 5% Calcite veining, as thin (hairline), microfracturing that is best developed in the massive dark green sections. Locally, thin bands or veins of yellowish green epidote-carbonate alteration are oriented subparallel to the foliation direction. Pervasive to irregular calcitic patches also occur in the dark green, massive, homogeneous, metavolcanics in the lower part of the unit.	NS	22.25	30.80	8.55	n/a	n/a	- 0.5%/PO			
		1911	22.50	24.00	1.50	.01	1.00	- MINOR			
		1912	24.00	25.00	1.00	.03	1.30	- MINOR			
		1913	30.00	31.00	1.00	.02	.50	- MNR-0.5			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	No significant veining. Minor pyrite, locally more common in the grey cherty sections. Hard competent unit, generally with 25 to 100 cm breakage along fractures at various angles to the core axis. Local, 10 to 20cm wide, rubble zones. Lower contact is transitional.										
30.80 33.50	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Same as the overlying unit, but pyritic, locally magnetic, and weakly carbonate (calcitic) and sericite? altered. Unit exhibits the same interbanding of fine grained, medium green, schistose zones, and grey, cherty bands as the overlying unit, but these are now more subdued and irregularly intermixed. Banding and foliation are oriented at 65 to 80 degrees to the core axis. Unit is less competent and more broken than the overlying units, including abundant calcite-sericite coated slip fractures generally orientated at 65 to 85 degrees to the core axis. Generally very weakly to non-magnetic, but many of the grey cherty bands are darker grey and strongly magnetitic, probably containing fine magnetite. The complete unit contains 2 to 3%, wispy laminated, and finely disseminated pyrite that locally constitutes over 10% across thin (cm) zones. No significant veining, but well developed calcitic fracturing and calcite-sericite slips. Lower contact is gradational.	NS 1914 1915 1916	30.80 31.00 32.00 33.00	33.50 32.00 33.00 33.50	2.70 1.00 1.00 .50	n/a .01 .02 .01	n/a 1.00 .70 .30	- - - -	2-5% 0.5% 3-5% 4-6%			
33.50 36.50	CARBONATE- AND/OR SILICA-SULPHIDE FACIES IRON FORMATION										
	33.50 35.00 Medium brownish-green to creamy brown, well-laminated/banded, carbonate rich section containing 5 to 10%, finely disseminated and wispy lamianted pyrite. Pyrite is evenly disseminated throughout the unit. Banding and laminations are oriented at 70 degrees to the core axis. Unit is weak to moderately reactive to HCl, and is generally non-magnetic with a few, thin, weak to moderately magnetic cherty bands.	NS 1917 1918 1919 1920	33.50 33.50 34.00 35.00 36.00	36.50 34.00 35.00 36.00 36.50	3.00 .50 1.00 1.00 .50	n/a .01 .01 .01 .03	n/a .80 .60 .50 .60	- - - - -	2-10% 4-7% 6-10% 2-3% 1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Unit is weak to moderately crackled and fractured, with small offsets along fractures. Well developed slip fracturing, generally oriented parallel to the foliation, with calcite+/-sericite (icing sugar) coatings on fracture surfaces. Unit contains no significant veining. Unit is somewhat incompetent, with numerous slip surfaces and a pervasive calcitic alteration that is somewhat weathered away leaving a finely porous rock unit. Upper and lower contacts are gradational.										
35.00 36.50	Dark grey to black, hard, cherty, moderately to strongly schistose/sheared? section containing 1 to 3%, finely laminated to wispy disseminated pyrite. Laminations and banding are oriented at 60 to 70 degrees to the core axis. Locally the unit contains a few, small (1 to 5cm), diffuse, boudinaged bands and footballs of vaguely porphyritic intrusive dyke material. These could be thin dykes that have been deformed within the unit, and could possibly be the source of some of the alteration/pyrite in this unit. Unit is moderately reactive to HCl, and strongly reactive along several foliation/banding subparallel, hairline to 1mm, fracture veinlets. No large veining. Unit contains several foliation/banding parallel slips, often with calcite and green sericite coatings. Relatively hard, competent unit, but moderately broken into 5 to 25cm pieces, generally parallel to the foliation. Upper and lower contacts are gradational.										
36.50 52.60	SCHISTOSE, BIOTITIC MAFIC METAVOLCANIC										
	Intermottled, very fine grained, medium to dark green, massive, homogeneous, chloritic metavolcanic, with brown, fine grained, biotitic zones/patches. The latter also locally exhibit a yellowish colour due to increased amounts of carbonate, is slightly coaser grained, and more phyllitic. The unit also contains a few brownish grey, siliceous bands that are more common in the overlying units. Locally the unit exhibits gradational changes along fractures from green, relatively unaltered	NS	36.50	52.60	16.10	n/a	n/a	- 0.5%/PO			
		1921	36.50	37.50	1.00	.02	.70	- 0.5-1%			
		1922	37.50	38.40	.90	.01	1.10	- MNR-1%			
		1923	44.00	45.00	1.00	.02	.60	- MINOR			
		1924	45.00	46.00	1.00	.01	.50	- MINOR			
		1925	46.00	46.50	.50	.01	.50	- MINOR			
		1926	46.50	47.00	.50	.03	.50	- 2-3%/PO			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

sections to grey, siliceous, or to brown, biotitic zones, suggesting the latter are in part alteration products of the former.
Unit also includes a few, thin (1 to 5cm), coarser, schistose, chlorite-biotite-calcite-plagioclase zones that are irregularly swirled, as well as a few, thin, lime green-yellow epidote-carbonate alteration bands. Unit also includes one 5cm epidote-garnet band oriented at 90 degrees to the core axis, between 36.70 to 36.75m, containing 10% pyrrhotite, and lesser pyrite and chalcopyrite.
Unit is generally weakly to strongly magnetic with small (0.5mm) disseminated magnetite grains locally visible.
Unit contains a moderate to intense development of calcitic microfracturing, particularly in finer grained, massive sections.
Unit contains a few, thin (2 to 5mm), subplanar to wormy (ptygmatic) quartz veins.
Unit locally has a pseudobrecciated to brecciated appearance due to alteration banding along, and adjacent to, intense microfracturing, but also includes a breccia zone.

44.00 46.00 Fault Breccia. Breccia consists of abundant, irregular, subangular, 0.5 to 5cm, fragments in massive to moderately sheared and foliated, fine grained, black to dark green, hard, siliceous matrix with a mafic volcanic composition. Fragments are mostly dark grey and cherty, similar to the cherty bands in the overlying unit, but include isolated, angular, medium grey, intrusive dyke fragments. Section is generally massive and has an annealed, silicified appearance, although locally it has a moderately well developed shear foliation oriented at 50 to 60 degrees to the core axis. 3 to 5%, thin (hairline to 2mm), discontinuous, calcite, tension microfracturing cuts across both fragments and matrix. Small fractures also locally offset breccia fragments by a few mm. No large veining. Minor amounts of disseminated pyrite. Transitional upper and lower contacts from the patchy biotitic altered, fine grained, chloritic mafic metavolcanics above and below, which are similar in composition to the matrix material of this breccia zone.

Below the annealed fault/breccia zone, the unit is moderately to

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	intensely biotite altered, including several fine grained, homogeneous, non-magnetic, brown, biotitic zones that contain 10 to 40%, 1 to 3mm, subrounded, brownish, poorly developed, poikioblastic, garnet porphyroblasts. These are locally weakly deformed into swirled or wavy foliated patterns. Unit is relatively competent and hard, generally with 25 to 100 cm breakage. Lower contact is transitional.										
52.60 57.20	INTERFLOW METASEDIMENT Medium to dark brown, fine grained, well laminated siltstone, to very fine grained sandstone, with some thin (0.5 to 10cm), medium grey, hard, aphanitic, chert bands. Bedding and laminations are slightly wavy, but planar, and oriented at 60 to 85 degrees to the core axis. Unit is non-magnetic, non-calcareous with minor, thin, irregular, calcitic veining subparallel to bedding, as well as local zones of calcitic, tension microfracturing. No significant veining. 0.5% Disseminated pyrite, generally concentrated along some bedding laminae. Lower contact is transitional, and has been taken as the top of a cherty band, below which the underlying unit is greener in colour, lacks laminations, and has a distinct volcanic texture.	MS 1927	52.60 57.20 56.00 57.20	4.60 1.20	n/a .01	n/a 1.50	- -	0.5% MINOR			
57.20 59.30	SCHISTOSE, BIOTITIC MAFIC METAVOLCANIC Similar to the unit between 36.50 to 56.50m above the thin metasiltstone unit. 50%, Brownish-green, biotitic altered mafic metavolcanic, and 50%, dark, laminated, chert bands. The latter occur between 57.20 to 57.45m, and 58.65 to 59.30 metres. Unit contains minor, thin (0.5cm), wormy (ptygmatic) quartz veining, and minor, irregular calcite veining/patches and tension microfracturing. Minor finely disseminated and fracture controlled pyrite.	MS 1928 1929	57.20 59.30 57.20 58.65 58.65 59.30	2.10 1.45 .65	n/a .01 .02	n/a 1.10 1.40	- - -	MINOR MNR-0.5 MNR-0.5			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Lower contact gradational.										
59.30 104.00	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS										
	Generally dark greenish black to brownish black to greyish black, fine grained, non-magnetic to magnetic, non-calareous, variably silicified and relatively homogeneous in appearance.	MS	59.30 104.00	44.70	n/a	n/a	-	0.5-3%	WK-MOD	V.WK	UN-WK
	Above 75 metres, and between 79.00 to 79.50, and 86.00 to 102.00 metres, the unit is not silicified, is greener, and exhibits a fine plagioclase-amphibole intergrowth typical of mafic metavolcanic flow units. These zones also exhibit some potassic (biotite) alteration, particularly at the upper contact with the overlying unit, and the two contact zones with an intrusive dyke. These biotitic zones also contain some calcitic microfracturing but much less than is common in the overlying units. Locally the unit exhibits epidote coated microfracturing. These zones contain minor, to locally 1 or 2%, finely disseminated pyrite as well as minor, thin (0.2 to 1cm), irregular, wormy (ptygmatic) quartz veining.	1930	62.00 62.65	.65	.01	.40	-	0.5%			
		1931	62.65 63.30	.65	.01	2.10	-	MINOR			
		1932	63.30 64.00	.70	.01	2.00	-	0.5%			
		1933	64.00 65.00	1.00	.02	2.10	-	1-2%			
		1934	65.00 66.50	1.50	.01	.70	-	0.5-1%			
		1935	66.50 68.00	1.50	.01	.80	-	0.5-1%			
		1936	68.00 69.50	1.50	.01	1.10	-	MINOR			
		1937	69.50 71.00	1.50	.02	1.30	-	0.5%			
		1938	74.00 75.00	1.00	.02	.80	-	0.5%			
		1939	75.00 76.00	1.00	.13	1.00	-	2-3%			
		1940	76.00 77.00	1.00	.01	.50	-	2-3%			
		1941	77.00 78.50	1.50	.01	.80	-	1%			
		1942	78.50 80.00	1.50	.01	1.20	-	1%			
		1943	80.00 81.50	1.50	.02	.80	-	2-3%			
		1944	81.50 83.00	1.50	.01	.60	-	2-3%			
		1945	83.00 84.50	1.50	.01	.60	-	2%			
		1946	84.50 86.00	1.50	.01	.50	-	1-2%			
		1947	86.00 87.50	1.50	.03	.50	-	1%			
		1948	87.50 89.00	1.50	.01	.50	-	0.5-1%			
		1949	89.00 90.50	1.50	.02	.50	-	0.5%			
		1950	90.50 92.00	1.50	.04	.30	-	0.5%			
		1951	92.00 93.50	1.50	.02	.30	-	0.5%			
		1952	93.50 95.00	1.50	.01	.60	-	0.5%			
		1953	95.00 96.50	1.50	.01	.80	-	MNR-0.5			
		1954	101.00 102.00	1.00	.01	.60	-	MINOR			
		1955	102.00 103.00	1.00	.02	.40	-	0.5-1%			
		1956	103.00 104.00	1.00	.14	.20	-	2-3%			
	62.65 65.00 Feldspar Porphyritic Quartz Diorite Dyke. Medium, slightly pinkish grey, hard, massive to weakly foliated at 60 to 70 degrees to the core axis. 10 to 30%, white to pinkish white, subhedral to diffusely resorbed, 1 to 5mm, plagioclase phenocrysts in a finer grained plagioclase dominant matrix. Unit contains 5 to 10% biotite, 0.5% finely disseminated pyrite, and 5%, thin (0.5 to 1cm), subplanar to wormy and irregular, quartz veining. Upper and lower contacts are sharp and oriented at 65 degrees to the core axis.										
	Below 75m, except for a few, thin, zones including 79.00 to 79.50m, the unit is dark green-black to dark grey, moderately to strongly magnetic, hard, exhibits a mottled looking silicification, and locally exhibits a weak shearing. Unit contains 10 to 15%, quartz-silica, as well as silica-calcite in irregular crackle and tension gash fractures, but these are as often diffuse in appearance and weakly foliated. 75 to 86 and 102 to 104 metres, the unit is moderately silicified, and 86 to 102 metres, the unit is weakly silicified with minor bands of (weak) epidote alteration. Minor, thin (1 to 5mm), weak epidote-carbarbonate mottled										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	alteration adjacent to some fractures, and some silica-carbonate veins. These bands/zones are generally slightly lighter green to brownish buff coloured. Below 89 metres this alteration begins to form anastomosing bands that are up to a few cm wide and light green to cream coloured. Epidote banding, weak shearing, and locally the calcitic/silica tension fracturing are oriented at 40 to 60 degrees to the core axis. Unit contains no significant (large) quartz veining, although there is abundant tension fracture veining. Silicified metavolcanic unit contains abundant (1 to 3%), finely disseminated pyrite, concentrated in wispy foliated patches and zones generally in association with the silica and silica-calcite tension fracture veining. Hard, very competent unit, with 50 to 150 cm breakage often along planar fractures oriented at various angles to the core axis. Lower contact is diffuse and gradational across a 0.5 metre wide zone into the underlying intrusive, with the contact probably oriented at approximately 20 to 30 degrees to the core axis.										
104.00 185.30	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED										
	Variably altered ranging from relatively unaltered, to weakly silicified with minor quartz veining, and locally moderately to intensely silicified and weakly to moderately sericitized with 5 to 15% quartz veining. Generally coarse grained, vuggy, well broken unit (1 to 10cm pieces), with transitional contacts between variations in alteration intensity.	NS	104.00	185.30	81.30	n/a	n/a	TRACE	1-4%	UM-MOD	UM-V.WK	UM-WK
		1957	104.00	104.55	.55	.30	.80	-	10-12%			
		1958	104.55	105.50	.95	.12	1.30	-	3-4%			
		1959	105.50	106.65	1.15	.03	1.20	-	1%			
		1960	106.65	107.65	1.00	.12	.80		-MNR-0.5%			
		1961	107.65	108.80	1.15	.15	1.20	-	2%			
		1962	108.80	109.20	.40	.01	1.10	0.5%	2-4%			
		1963	109.20	110.65	1.45	.09	1.20	TRACE	1-2%			
		1964	110.65	112.00	1.35	.11	1.20	-	1%			
		1965	112.00	113.00	1.00	.05	1.80	MINOR	2-3%			
		1966	113.00	114.00	1.00	.03	2.20	TRACE	2-3%			
		1967	114.00	114.90	.90	.06	1.60	TRACE	2-3%			
		1968	114.90	115.30	.40	.18	3.00	MINOR	1-2%			
		1969	115.30	115.80	.50	.06	1.40	-	2-3%			
		1970	115.80	116.50	.70	.01	1.20	-	0.5-1%			
		1971	116.50	118.00	1.50	.13	1.30	TRACE	2%			
104.00 106.65	Dark grey-black to dark wine red, relatively unaltered, although the section is weak to moderately silicified (but not sericitized) for 0.5m adjacent to the upper contact zone with the overlying metavolcanics. Section exhibits weak to locally moderate shearing, particularly in the dark grey coloured zone adjacent to overlying metavolcanics. This transitional contact zone is also very pyritic across 30 cm. Section is coarse grained, and plagioclase porphyritic, with 30 to 40%, white, subhedral, phenocrysts, that are 1 to 3mm in size and occasionally up										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	to 1 cm. Section contains 10%, 2 to 3mm, ovoid, slightly blue grey quartz phenocrysts, and 5 to 10%, weakly chloritized biotite in an aphanitic to fine grained, dark grey to red, plagioclase rich groundmass. No significant veining. Generally 1 to 4% pyrite, as fine disseminations, and foliation parallel blebs 2 to 5mm in size. The upper silicified contact zone with the overlying mafic volcanics contains abundant (10 to 12%), fine disseminations and coarse aggregations of pyrite that are weakly foliated parallel to the contact/shearing orientation. Most larger (5 to 15cm) shear foliated zones are moderately sheared and oriented at 20 to 35 degrees to the core axis, however some foliation is oriented at 40 to 65 degrees to the core axis. Competent section, but relatively broken into 2 to 20 cm pieces often along chloritic fractures oriented at various angles to the core axis. Lower contact with black mafic volcanics is poorly recovered, but appears to be relatively sharp at 40 degrees to the core axis.	1972	118.00 119.00	1.00	.37	5.50	0.25%	2-3%			
		1973	119.00 120.00	1.00	.13	1.60	TRACE	2-3%			
		1974	120.00 120.60	.60	.03	1.30	0.25%	2-3%			
		1975	120.60 121.25	.65	.01	1.20	-	1%			
		1976	121.25 122.25	1.00	.02	1.20	-	1%			
		1977	122.25 123.00	.75	.16	1.20	TRACE	2-3%			
		1978	123.00 124.00	1.00	.39	1.30	MINOR	2-3%			
		1979	124.00 125.40	1.40	.11	1.10	-	1-2%			
		1980	125.40 126.20	.80	.08	1.20	MINOR	2-3%			
		1981	126.20 127.10	.90	.03	1.10	TRACE	2%			
		1982	127.10 128.00	.90	.08	1.20	-	2-3%			
		1983	128.00 129.00	1.00	.09	1.30	0.25%	2-3%			
		1984	129.00 130.00	1.00	.04	1.20	TRACE	2-3%			
		1985	130.00 131.35	1.35	.07	1.20	MINOR	3-4%			
		1986	131.35 131.70	.35	.01	1.10	-	2-3%			
		1987	131.70 133.00	1.30	.02	1.30	0.25%	2-3%			
		1988	133.00 134.00	1.00	.19	2.20	MINOR	2-4%			
		1989	134.00 135.00	1.00	.14	2.10	TRACE	2-3%			
106.65 107.65	Silicified metavolcanic. Black, hard, siliceous, moderately vuggy, moderately magnetic, non-calcareous, silicified mafic metavolcanic. Contains several boudinaged and contorted intrusive fragments suggesting the zone is well sheared. Weak shearing foliation, locally moderately developed, is oriented at 40 to 45 degrees to the core axis. No significant veining. Minor to 0.5% finely disseminated pyrite. Lower contact is a sharp intrusive contact oriented at 50 degrees to the core axis. Section is well broken into 1 to 9 cm irregular pieces.	1990	135.00 136.00	1.00	.18	1.70	-	1-2%			
		1991	136.00 136.75	.75	.10	2.00	TRACE	2-3%			
		1992	136.75 137.90	1.15	.03	1.70	0.5%	2%			
		1993	137.90 138.85	.95	.05	2.00	TRACE	2-3%			
		1994	138.85 139.65	.80	.03	1.30	-	2-3%			
		1995	139.65 140.65	1.00	.02	1.50	0.5%	2-4%			
		1996	140.65 142.00	1.35	.24	1.20	MINOR	2-4%			
		1997	142.00 142.75	.75	.16	1.00	TRACE	2-3%			
		1998	142.75 143.25	.50	.32	.80	TRACE	1-2%			
		1999	143.25 144.05	.80	.03	.70	-	1-2%			
107.65 110.65	Medium grey, weak to moderately silicified and very weakly sericitized with a zone of intense silica flooding between 108.80 to 109.10 metres. The latter is vuggy, contains some white/cream coarsely crystalline calcite patches/blebs fringed in chlorite, and often contains abundant fine metallic grey minerals generally coating/rimming pyrite blebs. No significant quartz veining. Most biotite is partially altered to chlorite.	2000	144.05 145.15	1.10	.19	.80	TRACE	2%			
		8001	145.15 146.00	.85	.07	.50	MINOR	2-3%			
		8002	146.00 147.50	1.50	.10	1.90	MINOR	2-3%			
		8003	147.50 149.00	1.50	.17	1.80	TRACE	2-3%			
		8004	149.00 150.00	1.00	.38	1.10	TRACE	2%			
		8005	150.00 151.35	1.35	.44	1.10	-	2%			
		8006	151.35 152.15	.80	.26	1.30	-	2-3%			
		8007	152.15 152.90	.75	.21	1.20	-	2-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Moderately broken and fractured section, with irregular 2 to 10 cm pieces.	8008	152.90 154.00	1.10	.46	1.40	0.5%	2-3%			
		8009	154.00 154.80	.80	.29	1.20	0.5%	2-3%			
110.65 112.00	Medium pink, relatively unaltered intrusive containing one, 5cm, light orange, albite vein, minor irregular fracturing/slips, minor, thin (hairline to 1mm), bluish quartz veinlets, and numerous chloritic fractures oriented at a shallow (20 to 30 degrees) angles to the core axis. No significant veining. Moderately broken and fractured section, with 1 to 10 cm irregular pieces.	8010	154.80 156.00	1.20	.20	1.00	0.5%	2-3%			
		8011	156.00 157.30	1.30	.18	.80	TRACE	2-4%			
		8012	157.30 158.25	.95	.25	1.20	MINOR	2-3%			
		8013	158.25 158.75	.50	.03	.90	0.25	2-3%			
		8014	158.75 160.10	1.35	.02	.90	TRACE	1-2%			
		8015	160.10 161.20	1.10	.22	.90	-	2%			
		8016	161.20 162.00	.80	1.40	5.60	MINOR	2%			
112.00 115.80	Medium grey to light grey, weakly and locally moderately silicified, with very weak to weak sericitization. Biotite partially chloritized, and locally sericitized, with several, thin (1 to 5cm), silica flood patches, and several thin (1 to 5mm), subplanar quartz veins. Minor grey mineralization is associated with the later. One, 5mm, subplanar quartz vein at 112.40m, oriented at 45 degrees to the core axis, contains abundant purple molybdenite along both vein contact edges. Section includes a zone of intense silica flooding between 114.90 to 115.30m also containing minor metallic grey minerals. Section is vuggy and well broken into pieces generally less than 10cm, with numerous rubble zones. Pyrite forms fine disseminations and grains that are concentrated on fractures.	8017	162.00 163.00	1.00	.05	.90	0.25%	2%			
		8018	163.00 164.00	1.00	.22	1.20	TRACE	1-2%			
		8019	164.00 164.80	.80	.63	3.80	TRACE	1-2%			
		8020	164.80 166.10	1.30	.13	1.20	-	1%			
		8021	166.10 167.50	1.40	.03	1.00	-	0.5%			
		8022	167.50 168.50	1.00	.14	.80	MINOR	1-2%			
		8023	168.50 170.00	1.50	.01	1.00	MINOR	2%			
		8024	170.00 171.00	1.00	.02	1.10	-	2%			
		8025	171.00 172.00	1.00	.03	1.20	-	2%			
		8026	172.00 173.00	1.00	.03	1.20	-	2%			
		8027	173.00 174.50	1.50	.01	1.30	-	2-3%			
		8028	174.50 176.00	1.50	.01	1.40	-	2%			
		8029	176.00 177.50	1.50	.02	.70	-	1-2%			
		8030	177.50 179.00	1.50	.03	.90	-	1-2%			
115.80 116.50	Pink, relatively unaltered intrusive, with weakly chloritized biotite and minor, thin (1 to 3mm), planar quartz veining.	8031	179.00 180.20	1.20	.04	1.20	-	1-2%			
		8032	180.20 181.00	.80	.02	.80	-	1-2%			
		8033	181.00 182.35	1.35	.01	.60	-	1-2%			
116.50 120.60	Light grey, weak to moderately silicified and very weak to weakly sericitized intrusive with a few, thin (1 to 10cm), irregular, intensely silicified silica flood zones. Biotite is generally weakly chloritized to completely sericitized in the intensely silicified zones. Section includes some very vuggy and broken core. Section contains 10%, silica patches/flood zones in addition to pervasive silicification, but only contains a few, thin (2 to 5mm), blue-white, planar quartz veins. 2 to 4% pyrite, as fine disseminations concentrated along fractures, and as larger	8034	182.35 183.05	.70	.02	1.50	-	MINOR			
		8035	183.05 184.00	.95	.08	5.10	-	1%			
		8036	184.00 185.30	1.30	.13	1.30	-	1%			

Interval (Metres)		Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
		(1 to 5mm), coarsely crystalline aggregates. Abundant, chloritic, planar fractures, mostly oriented at 55 to 80 degrees to the core axis.										
120.60	122.25	Medium pink, relatively unaltered, coarse grained, plagioclase porphyritic intrusive also containing 5 to 10%, 1 to 3mm, ovoid, blue-white quartz phenocrysts, and 10%, black biotite. Minor, thin (1 to 3mm), subplanar, blue quartz veinlets, but no significant veining. Competent section with 5 to 20 cm breakage, generally along planar, chloritic fractures, mostly oriented at 50 to 75 degrees to the core axis.										
122.25	135.00	Light to medium grey, weak to moderately silicified and sericitized with several, small (1 to 10cm), irregular quartz vein zones often centering local intensely altered zones. Several of the latter sections contain minor, 0.5 to 2cm, irregular, white, coarsely crystalline calcite/carbonate often fringed by a 1mm wide halo of chlorite. Section is vuggy, well broken, and moderately fractured, with sericitic coatings on fractures. Generally 2 to 4% finely disseminated pyrite concentrated on fractures, and minor amounts of grey metallic mineralization. Well broken section, generally with 1 to 10cm breakage, and numerous rubble zones.										
135.00	136.75	Pinkish grey to medium grey or slightly greenish grey, medium to coarse grained, very weak to weakly silicified, but locally finer (0.5 to 1mm) grained, non-porphyritic and weak to moderately pervasively sericitized. Section is not as vuggy or broken as the more silicified sections. Minor, irregular quartz veining centering zones with trace amounts of disseminated metallic grey minerals. Well broken section with breakage ranging from 1 to 10cm in size, but generally 1 to 3cm somewhat rubbly breakage.										
136.75	137.90	50%, light grey to white, moderately to intensely silicified and sericitized intrusvie, with a large zone (50%) of quartz veining. Veining is clean, coarse grained, white, includes several intensely, altered wallrock										

Interval (Metres)		Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
		inclusions, and has a cracked-ice appearance. Locally, along the vein edges are small (1 to 3cm), irregular, white, coarsely crystalline carbonate minerals. A few, small, greenish fuchsite grains locally visible. Section contains 2 to 3% finely disseminated pyrite, and 0.5% finely disseminated needles of a grey metallic minerals. Moderately fractured and broken into 1 to 10cm pieces. Fractures are often sericite coated.										
137.90	152.90	25%, thin (10 to 50cm), pinkish grey, massive, biotitic, plagioclase porphyritic, coarse grained, relatively unaltered, typical quartz diorite intrusive, 50%, medium grey, weakly silicified and sericitized intrusive generally with chloritized biotite, and 25%, moderately and very locally intensely altered (silicified and sericitized) intrusive, that generally occurs adjacent to irregular quartz veining. Unaltered zones contain 0.5%, finely disseminated pyrite, are massive, moderately broken along fractures oriented at 50 to 80 degrees to the core axis, and generally contain no quartz veining. Altered sections, contain 2 to 4% pyrite generally concentrated on fractures, 5%, irregularly shaped and oriented, generally large (1 to 5cm), coarse grained, white quartz veins, and a few, thin (1 to 10cm), shear foliated zones. Weak shear foliation at 139.65 to 139.70m is oriented at 50 degrees to the core axis, but a large zone between 46.20 to 46.40m is oriented at 25 degrees to the core axis and contains 2 to 5% finely disseminated molybdenite along the slip surfaces. Altered sections are somewhat vuggy, and rubbly to well broken into 1 to 10 cm size pieces. Section also includes a medium grey mottled, weakly silicified and weakly carbonate altered zone between 151.25 to 152.15 metres.										
152.90	163.00	Generally light to medium slightly greenish grey, moderately altered intrusive with 25%, weakly altered, and 15%, white, intensely silicified and sericitized zones. This section is more sericitic than most of the other overlying intrusive sections. Biotite is generally										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	completely chloritized or sericitized. Unit contains 2 to 4%, pyrite as disseminations concentrated on fractures, and minor to 0.5%, extremely finely disseminated, metallic grey minerals concentrated in intensely silicified alteration zones, often adjacent to irregular quartz veining. Alteration (silicification and sericitization) is pervasive, although concentrated along fractures and irregular veining. The most intensely altered zones are extremely vuggy and broken, with 1 to 5cm breakage and numerous rubble zones. Section contains 10%, irregular quartz veining/patches, often including chloritic fringed carbonate grains. Section contains abundant fractures, often with chloritic or sericitic coatings. The coarse grained, porphyritic appearance of the original intrusive is still apparent but quite subdued due to the pervasive alteration. Weak foliation oriented at 45 to 60 degrees to the core axis is locally apparent, but section is generally massive.										
163.00 164.80	Slightly pinkish to brownish medium grey, with a coarse mottled appearance typical of the overlying section, and most of those below. Upper part of the intrusive, though variably altered, is not as mottled or subdued as as sections below 152.90 metres. This section and lower sections are also not as vuggy or broken, although some rubble sections occur. Section is generally weakly silicified, sericitized and carbonatized. No significant veining. Moderately broken section with 5 to 25 cm pieces. Minor finely disseminated metallic grey minerals, and 1 to 2% disseminated pyrite.										
164.80 167.50	Pink to red, medium grained, relatively unaltered, and mottled medium pinkish to brownish grey intrusive as above. Locally weakly shear foliated at 50 to 60 degrees to the core axis. No significant veining. Section does not contain visible grey metallic mineralization. A few fractures exhibit thin calcite coatings. Moderately competent section, generally with 5 to 50 cm breakage.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
167.50 176.00	Slightly pinkish to greenish grey, subdued and mottled, weak to moderately silicified, sericitized and carbonatized. Section exhibits a pervasive alteration with no significant veining. Section is locally weakly to moderately shear foliated at 50 to 70 degrees to the core axis. Locally contains minor metallic grey minerals, including some molybdenum along shear slips. Section is not vuggy and relatively competent, generally with 25 to 75cm breakage along planar fractures oriented at various angles to the core axis though mostly between 25 to 70 degrees.										
176.00 180.20	Shear foliated intrusive. Same as the overlying medium brownish grey section, but well sheared and cut by abundant, thin (hairline), anastomosing crackle veinlets of carbonate-epidote that increases in intensity down the hole. Shear foliation generally sericitic and oriented at 60 degrees to the core axis. No significant quartz veining. 1 to 2% fine pyrite, often concentrated on shear foliation surfaces. Section is relatively broken, generally into 3 to 10 cm irregular pieces, with the bottom part between 179.00 and 180.20m a well broken rubble zone.										
180.20 182.35	Quartz Vein Breccia Zone. Brecciated brownish to greenish grey, moderately altered intrusive as above, but broken into 0.5 to 2cm angular fragments, occurring in 20%, milky white quartz matrix. Lower contact along a calcitic fault breccia oriented at 20 degrees to the core axis. Hard, silicified, relatively competent unit with 10 to 50 cm breakage.										
182.35 183.05	Fault Zone. Incompetent, fault breccia/gouge zone, containing 60%, 2mm to 2cm, angular, polymictic fragments in 40%, greenish to cream coloured, clay-like carboante-calcite rich matrix. Soft incompetent section. Upper contact sharp at 25 degrees to the core axis. Lower contact sharp and planar at 60 degrees to the core axis.										
183.05 185.30	Shear foliated intrusive. Similar to 176.00 to 180.20 metres. Medium brownish grey, mottled, moderately altered,										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	and locally weak to moderately shear foliated at 70 degrees to the core axis. No significant veining. Numerous fractures, often with thin (1 to 5mm), incompetent calcitic altered bands. Relatively broken zone, with 5 to 15 cm breakage. Several fractures have 1 to 2mm sericitic calcite coatings. Lower contact with mafic metavolcanic is weakly sheared, but planar at 70 degrees to the core axis.										
185.30 194.00	SHEARED/SCHISTOSE MAFIC METAVOLCANIC										
	Dark greenish black, fine grained, mostly weakly to moderately shear foliated. Unit is particularly sheared near upper contact with the overlying fault zone. Weakly magnetic. Unit locally contains minor plagioclase phyric, massive slivers/fragments within the finer grained sheared matrix. Locally weakly carbonate and epidote altered in weakly sheared zones. Shearing oriented at 55 to 70 degrees to the core axis. A few, thin slivers of quartz diorite intrusive material also occur within sheared zones.	NS	185.30	194.00	8.70	n/a	n/a	-	MINOR		
		8037	185.30	186.00	.70	.03	.70	-	0.5%		
		8038	186.00	187.00	1.00	.01	1.30	-	MINOR		
		8039	187.00	188.00	1.00	.01	.70	-	MINOR		
		8040	188.00	189.50	1.50	.02	.90	-	MINOR		
		8041	189.50	191.00	1.50	.02	.90	-	MINOR		
		8042	191.00	192.50	1.50	.03	1.00	-	MINOR		
		8043	192.50	194.00	1.50	.10	.90	-	MINOR		
	Minor quartz-calcite veining, generally as thin (1 to 5mm), subplanar veins that are locally broken.										
	Lower contact not encountered.										
	194.00 End of Hole.										

ESSO MINERALS CANADA

SUMMARY DRILL LOG

Project Name: HN

Hole Number: HN88-40

Project Number: 1677

Logged By: M.H. Lenters

NTS: 42H/8

Date: October 1988

Location: L40+50W, 9+50S

Claim Number: L-871912

Azimuth: 360°. Dip: -45°.

Length (m): 242

PURPOSE: Intersect shear/mylonite zone encountered in HN88-28.

From (m)	To (m)	Description CASING REMAINS IN HOLE	Gold Assays (g/tonne)
0.0	13.00	Overburden	
13.00	25.15	Relatively Unaltered Granodiorite Intrusive Generally light pink, hard, massive, weakly plagioclase porphyritic intrusive. Contains 5% quartz veining which often centers thin (5 to 30 cm), moderately silicified and weakly sericitized, light grey, alteration zones, generally containing 1 to 2% pyrite and locally, minor amounts of grey metallic minerals. Unit also contains a few, thin (5 cm) shear foliated, siliceous bands oriented at 25° to CA.	0.01 - 0.16 (4)
25.15	27.75	Mafic Metavolcanic Xenolithic Inclusion Dark green-black, very fine-grained, calcitic, strongly magnetic massive to foliated mafic metavolcanic inclusion. 5%, thin calcitic, tension microfracturing. Minor, thin, offset and boudinaged quartz veinlets. Minor pyrite.	0.01 - 0.02 (3)
27.75	78.20	Variably Altered Granodiorite Intrusive 65 to 75%, pink-red, relatively unaltered granodiorite intrusive with 25 to 35%, 1 to 30 cm bands and zones of light grey to white (bleached), weak to moderately and locally intensely silicified and sericitized intrusive often occurring within zones of quartz veining. Unaltered sections are massive, coarse-grained (2 mm), with 5 to 10%, large (2 to 5 mm), subhedral plagioclase phenocrysts, 10%, 1 to 3 mm, ovoid, bluish quartz grains, 10 to 15% biotite, and 0.5% disseminated pyrite, in a pinkish (hematitic), fine-grained, plagioclase rich matrix. 5 to 10%, irregular to subplanar, quartz veining/silica flooding. Locally 0.5 to 3% pyrite and trace amounts of grey metallic minerals associated with more altered zones/bands and quartz veining containing coarse almond-white calcite.	0.01 - 0.15 (38)
78.20	81.90	Foliated Quartz-Feldspar Porphyry Dyke Slightly pinkish-brown, homogeneous, "augen-gneissic" dyke, containing 20% coarse (2 to 3 mm), rounded quartz phenocrysts, and lesser subhedral plagioclase in a well foliated, hematitic stained, biotitic matrix. Foliated at 20° to CA. No significant veining. Minor disseminated pyrite.	0.10 - 0.90 (4)
81.90	112.25	Weak to Moderately Altered Granodiorite Intrusive 35%, pink, very weakly altered to unaltered; 50%, light grey to white, weakly altered; and 15%, white, quartz veined, moderately to intensely altered intrusive. Similar to intrusive above the overlying intervening dyke, but with somehwat larger and more intense alteration zones/bands. Locally exhibits a weak foliation at 30 to 50° to CA. 5 to 10%, thin, irregular quartz veining. 0.5 to 4% disseminated pyrite, and locally minor amounts of grey metallic mineralization associated with more intensely altered and	0.01 - 0.29 (30)

From (m)	To (m)	Description HN88-40	Gold Assays (g/tonne)
		quartz veined zones.	
112.25	114.00	Mafic Metavolcanic Xenolithic Inclusion Dark brownish to greenish-grey, fine-grained, homogeneous, very weakly magnetic, strongly calcareous, with a weak to moderately well developed foliation oriented at 20° to CA. No veining. 1% fine cubic pyrite.	0.01 (2)
114.00	242.00	Weak to Moderately Altered Granodiorite Intrusion 114.00-124.50 White, weak to moderately silicified and sericitized, with local intensely silicified bands in an intrusive similar to that in upper part of the hole. 10 to 15%, irregular branching quartz veining. 1 to 3% disseminated pyrite and minor grey metallic minerals generally associated with intensely silicified zone adjacent to quartz veining. 124.50-242.00 Similar to upper section but slightly less altered. 35% pink-purple, relatively unaltered to weakly altered; 50%, light to medium grey, weakly silicified and sericitized; and 15%, light grey to white, moderately to intensely altered intrusive. 5 to 10%, thin (2 to 50 mm), irregular to subplanar quartz veining, as well as minor silica flood bands. 1 to 2% pyrite, as well as minor grey metallic minerals often adjacent to quartz veining.	0.01 - 0.89 (108)
	242.00	END OF HOLE	

Drilled by:	Bradley Bros. Limited	Azimuth:	360	Claim No:	L-871912
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	40+50W
Casing:	Casing Left in Hole			Northing:	9+50S
		Acid Tests:		Elevation:	Level
Started:	Oct. 16, 1988				
Finished:	Oct. 18, 1988	Depth Az. Dip		Purpose:	Test structure encountered in HN88-28
		13.00	-45.0		
Logged by:	M.H.Lenters	113.00	-43.5	Length:	242.00Metres
Date logged:	October 1988	213.00	-39.5	Vert. Proj:	164.0 Metres
Logging Method:	Log II			Hor. Proj:	178.0 Metres
Measurement System:	Metric			Ovb. Depth:	9.3 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)		Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 13.00	OVERBURDEN											
13.00 25.15	FELDSPAR PORPHYRITIC QUARTZ DIORITE INTRUSIVE - UNALTERED	NS	13.00	25.15	12.15	n/a	n/a	TRACE	0.5%	UN-MOD	UN-WK	UN-V.WK
		8044	16.00	17.00	1.00	.04	.80	TRACE	0.5%			
		8045	17.00	18.50	1.50	.16	.80	TRACE	0.5-1%			
		8046	18.50	20.00	1.50	.02	.80	TRACE	0.5-1%			
		8047	24.00	25.15	1.15	.01	.80	-	0.5%			

Generally unaltered, light pink, leucocratic, coarse grained, massive, weakly plagioclase porphyritic intrusive. Plagioclase phenocrysts are white, subhedral, 2 to 5mm, and occasionally up to 1cm in size. Unit also contains 10%, bluish quartz phenocrysts that are 2 to 3mm and subrounded, as well as 10 to 15%, black biotite.
Unit is generally unaltered but contains 5% altered zones that are bleached white where moderately silicified and weakly sericitized. These generally occur as thin, relatively sharply bounded zones to more diffuse patches that are from 1cm to 10's of cm wide, and usually centred by thin (2 to 10mm), subplanar, bluish quartz veins.
Generally 5%, thin (2 to 10mm), irregular branching to subplanar quartz veins oriented at 20 to 70 degrees to the core axis.
Locally weak to moderately shear foliated at 25 degrees to the core axis, [illegible]
Minor to 0.5% disseminated pyrite, with 1% pyrite and minor amounts of

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	ALTERATION CARB	ALTERATION SER
	grey metallic mineralization associated with the white alteration zones. Competent, hard core, but moderately broken, generally into 3 to 10 cm lengths along planar chloritic fractures oriented at 45 to 70 degrees to the core axis. Lower contact with volcanic inclusion is sharp at 80 degrees to the core axis.										
25.15 27.75	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Dark greenish to greyish black, very fine grained, calcitic, strongly magnetic, homogeneous, massive to foliated mafic metavolcanic inclusion(?).	NS	25.15	27.75 2.60	n/a	n/a	-	MINOR			
		8048	25.15	26.00 .85	.02	.70	-	MINOR			
		8049	26.00	27.00 1.00	.01	.50	-	MINOR			
	Same as uppermost part of HN88-22, although that unit was considered a metasediment.	8050	27.00	27.75 .75	.01	.50	-	MINOR			
	Unit contains 5%, hairline, calcite tension microfracturing forming abundant ladder, herring-bone, and en echelon patterns, as well as a few, thin (1 to 3mm) quartz veinlets which exhibit boundinaging and are locally discontinuous within the foliated zones. Other quartz veins are slightly offset along the calcitic microfracturing. Foliation is well developed in lower part where it is occasionally folded or wavy and oriented at 0 to 35 degrees to the core axis. Unit includes a few, small (1 to 10cm), irregular and broken intrusive fragments near the upper contact. Unit is relatively hard and competent with 10 to 50cm irregular breakage. Lower contact with intrusive is sharp, but sheared and oriented at 10 to 25 degrees to the core axis.										
27.75 78.20	FELDSPAR PORPHYRITIC QUARTZ DIORITE INTRUSIVE - UNALTERED										
	65 to 75%, pink, relatively unaltered granodiorite intrusive, cut by 1 to 30 cm bands and zones of white (bleached), weak to moderately silicified and sericitized material often centred by thin, (1 to 5mm), irregularly oriented branching and crosscutting quartz veining. Much of the white altered bands contain black biotite even though the zones are well bleached. Only in moderately to intensely altered, well quartz veined altered zones/bands is the biotite chloritized and locally sericitized.	NS	27.75	78.20 50.45	n/a	n/a	MINOR	0.5-3%	UN-MOD	-	UN-WK
		8051	27.75	29.00 1.25	.02	.80	TRACE	0.5-1%			
		8052	31.00	31.90 .90	.03	.80	-	0.5-1%			
		8053	31.90	32.50 .60	.02	.60	MINOR	2-3%			
		8054	32.50	33.00 .50	.12	.90	-	2-3%			
		8055	33.00	34.00 1.00	.03	.80	TRACE	1-2%			
		8056	34.00	35.00 1.00	.03	2.40	TRACE	1-2%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Altered zones are generally somewhat vuggy and moderately broken.	8057	35.00	36.50	1.50	.09	1.20	TRACE	1%		
	Unaltered sections of the unit are generally massive, coarse grained (2mm), containing 5 to 10%, large, (2 to 5mm), subhedral, pinkish plagioclase phenocrysts, 10%, 1 to 3mm, ovoid, bluish quartz, 10 to 15%, black biotite, and 0.5% finely disseminated pyrite. Phenocrysts occur in a finer grained plagioclase +/- silica rich, pinkish (hematitic?) matrix.	8058	36.50	38.00	1.50	.02	1.30	MINOR	1-2%		
		8059	38.00	39.50	1.50	.15	4.30	TRACE	1%		
		8060	39.50	41.00	1.50	.03	1.80	TRACE	0.5-1%		
		8061	41.00	42.50	1.50	.02	1.00	TRACE	0.5%		
		8062	42.50	42.90	.40	.01	1.20	-	2-3%		
	5%, thin (1 to 5mm) but up to 1.5cm in size, irregular to subplanar quartz veining. Subplanar veins are generally oriented at 45 to 65 degrees to the core axis and often crosscutting from opposite angles. Minor coarse grained, white calcite is associated with some quartz veining in altered zones.	8063	42.90	44.50	1.60	.03	2.80	TRACE	0.5-1%		
		8064	44.50	45.60	1.10	.02	2.40	MINOR	2-3%		
		8065	45.60	47.00	1.40	.01	1.20	TRACE	1-2%		
		8066	53.00	54.50	1.50	.02	1.30	TRACE	1%		
	Unit contains several mottled, medium grey, well silicified/silica flooded +/- sericitized shear bands. The largest of these bands occur between:	8067	54.50	55.50	1.00	.10	9.90	MINOR	2%		
		8068	55.50	56.00	.50	.03	1.00	0.25%	2%		
		8069	56.00	57.35	1.35	.01	.90	-	0.5%		
		8070	57.35	57.80	.45	.02	1.00	MINOR	1-2%		
	31.90 32.10 Oriented at 30 degrees to the core axis.	8071	57.80	59.00	1.20	.02	1.10	TRACE	0.5-1%		
	32.70 32.80 Oriented at 30 degrees to the core axis.	8072	61.00	62.00	1.00	.03	.80	-	0.5-1%		
	42.50 42.70 Oriented at 40 to 55 degrees to the core axis.	8073	62.00	63.00	1.00	.03	1.10	TRACE	0.5-1%		
	61.75 61.90 Oriented at 50 to 55 degrees to the core axis.	8074	63.00	64.00	1.00	.01	.60	TRACE	1-2%		
	62.00 62.10 Oriented at 40 degrees to the core axis.	8075	64.00	65.00	1.00	.02	.80	-	1%		
	62.40 62.60 Oriented at 30 to 35 degrees to the core axis.	8076	65.00	65.80	.80	.03	.80	MINOR	1-2%		
	White alteration bands appear more like zones exhibiting a bleaching of feldspar and hematite, and are not as silicified and much less sericitized than the white alteration zones in other drill holes.	8077	65.80	66.50	.70	.02	1.70	0.5%	2-3%		
		8078	66.50	68.00	1.50	.01	1.30	TRACE	0.5-1%		
		8079	68.00	69.50	1.50	.01	2.30	MINOR	1-2%		
	White alteration bands often exhibit sharp changes across a few mm from the pink unaltered zones. All quartz veins do not alter the adjacent wallrock, as several quartz veins cut through unaltered pink coloured zones.	8080	69.50	71.00	1.50	.02	1.20	TRACE	2%		
		8081	71.00	72.35	1.35	.01	.90	TRACE	1-2%		
		8082	72.35	73.00	.65	.03	1.00	-	3-4%		
		8083	73.00	74.00	1.00	.01	.80	-	2-3%		
	0.5 to 2% disseminated pyrite, and trace to minor amounts of disseminated grey metallic minerals. Locally, the coarsest metallic grey minerals appear to be associated with quartz veins containing coarse grained, white calcite.	8084	74.00	75.00	1.00	.01	.90	MINOR	2%		
		8085	75.00	75.70	.70	.03	.70	0.5%	1-2%		
		8086	75.70	76.10	.40	.02	.90	TRACE	1%		
		8087	76.10	76.65	.55	.02	.80	0.5-1%	1-2%		
	Unit is moderately well broken with unaltered zones exhibiting 5 to 25cm breakage, often along chloritic coated, planar fractures generally oriented at 40 to 70 degrees to the core axis.	8088	76.65	78.20	1.55	.01	.60	TRACE	0.5-1%		
	Altered zones are vuggy and well broken, generally into 1 to 10cm pieces with some rubble zones.										

Interval (Metres)	Description	Sample No.	Interval (Metres)		Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Lower contact is a sharp intrusive dyke contact oriented at 35 degrees to the core axis.											
78.20 81.90	WELL FOLIATED QUARTZ FELDSPAR PORPHYRY DYKE											
	Slightly pinkish brown with 20%, coarse (2mm), subrounded quartz phenocrysts in finer grained, foliated, hematitic stained, biotitic matrix.	NS	78.20	81.90	3.70	n/a	n/a	-	MINOR			
	Unit called augen gneissic in HN88-24 where it was first encountered and where it is slightly auriferous.	8089	78.20	79.00	.80	.31	1.40	-	MINOR			
	Well foliated at 20 degrees to the core axis, with moderate (10 to 50cm) fracturing paralleling the foliation orientation.	8090	79.00	80.00	1.00	.10	1.10	-	MINOR			
	Unit is very homogenerous in appearance, contains no veining, and only minor amounts of finely disseminated pyrite.	8091	80.00	81.00	1.00	.17	1.20	-	MINOR			
	Upper and lower contacts are sharp intrusive dyke contacts oriented at 35 to 40 degrees to the core axis.	8092	81.00	81.90	.90	.04	1.20	-	MINOR			
81.90 112.25	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED											
	35%, Pink, very weakly altered to unaltered; 50%, light grey to white to mottled light brownish grey, weakly altered; and 15%, white, well quartz veined, moderately to intensely altered intrusive.	NS	81.90	112.25	30.35	n/a	n/a	MINOR	1-2%	UN-INT	UN-WK	UN-MOD
	Similar to the other half of this intrusive unit between 27.75 to 78.20 metres, above the overlying dyke, but with somewhat larger and slightly more intensely altered zones, as well as less intervening unaltered intrusive material.	8093	81.90	83.00	1.10	.19	3.20	0.25%	2-3%			
		8094	83.00	84.00	1.00	.02	.90	MINOR	2-3%			
		8095	84.00	84.85	.85	.03	.70	TRACE	1-2%			
		8096	84.85	85.55	.70	.29	12.80	0.5%	2-3%			
		8097	85.55	86.00	.45	.01	2.30	0.25%	1-2%			
		8098	86.00	87.00	1.00	.01	.90	MINOR	2-3%			
	Quartz veining is similar to the upper part of this unit above the dyke, but includes several veins that are parallel to the core axis, producing long core intersections with moderately to intensely altered material.	8099	87.00	88.00	1.00	.02	.70	TRACE	0.5-1%			
		8100	88.00	88.50	.50	.01	.80	MINOR	1-2%			
		8101	88.50	89.00	.50	.01	.70	-	0.5%			
	This unit does not contain shear bands like the other half of this intrusive above the dyke, but exhibits local zones with a weak shearing foliation that is oriented at 30 to 50 degrees to the core axis.	8102	89.00	90.00	1.00	.02	.60	-	3-5%			
		8103	90.00	90.85	.85	.02	.60	-	2-3%			
		8104	90.85	92.05	1.20	.02	.80	-	2-4%			
	Lower contact with the mafic dyke-xenolith? is poorly recovered, but appears to be very sharp, though irregular, and oriented at a relatively shallow angle to the core axis.	8105	92.05	93.50	1.45	.01	.70	-	2-4%			
		8106	93.50	95.00	1.50	.02	1.00	-	2-3%			
		8107	95.00	96.00	1.00	.01	.90	TR-MNR	2-3%			
		8108	96.00	96.80	.80	.02	.80	MINOR	2-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
		8109	96.80 98.00	1.20	.01	.90	-	0.5%			
		8110	98.00 98.75	.75	.03	.80	TRACE	0.5%			
		8111	98.75 100.40	1.65	.02	3.00	MINOR	1-3%			
		8112	100.40 101.00	.60	.02	.90	-	0.5%			
		8113	101.00 101.70	.70	.04	1.10	TRACE	2-3%			
		8114	101.70 103.00	1.30	.02	.90	MINOR	1-2%			
		8115	103.00 103.65	.65	.02	1.00	MINOR	1-2%			
		8116	103.65 105.00	1.35	.01	.90	-	1%			
		8117	105.00 106.00	1.00	.02	1.10	TRACE	1-2%			
		8118	106.00 107.10	1.10	.02	.80	MINOR	1-2%			
		8119	107.10 108.50	1.40	.02	1.00	TRACE	1-2%			
		8120	108.50 109.65	1.15	.01	1.10	TRACE	1-2%			
		8121	109.65 110.55	.90	.02	1.00	-	0.5-1%			
		8122	110.55 112.25	1.70	.01	1.60	0.25%	2-3%			
112.25 114.00	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Very dark brownish to greenish grey, fine grained, very homogeneous, very weakly magnetic, strongly calcareous, with a weak to moderate foliation defined by the orientation of fine chlorite+/-biotite at 20 degrees to the core axis. This unit is probably a mafic volcanic xenolith inclusion, but could possibly be a mafic dyke.	NS	112.25 114.00	1.75	n/a	n/a	-	1%			
		8123	112.25 113.00	.75	.01	1.40	-	1%			
		8124	113.00 114.00	1.00	.01	1.40	-	1%			
	Unit contains no veining.										
	1%, Fine (0.5mm), cubic pyrite crystals disseminated throughout the unit.										
	Numerous chloritic fractures, generally oriented at shallow angles (0 to 30 degrees) to to the core axis.										
	Well broken, rubby unit, with breakage along fractures at shallow angles to to the core axis.										
	Upper and lower contacts are sharp, but slightly irregular, and oriented at approximately 20 degrees to the core axis.										
114.00 242.00	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED										
	114.00 124.50 White, weak to moderately silicified and sericitized, with local intensely silicified bands. 10 to 15%, irregularly oriented and branching to subplanar veining. Veining is	NS	114.00 242.00	128.00	n/a	n/a	MINOR	2-3%	UN-MOD	UN-WK	UN-MOD
		8125	114.00 115.00	1.00	.02	1.50	0.25%	2-3%			
		8126	115.00 116.00	1.00	.01	1.20	MINOR	1-2%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	somewhat more abundant, as well as larger (1 to 5cm), within this upper part. Subplanar veins are variably oriented, and often criss-crossing, although most are oriented at 45 to 50 degrees to the core axis. They are white, clean, coarse grained, and contain only minor amounts of wallrock inclusions, pyrite and metallic grey mineralization. Unit is coarse grained with the porphyritic character difficult to observe, due to the lack of colour variation with the unit. However, the porphyritic character is still apparent. Unit is somewhat porous or vuggy. 2 to 3% disseminated pyrite, generally concentrated near veining and along fractures. Moderately broken unit, with a few rubble sections. No shear foliated bands are apparent.	8127	116.00 117.50	1.50	.02	.90	MINOR	2-3%			
		8128	117.50 119.00	1.50	.02	1.80	0.25%	2-3%			
		8129	119.00 120.00	1.00	.02	2.20	TR-MNR	2-3%			
		8130	120.00 121.00	1.00	.16	1.70	TR-MNR	1-2%			
		8131	121.00 122.00	1.00	.18	7.20	0.5%	1-2%			
		8132	122.00 123.00	1.00	.06	3.50	0.25%	2%			
		8133	123.00 124.15	1.15	.13	2.00	0.25%	2-3%			
		8134	124.15 125.00	.85	.02	2.50	TRACE	1-2%			
		8135	125.00 126.50	1.50	.02	2.90	MINOR	1-3%			
		8136	126.50 128.00	1.50	.01	1.20	TRACE	1-2%			
		8137	128.00 129.05	1.05	.01	2.20	MINOR	2%			
		8138	129.05 131.10	2.05	.02	1.00	-	1-2%			
		8139	131.10 132.50	1.40	.01	1.70	TRACE	1-2%			
		8140	132.50 134.00	1.50	.03	1.50	MINOR	1-2%			
124.50 242.00	Similar to upper section, but consisting of 35% pink-purple to light pink-purple, relatively unaltered to very weakly altered zones; 50%, light to medium grey, weakly silicified and sericitized zones; and 15%, light grey to white moderate to intensely altered zones. Unit contains 5 to 10%, thin (1 to 5mm) to thicker (0.5 to 10cm), irregular to subplanar quartz veining. Minor shear foliated/silica flooded bands, that are generally oriented at 20 to 45 degrees to the core axis. These often exhibit smeared pyrite and moly on the slip surfaces. One, small (50cm), xenolithic inclusion occurs between 178.05 and 178.60m, including a minor fault clay/gouge in a well broken and lost core rubble zone between 178.50 and 178.60 metres. Inclusion is dark green, fine grained, well foliated at 20 degrees to the core axis, calcitic and non-magnetic. Contacts are oriented at approximately 20 to 25 degrees to the core axis. Quartz veining often contains minor amounts of grey metallic minerals surrounding pyrite.	8141	134.00 135.50	1.50	.02	1.50	-	1%			
		8142	135.50 137.00	1.50	.02	2.40	TRACE	1-2%			
		8143	137.00 138.50	1.50	.02	1.70	TRACE	1-2%			
		8144	138.50 140.00	1.50	.01	2.30	TR-MNR	1%			
		8145	140.00 141.50	1.50	.01	1.40	TR-MNR	1%			
		8146	141.50 143.00	1.50	.02	2.70	MINOR	1%			
		8147	143.00 144.50	1.50	.01	1.40	TRACE	1%			
		8148	144.50 146.00	1.50	.01	1.10	TRACE	1%			
		8149	146.00 147.20	1.20	.01	.80	-	0.5%			
		8150	147.20 148.00	.80	.02	1.70	0.25%	1%			
		8151	148.00 149.00	1.00	.02	2.50	0.25	1%			
		8152	149.00 150.50	1.50	.01	1.50	MINOR	1%			
		8153	150.50 152.00	1.50	.03	1.90	MINOR	1%			
		8154	152.00 153.50	1.50	.01	1.80	MINOR	1%			
		8155	153.50 155.00	1.50	.02	3.50	0.5%	1-2%			
		8156	155.00 156.00	1.00	.01	1.90	TR-MNR	1-2%			
		8157	156.00 157.00	1.00	.02	3.10	TRACE	1-2%			
		8158	157.00 158.15	1.15	.04	3.40	MINOR	1-2%			
Several fractures exhibit chloritic, and locally sericitic coatings.		8159	158.15 159.50	1.35	.18	3.90	TRACE	2-3%			
Moderately well fractured unit, with fracturing locally off-setting quartz veining across short (1 to 15mm) intervals.		8160	159.50 161.00	1.50	.03	3.60	TRACE	1-2%			
		8161	161.00 162.00	1.00	.06	4.60	TRACE	1-2%			
Moderately well broken core, with unaltered sections exhibiting 5 to 30		8162	162.00 163.00	1.00	.02	2.30	TRACE	0.5%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	cm breakage, and well altered sections generally including some rubble zones.	8163	163.00 164.00	1.00	.19	7.40	0.5%	1-2%			
	Lower contact not encountered.	8164	164.00 165.50	1.50	.04	2.20	MINOR	1-2%			
	242.00 End of hole.	8165	165.50 167.00	1.50	.22	2.10	TRACE	1%			
		8166	167.00 168.50	1.50	.29	1.60	-	0.5-1%			
		8167	168.50 170.00	1.50	.89	14.40	MINOR	0.5-1%			
		8168	170.00 171.50	1.50	.02	1.30	TRACE	0.5-1%			
		8169	171.50 173.00	1.50	.03	1.00	TRACE	0.5-1%			
		8170	173.00 174.50	1.50	.20	1.30	TRACE	0.5%			
		8171	174.50 176.00	1.50	.11	1.00	TRACE	0.5%			
		8172	176.00 177.50	1.50	.03	.90	-	0.5%			
		8173	177.50 178.05	.55	.26	1.30	-	0.5%			
		8174	178.05 178.60	.55	.22	1.20	-	0.5%			
		8175	178.60 179.00	.40	.63	2.10	-	MINOR			
		8176	179.00 180.50	1.50	.19	1.10	TRACE	1-2%			
		8177	180.50 182.00	1.50	.02	1.20	MINOR	1-2%			
		8178	182.00 183.00	1.00	.03	2.40	0.25%	1-2%			
		8179	183.00 184.00	1.00	.01	1.30	TRACE	1-2%			
		8180	184.00 185.00	1.00	.04	2.40	0.25%	2%			
		8181	185.00 185.60	.60	.02	2.30	0.25%	1-2%			
		8182	185.60 187.00	1.40	.01	1.20	TRACE	0.5-1%			
		8183	187.00 188.00	1.00	.01	1.10	-	0.5-1%			
		8184	188.00 189.00	1.00	.02	2.40	TRACE	1-2%			
		8185	189.00 190.00	1.00	.01	1.20	-	0.5-1%			
		8186	190.00 190.60	.60	.02	1.40	-	0.5-1%			
		8187	190.60 191.50	.90	.01	1.50	MINOR	1-2%			
		8188	191.50 192.70	1.20	.02	1.60	0.25%	1-2%			
		8189	192.70 194.00	1.30	.03	1.40	TRACE	1%			
		8190	194.00 195.50	1.50	.04	1.40	-	0.5%			
		8191	195.50 197.25	1.75	.01	.80	TRACE	0.5-1%			
		8192	197.25 197.75	.50	.02	1.00	0.25%	1-2%			
		8193	197.75 199.00	1.25	.01	.60	TRACE	0.5-1%			
		8194	199.00 200.00	1.00	.01	.40	-	0.5%			
		8195	200.00 201.50	1.50	.02	.70	MINOR	0.5%			
		8196	201.50 203.00	1.50	.01	7.90	-	0.5-1%			
		8197	203.00 204.00	1.00	.01	1.40	-	0.5-1%			
		8198	204.00 205.00	1.00	.30	11.60	MINOR	0.5-1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
		8199	205.00 206.00	1.00	.03	1.60	-	0.5-1%			
		8200	206.00 207.00	1.00	.01	1.00	-	0.5-1%			
		8201	207.00 208.00	1.00	.18	6.60	TRACE	1%			
		8202	208.00 209.00	1.00	.02	1.90	MINOR	1-2%			
		8203	209.00 210.00	1.00	.06	1.50	MINOR	0.5-1%			
		8204	210.00 211.00	1.00	.02	1.50	TRACE	1%			
		8205	211.00 212.00	1.00	.01	2.00	TRACE	1%			
		8206	212.00 213.50	1.50	.02	1.90	TRACE	0.5-1%			
		8207	213.50 215.00	1.50	.03	1.90	MINOR	1-2%			
		8208	215.00 215.65	.65	.02	1.30	TRACE	1-2%			
		8209	215.65 216.50	.85	.20	7.30	0.25%	2-3%			
		8210	216.50 218.35	1.85	.01	1.10	TRACE	1-2%			
		8211	218.35 219.60	1.25	.02	2.70	0.25%	1%			
		8212	219.60 220.00	.40	.01	1.20	-	0.5%			
		8213	220.00 221.00	1.00	.02	3.40	0.5%	1-2%			
		8214	221.00 222.50	1.50	.03	1.60	TRACE	1%			
		8215	222.50 224.00	1.50	.19	12.50	TRACE	1%			
		8216	224.00 225.50	1.50	.02	.90	TRACE	1%			
		8217	225.50 226.25	.75	.01	1.00	TRACE	1%			
		8218	226.25 227.00	.75	.01	.90	TRACE	0.5%			
		8219	227.00 228.00	1.00	.02	2.70	MINOR	0.5-1%			
		8220	228.00 229.50	1.50	.01	1.70	0.25%	1-2%			
		8221	229.50 231.00	1.50	.20	1.30	TRACE	1-2%			
		8222	231.00 232.00	1.00	.02	1.00	TRACE	1-2%			
		8223	232.00 233.00	1.00	.03	1.30	MINOR	1-2%			
		8224	233.00 234.00	1.00	.01	1.00	TRACE	1-2%			
		8225	234.00 234.75	.75	.02	1.40	0.5	1-2%			
		8226	234.75 235.75	1.00	.01	1.20	MINOR	0.5%			
		8227	235.75 236.75	1.00	.01	1.60	TRACE	1%			
		8228	236.75 238.00	1.25	.02	1.00	-	0.5%			
		8229	238.00 239.00	1.00	.01	.80	-	0.5%			
		8230	239.00 240.00	1.00	.02	.90	-	0.5%			
		8231	240.00 241.00	1.00	.01	.90	-	0.5%			
		8232	241.00 242.00	1.00	.01	1.00	MINOR	1%			

ESSO MINERALS CANADA

SUMMARY DRILL LOG

Project Name: HN Blackdock

Hole Number: HN88-41

Project Number: 1677

Logged By: M.H. Lenters

NTS: 42H/8

Date: October 1988

Location: L32+00W, 12+25S

Claim Number: L-872269

Azimuth: 180°. Dip: -43°.

