

**STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
MATERIALS & RESEARCH DIVISION  
SUBSURFACE INFORMATION**

















HOLE NO.: INCL 1  
SHEET 1 OF 1  
DATE STARTED: 1/8/97  
DATE COMPLETED: 1/14/97

PROJECT NAME: CORNWALL  
SITE NAME: VT 125  
STATION: 81m west of MM 00.80  
GROUND EL.: 93.215

PROJECT NUMBER: BRS 0172(6)  
SITE NO.: BR 9  
OFFSET: 18m north of centerline  
G.W. DEPTH:

BORING CREW  
CREW CHIEF: WILLIS  
DRILLER: MCGLYNN  
LOGGER: TALLMAN  
ADDITIONAL CREW:

BORING RIG: TRUCK  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL

| DEPTH | SYMBOL  | CLASSIFICATION OF MATERIALS<br>(Description)    | BLOWS<br>PER<br>0.3 m | M.C.<br>%                       | GRAVEL<br>% | SAND<br>%  | FINES<br>%   | LL       | PI       |
|-------|---|---|-----------------------|---------------------------------|-------------|------------|--------------|----------|----------|
|       |   |   |                       |                                 |             |            |              |          |          |
|       |    | A-7-6, Clay, Moist, br, Rec. = 0.6m             | 41                    | 33.2                            | 0.3         | 0.5        | 99.2         | 73       | 41       |
|       |   |   |                       |                                 |             |            |              |          |          |
|       |  | A-7-6, Clay, MTW, gr/br, Rec. = 0.3m            | 7                     | 42.9<br>63                      | 0.3<br>0.8  | 1.5<br>1.1 | 98.2<br>98.1 | 63<br>53 | 34<br>25 |
|       |  | A-7-6, Clay, Wet, gr/br, Rec. = 0.3m            | 15                    | 47.3                            | 0           | 0          | 100          | 65       | 35       |
|       |  | A-7-5, Clay, MTW, gr, Rec. = 0.6m               | 10                    | 50.2                            | 0           | 0          | 100          | 61       | 33       |
| 5     |  | A-7-6, Clay, MTW, gr, Rec. = 0.6m               | 9                     | 48.6                            | 0           | 0          | 100          | 56       | 31       |
|       |  | A-7-6, Clay, Wet, gr, Rec. = 0.3m               | 6                     | 46.9                            | 0           | 1          | 99           | 42       | 21       |
|       |  | A-4, Si, Wet, gr/br, Rec. = 0.3m                | 8                     | 26.7                            | 0           | 0.7        | 99.3         | 25       | 3        |
|       |  | A-4, Si, Wet, gr, Rec. = 0.5m                   | 5                     | 27.8                            | 0           | 7.4        | 92.6         | 23       | 3        |
|       |  | A-4, Si, MTW, gr, Rec. = 0.5m                   | 5                     | 25.5                            | 0           | 2.4        | 97.6         | 19       | 2        |
|       |  | A-4, Si, Wet, gr, Rec. = 0.6m                   | 2                     | 25.6                            | 0           | 0.9        | 99.1         | 21       | 5        |
|       |  | A-4, Si, Wet, gr, Rec. = 0.6m                   | 3                     | 31.9                            | 0           | 1          | 99           | 19       | 3        |
|       |  | A-6, SiCl, Wet, gr, Rec. = 0.5m                 | 2                     | 33                              | 0           | 0.9        | 99.1         | 39       | 18       |
|       |  | A-6, ClSi, Wet, gr, Rec. = 0.6m                 | 6                     | 44.9                            | 0.7         | 6.5        | 92.8         | 27       | 8        |
| 10    |   |   |                       |                                 |             |            |              |          |          |
|       |  | A-4, SaGrSi, Wet, gr, Rec. = 0.5m               | 6                     | 18.5                            | 24.7        | 19         | 56.3         |          |          |
|       |   |   |                       |                                 |             |            |              |          |          |
|       |  | A-7-6, Clay, Moist, gr, Rec. = 0.5m             | 82                    | 20.7                            | 1.4         | 9.4        | 89.2         | 41       | 21       |
|       |   |   |                       |                                 |             |            |              |          |          |
|       |  | A-4, SiSa, Moist, gr, Rec. = 0.2m               | R                     | 8.2                             | 18.2        | 43         | 38.8         |          |          |
|       |   | Note:<br>Installed inclinometer casing to 13.9m |                       | Hole stopped @ Ledge or Boulder |             |            | 13.9m        |          |          |

GEOLOGISTS REPORT:

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









HOLE NO.: INCL 2  
SHEET 1 OF 1  
DATE STARTED: 1/15/97  
DATE COMPLETED: 1/16/97

PROJECT NAME: CORNWALL  
SITE NAME: VT 125  
STATION: 81 m west of MM 00.80  
GROUND EL.: 98.357

PROJECT NUMBER: BRS 0172(6)  
SITE NO.: BR 9  
OFFSET: 6.4m north of centerline  
G.W. DEPTH:

BORING CREW  
CREW CHIEF: WILLIS  
DRILLER: MCGLYNN  
LOGGER: TALLMAN .  
ADDITIONAL CREW:

BORING RIG: TRUCK  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL

| DEPTH | SYMBOL  | CLASSIFICATION OF MATERIALS<br>(Description)                                    | BLOWS<br>PER<br>0.3 m | M.C.<br>%      | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|-------|---|---|-----------------------|----------------|-------------|-----------|------------|----|----|
|       |   | 0.0m to 0.80m<br>Gravel material placed by drill<br>crew for leveling purposes. |                       |                |             |           |            |    |    |
|       |    | A-4, SaSi, Moist, br, Rec. =<br>0.15m   | 8                     | 38.9           | 15.3        | 21.5      | 63.2       |    |    |
|       |    | A-1-b, GrSa, Moist, br, Rec. =<br>0.2m  | 9                     | 10             | 36.4        | 47.2      | 16.4       |    |    |
|       |  | A-1-a, SaGr, Moist, br, Rec. =<br>0.3m  | 29                    | 9.5            | 58          | 29.7      | 12.3       |    |    |
|       |  | A-7-6, Clay, Moist, gr, Rec. =<br>0.2m  | 16                    | 25.7           | 1.6         | 14.9      | 83.5       | 56 | 29 |
| 5     |  | A-7-5, Clay, Moist, gr, Rec. =<br>0.49m   | 20                    | 38.1           | 0.6         | 5.5       | 93.9       | 71 | 40 |
|       |  | A-7-6, Clay, Moist, gr, Rec. =<br>0.6m  | 18                    | 25.6           | 0.9         | 1.3       | 97.8       | 68 | 40 |
|       |  | A-7-6, Clay, Wet, br, Rec. =<br>0.6m  | 13                    | 47.9           | 0           | 0         | 100        | 44 | 23 |
|       |  | A-4, ClSi, Wet, gr, Rec. =<br>0.6m  | 11                    | 30.8           | 0           | 0.6       | 99.4       | 27 | 7  |
|       |  | A-6, SiCl, Moist, gr, Rec. =<br>0.49m   | 49                    | 18.7           | 4           | 16        | 80         | 33 | 16 |
| 10    |  | A-6, SaSiCl, Moist, gr, Rec. =<br>0.49m   | 72                    | 13.5           | 8.9         | 20.5      | 70.6       | 31 | 16 |
|       |   | Set inclinometer to 10.6m   |                       | Hole stopped @ |             |           | 10.6m      |    |    |

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
HOLE NO.: MW 1  
SHEET 1 OF 1  
DATE STARTED: 1/29/97  
DATE COMPLETED: 1/29/97

PROJECT NAME: CORNWALL  
SITE NAME: VT 125  
STATION: 81m west of of MM 00.80  
GROUND EL.: 97.884

PROJECT NUMBER: BRS 0172(6)  
SITE NO.: BR 9  
OFFSET: 6.9m south of centerline  
G.W. DEPTH:

BORING CREW  
CREW CHIEF: WILLIS  
DRILLER: MCGLYNN  
LOGGER: CHABOT .  
ADDITIONAL CREW:

BORING RIG: TRUCK  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL

| DEPTH | SYMBOL  | CLASSIFICATION OF MATERIALS<br><i>(Description)</i>                                   | BLOWS<br>PER<br>0.3 m | M.C.<br>%                               | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|-------|---|---|-----------------------|---|-------------|-----------|------------|----|----|
|       |    | A-7-5, Clay, Moist, br, Rec. =<br>0.53m   | 6                     | 46                                      | 0.2         | 0.9       | 98.9       | 73 | 40 |
|       |   | A-7-5, SiCl, Moist, br, Rec. =<br>0.56m   | 15                    | 32.5                                    | 0.3         | 0.9       | 98.8       | 40 | 14 |
|       |  | A-7-6, SiCl, Moist, br, Rec. =<br>0.53m   | 19                    | 36.25                                   | 0           | 0.6       | 99.4       | 41 | 19 |
|       |  | A-4, Si, Moist, br, Rec. =<br>0.29m   | 10                    | 28.7                                    | 0.1         | 2         | 97.9       | 20 | 2  |
|       |  | A-4, Si, Wet, gr, Rec. =<br>0.29m   |                       | 36                                      | 1.3         | 10.8      | 87.9       | 23 | 6  |
| 5     |   |   |                       | Hole stopped @ 4.9m<br>Ledge or Boulder |             |           |            |    |    |
|       |   | Note :<br>Elevations were established<br>using a TBM with assumed<br>elev. of 100.00m |                       |   |             |           |            |    |    |
| 10    |   |   |                       |   |             |           |            |    |    |

GEOLOGISTS REPORT:



| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH DIVISION<br>SUBSURFACE INFORMATION |             | HOLE NO.: B-103<br>SHEET 1 OF 4<br>DATE STARTED: 9/27/00<br>DATE COMPLETED: 10/6/00                        |                 |        |          |        |         |      |    |
|---|-------------|--|-----------------|--------|----------|--------|---------|------|----|
| PROJECT NAME: CORNWALL<br>SITE NAME: BR 9<br>STATION: 0+744.00<br>GROUND EL.:                           |             | PROJECT NUMBER: BRS 0172 (6)<br>SITE NO.: VT 125<br>OFFSET: -14.00<br>G.W. DEPTH: 0.32                     |                 |        |          |        |         |      |    |
| BORING CREW<br>CREW CHIEF: YOUNG<br>DRILLER: CHABOT<br>LOGGER: RUSSELL<br>ADDITIONAL CREW:              |             | BORING RIG: UNI-MOG<br>BORING TYPE: WASH BORE<br>SAMPLE TYPE: SPLIT BARREL/SHELBY TUBE                     |                 |        |          |        |         |      |    |
| DEPTH   | SYMBOL      | CLASSIFICATION OF MATERIALS<br>(Description)   | BLOWS PER 0.3 m | M.C. % | GRAVEL % | SAND % | FINES % | LL   | PI |
|   |             |  |                 |        |          |        |         |      |    |
|   |             | A-7-6, Cl, 1.00m-1.58m,<br>Rec. = 0.46m, 5.77% Organic,<br>Shelby Tube U1<br>VS: Could only penetrate 0.2m |                 | 36     | 0.2      | 4.4    | 95.4    | 54   | 26 |
|   |             | A-7-6, Cl, 3.00m-3.59m,<br>Rec. = 0.59m, Shelby Tube U2<br>VS: 13.0 KPa/remold-13.5 KPa                    |                 | 35.4   |          | 1.1    | 98.9    | 51   | 29 |
| 5   |             | A-6, SiCl, 5.00m-5.59m,<br>Rec. = 0.59m, Shelby Tube U3<br>VS: 15.0 KPa/remold-5.5 KPa                     |                 | 33.1   |          | 0.9    | 99.1    | 36   | 18 |
|   | SHELBY TUBE | 7.00m-7.43m, Shelby Tube<br>No Rec.<br>VS: 15.5 KPa/remold-6.0 KPa<br>Vane came back heavily damaged       |                 |        |          |        |         |      |    |
|   | SHELBY TUBE | 9.00m-9.28m, Shelby Tube<br>No Rec.<br>VS: 50.5 KPa/remold-11.0 KPa  |                 |        |          |        |         |      |    |
|   |             | A-2-4, Sa, gry, Moist,<br>Rec. = 0.38m   |                 | 18     | 19       | 1.6    | 86.6    | 11.8 |    |
|   |             | A-2-4, Sa, gry, Moist,<br>Rec. = 0.59m   |                 | 21     | 19.6     | 2.9    | 84.8    | 12.3 |    |

