



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

BORING LOG

SHREWSBURY
BRO 1443(44)
TH-4 BR-37

Boring No.: B-101

Page No.: 1 of 1

Pin No.: 94J154

Checked By: NSM

Boring Crew: PORTER, GARROW
Date Started: 4/21/11 Date Finished: 4/27/11
VTSPG NAD83: N 370120.02 ft E 1531053.50 ft
Station: 102+53 Offset: 23.00
Ground Elevation: 1017.74 ft

Casing Type: WB
Sampler Type: 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 55 TRACK CE = 1.46

Groundwater Observations		
Date	Depth (ft)	Notes
04/27/11	19.1	AM, Before drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-1-b, GrSa, brn, Moist, Rec. = 2.0 ft	3-5-8-8 (13)	9.5	22.9	57.5	19.6
		Field Note:, No Recovery					
		Field Note:, NXDC, Cobbles	26-17-12-9 (29)				
10		Visual Classification, GrSa, Rec. = 0.3 ft, Insufficient sample for testing. Field Note:, NXDC, Cobbles & Boulders	42- R@6.0"				
		Visual Classification, SaGr, Rec. = 0.3 ft, Insufficient sample for testing. Field Note:, NXDC, Cobbles & Boulders, Sleaved down to 3.0" casing.	R@5.0"				
20		Field Note:, BXDC, Cobbles & Gravel					
30		A-2-4, GrSiSa, brn, Moist, Rec. = 0.8 ft	20- R@6.0"	11.4	22.2	44.9	32.9
		A-2-4, SiSa, brn, Moist, Rec. = 2.0 ft	13-29-35-48 (64)	10.4	11.7	58.1	30.2
		A-1-b, SiSa, brn, Moist, Rec. = 1.0 ft	22-34- R@6.0"	10.6	17.4	61.5	21.1
		A-2-4, SaGrSi, brn, Moist, Rec. = 0.5 ft Field Note:, BXDC, Gravel	R@6.0"	10.8	33.4	31.8	34.8
		A-4, SaSi (HP), brn, Moist, Rec. = 0.7 ft	16- R@2.5"	9.0	19.0	33.5	47.5
40		A-4, SaSi (HP), brn, Moist, Rec. = 1.0 ft Field Note:, SiSa, Roller coned ahead.	30- R@6.0"	10.1	12.6	34.6	52.8
		Visual Classification, SiSa, red-brn, Moist, Rec. = 0.5 ft, Insufficient sample for testing. Field Note:, Sa, Roller coned ahead.	R@6.0"	11.6			
50		A-2-4, GrSiSa, red-brn, Moist, Rec. = 1.0 ft	11-40- R@2.5"	12.8	29.5	36.4	34.1
		Hole stopped @ 49.2 ft NLTD					

BORING LOG 2 SHREWSBURY BRO 1443(44).GPJ VERMONT AOT.GDT 6/1/11

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



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BORING LOG

SHREWSBURY
BRO 1443(44)
TH-4 BR-37

Boring No.: B-102

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Pin No.: 94J154

Checked By: NSM

Boring Crew: PORTER, GARROW
Date Started: 4/19/11 Date Finished: 4/21/11
VTSPG NAD83: N 370096.59 ft E 1531076.24 ft
Station: 102+70 Offset: 50.00
Ground Elevation: 1018.33 ft

Casing Type: WB
Sampler Type: 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 55 TRACK CE = 1.46