Length (m): 221

PURPOSE: Test anomalous IP chargeability response up-ice from anomalous base metal values in bedrock chips

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.00	8.00	Overburden	
8.00	73.10	Interbedded Felsic Metavolcaniclastic to Metavolcanic Pyroclastic Tuff Horizons with Minor Cherty Metasediments Thin to thickly, interbanded/interbedded sequence of felsic to intermediate chlorite-plagioclase-silica schists probably representing metavolcaniclastics and felsic ash, to fine lapilli tuff metavolcanics. Very few original textures are preserved, but locally felsic crystal tuffs, coarse felsic fragmentals, and cherty units are identifiable. Locally the units contain biotite, amphibole and minor magnetite. Felsic tuff units are grey, siliceous, fine-grained, magnetic and generally contain a few percent finely disseminated pyrrhotite and pyrite. Ash tuffs are locally finely laminated, crystal tuffs exhibit small (1 to 2 mm), euhedral plagioclase and ovoid, blue, quartz phenocrysts, and lapilli tuffs contain small (1-10 mm) angular volcanic fragments. Unit exhibits weak to strong foliation oriented at 50° to 65° to CA. Generally 3 to 5%, irregular calcite patches, and minor to 2% quartz veins. Felsic volcanic horizons contain minor to a few percent green to red to brownish sphalerite, locally forming small grains, and foliation subparallel bands and laminae, as well as minor galena, and trace chalcopyrite. Zinc/lead sulphides also form within and in close proximity to quartz and/or calcite veins. 24.25-25.10 cherty exhalite bed with 3 to 5% pyrite and 0.5% sphalerite 61.90-62.00 small fault gouge	0.01 - 0.39 (56)
73.10	74.40	Silicified and Weakly Sheared Quartz Diorite Intrusive Dyke Medium grey, aphanitic plagioclase-silica dominant groundmass with 15 to 20%, 1 to 3 mm, white, subhedral plagioclase phenocrysts. Contact zones of the dyke are silicified and moderately shear foliated at 50° to CA, parallel to the dyke contacts. 5% irregular calcite veining. 1% pyrite	0.01 - 0.04 (2)
74.40	221.00	Felsic Metavolcanic Ash/Crystal/Lapilli Tuffs with Minor Interbedded Intermediate to Mafic Tuffs Thickly interbedded sequence of felsic tuffs with lesser mafic/intermediate tuffs or volcaniclastics. Felsic volcanic tuffs consist mostly of fine ash, very fine lapilli and crystal tuffs with minor slightly coarser lapilli tuffs. These are generally medium grey, fine-grained, siliceous and massive to weakly foliated. Ash tuffs are aphanitic and locally laminated, lapilli tuffs contain small 1 to 3 mm, flattened volcanic fragments and crystal tuffs contain 5 to 10%, 1 to 3 mm plagioclase phenocrysts, and 2 to 5%, 1 to 2 mm, blue, ovoid quartz eyes. Felsic metavolcanics locally contain cherty exhalite horizons that are tan to light grey, aphanitic, finely laminated, hard, siliceous, and locally pyritic.	0.01 - 0.37 (68)

From (m)	To (m)	Description HN88-41	Gold Assays (g/tonne)
		Intermediate to mafic metavolcanic schist horizons are dark green to brownish green, fine-grained, magnetic, moderately schistose/phyllitic and generally composed of chlorite-plagioclase-silica and locally biotite and/or amphibole. Unit generally contains 5 to 10% irregular calcite patches, particularly in the mafic metavolcanic schists. Minor quartz veining. Foliation oriented at 50° to 55° to CA. Minor to 1% pyrite, but locally up to 2 to 5% particularly in slightly sericitic to carbonate altered felsic metavolcanic horizons. Felsic metavolcanic and cherty exhalite horizons locally contain minor to a few percent sphalerite, and trace amounts of galena.	
	221.00	END OF HOLE	

H-N PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL [redacted]D

Hole: HN88-41
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-872269
Hole Size:	BQ	Dip:	-43	Grid:	West
Core Size:	BQ			Easting:	L32+00W
Casing:	Casing Removed	Acid Tests:		Northing:	12+25S
				Elevation:	Level
Started:	Oct. 19, 1988				
Finished:	Oct. 20, 1988	Depth Az. Dip		Purpose:	Test IP & anomalous bedrock chips
		8.00 -43.0			
Logged by:	M.H.Lenters	108.00 -40.0		Length:	221.00Metres
Date logged:	October 1988	208.00 -36.0		Vert. Proj:	141.0 Metres
Logging Method:	Log II			Hor. Proj:	170.0 Metres
Measurement System:	Metric			Ovb. Depth:	5.7 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 8.00	OVERBURDEN										
8.00 73.10	FELDSPAR CRYSTAL/LAPILLI TUFF										
	Interbedded metavolcaniclastic to felsic metavolcanic horizons, and cherty metasediments.	NS	8.00	73.10 65.10	n/a	n/a	-	MNR-2%			
	Thin (cm) to thick (metres), relatively sharply bounded, interbanded/interbedded sequence of felsic to intermediate schists, probably representing metavolcaniclastic and felsic metavolcanic ash to fine lapilli tuffs. Very few original textures are preserved, but locally felsic crystal tuffs, coarse felsic fragmentals and cherty units are identifiable. The latter often contain abundant pyrite, minor to a few percent sphalerite and traces of galena.	8233	8.00	9.50 1.50	.02	.70	-	1-5%PO			
		8234	9.50	11.00 1.50	.03	.50	-	TR-1%PO			
		8235	11.00	12.00 1.00	.01	.50	-	TR-1%PO			
		8236	12.00	13.00 1.00	.01	1.20	-	TR-0.5%			
		8237	13.00	13.70 .70	.02	1.00	-	MNR-0.5			
		8238	13.70	14.50 .80	.01	.40	-	MNR/PO			
		8239	17.00	18.50 1.50	.01	.50	-	MNR/PO			
		8240	18.50	19.50 1.00	.02	1.30	-	0.5-1%			
	Many of the units with no original textures are fissile, chloritic to biotitic schists.	8241	19.50	20.00 .50	.21	.80	-	0.5-1%			
		8242	20.00	20.50 .50	.30	3.00	-	2%			
	8.00 8.45 Felsic metavolcanic ash tuff. Medium greenish grey, felsic looking, aphanitic silica-plagioclase-chlorite horizon. Moderately, but somewhat irregularly, wavy banded at 60 degrees to the core axis. Contains minor biotite, and 5%, white,	8243	20.50	21.05 .55	.02	.60	-	2%/PO			
		8244	21.05	22.00 .95	.02	1.10	-	2%/PO			
		8245	22.00	23.00 1.00	.38	7.00	-	2%/PO			
		8246	23.00	24.25 1.25	.04	4.50	-	2-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	irregular, foliation parallel calcitic patches. Strongly magnetic, with minor, 0.5 to 1mm, magnetite porphyroblasts. No significant veining. Minor disseminated pyrite and pyrrhotite. Lower contact is sharp and oriented at 65 degrees to the core axis.	8247	24.25 25.10	.85	.19	8.40	-	3-5%			
		8248	25.10 26.00	.90	.06	3.60	-	1-2%			
		8249	26.00 27.50	1.50	.03	2.90	-	1-2%			
		8250	27.50 29.00	1.50	.02	1.50	-	1-2%			
		8251	29.00 30.50	1.50	.02	1.40	-	1-2%			
8.45 8.55	Felsic volcanic ash metatuff. Medium grey, siliceous, fine grained silica-plagioclase horizon, much like most of the overlying horizon, but this section is less chloritic. Unit contains 5% biotite as small porphyroblasts oriented at 70 degrees to the core axis. Very minor Fe-sulphides. Non-magnetic. Upper and lower contacts are sharp, but slightly undulating and oriented at 50 to 70 degrees to the core axis.	8252	30.50 32.00	1.50	.01	1.20	-	1-2%			
		8253	32.00 32.30	.30	.03	1.40	-	1-2%			
		8254	32.30 32.55	.25	.01	1.00	-	2%			
		8255	32.55 33.75	1.20	.02	1.10	-	1%			
		8256	33.75 34.50	.75	.01	1.10	-	1-2%			
		8257	34.50 35.25	.75	.01	.60	-	1-2%			
		8258	35.25 35.50	.25	.01	1.00	-	1%			
8.55 9.15	Felsic metavolcanic ash tuff. Similar to horizon between 8.00 to 8.45, but with more (25%) biotite (1mm) porphyroblasts, a brownish medium grey colour, and a greater Fe-sulphide (5%) content. The later occur mostly as relatively coarse, wispy, pyrrhotite with lesser pyrite. Some Fe-sulphide grains are composed partly of both minerals. Horizon is moderately metamorphic foliated/banded at 50 to 70 degrees to the core axis, with 5% calcitic patches just like the horizon between 8.00 to 8.45 metres. Lower contact very sharp and planar at 50 degrees to the core axis.	8259	35.50 36.00	.50	.15	10.00	MINOR	1-2%			
		8260	36.00 36.50	.50	.01	2.10	TRACE	1-2%			
		8261	36.50 37.00	.50	.01	3.00	TRACE	1-2%			
		8262	37.00 37.75	.75	.06	8.80	MINOR	1-2%			
		8263	37.75 38.15	.40	.02	3.40	TRACE	1%			
		8264	38.15 38.80	.65	.01	.30	TRACE	1%			
		8265	38.80 39.40	.60	.02	.30	-	1-2%			
		8266	39.40 41.00	1.60	.01	1.30	-	0.5-1%			
		8267	41.00 42.50	1.50	.01	1.00	-	0.5-1%			
		8268	42.50 44.00	1.50	.01	.90	-	0.5-1%			
9.15 9.50	Felsic feldspar crystal tuff. Light to medium mottled grey, with 25%, coarse (1 to 5mm), irregular, diffuse, lighter coloured plagioclase phenocrysts/crystals in a medium grey, moderately foliated/banded, fine grained, homogeneous groundmass with 5%, foliation parallel biotite, minor chlorite, and minor pyrite. No significant veining, and lacking the irregular calcitic patches common in the more tuffaceous bands. Foliation oriented at 50 to 70 degrees to the core axis. Non-magnetic. Lower contact is sharp and oriented at 50 degrees to the core axis.	8269	44.00 45.50	1.50	.01	1.00	-	0.5%			
		8270	45.50 46.75	1.25	.02	1.00	-	0.5%			
		8271	46.75 48.50	1.75	.01	2.20	TRACE	2-3%			
		8272	48.50 50.00	1.50	.03	3.60	-	1-2%			
		8273	50.00 51.75	1.75	.39	3.90	-	1-2%			
		8274	51.75 53.00	1.25	.01	1.00	-	0.5-1%			
		8275	53.00 54.50	1.50	.01	1.10	-	0.5-1%			
		8276	54.50 56.00	1.50	.04	1.10	-	0.5-1%			
		8277	60.15 60.95	.80	.03	1.00	-	0.5-1%			
		8278	60.95 61.95	1.00	.11	.70	-	2-3%			
9.50 10.45	Felsic metavolcanic ash tuff. Similar to horizon between 8.55 to 9.15m, except more chloritic than biotitic giving it a medium greenish-grey colour. Intermottled/banded, finely fissile, chloritic schist, and medium grey, more siliceous	8279	62.00 63.05	1.05	.18	1.70	-	2-3%			
		8280	63.05 63.90	.85	.19	1.40	-	2-3%			
		8281	63.90 65.00	1.10	.04	.40	-	MINOR			
		8282	65.00 66.50	1.50	.02	1.00	-	0.5%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	material with biotite porphyroblasts, producing several sharply bounded bands and beds of varying composition. Weak to moderately magnetic with fine magnetite locally evident. 5%, irregular wispy, discontinuous calcitic patches. Foliation/banding oriented at 50 degrees to the core axis. Lower contact is sharp and oriented at 45 degrees to the core axis.	8283	66.50	68.00	1.50	.03	.90	-	MINOR		
		8284	68.00	69.50	1.50	.02	1.10	-	MINOR		
		8285	69.50	70.75	1.25	.03	.40	-	MINOR		
		8286	70.75	71.35	.60	.05	2.00	-	2-3%		
		8287	71.35	72.50	1.15	.02	.40	-	0.5%		
		8288	72.50	73.10	.60	.01	.70	-	1%		
10.45 12.00	Felsic metavolcanic ash tuff. Mostly similar to the green, finely fissile, chloritic schist horizons between 9.50 and 10.45m, but including a few, medium grey, siliceous bands with biotitic porphyroblasts. Moderately magnetic, with minor black, 1mm, magnetite, and 1% pyrrhotite grains evident. Foliation/banding oriented at 55 degrees to the core axis. 5%, irregular, wispy, discontinuous, calcitic patches/banding. Lower contact is a sharp bedding contact oriented at 45 degrees to the core axis.										
12.00 13.70	Felsic metavolcanic (fine fragmental) or possibly a crystal tuff. Medium grey, hard, siliceous, mottled, coarse grained, relatively homogeneous texture. Locally appears to be composed of small (0.5 to 2cm), monolithic fragments, as shown by vague outlines of flattened clasts. However, most of this section is massive. Contains 5% biotite oriented parallel to the foliation and clast orientation at 45 to 50 degrees to the core axis. 3%, weakly calcitic patches, but not as foliated as in the more tuffaceous horizons. Minor, small (1 to 3mm), ovoid, blue quartz eyes. Lower contact poorly recovered, but appears to be sharp and planar and oriented at 45 degrees to the core axis.										
13.70 24.25	Felsic metavolcanic ash tuff. Similar to the horizon between 9.50 to 10.45 metres. Green to greenish grey, mostly fissile, fine grained, and chloritic, with some greyer, more siliceous zones. The more chloritic sections are generally strongly magnetic with 1 to 3%, 1mm, magnetite, and often a few to 10% biotite, or a few percent dark green amphibole porphyroblasts. These porphyroblasts are generally 0.5 to 1mm in size, with biotite oriented parallel to foliation,										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	and often banded, while amphibole forms variably oriented blades. 5%, irregular calcitic patches, and occasional, 0.5 to 2cm, irregular quartz-calcite veins. Well developed fissile foliation oriented at 50 degrees to the core axis. Calcitic quartz vein/patches occur at 17.80 to 17.85 and 19.70 to 19.80m, with the latter containing minor pyrite and traces of reddish sphalerite and galena. Unit contains thin, grey, siliceous bands between 20.00 to 20.05, as well as 20.30 to 20.50m, which contain minor, fine (0.5mm), red sphalerite grains, often in thin (1 to 3mm) bands, as well as traces of galena and chalcopyrite as small grains often adjacent to thin, calcite bands/veins. Above 20.05 metres the unit contains minor to 0.5%, disseminated pyrite+/-pyrrhotite, often in concentrations as individual wispy grains along foliation surfaces. Below 20.05 the unit contains more (1 to 2%) Fe-sulphides, as well as the occasional sphalerite laminae. Sphalerite often occurs with thin (1 to 3mm), light grey, siliceous laminae that occasionally appear boudinaged. The lowest 50cm has a slight greyish colour and is more siliceous, with a greater (2 to 4%) concentration of very fine pyrite, and local reddish sphalerite bands. Lower contact is sharp and planar and oriented at 50 degrees to the core axis.										
24.25 25.10	Cherty (Zn,Fe) exhalite horizon. Well banded, medium to relatively dark reddish brownish to purplish grey, fine grained, hard, siliceous, non-magnetic and non-calcareous, although some brownish coloured bands suggest a carbonate (Fe-carb) content. 5%, biotite porphyroblasts give the horizon a foliated/banded appearance. Horizon is banded at 45 to 60 degrees to the core axis. Contains 3 to 5%, fine pyrite concentrated in foliation parallel bands, as well as fine (0.25 to 0.5mm), ovoid, reddish sphalerite, also concentrated in thin (1 to 2mm) foliation parallel bands. Non-magnetic. No significant veining. Lower contact is gradational over 10cm into a green, finely fissile, chloritic metatuff.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
25.10 32.30	Felsic metavolcanic flow/tuff. Medium greenish-grey, fine grained, fissile, hard, very felsic, homogeneous unit. Has a slight green colour due to fine chlorite?, but probably contains very little chlorite. Unit also contains 5 to 10% biotite porphyroblasts, that are foliation parallel and often segregated into foliaton parallel laminae. Unit locally exhibits a fine overprinting of variably oriented amphibole porphyroblasts. Very planar, fissile, foliation oriented at 55 to 60 degrees to the core axis. Minor calcitic banding, that is much more regular, foliation parallel, and not as common as in the overlying tuff horizons. 1 to 2%, very finely disseminated pyrite. Minor, thin (1 to 3mm), subplanar, often foliation parallel and slightly boudinaged, quartz+/-calcite veinlets, locally with a green epidote colour. Hard competent unit, generally with 0.5 to 2m breakage parallel to the foliation. Unit contains a few, thin (0.5 to 1cm), grey, cherty bands near 28 metres, locally with hematitic (jasper) colour. One thin cherty laminae at 29.60m contains minor sphalerite.										
32.30 32.55	Felsic metavolcanic fragmental/pyroclastic (definite fragmental texture). Vari-coloured medium green-grey colours, with abundant (30%), small (1mm to 2cm), polylithic (though all felsic volcanic), flattened to subrounded fragments/clasts. Larger clasts are broken and fractured. Clasts are medium grey, hard, fine grained, siliceous, and probably originate from tuffaceous matrix material having a composition much like the overlying units. Unit is well laminated/banded with pebbles oriented parallel to foliation/bedding at 50 to 55 degrees to the core axis. Pebbles appear to be moderately (3:1) flattened. Unit contains 2%, finely disseminated pyrite, often concentrated along foliation laminae. Minor irregular calcitic patches/lenses. Sharp lower contact oriented at 55 degrees to the core axis.										
32.55 33.75	Felsic feldspar crystal tuff (Possibly an intrusive dyke). Similar to unit between 9.15 to 9.5 metres. Light to medium										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	mottled grey, with 20%, small (1 to 4mm), subhedral and somewhat corroded looking, light grey-white plagioclase phenocrysts/crystals in a fine grained, siliceous, medium grey matrix, also containing 5%, fine biotite, and 1% finely disseminated pyrite. Relatively massive and homogeneous unit, with weak foliation due to aligned biotite oriented at 50 to 55 degrees to the core axis. Non-magnetic and non-calcareous. No significant veining. Hard, competent unit. Lower contact is a sharp planar surface oriented at 65 degrees to the core axis.										
33.75 35.25	Felsic metavolcanic fragmental/fine pyroclastic. Identical to section between 32.30 32.55m, with slightly greater (50%) percentage of fragments/clasts, and several larger fragments that are up to 1cm wide and extend across the core width. Relatively sharp upper and lower contacts oriented at 50 degrees to the core axis.										
35.25 35.50	Felsic feldspar crystal tuff. Identical to unit between 32.55 33.75 metres.										
35.50 38.80	Felsic metavolcanic. Fine fragmental/pyroclastic unit with minor cherty exhalitive bands. Medium grey to browns, with mottled subdued appearance, but locally exhibiting a subdued clastic/pyroclastic appearance with abundant fine (1 to 20mm) and the occasional larger fragment. Fragments are polylithic, felsic in composition, and flattened, occasionally with flamed edges (welded tuff?). Unit is non-magnetic. Unit has a pervasive siliceous appearance which may account for the subdued/vague definition/outlines of clasts/fragments. Clasts are usually greyer and more siliceous, while matrix material is biotitic. Good foliation and parallel alignment of fragments at 65 to 70 degrees to the core axis. A few bands are light grey and partially laminated with a cherty appearance. Unit contains 1% finely disseminated pyrite. Unit also contains traces of finely disseminated galena, and a few thin, foliation parallel laminae containing yellowish red to brownish sphalerite. An irregular quartz lense/vein between 37.50 to 37.55m contains										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	20%, irregularly anastomosing and finely networking yellowish-brown sphalerite. Another irregular quartz vein/lense between 35.90 to 36.00m contains a few percent more disseminated green sphalerite, and minor coarse galena. Minor sphalerite occurs in foliation parallel laminae in the wallrock adjacent to this vein/lense. Unit contains minor, calcitic veining/banding, but more foliation parallel, and not as patchy or irregular as in the finer grained felsic tuffs in upper part of this hole. Lower contact is gradational.										
38.80 39.40	Felsic metavolcanic. Fine fragmental/pyroclastic unit. Gradational change from the overlying unit into a more biotitic and less fragmental zone, but essentially the same unit. Well developed planar, fissile foliation oriented at 55 degrees to the core axis. Lower contact is sharp and planar and oriented at 55 degrees to the core axis.										
39.40 46.75	Felsic metavolcanic feldspar-quartz crystal tuff. Similar to overlying crystal tuff units. Medium grey, hard, homogeneous unit with 15 to 20%, light grey, 1 to 3mm, subhedral to corroded plagioclase crystals, and lesser, smaller (1 to 2mm), ovoid, bluish quartz eyes in a finer grained, weak to moderately foliated groundmass with 5% foliation parallel biotite. Central section of this unit contains fewer plagioclase crystals and appears somewhat similar to overlying grey tuff units. 0.5 to 1%, fine pyrite, often concentrated along wispy, biotitic, foliation parallel surfaces. Hard competent unit, generally with 30 to 100cm breakage. Unit includes one irregular quartz vein from 43.00 to 43.20m with coarse, clean, slightly smokey to clear quartz. Lower contact is sharp and planar and oriented at 50 degrees to the core axis.										
46.75 48.50	Fine felsic metavolcanic fragmental/pyroclastic schist. Same as unit between 35.50 to 38.80m, but lacking any cherty bands although many fragments/clasts have siliceous/cherty composition giving the entire unit a siliceous appearance. Medium grey to green, composed mostly of small (0.5 to 2cm),										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

flattened pebbles/fragments with a somewhat monolithic felsic volcanic composition, in a brownish green, fine, siliceous matrix also containing minor to a few percent chlorite, epidote, biotite and pyrite. Well developed planar fissile foliation, and parallel fragment/pebble flattening orientation at 50 degrees to the core axis. Hard, siliceous, non-magnetic unit. 2 to 3%, very finely disseminated pyrite, as wispy to elongate grains oriented parallel to the foliation. No significant veining. Unit contains traces of very fine galena often associated with whitish grey, siliceous pebbles, or silicified matrix bands/laminae. Lower contact is gradational over a cm or so into a more even textured, fine lithic/ash? tuff.

48.50 51.75 Felsic to intermediate metavolcanic flow/tuff. Similar to unit between 25.10 to 32.30m, but slightly less felsic and fissile. Medium greenish-grey, fine grained, hard, moderately felsic, moderately fissile, very homogeneous unit. Unit locally exhibits a brownish grey colour. Green sections due to minor chlorite and epidote, while brown sections are due to 5%, fine biotite porphyroblasts. Unit contains no amphibole porphyroblasts. Unit locally exhibits a fine grained (0.25 to 0.5mm), volcanic flow texture. Minor calcitic veining, generally as discontinuous lenses to thin (1 to 3mm), subplanar veins, but there are no irregular calcitic patches as is common in overlying tuff horizons. Weak to moderately magnetic. 1 to 2% finely disseminated pyrite. Minor epidote, often along hairline crackling. Small quartz veinlet at 51m has partial red (jasper) colouring. Upper zone contains two, large (5 to 10cm), subrounded, feldspar crystal tuff cobbles/fragments, that exhibit a slight flattening and flamed edges. These occur directly beneath upper contact zone. Hard competent unit. Upper contact is gradational. Lower contact is sharp, planar and oriented at 70 degrees to the core axis.

51.75 60.95 Felsic metavolcanic feldspar crystal tuff. (Possibly an intrusive dyke). Mottled, medium grey, with local salmon

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	pink alteration/colouration, generally along fractures. 5 to 10%, small (1 to 3mm), subhedral to corroded plagioclase crystals, and minor, ovoid, quartz in fine grained to aphanitic, weak to moderately foliated groundmass that also contains minor biotite and pyrite. Foliation oriented at 55 to 60 degrees to the core axis. Unit exhibits some variations in composition and grain size, including several lithic fragments suggesting the unit is a felsic crystal tuff as opposed to porphyritic dyke. Minor, thin (1mm), calcite and quartz-carbonate veinlets/lensing. Much of unit exhibits a weak crackle fracturing, locally with a slight salmon pink alteration/colouring. A few fractures are coated with thin (1mm), slightly greenish, icing-sugar calcite material. Non-magnetic. No significant veining. Hard, competent unit, with 25cm to 1m breakage, generally along foliation subparallel, planar, fractures. Lower contact is sharp and planar at 70 degrees to the core axis.									
60.95 73.10	Intermediate metavolcanic flow.									
60.95 61.95	Dark brownish green-grey, fine grained, chloritic with minor biotite, homogeneous, hard, weak to moderately foliated, strongly magnetic, weak to moderately calcareous. Unit has a weak silicified appearance, and locally contains minor, small (hairline to 1mm), irregly branching, discontinuous, white to purplish red (jasper), silica veinlets. 2 to 3%, finely disseminated pyrite, concentrated along foliation parallel laminae, giving unit a laminated/sulphide banded appearance. Foliation and pyritic laminae are oriented at 50 degrees to the core axis.									
61.95 62.00	Fault Zone. Recovered 5cm of white to light green, calcitic, clay fault gouge, containing numerous small (1 to 5mm), angular, altered/partially decomposed volcanic fragments. Upper and lower contacts are poorly recovered, but appear to be parallel to the foliation at 50 to 55 degrees to the core axis.									
62.00 63.90	Similar to section between 60.95 to 61.95m, but carbonate altered and biotitic, probably due to proximity to fault.									

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SBR
	Dark brownish grey, very fine grained, hard, biotitic, homogeneous, non to weakly magnetic, with weak to moderately phyllitic foliation. Has a pervasive silicified appearance, but exhibits 5%, irregular, criss-crossing (network), hairline, calcitic fractures with thin (hairline to 5mm), light tan-grey carbonate alteration adjacent to fracturing. 2 to 3%, finely disseminated pyrite, concentrated along thin, foliation parallel laminae. Phyllitic foliation and pyritic laminae are generally oriented at 40 to 45 degrees to the core axis. Section also contains a few, thin (1 to 3mm), foliation parallel, calcitic, pyritic bands/laminae occasionally containing minor amounts of sphalerite. No significant veining.									
63.90 72.50	Relatively unaltered, dark green, chloritic, fine grained, strongly magnetic, homogeneous, weakly to moderately phyllitic, intermediate to mafic metavolcanic flow. Good intergrown plagioclase-ferromagnesian volcanic flow texture is locally evident. Section includes a few zones with brownish colouration due to biotitic content, and minor silicification producing zones similar to that between 62.00 to 63.90m. These zones occur between 68.50 to 68.65m, and 70.75 to 71.35m, and have gradational contacts. Minor brown sphalerite occurs in two, thin (5mm), quartz-calcite bands that are oriented parallel to foliation. Dark green, chloritic sections locally exhibit small amphibole porphyroblasts with irregular orientations. Minor, thin (1 to 5mm), quartz+calcite veining, often oriented subplanar to foliation. Generally hard, competent unit, with 25 to 100cm breakage, but including a rubble zone between 72.35 to 72.75 metres.									
72.50 73.10	Similar to section between 62.00 to 63.90 metres. Dark brownish grey, fine grained, hard, silicified, homogeneous, non to very weakly magnetic, with weak to moderate foliation oriented at 45 degrees to the core axis. Lower contact is a sharp, planar intrusive contact oriented at 45 degrees to the core axis.									

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
73.10 74.40	FELDSPAR PORPHYRITIC QUARTZ DIORITE DYKE										
73.10 73.65	Shear foliated edge of dyke, with moderate silicification, and moderate foliation oriented at 50 degrees to the core axis.	NS	73.10	74.40 1.30	n/a	n/a	-	MNR-1%			
		8289	73.10	73.65 .55	.01	1.20	-	MINOR			
		8290	73.65	74.40 .75	.04	1.00	-	0.5%			
73.65 74.15	Irregularly swirled and moderately silicified, more massive intrusive dyke including large mafic metavolcanic inclusion. Intrusive is generally medium grey, aphanitic, with 15 to 20%, 1 to 3mm, white, subhedral, plagioclase phenocrysts. 1% pyrite. 5% irregular, calcite veining, particularly common near and within the mafic volcanic inclusion.										
74.15 74.40	Shear foliated and silicified edge of intrusive dyke, with foliation oriented at 45 degrees to the core axis. Upper and lower contacts are relatively sharp and oriented at 45 degrees to the core axis.										
74.40 85.20	PLAIGIOCLASE-CHLORITE-AMPHIBOLE SCHIST										
	Intermediate to mafic metavolcanic flows.	NS	74.40	85.20 10.80	n/a	n/a	-	MINOR			
	Dark green to brownish green, marbled looking unit, due to irregular calcitic vein patches, as well as biotitic and amphibolitic porphyroblastic zones.	8291	74.40	75.50 1.10	.01	.40	-	MINOR			
		8292	75.50	77.00 1.50	.01	.40	-	MINOR			
		8293	83.00	84.50 1.50	.02	.50	-	MINOR			
	Groundmass is normally a dark green, very fine grained, chloritic, weakly to moderately phyllitic, with some greyer more siliceous (felsic to intermediate), fine grained sections, and some brownish, biotitic, fine grained sections.	8294	84.50	85.20 .70	.02	1.00	-	MINOR			
	Unit locally contains 0.5 to 1mm, magnetite porphyroblasts.										
	Locally the fine grained zones contain irregular, buckshot to weakly banded, relatively coarse (1mm), reddish brown, biotite porphyroblasts (generally 1 to 5%, and locally to 30%), as well as minor to a few percent, 1mm, randomly oriented amphibole porphyroblasts.										
	Unit contains 5 to 15%, and locally (over a few cm) 50%, irregular to almost stockwork, calcitic patches that are somewhat aligned parallel to the foliation direction.										
	Foliation oriented at 55 to 56 degrees to the core axis.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SBR
	No significant veining. Minor pyrite. Competent unit, with 25 to 150 cm breakage. Lower contact is sharp and planar and oriented at 65 degrees to the core axis.										
85.20 86.05	FELDSPAR CRYSTAL/LAPILLI TUFF										
	Similar to unit between 12.00 to 13.70 metres.	NS	85.20	86.05	.85	n/a	n/a	- MINOR			
	Medium grey with slight coarse grained mottled appearance. Hard, siliceous, homogeneous, with massive to weakly foliated texture. Massive sections exhibit very poorly defined, 1 to 3mm, white plagioclase, and quartz crystals with corroded/resorbed edges in medium grey matrix.	8295	85.20	86.05	.85	.01	1.40	- MINOR			
	Finer grained, grey, weakly foliated zones contain 5%, fine, foliation parallel biotite. Foliation oriented at 55 degrees to the core axis. Minor calcitic veinlets, generally oriented parallel to foliation. Upper and lower contacts are sharp and planar and oriented at 65 and 60 degrees to the core axis.										
86.05 89.35	PLAIGIOCLASE-CHLORITE-AMPHIBOLE SCHIST										
	Intermediate to mafic metavolcanic flow unit, similar to unit between 74.40 to 85.20 metres.	NS	86.05	89.35	3.30	n/a	n/a	- MINOR			
		8296	86.05	87.50	1.45	.04	1.00	- MINOR			
	Mostly fine grained and chloritic, except for thin (10 to 50cm), biotitic, upper and lower contact zones that contain magnetite, biotite, and amphibole porphyroblasts, as well as 10 to 15% calcitic patches.	8297	87.50	89.35	1.85	.01	.40	- MINOR			
	Foliation oriented at 55 degrees to the core axis. Lower contact is transitional.										
89.35 94.45	FELDSPAR CRYSTAL/LAPILLI TUFF										
	Similar to unit between 85.20 to 86.05 metres.	NS	89.35	94.45	5.10	n/a	n/a	- MINOR			
	Medium grey, with mottled coarse grained appearance, locally exhibiting a well developed weakly foliated, crystal tuff texture. Contains several percent, 2 to 4mm, ovoid, blue quartz eyes. Non-magnetic, and very	8298	89.35	90.10	.75	.02	.50	- MINOR			
		8299	90.10	91.00	.90	.05	1.20	- MINOR			
		8300	91.00	92.00	1.00	.01	1.00	- MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	weakly calcareous.	8301	92.00	93.45	1.45	.01	1.10	-	MINOR		
	Upper zone between 89.35 to 90.10m is transitional between overlying intermediate to mafic metavolcanic, and this unit. Medium to dark grey, with moderate chlorite/biotite foliation/banding oriented at 50 degrees to the core axis.	8302	93.45	94.45	1.00	.02	1.90	-	1-2%		
	Lower zone between 93.45 to 94.45m may partly include exhalative chert/carbonate component. Grey to tan, locally finely laminated, with very fine grained, cherty/carbonate bands having planar contacts parallel to foliation at 50 degrees to the core axis.										
	Unit contains minor calcitic veinlets and fracturing, but is generally a very homogeneous unit and except for upper and lower contact zones contains very minor porphyroblasts.										
	Central section contains minor fine biotite producing a weak foliation oriented at 55 degrees to the core axis.										
	Minor disseminated pyrite, except for 1 to 2% in the lower cherty carbonate zone which also contains minor amounts of brown-red sphalerite.										
	No significant veining.										
	Hard, competent unit, generally with 50 to 100 cm breakage often parallel to foliation orientation.										
94.45 103.55	PLAIGIOCLASE-CHLORITE-AMPHIBOLE SCHIST										
	Intermediate to mafic metavolcanic.	NS	94.45	103.55	9.10	n/a	n/a	-	1-2%		
	Dark green-black, very fine grained, chloritic, very hard, with minor, thin (1 to 2cm), patches/bands of 1mm, biotite porphyroblasts, and minor, scattered, 1mm, dark green, amphibole porphyroblasts.	8303	94.45	95.00	.55	.01	1.40	-	2-3%		
		8304	95.00	96.00	1.00	.01	.50	-	MINOR		
		8305	98.00	98.95	.95	.01	.40	-	1-2%		
	Unit is relatively homogeneous, strongly magnetic, weakly phyllitic, and foliated at 55 degrees to the core axis.	8306	98.95	99.35	.40	.01	.90	-	TRACE		
		8307	99.35	99.95	.60	.12	5.90	-	2-3%		
	5 to 10%, irregular, somewhat foliation subparallel, calcitic mottling.	8308	99.95	101.00	1.05	.02	.90	-	1-2%		
	1 to 2%, wispy laminated/disseminated pyrite as well as minor pyritic laminae bands with minor red sphalerite.	8309	101.00	101.65	.65	.01	2.20	-	1%		
		8310	101.65	102.05	.40	.02	1.80	-	1-2%		
	98.95 99.35 Coarse grained, white quartz vein oriented at 25 degrees to the core axis.	8311	102.05	102.90	.85	.18	1.60	-	0.5-1%		
	99.35 99.95 Zone adjacent to quartz vein. Well banded, medium brownish to purplish grey, with abundant (3 to 5%), finely laminated pyrite as well as foliation parallel calcitic veinlet bands	8312	102.90	103.55	.65	.01	2.90	-	2-3%		

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	and red sphalerite. Zone exhibits gradational change to green metavolcanic.										
	101.70 102.00 And										
	102.90 103.55 Both bands are more biotitic, coarser grained, moderately schistose to well foliated, with abundant (3 to 6%), finely disseminated/laminated pyrite and minor red sphalerite, as well as minor, irregular, coarse, calcite fractures with sphalerite (1%) at contacts.										
	Competent, hard unit with 25 to 50 cm breakage generally along foliation surfaces.										
	Irregular lower contact along calcite fractures with sphalerite mineralization.										
103.55 109.65	FELDSPAR CRYSTAL/LAPILLI TUFF										
	Medium mottled grey to greenish grey, coarsely textured, locally with subdued crystal tuff texture, and locally with subdued, fine (1 to 10mm), flattened, mostly monolithic lapilli tuff texture.	NS	103.55 109.65	6.10	n/a	n/a	-	MNR-1%			
	Locally exhibits more massive, greenish (sericitic and carbonate) alteration patches/bands.	8313	103.55 104.00	.45	.01	1.00	-	MINOR			
	Foliation, bedding and alteration banding are moderately developed at 55 to 60 degrees to the core axis.	8314	104.00 105.50	1.50	.01	.90	-	MINOR			
	Non-magnetic.	8315	105.50 107.15	1.65	.02	1.10	-	MINOR			
	Minor calcitic patches and fracturing.	8316	107.15 107.45	.30	.01	3.00	-	1%			
	No significant veining, except one, 5cm, white, quartz vein oriented at 45 degrees to the core axis between 105.25 to 105.30 metres.	8317	107.45 108.50	1.05	.01	1.80	-	1%			
	Minor to 1%, finely disseminated to wispy laminated pyrite.	8318	108.50 109.65	1.15	.00	n/a					
	Minor, coarse (1mm), yellowish orange to reddish sphalerite in irregular, but foliation subparallel bands.										
	Relatively hard, competent unit, with 10 to 50cm breakage, generally parallel to foliation.										
	Lower contact is gradational.										
109.65 112.05	ASH TUFF / FINE LAPILLI TUFF										
	Somewhat similar to biotitic and chloritic ash tuffs in upper part of hole	NS	109.65 112.05	2.40	n/a	n/a	-	0.5-1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Brown, fine grained, non-magnetic to weakly magnetic, biotitic, even texture, phyllitic unit with some grey, irregular, more siliceous bands.	8319	109.65 111.00	1.35	.01	.60	-	0.5-1%			
	5%, Irregular networking patches of calcite as was typical in tuffs in upper part of hole.	8320	111.00 112.50	1.50	.02	1.50	-	1%			
	Moderate phyllitic foliation, and weak banding oriented at 55 to 65 degrees to the core axis.										
	0.5 to 1%, finely disseminated to wispy laminated pyrite grains.										
	Minor red sphalerite, often along irregular, hairline, late fractures.										
	Minor, irregular, quartz blebs (1 to 5mm), locally with pyrite and trace galena.										
	Unit is moderately broken into 1 to 20cm pieces, generally parallel to phyllitic foliation.										
	Lower contact is a sharp planar surface oriented at 75 degrees to the core axis.										
112.05 119.45	QUARTZ-FELDSPAR CRYSTAL TUFF										
	Unit locally has a felsic intrusive dyke-like appearance.	NS	112.05 119.45	7.40	n/a	n/a	-	MINOR			
	Mottled medium grey, slightly pinkish coloured, with porphyritic appearance although this is probably a crystal tuff. 10%, large (3 to 5mm), white, subhedral plagioclase crystals and 2%, large (2 to 4mm), ovoid, blue quartz eyes in wavy a foliated, coarse grained (0.5 to 2mm), plagioclase/quartz matrix containing minor (5%) biotite. Matrix appears slightly augen gneissic.	8321	112.50 114.00	1.50	.12	.90	-	MINOR			
		8322	114.00 115.00	1.00	.02	1.10	-	MINOR			
		8323	118.00 119.45	1.45	.01	1.10	-	MINOR			
	Relatively homogeneous unit, although some banding of crystal richer and crystal poorer zones occurs.										
	Hard, non-magnetic, very weakly calcareous, with foliation oriented at 60 degrees to the core axis.										
	Locally, some quartz eyes exhibit calcite in pressure shadows.										
	Minor disseminated pyrite.										
	No significant veining.										
	Hard, competent unit with 5 to 50cm breakage generally parallel to foliation.										
	Upper and lower contacts are sharp and planar and oriented at 75 and 65 degrees to the core axis respectively.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
119.45 139.80	PLAIGIOCLASE-CHLORITE-AMPHIBOLE SCHIST										
	Intermediate to mafic metavolcanic.	NS	119.45 139.80	20.35	n/a	n/a	-	MNR-0.5			
	Dark green-grey to slightly brownish grey, very fine grained, chloritic, moderately to strongly magnetic, weakly phyllitic, relatively homogeneous unit.	8324	119.45 121.00	1.55	.01	.50	-	MINOR			
		8325	121.00 122.85	1.85	.01	.50	-	0.5%			
		8326	122.85 123.30	.45	.23	3.10	-	2-3%			
	5 to 10%, vague, patchy networking, or irregular, discontinuous calcite forming irregular cloud patterns.	8327	123.30 125.00	1.70	.01	.50	-	MINOR			
		8328	125.00 126.50	1.50	.01	.50	-	0.5%			
	Also minor (1 to 2%), poorly formed, concentric filled, irregular fractures often with central white-grey silica that is bounded by bluish grey calcite, and locally by minor, red (jasper) silica bands containing pyrite. These also form irregular (1 to 10cm) patches.	8329	132.50 133.50	1.00	.01	.40	-	0.5%			
		8330	133.50 134.50	1.00	.01	.50	-	1-2%			
		8331	134.50 135.00	.50	.01	.40	-	1-2%			
		8332	135.00 136.00	1.00	.03	2.20	-	3-5%			
	Foliation and calcitic patches generally oriented at 55 to 65 degrees to the core axis.	8333	136.00 137.00	1.00	.01	.30	-	0.5%			
		8334	137.00 138.50	1.50	.01	.40	-	0.5%			
	Minor, 1 to 5 cm quartz veins.	8335	138.50 139.80	1.30	.01	.80	-	1%			
	Minor to 0.5%, finely disseminated and wispy laminated pyrite, as well as some thin (5 to 25 cm) zones containing 2 to 4% pyrite.										
	One zone of pyritic, brownish carbonate altered material between 135.5 and 136.00m has appearance similar to felsic metavolcanics of the underlying unit.										
	Competent unit with 10 to 50 cm breakage, generally along planar fractures (often with calcite coatings) variably oriented at 45 to 90 degrees to the core axis.										
	Lower contact sharp and planar at 70 degrees to the core axis, but contact zones to either side exhibit alteration effects and are somewhat different than the main parts of unit.										
139.80 147.40	FELDSPAR CRYSTAL/LAPILLI TUFF										
	Light to medium greenish grey, generally weak to moderately sericitic and weakly carbonate altered, with mottled coarse grained, and weak to moderately laminated/banded texture. Unit contains 2 to 4%, 1 to 3mm, ovoid, blue quartz eyes.	NS	139.80 147.40	7.60	n/a	n/a	-	0.5-1%			
		8336	139.80 141.00	1.20	.01	1.10	-	1%			
		8337	141.00 142.00	1.00	.01	.70	-	0.5%			
		8338	142.00 143.20	1.20	.02	1.00	-	0.5%			
	Well developed sericitic cleavage, parallel to foliation at 65 degrees to the core axis.	8339	143.20 144.50	1.30	.01	1.00	-	0.5%			
		8340	144.50 145.00	.50	.03	.80	-	TRACE			
	Non-magnetitic, and weakly reactive to HCl.	8341	145.00 146.00	1.00	.01	.70	TRACE	1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Cut by several, large (1 to 50cm), coarse grained, white, clean quartz veins, generally at shallow (20 to 40 degree) angles to the core axis, but veins are also somewhat irregular and branching. 0.5 to 1%, finely disseminated and wispy laminated pyrite. Moderately broken unit, with 2 to 15cm breakage along sericitic cleavage surfaces. Transitional lower contact, into more mafic, chloritic tuffs.	8342	146.00 147.40	1.40	.01	1.60	-	1-2%			
147.40 180.70	PLAIGIOCLASE-CHLORITE-AMPHIBOLE SCHIST										
	Intercalated mafic and felsic tuffs.	NS	147.40 180.70	33.30	n/a	n/a	-	2-4%			
	Alternating, thick (several metre) bands of dark green, chloritic, fine grained, weakly phyllitic and laminated, magnetic, pyritic (2 to 4%), mafic metavolcanic tuffs, and medium grey to green, sericitic and carboante altered, well foliated/laminated, fine grained, pyritic, non-magnetic, felsic metavolcanic tuffs.	8343	147.40 149.00	1.60	.01	.70	-	3-4%			
		8344	149.00 149.90	.90	.06	.50	-	3-4%			
		8345	149.90 152.00	2.10	.01	.90	-	1%			
		8346	152.00 153.00	1.00	.01	1.40	-	2%			
		8347	153.00 153.85	.85	.02	.60	-	5-8%			
	Felsic tuffs exhibit tuffaceous banding, but only locally have quartz eyes (not the typical blue ovoid grains), and appear more pyritic and carbonate altered than the overlying felsic metavolcanics.	8348	153.85 155.00	1.15	.01	.30	-	2%			
		8349	164.00 165.50	1.50	.01	.20	-	3-4%			
		8350	165.50 167.00	1.50	.01	.60	-	3-4%			
	More felsic sections contains some thinner (10 to 50cm), more mafic bands, and more mafic sections contain a few, thin (10 to 50cm), more felsic bands.	8351	176.00 177.50	1.50	.06	1.90	-	1-2%			
		8352	177.50 179.00	1.50	.37	2.30	-	3-4%			
		8353	179.00 180.70	1.70	.06	2.50	-	2-3%			
	Contacts between sections are somewhat gradational.										
	147.40 149.90 Mafic metavolcanic tuff.										
	149.90 153.85 Felsic carbonate altered metavolcanic tuff.										
	153.85 157.60 Mafic metavolcanic tuff.										
	157.60 159.15 Felsic metavolcanic tuff.										
	159.15 164.25 Mafic metavolcanic tuff.										
	164.25 170.40 Felsic metavolcanic tuff.										
	170.40 172.60 Mafic metavolcanic tuff.										
	172.60 173.50 Feldspar Porphyritic Quartz Diorite Dyke. Medium grey, feldspar porphyritic intrusive dyke.										
	173.50 180.70 Mafic metavolcanic tuff, including well laminated/banded zones, and minor, greenish yellow, (limonitic?) weathered pyrite.										
	Well developed lamination/foliation oriented at 55 to 65 degrees to the										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	core axis. Entire unit contains 2 to 4%, finely disseminated pyrite, locally concentrated as wispy grains along planar horizons parallel to foliation. Minor, thin (1 to 5cm), irregular quartz lenses/veins, locally with minor orange-red jasper veinlets. 165.70 165.85 Large quartz vein with irregular contacts oriented at 50 degrees to the core axis. Generally 5%, irregular, patchy networking of calcite mottling throughout unit. Generally moderately competent unit, with 5 to 25cm breakage parallel to foliation at 60 degrees to the core axis. Lower contact is sharp but poorly recovered.										
180.70 185.15	FELDSPAR CRYSTAL/LAPILLI TUFF Light to medium grey to pinkish grey, mottled, coarse grained, sericitic crystal tuff, locally with tuffaceous, augen-gneissic foliated texture, but generally fairly massive. Weak foliation oriented at 45 to 55 degrees to the core axis. Minor to 0.5% finely disseminated pyrite. No significant veining. Relatively competent unit, with 10 to 50cm breakage along irregular fractures. Lower contact is sharp and oriented at 80 degrees to the core axis.	NS 8354	180.70 185.15 180.70 182.00	4.45 1.30	n/a .05	n/a 1.00	- -	0.5% MINOR			
185.15 221.00	ASH TUFF / FINE LAPILLI TUFF Interbanded ash and fine quartz-feldspar crystal tuffs, locally exhibiting graded bedding. Light to medium grey to green, well laminated, non-magnetic, weak to moderately calcitic. Foliation and banding oriented at 70 to 85 degrees to the core axis. Locally contains zones with brownish mustard or emerald green coloured laminae. Minor quartz-calcite veining. Generally 1 to 2%, finely disseminated pyrite, but locally up to 3 or 4%	NS 8355 8356 8357 8358	185.15 220.55 186.50 188.00 188.00 189.50 218.00 219.50 219.50 220.55	35.40 1.50 1.50 1.50 1.05	n/a .13 .15 .08 .10	n/a 1.70 2.10 1.30 1.40	- - - TRACE -	1-3% 1-2% 2-3% 2-3% 1-2%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	concentrated along bedding laminations. Unit has weak to moderte sericitic, and slightly lesser carbonate altered appearance. Unit locally exhibits minor folding of laminations adjacent to veining. Relatively clean, homogeneous unit. Moderately competent unit, generally with 5 to 50cm breakage along foliation/bedding planes, but locally more broken into thin discs, and/or 1 cm pieces. Lower contact not encountered. End of Hole.										

ESSO MINERALS CANADA

SUMMARY DRILL LOG

Project Name: HN Blacklock

Hole Number: HN88-42

Project Number: 1677

Logged By: Dane Bridge

NTS: 42H/8

Date: October 1988

Location: L32+00W, 5+25S

Claim Number: L-872267

Azimuth: 180° Dip: -45°

Length (m): 155

PURPOSE: Test elevated IP chargeability anomaly in broad magnetic low.

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.00	7.00	Overburden	
7.00	8.45	Mafic Metavolcanics	Not Assayed
8.45	19.90	Feldspar Porphyry Dykes (Two Phases) 20% white plagioclase phenocrysts in fine-grained groundmass with biotite, cut by a finer-grained phase. Minor pyrite.	0.01 (3)
19.90	32.85	Mafic Metavolcanics Dark green, very weakly magnetic basalt. Trace pyrite, pyrrhotite.	Not Assayed
32.85	34.50	Feldspar Porphyry Dyke As above	Not Assayed
34.50	155.00	Mafic Metavolcanics Mainly aphanitic, non-magnetic basalt. Minor siltstone interbeds and biotitic basaltic tuff or mafic sediments. Minor calcite veining. Trace pyrite	0.01 (1)
	155.00	END OF HOLE	

H-M PROJECT (On[illegible]77)

ESSO MINERALS [illegible]ADA
DIAMOND DRILL [illegible]RD

Hole: HM88-42
Page: 1

Drilled by:	Bradley Bros. Limited.	Azimuth:	180	Claim No:	L-872267
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	32+00W
Casing:	Casing Removed			Northing:	5+25S
		Acid Tests:		Elevation:	Level
Started:	Oct. 21, 1988				
Finished:	Oct. 22, 1988	Depth Az. Dip		Purpose:	Test weak IP response in Mag low
		7.00 -45.0			
Logged by:	Dane Bridge	107.00 -41.5		Length:	155.00Metres
Date logged:	October 1988	155.00 -38.5		Vert. Proj:	104.0 Metres
Logging Method:	Log II			Hor. Proj:	115.0 Metres
Measurement System:	Metric			Ovb. Depth:	5.0 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 7.00	OVERBURDEN										
7.00 8.45	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE) Mafic volcanic. Very dark green, fine grained basalt with fine metamorphic hornblende. 1% calcite veinlets. Non foliated. Non magnetic.	MS	7.00	8.45 1.45	n/a	n/a	-	TRACE			
8.45 19.90	FELDSPAR PORPHYRITIC QUARTZ DIORITE INTRUSIVE - UNALTERED										
8.45 16.55	Main, earlier phase. Fine grained, feldspathic groundmass with disseminated biotite. 20%, 1 to 8mm, anhedral to subhedral plagioclase phenocrysts. Local, minor quartz veining, and up to 1% pyrite.	MS	8.45	19.90 11.45	n/a	n/a	-	MINOR			
		8359	11.00	13.00 2.00	.01	.90	-	MINOR			
		8360	13.00	14.60 1.60	.01	1.10	-	1%			
		8361	14.60	16.55 1.95	.01	1.20	-	MINOR			
16.55 19.20	Finer grained, later phase. Very fine grained, feldspathic groundmass with biotite. 25%, 1 to 4mm, plagioclase phenocrysts. Minor mafic inclusion. Minor quartz veining.										
19.20 19.90	Same as earlier phase between 8.45 to 16.55. Lower contact oriented at 80 degrees to the core axis.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
19.90 32.85	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE) Mafic volcanic. Fine grained, very dark green basalt. Very weakly foliated. 10%, fine acicular hornblende. 1%, irregular calcite-quartz veining. Very weakly magnetic. Trace pyrrhotite and pyrite.	MS	19.90	32.85 12.95	n/a	n/a	-	TRACE			
32.85 34.50	FELDSPAR PORPHYRITIC QUARTZ DIORITE DYKE Intrusive dyke. Fine grained groundmass with 10%, 1 to 6mm, anhedral to subhedral, plagioclase phenocrysts. Similar to earlier dike phase above. Non-magnetic. Trace pyrite. Sharp upper and lower contacts oriented 75 and 70 degrees to the core axis.	MS	32.85	34.50 1.65	n/a	n/a	-	MINOR			
34.50 155.00	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE) Mafic volcanic. Aphanitic to fine-grained, dark green to greenish grey. Minor, fine, metamorphic hornblende and biotite throughout. Absent to trace disseminated pyrrhotite and pyrite. Trace to minor calcite and quartz-calcite veinlets and patches.	MS	34.50	155.00120.50	n/a	n/a	-	MNR-1%			
	51.85 52.85 And	8362	38.75	40.40 1.65	.01	.40	-	MINOR			
	53.90 54.65 Very fine grained, medium grey quartz siltstone, interbedded with mafic volcanics. 1cm quartz vein containing 10% pyrite, and 1% chalcopyrite at 52.35 metres. Weakly foliated at 80 to 85 degrees to the core axis.	8363	144.10	146.70 2.60	.01	1.00	-	2%/PO			
	67.25 69.65 Moderately foliated, extremely biotite rich section with 10%, 1mm augen-shaped calcite-quartz? grains. Possibly a basaltic tuff, or epiclastic interflow material derived from mafic volcanics. Foliation approximately 80 degrees to the core axis										
	80.10 80.35 Siltstone, interbanded in medium green basalt. Dark purplish gray biotitic siltstone with 50% hornblende metacrysts and 1% pyrrhotite.										
	86.00 90.30 Interbedded siltstone and mafic volcanic debris. Contains sections of siliceous siltstone up to 25 cm thick in mixed biotitic basalt with siltstone interbeds. 5% calcite-quartz veinlets parallel to weak foliation oriented at 80 degrees to the core axis.										

Interval (Metres)		Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
90.30	94.00	Fine grained, dark green basalt, with 25%, coarse (up to 1cm), hornblende metacrysts. Non-magnetic.										
94.00	120.15	Basalt. Mainly aphanitic, dark gray, hard, uniform, with 5 to 10%, fine hornblende metacrysts, and minor chloritic bands. About 2% calcite veinlets as occur in units above. Non-magnetic.										
120.15	136.60	Basalt. Aphanitic to very fine grained, very hard and moderately hard interbanded sections. Fine hornblende metacrysts more common in slightly more chloritic sections. Trace calcite veining. Non-magnetic.										
136.60	139.35	Slightly biotitic and weakly foliated basalt with 5% calcite-quartz veins.										
139.35	155.00	Aphanitic to fine grained, hard, uniform, dark gray-green basalt. 2% calcite veining. Non-magnetic.										
144.10	146.70	3% quartz veining. Average 1% pyrite and up to 1% pyrrhotite. Sulphides mainly disseminated in basalt. Lower contact not encountered.										
155.00	End of hole.											

