

**BORING NUMBER:** B-001  
**SHEET** 1 of 3  
**DATE STARTED:** 2/23/06  
**DATE COMPLETED:** 3/15/06

**PROJECT NAME:** EAST MONTPELIER  
**SITE NAME:** RT-14  
**STATION:** 127+87  
**OFFSET:** -26.00  
**VTSPG:** N 644317.53 ft E 1643393.84 ft

**PROJECT NUMBER:** BRF 037-1(7)  
**SITE NUMBER:** BR-68  
**GROUND ELEVATION:** 663.26 ft  
**GROUNDWATER DEPTH:** 8.0 ft 3/16/06  
**PROJECT PIN NUMBER:** 98B252

**BORING CREW:**  
**CREW CHIEF:** TALLMAN  
**DRILLER:** TALLMAN  
**LOGGER:** PORTER

**BORING RIG:** LAG TRACK RIG w/AUTO HAMMER  
**BORING TYPE:** WASH BORE  
**SAMPLE TYPE:** SPLIT BARREL  
**CHECKED BY:** DLG

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-4, SiSa with Wood & small roots, brn, Moist, Rec. = 0.6 ft	7	32.9	6.8	54.3	38.9
		A-4, SaSi, brn, Moist, Rec. = 1.9 ft	6	22.9	2.7	44.9	52.4
		A-4, Si, brn, Moist, Rec. = 1.9 ft	8	29.9	2.7	19.2	78.1
		No Recovery, 6.0 ft - 8.0 ft	5				
10		A-2-4, SiGrSa, brn, Moist, Rec. = 1.6 ft	35	15.2	34.8	36.5	28.7
		A-2-4, GrSiSa, brn, Moist, Rec. = 1.3 ft	35	16.1	25.9	44.0	30.1
		A-1-b, SiGrSa, brn, Moist, Rec. = 1.1 ft	32	14.5	34.7	41.9	23.4
15		A-2-4, GrSiSa, brn, Moist, Rec. = 1.1 ft	27	14.6	27.4	40.6	32.0
		A-1-b, SiSaGr, gry, Moist, Rec. = 0.6 ft, Cleaned out casing.	21	8.0	48.2	31.0	20.8
20		A-4, Si, gry, Moist, Rec. = 1.5 ft, Cleaned out casing.	31	18.0	0.9	14.2	84.9
		A-4, Si, gry, Moist, Rec. = 1.65 ft, Cleaned out casing.	68	17.3	2.4	8.6	89.0
		A-4, SaSi, gry, Moist, Rec. = 1.0 ft, Cleaned out casing.	R	13.2	9.3	20.1	70.6
25		A-4, SaSi, gry, Moist, Rec. = 0.5 ft, Cleaned out casing.	R	9.7	16.2	24.7	59.1
		A-4, SaSi, gry, Moist, Rec. = 0.65 ft, Cleaned out casing.	R	9.7	13.3	24.1	62.6
		A-4, SaGrSi, gry, Moist, Rec. = 0.35 ft, Cleaned out casing.	R	8.7	23.4	23.4	53.2
30		A-4, SaSi, gry, Moist, Rec. = 1.0 ft, Cleaned out casing.	R	10.0	8.8	27.3	63.9
35		A-4, SaSi, gry, Moist, Rec. = 0.7 ft, Cleaned out casing.	R	10.6	10.7	25.0	64.3
40		A-4, SaGrSi, gry, Moist, Rec. = 0.75 ft, Cleaned out casing.	R	9.2	30.7	28.0	41.3
45		A-4, SaSi, gry, Moist, Rec. = 0.5 ft	R	10.0	15.3	25.0	59.7

LOG OF BORING EAST MONTPELIER BRF 037-1(7).GPJ VT\_AOT.GBT 12/12/06

**BORING NUMBER:** B-001  
**SHEET** 2 of 3  
**DATE STARTED:** 2/23/06  
**DATE COMPLETED:** 3/15/06

**PROJECT NAME:** EAST MONTPELIER  
**SITE NAME:** RT-14  
**STATION:** 127+87  
**OFFSET:** -26.00  
**VTSPG:** N 644317.53 ft E 1643393.84 ft

**PROJECT NUMBER:** BRF 037-1(7)  
**SITE NUMBER:** BR-68  
**GROUND ELEVATION:** 663.26 ft  
**GROUNDWATER DEPTH:** 8.0 ft 3/16/06  
**PROJECT PIN NUMBER:** 98B252

**BORING CREW:**  
**CREW CHIEF:** TALLMAN  
**DRILLER:** TALLMAN  
**LOGGER:** PORTER

**BORING RIG:** LAG TRACK RIG w/AUTO HAMMER  
**BORING TYPE:** WASH BORE  
**SAMPLE TYPE:** SPLIT BARREL  
**CHECKED BY:** DLG

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
55		A-4, SaSi, gry, Moist, Rec. = 1.75 ft, Cleaned out casing.	75	10.1	17.4	21.8	60.8
65		A-4, SaSi, gry, Moist, Rec. = 0.5 ft, Cleaned out casing.	R	10.7	7.6	24.4	68.0
75		A-4, SaSi, gry, Moist, Rec. = 0.7 ft, Cleaned out casing.	R	10.5	10.8	25.7	63.5
85		A-4, SaSi, gry, Moist, Rec. = 1.2 ft, Cleaned out casing.	85	11.2	10.5	25.2	64.3
95		No Sample, Stone in the end of sample barrel., 95.0 ft - 97.0 ft					

LOG OF BORING EAST MONTPELIER BRF 037-1(7).GPJ VT\_AOT.GBT 12/12/06

**BORING NUMBER:** B-001  
**SHEET** 3 of 3  
**DATE STARTED:** 2/23/06  
**DATE COMPLETED:** 3/15/06

**PROJECT NAME:** EAST MONTPELIER  
**SITE NAME:** RT-14  
**STATION:** 127+87  
**OFFSET:** -26.00  
**VTSPG:** N 644317.53 ft E 1643393.84 ft

