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**N.C.D.O.T. GEOTECHNICAL UNIT  
 BORING LOG**

SHEET 1 OF 1

| PROJECT NO. 8.T311002   |           | ID. R-2552B                 |      | COUNTY Johnston            |                 | GEOLOGIST D. Carr     |    |    |    |           |     |                           |                |
|---|-----------|-----------------------------|------|----------------------------|-----------------|-----------------------|----|----|----|-----------|-----|---------------------------|----------------|
| SITE DESCRIPTION Relocation of Bridge #207 on SR 1560 over Little Creek |           |                             |      |                            |                 | GROUND WATER (m)      |    |    |    |           |     |                           |                |
| BORING NO. B2-A   |           | BORING LOCATION 14+89.80    |      | OFFSET 2.13m Lt.           |                 | ALIGNMENT -Y11-REV    |    |    |    |           |     |                           |                |
| COLLAR ELEV. 60.02 m  |           | NORTHING 206,937.30         |      | EASTING 658,535.74         |                 | 0 HR. 1.31            |    |    |    |           |     |                           |                |
| TOTAL DEPTH 11.81 m   |           | DRILL MACHINE CME 550 Track |      | DRILL METHOD 8.26cm ID HSA |                 | HAMMER TYPE Automatic |    |    |    |           |     |                           |                |
| DATE STARTED 7/13/01  |           | COMPLETED 7/17/01           |      | SURFACE WATER DEPTH N/A    |                 |                       |    |    |    |           |     |                           |                |
| ELEV. (m)   | DEPTH (m) | BLOW COUNT                  |      |                            | BLOWS PER 30 CM |                       |    |    |    | SAMP. NO. | LOG | SOIL AND ROCK DESCRIPTION |                |
|   |           | 15cm                        | 15cm | 15cm                       | 0               | 20                    | 40 | 60 | 80 |           |     |                           | 100            |
| 60.02   |           |                             |      |                            |                 |                       |    |    |    |           |     |                           | Ground Surface |
|   | 0.00      | 1                           | 1    | 1                          |                 |                       |    |    |    |           |     | M                         | 60.02m 0.00m   |
|   | 0.61      |                             |      |                            |                 |                       |    |    |    |           |     | M                         | 59.74m 0.28m   |
|   | 1.07      | 2                           | 1    | 1                          |                 |                       |    |    |    |           |     | M                         | 59.41m 0.61m   |
|   | 1.98      | 1                           | WOH  | 1                          |                 |                       |    |    |    |           |     | W/S                       | 58.04m 1.98m   |
| 58  | 2.59      | 2                           | 3    | 6                          |                 |                       |    |    |    |           |     | M                         | 57.43m 2.59m   |
|   | 4.11      | 12                          | 27   | 46                         |                 |                       |    |    |    |           |     | M                         | 55.91m 4.11m   |
| 56  |           | 100/9cm                     |      |                            |                 |                       |    |    |    |           |     | M                         | 55.82m 4.20m   |
|   | 5.72      | 100/11cm                    |      |                            |                 |                       |    |    |    |           |     | M                         |                |
| 54  | 7.24      | 100/10cm                    |      |                            |                 |                       |    |    |    |           |     | M                         |                |
|   | 8.76      | 100/11cm                    |      |                            |                 |                       |    |    |    |           |     | M                         | 51.15m 8.87m   |
| 50  |           | 50/1cm                      |      |                            |                 |                       |    |    |    |           |     | M                         | 50.88m 9.14m   |
|   |           |                             |      |                            |                 |                       |    |    |    |           |     | M                         | 50.22m 9.80m   |
|   |           |                             |      |                            |                 |                       |    |    |    |           |     | M                         | 49.46m 10.56m  |
|   |           |                             |      |                            |                 |                       |    |    |    |           |     | M                         | 48.94m 11.08m  |
|   | 11.80     |                             |      |                            |                 |                       |    |    |    |           |     | M                         | 48.21m 11.81m  |

- Notes:  
 1) Geologist indicates strata change in split spoon at 0.28m.  
 2) PP=Pocket Penetrometer  
 3) Wet spoon at 1.98m.  
 4) Driller switches to coring techniques at 4.20m.  
 5) 4.57m of casing set at 4.20m.

