



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

BORING LOG

FAIRFIELD
 BRO 1448(41)
 Elm Brook Road, Fairfield, VT

Boring No.: B-1
 Page No.: 1 of 1
 Pin No.: 12J170
 Checked By: J. MacGregor

Boring Crew: P. Schofield, K. Owens
 Date Started: 2/14/13 Date Finished: 2/14/13
 VTSPG NAD83: N 835816.59 ft E 1544031.13 ft
 Station: 19+40.5 Offset: 10.5L
 Ground Elevation: 369.0 ft

Casing: WB Sampler: SS
 I.D.: 4 in 1.38 in
 Hammer Wt: 300 lb. 140 lb.
 Hammer Fall: 30 in. 30 in.
 Hammer/Rod Type: Manual/NW
 Rig: TRUCK D50 CE = 1.0

Groundwater Observations

Date	Depth (ft)	Notes
02/14/13	6.0	

Depth (ft)	Strata (I)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
0 - 4	X X X X X X X X X X X X	A-1-a, f.c. SAND, Some f.c. Gravel, trace silt, trace organics, very compact, brown, Moist, Rec. = 0.6 ft, (FILL) Rollerbit through frost layer.				38-50/4" (R)						
4 - 5		A-2-4 A-2-4, f.c. SAND, AND SILT, trace organics, loose, brown, Moist, Rec. = 1.7 ft				3-3-2-1 (5)			59.8	40.2		
5 - 7		A-2-4, f. SAND, Some Silt, trace organics, very loose, red-brn, Wet, Rec. = 1.5 ft				1-1-0-1 (1)						
7 - 10		A-4, Clayey SILT, AND f. SAND, trace organics, very soft, brown, Wet A-4, Rec. = 1.6 ft, Becomes soft				2-2-1-4 (3)	24.8		20.0	80.0	18	1
10 - 12.5		Not Sampled, Advanced rollerbit 11.0 ft to 12.5 ft. Rock coring started at 12.5 ft.							Top of Bedrock @ 11.0 ft			
12.5 - 17.5		12.5 ft - 17.5 ft, Greenish gray, Schist, Medium close fracture spacing, near vertical bedding. Hard, Slightly to moderately weathered, NXDC, Excellent RQD. Zones of white-pink quartz embedded within rock core.	R-1	96 (90)	12							
17.5 - 22.5		17.5 ft - 22.5 ft, Similar Rock. NXDC	R-2	100 (94)	12							
22.5 - 25		Hole stopped @ 22.5 ft										
25		Remarks: Project performed under CHA project No. 25043.										

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.

BORING LOG 25043_BRO1448_LOGS.GPJ VERMONT AOT.GDT 5/7/13



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BORING LOG

FAIRFIELD
 BRO 1448(41)
 Elm Brook Road, Fairfield, VT

Boring No.: B-1A
 Page No.: 1 of 1
 Pin No.: 12J170
 Checked By: K. Adnams

Boring Crew: P. LaVossiere, K. Owens
 Date Started: 4/29/13 Date Finished: 4/29/13
 VTSPG NAD83: N 835801.89 ft E 1544041.49 ft
 Station: 19+57.8 Offset: 4.8L
 Ground Elevation: 369.5 ft

Casing Sampler
 Type: WB SS
 I.D.: 4 in 1.38 in
 Hammer Wt: 300 lb. 140 lb.
 Hammer Fall: 30 in. 30 in.
 Hammer/Rod Type: Manual/NW
 Rig: TRUCK MOBILE B-47 CE = 1.0

Groundwater Observations

Date	Depth (ft)	Notes
04/29/13	9.0	

Depth (ft)	Strata (t)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (ROD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0-0.9	XXX	A-1-b, f.c. GRAVEL, Some f.c. Sand, little silt, medium compact, brown, Moist, Rec. = 0.9 ft, (FILL)				15-13-9-5 (22)				
0.9-1.8	XXX	A-1-b, Similar Soil, Rec. = 0.9 ft, (FILL)				4-13-10-13 (23)				
1.8-2.1		A-4, Clayey SILT, little f.c. gravel, hard, brown, Moist, Rec. = 0.3 ft, Cobble/boulder fragments recovered in shoe of spoon.				12-50/3" (R)				
2.1-7.0		No Recovery, Rec. = 0.0 ft, Casing refusal at 7.0 ft, interpreted as top of competent bedrock surface.				7-50/2" (R)				
7.0-9.0		Not Sampled, Advanced rollerbit 7.0 ft to 9.0 ft. Rock coring started at 9.0 ft.				Top of Bedrock @ 7.0 ft				
9.0-14.0		9.0 ft - 14.0 ft, Gray, Schist, Very close fracture spacing. Moderately hard to hard, Moderately to severely weathered, NXDC, Poor ROD. Seams of quartz embedded within rock core.	R-1	100 (28)	4.2					
14.0-19.0		14.0 ft - 19.0 ft, Similar Rock. NXDC	R-2	100 (40)	4.81					
19.0-20.0		Hole stopped @ 19.0 ft								
20.0-25.0		Remarks: Project performed under CHA project No. 25043.								

