

| VT Trans | | STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION | | BORING LOG | | Boring No.: B-101 | | | | | |
|--|------------|---|--|---|-------------------|--------------------------|---------------------------|--------------------|----------|--------|---------|
| | | | | BARNARD BHF 0241(39) VT-12 BR-25 | | Page No.: 1 of 1 | | | | | |
| | | | | | | Pin No.: 10C410 | | | | | |
| | | | | | | Checked By: NSM | | | | | |
| Boring Crew: SALISBURY, GARROW, DAVISON | | Casing | | Sampler | | Groundwater Observations | | | | | |
| Date Started: 5/04/12 Date Finished: 5/14/12 | | Type: WB | | SS | | Date | | | | | |
| VTSPG NAD83: N 458380.14 ft E 1605144.36 ft | | I.D.: 4 in | | 1.5 in | | Depth (ft) | | | | | |
| Station: 370+59 Offset: 20.70 | | Hammer Wt: N.A. | | 140 lb. | | Notes | | | | | |
| Ground Elevation: 881.12 ft | | Hammer Fall: N.A. | | 30 in. | | 05/14/12 11.0 AM | | | | | |
| | | Hammer/Rod Type: Auto/AWJ | | | | | | | | | |
| | | Rig: CME 45C TRACK | | C _E = 1.34 | | | | | | | |
| 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 % |
| | | A-1-b, SiGrSa, brn, Moist, Rec. = 1.4 ft | | | | | 4-3-6-5 (9) | 13.5 | 35.7 | 41.1 | 23.2 |
| | | A-1-b, SiGrSa, brn, Moist, Rec. = 1.1 ft, NXDC | | | | | 8-6-6-3 (12) | 9.9 | 38.3 | 40.1 | 21.6 |
| | | A-2-4, SiSa, brn, Moist, Rec. = 0.8 ft | | | | | 5-2-3-3 (5) | 15.8 | 17.6 | 56.9 | 25.5 |
| | | A-1-b, GrGr, brn, Moist, Rec. = 0.9 ft | | | | | 3-2-4-10 (6) | 14.6 | 36.4 | 45.0 | 18.6 |
| | | Field Note: NXDC, Cobbles | | | | | | | | | |
| | | A-4, SiSa, brn, Wet, Rec. = 1.1 ft | | | | | 8-8-8-11 (16) | 23.6 | 0.2 | 62.3 | 37.5 |
| | | A-2-4, Sa, brn, Wet, Rec. = 1.4 ft | | | | | 4-7-8-10 (15) | 21.3 | 7.5 | 75.5 | 17.0 |
| | | A-2-4, SiGrSa, brn, Moist, Rec. = 1.0 ft, NXDC | | | | | 7-25-35-R@2.5" (60) | 10.8 | 32.7 | 40.2 | 27.1 |
| | | A-2-4, SiSaGr, brn, Moist, Rec. = 1.0 ft, NXDC | | | | | 2-11-32-55 (43) R@3.5" | 9.9 | 38.0 | 36.0 | 26.0 |
| | | Visual Description: Broken Rock, gry, Moist, Rec. = 0.3 ft | | | | | | | | | |
| | | Field Note: NXDC, Cobbles & Gravel | | | | | | | | | |
| | | A-1-b, SiSaGr, gry, Moist, Rec. = 0.5 ft, NXDC | | | | | 5-17-R@2.5" | 11.2 | 43.5 | 35.4 | 21.1 |
| | | A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft | | | | | 9-R@6.0" | 15.2 | 25.7 | 58.3 | 16.0 |
| | | Field Note: NXDC, Broken Rock | | | | | | | | | |
| | | Field Note: Possible Bedrock 33.0 ft | | | | | | | | | |
| | | 34.0 ft - 39.0 ft, Light-pale-green chloritic ankeritic Greenstone, with amphibolite and hornblende. Moderately hard, Slightly weathered, Fair rock, NXMDC, Stained near vertical joint from 35.5-39.0 feet. RMR = 52 | | 1 (85) | 88 (0) | 6 | | | | | |
| | | 39.0 ft - 44.0 ft, Light-pale-green chloritic ankeritic Greenstone, with amphibolite and hornblende. Moderately hard, Slightly weathered, Fair rock, NXMDC, RMR = 52 | | 2 (85) | 100 (10) | 4 | | | | | |
| | | Hole stopped @ 44.0 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 _E 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. | | | | | | | | | | | |

