



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

BORING LOG

Fairlee
 STP SCR(15)
 VT 244 Br. #11

Boring No.: B-101
 Page No.: 1 of 1
 Pin No.: 16d012
 Checked By: MLM

Boring Crew: Nieto, Judkins, Emerson
 Date Started: 7/19/16 Date Finished: 7/20/16
 VTSPG NAD83: N 503715.33 ft E 1724562.34 ft
 Station: 122+25 Offset: 17.40
 Ground Elevation: 497.9 ft

Type: WB SS
 I.D.: 4 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_s = 1.42

| Groundwater Observations | | |
|--------------------------|------------|----------------------|
| Date | Depth (ft) | Notes |
| 07/20/16 | 5.0 | W.T. before drilling |
| | | |
| | | |

| 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 % |
|-------------|------------|--|----------------|---------------------|-----------------------|--------------------------|--------------------|----------|--------|---------|
| 0.0 - 2.5 | | A-2-4, Sa, blk, Moist, Rec. = 0.5 ft, Lab Note: Plant roots were within sample | | | | WH-WH-1-1 (1) | 23.7 | 10.6 | 74.7 | 14.7 |
| 2.5 - 5.0 | | Field Note:, NXDC, Cleaned out casing | | | | | | | | |
| 5.0 - 6.6 | | A-2-4, SiGrSa, blk, Moist, Rec. = 0.5 ft, Lab Note: Broken rock was within sample | | | | 5-6-R@5" (R) | 15.1 | 34.7 | 36.0 | 29.3 |
| 6.6 - 10.6 | | 6.6 ft - 10.6 ft, Gray, Pyrite bearing PHYLLITE, with quartz veins. Rust and yellow staining along joints. Moderately hard, Moderately weathered, Poor rock, NX, RMR=26 | 1 (80) | 38 (0) | 6 9 7 14 | | | | | |
| 10.6 - 12.5 | | Field Note:, NXDC, Cleaned out casing | | | | | | | | |
| 12.5 - 14.3 | | A-1-b, SaGr, gry, Moist, Rec. = 0.4 ft, Lab Note: Broken and weathered rock was within sample | | | | R@5" (R) | 13.3 | 60.7 | 23.7 | 15.6 |
| 14.3 - 15.0 | | Field Note:, Appears to be a seam in bedrock | | | | | | | | |
| 15.0 - 19.3 | | 14.3 ft - 19.3 ft, Gray, Pyrite bearing PHYLLITE, with quartz veins. Rust and brown staining along joints. Moderately hard, Very slightly weathered, Good rock, NX, RMR=64 | 2 (80) | 100 (95) | 4 4 4 3 4 | Top of Bedrock @ 14.3 ft | | | | |
| 19.3 - 20.0 | | Hole stopped @ 19.3 ft | | | | | | | | |
| 20.0 - 22.5 | | Remarks: Hole collapsed at 8.9 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_s 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.



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BORING LOG

Fairlee
STP SCR(15)
VT 244 Br. #11

Boring No.: **B-102**

Page No.: 1 of 1

Pin No.: 16d012

Checked By: MLM

Boring Crew: Garrow, Judkins, Gomes
Date Started: 7/15/16 Date Finished: 7/15/16
VTSPG NAD83: N 503714.54 ft E 1724575.29 ft
Station: 122+36 Offset: 11.00
Ground Elevation: 498.4 ft

Casing WB Sampler SS
Type: WB SS
I.D.: 4 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_s = 1.42

Groundwater Observations

| Date | Depth (ft) | Notes |
|----------|------------|---------------------|
| 07/15/16 | 6.0 | W.T. after drilling |
| | | |
| | | |