Groundwater Observations		
Date	Depth (ft)	Notes
04/20/11	9.5	
04/21/11	15.0	

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
10		A-1-b, SaGr, brn, Moist, Rec. = 1.4 ft	2-4-5-8 (9)	6.8	43.5	42.3	14.2
		Field Note: Cleaned out casing. Appears to be Gravel. Visual Classification, GrSaSi, brn, Moist, Rec. = 0.3 ft, Insufficient sample for testing.	2-2-2-2 (4)				
20		A-2-4, SiGrSa, brn, Moist, Rec. = 0.8 ft	1-1-2-1 (3)	19.8	29.9	40.2	29.9
		Field Note: Cobbles, Cleaned out casing. A-1-b, GrSa, brn, Moist, Rec. = 0.5 ft	4-11-6-4 (17)	12.1	42.2	47.5	10.3
30		Field Note: Boulder, Cleaned out casing. A-1-b, GrSa, brn, Moist, Rec. = 0.5 ft	4-4-5-12 (9)	15.3	32.5	53.7	13.8
		Field Note: NXDC, Boulder, Sleaved down to 3.0 in. A-2-4, SiGrSa, gry, Moist, Rec. = 1.5 ft	3-10-50-30 (60)	13.1	38.4	41.2	20.4
40		A-1-b, GrSa, brn, Moist, Rec. = 1.7 ft	7-16-30-46 (46)	11.6	32.3	49.2	18.5
		A-1-b, SiSaGr, brn, Moist, Rec. = 1.9 ft	26-42-38-32 (80)	9.3	46.8	27.9	25.3
50		A-2-4, SiGrSa, gold-brn, Moist, Rec. = 1.1 ft, Lab Note: Sample was rusty-orange colored.	17-30-R@6.0" (40)	12.5	33.2	36.3	30.5
		A-1-b, SaGr, gold-brn, Moist, Rec. = 0.7 ft, Lab Note: Sample was rusty-orange colored. Sample was mostly Broken Rock.	R@2.0" (52)	9.4	55.0	26.2	18.8
50		A-1-b, SiGrSa, brn, Moist, Rec. = 1.0 ft	R@6.0" (30-36-28-36) (64)	13.7	30.9	48.9	20.2
		A-2-4, SiGrSa, brn, Moist, Rec. = 2.0 ft	30-36-28-36 (64)	14.8	31.0	42.5	26.5
50		A-2-4, SiGrSa, red-brn, Moist, Rec. = 1.0 ft	25-R@6.0"	13.8	28.9	42.7	28.4
		Field Note: BXDC, Sandy Gravel A-1-b, SaGr, Rec. = 0.5 ft, Lab Note: Broken weathered Schist rock was within sample.	R@6.0"	11.6	49.4	32.9	17.7
50		Hole stopped @ 48.5 ft NLTD					

BORING LOG 2 SHREWSBURY BRO 1443(44).GPJ VERMONT AOT.GDT 6/1/11

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SHREWSBURY
BRO 1443(44)
TH-4 BR-37

Boring No.: B-103
Page No.: 1 of 1
Pin No.: 94J154
Checked By: NSM

Boring Crew: PORTER, GARROW
Date Started: 4/27/11 Date Finished: 4/29/11
VTSPG NAD83: N 370162.50 ft E 1531069.11 ft
Station: 102+76 Offset: -16.00
Ground Elevation: 1019.85 ft

Casing: WB
Sampler: SS
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 55 TRACK CE = 1.46

Groundwater Observations		
Date	Depth (ft)	Notes
05/02/11	14.2	After Weekend

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
10	[Diagonal Hatching]	A-2-4, SiSa Topsoil, Dk/brn, Moist, Rec. = 0.5 ft	1-1-R@6.0"	26.9	13.8	55.8	30.4
		A-4, SaSi, brn, Moist, Rec. = 0.5 ft Field Note: NXDC, Cobbles & Gravel		17.3	10.1	43.0	46.9
10	[Diagonal Hatching]	A-4, SaSi, brn, Moist, Rec. = 1.5 ft	1-1-1-1 (2)	19.1	18.2	39.6	42.2
		Field Note: No Recovery, Appears to be SaSi	1-1-1-1 (2)				
20	[Diagonal Hatching]	Field Note: NXDC, Cobbles					
		A-1-b, SiGrSa, brn, Moist, Rec. = 1.0 ft Field Note: NXDC, Cobbles & Gravel	8-14-11-30 (25)	15.9	38.5	38.9	22.6
20	[Diagonal Hatching]	A-1-b, SiGrSa, brn, Moist, Rec. = 0.7 ft Field Note: NXDC, Cobbles & Gravel	8-R@6.0"	10.2	23.5	54.7	21.8
		A-2-4, SiGrSa, brn, Moist, Rec. = 0.5 ft Field Note: NXDC, Cobbles & Gravel	40-R@2.5"	7.6	36.2	36.9	26.9
30	[Diagonal Hatching]	A-1-b, GrSa, gry, Moist, Rec. = 0.5 ft Field Note: NXDC, Cobbles & Gravel	R@6.0"	14.3	22.5	70.5	7.0
		Visual Classification, SaGr, brn, Moist, Rec. = 0.3 ft, Insufficient sample for testing. Field Note: NXDC, SaGr	10-R@2.5"	8.5			
30	[Diagonal Hatching]	A-4, SaSi (HP), gry, Moist, Rec. = 0.8 ft	40-80-R@0.0"	8.7	14.5	32.9	52.6
		A-4, SaSi (HP), gry, Moist, Rec. = 1.0 ft	33-70-R@0.0"	9.3	16.3	31.8	51.9
40	[Diagonal Hatching]	A-4, SaSi (HP), brn, Moist, Rec. = 0.3 ft	R@3.5"	9.5	18.8	32.0	49.2
		A-4, SaSi (HP), brn, Moist, Rec. = 0.5 ft	R@6.0"	9.4	15.3	35.4	49.3
50		A-2-4, SiSaGr, red-brn, Moist, Rec. = 0.3 ft, Lab Note: A small amount of Weathered Rock was within sample. Hole stopped @ 48.3 ft NLTD	R@3.5"	9.2	38.5	34.6	26.9

