Queensland Government
Department of Main Roads

ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH004
SHEET 1 of 2
REFERENCE No H10625

PROJECT BRUCE HIGHWAY (COOROY - CURRA) SECTION A GEOTECHNICAL INVESTIGATION
LOCATION Cut 4 COORDINATES 489681.0 E; 7077864.8 N
PROJECT No FG5825 SURFACE R.L. 127.19m PLUNGE DATE STARTED 7/9/09 GRID DATUM MGA94
JOB No 128/10A/901 HEIGHT DATUM AHD BEARING DATE COMPLETED 7/9/09 DRILLER R & D Drilling

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	127.19				**ROAD BASE**		RAVEL)					
	126.79				**Silty CLAY**							
				A	Pale grey with mottled red iron staining, moist, very stiff.						4,8,12 N=20; MC = 17.6%	SPT
1					Intermediate plasticity, iron cemented in part.		(CL-ML)					
				B	Becoming less iron stained with depth.						6,9,11 N=20	SPT
2	124.69											
				C	**MUDSTONE (XW):** Generally exhibits the engineering properties of pale grey, moist, very stiff to hard silty Clay of intermediate plasticity.						7,13,18 N=31	SPT
3					Iron cemented in parts.							
				D			XW				7,11,17 N=28; MC = 21.2%	SPT
4												
				E	4.5m: Becoming slightly sandy, fine grained.						7,11,15 N=26	SPT
5	121.69											
				F	**SANDSTONE (XW):** Generally exhibits the engineering properties of pale grey, moist, medium dense clayey Sand.						6,11,13 N=24	SPT
6					Becoming mottled red to brown with depth.		XW					
				G							13,22,30/140 N>50; MC = 17.2%	SPT
7	120.19		(80)		**SANDSTONE (HW):** Pale grey with orange-red mottles.							
							HW				Is(50) = 0.03MPa Is(50) = 0.01MPa	x o
8			100 (0)		8.1m: Becoming dark red.						Is(50) = 0.06MPa	o
	118.86										Is(50) = 0.06MPa	x
			44 (0)		**MUDSTONE (MW):** Pale grey with patches of brown-red, fine grained.						Is(50) = 0.07MPa Is(50) = 0.05MPa	x o
9			80 (8)		Some steeply dipping defects.		MW				UCS=55kPa	UCS
					Detailed defect descriptions shown on Form GEOT553/8 attached. (See over)						Is(50) = 0.08MPa	x
10												

REMARKS **Detailed defect descriptions are shown on Form GEOT533/8 attached.**

LOGGED BY BW

QLD_DMR_LIB_01.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY FG5825 BRUCE HWY COOROY-CURRA SECTION A BHS.GPJ DWG95012.GDW Datgel CPT Tool gINt Add-In 12/05/2010 10:29

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ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH004
SHEET 2 of 2
REFERENCE No H10625

PROJECT BRUCE HIGHWAY (COOROY - CURRA) SECTION A GEOTECHNICAL INVESTIGATION
LOCATION Cut 4 COORDINATES 489681.0 E; 7077864.8 N
PROJECT No FG5825 SURFACE R.L. 127.19m PLUNGE ____ DATE STARTED 7/9/09 GRID DATUM MGA94
JOB No 128/10A/901 HEIGHT DATUM AHD BEARING ____ DATE COMPLETED 7/9/09 DRILLER R & D Drilling

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
10	117.19				**MUDSTONE (MW):** (Cont'd)									
			(0)				MW					Is(50) = 0.07MPa		x
11														
12	115.19		83		Borehole terminated at 12m									
13														
14														
15														
16														
17														
18														
19														
20														

