



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

BORING LOG

Clarendon BRO 1443 (48)
Clarendon, VT

Boring No.: B-1
Page No.: 1 of 1
Pin No.: 12J160
Checked By: JFW

Boring Crew: J. Leonhardt (TransTech), J. Gilman (GeoDesign)
Date Started: 3/04/13 Date Finished: 3/05/13
VTSPG NAD83: N 383263 ft E 1501635 ft
Station: 11+50 Offset: 7LT
Ground Elevation: 647 ft

Type: FJ SS
I.D.: 4 in 1.38 in
Hammer Wt: N.A. 140 lb.
Hammer Fall: N.A. 30 in.
Hammer/Rod Type: Manual/Auto/NWJ
Rig: SEE REMARK 3 BELOW

Groundwater Observations

Date	Depth (ft)	Notes
03/04/13	10.0	Wet sample

Depth (ft)	Strata (i)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (ROD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
5	X X X	S1 (0.5'-2.0'): Dense, dark brown fine to coarse SAND, some fine to coarse Gravel, little Silt, moist. Rec. = 0.8 ft (AASHTO M145 Classification: A-1-b.)				18-23-20 (43)	4.9	45.9	43.5	10.6	NP	NP
	X X X	S2 (2'-4'): Medium dense, fine to coarse SAND, some Silt, little fine to coarse Gravel, moist. Rec. = 0.9 ft (AASHTO M145 Classification: A-2-4.)				19-11-7-8 (18)	12.0	22.9	49.2	27.9	NP	NP
	X X X	S3 (5'-7'): Medium dense, brown fine to coarse SAND, some fine to coarse Gravel, little Silt, moist. Rec. = 1.3 ft (AASHTO M145 Classification: A-1-b.)				5-7-5-8 (12)	8.1	35.2	48.1	16.7	NP	NP
	X X X	S4 (7'-9'): Loose, brown fine to medium SAND, some (+) Silt, trace fine Gravel, moist (bottom 5" mottled). Rec. = 1.5 ft (AASHTO M145 Classification: A-2-4.)				6-4-3-3 (7)	19.1	9.0	58.8	32.2	NP	NP
10		S5 (10'-12'): Medium dense, brown fine to coarse GRAVEL and fine to coarse SAND, trace Silt, wet. Rec. = 0.5 ft (AASHTO M145 Classification: A-1-a.)				10-6-5-7 (11)	14.8	64.5	27.5	8.0	NP	NP
		S6 (12'-14'): Medium dense, brown fine to coarse GRAVEL and fine to coarse SAND, trace (+) Silt, wet. Rec. = 0.5 ft (AASHTO M145 Classification: A-1-a.)				8-5-11-16 (16)	11.9	64.6	26.5	8.9	NP	NP
15		S7 (15'-17'): Medium dense, brown fine to coarse SAND and fine to coarse GRAVEL, little Silt, wet. Rec. = 1.0 ft (AASHTO M145 Classification: A-1-b.)				15-11-17-31 (28)	11.0	46.0	37.0	17.0	NP	NP
		S8 (17'-19'): Very dense, mixed color fine to coarse GRAVEL and fine to coarse SAND, little Silt, wet. Rec. = 1.3 ft (AASHTO M145 Classification: A-1-a.)				75-65-44-50 (100+)	8.4	61.7	24.0	14.3	NP	NP
20		S9 (20'-22'): Very dense, gray fine to medium SAND, some fine to coarse Gravel, some Silt, wet. Rec. = 0.6 ft (AASHTO M145 Classification: A-2-4.)				16-20-45-37 (65)	11.6	35.0	44.7	20.3	NP	NP
		S10 (25'-27'): Top 3": Gray fine to medium SAND. Bottom 14": Very dense, gray fine to coarse SAND, some fine to coarse Gravel, some Silt, wet. Rec. = 1.4 ft (AASHTO M145 Classification: A-1-b.)				25-35-42-32 (77)	10.3	41.6	33.8	24.6	NP	NP
30		S11 (30'-31.7'): Very dense, gray fine to medium SAND and SILT, wet (rock fragments in spoon tip). Rec. = 1.5 ft (AASHTO M145 Classification: A-4.)				28-44-57-100-3" (100+)	16.8	11.7	32.5	55.8	NP	NP
		C1 (32'-37'): Good quality, hard, fresh to slightly weathered, moderately jointed, white-gray, DOLOSTONE. Reacts to dilute HCl when powdered. Fractures typically 30 to 70 degrees from horizontal.	C1	93.3 (84)	8 5.75 6.25 5.5 5.5							
35		C2 (37'-42'): Fair quality, hard, slightly weathered, closely to moderately jointed, white-gray DOLOSTONE. Middle 1.5' tan and more weathered. Reacts to dilute HCl when powdered. Fractures typically 20 to 30 degrees from horizontal.	C2	95 (68)	4 4.5 4.4 6.5 7.5							
45		Remarks: Hole stopped @ 42.0 ft 1) Exploration location taped in the field by GeoDesign. Ground surface elevation, station, and offset shown are estimated from conceptual plans provided by VTrans. 2) Driller used 3.25" ID HSA to advance to 5 feet deep to create pilot hole for FJ casing advance. 3) Upper 22' of borehole (samples S1 through S9) was performed with a CME 45C Skid Rig with a cathed safety hammer and an assumed hammer correction factor of 1.0. Due to drill rig breakdown, the lower 20' (samples S10 through C2) was completed with a CME 75 Track Rig with an automatic hammer and a hammer correction factor of 1.43. 4) Driller noted a temporary decreased rotary bit resistance at approximately 22 feet deep. 5) Visual soil descriptions are per the Burmister system. Lab testing gradations reported are per AASHTO M145.										

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.

GEODESIGN BORING LOG 750-09-10-CLARENDONBRO1443(48).GPJ VERMONT AOT.GDT 4/11/13