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH DIVISION<br>SUBSURFACE INFORMATION |        | HOLE NO.: B-103<br>SHEET 2 OF 4<br>DATE STARTED: 9/27/00<br>DATE COMPLETED: 10/6/00    |                 |        |          |        |         |    |    |
|---|--------|--|-----------------|--------|----------|--------|---------|----|----|
| PROJECT NAME: CORNWALL<br>SITE NAME: BR 9<br>STATION: 0+744.00<br>GROUND EL.:                           |        | PROJECT NUMBER: BRS 0172 (6)<br>SITE NO.: VT 125<br>OFFSET: -14.00<br>G.W. DEPTH: 0.32 |                 |        |          |        |         |    |    |
| BORING CREW<br>CREW CHIEF: YOUNG<br>DRILLER: CHABOT<br>LOGGER: RUSSELL<br>ADDITIONAL CREW:              |        | BORING RIG: UNI-MOG<br>BORING TYPE: WASH BORE<br>SAMPLE TYPE: SPLIT BARREL/SHELBY TUBE |                 |        |          |        |         |    |    |
| DEPTH   | SYMBOL | CLASSIFICATION OF MATERIALS<br>(Description)   | BLOWS PER 0.3 m | M.C. % | GRAVEL % | SAND % | FINES % | LL | PI |
|   |        | A-4, SaSi, gry, MTW,<br>Rec. = 0.57m   | 6               | 20.8   | 0.5      | 24.7   | 74.8    |    |    |
|   |        | A-4, SiSa, gry, MTW,<br>Rec. = 0.41m   | 17              | 22.4   | 1.2      | 53.2   | 45.6    |    |    |
|   |        | A-3, Sa, gry, MTW,<br>Rec. = 0.46m   | 35              | 20.9   | 0.1      | 95.3   | 4.6     |    |    |
| 20  |        | A-4, SaSi, gry, MTW,<br>Rec. = 0.60m   | 24              | 22.3   | 3.5      | 31.5   | 65      |    |    |
|   |        | A-2-4, GrSa, gry, Moist,<br>Rec. = 0.29m   | 41              | 13.6   | 28.5     | 58.4   | 13.1    |    |    |
|   |        | No sample, in gravel   |                 |        |          |        |         |    |    |
|   |        | BXDC, 23.21m-24.60m, Boulders  |                 |        |          |        |         |    |    |
| 25  |        | A-2-4, Sa, gry, Moist,<br>Rec. = 0.23m   | 22              | 18.1   | 6        | 79.8   | 14.2    |    |    |
|   |        | A-4, SiSa, gry, Moist,<br>Rec. = 0.45m   | 36              | 14.1   | 4        | 58.2   | 37.8    |    |    |
|   |        | A-2-4, SiSa, gry, Moist,<br>Rec. = 0.31m   | R               | 17.4   | 1.1      | 76     | 22.9    |    |    |

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH DIVISION<br>SUBSURFACE INFORMATION |        | HOLE NO.: B-103<br>SHEET 3 OF 4<br>DATE STARTED: 9/27/00<br>DATE COMPLETED: 10/6/00  |                 |        |          |        |         |      |    |
|---|--------|--|-----------------|--------|----------|--------|---------|------|----|
| PROJECT NAME: CORNWALL<br>SITE NAME: BR 9<br>STATION: 0+744.00<br>GROUND EL.:                           |        | PROJECT NUMBER: BRS 0172 (6)<br>SITE NO.: VT 125<br>OFFSET: -14.00<br>G.W. DEPTH: 0.32                                     |                 |        |          |        |         |      |    |
| BORING CREW<br>CREW CHIEF: YOUNG<br>DRILLER: CHABOT<br>LOGGER: RUSSELL<br>ADDITIONAL CREW:              |        | BORING RIG: UNI-MOG<br>BORING TYPE: WASH BORE<br>SAMPLE TYPE: SPLIT BARREL/SHELBY TUBE                                     |                 |        |          |        |         |      |    |
| DEPTH   | SYMBOL | CLASSIFICATION OF MATERIALS<br>(Description)   | BLOWS PER 0.3 m | M.C. % | GRAVEL % | SAND % | FINES % | LL   | PI |
|   |        | No Rec., Stone in sampler.   |                 | R      |          |        |         |      |    |
| 35  |        | A-3, Sa, gry, Moist,<br>Rec. = 0.44m   |                 | R      | 13.4     | 0.5    | 93.1    | 6.4  |    |
|   |        | BXDC, 37.05m-37.50m,<br>Cleaned out casing.<br>A-1-b, GrSa, gry, Moist,<br>Rec. = 0.33m, Broken Rock<br>was within sample. |                 | R      | 12.1     | 22.9   | 69      | 8.1  |    |
| 40  |        | No Rec.  |                 | R      |          |        |         |      |    |
|   |        | A-4, SaGrSi HP, gry, Dry,<br>Rec. = 0.10m  |                 | R      | 7.1      | 37.3   | 24.2    | 38.5 |    |

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH DIVISION<br>SUBSURFACE INFORMATION |        | HOLE NO.: B-103<br>SHEET 4 OF 4<br>DATE STARTED: 9/27/00<br>DATE COMPLETED: 10/6/00    |                 |        |          |        |         |    |    |
|---|--------|--|-----------------|--------|----------|--------|---------|----|----|
| PROJECT NAME: CORNWALL<br>SITE NAME: BR 9<br>STATION: 0+744.00<br>GROUND EL.:                           |        | PROJECT NUMBER: BRS 0172 (6)<br>SITE NO.: VT 125<br>OFFSET: -14.00<br>G.W. DEPTH: 0.32 |                 |        |          |        |         |    |    |
| BORING CREW<br>CREW CHIEF: YOUNG<br>DRILLER: CHABOT<br>LOGGER: RUSSELL<br>ADDITIONAL CREW:              |        | BORING RIG: UNI-MOG<br>BORING TYPE: WASH BORE<br>SAMPLE TYPE: SPLIT BARREL/SHELBY TUBE |                 |        |          |        |         |    |    |
| DEPTH   | SYMBOL | CLASSIFICATION OF MATERIALS<br>(Description)   | BLOWS PER 0.3 m | M.C. % | GRAVEL % | SAND % | FINES % | LL | PI |
|   |        | BXDC, 45.70m-47.20m, Boulders  |                 |        |          |        |         |    |    |
|   |        | Hole stopped @ 47.20m  |                 |        |          |        |         |    |    |

- DRILLER'S NOTES:
- Monitoring well installed at 7.62m, the well casing extends 0.98m above the ground elevation.
  - Water table is 0.32m below ground surface on 11/16/00
  - Changed to smaller casing at 16.50m.
  - 21.0m of sand in casing at 28.5m - added drilling mud, pulled casing back and readvanced casing to 28.50m.
  - Water table is 0.12m below ground surface on 03/15/01

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH DIVISION<br>SUBSURFACE INFORMATION |        | HOLE NO.: B-104<br>SHEET 1 OF 3<br>DATE STARTED: 11/2/00<br>DATE COMPLETED:          |                 |        |          |        |         |    |    |
|---|--------|--|-----------------|--------|----------|--------|---------|----|----|
| PROJECT NAME: CORNWALL<br>SITE NAME: BR 9<br>STATION: 0+790.00<br>GROUND EL.:                           |        | PROJECT NUMBER: BRS 0172 (6)<br>SITE NO.: VT 125<br>OFFSET: 0.00<br>G.W. DEPTH: 0.00 |                 |        |          |        |         |    |    |
| BORING CREW<br>CREW CHIEF: TALLMAN<br>DRILLER: CHABOT<br>LOGGER: RUSSELL<br>ADDITIONAL CREW:            |        | BORING RIG: TRACTOR<br>BORING TYPE: WASH BORE<br>SAMPLE TYPE: SPLIT BARREL           |                 |        |          |        |         |    |    |
| DEPTH   | SYMBOL | CLASSIFICATION OF MATERIALS<br>(Description)   | BLOWS PER 0.3 m | M.C. % | GRAVEL % | SAND % | FINES % | LL | PI |
|   |        | No Sample, Ledge Fill  |                 |        |          |        |         |    |    |
|   |        | A-8, Organic Silt, brn, Sat,<br>Rec. = 0.23m,<br>Tested 22.04% Organic               | 2               | 141.3  |          |        |         |    |    |
|   |        | A-8, Organic Silt, brn, Sat,<br>Rec. = 0.28m,<br>Tested 26.4% Organic                | WH              | 246.3  |          |        |         |    |    |
| 5   |        | A-4, SiSa, gry, MTW,<br>Rec. = 0.48m   | 10              | 22.1   | 0.2      | 61.1   | 38.7    |    |    |
|   |        | A-4, SaSi, gry, MTW,<br>Rec. = 0.24m   | 18              | 21.5   |          | 33.9   | 66.1    |    |    |
|   |        | A-4, SiSa, gry, MTW,<br>Rec. = 0.44m   | 14              | 22.1   | 0.8      | 59.1   | 40.1    |    |    |
|   |        | A-3, Sa, gry, MTW,<br>Rec. = 0.15m   | 7               | 21.5   | 4.7      | 91.9   | 3.4     |    |    |
|   |        | A-3, Sa, gry, Moist,<br>Rec. = 0.40m   | 8               | 20.2   | 1.4      | 96.9   | 1.7     |    |    |
| 10  |        | A-3, Sa, gry, Moist,<br>Rec. = 0.33m   | 5               | 19.9   | 6.2      | 91.4   | 2.4     |    |    |
|   |        | No Sample, Flowing sand,<br>Casing plugged.  |                 |        |          |        |         |    |    |
|   |        | A-2-4, Sa, gry, Moist,<br>Rec. = 0.44m   | 8               | 19.5   | 9.6      | 77.7   | 12.7    |    |    |
|   |        | A-4, Si, gry, MTW,<br>Rec. = 0.46m   | 23              | 28.2   | 0.8      | 9      | 90.2    |    |    |

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH DIVISION<br>SUBSURFACE INFORMATION |        | HOLE NO.: B-104<br>SHEET 2 OF 3<br>DATE STARTED: 11/2/00<br>DATE COMPLETED:          |                 |        |          |        |         |    |    |
|---|--------|--|-----------------|--------|----------|--------|---------|----|----|
| PROJECT NAME: CORNWALL<br>SITE NAME: BR 9<br>STATION: 0+790.00<br>GROUND EL.:                           |        | PROJECT NUMBER: BRS 0172 (6)<br>SITE NO.: VT 125<br>OFFSET: 0.00<br>G.W. DEPTH: 0.00 |                 |        |          |        |         |    |    |
| BORING CREW<br>CREW CHIEF: TALLMAN<br>DRILLER: CHABOT<br>LOGGER: RUSSELL<br>ADDITIONAL CREW:            |        | BORING RIG: TRACTOR<br>BORING TYPE: WASH BORE<br>SAMPLE TYPE: SPLIT BARREL           |                 |        |          |        |         |    |    |
| DEPTH   | SYMBOL | CLASSIFICATION OF MATERIALS<br>(Description)   | BLOWS PER 0.3 m | M.C. % | GRAVEL % | SAND % | FINES % | LL | PI |
|   |        | A-4, SiSa, gry, Moist,<br>Rec. = 0.56m   | 36              | 19.2   | 2.4      | 60.6   | 37      |    |    |
|   |        | A-2-4, Sa, gry, Moist,<br>Rec. = 0.60m   | 20              | 14.2   | 8.8      | 78     | 13.2    |    |    |
|   |        | A-4, SaSi, gry, MTW,<br>Rec. = 0.43m   | 5               | 22.4   | 0.3      | 34     | 65.7    |    |    |
| 20  |        | A-4, SaSi, gry, Moist,<br>Rec. = 0.22m   | 14              | 16.7   | 18.2     | 27.4   | 54.4    |    |    |
|   |        | A-3, GrSa, gry, Moist,<br>Rec. = 0.58m   | 35              | 14     | 20.2     | 72.3   | 7.5     |    |    |
|   |        | No sample, Stone in sampler.   |                 |        |          |        |         |    |    |
|   |        | No sample, Stone in sampler.   | R               |        |          |        |         |    |    |
| 25  |        | BXDC, 24.90m-25.60m, Boulders  |                 |        |          |        |         |    |    |
|   |        | BXDC, 26.92m-27.22m, Boulders  |                 |        |          |        |         |    |    |
|   |        | A-2-4, SiSa, gry, Moist,<br>Rec. = 0.60m   | R               | 14.3   | 3.4      | 65.6   | 31      |    |    |

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH DIVISION<br>SUBSURFACE INFORMATION |        | HOLE NO.: B-104<br>SHEET 3 OF 3<br>DATE STARTED: 11/2/00<br>DATE COMPLETED:          |                 |        |          |        |         |    |    |
|---|--------|--|-----------------|--------|----------|--------|---------|----|----|
| PROJECT NAME: CORNWALL<br>SITE NAME: BR 9<br>STATION: 0+790.00<br>GROUND EL.:                           |        | PROJECT NUMBER: BRS 0172 (6)<br>SITE NO.: VT 125<br>OFFSET: 0.00<br>G.W. DEPTH: 0.00 |                 |        |          |        |         |    |    |
| BORING CREW<br>CREW CHIEF: TALLMAN<br>DRILLER: CHABOT<br>LOGGER: RUSSELL<br>ADDITIONAL CREW:            |        | BORING RIG: TRACTOR<br>BORING TYPE: WASH BORE<br>SAMPLE TYPE: SPLIT BARREL           |                 |        |          |        |         |    |    |
| DEPTH   | SYMBOL | CLASSIFICATION OF MATERIALS<br>(Description)   | BLOWS PER 0.3 m | M.C. % | GRAVEL % | SAND % | FINES % | LL | PI |
|   |        | A-2-4, SiSa, gry, Moist,<br>Rec. = 0.60m   | 92              | 13.1   | 0.9      | 65.9   | 33.2    |    |    |
|   |        | A-3, Sa, gry, Moist,<br>Rec. = 0.60m   | 95              | 18.4   |          | 93.5   | 6.5     |    |    |
| 35  |        | No sample, Flowing sand up<br>in casing.   |                 |        |          |        |         |    |    |
|   |        | A-4, SaSi, gry, Dry,<br>Rec. = 0.51m   | 53              | 9      | 4.9      | 30.6   | 64.5    |    |    |
| 40  |        | Hole stopped @ 39.60m  |                 |        |          |        |         |    |    |

- DRILLER'S NOTES:
- At 22.50m changed over to 88mm casing.
  - Changed casing bit at 26.00m
  - Water flowing above casing at 22.50m, Measured 13.9 gpm.
  - Flow stopped at 28.00m.

