



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

BORING LOG
Winoosburg NES 021-1(10)
(Geodesic #750-00.10)
Winoosburg, VT

Boring No.: 85
Page No.: 1 of 2
Pin No.: 046204
Checked By: JFW

Boring Crew: C. Mériak (Platform), A. Barbeau (Geodesic)
Date Started: 5/27/15 Date Finished: 5/28/15
VTSPG INDS: N 671700.00 H E 1479070.00 H
Station: 200+81 Offset: 44' LT
Ground Elevation: 372 H

Coiling Sampler
Type: **ANDER SS**
I.D.: 2.25 in 1.38 in
Hammer Mt: N.A. 140 lb.
Hammer Fall: N.A. 30 in.
Hammer/Rod Type: **Auto/MTJ**
Rig: **Geoprobe 782201 CE = 1.35**

Groundwater Observations (3)

Date	Depth (ft)	Notes
05/28/15	12.0	in open hole.
05/28/15	10.0	Wet sample

Depth (ft)	Shank (ft)	CLASSIFICATION OF MATERIALS (Description)	Moisture Content (%)	Moisture Content (%)	Gravel %	Sand %	Fines %	U _c %	U _z %
0 - 2'	2-1-2-4 (7)	S1 (0' - 2'): S1A - Top 12": Topsoil. S1B - Bottom 5": Loose, brown SILT, some fine to coarse Sand, trace fine Gravel, trace Clay & SN, trace Root fibers, mat. (General FM) Res. = 1.3 H (ASTM D145 Classification: A-4.)	20.0	12.0	26.1	50.9	MP	MP	
2.5 - 4'	3-4-5-6 (9)	S2 (2' - 4'): SILT, brown CLAY & SILT, little fine to medium Sand, trace Root Fiber, mat. (Reworked Clay FM) Res. = 1.8 H (ASTM D145 Classification: A-6.)	24.0	0.5	14.5	85.0	30	10	
5.0 - 6'	2-2-3-4 (5)	S3 (4' - 6'): Medium, gray-brown CLAY & SILT, trace fine to medium Sand, mat. (Reworked Clay FM) Res. = 1.8 H (ASTM D145 Classification: A-6.)	30.4		0.5	88.5	32	14	
7.5 - 8'	1-1-2-2 (5)	S4 (6' - 8'): Soft, gray-brown CLAY & SILT, trace fine to medium Sand, trace Root Fiber, mat. (Reworked Clay FM) Res. = 1.8 H (ASTM D145 Classification: A-6.)	35.4	0.1	2.3	97.8	33	13	
10.0 - 11'	NON-MON-MON (2)	S5 (8' - 10'): Soft, brown with gray mottling CLAY & SILT, trace (-) fine to medium Sand, trace Root Fibers, mat. (Possible Subsoil) (Terrene = 0.22 - 0.25 ter), Res. = 2.0 H (ASTM D145 Classification: A-6.)	41.2	0.1	1.0	98.9	30	10	
12.5 - 13.5'	NON-MON-MON (6)	S6 (10' - 12'): Very soft, gray SILT, CLAY, trace (-) fine to medium Sand, possible layering, mat. Res. = 2.0 H (ASTM D145 Classification: A-6.)	44.7		0.0	98.2	40	21	
15.0 - 16.5'		Inferred Sandy Clay & SN (Inferred from transition encountered in S5-S7)							
17.5 - 18.5'	6-4-6-3 (10)	S7 (15' - 17'): Medium dense, gray SILT and fine to coarse SAND, some fine to coarse Gravel, mat. Res. = 0.8 H (ASTM D145 Classification: A-4.)	10.5	30.3	30.7	30.0	MP	MP	

Notes:
1. Shading lines represent approximate boundary between material types. Granitic may be present.
2. If values are not listed for hammer energy, CE is the hammer energy conversion factor.
3. Water level readings have been made of time and other conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.



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Depth (ft)	Shank (ft)	CLASSIFICATION OF MATERIALS (Description)	Moisture Content (%)	Moisture Content (%)	Gravel %	Sand %	Fines %	U _c %	U _z %
22.5 - 25.0'	30-30-30 (6)	S8 (20' - 21.6'): Refused, gray fine to coarse SAND, some SN, little fine to coarse Gravel, mat. Res. = 1.3 H (ASTM D145 Classification: A-4.)	11.0	25.3	46.2	30.5	MP	MP	
25.0 - 25.4'	30/4.5" (6)	S9 (25' - 25.4'): Refused, gray SILT and fine to coarse SAND, trace fine Gravel, mat. Res. = 0.4 H (ASTM D145 Classification: A-4.) Hole stopped @ 25.4 H Soil upon refusal.	13.2	12.0	38.2	48.9	MP	MP	

Remarks:
1. Ground surface elevation, coring, casing, station, and offset shown are approximated from files made from existing features in the field by Geodesic personnel, the Preliminary Plan Set prepared by MIB and dated 4/30/2015, and an electronic site plan titled "046204.dwg" provided by MIB via email on June 26, 2015.
2. Visual soil descriptions are per the Bernier system. Laboratory gradations where applicable were performed by VTrans and are per ASTM D145.
3. Sample S1 from 0' - 2' was performed with approximately 4" of soil already in open hole ear from a previous borhole.
4. Borhole temporarily stopped after sampling S4 at 6' deep due to a thunder storm on May 27, 2015. Resumed on May 28.
5. SPT N-values may be artificially high for sample S7 at 15' deep due to drill string being out of vertical alignment. Note to straighten auger for samples below 15' deep.
6. Increased auger resistance noted during auger advance below 15' deep.
7. Hole remained open to 13.5' deep after removing augers with standing water at 12' deep.
8. Backfilled with cuttings and bentonite chips (1.5 bags).
9. Hammer energy is assumed.

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