



STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

MONTPELIER
BO 1446(36)
TH-130 BR-13

Boring No.: **B-101**
Page No.: **1 of 1**
Pin No.: **13J082**
Checked By: **MLM**

Boring Crew: DAIGNEAULT, NIETO, MEYERS
Date Started: 5/12/14 Date Finished: 5/12/14
VTSPG NAD83: N 645682.03 ft E 1621866.67 ft
Station: 13+94 Offset: -3.50
Ground Elevation: 535.2 ft

Type: WB Sampler 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
Rig: CME 45C SKID C = 1.33

Groundwater Observations

Date	Depth (ft)	Notes
05/12/14	1.1	While drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.48		Asphalt Pavement, 0.0 ft - 0.48 ft								
0.48 - 0.7		A-1-b, SaGr, Lt/gry, Moist, Rec. = 0.7 ft, Lab Note: Various types of Broken Rock were within sample. Roller coned and cleaned out casing.				11-12-23-11 (35)	11.0	46.3	37.2	16.5
0.7 - 1.1		A-2-4, SiGrSa, brn, MTW, Rec. = 0.4 ft, Lab Note: Broken Rock was within sample. Roller coned and cleaned out casing.				1-4-5-4 (9)	16.4	32.4	39.5	28.1
1.1 - 1.3		A-4, SiSa, brn, MTW, Rec. = 1.2 ft, Roller coned and cleaned out casing.				6-1-4-1 (5)	25.7	10.3	45.1	44.6
1.3 - 2.9		A-2-4, SiSa, brn, MTW, Rec. = 1.6 ft				4-2-1-1 (3)	26.6	9.4	60.0	30.6
2.9 - 3.8		Lab Note, Mostly flat brittle fragments of broken rock (Slate), gry-brn, Moist, Rec. = 0.9 ft				2-18-12-R@3.5" (30)	13.8	50.2	30.7	19.1
3.8 - 4.2		Field Note:, NXDC				R@2.5" (R)	9.2	64.5	17.8	17.7
4.2 - 13.0		13.0 ft - 18.0 ft, Dark-gray to silvery-gray, lustrous Phyllite & Slate, Moderately hard, Unweathered, Fair rock, NXMDC, RMR = 59	1 (70)	98 (34)	6	Top of Bedrock @ 13.0 ft				
13.0 - 18.0					5					
18.0 - 23.0		18.0 ft - 23.0 ft, Dark-gray to silvery-gray, lustrous Phyllite & Slate, Moderately hard, Unweathered, Good rock, NXMDC, RMR = 64	2 (70)	100 (54)	10					
23.0 - 25.0					5					
25.0 - 27.0					8					
27.0 - 29.0					12					
29.0 - 23.0		Hole stopped @ 23.0 ft								
23.0 - 25.0		Remarks: Hole collapsed at 4.6 ft.								

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 MONTPELIER BO 1446(36).GPJ VERMONT AOT.GDT 6/3/14



BORING LOG

MONTPELIER
BO 1446(36)
TH-130 BR-13

Boring No.: **B-102**

Page No.: **1 of 2**

Pin No.: **13J082**

Checked By: **MLM**

Boring Crew: **DAIGNEAULT, NIETO**
Date Started: **5/13/14** Date Finished: **5/14/14**
VTSPG NAD83: **N 645735.16 ft E 1621944.70 ft**
Station: **14+88** Offset: **-15.20**
Ground Elevation: **534.1 ft**

Casing Sampler
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 45C SKID C = 1.33**

Groundwater Observations

Date	Depth (ft)	Notes
05/14/14	10.1	AM

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RCD %)	Drill Rate min/feet	Groundwater Observations				
						Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
5		A-2-4, SiGrSa with roots & wood pieces, brn, Moist, Rec. = 1.0 ft, Lab Note: Broken Rock (Slate) fragments were within sample.				1-2-2-3 (4)	12.8	31.6	41.1	27.3
		A-1-a, SaGr, brn, Moist, Rec. = 1.1 ft, Lab Note: Broken Rock was within sample.				3-4-4-6 (8)	6.6	50.9	35.4	13.7
		A-1-b, SiSaGr, Lt/brn, Moist, Rec. = 0.8 ft, Lab Note: Broken Rock was within sample.				6-4-3-4 (7)	12.3	42.2	36.9	20.9
		A-2-4, SiGrSa, Lt/brn, MTW, Rec. = 0.7 ft, NXDC, Cleaned out casing. Lab Note: Orange clay tile pieces & wood were within sample.				6-2-2-2 (4)	22.9	35.8	37.8	26.4
10		A-1-b, SiSaGr, brn, MTW, Rec. = 0.5 ft, Roller coned ahead. Lab Note: Wood pieces were within sample.				4-21-7-2 (28)	37.1	41.1	38.6	20.3
		Lab Note, Wood core (solid 9 inches), Lt/brn, MTW, Rec. = 0.75 ft, Roller coned and cleaned out casing.				2-5-4-4 (9)	47.8	4.3	45.0	50.7
		A-4, SaSi, Lt/gy, MTW, Rec. = 0.65 ft, Lab Note: Small pieces of wood were within sample.				5-4-3-3 (7)	42.2		62.2	37.8
		A-4, SiSa, gry, MTW, Rec. = 0.2 ft, Roller coned and cleaned out casing. Lab Note: Wood pieces were within sample.				6-3-4-7 (7)				
15		Field Note: No Recovery				6-2-4-3 (6)	17.0	58.9	32.5	8.6
		A-1-a, SaGr, gry, MTW, Rec. = 0.7 ft, Roller coned and cleaned out casing. Lab Note: Wood pieces were within sample.				3-2-2-4 (4)				
		Field Note: No Recovery, Roller coned and cleaned out casing.				12-8-8-8 (16)				
		Field Note: No Recovery								
20		Field Note: No Recovery								
		Field Note: No Recovery								
25		A-2-4, SiGrSa, gry, Moist, Rec. = 0.5 ft, Lab Note: Broken Rock was within sample.				7-8-5-4 (13)	16.1	30.2	48.9	20.9

