



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

BORING NUMBER: B-201  
 SHEET 1 of 1  
 DATE STARTED: 4/26/05  
 DATE COMPLETED: 4/28/05

PROJECT NAME: MIDDLEBURY  
 SITE NAME: VT 30  
 STATION: 4612+49  
 OFFSET: -31.00  
 VTSPG: N 552773.31 ft E 1464659.66 ft

PROJECT NUMBER: BR 0161(9)  
 SITE NUMBER: BR 102  
 GROUND ELEVATION: 368.34 ft  
 GROUNDWATER DEPTH: No Water 4/28/05  
 PROJECT PIN NUMBER: 98B258

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: RUSSELL  
 LOGGER: PUALWAN

BORING RIG: LAG TRACK RIG  
 BORING TYPE: WASH BORE  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

| DEPTH (ft) | SYMBOL | CLASSIFICATION OF MATERIALS (Description)  | BLOWS PER FOOT | M.C. (%)                 | GRAVEL (%) | SAND (%)  | FINES (%)           | LL (%) | PI (%) |
|------------|--------|--|----------------|--------------------------|------------|-----------|---------------------|--------|--------|
|            |        |  | RUN            | REC (%)                  | RQD (%)    | Dip (deg) | Drill Rate (min/ft) |        |        |
|            |        | Visual Class: Topsoil, brn, Moist, Rec. = 1.5 ft, 0.0 ft - 2.0 ft  | 5              | 26.8                     |            |           |                     |        |        |
|            |        | A-4, SaSi, brn, Moist, Rec. = 0.4 ft   | 4              | 24.3                     | 18.3       | 27.9      | 53.8                |        |        |
|            |        | Visual Class: Broken brick with Limestone material, white, Moist, Rec. = 0.8 ft, 2.5 ft - 3.5 ft   |                | 10.9                     |            |           |                     |        |        |
|            |        | A-7-6, Cl, brn, Moist, Rec. = 0.4 ft   | 5              | 34.6                     | 0.6        | 6.1       | 93.3                | 55     | 27     |
|            |        | A-7-6, Cl, brn, Moist, Rec. = 1.3 ft   |                | 35.5                     | 0.2        | 4.4       | 95.4                | 55     | 26     |
|            |        | A-7-6, Cl, brn, Moist, Rec. = 2.0 ft   | 9              | 31.9                     | 1.1        | 3.8       | 95.1                | 49     | 24     |
|            |        | A-6, SiCl, brn, Moist, Rec. = 2.0 ft   | 8              | 21.8                     | 11.8       | 29.1      | 59.1                | 30     | 14     |
|            |        | A-6, SiCl, brn, Moist, Rec. = 1.7 ft   | 7              | 20.9                     | 20.6       | 27.8      | 51.6                | 28     | 14     |
|            |        | A-4, SaSi, gry-brn, Moist, Rec. = 1.5 ft   | 7              | 10.2                     | 18.8       | 33.3      | 47.9                | 17     | 3      |
|            |        | A-4, SaSi, gry, Moist, Rec. = 1.6 ft   | 8              | 12.3                     | 16.3       | 29.8      | 53.9                | 17     | 2      |
|            |        | Visual Class: A-4, Sa Si, gry, Moist, Rec. = 0.2 ft, 16.0 ft - 16.25 ft, Insufficient sample for testing   | R              | Top of Bedrock @ 16.8 ft |            |           |                     |        |        |
|            |        | Gray, Limestone, with quartz vein and minor calcite veins, Competent, Moderately hard, Unweathered, BXMDC, 16.8 ft - 21.8 ft, Rec. = 4.8 ft                      | 1              | 96                       | 88         | 60        | 5                   |        |        |
|            |        | Gray, Limestone, with minor calcite veins, Bottom of Run severely broken up (below 24.3'), Moderately hard, Unweathered, BXMDC, 21.8 ft - 26.8 ft, Rec. = 4.1 ft | 2              | 82                       | 26         | 60        | 6                   |        |        |
|            |        | Hole stopped @ 26.8 ft   |                |                          |            |           | 5                   |        |        |
|            |        |  |                |                          |            |           | 6                   |        |        |
|            |        |  |                |                          |            |           | 5                   |        |        |
|            |        |  |                |                          |            |           | 5                   |        |        |
|            |        |  |                |                          |            |           | 6                   |        |        |
|            |        |  |                |                          |            |           | 6                   |        |        |
|            |        |  |                |                          |            |           | 6                   |        |        |