BOTTOM OF PILE CAP
EL 875.85

PILE TIP
EL 847.12

BORING LOG 2 BARNARD BHF 0241(39) GPJ VERMONT AGT GDTI 6/20/12

| VT Trans | | STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION | | BORING LOG | | Boring No.: B-102 | | | | | |
|--|------------|---|--|---|-------------------|--------------------------|--------------------|--------------------|----------|--------|---------|
| | | | | BARNARD BHF 0241(39) VT-12 BR-25 | | Page No.: 1 of 1 | | | | | |
| | | | | | | Pin No.: 10C410 | | | | | |
| | | | | | | Checked By: NSM | | | | | |
| Boring Crew: SALISBURY, GARROW | | Casing | | Sampler | | Groundwater Observations | | | | | |
| Date Started: 5/03/12 Date Finished: 5/03/12 | | Type: WB | | SS | | Date | | | | | |
| VTSPG NAD83: N 458462.67 ft E 1605125.39 ft | | I.D.: 4 in | | 1.5 in | | Depth (ft) | | | | | |
| Station: 371+43 Offset: 5.90 | | Hammer Wt: N.A. | | 140 lb. | | Notes | | | | | |
| Ground Elevation: 885.82 ft | | Hammer Fall: N.A. | | 30 in. | | Collapsed at 14.0 ft. | | | | | |
| | | Hammer/Rod Type: Auto/AWJ | | | | Drilled same day. | | | | | |
| | | Rig: CME 45C TRACK | | C _E = 1.34 | | | | | | | |
| 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 % |
| | | Asphalt Pavement, 0.0 ft - 0.8 ft | | | | | | | | | |
| | | A-1-b, SaGr, brn, Moist, Rec. = 1.3 ft | | | | | 10-10-10-10 (20) | 7.5 | 47.6 | 36.6 | 15.8 |
| | | A-1-b, SaGr, brn, Moist, Rec. = 0.9 ft, NXDC | | | | | 10-7-11-10 (18) | 9.4 | 53.8 | 31.9 | 14.3 |
| | | A-1-b, SaGr, brn, Moist, Rec. = 0.5 ft, NXDC | | | | | 6-7-8-6 (15) | 8.3 | 52.4 | 28.9 | 18.7 |
| | | Visual Description: Broken Rock with Sand, brn-gry, Moist, Rec. = 0.3 ft, Stone in end of sampler. Insufficient sample for testing. NXDC | | | | | 10-14-15-7 (29) | | | | |
| | | Field Note: No Recovery | | | | | 5-4-4-4 (8) | | | | |
| | | A-2-4, SiSa, brn, Moist, Rec. = 0.8 ft | | | | | 2-2-1-R@3.5" (3) | 17.5 | 19.9 | 56.2 | 23.9 |
| | | Field Note: NXDC, Cobbles | | | | | | | | | |
| | | A-2-4, SiGrSa, brn, Moist, Rec. = 1.0 ft, NXDC | | | | | 5-9-15-25 (24) | 12.2 | 30.1 | 41.6 | 28.3 |
| | | A-4, GrSaSi, brn, Moist, Rec. = 0.4 ft, NXDC | | | | | R@5.0" | 17.9 | 28.3 | 32.0 | 39.7 |
| | | 17.5 ft - 22.5 ft, Light gray, To pale-green schist and feldspathic biotite quartzite Hard, Unweathered to slightly weathered, Fair rock, NXMDC, RMR = 57 | | 1 (85) | 96 (48) | 3 | | | | | |
| | | Top of Bedrock @ 17.5 ft | | | | | | | | | |
| | | 22.5 ft - 27.5 ft, Light gray, To pale-green schist and feldspathic biotite quartzite Hard, Unweathered, Good rock, NXMDC, RMR = 69 | | 2 (85) | 100 (90) | 3 | | | | | |
| | | Hole stopped @ 27.5 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 _E 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. | | | | | | | | | | | |

BOTTOM OF PILE CAP
EL 876.00

PILE TIP
EL 865.0

BORING LOG 2 BARNARD BHF 0241(39) GPJ VERMONT AGT GDTI 6/20/12

PROJECT NAME: BARNARD
 PROJECT NUMBER: ER BRF 0241(39)
 FILE NAME: sl0c410bor.dgn PLOT DATE: 29-AUG-2013
 PROJECT LEADER: K. HIGGINS DRAWN BY: J. SALVATORI
 DESIGNED BY: J. SALVATORI CHECKED BY: W. LAMMER
 BORING LOGS SHEET 15 OF 39