**PROJECT NUMBER:** BRF 037-1(7)  
**SITE NUMBER:** BR-68  
**GROUND ELEVATION:** 663.26 ft  
**GROUNDWATER DEPTH:** 8.0 ft 3/16/06  
**PROJECT PIN NUMBER:** 98B252

**BORING CREW:**  
**CREW CHIEF:** TALLMAN  
**DRILLER:** TALLMAN  
**LOGGER:** PORTER

**BORING RIG:** LAG TRACK RIG w/AUTO HAMMER  
**BORING TYPE:** WASH BORE  
**SAMPLE TYPE:** SPLIT BARREL  
**CHECKED BY:** DLG

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
			RUN	REC (%)	ROD (%)	Dip (deg)	Drill Rate (min/ft)
105		Field Note, Cobbles, No sample, Cleaned out casing.					
115		A-4, GrSi, gry, Moist, Rec. = 1.45 ft	60	11.1	25.9	17.8	56.3
125		A-4, SaSi, gry, Moist, Rec. = 1.6 ft	70	10.7	19.4	23.3	57.3
135		Dark gray, Carbonaceous Slate, with calcite and quartz veins., Competent., Moderately soft, Unweathered, NXMDC, 133.0 ft - 138.0 ft, Rec. = 5.0 ft	1	100	74	65	9 9 15 13 9
140		Dark gray, Carbonaceous Slate, with calcite and quartz veins., Competent., Last part of core while pulling it up the casing. Tried retrieving but couldn't., Moderately soft, Unweathered, NXMDC, 138.0 ft - 143.0 ft, Rec. = 2.7 ft	2	54	54	65	12 13 9 10 9
145		Hole stopped @ 143.0 ft					

LOG OF BORING EAST MONTPELIER BRF 037-1(7).GPJ VT\_AOT.GBT 12/12/06



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

BORING NUMBER: B-005  
SHEET 1 of 2  
DATE STARTED: 3/22/06  
DATE COMPLETED: 3/28/06

PROJECT NAME: EAST MONTPELIER  
SITE NAME: RT-14  
STATION: 127+79  
OFFSET: 37.00  
VTSPG: N 644340.09 ft E 1643453.20 ft

PROJECT NUMBER: BRF 037-1(7)  
SITE NUMBER: BR-68  
GROUND ELEVATION: 661.45 ft  
GROUNDWATER DEPTH: 7.5 ft 3/28/06  
PROJECT PIN NUMBER: 98B252

BORING CREW  
CREW CHIEF: TALLMAN  
DRILLER: TALLMAN  
LOGGER: PORTER

BORING RIG: LAG TRACK RIG w/AUTO HAMMER  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL  
CHECKED BY: DLG

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
0-2.0		A-1-b, GrSa with some topsoil, brn, Moist, Rec. = 2.0 ft	3	21.3	23.6	64.8	11.6
2.0-3.0		A-3, Sa, brn, Moist		9.7	0.9	91.7	7.4
3.0-5.0		Field Class., Boulders and cobbles, No sample, Cored ahead					
5.0-10.0		A-2-4, SiGrSa, brn, Moist, Rec. = 1.1 ft	40	12.8	29.7	42.5	27.8
10.0-15.0		A-4, SaSi, gry, Moist, Rec. = 1.2 ft	75	12.0	17.7	26.9	55.4
15.0-20.0		A-4, SaSi, gry, Moist, Rec. = 0.35 ft, Cleaned out casing.	R	10.5	19.3	23.5	57.2
20.0-25.0		A-4, SaSi, gry, Moist, Rec. = 0.8 ft, Cleaned out casing.	R	9.5	11.7	24.8	63.5
25.0-30.0		A-4, SaSi, gry, Moist, Rec. = 0.8 ft, Cleaned out casing.	R	9.6	15.5	23.0	61.5
30.0-35.0		A-4, SaGrSi, gry, Moist, Rec. = 1.4 ft, Cleaned out casing.	91	9.8	26.4	22.3	51.3
35.0-40.0		A-4, SaSi, gry, Moist, Rec. = 0.8 ft	R	10.4	16.8	23.2	60.0
40.0-45.0		A-4, SaGrSi, gry, Moist, Rec. = 0.95 ft	86	9.7	23.1	22.0	54.9

LOG OF BORING EAST MONTPELIER BRF 037-1(7).GPJ VT\_AOT.GDT 12/12/06



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

BORING NUMBER: B-005  
SHEET 2 of 2  
DATE STARTED: 3/22/06  
DATE COMPLETED: 3/28/06

PROJECT NAME: EAST MONTPELIER  
SITE NAME: RT-14  
STATION: 127+79  
OFFSET: 37.00  
VTSPG: N 644340.09 ft E 1643453.20 ft

PROJECT NUMBER: BRF 037-1(7)  
SITE NUMBER: BR-68  
GROUND ELEVATION: 661.45 ft  
GROUNDWATER DEPTH: 7.5 ft 3/28/06  
PROJECT PIN NUMBER: 98B252

BORING CREW  
CREW CHIEF: TALLMAN  
DRILLER: TALLMAN  
LOGGER: PORTER

BORING RIG: LAG TRACK RIG w/AUTO HAMMER  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL  
CHECKED BY: DLG

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
0-0.85		A-4, SaGrSi, gry, Moist, Rec. = 0.85 ft	86	9.6	25.6	20.4	54.0
0.85-55.0		A-4, SaSi, gry, Moist, Rec. = 0.5 ft	R	10.3	16.1	22.8	61.1
55.0-60.0		A-4, GrSaSi, gry, Moist, Rec. = 0.8 ft	81	10.6	20.1	23.4	56.5
60.0-65.0		A-4, SaSi, gry, Moist, Rec. = 1.1 ft	73	10.8	16.4	23.6	60.0
65.0-70.0		A-4, Si, gry, Moist, Rec. = 1.5 ft	42	14.3	13.5	15.4	71.1
70.0-75.0		A-4, SaSi, gry, Moist, Rec. = 0.95 ft	79	10.4	14.4	22.0	63.6
75.0-80.0		A-4, SaSi, gry, Moist, Rec. = 0.75 ft	R	18.1	19.3	30.2	50.5
80.0-85.0		A-4, SaGrSi, gry, Moist, Rec. = 0.9 ft	77	10.7	20.3	20.1	59.6
85.0-90.0		A-4, SaSi, gry, Moist, Rec. = 1.6 ft	31	11.5	10.1	23.2	66.7
90.0-92.0		Hole stopped @ 92.0 ft					
92.0-95.0							

