Queensland Government
Department of Main Roads

ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/5-2009

BOREHOLE No BH106
SHEET 1 of 3
REFERENCE No H10688

PROJECT BRUCE HIGHWAY (COOROY - CURRA) SECTION A GEOTECHNICAL INVESTIGATION
LOCATION Cut 14 COORDINATES 484181.9 E; 7081226.9 N
PROJECT No FG5825 SURFACE R.L. 155.18m PLUNGE DATE STARTED 11/2/10 GRID DATUM MGA94
JOB No 128/10A/901 HEIGHT DATUM AHD BEARING DATE COMPLETED 15/2/10 DRILLER Drillsure

DEPTH (m)	R.L. (m)	AUGER / CASING / WASH BORING / CORE DRILLING	RQD ( ) % / CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (mm) (20 60 200 600 2000)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
0	155.18				**Silty Clay** Brown to mottled red, moist, stiff. Intermediate plasticity; rock fabric visible in parts.		(CI)					4,5,7 N=12		SPT
1				A										
	153.68													
2				B	**PHYLLITE (XW):** Generally exhibits the engineering properties of mottled pale grey to red brown, moist, hard, gravelly Silt. Quartz veins up to 50mm thick; rock fabric visible throughout.		XW					6,11,20 N=31		SPT
				C								13,26,30/40mm N>50		SPT
3	152.18		(0)		**PHYLLITE (HW):** Brown, fine grained, foliated. Foliations are indistinct. Crushed quartz throughout.		HW							
			100											
4			(0)											
	150.73		100											
			(0)		**PHYLLITE (MW):** Brown, fine grained, foliated. Foliation is indistinct. Defects are generally closely spaced. Defect sets dip at 10° and 60°. Defect surfaces are typically clay infilled. Prominent quartz veining and clayey weathered zones.		MW					Clay seam		
5			100									Crushed QZ seams and clay		
			(0)											
			79									Clay seam, 10°		
6			(14)									Crushed QZ seam and clay		
												CLy HW zone		
			100									BZ		
	148.38		(22)											
7			100		**PHYLLITE (MW - SW):** Dark grey with distinctive light brown mottling, fine grained, foliated. Foliation typically dips at 10 - 30°. Defects are generally medium spaced. Prominent defect set dipping parallel to foliation with other sets at 10° and 45°. Defect surfaces are typically clay infilled or iron stained. Quartz veins throughout.		MW-SW					Is(50) = 0.78MPa Is(50) = 0.90MPa	o x	
			(20)											
			100									Clay seam		
8			(71)											
			100									UCS= 5.3 MPa Is(50) = 0.59MPa	UCS x	
			100											
			(0)									Clay seam, 30°		
			(30)									CLy BZ		
9												Clay seam, 10°		
												Is(50) = 0.52MPa	x	
												Is(50) = 0.63MPa	o	
10			100									BZ		

REMARKS Standpipe piezometer installed at base of hole.

LOGGED BY JA

QLD_DMR_LIB_01.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY FG5825 BRUCE HWY COOROY-CURRA SECTION A BHS.GPJ DWG71494.GDW Datgel CPT Tool gINT Add-In 20/05/2010 14:21

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10	145.18		(0) 100 (42)		**PHYLLITE (MW - SW):** (Cont'd)							BZ		
11			100 (0)		11.0-11.2m: Clayey broken zone							CLy BZ		
												Jt, 70°, Pl, C, Cln		
												Is(50) = 0.26MPa		x
												Is(50) = 0.62MPa		o
12			100 (9)									Clay seam, 20°		
13														
												Clay seam		
14			100 (22)									Is(50) = 0.09MPa		o
												Is(50) = 0.87MPa		x
15							MW-SW					Jt, 30°, Pl, C, Clnf		
			100 (56)											
16												Is(50) = 1.32MPa		x
												Is(50) = 0.86MPa		o
												UCS= 2.2 MPa		UCS
17			100 (66)											
18												Is(50) = 0.69MPa		x
												Is(50) = 0.91MPa		o
			100 (0)		18.5-20.25m: Clayey broken zone with multiple quartz veins.									
19			100 (0)									CLy BZ		
			60											
			(0)											
20			100											

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20	135.18		(0) 100		**PHYLLITE (MW - SW):** (Cont'd)						CLy BZ	Is(50) = 0.54MPa	x
			(28)								Crushed QZ vein	Is(50) = 0.31MPa	o
21											CLy QZ vein		
			100		21.27-22.65m: Clayey broken zone and quartz veining.								
			(0) 100								CLy BZ		
22			(0) 89										
			(31)									UCS= 3.3 MPa	UCS
23												Is(50) = 0.18MPa	x
			100										
			(43)										
24													
			100				MW-SW						
25			(21)										
					25.6-26.6m: Clayey broken zone								
26			90								CLy BZ		
			(0) 0										
			(0) 100										
27			(29)		26.8-27.1m: Clayey broken zone						CLy BZ	Is(50) = 0.57MPa	o
												Is(50) = 0.80MPa	x
											QZ vein		
28			100										
			(0) 100								BZ and QZ veining		
			(0)										
			100								CLy BZ		
29			(79)									Is(50) = 0.59MPa	x
												Is(50) = 0.21MPa	o
												UCS= 5.3 MPa	UCS
30	125.18		100		Borehole terminated at 30m								

REMARKS Standpipe piezometer installed at base of hole.