| 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 % |
|------------|------------|--|----------------|---------------------|-----------------------|----------------------|--------------------|----------|--------|---------|
| | | Asphalt Pavement, 0.0 ft - 0.88 ft | | | | | | | | |
| 5 | | A-1-b, SiGrSa, gry-brn, Moist, Rec. = 1.2 ft, Lab Note: A small amount of asphalt pavement was within sample | | | | 11-8-6-6 (14) | 11.4 | 26.0 | 52.5 | 21.5 |
| | | A-1-b, GrSa, brn, Moist, Rec. = 0.7 ft, Lab Note: Broken rock was within sample Field Note:, Rollercone, cleaned out casing | | | | 6-6-5-10 (11) | 13.4 | 41.6 | 42.6 | 15.8 |
| | | A-1-b, SaGr, brn, Moist, Rec. = 0.7 ft Field Note:, NXDC, Cleaned out casing | | | | 7-7-13-12 (20) | 16.5 | 50.7 | 37.2 | 12.1 |
| | | A-1-a, SaGr, brn, Moist, Rec. = 0.4 ft, Lab Note: Broken rock was within sample Field Note:, NXDC, Cleaned out casing | | | | 8-7-11-3 (18) | 12.3 | 52.3 | 37.0 | 10.7 |
| 10 | | Field Note:, No Recovery | | | | 4-1-5-10 (6) | | | | |
| | | A-1-b, SaGr, gry, Moist, Rec. = 1.1 ft, Lab Note: Broken and weathered rock was within sample Field Note:, NXDC, Cleaned out casing | | | | 4-11-20-17 (31) | 11.0 | 47.4 | 34.7 | 17.9 |
| | | A-1-b, SaGr, gry, Moist, Rec. = 1.3 ft, Lab Note: Broken and weathered rock was within sample Field Note:, NXDC, Cleaned out casing | | | | 12-10-13-R@3.5" (23) | 12.0 | 52.3 | 31.7 | 16.0 |
| 15 | | A-1-a, SaGr, gry, Moist, Rec. = 1.1 ft, Lab Note: Broken and weathered rock was within sample | | | | 30-16-7-R@3.5" (23) | 14.7 | 59.6 | 27.8 | 12.6 |
| 20 | | 16.9 ft - 21.9 ft, Gray, Pyrite bearing PHYLLITE, with quartz veins. Rust and brown staining along joints. Moderately hard, Very slightly weathered, Fair rock, NX, RMR=50 | 1 (70) | 96 (79) | 7 | | | | | |
| | | | | | 7 | | | | | |
| | | | | | 6 | | | | | |
| | | | | | 8 | | | | | |
| | | | | | 8 | | | | | |
| 25 | | 21.9 ft - 26.9 ft, Gray, Pyrite bearing PHYLLITE, with quartz veins. Massive quartz vein at 23.3-25.1 feet. Slight rust and brown staining along joints. Moderately hard, Unweathered, Good rock, NX, RMR=63 | 2 (70) | 100 (87) | 7 | | | | | |
| | | | | | 8 | | | | | |
| | | | | | 9 | | | | | |
| | | | | | 7 | | | | | |
| | | | | | 6 | | | | | |
| | | Hole stopped @ 26.9 ft | | | | | | | | |
| 30 | | Remarks: Hole collapsed at 11.9 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.



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BORING LOG

Fairlee
STP SCR(P)15
VT 244 Br. #11

Boring No.: **B-103**
Page No.: 1 of 1
Pin No.: 16d012
Checked By: MLM

Boring Crew: Nieto, Judkins, Emerson
Date Started: 7/18/16 Date Finished: 7/18/16
VTSPG NAD83: N 503752.04 ft E 1724564.58 ft
Station: 122+07 Offset: -14.80
Ground Elevation: 500.1 ft

Casing Sampler
Type: WB SS
I.D.: 4 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_r = 1.42

| Groundwater Observations | | |
|--------------------------|------------|---------------------|
| Date | Depth (ft) | Notes |
| 07/18/16 | 6.0 | W.T. after drilling |
| | | |
| | | |