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH DIVISION<br>SUBSURFACE INFORMATION |        | HOLE NO.: B-106<br>SHEET 1 OF 4<br>DATE STARTED: 10/17/00<br>DATE COMPLETED:             |                       |           |             |           |            |    |    |
|---|--------|--|-----------------------|-----------|-------------|-----------|------------|----|----|
| PROJECT NAME: CORNWALL<br>SITE NAME: BR 9<br>STATION: 0+790.00<br>GROUND EL.: 42.62                     |        | PROJECT NUMBER: BRS 0172 (6)<br>SITE NO.: VT 125<br>OFFSET: -14.00<br>G.W. DEPTH: 0.00   |                       |           |             |           |            |    |    |
| BORING CREW<br>CREW CHIEF: YOUNG<br>DRILLER: CHABOT<br>LOGGER: RUSSELL<br>ADDITIONAL CREW:              |        | BORING RIG: TRACTOR<br>BORING TYPE: WASH BORE<br>SAMPLE TYPE: SPLIT BARREL               |                       |           |             |           |            |    |    |
| DEPTH<br>▽  | SYMBOL | CLASSIFICATION OF MATERIALS<br>(Description)   | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|   |        | A-8, Organic Silt, brn, Sat,<br>Rec. = 0.15m<br>Tested 33.5% Organic                     | 3                     | 393.4     |             |           |            |    |    |
|   |        | A-8, Organic Silt, brn, Sat,<br>Rec. = 0.17m<br>Tested 24.1% Organic                     | WH                    | 319.7     |             |           |            |    |    |
|   |        | A-8, Organic Silt, brn, Sat,<br>Rec. = 0.60m<br>Tested 20.6% Organic                     | 2                     | 322.8     |             |           |            |    |    |
|   |        | A-4, Silt with Little<br>Organics, brn-gry, Sat,<br>Rec. = 0.45m<br>Tested 15.4% Organic | 3                     | 113.4     |             |           |            |    |    |
| 5   |        | A-2-4, SiSa, gry, MTW,<br>Rec. = 0.30m   | 5                     | 45.4      | 0.9         | 67.3      | 31.8       |    |    |
|   |        | A-3, GrSa, gry, Moist,<br>Rec. = 0.40m   | 18                    | 14        | 31          | 64.2      | 4.8        |    |    |
|   |        | A-3, Sa, gry, MTW,<br>Rec. = 0.60m   | 28                    | 20.8      | 2.8         | 93.5      | 3.7        |    |    |
|   |        | A-3, Sa, gry, MTW,<br>Rec. = 0.12m   | 7                     | 24.6      |             | 95.4      | 4.6        |    |    |
|   |        | A-1-b, Sa, gry, MTW,<br>Rec. = 0.10m   | 11                    | 21.4      | 7.7         | 91.3      | 1          |    |    |
| 10  |        | A-3, Sa, gry, MTW,<br>Rec. = 0.28m   | 9                     | 21        | 1           | 97.6      | 1.4        |    |    |
|   |        | A-3, Sa, gry, Moist,<br>Rec. = 0.33m   | 16                    | 20.4      | 1.2         | 97.3      | 1.5        |    |    |
|   |        | A-2-4, Sa, gry, Moist,<br>Rec. = 0.50m   | 33                    | 20.2      | 0.4         | 88.4      | 11.2       |    |    |
|   |        | A-2-4, SiSa, gry, Moist,<br>Rec. = 0.60m   | 8                     | 17.4      | 2.2         | 76.7      | 21.1       |    |    |

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH DIVISION<br>SUBSURFACE INFORMATION |        | HOLE NO.: B-106<br>SHEET 2 OF 4<br>DATE STARTED: 10/17/00<br>DATE COMPLETED:           |                       |           |             |           |            |    |    |
|---|--------|--|-----------------------|-----------|-------------|-----------|------------|----|----|
| PROJECT NAME: CORNWALL<br>SITE NAME: BR 9<br>STATION: 0+790.00<br>GROUND EL.: 42.62                     |        | PROJECT NUMBER: BRS 0172 (6)<br>SITE NO.: VT 125<br>OFFSET: -14.00<br>G.W. DEPTH: 0.00 |                       |           |             |           |            |    |    |
| BORING CREW<br>CREW CHIEF: YOUNG<br>DRILLER: CHABOT<br>LOGGER: RUSSELL<br>ADDITIONAL CREW:              |        | BORING RIG: TRACTOR<br>BORING TYPE: WASH BORE<br>SAMPLE TYPE: SPLIT BARREL             |                       |           |             |           |            |    |    |
| DEPTH   | SYMBOL | CLASSIFICATION OF MATERIALS<br>(Description)   | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|   |        | A-4, SaSi, gry, MTW,<br>Rec. = 0.20m   | 6                     | 20.8      | 1.6         | 41.4      | 57         |    |    |
|   |        | A-3, GrSa, gry, Moist,<br>Rec. = 0.22m   | 3                     | 14.7      | 27.3        | 66.3      | 6.4        |    |    |
|   |        | A-2-4, SiSa, gry, Moist,<br>Rec. = 0.60m   | 4                     | 19        | 2.1         | 65.9      | 32         |    |    |
| 20  |        | A-2-4, SiSa, gry, Moist,<br>Rec. = 0.60m   | 23                    | 14.4      | 19.9        | 47        | 33.1       |    |    |
|   |        | BXDC, 21.5m-22.8m, Boulders  |                       |           |             |           |            |    |    |
|   |        | No Rec.  | 38                    |           |             |           |            |    |    |
|   |        | A-2-4, GrSa, gry, Dry,<br>Rec. = 0.50m   | 24                    | 9.2       | 34.6        | 46.7      | 18.7       |    |    |
| 25  |        | No sample, Stone in casing.  |                       |           |             |           |            |    |    |
|   |        | A-1-a, SaGr, gry, Dry,<br>Rec. = 0.49m   | 74                    | 9.5       | 61.5        | 32.3      | 6.2        |    |    |
|   |        | A-2-4, GrSa, gry, Moist,<br>Rec. = 0.33m   | R                     | 13.1      | 26.9        | 53.2      | 19.9       |    |    |

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH DIVISION<br>SUBSURFACE INFORMATION |        | HOLE NO.: B-106<br>SHEET 3 OF 4<br>DATE STARTED: 10/17/00<br>DATE COMPLETED:           |                       |           |             |           |            |    |    |
|---|--------|--|-----------------------|-----------|-------------|-----------|------------|----|----|
| PROJECT NAME: CORNWALL<br>SITE NAME: BR 9<br>STATION: 0+790.00<br>GROUND EL.: 42.62                     |        | PROJECT NUMBER: BRS 0172 (6)<br>SITE NO.: VT 125<br>OFFSET: -14.00<br>G.W. DEPTH: 0.00 |                       |           |             |           |            |    |    |
| BORING CREW<br>CREW CHIEF: YOUNG<br>DRILLER: CHABOT<br>LOGGER: RUSSELL<br>ADDITIONAL CREW:              |        | BORING RIG: TRACTOR<br>BORING TYPE: WASH BORE<br>SAMPLE TYPE: SPLIT BARREL             |                       |           |             |           |            |    |    |
| DEPTH   | SYMBOL | CLASSIFICATION OF MATERIALS<br>(Description)   | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|   |        | A-4, SiSa, gry, Moist,<br>Rec. = 0.36m   | R                     | 13.3      | 1           | 50.4      | 48.6       |    |    |
|   |        | A-4, SiSa, gry, Moist,<br>Rec. = 0.60m   | R                     | 13.8      | 1           | 53.3      | 45.7       |    |    |
| 35  |        | A-2-4, Sa, gry, MTW,<br>Rec. = 0.23m   | R                     | 21.9      | 0.2         | 81.5      | 18.3       |    |    |
|   |        | No Rec.  | R                     |           |             |           |            |    |    |
| 40  |        | Visual Classification:<br>A-4, Si, brn, Moist,<br>Insufficient sample for<br>testing.  | R                     |           |             |           |            |    |    |

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION<br>MATERIALS & RESEARCH DIVISION<br>SUBSURFACE INFORMATION |        | HOLE NO.: B-106<br>SHEET 4 OF 4<br>DATE STARTED: 10/17/00<br>DATE COMPLETED:           |                       |           |             |           |            |    |    |
|---|--------|--|-----------------------|-----------|-------------|-----------|------------|----|----|
| PROJECT NAME: CORNWALL<br>SITE NAME: BR 9<br>STATION: 0+790.00<br>GROUND EL.: 42.62                     |        | PROJECT NUMBER: BRS 0172 (6)<br>SITE NO.: VT 125<br>OFFSET: -14.00<br>G.W. DEPTH: 0.00 |                       |           |             |           |            |    |    |
| BORING CREW<br>CREW CHIEF: YOUNG<br>DRILLER: CHABOT<br>LOGGER: RUSSELL<br>ADDITIONAL CREW:              |        | BORING RIG: TRACTOR<br>BORING TYPE: WASH BORE<br>SAMPLE TYPE: SPLIT BARREL             |                       |           |             |           |            |    |    |
| DEPTH   | SYMBOL | CLASSIFICATION OF MATERIALS<br>(Description)   | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|   |        | Visual Classification:<br>Broken Rock, Insufficient<br>sample for testing.             | R                     |           |             |           |            |    |    |
|   |        | Hole stopped @ 45.60m  |                       |           |             |           |            |    |    |

DRILLER'S NOTES:

- Monitoring well installed.  
0.21m of well casing extends above ground elevation.
- Water table observed at ground surface on 03/15/01.

**STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
MATERIALS & RESEARCH DIVISION  
SUBSURFACE INFORMATION**









HOLE NO.: B-107  
SHEET 1 OF 1  
DATE STARTED: 10/5/00  
DATE COMPLETED: 10/20/00

PROJECT NAME: CORNWALL  
SITE NAME: BR 9  
STATION: 0+900.00  
GROUND EL.: 52.45

PROJECT NUMBER: BRS 0172 (6)  
SITE NO.: VT 125  
OFFSET: 20.00  
G.W. DEPTH: 3.32 below surface 11/16/00

BORING CREW  
CREW CHIEF: TALLMAN  
DRILLER: TALLMAN  
LOGGER: RUSSELL  
ADDITIONAL CREW:

BORING RIG: TRUCK  
BORING TYPE: WASHBORE/HOLLOW STEM AUGER  
SAMPLE TYPE: SPLIT BARREL

| DEPTH | SYMBOL  | CLASSIFICATION OF MATERIALS<br>(Description)  | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|-------|---|---|-----------------------|-----------|-------------|-----------|------------|----|----|
|       |   | Advanced casing to 3.0m   |                       |           |             |           |            |    |    |
|       |  | A-7-6, Shelby Tube, 3.0m-3.6m,<br>Rec. = 0.60m,<br>Trace of Organics (2.4%)   |                       | 50.2      |             | 0.2       | 99.8       | 76 | 47 |
| 5     |  | 77mm x 155mm<br>4.0m: VS: 56.5 KPa/remold 0 KPa<br>51mm x 103mm<br>4.5m: VS: 72 KPa/remold 37 KPa<br>A-7-5, Shelby Tube, 5.0m-5.6m,<br>Rec. = 0.58m |                       | 45        |             | 0.2       | 99.8       | 84 | 54 |
|       |  | 51mm x 103mm<br>6.5m: VS: 72 KPa/remold 33.5 KPa<br>A-7-5, Shelby Tube, 7.0m-7.6m,<br>Rec. = 0.59m  |                       | 42.7      |             | 0.4       | 99.6       | 76 | 45 |
|       |  | 51mm x 103mm<br>8.5m: VS: 105.5 KPa/remold 35.5 KPa   |                       |           |             |           |            |    |    |
|       |  | No sample, Boulder  |                       |           |             |           |            |    |    |
| 10    | SHELBY<br>TUBE  | Shelby Tube, 10.0m-10.5m,<br>Rec. = 0.20m   |                       |           |             |           |            |    |    |
|       |  | 51mm x 103mm<br>11.5m: VS: 151 KPa/remold 43 KPa<br>A-6, SiCl, gry, MTW,<br>Rec. = 0.60m  | 9                     | 30        |             | 3         | 97         | 37 | 18 |
|       |  | A-4, Si, gry, MTW,<br>Rec. = 0.60m  | 11                    | 24.2      |             | 1         | 99         | 25 | 4  |
|       |  | 51mm x 103mm<br>14.3m: VS: 33.5 KPa/remold 8.5 KPa  |                       |           |             |           |            |    |    |
|       |   | Hole stopped @ 14.8m  |                       |           |             |           |            |    |    |

**DRILLER'S NOTES:**

- Installed monitoring well at 14.8m, casing extends 0.88m above the ground elevation.
- Ground water depth at 6.70m below ground surface on 10/20/00.
- Lost last 20' of hollow auger, at 20' below surface.
- 77mm x 155mm vane broke off at 4.6m, pulled casing and offset new hole 1.0m.
- At 6.0m: Pulled 112mm casing and switched to hollow stem auger.
- At 12.0m: Sample possesses a sandy varved layer at 12.2m, 6mm thick at an angle of 20 degrees.
- Ground water depth at 3.75m below ground surface on 03/15/01.

**STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
MATERIALS & RESEARCH DIVISION  
SUBSURFACE INFORMATION**

HOLE NO.: B-108  
SHEET 1 OF 1  
DATE STARTED: 10/25/00  
DATE COMPLETED: 10/25/00

PROJECT NAME: CORNWALL  
SITE NAME: BR 9  
STATION: 0+925.00  
GROUND EL.: 47.39

PROJECT NUMBER: BRS 0172 (6)  
SITE NO.: VT 125  
OFFSET: 7.00  
G.W. DEPTH:

BORING CREW  
CREW CHIEF: TALLMAN  
DRILLER: TALLMAN  
LOGGER: RUSSELL  
ADDITIONAL CREW:

BORING RIG: TRUCK  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL

| DEPTH                | SYMBOL | CLASSIFICATION OF MATERIALS<br><i>(Description)</i>                | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|----------------------|--------|--|-----------------------|-----------|-------------|-----------|------------|----|----|
|                      |        | Visual Classification:<br>A-7-6, Cl, brn-gry, MTW,<br>Rec. = 0.43m | 11                    | 35.6      |             |           |            |    |    |
|                      |        | A-7-6, Cl, Lt/gry, MTW,<br>Rec. = 0.57m                            | 11                    | 41.3      | 2.2         | 2.2       | 95.6       | 74 | 44 |
|                      |        | Visual Classification:<br>A-7-6, Cl, Lt/gry, MTW,<br>Rec. = 0.59m  | 7                     | 49.8      |             |           |            |    |    |
|                      |        | A-7-6, Cl, Lt/gry, MTW,<br>Rec. = 0.60m                            | 7                     | 49.8      |             | 1         | 99         | 80 | 50 |
| 5                    |        | Visual Classification:<br>A-7-6, Cl, Lt/gry, MTW,<br>Rec. = 0.60m  | 6                     | 45.6      |             |           |            |    |    |
| Hole stopped @ 5.20m |        |  |                       |           |             |           |            |    |    |
| 10                   |        |  |                       |           |             |           |            |    |    |

**DRILLER'S NOTES:**

1. No water encountered.

**STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
MATERIALS & RESEARCH DIVISION  
SUBSURFACE INFORMATION**

HOLE NO. : B-109  
SHEET 1 OF 1  
DATE STARTED: 10/25/00  
DATE COMPLETED: 10/26/00

PROJECT NAME: CORNWALL  
SITE NAME: BR 9  
STATION: 0+925.00  
GROUND EL.: 46.25

PROJECT NUMBER: BRS 0172 (6)  
SITE NO. : VT 125  
OFFSET: -8.00  
G.W. DEPTH:

BORING CREW  
CREW CHIEF: TALLMAN  
DRILLER: TALLMAN  
LOGGER: RUSSELL  
ADDITIONAL CREW:

BORING RIG: TRUCK  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL

| DEPTH                | SYMBOL | CLASSIFICATION OF MATERIALS<br><i>(Description)</i>                | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|----------------------|--------|--|-----------------------|-----------|-------------|-----------|------------|----|----|
|                      |        |  |                       |           |             |           |            |    |    |
|                      |        | A-7-6, Cl, brn-gry, MTW,<br>Rec. = 0.33m                           | 21                    | 29        |             | 7.8       | 99.2       | 55 | 28 |
|                      |        | Visual Classification:<br>A-7-6, Cl, brn-gry, MTW,<br>Rec. = 0.47m | 21                    | 34.8      |             |           |            |    |    |
|                      |        | A-7-6, Cl, brn-gry, MTW,<br>Rec. = 0.58m                           | 8                     | 40        |             | 0.8       | 99.2       | 75 | 45 |
|                      |        | Visual Classification:<br>A-7-6, Cl, brn-gry, MTW,<br>Rec. = 0.60m | 8                     | 45.5      |             |           |            |    |    |
| 5                    |        | A-7-6, Cl, brn-gry, MTW,<br>Rec. = 0.57m                           | 8                     | 48.8      |             | 0.8       | 99.2       | 75 | 46 |
| Hole stopped @ 5.20m |        |  |                       |           |             |           |            |    |    |
| 10                   |        |  |                       |           |             |           |            |    |    |

DRILLER'S NOTES:

1. No water encountered.

**STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
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SUBSURFACE INFORMATION**

HOLE NO.: B-110  
SHEET 1 OF 1  
DATE STARTED: 1/2/01  
DATE COMPLETED: 1/10/01

PROJECT NAME: CORNWALL  
SITE NAME: BR 9  
STATION: I+000.00  
GROUND EL.: 53.79

PROJECT NUMBER: BRS 0172 (6)  
SITE NO.: VT 125  
OFFSET: 10.00  
G.W. DEPTH: 3.5

BORING CREW  
CREW CHIEF: YOUNG  
DRILLER: CHABOT  
LOGGER: RUSSELL  
ADDITIONAL CREW:

BORING RIG: TRACTOR  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL/SHELBY TUBE

| DEPTH | SYMBOL | CLASSIFICATION OF MATERIALS<br>(Description)                                       | BLOWS<br>PER<br>0.3 m | M.C.<br>%             | GRAVEL<br>% | SAND<br>%  | FINES<br>%   | LL | PI |
|-------|--------|--|-----------------------|-----------------------|-------------|------------|--------------|----|----|
|       |        |  |                       |                       |             |            |              |    |    |
|       |        | Shelby Tube, A-7-6, Cl, brn,<br>MTW, Rec. = 0.50m                                  |                       | 36                    |             | 0.6        | 99.4         | 68 | 40 |
|       |        | VANE SHEAR:<br>76.5 KPa/remold 15 KPa  |                       |                       |             |            |              |    |    |
| ▽     |        | SHELBY TUBE:<br>Rec. = 0.60m   |                       |                       |             |            |              |    |    |
|       |        | VANE SHEAR:<br>165 KPa/remold 44 KPa   |                       |                       |             |            |              |    |    |
| 5     |        | Shelby Tube, A-7-6, Cl, gry,<br>MTW, Rec. = 0.60m                                  |                       | 49.1                  |             | 0.2        | 99.8         | 66 | 38 |
|       |        | VANE SHEAR:<br>100.5 KPa/remold 14.5 KPa   |                       |                       |             |            |              |    |    |
|       |        | SHELBY TUBE:<br>Rec. = 0.58m   |                       |                       |             |            |              |    |    |
|       |        | VANE SHEAR:<br>100.5 KPa/remold 52 KPa   |                       |                       |             |            |              |    |    |
|       |        | SHELBY TUBE:<br>Rec. = 0.60m   |                       |                       |             |            |              |    |    |
| 10    |        | VANE SHEAR:<br>80 KPa/remold 27 KPa  |                       |                       |             |            |              |    |    |
|       |        | A-4, Si, gry, MTW, Rec. = 0.30m  |                       | 27.8                  |             | 0.4        | 99.6         | 22 | 3  |
|       |        | 11.40m-11.58m, Boulder   |                       |                       |             |            |              |    |    |
|       |        | A-4, GrSaSi, gry, MTW, Rec.<br>= 0.10m, Broken Rock was<br>within sample, PP= 0.25 | R                     | 22.6<br>11.4          | 24.7<br>6.5 | 28<br>58.1 | 47.3<br>35.4 |    |    |
|       |        | A-2-4, SiSa, gry, Moist,<br>Rec. = 0.13m, PP=1.25                                  | R                     | 10.7                  | 13.8        | 44.4       | 41.8         |    |    |
|       |        | A-4, SiSa, gry, Moist,<br>Rec. = 0.15m   |                       | Hole stopped @ 13.30m |             |            |              |    |    |

**DRILLER'S NOTES:**

1. Material between 11.0m-11.4m was sampled from damaged shelby tube.
2. Installed Monitoring Well at 13.70m, casing extends 0.76m above ground.
3. Top of well pipe is @ 0.80m above ground surface.
4. 51mm x 103mm vanes were used during vane shear tests.
5. Ground water was observed at 2.71m below the ground surface.

**STATE OF VERMONT  
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SUBSURFACE INFORMATION**

HOLE NO.: B-111  
SHEET 1 OF 1  
DATE STARTED: 1/7/01  
DATE COMPLETED: 1/9/01

PROJECT NAME: CORNWALL  
SITE NAME: BR 9  
STATION: I+040.00  
GROUND EL.: 59.01

PROJECT NUMBER: BRS 0172 (6)  
SITE NO.: VT 125  
OFFSET: 27.00  
G.W. DEPTH: Not encountered

BORING CREW  
CREW CHIEF: YOUNG  
DRILLER: CHABOT  
LOGGER: RUSSELL  
ADDITIONAL CREW:

BORING RIG: TRACTOR  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL/SHELBY TUBE

| DEPTH | SYMBOL | CLASSIFICATION OF MATERIALS<br>(Description)                          | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|-------|--------|---|-----------------------|-----------|-------------|-----------|------------|----|----|
|       |        |   |                       |           |             |           |            |    |    |
|       |        | A-7-6, Cl, brn, MTW, Sampled from damaged shelby tube.                |                       | 38.9      |             | 0.8       | 99.2       | 52 | 26 |
|       |        | SHELBY TUBE: Rec. = 0.53m   |                       |           |             |           |            |    |    |
|       |        | VANE SHEAR:<br>154 KPa/remold 17 KPa                                  |                       |           |             |           |            |    |    |
|       |        | SHELBY TUBE: Rec. = 0.57m   |                       |           |             |           |            |    |    |
| 5     |        | VANE SHEAR:<br>190 KPa/remold 54 KPa<br>Trace of Lt/gry clay on vane. |                       |           |             |           |            |    |    |
|       |        | SHELBY TUBE: Rec. = 0.43m   |                       |           |             |           |            |    |    |
|       |        | VANE SHEAR:<br>131.5 KPa/remold 19 KPa<br>Trace of brn clay on vane.  |                       |           |             |           |            |    |    |
|       |        | SHELBY TUBE: Rec. = 0.31m   |                       |           |             |           |            |    |    |
|       |        | BXDC, 8.36m-8.62m   |                       |           |             |           |            |    |    |
|       |        | BXDC, 9.06m-9.25m, No sample  |                       | R         |             |           |            |    |    |
| 10    |        | Visual Classification:<br>Broken Rock & Silt, Rec. = 0.07m            | 93                    |           |             |           |            |    |    |
|       |        | Hole stopped @ 10.60m   |                       |           |             |           |            |    |    |

**STATE OF VERMONT  
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







HOLE NO.: B-112  
SHEET 1 OF 1  
DATE STARTED: 1/10/01  
DATE COMPLETED: 1/17/01

PROJECT NAME: CORNWALL  
SITE NAME: BR 9  
STATION: I+040.00  
GROUND EL.: 58.07

PROJECT NUMBER: BRS 0172 (6)  
SITE NO.: VT 125  
OFFSET: 10.00  
G.W. DEPTH: 7.75

BORING CREW  
CREW CHIEF: YOUNG  
DRILLER: CHABOT  
LOGGER: RUSSELL  
ADDITIONAL CREW:

BORING RIG: TRACTOR  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL/SHELBY TUBE

| DEPTH | SYMBOL  | CLASSIFICATION OF MATERIALS<br>(Description)            | BLOWS<br>PER<br>0.3 m | M.C.<br>%             | GRAVEL<br>% | SAND<br>%  | FINES<br>%   | LL | PI |
|-------|---|---|-----------------------|-----------------------|-------------|------------|--------------|----|----|
|       |    | SHELBY TUBE: Rec. = 0.45m<br>A-7-5, Cl, brn, MTW        |                       | 43.2                  | 1.5         | 2          | 96.5         | 74 | 44 |
|       |   | VANE SHEAR:<br>153 KPa/remold 38 KPa                    |                       |                       |             |            |              |    |    |
|       |  | SHELBY TUBE: Rec. = 0.55m<br>A-7-6, Cl, brn, Wet        |                       | 56.4                  |             | 0.6        | 99.4         | 75 | 46 |
|       |   | VANE SHEAR:<br>124.5 KPa/remold 40.5 KPa                |                       |                       |             |            |              |    |    |
| 5     |   | SHELBY TUBE: Rec. = 0.60m                               |                       |                       |             |            |              |    |    |
|       |   | VANE SHEAR:<br>176 KPa/remold 34 KPa                    |                       |                       |             |            |              |    |    |
|       |  | SHELBY TUBE: Rec. = 0.60m<br>A-7-6, Cl, brn, MTW        |                       | 44.6                  |             | 0.8        | 99.2         | 74 | 44 |
|       |  | A-4, Si, brn, MTW,<br>Rec. = 0.45m, PP= 1.80            | 26                    | 24.6                  | 0.3         | 1          | 98.7         |    |    |
|       |  | SHELBY TUBE: Rec. = 0.30m<br>A-7-6, SiCl, brn, MTW      |                       | 32.7                  |             | 0.6        | 99.4         | 41 | 19 |
| 10    |  | A-2-4, SiSaGr, Lt/gry, Moist,<br>Rec. = 0.12m, PP= 2.00 | 92                    | 10.9                  | 36.6        | 33.7       | 29.7         |    |    |
|       |  | A-4, SaSi, gry, Moist,<br>Rec. = 0.38m, PP= 1.60        | 39                    | 14                    | 1.8         | 45.6       | 52.6         |    |    |
|       |  | A-4, SaSi, gry, Moist,<br>Rec. = 0.35m, PP= 1.50        | R                     | 18.9                  | 0.1         | 33.2       | 66.7         |    |    |
|       |  | A-4, SiSa, gry, Moist, Rec. = 0.14m                     | R                     | 16.7<br>14            | 0.7<br>0.1  | 50.6<br>28 | 48.7<br>71.9 |    |    |
|       |   | A-4, SaSi, gry, Moist,<br>Rec. = 0.13m                  |                       | Hole stopped @ 13.30m |             |            |              |    |    |

**DRILLER'S NOTES:**

1. Installed Monitoring Well at 12.91m, casing extends 0.76m above the ground surface.
2. 51mm x 103mm vanes used during field vane shear tests.
3. Ground water depth was observed at 3.17m below ground surface on 03/15/01.