LOG OF BORING EAST MONTPELIER BRF 037-1(7).GPJ VT\_AOT.GDT 12/12/06



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

BORING NUMBER: B-009  
SHEET 1 of 2  
DATE STARTED: 3/31/06  
DATE COMPLETED: 4/07/06

PROJECT NAME: EAST MONTPELIER  
SITE NAME: RT-14  
STATION: 129+38  
OFFSET: -8.50  
VTSPG: N 644459.10 ft E 1643338.58 ft

PROJECT NUMBER: BRF 037-1(7)  
SITE NUMBER: BR-68  
GROUND ELEVATION: 672.36 ft  
GROUNDWATER DEPTH: 19.0 ft 4/07/06  
PROJECT PIN NUMBER: 98B252

BORING CREW  
CREW CHIEF: TALLMAN  
DRILLER: TALLMAN  
LOGGER: PORTER

BORING RIG: LAG TRACK RIG w/AUTO HAMMER  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL  
CHECKED BY: DLG

LOG OF BORING EAST MONTPELIER BRF 037-1(7).GPJ VT.AOT.GDT 12/12/06

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
0.0 - 0.5		Asphalt, 0.0 ft - 0.5 ft					
0.5 - 1.3		Concrete, 0.5 ft - 1.3 ft					
1.3 - 2.3		Gravel, 1.3 ft - 2.3 ft					
2.3 - 2.8		Concrete, 2.3 ft - 2.8 ft, Core shows very poor quality with voids.					
5		Visual Class: Gravelly Sand with Broken Rock, brn, Moist, Rec. = 0.5 ft, Cleaned out casing. Insufficient sample for testing.	52	11.9			
10		Visual Class: Silty Sand with Broken Rock, brn, Moist, Rec. = 0.4 ft, Insufficient sample for testing. Field Class: Boulders, Cleaned out casing, Cored ahead, No samples.	R	7.3			
30		A-4, SaGrSi, gry, Moist, Rec. = 0.7 ft	R	9.2	24.4	21.6	54.0
35		A-4, SaSi, gry, Moist, Rec. = 0.9 ft	R	10.4	18.2	22.9	58.9
40		A-4, SaGrSi, gry, Moist, Rec. = 0.95 ft	R	9.7	26.6	22.3	51.1
45		A-4, GrSaSi, gry, Moist, Rec. = 0.8 ft	R	9.4	21.4	22.5	56.1



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

BORING NUMBER: B-009  
SHEET 2 of 2  
DATE STARTED: 3/31/06  
DATE COMPLETED: 4/07/06

PROJECT NAME: EAST MONTPELIER  
SITE NAME: RT-14  
STATION: 129+38  
OFFSET: -8.50  
VTSPG: N 644459.10 ft E 1643338.58 ft

PROJECT NUMBER: BRF 037-1(7)  
SITE NUMBER: BR-68  
GROUND ELEVATION: 672.36 ft  
GROUNDWATER DEPTH: 19.0 ft 4/07/06  
PROJECT PIN NUMBER: 98B252

BORING CREW  
CREW CHIEF: TALLMAN  
DRILLER: TALLMAN  
LOGGER: PORTER

BORING RIG: LAG TRACK RIG w/AUTO HAMMER  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL  
CHECKED BY: DLG

LOG OF BORING EAST MONTPELIER BRF 037-1(7).GPJ VT.AOT.GDT 12/12/06

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
0.0 - 0.5		Field Note: No sample. Rock in end of sample barrel.	R				
55		A-4, SaSi, gry, Moist, Rec. = 1.4 ft	96	10.8	18.4	21.4	60.2
60		A-4, SaSi, gry, Moist, Rec. = 1.5 ft	70	10.9	17.3	21.6	61.1
65		A-4, SaSi, gry, Moist, Rec. = 1.4 ft	85	10.7	10.9	23.0	66.1
70		Visual Class: Broken Rock with Silt, gry, Moist, Rec. = 0.4 ft, Cleaned out casing.	R				
75		A-4, SaSi, gry, Moist, Rec. = 1.6 ft	70	11.4	13.1	20.7	66.2
80		A-4, SaGrSi, gry, Moist, Rec. = 1.45 ft	75	10.6	25.5	20.3	54.2
85		Visual Class: Broken Rock with Silt, gry, Moist, Rec. = 0.1 ft, Stone in end of sampler. Insufficient sample for testing.	R				
90		A-4, GrSaSi, gry, Moist, Rec. = 1.65 ft	77	10.6	20.3	22.1	57.6
92.0		Hole stopped @ 92.0 ft					