LOG OF BORING MIDDLEBURY BR0161(9).GPJ VT.AGT.GBT 9/5/06



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

BORING NUMBER: B-202  
 SHEET 1 of 1  
 DATE STARTED: 4/22/05  
 DATE COMPLETED: 4/25/05

PROJECT NAME: MIDDLEBURY  
 SITE NAME: VT 30  
 STATION: 4612+80  
 OFFSET: -30.50  
 VTSPG: N 552745.68 ft E 1464673.19 ft

PROJECT NUMBER: BR 0161(9)  
 SITE NUMBER: BR 102  
 GROUND ELEVATION: 369.04 ft  
 GROUNDWATER DEPTH: See Driller's Notes  
 PROJECT PIN NUMBER: 98B258

BORING CREW  
 CREW CHIEF: HOLT  
 DRILLER: GARROW  
 LOGGER: PUALWAN

BORING RIG: LAG TRACK RIG  
 BORING TYPE: WASH BORE  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

| DEPTH (ft) | SYMBOL | CLASSIFICATION OF MATERIALS (Description)   | BLOWS PER FOOT | M.C. (%) | GRAVEL (%) | SAND (%)  | FINES (%)           | LL (%) | PI (%) |
|------------|--------|---|----------------|----------|------------|-----------|---------------------|--------|--------|
|            |        |   | RUN            | REC (%)  | RQD (%)    | Dip (deg) | Drill Rate (min/ft) |        |        |
| 5          |        | A-4, SiSa with small brick particles, gry-blk, Moist, Rec. = 1.2 ft   | 5              | 26.9     | 4.5        | 49.1      | 46.4                |        |        |
|            |        | A-6, SiCl with traces of wood, various colors, Moist, Rec. = 0.9 ft   | 6              | 25.9     | 8.9        | 25.4      | 65.7                | 39     | 16     |
|            |        | A-7-6, Cl with traces of roots, gry, Moist, Rec. = 0.9 ft   | 10             | 32.4     | 7.2        | 25.0      | 67.8                | 48     | 21     |
|            |        | A-7-6, Cl with traces of brick, gry, Moist, Rec. = 1.0 ft   | 8              | 33.8     | 3.1        | 10.8      | 86.1                | 54     | 27     |
|            |        | A-6, SiCl with traces of brick & wood, gry, Moist, Rec. = 2.0 ft  | 10             | 28.5     | 5.3        | 25.3      | 69.4                | 32     | 17     |
| 10         |        | A-4, SaSi, gry, Moist, Rec. = 2.0 ft  | 14             | 14.0     | 16.7       | 39.4      | 43.9                | 18     | 3      |
|            |        | A-4, SaSi, gry, Moist, Rec. = 2.0 ft  | 33             | 10.8     | 18.1       | 35.8      | 46.1                |        |        |
| 15         |        | Visual Class: A-4, Silt with broken rock, gry, Moist, Rec. = 0.2 ft, 14.0 ft - 16.0 ft, Insufficient sample for testing     | 31             | 7.9      |            |           |                     |        |        |
|            |        | No sample, Boulder, 16.0 ft - 18.0 ft   |                |          |            |           |                     |        |        |
|            |        | Visual Class: A-2-4, Si Sa Gr, 18.0 ft - 18.25 ft, Insufficient sample for testing  | R              | 6.2      | 80         | 18.3 ft   | 7                   |        |        |
| 20         |        | Gray, Limestone, with minor calcite veins, Competent, Moderately hard, Unweathered, BXMDC, 18.3 ft - 23.3 ft, Rec. = 5.0 ft | 1              | 100      |            |           | 6                   |        |        |
|            |        |   |                |          |            |           | 7                   |        |        |
|            |        |   |                |          |            |           | 6                   |        |        |
|            |        |   |                |          |            |           | 6                   |        |        |
| 25         |        | Gray, Limestone, with minor calcite veins, Competent, Moderately hard, Unweathered, BXMDC, 23.3 ft - 28.3 ft, Rec. = 5.0 ft | 2              | 100      | 96         |           | 5                   |        |        |
|            |        |   |                |          |            |           | 5                   |        |        |
|            |        |   |                |          |            |           | 5                   |        |        |
|            |        |   |                |          |            |           | 5                   |        |        |
|            |        |   |                |          |            |           | 5                   |        |        |
| 30         |        | Hole stopped @ 28.3 ft  |                |          |            |           |                     |        |        |
|            |        | DRILLER'S NOTES:<br>Ground water elev. was 6.2' on 04/26/05.<br>Ground water elev. was 8.6' on 04/27/05.                    |                |          |            |           |                     |        |        |
| 35         |        |   |                |          |            |           |                     |        |        |

