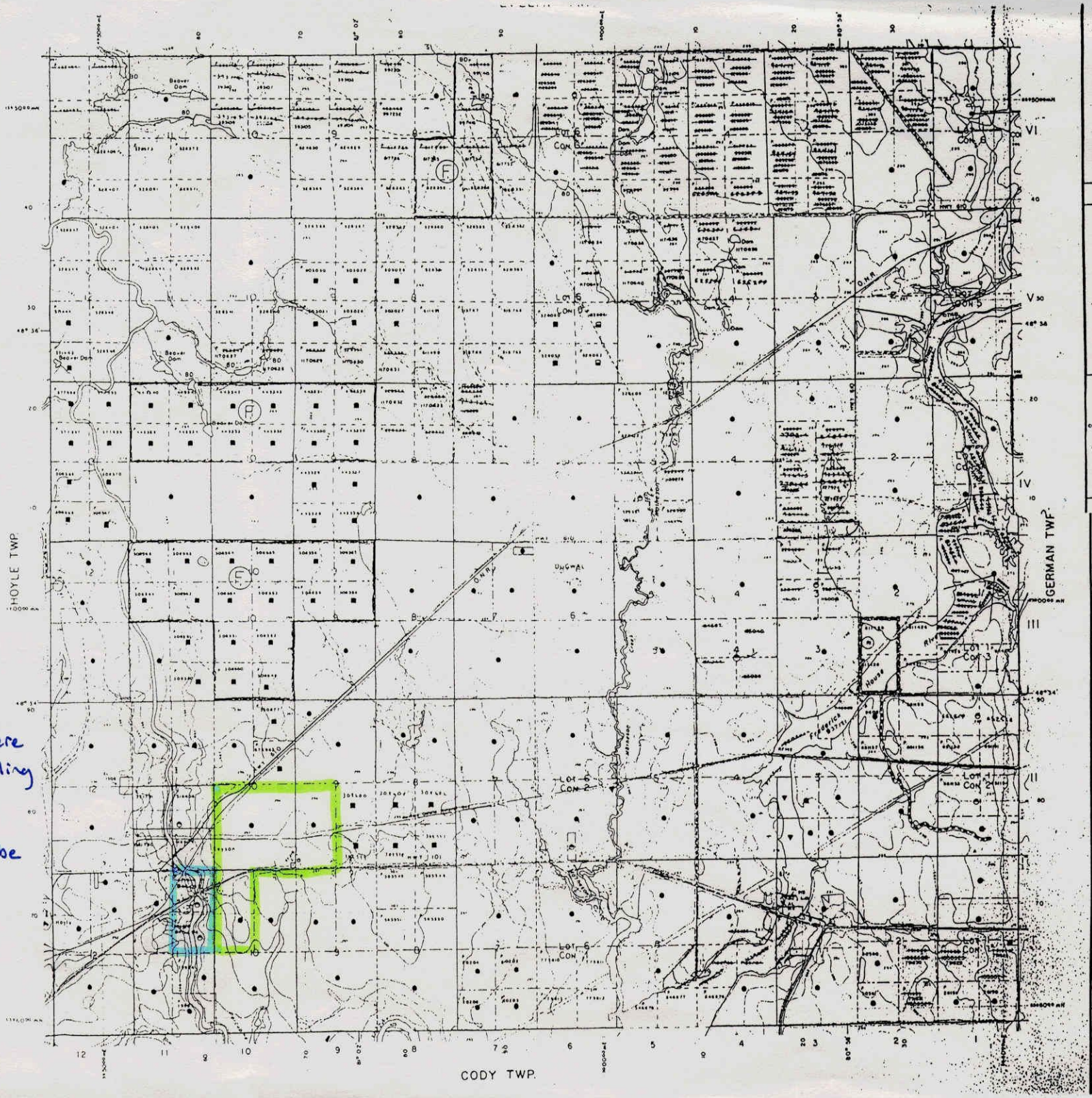


Patents where diamond drilling was done

Claims to be renewed.

PENTLAND FIRTH VENTURES LTD.

Property: HOYLE POND EAST: BIRKER OPTION
EASTING: 496893
NORTHING: 5377621
Elevation: 297.000
Grid: NONE, DDH IS SURVEY HUB FOR 1996 DRILLING
Collar Azi.: 180
Collar Dip: -55
Local Ref: \Ref1
Hole Length: 275.0 metres
Print Date: 9 Sep, 1996

DRILL HOLE RECORD

*** Dip Tests ***

Depth	Azi.	Dip
35	181	-57
89	184	-55
140	187	-54
191	184	-53
242	183	-52
275	182	-50

Drill Hole: HPE-01
Township: Matheson
Claim #: 17517 SEC
Date Started: JAN 19, 1996
Completed: JAN 22, 1996
Logged by: R.M. LANDRY
Date(s) Logged: JAN 23, 1995
Drilled by: Bradley Bros. Ltd.
Core Size: BQ
Company: PFVL

Purpose: TO TEST SOUTHEASTERN ZONE MINERALIZATION
Hole Condition: Casing REMAINS, collar marked with 2x2 picket and aluminum tags
Comments: Core Stored at the Marlhill Mine, Hoyle Twp.

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
.0	28.0		OVERBURDEN Overburden to 28m made up of clay and sand, with sporadic boulders, cored boulders are volcanic.									
28.0	70.0		ALTERED PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained light grey green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz and calcite. ALTERATION: moderate carbonate alteration, fizzes with HCL, tourmaline and chlorite alteration associated with pillow selvages. SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared. Bands of pyrite and magnetite with minor ARSENOPYRITE. STRUCTURE: RQD of 70 to 80, moderately foliated at 65 degrees to the core axis. 28.0 29.0 Trace to 0.5% fine grained pyrite associated with fractures and quartz filling in selvages. 29.0 30.5 Bracket sample, moderate quartz-ankerite vein mostly quartz as selvage	46779	28.0	29.0	1.0	.5				
				46780	29.0	30.5	1.5	.0				
				46781	30.5	31.3	.8	.5				
				46782	31.3	32.0	.7	.5				
				46783	41.0	41.6	.6	1.0				
				46784	41.6	42.4	.8	1.0				
				46785	42.4	43.3	.9	.1				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			filling with associated pyrite and pyrrhotite. 30.5 31.3 10 cm wide QUARTZ VEIN, pyrite associated with vein contact, minor associated hydromuscovite. 31.3 32.0 Bracket sample, trace to 0.5% fine grained pyrite associated with fracture filling. 41.0 41.6 0.5 to 1.0% fine grained pyrite associated with fracture filling, quartz-ankerite vein associated with fracture filling. 41.6 42.4 Same as above. 42.4 43.3 Trace fine grained pyrite, bracket sample with minor quartz-ankerite veins associated with fracture filling.									
70.0	90.5		PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained light green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz and calcite. ALTERATION: weak to moderate carbonate alteration, fizzes with HCL, tourmaline associated with pillow selvage. Moderate chlorite alteration associated with veins and selvages. SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared. Bands of pyrite and magnetite with minor ARSENOPYRITE. STRUCTURE: RQD of 80 to 90, massive with little to none fracturing.									
90.5	133.0		ALTERED PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained light grey green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz and calcite. ALTERATION: moderate carbonate alteration, fizzes with HCL tourmaline associated with pillow selvage. Minor chlorite alteration associated with fractures, sericite alteration in pillow. Also minor hematite alteration associated with fracture and or pillow selvage.	46786 46787 46788 46789 46790 46791 46792 46793 46794	90.5 91.2 103.5 104.0 104.5 111.0 112.0 112.5 132.0	91.2 92.0 104.0 104.5 105.0 112.0 112.5 113.0 133.0	.7 .8 .5 .5 .5 1.0 .5 .5 1.0	1.0 .5 .1 .5 .1 1.0 .5 .1 .5				

From (m)	To (m)	Rock Type	Geology
			SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared. Bands of pyrite and magnetite with minor ARSENOPYRITE, also minor pyrrhotite. STRUCTURE: RQD of 60 to 70, massive with little to none fracturing. 90.5 91.2 1.0% fine grained pyrite associated with strong carbonate alteration alteration. 91.2 92.0 Trace to 0.5% fine grained pyrite, bracket sample. 103.5 104.0 Trace fine grained pyrite associated with fracture filling. 104.0 104.5 Same as above. 104.5 105.0 Trace fine grained pyrite associated with vein contact, 1 cm vein at 10 to 15 degrees to the core axis. 111.0 112.0 Fine grained pyrite associated with pillow selvage, 10 to 15% quartz-ankerite vein or flood. 112.0 112.5 0.5% fine grained pyrite, minor quartz-ankerite veins stringers. 112.5 113.0 Bracket sample, minor pyrite. 132.0 133.0 0.5 to 1.0% fine grained and coarse grained pyrite, minor quartz-calcite stringers.
133.0	183.9		MODERATELY ALTERED PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained grey pillowed mafic, minor quartz-calcite veins, selvages filled with quartz. And calcite. ALTERATION: moderate carbonate alteration, fizzes with HCL, tourmaline associated with pillow selvages. Minor chlorite alteration associated with fractures, sericite alteration in pillows. Also minor hematite alteration associated with fracture and or pillow selvage. SULPHIDES: 0.5 to 1.0% fine grained and coarse grained pyrite associated with fractures and veins, pyrite whispy or smeared. Bands of pyrite and magnetite with minor ARSENOPYRITE, also minor pyrrhotite. STRUCTURE: RQD of 80 to 90, massive with very minor fracturing. At 131.3 meters flow top breccia.

Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
46795	133.0	134.2	1.2	1.0				
46796	134.2	135.3	1.1	.5				
46797	135.3	136.2	.9	.1				
46798	136.2	137.0	.8	.5				
46799	137.0	138.0	1.0	1.0				
46800	142.6	143.3	.7	.5				
46801	143.3	143.7	.4	5.0				
46802	143.7	144.6	.9	1.0				
46803	144.6	145.6	1.0	1.0				
46804	145.6	146.6	1.0	1.5				
46805	146.6	147.2	.6	1.0				
46806	147.2	147.8	.6	.5				
46807	147.8	148.3	.5	2.0				
46808	148.3	149.0	.7	.1				
46809	149.1	149.5	.4	.5				
46810	149.5	150.0	.5	.2				
46811	151.5	152.0	.5	.1				
46812	154.0	155.0	1.0	.2				
46813	156.7	157.0	.3	.5				
46814	157.0	158.0	1.0	.1				
46815	158.0	158.9	.9	.1				
46816	158.9	159.2	.3	.3				

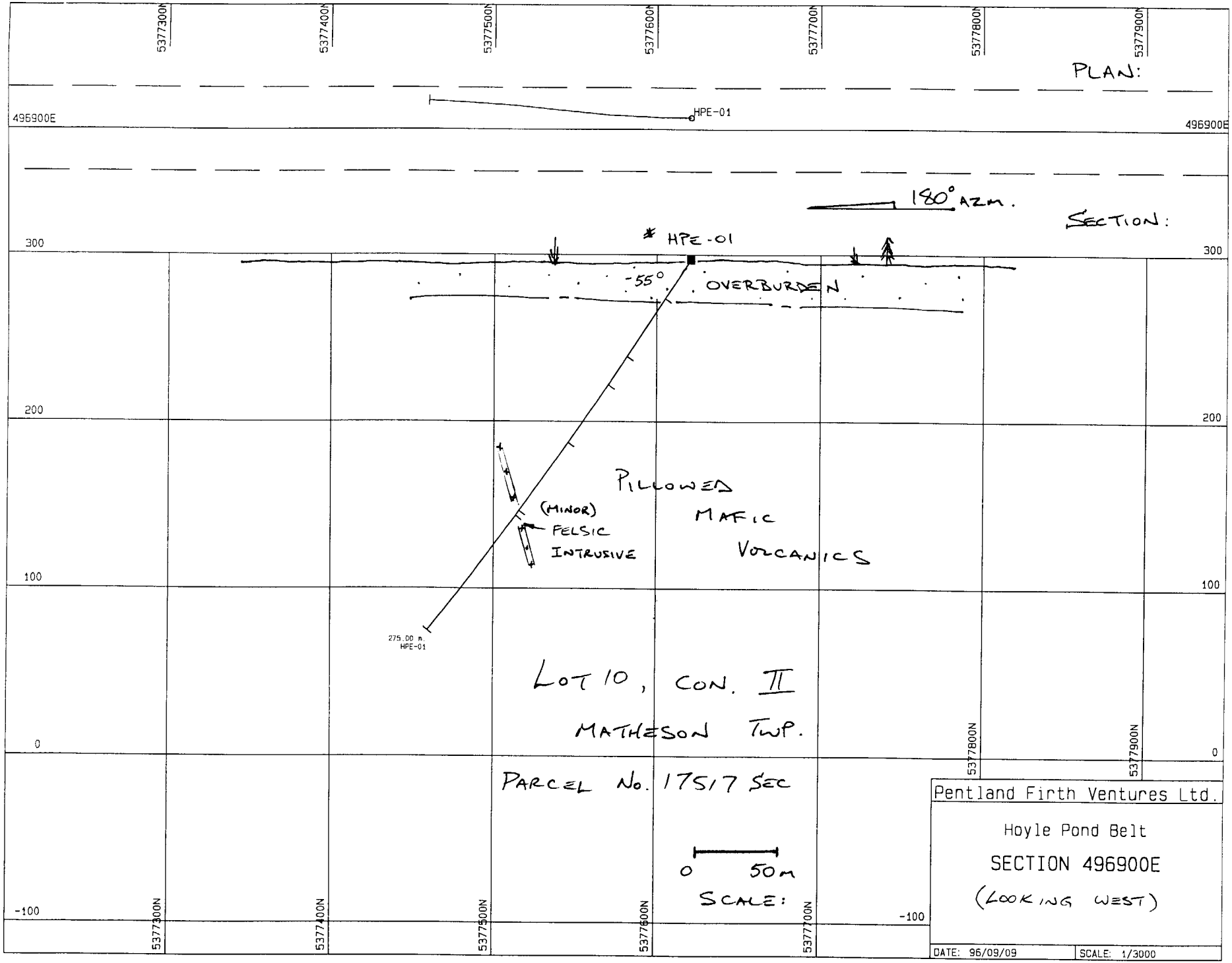
From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			133.0 134.2 1.0% fine grained an coarse grained pyrite associated with fracture filling and breccia, quartz-ankerite vein associated with fracture.	46817	159.2	160.5	1.3	1.0				
			134.2 135.3 0.5 to 1.0% fine grained pyrite associated with fractures, minor quartz-ankerite vein associated with fractures.	46818	160.5	161.5	1.0	3.0				
			135.3 136.2 Bracket sample, minor fine grained pyrite.	46819	161.5	162.0	.5	2.0				
			136.2 137.0 Quartz-calcite stringers at 10 to 15 degrees to the core axis, 1 cm quartz-calcite vein with specks of VISIBLE GOLD, pyrite associated with quartz-calcite.	46820	162.0	162.7	.7	1.0				
			137.0 138.0 1.0% fine grained pyrite associated with fracture filling, very minor quartz-calcite stringers at various angles to the core axis.	46821	162.7	163.6	.9	1.5				
			142.6 143.3 Trace to 0.5% fine grained pyrite associated with fracture filling, minor tourmaline associated with selvage.	46822	163.6	164.3	.7	.5				
			143.3 143.7 3.5% fine grained pyrite, 1.0% fine grained ARSENOPYRITE with minor pyrrhotite, 5 cm QUARTZ VEIN at 40 degrees to the core axis, pyrite at contacts with ARSENOPYRITE.	46823	164.3	165.1	.8	.5				
			143.7 144.6 1.0 to 2.0% fine grained pyrite, minor magnetite and pyrrhotite.	46824	165.1	165.9	.8	.5				
			144.6 145.6 Same as above.	46825	165.9	166.3	.4	6.0				
			145.6 146.6 Same as above, tourmaline associated with pillow selvage.	46826	166.3	167.0	.7	.4				
			146.6 147.2 Same as above, pyrite fine grained associated with fractures and fracture filling, minor quartz-calcite stringers at various angles to the core axis.	46827	178.3	179.0	.7	.5				
			147.2 147.8 0.5 to 1.0% fine grained pyrite associated with fractures.									
			147.8 148.3 2.0% fine grained pyrite associated with fracture and quartz-calcite vein at 35 degrees to the core axis, rock is quite fractured and recemented.									
			148.3 149.0 Bracket sample.									
			149.1 149.5 0.5 to 1.0% fine grained pyrite associated with fracture filling, tourmaline associated selvage.									
			149.5 150.0 Bracket sample, trace pyrite, tourmaline associated with selvage.									
			151.5 152.0 Trace fine grained pyrite, 4 cm QUARTZ VEIN perpendicular to core axis.									
			154.0 155.0 Trace fine grained pyrite, 2 minor QUARTZ VEIN at 30 degrees to the core axis and perpendicular to core axis.									
			156.7 157.0 0.5% fine grained pyrite associated with vein and fracture filling, bracket sample.									
			157.0 158.0 Trace pyrite, bracket sample, not as altered.									
			158.0 158.9 Same as above.									
			158.9 159.2 Trace to 0.5% fine grained pyrite associated with quartz-calcite fracture filling, possible FAULT ZONE at top of sample.									
			159.2 160.5 Fine grained pyrite associated with fracture filling, and in situ, very minor quartz-calcite stringers, moderate carbonate alteration, moderate tourmaline.									
			160.5 161.5 1.5% fine grained pyrite with 1.5% fine grained ARSENOPYRITE, minor QUARTZ VEINs at 85 degrees to the core axis.									
			161.5 162.0 1.0% fine grained pyrite associated with 2 cm quartz vein at 08 degrees to the core axis, also minor ARSENOPYRITE associated with									

