



BORING LOG

CAVENDISH
BO 1442(38)
TH-1 BR-58

Boring No.: **B-101**
Page No.: 1 of 2
Pin No.: 13J302
Checked By: MLM

Boring Crew: DAIGNEAULT, JUDKINS, HOOK
Date Started: 7/21/14 Date Finished: 7/23/14
VTSPG NAD83: N 321088.86 ft E 1604273.38 ft
Station: 43+11 Offset: 12.30
Ground Elevation: 931.4 ft

Type: WB SS
I.D.: 4 in 1.5 in
Hammer Wt: N.A. 140 lb.
Hammer Fall: N.A. 30 in.
Hammer/Rod Type: Auto/AWJ
Rlg: CME 55 TRACK C_c = 1.46

Groundwater Observations

Date	Depth (ft)	Notes
07/22/14	12.4	Before drilling.
07/23/14	13.4	After drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0		Asphalt Pavement, 0.0 ft - 0.64 ft A-1-a, SaGr, brn-gry, Moist, Rec. = 0.25 ft, Lab Note: Broken Rock was within sample.				R@3.5" (R)	11.2	63.3	27.7	9.0
0		Field Note: NXDC, Cleaned out casing.								
0		A-1-b, GrSa, brn-gry, Moist, Rec. = 0.25 ft, Lab Note: Broken Rock was within sample.				R@5.0" (R)	12.6	33.5	50.6	15.9
0		Field Note: NXDC, Cleaned out casing.								
10		A-1-b, GrSa, brn, Moist, Rec. = 1.0 ft, Lab Note: Broken Rock was within sample.				6-4-5-4 (9)	13.6	38.7	48.3	13.0
10		Field Note: NXDC, Cleaned out casing.								
10		Field Note: No Recovery. Appears to be silty sand., Rock plugged end of sampler.				5-2-1-2 (3)				
20		Field Note: Cleaned out with Roller cone								
20		A-2-4, Sa, brn, MTW, Rec. = 0.5 ft				1-1-1-3 (2)	28.6	2.0	85.1	12.9
20		Field Note: Cleaned out with Roller cone								
20		A-4, SiSa, brn, Molst, Rec. = 0.8 ft				2-2-3-3 (5)	30.4	0.2	62.5	37.3
30		Field Note: Cleaned out with Roller cone								
30		A-2-4, Sa, brn, Molst, Rec. = 0.8 ft				2-3-3-4 (6)	26.9	0.1	82.8	17.1
40		SiSa, brn, Moist, Rec. = 1.0 ft, 40.0 ft - 42.0 ft				2-3-3-4 (6)	30.6		53.9	46.1
50		Field Note: Cleaned out with Roller cone								
50		Field Note: No Recovery. Appears to be sand.				1-3-3-5 (6)				
60		Field Note: Cleaned out with Roller cone								
60		A-2-4, SiSa, brn, Molst, Rec. = 0.6 ft				5-7-8-8 (15)	28.3	0.6	73.5	25.9

