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**Queensland
Government**

Department of
Main Roads

ENGINEERING BOREHOLE

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM F:GEOT 017/3-2005

BOREHOLE No BH3
SHEET 1 of 2
REFERENCE No H9783

PROJECT Caboolture River Bridge Foundation Investigation
LOCATION Pier 2 - 14.2m left (along skew) of existing northbound bridge C/L COORDINATES 497554.6 E; 7003489.3 N
PROJECT No FG5439 SURFACE R.L. 3.02 DATE STARTED 07/11/05 DATUM MGA94 Zone 56
JOB No 25/10A/60C DATUM AHD DATE COMPLETED 07/11/05 DRILLER Drillsure Pty Ltd

ENGINEERING BOREHOLE CABOOLTURE R BRIDGE WIDENINGS.GPJ QLD MAIN ROADS.GDT 23/02/06

| DEPTH (m) | R.L. (m) | ALGER CUSING WASH BORING CORE DRILLING | RQD (%) | CORE REC % | SAMPLE | MATERIAL DESCRIPTION | WEATHERING | | | | | DEFECT SPACING (mm) | GRAPHIC LOG | ADDITIONAL DATA AND TEST RESULTS | SAMPLES TESTS | |
|-----------|----------|--|---------|------------|----------|--|------------|------------|----|----|----|---------------------|-------------|--|---------------|---|
| | | | | | | | USC | WEATHERING | EH | VH | IM | | | | | JL |
| 0 | 3.02 | | | | | Sandy CLAY (Alluvium): Brown, moist, soft, medium plasticity, fine grained sand, some plant roots and bioturbation. | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | 1,2,1 N=3 SPT |
| 2 | | | | | | Soft to firm below 2.5m. | | CI | | | | | | No sample recovered. | | |
| 3 | | | | | | | | | | | | | | | | 1,2,2 N=4 SPT |
| 4 | -0.98 | | | | | SAND (Alluvium): Brown, moist, loose, medium to coarse grained, some low to medium plasticity fines. | | SP | | | | | | | | 4,3,5 N=8 SPT |
| 5 | -1.98 | | | | | Clayey Gravelly SAND (Alluvium): Grey-brown, moist, loose, fine to coarse grained sand, fine to medium angular gravel up to 15mm, soft grey-brown silty clay lenses, some orange ironstaining. | | SP | | | | | | | | 1,4,4 N=8 SPT |
| 6 | | | | | | | | | | | | | | | | |
| 7 | -3.48 | | | | | Gravelly SAND (Alluvium): Pale brown, moist, loose, medium to coarse grained sand, fine to medium angular gravel up to 20mm, some low plasticity fines. | | SP | | | | | | | | 4,4,5 N=9 SPT |
| 8 | | | | | | | | | | | | | | | | |
| 9 | -5.48 | | | | (31) | SANDSTONE: HW: Orange-brown, fine to medium grained, very low to low strength, ironstained throughout. | | HW | | | | | | No sample recovered. | | 20/50 SPT |
| 9 | -6.12 | | | | 100 (90) | MW: Pale brown, fine to medium grained, strength, occasional thin dark brown carbonaceous laminae, some ironstaining throughout. | | MW | | | | | | 8.93m: 75° joint, planar, closed. | | N>50 Is(50)=0.08 MPa Is(50)=0.09 MPa Is(50)=0.14 MPa Is(50)=0.37 MPa Is(50)=0.67 MPa |
| 10 | -6.98 | | | | | | | | | | | | | 10.0m: Subhorizontal bedding parting, planar, smooth, ironstained. | | |

✓ PILE TIP - 5.5

REMARKS

LOGGED BY
A O'Rourke



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ENGINEERING BOREHOLE

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM F:GEOT 017/3-2005

BOREHOLE No BH3

SHEET 2 of 2

REFERENCE No H9783

PROJECT Caboolture River Bridge Foundation Investigation

LOCATION Pier 2 - 14.2m left (along skew) of existing northbound bridge C/L COORDINATES 497554.6 E; 7003489.3 N

