GZA GeoEnvironmental, Inc. *Engineers and Scientists*

Cornwall BRS 0172(6)
Cornwall, Vermont

Boring No.: B-301
Page: 1 of 4
File No.: 04.0023600.01
Check: JLH

Contractor: New Hampshire Boring, Inc.
Foreman: Marlisa Thompson
Logged by: Curtis George/Jay Hodkinson
Date Start/Finish: 7-26-04 / 7-29-04
Boring Location: Sta 1+115.6, 2 mL
GS Elev.: 48.31m Datum: NAVD 88

	Auger/ Casing	Sampler
Type:	HW	SS
I.D.:	102 mm	35 mm
Hammer Wt.:	136.1 kg	63.5 kg
Hammer Fall:	0.61 m	0.76 m
Rig Type:	CME 550 ATV	

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
	Not Measured			

Depth (m)	Sample Information: No.	Pen./ Rec. (m)	Depth (m)	Blows (/0.15m)	N Value	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
							ASPHALT 0.15m	1	No Equipment Installed
	S-1	0.61/ 0.05	3.05– 3.66	12–17 5–5	22	Medium dense, brown, fine to coarse SAND, some Clayey Silt, little Gravel. (A-2-4)	FILL		
							3.80m BOULDER	2	
	S-2	0.61/ 0.30	4.57– 5.18	16–5 2–1	7	Loose, brown, fine to medium SAND, some Silt, Ash and Wood Chips. (A-8)	4.30m FILL		
5							5.34m		
	S-3	0.61/ 0.61	6.10– 6.71	4–8 9–14	17	Very stiff, brown, SILT & CLAY, trace Organics with varved seams of fine Sand and Silt. (A-5)	SILT & CLAY		
	S-4	0.61/ 0.20	7.62– 8.23	WOH		VS = 168.0 kPa, vane tip at 8.1 meters. Very soft, brown, SILT & CLAY, trace fine to coarse Sand. (A-5)		3 4	
							9.53m		
	S-5	0.61/ 0.61	9.14– 9.75	3–3 1–1	4	Soft, gray, varved CLAY & SILT. (A-6)	CLAY & SILT		
	U-1	0.61/	9.75–	PUSH		Gray, CLAY & SILT. (A-6)			

45.15 BOT. OF PILE CAP ELEV. ABUT 1

1. During the first 65.6 meters of drilling, an Odex casing system was used to advance the borehole.
2. A boulder was encountered from 3.8 to 4.3 meters below ground surface.
3. WOH = Weight of Hammer
4. VS = Vane shear test. Split spoon was driven through soil disturbed by VS test.

REMARKS

SOIL BH, WELL LOGS.GPJ GZA_MK.GDT 3/29/07

All depth measurements are approximate. Stratification lines represent approximate boundary between soil types, transitions may be gradual. 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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Depth (m)	Sample Information: No.	Pen./ Rec. (m)	Depth (m)	Blows (/0.15m)	N Value	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
		0.61	10.36						
	S-6	0.61/ 0.25	10.36– 10.97	WOH		VS = 75 kPA, vane tip at 11 meters. CLAY & SILT, trace Gravel. (A-6)	CLAY & SILT		
							11.89m		
	S-7	0.61/ 0.28	12.19– 12.80	4–5 5–7	10	Loose, gray, fine SAND and Silt. (A-4)			
	S-8	0.61/ 0.00	13.72– 14.33	7–6 8–5	14	No recovery.			
15	S-9	0.61/ 0.36	15.24– 15.85	8–8 15–13	23	Medium dense, gray, fine SAND, little Silt. (A-4)			
	S-10	0.61/ 0.41	16.76– 17.37	2–1 1–2	2	Soft, gray, SILT and fine Sand, trace Gravel. (A-4)	SILT & SAND		
	S-11	0.61/ 0.03	18.29– 18.90	5–7 8–8	15	Medium dense, gray, fine SAND and Silt. (A-4)			
20	S-12	0.61/ 0.25	19.81– 20.42	2–2 5–8	7	Loose, gray, fine SAND and Silt. (A-4)			
	S-13	0.61/	21.34–	12–15	31	Dense, gray, fine to medium SAND, little Silt.			

EST. RANGE OF PILE TIP ELEV. 18.15 TO 20.15 ABUT.

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Depth (m)	Sample Information: No.	Pen./ Rec. (m)	Depth (m)	Blows (/0.15m)	N Value	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
		0.30	21.95	16–11		(A-1-b)	SILT & SAND		
							22.56m		
	S-14	0.61/ 0.36	22.86– 23.47	11–11 15–21	26	Medium dense, gray, medium to coarse SAND and Gravel, trace Silt. (A-1-a)			
25	S-15	0.61/ 0.25	24.38– 24.99	14–14 14–20	28	Medium dense, gray, medium to coarse SAND and Gravel, trace Silt. (A-1-a)	SAND WITH GRAVEL		
	S-16	0.61/ 0.30	25.91– 26.52	12–11 28–57	39	Very dense, gray, fine to coarse SAND and Gravel, trace Silt. (A-1-a)			
	S-17	0.61/ 0.15	27.43– 28.04	13–17 15–29	32	Dense, gray, fine to coarse SAND and Gravel, trace Silt. (A-1-a)			
							28.19m		
	S-18A/B	0.61/ 0.25	28.96– 29.57	7–6 12–17	18	First 0.30 m: Medium dense, gray, fine SAND, little Silt. (A-1-b) Bottom 0.30 m: Medium dense, gray, medium to coarse SAND and Gravel, trace Silt. (A-1-a)			
30	S-19	0.61/ 0.46	30.48– 31.09	10–20 22–24	42	Dense, gray, fine SAND, some Silt, trace Gravel. (A-2-4)	SAND		
	S-20	0.61/ 0.61	32.00– 32.61	4–17 26–45	43	Dense, gray, fine SAND, some Silt. (A-2-4)			

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BORING LOG SHEET 9

PROJECT:	PROJECT NO.:
CORNWALL	BRS 0172 (6)

DESIGN FILE NAME: z85e042bor logs.dgn
IPARM FILE NAME:
SURVEYED BY:
SQUAD LEADER: C.C. BENDA
DATE: 03/01

PLOT DATE: 2/5/2010
SURVEY DATE:
DRAWN BY: J.HODKINSON
SHEET: 77 OF 144

DATUM

VERTICAL NAVD 88
HORIZONTAL NAD 83(92)