Sheet 1 of 1

**CORE BORING REPORT**

DATE: 07/16/2001

PROJECT: 8.T311002 I.D. NO.: R-2552B BORING NO.: B2-A GEOLOGIST: Dan Carr  
 DESCRIPTION: Relocation of Bridge #207 on SR 1560 over Little Creek SENIOR DRILLER: J.W. Gilchrist, Jr.  
 COUNTY: Johnston COLLAR ELEVATION: 60.02m TOTAL DEPTH: 11.81m DRILLING ASSISTANT: M.W. Renza

| Elev. (m) | Depth (m) | Drill Rate min./0.3m | Run Length (m) | REC (%)   | RQD (%)   | Sample # | FIELD CLASSIFICATION AND REMARKS   |
|-----------|-----------|----------------------|----------------|-----------|-----------|----------|--|
| 55.82     | 4.20      | 5:02                 | 1.52           | 0.59/1.52 | 0.28/1.52 |          | 55.82m (4.20m)   |
|           |           | 4:37                 |                | 38.8%     | 18.4%     |          | Tan and brown severely weathered, slightly to moderately fractured, quartz-muscovite schist with disseminated pyrite.  |
|           |           | 5:02                 |                |           |           |          | Major joint set @ 30°, 45°, and 60°  |
|           |           | 4:51                 |                |           |           |          | Extremely fractured zones from 4.20-4.25m, 5.14-5.17m, 5.30-5.35m, and 5.93-5.96m.   |
| 54.30     | 5.72      | 4:48/0.32            |                |           |           |          | SPT taken from 5.72-5.83m (N value=100/1cm) Schist   |
| 54.19     | 5.83      | 4:24/0.21            | 1.41           | 1.30/1.41 | 1.12/1.41 |          |  |
|           |           | 5:45                 |                | 92.2%     | 79.4%     |          | STRATA REC.= 74%<br>STRATA RQD.= 53%   |
|           |           | 6:12                 |                |           |           |          |  |
|           |           | 5:31                 |                |           |           |          |  |
| 52.78     | 7.24      | 6:29                 |                |           |           |          | SPT taken from 7.24-7.34m (N value=100/10cm) Schist  |
| 52.68     | 7.34      | 3:57/0.22            | 1.42           | 1.35/1.42 | 0.91/1.42 |          |  |
|           |           | 4:43                 |                | 95.1%     | 64.1%     |          |  |
|           |           | 5:03                 |                |           |           |          |  |
|           |           | 4:07                 |                |           |           |          |  |
| 51.26     | 8.76      | 5:05                 |                |           |           |          | SPT taken from 8.76-8.87m (N value=100/11cm) Schist  |
| 51.15     | 8.87      | 2:25/0.21            | 1.41           | 1.41/1.41 | 0.41/1.41 |          | 51.15m (8.87m)   |
|           |           | 6:19                 |                | 100.0%    | 29.1%     |          | Tan, completely weathered, quartz muscovite schist with disseminated pyrite. STRATA REC.= 100%<br>STRATA RQD.= 0% 50.88m (9.14m)   |
|           |           | 6:27                 |                |           |           |          | Tan and white, severely weathered, moderately fractured, quartz-muscovite schist with disseminated pyrite. STRATA REC.= 100%<br>STRATA RQD.= 32% 50.22m (9.80m)                              |
|           |           | 6:31                 |                |           |           |          | Major joint set @ 60°  |
| 49.74     | 10.28     | 5:43                 |                |           |           |          | Tan/gray and white, moderately weathered, moderately to extremely fractured, quartz-muscovite schist with disseminated pyrite. STRATA REC.= 100%<br>STRATA RQD.= 26% 49.46m (10.56m)         |
| 49.74     | 10.28     | 3:15                 | 1.52           | 1.44/1.52 | 0.00/1.52 |          | Major joint set @ 45°  |
|           |           | 4:33                 |                | 94.7%     | 0.0%      |          |  |
|           |           | 4:11                 |                |           |           |          | Tan and orange, very severely weathered, extremely fractured, quartz-muscovite schist with disseminated pyrite. STRATA REC.= 85%<br>STRATA RQD.= 0% 48.94m (11.08m)                          |
| 48.22     | 11.80     | 4:06/0.32            |                |           |           |          | Tan/gray and white, moderately severely weathered, moderately to extremely fractured, quartz-muscovite schist with disseminated pyrite. STRATA REC.= 100%<br>STRATA RQD.= 0% 48.21m (11.81m) |
| 48.21     | 11.81     |                      |                |           |           |          | SPT taken from 11.80-11.81m (N value=50/1cm) Schist  |

DRILLING EQUIPMENT:  
 CME - 550 ATV Track rig with automatic hammer.  
 HOLE ADVANCEMENT:  
 1. HSA from 0.00 - 4.20 meters using 8.26cm hollow stem augers.  
 2. Cored using NQ3 triple barrel and a Series 6 face-discharge diamond impregnated bit from 4.20-11.83 meters.

NOTES:  
 Coring terminated at elevation 48.21m in quartz-muscovite schist.

NCDOT\_GDT 9/24/01  
NCDOT\_BORE R255