PROJECT No FG5439 SURFACE R.L. 3.02 DATE STARTED 07/11/05 DATUM MGA94 Zone 56

JOB No 25/10A/60C DATUM AHD DATE COMPLETED 07/11/05 DRILLER Drillsure Pty Ltd

| DEPTH (m) | R.L. (m) | AUGER CASING WASH BORING CORE DRILLING | RQD (%) | CORE REC % | SAMPLE | MATERIAL DESCRIPTION | USC WEATHERING | INTACT STRENGTH | | | | | | DEFECT SPACING (mm) | GRAPHIC LOG | ADDITIONAL DATA AND TEST RESULTS | SAMPLES TESTS |
|-----------|----------|--|---------|------------|--------|--|----------------|-----------------|-------|--------|---------|----------|--|---------------------|---|---|---------------|
| | | | | | | | | 0-20 | 20-60 | 60-200 | 200-600 | 600-2000 | | | | | |
| 10 | -6.98 | | | | | SANDSTONE: HW: Dark orange-brown, fine to medium grained, very low to low strength, some coarse grained sand and fine gravel, numerous subhorizontal laminations, ironstained throughout. MW: Light grey, medium to coarse grained, low to medium strength, occasional dark brown to black thin (<1mm) carbonaceous laminae, ironstained pale orange-brown through rockmass above 11.04m. Ironstained & iron cemented brown throughout rockmass below 12.56m. 13.49-13.88m: angular coarse sand and fine gravel quartz grains throughout. Below 13.90m: Coarse grained sandstone with little to no matrix material, stained dark orange-brown. | HW | | | | | | | | Is(50)=0.03 MPa Is(50)=0.12 MPa Is(50)=0.56 MPa Is(50)=0.88 MPa 10.94m: Subhorizontal joint, planar, ironstained. 11.04-11.22m: 80° joint, slightly irregular. 11.07m: Subhorizontal bedding parting along planar carbonaceous lamination. Is(50)=0.18 MPa Is(50)=0.84 MPa Is(50)=1.11 MPa 13.88-13.90m: Grey, fine grained sandstone rip up clast. | x o x o o x o | |
| 11 | -7.61 | | | | | | MW | | | | | | | | | | |
| 12 | | | 100 | (73) | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | |
| 14 | -11.53 | | 100 | | | | | | | | | | | | | | |
| 15 | | | | | | Borehole terminated at 14.55m | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | |

REMARKS

LOGGED BY
A O'Rourke

Project: FOUNDATION INVESTIGATION FOR THE WIDENING OF THE CAPTAIN WHISH BRIDGES (NORTH AND SOUTHBOUND) – CABOOLTURE RIVER

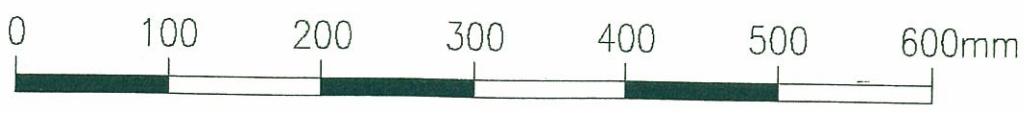
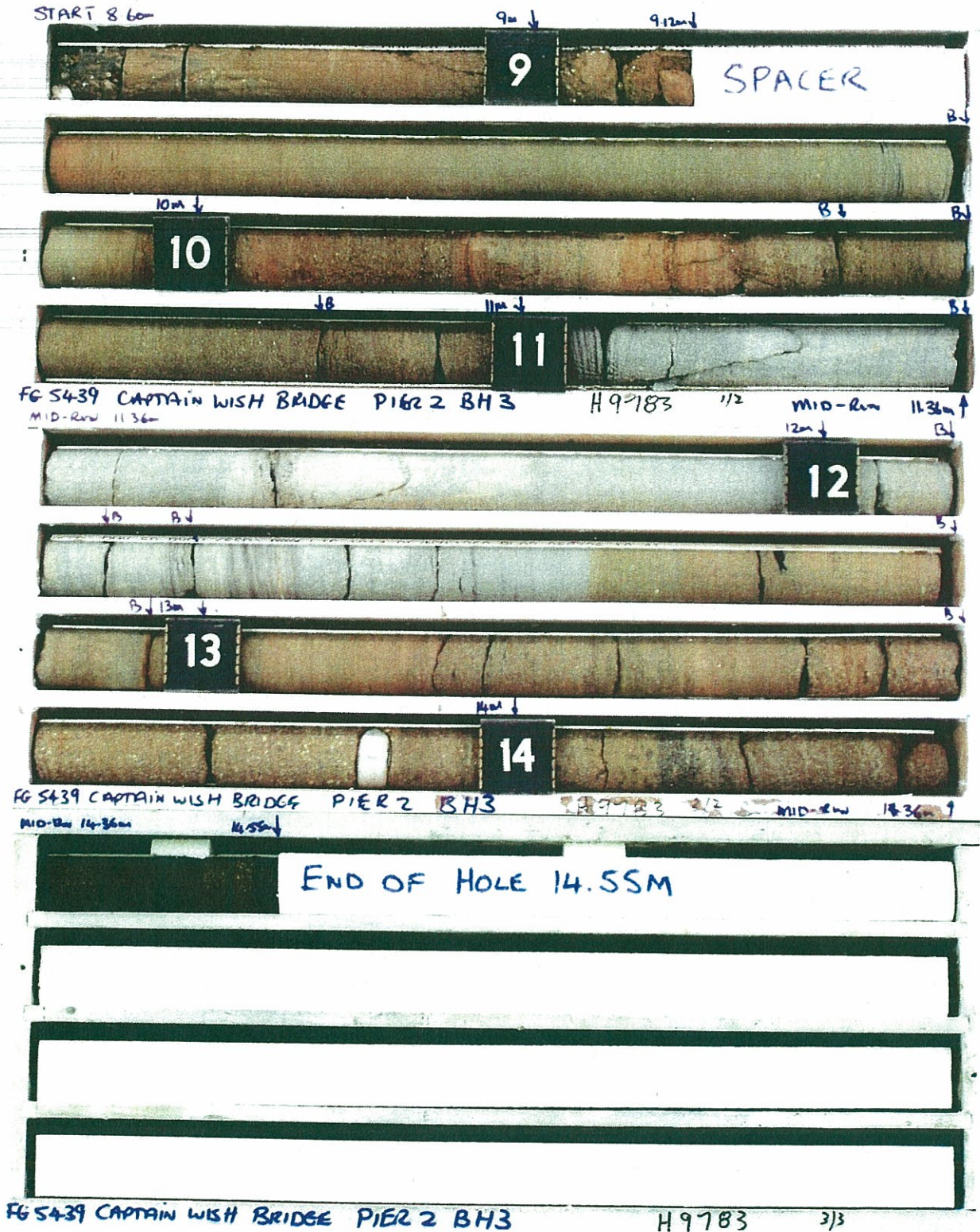
Borehole No: BH3 Pier 2