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SHREWSBURY
BRO 1443(44)
TH-4 BR-37

Boring No.: B-104

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Pin No.: 94J154

Checked By: NSM

Boring Crew: PORTER, GARROW
Date Started: 5/03/11 Date Finished: 5/03/11
VTSPG NAD83: N 370197.52 ft E 1531125.33 ft
Station: 103+40 Offset: -38.00
Ground Elevation: 1013.82 ft

Casing Type: WB
Sampler Type: 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 55 TRACK CE = 1.46

Groundwater Observations		
Date	Depth (ft)	Notes
05/03/11	0.6	Before drilling started.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
5		A-2-4, GrSiSa, blk, Wet, Rec. = 0.6 ft, (Muck)	WH-WH-2-3 (2)	55.8	28.2	43.5	28.3
		A-1-b, SiSaGr, Dk/brn, Wet, Rec. = 0.7 ft	8-8-10-8 (18)	18.3	40.6	37.8	21.6
		A-1-b, SiGrSa, brn, MTW, Rec. = 0.6 ft, Cleaned out casing with BXDC.	2-5-5-10 (10)	12.4	37.2	40.6	22.2
		A-4, SaGrSi, brn, MTW, Rec. = 0.6 ft, Cleaned out casing with BXDC.	10-10-8-10 (18)	8.5	34.2	29.6	36.2
10		Field Note: No Recovery, Stone in sampler. Appears to be Gravel, Cleaned out casing with BXDC.	3-13-13-15 (26)	6.0	30.6	32.0	37.4
		Visual Classification, Broken cobbles (Quartzite) with little silt & sand, white-brn, Moist, Rec. = 0.3 ft, Cleaned out casing with BXDC.	10-14-14-15 (28)				
15		A-4, GrSaSi, brn, MTW, Rec. = 0.3 ft	1-10-17-10 (27)	10.4	30.6	32.0	37.4
		A-2-4, SiGrSa, brn, Moist, Rec. = 1.0 ft	12-7-11-12 (18)	10.1	36.5	36.7	26.8
		A-2-4, SaGrSi, brn, Moist, Rec. = 1.5 ft	10-14-25-12 (39)	10.3	33.5	32.2	34.3
		A-2-4, SiSaGr (HP), brn, Moist, Rec. = 0.8 ft	8-11-22-38 (33)	9.8	42.3	29.6	28.1
25		Field Note: BXDC, Appears to be Sandy Gravel	20-80-R@0.0"	9.7	38.9	37.8	23.3
		A-1-b, SiSaGr (HP), orange-brown, Moist, Rec. = 0.8 ft					
		Field Note: BXDC, Appears to be Silty Sand					
30		A-2-4, SiGrSa (HP), brn, Moist, Rec. = 0.5 ft	R@6.0"	10.7	34.0	36.2	29.8
		Field Note: No recovery, BXDC, To confirm it was not bedrock					
30		Hole stopped @ 30.0 ft NLTD					

BORING LOG 2 SHREWSBURY BRO 1443(44) GPJ VERMONT AOT.GDT 6/1/11

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