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			vein. 162.0 162.7 1.0% fine grained pyrite, minor ARSENOPYRITE, bracket sample, selvage marked by tourmaline. 162.7 163.6 1.0% fine grained pyrite with 0.5% ARSENOPYRITE, weakly magnetic, moderate tourmaline. 163.6 164.3 Fine grained pyrite associated with possible foliation ?, minor ARSENOPYRITE, moderate tourmaline. 164.3 165.1 0.5% fine grained pyrite associated with fracture filling, locally strong mineralization, minor quartz-calcite stringers, pillow center fractured. 165.1 165.9 Trace to 0.5% fine grained pyrite, bracket sample. 165.9 166.3 3.0% fine grained pyrite with 3.0% pyrrhotite and minor magnetite and minor ARSENOPYRITE possible 5 cm dyke at 65 degrees to the core axis at contacts. 166.3 167.0 Bracket sample, minor pyrite. 178.3 179.0 0.5% fine grained pyrite associated with fracture filling, minor quartz-calcite stringers.									
183.9	187.4		FELSIC INTRUSIVE LITHOLOGY: medium grained, light grey green. ALTERATION: moderately to strongly sericitic, quartz anf feldspar crystals 2 to 3 mm in dia. QUARTZ VEIN associated with intrusive, light grey green. Moderate silicified. SULPHIDES: 0.5 to 1.0% fine grained pyrite, with 0.5% pyrrhotite. STRUCTURE: massive with minor quartz veins and veinlets. 183.9 184.3 1.0% fine grained pyrite, associated with quartz vein and in qfp, 3 cm vein at 55 degrees to the core axis, .5% pyrrhotite associated with qfp. 184.3 185.0 1.5% fine grained pyrite, 0.2% fine grained pyrrhotite, moderate quartz flooding. 185.0 186.5 Same as above. 186.5 187.4 Same as above.	46828 46829 46830 46831	183.9 184.3 185.0 186.5	184.3 185.0 186.5 187.4	.4 .7 1.5 .9	1.0 1.5 1.0 1.0				

From (m)	To (m)	Rock Type	Geology
187.4	275.0		PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained light grey green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz and calcite. ALTERATION: very weak carbonate alteration, minor chlorite alteration associated with fractures, sericite alteration in pillows. SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared. Bands of pyrite and magnetite with minor ARSENOPYRITE, also minor pyrrhotite. STRUCTURE: RQD of 80 to 90, weakly foliated at 55 degrees to the core axis. From 192.4 to 193.6 qfp upper contact at 85, lower contact at 80 dtca. Sample Description:. 187.4 187.9 Bracket sample, minor pyrite. 187.9 188.1 0.3% fine grained pyrite associated with vein contacts, 2 veins at 45 and 50 degrees to the core axis, 3.5 and 1.5 cm wide. 188.1 188.9 Bracket sample. 191.0 191.7 0.5% fine grained pyrite with minor ARSENOPYRITE. 191.7 192.4 Same as above. 192.4 192.8 1.0 to 2.0% fine grained pyrite with 0.5% ARSENOPYRITE, possible pyrrhotite, quartz FLOODED, moderate sericitic alteration. 192.8 193.1 Sulphides same as above, QUARTZ VEIN or possible blowout or flood. 193.1 193.6 1.0% fine grained pyrite with minor ARSENOPYRITE, and possible magnetite, end of qfp. 193.6 194.4 0.5 to 1.0% fine grained pyrite and very minor ARSENOPYRITE. 194.4 195.0 Same as above, with minor QUARTZ VEIN at 60 degrees to the core axis. 201.7 202.3 0.5% fine grained disseminated pyrite, 1 cm QUARTZ VEIN at 55 degrees to the core axis minor ARSENOPYRITE associated with vein. 208.5 209.0 0.4% cubic pyrite associated with pillow selvage, minor quartz-ankerite vein also associated. 209.0 209.5 Same as above. 214.8 215.3 0.3% fine grained pyrite associated with pillow selvage, minor quartz-ankerite vein, flow top breccia, moderate carbonate alteration 215.3 215.9 Trace pyrite, bracket sample, moderate carbonate alteration. 215.9 216.3 0.5% fine grained pyrite associated with QUARTZ VEIN, possible vein or quartz flood, perpendicular to CORE AXIS, 4 cm wide. 217.8 218.3 0.4% fine grained pyrite associated with quartz in selvage. 220.8 221.4 Trace to 0.4% fine grained disseminated pyrite, minor quartz-ankerite vein at 40 degrees to the core axis.

Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
46832	187.4	187.9	.5	.2				
46833	187.9	188.1	.2	.3				
46834	188.1	188.9	.8	.1				
46835	191.0	191.7	.7	.5				
46836	191.7	192.4	.7	.5				
46837	192.4	192.8	.4	1.0				
46838	192.8	193.1	.3	1.0				
46839	193.1	193.6	.5	1.0				
46840	193.6	194.4	.8	.5				
46841	194.4	195.0	.6	.5				
46842	201.7	202.3	.6	.5				
46843	208.5	209.0	.5	.4				
46844	209.0	209.5	.5	.4				
46845	214.8	215.3	.5	.3				
46846	215.3	215.9	.6	.1				
46847	215.9	216.3	.4	.5				
46848	217.8	218.3	.5	.4				
46849	220.8	221.4	.6	.4				
46850	221.4	222.0	.6	1.0				
54001	222.0	223.0	1.0	.1				
54002	223.0	223.5	.5	.2				
54003	223.5	224.0	.5	.5				
54004	224.0	224.8	.8	.2				
54005	229.0	229.7	.7	1.0				
54006	230.7	231.3	.6	.5				
54007	231.3	232.3	1.0	.5				
54008	232.3	233.0	.7	.0				
54009	241.9	242.4	.5	.5				
54010	259.5	260.0	.5	.1				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			221.4 222.0 1.0% fine grained and coarse grained pyrite associated with flow top breccia, quartz-calcite associated with fracture filling. 222.0 223.0 Bracket sample, minor pyrite with minor quartz-calcite associated with pillow selvage. 223.0 223.5 Bracket sample, minor pyrite. 223.5 224.0 0.5% fine grained pyrite associated with pillow selvage, minor quartz-calcite associated with selvage, minor chlorite alteration also associated with selvage. 224.0 224.8 Bracket sample, very minor fine grained disseminated pyrite. 229.0 229.7 1.0% fine grained pyrite associated with pillow selvage, 10% quartz-calcite associated with pillow selvage, minor tourmaline. 230.7 231.3 Same as above, with minor pyrite. 231.3 232.3 0.5 to 1.0% fine grained pyrite, 10 to 15% quartz-calcite associated with pillow selvage. 232.3 233.0 Bracket sample. 241.9 242.4 0.5% fine grained pyrite, quartz-calcite associated with pillow selvage. 259.5 260.0 Trace fine grained pyrite, 6 cm QUARTZ VEIN at 80 degrees to the core axis. CASING REMAINS; Hole open, No Cementing. 82 Samples sent to Swastika Labs Ltd. At 275.0 meters EOH.									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5377400N
5377500N
5377600N
5377700N
5377800N
5377900N
PLAN:
496900E
HPE-01
496900E
180° AZM.
SECTION:
300
HPE-01
-55°
OVERBURDEN
300
200
200
PILLOWED
MAFIC
VOLCANICS
(MINOR)
FELSIC
INTRUSIVE
100
100
275.00 m.
HPE-01
LOT 10, CON. II
MATHESON TWP.
0
0
PARCEL No. 17517 SEC
0 50m
SCALE:
-100
-100
Pentland Firth Ventures Ltd.
Hoyle Pond Belt
SECTION 496900E
(LOOKING WEST)
DATE: 96/09/09
SCALE: 1/3000

ASTRONOMIC

10°

N

I C G GASLINE

HWY 610

ONR

780m

HPE-01
-55° DIP

206m

273m

17517 SEC

12350 SEC

PENTLAND

CON. II

CON. I

P 805693

HWY 101

RIVER

P 805694

14191 SEC

PORCUPINE

LOT 11

LOT 10

LOT 9

SCALE: 1 : 5000

PENTLAND FIRTH VENTURES LTD.

Timmins ONTARIO

HOYLE POND EAST PROJECT

LOCATION PLAN MAP

1996 DRILLING: HPE-01

Matheson Township

DRAWN: A.H.R.	DATE: SEPT. 11/96	NTS:	PROJECT:
MAP No:			
DWG. No. HPELOC			

0 50 100 150 200M

PENTLAND FIRTH VENTURES LTD.

DRILL HOLE RECORD

Property: HOYLE POND EAST: Birker-Burkhardt OPTIONS
EASTING: 496928
NORTHING: 5377723
Elevation: 297.000
Grid: NONE: Tied into HPE-01
Collar Azi.: 180
Collar Dip: -55
Local Ref: \Ref1
Hole Length: 329.0 metres
Print Date: 9 Sep, 1996

*** Dip Tests ***

Depth	Azi.	Dip
89	176	-56
140	169	-55
175	172	-54
190	166	-54
218	163	-53
269	180	-50
329	162	-49

Drill Hole: HPE-02
Township: Matheson
Claim #: 12350 SEC
Date Started: JAN 22, 1996
Completed: JAN 26, 1996
Logged by: R.M. LANDRY
Date(s) Logged: JAN 25, 1995
Drilled by: Bradley Bros. Ltd.
Core Size: BQ
Company: PFVL

Purpose: TO DETERMINE VEIN ORIENTATION
Hole Condition: Casing PULLED, collar marked. Core Stored at the Marlhill Mine, Hoyle Twp.
Comments: DDH crosses the Birker-Burkhardt Property Boundary @ 244m downhole

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
.0	40.0		OVERBURDEN Overburden to 40m made up of clay and sand, with sporadic boulders.									
40.0	77.0		PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz. And calcite, minor tourmaline and chlorite alteration associated with selvage. ALTERATION: weak to moderate carbonate alteration, fizzes with HCL, minor tourmaline associated with pillow selvage. SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared. Bands of pyrite and magnetite with very minor ARSENOPYRITE. STRUCTURE: RQD of 80 to 90. 69.2 69.6 1.0% fine grained pyrite associated with quartz-ankerite vein, quartz-ankerite vein associated with pillow selvage, minor tourmaline.	54011	69.2	69.6	.4	1.0				
				54012	69.6	70.0	.4	1.0				
				54013	70.0	70.6	.6	.0				
				54014	70.6	71.2	.6	4.0				
				54015	71.2	72.2	1.0	.1				

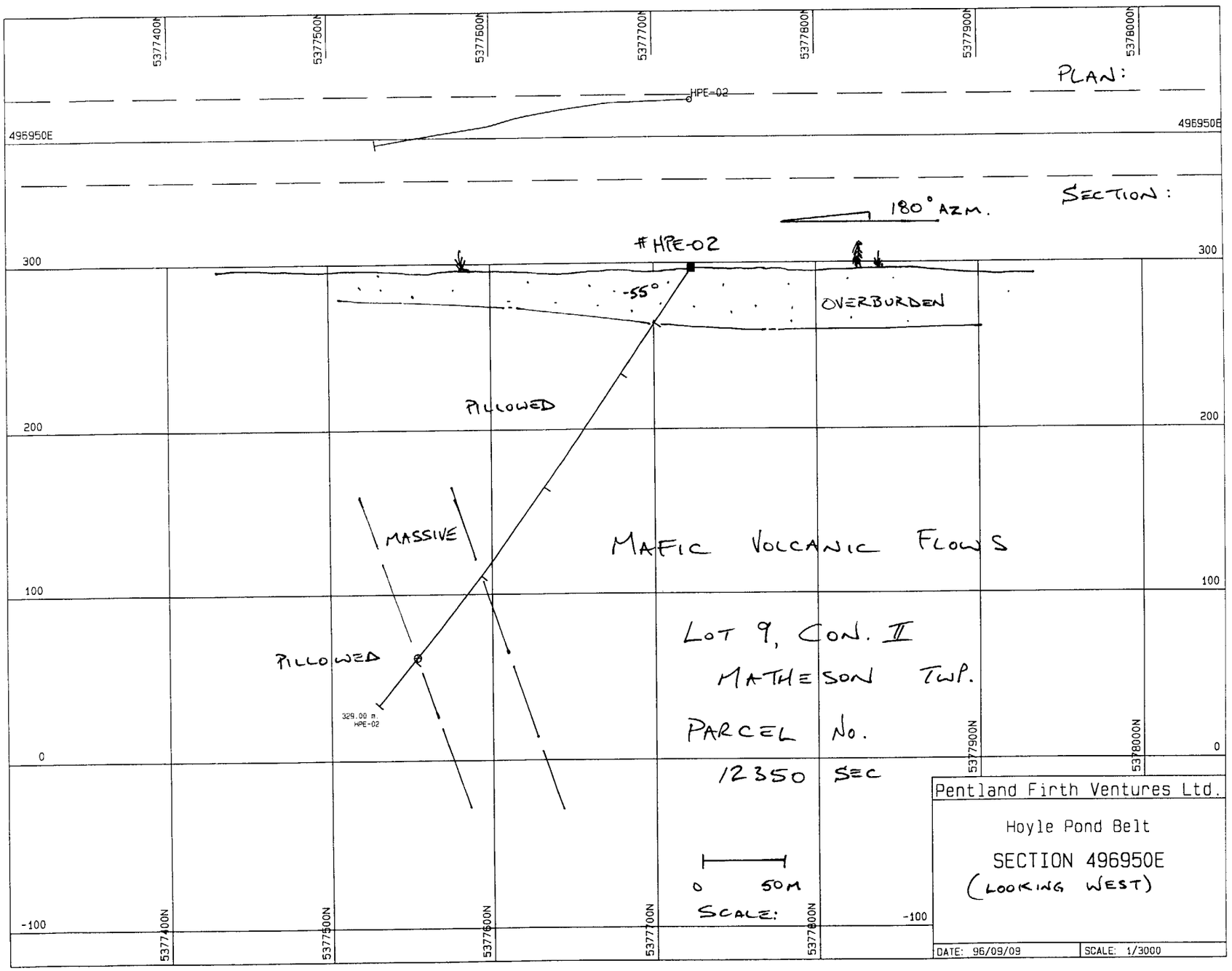
From (m)	To (m)	Rock Type	Geology
			69.6 70.0 1.0% fine grained pyrite and minor pyrrhotite, minor associated quartz-ankerite vein. 70.0 70.6 Bracket sample. 70.6 71.2 4.0% fine grained pyrrhotite and pyrite, minor quartz-ankerite vein associated with pillow selvage, sulphides banded. 71.2 72.2 Trace fine grained pyrite associated with quartz-ankerite vein stringers, stringers associated with fracture filling.
77.0	160.5		ALTERED PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained light grey green pillowed mafic, moderate quartz-calcite veins, selvages filled with quartz and calcite, pillow selvage less predominant towards end of interval. ALTERATION: weak to moderate carbonate alteration, fizzes with HCL, tourmaline associated with pillow selvage. Moderate chlorite alteration associated with veins and selvages. SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared. Bands of pyrite and magnetite with minor ARSENOPYRITE. STRUCTURE: RQD of 80 to 90, massive with little to none fracturing. Weak foliation at 60 degrees to the core axis. At 126.1 meters possible flow breccia. 86.1 86.8 Trace fine grained pyrite, minor quartz-calcite stringers associated with fractures, bracket sample. 86.8 87.5 Same as above, with increased quartz-calcite stringers. 87.5 88.2 0.3% fine grained pyrite, 10 to 20% quartz-calcite stringers. 88.2 89.0 0.4% fine grained pyrite 15 to 20% quartz-calcite stringers at various angles to the core axis possible fracture filling. 89.0 89.4 Trace pyrite, 20 to 30% quartz-ankerite stringers. 89.4 90.0 Trace fine grained pyrite, bracket sample. 92.4 93.2 0.8% fine grained pyrite with minor pyrrhotite associated with quartz-ankerite vein and as bands, quartz-ankerite vein at 80 degrees to the core axis, 10 cm wide. 93.2 93.9 0.4% fine grained disseminated pyrite, with minor quartz-ankerite veinlets at various angles to the core axis. 93.9 94.5 Fine grained pyrite associated with foliation, minor quartz-ankerite also associated with foliation as veinlets. 94.5 95.2 Same as above.

Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
54016	86.1	86.8	.7	.1				
54017	86.8	87.5	.7	.1				
54018	87.5	88.2	.7	.3				
54019	88.2	89.0	.8	.4				
54020	89.0	89.4	.4	.0				
54021	89.4	90.0	.6	.0				
54022	92.4	93.2	.8	.8				
54023	93.2	93.9	.7	.4				
54024	93.9	94.5	.6	1.0				
54025	94.5	95.2	.7	1.0				
54026	95.2	96.0	.8	1.0				
54027	96.0	97.1	1.1	1.0				
54028	97.1	97.6	.5	.5				
54029	100.1	101.0	.9	.5				
54030	101.0	101.7	.7	1.5				
54031	101.7	102.4	.7	.1				
54032	102.4	102.9	.5	.0				
54033	107.0	107.9	.9	.5				
54034	107.9	108.8	.9	.5				
54035	108.8	109.4	.6	1.0				
54036	132.3	132.9	.6	.1				
54037	132.9	133.6	.7	.3				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			95.2 96.0 1.0% fine grained pyrite associated with foliation and fracture filling, possible flow top breccia minor quartz-ankerite vein at 75 degrees to the core axis. 96.0 97.1 1.0% fine grained pyrite associated with quartz-ankerite flood?, quartz-ankerite 30 to 35%, also weakly brecciated (cemented). 97.1 97.6 0.5 to 1.0% fine grained pyrite associated with fracture filling and breccia. 100.1 101.0 0.5% fine grained pyrite associated with quartz-ankerite veinlets, veinlets associated with fracture filling, foliation weak, 5 to 10% quartz-calcite. 101.0 101.7 1.5% fine grained pyrite, zone of increased qtz, foln at 55 dtca, pos shear?. 101.7 102.4 Trace fine grained pyrite with minor quartz-ankerite stringers, bracket sample. 102.4 102.9 Bracket sample. 107.0 107.9 0.5% fine grained pyrite with minor quartz-ankerite stringers. 107.9 108.8 Trace to 0.5% fine grained pyrite, 1 cm quartz-ankerite vein at 0 to 5 degrees to the core axis. 108.8 109.4 1.0% fine grained pyrite associated with quartz-ankerite veins, 5 cm at 65 degrees to the core axis, 3 cm at 45 degrees to the core axis. 132.3 132.9 Trace fine grained pyrite associated with 1.5 cm quartz-ankerite vein at 60 degrees to the core axis, minor quartz-ankerite veinlets associated with foliation at 65 degrees to the core axis. 132.9 133.6 Trace fine grained pyrite, 10 to 12% quartz-ankerite veins associated with foliation, minor pyrrhotite.									
160.5	227.5		PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained light green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz and calcite. ALTERATION: moderate carbonate alteration, fizzes with HCL, tourmaline associated with pillow selvage. Minor chlorite alteration associated with fractures. SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared. Bands of pyrite and magnetite with minor ARSENOPYRITE, also minor pyrrhotite. STRUCTURE: RQD of 80 to 90, massive with little to no fracturing.	54038	186.0	186.4	.4	4.0				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			From 268.3 to 270.8 quartz feldspar porphry minor pyrite, moderate to strong sericitic alteration.									
			186.0 186.4 4.0% fine grained pyrite and pyrrhotite, sulphides associated with 4.5 cm dark band, moderate magnetic.									
227.5	294.0		MASSIVE MAFIC VOLCANIC FLOW	54039	228.0	228.4	.4	.5				
				54040	267.8	268.3	.5	.0				
			LITHOLOGY: fine grained light green mafic flow?, minor quartz-calcite veins.	54041	268.3	268.7	.4	.5				
				54042	268.7	269.0	.3	.3				
				54043	269.0	270.3	1.3	.3				
			ALTERATION: minor carbonate alteration, fizzes with HCL.	54044	270.3	270.8	.5	.5				
				54045	270.8	271.2	.4	.0				
				54046	271.2	271.6	.4	.5				
			SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared.	54047	271.6	272.0	.4	.1				
				54048	275.3	275.8	.5	.0				
			Bands of pyrite and magnetite.	54049	275.8	276.1	.3	.0				
				54050	276.1	276.9	.8	.0				
			STRUCTURE: RQD of 85 to 95, massive with little to none fracturing.	54051	276.9	277.6	.7	.1				
				54052	277.6	277.9	.3	.1				
			DDH deviates Eastwards onto the Burkhardt Property @ 244m.	54053	277.9	279.2	1.3	.1				
				54054	279.2	279.8	.6	.0				
			228.0 228.4 0.5% fine grained disseminated pyrite associated with 3 cm QUARTZ VEIN, vein at 45 degrees to the core axis, minor chlorite alteration.	54055	279.8	280.2	.4	.1				
				54056	280.2	281.8	1.6	.0				
			267.8 268.3 Trace fine grained pyrite, bracket sample.	54057	281.8	282.5	.7	.0				
			268.3 268.7 0.5% fine grained pyrite associated with QUARTZ VEINs at 75 and 80 degrees to the core axis, moderately to strongly sericitic, pyrite disseminated and vein associated.	54058	282.5	283.0	.5	.1				
				54059	283.0	283.6	.6	.0				
			268.7 269.0 QUARTZ VEIN with trace fine grained pyrite disseminated.									
			269.0 270.3 Bracket sample, minor disseminated pyrite with very minor QUARTZ VEINs.									
			270.3 270.8 0.5% disseminated pyrite, 3 QUARTZ VEIN at 55 and 78 degrees to the core axis, 1 to 2 cm.									
			270.8 271.2 Bracket sample.									
			271.2 271.6 0.5% fine grained pyrite associated with QUARTZ VEIN, vein 10 cm at 55 degrees to the core axis.									
			271.6 272.0 Trace fine grained pyrite, bracket sample.									
			275.3 275.8 Bracket sample.									
			275.8 276.1 6 cm QUARTZ VEIN at 60 degrees to the core axis.									
			276.1 276.9 Bracket sample.									
			276.9 277.6 Trace fine grained disseminated pyrite, quartz-ankerite blowout, 2 quartz-ankerite veins at 45 degrees to the core axis less than 1cm.									
			277.6 277.9 Trace fine grained disseminated pyrite, 5 cm QUARTZ VEIN at 60									

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			degrees to the core axis. 277.9 279.2 Trace fine grained disseminated pyrite, bracket sample. 279.2 279.8 Bracket sample. 279.8 280.2 Trace fine grained disseminated pyrite, 3 cm QUARTZ VEIN at 35 degrees to the core axis. 280.2 281.8 Bracket sample. 281.8 282.5 QUARTZ VEIN at 45 degrees to the core axis, 6.5 cm. 282.5 283.0 Trace fine grained pyrite, minor QUARTZ VEIN at 30 degrees to the core axis. 283.0 283.6 Bracket sample.									
294.0	329.0		PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz. And calcite. ALTERATION: moderate carbonate alteration, fizzes with HCL tourmaline associated with pillow selvage. Minor chlorite alteration associated with fractures, sericite alteration in pillow. SULPHIDES: trace to 0.5% fine grained and pyrite associated with fractures and veins, pyrite disseminated. Minor magnetite with very minor ARSENOPYRITE, also very minor pyrrhotite. STRUCTURE: RQD of 80 to 90, massive with little to none fracturing. WATER HAULED ON SITE WITH TRUCK FROM PORCUPINE RIVER. CASING PULLED; No Cementing. HOLE IS LOCATED 79m N AND 40m E OF HPE-01. 49 Samples sent to Swastika Labs Ltd. At 329.0 meters EOH.									


5377400N
5377500N
5377600N
5377700N
5377800N
5377900N
5378000N
PLAN:
HPE-02
496950E
496950E
SECTION:
180° AZM.
#HPE-02
300
300
-55°
OVERBURDEN
PILLOWED
200
200
MASSIVE
MAFIC VOLCANIC FLOWS
100
100
PILLOWED
329.00 m
HPE-02
LOT 9, CON. II
MATHESON TWP.
PARCEL No.
12350 SEC
0
0
5377900N
5378000N
0 50M
SCALE:
-100
-100
5377400N
5377500N
5377600N
5377700N
5377800N
Pentland Firth Ventures Ltd.
Hoyle Pond Belt
SECTION 496950E
(LOOKING WEST)
DATE: 96/09/09
SCALE: 1/3000

ASTRONOMIC

10°

N

I C G GASLINE

HWY 610

DNR

815m

HPE-02
-55° DIP

308m

32.9m

17517 SEC

12350 SEC

PENTLAND

CON. II

CON. I

P 805693

HWY 101

RIVER

P 805694

14191 SEC

PORCUPINE

LOT 11

LOT 10

LOT 9

SCALE: 1 : 5000

PENTLAND FIRTH VENTURES LTD.

Timmins ONTARIO

HOYLE POND EAST PROJECT

LOCATION PLAN MAP

1996 DRILLING: HPE-02

Matheson Township

DRAWN: A.H.R.	DATE: SEPT. 11/96	NTS:	PROJECT:
MAP No:			
DWG. No. HPELOC	0 50 100 150 200M		

PENTLAND FIRTH VENTURES LTD.

Property: HOYLE POND EAST: BURKHARDT OPTION
EASTING: 497005
NORTHING: 5377627
Elevation: 297.000
Grid: NONE, collar relative to HPE-01
Collar Azi.: 180
Collar Dip: -55
Local Ref: \Ref1
Hole Length: 275.0 metres
Print Date: 10 Sep, 1996

Purpose: TO TEST VEIN ORIENTATION
Hole Condition: Casing removed,
Comments: Core Stored at the Marlhill Mine, Hoyle Twp

DRILL HOLE RECORD

*** Dip Tests ***

Depth	Azi.	Dip
58	173	-56
107	188	-56
158	187	-56
209	186	-55
271	182	-52

Drill Hole: HPE-03
Township: Matheson
Claim #: 12350 SEC
Date Started: JAN 26, 1996
Completed: JAN 28, 1996
Logged by: R.M. LANDRY
Date(s) Logged: JAN 28, 1995
Drilled by: Bradley Bros. Ltd.
Core Size: BQ
Company: PFVL

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
.0	44.5		OVERBURDEN Overburden to 44.5m made up of sand, minor clay, with sporadic boulders. Cored boulders are volcanic.									
44.5	55.6		ALTERED MASSIVE MAFIC VOLCANIC FLOW LITHOLOGY: fine grained light grey mafic, vesicles predominant throughout quartz-calcite filled. ALTERATION: moderate carbonate alteration, fizzes with HCL, tourmaline associated with pillow selvages. SULPHIDES: trace fine grained disseminated pyrite associated with fractures and veins. STRUCTURE: RQD of 70 to 80, moderately foliated at 65 degrees to the core axis.									
55.6	117.5		PILLOWED MAFIC VOLCANIC FLOW	54060 54061	60.3 61.0	61.0 61.8	.7 .8	.1 1.0				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			LITHOLOGY: fine grained green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz. And calcite.	54062	61.8	62.3	.5	.1				
				54063	96.1	96.5	.4	.0				
				54064	96.5	97.2	.7	.5				
				54065	97.2	97.7	.5	.0				
				54066	104.5	104.9	.4	.1				
			ALTERATION: weak to moderate carbonate alteration, fizzes with HCL. Moderate chlorite alteration associated with veins and selvages.	54067	104.9	105.5	.6	.0				
				54068	105.5	106.0	.5	.5				
			SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared. Bands of pyrite and magnetite with minor ARSENOPYRITE.									
			STRUCTURE: RQD of 80 to 90, massive with little to none fracturing.									
			60.3 61.0 Trace fine grained pyrite, bracket sample.									
			61.0 61.8 0.3% fine grained disseminated pyrite with 0.7% fine grained pyrrhotite, minor quartz-ankerite vein at 30 degrees to the core axis.									
			61.8 62.3 Trace fine grained pyrite with very minor quartz-ankerite vein at 88 degrees to the core axis.									
			96.1 96.5 Bracket sample.									
			96.5 97.2 0.5% fine grained pyrite associated with pillow selvage, quartz-ankerite vein associated with selvage.									
			97.2 97.7 Bracket sample.									
			104.5 104.9 Minor quartz-ankerite vein at 40 degrees to the core axis, trace fine grained pyrite associated with vein.									
			104.9 105.5 Bracket sample.									
			105.5 106.0 0.5% fine grained pyrite associated with pillow selvage.									
117.5	137.8		MODERATELY ALTERED PILLOWED MAFIC VOLCANIC FLOW	54069	117.5	118.2	.7	.5				
				54070	118.2	118.6	.4	.1				
			LITHOLOGY: fine grained light grey green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz and calcite.	54071	118.6	119.5	.9	.5				
				54072	119.5	120.5	1.0	.5				
				54073	120.5	121.5	1.0	.5				
				54074	121.5	122.0	.5	.5				
			ALTERATION: moderate carbonate alteration, fizzes with HCL, tourmaline associated with pillow selvage. Minor chlorite alteration associated with fractures, sericite alteration in pillow. Also minor hematite alteration associated with fracture and or pillow selvage.	54075	122.0	123.0	1.0	.1				
				54076	123.0	123.4	.4	.0				
				54077	123.4	124.2	.8	.5				
				54078	124.2	125.0	.8	1.0				
				54079	125.0	125.5	.5	1.0				
				54080	125.5	126.2	.7	.4				
				54081	126.2	126.9	.7	1.0				
			SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and	54082	126.9	127.8	.9	1.0				