**STATE OF VERMONT  
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SUBSURFACE INFORMATION**

HOLE NO.: B-113  
SHEET 1 OF 1  
DATE STARTED: 1/25/01  
DATE COMPLETED: 1/26/01

PROJECT NAME: CORNWALL  
SITE NAME: BR 9  
STATION: I+118.00  
GROUND EL.: 46.30

PROJECT NUMBER: BRS 0172 (6)  
SITE NO.: VT 125  
OFFSET: 18.00  
G.W. DEPTH:

BORING CREW  
CREW CHIEF: YOUNG  
DRILLER: CHABOT  
LOGGER: RUSSELL  
ADDITIONAL CREW:

BORING RIG: TRACTOR  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL

| DEPTH                 | SYMBOL | CLASSIFICATION OF MATERIALS<br>(Description)          | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|-----------------------|--------|---|-----------------------|-----------|-------------|-----------|------------|----|----|
|                       |        | No sample, Boulders                                   |                       |           |             |           |            |    |    |
|                       |        | No sample, Boulders                                   |                       |           |             |           |            |    |    |
|                       |        | BXDC, 2.35m-2.95m, Boulder                            |                       |           |             |           |            |    |    |
|                       |        | A-2-4, Sa, gry, Moist,<br>Rec. = 0.50m, PP= 0.35      | 69                    | 14.8      | 18.2        | 63.5      | 18.3       |    |    |
| 5                     |        | A-2-4, GrSa, gry, Moist,<br>Rec. = 0.23m, PP= 0.35    | R                     | 18.3      | 24.5        | 57.7      | 17.8       |    |    |
|                       |        | 4.80m-6.15m,<br>No sample, Boulders                   |                       |           |             |           |            |    |    |
|                       |        | No sample, Boulder                                    |                       |           |             |           |            |    |    |
|                       |        | BXDC, Cleaned out casing                              |                       |           |             |           |            |    |    |
|                       |        | A-2-4, SiSa HP, gry, Moist,<br>Rec. = 0.18m, PP= 2.00 | R                     | 14.5      | 8.3         | 70.5      | 21.2       |    |    |
| 10                    |        | A-4, SaSi HP, gry, Moist,<br>Rec. = 0.33m             | R                     | 13.1      | 9.5         | 25.4      | 65.1       |    |    |
|                       |        | A-2-4, Sa, gry, Moist,<br>Rec. = 0.36m                | R                     | 18.2      | 3.7         | 78.9      | 17.4       |    |    |
| Hole stopped @ 10.95m |        |   |                       |           |             |           |            |    |    |

**STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
MATERIALS & RESEARCH DIVISION  
SUBSURFACE INFORMATION**

HOLE NO.: B-114  
SHEET 1 OF 1  
DATE STARTED: 1/22/01  
DATE COMPLETED: 1/25/01

PROJECT NAME: CORNWALL  
SITE NAME: BR 9  
STATION: I+125.00  
GROUND EL.: 45.10

PROJECT NUMBER: BRS 0172 (6)  
SITE NO.: VT 125  
OFFSET: 0.00  
G.W. DEPTH: 0.00 Top of ground

BORING CREW  
CREW CHIEF: YOUNG  
DRILLER: CHABOT  
LOGGER: RUSSELL  
ADDITIONAL CREW:

BORING RIG: TRACTOR  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL

| DEPTH<br>▽            | SYMBOL | CLASSIFICATION OF MATERIALS<br>(Description)   | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|-----------------------|--------|--|-----------------------|-----------|-------------|-----------|------------|----|----|
|                       |        |  | 43                    | 26.7      | 8.7         | 47.1      | 44.2       |    |    |
|                       |        | A-4, SiSa, Lt/gry, MTW,<br>Rec. = 0.20m, PP= 0.25<br>Visual Classification:<br>Broken Rock, Rec. = 0.15m |                       |           |             |           |            |    |    |
|                       |        | 1.80m-2.40m, No sample, Boulder  |                       |           |             |           |            |    |    |
|                       |        | BXMD, 2.40m-3.60m,<br>Boulder with a few seams.  |                       |           |             |           |            |    |    |
|                       |        | BXDC, 3.70m-4.30m,<br>No sample, Boulders  |                       |           |             |           |            |    |    |
| 5                     |        | BXMD, 4.60m-5.50m,<br>Boulders   |                       |           |             |           |            |    |    |
|                       |        | A-4, GrSaSi HP, gry, Moist,<br>Rec. = 0.30m  |                       | 11.1      | 29.8        | 32.1      | 38.1       |    |    |
|                       |        | A-6, SiCl HP, gry, Moist,<br>Rec. = 0.28m  | R                     | 10.5      | 13.7        | 32.4      | 53.9       | 24 | 11 |
|                       |        | A-6, SiCl HP, gry, Moist,<br>Rec. = 0.17m  | R                     | 11.9      | 17.2        | 28.1      | 54.7       | 24 | 11 |
|                       |        | A-6, SiCl HP, gry, Moist,<br>Rec. = 0.11m  | R                     | 13.6      | 19.8        | 28.2      | 52         | 24 | 11 |
|                       |        | A-4, SiSa, gry, Moist,<br>Rec. = 0.23m   |                       | 16.5      | 0.9         | 51.1      | 48         |    |    |
|                       |        | A-6, SaCl HP, gry, Moist,<br>Rec. = 0.45m, PP= 2.00  | 76                    | 18.1      | 1.8         | 54.1      | 44.1       | 26 | 13 |
| 10                    |        | A-4, Si HP, gry, MTW,<br>Rec. = 0.21m  | R                     | 21.8      | 5.1         | 16.7      | 78.2       |    |    |
|                       |        | A-6, SiCl HP, gry, Moist,<br>Rec. = 0.23m  | R                     | 15.9      | 14.8        | 29.6      | 55.6       | 31 | 16 |
|                       |        | A-4, SaSi, gry, MTW,<br>Rec. = 0.37m, PP= 2.65   | R                     | 21.3      | 4.1         | 38.2      | 57.7       |    |    |
|                       |        | A-4, Si HP, gry, MTW,<br>Rec. = 0.29m, PP= 1.10  | R                     | 23        | 1.4         | 19        | 79.6       |    |    |
|                       |        | A-6, SiCl, gry, Moist,<br>Rec. = 0.30m   | R                     | 18.8      | 3.8         | 45.2      | 51         | 31 | 16 |
| 15                    |        | No Rec., 15.0m-15.13m  | R                     |           |             |           |            |    |    |
| Hole stopped @ 15.13m |        |  |                       |           |             |           |            |    |    |

**DRILLER'S NOTES:**

1. Pulled casing @ 3.60m, installed diamond bit.
2. Lost part of measuring device in hole at 5.80m and could not retrieve it.
3. Pulled casing and moved boring back 0.65m and advanced 90.0mm casing.

**STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
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SUBSURFACE INFORMATION**








HOLE NO.: B-115  
SHEET 1 OF 1  
DATE STARTED: 1/30/01  
DATE COMPLETED: 1/31/01

PROJECT NAME: CORNWALL  
SITE NAME: BR 9  
STATION: I+125.00  
GROUND EL.: 45.10

PROJECT NUMBER: BRS 0172 (6)  
SITE NO.: VT 125  
OFFSET: -19.00  
G.W. DEPTH: 0.00 Top of ground

BORING CREW  
CREW CHIEF: YOUNG  
DRILLER: CHABOT  
LOGGER: SOMERS  
ADDITIONAL CREW:

BORING RIG: TRACTOR  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL

| DEPTH<br>▽            | SYMBOL  | CLASSIFICATION OF MATERIALS<br>(Description)                                    | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|-----------------------|---|---|-----------------------|-----------|-------------|-----------|------------|----|----|
|                       |    | No Rec.   | 10                    |           |             |           |            |    |    |
|                       |  | A-4, SiSa Trace of Organics,<br>brn, MTW, Rec. = 0.36m,<br>Tested 2.20% Organic | 5                     | 23.1      | 2.9         | 59.7      | 37.4       |    |    |
| 5                     |  | No Rec.   | 6                     |           |             |           |            |    |    |
|                       |  | A-4, SaSi HP, gry, Moist,<br>Rec. = 0.36m                                       | 38                    | 10.4      | 15.1        | 38        | 46.9       |    |    |
|                       |  | A-2-4, SiSa, gry, MTW,<br>Rec. = 0.28m  | 65                    | 22.5      | 3.3         | 69.5      | 27.2       |    |    |
|                       |  | A-4, SaSi, gry, Moist,<br>Rec. = 0.22m  | R                     | 20        | 1           | 21.7      | 77.3       | 20 | 3  |
| 10                    |  | A-1-b, GrSa, gry, Moist,<br>Rec. = 0.60m  | 91                    | 13.1      | 20.9        | 72.1      | 7          |    |    |
| Hole stopped @ 11.10m |   |   |                       |           |             |           |            |    |    |

**STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
MATERIALS & RESEARCH DIVISION  
SUBSURFACE INFORMATION**









HOLE NO.: B-116  
SHEET 1 OF 1  
DATE STARTED: 1/26/01  
DATE COMPLETED: 1/30/01

PROJECT NAME: CORNWALL  
SITE NAME: BR 9  
STATION: I+140.00  
GROUND EL.: 49.10

PROJECT NUMBER: BRS 0172 (6)  
SITE NO.: VT 125  
OFFSET: 18.00  
G.W. DEPTH: 0.3

BORING CREW  
CREW CHIEF: YOUNG  
DRILLER: CHABOT  
LOGGER: RUSSELL  
ADDITIONAL CREW:

BORING RIG: TRACTOR  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL

| DEPTH                 | SYMBOL  | CLASSIFICATION OF MATERIALS<br><i>(Description)</i>  | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|-----------------------|---|--|-----------------------|-----------|-------------|-----------|------------|----|----|
| ▽                     |   |  |                       |           |             |           |            |    |    |
|                       |    | A-2-4, GrSiSa, brn, Moist,<br>Rec. = 0.45m, PP= 1.75 | 22                    | 15.4      | 23.1        | 45.3      | 31.6       |    |    |
|                       |   | BXDC, 2.30m-4.50m, Boulders                          |                       |           |             |           |            |    |    |
| 5                     |  | A-4, SaSi HP, gry, Dry,<br>Rec. = 0.36m              | R                     | 8.5       | 9.2         | 28.9      | 61.9       |    |    |
|                       |  | A-4, SaSi HP, gry, Dry,<br>Rec. = 0.23m              | R                     | 8.1       | 12.6        | 32        | 55.4       |    |    |
|                       |  | A-4, SaSi, gry, Moist,<br>Rec. = 0.29m               | 99                    | 19        | 7.4         | 42.9      | 49.7       |    |    |
|                       |  | A-1-b, GrSa, gry-brn, Moist,<br>Rec. = 0.16m         |                       | 14.8      | 29.3        | 62.9      | 7.8        |    |    |
|                       |  | A-1-b, Sa, brn, Moist,<br>Rec. = 0.19m               | R                     | 12.4      | 14          | 69.7      | 16.3       |    |    |
| 10                    |  | A-7-6, CI HP, gry, MTW<br>Rec. = 0.60m               | 56                    | 21.5      | 0.1         | 3.2       | 96.7       | 52 | 29 |
| Hole stopped @ 11.10m |   |  |                       |           |             |           |            |    |    |

**STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
MATERIALS & RESEARCH DIVISION  
SUBSURFACE INFORMATION**






HOLE NO.: B-117  
SHEET 1 OF 1  
DATE STARTED: 1/31/01  
DATE COMPLETED: 2/6/01

PROJECT NAME: CORNWALL  
SITE NAME: BR 9  
STATION: I+210.00  
GROUND EL.: 50.30

PROJECT NUMBER: BRS 0172 (6)  
SITE NO.: VT 125  
OFFSET: -15.00  
G.W. DEPTH: 0.81

BORING CREW  
CREW CHIEF: YOUNG  
DRILLER: CHABOT  
LOGGER: SOMERS  
ADDITIONAL CREW:

BORING RIG: TRACTOR  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL/SHELBY TUBE

| DEPTH | SYMBOL  | CLASSIFICATION OF MATERIALS<br>(Description)               | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|-------|---|--|-----------------------|-----------|-------------|-----------|------------|----|----|
| ▽     |   |  |                       |           |             |           |            |    |    |
|       |    | A-7-6, Cl, gry, MTW, Sampled from disturbed Shelby Tube    |                       | 47.9      |             | 0.9       | 99.1       | 68 | 40 |
|       |   | SHELBY TUBE:   |                       |           |             |           |            |    |    |
|       |   | VANE SHEAR:<br>72 KPa/remold 30 KPa                        |                       |           |             |           |            |    |    |
|       |   | SHELBY TUBE:   |                       |           |             |           |            |    |    |
| 5     |   | VANE SHEAR:<br>45.5 KPa/remold 10.5 KPa                    |                       |           |             |           |            |    |    |
|       |   | SHELBY TUBE:   |                       |           |             |           |            |    |    |
|       |   | VANE SHEAR:<br>30 KPa/remold 18 KPa                        |                       |           |             |           |            |    |    |
|       |   | SHELBY TUBE:   |                       |           |             |           |            |    |    |
|       |  | No Rec.<br>Broken basket in sampler                        | 21                    |           |             |           |            |    |    |
| 10    |   | VANE SHEAR: 349.5 KPa/No remold,<br>Vane penetrated 0.45m. |                       |           |             |           |            |    |    |
|       |  | No Rec.<br>Broken basket in sampler                        | 73                    |           |             |           |            |    |    |
|       |  | BXDC, 12.00m-12.60m,<br>Boulders                           |                       |           |             |           |            |    |    |
|       |  | BXDC, 13.05m-13.80m,<br>Boulders                           |                       |           |             |           |            |    |    |
| 15    |   |  |                       |           |             |           |            |    |    |
|       |   |  | Hole stopped @ 15.00m |           |             |           |            |    |    |

**DRILLER'S NOTES:**

- 51mm x 103mm vane used during field vane shear tests.
- Installed monitoring well @ 12.45m, 4.57m of screened pipe, 9.15m of solid pipe. Casing extends 1.20m above ground surface.
- Ground water depth at 0.81m below ground elevation.
- Water at 0.81m on 03/15/01.