LOG OF BORING MIDDLEBURY BRFO161(9).GPJ VT.AGT.GBT 9/5/06



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

BORING NUMBER: B-203  
 SHEET 1 of 1  
 DATE STARTED: 5/04/05  
 DATE COMPLETED: 5/05/05

PROJECT NAME: MIDDLEBURY  
 SITE NAME: VT 30  
 STATION: 4614+94  
 OFFSET: 15.00  
 VTSPG: N 552528.51 ft E 1464707.40 ft

PROJECT NUMBER: BRF 0161(9)  
 SITE NUMBER: BR 102  
 GROUND ELEVATION: 357.14 ft  
 GROUNDWATER DEPTH: No Water 5/05/05  
 PROJECT PIN NUMBER: 98B258

BORING CREW  
 CREW CHIEF: HOLT  
 DRILLER: GARROW  
 LOGGER: PUALWAN

BORING RIG: SMALL SKID RIG  
 BORING TYPE: WASH BORE  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

| DEPTH (ft) | SYMBOL | CLASSIFICATION OF MATERIALS (Description)   | BLOWS PER FOOT | M.C. (%)                 | GRAVEL (%) | SAND (%)  | FINES (%)           | LL (%) | PI (%) |
|------------|--------|---|----------------|--------------------------|------------|-----------|---------------------|--------|--------|
|            |        |   | RUN            | REC (%)                  | RQD (%)    | Dip (deg) | Drill Rate (min/ft) |        |        |
|            |        | Visual Class: Topsoil, blk, Moist, Rec. = 0.5 ft, 0.0 ft - 2.0 ft   | 4              | 24.1                     |            |           |                     |        |        |
|            |        | A-4, SaSi, brn, Moist, Rec. = 0.5 ft  | 7              | 22.9                     | 10.1       | 26.5      | 63.4                | 18     | 2      |
| 5          |        | No Sample, 4.0 ft - 6.0 ft, Rock lodged in sampler  | 12             |                          |            |           |                     |        |        |
|            |        | A-4, GrSiSa, brn, Moist, Rec. = 0.3 ft  | 9              | 10.6                     | 23.3       | 39.8      | 36.9                |        |        |
|            |        | A-4, SaSi, brn, Moist, Rec. = 0.9 ft  | 18             | 9.4                      | 16.6       | 37.4      | 46.0                |        |        |
| 10         |        | A-4, SaSi, gry, Moist, Rec. = 1.1 ft  | 28             | 8.0                      | 12.8       | 39.0      | 48.2                |        |        |
|            |        | A-1-a, SaGr, gry, Moist, Rec. = 1.5 ft  | 67             | 6.7                      | 60.1       | 26.5      | 13.4                |        |        |
| 15         |        | 13.6 ft - 24.2 ft, Advanced casing, Encountered lots of Cobble material   |                |                          |            |           |                     |        |        |
| 20         |        |   |                |                          |            |           |                     |        |        |
| 25         |        | 24.2 ft - 26.2 ft, Cleaned out casing   |                |                          |            |           |                     |        |        |
|            |        |   |                | Top of Bedrock @ 26.2 ft |            |           |                     |        |        |
|            |        | Gray, Limestone, with minor calcite veins, Competent, Moderately hard, Unweathered, BXMDC, 26.2 ft - 31.2 ft, Rec. = 5.0 ft | 1              | 100                      | 86         |           | 9                   |        |        |
| 30         |        |   |                |                          |            |           | 9                   |        |        |
|            |        |   |                |                          |            |           | 10                  |        |        |
|            |        |   |                |                          |            |           | 10                  |        |        |
|            |        |   |                |                          |            |           | 10                  |        |        |
| 35         |        | Gray, Limestone, with minor calcite veins, Competent, Moderately hard, Unweathered, BXMDC, 31.2 ft - 36.2 ft, Rec. = 5.0 ft | 2              | 100                      | 78         |           | 10                  |        |        |
|            |        |   |                |                          |            |           | 10                  |        |        |
|            |        |   |                |                          |            |           | 11                  |        |        |
|            |        |   |                |                          |            |           | 10                  |        |        |
|            |        |   |                |                          |            |           | 10                  |        |        |
|            |        | Hole stopped @ 36.2 ft  |                |                          |            |           |                     |        |        |

LOG OF BORING MIDDLEBURY BRFD161(9).GPJ VT AOT.GDT 6/25/09