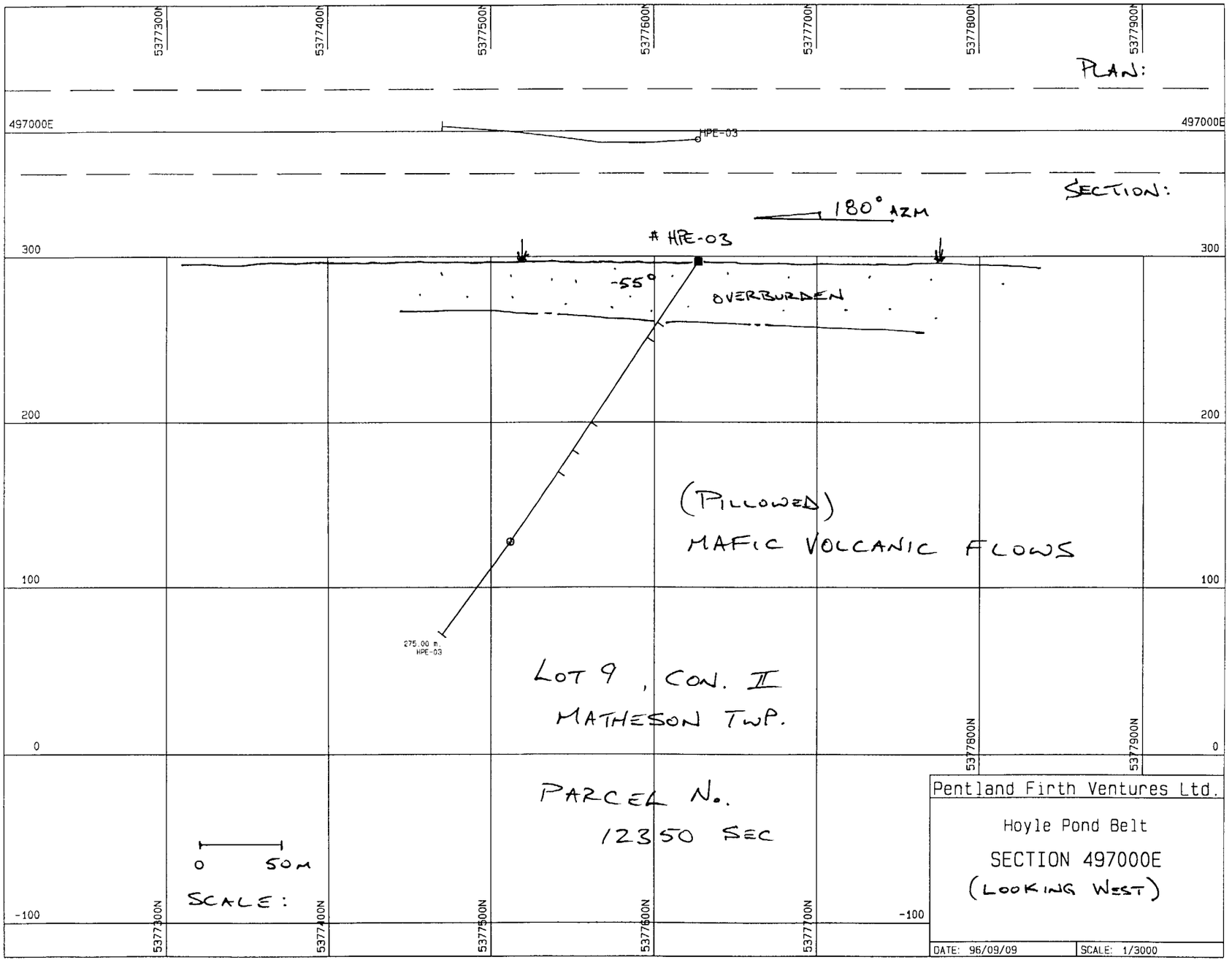
From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			veins, pyrite whispy or smeared.	54083	127.8	128.2	.4	1.0				
			Pyrite and magnetite with minor ARSENOPYRITE, also minor pyrrhotite.	54084	128.2	129.2	1.0	.5				
				54085	129.2	130.2	1.0	1.0				
			STRUCTURE: RQD of 80, massive with very minor fracturing.	54086	130.2	131.0	.8	1.5				
				54087	131.0	131.6	.6	.5				
				54088	131.6	132.4	.8	8.0				
			117.5 118.2 0.5% fine grained disseminated pyrite with very minor ARSENOPYRITE.	54089	132.4	133.4	1.0	3.0				
			118.2 118.6 Bracket sample, trace fine grained disseminated pyrite.	54090	133.4	133.9	.5	3.0				
			118.6 119.5 0.5 to 1.0% fine grained disseminated pyrite, minor quartz veinlets at 70 to 85 degrees to the core axis.	54091	133.9	134.4	.5	5.0				
				54092	134.4	135.4	1.0	.5				
			119.5 120.5 Same as above.	54093	135.4	136.2	.8	.1				
			120.5 121.5 0.5% fine grained pyrite associated with quartz-calcite, quartz-calcite associated with fracture filling.	54094	136.2	136.8	.6	.0				
				54095	136.8	137.8	1.0	.5				
			121.5 122.0 0.5 to 1.0% fine grained disseminated pyrite, minor ARSENOPYRITE, minor quartz-calcite associated with fracture filling.									
			122.0 123.0 Trace pyrite, bracket sample.									
			123.0 123.4 Trace fine grained pyrite, bracket sample.									
			123.4 124.2 0.5% fine grained disseminated pyrite, possible associated with pillow selvage ?.									
			124.2 125.0 1.0% fine grained pyrite with 0.1% coarse grained ARSENOPYRITE, possible quartz stockwork?, weakly magnetite.									
			125.0 125.5 Same as above.									
			125.5 126.2 Trace to 0.5% fine grained disseminated pyrite, minor quartz-ankerite stringers at 40 degrees to the core axis.									
			126.2 126.9 1.0% medium grained pyrite, pyrite associated with fracture filling, very minor quartz-ankerite veinlets at 35 to 40 degrees to the core axis.									
			126.9 127.8 0.6% fine grained pyrite, 0.4% fine grained ARSENOPYRITE, very minor quartz-ankerite.									
			127.8 128.2 Same as above.									
			128.2 129.2 0.5% fine grained pyrite, minor ARSENOPYRITE.									
			129.2 130.2 0.5% fine grained pyrite with 1.0% locally strong ARSENOPYRITE, minor quartz-ankerite.									
			130.2 131.0 1.0% fine grained disseminated pyrite with 0.5% needles of ARSENOPYRITE, minor quartz-ankerite.									
			131.0 131.6 Bracket sample, minor pyrite and ARSENOPYRITE.									
			131.6 132.4 1.0% fine grained pyrite, 7.0% ARSENOPYRITE medium grained as needles minor quartz vein.									
			132.4 133.4 1.5% fine grained pyrite, 1.5% medium grained ARSENOPYRITE, very weakly magnetite.									
			133.4 133.9 Same as above, ARSENOPYRITE associated with quartz-calcite veinlet.									
			133.9 134.4 4.0% medium grained ARSENOPYRITE, 1.0% fine grained disseminated pyrite, minor quartz veinlet at 80 degrees to the core axis, ARSENOPYRITE as needles.									
			134.4 135.4 0.5% fine grained pyrite with minor ARSENOPYRITE.									
			135.4 136.2 Trace fine grained pyrite and ARSENOPYRITE, weak carbonate alteration									

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			136.2 136.8 Bracket sample, minor pyrite associated with bands, possible pillow selvages. 136.8 137.8 0.5% fine grained disseminated pyrite.									
137.8	153.6		MODERATELY ALTERED PILLOWED MAFIC VOLCANIC FLOW	54096	137.8	138.3	.5	1.0				
				54097	138.3	139.0	.7	.5				
			LITHOLOGY: fine grained light grey green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz and calcite.	54098	139.0	139.5	.5	.5				
				54099	139.5	140.2	.7	2.0				
				54100	140.2	140.8	.6	1.5				
				54101	140.8	141.7	.9	1.0				
			ALTERATION: moderate carbonate alteration, fizzes with HCL, tourmaline associated with pillow selvage.	54102	141.7	142.7	1.0	.5				
				54103	142.7	143.6	.9	.1				
			Minor chlorite alteration associated with fractures, sericite alteration in pillows.	54104	143.6	144.4	.8	.5				
				54105	144.4	145.3	.9	.5				
			Also minor hematite alteration associated with fracture and or pillow selvages.	54106	145.3	146.0	.7	.1				
				54107	146.0	146.9	.9	.5				
				54108	146.9	147.4	.5	.1				
			SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared. Pyrite and magnetite with minor ARSENOPYRITE, also minor pyrrhotite.									
			STRUCTURE: RQD of 80, massive with very minor fracturing.									
			137.8 138.3 1.0% fine grained disseminated pyrite with very minor QUARTZ VEIN at 85 degrees to the core axis. 138.3 139.0 0.5% fine grained disseminated pyrite moderate carbonate alteration. 139.0 139.5 Same as above. 139.5 140.2 1.5% fine grained pyrite associated with fracture filling, trace ARSENOPYRITE, 2.5 cm quartz-ankerite vein at 25 degrees to the core axis. 140.2 140.8 1.5% fine grained pyrite associated with fracture filling, and disseminated, minor quartz-ankerite vein at 78 degrees to the core axis. 140.8 141.7 1.0% fine grained pyrite associated with fracture filling, and disseminated, minor quartz-calcite stringers at various angles to the core axis. 141.7 142.7 0.5% fine grained disseminated pyrite with minor quartz-calcite associated with fractures. 142.7 143.6 Trace fine grained pyrite, bracket sample. 143.6 144.4 0.5% fine grained pyrite associated with fracture filling and possible pillow selvage. 144.4 145.3 Same as above.									

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			145.3 146.0 Trace fine grained pyrite, bracket sample. 146.0 146.9 0.5% fine grained pyrite associated with possible pillow selvage, minor quartz-calcite associated with selvage. 146.9 147.4 Trace fine grained pyrite, bracket sample.									
153.6	275.0		PILLOWED MAFIC VOLCANIC FLOW	54109	153.6	154.0	.4	.5				
				54110	154.0	155.0	1.0	1.0				
			LITHOLOGY: fine grained light grey green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz and calcite.	54111	155.0	155.8	.8	.5				
				54112	171.7	172.1	.4	.3				
				54113	172.1	173.0	.9	.1				
				54114	173.0	173.9	.9	.5				
			ALTERATION: moderate carbonate alteration, fizzes with HCL, tourmaline associated with pillow selvage.	54115	173.9	174.7	.8	.1				
				54116	174.7	175.1	.4	.5				
			Minor chlorite alteration associated with fractures, sericite alteration in pillow.	54117	178.0	178.7	.7	.5				
				54118	189.5	189.9	.4	.5				
			Also minor hematite alteration associated with fracture and or pillow selvage.	54119	189.9	190.6	.7	.5				
				54120	190.6	191.0	.4	.5				
				54121	191.0	191.5	.5	.5				
			SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared.	54122	191.5	192.2	.7	.1				
				54123	192.2	192.8	.6	.5				
			Pyrite and magnetite with minor ARSENOPYRITE, also minor pyrrhotite.	54124	192.8	193.9	1.1	.5				
				54125	193.9	194.2	.3	.1				
			STRUCTURE: RQD of 80, massive with very minor fracturing.	54126	194.2	194.7	.5	.1				
				54127	198.8	199.4	.6	.0				
				54128	199.4	199.8	.4	.1				
			From 189.5 to 191.5 quartz feldspar porphyry, min po and py, mod serc altn.	54129	199.8	200.5	.7	.0				
			153.6 154.0 0.5% fine grained pyrite, disseminated and associated with fracture filling, minor quartz-calcite stringers.	54130	200.5	201.0	.5	.5				
				54131	201.0	201.4	.4	.5				
			154.0 155.0 1.0% fine grained pyrite, quartz-calcite associated with fracture filling.	54132	216.5	217.0	.5	.1				
				54133	217.0	217.3	.3	.5				
			155.0 155.8 Fine grained pyrite, bracket sample.	54134	217.3	217.7	.4	.1				
			171.7 172.1 0.3% fine grained pyrite associated with 1 cm quartz-ankerite vein perpendicular to at _ degrees to core axis.	54135	230.0	230.7	.7	.0				
				54136	230.7	231.0	.3	.4				
			172.1 173.0 Trace fine grained pyrite, bracket sample.	54137	231.0	231.5	.5	.5				
			173.0 173.9 0.5% fine grained pyrite with minor quartz-calcite stringers at various angles to the core axis.	54138	231.5	232.3	.8	.1				
				54139	234.9	235.7	.8	.5				
			173.9 174.7 Trace fine grained pyrite associated with minor quartz-calcite veinlets at 85 degrees to the core axis.	54140	235.7	236.3	.6	.5				
				54141	236.3	237.0	.7	.1				
			174.7 175.1 0.5% fine grained pyrite associated with quartz-ankerite vein, vein 7 cm at 85 degrees to the core axis, pyrite associated with contacts, carbonate alteration associated with contacts.	54142	241.0	241.5	.5	.5				
				54143	241.5	242.2	.7	.0				
				54144	244.2	244.6	.4	.1				
			178.0 178.7 0.5% fine grained disseminated pyrite, 10 cm quartz-ankerite vein at 75 degrees to the core axis.	54145	244.6	245.0	.4	.0				
				54146	245.0	245.8	.8	.2				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			189.5 189.9 0.5% fine grained disseminated pyrite associated with 5.5 cm QUARTZ VEIN, also 0.5% fine grained ARSENOPYRITE, sample is qfp, with moderate sericitic alteration.	54147	245.8	246.6	.8	.0				
				54148	246.6	247.0	.4	.5				
				54149	247.0	247.7	.7	.1				
			189.9 190.6 0.5% fine grained disseminated pyrite, qfp, bracket sample.	54150	252.7	253.2	.5	.1				
			190.6 191.0 Same as above.	54151	253.2	253.7	.5	.5				
			191.0 191.5 0.5% fine grained pyrite with 1 cm QUARTZ VEIN at 05 degrees to the core axis, sample made up of qfp, moderate sericitic alteration minor carbonate alteration.	54152	253.7	254.0	.3	.0				
			191.5 192.2 Trace fine grained pyrite, bracket sample, sample is volcanic.									
			192.2 192.8 0.5% fine grained disseminated pyrite, sample is qfp with 10% volcanics.									
			192.8 193.9 0.5% fine grained pyrite associated with minor quartz-ankerite vein at 75 degrees to the core axis, 3 cm, minor fuchsite associated with vein.									
			193.9 194.2 Trace fine grained pyrite, 6 cm QUARTZ VEIN at 45 degrees to the core axis, minor pyrite associated with vein.									
			194.2 194.7 Trace fine grained disseminated pyrite, brecciated pillow with quartz-calcite fracture filling.									
			198.8 199.4 Bracket sample.									
			199.4 199.8 Trace fine grained disseminated pyrite, 5 cm QUARTZ VEIN at 25 degrees to the core axis, minor pyrite associated with contacts.									
			199.8 200.5 Bracket sample.									
			200.5 201.0 0.5% fine grained pyrite associated with veins and disseminated, 14 cm vein at 40 degrees to the core axis.									
			201.0 201.4 0.5% fine grained pyrite associated with quartz flood?, minor fuchsite.									
			216.5 217.0 Trace fine grained disseminated pyrite, bracket sample.									
			217.0 217.3 Trace to 0.5% fine grained pyrite associated with quartz-ankerite vein, vein at 40 degrees to the core axis, 6.5 cm wide.									
			217.3 217.7 Trace fine grained disseminated pyrite, bracket sample, minor quartz-ankerite veins at 65 degrees to the core axis.									
			230.0 230.7 Trace to 0% fine grained pyrite, minor quartz-ankerite veinlets at various angles to the core axis.									
			230.7 231.0 Trace to 0.4% fine grained pyrite associated with quartz-ankerite vein, vein at 75 degrees to the core axis, vein 4 cm.									
			231.0 231.5 0.5% fine grained to medium grained pyrite associated with quartz-ankerite in pillow selvage.									
			231.5 232.3 Trace fine grained pyrite, minor quartz-ankerite veinlets, bracket sample.									
			234.9 235.7 0.5 to 1.0% fine grained disseminated pyrite, minor quartz-calcite veinlets, bracket sample.									
			235.7 236.3 0.5% fine grained pyrite associated with pillow selvage and quartz-calcite also associated with pillow selvage.									
			236.3 237.0 Trace fine grained pyrite, bracket sample.									
			241.0 241.5 0.5% fine grained and coarse grained pyrite associated with pillow selvage, minor quartz-ankerite also associated with selvage.									

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			241.5 242.2 Bracket sample. 244.2 244.6 Trace fine grained pyrite, 1.5 cm quartz-ankerite vein at 45 degrees to the core axis. 244.6 245.0 Bracket sample. 245.0 245.8 0.2% fine grained pyrite, minor quartz-calcite stringers at various angles to the core axis. 245.8 246.6 Minor quartz-calcite veinlets and stringers. 246.6 247.0 0.5% fine grained and coarse grained pyrite associated with 2 cm quartz-ankerite vein, vein at 35 degrees to the core axis. 247.0 247.7 Trace pyrite, bracket sample. 252.7 253.2 Trace fine grained pyrite, minor quartz-calcite associated with fracture filling, bracket sample. 253.2 253.7 0.5% fine grained and coarse grained pyrite with quartz-ankerite, both associated with pillow selvage. 253.7 254.0 Bracket sample. CASING Pulled. 93 Samples sent to Swastika Labs Ltd. At 275.0 meters EOH.									