ESSO MINERALS CANADA

SUMMARY DRILL LOG

Project Name: HN Blakelock

Hole Number: HN88-43

Project Number: 1677

Logged By: Dane Bridge

NTS: 42H/8

Date: October 1988

Location: L39+00W, 7+25S

Claim Number: L-871909

Azimuth: 180° Dip: -45°

Length (m): 276

PURPOSE: Test IP anomaly and extend drill section on L39W to the north of DDH HN88-31

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.00	18.60	Overburden	
18.60	70.80	Mafic Metavolcanic with minor Intrusive Dykes Dark, chloritic basalt with minor to abundant metamorphic hornblende, locally biotitic. 2% calcite veinlets. Minor pyrite.	0.01 (4)
70.80	80.40	Feldspar Porphyry Dyke 25% subhedral, white, plagioclase phenocrysts in fine-grained biotitic matrix.	0.01 - 0.02 (4)
80.40	124.35	Mafic Metavolcanic with minor Feldspar Porphyry Dykes Dark green, aphanitic and fine-grained, porphyritic basalt. Very minor garnet-epidote patches and calcite veinlets. Trace to 1% pyrite.	0.01 - 0.06 (6)
124.35	128.60	Felsic Crystal Tuff Fine-grained, massive, with minor 1 mm quartz phenocrysts.	Not Assayed
128.60	130.85	Feldspar Porphyry Dyke Same as above	0.01 (1)
130.85	149.20	Mafic Metavolanic with minor Feldspar Porphyry Dyke Mainly dark, aphanitic basalt with bleached patches and epidote-garnet patches. Slightly calcitic. Minor pyrite. Locally fractured with minor silica-pyrite alteration.	0.01 (6)
149.20	178.85	Biotite Quartz Diorite with minor Mafic Metavolcanic Inclusions and Feldspar Porphyry Dyke Light pinkish-grey, feldspar porphyritic diorite with minor quartz veining and 1% pyrite. Fractured and weakly silicified at contact for 4.65 m.	0.01 - 1.46 (9)
178.85	276.00	Biotite Quartz Diorite Pink to grey, and locally reddish-grey, feldspar porphyritic biotite quartz diorite. Commonly 1 to 2% quartz veining, and 1% disseminated pyrite. Minor sections of 5-10% quartz veining.	0.01 - 32.50 (23)
	276.00	END OF HOLE	

H-N PROJECT (On[redacted]7)

ESSO MINERALS [redacted]DA
DIAMOND DRILL [redacted]RD

Hole: HN88-43
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871909
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	39+00W
Casing:	Casing Removed			Northing:	7+25S
		Acid Tests:		Elevation:	Level
Started:	Oct. 23, 1988				
Finished:	Oct. 27, 1988	Depth Az. Dip		Purpose:	Test IP anomaly & extend section N of H
		17.00 -45.0			
Logged by:	Dane Bridge	117.00 -40.0		Length:	276.00Metres
Date logged:	October 1988	217.00 -38.0		Vert. Proj:	179.0 Metres
Logging Method:	Log II	276.00 -38.5		Hor. Proj:	210.0 Metres
Measurement System:	Metric			Ovb. Depth:	13.3 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 18.60	OVERBURDEN										
18.60 70.80	MAFIC METAVOLCANIC FLOWS (PB THOLEIITE)										
18.60 25.55	Aphanitic, massive, black basalt, with 2% calcite veinlets in very weak foliation. Trace pyrite. Sharp contact oriented at 85 degrees to the core axis. Very slightly magnetic.	NS	18.60	70.80 52.20	n/a	n/a	-	TRACE			
		8364	32.40	34.10 1.70	.01	.60	-	2%			
		8365	34.10	35.10 1.00	.01	.80	-	TRACE			
25.55 32.40	Medium grained, dark grey-green basalt, with minor to 20%, metamorphic hornblende. Trace pyrite. Very slightly magnetic. Sharp contact oriented at 60 degrees to the core axis.	8366	37.90	39.90 2.00	.01	1.00	-	2%			
		8367	47.00	47.65 .65	.01	.70	-	2%			
32.40 36.65	Massive, aphanitic to fine grained, basalt with fine plagioclase phenocrysts. Patchy epidote-garnet surrounding one quartz vein. Very weakly magnetic.										
36.65 50.85	Aphanitic, dark greenish black basalt. Weakly foliated sections. Minor bleaching along fractures in massive sections. Averages trace pyrite. Non-magnetic to weakly magnetic.										
37.70 37.90	Intrusive dike. Aphanitic, dark groundmass, with 20%, 1 to										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	3mm, white plagioclase phenocrysts.										
	50.85 70.80 Aphanitic to fine grained, basalt. Mainly dark greenish gray, with minor bands and patches of biotitic basalt. Up to 1% quartz-calcite veinlets. Average trace pyrite. Weakly magnetic										
	61.80 61.90 Fault gouge oriented at 45 degrees to the core axis.										
70.80 80.40	FELDSPAR PORPHYRITIC QUARTZ DIORITE DYKE										
	Mainly intrusive dike. Fine grained, dark brown-gray, feldspathic groundmass, with biotite. 25%, 1 to 5mm, white, subhedral, plagioclase phenocrysts. Non-magnetic. Average 0.5% pyrite. Upper contact sharp at 50 degrees to the core axis. Lower contact irregular.	NS	70.80	80.40	9.60	n/a	n/a	-	0.5%		
		3868	70.80	72.50	1.70	.01	1.20	-	1%		
		3869	72.50	72.85	.35	.01	.80	-	TRACE		
		8370	72.85	74.95	2.10	.02	.40	-	1%		
	72.85 74.95 Basalt inclusion.	8371	74.95	77.00	2.05	.01	1.30	-	0.5%		
80.40 124.35	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Mafic volcanic unit, with minor intrusive dikes.	NS	80.40	124.35	43.95	n/a	n/a	-	MNR-1%		
	80.40 93.55 Aphanitic, dark green basalt, with foliated bands of fine grained dark brown-gray, biotitic basalt. Core angles vary from 60 to 80 degrees to the core axis. Biotitic bands are locally calcitic and are probably metamorphic rather than primary. Non magnetic.	8372	104.00	105.60	1.60	.01	1.10	-	TRACE		
		8373	108.50	108.90	.40	.01	1.10	-	2%		
		8374	117.30	118.80	1.50	.01	1.10	-	TRACE		
		8375	118.80	120.50	1.70	.06	1.60	-	0.5%		
		8376	120.50	122.10	1.60	.02	1.20	-	0.5%		
	87.90 91.60 Feldspar Porphyritic Quartz Diorite Dyke. Fine grained, feldspathic groundmass with biotite. 30%, 1 to 4mm, plagioclase phenocrysts. 1% pyrite. Non-magnetic.	8377	122.10	124.35	2.25	.02	1.20	-	3%		
	93.55 98.85 Aphanitic, very dark green basalt. 1% disseminated pyrite. 1% garnet-epidote patches. Strongly magnetic.										
	98.55 118.80 Porphyritic basalt. Aphanitic, very dark green with 15%, commonly 1 to 3mm, subhedral, plagioclase phenocrysts. Minor, local (10cm section) of fragmental basalt. Strongly magnetic. Pyrite absent, except as noted locally in sample description sheets. One intrusive dike at 103.25 103.40 metres. Dike is non-magnetic, and has chilled contacts.										
	118.80 122.10 Feldspar Porphyritic Quartz Diorite Dyke. Fine grained, dark gray, feldspathic groundmass with minor biotite. 40%, 1 to 4mm, subhedral, white plagioclase phenocrysts.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Plagioclase locally has hematitic rims at contacts, and near veinlets of epidote. Average up to 1% pyrite. Non magnetic.										
122.10 124.35	Porphyritic basalt. Very fine grained, very dark grey-green. Minor to 10% plagioclase phenocrysts. 3% Disseminated pyrite. 1% quartz-calcite veinlets.										
124.35 128.60	QUARTZ-FELDSPAR CRYSTAL TUFF										
	Felsic crystal tuff. Fine grained, massive, felsic rock with minor, 1mm, quartz phenocrysts. Minor banding at approximately 90 degrees to the core axis, due to sections with biotite.	MS	124.35 128.60	4.25	n/a	n/a	-				
128.60 130.85	FELDSPAR PORPHYRITIC QUARTZ DIORITE DYKE										
	Intrusive dike. Medium grained, dark gray, feldspathic groundmass with biotite. Average 30%, 1 to 4mm, subhedral, plagioclase phenocrysts. Up to 1% quartz veins with trace pyrite, and up to 1%, hairline, calcite and quartz-calcite veinlets cutting quartz veins. Non-magnetic.	MS	128.60 130.85	2.25	n/a	n/a	-	TRACE			
		0378	128.60 130.85	2.25	.01	.90	-	0.5%			
130.85 149.20	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS										
	Mafic volcanic unit. Locally weakly altered.	MS	130.85 149.20	18.35	n/a	n/a	-	1%			
130.85 135.50	Aphanitic, dark gray basalt. Mainly intensely fractured and variably altered and bleached. Varies from bleached halos on fractures to pervasive silica-pyrite alteration. Average weak silicification. Weak calcite veinlets. Average 1% pyrite. Moderately magnetic.	0379	130.85 133.25	2.40	.01	.60	-	0.5%			
		0380	133.25 134.70	1.45	.01	.50	-	TRACE			
		0381	134.70 135.50	.80	.01	.80	-	2%			
		0382	135.50 137.00	1.50	.01	.70	-	0.5%			
		0383	137.00 137.70	.70	.01	.80	-	1%			
135.50 142.90	Aphanitic basalt. Average 1 to 2% fine quartz-calcite veinlets. Local epidote and garnet-epidote patches. Average up to 1% pyrite. Moderately magnetic.	0384	142.90 145.40	2.50	.01	1.10	-	1%			
142.90 145.40	Feldspar Porphyritic Quartz Diorite Dyke. Intrusive dike in mafic section. Medium grained, hydidiomorphic granular, biotite diorite. Locally very weakly silicified. Crackle fractured. Average 1% disseminated pyrite.										
145.40 149.20	Mafic volcanic. Fine grained to aphanitic, near black to										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	creamy in bleached patches. Minor epidote-garnet patches. Strongly magnetic. Trace pyrite near contacts.										
149.20 178.85	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED										
	Intrusive rock with minor mafic volcanic sections.	MS	149.20 178.85	29.65	n/a	n/a	-	1-2%			
149.50 153.75	Quartz diorite intrusive. Weakly altered, medium grained, medium gray, slightly porphyritic diorite. Locally intensely fractured and silicified. Overall weakly silicified, with 3% quartz and minor quartz-calcite veining. Average 1 to 1.5% pyrite. Non-magnetic.	8385	149.20 151.50	2.30	.41	1.50	-	1%			
		8386	151.50 153.75	2.25	.02	.90	-	1%			
		8387	153.75 154.50	.75	.02	1.00	-	TRACE			
		8388	154.50 156.50	2.00	.01	.90	-	1%			
		8389	156.50 158.50	2.00	.04	1.00	-	0.5%			
153.75 154.50	Mafic volcanic. Very fine grained, weakly foliated, biotitic basalt. 1% quartz-calcite veinlets. Foliation oriented at 45 to 50 degrees to the core axis. Non-magnetic.	8390	158.50 160.50	2.00	.01	.90	-	0.5%			
		8391	160.50 162.90	2.40	.01	.90	-	1%			
		8392	175.30 177.90	2.60	1.46	4.10	-	2%			
154.50 162.90	Quartz diorite. Medium grained, slightly feldspar porphyritic. Mainly reddish brown due to minor K-spar or hematite. Locally gray. Average 10% primary biotite. Minor quartz. 10%, white, porphyritic plagioclase. Trace to 1% pyrite. Minor quartz veining. Non-magnetic.	8393	177.90 178.85	.95	.14	.90	-	1%			
156.50 158.10	Mainly dark gray, later?, plagioclase porphyritic dike.										
162.90 166.20	Mafic volcanic. Black, very fine grained, slightly biotitic, moderately foliated basalt. 2%, fine calcite veinlets. 3%, coarse, quartz-calcite veinlets. Minor epidote-garnet patches. 1% pyrite. Strongly magnetic.										
166.20 173.60	Quartz diorite. Light pinkish gray, biotite quartz diorite. Average 1% disseminated and fracture-controlled pyrite. 1 to 2% quartz veining.										
173.60 178.85	Porphyritic diorite. Dark gray with 25%, 1 to 5mm, white to slightly pinkish, plagioclase phenocrysts. Average 2% pyrite. Non-magnetic.										
175.30 177.90	Average 15% quartz veins with trace pyrite internally, and minor pyrite along edges.										
178.85 276.00	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED										
	Pink to light gray, biotite quartz diorite. Hypidiomorphic granular with	MS	178.85 276.00	97.15	n/a	n/a	TRACE	1-2%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	minor, 5 to 8mm, plagioclase phenocrysts. Commonly 1 to 2% quartz veining, 1% pyrite, and trace calcite.	8394	178.85 181.00	2.15	.06	1.20	-	0.5%			
		8395	181.00 183.00	2.00	.01	.90	-	1%			
190.00 192.30	3% quartz veining in white diorite. Trace gray mineral associated with calcite veinlets with chloritic margins.	8396	183.00 185.15	2.15	.09	1.00	-	0.5%			
		8397	185.15 185.90	.75	32.50	90.60	-	2%			
196.80 197.20	2% quartz veining in light gray patch surrounded by pink diorite. Minor calcite veinlets with chlorite rims. Trace gray mineral.	8398	185.90 188.25	2.35	.21	1.90	-	1%			
		8399	188.25 190.60	2.35	.18	1.10	-	1%			
		8400	190.60 191.40	.80	.02	1.50	-	1%			
200.30 200.40	Basalt inclusion.	8401	191.40 192.30	.90	.01	1.10	-	1%			
202.60 202.85	Basalt inclusion.	8402	196.80 197.20	.40	.05	2.90	TRACE	1%			
203.00 204.40	15% quartz veining, and 1 to 1.5% pyrite in pink-gray diorite.	8403	203.00 204.40	1.40	.15	1.00	-	1-2%			
		8404	205.05 205.55	.50	.24	1.10	-	1%			
205.05 205.55	Trace sericite in pinkish gray diorite.	8405	214.85 215.70	.85	.52	2.30	-	1%			
208.30 217.15	Increase in quartz veining to about 5%.	8406	215.70 217.15	1.45	.04	1.00	-	1%			
214.85 215.70	Gray section in predominately red-pink section with 10% quartz veining.	8407	227.30 229.30	2.00	.01	.80	-	0.5%			
		8408	229.30 231.30	2.00	.67	3.20	-	0.5%			
215.70 217.15	Reddish diorite with 10% quartz veining.	8409	231.30 233.45	2.15	.02	.90	-	0.5%			
217.15 227.30	Very uniform pinkish biotite (10%), quartz (1%) diorite. Moderately plagioclase porphyritic, with minor plagioclase up to 8mm. Very minor quartz veining. Trace pyrite. Non-magnetic.	8410	233.45 234.05	.60	.20	1.00	-	1%			
		8411	256.10 256.70	.60	.39	.90	-	2%			
		8412	256.70 258.25	1.55	.10	.80	-	2%			
		8413	267.75 269.55	1.80	.10	1.00	-	1%			
227.30 233.45	Average 4% quartz veins in diorite as at 217.15 to 227.30 metres.	8414	269.55 271.00	1.45	.05	1.00	-	0.5%			
		8415	271.00 273.00	2.00	.07	1.20	-	1%			
233.45 234.05	Very slightly silicified, gray diorite with 1% pyrite and 10% quartz veining.	8416	273.00 275.00	2.00	.12	1.20	-	1%			
234.05 256.10	Mainly pinkish gray diorite, locally with 1% coarse oscillatory zoned plagioclase phenocrysts, and locally with 5%, 3 to 5mm, quartz phenocrysts. Overall average 1% quartz veining. Trace to locally 1% pyrite. Non-magnetic.										
256.10 256.70	Partly brecciated gray diorite with chlorite on clast boundaries. 2% disseminated pyrite. 3% quartz veining.										
256.70 258.25	2% pyrite. 3% quartz veining.										
267.75 271.00	Minor sections with weak foliation and weak silica-sericite alteration containing disseminated pyrite. Maximum pyrite content is 10% over 3 cm. Average pyrite is 1%. Weak foliation oriented at 75 to 80 degrees to the core axis. Trace calcite on fractures.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Lower contact not encountered.										
	276.00 End of hole.										

ESSO MINERALS CANADA

SUMMARY DRILL LOG

Project Name: HN Blackrock

Hole Number: HN88-44

Project Number: 1677

Logged By: Dane Bridge

NTS: 42H/8

Date: October 1988

Location: L42+00W, 6+50S

Claim Number: L-871911

Azimuth: 180°. Dip: -45°.

Length (m): 266

PURPOSE: Search for a mineralized shear north of the north contact of a biotite quartz diorite body.

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.00	8.00	Overburden	
8.00	99.30	Mafic Volcanic Unit, with Minor Feldspar Porphyry Dykes Mainly fine-grained, chloritic basalt with minor calcite veinlets.	0.01 (6)
99.30	129.00	Mafic Volcanic Unit with Weak Calcite Alteration, and Weak to Strong Bleaching Associated with Late Faults	0.01 (4)
129.00	140.55	Siliceous Siltstone and Felsic Crystal Tuff Mainly dark grey, chloritic, siliceous siltstone. Locally with mafic debris and minor biotite and amphibole. Includes minor gritty and fragmental sections that may be crystal tuff or arenite-wacke.	0.01 - 0.47 (4)
140.55	221.15	Mafic Volcanic Unit and minor Interbedded Siltstone and Mafic Derived Epiclastic Rocks Minor silicified zones in basalt. Unit becomes contact metamorphosed towards base and locally feldspar metacrystic. Minor late fault zones.	0.01 - 0.53 (16)
221.15	266.00	Biotite, Quartz Diorite Intrusive Medium-grained, pinkish-gray, hypidiomorphic granular to feldspar porphyritic diorite. About 40% of unit is bleached to a light grey colour and weakly sericitic and/or silicified. Minor pyrite and trace grey mineral.	0.01 - 0.15 (12)
	266.00	END OF HOLE	

H-W PROJECT (Ont. [illegible])

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HW88-44
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871911
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	42+00W
Casing:	Casing Removed			Northing:	6+50S
		Acid Tests:		Elevation:	Level
Started:	Oct. 27, 1988				
Finished:	Oct. 31, 1988	Depth Az. Dip		Purpose:	Test for mineralized shear structure
		8.00 -45.0			
Logged by:	Dane Bridge	108.00 -39.0		Length:	266.00Metres
Date logged:	November 1988	208.00 -40.0		Vert. Proj:	174.0 Metres
Logging Method:	Log II	265.00 -41.0		Hor. Proj:	201.0 Metres
Measurement System:	Metric			Ovb. Depth:	5.7 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 8.00	OVERBURDEN										
8.00 50.10	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
8.00 29.75	Aphanitic to fine grained, very hard, dark gray-green basalt. Non-magnetic to locally slightly magnetic. No sulphides. Average 1% calcite and calcite-quartz-epidote? patches, which are bleached and weakly foliated at 35 to 70 degrees to the core axis.	NS	8.00	50.10 42.10	n/a	n/a	-	1%			
		8417	36.90	38.00 1.10	.01	.30	-	4%			
		8418	38.00	39.30 1.30	.01	1.10	-	1%			
		8419	39.30	41.10 1.80	.01	.40	-	3%			
		8420	41.10	43.55 2.45	.01	.50	-	0.5%			
15.25 15.85	Fragmental section with fine, shard-like clasts and patches of serpentine. May be a flow-top breccia with glass altered to paragonite and then to serpentine.	8421	43.55	45.85 2.30	.01	.30	-	MINOR			
		8422	45.85	46.65 .80	.01	.40	-	MINOR			
24.80 29.75	5% calcite alteration as white veinlets, coarse, pink patches and foliated epidote-carbonate patches.										
27.80 27.95	Fault gouge oriented at 80 degrees to the core axis.										
29.75 31.70	Feldspar Porphyritic Quartz Diorite Dyke. Fine grained, very dark brownish gray, biotitic groundmass with 25%, mainly 1 to 3mm and locally to 5mm, mainly anhedral, white plagioclase phenocrysts. Both contacts are sharp. Upper at 60										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	degrees, and lower at 45 degrees to the core axis.										
31.70 50.10	Mafic volcanic unit with section of strong calcite alteration. Fine grained, dark green, normal hardness basalt. Non-magnetic to locally moderately magnetic.										
31.70 38.00	Locally mottled with bleached patches and minor calcite veinlets. May be a series of thin flows with flow rubble. Average 1% pyrite.										
38.00 43.55	Weakly calcite altered. Calcite veins, calcite patches and bands up to 2 cm thick. Massive to locally slightly biotitic and well foliated at 45 degrees to the core axis. Average 1% pyrite.										
43.55 45.85	Almost total replacement of basalt by medium-grained, off-white calcite. 25%, irregular patches of basalt remaining. One 15 cm quartz vein and minor quartz patches.										
45.85 50.10	Aphanitic, very dark green, hard basalt with weak calcite alteration. Average 3% calcite-quartz veinlets. Non-magnetic. No sulphides.										
50.10 53.20	FELDSPAR PORPHYRITIC QUARTZ DIORITE DYKE										
	Mottled light gray to dark gray dike. Peldspathic groundmass with minor to absent biotite. 30%, 1 to 5mm, subhedral plagioclase phenocrysts. Non-magnetic. Sharp contacts. Upper at 70 degrees, lower at 85 degrees to the core axis.	NS	50.10	53.20 3.10	n/a	n/a	-	0.5%			
53.20 71.60	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS										
	Mafic volcanic with feldspar porphyry dykes.	NS	53.20	71.60 18.40	n/a	n/a	-	TRACE			
53.20 54.35	Mainly massive basalt. Locally weakly foliated. Weakly carbonate altered with 5% calcite patches and veinlets. Non-magnetic. No sulphides.										
54.35 71.60	Very fine grained, hard, dark green, massive basalt. 1 to 2% calcite and calcite-quartz veinlets. Non-magnetic. No sulphides.										
55.75 56.30	Amygdaloidal with 3%, 1mm and locally 2 to 3mm, calcite-filled amygdules.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	71.60 74.30 Feldspar Porphyritic Quartz Diorite Dyke. Medium pinkish gray porphyry dike. Fine grained, feldspathic groundmass with 10% biotite. 30%, 1 to 3mm, white plagioclase phenocrysts, and minor, anhedral plagioclase up to 1cm.										
	74.30 81.85 Basalt as at 54.35 to 71.60m. Up to 1% calcite.										
	81.85 82.90 Feldspar Porphyritic Quartz Diorite Dyke. Porphyry dike as at 71.60 74.30. 15 cm, gray-green bleached and brecciated zone in adjacent basalt at lower contact.										
71.60 99.30	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Very fine-grained, dark green to black, massive basalt. Minor, 1cm, foliated and quartz-epidote sections. Minor, 1 to 2cm zones of brecciation. No sulphides. 1% calcite veinlets. Non-magnetic.	NS	71.60	99.30 27.70	n/a	n/a	-	TRACE			
99.30 129.00	WEAKLY BRECCIATED MAFIC METAVOLCANIC WITH EPIDOTE-CARB. BANDS										
	Mafic volcanic unit with weak carbonate alteration, and weak to strong bleaching associated with late faults.	NS	99.30	129.00 29.70	n/a	n/a	-	0.5-1%			
	99.30 113.45 Fine grained, mottled, medium gray to medium green basalt. Minor weak calcite alteration, and very weak bleaching. Minor scattered sections with 0.5 to 12cm quartz-epidote and calcite-quartz veins. Average trace pyrite. Non-magnetic.	8423	100.90	103.00 2.10	.01	1.00	-	TRACE			
		8424	103.00	105.20 2.20	.01	1.70	-	0.5%			
		8425	122.15	122.55 .40	.01	1.50	-	2%			
		8426	127.90	129.85 1.95	.01	1.60	-	1%			
	100.90 105.20 Four quartz-pyrite veins, and up to 1% disseminated pyrite in basalt.										
	113.45 124.90 Variably weakly to strongly bleached, and weakly calcite altered basalt. Colour varies from gray-green to pale greenish white, with soft talc?-chlorite patches. Alteration is centered around late faults. No sulphides except in minor quartz veins. Non-magnetic.										
	114.00 114.50 Fault Breccia. Dark green, talc-serpentine fault breccia with vuggy calcite.										
	118.20 118.50 Bleached fragments in calcite matrix. Fractures and possibly the fault oriented at 15 degrees to the core axis.										
	122.15 122.55 3 quartz-epidote-pyrite veins in weakly bleached basalt.										
	124.90 129.00 Weakly epidote altered basalt with 1% pyrite, and 2										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	quartz-pyrite veins.										
129.00 140.55	SILTSTONE										
	Mixed siltstone and felsic crystal tuff unit.	MS	129.00	140.55 11.55	n/a	n/a	-	2%			
129.00 129.85	Dark gray, very fine grained, chloritic, siliceous siltstone. Sharp upper contact oriented at 90 degrees to the core axis, with epidotized basalt. Trace pyrite. Non-magnetic.	8427	129.85	131.50 1.65	.01	2.20	-	1%			
		8428	131.50	132.70 1.20	.47	23.90	TRACE	5%			
		8429	132.70	134.00 1.30	.12	8.90	-	1%			
		8430	138.00	140.55 2.55	.32	9.90	-	2%			
129.85 132.70	Light gray, fine grained, felsic crystal tuff with 1 to 2%, 1mm quartz phenocrysts. (May be siliceous siltstone with minor arenite grains). 2% pyrite. Non-magnetic.										
129.85 131.00	Minor, crudely laminated silicate iron formation. Light red to cream coloured.										
131.50 132.70	Crystal tuff? with 5% disseminated pyrite, and 25%, white, irregular quartz veins. Veins contain minor chlorite and calcite, trace pyrite and gray mineral along vein-wallrock contacts.										
132.70 140.55	Dark greenish gray, impure siliceous siltstone. Commonly with 5 to 10% biotite, minor chlorite and locally, 5 to 10%, fine grained, amphibole. Local sections contain 25% amphibole. Probably impure mafic debris in a mainly siliceous siltstone unit. Average 1% pyrite. Non-magnetic.										
140.55 221.15	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS										
	Variable mafic volcanic unit including flows and tuffs, as well as minor siltstone and mafic epiclastic horizons.	MS	140.55	221.15 80.60	n/a	n/a	-	2%			
		8431	147.85	149.20 1.35	.01	.40	-	1%			
140.55 147.85	Very dark gray-green, medium grained, speckled basalt, with 25% amphibole in a hard, siliceous-looking matrix. Strongly magnetic.	8432	149.20	150.60 1.40	.01	.50	-	1%			
		8433	150.60	151.30 .70	.01	.80	-	3%			
		8434	151.30	152.50 1.20	.01	1.10	-	TRACE			
147.85 151.30	Mafic to siliceous siltstone. Dark gray to light gray siltstone with variable mafic component. Moderately foliated at 80 degrees to the core axis. Weakly to strongly magnetic. 1 to 2% pyrite, and 1% calcite-quartz veins.	8435	152.50	152.90 .40	.05	2.80	-	5%			
		8436	158.65	159.40 .75	.01	.80	-	4%			
		8437	163.30	164.00 .70	.21	1.20	-	3%			
		8438	179.00	180.55 1.55	.01	2.30	-	0.5%			
151.30 155.70	Mafic tuff?. Medium gray-green, fine grained, moderately	8439	180.55	182.00 1.45	.01	1.40	-	0.5%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	well laminted and deformed mafic, epidote-chlorite rich section, locally with shards. Epidote-hematite-pyrite patches around quartz veins. Non-magnetic.	8440	182.00 183.80	1.80	.01	1.00	-	TRACE			
		8441	183.80 185.50	1.70	.02	1.10	-	TRACE			
		8442	197.20 198.75	1.55	.01	1.10	-	TRACE			
155.70 163.30	Aphanitic to fine grained, dark green-black basalt. Mottled from dark to locally cream coloured, with 1 to 2% scattered patches of epidote-quartz-garnet and locally pyrite. Section is more hornfelsed and metamorphosed than mafic sections higher in the hole. Non-magnetic.	8443	198.75 200.00	1.25	.01	1.50	-	TRACE			
		8444	200.00 201.40	1.40	.02	1.70	-	0.5%			
		8445	201.40 202.80	1.40	.01	1.40	-	0.5%			
		8446	218.50 221.15	2.65	.53	1.70	-	2%			
158.65 159.45	4% disseminated pyrite with minor quartz veins and bleaching										
163.30 179.00	As at 155.70 to 163.70 except weakly to variably strongly magnetic. Minor bleached and brecciated sections.										
163.30 164.00	Intensely silicified basalt with 3% disseminated pyrite. Mottled medium to light gray. Non-magnetic.										
179.00 213.00	Metamorphosed and epidote altered basalt. Highly variable section with metamorphic contact effects from intrusive body to the south (down the hole). Sections with 5 to 15%, 1 to 3mm, euhedral to subhedral, plagioclase metacrysts in basalt. Sections of brecciation and bleaching with overall weak and locally strong epidote development.										
202.80 207.40	Fault zone. Variably to locally totally epidotized basalt, with local reddish hematite coloration. Intensely brecciated to sheared. Core recovery approximately 70%. Fracturing and shearing commonly at 0 degrees to the core axis. Non-magnetic.										
213.00 221.15	Aphanitic to fine grained, hornfelsed basalt. Slightly biotitic, siliceous looking. Very minor epidote. Crackle fractures with thin bleached halos. Weakly magnetic. Trace pyrite but increasing to 2% at contact.										
221.15 266.00	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED										
	Medium grained, light gray and pinkish gray, hypidiomorphic granular to feldspar porphyritic. Locally bleached white around fractures and quartz veins. Non-magnetic.	HB	221.15 266.00	44.85	n/a	n/a	-	0.5-3%			
		8447	221.15 222.50	1.35	.14	3.00	-	3%			
		8448	222.50 224.50	2.00	.03	1.70	-	1%			
221.15 222.50	Very weakly silicified, with trace white bleaching (sericite?) on fractures. 3% disseminated pyrite.	8449	224.50 226.20	1.70	.05	2.20	-	1%			
		8450	226.20 228.00	1.80	.02	1.50	-	1%			

Interval (Metres)		Description	Sample No.	Interval (Metres)		Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
222.50	226.20	Pinkish-gray and unaltered.	8451	228.00	230.00	2.00	.04	2.00	-	1%			
226.20	231.90	Light gray, weakly silicified, with 4% quartz, and 1% calcite-chlorite veining. Trace pyrite. Trace gray mineral in 2 veins.	8452	230.00	231.90	1.90	.10	1.80	-	1%			
			8453	237.70	238.85	1.15	.03	1.80	-	0.5%			
			8454	238.85	240.90	2.05	.15	1.50	-	0.5%			
231.90	253.10	Slightly pinkish gray diorite, with overall weak sericitic alteration. 1 to 2 cm wide bleached, white, sericitic halos on fractures or sections of up to 1m of white, chalky sericitic alteration with minor quartz-calcite-chlorite veinlets. Average up to 1% disseminated pyrite. Non-magnetic.	8455	244.40	245.00	.60	.08	2.80	-	0.5%			
			8456	249.80	252.40	2.60	.01	2.70	-	0.5%			
237.70	238.85		8457	252.40	253.10	.70	.03	2.80	-	0.5%			
244.40	245.00		8458	253.10	254.00	.90	.01	2.30	-	0.5%			
249.80	252.40	Three sections with almost total bleaching of feldspars. Overall moderately intense sericite alteration, but no foliation or deformation.											
252.40	266.00	Slightly pinkish gray, biotite quartz diorite. Minor patches of weak silicification. Average 1% quartz veining. Up to 1% pyrite. Non-magnetic.											
Lower contact not encountered.													
266.00	End of hole.												

ESSO MINERALS CANADA

SUMMARY DRILL LOG

Project Name: HN Blakeborder

Hole Number: HN88-45

Project Number: 1677

Logged By: D. Bridge

NTS: 42H/8

Date: November, 1988

Location: L36+00W, 9+00S

Claim Number: L-871904

Azimuth: 180°. Dip: -45°.

Length (m): 150.0

PURPOSE: Test coincident magnetic low and anomalous IP north of anomalous overburden tills in RC-102, 103, 104

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.00	7.35	Overburden	
7.35	48.25	Mafic Metavolcanic (Relatively Unaltered) Aphanitic to fine-grained, massive, chloritic basalt with 20% biotitic bands and patches, and 5% bleached, silicified or epidotized patches. Minor epidote-garnet patches and calcite veinlets. Minor pyrite.	Not Assayed
48.25	150.00	Biotite Quartz Diorite 75% pinkish-grey diorite, with minor disseminated pyrite and minor quartz and calcite veins. 25% bleached zones with weak sericitic? alteration of feldspar, local silicification, and local quartz-pyrite veins and traces of grey mineral. Minor silicified shear zones in diorite from 81.00 to 100.65 m.	0.01 - 14.22 (39)
	150.00	END OF HOLE	

H-M PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HM88-45
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871904
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	36+00W
Casing:	Casing Removed			Northing:	9+00S
		Acid Tests:		Elevation:	Level
Started:	Nov. 1, 1988				
Finished:	Nov. 3, 1988	Depth Az. Dip		Purpose:	Test Mag low & anomalous IP response
		7.00 -47.5			
Logged by:	Dane Bridge	107.00 -45.0		Length:	150.00Metres
Date logged:	November 1988	150.00 -49.0		Vert. Proj:	109.0 Metres
Logging Method:	Log II			Hor. Proj:	103.0 Metres
Measurement System:	Metric			Ovb. Depth:	5.3 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 7.35	OVERBURDEN										
7.35 48.25	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE) Aphanitic to fine grained, mainly dark green to brown basalt. Contact metamorphosed. Mainly chloritic, but 20%, thin bands and irregular patches of biotite-rich basalt. Rare patches with 5%, 1mm secondary amphibole. 5%, hard, light green to cream, bleached and locally epidotized patches. Trace garnet-epidote patches. Up to 1% quartz veining. About 1% calcite veins and hairline veinlets in fractures. Very minor pyrite. Few recognizable textures. Trace 1mm, slightly elongate, possibly vesicules. Biotitic bands commonly oriented at 60 degrees to the core axis. 7.35 13.00 Average moderately magnetic. 13.00 33.50 Non-magnetic. 33.50 41.00 Average weakly magnetic. 41.00 48.25 Non-magnetic, except locally weakly magnetic at lower contact.	MS	7.35	40.90	n/a	n/a	-	MINOR		

Interval (Metres)		Description	Sample No.	Interval (Metres)		Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
48.25	150.00	FELDSPAR PORPHYRITIC QUARTZ DIORITE INTRUSIVE - UNALTERED											
	48.25 50.25	Medium gray, medium grained, moderately porphyritic. 40%, 1 to 3mm, white to gray plagioclase, and 1 to 2% quartz, in a fine grained, feldspathic groundmass with 10% biotite. Contains inclusions of basalt. Transition to a crowded porphyry at contacts. May be a late dyke intruded into diorite-basalt contact. Non-magnetic. Trace pyrite.	MS	48.25	150.00	101.75	n/a	n/a	TRACE	0.5-3%			
			8459	50.25	51.50	1.25	.07	1.70	-	1%			
			8460	51.50	52.75	1.25	.08	1.90	-	1%			
			8461	52.75	53.60	.85	.02	1.60	-	1%			
			8462	53.60	54.95	1.35	.79	11.30	-	7%			
			8463	54.95	56.00	1.05	.14	1.70	-	1-2%			
	50.25 54.95	Pinkish gray, biotite quartz diorite. Mainly bleached to a dirty white colour, and overall weakly sericitized. Average 4% quartz veining. Average 1 to 2% pyrite, but 20% pyrite over 15cm on downhole side of one, 3cm quartz vein oriented at 30 degrees to the core axis. Minor calcite with quartz veins.	8464	67.30	67.55	.25	.11	2.20	-	5%			
			8465	68.15	68.70	.55	.01	1.80	-	1-2%			
			8466	71.25	72.25	1.00	.13	2.00	-	1%			
			8467	72.25	73.25	1.00	.77	3.20	-	1%			
			8468	73.25	74.25	1.00	.03	2.40	1%				
			8469	74.25	75.25	1.00	.10	2.20	-	1%			
	54.95 71.25	Pinkish gray, slightly potassic? diorite. Commonly aphanitic, feldspathic groundmass with 10% biotite, and minor to 20%, 1 to 3mm, gray plagioclase phenocrysts. Minor to 5%, quartz phenocrysts, but commonly up to 1% visible. Non-magnetic. Average trace pyrite, but locally to 1% pyrite. Rare quartz veining. Minor weakly silicified and pyritic patches around two quartz veins.	8470	75.25	76.25	1.00	.01	2.20	-	1%			
			8471	76.25	77.25	1.00	.04	4.00	-	2%			
			8472	77.25	78.25	1.00	.01	6.80	-	3%			
			8473	78.25	79.30	1.05	.20	3.00	-	2%			
			8474	79.30	80.45	1.15	.07	2.20	-	MINOR			
			8475	80.45	81.10	.65	.42	19.30	-	2%			
			8476	81.10	83.00	1.90	.01	2.10	-	1%			
	71.25 81.10	Weakly sericitized and very weakly silicified diorite with average 5% quartz veins with minor chlorite, and 5% calcite patches in veins. Average 1 to 2% disseminated pyrite, mainly in diorite. Trace gray mineral in some quartz veins.	8477	83.00	85.00	2.00	.01	2.30	-	1%			
			8478	85.80	87.00	2.00	.03	3.60	-	1%			
			8479	87.00	88.10	1.10	.01	1.80	-	1%			
			8480	88.10	88.80	.70	.33	4.10	-	1%			
	74.40 74.55	Weakly ribboned quartz vein. Finely sucrose. 2% pyrite. Oriented at 40 degrees to the core axis.	8481	88.80	91.15	2.35	.13	1.50	-	1-2%			
			8482	91.15	93.00	1.85	.01	1.60	-	1%			
	80.45 81.10	25%, irregular quartz veins with 5% calcite, 2% pyrite, and minor gray mineral.	8483	93.00	95.00	2.00	.03	1.10	-	1%			
			8484	95.00	95.35	.35	14.22	84.50	1%	1%			
	81.10 100.65	Mainly unaltered, pinkish gray diorite, with section of weak sericitic alteration and minor shear zones cutting diorite. Average 1% pyrite. Average 1% quartz veins and up to 1% quartz-calcite-chlorite veinlets. Shear zones are as follows:	8485	95.35	95.85	.50	.18	2.20	-	2%			
			8486	95.85	97.50	1.65	.04	1.60	-	1%			
			8487	97.50	99.10	1.60	.01	1.40	-	1%			
			8488	99.10	100.25	1.15	.20	1.20	-	1%			
	85.35 85.40	6 cm zone of fine grained, granular diorite with minor sericite, 2% pyrite. Oriented at 70 degrees to the core axis.	8489	100.25	100.65	.40	.39	1.00	-	1%			
			8490	117.00	118.50	1.50	.01	1.30	TRACE	1%			
	86.65 86.70	5 cm, pinkish feldspathic zone with minor quartz veins and	8491	118.50	120.10	1.60	.01	.90	-	1%			

Interval (Metres)	Description
	sericite. Oriented at 60 degrees to the core axis.
88.10 88.50	Scattered sections of fine grained, moderately sericitic diorite oriented at 70 degrees to the core axis.
95.00 95.35	Moderately sheared, weakly to moderately sericitic diorite, with minor quartz veins. 1% gray mineral. Oriented at 50 degrees to the core axis.
100.25 100.65	Strongly sheared diorite. Moderately silicified, weakly sericitized. 2% pyrite. Oriented at 75 degrees to the core axis.
100.65 117.00	Pink, medium grained, biotite (10%), quartz (5%) diorite. Mainly subhedral, white to pinkish gray, plagioclase with interstitial biotite and quartz.
110.65 108.40	2 small basalt xenoliths, and three, 15 to 70cm xenoliths of mafic diorite, containing 25%, fine grained, biotite in reddish feldspathic groundmass.
116.80 116.95	Xenolith of amphibolite-grade metamorphosed basalt. Dark gray, fine grained, with 20% elongate amphibole, and 5% red garnet.
117.00 128.70	Light gray, weakly sericitized and locally weakly to strongly silicified diorite. Minor quartz and quartz-calcite veins. Locally fine gray mineral in silicified patches and quartz veins. Average 2% pyrite.
120.10 126.60	Scattered zones of silicification, and trace to minor gray mineral.
123.40 124.10	Strongly silicified section, with quartz-calcite-pyrite veins and locally 1% gray mineral. Average 15% pyrite in section.
128.70 150.00	Pinkish gray, botite quartz diorite. Average up to 1% disseminated pyrite. Up to 1% quartz veins. Up to 1% thin quartz-calcite-chlorite veinlets. Trace gray mineral in 1cm silicified patch at 146.6 metres.
139.50 141.70	Weakly sericite or clay alteration of feldspar. Section is still pinkish gray, but feldspars are clouded and opaque.
Lower contact not encountered.	
150.00 End of hole.	

Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
8492	120.10 121.70	1.60	.02	1.20	TRACE	2%			
8493	121.70 123.40	1.70	.25	1.70	-	3%			
8494	123.40 124.10	.70	.64	11.00	MINOR	15%			
8495	124.10 125.00	.90	.01	1.20	-	3%			
8496	125.00 126.60	1.60	.01	1.40	-	2%			
8497	126.60 128.70	2.10	.02	1.50	-	1%			

ESSO MINERALS CANADA

SUMMARY DRILL LOG

OM88-6-C-236

Project Name: HN

Project Number: 1677

NTS: 42H/8

Hole Number: HN88-28

Logged By: M.H. Lenters

Date: September 1988

Location: L40+12.5W, 10+25S

Azimuth: 002° Dip: -45°

Claim Number: L-871909

Length (m): 374

PURPOSE: Test mineralized zones encountered in DDH's HN88-22,23 & 24

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMAINS	
0.0	22.90	Overburden	
22.90	118.00	Relatively Unaltered to Weakly Altered Quartz Diorite Intrusive Generally pink to pink-grey, coarse-grained, massive to weakly foliated, feldspar porphyritic granodiorite to quartz diorite with some light grey weakly silicified ± sericitized sections, and a few, thin (10's cm) moderately altered sections. The latter generally occur in thin zones adjacent to quartz veining and flooding. Minor, thin (10 cm) shear bands, and minor to 5% quartz veining. Minor to 1% finely disseminated pyrite, but locally up to 6% in well altered zones, which generally also contain trace to 0.5% disseminated metallic grey minerals. 100.20-101.80 Fine-grained metasediment inclusion.	0.01 - 2.04 (103)
118.00	132.00	Moderately Silicified and Weakly Sericitized Quartz Diorite Intrusive Generally grey-white, moderately silicified and weakly seriticitized, with local patches and bands that are white and intensely silicified and moderately sericitized. No significant quartz veining. 0.5 to 1% pyrite with intensely altered zones containing up to 5%. Minor to locally 1% disseminated, grey metallic minerals.	0.01 - 0.20 (21)
132.00	146.75	Schistose Mafic Metavolcanic Dark brown, very fine-grained, calcareous, non to weakly magnetic, sheared/schistose at 15° to 20° to CA. 5% calcite fracture veinlets, and 3 to 5% quartz veining. 0.5 to 1% pyrite.	0.02 - 0.17 (5)
146.75	151.20	Moderately Carbonate-Epidote Altered Mafic Metavolcanic Mottled dark green and light yellowish-green, fine-grained, non-magnetic, irregularly patchy altered mafic metavolcanic. Foliation at 20° to 40° to CA. Minor calcite veinlets. 5%, small quartz veins. Minor pyrite and trace chalcopyrite.	0.01 - 0.04 (3)
151.20	158.30	Weak to Moderately Silicified Granodiorite/Quartz Diorite Similar to section between 118.00 to 132.00 metres.	0.01 - 0.10 (7)
158.30	160.65	Shear Mafic Metavolcanic and Intrusive Dyke Material Medium to dark green, fine-grained, well foliated and sheared at 30° to CA, mafic metavolcanic with several irregular dyke fragments forming approximately 25% of the unit. Abundant calcite patches and tension veining. 5%, broken and sheared quartz veining. 1 to 3% pyrite.	0.01 - 0.02 (2)
160.65	180.50	Weak to Intensely Epidote-Carbonate Altered Mafic Metavolcanic Similar to 146.75 to 151.20 metres.	0.01 - 0.18 (6)

From (m)	To (m)	Description HN88-28 (page 2)	Gold Assays (g/tonne)
180.50	180.70	Fault Zone 50%, broken wallrock fragments surrounded by coarse quartz and and calcite veining. Contacts are irregular but at approximately 40° to CA. Fault edges are moderately (2 to 6%) pyritic.	0.20 (1)
180.70	182.30	Intensely Epidote-Carbonate Altered Mafic Metavolcanic Medium cream, pink and buff coloured, fine-grained, contorted, unit with weak foliation at 0° to 20° to CA. Minor offset and broken quartz veining. 5 to 6% disseminated pyrite.	0.61 - 0.68 (2)
182.30	184.00	Mylonite Light pastel multicoloured, finely laminated, shear banded at 20° to CA. Intensely carbonate altered mafic metavolcanic with numerous rotated fragments in finer cataclastic banded matrix. Minor veining. 2 to 4% finely disseminated pyrite.	0.30 - 0.83 (2)
184.00	185.15	Intensely Epidote-Carbonate Altered Mafic Metavolcanic Similar to 180.70 to 182.30 metres	0.41 (1)
185.15	194.70	Moderately Sheared Mafic Metavolcanic Intruded by Variably Altered Quartz Diorite Dykes/Plugs Green, moderately foliated/sheared at 20° to 45° to CA. Minor to 3% calcite fracturing and quartz veining. 2 to 6% finely disseminated pyrite. Intruded by several 1 to 4 metre wide, silicified and sericitized quartz diorite dykes with 2 to 3% pyrite and minor metallic grey, minerals.	0.01 - 2.80 (10)
194.70	199.45	Intensely Altered and Fractured Mafic Metavolcanic Medium grey-green, irregularly foliated, moderately to intensely brecciated, and 20% light yellow-green carbonate-epidote altered. 15% offset and broken quartz veining. 1 to 3% pyrite.	0.02 - 0.20 (4)
199.45	201.10	Weakly Silicified and Sericitized Quartz Diorite Intrusive Similar to 118.00 to 132.00 metres.	0.49 (1)
201.10	208.75	Intensely Sheared Mafic Metavolcanic with Mylonite Zones Intensely brecciated and epidote-carbonate altered mafic metavolcanic locally shear foliated into a mylonite with foliation at 0° to 30° to CA. Includes a few thin clay gouge shear/fault zones. Unit contains several, broken quartz vein fragments. 2 to 6% pyrite.	0.01 - 13.85 (11)
208.75	374.00	Variably (Weak to Intense) Epidote-Carbonate Altered Mafic metavolcanic Intruded by Variably (Unaltered to Moderately) Altered Granodiorite to Quartz Diorite Porphyry Dykes and Plugs 208.75-264.75 Weak to intensely epidote-carbonate altered, and locally brecciated mafic metavolcanic. Minor to 5% quartz veining. 0.5 to 4% pyrite. Includes intrusive dykes between: 215.40-217.15 Weak to mod. altered 222.20-228.10 Very weakly altered 230.25-233.10 Relatively unaltered 241.50-244.40 Relatively unaltered 249.90-251.35 Very weakly altered 252.50-253.05 Unaltered to weakly altered 261.95-264.75 Relatively unaltered 264.75-283.50 Dark green, magnetic, massive to weakly foliated at 0° to 30° to CA, relatively unaltered mafic metavolcanic. 3 to 5% quartz ± calcite veining. Minor pyrite. Includes one unaltered intrusive dyke between 271.75 to 273.15 metres. 283.50-287.70 Weak to moderately carbonate altered mafic metavolcanic, with thin unaltered zone exhibiting ovoid amygdules. Minor quartz veining. Minor to 1% pyrite. 287.70-310.50 Weak to moderately silicified ± sericitized quartz diorite intrusive. Similar to 118.00 to 132.00 metres. 310.50-316.35 Relatively unaltered mafic metavolcanic similar to 264.75 to 283.50 metres. 316.35-321.50 Weak to moderately altered quartz diorite intrusive. Similar to 118.00 to 132.00 metres.	0.01 - 0.33 (80)

From (m)	To (m)	Description HN88-28 (page 3)	Gold Assays (g/tonne)
		321.50-346.90 Weak to moderately epidote-carbonate altered mafic metavolcanic. Foliation at 0° to 30° to CA. 5% irregular quartz veining. Minor to 1% pyrite.	
		346.90-356.15 Relatively unaltered quartz diorite intrusive. Similar to 22.90 to 118.00 metres.	
		356.15-374.00 Moderately epidote-carbonate altered/banded mafic metavolcanic. Cut by three thin intrusive dykes. Foliation and alteration banding at 30° to 45° to CA. Minor quartz veining. Minor pyrite.	
	374.00	END OF HOLE	

H-N PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HN88-28
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	2	Claim No:	L-871909
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	40+12.5W
Casing:	Casing Remains			Northing:	10+25S
		Acid Tests:		Elevation:	Level
Started:	Sept. 7, 1988				
Finished:	Sept. 12, 1988	Depth	Az. Dip	Purpose:	Test mineralized zone in HN88-22
		23.00	-46.0		
Logged by:	M.H.Lenters	125.00	-38.5	Length:	374.00Metres
Date logged:	September 1988	223.00	-36.5	Vert. Proj:	220.0 Metres
Logging Method:	Log II	323.00	-28.0	Hor. Proj:	299.0 Metres
Measurement System:	Metric	371.00	-24.0	Ovb. Depth:	16.4 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)		Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 22.90	OVERBURDEN											
22.90 100.20	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED	NS	22.90	100.20	77.30	n/a	n/a	TRACE	0.5-5%	UN-WK	UN-V.WK	
	Relatively fresh to weakly altered, with thin (10's of cm wide) moderately altered zones. The latter are generally centred by quartz veining and flooding, although more planar/discrete quartz veins cut through both the relatively unaltered and weakly altered zones.	801	22.90	24.00	1.10	.03	1.20	-	1%			
		802	24.00	25.00	1.00	.02	1.50	-	0.5-1%			
		803	25.00	26.00	1.00	.06	1.40	MINOR	0.5-1%			
	Contacts between the subunits listed below are gradational, and represent changes in alteration intensely and/or color.	804	26.00	27.00	1.00	.02	1.50	-	0.5-1%			
		805	27.00	28.00	1.00	.01	1.40	-	0.5-1%			
	22.90 28.65 Pink to pink grey, coarse grained, massive to locally well foliated, relatively unaltered feldspar porphyritic granodiorite to quartz diorite. 70 to 75% plagioclase, as large (2 to 5mm), white, subhedral, often partially zoned, phenocrysts and smaller groundmass grains. 5 to 10% quartz, as 0.5 to 2mm, subrounded, phenocrysts. 15 to 20% biotite that is locally somewhat chloritic. 2 to 4% quartz veining, generally as 0.5 to 1cm, subplanar veins that are orientated at 40 to 60 degrees to the core axis, and often offset by	806	28.00	28.65	.65	.04	1.30	-	0.5-1%			
		807	28.65	30.10	1.45	.01	2.30	TRACE	1-2%			
		808	30.10	31.30	1.20	.02	1.40	MINOR	1-2%			
		809	31.30	32.30	1.00	.02	.70	-	0.5-1%			
		810	32.30	33.35	1.05	.03	1.30	-	3-4%			
		811	33.35	34.10	.75	.20	1.60	-	5%			
		812	34.10	34.75	.65	2.04	7.20	-	5-6%			
		813	34.75	35.25	.50	.43	3.50	-	6-7%			
		814	35.25	36.25	1.00	.03	.40	-	2%			

Interval (Metres)	Description	Sample No.	Interval (Metres)		Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	fracturing at an angle to the veining. Quartz veins are	815	36.25	37.00	.75	.04	.90	TRACE	1%			
	slightly bluish white and relatively clean, containing a few	816	37.00	38.00	1.00	.01	.60	TRACE	1%			
	wallrock fragments and minor pyrite. 1cm quartz vein at	817	38.00	38.90	.90	.06	8.20	-	2-3%			
	25.1 metres, oriented at 50 degrees to the core axis, and	818	38.90	39.90	1.00	.12	1.30	-	1%			
	offset by several vuggy fractures oriented at 0 degrees to	819	39.90	40.25	.35	.03	1.50	MINOR	2-3%			
	the core axis (perpendiclar to strike of vein) contains trace	820	40.25	41.00	.75	.02	1.70	-	0.5-1%			
	amounts of a metallic grey minerals. 0.5cm vuggy quartz	821	41.00	42.00	1.00	.04	1.40	-	0.5-1%			
	vein oriented at 50 degrees to the core axis contains 1 to 3%	822	42.00	43.00	1.00	.02	1.40	-	2%			
	pyrite, and 1 to 3% metallic grey minerals, both as thin	823	43.00	44.40	1.40	.01	1.70	TRACE	0.5-1%			
	wisps and bands that are concentrated at the vein edges. This	824	44.40	45.20	.80	.02	.50	-	5%			
	vein is offset by fracturing subparallel to the core axis.	825	45.20	46.00	.80	.01	1.10	-	1-2%			
	Minor white-grey silica flood shear zone from 26.80 to	826	46.00	47.00	1.00	.04	1.30	-	3-4%			
	27.00m, with shearing oriented at 30 to 45 degrees to the	827	47.00	48.00	1.00	.02	1.40	-	0.5%			
	core axis. Section generally contains 0.5 to 1% finely	828	48.00	49.00	1.00	.01	.80	-	0.5-1%			
	disseminated pyrite that is also concentrated along some	829	49.00	50.00	1.00	.03	1.00	-	0.5%			
	chloritic fractures. Weak shearing/foliation locally	830	50.00	50.90	.90	.02	1.60	-	0.5%			
	oriented at 35 to 45 degrees to the core axis, but most of	831	50.90	52.00	1.10	.18	2.30	TRACE	1-2%			
	section is massive. Well fractured both subparallel to the	832	52.00	53.00	1.00	.02	.80	-	0.5%			
	core axis, and at 40 to 50 degrees to the core axis,	833	53.00	54.00	1.00	.03	1.30	-	0.5-1%			
	producing relatively broken core. Section broken into 3 to	834	54.00	55.00	1.00	.02	.50	-	0.5%			
	10 cm pieces with some small rubble zones. Some fractures	835	55.00	55.60	.60	.01	.30	-	0.5-1%			
	are somewhat vuggy. Competent section.	836	55.60	56.00	.40	.13	5.20	MINOR	3-4%			
28.65 33.35	Light to medium grey to pink-grey relatively unaltered to	837	56.00	56.45	.45	.02	.80	-	1%			
	weakly silicified, medium to coarse grained, weakly feldspar	838	56.45	57.00	.55	.48	3.30	-	2%			
	porphyritic. Massive to weakly foliated. Unaltered zones are	839	57.00	57.60	.60	.37	1.40	-	1%			
	similar to the overlying section, while silicified zones,	840	57.60	58.50	.90	.04	1.20	-	2-3%			
	lack the porphyritic texture, contain 10 to 15% and locally	841	58.50	59.40	.90	.21	8.20	MINOR	2-3%			
	greater silica flooding, are light grey with biotite	842	59.40	60.00	.60	.03	.90	-	3-4%			
	partially chloritized and weakly schistose with some	843	60.00	61.10	1.10	.05	.80	-	1-4%			
	sericite. Section contains 10 to 20% quartz veining and	844	61.10	61.75	.65	.04	2.30	MINOR	3-4%			
	silica flooding mostly oriented at 40 to 60 degrees to the	845	61.75	62.30	.55	.02	1.60	-	2-3%			
	core axis, although some more irregular veins are oriented at	846	62.30	63.50	1.20	.01	.80	-	1-2%			
	20 to 30 degrees to the core axis. Locally the silica flood	847	63.50	64.40	.90	.02	.90	-	2-3%			
	bands are somewhat swirled and horsetailed. Veins are often	848	64.40	65.00	.60	.01	1.10	TRACE	1-2%			
	offset by late fractures. Veins are slightly blue-white,	849	65.00	65.50	.50	.23	1.70	MINOR	3%			
	coarse grained, contain minor, small wallrock inclusions,	850	65.50	66.00	.50	.02	2.80	-	3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	traces of pyrite, and occasionally very fine grains of metallic grey minerals. Grey minerals noted at 30.25m in a 0.5cm quartz vein oriented at 45 degrees to the core axis (trace), at 31.00 to 31.20m in an irregular 1cm vein oriented 25 degrees to the core axis (minor amounts of individual grains and needles), and at 32.50 to 32.60m in an irregular silica flood zone. Unaltered zones contain 0.5 to 1%, and silicified portions contain 1 to 2% finely disseminated pyrite. Pyrite locally forms small concentrations and stringers along fractures. Competent unit that is well fractured both subparallel to the core axis, and at 45 to 90 degrees to the core axis. Section is generally well broken into 5 to 10cm pieces, although the unit contains some thin (10 to 30cm) rubble zones.	851	66.00	66.50	.50	.03	1.30	-	2-3%			
		852	66.50	67.00	.50	.02	1.60	TRACE	3%			
		853	67.00	67.50	.50	.49	17.70	0.5%	3-5%			
		854	67.50	68.00	.50	.03	3.70	0.25%	3-4%			
		855	68.00	69.00	1.00	.09	2.90	MINOR	3-5%			
		856	69.00	70.00	1.00	.02	1.40	TRACE	3-5%			
		857	70.00	71.00	1.00	.03	.60	-	2-4%			
		858	71.00	71.80	.80	.02	.80	TRACE	2-3%			
		859	71.80	72.50	.70	.03	1.20	-	1%			
		860	72.50	73.00	.50	.04	1.20	-	0.5-1%			
		861	73.00	74.00	1.00	.18	1.10	-	0.5%			
		862	74.00	75.00	1.00	.03	.80	-	1%			
		863	75.00	75.70	.70	.02	.80	-	1%			
		864	75.70	76.15	.45	.03	1.00	-	0.5-1%			
33.35 34.75	Light to medium grey, mottled, moderately to intensely silicified, and moderately sheared/foliated. Section exhibits vague plagioclase phenocrysts in well silicified zones, and irregular chloritic/sericitic laminae parallel to shearing oriented at 40 to 45 degrees to the core axis. Locally silica flooding forms bands/veins that parallel the shear direction. 3 to 5% finely disseminated pyrite, as well as thin (mm), stringers and irregular bands that are oriented along fractures and parallel to the shearing direction. Moderately fractured subparallel to shearing at approximately 45 degrees to the core axis, and irregularly fractured at 25 to 35 degrees to the core axis. Competent section, but moderately well broken.	865	76.15	77.15	1.00	.12	1.00	-	0.5%			
		866	77.15	78.00	.85	.05	.90	-	1-2%			
		867	78.00	79.00	1.00	.03	.80	-	3%			
		868	79.00	80.00	1.00	.79	3.30	TRACE	2-3%			
		869	80.00	80.60	.60	.02	.60	-	0.5-1%			
		870	80.60	81.80	1.20	.03	.80	-	0.5-1%			
		871	81.80	82.30	.50	.17	1.60	-	0.5-1%			
		872	82.30	83.00	.70	.34	2.60	TRACE	3-5%			
		873	83.00	83.50	.50	.05	3.80	TRACE	1-2%			
		874	83.50	84.00	.50	.03	2.00	TRACE	1-2%			
		875	84.00	84.50	.50	.02	1.10	MINOR	2-3%			
		876	84.50	85.00	.50	.03	1.40	-	3-5%			
		877	85.00	85.75	.75	.04	3.30	MINOR	1-2%			
34.75 36.25	Medium grey to medium reddish-grey, fine to medium grained (0.5mm), massive intrusive. Above 35.25m it is grey and weakly to moderately silicified, and below 35.25m it is relatively unaltered with fresh biotite. Section is finer grained, and not porphyritic like the typical intrusive. No significant quartz veining. Above 35.25 metres, the section contains 6 to 7% finely disseminated pyrite in patches, blebs and along fractures. Section is moderately fractured at 35 to 60 degrees to the core axis. Competent section, broken	878	85.75	86.70	.95	.01	1.10	-	0.5-1%			
		879	86.70	87.50	.80	.06	4.10	MINOR	2%			
		880	87.50	88.75	1.25	.13	2.20	-	2%			
		881	88.75	89.00	.25	.19	8.00	MINOR	1%			
		882	89.00	90.00	1.00	.02	1.20	-	1%			
		883	90.00	91.00	1.00	.04	1.00	TRACE	2%			
		884	91.00	92.00	1.00	.01	1.70	TRACE	1-2%			
		885	92.00	93.00	1.00	.03	1.50	TRACE	2-3%			
		886	93.00	94.00	1.00	.02	.80	-	2%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	into 10 to 25cm pieces.	887	94.00 95.00	1.00	.04	.90	-	2-3%			
36.25 38.00	Pink, coarse grained, feldspar porphyritic, massive to very weakly shear foliated. Relatively fresh to weakly silicified (silica flooded and veined). Section consists mainly of plagioclase, as coarser (1 to 4mm), white, subhedral, subzoned phenocrysts in matrix of pink very fine plagioclase. 5 to 10% subrounded, quartz grains, and 5 to 10%, biotite (very weakly chloritized). 2 to 3% quartz veining as 0.5 to 2cm planar veins oriented at 45 degrees to the core axis. These are coarse grained, slightly blue-white with minor pyrite, and traces of grey metallic mineral. Weak shearing/foliation is locally evident and generally oriented parallel to quartz veining at approximately 45 degrees to the core axis. 1% disseminated and fracture controlled pyrite. Section is well fractured at various angles to the core axis, but concentrated subparallel to the core axis, and at 35 to 50 degrees to the core axis. Competent section, but well broken along fractures into 3 to 10 cm pieces.	888	95.00 96.00	1.00	.01	1.30	-	2%			
		889	96.00 97.00	1.00	.02	1.00	-	1-2%			
		890	97.00 98.55	1.55	.10	1.60	-	1%			
		891	98.55 100.20	1.65	.08	1.60	-	0.5-1%			
38.00 38.90	Similar to section between 34.75 to 36.25. Grey, very weakly silicified, fine grained, massive with 2 to 3% pyrite as fine disseminations and fracture fillings. No significant quartz veins.										
38.90 44.40	Typical pink, coarse grained, massive, plagioclase porphyritic intrusive containing thin, grey silica flooded zones between 39.90 and 40.25, and 42.25 and 42.80 metres. 3 to 5%, subplanar quartz veining variably oriented but concentrating between 30 and 45 degrees to the core axis. Quartz veining concentrated in flood zones, with 25% veining between 39.90 and 40.25m, containing minor, needle-like, grey metallic minerals. Veining offset on thin fractures. Veining and flooding oriented at 45 degrees to the core axis. Veins rimed by thin (1 to 3mm) zones having dark pink colour. 0.5 to 1% disseminated and fracture controlled pyrite, with 2 to 4% in silica flood zones. Competent section, but well fractured at various angles to core axis resulting in broken recovery, and generally 3 to 10cm core										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	pieces. 2cm quartz vein at 43.10m oriented at 45 degrees to the core axis, and containing minor to 0.5% blue-grey mineral.										
44.40 45.20	Identical to section between 38.00 and 38.90m, except this section contains slightly more pyrite, often concentrated along vuggy fractures, and this section contains a few quartz veins that are offset along fractures.										
45.20 47.00	Pink to creamy grey, relatively unaltered to weakly silicified and locally moderately silicified, coarse grained intrusive. About 60% weak to moderately silicified zones. Silicified portions contain broken and offset/sheared quartz veins (0.5 to 1.5cm wide) in irregularly swirled orientations subparallel to shearing/slippage at low (0 to 40 degree) angles to the core axis. Altered (silicified) zones contain 2 to 4% pyrite concentrated along fractures, some of which cut across and locally offset quartz veining. Well fractured and broken section with fractures oriented at various angles to the core axis.										
47.00 55.60	Pink, relatively unaltered, coarse grained, massive, plagioclase porphyritic intrusive, with a few, local, thin, light pinkish grey, weakly silicified zones. 70 to 75% plagioclase, including some 1 to 3mm and occasionally up to 5mm, subhedral, often weakly zoned phenocrysts, and mostly very fine grained, pink groundmass grains. 10%, subrounded, 1 to 2mm, bluish-clear quartz phenocrysts, and 10 to 15% biotite. 5%, irregular to subplanar, coarse grained, bluish-white, clean, quartz veins, generally oriented at 40 to 50 degrees to the core axis, but some at shallower angles. Veins locally branched and/or intersecting, offset, fractured, and occasionally have thin (1mm), pink feldspar rims (altered wallrock contact). Veins contain minor pyrite. Trace metallic grey minerals found in 2cm, irregular, vuggy quartz vein at 51.40 metres, within a 10cm wide grey, silicified zone. Section contains 0.5 to 1.0% disseminated pyrite, also concentrating along fractures. Competent section, but well fractured and broken into 5 to 10cm pieces with some fractured rubble zones.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
55.60 56.00	Medium grey, moderately silicified zone, with 20%, irregular quartz veining and 20% quartz flooding. Quartz veining/flooding is irregular with no dominant orientation apparent in the recovered fragments. 3 to 4% disseminated and thin (hairline) fracture controlled pyrite. Veining is very clean, coarse grained, white, and contains several small (1 to 3mm), wispy/buckshot/puffs of grey metallic minerals. Hard zone, but well fractured and broken into 0.5 to 3cm rubble zones.										
56.00 56.45	Pink-grey, very weak to weakly silicified, massive, coarse grained, plagioclase porphyritic intrusive. Zone has a hard, siliceous appearance, and biotite is weakly chloritized. A few, thin (0.5cm), slightly wavy/wormy quartz veins oriented at 30 to 45 degrees to the core axis. 1% finely disseminated and fracture controlled pyrite.										
56.45 57.00	Grey, weakly silicified, massive, coarse grained, plagioclase porphyritic intrusive. Minor quartz veining with two, 0.5cm, planar veins oriented at 45 degrees to the core axis, but perpendicular to each other. 2% finely disseminated pyrite with some blebs and hairline, fracture filling veinlets. Hard zone, but well fractured and broken into 1 to 10cm pieces										
57.00 57.60	Pink, coarse grained, massive, plagioclase porphyritic, relatively unaltered intrusive. No quartz veining. 1% finely disseminated and hairline fracture controlled pyrite. Hard zone, but moderately fractured and broken into 5 to 15 cm pieces.										
57.60 59.40	Medium grey, weak to locally moderately silicified, weakly to moderately sheared intrusive. Coarse grained texture partly preserved, but locally destroyed by weak shearing. Biotite partly chloritized/sericitized. 20% Quartz veining, as thin (0.5cm) to thick (5cm), cross-cutting and branching veins variably oriented at 20 to 60 degrees to the core axis. Veins consist of relatively clean, bluish white, coarse grained quartz with minor pyrite and occasionally trace amounts of grey metallic minerals. Quartz veins occur at 57.75m (2cm at 35 degrees to the core axis), 58.00m (5cm, irregular										

