



STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Chester
BF 0134(50)
VT 11 Culv. 51

Boring No.: B-101
Page No.: 1 of 1
Pin No.: 16b069
Checked By: MLM

Boring Crew: Garrow, Judkins, Emerson
Date Started: 9/13/16 Date Finished: 9/13/16
VTSPG NAD83: N 282685.36 ft E 1622038.88 ft
Station: 359+00 Offset: -25.00
Ground Elevation: 712.5 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 55 TRACKER = 1.41

Groundwater Observations

Date	Depth (ft)	Notes
09/13/16	11.2	W.T. during 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 %	
5		A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft				1-1-1-3 (2)	5.0	41.2	50.9	7.9	
		A-1-b, SaGr, brn, Moist, Rec. = 0.8 ft				2-3-4-8 (7)	4.2	48.8	39.4	11.8	
10		A-4, SiSa, brn, Moist, Rec. = 1.3 ft				5-4-9-4 (13)	9.1	14.7	49.1	36.2	
		Field Note:, NXDC, Cleaned out casing									
		A-4, SiSa, brn, Moist, Rec. = 1.3 ft Field Note:, NXDC, Cleaned out casing					19-4-5-6 (9)	13.6	18.3	42.3	39.4
		A-4, SaSi, gry, Moist, Rec. = 1.1 ft					10-5-6-8 (11)	15.3	8.6	39.2	52.2
15		Field Note:, NXDC, Cleaned out casing									
		A-4, SaSi, gry, Moist, Rec. = 1.2 ft, Lab Note: Pieces of wood and broken rock were within sample Field Note:, NXDC, Cleaned out casing					9-5-7-9 (12)	14.3	18.6	38.6	42.8
		A-1-b, GrSa, brn, Moist, Rec. = 1.1 ft					10-10-14-R@1" (24)	11.0	43.6	45.0	11.4
		Field Note:, NXDC, Cleaned out casing, Boulder									
20		Field Note:, NXDC, Cleaned out casing									
		A-1-b, SaGr, white-brn, Moist, Rec. = 0.5 ft, Lab Note: Broken rock was within sample Field Note:, NXDC, Cleaned out casing					R@6" (R)	10.5	50.3	37.5	12.2
		20.0 ft - 25.0 ft, White/light gray, Biotite-muscovite-quartz-plagioclase GNEISS, with brown/tan staining along joints. Hard, Very slightly weathered, Fair rock, NX, RMR=57	1 (50)	88 (41)	4	Top of Bedrock @ 20.0 ft					
25											
30		25.0 ft - 27.1 ft, White/light gray to dark gray, Biotite-muscovite-quartz-plagioclase GNEISS, with brown staining along joints. Hard, Very slightly weathered, Fair rock, NX, RMR=50	2 (50)	66 (55)	3						
		27.1 ft - 30.0 ft, White/light gray to dark gray, Biotite-muscovite-quartz-plagioclase GNEISS, with brown staining along joints. Medium hard, Moderately weathered, Fair rock, RMR=50			4						
					2						
Hole stopped @ 30.0 ft											
Remarks: Hole collapsed at 16.3 feet.											

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
 <<SUB>><<SUB>> 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.



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BORING LOG

Chester
 BF 0134(50)
 VT 11 Culv. 51

Boring No.: B-102
 Page No.: 1 of 1
 Pin No.: 16b069
 Checked By: SPM

Boring Crew: Garro, Judkins, Emerson
 Date Started: 9/15/16 Date Finished: 9/15/16
 VTSPG NAD83: N 282684.97 ft E 1622088.88 ft
 Station: 359+00 Offset: 25.00
 Ground Elevation: 714.3 ft

Casing: 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 55 TRACKER <<SUB>> = 1.41