Notes:

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BORING LOG 25043_BRO1448_LOGS.GPJ VERMONT AOT.GDT 5/7/13



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BORING LOG
 FAIRFIELD
 BRO 1448(41)
 Elm Brook Road, Fairfield, VT

Boring No.: B-2
 Page No.: 1 of 1
 Pin No.: 12J170
 Checked By: J. MacGregor

Boring Crew: P. Schofield, K. Owens
 Date Started: 2/15/13 Date Finished: 2/15/13
 VTSPG NAD83: N 835730.62 ft E 1544081.80 ft
 Station: 20+35.0 Offset: 13.0R
 Ground Elevation: 367.0 ft

Casing Sampler
 Type: WB SS
 I.D.: 4 in 1.38 in
 Hammer Wt: 300 lb. 140 lb.
 Hammer Fall: 30 in. 30 in.
 Hammer/Rod Type: Manual/NW
 Rig: TRUCK D50 CE = 1.0

Groundwater Observations		
Date	Depth (ft)	Notes
02/15/13	6.0	

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 %
0-4	X X X X X X X X X X X X	A-1-b, f.m.c. GRAVEL, Some Silt, little f.c. sand, trace organics, very compact, brown, Moist, Rec. = 0.6 ft, (FILL) Advanced rollerbit to 4 feet through frost layer.				37-45-50/2" (R)				
4-5		A-4 A-4, Clayey SILT, little f. sand, little f.c. gravel. medium stiff, brn-gry, Moist, Rec. = 0.3 ft				15-4-1-1 (5)				
5-6		A-2-4, f. SAND, Some clayey Silt, very loose, red-brn, Wet, Rec. = 1.4 ft				1-1-1-1 (2)				
6-9		A-4, Clayey SILT, AND f. SAND, little organics, soft, red-brn, Moist, Moderate organic odor observed in sample from 7 to 9.3 feet.				4-2-3-4 (5)				
9-10		A-4, Rec. = 1.0 ft, Becomes medium stiff								
10-15		A-2-4, f. SAND, Some clayey Silt, loose, gray, Wet								
15-16		A-4 A-4, Clayey SILT, Some f.c. Gravel, little f.c. sand, hard, gray, Moist, Rec. = 0.8 ft, (TILL)				9-17-50/6" (R)				
16-16.0		Not Sampled, Advanced rollerbit 15.5 ft to 16 ft. Rock coring started at 16 ft.				Top of Bedrock @ 15.5 ft				
16.0-21.0		16.0 ft - 21.0 ft, Greenish gray, Schist, Medium close fracture spacing, near vertical bedding. Moderately hard, Slightly weathered, NXDC, Excellent RQD	R-1	100 (100)	6					
21.0-26.0		21.0 ft - 26.0 ft, NXDC, Similar Rock	R-2	98 (98)	6					
26.0		Hole stopped @ 26.0 ft								
Remarks:		Project performed under CHA project No. 25043.								

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BORING LOG 25043_BRO1448_LOGS.GPJ VERMONT AOT.GDT 5/7/13



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SUBSURFACE INFORMATION

BORING LOG

FAIRFIELD
BRO 1448(41)
Elm Brook Road, Fairfield, VT

Boring No.: B-2A
Page No.: 1 of 2
Pin No.: 12J170
Checked By: K. Adnams

Boring Crew: P. LaVossiere, K. Owens
Date Started: 4/29/13 Date Finished: 4/29/13
VTSPG NAD83: N 835756.72 ft E 1544070.03 ft
Station: 20+9.6 Offset: 4.8R
Ground Elevation: 369.0 ft

Casing: WB
Sampler: SS
Type: WB SS
I.D.: 4 in 1.38 in
Hammer Wt: 300 lb. 140 lb.
Hammer Fall: 30 in. 30 in.
Hammer/Rod Type: Manual/NW
Rig: TRUCK MOBILE B-47 CE = 1.0