VT logo		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B-011 SHEET 1 of 3 DATE STARTED: 2/07/06 DATE COMPLETED: 2/23/06			
PROJECT NAME: EAST MONTPELIER SITE NAME: RT-14 STATION: 129+40 OFFSET: 55.00 VTSPG: N 644490.64 ft E 1643393.73 ft		PROJECT NUMBER: BR-68 SITE NUMBER: BR-68 GROUND ELEVATION: 665.97 ft GROUNDWATER DEPTH: 13.7 ft 2/23/06 PROJECT PIN NUMBER: 98B252					
BORING CREW CREW CHIEF: TALLMAN DRILLER: TALLMAN LOGGER: PORTER		BORING RIG: LAG TRACK RIG w/AUTO HAMMER BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL CHECKED BY: DLG					
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-2-4, Sa with small root material, brn, Moist, Rec. = 0.25 ft	2	38.2	8.3	79.5	12.2
		A-2-4, SiSa, brn, Moist, Rec. = 0.25 ft	2	15.1	11.1	68.7	20.2
		A-2-4, GrSa, brn, Moist, Rec. = 0.5 ft	2	15.2	21.3	67.4	11.3
		A-4, SaSi with Little Organics (12.7%), gry, Moist, Rec. = 1.1 ft	4	78.0	2.1	35.6	62.3
		A-4, Si with a Trace of Organics (9.8%), gry, Moist, Rec. = 1.4 ft	4	57.1	2.4	16.8	80.8
10		A-4, SaSi with Wood particles, gry, Moist, Rec. = 0.4 ft	4	60.8	3.0	28.7	68.3
		Visual Class., Wood, brn, Moist, Rec. = 0.9 ft, Lost water at 13.0', Cleaned out casing	2				
15		A-4, SaSi, gry, Moist, Rec. = 0.2 ft, Water returned at the start of the day	2	12.1	13.1	25.6	61.3
		A-4, SaGrSi, gry, Moist, Rec. = 1.1 ft, Cleaned out casing	21	10.2	27.3	25.1	47.6
		A-4, GrSaSi, gry, Moist, Rec. = 0.4 ft	R	7.8	21.6	29.0	49.4
20		A-4, SaSi, gry, Moist, Rec. = 0.9 ft, Cleaned out casing	R	10.1	13.8	24.5	61.7
		A-4, SaSi, gry, Moist, Rec. = 0.95 ft	R	10.0	13.6	25.5	60.9
25		A-4, SaSi, gry, Moist, Rec. = 0.9 ft	R	9.8	18.1	25.3	56.6
		A-4, GrSaSi, gry, Moist, Rec. = 0.8 ft, Cleaned out casing	R	9.3	21.6	24.4	54.0
		A-4, SaSi, gry, Moist, Rec. = 0.8 ft	R	9.0	19.0	27.7	53.3
30		A-4, SaSi, gry, Moist, Rec. = 1.2 ft, Cleaned out casing	88	10.4	16.9	24.6	58.5
35		A-4, SaSi, gry, Moist, Rec. = 0.6 ft, Cleaned out casing	R	10.7	19.2	26.2	54.6
40		A-4, SaGrSi, gry, Moist, Rec. = 0.65 ft, Cleaned out casing	R	9.2	24.5	24.3	51.2
45		A-4, SaSi, gry, Moist, Rec. = 1.25 ft, Cleaned out casing	73	10.7	15.7	24.4	59.9

LOG OF BORING EAST MONTPELIER BR-68-1(7).GPJ VT AOT.GDT 12/12/06

VT logo		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B-011 SHEET 2 of 3 DATE STARTED: 2/07/06 DATE COMPLETED: 2/23/06			
PROJECT NAME: EAST MONTPELIER SITE NAME: RT-14 STATION: 129+40 OFFSET: 55.00 VTSPG: N 644490.64 ft E 1643393.73 ft		PROJECT NUMBER: BR-68 SITE NUMBER: BR-68 GROUND ELEVATION: 665.97 ft GROUNDWATER DEPTH: 13.7 ft 2/23/06 PROJECT PIN NUMBER: 98B252					
BORING CREW CREW CHIEF: TALLMAN DRILLER: TALLMAN LOGGER: PORTER		BORING RIG: LAG TRACK RIG w/AUTO HAMMER BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL CHECKED BY: DLG					
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
55		A-4, SaSi, gry, Moist, Rec. = 0.5 ft, Cleaned out casing	R	9.3	17.5	24.4	58.1
		A-4, GrSaSi, gry, Moist, Rec. = 1.3 ft, Cleaned out casing	80	10.0	20.7	24.3	55.0
60		A-4, SaSi, gry, Moist, Rec. = 0.9 ft, Cleaned out casing	R	10.1	16.5	23.2	60.3
65		A-4, SaSi, gry, Moist, Rec. = 0.5 ft, Cleaned out casing	R	11.0	19.2	20.4	60.4
70		A-4, SaSi, gry, Moist, Rec. = 1.4 ft, Cleaned out casing	73	10.9	14.1	23.6	62.3
75							
80		A-4, SaSi, gry, Moist, Rec. = 1.3 ft, Cleaned out casing	55	11.0	17.0	25.7	57.3
85		Field Note:, Cobbles					
90		A-4, GrSi, gry, Moist, Rec. = 1.6 ft	64	10.0	30.3	18.8	50.9
95							

LOG OF BORING EAST MONTPELIER BR-68-2(7).GPJ VT AOT.GDT 12/12/06

VT logo		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B-011 SHEET 3 of 3 DATE STARTED: 2/07/06 DATE COMPLETED: 2/23/06			
PROJECT NAME: EAST MONTPELIER SITE NAME: RT-14 STATION: 129+40 OFFSET: 55.00 VTSPG: N 644490.64 ft E 1643393.73 ft		PROJECT NUMBER: BR-68 SITE NUMBER: BR-68 GROUND ELEVATION: 665.97 ft GROUNDWATER DEPTH: 13.7 ft 2/23/06 PROJECT PIN NUMBER: 98B252					
BORING CREW CREW CHIEF: TALLMAN DRILLER: TALLMAN LOGGER: PORTER		BORING RIG: LAG TRACK RIG w/AUTO HAMMER BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL CHECKED BY: DLG					
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
105		A-4, SaSi, gry, Moist, Rec. = 1.75 ft	64	11.0	18.2	20.9	60.9
110		A-4, SaSi, gry, Moist, Rec. = 1.4 ft	65	11.2	13.8	22.6	63.6
115							
120		Dark gray, Slate, Poor RQD may be due to mechanical breakage., Moderately soft, Unweathered, NXMDC, 120.0 ft - 125.0 ft, Rec. = 3.65 ft	1	73	0	10	13
125		Dark gray, Slate, Poor RQD may be due to mechanical breakage., Moderately soft, Unweathered, NXMDC, 125.0 ft - 130.0 ft, Rec. = 5.0 ft	2	100	0	10	6
130		Hole stopped @ 130.0 ft					6
135							7
140							6
145							6