5377300N
5377400N
5377500N
5377600N
5377700N
5377800N
5377900N
PLAN:
497000E
HPE-03
497000E
SECTION:
180° AZM
HPE-03
300
300
-55°
OVERBURDEN
200
200
(PILLOWED)
MAFIC VOLCANIC FLOWS
100
100
275.00 ft.
HPE-03
LOT 9, CON. II
MATHESON TWP.
0
0
PARCEL No.
12350 SEC
0 50M
SCALE:
-100
-100
Pentland Firth Ventures Ltd.
Hoyle Pond Belt
SECTION 497000E
(LOOKING WEST)
DATE: 96/09/09
SCALE: 1/3000

ASTRONOMIC

10°

N

I C G GASLINE

HWY 610

ONR

892m

HPE-03
-55° DIP

17517 SEC

212m

12350 SEC

PENTLAND

CON. II

CON. I

P 805693

HWY 101

RIVER

P 805694

14191 SEC

PORCUPINE

LOT 11

LOT 10

LOT 9

SCALE: 1 : 5000

PENTLAND FIRTH VENTURES LTD.

Timmins ONTARIO

HOYLE POND EAST PROJECT

LOCATION PLAN MAP

1996 DRILLING: HPE-03

Matheson Township

DRAWN: A.H.R.	DATE: SEPT. 11/96	NTS:	PROJECT:
MAP No:			
DWG. No. HPELOC		0 50 100 150 200M	

PENTLAND FIRTH VENTURES LTD.

Property: HOYLE POND EAST PROJECT: BIRKER OPTION
EASTING: 496396
NORTHING: 5377669
Elevation: 297.000
Grid: NONE: tied into HPE-01
Collar Azi.: 180
Collar Dip: -50
Local Ref: \Ref1
Hole Length: 440.0 metres
Print Date: 10 Sep, 1996

DRILL HOLE RECORD

*** Dip Tests ***

Depth	Azi.	Dip
38	182	-56
89	174	-55
139	177	-53
191	183	-52
242	179	-51
293	179	-50
344	179	-49

Drill Hole: HPE-04
Township: Matheson
Claim #: 17517 SEC
Date Started: JAN 28, 1996
Completed: FEB 02, 1996
Logged by: R.M. LANDRY
Date(s) Logged: FEB 01, 1995
Drilled by: Bradley Bros. Ltd.
Core Size: BQ
Company: PFVL

Purpose: TO TEST ATTITUDE OF SOUTHWESTERN ZONE
Hole Condition: CASING REMAINS DOWNHOLE
Comments: Core Stored at the Marlhill Mine, Hoyle Twp

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
.0	27.1		OVERBURDEN Overburden to 44.5m made up of sand, minor clay, with sporadic boulders. Cored boulders are volcanic and granitic.									
27.1	35.4		PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained light green, weakly pillowed mafic volcanic. ALTERATION: very weak carbonate alteration, fizzes with HCL, very minor tourmaline associated with pillow selvage. SULPHIDES: trace fine grained disseminated pyrite associated with fractures and veins. STRUCTURE: RQD of 70 to 80, moderately foliated at 65 degrees to the core axis. 31.5 32.1 Bracket sample. 32.1 33.0 Trace fine grained pyrite associated with fracture filling, very minor quartz-calcite stringers associated with fracture filling.	54153 54154 54155 54156 54157	31.5 32.1 33.0 34.5 35.3	32.1 33.0 34.5 35.3 36.0	.6 .9 1.5 .8 .7	.0 .1 .5 .1 .2				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			33.0 34.5 Trace to 0.5% pyrite, same as above.									
			34.5 35.3 Trace pyrite, disseminated, bracket sample.									
			35.3 36.0 Trace to 0.2% fine grained pyrite associated with pillow selvage, minor quartz-calcite also associated with pillow selvage.									
35.4	57.0		MODERATELY ALTERED PILLOWED MAFIC VOLCANIC FLOW	54158	36.0	36.4	.4	1.0				
				54159	36.4	37.2	.8	3.0				
			LITHOLOGY: fine grained green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz.	54160	37.2	38.0	.8	2.0				
			And calcite.	54161	38.0	38.8	.8	.1				
				54162	38.8	39.3	.5	.1				
				54163	39.3	41.0	1.7	.1				
				54164	41.0	41.8	.8	.1				
			ALTERATION: weak to moderate carbonate alteration, fizzes with HCL.	54165	41.8	42.5	.7	.2				
			Moderate chlorite alteration associated with veins and selvages.	46870	42.5	43.3	.8	.2				
				46871	43.3	44.0	.7	.2				
			SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared.	46872	44.0	44.7	.7	.3				
				46873	44.7	45.3	.6	.2				
			Bands of pyrite and magnetite with minor ARSENOPYRITE.	46874	45.3	46.0	.7	.1				
				46875	46.0	47.0	1.0	.0				
			STRUCTURE: RQD of 80 to 90, massive with little to no fracturing.	46876	47.0	47.8	.8	.0				
				54166	47.8	48.6	.8	.0				
				54167	48.6	49.2	.6	.1				
			At 87.1 meters fault gouge.	54168	49.2	50.3	1.1	.0				
			From 36.6 to 36.8 breccia, flow?.	54169	50.3	51.6	1.3	.5				
			36.0 36.4 1.0 fine grained disseminated pyrite, quartz-ankerite vein at 55 degrees to the core axis, 1.5 cm, minor pyrite associated with vein, minor veinlets.	54170	51.6	52.6	1.0	.1				
				54171	52.6	53.3	.7	1.0				
				54172	53.3	54.0	.7	1.0				
			36.4 37.2 3.0% fine grained pyrite associated with vein and disseminated, minor coarse grained pyrite, vein at 55 degrees to the core axis, vein quartz-ankerite and 1.5 cm.	54173	54.0	54.8	.8	1.0				
				54174	54.8	55.5	.7	1.0				
				54175	55.5	56.2	.7	.5				
			37.2 38.0 2.0% fine grained pyrite with minor coarse grained pyrite, quartz-ankerite veinlets at various angles to the core axis, possible flood all associated with pillow selvage.	54176	56.2	57.0	.8	.0				
			38.0 38.8 Trace fine grained pyrite, bracket sample, very minor quartz-calcite stringers at 40 degrees to the core axis.									
			38.8 39.3 Same as above.									
			39.3 41.0 Trace fine grained pyrite associated with pillow selvage, minor quartz-ankerite also associated with pillow selvage.									
			41.0 41.8 Trace fine grained pyrite, minor quartz-ankerite.									
			41.8 42.5 0.2% fine grained disseminated pyrite with minor pyrite associated with fracture filling, minor QUARTZ VEIN at 45 degrees to the core axis									
			42.5 43.3 0.2 to 0.5% fine grained pyrite, weak to moderate sericitic alteration, minor fuchsite alteration associated with vein, pyrite associated quartz eyes.									
			43.3 44.0 Trace pyrite, same as above.									

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			44.0 44.7 0.3% fine grained pyrite, pyrite snowflake and fracture associated, moderate sericitic alteration. 44.7 45.3 0.2% fine grained pyrite associated with fractures and or foliation, moderate sericitic alteration. 45.3 46.0 Bracket sample, minor pyrite same as above. 46.0 47.0 Bracket sample, weak foliation, trace fine grained pyrite associated with foliation. 47.0 47.8 Bracket sample. 47.8 48.6 Minor quartz-calcite veinlet at 44 degrees to the core axis. 48.6 49.2 Trace fine grained disseminated pyrite, 1 cm quartz-ankerite vein at 05 to 08 degrees to the core axis. 49.2 50.3 Bracket sample. 50.3 51.6 0.5% fine grained and minor coarse grained pyrite, pyrite disseminated and associated with minor quartz-ankerite veinlets at 45 degrees to the core axis. 51.6 52.6 Trace fine grained pyrite very minor quartz-ankerite veinlets. 52.6 53.3 1.0% fine grained disseminated pyrite, 10% quartz-ankerite as veinlets and stringers, at various angles to the core axis. 53.3 54.0 Same as above. 54.0 54.8 Same as above. 54.8 55.5 Same as above, with 2 cm quartz-ankerite vein at 45 degrees to the core axis. 55.5 56.2 0.5% fine grained pyrite, minor quartz-ankerite all associated with pillow selvage. 56.2 57.0 Bracket sample.									
57.0	137.8		ALTERED PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained light grey green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz and calcite. ALTERATION: minor carbonate alteration, fizzes with HCL, tourmaline associated with pillow selvages. Minor chlorite alteration associated with fractures, sericite alteration in pillows. Also minor hematite alteration associated with fracture and or pillow selvage. SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared. Pyrite and magnetite with minor ARSENOPYRITE, also minor pyrrhotite.	54177	86.0	86.6	.6	.0				
				54178	86.6	87.5	.9	.1				
				54179	87.5	88.3	.8	.1				
				54180	88.3	88.8	.5	.2				
				54181	88.8	89.1	.3	.5				
				54182	89.1	89.9	.8	.0				
				54183	102.6	103.5	.9	.0				
				54184	103.5	104.2	.7	.2				
				54185	104.2	105.0	.8	.0				
				54186	105.0	106.2	1.2	.0				
				54187	106.2	106.8	.6	.2				
				54188	106.8	107.7	.9	.5				
				54189	107.7	108.1	.4	.0				
				54190	108.1	108.6	.5	.5				
				54191	111.1	111.6	.5	.0				
				54192	115.4	116.3	.9	.5				
				54193	119.2	119.7	.5	.0				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			STRUCTURE: RQD of 80, massive with very minor fracturing.	54194	119.7	120.4	.7	1.0				
				54195	120.4	121.2	.8	1.0				
				54196	121.2	121.8	.6	1.0				
			86.0 86.6 3.5 cm quartz-ankerite vein at 75 degrees to the core axis, minor quartz-ankerite vein at various angles to the core axis, possible fracture filling.	54197	121.8	122.5	.7	.0				
			86.6 87.5 Trace fine grained pyrite associated with quartz-ankerite vein, 2 cm vein at 25 degrees to the core axis.									
			87.5 88.3 Trace fine grained pyrite, minor quartz-ankerite veins 1 cm vein at 50 degrees to the core axis, associated with pillow selvage.									
			88.3 88.8 Trace to 0.2% fine grained pyrite associated with quartz-ankerite.									
			88.8 89.1 0.5% fine grained pyrite disseminated and associated with vein, vein at 60 degrees to the core axis 4 cm.									
			89.1 89.9 Bracket sample, minor quartz-calcite stringers.									
			102.6 103.5 Trace fine grained disseminated pyrite, 10 to 15% quartz-ankerite alteration, at 65 degrees to the core axis, with foliation.									
			103.5 104.2 0.2% fine grained pyrite, 50 to 60% quartz-calcite with 2 veins at 50 and 45 degrees to the core axis, 5 and 3 cm, minor chlorite alteration associated with veins.									
			104.2 105.0 Bracket sample.									
			105.0 106.2 Bracket sample.									
			106.2 106.8 Trace to 0.2% fine grained pyrite, minor quartz-calcite stringers associated with fracture filling.									
			106.8 107.7 0.5% fine grained disseminated minor quartz-calcite vein at 15 degrees to the core axis, 1.1 cm, weak foliation at 50 degrees to the core axis.									
			107.7 108.1 Bracket sample.									
			108.1 108.6 0.5% fine grained pyrite associated with upper contact, 1 cm QUARTZ VEIN at 87 degrees to the core axis.									
			111.1 111.6 1.5 cm at 85 degrees to the core axis.									
			115.4 116.3 0.5% fine grained pyrite associated with QUARTZ VEIN at 75 degrees to the core axis.									
			119.2 119.7 Bracket sample.									
			119.7 120.4 1.0% minor quartz-ankerite, possible pillow selvage.									
			120.4 121.2 0.5% fine grained disseminated pyrite, with 0.5% coarse grained ARSENOPYRITE, 4 cm QUARTZ VEIN at 46 degrees to the core axis.									
			121.2 121.8 1.0% fine grained and coarse grained disseminated pyrite, minor quartz-ankerite vein at 45 degrees to the core axis.									
			121.8 122.5 Bracket sample.									
137.8	161.6		MODERATELY ALTERED PILLOWED MAFIC VOLCANIC FLOW	54198	155.3	155.8	.5	.5				
				54199	155.8	156.5	.7	1.5				
			LITHOLOGY: fine grained light grey green pillowed mafic, minor quartz-calcite	54200	156.5	157.0	.5	1.0				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			veins, selvages filled with quartz and calcite.	54201	157.0	157.7	.7	.5				
				54202	157.7	158.2	.5	.5				
				54203	158.2	159.2	1.0	.5				
			ALTERATION: moderate carbonate alteration, fizzes with HCL, tourmaline associated with pillow selvages.	54204	159.2	159.7	.5	.2				
				54205	159.7	160.2	.5	1.0				
			Minor chlorite alteration associated with fractures, sericite alteration in pillow.	54206	160.2	160.7	.5	.5				
				54207	160.7	161.6	.9	.0				
			Also minor hematite alteration associated with fracture and or pillow selvages.									
			SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared.									
			Pyrite and magnetite with minor ARSENOPYRITE, also minor pyrrhotite.									
			STRUCTURE: RQD of 80, massive with very minor fracturing.									
			155.3 155.8 Trace to 0.5% fine grained disseminated pyrite, minor quartz veinlet at 20 degrees to the core axis.									
			155.8 156.5 1.0% fine grained disseminated pyrite with 0.5% ARSENOPYRITE, numerous quartz-ankerite veins at 40 to 50 degrees to the core axis.									
			156.5 157.0 0.8% fine grained and coarse grained pyrite, 0.2% fine grained ARSENOPYRITE, 1 cm QUARTZ VEIN at 25 degrees to the core axis, pyrite associated with vein contact.									
			157.0 157.7 Trace to 0.5% fine grained disseminated pyrite, minor quartz-ankerite associated with fracture filling.									
			157.7 158.2 0.5% fine grained pyrite, sample made up of 45% quartz-calcite veinlets at 45 degrees to the core axis, quartz blowout 3 cm with minor pyrite associated.									
			158.2 159.2 0.5% fine grained pyrite and very minor ARSENOPYRITE.									
			159.2 159.7 Trace to 0.2% fine grained disseminated pyrite.									
			159.7 160.2 1.0% fine grained pyrite associated with fracture filling, disseminated ARSENOPYRITE, 1 cm QUARTZ VEIN at 40 degrees to the core axis, minor veins at 10 degrees to the core axis.									
			160.2 160.7 0.5% fine grained disseminated pyrite, 1 cm vein at 13 degrees to the core axis.									
			160.7 161.6 Bracket sample.									
161.6	206.1		ALTERED PILLOWED MAFIC VOLCANIC FLOW	54208	170.7	171.0	.3	.0				
				54209	171.0	171.4	.4	.2				
			LITHOLOGY: fine grained light grey green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz and calcite.	54210	171.4	172.0	.6	.1				
				54211	177.9	178.4	.5	.0				
				54212	178.4	178.9	.5	.1				