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Groundwater Observations


Date	Depth (ft)	Notes
07/22/14	12.4	Before drilling.
07/23/14	13.4	After drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0		A-2-4, Sa, brn, Moist, Rec. = 1.7 ft				7-8-11-12 (19)	23.0	5.5	75.4	19.1
0		Field Note: Cleaned out with Roller cone								
80		A-2-4, SiSa, brn, Moist, Rec. = 0.8 ft				6-7-8-7 (15)	27.9		76.5	23.5
90		Field Note: Cleaned out with Roller cone								
90		A-2-4, Sa, brn, Moist, Rec. = 0.7 ft				16-32-20-23 (52)	22.0	2.8	78.7	18.5
90		A-2-4, SiSa, gry-brn, Molst, Rec. = 0.6 ft					15.4	19.3	59.5	21.2
100		Field Note: Cleaned out with Roller cone								
100		A-2-4, SiSa, brn, Molst, Rec. = 0.2 ft				6-10-15-16 (25)	20.9	15.2	64.7	20.1
110		A-2-4, Sa, brn, Moist, Rec. = 0.4 ft				R@5.0" (R)	23.6	7.3	73.1	19.6
110		Field Note: BXDC, Cleaned out casing.								
120		120.0 ft - 124.0 ft, Dark green, Amphibolite, Hard, Unweathered, Good rock, BX, RMR=72	1 (55)	70 (58)	9					Top of Bedrock @ 120.0 ft
120		124.0 ft - 129.0 ft, Dark green, Amphibolite, and light-gray to white, gneissic hornblende-biotite tonalite. Closely spaced horizontal jointing. Hard, Unweathered, Fair rock, BX, RMR=52	2 (55)	80 (8)	3					
130		Hole stopped @ 129.0 ft								
130		Remarks: Hole collapsed at 33.6 ft.								


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BORING LOG 2 CAVENDISH BO 1442(38) GPJ VERMONT AOT.GDT 8/5/14


BORING LOG 2 CAVENDISH BO 1442(38) GPJ VERMONT AOT.GDT 8/5/14

 STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: B-102 Page No.: 1 of 3 Pln No.: 13J302 Checked By: MLM						
Boring Crew: <u>DAVISON, JUDKINS, HOOK</u> Date Started: <u>7/02/14</u> Date Finished: <u>7/17/14</u> VTSFG NAD83: <u>N 321165.60 ft E 1604160.35 ft</u> Station: <u>44+44</u> Offset: <u>-10.20</u> Ground Elevation: <u>929.5 ft</u>		Casing Sampler I.D.: <u>WB SS</u> 4 in 1.5 in Hammer Wt: <u>N.A.</u> <u>140 lb.</u> Hammer Fall: <u>N.A.</u> <u>30 In.</u> Hammer/Rod Type: <u>Auto/AWJ</u> Rlg: <u>CME 45C SKID</u> <u>C = 1.33</u>		Groundwater Observations Date Depth (ft) Notes 07/08/14 12.5 While drilling. 07/09/14 3.3 Before drilling. 07/15/14 10.1 While drilling.						
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip-sep)	Core Rec. (ROD %)	Drill Rate (min/ft)	Blow#* (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0		Asphalt Pavement, 0.0 ft - 0.64 ft								
0		A-1-b, GrSa, brn, Moist, Rec. = 0.7 ft, Lab Note: Broken Rock was within sample.				8-9-12-9 (20)	9.9	39.7	43.8	16.5
5		A-1-b, SiGrSa, brn, Moist, Rec. = 1.6 ft				5-5-4-4 (9)	8.8	33.1	46.3	20.6
5		A-1-b, SiGrSa, brn, Moist, Lab Note: Broken Rock was within sample.				4-11-4- (15)	9.8	35.3	42.5	22.2
10		Visual Description: Sandy Gravel with broken rock, gry, Moist, Rec. = 2 ft, Lab Note: Insufficient sample for testing.				11-6-2-2 (8)	27.7	0.8	56.8	42.4
10		A-4, SiSa, brn, Moist, Rec. = 1.5 ft				3-3-3-3 (6)	13.4	27.1	50.1	22.8
10		A-2-4, SiGrSa, brn, Moist, NXDC, Cleaned out casing.								
10		A-2-4, Sa, brn, MTW, Rec. = 0.25 ft				4-12-15-19 (27)	24.5	1.6	85.1	13.3
15		A-1-a, SaGr, brn-white, MTW, Rec. = 1.0 ft, Lab Note: Broken Rock was within sample, NXDC, Cleaned out casing.				25-25- (36)	11.8	49.5	38.8	11.7
15		Visual Description: Broken Rock, white, Dry, Rec. = 0.1 ft, NXDC, Cleaned out casing.				R@1.0* (83)				
15		Field Note: No Recovery, Appears to be GrSa				0-4-2-5-14 (67)				
20		A-2-4, Sa, brn, Moist, Rec. = 1.0 ft				15-11-8-10 (19)	24.9	1.0	84.0	15.0
20		Field Note: No Recovery				6-5-5-7 (10)				
25		A-2-4, Sa, brn, Moist, Rec. = 0.9 ft				3-5-6-5 (11)	23.1	0.2	84.6	15.2
30		A-2-4, SiSa, brn, MTW, Rec. = 1.0 ft				6-7-8-8 (15)	27.3	0.1	74.0	25.9
35		A-2-4, SiSa, brn, MTW, Rec. = 0.7 ft				8-6-6-8 (12)	26.6	0.1	74.0	25.9
40		A-2-4, SiSa, brn, Moist, Rec. = 0.7 ft				4-5-6-7 (11)	24.1		73.6	26.4
45		A-2-4, SiSa, brn, MTW, Rec. = 0.6 ft				4-6-7-8 (13)	29.5		75.4	24.6