LOG OF BORING EAST MONTPELIER BR-68-3(7).GPJ VT AOT.GDT 12/12/06



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

BORING NUMBER: B-202  
 SHEET 1 of 1  
 DATE STARTED: 10/03/06  
 DATE COMPLETED: 10/04/06

PROJECT NAME: EAST MONTPELIER  
 SITE NAME: RT-14  
 STATION: 126+60  
 OFFSET: 45.00  
 VTSPG: N 644244.90 ft E 1643518.09 ft

PROJECT NUMBER: BRF 037-1(7)  
 SITE NUMBER: BR-68  
 GROUND ELEVATION:  
 GROUNDWATER DEPTH: NO WATER FOUND  
 PROJECT PIN NUMBER: 98B252

BORING CREW  
 CREW CHIEF: PORTER  
 DRILLER: GARROW  
 LOGGER: CARRIERE

BORING RIG: LAG TRACK RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: TDE

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
		Visual Class., Topsoil with small roots, brn, Moist, Rec. = 1.0 ft	4	24.9			
2.5		A-4, SiSa, brn, Moist, Rec. = 1.75 ft	5	10.1	0.0	62.8	37.2
5.0		A-2-4, SiSa, brn-gry, Moist, Rec. = 1.85 ft	5	9.5	0.8	69.7	29.5
7.5		A-4, SiSa, brn-gry, Moist, Rec. = 1.65 ft	5	16.1	0.0	51.8	48.2
		A-4, SaSi, brn, Moist, Rec. = 1.75 ft	6	21.5	0.1	49.1	50.8
10.0		A-4, SaSi, brn, Moist, Rec. = 0.8 ft		21.1	0.5	44.4	55.1
12.5		A-4, Si, brn, Wet, Rec. = 1.8 ft, Sample was taken after Infiltration Test.	5	30.4	1.4	16.8	81.8
		Hole stopped @ 13.0 ft					
15.0		DRILLER'S NOTES: 1. No water found in hole. 2. An Infiltration Test was performed.					
17.5							

LOG OF BORING - EAST MONTPELIER BRF 037-1(7).GPJ VT AOT.GDT 12/12/06



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

BORING LOG

EAST MONTPELIER  
 BRF 037-1(7)  
 VT-14 BR-68

Boring No.: **B-301**

Page No.: 1 of 1

Pin No.: 98B252

Checked By: MLM

Boring Crew: DAIGNEAULT, GARROW  
 Date Started: 10/25/13 Date Finished: 10/25/13  
 VTSPG NAD83: N 644545.00 ft E 1643296.92 ft  
 Station: 144+30.6 Offset: -29.30  
 Ground Elevation: 677.01 ft

Casing: WB Sampler: SS  
 I.D.: 4.25 in 1.5 in  
 Hammer Wt: N.A. 140 lb.  
 Hammer Fall: N.A. 30 in.  
 Hammer/Rod Type: Auto/AWJ  
 Rig: CME 55 TRACK C = 1.46

Groundwater Observations		
Date	Depth (ft)	Notes
10/25/13	3.8	While drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-1-b, SiGrSa, brn, Moist, Rec. = 0.7 ft	WH-2-3-3 (5)	15.2	29.5	50.0	20.5
		A-4, Si, brn, Moist, Rec. = 1.2 ft	2-2-2-3 (4)	30.9	1.1	5.3	93.6
5		A-4, Si, brn, Moist, Rec. = 1.5 ft, Sample was tested for Limits. (NP)	2-3-3-3 (6)	38.4		1.4	98.6
		Field Note:, No Recovery, Appears to be silt.	4-4-4-3 (8)				
		A-4, Si, brn, Moist, Rec. = 1.4 ft, Sample was tested for Limits. (NP)	WH-2-2-3 (4)	37.6	2.1	1.7	96.2
10		A-4, Si, gry, Moist, Rec. = 1.0 ft, Sample was tested for Limits. (NP)	1-2-2-3 (4)	38.4		1.2	98.8
		Field Note:, No Recovery, Appears to be silt.	5-6-6-5 (12)				
		Field Note:, Cleaned out casing. Hit hard packed material at 19.0 ft.					
20		A-4, SaGrSi (HP), gry, Moist, Rec. = 1.2 ft	10-12-12-14 (24)	11.2	23.2	22.7	54.1
		A-4, SaSiGr (HP), gry, Moist, Rec. = 0.9 ft	22-34-41-R@1.0" (75)	9.6	40.0	20.3	39.7
	Hole stopped @ 27.0 ft						
30	Remarks: Hole collapsed at 22.6 ft.						

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.  
 2. N Values have not been corrected for hammer energy. C is the hammer energy correction factor.  
 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 EAST MONTPELIER BRF 037-1(7).GPJ VERMONT AOT.GDT 11/1/13



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

BORING LOG

EAST MONTPELIER  
 BRF 037-1(7)  
 VT-14 BR-68

Boring No.: **B-302**

Page No.: 1 of 1

Pin No.: 98B252

Checked By: MLM

Boring Crew: DAIGNEAULT, GARROW  
 Date Started: 10/28/13 Date Finished: 10/28/13  
 VTSPG NAD83: N 644677.65 ft E 1643381.89 ft  
 Station: 145+88.3 Offset: -25.40  
 Ground Elevation: 687.35 ft

Type: WB SS  
 I.D.: 4.25 in 1.5 in  
 Hammer Wt: N.A. 140 lb.  
 Hammer Fall: N.A. 30 in.  
 Hammer/Rod Type: Auto/AWJ  
 Rig: CME 55 TRACK C<sub>s</sub> = 1.46

