

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 GEOTECHNICAL UNIT BORING LOG

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 GEOTECHNICAL UNIT CORE BORING REPORT

PROJECT NO: 8.1830503 PROJECT ID: R-2206C COUNTY: CATAWBA GEOLOGIST: J.K. STICKNEY  
 SITE DESCRIPTION: BRIDGE ON NC 16 BYPASS OVER REED CRK BETWEEN SR 1855 & NC 16 DRILLER: C.L. SMITH  
 BORING NO: B1-B NBL BORING LOCATION (STA): 256+81.0 OFFSET: 17.4 RT  
 COLLAR ELEV: 280.251 PERSONNEL: C.E. BURRIS CORE SIZE: NXWL  
 TOTAL DEPTH: 15.81 DRILL MACHINE: CME-550 DATE STARTED: 1-7-04  
 TOTAL RUN: 4.95 DRILL EQUIP: NXWL, TRI-CONE DATE COMPLETED: 1-7-04

| PROJECT NO 34383.1.1  |       | ID R-2206C                 |                              | COUNTY CATAWBA     |         | GEOLOGIST J.K. STICKNEY   |    |    |    |           |        |                           |  |
|---|-------|----------------------------|------------------------------|--------------------|---------|---------------------------|----|----|----|-----------|--------|---------------------------|--|
| SITE DESCRIPTION BRIDGE ON NC 16 BYPASS OVER REED CRK BETWEEN SR 1855 & NC 16 |       |                            |                              |                    |         | GND WATER                 |    |    |    |           |        |                           |  |
| BORING NO B1-B NBL  |       | NORTHING 0.00              |                              | EASTING 0.00       |         | 0 HR 1.90m                |    |    |    |           |        |                           |  |
| ALIGNMENT L   |       | BORING LOCATION 256+81.000 |                              | OFFSET 17.40m RT   |         | 24 HR 2.30m               |    |    |    |           |        |                           |  |
| COLLAR ELEV 280.25m   |       | TOTAL DEPTH 15.81m         |                              | START DATE 1/07/04 |         | COMPLETION DATE 01/07/04  |    |    |    |           |        |                           |  |
| DRILL MACHINE CME-550   |       |                            | DRILL METHOD SPT CORE BORING |                    |         | HAMMER TYPE AUTOMATIC     |    |    |    |           |        |                           |  |
| SURFACE WATER DEPTH   |       |                            | DEPTH TO ROCK 10.86m         |                    |         | Log B1-B NBL, 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  |
| 280.25  |       |                            |                              |                    |         |                           |    |    |    |           |        | Ground Surface            |  |
| 279.00  | 1.57  | 8                          | 10                           | 9                  | 0.30    |                           |    |    |    | 19        | SS-21  | MOIST                     | ALLUVIUM - LOOSE TO MEDIUM DENSE TAN-BROWN SILTY SAND WITH QUARTZ GRAVEL |
| 277.00  | 3.09  | 2                          | 3                            | 5                  | 0.30    |                           |    |    |    | 8         |        | MOIST                     |  |
| 275.00  | 4.62  | 2                          | 4                            | 5                  | 0.30    |                           |    |    |    | 9         | SS-22  | M/W                       | RESIDUAL - LOOSE TO VERY DENSE TAN-BROWN CLAYEY SILTY SAND               |
| 273.00  | 6.14  | 2                          | 2                            | 5                  | 0.30    |                           |    |    |    | 7         |        | M/W                       |  |
| 271.00  | 7.67  | 20                         | 16                           | 50                 | 0.30    |                           |    |    |    | 66        | SS-23  | MOIST                     |  |
| 269.00  | 9.19  | 8                          | 8                            | 9                  | 0.30    |                           |    |    |    |           |        | MOIST                     |  |
| 267.00  | 10.71 | 24                         | 76                           |                    | 0.29    |                           |    |    |    | 100       | RUN #1 |                           | WEATHERED ROCK   |
|   |       |                            |                              |                    |         |                           |    |    |    |           | RUN #2 |                           | HARD ROCK - BROWN-TAN-GRAY GRANITE REC=89% RQD=0%                        |
|   |       |                            |                              |                    |         |                           |    |    |    |           | RUN #3 |                           | AS ABOVE, REC=93% RQD=0%   |
|   |       |                            |                              |                    |         |                           |    |    |    |           | RUN #4 |                           | AS ABOVE, REC=95% RQD=35%  |
| 265.00  |       |                            |                              |                    |         |                           |    |    |    |           | RS-1   |                           | GRAY GRANITE, REC=98% RQD=93%  |
| 264.44  |       |                            |                              |                    |         |                           |    |    |    |           |        |                           | CORING TERMINATED AT ELEVATION 264.44 METERS IN VERY HARD GRANITE        |

| ELEV. (M)    | DEPTH (M) | DRILL RATE (MIN/.3 m) | RUN NO. | REC % (M) | RQD % (M) | SAMPLE NO. | FIELD CLASSIFICATION AND REMARKS  |
|--------------|-----------|-----------------------|---------|-----------|-----------|------------|---|
| 269.391      | 10.86     |                       | 1       | 89        | 0         |            | BROWN-TAN-GRAY MEDIUM TO MODERATELY HARD, MODERATELY SEVERELY TO MODERATELY WEATHERED GRANITE WITH VERY CLOSE TO CLOSE FRACTURE SPACING (IN RUNS 1 AND 2 THERE IS AN INTERMITTENT CONTACT WITH ROCK FROM THE KINGS MOUNTAIN SHCIST) |
| 268.081      | 12.17     |                       | 2       | 93        | 0         |            | AS ABOVE  |
| 266.561      | 13.69     |                       | 3       | 95        | 35        | RS-1       | AS ABOVE TO 14.06 METERS THEN, GRAY VERY HARD, FRESH GRANITE WITH CLOSE FRACTURE SPACING  |
| 265.041      | 15.21     |                       | 4       | 98        | 93        |            | GRAY FRESH, VERY HARD GRANITE WITH CLOSE TO MODERATELY CLOSE FRACTURE SPACING   |
| 264.441      | 15.81     |                       |         |           |           |            |   |
| <b>NOTES</b> |           |                       |         |           |           |            |   |