REMARKS **Detailed defect descriptions are shown on Form GEOT533/8 attached.**

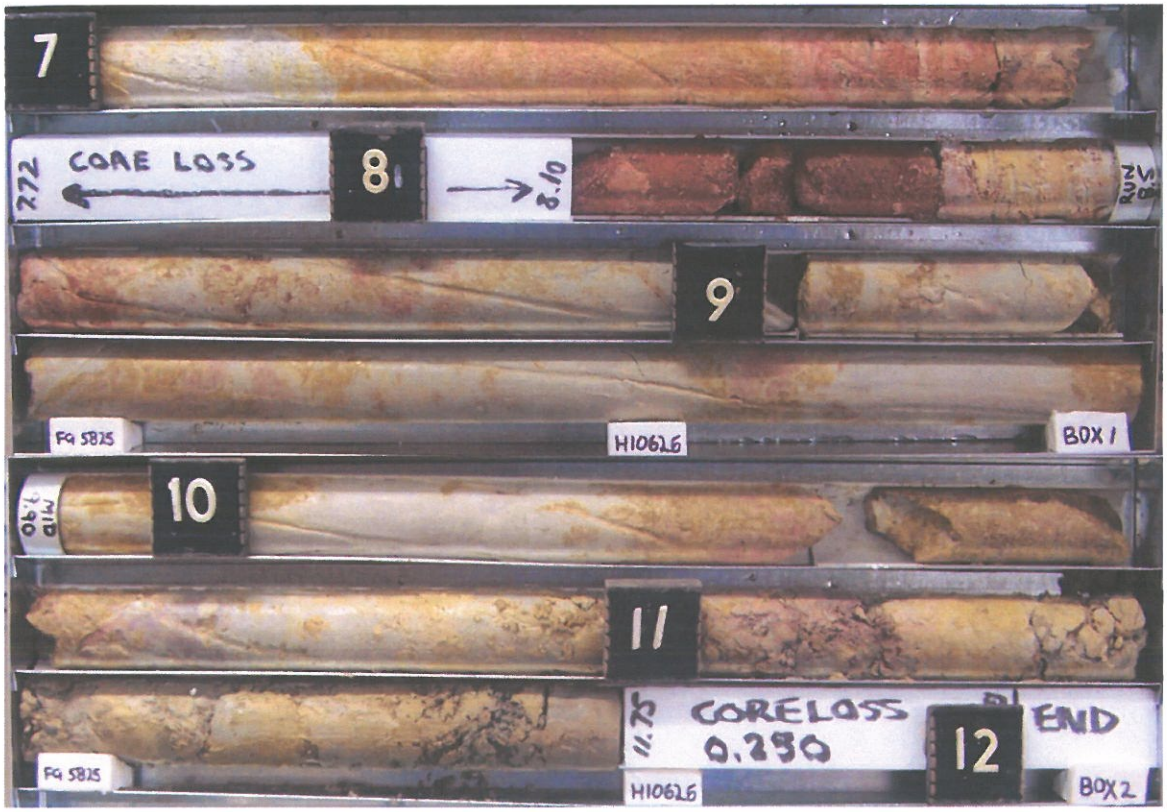
LOGGED BY BW

QLD_DMR_LIB_01.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY FG5825 BRUCE HWY COOROY-CURRA SECTION A BHS.GPJ DWG95012.GDW Datgel CPT Tool gINt Add-In 12/05/2010 10:29

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

Borehole No: **BH4**

Start Depth: 7.00m
Finish Depth: 12.00m
Project No: FG5825
H No: 10626



0 100 200 300 400 500 600mm

SCALE 1:5

F:GEOT043/1

GEOTECHNICAL BRANCH LABORATORY
Materials Services - Brisbane
35 Butterfield Street, HERSTON Q 4006
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DEFECT DESCRIPTIONS OF ENGINEERING BORELOGS

[CHARACTERISATION OF DEFECTS ARE IN ACCORDANCE WITH GEOTECHNIICAL TERMS AND SYMBOLS – FORM : GEOT 017/5 – 2009

BOREHOLE NO.:	BH4
SHEET:	1 of 1
REFERENCE NO.:	H10625

PROJECT: Bruce Highway Upgrade (Cooroy – Curra) Section A Geotechnical Investigation

LOCATION: Cut 4

PROJECT NO.: FG5825 **SURFACE R.L.:** 127.2 **DRILLER:** R & D Drilling

JOB NO.: 128/10A/901 **DATUM:** MGA94 **DATE DRILLED:** 20/10/09

DEPTH	DEFECT TYPE	DIP (DEGREES)	PLANARITY	ROUGHNESS	APERTURE	WALL ALTERATION	OTHER
7.18	J	40	Pl	S	O		
7.48	J	20	Pl	S	O		
8.29	J	30	Un	S	O		
8.65	J	65	Pl	S	O		
9.03	J	60	Pl	S	O		
10.88	J	25	Pl	S	O		

Abbreviations *(as per F: GEOT 017/5 – 2009)*

ROUGHNESS		WALL ALTERATIONS		TYPE		OTHER	
R	Rough	FeSt	Iron Stained	J, Js	Joint, Joints	Cl	Clay Infill
SR	Slightly Rough	W	Weathered	B	Bedding	CLy	Clayey
S	Smooth	Smn	Secondary Mineralisation	BP	Bedding Parting	Co	Coal Seam
SL	Slickensided	Cn	Clean	FP	Foliation Parting	Carb	Carbonaceous
PO	Polished	Mn	Manganese Stained	LP	Lamination Parting	Sl	Sand Infill
PLANARITY		**APERTURE**		CLV	Cleavage	QZ	Quartz
Pl	Planar	C	Closed	Fr	Fracture	CA	Calcite
St	Stepped	O	Open	SZ	Sheared Zone	Chl	Chlorite
Un	Undulating	F	Filled	CZ	Crushed Zone	In	Incipient
Cu	Curved	T	Tight	BZ	Broken Zone	Int	Intersecting
Ir	Irregular			HFZ	Highly Fractured Zone	Lam (s)	Lamination (s)
				WS	Weathered Seam	DI	Drilling Induced
				VN	Vein	H	Horizontal
						V	Vertical

NOTE: This sheet should be read in conjunction with appropriate Engineering Borelog. Defect angles were measured with respect to horizontal plane.