Groundwater Observations

Date	Depth (ft)	Notes
		None taken.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
5		A-4, SiSa, brn, Moist, Rec. = 0.5 ft	WH-WH-1-1 (1)	15.2	15.0	47.7	37.3
		A-1-b, Sa, brn, Moist, Rec. = 1.2 ft	2-2-2-1 (4)	5.3	9.9	83.1	7.0
10		A-1-b, Sa, brn, Moist, Rec. = 0.7 ft	2-1-2-2 (3)	5.8	7.6	86.1	6.3
		A-4, Si, brn, MTW, Rec. = 0.5 ft	2-2-2-2 (4)	33.0	1.2	15.3	83.5
A-4, Si, brn, MTW, Rec. = 1.6 ft, Sample was tested for Limits. (NP)	39.9	0.3		99.7			
15		A-4, Si, brn, MTW, Rec. = 1.5 ft, Sample was tested for Limits. (NP)	WH-1-3-3 (4)	40.2		0.4	99.6
		A-4, Si, brn, MTW, Rec. = 1.6 ft, Sample was tested for Limits. (NP)	WH-2-2-3 (4)	40.6		0.6	99.4
20		A-4, Si, brn, MTW, Rec. = 1.2 ft, Sample was tested for Limits. (NP)	1-2-3-3 (5)	37.8		0.8	99.2
		A-4, Si, brn, MTW, Rec. = 1.6 ft, Sample was tested for Limits. (NP)	3-3-3-3 (6)	36.3		1.6	98.4
25		A-4, Si, brn-gry, MTW, Rec. = 1.4 ft, Sample was tested for Limits. (NP)	1-3-2-3 (5)	35.0		0.8	99.2
		A-4, Si, gry, MTW, Rec. = 1.3 ft	2-2-1-1 (3)	32.9	10.1	3.0	86.9
30		Visual Description: Broken Rock with sand, gry, Moist, Rec. = 0.3 ft, Insufficient sample for testing.	17-13-13-48 (26)				
35		A-4, SaSi (HP), gry, Moist, Rec. = 0.8 ft	30-R@5.0" (R)	11.7	18.5	27.6	53.9
		A-4, SaSi (HP), gry, Moist, Rec. = 0.4 ft	R@5.0" (R)	9.4	17.1	26.0	56.9

Hole stopped @ 35.4 ft

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.  
 2. N Values have not been corrected for hammer energy. C is the hammer energy correction factor.  
 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 EAST MONTPELIER BRF 037-1(7).GPJ VERMONT AOT.GDT 11/1/13



STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
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BORING LOG

EAST MONTPELIER  
BRF 037-1(7)  
VT-14 BR-68

Boring No.: B-401

Page No.: 1 of 1

Pin No.: \_\_\_\_\_

Checked By: MRG

Boring Crew: GARROW, NIETO  
Date Started: 11/18/15 Date Finished: 11/18/15  
VTSPG NAD83: N 644488.50 ft E 1643254.08 ft  
Station: 143+65 Offset: -17.30  
Ground Elevation: 670.8 ft

Casing Sampler  
Type: H.S.A. SS  
I.D.: 3 in 1.5 in  
Hammer Wt: N.A. 140 lb.  
Hammer Fall: N.A. 30 in.  
Hammer/Rod Type: Auto/AWJ  
Rig: CME 45C SKID C. = Unknown

Groundwater Observations		
Date	Depth (ft)	Notes
11/18/15	17.1	W.T. after drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.3		Asphalt Pavement, 0.0 ft - 0.3 ft					
2.5		A-1-b, SiGrSa, brn, Moist, Rec. = 1.1 ft	8-13-12-12 (25)	6.0	33.0	45.0	22.0
		A-1-b, SiSaGr, gry, Moist, Rec. = 1.5 ft, Lab Note: Broken rock was within sample.	9-8-7-6 (15)	8.0	41.8	36.5	21.7
5.0		A-4, GrSaSi, Dk/brn, Moist, Rec. = 1.2 ft, Lab Note: Sample tested non-plastic.	3-4-5-3 (9)	17.3	22.8	31.7	45.5
7.5		A-4, SiSa, gry-brn, Moist, Rec. = 0.8 ft, Lab Note: Wood fibers and pieces of wood were within sample.	1-4-3-2 (7)	25.1	12.8	47.4	39.8
10.0		A-4, GrSaSi, gry, Moist, Rec. = 0.9 ft, Lab Note: A lot of wood fibers were within sample.	2-6-8-8 (14)	18.0	20.6	31.7	47.7
12.5		A-2-4, GrSaSi, gry, Moist, Rec. = 1.1 ft, Lab Note: Wood fibers and pieces of wood were within sample.	13-7-5-6 (12)	13.5	31.9	32.9	35.2
15.0		A-4, SaSi, gry, Moist, Rec. = 1.5 ft	2-3-20-40 (23)	13.6	17.6	27.1	55.3
		A-4, SaSi, gry, Moist, Rec. = 1.5 ft, Lab Note: Wood fibers were within sample.	10-18-28-24 (46)	13.0	14.7	25.2	60.1
17.5		A-4, SaSi, gry, Moist, Rec. = 1.8 ft	13-16-48- R@3.5" (64)	12.0	15.2	21.3	63.5
20.0		A-4, SaGrSi, gry, Moist, Rec. = 0.5 ft	R@6" (R)	12.5	21.3	21.2	57.5
		Hole stopped @ 19.5 ft					
22.5		Remarks: Hole Collapsed at 9.6 feet.					