Interval (Metres)		Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
		orientation), 58.20m (4cm at 60 degrees to the core axis), 58.40m (1cm at 60 degrees to the core axis), 58.55 (2cm at 40 degrees to the core axis), and 58.55 to 58.80m (a 7cm quartz vein oriented at 40 degrees to the core axis, and a thin vein oriented at 0 to 20 degrees to the core axis). The latter two veins contain numerous small (1 to 2mm), puffs of metallic grey minerals. 2 to 3% finely disseminated pyrite often forming small blebs, or occuring along fractures. Relatively well fractured section with strong fracture orientation at 45 degrees to the core axis having chloritic parting surfaces. Weak shearing, where evident, is oriented at 40 to 45 degrees to the core axis. Competent section, but well broken into 1 to 5cm pieces often as rubble.										
59.40	60.00	White-grey, mottled, moderately to intensely silicified, weakly carbonatized, and weak to moderately sericitized intrusive. Massive, coarse grained texture still evident but somewhat subdued. Biotite completely chloritized/sericitized. Strongly silica veined (20 to 30%) and flooded by an irregular network of thin (hairline to 3cm), branching and anastomosing veins tending to be oriented at 40 degrees to the core axis. 3 to 4% pyrite as finely disseminated grains, small blebs, and discontinuous hairline fracture fillings. Moderately competent section, but moderately fractured and broken.										
60.00	61.10	Mostly medium grey, weak to moderately silicified intrusive, as between 57.60 to 59.40m, but containing two moderately to intensely silicified (altered) zones as occurs in the section between 59.40 to 60.00 metres. The latter occur between 60.30 to 60.40 and 60.55 to 60.75 metres. No metallic grey minerals apparent in veining within this section										
61.10	61.75	Same as section between 59.40 to 60.00m, including metallic grey mineral in thicker (3 to 5cm) quartz veins.										
61.75	62.30	Similar to 57.60 to 59.40 metres. Medium grey, but generally moderately silicified with strong quartz flooding, and local spots of moderate to intense silicification.										
62.30	63.50	Pink, coarse grained, massive, plagioclase porphyritic										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	intrusive with typical plagioclase, quartz and biotite contents. Minor, irregularly branching, 0.5 to 1cm quartz veining oriented at 40 to 60 degrees to the core axis. Veins have opaque, bluish clear-white quartz, with some thin (1 to 2mm), pink, plagioclase reaction rims/bands. Section contains 1 to 2% pyrite disseminated throughout, but concentrated on fractures. Well fractured section, broken into irregular, 1 to 5cm pieces and slices.										
63.50 67.00	Alternating zones of pink, very weakly silicified, and greenish grey, weakly silicified, with local bands of moderately silicified and weakly to moderately sericitized intrusive. More altered zones are generally cut by quartz veining that tends to be 0.5 to 10cm wide, subplanar, and oriented at 40 to 50 degrees to the core axis, although various orientations and crosscutting relationships occur. Probably 5% veining throughout section. Veining often centres thin (2 to 5cm), silica flood zones occasionally containing traces of grey metallic minerals. Grey minerals noted at 64.80m in 1cm quartz vein oriented at 50 degrees to the core axis, and between 65.40 and 65.50m in an irregularly veined flood zone where it is relatively abundant as very small blebs. Biotite is generally unaltered in pink sections, and slightly to mostly sericitized in altered sections, particularly along fractures. 1% pyrite in pink sections, and 2 to 4% pyrite in altered zones, generally as disseminations and blebs, and as discontinuous veinlets along fractures. Local shearing in thin, fanning (non-parallel) bands oriented at 45 to 60 degrees to the core axis. Extremely broken section, into 1 to 3cm irregular pieces.										
67.00 69.00	Mottled white-grey, moderately to intensely silicified, weakly carbonatized, and weak to moderately sericitized. Biotite locally evident, but mostly chloritized/sericitized. Massive, coarse grained texture is generally well preserved. Section contains 15 to 30%, irregular quartz flood zones/bands that pervasively alter the intrusive, and form,										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	or are centred by, small (0.5 to 1cm), irregular, wavy to anastomosing branching and crosscutting quartz veinlets. Section contains minor fuchsite as small (1 to 2mm) grains. Silica flood zones contain numerous very small clusters or puffs of metallic grey minerals, which occur throughout section. 3 to 5% pyrite as fine disseminations often concentrated along fractures, as well as several larger (0.5 to 1cm), irregular clusters of pyrite. Section is moderately competent, slightly vuggy, extremely well fractured, and well broken into 1 to 5cm, irregular shaped pieces.										
69.00 71.80	Medium grey, weakly silicified with a few, thin (1 to 5cm), strongly silicified zones adjacent to quartz veins. Plagioclase porphyritic texture is well perserved, and biotite mostly unaltered. Weak shearing locally developed and oriented at 40 to 50 degrees to the core axis. Minor to 5%, thin (0.5 to 2cm), quartz veins generally oriented subparallel to shearing at 40 to 50 degrees to the core axis. 2 to 5% pyrite as fine disseminations, as larger blebs, and as hairline fracture veinlets. Extremely well fractured and broken section.										
71.80 76.15	Pink to slightly greyish pink, relatively unaltered, feldspar porphyritic, coarse grained, massive to weakly foliated at approximately 30 degrees to the core axis. Biotite is black and unaltered. Several, thin (hairline), black, slip surfaces. Many small quartz veins are offset and appear pulled apart. Slips parallel shearing orientation at 30 degrees to the core axis. 5%, thin (0.1 to 3cm), subplanar quartz veins, generally oriented at 25 to 45 degrees to the core axis. 0.5 to 1% pyrite as fine disseminations often lining fractures. Competent section, generally with 10 to 25cm breakage along fractures oriented at 45 to 65 degrees to the core axis.										
76.15 77.15	Creamy pinkish brown, weakly foliated at 10 degrees to the core axis. Zone appears weakly to possibly moderately silicified and carbonatized?. No biotite evident. 0.5% finely disseminated pyrite. Section is somewhat vuggy, and										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	exhibits hairline carbonate? veining subparallel to foliation/shear orientation. No significant quartz veining. Several chloritic fractures are oriented at 15 to 25 degrees to the core axis, with slickensides oriented at 45 degrees on the planar surfaces. Competent section, but broken into 5 to 10cm, irregular pieces along fractures.										
77.15 80.60	Medium grey to mottled medium grey-white, weak to locally moderately silicified and weak sericitized. Biotite locally present, but mostly chloritized/sericitized. Massive with coarse grained, plagioclase porphyritic texture well preserved. 10%, 0.5 to 1cm, milky bluish white, quartz veins that are somewhat irregular and branching, but with a preferred orientation at 30 to 40 degrees to the core axis. Veins have somewhat diffuse contact margins and the adjacent rock is partially pervasively silicified. 2 to 3% pyrite, as fine disseminations often concentrated along fractures. Trace metallic grey mineral occurs near one quartz vein. Dominant fracturing direction oriented at 20 to 25 degrees to the core axis. Fractures often have open vugs that locally occur in parallel sheeted sets. These fracture sets are subperdendicular to the orientation of quartz veins. Competent section, well broken along fractures into less than 10 cm pieces with some rubble zones.										
80.60 82.30	Grey-pink to pink, massive, coarse grained, porphyritic intrusive. Very weakly silicified to unaltered. Minor, 0.5cm, irregular quartz veins, generally with shallow orientations to the core axis. 0.5 to 1%, finely disseminated pyrite. Competent section, but broken into less than 5cm pieces.										
82.30 85.75	Mottled medium grey-white to creamy grey-white, weakly to locally moderately silicified and very weak to weakly carbonatized and sericitized, although the biotite is locally relatively unaltered. Generally 15 to 20%, though locally more concentrated diffuse silica veining and flooding that is generally oriented at 10 to 30 degrees to the core axis. Quartz flooding/veining locally gives section a										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	foliated appearance. Veining and adjacent flood zones contain numerous very small grains of metallic grey minerals. 3 to 4% pyrite as fine disseminations, as well as several clots and blebs up to 1cm in size occuring along fractures or veining. Relatively vuggy and broken section, generally broken into less than 10cm pieces with several short (10 cm) rubble zones.										
85.75 86.70	Light pink-grey to slightly pinkish grey, massive, coarse grained, plagioclase porphyritic relatively unaltered section. 5%, subplanar, 0.5 to 1cm, bluish white quartz veins that are irregularly branching and generally oriented at 40 degrees to the core axis. Some veins are slightly (0.5 to 1cm) offset across thin fractures. Section contains several fractures oriented at 45 degrees to the core axis (perpendicular directions), as well as some irregular fractures oriented approximately perpendicular to the core axis. 0.5 to 1% pyrite as fine disseminations, as well as concentrations along fractures.										
86.70 98.55	Medium grey to mottled medium grey-white, very weakly altered, but well quartz veined, to weakly altered (veined and pervasive) and locally weak to moderately silicified (veined and pervasive). Plagioclase porphyritic texture generally well preserved with euhedral grains up to 7mm, but commonly 3 to 4mm. Biotite locally relatively unaltered, but generally chloritized/sericitized. Section is generally massive and only locally weakly foliated in quartz flood zones with orientations at 30 to 35 degrees to the core axis. Less altered silicified zones contain minor (2 to 5%) amounts of planar, sharp bounded, quartz veins, while more altered sections contain 5 to 15%, subplanar to highly irregular veining with diffuse contacts that grade into silica flood zones. Locally the veining is highly irregular with various curving and crosscutting and branching relationships. Veins are locally offset along fractures. Veins are mostly oriented at 30 to 45 degrees to the core axis, although a vein oriented subparallel to the core axis										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	occurs between 90.50 to 91.00 metres. Quartz veins are generally 0.5 to 3cm in width, and consist of coarse white quartz containing minor, very small wallrock impurities, and trace to minor amounts of pyrite. A few of the larger veins also contain trace to minor amounts of grey metallic minerals, generally as fine explosion puffs, and/or needles. Section is moderately well fractured, generally at 45 to 60 degrees to the core axis, although most orientations occur. Competent section with 10 to 25 cm breakage, generally along fractures. 1 to 3% pyrite as fine disseminations, and concentrated into local blebs and along fractures.										
98.55 100.20	Pink, relatively unaltered, coarse (0.5 to 2mm) grained, with 5%, small (2 to 5mm), euhedral, zoned plagioclase phenocrysts, 5 to 10%, 1 to 2mm, subrounded quartz grains, and 10 to 15% biotite (chloritized) in a fine grained plagioclase dominant matrix. A few, thin (1 to 2mm), bluish white quartz veinlets oriented at 35 to 40 degrees to the core axis. Minor to 1%, finely disseminated pyrite and also as concentrations on slip fractures. Several chloritic slip fractures with lineations orientated at 20 degrees on slip planes which are oriented at 20 to 30 degrees to the core axis. Competent section, but moderately broken into 5 to 10cm pieces with a rubbly lower contact zone. Lower contact with volcanic inclusion oriented at 40 degrees to the core axis.										
100.20 101.80	FINE-GRAINED METASEDIMENT INCLUSION Dark greenish-black to brownish-black, very fine grained, moderately foliated/schistose/phyllitic with foliation oriented at 25 to 30 degrees to the core axis at top and bottom, and 5 degrees to the core axis in the central section. Section has local banded character, consisting of coarser, darker, magnetic bands, within finer grained, phyllitic material that is generally weakly magnetic. Unit is generally moderately reactive to HCl.	NS 892	100.20 101.80 100.20 101.80	1.60 1.60	n/a .05	n/a .60	- -	0.5% 0.5%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Minor quartz veining and intrusive material occurs as thin (1 to 2mm), discontinuous to boudinaged/strectched/sheared veins oriented parallel to the foliation, and as occasional irregular and often offset blebs up to a few cms. Offsets are generally on slips subparallel to foliation. Possibly volcanic in origin, but varying grain size in bands, strongly magnetic bands, brownish colour, and lack of any epidote alteration suggest that it is a sediment. Includes hairline network fracturing throughout unit (late fractures). 0.5% Pyrite mostly as very fine disseminations, but incuding several small areas with 1mm cubic crystals. Upper contact is sharp and oriented at 40 degrees to the core axis, and lower contact is in poorly recovered rubble zone with indeterminate contact orientation although foliation is oriented at 25 to 30 degrees to the core axis.										
101.80 132.00	FELDSPAR PORPHYRITIC QUARTZ DIORITE INTRUSIVE - UNALTERED										
	101.80 118.00 Pink with minor pinkish grey sections, relatively unaltered, massive, coarsely (1 to 2mm) feldspar porphyritic, with a few larger (2 to 5mm), subhedral to euhedral phenocrysts, many that are partially resorbed. 5%, Subrounded quartz grains, and 10% fine patchy biotite. 3 to 5% quartz veins as 1mm to 2cm, subplanar veins oriented at various angles to the core axis, but concentrated at 30 degrees to the core axis. Veins are white with little or no inclusions or mineralization. Quartz veins are locally offset (1 to 5mm) along slips and fractures. Some veins have thin (1mm) red alteration bands. 0.5 to 1% finely disseminated pyrite with concentrations along fractures. Moderately fractured at various angles to the core axis, but concentrating at 10 to 30 degrees and at 60 and 70 degrees to the core axis. These fractures are often chloritic, pyritic and weakly vuggy, locally with calcitic coatings. Unit is weakly vuggy throughout. A grey to weakly silicified zone occurs between 110.20 to 111.50 metres. Relatively competent unit, but well fractured and broken into pieces less than 5 cm with several short (5 to 20cm) rubble sections.	NS	101.80	132.00	30.20	n/a	n/a	TR-MNR	0.5-1%	UN-MOD	UN-WK	UN-WK
		893	101.80	103.00	1.20	.10	5.00	-	1%			
		894	103.00	104.00	1.00	.40	3.40	-	1%			
		895	104.00	105.00	1.00	.22	7.60	-	1-2%			
		896	105.00	107.00	2.00	.10	1.50	-	0.5-1%			
		897	107.00	108.50	1.50	.01	1.40	-	0.5-1%			
		898	108.50	110.00	1.50	.01	1.10	-	0.5-1%			
		899	110.00	111.50	1.50	.02	1.50	TRACE	1-2%			
		900	111.50	113.00	1.50	1.06	5.50	-	0.5-1%			
		901	113.00	114.50	1.50	.07	2.00	-	0.5%			
		902	114.50	116.00	1.50	.01	1.50	-	0.5-1%			
		903	116.00	118.00	2.00	.01	1.50	-	0.5-1%			
		904	118.00	119.00	1.00	.01	1.50	MINOR	1-2%			
		905	119.00	120.00	1.00	.01	1.30	TRACE	1-2%			
		906	120.00	120.50	.50	.02	1.70	0.5%	2-4%			
		907	120.50	120.80	.30	.01	1.30	TRACE	1-2%			
		908	120.80	121.00	.20	.01	1.10	0.5%	2-4%			
		909	121.00	122.00	1.00	.03	1.30	TRACE	2-3%			
		910	122.00	122.50	.50	.18	1.30	1-1.5%	2-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
118.00 132.00	Generally mottled grey-white, moderately silicified and weakly sericitized with local patches (10's of cm) and bands (a few cm) that are white and intensely silicified and moderately sericitized.	911	122.50 122.75	.25	.08	.80	-	2%			
		912	122.75 123.00	.25	.01	1.00	TRACE	2-3%			
		913	123.00 123.50	.50	.01	1.00	0.5%	2-3%			
		914	123.50 124.00	.50	.01	1.20	-	1-2%			
		915	124.00 125.00	1.00	.01	1.30	MINOR	1-2%			
		916	125.00 126.00	1.00	.01	1.20	-	1-2%			
		917	126.00 127.00	1.00	.01	1.10	MINOR	1-3%			
		918	127.00 127.70	.70	.01	1.00	-	2-3%			
		919	127.70 128.00	.30	.01	1.10	MNR-0.5	2-3%			
		920	128.00 129.00	1.00	.20	.80	MNR-0.5	2-3%			
		921	129.00 130.00	1.00	.05	.90	MNR-0.5	2-4%			
		922	130.00 130.70	.70	.18	.70	-	2%			
		923	130.70 131.00	.30	.10	1.10	0.5-1%	2-4%			
		924	131.00 132.00	1.00	.02	.90	0.5%	2-3%			
	Thin (1 to 5cm) alteration bands appear to grade outward in intensity from small fracture zones that are often oriented at 10 to 45 degrees to the core axis. These fractures locally contain thin (1 to 2mm), wavy, chloritic, alteration fringes, some of which surround calcite fragments that are cm sized.										
	Larger alteration zones are pervasively silicified with sericitization of biotite, but contain no significant quartz veining.										
	This section also contains 20% relatively unaltered to weakly silicified, slightly pinkish to purplish grey, intrusive. Typical granodiorite/quartz diorite. Coarse grained, plagioclase porphyritic, with minor quartz phenocrysts, and 10% black, unaltered biotite. Core recovered was very broken through the altered sections. Changes from unaltered to altered sections are often transitional over a few cm, but also rather sudden.										
	The white moderate to intensely silicified sections contain zones of silica flooding that contain minor to locally 1%, fine grey metallic minerals. These are usually small (visible in handlense), however several fractures between 122 to 122.5m contain smeared fracture coatings of a soft purplish grey mineral that appears to be molybdenite. These fractures are oriented at 5 to 25 degrees to the core axis.										
	No significant quartz veining through the unit.										
	Pyrite constitutes 0.5 to 1% of the relatively unaltered intrusive sections, and 2 to 5% in moderately to intensely altered zones. Pyrite is finely disseminated throughout and occurs as concentrations along most fractures, particularly through intensely altered zones. Pyritic hairline fractures through altered zones are often jagged, irregular and discontinuous.										
	Moderately foliated band 3cm wide and oriented at 25 degrees to the core axis occurs at 133.80 metres.										
	Section is well fractured, generally at 10 to 45 degrees to the core axis. Fractures often planar, but altered zones are fractured/broken along irregular fracture orientations.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Chlorite, calcite, and minor sericite occur on some fractures. Section is well broken, particularly in altered zones where it often forms irregular chips and rubble. Small mafic volcanic inclusion occurs between 122.50 to 122.75 metres. Dark brown, fine grained, schistose with foliation oriented at 40 degrees to the core axis. Upper contact parallel to foliation at 40 degrees to the core axis and lower contact subparallel to the core axis at 70 degrees. Upper contact transitional. Lower contact oriented at 30 to 40 degrees to the core axis.										
132.00 146.75	SHEARED/SCHISTOSE MAFIC METAVOLCANIC										
	Dark brownish black and locally greenish black, very fine grained, schistose/sheared metavolcanic. Weakly reactive to HCl with local highly reactive sections. Generally non-magnetic with local magnetic patches. Shearing foliation well developed throughout upper part of unit and oriented at 15 to 20 degrees to the core axis. Lower few metres contains a few more massive sections with volcanic textures, and minor lime-yellow green epidote-carbonate alteration that is well developed in the underlying unit. Rest of this unit is not altered. Unit contains 5%, thin (hairline to 1mm), discontinuous calcite lined fractures, occasionally stretched parallel to foliation, but mostly as short, irregular to ladder sets of tension gash fillings. Unit contains 3 to 5% quartz veins and quartz calcite laminae. The quartz-carbonate (calcite) veinlets are mostly thin (hairline), stretched out, and slightly boudinaged veinlets (laminae) oriented subparallel to the shear foliation. The quartz veins are 0.5 to 2cm and form irregular, disjointed, pinch and swell to boudinaged broken veins generally at 10 to 45 degrees to the core axis. Locally these are offset across thin fractures. These are generally clean white veins, occasionally with carbonate along the edges or in pressure shadows. 0.5 to 1% pyrite as fine disseminations often concentrated in laminae parallel to the shear foliation. Small weakly altered intrusive dyke from the overlying intrusive occurs	NS	132.00	146.75	14.75	n/a	n/a	-	0.5-1%			
		925	132.00	133.00	1.00	.17	.80	-	0.5-1%			
		926	133.00	134.00	1.00	.04	1.30	-	0.5-1%			
		927	134.00	134.85	.85	.05	1.00	-	1-2%			
		928	134.85	136.00	1.15	.04	1.00	-	0.5-1%			
		929	141.25	141.60	.35	.02	1.20	-	2-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	between 134.00 to 134.85 metres. Contacts are highly sheared and oriented at 25 to 40 degrees to the core axis. Smaller intrusive dyke that is relatively fresh but irregular (caught in swirled schistose section) from 141.25 to 141.60m occurs as several broken pieces. Relatively competent unit, but moderately broken along shear foliation and several fractures generally into 10 to 50cm pieces. Upper contact is sharp, but wavy and oriented at 30 to 40 degrees to the core axis. Lower contact is sharp and oriented at 25 degrees to the core axis.										
146.75 151.20	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS Mottled light yellowish-lime epidote green to dark green, with 50% lighter coloured altered sections occuring as patches and somewhat irregular squares within network of darker bands of less altered mafic volcanic. No pervasive reaction to HCl. Light coloured altered patches are massive, non-magnetic, with no preserved original textures, while dark green weak to unaltered portions exhibit fine grained volcanic texture and are moderately magnetic, massive to moderately foliated at 20 to 40 degrees to the core axis. Unit contains a few percent irregular, hairline, calcite fracturing, but not as pervasive as in the overlying sheared unit. 5% Quartz veining like the overlying unit, and although slightly (1 to 2cm) offset on fractures, are not stretched and boudinaged like in the overlying unit. Trace pyrite and one chalcopyrite grain noted in quartz veins. Veins all oriented at 30 to 50 degrees to the core axis, and are generally planar. Veining cuts both altered and unaltered volcanic sections. Minor pyrite, generally as fine disseminations in wallrock adjacent to quartz veins. Competent unit with fractures generally oriented at 45 degrees to the core axis, and core broken along fractures into 20 to 100cm pieces. Lower contact with intrusive not recovered.	MS	146.75	151.20	4.45	n/a	n/a	-	MINOR		
		930	148.00	149.00	1.00	.01	1.60	-	MINOR		
		931	149.00	150.00	1.00	.04	1.70	-	MINOR		
		932	150.00	151.20	1.20	.02	1.40	-	MINOR		

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
151.20 158.30	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED Mostly weak to moderately silicified and very weakly sericitized, but containing a large section between 157.0 and 158.3m at the bottom that is relatively fresh. Biotite is generally unaltered to weakly chloritized throughout unit. Altered zones have preserved the original coarse grained, plagioclase porphyritic texture, are mottled medium grey in colour, and massive to weak and locally moderately sheared/foliated at 20 to 25 degrees to the core axis. A few thin (1cm), planar quartz veins oriented at 20 to 30 degrees to the core axis, and some minor quartz patches and silica flood zones. The latter occasionally contain minor amounts of grey metallic minerals. Unit is moderately vuggy. Altered zones contain 2 to 4% pyrite as fine disseminations, often concentrated on fractures. Moderately fractured at shallow and subperpendicular angles to the core axis, with altered zones having more fracturing and orientations at 15 to 30 degrees to the core axis, and unaltered zones containing less fractures that are generally oriented at 45 to 70 degrees to the core axis Altered zones are well broken with several rubble sections, and unaltered zones are competent with 10 to 50cm breakage along fractures. Upper contact not recovered. Lower contact is sharp and somewhat sheared and undulating with orientation at 25 to 30 to the core axis.	NS 933 934 935 936 937 938 939	151.20 158.30 151.20 152.00 152.00 153.00 153.00 154.00 154.00 155.00 155.00 156.00 156.00 157.00 157.00 158.30	7.10 .80 1.00 1.00 1.00 1.00 1.00 1.30	n/a .01 .01 .02 .10 .08 .01 .01	n/a 1.10 1.00 1.00 1.00 .90 2.20 1.30	TRACE - TRACE - TRACE - TRACE -	1-3% 2-3% 2-3% 2% 2-3% 2% 1-2% 1%	WK	-	V.WK
158.30 160.65	SHEARED/SCHISTOSE MAFIC METAVOLCANIC Medium to dark green, well foliated/sheared, fine grained, laminated/sheared mafic volcanic, including several irregular intrusive dyke fragments occurring between 158.50 to 158.60, 159.10 to 159.20, 159.25 to 159.30 and 159.50 to 159.85 forming approximately 25% of unit. Shearing orientation in the mafic volcanic is at 30 degrees to the core axis, although somewhat swirled and irregular. Very weakly epidote altered in shear/foliation parallel, laminae/bands, consisting mainly of carbonate/epidote/plagioclase. Abundant calcitic patches/networking and thin (hairline to 2mm),	NS 940 941	158.30 160.65 158.30 159.85 159.85 160.65	2.35 1.55 .80	n/a .01 .02	n/a 1.20 .90	- - -	MINOR 1% MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	irregular tension gash fillings. 5% Quartz veining, mostly as broken vein fragments separated along slips and shears, many with no continuity of the original vein apparent. Intrusive fragments are unaltered to weakly altered, containing 1 to 3% pyrite, and having irregular contacts. Minor pyrite in mafic volcanic. Competent unit with 25 to 75cm breakage along fractures generally oriented at 45 to 60 degrees to the core axis. Lower contact is sharp along a quartz vein oriented at 40 degrees to the core axis, into underlying epidote altered mafic volcanic.										
160.65 180.50	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS Similar to unit between 146.75 to 151.20 metres. Dark green with volcanic texture consisting of fine plagioclase in chloritic matrix. Fresh sections are rare but highly magnetitic and massive. Most of rock is weakly to intensely epidote-carbonate altered with the latter consisting of light cloudy pinkish to yellow-lime green coloured patches, irregular zones and bands. Pinkish alteration also forms bands along fractures and quartz veins. Altered zones are generally well foliated at 0 to 40 degrees to the core axis, but mostly at approximately 20 degrees to the core axis. Minor hairline calcite veinlets along late tension fractures. Abundant (5 to 15%) quartz veining, as 1 to 2cm, subplanar, but somewhat irregular and branching veins all offset along slips and fractures over distances of 1 to 3cm and occasionally up to 10 cm. Veins are bluish white and clean, generally with sharp contacts. Locally some veins exhibit fleshy pink, calcitic reaction bands a few mm wide. Veins appear to have preferred orientations at 40 to 60 degrees to the core axis. Generally minor amounts of finely disseminated pyrite, but some veins and fractures have somewhat greater (1 to 3%) concentrations. Several thin (3mm to 1cm), intrusive dykelets cut the volcanic. These are planar and have various orientations between 20 and 45 degrees to the core axis, and at an angle to the quartz veining.	NS 942 943 944 945 946 947	160.65 180.50 160.65 162.00 176.00 177.00 177.00 178.00 178.00 179.00 179.00 180.00 180.00 180.50	19.85 1.35 1.00 1.00 1.00 1.00 .50	n/a .01 .05 .01 .04 .02 .18	n/a 1.60 2.00 1.80 1.70 .40 1.90	- - - - - - -	0.5-1% MINOR 0.5% 0.5% 0.5% 0.5% 2-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
180.50 180.70	FAULT ZONE Small fault zone with 50%, small (less than 1cm), broken wallrock fragments surrounded by quartz and coarse calcite. Central part of zone is a vuggy, irregular quartz-calcite vein. Edges of fault are moderately pyritic, and the underlying pink coloured, pyritic altered volcanic adjacent to this fault seems to occur between this fault and the mylonite occurring further below. Contacts of the fault somewhat irregular but oriented at approximately 40 degrees to the core axis.	NS 948	180.50 180.70 180.50 180.70	.20 .20	n/a .20	n/a 1.90	- -	2% 2%			
180.70 182.30	INTENSELY EPIDOTE-CARBONATE ALTERED METAVOLCANIC Pervasively and intensely altered volcanic lying below the overlying fault, and underlying mylonite. Medium creamy to purplish to pinkish buff colours. Zone is generally fine grained with highly contorted appearance due to broken and offset quartz veins, alteration banding, and pyritic fracture fillings. However, it is only weakly foliated at 0 to 20 degrees to the core axis above 181.5m, and more or less massive below. Above 181.5 it is also more altered, contorted and pyritic. Minor quartz veining, now as small broken offset fragments. 5 to 6% pyrite as fine disseminations concentrated on and along fractures forming irregular network patterns across the section. Hard competent section generally breaking into 10 to 100 cm pieces. Upper contact along fault at 40 degrees to the core axis. Lower contact with mylonite zone at 25 degrees to the core axis.	NS 949 950	180.70 182.30 180.70 181.50 181.50 182.30	1.60 .80 .80	n/a .61 .68	n/a 5.20 2.40	- - -	3-6% 5-6% 3-4%			
182.30 184.00	MYLONITE ZONE Finely laminated/banded, multicoloured, well sheared mylonite zone. Light yellow-green, to purplish, to pink, to buff grey, weakly calcitic, strong carbonate altered. Upper part contains numerous 3mm and smaller rotated fragments in finer cataclastic matrix.	NS 723 951	182.30 184.00 182.30 183.50 183.50 184.00	1.70 1.20 .50	n/a .83 .30	n/a 7.80 .30	- - -	2-5% 4-5% 2-4%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Several small (less than 3cm) quartz vein fragments caught in irregulaly swirled mylonite sections. Well banded shearing oriented at 20 degrees to the core axis, although it is somewhat undulating and nonparallel. 2 to 4% finely disseminated pyrite. Relatively soft section, broken into 10 to 50cm pieces along shear foliation. Upper contact, wavy and undulating at 25 degrees to the core axis. Lower contact, wavy and undulating at 25 to 30 degrees to the core axis.										
184.00 185.15	INTENSELY EPIDOTE-CARBONATE ALTERED METAVOLCANIC										
	Similar to unit between 180.70 to 182.30 metres.	NS	184.00 185.15	1.15	n/a	n/a	-	2-3%			
	Creamy pinkish purplish to buff coloured, fine grained, intensely altered mafic volcanic. Also similar to overlying mylonite except this is massive to weakly foliated at 20 to 30 degrees to the core axis.	952	184.00 185.15	1.15	.41	.90	-	2-3%			
	Overlying mylonite unit is the cataclastically sheared portion of the volcanic unit on either side. Contains a few, small (1 to 2mm) quartz veins that are weakly stretched/elongated due to weak shearing and offset a few cm along fractures. 2 to 3% finely disseminated pyrite concentrated along fractures. Minor, hairline, calcitic tension fractures. Includes a few irregular, diffuse intrusive patches occupying 10% of the zone below 184.75 metres. Relatively competent core with 10 to 50cm breakage, often along weak foliation orientation. Lower contact is an irregular intrusive dyke, below which this unit grades into less altered, but well sheared mafic metavolcanics.										
185.15 185.85	SHEAR ZONE										
	Medium green to buff green, intensely sheared metavolcanic. Fine grained, moderately calcitic, non-magnetic.	NS	185.15 185.85	.70	n/a	n/a	-	1%			
	No original volcanic textures. Shear surfaces somewhat calcitic and containing minor sericite.	953	185.15 185.85	.70	2.80	8.30	-	1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Well developed shear foliation oriented at 20 degrees to the core axis. Minor, thin (0.5cm) pieces of broken quartz veins. 1% Pyrite as fine disseminations often concentrated along shear planes and calcitic fractures. One large (2 x 5mm) bleb of chalcopyrite occurs along a vuggy calcitic fracture. Moderately competent unit with breakage along shear foliation.										
185.85 194.70	WEAKLY BRECCIATED MAFIC METAVOLCANIC WITH EPIDOTE-CARB. BANDS										
	Moderately sheared mafic metavolcanic intruded by several granodiorite/quartz diorite dykes.	MS	185.85 194.70	8.85	n/a	n/a	-	2-3%			
	185.85 186.55 Feldspar Porphyritic Quartz Diorite Dyke. Medium grey, weakly to moderately silicified, massive to sheared intrusive including several long (2cm x 20cm), irregular, highly altered mafic volcanic fragments oriented parallel to irregular shear foliation at 0 to 20 degrees to the core axis. Sericite occurs along shear fragments. Upper and lower contacts are oriented at 20 degrees to the core axis, but highly irregular (broken and sheared).	954	185.85 186.55	.70	1.42	4.90	-	2-3%			
		955	186.55 187.00	.45	1.52	3.50	-	5-8%			
		956	187.00 187.75	.75	.71	1.90	-	1-2%			
		957	187.75 188.80	1.05	.36	.60	-	0.5%			
		958	188.80 190.00	1.20	.27	1.10	MINOR	3-4%			
		959	190.00 191.00	1.00	.01	1.00	-	1-2%			
		960	191.00 192.00	1.00	.01	.90	-	1-2%			
		724	192.00 193.60	1.60	.18	2.30	-	3-4%			
		961	193.60 194.70	1.10	.06	1.20	-	2%			
	186.55 187.00 Medium green, moderate foliated/sheared mafic metavolcanic containing 5 to 6% disseminated pyrite. Foliation and contacts oriented at 20 degrees to the core axis. Minor calcitic fracturing.										
	187.00 187.75 Feldspar Porphyritic Quartz Diorite Dyke. Same as intrusive between 185.85 to 186.65m, although more sheared.										
	187.75 188.80 Dark green, moderately foliated/sheared mafic metavolcanic containing 15%, thin (1 to 2mm), discontinuous fracture gashes, forming an intense network of calcite veining yielding a pseudobrecciated appearance. Well sheared at 10 to 20 degrees to the core axis, with upper and lower contacts sharp but unulating at 20 to 30 degrees to the core axis. Section contains several broken pieces of offset and boudinaged quartz veining.										
	188.80 192.00 Feldspar Porphyritic Quartz Diorite Dyke. Mostly grey, biotitic, relatively unaltered, massive, coarse grained, porphyritic intrusive, but with a zone between 189 and 190m										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	that is mostly weak to moderately altered. Local intensely silicified/silica flood zones adjacent to several fractures oriented at 40 degrees to the core axis. The latter are bleached white and contain 0.5 to 1% very finely disseminated grey metallic minerals. Fractures are vuggy with chloritic fringing of some calcite grains and fractures noted in overlying altered intrusive at 124 metres. 3 to 4% pyrite occurs as fine disseminations, and along small fractures throughout the altered sections, and 1 to 2% pyrite as disseminations throughout unaltered intrusive sections. Lower contact of unaltered intrusive highly sheared across 20cm zone and oriented at 20 to 45 degrees to the core axis.										
192.00 193.60	Dark green, moderately foliated/sheared mafic volcanic with foliation oriented at 20 to 35 degrees to the core axis. 10%, hairline, calcitic tension microfracture network, and several large pieces of broken and boudinaged quartz veins. 2% pyrite as disseminations concentrated along shear foliation parallel laminae. Lower contact oriented at 45 degrees to the core axis.										
193.60 194.70	Feldspar Porphyritic Quartz Diorite Dyke. Mottled pinkish to greenish grey, weakly silicified and sericitized intrusive. Massive with subdued/clouded/resorbed/altered, coarse grained texture. 5%, subplanar to irregular, thin (1 to 10cm) quartz veins often offset along fractures. Fractures are often sericitic giving section a light green colour. Upper and lower contacts are oriented at 40 and 50 degrees to the core axis. 2%, pyrite occurs as disseminations concentrated on fractures.										
194.70 199.45	WEAKLY BRECCIATED MAFIC METAVOLCANIC WITH EPIDOTE-CARB. BANDS										
	Medium grey-green, irregularly swirled and moderately to intensely brecciated and fractured, with 20% light yellow-green epidote-carboante alteration bands, and generally an overall moderate to intense carbonate alteration.	NS	194.70	199.45	4.75	n/a	n/a	-	1-3%		
		962	194.70	196.00	1.30	.20	1.10	-	1-3%		
		725	196.00	197.00	1.00	.02	1.70	-	2-4%		
		726	197.00	198.50	1.50	.03	1.90	-	1-2%		

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Locally intensely sheared at 20 degrees to the core axis, near both contacts.	727	198.50 199.45	.95	.06	1.30	-	2-3%			
	Altered sections of the volcanic unit are themselves brecciated and broken Several fractures have carbonate-sericitic slip surfaces.										
	Generally 1%, and locally up to 3%, pyrite as fine disseminations and fracture linings.										
	Relatively broken unit, often broken along irregular, as well as planar sericitic fractures. The latter are generally oriented at 20 to 40 degrees to the core axis.										
	Lower contact along sharp chloritic slip at 20 degrees to the core axis.										
199.45 201.10	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED										
	Mottled medium grey and grey-green, weakly silicified but moderately sericitized and brecciated.	MS	199.45 201.10	1.65	n/a	n/a	-	2%			
		963	199.45 201.10	1.65	.49	1.90	-	2%			
	Vague, coarse grained, massive texture evident, but mostly fine grained quartz-carbonate-plagioclase-sericite schist.										
	Well mottled texture due to brecciation, silica flooding, and sericitization.										
	No significant quartz veins, although silica flood zones often form irregular silica bands 0.5 to 2cm wide.										
	2% Pyrite as fine disseminations and fracture linings.										
	Moderately competent unit, but moderately broken along carbonate-sercite-talc lined fractures at 20 to 40 degrees to the core axis.										
	Lower contact occurs along an irregularly brecciated quartz vein, separating intrusive from intensely sheared mylonitic mafic volcanics below.										
201.10 208.75	SHEAR ZONE										
	Intensely altered and sheared mafic metavolcanic with soft banded clay gouge zones between 202.50 to 204.00, and 208.60 to 208.70 metres.	MS	201.10 208.75	7.65	n/a	n/a	-	1-5%			
		964	201.10 202.35	1.25	13.85	42.60	-	3%			
	The mylonite/clay gouge zones are soft and claylike with multicoloured, light pink to grey to green banding (1mm laminations). Several thin (1 x 5mm) quartz vein fragments occur in the fault gouge parallel to the	728	202.35 203.00	.65	6.74	5.30	-	5-6%			
		729	203.00 203.50	.50	7.86	29.50	-	3-4%			
		730	203.50 204.00	.50	3.22	11.90	-	3-4%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	shear foliation, which varies between 0 to 20 degrees to the core axis.	731	204.00 204.50	.50	.34	2.10	-	3-4%			
	The larger upper zone also includes a friable, altered, 3cm x 3cm,	732	204.50 205.00	.50	.26	2.70	-	3-4%			
	irregular, intrusive fragment.	733	205.00 205.50	.50	.14	3.00	-	2-3%			
	Gouge is relatively pyritic containing 1%, to locally 5%, finely	734	205.50 206.00	.50	.03	2.00	-	1%			
	disseminated pyrite above 202.50 metres. The unit is well sheared much	735	206.00 207.00	1.00	.02	1.70	-	1-2%			
	like the mylonite adjacent to it, but not sheared into gouge. Section	736	207.00 208.00	1.00	.01	1.70	-	1-2%			
	contains 15%, large, broken fragments of quartz veining and 3 to 4%	737	208.00 209.00	1.00	.02	1.90	-	2-4%			
	pyrite. Section is somewhat similar to mylonite between 182.30 and 184.00 metres.										
	Shear folition is wavy and irregular, and swirled around quartz vein fragments, but generally ranges between 0 and 30 degrees to the core axis										
	Between the two gouge zones the volcanic is moderately to intensely brecciated, and similar to zone between 194.70 and 199.45m with 10% epidote-carbonate mottling.										
	Some darker, less altered, brecciated sections of this zone are locally magnetic, with 0.5% pyrite.										
	Unit is mostly massive and brecciated, but locally weakly sheared with well developed foliation oriented at about 20 degrees to the core axis.										
	Soft, well broken to rubbly unit.										
208.75 287.70	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS										
	Variably altered (weak to intense) mafic volcanic, intruded by variably	MS	208.75 287.70	78.95	n/a	n/a	-	0.5-2%			
	altered (unaltered to locally moderate or intense) granodiorite to	738	209.00 210.00	1.00	.04	2.00	-	3-4%			
	quartz diorite.	739	210.00 211.00	1.00	.03	2.40	-	2-3%			
	208.75 213.75 Intensely altered and brecciated, mottled medium to dark	740	211.00 212.00	1.00	.02	2.30	-	1-2%			
	green and grey mafic volcanic adjacent to the overlying	741	212.00 213.00	1.00	.01	2.20	-	1-2%			
	mylonite zone, grading into a well altered	742	213.00 213.75	.75	.01	2.40	-	2-3%			
	(epidote-carbonate) mafic volcanic that is more massive,	965	213.75 215.40	1.65	.07	1.40	-	2%			
	but still slightly brecciated/deformed as shown by offset	966	215.40 216.55	1.15	.01	1.20	-	2%			
	(1 to 3cm) quartz veining. Unit mostly altered to light	743	216.55 217.15	.60	.02	1.20	-	1-2%			
	green-yellow epidote patches, but a few dark green, fine	744	217.15 218.00	.85	.02	2.20	-	1-2%			
	grained, magnetic, unaltered mafic volcanic remnant	745	218.00 219.00	1.00	.04	196.60	-	2-3%			
	fragments remain. 5%, intense, thin (1mm), calcitic,	746	219.00 220.00	1.00	.03	2.40	-	2%			
	tension microfracture networking. 5%, 0.5 To 2cm,	967	220.00 221.00	1.00	.21	1.90	-	1-3%			
	subplanar quartz veins oriented at 30 to 55 degrees to the	747	221.00 222.20	1.20	.19	2.20	-	2-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	core axis. Weak alteration banding is often irregular but	968	222.20 223.00	.80	.10	2.00	-	1-2%			
	mostly oriented at 20 degrees to the core axis.	969	227.35 228.10	.75	.03	1.40	TRACE	1-2%			
213.75 215.40	Intrusive/mafic metavolcanic contact zone. 50%, irregular,	970	233.10 234.00	.90	.04	1.50	-	0.5-1%			
	intrusive blocks as below with 50% mostly intensely	971	234.00 235.00	1.00	.06	1.50	-	0.5-1%			
	epidotized, lime green to salmon pink coloured altered	972	241.50 243.00	1.50	.02	1.40	-	0.5%			
	mafic metavolcanic. Section is well fractured with sharp,	973	243.00 243.55	.55	.07	1.00	-	TRACE			
	but irregular to somewhat subdued (metasonatized) contacts.	974	243.55 244.40	.85	.01	1.30	-	1%			
215.40 217.15	Quartz diorite intrusive. Slightly greenish to reddish	975	244.40 245.50	1.10	.19	.80	-	4-5%			
	medium grey, weakly to moderately carbonate and epidote	976	248.00 249.00	1.00	.11	1.00	-	4-5%			
	altered, coarse grained, feldspar porphyritic intrusive.	977	249.00 249.90	.90	.01	1.90	-	1%			
	30 to 40%, euhedral to subhedral, often zoned, 1 to 3mm and	978	249.90 251.00	1.10	.12	1.50	-	0.5%			
	up to 1cm, white plagioclase phenocrysts, and 5%,	8546	251.00 252.50	1.50	.02	1.20	-	0.5%			
	subrounded, 2 to 5mm quartz phenocrysts in finer grained	979	252.50 253.05	.55	.01	1.40	-	1-2%			
	plagioclase rich matrix that is carbonatized and	980	253.05 254.00	.95	.09	1.20	-	3-4%			
	epidotized. Only minor unaltered biotite is evident.	981	254.00 255.00	1.00	.19	.90	-	2-3%			
	Intrusive is massive and contains a few well altered,	8547	255.00 256.00	1.00	.04	1.30	-	1%			
	pyritic volcanic wallrock fragments that are intensely	8548	256.00 257.00	1.00	.03	1.20	-	1-2%			
	microfractured. No significant quartz veining. 2% pyrite	8549	257.00 258.50	1.50	.07	1.30	-	1%			
	as fine disseminations and fracture fillings. Competent	8550	258.50 260.00	1.50	.22	1.20	-	1%			
	section, with 5 to 50 cm breakage along fractures generally	8551	260.00 261.35	1.35	.21	1.30	-	1-2%			
	oriented at 45 degrees to the core axis. Lower contact is	982	261.35 261.95	.60	.25	1.80	-	1-2%			
	sharp and oriented at 35 degrees to the core axis.	8552	261.95 263.00	1.05	.01	.80	-	1%			
217.15 221.15	Intensely altered mafic metavolcanic. 10%, dark green,	8553	263.00 264.75	1.75	.01	1.10	-	1%			
	magnetic, unaltered remnants, 50%, weak to moderately	8554	264.75 266.00	1.25	.33	1.60	-	0.5%			
	carbonate and epidote altered sections having a irregular,	8555	266.00 267.50	1.50	.06	1.30	-	0.5%			
	patchy, cream to light yellow-green colour, and 20%,	8556	267.50 269.00	1.50	.04	1.10	-	1%			
	intensely light-yellow epidote altered sections with small	8557	269.00 270.50	1.50	.01	.90	-	0.5%			
	irregular intrusive dykelets and veining. Section is	8558	270.50 271.80	1.30	.09	.90	-	1-2%			
	moderately to intensely fractured/brecciated, with 5%,	8559	271.80 273.15	1.35	.03	1.00	-	MINOR			
	calcite filling thin, irregular, tension fracture	8560	273.15 275.00	1.85	.10	.80	-	0.5-1%			
	networking. Minor, irregular, broken and offset quartz	8561	275.00 276.50	1.50	.05	.90	-	0.5-1%			
	veining. 1 to 2% finely disseminated pyrite. Competent	8562	276.50 278.00	1.50	.02	.80	-	0.5-1%			
	section but moderately well fractured at various angles to	983	285.90 287.70	1.80	.03	1.50	-	0.5-1%			
	the core axis. Lower contact is an irregular transition										
	zone into intrusive.										
221.15 222.20	Transitional contact between mafic metavolcanic and										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	intrusive. 60%, intensely altered mafic volcanic as above, and 40%, slightly deformed intrusive as below, with irregular to sheared contact edges between rock types.										
222.20 228.10	Quartz diorite intrusive. Medium pink to purplish pink, relatively fresh to weakly altered with local sheared zones. Upper part is weak to moderately carbonate altered with little unaltered biotite. Central part is mostly relatively fresh with large plagioclase phenocrysts, minor quartz veining, and local weakly silicified zones. Lower part (227.60 to 228.10m) of this section is locally moderately sheared at 50 to 60 degrees to the core axis, and weak to moderately silicified. Lower contact is sharp and oriented at 40 degrees to the core axis. Unaltered intrusive contains 0.5%, finely disseminated pyrite, with 2 to 3% in the lower altered portion. 226.70 to 226.80m is an irregular, creamy grey, intensely altered, pyritic (2%), mafic volcanic wallrock fragment.										
228.10 230.25	Weak to moderately altered mafic metavolcanic. Medium to dark green to grey-green, fine grained, weak to moderately magnetic sections, with 50%, patchy grey silicification adjacent to the upper contact, and 50%, yellow-green, irregularly banded to patchy, weak to moderately epidote alteration throughout most of the rest of the section. Dark green less altered zones are weakly banded at 20 to 30 degrees to the core axis, and exhibit fine volcanic flow textures. Epidote banding often at 20 to 50 degrees to the core axis, but mostly irregular and strongest adjacent to silica veinelts. Carbonate-epidote banding occasionally contains minor porphyroblastic garnet in small (0.5cm), irregular clusters. Minor, thin (less than 0.5cm), subplanar, but irregular quartz veining, generally with numerous offsets along parallel fractures. Minor, irregular network of calcite fracturing. Upper contact is a sharp, planar intrusive contact oriented at 40 degrees to the core axis. Lower contact is a sharp, irregular contact oriented at 40 degrees to the core axis, truncating										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	compositional and alteration banding within the volcanic.										
230.25 233.10	Relatively unaltered quartz diorite intrusive. Medium grey to medium pinkish grey, typical, massive, coarse grained, plagioclase porphyritic, biotite quartz diorite. Contains 3 to 5%, thin (1mm to 2cm), quartz vein bands with somewhat nonparallel and diffuse contacts, locally giving them a flood band appearance. Quartz veining is white, coarse grained, with some salmon pink (K-spar) laminae and contact bands along the edges of veins. Veins have various orientations, but mostly between 0 and 45 degrees to the core axis. 1 to 2% pyrite as fine disseminations and small, partial fracture fillings. Moderately fractured unit, generally oriented at 10 to 25 degrees, or 40 to 50 degrees to the core axis. Upper and lower contacts are sharp, but undulating, intrusive contacts oriented at 30 to 40 degrees to the core axis.										
233.10 241.50	Weak to moderately altered mafic volcanic. Between 233.10 and 235.00 metres this section is mottled to weakly banded, medium grey-green to green-grey, with 15%, blue-white, irregular, 0.5 to 3cm, quartz blebs, and discontinuous to boudinaged veins. Weak shear banding oriented at 20 to 30 degrees to the core axis. Below 235 metres, this section consists of 50%, dark green, very magnetic, massive to weakly foliated zones, and 50%, medium green to light yellow-green, weak to moderately and locally strongly, epidote-carbonate altered with minor pink garnet porphyroblasts. Unaltered zones exhibit flow breccia or flow top textures. Alteration is patchy to irregularly banded at 10 to 40 degrees to the core axis. 5 to 10%, 0.5 to 10cm, subplanar, quartz veining oriented at 20 to 70 degrees to the core axis, but generally broken and offset along fractues. Generally minor to 0.5% pyrite as fine disseminations, but locally up to several percent along fractures, quartz veining, and the lower intrusive contact. Quartz veins in volcanic near the lower contact are cut by the underlying intrusive. Lower contact sharp, but										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	irregular and undulating at 10 degrees to the core axis.										
241.50 244.40	Relatively unaltered, coarse grained, plagioclase porphyritic, biotite, quartz diorite intrusive. Medium grey, unaltered or very weakly altered, massive to weakly foliated. Large quartz vein between 243.00 and 243.55 metres. Vein is watery white, coarse grained, and clean, and oriented at 10 degrees to the core axis.										
244.40 249.90	Weak to moderately altered mafic metavolcanic, with 40% unaltered intrusive dykes. Medium to dark green, magnetic, mottled, and network fractured, with medium grey, weak and locally moderately epidote-carbonate altered zones. Unit is well fractured by thin network calcite veining, and intruded by 30 to 40%, irregular, unaltered intrusive dykelets (1 to 50cm wide), and some irregular quartz veins. Veining and dykes generally oriented at 0 to 40 degrees to the core axis. 1 to 5%, pyrite as fine disseminations, often concentrated in irregular bands in dark green mafic volcanic sections, as well as in fractures throughout unit. Moderately broken section, generally along fractures into pieces 10 to 50cm. Lower contact is a sharp, but irregular intrusive contact oriented at 20 degrees to the core axis.										
249.90 251.35	Relatively unaltered to weakly silicified quartz diorite intrusive. Medium grey, typical, coarse grained, plagioclase porphyritic, biotitic quartz diorite, but with a slight washed out, pervasive silicification appearance. Massive and locally weakly foliated/sheared. Includes a few, 1 to 1.5cm white plagioclase megacrysts. Upper contact is sharp and curving from 20 to 60 degrees to the core axis. Lower contact is sharp, but irregular at 20 degrees to the core axis. Minor quartz veining, generally oriented at 45 to 60 degrees to the core axis.										
251.35 252.50	Weak to moderately altered mafic metavolcanic. Similar to volcanic section between 244.40 and 249.90m, with slightly more (5%), thin calcite network tension microfracturing. Foliation/banding oriented at 20 to 30 degrees to the core										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	axis. Lower contact oriented at 25 degrees to the core axis.										
252.50 253.50	Relatively unaltered to weakly silicified quartz diorite intrusive. Similar to dyke between 249.90 to 251.35m, but slightly more foliated at 10 to 20 degrees to the core axis, particularly near the the lower contact which is intensely carbonate altered.										
253.05 261.95	Weak to moderately carbonate-epidote to carbonate altered mafic metavolcanic. Mostly dark greenish, hard, fine grained, moderately magnetic, weakly and thickly banded mafic metavolcanic, with an upper contact zone that is medium grey and moderately carbonate altered, and several patchy zones, and bands of light yellow-green epidote-carbonate alteration through the rest of the unit. Minor pink garnet porphyroblasts. Upper carbonate altered zone contains 5%, thin (hairline to 1mm), network of calcitic tension microfracturing, and 2 to 5%, finely disseminated pyrite. Dark green, relatively unaltered volcanic contains thin (0.5 to 1cm), lighter coloured bands at shallow (5 to 25 degree) angles to the core axis, that may be pillow selvages. Minor to 5%, thin (1mm), network to calcite tension fracturing. 3 to 5%, thin (0.5 to 2cm), irregular, blue-white quartz veining, often branching and at various angles to the core axis. 0.5 to 2% and locally to 3 or 4%, fine pyrite mostly along fractures. 5cm, grey, typical intrusive dyke occurs between 261.10 to 262.30m, and is oriented at 20 degrees to the core axis. Competent unit, with 25 to 75 cm breakage along fractures. Lower contact is sharp at 15 degrees to the core axis, with adjacent mafic volcanic that is well carbonate altered and moderately pyritized.										
261.95 264.75	Medium grey, typical, massive, coarse grained, plagioclase porphyritic, quartz diorite intrusive with 3 to 5% quartz veining generally oriented at 50 to 70 degrees to the core axis. One, thin (1cm), green to salmon pink, epidote altered fracture at 263.55m oriented at 45 degrees to the core axis. Minor silicification in thin (1cm) bands										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	adjacent to some fractures. Good euhedral, zoned plagioclase phenocrysts. 1 to 2% pyrite as fine disseminations, small clots, and fracture linings/fillings. Competent core, with 10 to 50cm breakage along fractures generally oriented at 45 to 80 degrees to the core axis. Lower contact is sharp and planar and oriented at 30 degrees to the core axis.										
264.75 271.85	Relatively unaltered mafic metavolcanic. Dark green, weak to moderately magnetic, fine grained, mafic metavolcanic flow. Massive to weakly foliated at 0 to 30 degrees to the core axis, with well developed (5%), network of hairline calcite tension microfracturing. 3 to 5%, thin (1mm to 2cm), subplanar, blue-white quartz veining offset along parallel fractures, as well as some irregular, now vuggy, quartz-calcite veins/lenses. Minor, thin, wispy bands of epidote-carbonate alteration. Competent unit, with 20 to 50cm breakage. Lower contact is a sharp, planar intrusive contact oriented at 50 degrees to the core axis.										
271.75 273.15	Relatively unaltered quartz diorite intrusive. Similar to section between 261.95 to 264.75m, but quartz veining is vuggy and oriented at 30 to 50 degrees to the core axis, and including two, large (2 x 5cm), intrusive wallrock fragments. Lower contact is a sharp, planar intrusive contact oriented at 20 degrees to the core axis.										
273.15 281.85	Relatively unaltered mafic metavolcanic. Similar to section between 264.75 to 271.85m, but including several, thin to thicker, intrusive dykelets.										
273.40 273.50	4cm, white quartz vein oriented at 20 degrees to the core axis.										
273.90 273.95	4cm, white quartz vein oriented at 45 degrees to the core axis.										
275.20 275.30	0.5cm intrusive dykelet oriented at 20 degrees to the core axis, and cut by an S folded, 3cm, blue quartz vein at an opposite, shallow angle to the core axis.										
276.70 276.75	1cm intrusive dyke oriented at 25 degrees to the core axis.										
276.80 276.85	2cm, white quartz vein oriented at 45 degrees to the core										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

axis.

278.75 281.85 Weak to moderately epidote-carbonate altered zone of mafic volcanic, containing 5% quartz veining, and abundant (10 to 15%), thin, calcite tension microfracturing in parallel ladders, as well as irregular intrusive fragments between 279.70 to 279.85, 280.10 to 280.25, 280.35 to 280.50, 280.60 to 281.00, and 281.20 to 281.30, and quartz veins at 280.00 to 280.05 (at 40 degrees to the core axis), and 281.30 to 281.35 (irregular quartz fragment). Lower contact is sharp and oriented at 40 degrees to the core axis

281.85 283.50 Chlorite-biotite-plagioclase-calcite schist. Dark green-black, non-magnetic, relatively coarse (1mm) grained, with well developed schistose foliation oriented at 40 to 55 degrees to the core axis. Unit contains 5%, thin and irreuglar, white calcite patches and discontinuous veins. Section is pervasively reactive to HCl. Biotite is coarse grained (porphyroblastic), and except for the strong foliation gives section a semi-lamprophyric appearance. No significant quartz veining. Relatively competent section with 20 to 50cm breakage. Lower contact is sharp but undulating at 10 degrees to the core axis.

283.50 287.70 Weak to moderately carbonate altered mafic metavolcanic. Above 285.90m, the section is relatively unaltered to weakly epidote-carbonate altered with the latter forming lighter green network fracturing as well as small blebs/patches in dark green, fine grained unaltered metavolcanic. Unaltered zone at 285m exhibits small (0.5 to 1mm), ovoid amygdules. Minor calcite microfracturing, and minor, 1 to 3cm, irregular quartz blebs and patches, locally containing crystalline pyrite within the adjacent wallrock. Below 285.90m, the section is fine grained, weak to moderately magnetic, and intensely carbonate altered, particularly adjacent to the underlying intrusive. This section has strong medium yellow-green to buff-green mottling, with microfractured pseudobreccia appearance. Between 87.20 and 87.40m is a thin well altered, intrusive

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	ALTERATION CARB	ALTERATION SER
	dyke occurring within well foliated/sheared carbonate altered mafic volcanic. Dyke contacts and volcanic foliation oriented at 45 to 60 degrees to the core axis. Quartz veining and intrusive dykelets are boudinaged into small discontinuous lensoids that parallel to the shear foliation within this zone. Minor large (0.5 to 2.0cm), quartz veining within the upper less altered zone is partly boudinaged, generally at 20 to 30 degrees to the core axis, locally offset along fractures, and exhibits partially resorbed reaction rim contacts. Relatively competent unit with 10 to 30cm breakage, generally along fractures oriented at 40 to 50 degrees to the core axis. Lower contact is a sharp, planar intrusive contact oriented at 55 degrees to the core axis.										
287.70 310.50	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED										
	Mottled light to medium grey, weak to moderately silicified and sericitized, with some very weak to weakly altered, medium pinkish grey zones, and a few white, moderately to intensely altered bands.	NS	287.70	310.50	22.80	n/a	n/a	TRACE	1-4%	WK-MOD	WK-MOD	V.WK
	The unit is a typical, although altered, massive, coarse grained, plagioclase porphyritic, biotite intrusive plug.	984	287.70	289.40	1.70	.01	1.60	-	0.5-1%			
	The less altered pinkish zones are massive and coarse grained, with a weak silicified, resorbed, or faded appearance of the plagioclase phenocrysts although biotite is still relatively unaltered to weakly chloritized.	985	289.40	290.00	.60	.02	1.60	-	1%			
	Weak to moderately altered zones are often weakly foliated, with minor, thin quartz veining and flooding. Biotite is still locally evident but generally chloritized/sericitized.	986	290.00	291.00	1.00	.03	2.20	MINOR	2-3%			
	Moderate to intensely altered zones are white, often well foliated and quartz veined, with abundant silica flooding, as well as sericite replacing all original biotite.	987	291.00	291.50	.50	.02	1.50	TRACE	2%			
	5% Quartz veining throughout unit as very irregular branching veins, generally oriented at 0 to 40 degrees to the core axis. Veining often centres moderate to intensely altered bands a few 10's of cm wide but also cuts more sharply across the less altered zones. Several quartz	988	291.50	292.00	.50	.12	1.70	-	2-3%			
		989	292.00	293.00	1.00	.03	1.30	MINOR	2-3%			
		990	293.00	294.00	1.00	.09	1.30	-	2-3%			
		991	294.00	295.00	1.00	.02	1.30	-	1-2%			
		992	295.00	296.00	1.00	.01	1.10	TRACE	2%			
		993	296.00	297.00	1.00	.02	1.40	-	2%			
		994	297.00	298.00	1.00	.02	1.50	-	1%			
		995	298.00	298.50	.50	.03	1.50	-	2%			
		996	298.50	299.00	.50	.06	1.80	TRACE	2%			
		997	299.00	300.00	1.00	.04	1.90	-	2-3%			
		998	300.00	301.00	1.00	.08	1.90	TRACE	2-3%			
		999	301.00	302.00	1.00	.22	22.30	-	1-2%			
		1000	302.00	303.00	1.00	.06	2.00	-	1%			
		1301	303.00	304.00	1.00	.11	2.30	-	2%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	veins, particularly those within well altered sections, contain minor amounts of a fine metallic grey minerals. The best mineralized zone occurs within an intensely altered and quartz veined section between 290.40 to 291.00 metres, with other grey mineral locations identified on the sample description sheets.	1302	304.00 305.00	1.00	.04	1.30	-	1-2%			
		1303	305.00 306.00	1.00	.09	1.40	-	0.5-1%			
		1304	306.00 307.00	1.00	.02	4.00	-	1-2%			
		1305	307.00 308.00	1.00	.13	1.50	-	1-2%			
		1306	308.00 309.00	1.00	.01	1.40	-	1-2%			
	1 to 4% pyrite as fine disseminations often concentrated along fractures. Greater amounts of pyrite generally occur within the altered intrusive sections.	1307	309.00 310.00	1.00	.10	8.40	-	2%			
		1308	310.00 310.50	.50	.03	5.40	-	1-2%			
	Weakly to moderately competent unit and moderately broken along fractures into 2 to 10cm pieces with less altered zones having 20 to 50cm breakage, and more altered zones forming 1cm rubble/friable zones. Several fractures are coated with thin, chloritic and/or sericitic surfaces.										
	Near the upper contact is an intensely foliated shear zone between 289.40 and 290.00 metres. Above this is the only relatively unaltered intrusive in this unit. Shearing and foliation oriented at 30 degrees to the core axis.										
	Lower contact is a planar, sharp, 1cm wide shear zone oriented at 40 degrees to the core axis.										
310.50 316.35	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Dark green, fine grained, weak to moderately magnetic, massive to weakly foliated/banded at 0 to 25 degrees to the core axis, with some thin bands resembling pillow selvages.	NS	310.50 316.35	5.85	n/a	n/a	-	1%			
		1309	310.50 312.00	1.50	.11	1.50	-	1%			
	Abundant fine (hairline to 1mm), calcitic tension microfracturing in network and en echelon discontinuous veining patterns.										
	5%, Very irregular, 0.5 to 2cm, boudinaged and offset quartz veins/lenses/blebs mostly oriented at shallow (0 to 40 degee) angles to the core axis, although somewhat undulating and discontinuous.										
	Upper and lower contact zones contain thin (20 to 50cm) zones of medium green, moderately carbonatized and sheared (40 to 45 degrees to the core axis) metavolcanic adjacent to sharp intrusive contacts parallel to the shearing orientation.										
	Relatively competent unit with 25 to 50cm breakage along fractures generally oriented at 40 to 45 degrees to the core axis.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
316.35 321.50	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED Above 320m, the unit is similar to the mottled, white, weak to moderately silicified intrusive zones between 287.70 to 310.50m, except with local salmon pink colour to some plagioclase phenocrysts within the white altered zones. This section contains minor (5%) quartz veining occasionally with minor metallic grey mineralization. Below 320m, it is slightly pinkish medium grey, and very weakly altered to relatively unaltered. Section is weakly sheared in more altered zones at 40 degrees to the core axis. Moderately broken core (1 to 10cm) in altered zones, and relatively competent with 10 to 30cm breakgage in unaltered zones. Lower contact is sharp and planar at 40 degrees to the core axis, subparallel to the foliation orientation in the adjacent mafic volcanics.	MS	316.35	321.50	5.15	n/a	n/a	TRACE	1%			
		1310	316.35	317.00	.65	.02	1.60	-	1%			
		1311	317.00	318.00	1.00	.04	1.30	MINOR	2-3%			
		1312	318.00	319.00	1.00	.01	1.40	TRACE	2-3%			
		1313	319.00	320.00	1.00	.02	1.30	-	2-3%			
		1314	320.00	321.50	1.50	.02	1.50	-	1-2%			
321.50 346.90	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS Generally dark green, with minor to moderate light green speckling, and well developed irregular banding that is often concentrated in thin (10 to 30cm), mostly light yellow-green epidote-carbonate altered patches. Locally, these form as small (10 to 50cm) patches and bands that are moderate to strongly altered. Banding may be in part original compositional, but is mostly due to alteration. Dark green less altered zones are fine grained, often with fine volcanic textures as well as pillow selvages? evident. Weakly to moderately magnetic. Colour/alteration/compositional banding generally oriented at 10 to 30 degrees to the core axis, and locally weakly sheared at 0 to 20 degrees to the core axis. Unit is well microfractured with 5%, very irregular, network of calcitic tension microfracturing, and minor offset quartz veining. Lower contact has intense microfractured band 50cm wide. 5%, Very irregular, broken, offset and occasionally swirled, thin (0.5 to 2cm), blue-white quartz veining.	MS	321.50	346.90	25.40	n/a	n/a	-	MNR-0.5			
		1315	329.00	330.00	1.00	.06	.40	-	MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	A few fractures oriented at 30 degrees to the core axis have thin (1 to 3mm), calcite-sericite-talc coatings. Minor disseminated pyrite with local concentrations, generally forming adjacent to quartz veining. Unit includes a grey, plagioclase porphyritic (1 to 3mm), unfoliated dyke between 335.00 to 335.35m, with sharp contact edges at 30 degrees to the core axis, subparallel to foliation in the volcanic. Relatively competent unit with 20 to 75cm breakage. Lower contact is sharp, planar intrusive contact oriented at 50 degrees to the core axis.										
346.90 356.15	FELDSPAR PORPHYRITIC QUARTZ DIORITE INTRUSIVE - UNALTERED Mostly medium grey to slightly pinkish grey, coarse grained, plagioclase porphyritic, biotite intrusive, with minor quartz veining, and minor weakly silicified zones. Two larger (1cm), irregular quartz veins oriented at 10 degrees to the core axis occur between 351.00 to 351.50 and 353.60 to 354.00 metres. Large volcanic xenolithic inclusion with 15cm quartz vein occurs between 355.15 to 355.45 metres. Competent unit, but relatively well fractured with 3 to 10cm breakage.	NS 1316	346.90 356.15 353.00 354.00	9.25 1.00	n/a .01	n/a 1.50	- -	1-3% 2%	UN-WK	UN-WK	UN-V.WK
356.15 374.00	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS Mostly mottled to banded sequence of dark green, fine grained, weakly magnetic, and light yellow-green, non-magnetic altered bands and patches that are often irregularly swirled and contorted. Minor garnet porphyroblasts occur within the intensely altered zones. Unit has weak compositional and alteration banding oriented at 30 to 45 degrees to the core axis. Unit includes 3 mafic dykes between. 356.65 357.20 Feldspar Porphyritic Quartz Diorite Dyke. Upper contact oriented at 20 degrees to the core axis and lower contact perpendicular oriented at 45 degrees to the core axis. 357.50 357.65 Feldspar Porphyritic Quartz Diorite Dyke. With parallel contacts at 30 to 40 degrees to the core axis.	NS 1317	356.15 374.00 356.65 357.20	17.85 .55	n/a .04	n/a 1.60	- -	MINOR MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
367.00 369.30	Feldspar Porphyritic Quartz Diorite Dyke. With upper and lower contacts at 45 degrees to the core axis, and including 20%, large volcanic wallrock inclusions. Dykes are dark grey in colour with 50%, uniform, 1mm, subhedral, weakly zoned plagioclase phenocrysts in black, aphanitic, weakly foliated, and weakly magnetic groundmass. Dykes are massive with no veining and contain minor pyrite. Unit contains minor quartz veining, but well developed, hairline width network and en echelon calcitic tension microfracturing. Some epidote-carbonate altered zones contain thin (1 to 10mm), irregular, silica flood veinlets. Minor pyrite as fine disseminations. Relatively competent unit with 20 to 75cm breakage along fractures generally oriented at 45 to 60 degrees to the core axis. Lower contact not encountered. 374.00 End of Hole.										