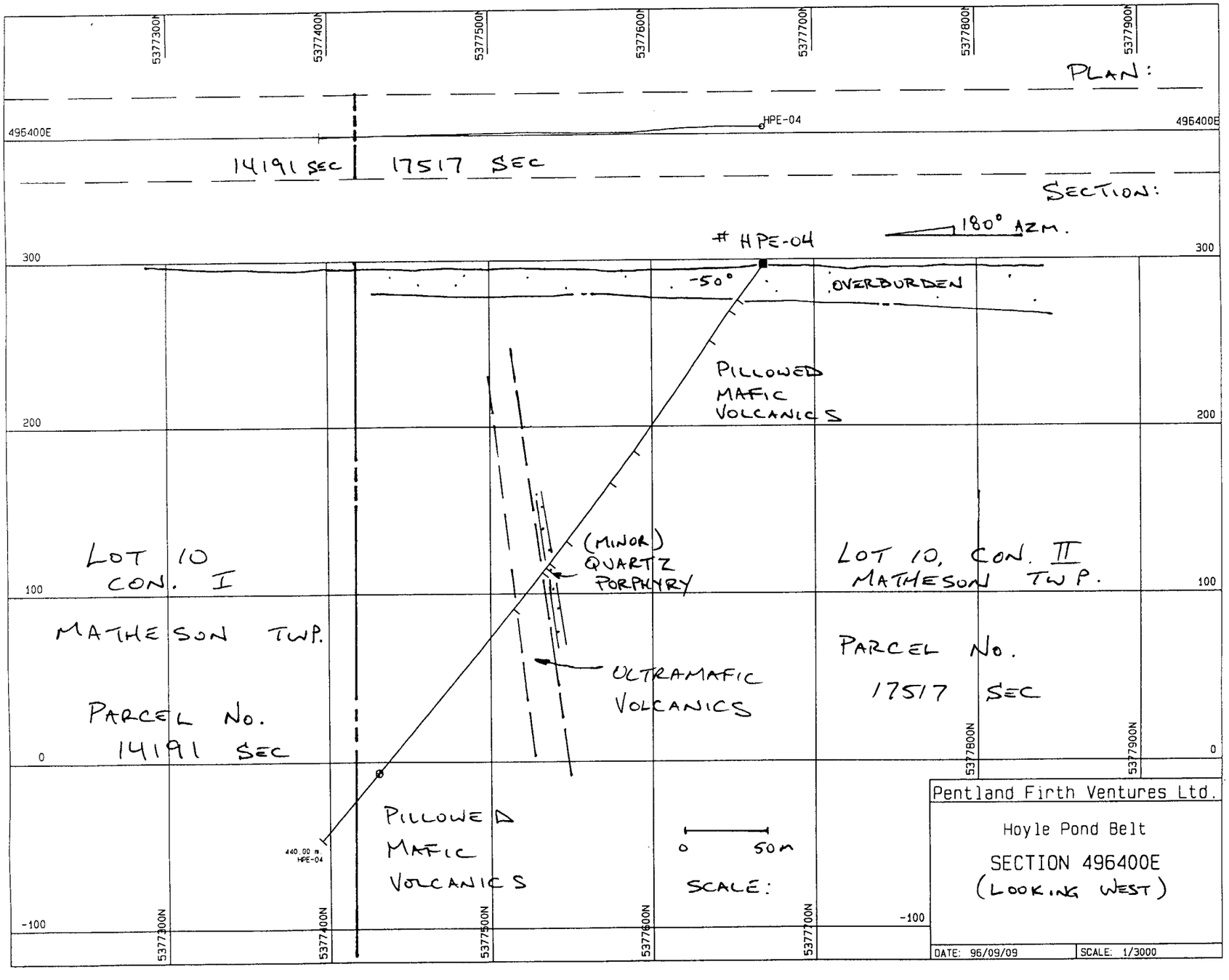
From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			ALTERATION: minor to moderate carbonate alteration, fizzes with HCL, minor chlorite alteration associated with fractures. Sericite alteration in pillows, also minor hematite alteration associated with fracture and or pillow selvages. SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared. Pyrite and very minor magnetite with minor ARSENOPYRITE. STRUCTURE: RQD of 80, massive with very minor fracturing. 170.7 171.0 Bracket sample. 171.0 171.4 Trace fine grained pyrite, 40 cm quartz-ankerite vein possible flood vein up to at 85 degrees to the core axis lower contact unclear. 171.4 172.0 Trace fine grained pyrite, bracket sample. 177.9 178.4 Bracket sample. 178.4 178.9 20 cm quartz-calcite vein at 50 degrees to the core axis, vein is mostly quartz fragments cemented by calcite pyrite associated with vein contacts. 178.9 179.5 Trace pyrite, 0.5 cm vein 70 degrees to the core axis. 179.5 180.0 Trace pyrite, 1 cm quartz-ankerite vein at 40 degrees to the core axis. 180.0 181.5 Trace fine grained pyrite with very minor quartz-ankerite veinlets at 35 to 50 degrees to the core axis. 181.5 182.0 Trace to 0.2% fine grained pyrite associated with quartz flood/vein, vein 20 cm. 182.0 182.6 Bracket sample. 185.0 185.8 0.3% fine grained disseminated pyrite, minor quartz-calcite veinlets associated with fracture filling. 185.8 186.3 Trace to 0.3% fine grained pyrite associated with quartz-ankerite vein, possible quartz flood. 186.3 186.8 Bracket sample, coarse grained trace pyrite associated with pillow selvage. 191.0 191.5 Trace fine grained pyrite, bracket sample with minor quartz stringers 191.5 191.9 Trace to 0.2% fine grained pyrite associated with quartz flood possible pillow selvage replacement. 191.9 192.5 0.3% coarse grained and minor fine grained pyrite associated with pillow selvage, very minor quartz-calcite stringers associated with fracture filling. 198.5 199.5 Trace fine grained pyrite, bracket sample, minor quartz-calcite stringers, minor carbonate alteration. 199.5 200.0 0.5% fine grained and coarse grained pyrite minor quartz-calcite veinlets at 35 to 45 degrees to the core axis.	54213	178.9	179.5	.6	.0				
				54214	179.5	180.0	.5	.1				
				54215	180.0	181.5	1.5	.1				
				54216	181.5	182.0	.5	.2				
				54217	182.0	182.6	.6	.0				
				54218	185.0	185.8	.8	.3				
				54219	185.8	186.3	.5	.1				
				54220	186.3	186.8	.5	.1				
				54221	191.0	191.5	.5	.1				
				54222	191.5	191.9	.4	.2				
				54223	191.9	192.5	.6	.3				
				46877	198.5	199.5	1.0	.0				
				54224	199.5	200.0	.5	.5				
				54225	200.0	200.7	.7	.5				
				54226	200.7	201.3	.6	.2				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			200.0 200.7 Same as above, 2.5 cm vein at 50 degrees to the core axis. 200.7 201.3 1 cm QUARTZ VEIN at 50 degrees to the core axis, pyrite coarse grained and fine grained disseminated.									
206.1	222.9		PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained light green grey pillowed mafic, minor quartz-calcite veins, selvages filled with quartz. And calcite. ALTERATION: minor carbonate alteration, fizzes with HCL, minor chlorite alteration associated with fractures. Minor sericite alteration in pillow. SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite disseminated. STRUCTURE: RQD of 85, massive with very minor fracturing.									
222.9	226.4		QUARTZ PORPHYRY LITHOLOGY: quartz feldspar porphyry, 70% feldspar and 30% quartz, matrix dark to 225.2. Minor QUARTZ VEINs, up to sharp at 40 dtca lower contact at 55 degrees to the core axis, contact very gradational. ALTERATION: minor to moderate sericite alteration. SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite also disseminated. STRUCTURE: RQD of 90 to 95, 20% phenocrysts with sizes ranging from .5 mm to .3 mm. 224.5 225.1 Trace fine grained disseminated pyrite with minor sericitic	54227 54228 54229	224.5 225.1 225.7	225.1 225.7 226.4	.6 .6 .7	.3 .5 .3				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			alteration, bracket sample. 225.1 225.7 Trace to 0.5% fine grained disseminated pyrite with 4 minor QUARTZ VEINs at 60 to 65 degrees to the core axis. 225.7 226.4 Trace to 0.3% fine grained, bracket sample.									
226.4	229.8		PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained light green pillowed mafic. ALTERATION: minor carbonate alteration, fizzes with HCL, minor chlorite alteration associated with fractures. Minor sericite alteration in pillow. SULPHIDES: trace to fine grained pyrite associated with fractures. STRUCTURE: RQD of 90, massive with very minor fracturing. From 228.6 to 229.8 quartz feldspar porphyry, sericitic alteration.									
229.8	258.0		KOMATIITIC ULTRAMAFIC VOLCANIC LITHOLOGY: fine grained to medium grained, dark grey, with feldspar phenocrysts, up to at 50 degrees to the core axis. Lower contact at 40 degrees to the core axis. ALTERATION: minor carbonate alteration. SULPHIDES: trace fine grained disseminated pyrite. STRUCTURE: RQD of 90, foliation at 83 degrees to the core axis interval is quite hard. 235.0 235.6 Minor quartz veinlets at 35 and 45 degrees to the core axis minor fuchsite. 235.6 236.2 Quartz feldspar vein, upper portion of vein, contact at 12 degrees to the core axis, minor fuchsite associated with vein.	54230	235.0	235.6	.6	.0				
				54231	235.6	236.2	.6	.0				
				54232	236.2	236.9	.7	.0				
				54233	236.9	238.1	1.2	.0				
				54234	238.1	238.9	.8	.1				
				54235	238.9	239.6	.7	.1				
				54236	239.6	240.1	.5	.1				
				54237	240.1	240.8	.7	.0				
				54238	243.9	244.4	.5	.2				
				54239	244.4	244.8	.4	.3				
				54240	244.8	245.4	.6	.0				
				54241	248.7	249.2	.5	.0				
				54242	249.2	249.6	.4	.0				
				54243	249.6	250.5	.9	.0				
				54244	250.5	251.0	.5	.0				
				54245	251.0	251.6	.6	.0				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			236.2 236.9 Quartz vein with minor feldspar, vein width msleading, vein cored down axis. 236.9 238.1 Same as above, lower contact at 12 degrees to the core axis. 238.1 238.9 Trace fine grained disseminated pyrite, bracket sample. 238.9 239.6 Same as above, feldspar crystals throughout. 239.6 240.1 10 cm quartz vein at 20 degrees to the core axis, minor pyrite disseminated in wall rock. 240.1 240.8 Bracket sample. 243.9 244.4 Trace to 0.2% fine grained disseminated pyrite associated with veins, veins at 65 degrees to the core axis. 244.4 244.8 Trace to 0.5% fine grained pyrite, minor quartz vein at 35 degrees to the core axis, minor fuchsite associated with vein. 244.8 245.4 1.5 cm quartz-ankerite vein at 15 degrees to the core axis. 248.7 249.2 Bracket sample, trace pyrite. 249.2 249.6 1.5 cm QUARTZ VEIN at 55 degrees to the core axis. 249.6 250.5 Bracket sample. 250.5 251.0 15 cm QUARTZ VEIN at 35 degrees to the core axis, minor associated fuchsite and very minor pyrite. 251.0 251.6 Bracket sample.									
258.0	440.0		PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained light green pillowed mafic. ALTERATION: minor carbonate alteration, fizzes with HCL, minor chlorite alteration associated with fractures and selvages. Minor sericite alteration in pillow. Pin pointed clotted carbonate alteration. SULPHIDES: trace to fine grained pyrite associated with fractures and pillow selvages. STRUCTURE: RQD of 90, massive with very minor fracturing weak foliation at 80 degrees to the core axis. 259.0 259.4 0.5% fine grained pyrite associated with quartz-ankerite flood, minor fuchsite alteration. 329.3 329.8 Trace fine grained disseminated pyrite, bracket sample. 329.8 331.6 Trace fine grained pyrite, possible fault zone, 5 cm QUARTZ VEIN at 65 degrees to the core axis, pyrite associated with vein contacts.	54246 54247 54248 54249	259.0 329.3 329.8 331.6	259.4 329.8 331.6 332.0	.4 .5 1.8 .4	.5 .1 .2 .0				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			331.6 332.0 Trace pyrite, bracket sample.									
			CASING REMAINS; No Cementing. HPE-04 IS LOCATED 70m N AND 480m W OF HPE-01.									
			105 Samples sent to Swastika Labs Ltd.									
			CORE STORED AT THE MARLHILL MINE, HOYLE TWP., SOUTH PORCUPINE.									
			At 440.0 meters EOH.									


5377300N
5377400N
5377500N
5377600N
5377700N
5377800N
5377900N
PLAN:
496400E
HPE-04
496400E
14191 SEC
17517 SEC
SECTION:
180° AZM.
HPE-04
300
-50°
OVERBURDEN
PILLOWED MAFIC VOLCANICS
200
LOT 10 CON. I MATHESON TWP.
PARCEL No. 14191 SEC
(MINOR) QUARTZ PORPHYRY
ULTRAMAFIC VOLCANICS
LOT 10, CON. II MATHESON TWP.
PARCEL No. 17517 SEC
100
0
440.00 m HPE-04
PILLOWED MAFIC VOLCANICS
0 50m
SCALE:
-100
Pentland Firth Ventures Ltd.
Hoyle Pond Belt
SECTION 496400E
(LOOKING WEST)
DATE: 96/09/09
SCALE: 1/3000

ASTRONOMIC

10°

N

I C G GASLINE

HWY 610

ONR

283m

HPE-04
-50° DIP

254m

PENTLAND

17517 SEC

12350 SEC

CON. II

CON. I

P 805693

443m

HWY 101

RIVER

P 805694

14191 SEC

PORCUPINE

LOT 11

LOT 10

LOT 9

SCALE: 1 : 5000

PENTLAND FIRTH VENTURES LTD.

Timmins ONTARIO

HOYLE POND EAST PROJECT

LOCATION PLAN MAP

1996 DRILLING: HPE-04

Matheson Township

DRAWN A.H.R.	DATE SEPT. 11/96	NTS:	PROJECT:
MAP No:			
DWG. No. HPELOC	0 50 100 150 200M		

PENTLAND FIRTH VENTURES LTD.

DRILL HOLE RECORD

Property: BIRKER OPTION
EASTING: 496457
NORTHING: 5377518
Elevation: 297.000
Grid: NONE: TIED INTO HPE-01
Collar Azi.: 180
Collar Dip: -56
Local Ref: \Ref1
Hole Length: 377.0 metres
Print Date: 10 Sep, 1996

*** Dip Tests ***

Depth	Azi.	Dip
29	182	-58
80	183	-56
182	181	-53
209	177	-54
227	181	-52
278	179	-52
329	185	-52

Drill Hole: HPE-05
Township: Matheson
Claim #: 17517 SEC
Date Started: FEB 03, 1996
Completed: FEB 06, 1996
Logged by: R.M. LANDRY
Date(s) Logged: FEB 06, 1995
Drilled by: Bradley Bros. Ltd.
Core Size: BQ
Company: PFVL

Purpose: TO TEST SOUTHWESTERN ZONE, EAST OF HPE-04
Hole Condition: Casing pulled.
Comments: Core Stored at the Marlhill Mine, Hoyle Twp.