Groundwater Observations

Date	Depth (ft)	Notes
04/29/13	10.0	

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 %
0-1.2	X X X	A-1-a, f.c. GRAVEL, AND f.c. SAND, trace silt, trace brick, compact, brown, Moist, Rec. = 1.2 ft, (FILL)				19-22-26-15 (48)				
1.2-0.4	X X X	A-1-b, f.c. GRAVEL, Some Silt, Some f.c. Sand, medium compact, gray, Moist, Rec. = 0.4 ft, (FILL)				47-22-8-10 (30)				
5.0-0.7		A-2-4, f.c. SAND, little silt, medium compact, brown, Moist, Rec. = 0.7 ft				8-6-5-4 (11)				
5.0-1.0		A-2-4, Rec. = 1.0 ft, becomes loose				4-3-5-4 (8)				
10.0-1.4		A-1-b, f.c. SAND, trace silt, very loose, brown, Wet, Rec. = 1.4 ft				3-1-2-1 (3)				
10.0-1.1		A-1-b, Rec. = 1.1 ft, turns gray, becomes loose				3-4-4-6 (8)				
15.0-1.0		A-1-b, f.c. SAND, little organics, trace silt, compact, gray, Wet, Rec. = 1.0 ft, Portion of tree branch recovered in sample spoon.				6-5-33-34 (38)				
15.0-0.3		A-1-b, Rec. = 0.3 ft, becomes loose				5-4-5-4 (9)				
15.0-1.4		A-1-b, Rec. = 1.4 ft, turns dark gray				4-4-3-5 (7)				
18.5-19.0		Not Sampled, Advanced rollerbit 18.5 ft to 19.0 ft. Rock core started at 19.0 ft.				Top of Bedrock @ 18.5 ft				
19.0-24.0		19.0 ft - 24.0 ft, Gray, Schist, Close fracture spacing. Moderately hard to hard, Slightly weathered, NXDC, Excellent RQD	R-1	100 (90)	3.4					
24.0-29.0		24.0 ft - 29.0 ft, Gray, Schist, Medium close fracture spacing. Moderately hard to hard, Slightly weathered, NXDC, Good RQD	R-2	96 (82)	3.6					

Hole stopped @ 29.0 ft Remarks: Project performed under CHA project No. 25043.

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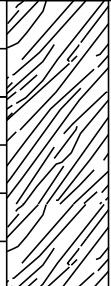
FAIRFIELD
 BRO 1448(41)
 Elm Brook Road, Fairfield, VT

Boring No.: B-3
 Page No.: 1 of 1
 Pin No.: 12J170
 Checked By: K. Adnams

Boring Crew: P. LaVossiere, K. Owens
 Date Started: 4/30/13 Date Finished: 4/30/13
 VTSPG NAD83: N 835792.41 ft E 1544036.42 ft
 Station: 19+59.0 Offset: 4.4R
 Ground Elevation: 369.5 ft

Casing Sampler
 Type: WB N/A
 I.D.: 4 in 1.38 in
 Hammer Wt: 300 lb. 140 lb.
 Hammer Fall: 30 in. 30 in.
 Hammer/Rod Type: Manual/NW
 Rig: TRUCK MOBILE B-47 CE = 1.0

Groundwater Observations		
Date	Depth (ft)	Notes
04/30/13		None obs.

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		Not Sampled, Advanced boring to top of bedrock without soil sampling.								
10		Not Sampled, Casing refusal at 8.0 ft. Advanced roller bit 8.0 ft to 9.0 ft. Rock coring started at 9.0 ft. 9.0 ft - 12.0 ft, Gry-white, Schist, Very close fracture spacing. Medium hard, Severely weathered, NXDC, Poor RQD. Quartz seams embedded within rock core. Core barrel jammed at 12'. 12.0 ft - 14.0 ft, NXDC, Similar Rock	R-1	100 (47)	5.99					
			R-2	100 (35)	6.99					
15		Hole stopped @ 14.0 ft								
20		Remarks: Project performed under CHA project No. 25043.								
25										

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BORING LOG

FAIRFIELD
 BRO 1448(41)
 Elm Brook Road, Fairfield, VT


Boring No.: B-4
 Page No.: 1 of 1
 Pin No.: 12J170
 Checked By: K. Adnams

Boring Crew: P. LaVossiere, K. Owens
 Date Started: 4/30/13 Date Finished: 4/30/13
 VTSPG NAD83: N 835763.81 ft E 1544076.93 ft
 Station: 20+8.8 Offset: 4.8L
 Ground Elevation: 369.0 ft

Casing Sampler
 Type: WB N/A
 I.D.: 4 in 1.38 in
 Hammer Wt: 300 lb. 140 lb.
 Hammer Fall: 30 in. 30 in.
 Hammer/Rod Type: Manual/NW
 Rig: TRUCK MOBILE B-47 CE = 1.0

Groundwater Observations

Date	Depth (ft)	Notes
04/30/13		None obs.

Depth (ft)	Strata (t)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
5		Not Sampled, Advanced boring to top of bedrock without soil sampling.								
10										
15										
20		Not Sampled, Casing refusal at 17.5 ft. Advanced roller bit 17.5 ft to 19.0 ft. Rock coring started at 19.0 ft. 19.0 ft - 24.0 ft, Gray, Schist, Medium close fracture spacing. Medium hard, Slightly weathered, NXDC, Excellent RQD. Quartz seams embedded within rock core.	R-1	92 (92)	5.21					
25		Hole stopped @ 24.0 ft Remarks: Project performed under CHA project No. 25043.								

Top of Bedrock @ 17.5 ft

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