



# BOREHOLE LOG

## Beauly - Denny 400kv OHL

Borehole No  
BF74B-A  
Sheet 1 of 2  
Status  
Final  
29/11/2011

Client: Scottish & Southern Energy plc  
Consultant: Balfour Beatty Utility Solutions

Job No: 4578

|                           |                                |   |
|---------------------------|--------------------------------|---|
| Date Started: 14/10/2011  | Initial Boring Diameter: 160mm | Coordinates: E 230955.087 m National Grid |
| Date Complete: 15/10/2011 | Initial Core Diameter: 86mm    | Coordinates: N 825428.835 m National Grid |
| Hole Type: RO+RC          | Rotary Casing Type: Robit      | Ground Level: 280.20 m OD                 |
| Equipment: DB520 Boart    | Core Barrel: T2-101            | Plunge: 90°                               |
|                           | Core Bit: Diamond Impreg       | Scale: 1:50                               |

| Description of Strata  | Legend | Depth | Reduced Level | Sampling/<br>Core Run | U | In Situ Testing |        | TCR (SCR) RQD | FI | Installation |
|--|--------|-------|---------------|-----------------------|---|-----------------|--------|---------------|----|--------------|
|  |        |       |               |                       |   | Test            | Result |               |    |              |
| Very soft spongy dark brown pseudo-fibrous PEAT.   |        |       |               |                       |   |                 |        |               |    |              |
| SAND & GRAVEL. (Driller's description)   |        | 1.10  | 259.10        |                       |   |                 |        |               |    |              |
| Very strong grey fine to medium grained PSAMMITE, slightly weathered with some yellowish brown staining on fractures. Occasional micaceous bands. Bedding fractures are inclined between 20deg and 30deg and are very closely to closely spaced, planar, smooth, tight and frequently micaceous. |        | 1.70  | 258.50        | 1.70-3.00             |   |                 |        | 100 (94) 75   | 7  |              |
| From 3.00m to 4.30m, with frequent pinkish white crystalline quartz bands.   |        |       |               | 3.00-3.50             |   |                 |        | 100 (0) 0     |    |              |
|  |        |       |               | 3.50-4.70             |   |                 |        | 100 (16) 0    | NI |              |
| From 4.30m, locally more weathered with some weaker and broken bands and patches of orangish brown staining. Dark grey in colour. Sub vertical and sub horizontal fractures.   |        |       |               | 4.70-5.00             |   |                 |        | 100 (0) 0     |    |              |
|  |        |       |               | 5.00-6.50             |   |                 |        | 100 (70) 27   | 12 |              |
| From 6.00m to 6.50m, becomes medium strong to strong and micaceous.  |        |       |               | 6.50-7.70             |   |                 |        | 100 (79) 63   | 7  |              |
| From 6.50m, with some occasional bands of crystalline quartz.  |        |       |               | 7.70-8.00             |   |                 |        | 100 (100) 100 |    |              |
| Continued next sheet   |        |       |               |                       |   |                 |        |               |    |              |

|                                 |                                 |                                 |                            |
|---------------------------------|---------------------------------|---------------------------------|----------------------------|
| U Undisturbed U100 / U86 Sample | TCR Total Core Recovery         | S Standard Penetration Test     | CP Cable Percussion        |
| P Piston Sample                 | SCR Solid Core Recovery         | C Cone Penetration Test         | RO Rotary Open Hole        |
| TW Thin Wall Sample             | RQD Rock Quality Designation    | 32 N for full 300mm penetration | RC Rotary Cored            |
| D Small Disturbed Sample        | FI Fracture Index               | /175 For given penetration (mm) | SO Sonic Open Holed        |
| B Bulk Disturbed Sample         | NI Non Intact                   | /25# Seating blows only (mm)    | CONP Continuous Percussion |
| LB Large Bulk Disturbed Sample  | U* Blows to drive U100 / U86    | PP Pocket Penetrometer Test     | WLS Windowless Sampler     |
| W Water Sample                  | UT Thin wall undisturbed sample | K Permeability Test (m/s)       | <b>Installation</b>        |
| G Gas Sample                    | NA Not Applicable               | L Packer Test (Lugeons)         | Slotted Pipe               |
| C Core                          | NR No Recovery                  | IV Insitu Vane Test. Peak       | Piezometer Tip             |
| J Amber Jar Sample              | NP No Penetration               | IVR Insitu Vane Test. Residual  | Grout                      |
| V Vial Sample                   |                                 | HV Hand Vane Test. Peak         | Sand Filter                |
|                                 |                                 | HVR Hand Vane Test. Residual    | Bentonite Seal             |
|                                 |                                 |                                 | Gravel Filter              |
|                                 |                                 |                                 | Concrete                   |



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| Description of Strata  | Legend | Depth     | Reduced Level | Sampling/<br>Core Run | U | In Situ Testing |        | TCR (SCR)<br>RCD | FI | Install<br>-ation |
|--|--------|-----------|---------------|-----------------------|---|-----------------|--------|------------------|----|-------------------|
|  |        |           |               |                       |   | Test            | Result |                  |    |                   |
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|  |        |           |               |                       |   |                 |        | (83)             |    |                   |
|  |        |           |               |                       |   |                 |        | 77               |    |                   |
|  |        |           |               |                       |   |                 |        | 100              |    |                   |
|  |        |           |               |                       |   |                 |        | (93)             |    |                   |
| 71   | 8      |           |               |                       |   |                 |        |                  |    |                   |
| 10.20-10.70  |        | 100       | 6             |                       |   |                 |        |                  |    |                   |
| 10.70-11.70  |        | 100       |               |                       |   |                 |        |                  |    |                   |
| (100)  |        |           |               |                       |   |                 |        |                  |    |                   |
| 11.70-12.70  | 100    | 9         |               |                       |   |                 |        |                  |    |                   |
| 12.70-13.70  | (90)   |           |               |                       |   |                 |        |                  |    |                   |
|  |        | 75        | 60            |                       |   |                 |        |                  |    |                   |
| End of Borehole at 13.70 m   |        | 13.70     | 246.50        |                       |   |                 |        |                  |    |                   |

|                                 |                                 |                                 |                            |
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|                                 |                                 |                                 | Concrete                   |