Start Depth: 8.60m

Finish Depth: 14.55m

Project No: FG5439

H No: 9783



SCALE 1:5

F:GEOT043/1

Point Load Strength Index - Test Report

Project: CABOOLTURE RIVER BRIDGE

Project No: FG 5439

Date Sampled 7/11/05

Feature: PIER 2

Sample Type: NMLC ROCK CORE

Date Tested 1/12/05

Report No. FG 5439/GS05/786/AS4133.4.1

| Sample Number | Sample Location | Depth (m) | Test Type D,A,B,I* | Is (MPa) | Is50 (MPa) | Strength Descriptor** | Lithology |
|---------------|-----------------|-----------|--------------------|----------|------------|-----------------------|-----------|
| GS05/786-A | BH3 | 8.74 | A | 0.08 | 0.08 | VL | Sandstone |
| GS05/786-B | BH3 | 8.80 | D | 0.09 | 0.09 | VL | Sandstone |
| GS05/786-C | BH3 | 8.82 | A | 0.16 | 0.14 | L | Sandstone |
| GS05/786-D | BH3 | 9.24 | D | 0.37 | 0.37 | M | Sandstone |
| GS05/786-E | BH3 | 9.27 | A | 0.72 | 0.67 | M | Sandstone |
| GS05/786-F | BH3 | 10.07 | D | 0.03 | 0.03 | EL | Sandstone |
| GS05/786-G | BH3 | 10.10 | A | 0.12 | 0.12 | L | Sandstone |
| GS05/786-H | BH3 | 10.66 | D | 0.56 | 0.56 | M | Sandstone |
| GS05/786-I | BH3 | 10.69 | A | 1.01 | 0.88 | M | Sandstone |
| GS05/786-J | BH3 | 12.14 | A | 0.18 | 0.15 | L | Sandstone |

Sample Remarks

* D - Diametral; A - Axial; B - Block; I - Irregular;

** EL - Extremely Low; VL - Very Low; L - Low; M - Medium; H - High; VH - Very High; EH - Extremely High (taken from AS1726 Table 8A)

Remarks / Variations to Test Procedures:

Test Method: AS4133.4.1

Software Version 2.03 April 2005

Client Name: RS&E STRUCTURES DIVISION
Client Address: PO BOX 1412 SPRING HILL 4001

Signatory 
(P.REYNOLDS)



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accreditation requirements.

Point Load Strength Index - Test Report

Project: CABOOLTURE RIVER BRIDGE

Project No: FG 5439

**Date Sampled 7/11/05
Feature: PIER 2
Sample Type: NMLC ROCK CORE**

Date Tested 1/12/05

Report No. FG 5439/GS05/786/AS4133.4.1

| Sample Number | Sample Location | Depth (m) | Test Type D,A,B,I* | Is (MPa) | Is50 (MPa) | Strength Descriptor** | Lithology |
|---------------|-----------------|-----------|--------------------|----------|------------|-----------------------|-----------|
| GS05/786-K | BH3 | 13.65 | D | 0.85 | 0.84 | M | Sandstone |
| GS05/786-L | BH3 | 13.68 | A | 1.16 | 1.11 | H | Sandstone |

Sample Remarks

* D - Diametral; A - Axial; B - Block; I - Irregular;

** EL - Extremely Low; VL - Very Low; L - Low; M - Medium; H - High; VH - Very High; EH - Extremely High (taken from AS1726 Table 8A)

Remarks / Variations to Test Procedures:

Test Method: AS4133.4.1

Software Version 2.03 April 2005

Client Name: RS&E STRUCTURES DIVISION
Client Address: PO BOX 1412 SPRING HILL 4001

Signatory  2 / 12 / 05
(P.REYNOLDS)



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