**STATE OF VERMONT  
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MATERIALS & RESEARCH DIVISION  
SUBSURFACE INFORMATION**






HOLE NO.: B-119  
SHEET 1 OF 1  
DATE STARTED: 2/7/01  
DATE COMPLETED: 2/8/01

PROJECT NAME: CORNWALL  
SITE NAME: BR 9  
STATION: I+280.00  
GROUND EL.: 54.10

PROJECT NUMBER: BRS 0172 (6)  
SITE NO.: VT 125  
OFFSET: -12.00  
G.W. DEPTH: 3.29

BORING CREW  
CREW CHIEF: HOLT  
DRILLER: CHABOT  
LOGGER: SOMERS  
ADDITIONAL CREW:

BORING RIG: LARGE SKID RIG  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL

| DEPTH                | SYMBOL  | CLASSIFICATION OF MATERIALS<br><i>(Description)</i> | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|----------------------|---|---|-----------------------|-----------|-------------|-----------|------------|----|----|
|                      |    | A-6, SiCl, brn, MTW,<br>Rec. = 0.60m                | 4                     | 25.6      | 23.8        | 27.7      | 48.5       | 39 | 18 |
|                      |    | A-7-6, Cl, brn, MTW,<br>Rec. = 0.60m                | 4                     | 33.6      | 1.5         | 8.5       | 90         | 51 | 26 |
|                      |  | A-4, SaSi, brn, Moist,<br>Rec. = 0.45m              | 86                    | 10.2      | 15.5        | 42.1      | 42.4       |    |    |
| 5                    |  | A-2-4, SiSaGr, gry, Dry,<br>Rec. = 0.55m            | 89                    | 7.6       | 37          | 36.9      | 26.1       |    |    |
|                      |  | A-4, SaSi, gry, Moist,<br>Rec. = 0.35m              | R                     | 11.2      | 18.3        | 38.7      | 43         |    |    |
| Hole stopped @ 6.35m |   |   |                       |           |             |           |            |    |    |
| 10                   |   |   |                       |           |             |           |            |    |    |

**DRILLER'S NOTES:**

1. Water level @ 3.29m on 02/08/01.

**STATE OF VERMONT  
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MATERIALS & RESEARCH DIVISION  
SUBSURFACE INFORMATION**







HOLE NO.: B-120  
SHEET 1 OF 1  
DATE STARTED: 2/9/01  
DATE COMPLETED: 2/15/01

PROJECT NAME: CORNWALL  
SITE NAME: BR 9  
STATION: NA  
GROUND EL.: NA

PROJECT NUMBER: BRS 0172 (6)  
SITE NO.: VT 125  
OFFSET: NA  
G.W. DEPTH: 3.00

BORING CREW  
CREW CHIEF: TALLMAN  
DRILLER: CHABOT  
LOGGER: RUSSELL  
ADDITIONAL CREW:

BORING RIG: LARGE SKID RIG  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL/SHELBY TUBE

| DEPTH | SYMBOL  | CLASSIFICATION OF MATERIALS<br><i>(Description)</i>      | BLOWS<br>PER<br>0.3 m | M.C.<br>% | GRAVEL<br>% | SAND<br>% | FINES<br>% | LL | PI |
|-------|---|--|-----------------------|-----------|-------------|-----------|------------|----|----|
|       |    | A-1-b, GrSa, brn, Moist,<br>Rec. = 0.14m, Possible Fill. | 5                     | 13.3      | 39.5        | 47.7      | 12.8       |    |    |
| ▽     |  | A-7-6, Cl, gry, MTW,<br>Rec. = 0.30m, PP= 2.25           | 5                     | 31.6      | 0.3         | 8.5       | 91.2       | 53 | 26 |
|       |  | A-7-5, Cl, gry, MTW,<br>SHELBY TUBE: Rec. = 0.38m        |                       | 38.6      |             | 0.8       | 99.2       | 77 | 46 |
| 5     |   | VANE SHEAR:<br>92 KPa/remold 14.5 KPa                    |                       |           |             |           |            |    |    |
|       |   | SHELBY TUBE: Rec. = 0.60m                                |                       |           |             |           |            |    |    |
|       |   | VANE SHEAR:<br>26.5 KPa/remold 5 KPa                     |                       |           |             |           |            |    |    |
|       |   | SHELBY TUBE: Rec. = 0.51m                                |                       |           |             |           |            |    |    |
|       |  | A-7-6, Cl HP, gry, Moist,<br>Rec. = 0.60m                | 34                    | 19.6      | 1.4         | 8.6       | 90         | 46 | 27 |
| 10    |  | A-6, Cl HP, gry, Moist,<br>Rec. = 0.60m                  | 43                    | 19        | 0.4         | 5.8       | 93.8       | 40 | 21 |
|       |  | A-6, SiCl HP, gry, MTW,<br>Rec. = 0.13m                  | 42                    | 25        | 1           | 5.4       | 93.6       | 39 | 19 |
|       |   | Hole stopped @ 12.60m                                    |                       |           |             |           |            |    |    |

**DRILLER'S NOTES:**

1. Water @ 3.00m below surface 02/16/01.
2. Water @ 2.85m below surface 02/26/01.
3. Water @ 3.16m below surface 03/15/01.
4. 51mm x 103mm vanes used during field vane shear tests.
5. Installed monitor well @ 9.29m, 4.85m of screen pipe and 5.51m of solid pipe, Well extends 1.04m above ground surface.

**GZA** GeoEnvironmental, Inc. Engineers and Scientists  
 Cornwall BRS 0172(6)S  
 Cornwall, Vermont  
 Boring No.: B-201(OW)  
 Page: 1 of 3  
 File No.: 22721.3  
 Check: TAD

Contractor: NH Boring  
 Foreman: Bob Doherty  
 Logged by: Jay Hodgkinson  
 Date Start/Finish: 9-18-01 / 9-21-01  
 Boring Location: Sta. 0+736.5, 4.1 mL  
 GS Elev.: 49.0+/- Datum: NAVD 88

Auger/Casing Sampler  
 Type: HW SS  
 I.D.: 102mm 35mm  
 Hammer Wt.: 136.1kg 63.5kg  
 Hammer Fall: 0.76m 0.76m  
 Rig Type: CME 45

**GROUNDWATER READINGS**

| Date    | Time | Depth | Casing    | Stab   |
|---------|------|-------|-----------|--------|
| 9/21/01 | 1530 | 1.33m | deep well | 15 min |
| 9/21/01 |      | 2.20m | shallow   | 15 min |
| 9/24/01 | 1430 | 1.25m | deep      | 3 days |
| 9/24/01 |      | 2.25m | shallow   | 3 days |

| Depth (m) | Sample Information |               |           |                |         | Sample Description & Classification  | Stratum Desc. | Remarks | Equipment Installed                  |
|-----------|--------------------|---------------|-----------|----------------|---------|--|---------------|---------|--------------------------------------|
|           | No.                | Pen./Rec. (m) | Depth (m) | Blows (/0.15m) | N Value |  |               |         |                                      |
| 1         | S-1                | 0.61/0.30     | 1.52-2.13 | 5-5<br>6-8     | 11      | Stiff, brown, Silty CLAY, mottled. (A-7-6)   |               |         |                                      |
| 2         | S-2                | 0.61/0.20     | 2.13-2.74 | 11-12<br>11-12 | 23      | Very stiff, brown, Silty CLAY, with fine SAND and Silt seams, mottled. (A-7-5)   |               |         | FILTER SAND                          |
| 3         | S-3                | 0.61/0.56     | 2.74-3.35 | 4-6<br>5-7     | 11      | Stiff, brown, Silty CLAY, with Silt seams, mottled. (A-7-6)  | SILTY CLAY    |         | 25mm SCH. 40 PVC RISERS              |
| 4         | S-4                | 0.61/0.61     | 3.35-3.96 | 14-11<br>13-13 | 24      | Very stiff, brown, Silty CLAY with Silt seams and lenses, mottled. (A-7-6)   |               |         | 3.96m                                |
| 4         | S-5                | 0.61/0.61     | 3.96-4.57 | 5-6<br>5-6     | 11      | Stiff, brown, Silty CLAY with Silt seams and lenses, mottled. (A-7-6)  |               |         | BENTONITE SEAL                       |
| 5         | S-6                | 0.61/0.61     | 4.57-5.18 | 7-7<br>5-6     | 12      | Stiff, brown, Silty CLAY with Silt seams and lenses, mottled. (A-7-6)  |               |         | 4.88m                                |
| 6         | S-7                | 0.61/0.51     | 6.10-6.71 | 2-2<br>2-3     | 4       | Soft, gray, SILT & CLAY, with 51mm (2 inch) seam of brown, SILT and fine SAND. (A-6)   | 6.10m         |         | 6.10m                                |
| 7         | S-8                | 0.61/0.61     | 6.71-7.32 | 3-3<br>2-3     | 5       | Medium stiff, gray, Clayey SILT, trace fine Sand. (A-5)  |               |         | 25mm SCH. 40 PVC 0.01 SLOTTED SCREEN |
| 8         | U-1                | 0.61/0.56     | 7.32-7.92 | push           |         | VS: 68.03 kPa, vane tip at 7.16m (23.5 feet).<br>Gray, Silty CLAY. (A-7-6)<br>Tv=24.90 kPa (520 psf)<br>Pp=47.88 kPa (1,000 psf) | CLAYEY SILT   | 1<br>2  | FILTER SAND                          |
| 9         |                    |               |           |                |         |  |               |         | 9.14m                                |

1. VS=Vane Shear Test. Split spoon sample was driven through soil disturbed by VS test.  
 2. Tv=Torvane, Pp= Pocket Penetrometer

Stratification lines represent approximate boundary between soil types, transitions may be gradual. 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 No.: B-201(OW)

**GZA** GeoEnvironmental, Inc. Engineers and Scientists  
 Cornwall BRS 0172(6)S  
 Cornwall, Vermont  
 Boring No.: B-201(OW)  
 Page: 2 of 3  
 File No.: 22721.3  
 Check: TAD

| Depth (m) | Sample Information |               |             |                |         | Sample Description & Classification                             | Stratum Desc. | Remarks | Equipment Installed     |
|-----------|--------------------|---------------|-------------|----------------|---------|---|---------------|---------|-------------------------|
|           | No.                | Pen./Rec. (m) | Depth (m)   | Blows (/0.15m) | N Value |   |               |         |                         |
| 9         | S-9                | 0.61/0.61     | 9.14-9.75   | 4-7<br>9-7     | 16      | Very stiff, gray, Clayey SILT, trace fine Sand. (A-5)           | CLAYEY SILT   |         | 25mm SCH. 40 PVC RISER  |
| 10        |                    |               |             |                |         |   |               | 3       | FILTER SAND             |
| 11        | S-10               | 0.61/0.51     | 10.67-11.28 | 5-1<br>9-4     | 10      | Loose, gray, fine SAND and Silt, trace Gravel. (A-4)            |               |         | 10.36m                  |
| 12        | S-11               | 0.61/0.43     | 12.19-12.80 | 9-7<br>7-6     | 14      | Medium dense, gray, fine SAND, some Silt, trace Gravel. (A-2-7) |               |         | 12.19m                  |
| 13        |                    |               |             |                |         |   |               |         | BENTONITE SEAL          |
| 14        | S-12               | 0.61/0.28     | 13.72-14.33 | 8-5<br>6-7     | 11      | Medium dense, gray, fine SAND, some Silt. (A-2-7)               |               |         | 13.72m                  |
| 15        | S-13               | 0.61/0.25     | 15.24-15.85 | 4-4<br>4-4     | 8       | Loose, gray, fine SAND and Silt. (A-4)                          | SILTY SAND    |         |                         |
| 16        |                    |               |             |                |         |   |               |         | DRILL CUTTINGS          |
| 17        | S-14               | 0.61/0.23     | 16.76-17.37 | 7-4<br>6-11    | 10      | Loose, gray, fine SAND and Silt. (A-4)                          |               |         |                         |
| 18        | S-15               | 0.61/0.51     | 18.29-18.90 | 5-4<br>3-1     | 7       | Loose, gray, fine SAND, some Silt. (A-2-7)                      |               |         | 25mm SCH. 40 PVC RISERS |
| 19        |                    |               |             |                |         |   |               |         |                         |

3. Drilling change at 10.36m (34 feet) below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. 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 No.: B-201(OW)

