

**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
GEOTECHNICAL UNIT BORING LOG**

| PROJECT NO 8.2860401   |       | ID B-2583                 |                               | COUNTY MADISON     |         | GEOLOGIST SHELTON, T.P.  |           |    |    |     |           |     |                           |   |
|--|-------|---------------------------|-------------------------------|--------------------|---------|--------------------------|-----------|----|----|-----|-----------|-----|---------------------------|---|
| SITE DESCRIPTION BRIDGE NO. 328 ON SR-1001 OVER FRENCH BROAD RIVER |       |                           |                               |                    |         |                          | GND WATER |    |    |     |           |     |                           |   |
| BORING NO B10-B  |       | NORTHING 0.00             |                               | EASTING 0.00       |         | 0 HR N/A                 | 24 HR N/A |    |    |     |           |     |                           |   |
| ALIGNMENT -L-  |       | BORING LOCATION 13+03.000 |                               | OFFSET 5.00m RT    |         |                          |           |    |    |     |           |     |                           |   |
| COLLAR ELEV 495.06m  |       | TOTAL DEPTH 5.31m         |                               | START DATE 9/20/00 |         | COMPLETION DATE 09/20/00 |           |    |    |     |           |     |                           |   |
| DRILL MACHINE CME-550  |       |                           | DRILL METHOD CORE BORING/CORE |                    |         | HAMMER TYPE AUTOHAMMER   |           |    |    |     |           |     |                           |   |
| SURFACE WATER DEPTH 0.48m  |       |                           | DEPTH TO ROCK 1.33m           |                    |         | Log B10-B, Page 1 of 1   |           |    |    |     |           |     |                           |   |
| ELEV   | DEPTH | BLOW CT                   |                               |                    | PEN (m) | BLOWS PER 30cm           |           |    |    |     | SAMPLE NO | LOG | SOIL AND ROCK DESCRIPTION |   |
|  |       | 15cm                      | 15cm                          | 15cm               |         | 0                        | 25        | 50 | 75 | 100 |           |     |                           |   |
| 495.54   |       |                           |                               |                    |         |                          |           |    |    |     |           |     |                           | Surface Water   |
| 495.00   |       |                           |                               |                    |         |                          |           |    |    |     |           |     |                           | Ground Surface  |
|  |       |                           |                               |                    |         |                          |           |    |    |     |           |     |                           | ALLUVIUM: BROWN-TAN-GREY GRAVEL & COBBLES.  |
|  |       |                           |                               |                    |         |                          |           |    |    |     |           |     |                           | MIGMATITIC AMPHIBOLITE W/ MINOR BIO.-GRANITIC GNEISS. REC: 95% RQD: 92%                                     |
|  |       |                           |                               |                    |         |                          |           |    |    |     |           |     |                           | FRESH, MIGMATITIC BIO.-GRANITIC & BIO.-HB. GNEISS W/ MINOR AMPHIBOLITE. REC: 97% RQD: 97%                   |
|  |       |                           |                               |                    |         |                          |           |    |    |     |           |     |                           | F.-CSE. GRAINED, HARD-V. HARD, FRESH, MIGMATITIC BIO.-GRANITIC & BIO.-HORNBLLENDE GNEISS. REC: 94% RQD: 90% |
|  |       |                           |                               |                    |         |                          |           |    |    |     |           |     |                           | BORING TERMINATED IN ROCK (MIGMATITIC BIOTITE-GRANITIC & BIOTITE-HORNBLLENDE GNEISS) @ ELEV: 489.75 M       |

| CORE BORING REPORT   |           |                     |         |                    |               |         | DATE  |
|--|-----------|---------------------|---------|--------------------|---------------|---------|---|
| PROJECT: 8.2860401 I. D. NO: B-2583 BORING NO: B10-B GEOLOGIST: TREADWAY, M.A. |           |                     |         |                    |               |         | 11/1/00   |
| DESCRIPTION: BRIDGE NO. 328 ON SR-1001 OVER FRENCH BROAD RIVER                 |           |                     |         |                    |               |         |   |
| COUNTY: MADISON COLLAR ELEVATION: 495.06 m TOTAL DEPTH: 5.31 m                 |           |                     |         |                    |               |         |   |
| ELEV. (m)  | DEPTH (m) | DRILL RATE MIN./3 m | RUN (m) | REC. METERS %      | RQD. METERS % | SAMP. # | FIELD CLASSIFICATION AND REMARKS  |
| 493.73   | 1.33      |                     | 1.00    | 0.95               | 0.92          |         | WH-GREY & BRN-GN, F.-CSE. GRAINED, FRESH-V. SLI. WEATHERED, EXTR. FRAC.-SOUND, HARD, MOD. TO WELL-FOLIATED, MIGMATITIC AMPHIBOLITE W/ MINOR BIOTITE-GRANITIC GNEISS. TRACE OF PYRITE & EPIDOTE. 1 JNT. @ 0-10° ADT: INDETERMINABLE (SLI. FE STAINS)     |
| 492.73   | 2.33      |                     |         | 95                 | 92            |         | 2 JNTS. @ 30-40° ADS: 6cm ADT: INDETERMINABLE (SLI. FE STAINS)  |
| 492.73   | 2.33      |                     |         |                    |               | RS-14   | 1 JNT. @ 65-75° ADT: 2mm (CALCITE INFILLING)<br>STRATA REC: 96% STRATA RQD: 93% *END STRATA @ [2.61m]   |
| 491.24   | 3.82      |                     | 1.49    | 1.45               | 1.44          |         | GREEN-BROWN & WHITE-GREY, FINE TO COARSE-GRAINED, FRESH, MOD. FRAC.-CHIEFLY SOUND, HARD-V. HARD, WELL-FOLIATED, MIGMATITIC BIO.-GRANITIC GNEISS W/ INTERLAYERED BIO.-HORNBLLENDE GNEISS. TRACE OF PYRITE; OCCASIONAL PITS & PARTIALLY HEALED FRACTURES. |
| 491.24   | 3.82      |                     | 1.49    | 97                 | 97            |         | 1 JNT. @ 30-40° ADT: 1mm **{STRATA REC: 95%}  |
| 489.75   | 5.31      |                     |         | 1.40               | 1.35          |         | 2 JNTS. @ 40-50° ADS: 4cm ADT: 2mm **{STRATA RQD: 92%}  |
| 489.75   | 5.31      |                     |         | 94                 | 90            |         | 1 JNT. @ 50-60° ADT: 1mm [5.31m]  |
|  |           |                     |         |                    |               |         | CORING TERMINATED AT ELEVATION 489.75 m   |
| DRILLER: W.A. GOSNELL  |           | CORE SIZE: NXWL     |         | EQUIPMENT: CME-550 |               |         |   |