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
.0	20.0		OVERBURDEN Overburden to 19.5m made up of sand, minor clay, with sporadic boulders. Cored boulders are volcanic and granitic.									
20.0	88.6		PILLOWED MAFIC VOLCANIC FLOW LITHOLOGY: fine grained light green to light grey, very weak intermittant grey zones. 2 to 3% quartz-calcite. ALTERATION: moderate carbonate alteration, fizzes with HCL, minor chlorite alteration associated with pillow selvage and fractures. Pin point clotted carbonate alteration, weak sericitic alteration in pillow. SULPHIDES: trace fine grained disseminated pyrite associated with fractures, veins, and pillow selvages. STRUCTURE: RQD of 70 to 80, moderately foliated at 65 degrees to the core axis.	54264	20.4	21.0	.6	.0				
				54265	21.0	21.8	.8	.1				
				54266	21.8	22.6	.8	.0				
				54267	76.3	76.9	.6	.1				
				54268	76.9	77.5	.6	.3				
				54269	77.5	78.4	.9	.0				
				54270	78.4	79.5	1.1	.5				
				54271	79.5	80.0	.5	.0				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			20.4 21.0 Bracket sample. 21.0 21.8 Trace fine grained pyrite, 3 to 5% quartz-calcite veinlets at various angles to the core axis. 21.8 22.6 Bracket sample. 76.3 76.9 Trace fine grained pyrite associated with pillow selvages. 76.9 77.5 0.3% fine grained pyrite associated with pillow selvage with chlorite alteration, 1 cm quartz vein at 75 degrees to the core axis. 77.5 78.4 Bracket sample. 78.4 79.5 Trace to 0.5% fine grained pyrite, 10 to 15% quartz-calcite veinlets at various angles to the core axis, minor pyrite associated with vein. 79.5 80.0 Bracket sample.									
88.6	131.1		MASSIVE MAFIC VOLCANIC FLOW LITHOLOGY: fine grained light grey green mafic flow, minor quartz-calcite veins. ALTERATION: minor to moderate carbonate alteration, fizzes with HCL minor chlorite alteration associated with fractures. SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins. STRUCTURE: RQD of 80, massive with very minor fracturing. At 98.6 meters VISIBLE GOLD ASSOCIATED WITH QUARTZ VEIN. 97.7 98.5 Trace to 0.3% fine grained disseminated pyrite, bracket sample. 98.5 98.8 Trace fine grained pyrite, VISIBLE GOLD associated with 1 cm quartz vein at 45 degrees to the core axis. 98.8 99.6 Trace fine grained pyrite, bracket sample. 129.1 129.9 0.5% fine grained disseminated pyrite with 0.5% fine grained disseminated ARSENOPYRITE, very minor quartz-ankerite. 129.9 130.7 1.3% fine grained and coarse grained pyrite, minor ARSENOPYRITE, 1 cm quartz-ankerite vein at 70 to 90 degrees to the core axis. 130.7 131.1 1.5% fine grained disseminated pyrite associated with vein, ARSENOPYRITE at 1.0%, disseminated and associated with vein, 2.5 cm QUARTZ VEIN at 75 to 80 degrees to the core axis.	54272 54273 54274 54275 54276 54277	97.7 98.5 98.8 129.1 129.9 130.7	98.5 98.8 99.6 129.9 130.7 131.1	.8 .3 .8 .8 .8 .4	.3 .3 .0 1.5 1.5 2.5				
131.1	139.2		FELDSPAR PORPHYRY	54278	131.1	131.9	.8	.0				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			LITHOLOGY: quartz feldspar porphyry, 90% feldspar and 10% quartz, matrix dark to 131.9. Minor QUARTZ VEINs, up to weak, broad zone of mixing lower contact at 55 degrees to the core axis, contact very gradational, from 131.9 to 135.4 strong sericitic alteration. Contacts are both very gradational. ALTERATION: minor to moderate sericite alteration, locally quite strong. SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite also disseminated. Trace fine grained ARSENOPYRITE. STRUCTURE: RQD of 90 to 95, 20% phenocrysts with sizes ranging from .5 mm to .3 mm. 131.1 131.9 Trace fine grained disseminated pyrite, very minor sericitic alteration. 135.4 136.1 Trace fine grained disseminated pyrite, minor pyrite associated with veins, quartz veins at 80 to 90 degrees to the core axis, 1 cm to 4 cm. 136.1 137.0 Trace fine grained disseminated pyrite, minor QUARTZ VEIN at 75 degrees to the core axis, bracket sample. 137.0 137.5 Trace fine grained pyrite and trace fine grained ARSENOPYRITE, 2 QUARTZ VEINs at 45 and 75 degrees to the core axis 1.0 cm and 0.4 mm. 137.5 138.1 1.5% fine grained disseminated pyrite and 0.5% fine grained disseminated ARSENOPYRITE, minor pyrrhotite, 1.5 cm quartz-ankerite vein at 15 to 20 degrees to the core axis sample is an ultramafic unit. 138.1 139.2 Trace fine grained pyrite, bracket sample, qfp.	54279	135.4	136.1	.7	.2				
				54280	136.1	137.0	.9	.1				
				54281	137.0	137.5	.5	.3				
				54282	137.5	138.1	.6	2.0				
				54283	138.1	139.2	1.1	.0				
139.2	191.5		KOMATIITIC ULTRAMAFIC VOLCANIC LITHOLOGY: fine grained to medium grained, DARK grey, up to at 55 degrees to the core axis, lower contact at 48 degrees to the core axis. Well foliated. ALTERATION: minor carbonate alteration, minor fuchsite.	54284	139.2	139.6	.4	.1				
				54285	139.6	140.1	.5	.0				
				54286	140.1	140.7	.6	.0				
				54287	140.7	141.4	.7	.1				
				54288	141.4	142.3	.9	.2				
				54289	142.3	142.6	.3	.2				
				54290	142.6	143.3	.7	.0				
				54291	143.3	144.7	1.4	.3				

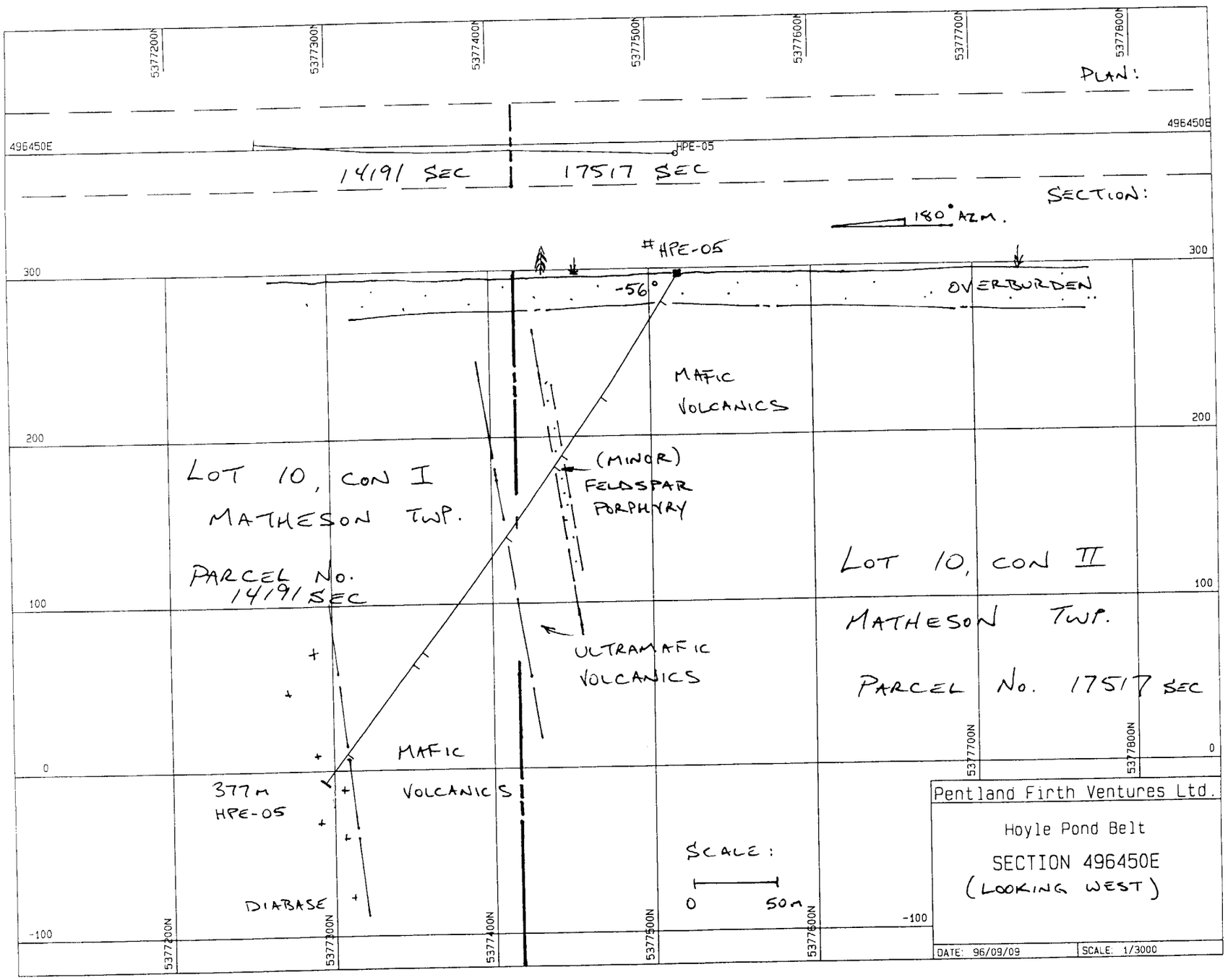
From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
				54292	144.7	145.1	.4	.2				
			SULPHIDES: trace fine grained disseminated pyrite with minor ARSENOPYRITE.	54293	181.9	182.8	.9	.1				
			STRUCTURE: RQD of 90, foliation at 83 degrees to the core axis interval is quite hard.									
			139.2 139.6 Trace fine grained pyrite and very minor ARSENOPYRITE, bracket sample 139.6 140.1 Trace fine grained pyrite, 2 1.5 cm QUARTZ VEIN, at 70 degrees to the core axis, minor pyrite associated with vein contacts. 140.1 140.7 Trace fine grained pyrite, 1 cm quartz-ankerite vein at 70 degrees to the core axis. 140.7 141.4 Trace fine grained pyrite, bracket sample. 141.4 142.3 Trace fine grained pyrite, 2 2 cm QUARTZ VEINs at 80 degrees to the core axis, 1 quartz feldspar flood 6 cm. 142.3 142.6 Trace fine grained disseminated pyrite associated with foliation, 7 cm QUARTZ VEIN at 35 degrees to the core axis cross cutting foliation 142.6 143.3 Bracket sample. 143.3 144.7 Trace fine grained and minor coarse grained pyrite, semi bleached. 144.7 145.1 Trace fine grained disseminated pyrite, 3 cm QUARTZ VEIN or flood at 85 to 90 degrees to the core axis. 181.9 182.8 Trace fine grained disseminated pyrite, minor pyrite associated with QUARTZ VEIN, vein is 1.5 cm at 05 degrees to the core axis, possible flood, minor chlorite alteration with vein.									
191.5	278.6		PILLOWED MAFIC VOLCANIC FLOW	54294	194.0	194.7	.7	.1				
				54295	194.7	195.4	.7	.0				
			LITHOLOGY: fine grained light grey green pillowed mafic, minor quartz-calcite veins, selvages filled with quartz.	54296	195.4	195.8	.4	.1				
			And calcite.	54297	195.8	196.4	.6	.0				
				54298	210.2	210.7	.5	.0				
				54299	210.7	211.0	.3	.3				
				54300	211.0	212.0	1.0	.0				
			ALTERATION: minor to moderate carbonate alteration, fizzes with HCL minor chlorite alteration associated with fractures.	54301	212.0	213.4	1.4	.0				
			Sericite alteration in pillow.	54302	213.4	214.0	.6	1.0				
				54303	214.0	214.7	.7	.0				
				54304	224.5	225.1	.6	.1				
				54305	225.1	226.0	.9	.0				
			SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures and veins, pyrite whispy or smeared.	54306	226.0	226.8	.8	.0				
				54307	226.8	227.2	.4	.2				
				54308	227.2	228.2	1.0	.0				
				54309	228.2	228.8	.6	.0				
			STRUCTURE: RQD of 80, massive with very minor fracturing.	54310	228.8	229.8	1.0	1.0				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			At 210 meters DDH departs the southern boubdary of the Birker Option, enters Parcel 14191 SEC. From 228.8 to 229.8 fault gouge, hematite alteration, chlorite alteration, 2% pyrite. 194.0 194.7 Trace fine grained pyrite associated with veins, 0.2 cm vein at 50 degrees to the core axis, quartz flood or selvage at 50 to 60 degrees to the core axis, minor chlorite alteration associated with selvage. 194.7 195.4 Bracket sample. 195.4 195.8 Trace fine grained pyrite associated with vein or flood, minor epidote associated with vein. 195.8 196.4 Bracket sample. 210.2 210.7 Bracket sample. 210.7 211.0 0.3% fine grained pyrite associated with vein, 1 cm vein at 40 degrees to the core axis, 0.2 cm quartz-ankerite vein at 85 degrees to the core axis feeding 1 cm vein. 211.0 212.0 Bracket sample. 212.0 213.4 Bracket sample. 213.4 214.0 1.0% fine grained and coarse grained disseminated pyrite, minor 0.2 mm quartz-ankerite vein at 10 degrees to the core axis. 214.0 214.7 Bracket sample. 224.5 225.1 Trace fine grained pyrite, quartz-ankerite and quartz-calcite vein or flood, 10 cm. 225.1 226.0 Bracket sample. 226.0 226.8 Bracket sample. 226.8 227.2 0.2% coarse grained pyrite associated with 8 cm vein at 70 degrees to the core axis, possible flood. 227.2 228.2 Bracket sample. 228.2 228.8 Bracket sample, minor quartz-ankerite veinlets. 228.8 229.8 1.0% fine grained pyrite associated with fractures, moderate hematite alteration, minor carbonate alteration, fault gouge, minor chlorite alteration, very minor quartz-ankerite veinlets at various angles to the core axis. 229.8 230.6 0.3% fine grained and minor coarse grained pyrite, bracket sample. 248.6 249.1 Bracket sample. 249.1 249.7 Trace fine grained pyrite, quartz flood or selvage, chlorite alteration associated with selvage. 249.7 250.2 Bracket sample. 270.7 271.3 0.5% fine grained pyrite associated with quartz-calcite vein, vein perpendicular to at _ degrees to core axis, 5 to 8 cm. 271.3 272.6 Trace fine grained disseminated pyrite minor pyrite associated with vein, vein at 60 degrees to the core axis and 2.5 cm, minor chlorite alteration associated with vein.	54311	229.8	230.6	.8	.3				
				54312	248.6	249.1	.5	.0				
				54313	249.1	249.7	.6	.1				
				54314	249.7	250.2	.5	.0				
				54315	270.7	271.3	.6	.5				
				54316	271.3	272.6	1.3	.1				
				54317	272.6	272.0	-.6	.0				
				54318	272.0	272.7	.7	.0				
				54319	272.7	273.2	.5	.2				
				54320	278.0	278.6	.6	.0				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			272.6 272.0 Bracket sample.									
			272.0 272.7 Trace fine grained pyrite, 2 quartz-ankerite veins or floods 2 and 5 cm, possible selvage associated.									
			272.7 273.2 2.5 cm quartz vein at 45 degrees to the core axis, 0.2% fine grained pyrite associated with vein.									
			278.0 278.6 Bracket sample.									
278.6	287.9		MASSIVE MAFIC VOLCANIC FLOW									
			Weak to moderate fuchsite alteration with minor to moderate carbonate alteration.	54321	278.6	278.9	.3	.0				
				54322	278.9	280.4	1.5	.1				
				54323	280.4	281.8	1.4	.1				
			LITHOLOGY: fine grained light green grey mafic Flow, minor quartz-calcite veins.	54334	281.8	283.3	1.5	.1				
				54325	283.3	284.8	1.5	.1				
				54326	284.8	285.6	.8	.1				
			ALTERATION: minor carbonate alteration, fizzes with HCL, weak to moderate fuchsite alteration.	54327	285.6	286.7	1.1	.3				
				54328	286.7	287.3	.6	.3				
				54329	287.3	287.9	.6	.1				
			SULPHIDES: trace to 0.5% fine grained pyrite, pyrite disseminated.									
			STRUCTURE: RQD of 95, massive with very minor fracturing.									
			278.6 278.9 Trace fine grained pyrite, 10 cm quartz-ankerite vein perpendicular to at _ degrees to core axis, minor chlorite alteration associated with vein.									
			278.9 280.4 0.1 to trace fine grained disseminated pyrite associated with fragments, minor fuchsite alteration, minor carbonate alteration associated with quartz-calcite veinlets at various angles to the core axis, moderate silicified.									
			280.4 281.8 Same as above.									
			281.8 283.3 Same as above.									
			283.3 284.8 Same as above.									
			284.8 285.6 Same as above.									
			285.6 286.7 Same as above, with increased silicification and minor quartz-calcite veins at 50 to 70 degrees to the core axis.									
			286.7 287.3 Same as above.									
			287.3 287.9 Same as above.									
287.9	355.9		MASSIVE MAFIC VOLCANIC FLOW									
				54330	287.9	288.6	.7	.1				
				54331	292.5	293.0	.5	.1				

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			LITHOLOGY: fine grained light green mafic flow.	54332	293.0	294.2	1.2	.3				
				54333	294.2	294.8	.6	.0				
				54334	341.5	342.1	.6	.1				
			ALTERATION: moderate carbonate alteration, fizzes with HCL, moderate chlorite alteration associated with fractures.	54335	351.8	352.3	.5	.0				
				54336	352.3	352.9	.6	.5				
			Pin point carbonate alteration.	54337	352.9	353.4	.5	.0				
			SULPHIDES: 0 to trace fine grained pyrite associated with fractures, and veinlets Increased areas of py.									
			STRUCTURE: RQD of 95, massive with very minor fracturing.									
			From 297.5 to 300.0 dark green 2m, strong chlorite alteration.									
			287.9 288.6 Bracket sample, trace fine grained disseminated pyrite, minor quartz-calcite veinlets and stringers at various angles to the core axis.									
			292.5 293.0 Trace fine grained pyrite, bracket sample, minor quartz-calcite stringers and veinlets possible breccia zone.									
			293.0 294.2 0.3% fine grained pyrite associated with QUARTZ VEIN, 0.5 cm QUARTZ VEIN at 01 to 03 degrees to the core axis, minor chlorite alteration associated with vein.									
			294.2 294.8 Bracket sample, minor quartz-calcite veinlet and stringers.									
			341.5 342.1 Trace fine grained pyrite, 1 cm quartz-ankerite vein at 05 degrees to the core axis, minor chlorite alteration, minor veinlets at 50 degrees to the core axis.									
			351.8 352.3 Bracket sample, minor quartz-calcite stringers at 55 degrees to the core axis.									
			352.3 352.9 0.5% fine grained pyrite associated with veins, veins at 65 and 80 degrees to the core axis, 1 to 3 cm wide.									
			352.9 353.4 Bracket sample.									
355.9	377.0		DIABASE	54338	371.7	372.5	.8	.1				
				54339	372.5	373.5	1.0	.5				
			LITHOLOGY: dark green grey, fine grained uphole grading to coarse grained downhole.	54340	373.5	374.2	.7	.1				
			Increasing magnetics downhole along w increased py.									
			ALTERATION: moderate to strong carbonate alteration.									
			SULPHIDES: trace to 0.5% fine grained pyrite associated with fractures, pyrite also disseminated.									