**GZA** GeoEnvironmental, Inc. Engineers and Scientists  
 Cornwall BRS 0172(6)S  
 Cornwall, Vermont  
 Boring No.: B-201(OW)  
 Page: 3 of 3  
 File No.: 22721.3  
 Check: TAD

| Depth (m) | Sample Information |               |             |                    |         | Sample Description & Classification  | Stratum Desc. | Remarks | Equipment Installed                  |
|-----------|--------------------|---------------|-------------|--------------------|---------|--|---------------|---------|--------------------------------------|
|           | No.                | Pen./Rec. (m) | Depth (m)   | Blows (/0.15m)     | N Value |  |               |         |                                      |
| 20        | S-16               | 0.61/0.15     | 19.81-20.42 | 2-2<br>2-5         | 4       | Very loose, gray, SILT and fine Sand. (A-5)                                | SILTY SAND    |         | 25mm SCH. 40 PVC RISER               |
| 21        |                    |               |             |                    |         |  |               | 4       | FILTER SAND                          |
| 22        | S-17               | 0.61/0.03     | 21.34-21.95 | 18-17<br>12-10     | 29      | Medium dense, gray, fine to coarse SAND, some Gravel, little Silt. (A-1-b) |               |         | 21.03m                               |
| 23        | S-18               | 0.61/0.15     | 22.86-23.47 | 13-12<br>20-28     | 32      | Dense, gray, fine to coarse SAND, some Silt, little Gravel. (A-2-4)        | GLACIAL TILL  |         | 23.47m                               |
| 24        |                    |               |             |                    |         |  |               |         | FILTER SAND                          |
| 25        | S-19               | 0.25/0.05     | 24.38-24.64 | 14-43<br>100/152mm | 143     | Very dense, gray, fine to coarse SAND, some Gravel, little Silt. (A-1-b)   |               |         | 24.30m                               |
| 26        | S-20               | 0.61/0.25     | 25.91-26.52 | 16-9<br>12-13      | 21      | Medium dense, gray, fine to medium SAND, some Silt, little Gravel. (A-2-4) |               |         | 25.91m                               |
| 27        |                    |               |             |                    |         |  |               |         | 25mm SCH. 40 PVC 0.01 SLOTTED SCREEN |
| 28        |                    |               |             |                    |         |  |               |         |                                      |
| 29        |                    |               |             |                    |         |  |               |         |                                      |
| 30        |                    |               |             |                    |         |  |               |         |                                      |
| 31        |                    |               |             |                    |         |  |               |         |                                      |

4. Drilling change at 21.03m (69 feet).

Stratification lines represent approximate boundary between soil types, transitions may be gradual. 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 No.: B-201(OW)

SOIL B. WELL CORNWALL2002.GPJ GZA-NH.GDT 9/16/02

SOIL B. WELL CORNWALL2002.GPJ GZA-NH.GDT 9/16/02

SOIL B. WELL CORNWALL2002.GPJ GZA-NH.GDT 9/16/02

**GZA** GeoEnvironmental, Inc. Engineers and Scientists  
 Cornwall BRS 0172(6)S Boring No.: B-202(OW)  
 Cornwall, Vermont Page: 1 of 3  
 File No.: 22721.3  
 Check: TAD

Contractor: NH Boring Auger/Casing: HW Sampler: SS  
 Foreman: Bob Doherty Type: I.D.: 102mm 35mm  
 Logged by: Jay Hodgkinson Date: 9/13/01 1730 PVC+1.73m deep well 4 hrs.  
 Date Start/Finish: 9-13-01 / 9-17-01 Hammer Wt.: 136.1kg 63.5kg  
 Boring Location: Sta. 0+800.3, 7 mL Hammer Fall: 0.76m 0.76m  
 GS Elev.: 42.5+/- Datum: NAVD 88 Rig Type: CME 45

| Depth (m) | Sample Information |               |           |                |         | Stratum Desc. | Remarks | Equipment Installed   |
|-----------|--------------------|---------------|-----------|----------------|---------|---------------|---------|---|
|           | No.                | Pen./Rec. (m) | Depth (m) | Blows (/0.15m) | N Value |               |         |   |
| 1         |                    |               |           |                |         |               | 1       | Attempted Shelby tube sample from 0.91 to 1.52m; no recovery.   |
| 2         | S-1                | 0.61/0.33     | 1.83-2.44 | push           | 0       | ORGANIC SILT  | 2       | VS: 3.7 kPa, vane tip at 1.98m (6.5 feet) Brown, ORGANIC SILT. (A-8)  |
| 3         | U-1                | 0.61/0.33     | 3.05-3.66 | push           |         |               |         | Brown, ORGANIC SILT, with wood fragments. (A-8)   |
| 4         | S-2                | 0.61/0.36     | 3.66-4.27 | push           |         |               |         | VS: 14.9 kPa, vane tip at 4.11m (13.5 feet) Brown ORGANIC SILT, with wood fragments and roots (25mm (1 inch) layer of gray, fine to medium SAND, some Silt in spoon tip). (A-8) |
| 6         | S-3                | 0.61/0.36     | 6.10-6.71 | 5-6<br>4-3     | 10      | SAND          |         | Medium dense, gray, fine SAND, some Silt, trace Gravel. (A-2-4)   |
| 8         | S-4                | 0.61/0.38     | 7.62-8.23 | 8-8<br>5-5     | 13      |               |         | Medium dense, gray, fine to medium SAND, little Silt. (A-3)   |

1. Change in wash color from brown to black with fragments of wood at 0.91m (3 feet).  
 2. VS-vane shear test; split spoon sample was driven through soil disturbed by VS test.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. 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 No.: B-202(OW)

**GZA** GeoEnvironmental, Inc. Engineers and Scientists  
 Cornwall BRS 0172(6)S Boring No.: B-202(OW)  
 Cornwall, Vermont Page: 2 of 3  
 File No.: 22721.3  
 Check: TAD

| Depth (m) | Sample Information |               |             |                |         | Stratum Desc. | Remarks | Equipment Installed  |
|-----------|--------------------|---------------|-------------|----------------|---------|---------------|---------|--|
|           | No.                | Pen./Rec. (m) | Depth (m)   | Blows (/0.15m) | N Value |               |         |  |
| 9         | S-5                | 0.61/0.51     | 9.14-9.75   | 9-5<br>7-15    | 12      |               | 3       | Medium dense, gray, fine to medium SAND, trace Gravel, trace Silt. (A-3)   |
| 11        | S-6                | 0.61/0.20     | 10.67-11.28 | 4-4<br>4-6     | 8       |               | 4       | Loose, gray, fine to medium SAND, trace Gravel, trace Silt. (A-3)          |
| 12        | S-7                | 0.61/0.08     | 12.19-12.80 | 5-5<br>4-4     | 9       |               |         | Loose, gray, fine to medium SAND, trace Gravel, trace Silt. (A-3)          |
| 14        | S-8                | 0.61/0.38     | 13.72-14.33 | 6-6<br>4-9     | 10      | SAND          |         | Loose, gray, fine SAND and Silt, trace Gravel. (A-4)                       |
| 15        | S-9                | 0.61/0.25     | 15.24-15.85 | 3-5<br>5-7     | 10      |               |         | Loose, gray, fine SAND, some Silt, trace Gravel. (A-4)                     |
| 17        | S-10               | 0.61/0.28     | 16.76-17.37 | 8-13<br>13-11  | 26      |               |         | Medium dense, gray, fine to coarse SAND, some Gravel, little Silt. (A-1-b) |
| 18        | S-11               | 0.61/0.13     | 18.29-18.90 | 10-18<br>26-30 | 44      |               | 5       | Dense, gray, fine to coarse SAND, some Gravel, little Silt. (A-1-b)        |

3. Approximately 3.05m (10 feet) of "blow-in sand" when roller bit was inserted into borehole.  
 4. Approximately 0.3m (1 foot) of "blow-in sand" in spoon.  
 5. Water started to flow out of the casing between 16.76m (55 feet) and 18.29m (60 feet). Blow counts may be artificially high due to approximately 0.46m (18 inches) of "blow-in sand" in casing.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. 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 No.: B-202(OW)

**GZA** GeoEnvironmental, Inc. Engineers and Scientists  
 Cornwall BRS 0172(6)S Boring No.: B-202(OW)  
 Cornwall, Vermont Page: 3 of 3  
 File No.: 22721.3  
 Check: TAD

| Depth (m) | Sample Information |               |             |                |         | Stratum Desc. | Remarks | Equipment Installed  |
|-----------|--------------------|---------------|-------------|----------------|---------|---------------|---------|--|
|           | No.                | Pen./Rec. (m) | Depth (m)   | Blows (/0.15m) | N Value |               |         |  |
| 20        | S-12               | 0.61/0.05     | 19.81-20.42 | 8-7<br>5-13    | 12      |               |         | Medium dense, gray, fine to coarse SAND, some Silt, little Gravel. (A-2-4) |
| 21        | S-13               | 0.61/0.05     | 21.34-21.95 | 6-4<br>13-19   | 17      | SAND          | 6       | Medium dense, gray, fine to coarse SAND, some Gravel, little Silt. (A-1-b) |
| 23        | S-14               | 0.61/0.15     | 22.86-23.47 | 4-4<br>5-7     | 9       |               |         | Loose, gray, fine to coarse SAND, some Gravel, little Silt. (A-1-b)        |
| 24        | S-15               | 0.61/0.03     | 24.38-24.99 | 13-5<br>9-12   | 14      |               |         | Medium dense, gray, fine to coarse SAND, some Gravel, some Silt. (A-2-4)   |
| 26        | S-16               | 0.61/0.10     | 25.91-26.52 | 32-24<br>19-21 | 43      | GLACIAL TILL  | 8       | Dense, gray, fine to coarse SAND, some Gravel, some Silt. (A-2-4)          |
| 28        | S-17               | 0.61/0.25     | 27.43-28.04 | 24-38<br>37-32 | 75      |               | 9       | Very dense, gray, fine to coarse SAND, some Silt, little Gravel. (A-2-4)   |
| 28.04     |                    |               |             |                |         |               |         | Bottom of boring at 28.04m (92 feet) below ground surface. No refusal.     |

6. Approximately 0.20m (8 inches) of "blow-in-sand".  
 7. Change in drilling at 23.77m (78 feet).  
 8. 9/17/01: Wash down to 25.91m (85 feet); sampled 25.91m to 26.52m (85 to 87 feet).  
 9/18/01: Measured 1.54m (60.5 inches) above ground surface of hydraulic head in casing.  
 9. Water flowing out of hole at 25 gallon per minute.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. 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 No.: B-202(OW)

SOIL BELL WELL CORNWALL2002.GPJ GZA NH LGOT 9/16/02

SOIL BELL WELL CORNWALL2002.GPJ GZA NH LGOT 9/16/02

SOIL BELL WELL CORNWALL2002.GPJ GZA NH LGOT 9/16/02

| GZA<br>GeoEnvironmental, Inc.<br>Engineers and Scientists   |     | Cornwall BRS 0172(6)S<br>Cornwall, Vermont |           | Boring No.: B-203    |         |   |
|---|-----|--|-----------|----------------------|---------|---|
| Contractor: NH Boring   |     | Auger/Casing: HW                           |           | Page: 1 of 3         |         |   |
| Foreman: Bob Doherty  |     | Sampler: SS                                |           | File No.: 22721.3    |         |   |
| Logged by: Jay Hodgkinson   |     | Type: Casing                               |           | Check: TAD           |         |   |
| Date Start/Finish: 9-10-01 / 9-13-01  |     | I.D.: 102mm / 35mm                         |           | GROUNDWATER READINGS |         |   |
| Boring Location: Sta. 0+820.7, 8.5 mL   |     | Hammer Wt.: 136.1kg / 63.5kg               |           | Time                 |         |   |
| GS Elev.: 42.9+/- Datum: NAVD 88  |     | Hammer Fall: 0.76m / 0.76m                 |           | Depth                |         |   |
|   |     | Rig Type: CME 45                           |           | Casing               |         |   |
|   |     |  |           | Stab                 |         |   |
| Sample Information  |     |  |           |                      |         |   |
| Depth (m)   | No. | Pen./Rec. (m)                              | Depth (m) | Blows (/0.15m)       | N Value | Sample Description & Classification   |
| 1   | S-1 | 0.61/0.05                                  | 1.52-2.13 | push                 |         | VS: 16.5 kPa, Vane tip at 1.98m (6.5 feet). Gray-brown, CLAY & SILT, with layers of ORGANIC SILT. (A-7-6) |
| 3   | S-2 | 0.61/0.38                                  | 3.05-3.66 | push                 |         | VS: 19.1 kPa, Vane tip at 3.51m (11.5 feet). Gray, CLAY & SILT, with layers of ORGANIC SILT. (A-7-6)      |
| 5   | S-3 | 0.61/0.43                                  | 4.57-5.18 | 3-1<br>2-1           | 3       | Soft, gray, CLAY & SILT, with layers of ORGANIC SILT. (A-7-6)   |
| 6   | S-4 | 0.61/0.33                                  | 6.10-6.71 | 6-10<br>12-14        | 22      | Medium dense, gray, fine to medium SAND, trace Silt. (A-3)  |
| 8   | S-5 | 0.61/0.18                                  | 7.62-8.23 | 6-9<br>14-18         | 23      | Medium dense, gray, fine to medium SAND, little Silt. (A-3)   |
| Remarks: 1<br>Equipment Installed: No Equipment Installed<br>Strat. Desc.: CLAY & SILT with Layers of ORGANIC SILT<br>5.49m<br>SAND<br>5  |     |  |           |                      |         |   |
| 1. VS=Vane Shear Test. Split spoon sample was driven through the soil disturbed by the VS test.<br>2. Change in strata at 5.49m (18 feet) based on drill action.<br>3. Blow counts may be artificially high due to approximately 0.3m (1 foot) of "blow-in sands" in casing.<br>4. Water was at top of casing approximately 0.15m (6 inches) above ground surface approximately 14 hours of stabilization time. |     |  |           |                      |         |   |
| Stratification lines represent approximate boundary between soil types, transitions may be gradual. 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 No.: B-203   |     |  |           |                      |         |   |

