GEODESIGN INCORPORATED
Geotechnical Engineers/Environmental Consultants/Contruction Engineers
P.O. Box 699 — 1233 Shelburne Rd., Suite E-1
Windsor, VT 05089 — South Burlington, VT 05403
Tel:802-674-2033 — Tel:802-652-5140
Fax: 802-674-5943

BORING LOG

Project Name

Chester Bridge BRF016-1(25)

Chester, VT

Boring No.: B-3 | Page No.: 1 of 4 | File No.: 750-05.2 | Checked By: JAG

Boring Company: SJB Services Inc.
Foreman: Steve Wolkiewicz
GeoDesign Rep.: Jacob Wimett
Date Started: May 1, 2007 — Date Finished: May 3, 2007
N. Coordinate: 276171.778 — E. Coordinate: 1592834.2373
Ground Surface Elevation (feet): 938.5
Station: 15+19 — Offset: 21 ft LT

	Casing:	Sampler:
Type:	H.S.A.	SS
I.D.:	4.25 in.	1.38 in.
Hammer Wt.:	NA	140 lbs
Hammer Fall:	NA	30 in.
Rig Type:	CME 550X ATV	
Hammer Type:	Automatic	

Groundwater Observations

Date	Depth (ft)	Elev. (ft)	Notes
5/1/07	15.0	923.5	Wet Sample

Depth (ft)	Casing Blows/ft	Number	Type	Penetration (inches)	Recovery (inches)	Depth (ft)	Blows / 6 inch Interval 0 – 6	6 – 12	12 – 18	18 – 24	Casing Time (min./ft)	Moisture Content (%)	Strata Description Depth & Elevation(feet)	Symbol	Sample Description Classification System: Burmister
		S1	SS	24	10	0	1	12	15	14			Topsoil 938.2 Fill		S1) Medium dense, Top 4": Topsoil. Bottom 6": Brown, fine to coarse GRAVEL and fine to coarse SAND, little Silt, moist.
5		S2	SS	24	4	5	8	4	7	3			5 Old Ground 933.5 topsoil/ Subsoil		S2) Medium dense, light brown, fine to medium SAND, little (+) Silt, little fine to coarse Gravel, trace roots, moist.
		S3	SS	30	12	7	11	13	5	3/12"					S3) Medium dense, light brown with dark brown, fine to medium SAND, some Silt, little fine to coarse Gravel, little roots, moist.
10		S4	SS	24	13	10	8	18	36	48			10.5 Sand And 928.0 gravel With Boulders/ Cobbles		S4) Very dense, S4A (Top 6"): Similar to S3 except without roots. S4B (Bottom 7"): Tan/ brown, fine to coarse GRAVEL and fine to coarse SAND, little Silt, moist.
15		S5	SS	24	21	15	20	31	37	37			15 Silty Sand 923.5		S5) Very dense, olive brown with orange oxidizations, fine to medium SAND, little Silt, little fine Gravel and decomposed Rock, wet.
20		S6	SS	24	19	20	14	38	75	79					S6) Very dense, olive brown, fine to medium SAND, some Silt, trace fine Gravel, wet.
25		S7	SS	5	5	25	100/5"						25 Glacial Till 913.5		S7) Refusal, olive brown, fine to medium SAND and SILT, little fine to coarse Gravel (fractured in spoon tip), wet.
30															

Remarks:
1) Ground surface elevation estimated by GeoDesign. Boring coordinates derived from electronic site plans issued by VTrans.
2) Frequent coarse Gravel and Cobbles noted while augering from 0' to 5' deep. Hard grinding and rig chatter noted from 7' to 8.5' deep.
3) Very hard grinding/ slow auger advance through inferred Boulders and gravelly layer from 11' to 13.5' deep.

Notes:
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3) Sample Type Coding: A=Auger; C=Core; D=Direct; G=Grab; PS=Piston Sampler; SS=Split Barrel (Split Spoon); ST=Shelby Tube; Geo = GeoProbe; V=Vane; WOR/R=Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

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VT BORING LOG MC 5/12/04 FOR CONVERSION TO SPT 750-5.2.GPJ GEODESIGN STANDARD.GDT 8/17/07

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		S8	SS	6	6	30	122						Glacial Till (Continued)		S8) Refusal, gray, fine to coarse SAND, some fine to coarse Gravel/ decomposed Rock, little (+) Silt, wet.
55		S9	SS	17	13	35	18	53	100/5"						S9) Very dense/ refusal, gray, fine to medium SAND, little (+) Silt, trace fine Gravel, wet.
60		S10	SS	21	13	40	32	67	88	50/3"					S10) Very dense, dark gray/ black, fine to medium SAND and SILT, some (+) decomposed Rock, wet.
65		S11	SS	12	12	45	47	100/6"							S11) Refusal, dark gray/ black, fine to medium SAND and SILT and decomposed ROCK, wet.
70		S12	SS	10	10	50	20	100/5"							S12) Refusal, brown, fine to medium SAND and SILT and decomposed ROCK, little fine Gravel, wet.
75		S13	SS	8	4	55	68	50/2"							S13) Refusal, brown, decomposed ROCK and fine to coarse SAND and SILT, wet.
80		S14	SS	4	4	59	100/4"								S14) Refusal, similar to S13 except with piece

Remarks:
4) No movement last 30 blows of S12.
5) Very hard auger grinding and chatter from 51' to 51.5' deep.
6) Very hard auger grinding and chatter from 55.5' to 56.5' deep sustained. Unsustained frequent hard grinding and chatter from 57' to 58' deep and sustained again to 59' deep.
7) Switch to mud rotary with FJ 3" casing at 59' deep.

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													Glacial Till (Continued)		of coarse GRAVEL in spoon tip.
85													88 Probable 850.5 bedrock (Inferred From Roller Bit)		
90													90		

Remarks:
8) Return water color change from rusty brown to tannish brown at approximately 63' deep with and increase in roller bit resistance. Infer still in Glacial Till due to the lack of ROCK in return water, cuttings.
9) Driller infers Silties/ clayier Glacial Till beginning at approximately 66' deep due to spikes in the water back pressure. No noticable decrease in drilling resistance. Water return became grayer as well.
10) At approximately 72' deep water changed back to brownish in color with less water backpressure (less Silt).
11) Light grinding/ chatter from approximately 73' to 73.5' deep and 77' to 77.5' deep.

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		C1	C	60	37	90	[REC= 62%; RQD= 25%]						7.5 Bedrock 848.5		C1) Top 8": Fractured fine to coarse GRAVEL. Bottom 29": Silver gray with white quartz banding, hard, slightly weathered along fracture surfaces, moderately to widely jointed, poor quality micaceous SCHIST. Fractures 75o to 90o from horizontal.
95													95 Bottom 843.5 of Exploration at 95.0 ft		
100															
105															
110															
115															
120															

Remarks:
12) Grinding and chatter while roller bitting from 88' to 90' deep. Attempt core sample at 90' deep. Cased to 88' prior to coring.
13) Return water color changed to gray at approximately 91' deep.

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