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Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip-sep)	Core Rec. (ROD %)	Drill Rate (min/ft)	Blow#* (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0		A-2-4, SiSa, brn, Moist, Rec. = 0.6 ft				5-6-7-8 (13)	27.5		73.4	26.6
55		Field Note: NXDC, Cleaned out casing.				3-6-8-8 (14)	28.6	0.1	74.9	25.0
60		A-2-4, SiSa, brn, Moist, Rec. = 0.7 ft				10-9-10-11 (19)	25.5	2.8	72.5	24.7
65		A-2-4, Sa, brn, Wet, Rec. = 0.5 ft				8-13-12-11 (25)	32.7	2.8	77.6	19.6
70		Field Note: No Recovery				6-9-10- (19)				
75		A-2-4, SiSa, brn, Moist, Rec. = 1.2 ft				6-12-15-19 (27)	24.1	2.8	73.4	23.8
80		A-2-4, SiSa, brn, Moist, Rec. = 0.8 ft				10-15-19-20 (34)	22.9	3.4	73.0	23.6
85		A-2-4, SiSa, brn, Moist, Rec. = 1.0 ft				11-15-19-21 (34)	24.1	0.7	73.1	26.2
90		A-2-4, SiSa, brn, Moist, Rec. = 0.8 ft				15-20-22-23 (42)	22.5	2.9	64.5	32.6

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0		A-2-4, SiSa, brn, Moist, Rec. = 0.5 ft				9-16-18-7 (34)			21.3	0.2	77.7	22.1
105		Field Note: NXDC, Cleaned out casing, Appears to be cobbles.										
105		Field Note: Went inside 4" casing with 3" casing.										
110		Field Note: BXDC, Cleaned out casing.										
110		Field Note: No Recovery, Appears to be a boulder.										
115												
120		Field Note: BXDC, Cleaned out casing.										
120		A-2-4, GrSiSa, Ltbrn-gry, Moist, Rec. = 0.1 ft										
125												
130		A-4, GrSaSl, gry, Moist, Rec. = 0.1 ft										
135		133.5 ft - 134.5 ft. Dark green, Amphibolite, Hard, Unweathered, Fair rock, BX, RMR=52 134.5 ft - 138.5 ft. Light gray to white, Gneissic hornblende-biotite Tonallite, closely spaced horizontal jointing, Hard, Unweathered, Fair rock, RMR=52	1 (2)	94 (0)	4 4 6 4 4							
140		138.5 ft - 143.5 ft. Light gray to white, Gneissic hornblende-biotite Tonallite, Hard, Unweathered, Good rock, BX, RMR=72	2 (7)	74 (60)	2 3 2 3 3							
145		Hole stopped @ 143.5 ft										

Remarks:
 1. Groundwater was noted by the drillers at 13.2 ft and 12.9 ft on 7/17/14 and 7/18/14, respectively.
 2. Hole collapsed at 13.0 ft.

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