Groundwater Observations		
Date	Depth (ft)	Notes
09/15/16	11.7	W.T. after 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 %
5		A-1-b, GrSa, brn, Moist, Rec. = 0.4 ft				1-2-4-3 (6)	2.5	30.3	57.8	11.9
		A-1-b, SiGrSa, brn, Moist, Rec. = 1.2 ft, Lab Note: Broken rock was within sample				3-3-6-3 (9)	6.2	31.1	47.0	21.9
		A-2-4, GrSiSa, brn, Moist, Rec. = 0.9 ft				6-5-4-3 (9)	6.6	22.0	54.2	23.8
		A-1-b, GrSa, brn, Moist, Rec. = 0.7 ft, Lab Note: Broken rock was within sample				3-6-8-8 (14)	3.9	43.6	44.6	11.8
		A-1-b, GrSa, brn, Moist, Rec. = 1.1 ft, Lab Note: Broken rock was within sample				7-7-R@2.5" (R)	5.8	35.0	52.2	12.8
10		Field Note: NXDC, Cleaned out casing								
		A-1-b, SaGr, brn, Moist, Rec. = 0.8 ft, Lab Note: Broken rock was within sample				25-17-20-20 (37)	11.5	47.8	38.0	14.2
		Field Note: NXDC, Cleaned out casing								
15		A-1-b, GrSa, brn-gry, Moist, Rec. = 0.4 ft, Lab Note: Broken rock was within sample				R@5" (R)	13.9	41.1	42.4	16.5
		Field Note: NXDC, Cleaned out casing								
		A-1-b, SaGr, gry-blk, Moist, Rec. = 0.7 ft				17-22-28-R@1" (50)	9.1	54.0	30.7	15.3
		Field Note: NXDC, Cleaned out casing								
		Field Note: No Recovery								
20		Field Note: NXDC, Cleaned out casing								
		Field Note: NXDC, Cleaned out casing								
		18.0 ft - 23.0 ft, White to gray, Biotite-muscovite-quartz-plagioclase GNEISS, with brown staining on joints. Seam noted during drilling 20.7 feet to 21.5 feet. Hard, Very slightly weathered, Good rock, NX, RMR=66	1 (40)	80 (78)	2	Top of Bedrock @ 18.0 ft				
					2					
					1					
25										
		23.0 ft - 28.0 ft, White to gray, Biotite-muscovite-quartz-plagioclase GNEISS, with faint brown/tan staining along joints. Hard, Unweathered, Good rock, NX, RMR=74	2 (50)	100 (100)	3					
					2					
					2					
30		Hole stopped @ 28.0 ft								

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BORING LOG 2 GILLESPIE DRIVE VERMONT STATE COLLEGE ST. VERMONT 05405



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CENTRAL LABORATORY

BORING LOG

Chester
BF 0134(50)
VT 11 Culv. 51

Boring No.: **B-103**

Page No.: 1 of 1

Pin No.: 16b069

Checked By: SPM

Boring Crew: Judkins, Garrow, Gomes
Date Started: 9/14/16 Date Finished: 9/14/16
VTSPG NAD83: N 282710.14 ft E 1622038.97 ft
Station: 359+25 Offset: -25.00
Ground Elevation: 713.0 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 55 TRACKER = 1.41

Groundwater Observations		
Date	Depth (ft)	Notes
09/14/16	8.1	W.T. during 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 %	
5		A-1-b, GrSa, brn, Dry, Rec. = 0.6 ft, Lab Note: Pieces of wood and plant material were within sample				WH-WH-2-2 (2)	6.7	32.4	55.5	12.1	
		A-2-4, GrSiSa, brn, Moist, Rec. = 1.3 ft				3-4-3-4 (7)	8.7	26.4	43.5	30.1	
		A-2-4, SiGrSa, brn, Moist, Rec. = 1.5 ft, Lab Note: Asphalt pavement was within sample				3-5-10-4 (15)	11.3	30.9	38.5	30.6	
		A-2-4, GrSiSa, brn, Moist, Rec. = 0.6 ft				7-2-3-5 (5)	13.6	28.6	40.3	31.1	
10		Field Note:, NXDC, Cleaned out casing									
		A-1-b, SaGr, brn, Moist, Rec. = 0.2 ft, Lab Note: Broken rock was within sample				3-4-14-5 (18)	16.4	53.4	37.8	8.8	
		A-2-4, GrSa, Dk/brn, Moist, Rec. = 0.2 ft, Lab Note: Some organic material was within sample. Insufficient sample size for organic testing						43.0	30.4	54.9	14.7
		A-1-b, GrSa, Dk/brn, Moist, Rec. = 0.4 ft, Lab Note: Decomposing wood was within sample						38.6	33.0	57.6	9.4
		Field Note:, NXDC, Cleaned out casing									
		A-1-a, SaGr, gry, Moist, Rec. = 0.7 ft, Lab Note: A lot of broken rock was within sample						21-28-16-10 (44)	11.9	59.2	32.5
15		Field Note:, NXDC, Cleaned out casing									
		A-4, SiSa, gry, Moist, Rec. = 1.2 ft				9-15-14-9 (29)	18.3	11.2	45.0	43.8	
		A-2-4, GrSa, brn-gry, Moist, Rec. = 0.4 ft, Lab Note: Broken and weathered rock was within sample						R@5" (R)	7.7	29.1	51.7
20		18.0 ft - 23.0 ft, White to dark gray, Biotite-muscovite-quartz-plagioclase GNEISS, with brown and orange staining along joints. Moderately hard, Slightly weathered, Fair rock, NX, RMR=49	1 (50)	86 (42)	4	Top of Bedrock @ 18.0 ft					
					4						
					3						
					3						
					4						
25		23.0 ft - 28.0 ft, White to dark gray, Biotite-muscovite-quartz-plagioclase GNEISS, with brown staining along joints and micaceous foliation. GREENSTONE inclusion at 25.8 feet to 26.0 feet. Medium hard, Slightly weathered, Fair rock, NX, RMR=42	2 (50)	78 (15)	4						
					3						
					3						
					3						
					4						
30		Hole stopped @ 28.0 ft									
		Remarks: Hole collapsed at 28.0 feet.									