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	SUL (%)	AU (gpt)	AURE (gpt)	AUREJ (gpt)	AUAV (gpt)
			STRUCTURE: RQD of 90 to 95, very minor veinlets at 35 to 50 degrees to the core axis. 371.7 372.5 Trace fine grained pyrite, bracket sample. 372.5 373.5 0.5% fine grained and coarse grained disseminated pyrite, minor quartz-calcite stringers and veinlets at various angles to the core axis. 373.5 374.2 Trace fine grained disseminated pyrite, bracket sample. Water hauled by truck from Porcupine River, sumps dug and filled. CASING pulled; No Cementing. HPE-05 IS LOCATED 77m S AND 429m W OF HPE-01. CORE STORED AT THE MARLHILL MINE, HOYLE TWP., SOUTH PORCUPINE. 77 Samples sent to Swastika Labs Ltd. At 377.0 meters EOH.									


5377200N
5377300N
5377400N
5377500N
5377600N
5377700N
5377800N
PLAN:
496450E
496450E
HPE-05
14191 SEC
17517 SEC
SECTION:
180° AZM.
#HPE-05
300
300
-56°
OVERBURDEN
MAFIC
VOLCANICS
200
200
LOT 10, CON I
MATHESON TWP.
PARCEL No.
14191 SEC
(MINOR)
FELDSPAR
PORPHYRY
LOT 10, CON II
MATHESON TWP.
PARCEL No. 17517 SEC
100
100
ULTRAMAFIC
VOLCANICS
0
0
MAFIC
VOLCANICS
377m
HPE-05
DIABASE
SCALE:
0
50m
-100
-100
5377200N
5377300N
5377400N
5377500N
5377600N
5377700N
5377800N
Pentland Firth Ventures Ltd.
Hoyle Pond Belt
SECTION 496450E
(LOOKING WEST)
DATE: 96/09/09
SCALE: 1/3000

ASTRONOMIC

10°

N

I C G GASLINE

HWY 610

DNR

PENTLAND

344m

HPE-05
-56° DIP

17517 SEC

12350 SEC

103m

CON. II

CON. I

P 805693

HWY 101

377m

RIVER

P 805694

14191 SEC

PORCUPINE

LOT 11

LOT 10

LOT 9

SCALE: 1 : 5000

PENTLAND FIRTH VENTURES LTD.

Timmins ONTARIO

HOYLE POND EAST PROJECT

LOCATION PLAN MAP

1996 DRILLING: HPE-05

Matheson Township

DRAWN: A.H.R.	DATE: SEPT. 11/96	NTS:	PROJECT:
MAP No:			
DWG. No. HPELOC			

0 50 100 150 200M

Ministry of Northern Development and Mines

Ontario

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number: W9660.00525

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

Instructions:
- Please type or print and submit in d
- Refer to the Mining Act and Regulat Recorder.
- A separate copy of this form must b
- Technical reports and maps must ac
- A sketch, showing the claims the work is assigned to, must accompany this form.

42A11SE0091 W9660.00525 MATHESON

Mining

900

Recorded Holder(s)		Client No.
PENTLAND FIRTH VENTURES LTD.		300694
Address		**Telephone No.**
P.O. Box 1690 SOUTH PORCUPINE ONT.		(705) 235-2311
Mining Division	**Township/Area**	**M or G Plan No.**
PORCUPINE	MATHESON	G-3982

Dates Work Performed From: JANUARY 19, 1996 To: FEBRUARY 6, 1996

Work Performed (Check One Work Group Only)

	Work Group	Type
	Geotechnical Survey	
✓	Physical Work, Including Drilling	DIAMOND DRILLING
	Rehabilitation	
	Other Authorized Work	
	Assays	
	Assignment from Reserve	

Total Assessment Work Claimed on the Attached Statement of Costs $ 92,144

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
BRADLEY BROTHERS	HWY 101 W, TIMMINS, ONTARIO
ROLAND LANDRY (GEOLOGIST)	P.O. Box 1690 SOUTH PORCUPINE ONTARIO

(attach a schedule if necessary)

RECORDED
SEP 18 1996

Certification of Beneficial Interest * See Note No. 1 on reverse side

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date	Recorded Holder or Agent (Signature)
	Sept 12/96	

Certification of Work Report

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

Name and Address of Person Certifying: Ken Tylee P.O. Box 1690 South Porcupine Ontario

Telepone No.	Date	Certified By (Signature)
(705) 235-2311	Sept 12/96	

For Office Use Only

Total Value Cr. Recorded	Date Recorded	Mining Recorder	Revised Date
92,144	Deemed Approval Date: DEC. 12/96	Date Approved: DEC 12/96	
	Date Notice for Amendments Sent		

RECEIVED
SEP 18 1996
PORCUPINE MINING DIVISION

0241 (03/91)

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units	Value of Assessment Work Done on this Claim	Value Applied to this Claim	Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
	12350 SEC		32816		24375	8441
	17517 SEC		46995		46995	
	14191 SEC		12333		12333	
	P805693	1		41852		
	P805694	1		41851		
	Total Number of Claims		Total Value Work Done: 92144	Total Value Work Applied: 83703	Total Assigned From: 83703	Total Reserve: 8441

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to priorize the deletion of credits. Please mark (✓) one of the following:

1. ☐ Credits are to be cut back starting with the claim listed last, working backwards.
2. ☐ Credits are to be cut back equally over all claims contained in this report of work.
3. ☐ Credits are to be cut back as priorized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.	Signature [signature]	Date Sept. 12/96

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units	Value Applied to this Claim	Value of Assessment Work Done on this Claim
	12350 SEC			32816
	17517 SEC			46995
	14191 SEC			12333
1	P805693	1	~~4852~~ 4800 JM	
	P805694	1	~~4852~~ 4800 JM	

Total Number of Claims

Total Value Work Done: 92144

Total Value Work Applied: ~~9852~~ 9600 JM

Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
~~32816~~ 32816 JM	
~~46995~~ 46995 JM	
~~12333~~ 12333 JM	

Total Assigned From ~~9852~~ 9600 JM

Total Reserve: ~~87344~~ 87344 JM

AMENDED - W9660.00525

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to priorize the deletion of credits. Please mark (✓) one of the following:

1. ☐ Credits are to be cut back starting with the claim listed last, working backwards.
2. ☐ Credits are to be cut back equally over all claims contained in this report of work.
3. ☐ Credits are to be cut back as priorized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented	Signature	Date
		Sept. 12/96.

Ontario Ministry of Northern Development and Mines

Statement of Costs for Assessment Credit

Transaction Number (office use)
W9660.00525

Personal information collected on this form is obtained under the authority of subsection 6(1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, the information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to the Chief Mining Recorder, Ministry of Northern Development and Mines, 6th Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

Work Type	Units of Work Depending on the type of work, list the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc.	Cost Per Unit	Total Cost
Diamond Drilling	1696 m	$ 52.99/m	$ 89871
Associated Costs (e.g. supplies, mobilization and demobilization).			
Transportation Costs			
Truck Rental / Gas		$ 1.34 m	2273
Food and Lodging Costs			
		Total Value of Assessment Work	92,144

Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK x 0.50 = Total $ value of worked claimed.

Note:
- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, Jane A. McCaw (please print full name), do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying Declaration of Work form as Property Administrator (recorded holder, agent, or state company position with signing authority) I am authorized to make this certification.

RECEIVED
SEP 13 1996
PORCUPINE MINING DIVISION

Signature: Jane A. McCaw Date: Sept 12/96

MAP SYMBOLOGY

Aerial Cableway
Boundary
International
Interprovincial
District, Township, Indian Reserve
Approximate
Lot, Concession
Approximate
Park Boundary
Bridge
Road, Railroad
Building
Chimney
Cliff, Pit, Pile
Contours
Interpolated
Approximate
Depression
Control Points
Horizontal Δ 01774051
Vertical ⊙ 300.02
Culvert
Falls
Double line river
Fence, Hedge, Wall
Feature Outline (Construction features, etc.)
Flooded Land
Lock
Marsh or Swamp
Mast
Mine Head Frame
Outcrop

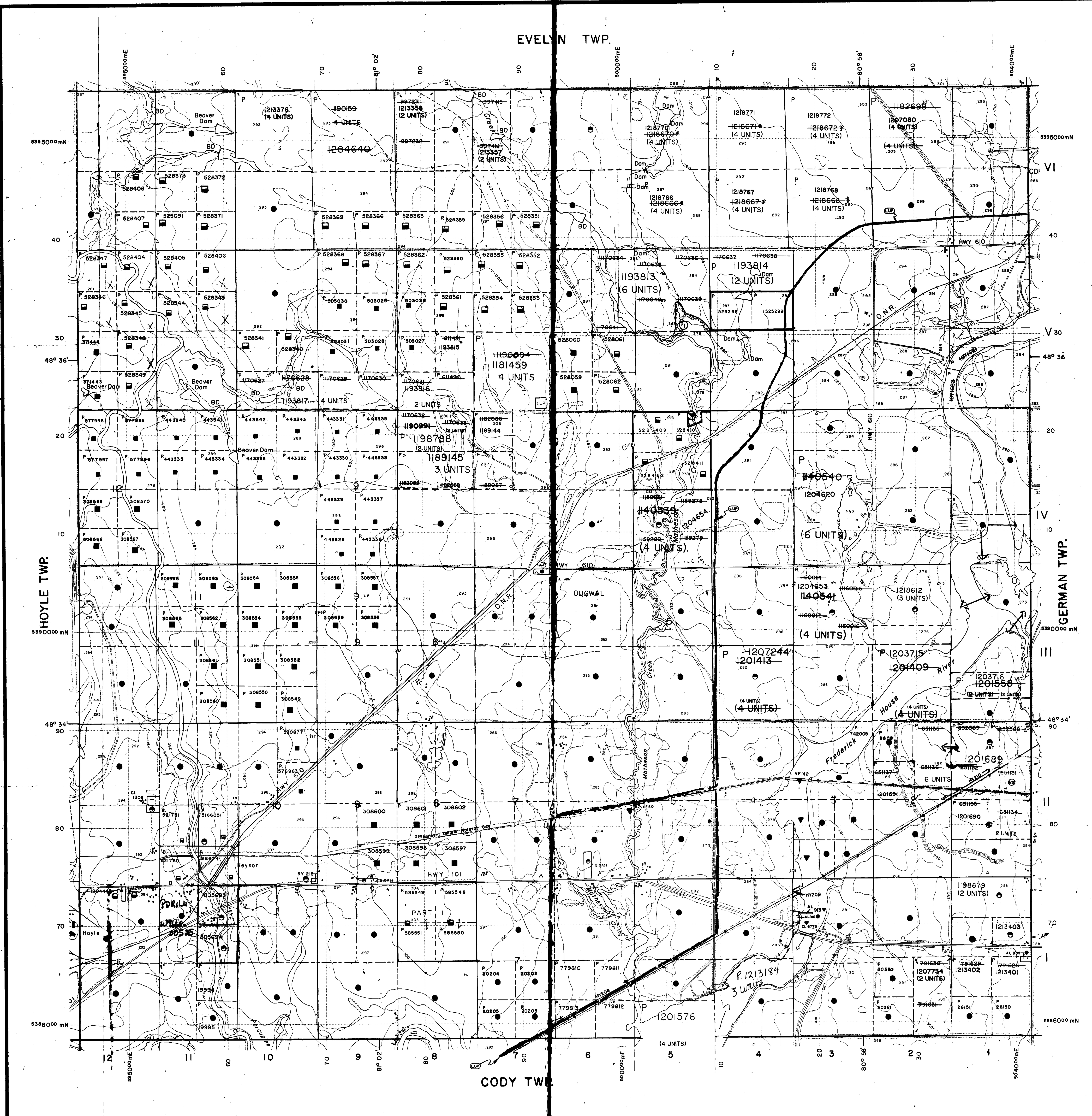
Pipeline (above ground)
Railroad
Single Track
Double Track
Abandoned
Turntable
Road
Highway, County, Township
Access (road of doubtful maintenance or significant driveway)
Trail, Bush Road (portage, alley)
Rapids
Double line river with multiple rapids
Double line river with multiple rapids
Reservoir
River, Stream, Canal
Approximate
Seasonal
Direction of flow
Rock
Significant
Shoal
Spot Elevation (lake elevations) 300.0
Tower
Transmission Line
Poles
Pylons
Tunnel
Utility Poles
Wharf, Dock, Pier
Wooded Area

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+ S. – MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.



LEGEND

HIGHWAY AND ROUTE No.
OTHER ROADS
TRAILS
SURVEYED LINES:
TOWNSHIPS, BASE LINES, ETC.
LOTS, MINING CLAIMS, PARCELS, ETC.
UNSURVEYED LINES:
LOT LINES
PARCEL BOUNDARY
MINING CLAIMS ETC.
RAILWAY AND RIGHT OF WAY
UTILITY LINES
NON-PERENNIAL STREAM
FLOODING OR FLOODING RIGHTS
SUBDIVISION OR COMPOSITE PLAN
RESERVATIONS
ORIGINAL SHORELINE
MARSH OR MUSKEG
MINES
TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" , SURFACE RIGHTS ONLY	◓
" , MINING RIGHTS ONLY	◒
LEASE, SURFACE & MINING RIGHTS	■
" , SURFACE RIGHTS ONLY	⬒
" , MINING RIGHTS ONLY	⬓
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	Ⓡ
CANCELLED	⊗
SAND & GRAVEL	◐

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

Metres 500 0 1000 Metres
Chains 10 0 10 20 30 40 50 60 70 Chains
Feet 500 0 1000 2000 3000 4000 5000 Feet

SCALE 1:20 000
GRID ZONE : 17

NOTES

FLOODING RIGHTS ON THE FREDERICK HOUSE RIVER TO 903' CONTOUR RESERVED TO H.E.P.C.

(R1) FLOODING RIGHTS RESERVED TO DUCKS UNLIMITED (FILE #M890.00057) OCTOER 31, 1988

(F) ~~THIS TWP. IS SUBJECT TO FOREST ACTIVITIES IN 1992/93. FURTHER INFORMATION AVAILABLE ON FILE.~~

LUP PENDING LAND USE PERMIT - MAR. 18/92

(R2) PENDING APPLICATION UNDER THE PUBLIC LANDS ACT NOTICE RECEIVED 92-NOV-17 (AGRICULTURAL)

(LUP) APPLICATION PENDING UNDER PUBLIC LANDS ACT NOTICE RECEIVED 93-MAR-30 (SNOWMOBILE TRAIL)

~~THIS TWP. IS SUBJECT TO FOREST ACTIVITY IN 1994/95 FURTHER INFORMATION AVAILABLE ON FILE.~~

* – APPLICATION TO RECORD AMENDED

TOWNSHIP
MATHESON
M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS
MINING DIVISION
PORCUPINE
LAND TITLES / REGISTRY DIVISION
COCHRANE

Ontario — Ministry of Natural Resources — Land Management Branch

ORIGINAL COMPILATION JULY 1984
ACTIVATED JULY 7, 199? BY L.C.
REVISED
CHECKED BY G.W.
Number G-3982

MATHESON TWP.
G-3982

42A11SE0091 W9660.00525 MATHESON
200