| GZA<br>GeoEnvironmental, Inc.<br>Engineers and Scientists   |      | Cornwall BRS 0172(6)S<br>Cornwall, Vermont |             | Boring No.: B-203 |         |   |
|---|------|--|-------------|-------------------|---------|---|
| Page: 2 of 3  |      | File No.: 22721.3                          |             | Check: TAD        |         |   |
| Sample Information  |      |  |             |                   |         |   |
| Depth (m)   | No.  | Pen./Rec. (m)                              | Depth (m)   | Blows (/0.15m)    | N Value | Sample Description & Classification                         |
| 10  | S-6  | 0.61/0.13                                  | 9.14-9.75   | 5-5<br>8-19       | 13      | Medium dense, gray, fine SAND and Silt, trace Gravel. (A-4) |
| 11  | S-7  | 0.61/0.20                                  | 10.67-11.28 | 4-4<br>4-4        | 8       | Loose, gray, fine to medium SAND, trace Silt. (A-3)         |
| 12  | S-8  | 0.61/0.15                                  | 12.19-12.80 | WOR-3<br>5-5      | 8       | Loose, gray, fine SAND, some Silt. (A-3)                    |
| 14  | S-9  | 0.61/0.30                                  | 13.72-14.33 | 4-3<br>3-3        | 6       | Loose, gray, Clayey SILT, little fine Sand. (A-5)           |
| 15  | S-10 | 0.61/0.41                                  | 15.24-15.85 | 12-4<br>4-5       | 8       | Loose, gray, fine SAND, some Silt, trace Gravel. (A-2-4)    |
| 17  | S-11 | 0.30/0.15                                  | 16.76-17.07 | 5-5<br>60/<br>0mm | 65      | Very dense, gray, fine SAND, some Silt. (A-3)               |
| 18  | S-12 | 0.61/0.25                                  | 18.29-18.90 | 4-5<br>5-4        | 10      | Loose, gray, fine SAND, some Silt. (A-3)                    |
| Remarks: 5<br>Equipment Installed:  |      |  |             |                   |         |   |
| 5. Drilling change at 19.51m (64 feet).   |      |  |             |                   |         |   |
| Stratification lines represent approximate boundary between soil types, transitions may be gradual. 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 No.: B-203   |      |  |             |                   |         |   |

| GZA<br>GeoEnvironmental, Inc.<br>Engineers and Scientists   |      | Cornwall BRS 0172(6)S<br>Cornwall, Vermont |             | Boring No.: B-203 |         |  |
|---|------|--|-------------|-------------------|---------|--|
| Page: 3 of 3  |      | File No.: 22721.3                          |             | Check: TAD        |         |  |
| Sample Information  |      |  |             |                   |         |  |
| Depth (m)   | No.  | Pen./Rec. (m)                              | Depth (m)   | Blows (/0.15m)    | N Value | Sample Description & Classification  |
| 20  | S-13 | 0.61/0.33                                  | 19.81-20.42 | 44-53<br>51-54    | 104     | Very dense, fine to medium SAND, some Silt, little Clay, trace Gravel. (A-2-4)                               |
| 21  | S-14 | 0.61/0.33                                  | 21.34-21.95 | 10-26<br>30-28    | 56      | Very dense, fine to medium SAND, trace Silt with 0.10m (4 inch) layer of SAND and Silt, some Gravel. (A-1-b) |
| 23  | S-15 | 0.61/0.00                                  | 22.86-23.47 | 8-10<br>13-25     | 23      | No recovery.   |
| 24  | S-16 | 0.61/0.08                                  | 24.38-24.99 | 26-13<br>13-18    | 26      | Medium dense, gray, fine to coarse SAND, some Silt, little Gravel. (A-2-4)                                   |
| 26  | S-17 | 0.61/0.25                                  | 25.91-26.52 | 24-32<br>28-34    | 60      | Very dense, gray, fine to coarse SAND and Silt, little Gravel. (A-4)   |
| 28  | S-18 | 0.61/0.25                                  | 27.43-28.04 | 34-46<br>32-30    | 78      | Very dense, gray, fine to coarse SAND and Silt, little Gravel. (A-4)   |
| Remarks: 6<br>Equipment Installed:  |      |  |             |                   |         |  |
| 6. Water flowing out of the borehole.<br>7. Approximately 0.46m (1.5 feet) of wash in sample.   |      |  |             |                   |         |  |
| Stratification lines represent approximate boundary between soil types, transitions may be gradual. 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 No.: B-203   |      |  |             |                   |         |  |



GZA  
GeoEnvironmental, Inc.  
Engineers and Scientists

Cornwall BRS 0172(6)S

Cornwall, Vermont

Boring No.: B-204(OW)

Page: 1 of 1

File No.: 22721.3

Check: TAD

Contractor: NH Boring  
Foreman: Bob Doherty  
Logged by: Jay Hodgkinson  
Date Start/Finish: 9-24-01 / 9-25-01  
Boring Location: See Note 1  
GS Elev.: \_\_\_\_\_ Datum: NAVD 88

Auger/  
Casing  
Type: HW  
I.D.: 102mm  
Hammer Wt.: 136.1kg  
Hammer Fall: 0.76m  
Rig Type: CME 45

Sampler  
SS  
35mm  
63.5kg  
0.76m

GROUNDWATER READINGS

| Date    | Time | Depth | Casing | Stab   |
|---------|------|-------|--------|--------|
| 9/25/01 | 1300 | 0.00m | PVC    | 1 hour |
|         |      |       |        |        |
|         |      |       |        |        |
|         |      |       |        |        |

| Depth (m) | Sample Information |               |           |                |         | Sample Description & Classification   | Stratum Desc.        | Remarks | Equipment Installed |
|-----------|--------------------|---------------|-----------|----------------|---------|---|----------------------|---------|---------------------|
|           | No.                | Pen./Rec. (m) | Depth (m) | Blows (/0.15m) | N Value |   |                      |         |                     |
| 1         |                    |               |           |                |         |   |                      |         |                     |
| 1.52-2.13 | S-1                | 0.61/0.56     | 1.52-2.13 | 3-4<br>4-3     | 8       | Stiff, brown, Silty CLAY. (A-7-6)   |                      |         |                     |
| 3.05-3.66 | S-2                | 0.61/0.10     | 3.05-3.66 | 3-3<br>3-2     | 6       | Medium stiff, brown, CLAY & SILT. (A-6)   | SILTY CLAY           |         |                     |
| 3.66-4.27 | U-1                | 0.61/0.61     | 3.66-4.27 | push           |         | Brown, CLAY & SILT. (A-6)<br>Tv=44.0 kPa (920 psf); Pp=119.7 kPa (2,500 psf)      |                      |         |                     |
| 4.57-5.18 | S-3                | 0.61/0.38     | 4.57-5.18 | push           |         | VS: 58.5 kPa, vane tip at 5.03m (16.5 feet).<br>Gray-brown, Silty CLAY. (A-7-6)   |                      |         |                     |
| 5.49-6.10 | U-2                | 0.61/0.61     | 5.49-6.10 | push           |         | Gray-brown, Silty CLAY. (A-7-6)<br>Tv=20.1 kPa (420 psf); Pp=71.8 kPa (1,500 psf) |                      |         |                     |
| 7.62-8.23 | S-4                | 0.61/0.61     | 7.62-8.23 | 1-1<br>1-1     | 2       | Soft, gray, Clayey SILT. (A-5)  | 7.01m<br>CLAYEY SILT |         |                     |
| 9.14-9.75 | S-5                | 0.61/0.51     | 9.14-9.75 | 6-7<br>8-11    | 15      | Very stiff, gray, Clayey SILT, trace fine Sand. (A-5)                             |                      |         |                     |
| 9.75m     |                    |               |           |                |         | Bottom of boring at 9.75m (32 feet) below ground surface. No refusal.             | 9.75m                |         |                     |

SOIL BL WELL CORNWALL2002.GPJ GZA\_NH.GDT 9/6/02

1. Test boring is located approximately 19.51m (64 feet) (north toward the Lemon Fair River) from Inc. #1.
2. Tv=Torvane, Pp= Pocket Pentrometer
3. VS=vane shear test; split spoon sample was driven through soil disturbed by VS test.
4. Change in wash color noted at 7.01m (23 feet) below ground surface.

Stratification lines represent approximate boundary between soil types, transitions may be gradual. 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 No.: B-204(OW)



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

BORING NUMBER: B-401  
SHEET 1 of 2  
DATE STARTED: 9/07/07  
DATE COMPLETED: 9/13/07

PROJECT NAME: CORNWALL  
SITE NAME: VT-125  
STATION: 1+589.58  
OFFSET: -5.87  
VTSPG: N 165899.86 m E 440005.50 m

PROJECT NUMBER: BRS 0172(6)  
SITE NUMBER: BR-9  
GROUND ELEVATION: 52.56 m  
GROUNDWATER DEPTH:  
PROJECT PIN NUMBER: 85E042

BORING CREW  
CREW CHIEF: PORTER  
DRILLER: PORTER  
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #09 w/AUTO HAMMER  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL & TUBE  
CHECKED BY: CAA

| DEPTH (m)   | SYMBOL | CLASSIFICATION OF MATERIALS (Description)  | WELL DIAGRAM | BLOWS PER 300mm | M.C. (%) | GRAVEL (%) | SAND (%) | FINES (%) | LL (%) | PI (%) |
|-------------|--------|--|--------------|-----------------|----------|------------|----------|-----------|--------|--------|
| 0.0 - 0.762 |        | Field Note, Casing above ground = 0.762m<br>Field Class., Asphalt pavement grindings.          |              |                 |          |            |          |           |        |        |
| 0.762 - 1.5 |        | A-1-a, SaGr, brn, Wet, Rec. = 0.15 m   |              | 3               | 13.9     | 53.4       | 35.9     | 10.7      |        |        |
| 1.5 - 3.05  |        | No Recovery, 3.05 m - 3.66 m   |              | 7               |          |            |          |           |        |        |
| 3.05 - 3.66 |        | Field Note, In clay at around 3.66m  |              |                 |          |            |          |           |        |        |
| 3.66 - 4.5  |        | A-7-6, Cl, tan, Moist, Rec. = 0.55 m, Lost water at 5.18m                                      |              | 7               | 37.7     | 1.1        | 1.4      | 97.5      | 69     | 42     |
| 4.5 - 6.0   |        | A-7-6, Cl, brn, Moist, Rec. = 0.61 m, Sample taken from top 38.1mm of tube for classification. |              |                 | 61.9     | 0.0        | 2.0      | 98.0      | 69     | 40     |
| 6.0 - 7.32  |        | Vane Shear test, 7.32 m - 7.47 m, vs=6.70 kPa remold=3.69 kPa                                  |              |                 |          |            |          |           |        |        |
| 7.32 - 7.62 |        | Shelby Tube, brn, MTW, Rec. = 0.61 m, 7.62 m - 8.23 m, Water returned at 7.62m                 |              |                 |          |            |          |           |        |        |

LOG OF BORING CORNWALL BRS0172(6).SP1 VT AUT.GBT 4/17/08



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

BORING NUMBER: B-401  
SHEET 2 of 2  
DATE STARTED: 9/07/07  
DATE COMPLETED: 9/13/07

PROJECT NAME: CORNWALL  
SITE NAME: VT-125  
STATION: 1+589.58  
OFFSET: -5.87  
VTSPG: N 165899.86 m E 440005.50 m

PROJECT NUMBER: BRS 0172(6)  
SITE NUMBER: BR-9  
GROUND ELEVATION: 52.56 m  
GROUNDWATER DEPTH:  
PROJECT PIN NUMBER: 85E042

BORING CREW  
CREW CHIEF: PORTER  
DRILLER: PORTER  
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #09 w/AUTO HAMMER  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL & TUBE  
CHECKED BY: CAA

| DEPTH (m)    | SYMBOL | CLASSIFICATION OF MATERIALS (Description)  | WELL DIAGRAM | BLOWS PER 300mm | M.C. (%) | GRAVEL (%) | SAND (%) | FINES (%) | LL (%) | PI (%) |
|--------------|--------|--|--------------|-----------------|----------|------------|----------|-----------|--------|--------|
| 8.99 - 9.14  |        | Vane Shear test, 8.99 m - 9.14 m, vs=3.97 kPa remold=1.29 kPa  |              |                 |          |            |          |           |        |        |
| 9.14 - 9.45  |        | Shelby Tube, gry, Moist, Rec. = 0.30 m, 9.14 m - 9.45 m  |              |                 | 19.3     | 0.5        | 7.4      | 92.1      | 46     | 26     |
| 9.45 - 10.5  |        | A-7-6, Cl, gry, Moist, Rec. = 0.03 m, Sample sticking from end of Shelby tube.   |              |                 |          |            |          |           |        |        |
| 10.5 - 11.0  |        | A-7-6, Cl, gry, Moist, Rec. = 0.50 m   |              | 54              | 17.2     | 2.3        | 8.7      | 89.0      | 41     | 22     |
| 11.0 - 12.5  |        | A-6, SiCl, gry, Moist, Rec. = 0.52 m   |              | 41              | 21.6     | 1.8        | 3.3      | 94.9      | 34     | 11     |
| 12.5 - 13.5  |        | A-7-6, Cl, gry, Moist, Rec. = 0.61 m   |              | 19              | 29.4     | 0.0        | 1.1      | 98.9      | 53     | 30     |
| 13.5 - 14.33 |        | Hole stopped @ 14.33 m   |              |                 |          |            |          |           |        |        |
| 14.33 - 16.5 |        | DRILLER'S NOTES:<br>1. An inclinometer was installed.<br>2. Top of well casing is 0.76m above ground level.<br>3. Boring location is approximate based on recollection of drill crew supervisor. Boring should be field verified in spring 2008. |              |                 |          |            |          |           |        |        |

LOG OF BORING CORNWALL BRS0172(6).SP1 VT AUT.GBT 4/17/08