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.  
2. N Values have not been corrected for hammer energy. C. is the hammer energy correction factor.  
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 EAST MONTPELIER BRF 037-1(7).GPJ VERMONT AOT.GDT 12/3/15



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

**BORING LOG**

**EAST MONTPELIER**  
**BRF 037-1(7)**  
**VT-14 BR-68**

Boring No.: **B-501**  
Page No.: 1 of 2  
Pin No.: 98b252  
Checked By: MLM



STATE OF VERMONT  
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**BORING LOG**

**EAST MONTPELIER**  
**BRF 037-1(7)**  
**VT-14 BR-68**

Boring No.: **B-501**  
Page No.: 2 of 2  
Pin No.: 98b252  
Checked By: MLM

Boring Crew: <u>Judkins, Garrow, Emerson</u>	Casing Type: <u>WB</u>	Sampler: <u>SS</u>	Groundwater Observations		
Date Started: <u>8/08/16</u> Date Finished: <u>8/23/16</u>	I.D.: <u>4 in</u>	SS: <u>1.5 in</u>	Date	Depth (ft)	Notes
VTSPG NAD83: <u>N 644340.98 ft E 1643404.04 ft</u>	Hammer Wt: <u>N.A.</u>	140 lb.	08/09/16	21.1	W.T. before drilling
Station: <u>128+2.94</u> Offset: <u>-6.00</u>	Hammer Fall: <u>N.A.</u>	30 in.	08/10/16	20.0	W.T. before drilling
Ground Elevation: <u>671.5 ft</u>	Hammer/Rod Type: <u>Auto/AWJ</u>		08/11/16	18.2	W.T. before drilling
	Rig: <u>CME 55 TRACSUB&gt;&gt;&lt;&lt;SUB&gt;&gt;</u>				

Boring Crew: <u>Judkins, Garrow, Emerson</u>	Casing Type: <u>WB</u>	Sampler: <u>SS</u>	Groundwater Observations		
Date Started: <u>8/08/16</u> Date Finished: <u>8/23/16</u>	I.D.: <u>4 in</u>	SS: <u>1.5 in</u>	Date	Depth (ft)	Notes
VTSPG NAD83: <u>N 644340.98 ft E 1643404.04 ft</u>	Hammer Wt: <u>N.A.</u>	140 lb.	08/09/16	21.1	W.T. before drilling
Station: <u>128+2.94</u> Offset: <u>-6.00</u>	Hammer Fall: <u>N.A.</u>	30 in.	08/10/16	20.0	W.T. before drilling
Ground Elevation: <u>671.5 ft</u>	Hammer/Rod Type: <u>Auto/AWJ</u>		08/11/16	18.2	W.T. before drilling
	Rig: <u>CME 55 TRACSUB&gt;&gt;&lt;&lt;SUB&gt;&gt;</u>				

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0-0.6		Asphalt Pavement, 0.0 ft - 0.6 ft								
0.6-1.7		Concrete, 0.6 ft - 1.7 ft								
1.7-0.9		A-1-b, GrSa, brn, Moist, Rec. = 0.9 ft				2-2-2-1 (4)	11.0	25.0	59.9	15.1
10-0.4		Field Note: Rollercone, Cleaned out casing A-1-b, GrSa, brn, Moist, Rec. = 0.4 ft				7-7-20-20 (27)	11.0	28.7	57.8	13.5
20-0.9		Field Note: Rollercone, Cleaned out casing A-2-4, GrSiSa, brn, Moist, Rec. = 0.9 ft, Lab Note: A lot of decomposing wood was within sample				27-3-5-8 (8)	30.1	28.3	42.4	29.3
30-0.4		Field Note: Rollercone, Cleaned out casing A-4, SaSi, gry, Moist, Rec. = 0.4 ft				R@5" (R)	7.7	16.6	29.2	54.2
40-0.5		Field Note: Rollercone, Cleaned out casing A-4, SaSi, gry, Moist, Rec. = 0.5 ft				R@6" (R)	8.4	19.6	22.8	57.6
50-0.3		Field Note: Rollercone, Cleaned out casing A-1-a, Gr, gry, Moist, Rec. = 0.3 ft, Lab Note: A lot of broken rock was within sample				R@3.5" (R)	5.5	79.5	12.5	8.0
60-1.0		Field Note: Rollercone, Cleaned out casing A-4, GrSaSi, gry, Moist, Rec. = 1.0 ft, Lab Note: Broken rock was within sample				43-38-R@1" (R)	8.3	21.9	23.6	54.5
70-1.5		Field Note: Rollercone, Cleaned out casing A-4, GrSaSi, gry, Moist, Rec. = 1.5 ft, Lab Note: Broken rock was within sample				37-40-R@6" (R)	9.8	20.1	28.4	51.5
		Field Note: Rollercone, Cleaned out casing								

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0-1.1		A-4, GrSi, gry, Moist, Rec. = 1.1 ft, Lab Note: Broken rock was within sample				44-30-R@5" (R)	11.3	25.7	19.3	55.0
90-0.5		Field Note: Rollercone, Cleaned out casing A-4, SaGrSi, gry, Moist, Rec. = 0.5 ft				43-R@1" (R)	8.4	34.8	28.3	36.9
100-1.0		Field Note: Rollercone, Cleaned out casing A-4, GrSi, gry, Moist, Rec. = 1.0 ft				18-40-R@6" (R)	10.2	30.2	19.6	50.2
110-1.0		Field Note: Rollercone, Cleaned out casing A-4, SaGrSi, gry, Moist, Rec. = 1.0 ft				15-32-28-R@3.5" (60)	9.5	32.3	21.1	46.6
120-0.5		Field Note: Rollercone, Cleaned out casing A-4, SaGrSi, gry, Moist, Rec. = 0.5 ft, Lab Note: Broken rock was within sample				37-41-R@3.5" (R)	10.7	35.1	23.9	41.0
130-1.1		Field Note: Rollercone, Cleaned out casing A-4, GrSi, gry, Moist, Rec. = 1.1 ft				18-32-R@3.5" (R)	10.1	26.3	19.2	54.5
140-146.5		Field Note: NXDC, Cleaned out casing Field Note: No Recovery 141.5 ft - 146.5 ft, Blue-gray to black, Interbedded META-LIMESTONE, and carbonaceous, muscovite-quartz PHYLLITE with pyrite. Rust and brown staining along joints. Vuggy phyllite noted from 145.2 to 145.5 feet. Moderately hard, Very slightly weathered, Fair rock, NX, RMR=53. Low RQD could be due to mechanical breakage	1 (50)	100 (25)	9 (25)	R@5" (R)				
150-146.5		Hole stopped @ 146.5 ft								

