

Boring No. N/A  
 Sample No. B1  
 Depth (ft) 5.0 m  
 Date 11/5/2010  
 Sheet No. \_\_\_\_\_

**SOLUM**  
 CONSULTANTS LTD.  
**UNCONFINED**  
**COMPRESSION TEST (ASTM D2166)**

Job No. N/A  
 Job Name N/A  
 Tested By SF/KC  
 Calculated By KC  
 Checked By SF

|                        |                                  |                       |                                    |
|------------------------|----------------------------------|-----------------------|------------------------------------|
| SPECIMEN DIAMETER      | <u>7.34</u> (cm)                 | MOISTURE CONTENT      | <u>21.0</u> (%)                    |
| SPECIMEN HEIGHT        | <u>15.48</u> (cm)                | MASS OF WET SAMPLE    | <u>1273.1</u> (g)                  |
| SPECIMEN AREA          | <u>42.27</u> (cm <sup>2</sup> )  | HEIGHT/DIAMETER RATIO | <u>2.11</u>                        |
| SPECIMEN VOLUME        | <u>654.41</u> (cm <sup>3</sup> ) | WET BULK DENSITY      | <u>1945.4</u> (kg/m <sup>3</sup> ) |
| ASSUMED G <sub>s</sub> | <u>2.75</u>                      | INITIAL SATURATION    | <u>81.3</u> (%)                    |
| INITIAL VOID RATIO     | <u>0.71</u>                      |                       |                                    |

|                      |                    |                                 |                     |
|----------------------|--------------------|---------------------------------|---------------------|
| Shear Strength       | <u>76.36</u> (kPa) | Unconfined Compressive Strength | <u>152.72</u> (kPa) |
| Axial Failure Strain | <u>9.47</u> (%)    |                                 |                     |

| VERT.<br>DISPL.<br>(cm) | LOAD<br>CELL<br>(kN) | ε <sub>1</sub><br>(%) | σ <sub>1</sub> -σ <sub>3</sub> (σ <sub>1</sub> -σ <sub>3</sub> )/2<br>(kPa) | (kPa) |
|-------------------------|----------------------|-----------------------|-----------------------------------------------------------------------------|-------|
| 0.00                    | 0.00                 | 0.00                  | 0.00                                                                        | 0.00  |
| 0.13                    | 0.16                 | 0.85                  | 37.25                                                                       | 18.62 |
| 0.28                    | 0.29                 | 1.84                  | 67.46                                                                       | 33.73 |
| 0.41                    | 0.39                 | 2.64                  | 88.83                                                                       | 44.41 |
| 0.57                    | 0.49                 | 3.71                  | 111.16                                                                      | 55.58 |
| 0.74                    | 0.56                 | 4.81                  | 126.12                                                                      | 63.06 |
| 0.91                    | 0.62                 | 5.87                  | 137.59                                                                      | 68.79 |
| 1.08                    | 0.66                 | 6.99                  | 145.45                                                                      | 72.73 |
| 1.30                    | 0.70                 | 8.37                  | 151.01                                                                      | 75.50 |
| 1.47                    | 0.71                 | 9.47                  | 152.72                                                                      | 76.36 |
| 1.60                    | 0.72                 | 10.30                 | 152.16                                                                      | 76.08 |
| 1.75                    | 0.68                 | 11.29                 | 142.71                                                                      | 71.36 |
| 1.84                    | 0.59                 | 11.86                 | 123.18                                                                      | 61.59 |

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**UNCONFINED  
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Stress-Strain Plot**

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