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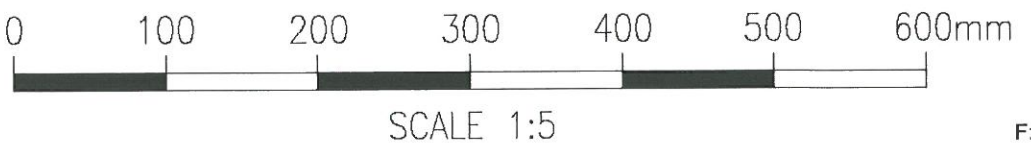
QLD_DMR_LIB_01.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY FG5825 BRUCE HWY COOROY-CURRA SECTION A BHS.GPJ DWG71494.GDW Datgel CPT Tool gINt Add-In 20/05/2010 14:21

Project: **Bruce Highway Upgrade (Cooroy – Curra) Section A**

Borehole No: **BH 106**

Start Depth: 3.00m
Finish Depth: 30.00m
Project No: FG5825
H No: 10688



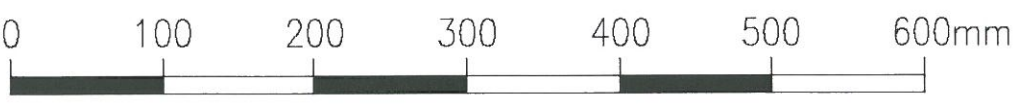
SCALE 1:5

F:GEOT043/1

Project: **Bruce Highway Upgrade (Cooroy – Curra) Section A**

Borehole No: **BH 106**

Start Depth: 3.00m
Finish Depth: 30.00m
Project No: FG5825
H No: 10688



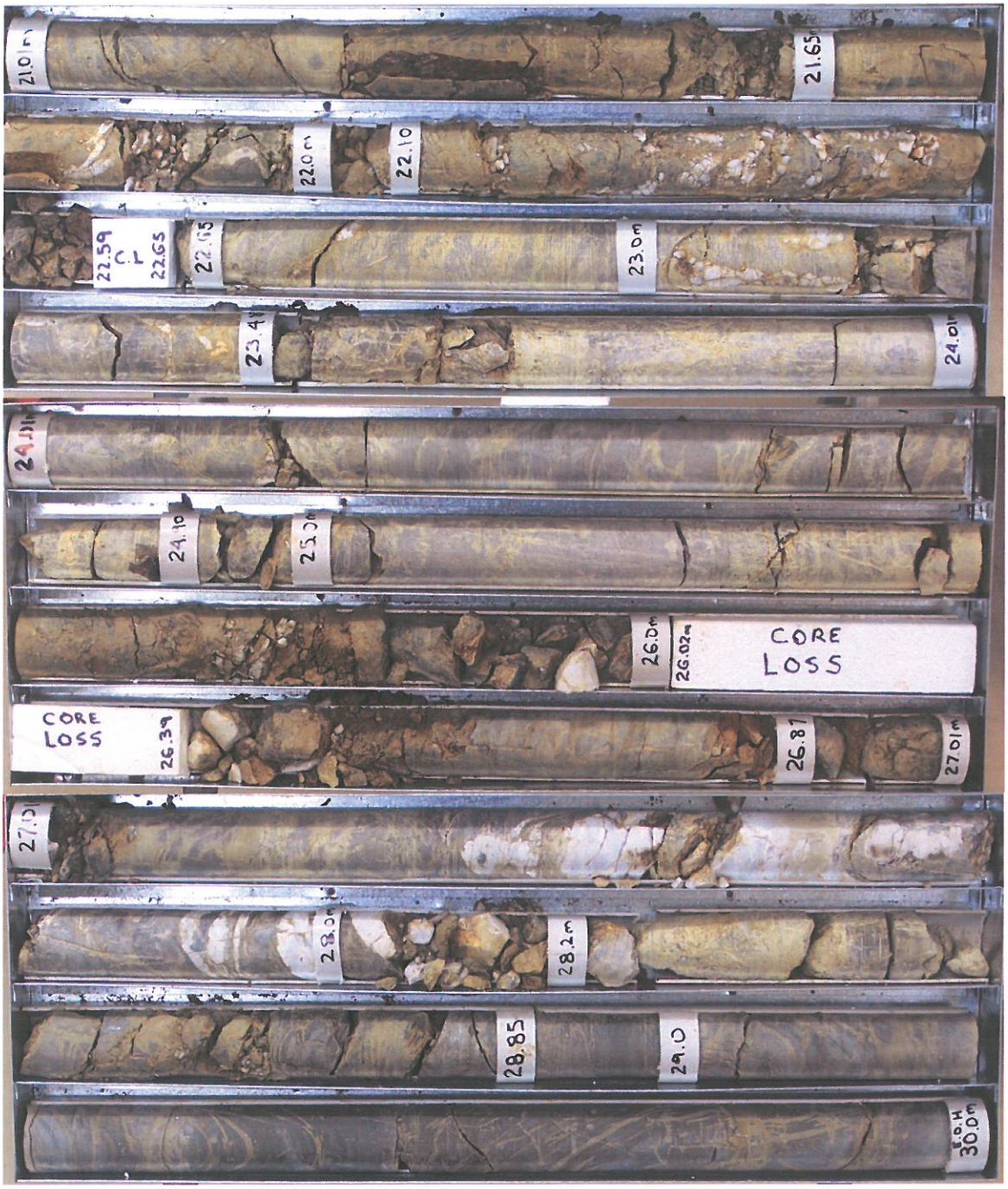
SCALE 1:5

F:GEOT043/1

Project: **Bruce Highway Upgrade (Cooroy – Curra) Section A**

Borehole No: **BH 106**

Start Depth: 3.00m
Finish Depth: 30.00m
Project No: FG5825
H No: 10688



0 100 200 300 400 500 600mm

SCALE 1:5

F:GEOT043/1