ESSO MINERALS CANADA OM88-6-C-230

SUMMARY DRILL LOG

Project Name: HN. Hole Number: HN88-32.

Project Number: 1677. Logged By: M.H. Lenters.

NTS: 42H/8. Date: September 1988.

Location: 42+00W, 8+50S. Claim Number: L-871912.

Azimuth: 180°. Dip: -45°. Length (m): 179.00.

PURPOSE: Test Mag. low and high background IP chargeability response west of HN88-22.

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.0	7.00	Overburden	
7.00	23.60	Mafic Metavolcanic Flow (Relatively Unaltered) Dark green, fine-grained, weakly magnetic, and relatively unaltered, with minor, hairline epidote-carbonate fracturing. Weak to moderately well developed schistosity and foliation oriented at 60° to 80° to CA. Minor quartz veining and cherty bands. Minor to 1% pyrite.	Not Assayed
23.60	41.00	Weak to Moderately Carbonate-Epidote Altered and Brecciated/ Fractured Mafic Metavolcanic Mottled to irregularly banded, light to medium green, buff and cream coloured, weak to moderately carbonate-epidote altered and weak to locally moderately brecciated. Fine-grained, non-magnetic, and cut by several, small quartz vein breccia zones. 0.5% pyrite.	0.01 - 0.15 (9)
41.00	49.00	Quartz Vein and Intrusive Breccia Zone Brecciated, carbonate altered, silicified, and quartz flooded/ veined mafic metavolcanic and intrusive, including large quartz vein zones containing abundant altered and partially assimilated wallrock fragments. Minor fault zone rubble and clay gouge zone with some lost core. Minor pyrite.	0.01 - 0.03 (8)
49.00	57.85	Mafic Metavolcanic Generally dark green-black, weak to moderately magnetic, fine-grained, massive, locally plagioclase phyric mafic metavolcanic, with a few weak to moderately epidote-carbonate altered zones, and one small fault zone. 51.70-52.10 Fault Breccia.	0.01 - 0.04 (3)
57.85	124.60	Variably Altered Quartz Diorite Intrusive 57.85-106.55 Light to medium grey to greenish white, generally weakly to moderately silicified and sericitized, coarse-grained, feldspar porphyritic intrusive with local intensely altered zones, often adjacent to quartz veining, and a few, thin, pinkish, relatively unaltered zones. Minor to 5%, irregular quartz veining. 1 to 5% pyrite and minor grey metallic mineralization. 106.55-124.60 Generally pinkish to purplish, medium-grey coloured, coarse-grained, plagioclase porphyritic, biotite, quartz diorite that is relatively unaltered to very weakly silicified, with local zones/bands of weak silicification and sericitization. Minor to 5% quartz veining. 1 to 3% pyrite.	0.01 - 0.28 (75)

From (m)	To (m)	Description HN88-32	Gold Assays (g/tonne)
124.60	179.00	Mafic Metavolcanic Pillowed Flow 124.60-131.00 Mottled and banded medium to dark green, epidote-carbonate altered mafic metavolcanic. Foliation and banding oriented at 60° to 70° to CA. Moderate calcitic microfracturing. Minor quartz veining. Several thin (5 to 50 cm) intrusive dykes. Minor to 1% pyrite +/- minor pyrrhotite and chalcopyrite 131.00-179.00 Dark green, moderately magnetic, fine-grained with minor epidote-carbonate alteration stringers and patches. Pillow selvages, and amygdules locally evident. Minor quartz veining. Minor to 1% pyrite +/- minor pyrrhotite and chalcopyrite	0.01 - 1.05 (10)
	179.00	END OF HOLE	

H-M PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HM88-32
Page: 1

Drilled by: Bradley Bros. Limited
Hole Size: BQ
Core Size: BQ
Casing: Casing Removed

Started: Sept. 21, 1988
Finished: Sept. 22, 1988

Logged by: M.H.Lenters
Date logged: September 1988
Logging Method: Log II
Measurement System: Metric

Azimuth: 180
Dip: -45

Acid Tests:

Depth	Az.	Dip
7.00		-45.0
137.00		-40.0
179.00		-39.5

Claim No: L-871912
Grid: West
Easting: 42+00W
Northing: 0+50S
Elevation: Level

Purpose: Test Mag Low & IP West of HM88-22

Length: 179.00Metres
Vert. Proj: 120.0 Metres
Hor. Proj: 133.0 Metres
Ovb. Depth: 5.0 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 7.00	OVERBURDEN										
7.00 23.60	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE) Dark green to greyish green, fine grained, weakly magnetic, with abundant, thin (hairline to 2mm), light green, epidote-carbonate altered fracture stringers, locally anastomosing and coalesing into weakly altered bands or zones. Compositional banding, alteration banding, fracturing, and a weak to moderately developed phyllitic/schistose foliation are all oriented at 60 to 80 degrees to the core axis, although some alteration banding associated with fractures and quartz veins are oriented at somewhat shallower angles. Unit cut by a few, thin (1 to 0.5mm), subplanar, quartz veins with sharp contacts, and oriented at various angles to the core axis. 7.80 8.00 4cm quartz vein with epidote altered fractures, oriented at 20 degrees to the core axis. Unit contains two, thin, diffusely colour banded cherty horizons, with buff, tan, cream, salmon pink colours. These zones are hard,	MS	7.00	23.60 16.60	n/a	n/a	-	MNR-1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	microfractured, and well banded/bedded at 60 to 65 degrees to the core axis.										
	12.60 12.75 Cherty horizon.										
	13.00 13.05 Cherty horizon.										
	The two above bands could also be intensely silica-carbonate altered volcanic bands.										
	Unit has strong microfractured appearance, with some veining offset 1 to 10mm along fracture slips.										
	Minor to 1% pyrite as fine, often wispy, disseminations aligned parallel to the foliation. Locally minor amounts of coarser pyrite are disseminated in irregular patches.										
	Relatively competent core, with 10 to 75 cm breakage generally parallel to foliation at 60 to 80 degrees to the core axis.										
	Lower contact is transitional across a few metres into a weak to moderately epidote-carbonate altered mafic metavolcanic.										
23.60 41.00	WEAKLY BRECCIATED MAFIC METAVOLCANIC WITH EPIDOTE-CARB. BANDS										
	Weak to moderately epidote-carbonate altered, weak to locally moderately brecciated/fractured, and cut by several brecciated/faulted quartz veins/dykes.	NS	23.60	41.00 17.40	n/a	n/a	-	0.5-1%			
	Mottled to irregularly banded, light to medium green, buff and cream colours, fine grained, non magnetic, weakly to mostly moderately epidote-carbonate altered, and fractured/brecciated.	1583	25.00	26.00 1.00	.02	1.90	-	MINOR			
	Weakly altered zones are medium to dark green, with abundant hairline fracturing, as well as containing small brecciated fragments or patches/bands of light green epidote/carbonate altered rock.	1584	26.00	27.00 1.00	.01	2.00	-	MINOR			
	Moderately altered sections have pale pastel yellow and green colouring that is generally banded at 60 to 90 degrees to the core axis, but also somewhat irregular and often moderately brecciated/fractured, and containing thin, irregular quartz vein infilling. Alteration and brecciation is particularly strong adjacent to quartz veins and intrusive dykes, which are generally also brecciated.	1585	33.50	35.00 1.50	.15	2.10	-	0.5%			
	Significant quartz veins and intrusive dykes occur at:	1586	35.00	36.00 1.00	.01	2.90	-	MINOR			
	25.30 26.00 Thin (1 to 3 cm), salmon pinkish, brecciated, but rehealed quartz vein containing abundant, angular wallrock fragments.	1587	36.00	37.00 1.00	.03	2.10	-	0.5-1%			
		1588	37.00	38.00 1.00	.02	1.80	-	0.5-1%			
		1589	38.00	39.00 1.00	.01	1.80	-	0.5-1%			
		1590	39.00	40.00 1.00	.01	1.70	-	0.5-1%			
		1591	40.00	41.00 1.00	.03	1.80	-	0.5-1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	The adjacent mafic volcanics are well fractured/brecciated and intruded by quartz veinlets.										
29.80 29.85	2 cm wide, white quartz vein with minor wallrock inclusions oriented at 45 to 50 degrees to the core axis.										
33.90 34.20	Brecciated multiphase quartz vein oriented at 30 degrees to the core axis.										
36.00 41.00	Moderately to intensely epidote-carbonate+/-silica altered mafic metavolcanic containing 20 to 70%, light grey, sharp to subdued/resorbed and diffusely bounded porphyritic intrusive fragments. Band appears to be a fault/brecciated hybrid zone with composition between altered volcanic and intrusive. Locally the band appears to be an intrusive breccia zone, that has a subdued and assimilated/rehealed appearance.										
	Unit is moderately competent.										
41.00 49.00	QUARTZ VEIN & INTRUSIVE BRECCIA ZONE										
41.00 43.30	Medium greenish grey, epidote-carbonate altered intrusive with composition similar to the assimilated fragments in the overlying zone. Contains 15 to 20%, salmon pink, subhedral, 1 to 3mm, plagioclase phenocrysts, and no biotite, in fine grained altered groundmass. Zone is crackled and brecciated, and intruded either by volcanic and/or intrusive material. Zone itself is cut by some quartz veining/flooding, and includes a few, thin, quartz diorite intrusive fragments, or later, irregularly offset dykes. These are salmon pink in colour and also somewhat subdued/resorbed in appearance. The unit is possibly a sheared intrusive/metavolcanic contact zone	NS	41.00	49.00	8.00	n/a	n/a	-	MNR-1%		
		1592	41.00	42.00	1.00	.01	1.70	-	1-2%		
		1593	42.00	43.30	1.30	.01	1.80	-	MINOR		
		1594	43.30	44.00	.70	.01	1.40	-	MINOR		
		1595	44.00	45.20	1.20	.01	1.30	-	MINOR		
		1596	45.20	46.00	.80	.02	1.10	-	MINOR		
		1597	46.00	47.00	1.00	.01	.90	-	MINOR		
		1598	47.00	48.00	1.00	.03	1.30	-	0.5%		
		1599	48.00	49.00	1.00	.01	1.60	-	0.5%		
43.30 44.00	Quartz vein. White, coarse grained quartz vein containing 40% variably assimilated, altered wallrock fragments that are generally less than 1 cm in size. Vein also cut by a minor amount of diffuse, thin (1 to 3mm), irregular, grey quartz/silica veinlets. Contacts of quartz vein with the adjacent wallrock are irregular, brecciated zones, with the lower contact passing into the underlying fault gouge,										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	breccia and lost core zone.										
44.00 42.20	Lost core. 0.50m of recovered altered intrusive and brecciated/rehealed quartz vein rubble from below a 1 cm zone of hematitic, mud red, clay gouge along a thin (1 to 2cm), fault slip.										
45.20 49.00	Intrusive (brecciated, altered and quartz flooded). Light greenish grey to pinkish, intensely silicified/silica flooded, and locally quartz veined, epidote-carbonate altered, quartz diorite intrusive. Unit has a diffuse resorbed appearance, and is locally brecciated. The upper contact not recovered, and the lower contact is a brecciated/shear zone oriented at 45 degrees to the core axis. Relatively competent core.										
49.00 57.85	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS										
	Generally dark green-black, weak to locally moderately magnetic, fine grained and massive, locally exhibiting a few, small (1mm), greenish white, plagioclase phenocrysts.	MS	49.00	57.85	8.85	n/a	n/a	-	MINOR		
	Unit is locally well fractured and weakly to moderately epidote-carbonate altered particularly in the upper metre adjacent to the overlying fault zone, adjacent to a few thin intrusive dykes, and near the lower contact with the underlying quartz diorite intrusive body. Fracturing, as well as epidote veinlets and banding, tend to concentrate along a 50 to 70 degrees to the core axis orientation, although it is generally quite irregular.	1600	49.00	50.00	1.00	.01	1.90	-	MINOR		
		1601	50.00	51.00	1.00	.04	1.60	-	MINOR		
		1602	56.00	57.85	1.85	.03	1.50	-	MINOR		
51.70 52.10	Fault zone. Small, relatively late fault breccia zone consisting of small (0.5 to 5cm), very angular volcanic fragments exhibiting varying intensities of alteration, and sharply bounded by finer matrix. Zone contains numerous incompetent clay slip surfaces. Fault zone appears to be 4 to 6 cm wide, and is oriented at 10 to 20 degrees to the core axis. Core is well broken along fractures at 0 to 20 degrees to the core axis.										
	Several, small, flesh coloured intrusive dykelets with subdued textures, but sharp contacts occur at:										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	50.25 50.40 Dyke at 30 to 35 degrees to the core axis. 52.40 52.50 Dyke at 35 degrees to the core axis. 53.30 53.40 Dyke at 30 to 35 degrees to the core axis. Unit contains a few, thin (0.5 to 1cm), quartz veins/bands that are oriented at various angles to the core axis. Minor finely disseminated pyrite. Upper part of unit is well fractured and broken into irregular 3 to 15 cm pieces, while the lower part is more competent and consists of 25 to 75 cm pieces. Lower contact is a sharp intrusive contact oriented at 25 degrees to the core axis.										
57.85 124.60	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED Generally weakly to moderately silicified and sericitized, with local intensely altered zones and a few very weakly altered zones above 106.55 metres, and very weakly to weakly altered with several relatively unaltered sections below 106.55 metres. Unit contains a large (between 58.20 to 58.70m) mafic volcanic wallrock inclusion near the upper contact. Relatively unaltered sections are pinkish, to purplish grey in colour, and generally exhibit the typical quartz diorite intrusive composition and texture, with minor quartz phenocrysts, 10 to 25%, white, plagioclase phenocrysts, and 10% biotite, in a medium to coarse grained, massive, feldspar dominant matrix. The altered zones become progressively more bleached (white) in colour, with biotite altering to chlorite and then to a light green sericite. Unit has less of a hard, silicified, silica flooded appearance than most other altered intrusive sections, and is more chalky white, porous and sericitic than HM88-31. Unit contains only minor amounts of irregular quartz veining, although locally up to 5% in several thin, more altered zones. Relatively unaltered zones contain 0.5 to 1% pyrite, with the pyrite content increasing to 5% with increasing alteration intensity (silicification and sericitization). Moderate to intensely altered zones are generally white to light grey,	NS	57.85	124.60	66.75	n/a	n/a	TR-MNR	0.5-4%			
		1603	57.85	58.70	.85	.02	1.20	-	0.5%		
		1604	58.70	59.50	.80	.01	1.40	-	0.5-1%		
		1605	59.50	60.50	1.00	.02	1.30	0.25%	2-3%		
		1606	60.50	61.90	1.40	.01	1.30	-	1-2%		
		1607	61.90	63.00	1.10	.01	1.30	0.5-1%	5-6%		
		1608	63.00	64.00	1.00	.01	1.20	-	1-2%		
		1609	64.00	65.00	1.00	.03	1.20	-	1-2%		
		1610	65.00	66.00	1.00	.02	1.20	-	0.5-1%		
		1611	66.00	67.00	1.00	.03	.80	-	0.5-1%		
		1612	67.00	68.00	1.00	.02	1.30	-	0.5%		
		1613	68.00	69.00	1.00	.06	1.30	TR-MNR	2-3%		
		1614	69.00	70.00	1.00	.11	.80	TRACE	1-2%		
		1615	70.00	71.00	1.00	.03	.80	TRACE	1-2%		
		1616	71.00	72.00	1.00	.06	1.00	-	1-2%		
		1617	72.00	72.75	.75	.03	1.10	TRACE	1%		
		1618	72.75	73.30	.55	.04	1.20	0.5%	2-3%		
		1619	73.30	74.50	1.20	.05	.60	TRACE	1-2%		
		1620	74.50	75.00	.50	.03	.80	0.5%	3-4%		
		1621	75.00	76.00	1.00	.02	.70	MINOR	2-3%		
		1622	76.00	77.00	1.00	.02	1.50	0.25%	3-4%		
		1623	77.00	78.00	1.00	.04	1.60	MINOR	3-4%		

Interval (Metres)	Description	Sample No.	Interval (Metres)		Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	with biotite altered to chlorite/sericite, locally contain minor to abundant very finely disseminated purplish grey mineralization in needle-like clusters that are concentrated along fractures, or along the wallrock edges adjacent to quartz veins, both of which often centre zones of increased alteration.	1624	78.00	79.00	1.00	.01	.60	TRACE	1-2%			
	Locally the intrusive contains thin (1 to 5cm), silica/cherty bands oriented at 70 to 80 degrees to the core axis. These appear to be weak shear zones/bands, and occasionally contain slip surfaces coated with fine molybdenum.	1625	79.00	80.00	1.00	.02	.80	TRACE	1-2%			
		1626	80.00	81.00	1.00	.02	.80	TRACE	2-3%			
		1627	81.00	81.80	.80	.01	.90	-	1-2%			
		1628	81.80	82.50	.70	.01	.50	0.25%	2-3%			
		1629	82.50	83.35	.85	.02	.90	TRACE	2-3%			
		1630	83.35	83.80	.45	.01	1.10	0.5%	3-4%			
		1631	83.80	85.00	1.20	.01	.50	TRACE	5-6%			
		1632	85.00	86.00	1.00	.03	.90	TRACE	3-4%			
	Unaltered zones are competent and broken into 25 to 50 cm pieces, generally along fractures at various angles to the core axis, but concentrating at 60 to 75 degrees to the core axis.	1633	86.00	86.70	.70	.01	1.00	MINOR	2-3%			
		1634	86.70	87.90	1.20	.03	.70	-	2%			
		1635	87.90	88.25	.35	.01	3.90	0.5%	3-4%			
	Altered zones are moderately competent and more broken with 5 to 25 cm sized pieces.	1636	88.25	89.00	.75	.02	.60	-	2-3%			
		1637	89.00	89.65	.65	.02	.90	-	1-2%			
	Near the lower contact zone the intrusive is subdued and finer grained, appearing much like smaller intrusive dykes, and may be a later, intrusive phase.	1638	89.65	91.00	1.35	.02	1.30	MINOR	2-4%			
		1639	91.00	92.00	1.00	.03	.90	TR-MNR	3-4%			
		1640	92.00	92.60	.60	.01	1.00	-	2-3%			
	Lower contact oriented at 60 degrees to the core axis.	1641	92.60	93.00	.40	.01	1.00	0.25%	4-5%			
		1642	93.00	93.50	.50	.02	3.90	0.5%	3-5%			
		1643	93.50	94.00	.50	.01	1.80	0.25%	2-3%			
		1644	94.00	94.50	.50	.02	1.00	0.5-1%	5%			
		1645	94.50	95.00	.50	.01	.70	MINOR	1-3%			
		1646	95.00	96.00	1.00	.03	4.70	MINOR	2-3%			
		1647	96.00	97.00	1.00	.02	1.00	0.25%	2-3%			
		1648	97.00	98.00	1.00	.01	.90	TRACE	1%			
		1649	98.00	99.00	1.00	.01	1.10	TRACE	1%			
		1650	99.00	100.00	1.00	.01	1.00	-	1-2%			
		1651	100.00	101.00	1.00	.02	1.30	TRACE	2-3%			
		1652	101.00	101.85	.85	.02	1.20	TRACE	2-3%			
		1653	101.85	103.00	1.15	.01	1.20	MINOR	2-3%			
		1654	103.00	104.00	1.00	.02	1.70	MINOR	2-4%			
		1655	104.00	104.90	.90	.02	2.20	TRACE	2-3%			
		1656	104.90	105.65	.75	.01	1.40	-	1-2%			
		1657	105.65	106.55	.90	.02	.90	MINOR	1-2%			
		1658	106.55	107.50	.95	.01	.90	MINOR	0.5-1%			
		1659	107.50	108.60	1.10	.05	.70	-	0.5-1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
		1660	108.60 109.50	.90	.01	1.40	MINOR	2-3%			
		1661	109.50 110.50	1.00	.04	1.40	-	1%			
		1662	110.50 111.50	1.00	.08	1.20	TRACE	1%			
		1663	111.50 112.00	.50	.04	2.50	TRACE	1-2%			
		1664	112.00 113.00	1.00	.28	2.10	0.25%	2-4%			
		1665	113.00 114.00	1.00	.12	2.10	-	1-2%			
		1666	114.00 115.00	1.00	.01	.80	-	1%			
		1667	115.00 116.00	1.00	.08	.60	TRACE	1%			
		1668	116.00 117.10	1.10	.01	.70	-	1%			
		1669	117.10 118.00	.90	.14	.80	-	2-3%			
		1670	118.00 118.70	.70	.01	.80	-	1-2%			
		1671	118.70 119.50	.80	.01	1.00	-	1-2%			
		1672	119.50 120.00	.50	.02	.70	-	3-4%			
		1673	120.00 120.90	.90	.01	1.00	-	2-3%			
		1674	120.90 122.00	1.10	.05	.90	-	1-2%			
		1675	122.00 123.00	1.00	.10	1.30	-	1-2%			
		1676	123.00 123.80	.80	.02	1.00	-	1-2%			
		1677	123.80 124.60	.80	.02	.90	-	0.5-1%			
124.60 179.00	MAFIC METAVOLCANIC FLOWS (PB THOLEIITE)										
	Generally relatively unaltered except above 131.00m, which is weakly epidote-carbonate altered and cut by several intrusive dykes.	MS	124.60 179.00	54.40	n/a	n/a	-	0.5-1%			
	Generally dark greenish black, very fine grained, massive, weakly to strongly magnetic, with minor to moderate, hairline, calcitic microfracturing, and a few weakly epidote-carbonate altered stringers and patches. Between 124.60 and 131.00m in the upper contact zone the epidote-carbonate alteration patches and anastomosing stringer bands are more numerous. These are often irregularly oriented, but concentrate in an orientation at 65 to 70 degrees to the core axis. This zone also exhibits a well developed calcitic microfracturing that locally gives the unit a pseudo-brecciated appearance.	1678	124.60 126.00	1.40	.01	1.20	-	1%			
		1679	132.05 133.25	1.20	.01	1.20	-	MINOR			
		1680	134.00 135.00	1.00	.01	.40	-	1-2%			
		8600	143.00 144.50	1.50	.01	1.00	-	1-2%			
		8601	144.50 146.00	1.50	.01	1.00	-	0.5%			
		1681	146.00 147.00	1.00	1.05	6.60	-	1%			
		8602	147.00 148.00	1.00	.01	.90	-	0.5%			
		8603	148.00 149.00	1.00	.01	1.40	-	0.5%			
		8604	149.00 150.50	1.50	.03	1.70	-	0.25%			
		8605	150.50 152.00	1.50	.01	1.00	-	0.25%			
	Dark green, massive unaltered zones contain several thin (1 to 5 cm), coarser grained, biotitic, more schistose bands that appear to be pillow selveges. These are definite pillow selveges between 132 and 134 metres. These bands are also often more pyritic, with the pyrite forming thin										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

bands/laminae. Unaltered massive zones also contain patches with small, ovoid, amygdules.
Weakly developed schistosity and foliation above 158m is oriented at 60 to 70 degrees to the core axis, but below 158m it is oriented at about 45 to 50 degrees to the core axis.
Minor, thin (2 to 10mm), quartz veining that is often irregular and discontinuous, as well as a few small (0.5 to 1cm), subplanar veins, locally containing minor pyrite, pyrrhotite and chalcopyrite.
Several diffuse or subdued, medium grey, fine grained porphyritic intrusive dykes with sharp contacts located between:
132.05 133.25 Dyke with chalcopyrite along fractures oriented at 40 degrees to the core axis, and with contacts oriented at 75 degrees to the core axis.
136.60 136.65 Dyke with irregular contacts.
136.95 137.20 Dyke with upper and lower contacts oriented at 50 and 65 degrees to the core axis.
Generally minor to 0.5% finely disseminated pyrite, locally as relatively coarse grains in irregular, coarser grained, often biotitic patches.
Lower part of unit contains some thicker, brownish, massive bands containing an increased biotite content, and also giving the unit a slightly coarser grain size, and better developed schistose foliation. These zones could be due to potassic alteration.
Competent core with 25 to 75 cm breakage.
Lower contact not encountered.
179.00 End of hole.

ESSO MINERALS CANADA

OM88-6-C-2360

SUMMARY DRILL LOG

Project Name: HN.

Hole Number: HN88-33.

Project Number: 1677.

Logged By: M.H. Lenters.

NTS: 42H/8.

Date: September 1988.

Location: 46+00W, 7+75S.

Claim Number: L-871912.

Azimuth: 180°. Dip: -43°.

Length (m): 141.1.

PURPOSE: Test mag. low, and anomalous IP chargeability response and IP resistivity high west of bottom of DDH HN88-26.

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.0	9.40	Overburden	
9.40	16.50	Mafic Metavolcanic Flow (Relatively Unaltered) Dark green-black, fine-grained, massive to weakly schistose and relatively unaltered. Includes a few, thin (5 to 10 cm), medium brownish red, moderately carbonate altered zones/patches, adjacent to a few, thin, weakly sheared zones below 14.00 m, particularly at the contact zone with the underlying quartz veined shear zones. Schistose foliation oriented at 60° to CA. Minor quartz veinlets. Minor to 1% disseminated pyrite.	0.01 - 0.02 (5)
16.50	20.55	Quartz Veined Shear/Fault Zone 16.50-17.40 70%, coarse-grained, quartz veining containing 30% medium green, moderately altered mafic metavolcanic wallrock inclusions and stylolitic laminae and parting surfaces. Foliation, shearing and veining oriented at 70° to 80° to CA. 2 to 5% finely disseminated pyrite and minor to 1% grey metallic minerals. 17.40-20.00 80 to 85%, medium grey-green, well foliated and moderately sheared/altered mafic metavolcanic containing 15 to 20% irregular to broken and boudinaged calcite ± quartz veining/patches. Shearing indicates N side up and S side down. 5 to 10% finely disseminated pyrite, and 0.5 to 1% grey metallic minerals including molybdenum. 20.00-20.55 Quartz viening with mafic metavolcanic wallrock inclusions, similar to 16.50 to 17.40, with lesser grey metallic minerals in quartz viening. 2 to 3% pyrite. Minor grey metallic minerals.	0.01 - 0.10 (6)
20.55	144.10	Mafic Metavolcanic Flows (Relatively Unaltered) Generally dark green, fine-grained, massive, unaltered, weak to moderately magnetic, with minor calcitic microfracturing and local zones/bands with brown colour, and weak schistosity due to minor biotite content (Potassic alteration?). Unit includes one thin, sheared felsic intrusive dyke or silicified band between 75.80 and 76.75. Minor quartz veining. Minor to 2% pyrrhotite and pyrite, often as thin fracture veinlets.	0.01 - 0.06 (25)
	144.10	END OF HOLE	

H-N PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HN88-33
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871912
Hole Size:	BQ	Dip:	-43	Grid:	West
Core Size:	BQ			Easting:	46+00W
Casing:	Casing Removed	Acid Tests:		Northing:	7+75S
				Elevation:	Level
Started:	Sept. 23, 1988	Depth Az. Dip			
Finished:	Sept. 24, 1988	10.00 -43.0		Purpose:	Test Mag Low & IP West of HN88-26
		110.00 -40.0			
Logged by:	M.H.Lenters			Length:	141.10Metres
Date logged:	September 1988			Vert. Proj:	93.0 Metres
Logging Method:	Log II			Hor. Proj:	106.0 Metres
Measurement System:	Metric			Ovb. Depth:	7.1 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 9.40	OVERBURDEN										
9.40 16.50	MAFIC METAVOLCANIC FLOWS (PB THOLEIITE) Generally dark green-black, fine grained, massive to weakly schistose, relatively unaltered mafic metavolcanic. Includes a few, thin (5 to 10cm), medium brownish red, moderately carbonate altered zones/patches surrounded by medium green, very weakly altered volcanic, adjacent to a few, thin, weakly sheared zones below 14.00m, particularly at the contact zone with the underlying quartz veined shear zone. Unit is very fine grained and massive above 12.00m, and medium grained, weak to modetately schistose between 12.50 and 13.50m, with the schistose foliation oriented at 60 degrees to the core axis. This zone contains minor, large (1mm), euhedral pyrite cubes. Below 14.00m the unit exhibits minor to moderate amounts of subhedral, small (less than 1mm), plagioclase phenocrysts, a weak to moderately developed foliation at 60 degrees to the core axis, and thin epidote-carbonate alteration bands that are also moderately pyritic (3 to 7% pyrite). Unit contains minor, thin (hairline to 2mm), planar, quartz veinlets and	NS	9.40	16.50	7.10	n/a	n/a	-	MNR-1%			
		1682	12.00	13.00	1.00	.01	1.20	-	1%		
		1683	13.00	14.00	1.00	.01	1.50	-	0.5-1%		
		1684	14.00	15.00	1.00	.01	1.20	-	MINOR		
		1685	15.00	16.00	1.00	.01	.90	-	0.5-1%		
		1686	16.00	16.50	.50	.02	.80	-	MNR-1%		

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	tension fracture fillings oriented at various angles to the core axis. Unit generally contains minor amounts of very finely disseminated pyrite, except for the coarser crystalline (cubic) concentrations in thin altered shear bands. Moderately competent core with 5 to 25 cm breakage, generally along fractures oriented at 50 to 60 degrees to the core axis. Lower contact is a sharp, planar quartz vein surface oriented at 50 degrees to the core axis.										
16.50 20.55	QUARTZ VEINED SHEAR/FAULT ZONE										
16.50 17.40	70%, coarse grained, cracked, ice-white quartz veining, containing 30% mafic volcanic wallrock inclusions, as both thin (1mm), vein parallel laminae that are occasionally weakly stylolitic, and as larger (0.5 to 10cm), well foliated bands. Locally the volcanic laminae and bands are irregular, but generally they are oriented at 60 to 80 degrees to the core axis. Quartz veining forms relatively clean bands containing minor, small, isolated volcanic wallrock pieces, and finely disseminated pyrite grains. Minor amounts of metallic grey minerals are often associated with the pyrite. Foliated mafic volcanic wallrock inclusions are medium green, and moderately altered containing 5 to 10%, fine, pyritic banding/laminae, often with thin purplish streaks of grey metallic (molybdenite) mineralization. Relatively competent core, but broken into 5 to 10 cm pieces along volcanic laminae in the quartz vein, and parallel to the foliation within volcanic inclusions. Upper contact is sharp and planar at 50 degrees to the core axis. Lower contact is undulating and sharp at 70 to 80 degrees to the core axis.	MS	16.50	20.55	4.05	n/a	n/a	MNR-1%	3-7%		
		1687	16.50	17.00	.50	.01	45.00	0.5%	5-6%		
		1688	17.00	17.40	.40	.02	51.00	0.5-1%	2%		
17.40 20.00	80 to 85%, medium grey-green to green-grey, well foliated, moderately sheared mafic metavolcanic containing 15 to 20%, thin (hairline to 3mm), lensoid, discontinuous, calcitic veining, and a few, thin (1 to 20cm), broken and boudinaged quartz veins. Foliation, banding, and veining generally	1689	17.40	18.00	.60	.10	5.80	0.5%	5-10%		
		1690	18.00	19.00	1.00	.05	10.00	MINOR	5-7%		
		1691	19.00	20.00	1.00	.01	21.80	0.5%	4-6%		
		1692	20.00	20.55	.55	.01	28.60	MINOR	2-3%		

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	oriented at 55 to 70 degrees to the core axis, with small scale structures indicating N side up and S side down if core oriented with foliation plane E-W and dipping steeply north. Unit locally well shear banded, and includes a thin (1 to 3cm), poorly recovered fault gauge clay zone at about 18.75 metres. Shear/slip surfaces, are often well lineated and coated with greenish sericite-calcite. Generally abundant (3 to 7%), finely disseminated pyrite generally concentrated in laminae. Locally, this section contains thin (0.5 to 1cm), purplish bands indicating significant amounts of very finely disseminated molybdenum. Section contains thin (0.5 to 2cm), bands of broken and boudinaged quartz veining, generally containing 0.5% relatively coarse, irregular explosion puffs of metallic grey mineral. One larger (10 cm) quartz vein zone between 19.65 and 19.75 metres. Vein contact is irregular with swirled foliation in the adjacent mafic volcanics, athough the shear zone is relatively planar (competent unit in shear). Lower contact with quartz vein zone is oriented at 55 degrees to the core axis. Relatively incompetent broken zone with 1 to 5 cm breakage, including several rubble zones.										
20.00 20.55	70 to 80%, coarse grained, cracked ice-white quartz vein with 30% irregular blebs and thin, discontinuous laminae of mafic volcanic wallrock material. Similar to 16.50 to 17.40, with lesser amounts of grey mineral in quartz veining. Lower contact is a 30 cm fault breccia/shear zone with latest movement along 1 cm wide calcite breccia vein. Shearing and veining are planar and oriented at 30 to 45 degrees to the core axis. Volcanic adjacent to contact has abundant, anastomosing epidote veinlet banding parallel to shearing/faulting. Relatively broken core, generally with 5 to 10 cm pieces. Lower contact is calcite vein containing abundant, small, wallrock fragments, which is oriented at 30 degrees to the core axis.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
20.55 144.10	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Generally dark green, fine grained, massive, unaltered, weak to moderately magnetic mafic metavolcanic.	MS	20.55	141.10 120.55	n/a	n/a	-	MNR-1%			
	20.55 23.00 Weak to moderately epidote veined, with irregular hairline tension fracturing. Moderate calcite, tension microfracturing throughout section, with slightly coarser grained biotitic bands adjacent to some zones of calcite fracturing (potassic altereation?). These zones also tend to contain more (1 to 2%), disseminated pyrite.	1693	20.55	21.25 .70	.01	2.10	-	MINOR			
		1694	21.25	22.00 .75	.01	1.90	-	1%			
		1695	22.00	23.00 1.00	.02	1.50	-	1%			
		1696	23.00	24.50 1.50	.06	1.40	-	MNR-0.5			
		1697	24.50	26.00 1.50	.01	1.20	-	MNR-0.5			
		1698	26.00	27.50 1.50	.01	1.40	-	MINOR			
		1699	27.50	29.00 1.50	.01	1.30	-	0.5-1%			
		1700	29.00	30.50 1.50	.01	1.40	-	0.5-1%			
	Other larger biotitic patches and zones occur as follows.	1701	30.50	32.00 1.50	.01	1.70	-	2-3%			
	30.50 32.00 Weakly schistose biotitic zone with minor silica patches/bands and increased (2 to 3%) pyrite content.	1702	32.00	33.50 1.50	.02	1.70	-	MINOR			
		1703	38.00	39.00 1.00	.01	1.00	-	MNR-0.5			
	38.40 38.45 5cm, light grey, calcitic/silicified band adjacent to fracture (calcitic) oriented at 40 degrees to the core axis, and containing 5 to 10% finely disseminated pyrite.	1704	48.50	50.00 1.50	.03	1.00	-	1-2%/PO			
		1705	53.00	54.00 1.00	.02	1.60	-	1-2%/PO			
		1706	54.00	55.00 1.00	.03	1.00	-	1-2%/PO			
	55.00 56.00 Dark to medium grey to brownish grey, silicified and biotitic mafic metavolcanic.	1707	55.00	56.00 1.00	.01	1.30	-	2-4%/PO			
		1708	56.00	57.00 1.00	.04	1.40	-	2-4%/PO			
	73.00 75.80 Mafic volcanic containing minor amphibole porphyroblasts in biotitic bands.	1709	73.00	74.00 1.00	.01	1.40	-	0.5%/PO			
		1710	74.00	75.00 1.00	.01	1.40	-	1%/PO			
	75.80 76.75 Medium grey, well fractured and sheared, vuggy intrusive dyke or possibly an intensely silicified mafic volcanic band. Contacts and shear/slip surfaces oriented at 40 to 50 degrees to the core axis, parallel to the foliation in adjacent volcanics. Dyke contains vugs exhibiting finely crystalline epidote. Vugs probably due to the removal of calcite. Dyke contains 4 to 6% fine to coarse pyrite often in laminae parallel to shearing. Upper and lower contacts at 50 and 40 degrees to the core axis. No significant quartz veining. Relatively broken section of core, generally consisting of small rubble to 10cm pieces.	1711	75.00	75.80 .80	.04	1.20	-	0.5/PO			
		1712	75.80	76.75 .95	.01	1.30	-	4-6%			
		1713	76.75	78.00 1.25	.01	1.00	-	MNR-0.5			
		1714	99.00	100.00 1.00	.01	1.30	-	0.5%			
		1715	100.00	101.00 1.00	.02	1.10	-	0.5%/PO			
		1716	109.00	110.00 1.00	.01	1.60	-	2-3%/PO			
		1717	120.70	122.00 1.30	.01	2.50	-	1-2%/PO			
	100.30 100.35 5cm quartz vein oriented at 70 degrees to the core axis.										
	104.00 113.00 Several, thin (10 to 50cm), biotitic bands containing minor epidote carbonate altered patches with a few percent large garnets, as well as minor, geenish grey, weak silica flood bands.										
	113.95 114.00 5cm quartz vein oriented at 60 degrees to the core axis.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

120.60 130.80 Large zone of relatively coarser grained, schistose, brownish with a fine white speckled appearance, biotite altered mafic metavolcanic. Relatively homogeneous zone with minor calcite fracturing. Includes a 5 cm quartz vein between 120.80 and 120.85 oriented at 60 degrees to the core axis. Biotitic foliation produces a weak to moderate schistosity oriented at 50 to 60 degrees to the core axis.

139.55 139.65 10cm, white quartz vein oriented at 45 degrees to the core axis.

Small patches (1 to 5cm) of biotitic alteration occur throughout the unit above 120.60m.

Locally, small (10 to 100cm) bands contain minor to moderate (15%) amounts of fine (0.5 to 1mm) slightly pinkish, garnet porphyroblasts above 120.60 metres.

Below 130.80 the unit is very fine grained, massive dark green and relatively unaltered with very little calcitic microfracturing. Unaltered mafic volcanic locally exhibits small (1mm), subrounded amygdules.

Minor to 2% pyrite and pyrrhotite, often as thin fracture veinlets.

Foliation and alteration banding well developed between 72.00 to 77.00 metres, and generally oriented at 50 to 60 degrees to the core axis.

Unit is competent, generally with 50 to 100 cm breakage at 45 to 70 degrees to the core axis parallel to foliation and main fracture orientation.

Lower contact not encountered.

141.10 End of hole.

ON88-6-C-236

ESSO MINERALS CANADA

SUMMARY DRILL LOG

Project Name: HN

Hole Number: HN88-37

Project Number: 1677

Logged By: M.H. Lenters

NTS: 42H/8

Date: October 1988

Location: L48+00W, 16+25S

Claim Number: L-871915

Azimuth: 180° Dip: -45°

Length (m): 149

PURPOSE: Test anomalous IP chargeability response along edge of mag high, up-ice from bedrock chip gold value at RC-109.

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.0	25.00	Overburden	
25.00	40.10	Felsic to Intermediate Metavolcanic Flow Medium green, fine-grained, non-magnetic, weak to moderately phyllitic/schistose, with chloritic carbonate-plagioclase-silica composition, and local biotitic zones. Foliation oriented at 70° to 80° to CA. 3 to 5%, thin, irregular calcite patches/lenses, as well as calcite tension fracture veining. Minor to 1% finely disseminated pyrite.	0.01 - 0.02 (7)
40.10	135.00	Felsic Volcanic Crystal/Lapilli Tuff Medium grey, fine-grained, massive to weakly foliated, weak to moderately magnetic, weakly calcareous crystal, and fine lapilli tuff. Possibly somewhat reworked as a volcaniclastic. Local, coarser (0.5 to 2 cm), flattened lapilli tuff horizons. Foliation/schistosity oriented at 65° to 85° to CA. 3% calcite blebs and irregular patches, locally weathered out producing coarse vugs. Minor quartz veining. Minor to 0.5% disseminated pyrite.	0.01 - 0.21 (29)
135.00	143.00	Carbonate Facies Exhalite Horizon, or Carbonate Altered Ash Tuff Light yellowish-brown to creamy tan, massive to wispy laminated, fine-grained, non-magnetic, calcareous, with foliation oriented at 70° to CA. Local irregular silica flood zones/crackling. Minor to 1% disseminated pyrite.	0.08 - 0.90 (8)
143.00	149.00	Pebbly Arenite Medium grey, fine-grained arenite with pebbly sections containing 1 to 15%, small (1 to 20 mm), well flattened, polymictic pebbles. Weak to moderately magnetic. Minor irregular calcite patches/lenses. Foliation oriented at 50° to 70° to CA. Minor pyrite.	0.01 - 0.03 (4)
	149.00	END OF HOLE	

H-N PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HN88-37
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871915
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	L48+00W
Casing:	Casing Removed	Acid Tests:		Northing:	16+25S
				Elevation:	Level
Started:	Oct. 1, 1988	Depth Az. Dip			
Finished:	Oct. 2, 1988	25.00 -45.0		Purpose:	Test IP & Mag up-ice from RC-109
Logged by:	M.H.Lenters	125.00 -39.0		Length:	149.00Metres
Date logged:	October 1988			Vert. Proj:	100.0 Metres
Logging Method:	Log II			Hor. Proj:	111.0 Metres
Measurement System:	Metric			Ovb. Depth:	17.8 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 25.00	OVERBURDEN										
25.00 40.10	FINE-GRAINED FELSIC VOLCANIC FLOW (EXTRUSIVE) Generally medium green, fine grained, weakly foliated, with dull carbonate appearance. Unit is moderately phyllitic/finely schistose, with chloritic, carbonate-plagioclase-silica composition, and local biotitic zones. Foliation generally oriented at 70 to 80 degrees to the core axis. Locally reactive to HCl. Generally non-magnetic. 26.00 27.00 Medium brown, biotitic band that is strongly reactive to HCl. 27.00 32.00 Weakly silicified zone, with local pseudobrecciation, and 1 to 3% finely disseminated pyrite. Complete unit contains 3 to 5%, thin, irregular, white calcite patches/lenses that are oriented subparallel to foliation, and/or more irregularly crosscutting calcite tension filling veins/veinlets. No significant quartz veining. Relatively competent unit, generally with 25 to 50cm breakage.	NS	25.00	40.10 15.10	n/a	n/a	-	0.5%	WK	WK	
		8498	26.00	27.00 1.00	.01	1.50	-	0.5%			
		8499	27.00	28.00 1.00	.01	1.10	-	0.5-1%			
		8500	28.00	29.00 1.00	.01	.70	-	2-3%			
		8501	29.00	30.50 1.50	.02	1.00	-	1-2%			
		8502	30.50	32.00 1.50	.01	.60	-	1%			
		8503	38.00	39.00 1.00	.01	.60	-	MINOR			
		8504	39.00	40.10 1.10	.02	1.40	-	MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Lower contact relatively sharp, and oriented at 70 degrees to the core axis.										
40.10 135.00	FELDSPAR CRYSTAL/LAPILLI TUFF										
	Generally a medium grey, fine sandy texture. Weakly foliated to massive, weakly to moderately magnetic, and weakly calcareous crystal/lapilli tuff (possibly somewhat reworked in a shallow submarine environment).	NS	40.10	135.00 94.90	n/a	n/a	-	MNR-0.5	V.WK	WK	WK
		8505	40.10	41.00 .90	.03	1.30	-	1%			
		8506	41.00	42.50 1.50	.01	14.10	-	1%			
	Unit locally contains minor, coarser (0.5 to 2cm), well flattened, and metamorphic foliated/flattened, coarser lapilli tuff horizons, as well as minor, finely laminated tuff horizons, generally with gradational contacts.	8507	42.50	44.00 1.50	.02	7.60	-	1%			
		8508	44.00	45.50 1.50	.02	2.50	-	0.5%/PO			
		8509	45.50	47.00 1.50	.01	1.70	-	MINOR			
		8510	47.00	48.50 1.50	.01	1.30	-	MINOR			
	Foliation/schistosity generally oriented at 65 to 85 degrees to the core axis.	8511	48.50	50.00 1.50	.01	1.10	-	MINOR			
		8512	71.00	72.50 1.50	.01	1.00	-	MINOR			
	Unit generally contains 3%, small, elongate, calcite blebs/patches, but in the upper few metres these have been weathered out producing a relatively coarse vuggy appearance.	8513	72.50	74.00 1.50	.01	1.30	-	MINOR			
		8514	86.00	87.50 1.50	.02	.90	-	MINOR			
		8515	87.50	89.00 1.50	.01	.90	-	MINOR			
	Minor, small quartz veins, including a 10cm vein between 46.45 to 46.55m oriented at 35 degrees to the core axis.	8516	89.00	90.50 1.50	.01	.90	-	MINOR			
		8517	90.50	92.00 1.50	.02	1.00	-	MINOR			
	Most of unit has a fine (1 to 2mm), plagioclase arenitic appearance, although the composition and texture suggest it is a fine crystal/lapilli tuff. Unit also contains minor, small (1 to 3mm), subrounded, blue quartz eyes that are locally common (5%) across thin (cm) widths.	8518	92.00	93.50 1.50	.01	.80	-	MINOR			
		8519	107.00	108.50 1.50	.02	.70	-	0.5%			
		8520	108.50	110.00 1.50	.01	.90	-	0.5%			
		8521	110.00	111.50 1.50	.01	.90	-	0.5-1%			
		8522	111.50	113.00 1.50	.02	.80	-	0.5-1%			
	Generally massive, relatively hard and competent unit, with 5 to 100cm breakage along foliation planes oriented at 65 to 85 degrees to the core axis. Upper several metres is vuggy and more broken. Rest of unit contains some thin (1cm), incompetant zones adjacent to fractures, and a few weahthered/clay (sericite) altered incompetent zones, including a 40cm band between 92.00 and 92.40 metres.	8523	113.00	114.50 1.50	.01	.80	-	0.5%			
		8524	114.50	116.00 1.50	.01	.70	-	0.5%			
		8525	116.00	117.50 1.50	.02	.70	-	0.5%			
		8526	117.50	119.00 1.50	.01	.60	-	0.5%			
		8527	119.00	120.50 1.50	.01	.90	-	0.5%			
		8528	120.50	122.00 1.50	.01	1.60	-	MINOR			
	40.10 100.00 Mostly fine (1 to 2mm), sand-sized crystal/lapilli tuff, with minor ash tuff interbands.	8529	122.00	123.50 1.50	.02	.70	-	MINOR			
		8530	126.50	128.00 1.50	.16	1.00	-	0.5%			
	100.00 111.00 Generally coarse lapilli tuff, although metamorphism and compressional deformation have made separation/identification of lapilli and matrix locally difficult.	8531	131.00	132.50 1.50	.01	.80	-	MINOR			
		8532	132.50	134.00 1.50	.02	.70	-	MINOR			
		8533	134.00	135.00 1.00	.21	.70	-	MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	ALTERATION CARB	ALTERATION SER
111.00 120.50	Mostly fine (1 to 2mm), sand-sized crystal/lapilli tuff, with minor ash horizons.										
120.50 135.00	Medium grey to medium green, very fine grained, moderately phyllitic to moderately laminated ash tuffs. Green sections are generally phyllitic, while grey to creamy zones are non-magnetic and laminated. Lower contact is gradational into more carbonate rich zone.										
135.00 143.00	CARBONATE FACIES EXHALITE HORIZON										
	Carbonate facies exhalite horizon, or carbonate altered ash tuff horizon.	NS	135.00 143.00	8.00	n/a	n/a	-	1%	WK MOD-INT		WK
	Light yellowish brown to creamy tan, fairly homogeneous coloured, mostly massive, but weakly phyllitic and wispy laminated.	8534	135.00 136.00	1.00	.23	2.10	-	1%			
	Unit is non-magnetic with moderate pervasive reaction to HCl.	8535	136.00 137.00	1.00	.33	2.30	-	1%			
	1%, Very finely disseminated pyrite concentrated in wispy laminations.	8536	137.00 138.00	1.00	.59	2.20	-	1%			
	Unit locally exhibits fine (hairline to a few mm), irregular branching, reddish, silica flood zones/crackling.	8537	138.00 139.00	1.00	.39	1.90	-	1%			
	Foliation is oriented at 70 degrees to the core axis.	8538	139.00 140.00	1.00	.37	1.90	-	1%			
	Locally foliation exhibits a tight swirling, and locally the unit exhibits minor pseudobrecciation.	8539	140.00 141.00	1.00	.40	1.30	-	1%			
	Unit locally exhibits fine yellowish colouration, which may indicate minor sphalerite content.	8540	141.00 142.00	1.00	.90	.80	-	MINOR			
	Competent unit, but relatively well broken into 5 to 10cm pieces, generally at 70 degrees to the core axis.	8541	142.00 143.00	1.00	.08	.05	-	MINOR			
	Lower contact is particularly well broken into a few rubble sections due to a few, late, calcite-lined fractures oriented at a shallow (10 to 25) angles to the core axis, and intersecting the foliation at right angles.										
	Lower contact zone exhibits a few, short intervals with foliation oriented at 0 degrees to the core axis, possibly indicating a small fault zone.										
143.00 149.00	PSAMMITIC ARENITE WITH PEBBLY INTERBEDS										
	Mottled, medium grey, fine grained arenite, with pebbly sections containing 1 to 15%, well flattened and metamorphically assimilated, small (1mm to 2cm), polymitic pebbles. Most are elongated beyond	NS	143.00 149.00	6.00	n/a	n/a	-	MINOR			
		8542	143.00 144.50	1.50	.01	.90	-	MINOR			
		8543	144.50 146.00	1.50	.03	.90	-	MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	ALTERATION CARB	ALTERATION SER
	recognition but were probably originally subrounded.	8544	146.00 147.50	1.50	.02	1.00	-	MINOR			
	Unit is weak to moderately magnetic, and moderately reactive to HCl, particularly in the matrix material.	8545	147.50 149.00	1.50	.01	1.10	-	MINOR			
	Minor irregular calcite patches/lenses.										
	Foliation/bedding oriented at 50 to 70 degrees to the core axis.										
	Competent unit, with 20 to 100cm breakage.										
	Lower contact not encountered.										
	149.00 End of Hole.										

ESSO MINERALS CANADA OM88-6-C-236

SUMMARY DRILL LOG

Project Name: HN.

Hole Number: HN88-38.

Project Number: 1677.

Logged By: M.H. Lenters.

NTS: 42H/8.

Date: October 1988.

Location: L48+00W, 13+75S.

Claim Number: L-871916.

Azimuth: 180°. Dip: -45°.

Length (m): 191.

PURPOSE: Test Mag. low and anomalous IP chargeability response up-ice from RC-109 (anomalous bedrock gold value).

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.0	26.00	Overburden	
26.00	191.00	Mafic Metavolcanic Pillowed Flows (Relatively Unaltered) Generally dark green to green-grey, very fine-grained, massive, unfoliated, chloritic, non-magnetic and non-calcareous, but including several biotitic (potassic altered?) bands and patches. These zones are brownish coloured, coarser-grained, weakly foliated/schistose at 60° to 75° to CA, often calcitic, and locally magnetic. Locally these zones also contain minor amphibole and garnet porphyroblasts. The unit appears to be a pillowed flow sequence locally exhibiting pillow selvages and amygdules. Unit is moderately fractured by thin (hairline to 1 mm) calcite veinlets and some thicker, irregular calcite patches/veining. Minor quartz veining. Trace to minor disseminated pyrite, but locally 1 to 5% pyrrhotite in thin bands or laminae.	0.01 - 2.60 (39)
	191.00	END OF HOLE	

H-N PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HN88-38
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871916
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	48+00W
Casing:	Casing Removed			Northing:	13+75S
		Acid Tests:		Elevation:	Level
Started:	Oct. 2, 1988				
Finished:	Oct. 4, 1988	Depth Az. Dip		Purpose:	Test Mag Low & IP Up-ice from RC-109
		26.00 -45.0			
Logged by:	M.H.Lenters	126.00 -42.0		Length:	191.00Metres
Date logged:	October 1988	191.00 -38.0		Vert. Proj:	129.0 Metres
Logging Method:	Log II			Hor. Proj:	141.0 Metres
Measurement System:	Metric			Ovb. Depth:	18.5 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SBR
.00 26.00	OVERBURDEN										
26.00 191.00	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Generally dark green to green-grey, very fine grained, massive, unfoliated, chloritic, non-magnetic and non-calcareous mafic volcanic flow cut by a few porphyry dykes. Generally unaltered, but includes a few biotitic (weakly potassic altered?) zones.	NS	26.00	191.00165.00	n/a	n/a	-	M-2%/PO			
		1864	35.00	36.50 1.50	.01	1.30	-	MINOR			
		1865	36.50	38.00 1.50	.01	1.50	-	MINOR			
		1866	64.00	65.00 1.00	.02	.50	-	MINOR			
	Above 48.50 metres the unit contains 10 to 25%, very weak to weak, brownish-grey, biotitic bands/zones, ranging from thin fracture bands to larger swirled irregular zones that are several 10's of cm wide. These zones contain fine biotite, as well as up to 10% coarse (1 mm) biotite books, and rarely, 1 mm, pinkish garnet porphyroblasts, or small (0.5mm), black magnetite grains. Biotitic zones are also generally calcitic. Locally, the brown biotitic bands and patches appear like pillow selvages, and/or irregular flow top zones.	1867	68.00	69.00 1.00	.01	1.00	-	MINOR			
		1868	69.00	69.65 .65	.03	1.00	-	0.5%/PO			
		1869	69.65	70.40 .75	.01	.70	-	1%PO			
		1870	70.40	71.00 .60	.01	.70	-	1%PO			
		1871	74.00	75.00 1.00	.02	.80	-	MINOR			
		1872	75.00	75.50 .50	.03	1.00	-	0.5%			
		1873	75.50	76.40 .90	.01	1.30	-	0.5%			
		1874	76.40	77.00 .60	.01	1.30	-	MINOR			
	Between 48.50 to 74.00 metres the unit contains fewer (5 to 10%) biotitic-calcitic bands, but these often have a moderately developed schistosity oriented at 60 to 70 degrees to the core axis. Locally,	1875	77.00	77.50 .50	.07	1.30	-	0.5%PO			
		1876	77.50	79.00 1.50	.02	1.20	-	MINOR			
		1877	79.00	80.00 1.00	.02	1.00	-	MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	small garnets and amphibole crystals (blades) occur within these recrystallized zones. These zones are generally irregularly swirled and patchy. Biotitic zones often have a somewhat variable and swirled foliation, but are generally oriented at 60 to 75 degrees to the core axis Trace to minor disseminated pyrite, locally concentrated along fractures. Pyrrhotite is common between 64.00 and 90.00m especially between 69.00 to 71.00 and 82.00 to 84.00m, as thin bands, wavy stringers/laminae, and blebs in slightly siliceous bands 1 to 5 cm wide containing 1 to 5% pyrrhotite. Bands are spaced 0.5 to 2 metres apart and may be altered flow edges?. A few of the bands contain fine grained semi-massive pyrrhotite.	1878	80.00	81.00	1.00	.01	1.30	-	MINOR			
		1879	81.00	82.00	1.00	.01	1.30	-	MINOR			
		1880	82.00	83.00	1.00	.02	1.20	-	3-4%PO			
		1881	83.00	84.00	1.00	.01	.60	-	5-10%PO			
		1882	84.00	85.00	1.00	.01	.90	-	1%PO			
		1883	85.00	86.00	1.00	.02	1.00	-	MINOR			
		1884	86.00	87.50	1.50	2.60	1.70	-	0.5%PO			
		1885	87.50	89.00	1.50	.02	.80	-	0.5%PO			
		1886	89.00	90.00	1.00	.03	.90	-	1%PO			
		1887	100.00	101.00	1.00	.02	1.50	-	1-2%PO			
		1888	104.30	105.10	.80	.01	.80	-	2-3%PO			
74.00 129.50	The unit is brownish grey to greenish grey with large zones of weak to moderately pervasively biotitic (potassic) altered mafic metavolcanic containing a minor to moderate amount of fine, calcite tension fracturing. Section is massive, fine grained and non-magnetic.	1889	105.10	107.00	1.90	.03	1.00	-	0.5%PO			
		1890	128.00	129.00	1.00	.01	1.80	-	MINOR			
		1891	129.00	129.50	.50	.02	1.60	-	1%			
		1892	129.50	130.00	.50	.01	1.50	-	MINOR			
		1893	140.00	141.50	1.50	.01	1.20	-	0.5%PO			
		1894	141.50	142.50	1.00	.01	.50	-	MINOR			
		1895	142.50	143.30	.80	.02	1.00	-	2%			
		1896	143.30	144.30	1.00	.02	1.20	-	2%			
		1897	144.30	145.30	1.00	.01	.50	-	MINOR			
		1898	145.30	146.00	.70	.01	1.00	-	MINOR			
		1899	146.00	146.90	.90	.03	.30	-	1%PO			
		1900	160.00	161.00	1.00	.01	.50	-	MINOR			
		1901	161.00	162.00	1.00	.01	1.40	-	5-6%PO			
		1902	162.00	163.00	1.00	.02	.40	-	MINOR			
129.50 139.50	Dark green, fine grained, massive, relatively unaltered with a minor to moderate amount of calcitic fracturing that is locally intense, forming a 10 to 20cm wide pseudobreccia zone.											
139.50 151.00	Mottled medium green, calcitic mafic volcanic with abundant small (3mm long), amphibole porphyroblasts and weak biotitic alteration with a foliation orientation at 50 to 60 degrees to the core axis.											
151.00 164.50	Dark green, fine grained, massive, relatively unaltered mafic metavolcanic.											
164.50 191.00	Minor dark green, massive, fine grained, relatively unaltered zones with large patches of dark brownish grey, weakly schistose biotitic (potassic) altered mafic metavolcanic. Biotitic altered zones are weakly schistose and often have abundant needle-like, dark green amphibole porphyroblasts, although the latter also occur in some fine grained, massive, chloritic mafic volcanic sections.											
Intrusive dykes occur between:												
53.30 53.55	Sharp contacts oriented at 70 degrees to the core axis.											
75.00 76.40	Sharp contacts oriented at 80 degrees to the core axis, and											

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

25cm wide foliated biotite altered schist contact zones.

142.50 144.30 Sharp contacts oriented at 80 degrees to the core axis, and containing 1 to 2% finely disseminated pyrite.

The above dykes are very hard and massive, consisting of 20 to 30%, 1 to 3mm, subhedral to euhedral, white, plagioclase in medium to dark brownish-grey, very fine grained to aphanitic groundmass. Larger dykes also exhibit 5%, 1 to 2mm wide biotite books, and contain somewhat coarser, and lighter coloured, plagioclase in the groundmass.

Unit is moderately (5 to 10%) fractured by thin (hairline to 1mm), subplanar, calcitic veinlets, and thicker calcitic patches and anastomosing veining/alteration. Most are tension fractures forming herring bone and en echelon fracture patterns at various orientations to the core axis. Occasionally the fractures centre, thin (1cm) biotite altered bands. Locally calcitic fracturing is intense forming pseudobreccia zones.

No significant veining, but a few veins with widths greater than 0.5 cm occur between:

62.80 62.90 Quartz vein with irregular contacts.

134.75 134.90 Irregular coarse grained quartz vein with contacts oriented at 75 degrees to the core axis.

175.40 175.45 Irregular quartz vein with contacts oriented at 45 degrees to the core axis.

177.90 177.95 Coarse grained quartz vein with contacts oriented at 45 degrees to the core axis.

Between 85 and 110m the unit is very massive and fine grained, locally exhibiting small zones with amygdules and minor, small (1mm), subhedral, white plagioclase phenocrysts.

129.50 130.00 Section containing several large (1 to 5mm), calcite amygdules.

Competent core, generally with 25 to 100 cm breakage along fractures oriented at 45 to 80 degrees to the core axis.

Lower contact not encountered.