| Depth (ft) | Strata (1) | CLASSIFICATION OF MATERIALS (Description) | Run (Dip deg.) | Core Rec. % (RCD %) | Drill Rate minutes/ft | Blows/6" (N Value) | Moisture Content % | Gravel % | Sand % | Fines % |
|------------|------------|---|----------------|---------------------|-----------------------|--------------------|--------------------|----------|--------|---------|
| 5 | | A-1-b, GrSa, brn, Moist, Rec. = 1.2 ft, Lab Note: A small amount of asphalt pavement was within sample | | | | 4-6-6-7 (12) | 7.1 | 35.9 | 53.6 | 10.5 |
| | | A-2-4, GrSa, brn, Moist, Rec. = 0.8 ft, Lab Note: A small amount of asphalt pavement was within sample | | | | 6-4-3-3 (7) | 10.1 | 20.4 | 60.1 | 19.5 |
| | | A-2-4, SiSa, brn, Moist, Rec. = 1.3 ft, Lab Note: Pieces of wood were within sample | | | | 1-2-3-7 (5) | 21.0 | 19.0 | 54.6 | 26.4 |
| | | A-2-4, SiGrSa, gry, Moist, Rec. = 1.2 ft, Lab Note: Pieces of wood and a small amount of asphalt pavement were within sample Field Note:, Rollercone, Cleaned out casing | | | | 1-2-5-7 (7) | 24.7 | 29.6 | 49.5 | 20.9 |
| 10 | | A-3, Sa, brn, Moist, Rec. = 0.8 ft | | | | 6-2-3-2 (5) | 22.0 | 8.3 | 81.6 | 10.1 |
| | | Visual Description:, Broken rock, Rec. = 0.2 ft | | | | 5-4-5-3 (9) | 2.6 | | | |
| | | Field Note:, No Recovery, Appears to be sand | | | | 5-4-3-9 (7) | | | | |
| 15 | | A-1-b, GrSa, brn, Moist, Rec. = 0.5 ft | | | | 10-15-10-R@0" (25) | 12.2 | 42.1 | 46.2 | 11.7 |
| | | 19.1 ft - 24.1 ft, Gray, PHYLLITE, with few quartz veins and rare pyrite. Moderately hard, Unweathered, Good rock, NX, RMR=71 | 1 (70-80) | 100 (100) | 5 | | | | | |
| 25 | | 24.1 ft - 29.1 ft, Gray, Pyrite bearing PHYLLITE, with quartz veins. Moderately hard, Unweathered, Good rock, NX, RMR=66 | 2 (75-80) | 90 (96) | 5 | | | | | |
| | | | | | 6 | | | | | |
| | | | | | 7 | | | | | |
| | | | | | 8 | | | | | |
| 30 | | | | | 7 | | | | | |
| | | Hole stopped @ 29.1 ft | | | | | | | | |
| | | Remarks: Hole collapsed at 6.1 feet. | | | | | | | | |

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BORING LOG Z FAIRLEE STP SCR(P)15 VERMONT AOT GDI 0120110



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BORING LOG

Fairlee
 STP SCRP(15)
 VT 244 Br. #11

Boring No.: **B-104**
 Page No.: 1 of 1
 Pin No.: 16d012
 Checked By: MLM

Boring Crew: Nieto, Judkins, Emerson
 Date Started: 7/19/16 Date Finished: 7/19/16
 VTSPG NAD83: N 503743.81 ft E 1724577.91 ft
 Station: 122+23 Offset: -15.00
 Ground Elevation: 498.6 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 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 = 1.42

| Groundwater Observations | | |
|--------------------------|------------|---------------------|
| Date | Depth (ft) | Notes |
| 07/19/16 | 6.4 | W.T. after drilling |
| | | |
| | | |

| 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 % |
|------------|------------|---|----------------|---------------------|-----------------------|-----------------------------------|--------------------|----------|--------|---------|
| | | A-1-b, GrSa, brn, Moist, Rec. = 1.4 ft, Lab Note: A small amount of asphalt pavement was within sample | | | | 3-5-6-5 (11) | 5.8 | 39.0 | 50.3 | 10.7 |
| 5 | | Field Note:, Rollercone, Cleaned out casing Field Note:, No Recovery, Appears to be sand | | | | 3-4-3-7 (7) | | | | |
| 10 | | Field Note:, Rollercone, Cleaned out casing Field Note:, No Recovery, Appears to be sand | | | | 6-4-4-5 (8) | | | | |
| 15 | | A-1-b, GrSa, brn, Moist, Rec. = 0.5 ft A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft, Lab Note: Broken rock was within sample | | | | 4-7-12-12 (19) 5-10-12-11 (22) | 12.6 | 35.4 | 46.7 | 17.9 |
| 20 | | 18.5 ft - 23.5 ft, Gray, Pyrite bearing PHYLLITE, with quartz veins. Moderately hard, Unweathered, Fair rock, NX, RMR=60 | 1 (80) | 100 (78) | 8 | Top of Bedrock @ 18.5 ft | | | | |
| 25 | | Hole stopped @ 23.5 ft Remarks: Hole collapsed at 8.6 feet. | | | 7 9 4 4 | | | | | |

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
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