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BORING LOG Z CHESTER BF0134(50).GPF VERMONT.AOT.GDI 10/17/16



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CENTRAL LABORATORY

BORING LOG

Chester
BF 0134(50)
VT 11 Culv. 51

Boring No.: **B-104**

Page No.: 1 of 1

Pin No.: 16b069

Checked By: MLM

Boring Crew: Emerson, Garrow, Gomes

Date Started: 9/09/16 Date Finished: 9/12/16

VTSPG NAD83: N 282715.23 ft E 1622088.96 ft

Station: 359+30 Offset: 25.00

Ground Elevation: 713.9 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 55 TRACKER

Casing Sampler

Groundwater Observations

Date	Depth (ft)	Notes
09/12/16	12.4	W.T. before 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 %
5		A-2-4, Sa, brn, Dry, Rec. = 0.2 ft, Lab Note: Plant roots were within sample				1-1-1-2 (2)	10.9	14.5	73.9	11.6
		A-2-4, GrSiSa, brn, Moist, Rec. = 1.0 ft				3-4-1-2 (5)	8.0	27.0	44.9	28.1
		A-2-4, SiSa, brn, Moist, Rec. = 1.3 ft Field Note: NXDC, cleaned out casing				2-2-3-10 (5)	9.0	19.4	47.4	33.2
		A-1-b, GrSa, brn, Moist, Rec. = 0.6 ft Field Note: NXDC, cleaned out casing Field Note: No Recovery				3-4-4-3 (8)	11.9	35.7	46.4	17.9
		A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft Field Note: NXDC, cleaned out casing				4-3-3-4 (6)				
15		A-1-b, SaGr, gry, Moist, Rec. = 0.5 ft Field Note: NXDC, cleaned out casing, Cobbles				5-6-4-5 (10)	11.3	41.4	50.6	8.0
		A-1-a, SaGr, gry-brn, Moist, Rec. = 0.6 ft, Lab Note: Broken rock was within sample Field Note: NXDC, cleaned out casing				4-11-14-9 (25)	10.8	56.8	30.1	13.1
		A-1-b, SaGr, gry, Moist, Rec. = 0.5 ft Field Note: NXDC, cleaned out casing				8-23-R@1" (R)	8.4	51.6	33.8	14.6
		A-4, SaSi, gry, Moist, Rec. = 1.6 ft, Lab Note: Some clay was within sample. Sample tested non-plastic Field Note: NXDC, cleaned out casing				8-18-19-20 (37)	12.4	16.6	34.3	49.1
20		A-4, SaSi, gry, Moist, Rec. = 1.8 ft, Lab Note: A small amount of clay was within sample. Sample tested non-plastic.				11-17-33-38 (50)	10.1	17.3	37.7	45.0
		Field Note: NXDC, cleaned out casing								
25		24.0 ft - 29.0 ft, White/gray, Biotite-muscovite-quartz-plagioclase GNEISS, with brown/tan staining along joints. Hard, Very slightly weathered, Good rock, NX, RMR=66	1 (40)	80 (90)	3					
					4					
					4					
					3					
					3					
30		29.0 ft - 34.0 ft, White/gray, Biotite-muscovite-quartz-plagioclase GNEISS, with vertical brown/tan stained joints from 32.1 feet to 32.4 feet. Moderately hard, Slightly weathered, Fair rock, NX, RMR=54	2 (50)	100 (52)	2					
					2					
					2					
					2					
					2					
35		Hole stopped @ 34.0 ft								
		Remarks: Hole collapsed at 6.7 feet.								

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