191.00 End of hole.

ESSO MINERALS CANADA OM88-6-C-236

SUMMARY DRILL LOG

Project Name: HN. Hole Number: HN88-39.

Project Number: 1677. Logged By: M. H. Lenters.

NTS: 42H/8. Date: October 1988.

Location: L40+00W, 12+50S. Claim Number: L-871908.

Azimuth: 180°. Dip: -44°. Length (m): 194.

PURPOSE: Extend N-S drill fence along L40W south of DDH HN88-24.

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.0	7.00	Overburden	
7.00	11.25	Mafic Metavolcanic with biotitic, schistose bands Very fine-grained, wavy banded and laminated, weakly phyllitic, hard, dense, and non-calcareous. Composed of 50%, massive, dark green, mafic metavolcanic bands, and 50%, dark grey to sandy brown, cherty/siliceous interflow(?) metasediment, or schistose metavolcanic bands. Banding and foliation generally oriented at 70° to 80° to CA. 5% calcite, tension and crackle microfracturing. Several, 1 to 5 cm wide bands with 1 to 30%, finely laminated to fracture filling pyrrhotite, as well as minor pyrite and chalcopyrite.	0.01 - 0.02 (6)
11.25	22.25	Plagioclase-Chlorite-Amphibole Schist Fine-grained, weakly schistose, plagioclase-silica-chlorite (amphibole) unit, intermottled with medium-grained, weak to moderately schistose plagioclase-silica-biotite sections, producing irregularly alternating bands/patches 1 to 50 cm wide, with a fairly homogeneous, dark green-brown to grey-brown colour. Weak to moderately foliated at 60° to 80° to CA. No significant veining. Generally minor pyrite, but with thin zones containing 1 to 3%.	0.01 - 0.02 (2)
22.25	33.50	Mafic Metavolcanic with biotitic, schistose bands 22.25-30.80 Similar to unit between 7.00 and 11.25 metres. 5% calcite microfracturing. Minor pyrite. 30.80-33.50 Same as upper section, but pyritic (2 to 3%), locally magnetic, and weakly carbonate (calcite) and sericite? altered.	0.01 - 0.03 (3)
33.50	36.50	Carbonate-and/or Silica-Sulphide Facies Iron Formation 33.50-35.00 Medium brown-green to creamy brown, well laminated/banded, carbonate-rich section, containing 5 to 10%, finely disseminated and wispy laminated pyrite. Foliation/laminations oriented at 70° to CA. 35.00-36.50 Dark grey to black, hard, cherty, moderately to strongly schistose/sheared? section, containing 1 to 3% finely disseminated pyrite. Foliation/banding at 60° to 70° to CA.	0.01 - 0.03 (4)
36.50	59.30	Schistose, Biotitic Mafic Metavolcanic Intermottled, very fine-grained, medium to dark green, massive, moderately magnetic, chloritic mafic metavolcanic, with abundant, brown, fine-grained, calcareous, biotitic zones/patches. 3 to 5% fine calcite fracturing. Minor pyrite. 44.00-46.00 Fault Breccia. Abundant, subangular, cherty and intrusive fragments in dark, fine-grained well foliated/sheared matrix.	0.01 - 0.03 (9)

From (m)	To (m)	Description HN88-39	Gold Assays (g/tonne)
		52.60-57.20 Interflow Metasediment Medium to dark brown, fine-grained, non-magnetic, non-calcareous, well laminated siltstone and fine-grained sandstone with minor grey, chert horizons. No veining. 0.5% pyrite	
59.30	104.00	Schistose Mafic Metavolcanic with Minor Epidote-Carbonate Alteration Bands Generally dark greenish-black to brownish-black, fine-grained, non-magnetic to magnetic, non-calcareous and variably silicified. Weakly foliated and epidote-carbonate altered/banded at 40° to 60° to CA. One 2 metre intrusive dyke. No significant veining although there is abundant silica-calcite tension fracturing. Minor to 3% disseminated pyrite.	0.01 - 0.14 (27)
104.00	185.30	Weak to locally Moderately Altered Quartz Diorite Intrusive Biotite, plagioclase porphyritic quartz diorite. Variably altered, ranging from relatively unaltered, to weakly silicified with minor quartz veining, and locally moderately to intensely silicified +/- sericitized with 5 to 15% quartz veining. Generally coarse-grained, vuggy, well broken unit with transitional contacts between variations in alteration intensity. Minor to abundant (10-20%), irregular to subplanar quartz veining. Minor to 4% disseminated pyrite, and locally minor to 0.5% grey metallic minerals, generally associated with quartz veining in white, silicified sections of the intrusive 176.00-185.30 Shear foliated intrusive with Quartz Vein Breccia/Fault Zone between 180.20 to 183.05	0.01 - 1.40 (80)
185.30	194.00	Sheared/Schistose Mafic Metavolcanic Dark greenish black, fine-grained, weakly magnetic, weak to moderately shear foliated at 55° to 70° to CA. Locally weakly carbonate-epidote altered. Minor quartz-calcite veining. Minor pyrite.	0.01 - 0.10 (7)
	194.00	END OF HOLE	

H-N PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HN88-39
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871908
Hole Size:	BQ	Dip:	-44	Grid:	West
Core Size:	BQ			Easting:	40+00W
Casing:	Casing Removed			Northing:	12+50S
		Acid Tests:		Elevation:	Level
Started:	Oct. 13, 1988				
Finished:	Oct. 15, 1988	Depth Az. Dip		Purpose:	Extend L40W Drill Fence
		23.00 -44.0			
Logged by:	M.H.Lenters	107.00 -40.0		Length:	194.00Metres
Date logged:	October 1988	194.00 -39.0		Vert. Proj:	127.0 Metres
Logging Method:	Log II			Hor. Proj:	146.00 Metres
Measurement System:	Metric			Ovb. Depth:	5.0 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 7.00	OVERBURDEN										
7.00 11.25	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE) Very fine grained, wavy banded and laminated, weakly phyllitic, hard, dense and non-calcareous. Minor to moderate development of thin (hairline), tension microfracturing containing white calcite. Composed of 50%, massive, dark green, very fine grained, mafic metavolcanic bands, and includes 50%, dark grey to sandy brown, cherty, interflow? metasediment horizons. The metasediments range from thin laminae to bands a few cm thick, but are wavy to irregular, and locally patchy and/or anastomosing. Where the laminated brown-grey siliceous bands are well developed, the unit appears sedimentary, but where it is patchy, it appears that it could also be altered metavolcanic bands. The grey-brown metasediment bands are slightly siliceous, and exhibit a weak phyllitic appearance due to biotite content. Banding and foliation within the unit are generally oriented at 70 to 80 degrees to the core axis, but the irregular wavy character has a range between 50 to 90 degrees to the core axis.	NS	7.00	11.25	4.25	n/a	n/a	- 1-5%PO			
		1903	7.00	7.60	.60	.02	.90	- 5-12%PO			
		1904	7.60	8.00	.40	.02	1.50	- 2%/PO			
		1905	8.00	9.00	1.00	.02	1.40	- 2-4%/PO			
		1906	9.00	9.40	.40	.01	.50	- 8-12%PO			
		1907	9.40	10.00	.60	.02	1.20	- 0.5%/PO			
		1908	10.00	11.25	1.25	.02	1.10	- 0.5%/PO			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Unit contains 5%, tension and crackle microfracturing, in irregular ladder and en echelon patterns. Unit contains several, 1 to 5 cm wide zones/bands containing abundant (1 to 30%), finely wispy laminated/disseminated, to discontinuous fracture filling pyrrhotite, as well as minor pyrite, and trace chalcopyrite. Where best developed the sulphides occur as swirled, wispy laminations. These zones are moderately to strongly magnetic, within a generally non-magnetic unit. No significant veining. Hard, competent unit, generally with 10 to 50 cm breakage along fractures oriented at 30 to 90 degrees to the core axis. Lower contact is transitional.										
11.25 22.25	PLAIGIOCLASE-CHLORITE-AMPHIBOLE SCHIST Fine grained (up to 1mm), generally weakly schistose, plagioclase-silica-chlorite (amphibole) unit, intermottled with medium grained, weak to moderately schistose plagioclase-silica-biotite sections, producing irregularly alternating bands/patches 1 to 50 cm wide, with a fairly homogeneous, dark green-brown to grey-brown colour. The unit also contains a few, thin (1 to 10cm), dark grey, aphanitic, siliceous, massive bands/patches similar to those in the overlying unit. The various rock compositions form irregular bands and patches that grade both quickly and/or slowly, and often irregularly into one another. Weak to moderately well developed compositional banding and foliation oriented at 60 to 80 degrees to the core axis. Unit contains minor, thin (1 to 5mm), light green, pinch and swell, epidote-carbonate-garnet alteration bands that parallel foliation. Wavy patchy compositional banding gives the unit a layered appearance that is mostly metamorphic in origin, but could parallel original metasediment/tuff compositional banding. Dark green, very fine grained, massive sections exhibit a well developed, calcite microfracturing, while the coarser, more schistose sections contain 2 to 5%, more irregular, diffuse and patchy, thin (hairline to 2 mm), calcite veining. Unit is non-magnetic.	MS 1909 1910	11.25 14.00 21.50	22.25 11.00 15.00 1.00 22.50 1.00	n/a .01 .02	n/a .90 1.30		- 0.5%/PO - 0.5%/PO - MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	No significant veining. Generally trace to minor pyrite, although a few, dark green, fine grained, massive zones similar to those in the overlying unit contain 1 to 3%, wispy disseminated pyrrhotite and pyrite. Relatively competent unit, generally with 10 to 100 cm breakage along foliation or fractures oriented at 40 to 70 degrees to the core axis. Lower contact is transitional.										
22.25 30.80	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE) Similar to unit between 7.00 and 11.25 metres. Dark green, very fine grained, massive, homogeneous, chloritic, mafic metavolcanic with dark grey, aphanitic, weakly biotitic and phyllitic, siliceous/cherty interbands. The latter constitute about 75% of the unit above 25.50m, and about 25% of the unit below 25.50 metres. The grey, cherty interbands/patches are less planar and less distinct than in the upper unit, and are often irregularly anastomosing, locally appearing to pervasively alter the massive, fine grained, green sections. Unit has a weak to moderately swirled and mottled appearance, but banding and foliation are generally oriented at 65 to 80 degrees to the core axis Unit also includes a few bands/patches of coarser grained, schistose silica-plagioclase-biotite altered rock that is more common in the overlying unit. Unit is generally non-magnetic, but includes a few, thin (1cm), magnetic bands near the lower contact zone. The grey cherty bands locally give the unit a metasedimentary appearance, but the dark green, fine grained massive sections appear to be mafic volcanic in origin. Locally, the latter exhibit variable, but pervasive, alteration changes to the grey cherty bands suggesting that these may be metamorphic and not sedimentary in origin. 5% Calcite veining, as thin (hairline), microfracturing that is best developed in the massive dark green sections. Locally, thin bands or veins of yellowish green epidote-carbonate alteration are oriented subparallel to the foliation direction. Pervasive to irregular calcitic patches also occur in the dark green, massive, homogeneous, metavolcanics in the lower part of the unit.	NS 1911 1912 1913	22.25 22.50 24.00 30.00	30.80 24.00 25.00 31.00	8.55 1.50 1.00 1.00	n/a .01 .03 .02	n/a 1.00 1.30 .50	- 0.5%/PO - MINOR - MINOR - MNR-0.5			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	ALTERATION CARB	ALTERATION SER
	No significant veining. Minor pyrite, locally more common in the grey cherty sections. Hard competent unit, generally with 25 to 100 cm breakage along fractures at various angles to the core axis. Local, 10 to 20cm wide, rubble zones. Lower contact is transitional.										
30.80 33.50	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Same as the overlying unit, but pyritic, locally magnetic, and weakly carbonate (calcitic) and sericite? altered. Unit exhibits the same interbanding of fine grained, medium green, schistose zones, and grey, cherty bands as the overlying unit, but these are now more subdued and irregularly intermixed. Banding and foliation are oriented at 65 to 80 degrees to the core axis. Unit is less competent and more broken than the overlying units, including abundant calcite-sericite coated slip fractures generally orientated at 65 to 85 degrees to the core axis. Generally very weakly to non-magnetic, but many of the grey cherty bands are darker grey and strongly magnetitic, probably containing fine magnetite. The complete unit contains 2 to 3%, wispy laminated, and finely disseminated pyrite that locally constitutes over 10% across thin (cm) zones. No significant veining, but well developed calcitic fracturing and calcite-sericite slips. Lower contact is gradational.	MS	30.80	33.50	2.70	n/a	n/a	-	2-5%			
		1914	31.00	32.00	1.00	.01	1.00	-	0.5%			
		1915	32.00	33.00	1.00	.02	.70	-	3-5%			
		1916	33.00	33.50	.50	.01	.30	-	4-6%			
33.50 36.50	CARBONATE- AND/OR SILICA-SULPHIDE FACIES IRON FORMATION										
33.50 35.00	Medium brownish-green to creamy brown, well-laminated/banded, carbonate rich section containing 5 to 10%, finely disseminated and wispy lamianted pyrite. Pyrite is evenly disseminated throughout the unit. Banding and laminations are oriented at 70 degrees to the core axis. Unit is weak to moderately reactive to HCl, and is generally non-magnetic with a few, thin, weak to moderately magnetic cherty bands.	MS	33.50	36.50	3.00	n/a	n/a	-	2-10%			
		1917	33.50	34.00	.50	.01	.80	-	4-7%			
		1918	34.00	35.00	1.00	.01	.60	-	6-10%			
		1919	35.00	36.00	1.00	.01	.50	-	2-3%			
		1920	36.00	36.50	.50	.03	.60	-	1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Unit is weak to moderately crackled and fractured, with small offsets along fractures. Well developed slip fracturing, generally oriented parallel to the foliation, with calcite+/-sericite (icing sugar) coatings on fracture surfaces. Unit contains no significant veining. Unit is somewhat incompetent, with numerous slip surfaces and a pervasive calcitic alteration that is somewhat weathered away leaving a finely porous rock unit. Upper and lower contacts are gradational.										
35.00 36.50	Dark grey to black, hard, cherty, moderately to strongly schistose/sheared? section containing 1 to 3%, finely laminated to wispy disseminated pyrite. Laminations and banding are oriented at 60 to 70 degrees to the core axis. Locally the unit contains a few, small (1 to 5cm), diffuse, boudinaged bands and footballs of vaguely porphyritic intrusive dyke material. These could be thin dykes that have been deformed within the unit, and could possibly be the source of some of the alteration/pyrite in this unit. Unit is moderately reactive to HCl, and strongly reactive along several foliation/banding subparallel, hairline to 1mm, fracture veinlets. No large veining. Unit contains several foliation/banding parallel slips, often with calcite and green sericite coatings. Relatively hard, competent unit, but moderately broken into 5 to 25cm pieces, generally parallel to the foliation. Upper and lower contacts are gradational.										
36.50 52.60	SCHISTOSE, BIOTITIC MAFIC METAVOLCANIC										
	Intermottled, very fine grained, medium to dark green, massive, homogeneous, chloritic metavolcanic, with brown, fine grained, biotitic zones/patches. The latter also locally exhibit a yellowish colour due to increased amounts of carbonate, is slightly coaser grained, and more phyllitic. The unit also contains a few brownish grey, siliceous bands that are more common in the overlying units. Locally the unit exhibits gradational changes along fractures from green, relatively unaltered	NS	36.50	52.60 16.10	n/a	n/a		- 0.5%/PO			
		1921	36.50	37.50 1.00	.02	.70		- 0.5-1%			
		1922	37.50	38.40 .90	.01	1.10		- MNR-1%			
		1923	44.00	45.00 1.00	.02	.60		- MINOR			
		1924	45.00	46.00 1.00	.01	.50		- MINOR			
		1925	46.00	46.50 .50	.01	.50		- MINOR			
		1926	46.50	47.00 .50	.03	.50		- 2-3%/PO			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

sections to grey, siliceous, or to brown, biotitic zones, suggesting the latter are in part alteration products of the former.
Unit also includes a few, thin (1 to 5cm), coarser, schistose, chlorite-biotite-calcite-plagioclase zones that are irregularly swirled, as well as a few, thin, lime green-yellow epidote-carbonate alteration bands. Unit also includes one 5cm epidote-garnet band oriented at 90 degrees to the core axis, between 36.70 to 36.75m, containing 10% pyrrhotite, and lesser pyrite and chalcopyrite.
Unit is generally weakly to strongly magnetic with small (0.5mm) disseminated magnetite grains locally visible.
Unit contains a moderate to intense development of calcitic microfracturing, particularly in finer grained, massive sections.
Unit contains a few, thin (2 to 5mm), subplanar to wormy (ptygmatic) quartz veins.
Unit locally has a pseudobrecciated to brecciated appearance due to alteration banding along, and adjacent to, intense microfracturing, but also includes a breccia zone.

44.00 46.00 Fault Breccia. Breccia consists of abundant, irregular, subangular, 0.5 to 5cm, fragments in massive to moderately sheared and foliated, fine grained, black to dark green, hard, siliceous matrix with a mafic volcanic composition. Fragments are mostly dark grey and cherty, similar to the cherty bands in the overlying unit, but include isolated, angular, medium grey, intrusive dyke fragments. Section is generally massive and has an annealed, silicified appearance, although locally it has a moderately well developed shear foliation oriented at 50 to 60 degrees to the core axis. 3 to 5%, thin (hairline to 2mm), discontinuous, calcite, tension microfracturing cuts across both fragments and matrix. Small fractures also locally offset breccia fragments by a few mm. No large veining. Minor amounts of disseminated pyrite. Transitional upper and lower contacts from the patchy biotitic altered, fine grained, chloritic mafic metavolcanics above and below, which are similar in composition to the matrix material of this breccia zone.

Below the annealed fault/breccia zone, the unit is moderately to

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Intensely biotite altered, including several fine grained, homogeneous, non-magnetic, brown, biotitic zones that contain 10 to 40%, 1 to 3mm, subrounded, brownish, poorly developed, poikioblastic, garnet porphyroblasts. These are locally weakly deformed into swirled or wavy foliated patterns. Unit is relatively competent and hard, generally with 25 to 100 cm breakage. Lower contact is transitional.										
52.60 57.20	INTERFLOW METASEDIMENT Medium to dark brown, fine grained, well laminated siltstone, to very fine grained sandstone, with some thin (0.5 to 10cm), medium grey, hard, aphanitic, chert bands. Bedding and laminations are slightly wavy, but planar, and oriented at 60 to 65 degrees to the core axis. Unit is non-magnetic, non-calcareous with minor, thin, irregular, calcitic veining subparallel to bedding, as well as local zones of calcitic, tension microfracturing. No significant veining. 0.5% Disseminated pyrite, generally concentrated along some bedding laminae. Lower contact is transitional, and has been taken as the top of a cherty band, below which the underlying unit is greener in colour, lacks laminations, and has a distinct volcanic texture.	MS 1927	52.60 57.20 56.00 57.20	4.60 1.20	n/a .01	n/a 1.50	- -	0.5% MINOR			
57.20 59.30	SCHISTOSE, BIOTITIC MAFIC METAVOLCANIC Similar to the unit between 36.50 to 56.50m above the thin metasiltstone unit. 50%, Brownish-green, biotitic altered mafic metavolcanic, and 50%, dark, laminated, chert bands. The latter occur between 57.20 to 57.45m, and 58.65 to 59.30 metres. Unit contains minor, thin (0.5cm), wormy (ptygmatic) quartz veining, and minor, irregular calcite veining/patches and tension microfracturing. Minor finely disseminated and fracture controlled pyrite.	MS 1928 1929	57.20 59.30 57.20 58.65 58.65 59.30	2.10 1.45 .65	n/a .01 .02	n/a 1.10 1.40	- - -	MINOR MNR-0.5 MNR-0.5			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Lower contact gradational.										
59.30 104.00	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS Generally dark greenish black to brownish black to greyish black, fine grained, non-magnetic to magnetic, non-calareous, variably silicified and relatively homogeneous in appearance. Above 75 metres, and between 79.00 to 79.50, and 86.00 to 102.00 metres, the unit is not silicified, is greener, and exhibits a fine plagioclase-amphibole intergrowth typical of mafic metavolcanic flow units. These zones also exhibit some potassic (biotite) alteration, particularly at the upper contact with the overlying unit, and the two contact zones with an intrusive dyke. These biotitic zones also contain some calcitic microfracturing but much less than is common in the overlying units. Locally the unit exhibits epidote coated microfracturing. These zones contain minor, to locally 1 or 2%, finely disseminated pyrite as well as minor, thin (0.2 to 1cm), irregular, wormy (ptygmatic) quartz veining.	MS	59.30	104.00 44.70	n/a	n/a	-	0.5-3%	WK-MOD	V.WK	UN-WK
	62.65 65.00 Feldspar Porphyritic Quartz Diorite Dyke. Medium, slightly pinkish grey, hard, massive to weakly foliated at 60 to 70 degrees to the core axis. 10 to 30%, white to pinkish white, subhedral to diffusely resorbed, 1 to 5mm, plagioclase phenocrysts in a finer grained plagioclase dominant matrix. Unit contains 5 to 10% biotite, 0.5% finely disseminated pyrite, and 5%, thin (0.5 to 1cm), subplanar to wormy and irregular, quartz veining. Upper and lower contacts are sharp and oriented at 65 degrees to the core axis.	1930	62.00	62.65 .65	.01	.40	-	0.5%			
		1931	62.65	63.30 .65	.01	2.10	-	MINOR			
		1932	63.30	64.00 .70	.01	2.00	-	0.5%			
		1933	64.00	65.00 1.00	.02	2.10	-	1-2%			
		1934	65.00	66.50 1.50	.01	.70	-	0.5-1%			
		1935	66.50	68.00 1.50	.01	.80	-	0.5-1%			
		1936	68.00	69.50 1.50	.01	1.10	-	MINOR			
		1937	69.50	71.00 1.50	.02	1.30	-	0.5%			
		1938	74.00	75.00 1.00	.02	.80	-	0.5%			
		1939	75.00	76.00 1.00	.13	1.00	-	2-3%			
		1940	76.00	77.00 1.00	.01	.50	-	2-3%			
		1941	77.00	78.50 1.50	.01	.80	-	1%			
		1942	78.50	80.00 1.50	.01	1.20	-	1%			
		1943	80.00	81.50 1.50	.02	.80	-	2-3%			
		1944	81.50	83.00 1.50	.01	.60	-	2-3%			
		1945	83.00	84.50 1.50	.01	.60	-	2%			
		1946	84.50	86.00 1.50	.01	.50	-	1-2%			
		1947	86.00	87.50 1.50	.03	.50	-	1%			
		1948	87.50	89.00 1.50	.01	.50	-	0.5-1%			
		1949	89.00	90.50 1.50	.02	.50	-	0.5%			
		1950	90.50	92.00 1.50	.04	.30	-	0.5%			
		1951	92.00	93.50 1.50	.02	.30	-	0.5%			
		1952	93.50	95.00 1.50	.01	.60	-	0.5%			
		1953	95.00	96.50 1.50	.01	.80	-	MNR-0.5			
		1954	101.00	102.00 1.00	.01	.60	-	MINOR			
		1955	102.00	103.00 1.00	.02	.40	-	0.5-1%			
		1956	103.00	104.00 1.00	.14	.20	-	2-3%			
	Below 75m, except for a few, thin, zones including 79.00 to 79.50m, the unit is dark green-black to dark grey, moderately to strongly magnetic, hard, exhibits a mottled looking silicification, and locally exhibits a weak shearing. Unit contains 10 to 15%, quartz-silica, as well as silica-calcite in irregular crackle and tension gash fractures, but these are as often diffuse in appearance and weakly foliated. 75 to 86 and 102 to 104 metres, the unit is moderately silicified, and 86 to 102 metres, the unit is weakly silicified with minor bands of (weak) epidote alteration. Minor, thin (1 to 5mm), weak epidote-carbarbonate mottled										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	ALTERATION CARB	ALTERATION SER
	alteration adjacent to some fractures, and some silica-carbonate veins. These bands/zones are generally slightly lighter green to brownish buff coloured. Below 89 metres this alteration begins to form anastomosing bands that are up to a few cm wide and light green to cream coloured. Epidote banding, weak shearing, and locally the calcitic/silica tension fracturing are oriented at 40 to 60 degrees to the core axis. Unit contains no significant (large) quartz veining, although there is abundant tension fracture veining. Silicified metavolcanic unit contains abundant (1 to 3%), finely disseminated pyrite, concentrated in wispy foliated patches and zones generally in association with the silica and silica-calcite tension fracture veining. Hard, very competent unit, with 50 to 150 cm breakage often along planar fractures oriented at various angles to the core axis. Lower contact is diffuse and gradational across a 0.5 metre wide zone into the underlying intrusive, with the contact probably oriented at approximately 20 to 30 degrees to the core axis.										
104.00 185.30	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED										
	Variably altered ranging from relatively unaltered, to weakly silicified with minor quartz veining, and locally moderately to intensely silicified and weakly to moderately sericitized with 5 to 15% quartz veining. Generally coarse grained, vuggy, well broken unit (1 to 10cm pieces), with transitional contacts between variations in alteration intensity.	NS	104.00	185.30	81.30	n/a	n/a	TRACE	1-4%	UN-MOD	UN-V.WK	UN-WK
	104.00 106.65 Dark grey-black to dark wine red, relatively unaltered,	1957	104.00	104.55	.55	.30	.80	-	10-12%			
	although the section is weak to moderately silicified (but	1958	104.55	105.50	.95	.12	1.30	-	3-4%			
	not sericitized) for 0.5m adjacent to the upper contact	1959	105.50	106.65	1.15	.03	1.20	-	1%			
	zone with the overlying metavolcanics. Section exhibits	1960	106.65	107.65	1.00	.12	.80		-MNR-0.5%			
	weak to locally moderate shearing, particularly in the	1961	107.65	108.80	1.15	.15	1.20	-	2%			
	dark grey coloured zone adjacent to overlying	1962	108.80	109.20	.40	.01	1.10	0.5%	2-4%			
	metavolcanics. This transitional contact zone is also very	1963	109.20	110.65	1.45	.09	1.20	TRACE	1-2%			
	pyritic across 30 cm. Section is coarse grained, and	1964	110.65	112.00	1.35	.11	1.20	-	1%			
	plagioclase porphyritic, with 30 to 40%, white, subhedral,	1965	112.00	113.00	1.00	.05	1.80	MINOR	2-3%			
	phenocrysts, that are 1 to 3mm in size and occasionally up	1966	113.00	114.00	1.00	.03	2.20	TRACE	2-3%			
		1967	114.00	114.90	.90	.06	1.60	TRACE	2-3%			
		1968	114.90	115.30	.40	.18	3.00	MINOR	1-2%			
		1969	115.30	115.80	.50	.06	1.40	-	2-3%			
		1970	115.80	116.50	.70	.01	1.20	-	0.5-1%			
		1971	116.50	118.00	1.50	.13	1.30	TRACE	2%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	to 1 cm. Section contains 10%, 2 to 3mm, ovoid, slightly	1972	118.00 119.00	1.00	.37	5.50	0.25%	2-3%			
	blue grey quartz phenocrysts, and 5 to 10%, weakly	1973	119.00 120.00	1.00	.13	1.60	TRACE	2-3%			
	chloritized biotite in an aphanitic to fine grained, dark	1974	120.00 120.60	.60	.03	1.30	0.25%	2-3%			
	grey to red, plagioclase rich groundmass. No significant	1975	120.60 121.25	.65	.01	1.20	-	1%			
	veining. Generally 1 to 4% pyrite, as fine disseminations,	1976	121.25 122.25	1.00	.02	1.20	-	1%			
	and foliation parallel blebs 2 to 5mm in size. The upper	1977	122.25 123.00	.75	.16	1.20	TRACE	2-3%			
	silicified contact zone with the overlying mafic volcanics	1978	123.00 124.00	1.00	.39	1.30	MINOR	2-3%			
	contains abundant (10 to 12%), fine disseminations and	1979	124.00 125.40	1.40	.11	1.10	-	1-2%			
	coarse aggregations of pyrite that are weakly foliated	1980	125.40 126.20	.80	.08	1.20	MINOR	2-3%			
	parallel to the contact/shearing orientation. Most larger	1981	126.20 127.10	.90	.03	1.10	TRACE	2%			
	(5 to 15cm) shear foliated zones are moderately sheared and	1982	127.10 128.00	.90	.08	1.20	-	2-3%			
	oriented at 20 to 35 degrees to the core axis, however	1983	128.00 129.00	1.00	.09	1.30	0.25%	2-3%			
	some foliation is oriented at 40 to 65 degrees to the core	1984	129.00 130.00	1.00	.04	1.20	TRACE	2-3%			
	axis. Competent section, but relatively broken into 2 to	1985	130.00 131.35	1.35	.07	1.20	MINOR	3-4%			
	20 cm pieces often along chloritic fractures oriented at	1986	131.35 131.70	.35	.01	1.10	-	2-3%			
	various angles to the core axis. Lower contact with black	1987	131.70 133.00	1.30	.02	1.30	0.25%	2-3%			
	mafic volcanics is poorly recovered, but appears to be	1988	133.00 134.00	1.00	.19	2.20	MINOR	2-4%			
	relatively sharp at 40 degrees to the core axis.	1989	134.00 135.00	1.00	.14	2.10	TRACE	2-3%			
106.65 107.65	Silicified metavolcanic. Black, hard, siliceous,	1990	135.00 136.00	1.00	.18	1.70	-	1-2%			
	moderately vuggy, moderately magnetic, non-calcareous,	1991	136.00 136.75	.75	.10	2.00	TRACE	2-3%			
	silicified mafic metavolcanic. Contains several	1992	136.75 137.90	1.15	.03	1.70	0.5%	2%			
	boudinaged and contorted intrusive fragments suggesting the	1993	137.90 138.85	.95	.05	2.00	TRACE	2-3%			
	zone is well sheared. Weak shearing foliation, locally	1994	138.85 139.65	.80	.03	1.30	-	2-3%			
	moderately developed, is oriented at 40 to 45 degrees to	1995	139.65 140.65	1.00	.02	1.50	0.5%	2-4%			
	the core axis. No significant veining. Minor to 0.5%	1996	140.65 142.00	1.35	.24	1.20	MINOR	2-4%			
	finely disseminated pyrite. Lower contact is a sharp	1997	142.00 142.75	.75	.16	1.00	TRACE	2-3%			
	intrusive contact oriented at 50 degrees to the core axis.	1998	142.75 143.25	.50	.32	.80	TRACE	1-2%			
	Section is well broken into 1 to 9 cm irregular pieces.	1999	143.25 144.05	.80	.03	.70	-	1-2%			
107.65 110.65	Medium grey, weak to moderately silicified and very weakly	2000	144.05 145.15	1.10	.19	.80	TRACE	2%			
	sericitized with a zone of intense silica flooding between	8001	145.15 146.00	.85	.07	.50	MINOR	2-3%			
	108.80 to 109.10 metres. The latter is vuggy, contains	8002	146.00 147.50	1.50	.10	1.90	MINOR	2-3%			
	some white/cream coarsely crystalline calcite	8003	147.50 149.00	1.50	.17	1.80	TRACE	2-3%			
	patches/blebs fringed in chlorite, and often contains	8004	149.00 150.00	1.00	.38	1.10	TRACE	2%			
	abundant fine metallic grey minerals generally	8005	150.00 151.35	1.35	.44	1.10	-	2%			
	coating/rimming pyrite blebs. No significant quartz	8006	151.35 152.15	.80	.26	1.30	-	2-3%			
	veining. Most biotite is partially altered to chlorite.	8007	152.15 152.90	.75	.21	1.20	-	2-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Moderately broken and fractured section, with irregular 2 to 10 cm pieces.	8008	152.90 154.00	1.10	.46	1.40	0.5%	2-3%			
		8009	154.00 154.80	.80	.29	1.20	0.5%	2-3%			
110.65 112.00	Medium pink, relatively unaltered intrusive containing one, 5cm, light orange, albite vein, minor irregular fracturing/slips, minor, thin (hairline to 1mm), bluish quartz veinlets, and numerous chloritic fractures oriented at a shallow (20 to 30 degrees) angles to the core axis. No significant veining. Moderately broken and fractured section, with 1 to 10 cm irregular pieces.	8010	154.80 156.00	1.20	.20	1.00	0.5%	2-3%			
		8011	156.00 157.30	1.30	.18	.80	TRACE	2-4%			
		8012	157.30 158.25	.95	.25	1.20	MINOR	2-3%			
		8013	158.25 158.75	.50	.03	.90	0.25	2-3%			
		8014	158.75 160.10	1.35	.02	.90	TRACE	1-2%			
		8015	160.10 161.20	1.10	.22	.90	-	2%			
		8016	161.20 162.00	.80	1.40	5.60	MINOR	2%			
112.00 115.80	Medium grey to light grey, weakly and locally moderately silicified, with very weak to weak sericitization. Biotite partially chloritized, and locally sericitized, with several, thin (1 to 5cm), silica flood patches, and several thin (1 to 5mm), subplanar quartz veins. Minor grey mineralization is associated with the later. One, 5mm, subplanar quartz vein at 112.40m, oriented at 45 degrees to the core axis, contains abundant purple molybdenite along both vein contact edges. Section includes a zone of intense silica flooding between 114.90 to 115.30m also containing minor metallic grey minerals. Section is vuggy and well broken into pieces generally less than 10cm, with numerous rubble zones. Pyrite forms fine disseminations and grains that are concentrated on fractures.	8017	162.00 163.00	1.00	.05	.90	0.25%	2%			
		8018	163.00 164.00	1.00	.22	1.20	TRACE	1-2%			
		8019	164.00 164.80	.80	.63	3.80	TRACE	1-2%			
		8020	164.80 166.10	1.30	.13	1.20	-	1%			
		8021	166.10 167.50	1.40	.03	1.00	-	0.5%			
		8022	167.50 168.50	1.00	.14	.80	MINOR	1-2%			
		8023	168.50 170.00	1.50	.01	1.00	MINOR	2%			
		8024	170.00 171.00	1.00	.02	1.10	-	2%			
		8025	171.00 172.00	1.00	.03	1.20	-	2%			
		8026	172.00 173.00	1.00	.03	1.20	-	2%			
		8027	173.00 174.50	1.50	.01	1.30	-	2-3%			
		8028	174.50 176.00	1.50	.01	1.40	-	2%			
115.80 116.50	Pink, relatively unaltered intrusive, with weakly chloritized biotite and minor, thin (1 to 3mm), planar quartz veining.	8029	176.00 177.50	1.50	.02	.70	-	1-2%			
		8030	177.50 179.00	1.50	.03	.90	-	1-2%			
		8031	179.00 180.20	1.20	.04	1.20	-	1-2%			
		8032	180.20 181.00	.80	.02	.80	-	1-2%			
		8033	181.00 182.35	1.35	.01	.60	-	1-2%			
116.50 120.60	Light grey, weak to moderately silicified and very weak to weakly sericitized intrusive with a few, thin (1 to 10cm), irregular, intensely silicified silica flood zones. Biotite is generally weakly chloritized to completely sericitized in the intensely silicified zones. Section includes some very vuggy and broken core. Section contains 10%, silica patches/flood zones in addition to pervasive silicification, but only contains a few, thin (2 to 5mm), blue-white, planar quartz veins. 2 to 4% pyrite, as fine disseminations concentrated along fractures, and as larger	8034	182.35 183.05	.70	.02	1.50	-	MINOR			
		8035	183.05 184.00	.95	.08	5.10	-	1%			
		8036	184.00 185.30	1.30	.13	1.30	-	1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	(1 to 5mm), coarsely crystalline aggregates. Abundant, chloritic, planar fractures, mostly oriented at 55 to 80 degrees to the core axis.										
120.60 122.25	Medium pink, relatively unaltered, coarse grained, plagioclase porphyritic intrusive also containing 5 to 10%, 1 to 3mm, ovoid, blue-white quartz phenocrysts, and 10%, black biotite. Minor, thin (1 to 3mm), subplanar, blue quartz veinlets, but no significant veining. Competent section with 5 to 20 cm breakage, generally along planar, chloritic fractures, mostly oriented at 50 to 75 degrees to the core axis.										
122.25 135.00	Light to medium grey, weak to moderately silicified and sericitized with several, small (1 to 10cm), irregular quartz vein zones often centering local intensely altered zones. Several of the latter sections contain minor, 0.5 to 2cm, irregular, white, coarsely crystalline calcite/carbonate often fringed by a 1mm wide halo of chlorite. Section is vuggy, well broken, and moderately fractured, with sericitic coatings on fractures. Generally 2 to 4% finely disseminated pyrite concentrated on fractures, and minor amounts of grey metallic mineralization. Well broken section, generally with 1 to 10cm breakage, and numerous rubble zones.										
135.00 136.75	Pinkish grey to medium grey or slightly greenish grey, medium to coarse grained, very weak to weakly silicified, but locally finer (0.5 to 1mm) grained, non-porphyritic and weak to moderately pervasively sericitized. Section is not as vuggy or broken as the more silicified sections. Minor, irregular quartz veining centering zones with trace amounts of disseminated metallic grey minerals. Well broken section with breakage ranging from 1 to 10cm in size, but generally 1 to 3cm somewhat rubbly breakage.										
136.75 137.90	50%, light grey to white, moderately to intensely silicified and sericitized intrusvie, with a large zone (50%) of quartz veining. Veining is clean, coarse grained, white, includes several intensely, altered wallrock										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	inclusions, and has a cracked-ice appearance. Locally, along the vein edges are small (1 to 3cm), irregular, white, coarsely crystalline carbonate minerals. A few, small, greenish fuchsite grains locally visible. Section contains 2 to 3% finely disseminated pyrite, and 0.5% finely disseminated needles of a grey metallic minerals. Moderately fractured and broken into 1 to 10cm pieces. Fractures are often sericite coated.										
137.90 152.90	25%, thin (10 to 50cm), pinkish grey, massive, biotitic, plagioclase porphyritic, coarse grained, relatively unaltered, typical quartz diorite intrusive, 50%, medium grey, weakly silicified and sericitized intrusive generally with chloritized biotite, and 25%, moderately and very locally intensely altered (silicified and sericitized) intrusive, that generally occurs adjacent to irregular quartz veining. Unaltered zones contain 0.5%, finely disseminated pyrite, are massive, moderately broken along fractures oriented at 50 to 80 degrees to the core axis, and generally contain no quartz veining. Altered sections, contain 2 to 4% pyrite generally concentrated on fractures, 5%, irregularly shaped and oriented, generally large (1 to 5cm), coarse grained, white quartz veins, and a few, thin (1 to 10cm), shear foliated zones. Weak shear foliation at 139.65 to 139.70m is oriented at 50 degrees to the core axis, but a large zone between 46.20 to 46.40m is oriented at 25 degrees to the core axis and contains 2 to 5% finely disseminated molybdenite along the slip surfaces. Altered sections are somewhat vuggy, and rubbly to well broken into 1 to 10 cm size pieces. Section also includes a medium grey mottled, weakly silicified and weakly carbonate altered zone between 151.25 to 152.15 metres.										
152.90 163.00	Generally light to medium slightly greenish grey, moderately altered intrusive with 25%, weakly altered, and 15%, white, intensely silicified and sericitized zones. This section is more sericitic than most of the other overlying intrusive sections. Biotite is generally										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	completely chloritized or sericitized. Unit contains 2 to 4%, pyrite as disseminations concentrated on fractures, and minor to 0.5%, extremely finely disseminated, metallic grey minerals concentrated in intensely silicified alteration zones, often adjacent to irregular quartz veining. Alteration (silicification and sericitization) is pervasive, although concentrated along fractures and irregular veining. The most intensely altered zones are extremely vuggy and broken, with 1 to 5cm breakage and numerous rubble zones. Section contains 10%, irregular quartz veining/patches, often including chloritic fringed carbonate grains. Section contains abundant fractures, often with chloritic or sericitic coatings. The coarse grained, porphyritic appearance of the original intrusive is still apparent but quite subdued due to the pervasive alteration. Weak foliation oriented at 45 to 60 degrees to the core axis is locally apparent, but section is generally massive.										
163.00 164.80	Slightly pinkish to brownish medium grey, with a coarse mottled appearance typical of the overlying section, and most of those below. Upper part of the intrusive, though variably altered, is not as mottled or subdued as as sections below 152.90 metres. This section and lower sections are also not as vuggy or broken, although some rubble sections occur. Section is generally weakly silicified, sericitized and carbonatized. No significant veining. Moderately broken section with 5 to 25 cm pieces. Minor finely disseminated metallic grey minerals, and 1 to 2% disseminated pyrite.										
164.80 167.50	Pink to red, medium grained, relatively unaltered, and mottled medium pinkish to brownish grey intrusive as above. Locally weakly shear foliated at 50 to 60 degrees to the core axis. No significant veining. Section does not contain visible grey metallic mineralization. A few fractures exhibit thin calcite coatings. Moderately competent section, generally with 5 to 50 cm breakage.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
167.50 176.00	Slightly pinkish to greenish grey, subdued and mottled, weak to moderately silicified, sericitized and carbonatized. Section exhibits a pervasive alteration with no significant veining. Section is locally weakly to moderately shear foliated at 50 to 70 degrees to the core axis. Locally contains minor metallic grey minerals, including some molybdenum along shear slips. Section is not vuggy and relatively competent, generally with 25 to 75cm breakage along planar fractures oriented at various angles to the core axis though mostly between 25 to 70 degrees.										
176.00 180.20	Shear foliated intrusive. Same as the overlying medium brownish grey section, but well sheared and cut by abundant, thin (hairline), anastomosing crackle veinlets of carbonate-epidote that increases in intensity down the hole. Shear foliation generally sericitic and oriented at 60 degrees to the core axis. No significant quartz veining. 1 to 2% fine pyrite, often concentrated on shear foliation surfaces. Section is relatively broken, generally into 3 to 10 cm irregular pieces, with the bottom part between 179.00 and 180.20m a well broken rubble zone.										
180.20 182.35	Quartz Vein Breccia Zone. Brecciated brownish to greenish grey, moderately altered intrusive as above, but broken into 0.5 to 2cm angular fragments, occurring in 20%, milky white quartz matrix. Lower contact along a calcitic fault breccia oriented at 20 degrees to the core axis. Hard, silicified, relatively competent unit with 10 to 50 cm breakage.										
182.35 183.05	Fault Zone. Incompetent, fault breccia/gouge zone, containing 60%, 2mm to 2cm, angular, polymictic fragments in 40%, greenish to cream coloured, clay-like carboante-calcite rich matrix. Soft incompetent section. Upper contact sharp at 25 degrees to the core axis. Lower contact sharp and planar at 60 degrees to the core axis.										
183.05 185.30	Shear foliated intrusive. Similar to 176.00 to 180.20 metres. Medium brownish grey, mottled, moderately altered,										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	and locally weak to moderately shear foliated at 70 degrees to the core axis. No significant veining. Numerous fractures, often with thin (1 to 5mm), incompetent calcitic altered bands. Relatively broken zone, with 5 to 15 cm breakage. Several fractures have 1 to 2mm sericitic calcite coatings. Lower contact with mafic metavolcanic is weakly sheared, but planar at 70 degrees to the core axis.										
185.30 194.00	SHEARED/SCHISTOSE MAFIC METAVOLCANIC										
	Dark greenish black, fine grained, mostly weakly to moderately shear foliated. Unit is particularly sheared near upper contact with the overlying fault zone. Weakly magnetic. Unit locally contains minor plagioclase phyric, massive slivers/fragments within the finer grained sheared matrix. Locally weakly carbonate and epidote altered in weakly sheared zones. Shearing oriented at 55 to 70 degrees to the core axis. A few, thin slivers of quartz diorite intrusive material also occur within sheared zones.	MS	185.30	194.00	8.70	n/a	n/a	-	MINOR		
		8037	185.30	186.00	.70	.03	.70	-	0.5%		
		8038	186.00	187.00	1.00	.01	1.30	-	MINOR		
		8039	187.00	188.00	1.00	.01	.70	-	MINOR		
		8040	188.00	189.50	1.50	.02	.90	-	MINOR		
		8041	189.50	191.00	1.50	.02	.90	-	MINOR		
		8042	191.00	192.50	1.50	.03	1.00	-	MINOR		
		8043	192.50	194.00	1.50	.10	.90	-	MINOR		
	Minor quartz-calcite veining, generally as thin (1 to 5mm), subplanar veins that are locally broken.										
	Lower contact not encountered.										
	194.00 End of Hole.										

OM88-6-C-236

ESSO MINERALS CANADA

SUMMARY DRILL LOG

Project Name: HN

Hole Number: HN88-40

Project Number: 1677

Logged By: M.H. Lenters

NTS: 42H/8

Date: October 1988

Location: L40+50W, 9+50S

Claim Number: L-871912

Azimuth: 360° Dip: -45°

Length (m): 242

PURPOSE: Intersect shear/mylonite zone encountered in HN88-28.

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMAINS IN HOLE	
0.0	13.00	Overburden	
13.00	25.15	Relatively Unaltered Granodiorite Intrusive Generally light pink, hard, massive, weakly plagioclase porphyritic intrusive. Contains 5% quartz veining which often centers thin (5 to 30 cm), moderately silicified and weakly sericitized, light grey, alteration zones, generally containing 1 to 2% pyrite and locally, minor amounts of grey metallic minerals. Unit also contains a few, thin (5 cm) shear foliated, siliceous bands oriented at 25° to CA.	0.01 - 0.16 (4)
25.15	27.75	Mafic Metavolcanic Xenolithic Inclusion Dark green-black, very fine-grained, calcitic, strongly magnetic massive to foliated mafic metavolcanic inclusion. 5%, thin calcitic, tension microfracturing. Minor, thin, offset and boudinaged quartz veinlets. Minor pyrite.	0.01 - 0.02 (3)
27.75	78.20	Variably Altered Granodiorite Intrusive 65 to 75%, pink-red, relatively unaltered granodiorite intrusive with 25 to 35%, 1 to 30 cm bands and zones of light grey to white (bleached), weak to moderately and locally intensely silicified and sericitized intrusive often occurring within zones of quartz veining. Unaltered sections are massive, coarse-grained (2 mm), with 5 to 10%, large (2 to 5 mm), subhedral plagioclase phenocrysts, 10%, 1 to 3 mm, ovoid, bluish quartz grains, 10 to 15% biotite, and 0.5% disseminated pyrite, in a pinkish (hematitic), fine-grained, plagioclase rich matrix. 5 to 10%, irregular to subplanar, quartz veining/silica flooding. Locally 0.5 to 3% pyrite and trace amounts of grey metallic minerals associated with more altered zones/bands and quartz veining containing coarse almond-white calcite.	0.01 - 0.15 (38)
78.20	81.90	Foliated Quartz-Feldspar Porphyry Dyke Slightly pinkish-brown, homogeneous, "augen-gneissic" dyke, containing 20% coarse (2 to 3 mm), rounded quartz phenocrysts, and lesser subhedral plagioclase in a well foliated, hematitic stained, biotitic matrix. Foliated at 20° to CA. No significant veining. Minor disseminated pyrite.	0.10 - 0.90 (4)
81.90	112.25	Weak to Moderately Altered Granodiorite Intrusive 35%, pink, very weakly altered to unaltered; 50%, light grey to white, weakly altered; and 15%, white, quartz veined, moderately to intensely altered intrusive. Similar to intrusive above the overlying intervening dyke, but with somehwat larger and more intense alteration zones/bands. Locally exhibits a weak foliation at 30 to 50° to CA. 5 to 10%, thin, irregular quartz veining. 0.5 to 4% disseminated pyrite, and locally minor amounts of grey metallic mineralization associated with more intensely altered and	0.01 - 0.29 (30)

From (m)	To (m)	Description HN88-40	Gold Assays (g/tonne)
		quartz veined zones.	
112.25	114.00	Mafic Metavolcanic Xenolithic Inclusion Dark brownish to greenish-grey, fine-grained, homogeneous, very weakly magnetic, strongly calcareous, with a weak to moderately well developed foliation oriented at 20° to CA. No veining. 1% fine cubic pyrite.	0.01 (2)
114.00	242.00	Weak to Moderately Altered Granodiorite Intrusion 114.00-124.50 White, weak to moderately silicified and sericitized, with local intensely silicified bands in an intrusive similar to that in upper part of the hole. 10 to 15%, irregular branching quartz veining. 1 to 3% disseminated pyrite and minor grey metallic minerals generally associated with intensely silicified zone adjacent to quartz veining. 124.50-242.00 Similar to upper section but slightly less altered. 35% pink-purple, relatively unaltered to weakly altered; 50%, light to medium grey, weakly silicified and sericitized; and 15%, light grey to white, moderately to intensely altered intrusive. 5 to 10%, thin (2 to 50 mm), irregular to subplanar quartz veining, as well as minor silica flood bands. 1 to 2% pyrite, as well as minor grey metallic minerals often adjacent to quartz veining.	0.01 - 0.89 (108)
	242.00	END OF HOLE	

H-N PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HN88-40
Page: 1

Drilled by: Bradley Bros. Limited
Hole Size: BQ
Core Size: BQ
Casing: Casing Left in Hole

Started: Oct. 16, 1988
Finished: Oct. 18, 1988

Logged by: M.H.Lenters
Date logged: October 1988
Logging Method: Log II
Measurement System: Metric

Azimuth: 360
Dip: -45

Acid Tests:

Depth	Az.	Dip
13.00		-45.0
113.00		-43.5
213.00		-39.5

Claim No: L-871912
Grid: West
Easting: 40+50W
Northing: 9+50S
Elevation: Level

Purpose: Test structure encountered in HN88-28

Length: 242.00Metres
Vert. Proj: 164.0 Metres
Hor. Proj: 178.0 Metres
Ovb. Depth: 9.3 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)		Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00	13.00 OVERBURDEN											
13.00	25.15 FELDSPAR PORPHYRITIC QUARTZ DIORITE INTRUSIVE - UNALTERED Generally unaltered, light pink, leucocratic, coarse grained, massive, weakly plagioclase porphyritic intrusive. Plagioclase phenocrysts are white, subhedral, 2 to 5mm, and occasionally up to 1cm in size. Unit also contains 10%, bluish quartz phenocrysts that are 2 to 3mm and subrounded, as well as 10 to 15%, black biotite. Unit is generally unaltered but contains 5% altered zones that are bleached white where moderately silicified and weakly sericitized. These generally occur as thin, relatively sharply bounded zones to more diffuse patches that are from 1cm to 10's of cm wide, and usually centred by thin (2 to 10mm), subplanar, bluish quartz veins. Generally 5%, thin (2 to 10mm), irregular branching to subplanar quartz veins oriented at 20 to 70 degrees to the core axis. Locally weak to moderately shear foliated at 25 degrees to the core axis, across thin (1 to 5cm) widths. Minor to 0.5% disseminated pyrite, with 1% pyrite and minor amounts of	NS	13.00	25.15	12.15	n/a	n/a	TRACE	0.5%	UN-MOD	UN-WK	UN-V.WK
		8044	16.00	17.00	1.00	.04	.80	TRACE	0.5%			
		8045	17.00	18.50	1.50	.16	.80	TRACE	0.5-1%			
		8046	18.50	20.00	1.50	.02	.80	TRACE	0.5-1%			
		8047	24.00	25.15	1.15	.01	.80	-	0.5%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	grey metallic mineralization associated with the white alteration zones. Competent, hard core, but moderately broken, generally into 3 to 10 cm lengths along planar chloritic fractures oriented at 45 to 70 degrees to the core axis. Lower contact with volcanic inclusion is sharp at 80 degrees to the core axis.										
25.15 27.75	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Dark greenish to greyish black, very fine grained, calcitic, strongly magnetic, homogeneous, massive to foliated mafic metavolcanic inclusion(?).	NS	25.15	27.75 2.60	n/a	n/a	-	MINOR			
	Same as uppermost part of HN88-22, although that unit was considered a metasediment.	8048	25.15	26.00 .85	.02	.70	-	MINOR			
	Unit contains 5%, hairline, calcite tension microfracturing forming abundant ladder, herring-bone, and en echelon patterns, as well as a few, thin (1 to 3mm) quartz veinlets which exhibit boundinaging and are locally discontinuous within the foliated zones. Other quartz veins are slightly offset along the calcitic microfracturing.	8049	26.00	27.00 1.00	.01	.50	-	MINOR			
	Foliation is well developed in lower part where it is occasionally folded or wavy and oriented at 0 to 35 degrees to the core axis.	8050	27.00	27.75 .75	.01	.50	-	MINOR			
	Unit includes a few, small (1 to 10cm), irregular and broken intrusive fragments near the upper contact.										
	Unit is relatively hard and competent with 10 to 50cm irregular breakage.										
	Lower contact with intrusive is sharp, but sheared and oriented at 10 to 25 degrees to the core axis.										
27.75 78.20	FELDSPAR PORPHYRITIC QUARTZ DIORITE INTRUSIVE - UNALTERED										
	65 to 75%, pink, relatively unaltered granodiorite intrusive, cut by 1 to 30 cm bands and zones of white (bleached), weak to moderately silicified and sericitized material often centred by thin, (1 to 5mm), irregularly oriented branching and crosscutting quartz veining. Much of the white altered bands contain black biotite even though the zones are well bleached. Only in moderately to intensely altered, well quartz veined altered zones/bands is the biotite chloritized and locally sericitized.	NS	27.75	78.20 50.45	n/a	n/a	MINOR	0.5-3%	UN-MOD	-	UN-WK
		8051	27.75	29.00 1.25	.02	.80	TRACE	0.5-1%			
		8052	31.00	31.90 .90	.03	.80	-	0.5-1%			
		8053	31.90	32.50 .60	.02	.60	MINOR	2-3%			
		8054	32.50	33.00 .50	.12	.90	-	2-3%			
		8055	33.00	34.00 1.00	.03	.80	TRACE	1-2%			
		8056	34.00	35.00 1.00	.03	2.40	TRACE	1-2%			

Interval (Metres)	Description	Sample No.	Interval (Metres)		Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Altered zones are generally somewhat vuggy and moderately broken.	8057	35.00	36.50	1.50	.09	1.20	TRACE	1%			
	Unaltered sections of the unit are generally massive, coarse grained (2mm), containing 5 to 10%, large, (2 to 5mm), subhedral, pinkish plagioclase phenocrysts, 10%, 1 to 3mm, ovoid, bluish quartz, 10 to 15%, black biotite, and 0.5% finely disseminated pyrite. Phenocrysts occur in a finer grained plagioclase +/- silica rich, pinkish (hematitic?) matrix. 5%, Thin (1 to 5mm) but up to 1.5cm in size, irregular to subplanar quartz veining. Subplanar veins are generally oriented at 45 to 65 degrees to the core axis and often crosscutting from opposite angles. Minor coarse grained, white calcite is associated with some quartz veining in altered zones.	8058	36.50	38.00	1.50	.02	1.30	MINOR	1-2%			
		8059	38.00	39.50	1.50	.15	4.30	TRACE	1%			
		8060	39.50	41.00	1.50	.03	1.80	TRACE	0.5-1%			
		8061	41.00	42.50	1.50	.02	1.00	TRACE	0.5%			
		8062	42.50	42.90	.40	.01	1.20	-	2-3%			
		8063	42.90	44.50	1.60	.03	2.80	TRACE	0.5-1%			
		8064	44.50	45.60	1.10	.02	2.40	MINOR	2-3%			
		8065	45.60	47.00	1.40	.01	1.20	TRACE	1-2%			
		8066	53.00	54.50	1.50	.02	1.30	TRACE	1%			
	Unit contains several mottled, medium grey, well silicified/silica flooded +/- sericitized shear bands. The largest of these bands occur between:	8067	54.50	55.50	1.00	.10	9.90	MINOR	2%			
		8068	55.50	56.00	.50	.03	1.00	0.25%	2%			
		8069	56.00	57.35	1.35	.01	.90	-	0.5%			
		8070	57.35	57.80	.45	.02	1.00	MINOR	1-2%			
	31.90 32.10 Oriented at 30 degrees to the core axis.	8071	57.80	59.00	1.20	.02	1.10	TRACE	0.5-1%			
	32.70 32.80 Oriented at 30 degrees to the core axis.	8072	61.00	62.00	1.00	.03	.80	-	0.5-1%			
	42.50 42.70 Oriented at 40 to 55 degrees to the core axis.	8073	62.00	63.00	1.00	.03	1.10	TRACE	0.5-1%			
	61.75 61.90 Oriented at 50 to 55 degrees to the core axis.	8074	63.00	64.00	1.00	.01	.60	TRACE	1-2%			
	62.00 62.10 Oriented at 40 degrees to the core axis.	8075	64.00	65.00	1.00	.02	.80	-	1%			
	62.40 62.60 Oriented at 30 to 35 degrees to the core axis.	8076	65.00	65.80	.80	.03	.80	MINOR	1-2%			
	White alteration bands appear more like zones exhibiting a bleaching of feldspar and hematite, and are not as silicified and much less sericitized than the white alteration zones in other drill holes.	8077	65.80	66.50	.70	.02	1.70	0.5%	2-3%			
		8078	66.50	68.00	1.50	.01	1.30	TRACE	0.5-1%			
		8079	68.00	69.50	1.50	.01	2.30	MINOR	1-2%			
	White alteration bands often exhibit sharp changes across a few mm from the pink unaltered zones. All quartz veins do not alter the adjacent wallrock, as several quartz veins cut through unaltered pink coloured zones.	8080	69.50	71.00	1.50	.02	1.20	TRACE	2%			
		8081	71.00	72.35	1.35	.01	.90	TRACE	1-2%			
		8082	72.35	73.00	.65	.03	1.00	-	3-4%			
		8083	73.00	74.00	1.00	.01	.80	-	2-3%			
	0.5 to 2% disseminated pyrite, and trace to minor amounts of disseminated grey metallic minerals. Locally, the coarsest metallic grey minerals appear to be associated with quartz veins containing coarse grained, white calcite.	8084	74.00	75.00	1.00	.01	.90	MINOR	2%			
		8085	75.00	75.70	.70	.03	.70	0.5%	1-2%			
		8086	75.70	76.10	.40	.02	.90	TRACE	1%			
		8087	76.10	76.65	.55	.02	.80	0.5-1%	1-2%			
	Unit is moderately well broken with unaltered zones exhibiting 5 to 25cm breakage, often along chloritic coated, planar fractures generally oriented at 40 to 70 degrees to the core axis.	8088	76.65	78.20	1.55	.01	.60	TRACE	0.5-1%			
	Altered zones are vuggy and well broken, generally into 1 to 10cm pieces with some rubble zones.											