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BORING LOG

MONTPELIER
BO 1446(36)
TH-130 BR-13

Boring No.: **B-102**

Page No.: **2 of 2**

Pin No.: **13J082**

Checked By: **MLM**

Boring Crew: **DAIGNEAULT, NIETO**
Date Started: **5/13/14** Date Finished: **5/14/14**
VTSPG NAD83: **N 645735.16 ft E 1621944.70 ft**
Station: **14+88** Offset: **-15.20**
Ground Elevation: **534.1 ft**

Casing Sampler
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 45C SKID C = 1.33**

Groundwater Observations

Date	Depth (ft)	Notes
05/14/14	10.1	AM

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RCD %)	Drill Rate min/feet	Groundwater Observations				
						Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
35		A-3, Sa, gry, Moist, Rec. = 0.6 ft				2-4-6-5 (10)	21.5	12.2	78.0	9.8
		A-2-4, SiSa, gry, Molst, Rec. = 1.0 ft				4-3-4-6 (7)	22.0	0.1	70.2	29.7
		Field Note: Roller coned and cleaned out casing. Lab Note: Wood pieces were within sample.				3-4-5-6 (9)	19.2	7.7	82.5	9.8
		A-3, Sa, gry, Moist, Rec. = 0.5 ft, Lab Note: Broken Rock was within sample.								
45		Field Note: Broken & weathered rock								
		44.4 ft - 49.4 ft, Dark-gray to silvery-gray, lustrous Phyllite & Slate, Moderately hard, Unweathered, Good rock, NXMDC, RMR = 68	1 (60)	100 (76)	4	Top of Bedrock @ 44.4 ft				
					5					
					5					
50		49.4 ft - 54.4 ft, Dark-gray to silvery-gray, lustrous Phyllite & Slate, with quartz veins. Moderately hard, Unweathered, Fair rock, NXMDC, RMR = 59	2 (60)	100 (46)	5					
					6					
					6					
					5					
55		Hole stopped @ 54.4 ft								
		Remarks: Hole collapsed at 9.7 ft.								

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BORING LOG

MONTPELIER
BO 1446(36)
TH-130 BR-13

Boring No.: **B-103**

Page No.: **1 of 1**

Pin No.: **13J082**

Checked By: **MLM**

Boring Crew: DAIGNEAULT, NIETO, HOOK
 Date Started: 5/20/14 Date Finished: 5/20/14
 VTSPG NAD83: N 645715.60 ft E 1621951.11 ft
 Station: 14+85 Offset: 5.10
 Ground Elevation: 532.4 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
 Rig: CME 45C SKID C = 1.33

Groundwater Observations

Date	Depth (ft)	Notes
05/20/14	6.1	After drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Groundwater Observations				
						Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
10		Visual Description:, Recycled Asphalt Pavement, blk, Dry, Rec. = 0.8 ft				5-8-2-3 (10)	8.1			
		A-2-4, GrSa, Dk/brn, Moist, Rec. = 1.2 ft				3-3-3-2 (6)	13.4	24.9	55.2	19.9
		A-1-b, SaGr, Dk/brn, Moist, Rec. = 0.7 ft				3-4-4-8 (8)	10.6	45.3	40.1	14.6
		Visual Description:, Broken Rock with sand and asphalt pavement, Dk/brn, Moist, Rec. = 0.5 ft				2-2-3-2 (5)	5.2			
		A-2-4, GrSa, brn, Moist, Rec. = 0.5 ft				2-R@3.5" (R)	18.2	29.2	54.3	16.5
		Field Note:, Concrete Footing/Granite Fill								
		Visual Description:, Broken Rock with silty sand, gry, Moist, Rec. = 0.3 ft				R@3.5" (R)	12.0			
		Field Note:, NXDC								
		A-2-4, GrSa, Dk/gry, Moist, Rec. = 0.6 ft				5-3-1-1 (4)	23.1	35.8	48.8	15.4
	20		A-1-b, GrSa, brn, MTW, Rec. = 0.6 ft				3-3-5-6 (8)	16.1	39.0	47.8
		Field Note:, NXDC								
		A-2-4, Sa, Lt/gry, Moist, Rec. = 1.0 ft				5-3-3-4 (6)	19.9	14.5	71.9	13.6
		Field Note:, No Recovery				4-3-6-9 (9)				
30		A-2-4, Sa, gry, Moist, Rec. = 0.6 ft				2-4-8-8 (12)	23.9		87.3	12.7
		37.6 ft - 42.6 ft, Dark-gray to silvery-gray, lustrous Phyllite & Slate, with quartz vein from 39.4' to 40.8'. Moderately hard, Unweathered, Fair rock, NXMDC, RMR = 59	1 (60)	100 (48)	5	Top of Bedrock @ 37.6 ft				
		42.6 ft - 45.9 ft, Dark-gray to silvery-gray, lustrous Phyllite & Slate, Moderately hard, Unweathered, Good rock, NXMDC, RMR = 64	2 (80)	97 (61)	5					
40					6					
					7					
50					9					
					15					
					17					
		Hole stopped @ 45.9 ft								
		Remarks: Hole collapsed at 8.0 ft.								

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