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.  
<<SUB>><<SUB>> Is the hammer energy correction factor.  
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.  
<<SUB>><<SUB>> Is the hammer energy correction factor.  
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 EAST MONTPELIER BRF 037-1(7) GPJ VERMONT AOT.GDT 9/14/16



**BORING LOG**

**EAST MONTPELIER**  
**BRF 037-1(7)**  
**VT-14 BR-68**

Boring No.: **B-502**  
Page No.: 1 of 2  
Pin No.: 98b252  
Checked By: MLM

Boring Crew: Judkins, Garrow, Emerson  
Date Started: 8/23/16 Date Finished: 8/31/16  
VTSPG NAD83: N 644447.01 ft E 1643347.82 ft  
Station: 129+22.95 Offset: -6.00  
Ground Elevation: 647.1 ft

Type:	Casing	Sampler	Groundwater Observations		
	WB	SS	Date	Depth (ft)	Notes
I.D.:	<u>4 in</u>	<u>1.5 in</u>	08/29/16	22.3	W.T. before drilling
Hammer Wt:	<u>N.A.</u>	<u>140 lb.</u>	08/31/16	22.0	W.T. before drilling
Hammer Fall:	<u>N.A.</u>	<u>30 in.</u>			
Hammer/Rod Type:	<u>Auto/AWJ</u>				
Rig:	<u>CME 55 TRACUB&gt;&gt;&lt;&lt;SUB&gt;&gt;</u>			<u>= 1.41</u>	

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 %
		Field Note:, NXDC, Cleaned out casing								
		A-4, SaGrSi, gry, Moist, Rec. = 0.3 ft				R@3.5" (R)	7.4	31.6	21.0	47.4
		Field Note:, NXDC, Cleaned out casing								
		A-4, SiGr, gry, Moist, Rec. = 0.6 ft, Lab Note: Broken rock was within sample				8-R@1" (R)	8.5	44.3	19.7	36.0
		Field Note:, NXDC, Cleaned out casing								
		A-4, SaGrSi, gry, Moist, Rec. = 0.9 ft, Lab Note: Broken rock was within sample				32-R@5" (R)	9.6	28.0	21.7	50.3
		Field Note:, NXDC, Cleaned out casing								
		A-2-4, SaSiGr, gry, Moist, Rec. = 0.3 ft, Lab Note: Broken rock was within sample				R@3.5" (R)	7.9	42.7	22.4	34.9
		Field Note:, NXDC, Cleaned out casing								
		A-4, SaGrSi, gry, Moist, Rec. = 8.0 ft, Lab Note: Broken rock was within sample				40-R@5.5" (R)	10.1	24.7	23.9	51.4
		Field Note:, NXDC, Cleaned out casing								
		A-4, SaSi, gry, Moist, Rec. = 1.3 ft				21-26-48-R@1" (74)	10.5	17.2	21.8	61.0

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.  
<<SUB>><<SUB>> Is the hammer energy correction factor.  
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.



**BORING LOG**

**EAST MONTPELIER**  
**BRF 037-1(7)**  
**VT-14 BR-68**

Boring No.: **B-502**  
Page No.: 2 of 2  
Pin No.: 98b252  
Checked By: MLM

Boring Crew: Judkins, Garrow, Emerson  
Date Started: 8/23/16 Date Finished: 8/31/16  
VTSPG NAD83: N 644447.01 ft E 1643347.82 ft  
Station: 129+22.95 Offset: -6.00  
Ground Elevation: 647.1 ft

Type:	Casing	Sampler	Groundwater Observations		
	WB	SS	Date	Depth (ft)	Notes
I.D.:	<u>4 in</u>	<u>1.5 in</u>	08/29/16	22.3	W.T. before drilling
Hammer Wt:	<u>N.A.</u>	<u>140 lb.</u>	08/31/16	22.0	W.T. before drilling
Hammer Fall:	<u>N.A.</u>	<u>30 in.</u>			
Hammer/Rod Type:	<u>Auto/AWJ</u>				
Rig:	<u>CME 55 TRACUB&gt;&gt;&lt;&lt;SUB&gt;&gt;</u>			<u>= 1.41</u>	

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 %
		Field Note:, NXDC, Cleaned out casing								
		A-4, Si, gry, Moist, Rec. = 1.4 ft, Lab Note: Broken rock was within sample				23-30-34-R@2.5" (64)	11.1	16.3	19.9	63.8
		Field Note:, NXDC, Cleaned out casing								
		A-4, SaGrSi, gry, Moist, Rec. = 0.6 ft, Lab Note: Broken rock was within sample				24-39-R@6" (R)	10.2	34.8	26.9	38.3
		Field Note:, NXDC, Cleaned out casing								
		A-4, SaSi, gry, Moist, Rec. = 0.9 ft, Lab Note: Broken rock was within sample				29-32-R@6" (R)	11.1	19.0	22.1	58.9
		Field Note:, NXDC, Cleaned out casing								
		A-4, SaSi, gry, Moist, Rec. = 0.8 ft, Lab Note: Broken rock was within sample				34-R@5" (R)	11.9	16.6	27.2	56.2
		101.1 ft - 106.1 ft, Gray to black, Muscovite-quartz PHYLLITE, with pyrite and massive QUARTZ vein from 103.0 to 105.3 feet. Medium hard, Unweathered, Fair rock, NX, RMR=41. Low RQD could be due to mechanical breakage	1 (65)	90 (13)	7					Top of Bedrock @ 101.1 ft
		Hole stopped @ 106.1 ft								
		Remarks: 1. Boring was performed through bridge deck. 2. Ground elevation represents the ground surface elevation. 3. Boring log begins at the ground surface.								
		Top of Bridge Deck Data: 1. Asphalt Pavement 0.0'-0.3' 2. Concrete 0.3'-0.8' 3. Bottom of deck to ground surface = 25.0'								

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.  
<<SUB>><<SUB>> Is the hammer energy correction factor.  
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 EAST MONTPELIER BRF 037-1(7) G.P.J. VERMONT AGT.GDT. 9/14/16

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