Interval (Metres)	Description	Sample No.	Interval (Metres)		Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Lower contact is a sharp intrusive dyke contact oriented at 35 degrees to the core axis.											
78.20 81.90	WELL FOLIATED QUARTZ FELDSPAR PORPHYRY DYKE											
	Slightly pinkish brown with 20%, coarse (2mm), subrounded quartz phenocrysts in finer grained, foliated, hematitic stained, biotitic matrix.	NS	78.20	81.90	3.70	n/a	n/a	-	MINOR			
		8089	78.20	79.00	.80	.31	1.40	-	MINOR			
		8090	79.00	80.00	1.00	.10	1.10	-	MINOR			
	Unit called augen gneissic in HN88-24 where it was first encountered and where it is slightly auriferous.	8091	80.00	81.00	1.00	.17	1.20	-	MINOR			
		8092	81.00	81.90	.90	.04	1.20	-	MINOR			
	Well foliated at 20 degrees to the core axis, with moderate (10 to 50cm) fracturing paralleling the foliation orientation.											
	Unit is very homogenerous in appearance, contains no veining, and only minor amounts of finely disseminated pyrite.											
	Upper and lower contacts are sharp intrusive dyke contacts oriented at 35 to 40 degrees to the core axis.											
81.90 112.25	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED											
	35%, Pink, very weakly altered to unaltered; 50%, light grey to white to mottled light brownish grey, weakly altered; and 15%, white, well quartz veined, moderately to intensely altered intrusive.	NS	81.90	112.25	30.35	n/a	n/a	MINOR	1-2%	UN-INT	UN-WK	UN-MOD
		8093	81.90	83.00	1.10	.19	3.20	0.25%	2-3%			
		8094	83.00	84.00	1.00	.02	.90	MINOR	2-3%			
	Similar to the other half of this intrusive unit between 27.75 to 78.20 metres, above the overlying dyke, but with somewhat larger and slightly more intensely altered zones, as well as less intervening unaltered intrusive material.	8095	84.00	84.85	.85	.03	.70	TRACE	1-2%			
		8096	84.85	85.55	.70	.29	12.80	0.5%	2-3%			
		8097	85.55	86.00	.45	.01	2.30	0.25%	1-2%			
		8098	86.00	87.00	1.00	.01	.90	MINOR	2-3%			
	Quartz veining is similar to the upper part of this unit above the dyke, but includes several veins that are parallel to the core axis, producing long core intersections with moderately to intensely altered material.	8099	87.00	88.00	1.00	.02	.70	TRACE	0.5-1%			
		8100	88.00	88.50	.50	.01	.80	MINOR	1-2%			
		8101	88.50	89.00	.50	.01	.70	-	0.5%			
	This unit does not contain shear bands like the other half of this intrusive above the dyke, but exhibits local zones with a weak shearing foliation that is oriented at 30 to 50 degrees to the core axis.	8102	89.00	90.00	1.00	.02	.60	-	3-5%			
		8103	90.00	90.85	.85	.02	.60	-	2-3%			
		8104	90.85	92.05	1.20	.02	.80	-	2-4%			
	Lower contact with the mafic dyke-xenolith? is poorly recovered, but appears to be very sharp, though irregular, and oriented at a relatively shallow angle to the core axis.	8105	92.05	93.50	1.45	.01	.70	-	2-4%			
		8106	93.50	95.00	1.50	.02	1.00	-	2-3%			
		8107	95.00	96.00	1.00	.01	.90	TR-MNR	2-3%			
		8108	96.00	96.80	.80	.02	.80	MINOR	2-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	ALTERATION CARB	ALTERATION SER
		8109	96.80 98.00	1.20	.01	.90	-	0.5%			
		8110	98.00 98.75	.75	.03	.80	TRACE	0.5%			
		8111	98.75 100.40	1.65	.02	3.00	MINOR	1-3%			
		8112	100.40 101.00	.60	.02	.90	-	0.5%			
		8113	101.00 101.70	.70	.04	1.10	TRACE	2-3%			
		8114	101.70 103.00	1.30	.02	.90	MINOR	1-2%			
		8115	103.00 103.65	.65	.02	1.00	MINOR	1-2%			
		8116	103.65 105.00	1.35	.01	.90	-	1%			
		8117	105.00 106.00	1.00	.02	1.10	TRACE	1-2%			
		8118	106.00 107.10	1.10	.02	.80	MINOR	1-2%			
		8119	107.10 108.50	1.40	.02	1.00	TRACE	1-2%			
		8120	108.50 109.65	1.15	.01	1.10	TRACE	1-2%			
		8121	109.65 110.55	.90	.02	1.00	-	0.5-1%			
		8122	110.55 112.25	1.70	.01	1.60	0.25%	2-3%			
112.25 114.00	MAFIC METAVOLCANIC FLOWS (PE THOLEIITE)										
	Very dark brownish to greenish grey, fine grained, very homogeneous, very weakly magnetic, strongly calcareous, with a weak to moderate foliation defined by the orientation of fine chlorite+/-biotite at 20 degrees to the core axis. This unit is probably a mafic volcanic xenolith inclusion, but could possibly be a mafic dyke.	NS	112.25 114.00	1.75	n/a	n/a	-	1%			
		8123	112.25 113.00	.75	.01	1.40	-	1%			
		8124	113.00 114.00	1.00	.01	1.40	-	1%			
	Unit contains no veining.										
	1%, Fine (0.5mm), cubic pyrite crystals disseminated throughout the unit.										
	Numerous chloritic fractures, generally oriented at shallow angles (0 to 30 degrees) to to the core axis.										
	Well broken, rubby unit, with breakage along fractures at shallow angles to to the core axis.										
	Upper and lower contacts are sharp, but slightly irregular, and oriented at approximately 20 degrees to the core axis.										
114.00 242.00	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED										
114.00 124.50	White, weak to moderately silicified and sericitized, with local intensely silicified bands. 10 to 15%, irregularly oriented and branching to subplanar veining. Veining is	NS	114.00 242.00	128.00	n/a	n/a	MINOR	2-3%	UN-MOD	UN-WK	UN-MOD
		8125	114.00 115.00	1.00	.02	1.50	0.25%	2-3%			
		8126	115.00 116.00	1.00	.01	1.20	MINOR	1-2%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	somewhat more abundant, as well as larger (1 to 5cm), within this upper part. Subplanar veins are variably oriented, and often criss-crossing, although most are oriented at 45 to 50 degrees to the core axis. They are white, clean, coarse grained, and contain only minor amounts of wallrock inclusions, pyrite and metallic grey mineralization. Unit is coarse grained with the porphyritic character difficult to observe, due to the lack of colour variation with the unit. However, the porphyritic character is still apparent. Unit is somewhat porous or vuggy. 2 to 3% disseminated pyrite, generally concentrated near veining and along fractures. Moderately broken unit, with a few rubble sections. No shear foliated bands are apparent.	8127	116.00 117.50	1.50	.02	.90	MINOR	2-3%			
		8128	117.50 119.00	1.50	.02	1.80	0.25%	2-3%			
		8129	119.00 120.00	1.00	.02	2.20	TR-MNR	2-3%			
		8130	120.00 121.00	1.00	.16	1.70	TR-MNR	1-2%			
		8131	121.00 122.00	1.00	.18	7.20	0.5%	1-2%			
		8132	122.00 123.00	1.00	.06	3.50	0.25%	2%			
		8133	123.00 124.15	1.15	.13	2.00	0.25%	2-3%			
		8134	124.15 125.00	.85	.02	2.50	TRACE	1-2%			
		8135	125.00 126.50	1.50	.02	2.90	MINOR	1-3%			
		8136	126.50 128.00	1.50	.01	1.20	TRACE	1-2%			
		8137	128.00 129.05	1.05	.01	2.20	MINOR	2%			
		8138	129.05 131.10	2.05	.02	1.00	-	1-2%			
		8139	131.10 132.50	1.40	.01	1.70	TRACE	1-2%			
		8140	132.50 134.00	1.50	.03	1.50	MINOR	1-2%			
124.50 242.00	Similar to upper section, but consisting of 35% pink-purple to light pink-purple, relatively unaltered to very weakly altered zones; 50%, light to medium grey, weakly silicified and sericitized zones; and 15%, light grey to white moderate to intensely altered zones. Unit contains 5 to 10%, thin (1 to 5mm) to thicker (0.5 to 10cm), irregular to subplanar quartz veining. Minor shear foliated/silica flooded bands, that are generally oriented at 20 to 45 degrees to the core axis. These often exhibit smeared pyrite and moly on the slip surfaces. One, small (50cm), xenolithic inclusion occurs between 178.05 and 178.60m, including a minor fault clay/gouge in a well broken and lost core rubble zone between 178.50 and 178.60 metres. Inclusion is dark green, fine grained, well foliated at 20 degrees to the core axis, calcitic and non-magnetic. Contacts are oriented at approximately 20 to 25 degrees to the core axis. Quartz veining often contains minor amounts of grey metallic minerals surrounding pyrite.	8141	134.00 135.50	1.50	.02	1.50	-	1%			
		8142	135.50 137.00	1.50	.02	2.40	TRACE	1-2%			
		8143	137.00 138.50	1.50	.02	1.70	TRACE	1-2%			
		8144	138.50 140.00	1.50	.01	2.30	TR-MNR	1%			
		8145	140.00 141.50	1.50	.01	1.40	TR-MNR	1%			
		8146	141.50 143.00	1.50	.02	2.70	MINOR	1%			
		8147	143.00 144.50	1.50	.01	1.40	TRACE	1%			
		8148	144.50 146.00	1.50	.01	1.10	TRACE	1%			
		8149	146.00 147.20	1.20	.01	.80	-	0.5%			
		8150	147.20 148.00	.80	.02	1.70	0.25%	1%			
		8151	148.00 149.00	1.00	.02	2.50	0.25	1%			
		8152	149.00 150.50	1.50	.01	1.50	MINOR	1%			
		8153	150.50 152.00	1.50	.03	1.90	MINOR	1%			
		8154	152.00 153.50	1.50	.01	1.80	MINOR	1%			
		8155	153.50 155.00	1.50	.02	3.50	0.5%	1-2%			
		8156	155.00 156.00	1.00	.01	1.90	TR-MNR	1-2%			
		8157	156.00 157.00	1.00	.02	3.10	TRACE	1-2%			
		8158	157.00 158.15	1.15	.04	3.40	MINOR	1-2%			
Several fractures exhibit chloritic, and locally sericitic coatings.		8159	158.15 159.50	1.35	.18	3.90	TRACE	2-3%			
Moderately well fractured unit, with fracturing locally off-setting quartz veining across short (1 to 15mm) intervals.		8160	159.50 161.00	1.50	.03	3.60	TRACE	1-2%			
		8161	161.00 162.00	1.00	.06	4.60	TRACE	1-2%			
Moderately well broken core, with unaltered sections exhibiting 5 to 30		8162	162.00 163.00	1.00	.02	2.30	TRACE	0.5%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	cm breakage, and well altered sections generally including some rubble zones.	8163	163.00 164.00	1.00	.19	7.40	0.5%	1-2%			
	Lower contact not encountered.	8164	164.00 165.50	1.50	.04	2.20	MINOR	1-2%			
	242.00 End of hole.	8165	165.50 167.00	1.50	.22	2.10	TRACE	1%			
		8166	167.00 168.50	1.50	.29	1.60	-	0.5-1%			
		8167	168.50 170.00	1.50	.89	14.40	MINOR	0.5-1%			
		8168	170.00 171.50	1.50	.02	1.30	TRACE	0.5-1%			
		8169	171.50 173.00	1.50	.03	1.00	TRACE	0.5-1%			
		8170	173.00 174.50	1.50	.20	1.30	TRACE	0.5%			
		8171	174.50 176.00	1.50	.11	1.00	TRACE	0.5%			
		8172	176.00 177.50	1.50	.03	.90	-	0.5%			
		8173	177.50 178.05	.55	.26	1.30	-	0.5%			
		8174	178.05 178.60	.55	.22	1.20	-	0.5%			
		8175	178.60 179.00	.40	.63	2.10	-	MINOR			
		8176	179.00 180.50	1.50	.19	1.10	TRACE	1-2%			
		8177	180.50 182.00	1.50	.02	1.20	MINOR	1-2%			
		8178	182.00 183.00	1.00	.03	2.40	0.25%	1-2%			
		8179	183.00 184.00	1.00	.01	1.30	TRACE	1-2%			
		8180	184.00 185.00	1.00	.04	2.40	0.25%	2%			
		8181	185.00 185.60	.60	.02	2.30	0.25%	1-2%			
		8182	185.60 187.00	1.40	.01	1.20	TRACE	0.5-1%			
		8183	187.00 188.00	1.00	.01	1.10	-	0.5-1%			
		8184	188.00 189.00	1.00	.02	2.40	TRACE	1-2%			
		8185	189.00 190.00	1.00	.01	1.20	-	0.5-1%			
		8186	190.00 190.60	.60	.02	1.40	-	0.5-1%			
		8187	190.60 191.50	.90	.01	1.50	MINOR	1-2%			
		8188	191.50 192.70	1.20	.02	1.60	0.25%	1-2%			
		8189	192.70 194.00	1.30	.03	1.40	TRACE	1%			
		8190	194.00 195.50	1.50	.04	1.40	-	0.5%			
		8191	195.50 197.25	1.75	.01	.80	TRACE	0.5-1%			
		8192	197.25 197.75	.50	.02	1.00	0.25%	1-2%			
		8193	197.75 199.00	1.25	.01	.60	TRACE	0.5-1%			
		8194	199.00 200.00	1.00	.01	.40	-	0.5%			
		8195	200.00 201.50	1.50	.02	.70	MINOR	0.5%			
		8196	201.50 203.00	1.50	.01	7.90	-	0.5-1%			
		8197	203.00 204.00	1.00	.01	1.40	-	0.5-1%			
		8198	204.00 205.00	1.00	.30	11.60	MINOR	0.5-1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
		8199	205.00 206.00	1.00	.03	1.60	-	0.5-1%			
		8200	206.00 207.00	1.00	.01	1.00	-	0.5-1%			
		8201	207.00 208.00	1.00	.18	6.60	TRACE	1%			
		8202	208.00 209.00	1.00	.02	1.90	MINOR	1-2%			
		8203	209.00 210.00	1.00	.06	1.50	MINOR	0.5-1%			
		8204	210.00 211.00	1.00	.02	1.50	TRACE	1%			
		8205	211.00 212.00	1.00	.01	2.00	TRACE	1%			
		8206	212.00 213.50	1.50	.02	1.90	TRACE	0.5-1%			
		8207	213.50 215.00	1.50	.03	1.90	MINOR	1-2%			
		8208	215.00 215.65	.65	.02	1.30	TRACE	1-2%			
		8209	215.65 216.50	.85	.20	7.30	0.25%	2-3%			
		8210	216.50 218.35	1.85	.01	1.10	TRACE	1-2%			
		8211	218.35 219.60	1.25	.02	2.70	0.25%	1%			
		8212	219.60 220.00	.40	.01	1.20	-	0.5%			
		8213	220.00 221.00	1.00	.02	3.40	0.5%	1-2%			
		8214	221.00 222.50	1.50	.03	1.60	TRACE	1%			
		8215	222.50 224.00	1.50	.19	12.50	TRACE	1%			
		8216	224.00 225.50	1.50	.02	.90	TRACE	1%			
		8217	225.50 226.25	.75	.01	1.00	TRACE	1%			
		8218	226.25 227.00	.75	.01	.90	TRACE	0.5%			
		8219	227.00 228.00	1.00	.02	2.70	MINOR	0.5-1%			
		8220	228.00 229.50	1.50	.01	1.70	0.25%	1-2%			
		8221	229.50 231.00	1.50	.20	1.30	TRACE	1-2%			
		8222	231.00 232.00	1.00	.02	1.00	TRACE	1-2%			
		8223	232.00 233.00	1.00	.03	1.30	MINOR	1-2%			
		8224	233.00 234.00	1.00	.01	1.00	TRACE	1-2%			
		8225	234.00 234.75	.75	.02	1.40	0.5	1-2%			
		8226	234.75 235.75	1.00	.01	1.20	MINOR	0.5%			
		8227	235.75 236.75	1.00	.01	1.60	TRACE	1%			
		8228	236.75 238.00	1.25	.02	1.00	-	0.5%			
		8229	238.00 239.00	1.00	.01	.80	-	0.5%			
		8230	239.00 240.00	1.00	.02	.90	-	0.5%			
		8231	240.00 241.00	1.00	.01	.90	-	0.5%			
		8232	241.00 242.00	1.00	.01	1.00	MINOR	1%			

ESSO MINERALS CANADA

OM88-6-C-236

SUMMARY DRILL LOG

Project Name: HN

Hole Number: HN88-41

Project Number: 1677

Logged By: M.H. Lenters

NTS: 42H/8

Date: October 1988

Location: L32+00W, 12+25S

Claim Number: L-872269

Azimuth: 180° Dip: -43°

Length (m): 221

PURPOSE: Test anomalous IP chargeability response up-ice from anomalous base metal values in bedrock chips

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.00	8.00	Overburden	
8.00	73.10	Interbedded Felsic Metavolcaniclastic to Metavolcanic Pyroclastic Tuff Horizons with Minor Cherty Metasediments Thin to thickly, interbanded/interbedded sequence of felsic to intermediate chlorite-plagioclase-silica schists probably representing metavolcaniclastics and felsic ash, to fine lapilli tuff metavolcanics. Very few original textures are preserved, but locally felsic crystal tuffs, coarse felsic fragmentals, and cherty units are identifiable. Locally the units contain biotite, amphibole and minor magnetite. Felsic tuff units are grey, siliceous, fine-grained, magnetic and generally contain a few percent finely disseminated pyrrhotite and pyrite. Ash tuffs are locally finely laminated, crystal tuffs exhibit small (1 to 2 mm), euhedral plagioclase and ovoid, blue, quartz phenocrysts, and lapilli tuffs contain small (1-10 mm) angular volcanic fragments. Unit exhibits weak to strong foliation oriented at 50° to 65° to CA. Generally 3 to 5%, irregular calcite patches, and minor to 2% quartz veins. Felsic volcanic horizons contain minor to a few percent green to red to brownish sphalerite, locally forming small grains, and foliation subparallel bands and laminae, as well as minor galena, and trace chalcopyrite. Zinc/lead sulphides also form within and in close proximity to quartz and/or calcite veins. 24.25-25.10 cherty exhalite bed with 3 to 5% pyrite and 0.5% sphalerite 61.90-62.00 small fault gouge	0.01 - 0.39 (56)
73.10	74.40	Silicified and Weakly Sheared Quartz Diorite Intrusive Dyke Medium grey, aphanitic plagioclase-silica dominant groundmass with 15 to 20%, 1 to 3 mm, white, subhedral plagioclase phenocrysts. Contact zones of the dyke are silicified and moderately shear foliated at 50° to CA, parallel to the dyke contacts. 5% irregular calcite veining. 1% pyrite	0.01 - 0.04 (2)
74.40	221.00	Felsic Metavolcanic Ash/Crystal/Lapilli Tuffs with Minor Interbedded Intermediate to Mafic Tuffs Thickly interbedded sequence of felsic tuffs with lesser mafic/intermediate tuffs or volcaniclastics. Felsic volcanic tuffs consist mostly of fine ash, very fine lapilli and crystal tuffs with minor slightly coarser lapilli tuffs. These are generally medium grey, fine-grained, siliceous and massive to weakly foliated. Ash tuffs are aphanitic and locally laminated, lapilli tuffs contain small 1 to 3 mm, flattened volcanic fragments and crystal tuffs contain 5 to 10%, 1 to 3 mm plagioclase phenocrysts, and 2 to 5%, 1 to 2 mm, blue, ovoid quartz eyes. Felsic metavolcanics locally contain cherty exhalite horizons that are tan to light grey, aphanitic, finely laminated, hard, siliceous, and locally pyritic.	0.01 - 0.37 (68)

From (m)	To (m)	Description HN88-41	Gold Assays (g/tonne)
		Intermediate to mafic metavolcanic schist horizons are dark green to brownish green, fine-grained, magnetic, moderately schistose/phyllitic and generally composed of chlorite-plagioclase-silica and locally biotite and/or amphibole. Unit generally contains 5 to 10% irregular calcite patches, particularly in the mafic metavolcanic schists. Minor quartz veining. Foliation oriented at 50° to 55° to CA. Minor to 1% pyrite, but locally up to 2 to 5% particularly in slightly sericitic to carbonate altered felsic metavolcanic horizons. Felsic metavolcanic and cherty exhalite horizons locally contain minor to a few percent sphalerite, and trace amounts of galena.	
	221.00	END OF HOLE	

H-N PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HN88-41
Page: 1

Drilled by: Bradley Bros. Limited
Hole Size: BQ
Core Size: BQ
Casing: Casing Removed

Started: Oct. 19, 1988
Finished: Oct. 20, 1988

Logged by: M.H.Lenters
Date logged: October 1988
Logging Method: Log II
Measurement System: Metric

Azimuth: 180
Dip: -43

Acid Tests:

Depth	Az.	Dip
8.00		-43.0
108.00		-40.0
208.00		-36.0

Claim No: L-872269
Grid: West
Easting: L32+00W
Northing: 12+25S
Elevation: Level

Purpose: Test IP & anomalous bedrock chips

Length: 221.00Metres
Vert. Proj: 141.0 Metres
Hor. Proj: 170.0 Metres
Ovb. Depth: 5.7 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 8.00	OVERBURDEN										
8.00 73.10	FELDSPAR CRYSTAL/LAPILLI TUFF										
	Interbedded metavolcaniclastic to felsic metavolcanic horizons, and cherty metasediments.	MS	8.00	73.10 65.10	n/a	n/a	-	MNR-2%			
	Thin (cm) to thick (metres), relatively sharply bounded, interbanded/interbedded sequence of felsic to intermediate schists, probably representing metavolcaniclastic and felsic metavolcanic ash to fine lapilli tuffs. Very few original textures are preserved, but locally felsic crystal tuffs, coarse felsic fragmentals and cherty units are identifiable. The latter often contain abundant pyrite, minor to a few percent sphalerite and traces of galena.	8233	8.00	9.50 1.50	.02	.70	-	1-5%PO			
		8234	9.50	11.00 1.50	.03	.50	-	TR-1%PO			
		8235	11.00	12.00 1.00	.01	.50	-	TR-1%PO			
		8236	12.00	13.00 1.00	.01	1.20	-	TR-0.5%			
		8237	13.00	13.70 .70	.02	1.00	-	MNR-0.5			
		8238	13.70	14.50 .80	.01	.40	-	MNR/PO			
		8239	17.00	18.50 1.50	.01	.50	-	MNR/PO			
		8240	18.50	19.50 1.00	.02	1.30	-	0.5-1%			
	Many of the units with no original textures are fissile, chloritic to biotitic schists.	8241	19.50	20.00 .50	.21	.80	-	0.5-1%			
		8242	20.00	20.50 .50	.30	3.00	-	2%			
	8.00 8.45 Felsic metavolcanic ash tuff. Medium greenish grey, felsic looking, aphanitic silica-plagioclase-chlorite horizon. Moderately, but somewhat irregularly, wavy banded at 60 degrees to the core axis. Contains minor biotite, and 5%, white,	8243	20.50	21.05 .55	.02	.60	-	2%/PO			
		8244	21.05	22.00 .95	.02	1.10	-	2%/PO			
		8245	22.00	23.00 1.00	.38	7.00	-	2%/PO			
		8246	23.00	24.25 1.25	.04	4.50	-	2-3%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	irregular, foliation parallel calcitic patches. Strongly magnetic, with minor, 0.5 to 1mm, magnetite porphyroblasts. No significant veining. Minor disseminated pyrite and pyrrhotite. Lower contact is sharp and oriented at 65 degrees to the core axis.	8247	24.25 25.10	.85	.19	8.40	-	3-5%			
		8248	25.10 26.00	.90	.06	3.60	-	1-2%			
		8249	26.00 27.50	1.50	.03	2.90	-	1-2%			
		8250	27.50 29.00	1.50	.02	1.50	-	1-2%			
		8251	29.00 30.50	1.50	.02	1.40	-	1-2%			
8.45 8.55	Felsic volcanic ash metatuff. Medium grey, siliceous, fine grained silica-plagioclase horizon, much like most of the overlying horizon, but this section is less chloritic. Unit contains 5% biotite as small porphyroblasts oriented at 70 degrees to the core axis. Very minor Fe-sulphides. Non-magnetic. Upper and lower contacts are sharp, but slightly undulating and oriented at 50 to 70 degrees to the core axis.	8252	30.50 32.00	1.50	.01	1.20	-	1-2%			
		8253	32.00 32.30	.30	.03	1.40	-	1-2%			
		8254	32.30 32.55	.25	.01	1.00	-	2%			
		8255	32.55 33.75	1.20	.02	1.10	-	1%			
		8256	33.75 34.50	.75	.01	1.10	-	1-2%			
		8257	34.50 35.25	.75	.01	.60	-	1-2%			
		8258	35.25 35.50	.25	.01	1.00	-	1%			
8.55 9.15	Felsic metavolcanic ash tuff. Similar to horizon between 8.00 to 8.45, but with more (25%) biotite (1mm) porphyroblasts, a brownish medium grey colour, and a greater Fe-sulphide (5%) content. The later occur mostly as relatively coarse, wispy, pyrrhotite with lesser pyrite. Some Fe-sulphide grains are composed partly of both minerals. Horizon is moderately metamorphic foliated/banded at 50 to 70 degrees to the core axis, with 5% calcitic patches just like the horizon between 8.00 to 8.45 metres. Lower contact very sharp and planar at 50 degrees to the core axis.	8259	35.50 36.00	.50	.15	10.00	MINOR	1-2%			
		8260	36.00 36.50	.50	.01	2.10	TRACE	1-2%			
		8261	36.50 37.00	.50	.01	3.00	TRACE	1-2%			
		8262	37.00 37.75	.75	.06	8.80	MINOR	1-2%			
		8263	37.75 38.15	.40	.02	3.40	TRACE	1%			
		8264	38.15 38.80	.65	.01	.30	TRACE	1%			
		8265	38.80 39.40	.60	.02	.30	-	1-2%			
		8266	39.40 41.00	1.60	.01	1.30	-	0.5-1%			
		8267	41.00 42.50	1.50	.01	1.00	-	0.5-1%			
		8268	42.50 44.00	1.50	.01	.90	-	0.5-1%			
9.15 9.50	Felsic feldspar crystal tuff. Light to medium mottled grey, with 25%, coarse (1 to 5mm), irregular, diffuse, lighter coloured plagioclase phenocrysts/crystals in a medium grey, moderately foliated/banded, fine grained, homogeneous groundmass with 5%, foliation parallel biotite, minor chlorite, and minor pyrite. No significant veining, and lacking the irregular calcitic patches common in the more tuffaceous bands. Foliation oriented at 50 to 70 degrees to the core axis. Non-magnetic. Lower contact is sharp and oriented at 50 degrees to the core axis.	8269	44.00 45.50	1.50	.01	1.00	-	0.5%			
		8270	45.50 46.75	1.25	.02	1.00	-	0.5%			
		8271	46.75 48.50	1.75	.01	2.20	TRACE	2-3%			
		8272	48.50 50.00	1.50	.03	3.60	-	1-2%			
		8273	50.00 51.75	1.75	.39	3.90	-	1-2%			
		8274	51.75 53.00	1.25	.01	1.00	-	0.5-1%			
		8275	53.00 54.50	1.50	.01	1.10	-	0.5-1%			
		8276	54.50 56.00	1.50	.04	1.10	-	0.5-1%			
		8277	60.15 60.95	.80	.03	1.00	-	0.5-1%			
		8278	60.95 61.95	1.00	.11	.70	-	2-3%			
9.50 10.45	Felsic metavolcanic ash tuff. Similar to horizon between 8.55 to 9.15m, except more chloritic than biotitic giving it a medium greenish-grey colour. Intermottled/banded, finely fissile, chloritic schist, and medium grey, more siliceous	8279	62.00 63.05	1.05	.18	1.70	-	2-3%			
		8280	63.05 63.90	.85	.19	1.40	-	2-3%			
		8281	63.90 65.00	1.10	.04	.40	-	MINOR			
		8282	65.00 66.50	1.50	.02	1.00	-	0.5%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	material with biotite porphyroblasts, producing several sharply bounded bands and beds of varying composition. Weak to moderately magnetic with fine magnetite locally evident. 5%, irregular wispy, discontinuous calcitic patches. Foliation/banding oriented at 50 degrees to the core axis. Lower contact is sharp and oriented at 45 degrees to the core axis.	8283	66.50	68.00	1.50	.03	.90	-	MINOR		
		8284	68.00	69.50	1.50	.02	1.10	-	MINOR		
		8285	69.50	70.75	1.25	.03	.40	-	MINOR		
		8286	70.75	71.35	.60	.05	2.00	-	2-3%		
		8287	71.35	72.50	1.15	.02	.40	-	0.5%		
		8288	72.50	73.10	.60	.01	.70	-	1%		
10.45 12.00	Felsic metavolcanic ash tuff. Mostly similar to the green, finely fissile, chloritic schist horizons between 9.50 and 10.45m, but including a few, medium grey, siliceous bands with biotitic porphyroblasts. Moderately magnetic, with minor black, 1mm, magnetite, and 1% pyrrhotite grains evident. Foliation/banding oriented at 55 degrees to the core axis. 5%, irregular, wispy, discontinuous, calcitic patches/banding. Lower contact is a sharp bedding contact oriented at 45 degrees to the core axis.										
12.00 13.70	Felsic metavolcanic (fine fragmental) or possibly a crystal tuff. Medium grey, hard, siliceous, mottled, coarse grained, relatively homogeneous texture. Locally appears to be composed of small (0.5 to 2cm), monolithic fragments, as shown by vague outlines of flattened clasts. However, most of this section is massive. Contains 5% biotite oriented parallel to the foliation and clast orientation at 45 to 50 degrees to the core axis. 3%, weakly calcitic patches, but not as foliated as in the more tuffaceous horizons. Minor, small (1 to 3mm), ovoid, blue quartz eyes. Lower contact poorly recovered, but appears to be sharp and planar and oriented at 45 degrees to the core axis.										
13.70 24.25	Felsic metavolcanic ash tuff. Similar to the horizon between 9.50 to 10.45 metres. Green to greenish grey, mostly fissile, fine grained, and chloritic, with some greyer, more siliceous zones. The more chloritic sections are generally strongly magnetic with 1 to 3%, 1mm, magnetite, and often a few to 10% biotite, or a few percent dark green amphibole porphyroblasts. These porphyroblasts are generally 0.5 to 1mm in size, with biotite oriented parallel to foliation,										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	and often banded, while amphibole forms variably oriented blades. 5%, irregular calcitic patches, and occasional, 0.5 to 2cm, irregular quartz-calcite veins. Well developed fissile foliation oriented at 50 degrees to the core axis. Calcitic quartz vein/patches occur at 17.80 to 17.85 and 19.70 to 19.80m, with the latter containing minor pyrite and traces of reddish sphalerite and galena. Unit contains thin, grey, siliceous bands between 20.00 to 20.05, as well as 20.30 to 20.50m, which contain minor, fine (0.5mm), red sphalerite grains, often in thin (1 to 3mm) bands, as well as traces of galena and chalcopyrite as small grains often adjacent to thin, calcite bands/veins. Above 20.05 metres the unit contains minor to 0.5%, disseminated pyrite+/-pyrrhotite, often in concentrations as individual wispy grains along foliation surfaces. Below 20.05 the unit contains more (1 to 2%) Fe-sulphides, as well as the occasional sphalerite laminae. Sphalerite often occurs with thin (1 to 3mm), light grey, siliceous laminae that occasionally appear boudinaged. The lowest 50cm has a slight greyish colour and is more siliceous, with a greater (2 to 4%) concentration of very fine pyrite, and local reddish sphalerite bands. Lower contact is sharp and planar and oriented at 50 degrees to the core axis.										
24.25 25.10	Cherty (Zn,Fe) exhalite horizon. Well banded, medium to relatively dark reddish brownish to purplish grey, fine grained, hard, siliceous, non-magnetic and non-calcareous, although some brownish coloured bands suggest a carbonate (Fe-carb) content. 5%, biotite porphyroblasts give the horizon a foliated/banded appearance. Horizon is banded at 45 to 60 degrees to the core axis. Contains 3 to 5%, fine pyrite concentrated in foliation parallel bands, as well as fine (0.25 to 0.5mm), ovoid, reddish sphalerite, also concentrated in thin (1 to 2mm) foliation parallel bands. Non-magnetic. No significant veining. Lower contact is gradational over 10cm into a green, finely fissile, chloritic metatuff.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
25.10 32.30	Felsic metavolcanic flow/tuff. Medium greenish-grey, fine grained, fissile, hard, very felsic, homogeneous unit. Has a slight green colour due to fine chlorite?, but probably contains very little chlorite. Unit also contains 5 to 10% biotite porphyroblasts, that are foliation parallel and often segregated into foliaton parallel laminae. Unit locally exhibits a fine overprinting of variably oriented amphibole porphyroblasts. Very planar, fissile, foliation oriented at 55 to 60 degrees to the core axis. Minor calcitic banding, that is much more regular, foliation parallel, and not as common as in the overlying tuff horizons. 1 to 2%, very finely disseminated pyrite. Minor, thin (1 to 3mm), subplanar, often foliation parallel and slightly boudinaged, quartz+/-calcite veinlets, locally with a green epidote colour. Hard competent unit, generally with 0.5 to 2m breakage parallel to the foliation. Unit contains a few, thin (0.5 to 1cm), grey, cherty bands near 28 metres, locally with hematitic (jasper) colour. One thin cherty laminae at 29.60m contains minor sphalerite.										
32.30 32.55	Felsic metavolcanic fragmental/pyroclastic (definite fragmental texture). Vari-coloured medium green-grey colours, with abundant (30%), small (1mm to 2cm), polylithic (though all felsic volcanic), flattened to subrounded fragments/clasts. Larger clasts are broken and fractured. Clasts are medium grey, hard, fine grained, siliceous, and probably originate from tuffaceous matrix material having a composition much like the overlying units. Unit is well laminated/banded with pebbles oriented parallel to foliation/bedding at 50 to 55 degrees to the core axis. Pebbles appear to be moderately (3:1) flattened. Unit contains 2%, finely disseminated pyrite, often concentrated along foliation laminae. Minor irregular calcitic patches/lenses. Sharp lower contact oriented at 55 degrees to the core axis.										
32.55 33.75	Felsic feldspar crystal tuff (Possibly an intrusive dyke). Similar to unit between 9.15 to 9.5 metres. Light to medium										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	mottled grey, with 20%, small (1 to 4mm), subhedral and somewhat corroded looking, light grey-white plagioclase phenocrysts/crystals in a fine grained, siliceous, medium grey matrix, also containing 5%, fine biotite, and 1% finely disseminated pyrite. Relatively massive and homogeneous unit, with weak foliation due to aligned biotite oriented at 50 to 55 degrees to the core axis. Non-magnetic and non-calcareous. No significant veining. Hard, competent unit. Lower contact is a sharp planar surface oriented at 65 degrees to the core axis.										
33.75 35.25	Felsic metavolcanic fragmental/fine pyroclastic. Identical to section between 32.30 32.55m, with slightly greater (50%) percentage of fragments/clasts, and several larger fragments that are up to 1cm wide and extend across the core width. Relatively sharp upper and lower contacts oriented at 50 degrees to the core axis.										
35.25 35.50	Felsic feldspar crystal tuff. Identical to unit between 32.55 33.75 metres.										
35.50 38.80	Felsic metavolcanic. Fine fragmental/pyroclastic unit with minor cherty exhalitive bands. Medium grey to browns, with mottled subdued appearance, but locally exhibiting a subdued clastic/pyroclastic appearance with abundant fine (1 to 20mm) and the occasional larger fragment. Fragments are polylithic, felsic in composition, and flattened, occasionally with flamed edges (welded tuff?). Unit is non-magnetic. Unit has a pervasive siliceous appearance which may account for the subdued/vague definition/outlines of clasts/fragments. Clasts are usually greyer and more siliceous, while matrix material is biotitic. Good foliation and parallel alignment of fragments at 65 to 70 degrees to the core axis. A few bands are light grey and partially laminated with a cherty appearance. Unit contains 1% finely disseminated pyrite. Unit also contains traces of finely disseminated galena, and a few thin, foliation parallel laminae containing yellowish red to brownish sphalerite. An irregular quartz lense/vein between 37.50 to 37.55m contains										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	20%, irregularly anastomosing and finely networking yellowish-brown sphalerite. Another irregular quartz vein/lense between 35.90 to 36.00m contains a few percent more disseminated green sphalerite, and minor coarse galena. Minor sphalerite occurs in foliation parallel laminae in the wallrock adjacent to this vein/lense. Unit contains minor, calcitic veining/banding, but more foliation parallel, and not as patchy or irregular as in the finer grained felsic tuffs in upper part of this hole. Lower contact is gradational.										
38.80 39.40	Felsic metavolcanic. Fine fragmental/pyroclastic unit. Gradational change from the overlying unit into a more biotitic and less fragmental zone, but essentially the same unit. Well developed planar, fissile foliation oriented at 55 degrees to the core axis. Lower contact is sharp and planar and oriented at 55 degrees to the core axis.										
39.40 46.75	Felsic metavolcanic feldspar-quartz crystal tuff. Similar to overlying crystal tuff units. Medium grey, hard, homogeneous unit with 15 to 20%, light grey, 1 to 3mm, subhedral to corroded plagioclase crystals, and lesser, smaller (1 to 2mm), ovoid, bluish quartz eyes in a finer grained, weak to moderately foliated groundmass with 5% foliation parallel biotite. Central section of this unit contains fewer plagioclase crystals and appears somewhat similar to overlying grey tuff units. 0.5 to 1%, fine pyrite, often concentrated along wispy, biotitic, foliation parallel surfaces. Hard competent unit, generally with 30 to 100cm breakage. Unit includes one irregular quartz vein from 43.00 to 43.20m with coarse, clean, slightly smokey to clear quartz. Lower contact is sharp and planar and oriented at 50 degrees to the core axis.										
46.75 48.50	Fine felsic metavolcanic fragmental/pyroclastic schist. Same as unit between 35.50 to 38.80m, but lacking any cherty bands although many fragments/clasts have siliceous/cherty composition giving the entire unit a siliceous appearance. Medium grey to green, composed mostly of small (0.5 to 2cm),										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

flattened pebbles/fragments with a somewhat monolithic felsic volcanic composition, in a brownish green, fine, siliceous matrix also containing minor to a few percent chlorite, epidote, biotite and pyrite. Well developed planar fissile foliation, and parallel fragment/pebble flattening orientation at 50 degrees to the core axis. Hard, siliceous, non-magnetic unit. 2 to 3%, very finely disseminated pyrite, as wispy to elongate grains oriented parallel to the foliation. No significant veining. Unit contains traces of very fine galena often associated with whitish grey, siliceous pebbles, or silicified matrix bands/laminae. Lower contact is gradational over a cm or so into a more even textured, fine lithic/ash? tuff.

48.50 51.75 Felsic to intermediate metavolcanic flow/tuff. Similar to unit between 25.10 to 32.30m, but slightly less felsic and fissile. Medium greenish-grey, fine grained, hard, moderately felsic, moderately fissile, very homogeneous unit. Unit locally exhibits a brownish grey colour. Green sections due to minor chlorite and epidote, while brown sections are due to 5%, fine biotite porphyroblasts. Unit contains no amphibole porphyroblasts. Unit locally exhibits a fine grained (0.25 to 0.5mm), volcanic flow texture. Minor calcitic veining, generally as discontinuous lenses to thin (1 to 3mm), subplanar veins, but there are no irregular calcitic patches as is common in overlying tuff horizons. Weak to moderately magnetic. 1 to 2% finely disseminated pyrite. Minor epidote, often along hairline crackling. Small quartz veinlet at 51m has partial red (jasper) colouring. Upper zone contains two, large (5 to 10cm), subrounded, feldspar crystal tuff cobbles/fragments, that exhibit a slight flattening and flamed edges. These occur directly beneath upper contact zone. Hard competent unit. Upper contact is gradational. Lower contact is sharp, planar and oriented at 70 degrees to the core axis.

51.75 60.95 Felsic metavolcanic feldspar crystal tuff. (Possibly an intrusive dyke). Mottled, medium grey, with local salmon

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	pink alteration/colouration, generally along fractures. 5 to 10%, small (1 to 3mm), subhedral to corroded plagioclase crystals, and minor, ovoid, quartz in fine grained to aphanitic, weak to moderately foliated groundmass that also contains minor biotite and pyrite. Foliation oriented at 55 to 60 degrees to the core axis. Unit exhibits some variations in composition and grain size, including several lithic fragments suggesting the unit is a felsic crystal tuff as opposed to porphyritic dyke. Minor, thin (1mm), calcite and quartz-carbonate veinlets/lensing. Much of unit exhibits a weak crackle fracturing, locally with a slight salmon pink alteration/colouring. A few fractures are coated with thin (1mm), slightly greenish, icing-sugar calcite material. Non-magnetic. No significant veining. Hard, competent unit, with 25cm to 1m breakage, generally along foliation subparallel, planar, fractures. Lower contact is sharp and planar at 70 degrees to the core axis.										
60.95 73.10	Intermediate metavolcanic flow.										
60.95 61.95	Dark brownish green-grey, fine grained, chloritic with minor biotite, homogeneous, hard, weak to moderately foliated, strongly magnetic, weak to moderately calcareous. Unit has a weak silicified appearance, and locally contains minor, small (hairline to 1mm), irregly branching, discontinuous, white to purplish red (jasper), silica veinlets. 2 to 3%, finely disseminated pyrite, concentrated along foliation parallel laminae, giving unit a laminated/sulphide banded appearance. Foliation and pyritic laminae are oriented at 50 degrees to the core axis.										
61.95 62.00	Fault Zone. Recovered 5cm of white to light green, calcitic, clay fault gouge, containing numerous small (1 to 5mm), angular, altered/partially decomposed volcanic fragments. Upper and lower contacts are poorly recovered, but appear to be parallel to the foliation at 50 to 55 degrees to the core axis.										
62.00 63.90	Similar to section between 60.95 to 61.95m, but carbonate altered and biotitic, probably due to proximity to fault.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Dark brownish grey, very fine grained, hard, biotitic, homogeneous, non to weakly magnetic, with weak to moderately phyllitic foliation. Has a pervasive silicified appearance, but exhibits 5%, irregular, criss-crossing (network), hairline, calcitic fractures with thin (hairline to 5mm), light tan-grey carbonate alteration adjacent to fracturing. 2 to 3%, finely disseminated pyrite, concentrated along thin, foliation parallel laminae. Phyllitic foliation and pyritic laminae are generally oriented at 40 to 45 degrees to the core axis. Section also contains a few, thin (1 to 3mm), foliation parallel, calcitic, pyritic bands/laminae occasionally containing minor amounts of sphalerite. No significant veining.										
63.90 72.50	Relatively unaltered, dark green, chloritic, fine grained, strongly magnetic, homogeneous, weakly to moderately phyllitic, intermediate to mafic metavolcanic flow. Good intergrown plagioclase-ferromagnesian volcanic flow texture is locally evident. Section includes a few zones with brownish colouration due to biotitic content, and minor silicification producing zones similar to that between 62.00 to 63.90m. These zones occur between 68.50 to 68.65m, and 70.75 to 71.35m, and have gradational contacts. Minor brown sphalerite occurs in two, thin (5mm), quartz-calcite bands that are oriented parallel to foliation. Dark green, chloritic sections locally exhibit small amphibole porphyroblasts with irregular orientations. Minor, thin (1 to 5mm), quartz+calcite veining, often oriented subplanar to foliation. Generally hard, competent unit, with 25 to 100cm breakage, but including a rubble zone between 72.35 to 72.75 metres.										
72.50 73.10	Similar to section between 62.00 to 63.90 metres. Dark brownish grey, fine grained, hard, silicified, homogeneous, non to very weakly magnetic, with weak to moderate foliation oriented at 45 degrees to the core axis. Lower contact is a sharp, planar intrusive contact oriented at 45 degrees to the core axis.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
73.10 74.40	FELDSPAR PORPHYRITIC QUARTZ DIORITE DYKE										
73.10 73.65	Shear foliated edge of dyke, with moderate silicification, and moderate foliation oriented at 50 degrees to the core axis.	NS	73.10	74.40 1.30	n/a	n/a	-	MNR-1%			
		8289	73.10	73.65 .55	.01	1.20	-	MINOR			
		8290	73.65	74.40 .75	.04	1.00	-	0.5%			
73.65 74.15	Irregularly swirled and moderately silicified, more massive intrusive dyke including large mafic metavolcanic inclusion. Intrusive is generally medium grey, aphanitic, with 15 to 20%, 1 to 3mm, white, subhedral, plagioclase phenocrysts. 1% pyrite. 5% irregular, calcite veining, particularly common near and within the mafic volcanic inclusion.										
74.15 74.40	Shear foliated and silicified edge of intrusive dyke, with foliation oriented at 45 degrees to the core axis. Upper and lower contacts are relatively sharp and oriented at 45 degrees to the core axis.										
74.40 85.20	PLAIGIOCLASE-CHLORITE-AMPHIBOLE SCHIST										
	Intermediate to mafic metavolcanic flows.	NS	74.40	85.20 10.80	n/a	n/a	-	MINOR			
	Dark green to brownish green, marbled looking unit, due to irregular calcitic vein patches, as well as biotitic and amphibolitic porphyroblastic zones.	8291	74.40	75.50 1.10	.01	.40	-	MINOR			
		8292	75.50	77.00 1.50	.01	.40	-	MINOR			
		8293	83.00	84.50 1.50	.02	.50	-	MINOR			
		8294	84.50	85.20 .70	.02	1.00	-	MINOR			
	Groundmass is normally a dark green, very fine grained, chloritic, weakly to moderately phyllitic, with some greyer more siliceous (felsic to intermediate), fine grained sections, and some brownish, biotitic, fine grained sections.										
	Unit locally contains 0.5 to 1mm, magnetite porphyroblasts.										
	Locally the fine grained zones contain irregular, buckshot to weakly banded, relatively coarse (1mm), reddish brown, biotite porphyroblasts (generally 1 to 5%, and locally to 30%), as well as minor to a few percent, 1mm, randomly oriented amphibole porphyroblasts.										
	Unit contains 5 to 15%, and locally (over a few cm) 50%, irregular to almost stockwork, calcitic patches that are somewhat aligned parallel to the foliation direction.										
	Foliation oriented at 55 to 56 degrees to the core axis.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	ALTERATION CARB	ALTERATION SER
	No significant veining. Minor pyrite. Competent unit, with 25 to 150 cm breakage. Lower contact is sharp and planar and oriented at 65 degrees to the core axis.										
85.20 86.05	FELDSPAR CRYSTAL/LAPILLI TUFF										
	Similar to unit between 12.00 to 13.70 metres.	NS	85.20	86.05	.85	n/a	n/a	- MINOR			
	Medium grey with slight coarse grained mottled appearance. Hard, siliceous, homogeneous, with massive to weakly foliated texture. Massive sections exhibit very poorly defined, 1 to 3mm, white plagioclase, and quartz crystals with corroded/resorbed edges in medium grey matrix.	8295	85.20	86.05	.85	.01	1.40	- MINOR			
	Finer grained, grey, weakly foliated zones contain 5%, fine, foliation parallel biotite. Foliation oriented at 55 degrees to the core axis. Minor calcitic veinlets, generally oriented parallel to foliation. Upper and lower contacts are sharp and planar and oriented at 65 and 60 degrees to the core axis.										
86.05 89.35	PLAIGIOCLASE-CHLORITE-AMPHIBOLE SCHIST										
	Intermediate to mafic metavolcanic flow unit, similar to unit between 74.40 to 85.20 metres.	NS	86.05	89.35	3.30	n/a	n/a	- MINOR			
		8296	86.05	87.50	1.45	.04	1.00	- MINOR			
	Mostly fine grained and chloritic, except for thin (10 to 50cm), biotitic, upper and lower contact zones that contain magnetite, biotite, and amphibole porphyroblasts, as well as 10 to 15% calcitic patches.	8297	87.50	89.35	1.85	.01	.40	- MINOR			
	Foliation oriented at 55 degrees to the core axis. Lower contact is transitional.										
89.35 94.45	FELDSPAR CRYSTAL/LAPILLI TUFF										
	Similar to unit between 85.20 to 86.05 metres.	NS	89.35	94.45	5.10	n/a	n/a	- MINOR			
	Medium grey, with mottled coarse grained appearance, locally exhibiting a well developed weakly foliated, crystal tuff texture. Contains several percent, 2 to 4mm, ovoid, blue quartz eyes. Non-magnetic, and very	8298	89.35	90.10	.75	.02	.50	- MINOR			
		8299	90.10	91.00	.90	.05	1.20	- MINOR			
		8300	91.00	92.00	1.00	.01	1.00	- MINOR			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	weakly calcareous.	8301	92.00	93.45	1.45	.01	1.10	-	MINOR		
	Upper zone between 89.35 to 90.10m is transitional between overlying intermediate to mafic metavolcanic, and this unit. Medium to dark grey, with moderate chlorite/biotite foliation/banding oriented at 50 degrees to the core axis.	8302	93.45	94.45	1.00	.02	1.90	-	1-2%		
	Lower zone between 93.45 to 94.45m may partly include exhalative chert/carbonate component. Grey to tan, locally finely laminated, with very fine grained, cherty/carbonate bands having planar contacts parallel to foliation at 50 degrees to the core axis.										
	Unit contains minor calcitic veinlets and fracturing, but is generally a very homogeneous unit and except for upper and lower contact zones contains very minor porphyroblasts.										
	Central section contains minor fine biotite producing a weak foliation oriented at 55 degrees to the core axis.										
	Minor disseminated pyrite, except for 1 to 2% in the lower cherty carbonate zone which also contains minor amounts of brown-red sphalerite. No significant veining.										
	Hard, competent unit, generally with 50 to 100 cm breakage often parallel to foliation orientation.										
94.45 103.55	PLAIGIOCLASE-CHLORITE-AMPHIBOLE SCHIST										
	Intermediate to mafic metavolcanic.	NS	94.45	103.55	9.10	n/a	n/a	-	1-2%		
	Dark green-black, very fine grained, chloritic, very hard, with minor, thin (1 to 2cm), patches/bands of 1mm, biotite porphyroblasts, and minor, scattered, 1mm, dark green, amphibole porphyroblasts.	8303	94.45	95.00	.55	.01	1.40	-	2-3%		
	Unit is relatively homogeneous, strongly magnetic, weakly phyllitic, and foliated at 55 degrees to the core axis.	8304	95.00	96.00	1.00	.01	.50	-	MINOR		
	5 to 10%, irregular, somewhat foliation subparallel, calcitic mottling.	8305	98.00	98.95	.95	.01	.40	-	1-2%		
	1 to 2%, wispy laminated/disseminated pyrite as well as minor pyritic laminae bands with minor red sphalerite.	8306	98.95	99.35	.40	.01	.90	-	TRACE		
	98.95 99.35 Coarse grained, white quartz vein oriented at 25 degrees to the core axis.	8307	99.35	99.95	.60	.12	5.90	-	2-3%		
	99.35 99.95 Zone adjacent to quartz vein. Well banded, medium brownish to purplish grey, with abundant (3 to 5%), finely laminated pyrite as well as foliation parallel calcitic veinlet bands	8308	99.95	101.00	1.05	.02	.90	-	1-2%		
		8309	101.00	101.65	.65	.01	2.20	-	1%		
		8310	101.65	102.05	.40	.02	1.80	-	1-2%		
		8311	102.05	102.90	.85	.18	1.60	-	0.5-1%		
		8312	102.90	103.55	.65	.01	2.90	-	2-3%		

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	and red sphalerite. Zone exhibits gradational change to green metavolcanic.										
	101.70 102.00 And										
	102.90 103.55 Both bands are more biotitic, coarser grained, moderately schistose to well foliated, with abundant (3 to 6%), finely disseminated/laminated pyrite and minor red sphalerite, as well as minor, irregular, coarse, calcite fractures with sphalerite (1%) at contacts.										
	Competent, hard unit with 25 to 50 cm breakage generally along foliation surfaces.										
	Irregular lower contact along calcite fractures with sphalerite mineralization.										
103.55 109.65	FELDSPAR CRYSTAL/LAPILLI TUFF										
	Medium mottled grey to greenish grey, coarsely textured, locally with subdued crystal tuff texture, and locally with subdued, fine (1 to 10mm), flattened, mostly monolithic lapilli tuff texture.	NS	103.55 109.65	6.10	n/a	n/a	-	MNR-1%			
		8313	103.55 104.00	.45	.01	1.00	-	MINOR			
		8314	104.00 105.50	1.50	.01	.90	-	MINOR			
	Locally exhibits more massive, greenish (sericitic and carbonate) alteration patches/bands.	8315	105.50 107.15	1.65	.02	1.10	-	MINOR			
		8316	107.15 107.45	.30	.01	3.00	-	1%			
	Foliation, bedding and alteration banding are moderately developed at 55 to 60 degrees to the core axis.	8317	107.45 108.50	1.05	.01	1.80	-	1%			
		8318	108.50 109.65	1.15	.00	n/a					
	Non-magnetic.										
	Minor calcitic patches and fracturing.										
	No significant veining, except one, 5cm, white, quartz vein oriented at 45 degrees to the core axis between 105.25 to 105.30 metres.										
	Minor to 1%, finely disseminated to wispy laminated pyrite.										
	Minor, coarse (1mm), yellowish orange to reddish sphalerite in irregular, but foliation subparallel bands.										
	Relatively hard, competent unit, with 10 to 50cm breakage, generally parallel to foliation.										
	Lower contact is gradational.										
109.65 112.05	ASH TUFF / FINE LAPILLI TUFF										
	Somewhat similar to biotitic and chloritic ash tuffs in upper part of hole	NS	109.65 112.05	2.40	n/a	n/a	-	0.5-1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Brown, fine grained, non-magnetic to weakly magnetic, biotitic, even texture, phyllitic unit with some grey, irregular, more siliceous bands.	8319	109.65 111.00	1.35	.01	.60	-	0.5-1%			
	5%, Irregular networking patches of calcite as was typical in tuffs in upper part of hole.	8320	111.00 112.50	1.50	.02	1.50	-	1%			
	Moderate phyllitic foliation, and weak banding oriented at 55 to 65 degrees to the core axis.										
	0.5 to 1%, finely disseminated to wispy laminated pyrite grains.										
	Minor red sphalerite, often along irregular, hairline, late fractures.										
	Minor, irregular, quartz blebs (1 to 5mm), locally with pyrite and trace galena.										
	Unit is moderately broken into 1 to 20cm pieces, generally parallel to phyllitic foliation.										
	Lower contact is a sharp planar surface oriented at 75 degrees to the core axis.										
112.05 119.45	QUARTZ-FELDSPAR CRYSTAL TUFF										
	Unit locally has a felsic intrusive dyke-like appearance.	MS	112.05 119.45	7.40	n/a	n/a	-	MINOR			
	Mottled medium grey, slightly pinkish coloured, with porphyritic appearance although this is probably a crystal tuff. 10%, large (3 to 5mm), white, subhedral plagioclase crystals and 2%, large (2 to 4mm), ovoid, blue quartz eyes in wavy a foliated, coarse grained (0.5 to 2mm), plagioclase/quartz matrix containing minor (5%) biotite. Matrix appears slightly augen gneissic.	8321	112.50 114.00	1.50	.12	.90	-	MINOR			
		8322	114.00 115.00	1.00	.02	1.10	-	MINOR			
		8323	118.00 119.45	1.45	.01	1.10	-	MINOR			
	Relatively homogeneous unit, although some banding of crystal richer and crystal poorer zones occurs.										
	Hard, non-magnetic, very weakly calcareous, with foliation oriented at 60 degrees to the core axis.										
	Locally, some quartz eyes exhibit calcite in pressure shadows.										
	Minor disseminated pyrite.										
	No significant veining.										
	Hard, competent unit with 5 to 50cm breakage generally parallel to foliation.										
	Upper and lower contacts are sharp and planar and oriented at 75 and 65 degrees to the core axis respectively.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	ALTERATION CARB	ALTERATION SER
119.45 139.80	PLAIGIOCLASE-CHLORITE-AMPHIBOLE SCHIST										
	Intermediate to mafic metavolcanic.	NS	119.45 139.80	20.35	n/a	n/a	-	MNR-0.5			
	Dark green-grey to slightly brownish grey, very fine grained, chloritic, moderately to strongly magnetic, weakly phyllitic, relatively homogeneous unit.	8324	119.45 121.00	1.55	.01	.50	-	MINOR			
		8325	121.00 122.85	1.85	.01	.50	-	0.5%			
		8326	122.85 123.30	.45	.23	3.10	-	2-3%			
	5 to 10%, vague, patchy networking, or irregular, discontinuous calcite forming irregular cloud patterns.	8327	123.30 125.00	1.70	.01	.50	-	MINOR			
		8328	125.00 126.50	1.50	.01	.50	-	0.5%			
	Also minor (1 to 2%), poorly formed, concentric filled, irregular fractures often with central white-grey silica that is bounded by bluish grey calcite, and locally by minor, red (jasper) silica bands containing pyrite. These also form irregular (1 to 10cm) patches.	8329	132.50 133.50	1.00	.01	.40	-	0.5%			
		8330	133.50 134.50	1.00	.01	.50	-	1-2%			
		8331	134.50 135.00	.50	.01	.40	-	1-2%			
		8332	135.00 136.00	1.00	.03	2.20	-	3-5%			
	Foliation and calcitic patches generally oriented at 55 to 65 degrees to the core axis.	8333	136.00 137.00	1.00	.01	.30	-	0.5%			
		8334	137.00 138.50	1.50	.01	.40	-	0.5%			
	Minor, 1 to 5 cm quartz veins.	8335	138.50 139.80	1.30	.01	.80	-	1%			
	Minor to 0.5%, finely disseminated and wispy laminated pyrite, as well as some thin (5 to 25 cm) zones containing 2 to 4% pyrite.										
	One zone of pyritic, brownish carbonate altered material between 135.5 and 136.00m has appearance similar to felsic metavolcanics of the underlying unit.										
	Competent unit with 10 to 50 cm breakage, generally along planar fractures (often with calcite coatings) variably oriented at 45 to 90 degrees to the core axis.										
	Lower contact sharp and planar at 70 degrees to the core axis, but contact zones to either side exhibit alteration effects and are somewhat different than the main parts of unit.										
139.80 147.40	FELDSPAR CRYSTAL/LAPILLI TUFF										
	Light to medium greenish grey, generally weak to moderately sericitic and weakly carbonate altered, with mottled coarse grained, and weak to moderately laminated/banded texture. Unit contains 2 to 4%, 1 to 3mm, ovoid, blue quartz eyes.	NS	139.80 147.40	7.60	n/a	n/a	-	0.5-1%			
		8336	139.80 141.00	1.20	.01	1.10	-	1%			
		8337	141.00 142.00	1.00	.01	.70	-	0.5%			
		8338	142.00 143.20	1.20	.02	1.00	-	0.5%			
	Well developed sericitic cleavage, parallel to foliation at 65 degrees to the core axis.	8339	143.20 144.50	1.30	.01	1.00	-	0.5%			
		8340	144.50 145.00	.50	.03	.80	-	TRACE			
	Non-magnetitic, and weakly reactive to HCl.	8341	145.00 146.00	1.00	.01	.70	TRACE	1%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Cut by several, large (1 to 50cm), coarse grained, white, clean quartz veins, generally at shallow (20 to 40 degree) angles to the core axis, but veins are also somewhat irregular and branching.	8342	146.00 147.40	1.40	.01	1.60	-	1-2%			
	0.5 to 1%, finely disseminated and wispy laminated pyrite.										
	Moderately broken unit, with 2 to 15cm breakage along sericitic cleavage surfaces.										
	Transitional lower contact, into more mafic, chloritic tuffs.										
147.40 180.70	PLAIGIOCLASE-CHLORITE-AMPHIBOLE SCHIST										
	Intercalated mafic and felsic tuffs.	NS	147.40 180.70	33.30	n/a	n/a	-	2-4%			
	Alternating, thick (several metre) bands of dark green, chloritic, fine grained, weakly phyllitic and laminated, magnetic, pyritic (2 to 4%), mafic metavolcanic tuffs, and medium grey to green, sericitic and carboante altered, well foliated/laminated, fine grained, pyritic, non-magnetic, felsic metavolcanic tuffs.	8343	147.40 149.00	1.60	.01	.70	-	3-4%			
		8344	149.00 149.90	.90	.06	.50	-	3-4%			
		8345	149.90 152.00	2.10	.01	.90	-	1%			
		8346	152.00 153.00	1.00	.01	1.40	-	2%			
		8347	153.00 153.85	.85	.02	.60	-	5-8%			
	Felsic tuffs exhibit tuffaceous banding, but only locally have quartz eyes (not the typical blue ovoid grains), and appear more pyritic and carbonate altered than the overlying felsic metavolcanics.	8348	153.85 155.00	1.15	.01	.30	-	2%			
		8349	164.00 165.50	1.50	.01	.20	-	3-4%			
		8350	165.50 167.00	1.50	.01	.60	-	3-4%			
	More felsic sections contains some thinner (10 to 50cm), more mafic bands, and more mafic sections contain a few, thin (10 to 50cm), more felsic bands.	8351	176.00 177.50	1.50	.06	1.90	-	1-2%			
		8352	177.50 179.00	1.50	.37	2.30	-	3-4%			
		8353	179.00 180.70	1.70	.06	2.50	-	2-3%			
	Contacts between sections are somewhat gradational.										
	147.40 149.90 Mafic metavolcanic tuff.										
	149.90 153.85 Felsic carbonate altered metavolcanic tuff.										
	153.85 157.60 Mafic metavolcanic tuff.										
	157.60 159.15 Felsic metavolcanic tuff.										
	159.15 164.25 Mafic metavolcanic tuff.										
	164.25 170.40 Felsic metavolcanic tuff.										
	170.40 172.60 Mafic metavolcanic tuff.										
	172.60 173.50 Feldspar Porphyritic Quartz Diorite Dyke. Medium grey, feldspar porphyritic intrusive dyke.										
	173.50 180.70 Mafic metavolcanic tuff, including well laminated/banded zones, and minor, greenish yellow, (limonitic?) weathered pyrite.										
	Well developed lamination/foliation oriented at 55 to 65 degrees to the										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	core axis. Entire unit contains 2 to 4%, finely disseminated pyrite, locally concentrated as wispy grains along planar horizons parallel to foliation. Minor, thin (1 to 5cm), irregular quartz lenses/veins, locally with minor orange-red jasper veinlets. 165.70 165.85 Large quartz vein with irregular contacts oriented at 50 degrees to the core axis. Generally 5%, irregular, patchy networking of calcite mottling throughout unit. Generally moderately competent unit, with 5 to 25cm breakage parallel to foliation at 60 degrees to the core axis. Lower contact is sharp but poorly recovered.										
180.70 185.15	FELDSPAR CRYSTAL/LAPILLI TUFF Light to medium grey to pinkish grey, mottled, coarse grained, sericitic crystal tuff, locally with tuffaceous, augen-gneissic foliated texture, but generally fairly massive. Weak foliation oriented at 45 to 55 degrees to the core axis. Minor to 0.5% finely disseminated pyrite. No significant veining. Relatively competent unit, with 10 to 50cm breakage along irregular fractures. Lower contact is sharp and oriented at 80 degrees to the core axis.	NS 8354	180.70 185.15 180.70 182.00	4.45 1.30	n/a .05	n/a 1.00	- -	0.5% MINOR			
185.15 221.00	ASH TUFF / FINE LAPILLI TUFF Interbanded ash and fine quartz-feldspar crystal tuffs, locally exhibiting graded bedding. Light to medium grey to green, well laminated, non-magnetic, weak to moderately calcitic. Foliation and banding oriented at 70 to 85 degrees to the core axis. Locally contains zones with brownish mustard or emerald green coloured laminae. Minor quartz-calcite veining. Generally 1 to 2%, finely disseminated pyrite, but locally up to 3 or 4%	NS 8355 8356 8357 8358	185.15 220.55 186.50 188.00 188.00 189.50 218.00 219.50 219.50 220.55	35.40 1.50 1.50 1.50 1.05	n/a .13 .15 .08 .10	n/a 1.70 2.10 1.30 1.40	- - - TRACE -	1-3% 1-2% 2-3% 2-3% 1-2%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER

concentrated along bedding laminations.
Unit has weak to moderte sericitic, and slightly lesser carbonate altered appearance.
Unit locally exhibits minor folding of laminations adjacent to veining.
Relatively clean, homogeneous unit.
Moderately competent unit, generally with 5 to 50cm breakage along foliation/bedding planes, but locally more broken into thin discs, and/or 1 cm pieces.
Lower contact not encountered.
End of Hole.

ESSO MINERALS CANADA ON88-6-C-236

SUMMARY DRILL LOG

Project Name: HN

Hole Number: HN88-42

Project Number: 1677

Logged By: Dane Bridge

NTS: 42H/8

Date: October 1988

Location: L32+00W, 5+25S

Claim Number: L-872267

Azimuth: 180° Dip: -45°

Length (m): 155

PURPOSE: Test elevated IP chargeability anomaly in broad magnetic low.

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.00	7.00	Overburden	
7.00	8.45	Mafic Metavolcanics	Not Assayed
8.45	19.90	Feldspar Porphyry Dykes (Two Phases) 20% white plagioclase phenocrysts in fine-grained groundmass with biotite, cut by a finer-grained phase. Minor pyrite.	0.01 (3)
19.90	32.85	Mafic Metavolcanics Dark green, very weakly magnetic basalt. Trace pyrite, pyrrhotite.	Not Assayed
32.85	34.50	Feldspar Porphyry Dyke As above	Not Assayed
34.50	155.00	Mafic Metavolcanics Mainly aphanitic, non-magnetic basalt. Minor siltstone interbeds and biotitic basaltic tuff or mafic sediments. Minor calcite veining. Trace pyrite	0.01 (1)
	155.00	END OF HOLE	

H-M PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HM88-42
Page: 1

Drilled by:	Bradley Bros. Limited.	Azimuth:	180	Claim No:	L-872267
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	32+00W
Casing:	Casing Removed	Acid Tests:		Northing:	5+25S
				Elevation:	Level
Started:	Oct. 21, 1988	Depth Az. Dip			
Finished:	Oct. 22, 1988	7.00 -45.0		Purpose:	Test weak IP response in Mag low
Logged by:	Dane Bridge	107.00 -41.5		Length:	155.00Metres
Date logged:	October 1988	155.00 -38.5		Vert. Proj:	104.0 Metres
Logging Method:	Log II			Hor. Proj:	115.0 Metres
Measurement System:	Metric			Ovb. Depth:	5.0 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 7.00	OVERBURDEN										
7.00 8.45	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE) Mafic volcanic. Very dark green, fine grained basalt with fine metamorphic hornblende. 1% calcite veinlets. Non foliated. Non magnetic.	NS	7.00	8.45 1.45	n/a	n/a	-	TRACE			
8.45 19.90	FELDSPAR PORPHYRITIC QUARTZ DIORITE INTRUSIVE - UNALTERED										
	8.45 16.55 Main, earlier phase. Fine grained, feldspathic groundmass with disseminated biotite. 20%, 1 to 8mm, anhedral to subhedral plagioclase phenocrysts. Local, minor quartz veining, and up to 1% pyrite.	NS	8.45	19.90 11.45	n/a	n/a	-	MINOR			
		0359	11.00	13.00 2.00	.01	.90	-	MINOR			
		0360	13.00	14.60 1.60	.01	1.10	-	1%			
		0361	14.60	16.55 1.95	.01	1.20	-	MINOR			
	16.55 19.20 Finer grained, later phase. Very fine grained, feldspathic groundmass with biotite. 25%, 1 to 4mm, plagioclase phenocrysts. Minor mafic inclusion. Minor quartz veining.										
	19.20 19.90 Same as earlier phase between 8.45 to 16.55. Lower contact oriented at 80 degrees to the core axis.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
19.90 32.85	MAFIC METAVOLCANIC FLOWS (PE THOLEIITE) Mafic volcanic. Fine grained, very dark green basalt. Very weakly foliated. 10%, fine acicular hornblende. 1%, irregular calcite-quartz veining. Very weakly magnetic. Trace pyrrhotite and pyrite.	MS	19.90 32.85	12.95	n/a	n/a	-	TRACE			
32.85 34.50	FELDSPAR PORPHYRITIC QUARTZ DIORITE DYKE Intrusive dyke. Fine grained groundmass with 10%, 1 to 6mm, anhedral to subhedral, plagioclase phenocrysts. Similar to earlier dike phase above. Non-magnetic. Trace pyrite. Sharp upper and lower contacts oriented 75 and 70 degrees to the core axis.	MS	32.85 34.50	1.65	n/a	n/a	-	MINOR			
34.50 155.00	MAFIC METAVOLCANIC FLOWS (PE THOLEIITE) Mafic volcanic. Aphanitic to fine-grained, dark green to greenish grey. Minor, fine, metamorphic hornblende and biotite throughout. Absent to trace disseminated pyrrhotite and pyrite. Trace to minor calcite and quartz-calcite veinlets and patches.	MS	34.50 155.00	120.50	n/a	n/a	-	MNR-1%			
	51.85 52.85 And	8362	38.75 40.40	1.65	.01	.40	-	MINOR			
	53.90 54.65 Very fine grained, medium grey quartz siltstone, interbedded with mafic volcanics. 1cm quartz vein containing 10% pyrite, and 1% chalcopyrite at 52.35 metres. Weakly foliated at 80 to 85 degrees to the core axis.	8363	144.10 146.70	2.60	.01	1.00	-	2%/PO			
	67.25 69.65 Moderately foliated, extremely biotite rich section with 10%, 1mm augen-shaped calcite-quartz? grains. Possibly a basaltic tuff, or epiclastic interflow material derived from mafic volcanics. Foliation approximately 80 degrees to the core axis										
	80.10 80.35 Siltstone, interbanded in medium green basalt. Dark purplish gray biotitic siltstone with 50% hornblende metacrysts and 1% pyrrhotite.										
	86.00 90.30 Interbedded siltstone and mafic volcanic debris. Contains sections of siliceous siltstone up to 25 cm thick in mixed biotitic basalt with siltstone interbeds. 5% calcite-quartz veinlets parallel to weak foliation oriented at 80 degrees to the core axis.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
90.30 94.00	Fine grained, dark green basalt, with 25%, coarse (up to 1cm), hornblende metacrysts. Non-magnetic.										
94.00 120.15	Basalt. Mainly aphanitic, dark gray, hard, uniform, with 5 to 10%, fine hornblende metacrysts, and minor chloritic bands. About 2% calcite veinlets as occur in units above. Non-magnetic.										
120.15 136.60	Basalt. Aphanitic to very fine grained, very hard and moderately hard interbanded sections. Fine hornblende metacrysts more common in slightly more chloritic sections. Trace calcite veining. Non-magnetic.										
136.60 139.35	Slightly biotitic and weakly foliated basalt with 5% calcite-quartz veins.										
139.35 155.00	Aphanitic to fine grained, hard, uniform, dark gray-green basalt. 2% calcite veining. Non-magnetic.										
144.10 146.70	3% quartz veining. Average 1% pyrite and up to 1% pyrrhotite. Sulphides mainly disseminated in basalt. Lower contact not encountered.										
155.00	End of hole.										

ESSO MINERALS CANADA

om88-6-C-236

SUMMARY DRILL LOG

Project Name: HN

Hole Number: HN88-43

Project Number: 1677

Logged By: Dane Bridge

NTS: 42H/8

Date: October 1988

Location: L39+00W, 7+25S

Claim Number: L-871909

Azimuth: 180° Dip: -45°

Length (m): 276

PURPOSE: Test IP anomaly and extend drill section on L39W to the north of DDH HN88-31

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.00	18.60	Overburden	
18.60	70.80	Mafic Metavolcanic with minor Intrusive Dykes Dark, chloritic basalt with minor to abundant metamorphic hornblende, locally biotitic. 2% calcite veinlets. Minor pyrite.	0.01 (4)
70.80	80.40	Feldspar Porphyry Dyke 25% subhedral, white, plagioclase phenocrysts in fine-grained biotitic matrix.	0.01 - 0.02 (4)
80.40	124.35	Mafic Metavolcanic with minor Feldspar Porphyry Dykes Dark green, aphanitic and fine-grained, porphyritic basalt. Very minor garnet-epidote patches and calcite veinlets. Trace to 1% pyrite.	0.01 - 0.06 (6)
124.35	128.60	Felsic Crystal Tuff Fine-grained, massive, with minor 1 mm quartz phenocrysts.	Not Assayed
128.60	130.85	Feldspar Porphyry Dyke Same as above	0.01 (1)
130.85	149.20	Mafic Metavolanic with minor Feldspar Porphyry Dyke Mainly dark, aphanitic basalt with bleached patches and epidote-garnet patches. Slightly calcitic. Minor pyrite. Locally fractured with minor silica-pyrite alteration.	0.01 (6)
149.20	178.85	Biotite Quartz Diorite with minor Mafic Metavolcanic Inclusions and Feldspar Porphyry Dyke Light pinkish-grey, feldspar porphyritic diorite with minor quartz veining and 1% pyrite. Fractured and weakly silicified at contact for 4.65 m.	0.01 - 1.46 (9)
178.85	276.00	Biotite Quartz Diorite Pink to grey, and locally reddish-grey, feldspar porphyritic biotite quartz diorite. Commonly 1 to 2% quartz veining, and 1% disseminated pyrite. Minor sections of 5-10% quartz veining.	0.01 - 32.50 (23)
	276.00	END OF HOLE	

H-N PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HN88-43
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871909
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	39+00W
Casing:	Casing Removed			Northing:	7+25S
		Acid Tests:		Elevation:	Level
Started:	Oct. 23, 1988				
Finished:	Oct. 27, 1988	Depth / Az. / Dip		Purpose:	Test IP anomaly & extend section N of HN88-
		17.00 / -45.0			
Logged by:	Dane Bridge	117.00 / -40.0		Length:	276.00Metres
Date logged:	October 1988	217.00 / -38.0		Vert. Proj:	179.0 Metres
Logging Method:	Log II	276.00 / -38.5		Hor. Proj:	210.0 Metres
Measurement System:	Metric			Ovb. Depth:	13.3 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 18.60	OVERBURDEN										
18.60 70.80	MAFIC METAVOLCANIC FLOWS (PB THOLEIITE)										
18.60 25.55	Aphanitic, massive, black basalt, with 2% calcite veinlets in very weak foliation. Trace pyrite. Sharp contact oriented at 85 degrees to the core axis. Very slightly magnetic.	NS	18.60 70.80	52.20	n/a	n/a	-	TRACE			
		8364	32.40 34.10	1.70	.01	.60	-	2%			
		8365	34.10 35.10	1.00	.01	.80	-	TRACE			
25.55 32.40	Medium grained, dark grey-green basalt, with minor to 20%, metamorphic hornblende. Trace pyrite. Very slightly magnetic. Sharp contact oriented at 60 degrees to the core axis.	8366	37.90 39.90	2.00	.01	1.00	-	2%			
		8367	47.00 47.65	.65	.01	.70	-	2%			
32.40 36.65	Massive, aphanitic to fine grained, basalt with fine plagioclase phenocrysts. Patchy epidote-garnet surrounding one quartz vein. Very weakly magnetic.										
36.65 50.85	Aphanitic, dark greenish black basalt. Weakly foliated sections. Minor bleaching along fractures in massive sections. Averages trace pyrite. Non-magnetic to weakly magnetic.										
37.70 37.90	Intrusive dike. Aphanitic, dark groundmass, with 20%, 1 to										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	3mm, white plagioclase phenocrysts.										
50.85 70.80	Aphanitic to fine grained, basalt. Mainly dark greenish gray, with minor bands and patches of biotitic basalt. Up to 1% quartz-calcite veinlets. Average trace pyrite. Weakly magnetic										
61.80 61.90	Fault gouge oriented at 45 degrees to the core axis.										
70.80 80.40	FELDSPAR PORPHYRITIC QUARTZ DIORITE DYKE										
	Mainly intrusive dike. Fine grained, dark brown-gray, feldspathic groundmass, with biotite. 25%, 1 to 5mm, white, subhedral, plagioclase phenocrysts. Non-magnetic. Average 0.5% pyrite. Upper contact sharp at 50 degrees to the core axis. Lower contact irregular.	NS	70.80 80.40	9.60	n/a	n/a	-	0.5%			
		3868	70.80 72.50	1.70	.01	1.20	-	1%			
		3869	72.50 72.85	.35	.01	.80	-	TRACE			
		3870	72.85 74.95	2.10	.02	.40	-	1%			
72.85 74.95	Basalt inclusion.	3871	74.95 77.00	2.05	.01	1.30	-	0.5%			
80.40 124.35	MAFIC METAVOLCANIC FLOWS (PR THOLEIITE)										
	Mafic volcanic unit, with minor intrusive dikes.	NS	80.40 124.35	43.95	n/a	n/a	-	MNR-1%			
80.40 93.55	Aphanitic, dark green basalt, with foliated bands of fine grained dark brown-gray, biotitic basalt. Core angles vary from 60 to 80 degrees to the core axis. Biotitic bands are locally calcitic and are probably metamorphic rather than primary. Non magnetic.	3872	104.00 105.60	1.60	.01	1.10	-	TRACE			
		3873	108.50 108.90	.40	.01	1.10	-	2%			
		3874	117.30 118.80	1.50	.01	1.10	-	TRACE			
		3875	118.80 120.50	1.70	.06	1.60	-	0.5%			
		3876	120.50 122.10	1.60	.02	1.20	-	0.5%			
87.90 91.60	Feldspar Porphyritic Quartz Diorite Dyke. Fine grained, feldspathic groundmass with biotite. 30%, 1 to 4mm, plagioclase phenocrysts. 1% pyrite. Non-magnetic.	3877	122.10 124.35	2.25	.02	1.20	-	3%			
93.55 98.85	Aphanitic, very dark green basalt. 1% disseminated pyrite. 1% garnet-epidote patches. Strongly magnetic.										
98.55 118.80	Porphyritic basalt. Aphanitic, very dark green with 15%, commonly 1 to 3mm, subhedral, plagioclase phenocrysts. Minor, local (10cm section) of fragmental basalt. Strongly magnetic. Pyrite absent, except as noted locally in sample description sheets. One intrusive dike at 103.25 103.40 metres. Dike is non-magnetic, and has chilled contacts.										
118.80 122.10	Feldspar Porphyritic Quartz Diorite Dyke. Fine grained, dark gray, feldspathic groundmass with minor biotite. 40%, 1 to 4mm, subhedral, white plagioclase phenocrysts.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	Plagioclase locally has hematitic rims at contacts, and near veinlets of epidote. Average up to 1% pyrite. Non magnetic.										
122.10 124.35	Porphyritic basalt. Very fine grained, very dark grey-green. Minor to 10% plagioclase phenocrysts. 3% Disseminated pyrite. 1% quartz-calcite veinlets.										
124.35 128.60	QUARTZ-FELDSPAR CRYSTAL TUFF										
	Felsic crystal tuff. Fine grained, massive, felsic rock with minor, 1mm, quartz phenocrysts. Minor banding at approximately 90 degrees to the core axis, due to sections with biotite.	NS	124.35 128.60	4.25	n/a	n/a	-				
128.60 130.85	FELDSPAR PORPHYRITIC QUARTZ DIORITE DYKE										
	Intrusive dike. Medium grained, dark gray, feldspathic groundmass with biotite. Average 30%, 1 to 4mm, subhedral, plagioclase phenocrysts. Up to 1% quartz veins with trace pyrite, and up to 1%, hairline, calcite and quartz-calcite veinlets cutting quartz veins. Non-magnetic.	NS	128.60 130.85	2.25	n/a	n/a	-	TRACE			
		8378	128.60 130.85	2.25	.01	.90	-	0.5%			
130.85 149.20	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS										
	Mafic volcanic unit. Locally weakly altered.	NS	130.85 149.20	18.35	n/a	n/a	-	1%			
130.85 135.50	Aphanitic, dark gray basalt. Mainly intensely fractured and variably altered and bleached. Varies from bleached halos on fractures to pervasive silica-pyrite alteration. Average weak silicification. Weak calcite veinlets. Average 1% pyrite. Moderately magnetic.	8379	130.85 133.25	2.40	.01	.60	-	0.5%			
		8380	133.25 134.70	1.45	.01	.50	-	TRACE			
		8381	134.70 135.50	.80	.01	.80	-	2%			
		8382	135.50 137.00	1.50	.01	.70	-	0.5%			
		8383	137.00 137.70	.70	.01	.80	-	1%			
135.50 142.90	Aphanitic basalt. Average 1 to 2% fine quartz-calcite veinlets. Local epidote and garnet-epidote patches. Average up to 1% pyrite. Moderately magnetic.	8384	142.90 145.40	2.50	.01	1.10	-	1%			
142.90 145.40	Feldspar Porphyritic Quartz Diorite Dyke. Intrusive dike in mafic section. Medium grained, hydidiomorphic granular, biotite diorite. Locally very weakly silicified. Crackle fractured. Average 1% disseminated pyrite.										
145.40 149.20	Mafic volcanic. Fine grained to aphanitic, near black to										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	creamy in bleached patches. Minor epidote-garnet patches. Strongly magnetic. Trace pyrite near contacts.										
149.20 178.85	PP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED										
	Intrusive rock with minor mafic volcanic sections.	MS	149.20 178.85	29.65	n/a	n/a	-	1-2%			
149.50 153.75	Quartz diorite intrusive. Weakly altered, medium grained, medium gray, slightly porphyritic diorite. Locally intensely fractured and silicified. Overall weakly silicified, with 3% quartz and minor quartz-calcite veining. Average 1 to 1.5% pyrite. Non-magnetic.	8385	149.20 151.50	2.30	.41	1.50	-	1%			
		8386	151.50 153.75	2.25	.02	.90	-	1%			
		8387	153.75 154.50	.75	.02	1.00	-	TRACE			
		8388	154.50 156.50	2.00	.01	.90	-	1%			
		8389	156.50 158.50	2.00	.04	1.00	-	0.5%			
153.75 154.50	Mafic volcanic. Very fine grained, weakly foliated, biotitic basalt. 1% quartz-calcite veinlets. Foliation oriented at 45 to 50 degrees to the core axis. Non-magnetic.	8390	158.50 160.50	2.00	.01	.90	-	0.5%			
		8391	160.50 162.90	2.40	.01	.90	-	1%			
		8392	175.30 177.90	2.60	1.46	4.10	-	2%			
154.50 162.90	Quartz diorite. Medium grained, slightly feldspar porphyritic. Mainly reddish brown due to minor K-spar or hematite. Locally gray. Average 10% primary biotite. Minor quartz. 10%, white, porphyritic plagioclase. Trace to 1% pyrite. Minor quartz veining. Non-magnetic.	8393	177.90 178.85	.95	.14	.90	-	1%			
156.50 158.10	Mainly dark gray, later?, plagioclase porphyritic dike.										
162.90 166.20	Mafic volcanic. Black, very fine grained, slightly biotitic, moderately foliated basalt. 2%, fine calcite veinlets. 3%, coarse, quartz-calcite veinlets. Minor epidote-garnet patches. 1% pyrite. Strongly magnetic.										
166.20 173.60	Quartz diorite. Light pinkish gray, biotite quartz diorite. Average 1% disseminated and fracture-controlled pyrite. 1 to 2% quartz veining.										
173.60 178.85	Porphyritic diorite. Dark gray with 25%, 1 to 5mm, white to slightly pinkish, plagioclase phenocrysts. Average 2% pyrite. Non-magnetic.										
175.30 177.90	Average 15% quartz veins with trace pyrite internally, and minor pyrite along edges.										
178.85 276.00	PP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED										
	Pink to light gray, biotite quartz diorite. Hypidiomorphic granular with	MS	178.85 276.00	97.15	n/a	n/a	TRACE	1-2%			

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	minor, 5 to 8mm, plagioclase phenocrysts. Commonly 1 to 2% quartz veining, 1% pyrite, and trace calcite.	8394	178.85 181.00	2.15	.06	1.20	-	0.5%			
		8395	181.00 183.00	2.00	.01	.90	-	1%			
190.00 192.30	3% quartz veining in white diorite. Trace gray mineral associated with calcite veinlets with chloritic margins.	8396	183.00 185.15	2.15	.09	1.00	-	0.5%			
		8397	185.15 185.90	.75	32.50	90.60	-	2%			
196.80 197.20	2% quartz veining in light gray patch surrounded by pink diorite. Minor calcite veinlets with chlorite rims. Trace gray mineral.	8398	185.90 188.25	2.35	.21	1.90	-	1%			
		8399	188.25 190.60	2.35	.18	1.10	-	1%			
		8400	190.60 191.40	.80	.02	1.50	-	1%			
200.30 200.40	Basalt inclusion.	8401	191.40 192.30	.90	.01	1.10	-	1%			
202.60 202.85	Basalt inclusion.	8402	196.80 197.20	.40	.05	2.90	TRACE	1%			
203.00 204.40	15% quartz veining, and 1 to 1.5% pyrite in pink-gray diorite.	8403	203.00 204.40	1.40	.15	1.00	-	1-2%			
		8404	205.05 205.55	.50	.24	1.10	-	1%			
205.05 205.55	Trace sericite in pinkish gray diorite.	8405	214.85 215.70	.85	.52	2.30	-	1%			
208.30 217.15	Increase in quartz veining to about 5%.	8406	215.70 217.15	1.45	.04	1.00	-	1%			
214.85 215.70	Gray section in predominately red-pink section with 10% quartz veining.	8407	227.30 229.30	2.00	.01	.80	-	0.5%			
		8408	229.30 231.30	2.00	.67	3.20	-	0.5%			
215.70 217.15	Reddish diorite with 10% quartz veining.	8409	231.30 233.45	2.15	.02	.90	-	0.5%			
217.15 227.30	Very uniform pinkish biotite (10%), quartz (1%) diorite. Moderately plagioclase porphyritic, with minor plagioclase up to 8mm. Very minor quartz veining. Trace pyrite. Non-magnetic.	8410	233.45 234.05	.60	.20	1.00	-	1%			
		8411	256.10 256.70	.60	.39	.90	-	2%			
		8412	256.70 258.25	1.55	.10	.80	-	2%			
		8413	267.75 269.55	1.80	.10	1.00	-	1%			
227.30 233.45	Average 4% quartz veins in diorite as at 217.15 to 227.30 metres.	8414	269.55 271.00	1.45	.05	1.00	-	0.5%			
		8415	271.00 273.00	2.00	.07	1.20	-	1%			
233.45 234.05	Very slightly silicified, gray diorite with 1% pyrite and 10% quartz veining.	8416	273.00 275.00	2.00	.12	1.20	-	1%			
234.05 256.10	Mainly pinkish gray diorite, locally with 1% coarse oscillatory zoned plagioclase phenocrysts, and locally with 5%, 3 to 5mm, quartz phenocrysts. Overall average 1% quartz veining. Trace to locally 1% pyrite. Non-magnetic.										
256.10 256.70	Partly brecciated gray diorite with chlorite on clast boundaries. 2% disseminated pyrite. 3% quartz veining.										
256.70 258.25	2% pyrite. 3% quartz veining.										
267.75 271.00	Minor sections with weak foliation and weak silica-sericite alteration containing disseminated pyrite. Maximum pyrite content is 10% over 3 cm. Average pyrite is 1%. Weak foliation oriented at 75 to 80 degrees to the core axis. Trace calcite on fractures.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	ALTERATION CARB	ALTERATION SER

Lower contact not encountered.
276.00 End of hole.

ESSO MINERALS CANADA

OM88-6-C-236

SUMMARY DRILL LOG

Project Name: HN.

Hole Number: HN88-44.

Project Number: 1677.

Logged By: Dane Bridge.

NTS: 42H/8.

Date: October 1988.

Location: L42+00W, 6+50S.

Claim Number: L-871911.

Azimuth: 180°. Dip: -45°.

Length (m): 266.

PURPOSE: Search for a mineralized shear north of the north contact of a biotite quartz diorite body.

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.00	8.00	Overburden	
8.00	99.30	Mafic Volcanic Unit, with Minor Feldspar Porphyry Dykes Mainly fine-grained, chloritic basalt with minor calcite veinlets.	0.01 (6)
99.30	129.00	Mafic Volcanic Unit with Weak Calcite Alteration, and Weak to Strong Bleaching Associated with Late Faults	0.01 (4)
129.00	140.55	Siliceous Siltstone and Felsic Crystal Tuff Mainly dark grey, chloritic, siliceous siltstone. Locally with mafic debris and minor biotite and amphibole. Includes minor gritty and fragmental sections that may be crystal tuff or arenite-wacke.	0.01 - 0.47 (4)
140.55	221.15	Mafic Volcanic Unit and minor Interbedded Siltstone and Mafic Derived Epiclastic Rocks Minor silicified zones in basalt. Unit becomes contact metamorphosed towards base and locally feldspar metacrystic. Minor late fault zones.	0.01 - 0.53 (16)
221.15	266.00	Biotite, Quartz Diorite Intrusive Medium-grained, pinkish-gray, hypidiomorphic granular to feldspar porphyritic diorite. About 40% of unit is bleached to a light grey colour and weakly sericitic and/or silicified. Minor pyrite and trace grey mineral.	0.01 - 0.15 (12)
	266.00	END OF HOLE	

H-M PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HM88-44
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871911
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	42+00W
Casing:	Casing Removed			Northing:	6+50S
		Acid Tests:		Elevation:	Level
Started:	Oct. 27, 1988				
Finished:	Oct. 31, 1988	Depth Az. Dip		Purpose:	Test for mineralized shear structure
		0.00 -45.0			
Logged by:	Dane Bridge	108.00 -39.0		Length:	266.00Metres
Date logged:	November 1988	208.00 -40.0		Vert. Proj:	174.0 Metres
Logging Method:	Log II	265.00 -41.0		Hor. Proj:	201.0 Metres
Measurement System:	Metric			Ovb. Depth:	5.7 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 8.00	OVERBURDEN										
8.00 50.10	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
8.00 29.75	Aphanitic to fine grained, very hard, dark gray-green basalt. Non-magnetic to locally slightly magnetic. No sulphides. Average 1% calcite and calcite-quartz-epidote? patches, which are bleached and weakly foliated at 35 to 70 degrees to the core axis.	MS	8.00	50.10 42.10	n/a	n/a	-	1%			
		8417	36.90	38.00 1.10	.01	.30	-	4%			
		8418	38.00	39.30 1.30	.01	1.10	-	1%			
		8419	39.30	41.10 1.80	.01	.40	-	3%			
		8420	41.10	43.55 2.45	.01	.50	-	0.5%			
15.25 15.85	Pragmental section with fine, shard-like clasts and patches of serpentine. May be a flow-top breccia with glass altered to paragonite and then to serpentine.	8421	43.55	45.85 2.30	.01	.30	-	MINOR			
		8422	45.85	46.65 .80	.01	.40	-	MINOR			
24.80 29.75	5% calcite alteration as white veinlets, coarse, pink patches and foliated epidote-carbonate patches.										
27.80 27.95	Fault gouge oriented at 80 degrees to the core axis.										
29.75 31.70	Feldspar Porphyritic Quartz Diorite Dyke. Fine grained, very dark brownish gray, biotitic groundmass with 25%, mainly 1 to 3mm and locally to 5mm, mainly anhedral, white plagioclase phenocrysts. Both contacts are sharp. Upper at 60										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	degrees, and lower at 45 degrees to the core axis.										
31.70 50.10	Mafic volcanic unit with section of strong calcite alteration. Fine grained, dark green, normal hardness basalt. Non-magnetic to locally moderately magnetic.										
31.70 38.00	Locally mottled with bleached patches and minor calcite veinlets. May be a series of thin flows with flow rubble. Average 1% pyrite.										
38.00 43.55	Weakly calcite altered. Calcite veins, calcite patches and bands up to 2 cm thick. Massive to locally slightly biotitic and well foliated at 45 degrees to the core axis. Average 1% pyrite.										
43.55 45.85	Almost total replacement of basalt by medium-grained, off-white calcite. 25%, irregular patches of basalt remaining. One 15 cm quartz vein and minor quartz patches.										
45.85 50.10	Aphanitic, very dark green, hard basalt with weak calcite alteration. Average 3% calcite-quartz veinlets. Non-magnetic. No sulphides.										
50.10 53.20	FELDSPAR PORPHYRITIC QUARTZ DIORITE DYKE Mottled light gray to dark gray dike. Feldspathic groundmass with minor to absent biotite. 30%, 1 to 5mm, subhedral plagioclase phenocrysts. Non-magnetic. Sharp contacts. Upper at 70 degrees, lower at 85 degrees to the core axis.	MS	50.10	53.20 3.10	n/a	n/a	-	0.5%			
53.20 71.60	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS Mafic volcanic with feldspar porphyry dykes.	MS	53.20	71.60 18.40	n/a	n/a	-	TRACE			
53.20 54.35	Mainly massive basalt. Locally weakly foliated. Weakly carbonate altered with 5% calcite patches and veinlets. Non-magnetic. No sulphides.										
54.35 71.60	Very fine grained, hard, dark green, massive basalt. 1 to 2% calcite and calcite-quartz veinlets. Non-magnetic. No sulphides.										
55.75 56.30	Amygdaloidal with 3%, 1mm and locally 2 to 3mm, calcite-filled amygdules.										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	71.60 74.30 Feldspar Porphyritic Quartz Diorite Dyke. Medium pinkish gray porphyry dike. Fine grained, feldspathic groundmass with 10% biotite. 30%, 1 to 3mm, white plagioclase phenocrysts, and minor, anhedral plagioclase up to 1cm.										
	74.30 81.85 Basalt as at 54.35 to 71.60m. Up to 1% calcite.										
	81.85 82.90 Feldspar Porphyritic Quartz Diorite Dyke. Porphyry dike as at 71.60 74.30. 15 cm, gray-green bleached and brecciated zone in adjacent basalt at lower contact.										
71.60 99.30	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE)										
	Very fine-grained, dark green to black, massive basalt. Minor, 1cm, foliated and quartz-epidote sections. Minor, 1 to 2cm zones of brecciation. No sulphides. 1% calcite veinlets. Non-magnetic.	NS	71.60	99.30 27.70	n/a	n/a	-	TRACE			
99.30 129.00	WEAKLY BRECCIATED MAFIC METAVOLCANIC WITH EPIDOTE-CARB. BANDS										
	Mafic volcanic unit with weak carbonate alteration, and weak to strong bleaching associated with late faults.	NS	99.30	129.00 29.70	n/a	n/a	-	0.5-1%			
	99.30 113.45 Fine grained, mottled, medium gray to medium green basalt. Minor weak calcite alteration, and very weak bleaching. Minor scattered sections with 0.5 to 12cm quartz-epidote and calcite-quartz veins. Average trace pyrite. Non-magnetic.	8423	100.90	103.00 2.10	.01	1.00	-	TRACE			
		8424	103.00	105.20 2.20	.01	1.70	-	0.5%			
		8425	122.15	122.55 .40	.01	1.50	-	2%			
		8426	127.90	129.85 1.95	.01	1.60	-	1%			
	100.90 105.20 Four quartz-pyrite veins, and up to 1% disseminated pyrite in basalt.										
	113.45 124.90 Variably weakly to strongly bleached, and weakly calcite altered basalt. Colour varies from gray-green to pale greenish white, with soft talc?-chlorite patches. Alteration is centered around late faults. No sulphides except in minor quartz veins. Non-magnetic.										
	114.00 114.50 Fault Breccia. Dark green, talc-serpentine fault breccia with vuggy calcite.										
	118.20 118.50 Bleached fragments in calcite matrix. Fractures and possibly the fault oriented at 15 degrees to the core axis.										
	122.15 122.55 3 quartz-epidote-pyrite veins in weakly bleached basalt.										
	124.90 129.00 Weakly epidote altered basalt with 1% pyrite, and 2										

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
	quartz-pyrite veins.										
129.00 140.55	SILTSTONE										
	Mixed siltstone and felsic crystal tuff unit.	MS	129.00 140.55	11.55	n/a	n/a	-	2%			
129.00 129.85	Dark gray, very fine grained, chloritic, siliceous siltstone. Sharp upper contact oriented at 90 degrees to the core axis, with epidotized basalt. Trace pyrite. Non-magnetic.	8427	129.85 131.50	1.65	.01	2.20	-	1%			
		8428	131.50 132.70	1.20	.47	23.90	TRACE	5%			
		8429	132.70 134.00	1.30	.12	8.90	-	1%			
		8430	138.00 140.55	2.55	.32	9.90	-	2%			
129.85 132.70	Light gray, fine grained, felsic crystal tuff with 1 to 2%, 1mm quartz phenocrysts. (May be siliceous siltstone with minor arenite grains). 2% pyrite. Non-magnetic.										
129.85 131.00	Minor, crudely laminated silicate iron formation. Light red to cream coloured.										
131.50 132.70	Crystal tuff? with 5% disseminated pyrite, and 25%, white, irregular quartz veins. Veins contain minor chlorite and calcite, trace pyrite and gray mineral along vein-wallrock contacts.										
132.70 140.55	Dark greenish gray, impure siliceous siltstone. Commonly with 5 to 10% biotite, minor chlorite and locally, 5 to 10%, fine grained, amphibole. Local sections contain 25% amphibole. Probably impure mafic debris in a mainly siliceous siltstone unit. Average 1% pyrite. Non-magnetic.										
140.55 221.15	SCHISTOSE MAFIC METAVOLCANIC WITH EPIDOTE-CARBONATE BANDS										
	Variable mafic volcanic unit including flows and tuffs, as well as minor siltstone and mafic epiclastic horizons.	MS	140.55 221.15	80.60	n/a	n/a	-	2%			
140.55 147.85	Very dark gray-green, medium grained, speckled basalt, with 25% amphibole in a hard, siliceous-looking matrix. Strongly magnetic.	8431	147.85 149.20	1.35	.01	.40	-	1%			
		8432	149.20 150.60	1.40	.01	.50	-	1%			
		8433	150.60 151.30	.70	.01	.80	-	3%			
		8434	151.30 152.50	1.20	.01	1.10	-	TRACE			
147.85 151.30	Mafic to siliceous siltstone. Dark gray to light gray siltstone with variable mafic component. Moderately foliated at 80 degrees to the core axis. Weakly to strongly magnetic. 1 to 2% pyrite, and 1% calcite-quartz veins.	8435	152.50 152.90	.40	.05	2.80	-	5%			
		8436	158.65 159.40	.75	.01	.80	-	4%			
		8437	163.30 164.00	.70	.21	1.20	-	3%			
		8438	179.00 180.55	1.55	.01	2.30	-	0.5%			
151.30 155.70	Mafic tuff?. Medium gray-green, fine grained, moderately	8439	180.55 182.00	1.45	.01	1.40	-	0.5%			

Interval (Metres)		Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
		well laminted and deformed mafic, epidote-chlorite rich section, locally with shards. Epidote-hematite-pyrite patches around quartz veins. Non-magnetic.	8440	182.00 183.80	1.80	.01	1.00	-	TRACE			
			8441	183.80 185.50	1.70	.02	1.10	-	TRACE			
			8442	197.20 198.75	1.55	.01	1.10	-	TRACE			
155.70	163.30	Aphanitic to fine grained, dark green-black basalt. Mottled from dark to locally cream coloured, with 1 to 2% scattered patches of epidote-quartz-garnet and locally pyrite. Section is more hornfelsed and metamorphosed than mafic sections higher in the hole. Non-magnetic.	8443	198.75 200.00	1.25	.01	1.50	-	TRACE			
			8444	200.00 201.40	1.40	.02	1.70	-	0.5%			
			8445	201.40 202.80	1.40	.01	1.40	-	0.5%			
			8446	218.50 221.15	2.65	.53	1.70	-	2%			
158.65	159.45	4% disseminated pyrite with minor quartz veins and bleaching										
163.30	179.00	As at 155.70 to 163.70 except weakly to variably strongly magnetic. Minor bleached and brecciated sections.										
163.30	164.00	Intensely silicified basalt with 3% disseminated pyrite. Mottled medium to light gray. Non-magnetic.										
179.00	213.00	Metamorphosed and epidote altered basalt. Highly variable section with metamorphic contact effects from intrusive body to the south (down the hole). Sections with 5 to 15%, 1 to 3mm, euhedral to subhedral, plagioclase metacrysts in basalt. Sections of brecciation and bleaching with overall weak and locally strong epidote development.										
202.80	207.40	Fault Zone. Variably to locally totally epidotized basalt, with local reddish hematite coloration. Intensely brecciated to sheared. Core recovery approximately 70%. Fracturing and shearing commonly at 0 degrees to the core axis. Non-magnetic.										
213.00	221.15	Aphanitic to fine grained, hornfelsed basalt. Slightly biotitic, siliceous looking. Very minor epidote. Crackle fractures with thin bleached halos. Weakly magnetic. Trace pyrite but increasing to 2% at contact.										
221.15	266.00	FP QUARTZ DIORITE INTRUSIVE - WK TO MOD ALTERED										
		Medium grained, light gray and pinkish gray, hypidiomorphic granular to feldspar porphyritic. Locally bleached white around fractures and quartz veins. Non-magnetic.	NS	221.15 266.00	44.85	n/a	n/a	-	0.5-3%			
			8447	221.15 222.50	1.35	.14	3.00	-	3%			
			8448	222.50 224.50	2.00	.03	1.70	-	1%			
221.15	222.50	Very weakly silicified, with trace white bleaching (sericite?) on fractures. 3% disseminated pyrite.	8449	224.50 226.20	1.70	.05	2.20	-	1%			
			8450	226.20 228.00	1.80	.02	1.50	-	1%			

Interval (Metres)		Description	Sample No.	Interval (Metres)		Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
222.50	226.20	Pinkish-gray and unaltered.	8451	228.00	230.00	2.00	.04	2.00	-	1%			
226.20	231.90	Light gray, weakly silicified, with 4% quartz, and 1% calcite-chlorite veining. Trace pyrite. Trace gray mineral in 2 veins.	8452	230.00	231.90	1.90	.10	1.80	-	1%			
231.90	253.10	Slightly pinkish gray diorite, with overall weak sericitic alteration. 1 to 2 cm wide bleached, white, sericitic halos on fractures or sections of up to 1m of white, chalky sericitic alteration with minor quartz-calcite-chlorite veinlets. Average up to 1% disseminated pyrite. Non-magnetic.	8453	237.70	238.85	1.15	.03	1.80	-	0.5%			
			8454	238.85	240.90	2.05	.15	1.50	-	0.5%			
			8455	244.40	245.00	.60	.08	2.80	-	0.5%			
			8456	249.80	252.40	2.60	.01	2.70	-	0.5%			
			8457	252.40	253.10	.70	.03	2.80	-	0.5%			
			8458	253.10	254.00	.90	.01	2.30	-	0.5%			
237.70	238.85	0.											
244.40	245.00	0.											
249.80	252.40	Three sections with almost total bleaching of feldspars. Overall moderately intense sericite alteration, but no foliation or deformation.											
252.40	266.00	Slightly pinkish gray, biotite quartz diorite. Minor patches of weak silicification. Average 1% quartz veining. Up to 1% pyrite. Non-magnetic.											
Lower contact not encountered.													
266.00	End of hole.												

ESSO MINERALS CANADA

OM88-6-C-236

SUMMARY DRILL LOG

Project Name: HN.

Hole Number: HN88-45.

Project Number: 1677.

Logged By: D. Bridge.

NTS: 42H/8.

Date: November, 1988.

Location: L36+00W, 9+00S.

Claim Number: L-871904.

Azimuth: 180°. Dip: -45°.

Length (m): 150.0.

PURPOSE: Test coincident magnetic low and anomalous IP north of anomalous overburden tills in RC-102, 103, 104.

From (m)	To (m)	Description	Gold Assays (g/tonne)
		CASING REMOVED	
0.00	7.35	Overburden	
7.35	48.25	Mafic Metavolcanic (Relatively Unaltered) Aphanitic to fine-grained, massive, chloritic basalt with 20% biotitic bands and patches, and 5% bleached, silicified or epidotized patches. Minor epidote-garnet patches and calcite veinlets. Minor pyrite.	Not Assayed
48.25	150.00	Biotite Quartz Diorite 75% pinkish-grey diorite, with minor disseminated pyrite and minor quartz and calcite veins. 25% bleached zones with weak sericitic? alteration of feldspar, local silicification, and local quartz-pyrite veins and traces of grey mineral. Minor silicified shear zones in diorite from 81.00 to 100.65 m.	0.01 - 14.22 (39)
	150.00	END OF HOLE	

H-N PROJECT (Ont. 77)

ESSO MINERALS CANADA
DIAMOND DRILL RECORD

Hole: HN88-45
Page: 1

Drilled by:	Bradley Bros. Limited	Azimuth:	180	Claim No:	L-871904
Hole Size:	BQ	Dip:	-45	Grid:	West
Core Size:	BQ			Easting:	36+00W
Casing:	Casing Removed			Northing:	9+00S
		Acid Tests:		Elevation:	Level
Started:	Nov. 1, 1988				
Finished:	Nov. 3, 1988	Depth Az. Dip		Purpose:	Test Mag low & anomalous IP response
		7.00 -47.5			
Logged by:	Dane Bridge	107.00 -45.0		Length:	150.00Metres
Date logged:	November 1988	150.00 -49.0		Vert. Proj:	109.0 Metres
Logging Method:	Log II			Hor. Proj:	103.0 Metres
Measurement System:	Metric			Ovb. Depth:	5.3 Metres

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
.00 7.35	OVERBURDEN										
7.35 48.25	MAFIC METAVOLCANIC FLOWS (FE THOLEIITE) Aphanitic to fine grained, mainly dark green to brown basalt. Contact metamorphosed. Mainly chloritic, but 20%, thin bands and irregular patches of biotite-rich basalt. Rare patches with 5%, 1mm secondary amphibole. 5%, hard, light green to cream, bleached and locally epidotized patches. Trace garnet-epidote patches. Up to 1% quartz veining. About 1% calcite veins and hairline veinlets in fractures. Very minor pyrite. Few recognizable textures. Trace 1mm, slightly elongate, possibly vesicules. Biotitic bands commonly oriented at 60 degrees to the core axis. 7.35 13.00 Average moderately magnetic. 13.00 33.50 Non-magnetic. 33.50 41.00 Average weakly magnetic. 41.00 48.25 Non-magnetic, except locally weakly magnetic at lower contact.	MS	7.35	48.25 40.90	n/a	n/a	-	MINOR		

Interval (Metres)	Description	Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
48.25 150.00	FELDSPAR PORPHYRITIC QUARTZ DIORITE INTRUSIVE - UNALTERED										
48.25 50.25	Medium gray, medium grained, moderately porphyritic. 40%, 1 to 3mm, white to gray plagioclase, and 1 to 2% quartz, in a fine grained, feldspathic groundmass with 10% biotite. Contains inclusions of basalt. Transition to a crowded porphyry at contacts. May be a late dyke intruded into diorite-basalt contact. Non-magnetic. Trace pyrite.	NS	48.25	150.00	101.75	n/a	n/a	TRACE	0.5-3%		
		8459	50.25	51.50	1.25	.07	1.70	-	1%		
		8460	51.50	52.75	1.25	.08	1.90	-	1%		
		8461	52.75	53.60	.85	.02	1.60	-	1%		
		8462	53.60	54.95	1.35	.79	11.30	-	7%		
		8463	54.95	56.00	1.05	.14	1.70	-	1-2%		
50.25 54.95	Pinkish gray, biotite quartz diorite. Mainly bleached to a dirty white colour, and overall weakly sericitized. Average 4% quartz veining. Average 1 to 2% pyrite, but 20% pyrite over 15cm on downhole side of one, 3cm quartz vein oriented at 30 degrees to the core axis. Minor calcite with quartz veins.	8464	67.30	67.55	.25	.11	2.20	-	5%		
		8465	68.15	68.70	.55	.01	1.80	-	1-2%		
		8466	71.25	72.25	1.00	.13	2.00	-	1%		
		8467	72.25	73.25	1.00	.77	3.20	-	1%		
		8468	73.25	74.25	1.00	.03	2.40	1%			
		8469	74.25	75.25	1.00	.10	2.20	-	1%		
54.95 71.25	Pinkish gray, slightly potassic? diorite. Commonly aphanitic, feldspathic groundmass with 10% biotite, and minor to 20%, 1 to 3mm, gray plagioclase phenocrysts. Minor to 5%, quartz phenocrysts, but commonly up to 1% visible. Non-magnetic. Average trace pyrite, but locally to 1% pyrite. Rare quartz veining. Minor weakly silicified and pyritic patches around two quartz veins.	8470	75.25	76.25	1.00	.01	2.20	-	1%		
		8471	76.25	77.25	1.00	.04	4.00	-	2%		
		8472	77.25	78.25	1.00	.01	6.80	-	3%		
		8473	78.25	79.30	1.05	.20	3.00	-	2%		
		8474	79.30	80.45	1.15	.07	2.20	-	MINOR		
		8475	80.45	81.10	.65	.42	19.30	-	2%		
		8476	81.10	83.00	1.90	.01	2.10	-	1%		
71.25 81.10	Weakly sericitized and very weakly silicified diorite with average 5% quartz veins with minor chlorite, and 5% calcite patches in veins. Average 1 to 2% disseminated pyrite, mainly in diorite. Trace gray mineral in some quartz veins.	8477	83.00	85.00	2.00	.01	2.30	-	1%		
		8478	85.00	87.00	2.00	.03	3.60	-	1%		
		8479	87.00	88.10	1.10	.01	1.80	-	1%		
		8480	88.10	88.80	.70	.33	4.10	-	1%		
74.40 74.55	Weakly ribboned quartz vein. Finely sucrose. 2% pyrite. Oriented at 40 degrees to the core axis.	8481	88.80	91.15	2.35	.13	1.50	-	1-2%		
		8482	91.15	93.00	1.85	.01	1.60	-	1%		
80.45 81.10	25%, irregular quartz veins with 5% calcite, 2% pyrite, and minor gray mineral.	8483	93.00	95.00	2.00	.03	1.10	-	1%		
		8484	95.00	95.35	.35	14.22	84.50	1%	1%		
81.10 100.65	Mainly unaltered, pinkish gray diorite, with section of weak sericitic alteration and minor shear zones cutting diorite. Average 1% pyrite. Average 1% quartz veins and up to 1% quartz-calcite-chlorite veinlets. Shear zones are as follows:	8485	95.35	95.85	.50	.18	2.20	-	2%		
		8486	95.85	97.50	1.65	.04	1.60	-	1%		
		8487	97.50	99.10	1.60	.01	1.40	-	1%		
		8488	99.10	100.25	1.15	.20	1.20	-	1%		
85.35 85.40	6 cm zone of fine grained, granular diorite with minor sericite, 2% pyrite. Oriented at 70 degrees to the core axis.	8489	100.25	100.65	.40	.39	1.00	-	1%		
		8490	117.00	118.50	1.50	.01	1.30	TRACE	1%		
86.65 86.70	5 cm, pinkish feldspathic zone with minor quartz veins and	8491	118.50	120.10	1.60	.01	.90	-	1%		

Interval (Metres)	Description
	sericite. Oriented at 60 degrees to the core axis.
88.10 88.50	Scattered sections of fine grained, moderately sericitic diorite oriented at 70 degrees to the core axis.
95.00 95.35	Moderately sheared, weakly to moderately sericitic diorite, with minor quartz veins. 1% gray mineral. Oriented at 50 degrees to the core axis.
100.25 100.65	Strongly sheared diorite. Moderately silicified, weakly sericitized. 2% pyrite. Oriented at 75 degrees to the core axis.
100.65 117.00	Pink, medium grained, biotite (10%), quartz (5%) diorite. Mainly subhedral, white to pinkish gray, plagioclase with interstitial biotite and quartz.
110.65 108.40	2 small basalt xenoliths, and three, 15 to 70cm xenoliths of mafic diorite, containing 25%, fine grained, biotite in reddish feldspathic groundmass.
116.80 116.95	Xenolith of amphibolite-grade metamorphosed basalt. Dark gray, fine grained, with 20% elongate amphibole, and 5% red garnet.
117.00 128.70	Light gray, weakly sericitized and locally weakly to strongly silicified diorite. Minor quartz and quartz-calcite veins. Locally fine gray mineral in silicified patches and quartz veins. Average 2% pyrite.
120.10 126.60	Scattered zones of silicification, and trace to minor gray mineral.
123.40 124.10	Strongly silicified section, with quartz-calcite-pyrite veins and locally 1% gray mineral. Average 15% pyrite in section.
128.70 150.00	Pinkish gray, botite quartz diorite. Average up to 1% disseminated pyrite. Up to 1% quartz veins. Up to 1% thin quartz-calcite-chlorite veinlets. Trace gray mineral in 1cm silicified patch at 146.6 metres.
139.50 141.70	Weakly sericite or clay alteration of feldspar. Section is still pinkish gray, but feldspars are clouded and opaque.
Lower contact	not encountered.
150.00	End of hole.

Sample No.	Interval (Metres)	Length (Metres)	Au (g/t)	Ag (ppm)	Grey Metallic	Pyrite (%)	ALTERATION SIL	CARB	SER
8492	120.10 121.70	1.60	.02	1.20	TRACE	2%			
8493	121.70 123.40	1.70	.25	1.70	-	3%			
8494	123.40 124.10	.70	.64	11.00	MINOR	15%			
8495	124.10 125.00	.90	.01	1.20	-	3%			
8496	125.00 126.60	1.60	.01	1.40	-	2%			
8497	126.60 128.70	2.10	.02	1.50	-	1%			

ESSO

E

DANE A. BRIDGE
District Geologist, Timmins

THIRD FLOOR, HOLLINGER BUILDING
637 ALGONQUIN AVENUE EAST, P.O. BOX 290
TIMMINS, ONTARIO P4N 7N6
TELEPHONE: (705) 267-6680

File: HN, 1677 AO1 and
Blakelock 1, 1696 AO1

February 28, 1989.

Mining Recorder,
4 Government Road East,
Kirkland Lake, Ontario
P2N 1A2

Re: Reports of work for Diamond Drilling

Dear Sir:

Enclosed are three Reports of Work for diamond drilling on a block of 447 contiguous claims held by Esso Resources Canada Limited in Hoblitzell, Noseworthy, Blakelock, Hurtubise and Tomlinson Townships. Each Report of Work is for a specific group of claims as indicated on the mining claim list on or attached to the Report of Work.

A total of 15 drill holes are included with the three Reports of Work. The 15 holes total 3109.3 metres or 10,201 feet. A total of 9473.6 days credit is claimed in the three Reports of Work.

The following is included with the Reports of Work in duplicate:

Summary logs and detailed drill logs for 15 holes, HN88-28 and 32 to 45.
HN(West Grid) Claim and Drill Hole Location Map, 1:5,000
HN(East Grid) Claim and Drill Hole Location Map, 1:10,000
List of drill holes with co-ordinates, attitude, length and claim number.

Yours truly,

Dane Bridge.

DB:lal
Encl.
cc: J. Pirie

Claim List for February 18, 1989 Filing on HN Project

Noseworthy Twp.

8 claims

CLAIM NO.	DAYS CREDIT
L-1031202	100
L-1031203	100
L-1031208	100
L-1031629	100
L-1031980	100
L-1031985	100
L-1031986	100
L-1031997	100

Hoblitzell Twp.

12 claims and 4 claims

CLAIM NO.	DAYS CREDIT
L-968383	200
L-968384	200
L-968385	200
L-968386	200
L-968387	200
L-968388	200
L-968389	200
L-968390	200
L-968391	200
L-968392	200
L-968393	200
L-968394	200
L-1031968	200
L-1031973	200
L-1031974	200
L-1031979	200

Blakelock Twp.

36 claims

CLAIM NO.	DAYS CREDIT
L-1035895	60
L-1035896	60
L-1035897	60
L-1035898	60
L-1035899	60

Blakelock Twp.(cont)

CLAIM NO.	DAYS CREDIT
L-1035900	60
L-1035901	60
L-1035902	60
L-1035903	60
L-1035904	60
L-1035905	60
L-1035906	60
L-1035907	60
L-1035908	60
L-1035909	60
L-1035910	60
L-1074507	60
L-1074508	60
L-1074509	60
L-1074510	60
L-1074511	60
L-1074512	60
L-1074513	60
L-1074514	60
L-1074515	60
L-1074516	60
L-1074517	60
L-1074518	60
L-1074519	60
L-1074520	60
L-1074521	60
L-1074522	60
L-1074523	60
L-1074524	60
L-1074525	60
L-1074526	60

Hurtubise Twp.

20 claims

CLAIM NO.	DAYS CREDIT
L-1031198	60
L-1031199	60
L-1031200	60
L-1031201	60
L-1031204	60
L-1031205	60
L-1031206	60
L-1031207	60

Hurtubise Twp. (Cont)

CLAIM NO.	DAYS CREDIT
L-1031209	60
L-1031210	60
L-1031211	60
L-1031212	60
L-1031213	60
L-1031214	60
L-1031981	60
L-1031982	60
L-1031983	60
L-1031984	60
L-1031987	60
L-1032002	60

Tomlinson Twp.

8 claims ✓

CLAIM NO.	DAYS CREDIT
L-1031969	60
L-1031970	60
L-1031971	60
L-1031972	60
L-1031975	60
L-1031976	60
L-1031977	60
L-1031978	60

Ministry of Northern Development and Mines

Ontario

Report of Work

DOCUMENT No. W8908.093

Mining Act

Instructions – Supply required data on a separate form for each type of work to be recorded (see table below).
– For Geo-technical work use form no. 1362 "Report of Work (Geological, Geophysical, Geochemical and Expenditures)".

Name and Postal Address of Recorded Holder	Prospector's Licence No.
Esso Resources Canada Limited, P.O. Box 4029, Terminal A, Toronto, Ontario M5H 1T2	T-872

Summary of Work Performance and Distribution of Credits

Total Work Days Cr. claimed: 9473.6

for Performance of the following work. (Check one only)

- ☐ Manual Work
- ☐ Shaft Sinking Drifting or other Lateral Work.
- ☐ Compressed Air, other Power driven or mechanical equip.
- ☐ Power Stripping
- ☒ Diamond or other Core drilling
- ☐ Land Survey

Mining Claim Prefix	Mining Claim Number	Work Days Cr.	Mining Claim Prefix	Mining Claim Number	Work Days Cr.	Mining Claim Prefix	Mining Claim Number	Work Days Cr.
L	848104	61.4	L	848112	61.4	L	848120	61.4
[redacted]	848105	61.4	[redacted]	848113	61.4	[redacted]	848121	61.4
	848106	61.4		848114	61.4		848409	61.4
	848107	61.4		848115	61.4		848410	61.4
	848108	61.4		848116	61.4		848411	61.4
	848109	61.4		848117	61.4		848412	61.4
	848110	61.4		848118	61.4		848413	61.4
	848111	61.4		848119	61.4		848414	61.4

All the work was performed on Mining Claim(s): L-834477,834505; 871904,908,909,911,912,915,916; L-872267, 269; 834467 ds.

Required Information eg: type of equipment, Names, Addresses, etc. (See Table Below)

Re: Beaverhead Option, Hoblitzell Twp.
24 claims

Holes HN88-28 and 32-45, cored between September 21, 1988 and November 3, 1988, using a BBS-25A diamond drill, owned and operated by Bradley Bros. Ltd., P.O. Box 2367, Noranda, Quebec, J9X 5A9. A total of ~~2458.3~~ 3109.3 metres (~~8068.5~~ 10201 feet) were drilled in these 13 holes.

LANDER LAKE MINING DIV. RECEIVED MAR - 1 1989 AM PM 7 8 9 10 11 12 1 2 3 4 5 6

Date of Report	Recorded Holder or Agent (Signature)
Feb. 28, 1989	Dane Bridge

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: Dane Bridge, Box 290, Timmins, Ontario P4N 7N6

Date Certified	Certified by (Signature)
Feb. 28, 1989	Dane Bridge

Table of Information/Attachments Required by the Mining Recorder

Type of Work	Specific information per type	Other information (Common to 2 or more types)	Attachments
Manual Work Shaft Sinking, Drifting or other Lateral Work	Nil	Names and addresses of men who performed manual work/operated equipment, together with dates and hours of employment.	Work Sketch: these are required to show the location and extent of work in relation to the nearest claim post.
Compressed air, other power driven or mechanical equip.	Type of equipment		
Power Stripping	Type of equipment and amount expended. Note: Proof of actual cost must be submitted within 30 days of recording.	Names and addresses of owner or operator together with dates when drilling/stripping done.	
Diamond or other core drilling	Signed core log showing: footage, diameter of core, number and angles of holes.		Work Sketch (as above) in duplicate
Land Survey	Name and address of Ontario land surveyor.	Nil	Nil

768 (85/12)

Ministry of Northern Development and Mines

Ontario

Report of Work

DOCUMENT No. W8908.093 Mining Act

Instructions – Supply required data on a separate form for each type of work to be recorded (see table below).
– For Geo-technical work use form no. 1362 "Report of Work (Geological, Geophysical, Geochemical and Expenditures)".

Name and Postal Address of Recorded Holder	Prospector's Licence No.
Esso Resources Canada Limited P.O. Box 4029, Terminal A, Toronto, Ontario M5H 1T2	T-872

Summary of Work Performance and Distribution of Credits

Total Work Days Cr. claimed	Mining Claim Prefix	Mining Claim Number	Work Days Cr.	Mining Claim Prefix	Mining Claim Number	Work Days Cr.	Mining Claim Prefix	Mining Claim Number	Work Days Cr.
9473.6									
for Performance of the following work. (Check one only)	See attached list								
☐ Manual Work									
☐ Shaft Sinking Drifting or other Lateral Work.									
☐ Compressed Air, other Power driven or mechanical equip.									
☐ Power Stripping									
☒ Diamond or other Core drilling									
☐ Land Survey									

All the work was performed on Mining Claim(s): L-834477,834505; 871904,908,909,911,912,915,916; L-872267,269; 894467 DB.

Required Information eg: type of equipment, Names, Addresses, etc. (See Table Below)

Re: Noseworthy Twp., 8 claims, L-1031202,203,208,629,980,985,986,997

Hoblitzell Twp., 12 claims, L-968383-968394

Hoblitzell Twp., 4 claims, L-1031968,1031973-979

Blakelock Twp., 36 claims, L-1035895-910, 1074507-526

Hurtubise Twp., 20 claims, L-1031198-201,204-207,209-214, L-1031981-984,987, L-1032002

Tomlinson Twp., 8 claims, L-1031969-972,975-978

Holes HN-88-28 and 32-45, cored between September 21, 1988 and November 3, 1988, using a BBS-25A diamond drill, owned and operated by Bradley Bros. Ltd., P.O. Box 2367, Noranda, Quebec, J9X 5A9. A total of ~~2459.5~~ metres (~~8068.5~~ feet) were drilled in these 13 holes.

3109.3 DB. 10201 DB.

Date of Report	Recorded Holder or Agent (Signature)
Feb. 28, 1989	Dane Bridge

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying	Date Certified	Certified by (Signature)
Dane Bridge, Box 290, Timmins, Ontario P4N 7N6	Feb. 28, 1989	Dane Bridge

Table of Information/Attachments Required by the Mining Recorder

Type of Work	Specific information per type	Other information (Common to 2 or more types)	Attachments
Manual Work	Nil	Names and addresses of men who performed manual work/operated equipment, together with dates and hours of employment.	Work Sketch: these are required to show the location and extent of work in relation to the nearest claim post.
Shaft Sinking, Drifting or other Lateral Work			
Compressed air, other power driven or mechanical equip.	Type of equipment		
Power Stripping	Type of equipment and amount expended. Note: Proof of actual cost must be submitted within 30 days of recording.	Names and addresses of owner or operator together with dates when drilling/stripping done.	
Diamond or other core drilling	Signed core log showing; footage, diameter of core, number and angles of holes.		Work Sketch (as above) in duplicate
Land Survey	Name and address of Ontario land surveyor.	Nil	Nil

768 (85/12)

Ministry of Northern Development and Mines

Ontario

Report of Work

Assessment Work

DOCUMENT No. W8908.093

Mining Act

Instructions – Supply required data on a separate form for each type of work to be recorded (see table below).
– For Geo-technical work use form no. 1362 "Report of Work (Geological, Geophysical, Geochemical and Expenditures)".

Name and Postal Address of Recorded Holder	Prospector's Licence No.
Esso Resources Canada Limited	T-872
P.O. Box 4029, Terminal A, Toronto, Ontario M5H 1T2	

Summary of Work Performance and Distribution of Credits

Total Work Days Cr. claimed: 9473.6

for Performance of the following work. (Check one only)

- ☐ Manual Work
- ☐ Shaft Sinking Drifting or other Lateral Work.
- ☐ Compressed Air, other Power driven or mechanical equip.
- ☐ Power Stripping
- ☒ Diamond or other Core drilling
- ☐ Land Survey

Mining Claim Prefix	Mining Claim Number	Work Days Cr.	Mining Claim Prefix	Mining Claim Number	Work Days Cr.	Mining Claim Prefix	Mining Claim Number	Work Days Cr.
L	756779	40						
	756780	40						
	756781	40						
	756782	40						

All the work was performed on Mining Claim(s): L-834477,834505; 871904,908,909,911,912,915,916; L-872267, 269; 834467

Required Information eg: type of equipment, Names, Addresses, etc. (See Table Below)

Re: Blakelock 1 Group, Blakelock Twp.
4 Claims

Holes HN-88-28 and 32-45, cored between September 21, 1988 and November 3, 1988, using a BBS-25A diamond drill, owned and operated by Bradley Bros. Ltd., P.O. Box 2367, Noranda, Quebec, J9X 5A9. A total of ~~14597~~ 3109.3 metres (~~47868~~ 10201 feet) were drilled in these 13 holes.

Date of Report	Recorded Holder or Agent (Signature)
Feb 28, 1989	Dane Bridge

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying	
Dane Bridge, Box 290, Timmins, Ontario P4N 7N6	
	Date Certified: Feb. 28, 1989
	Certified by (Signature): Dane Bridge

Table of Information/Attachments Required by the Mining Recorder

Type of Work	Specific information per type	Other information (Common to 2 or more types)	Attachments
Manual Work; Shaft Sinking, Drifting or other Lateral Work	Nil	Names and addresses of men who performed manual work/operated equipment, together with dates and hours of employment.	Work Sketch: these are required to show the location and extent of work in relation to the nearest claim post.
Compressed air, other power driven or mechanical equip.	Type of equipment		
Power Stripping	Type of equipment and amount expended. **Note:** Proof of actual cost must be submitted within 30 days of recording.	Names and addresses of owner or operator together with dates when drilling/stripping done.	
Diamond or other core drilling	Signed core log showing: footage, diameter of core, number and angles of holes.		Work Sketch (as above) in duplicate
Land Survey	Name and address of Ontario land surveyer.	Nil	Nil

768 (85/12)

WEST GRID

L48W L46W L44W L42W L40W L38W L36W L34W L32W L30W L28W L26W L24W L22W L20W L18W

4+00S

14+00S

24+50S

L14+00S BASELINE

L22+00S

871918 871911 871910 871903 872267 872263 872259

871917 871912 871909 871904 872268 872264 872260

871916 871913 871908 871905 872269 872265 872261

871915 871914 871907 871906 872270 872266 872262

871930 871925 871924 871919 872271 872272 872272

871929 871926 871923 871920 872276 872275 872274

871928 871927 871922 871921 872271

TG Sulphur BL

HOBLITZELL TOWNSHIP

BLAKELOCK TOWNSHIP

Declination 11°W

N

SYMBOLS

93° Reverse Circulation Drill Hole (Vertical)

DDH 88-28⊙ Diamond Drill Hole (inclined - Geology projected to overburden surface at 60°)

Bulldozer Road

Post Located – grid coordinates

Post Located – place and compass

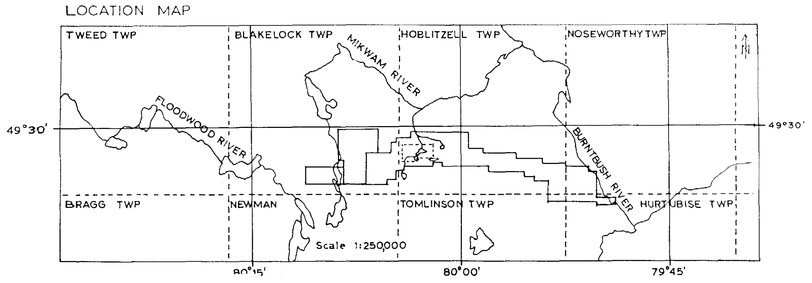
Trial Post – trial post with blaze, directions noted

Post Assumed – post not located but intersecting blaze directions noted

Claim Lines approximate (not located)

Claim Lines located

LOCATION MAP



SCALE

0 100 200 300 400 500 Metres

MAP 3

ESSO MINERALS CANADA

A DIVISION OF ESSO RESOURCES CANADA LIMITED

PROSPECT HN (West Grid)

SUBJECT Claim and Drill Hole Location Map

SURVEY BY	FILE NO	DWG NO
DRAWN BY MHL	SCALE 1:5000	
REVISED BY	N.T.S. 42H/8	DATE Aug. 1988