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**Queensland
Government**

Department of
Main Roads

ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH055

SHEET 1 of 1

REFERENCE No H10614

PROJECT BRUCE HIGHWAY (COOROY - CURRA) SECTION A GEOTECHNICAL INVESTIGATION

LOCATION Cut 20 COORDINATES 482529.4 E; 7080709.5 N

PROJECT No FG5825 SURFACE R.L. 109.58m PLUNGE _____ DATE STARTED 19/8/09 GRID DATUM MGA94

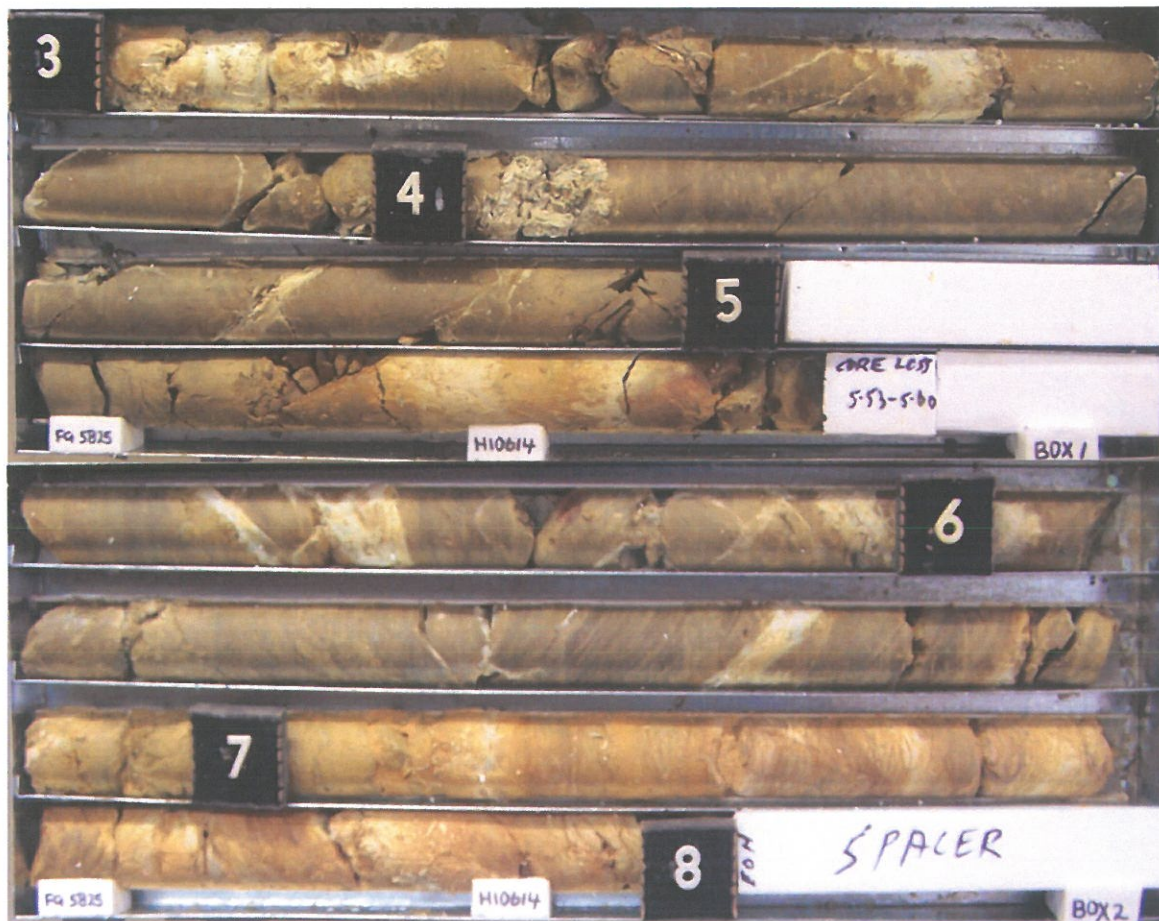
JOB No 128/10A/901 HEIGHT DATUM AHD BEARING _____ DATE COMPLETED 19/8/09 DRILLER Geo Drill

DEPTH (m)	R.L. (m)	AUGER WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
0	109.58												
1					A	Clayey SILT (Colluvium) Brown, moist, firm to stiff, intermediate plasticity, traces of plant materials.		(CL-ML)				2,3,5 N=8	SPT
2	108.08				B	PHYLLITE (XW) Generally exhibits the engineering properties of pale brown to pale grey, moist becoming dry, very stiff to hard, gravelly SILT. Intermediate plasticity, traces of plant materials.		XW				4,7,9 N=16	SPT
3	106.58				C							11,17,25 N=42	SPT
4			(21)			PHYLLITE (HW) Orange-brown to pale grey, fine grained. Frequent clayey zones throughout						XW disturbed zone with clay seams	
5			100			Foliations generally dipping at 50°						XW disturbed zone with clay seams	Is(50) = 0.44MPa x
6			(28)			Defects generally closely spaced. Defect set typically parallel to foliation and at 70°. Defect surfaces clay infilled. 3.4-5.0m						Is(50) = 0.23MPa x	
7			100			Moderately weathered band.						XW disturbed zone with clay seams	
8			(0)									XW disturbed zone	Is(50) = 0.00MPa x
9			88			5.6-7.0m		HW				Is(50) = 0.29MPa x	
10			(18)			Moderately weathered band.						Is(50) = 0.00MPa x	
11						Detailed defect descriptions shown on Form GEOT 533/8 attached.						Frequent foliation partings	
12			100			7.0-8.05m						Clay seam	
13			(15)			Orange-brown with pale grey and red-brown mottling.						Disturbed zone	Is(50) = 0.11MPa x
14												Clay seam	
15	101.53		100			Borehole terminated at 8.05m							

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

LOGGED BY
AN

Project: **Bruce Highway Upgrade (Cooroy – Curra) Section A**
Borehole No: **BH 55**
Start Depth: 3.00m
Finish Depth: 8.00m
Project No: FG5825
H No: 10614



0 100 200 300 400 500 600mm

SCALE 1:5

F:GEOT043/1

DEFECT DESCRIPTIONS OF ENGINEERING BORELOGS

[CHARACTERISATION OF DEFECTS ARE IN ACCORDANCE WITH
ISRM SUGGESTED METHODS (1981)]

BOREHOLE NO.:	BH55
SHEET:	1 of 2
REFERENCE NO.:	H10614

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

LOCATION: Cut 20

PROJECT NO.: FG5825

SURFACE R.L.: 109.6

DRILLER: Geodrill

JOB NO.: 128/10A/901

DATUM: MGA94

DATE DRILLED: 19/08/09

DEPTH	DEFECT TYPE	DIP°	PLANARITY	ROUGHNESS	APERTURE	WALL ALTERATION	OTHER
3.0-3.21	WS						Clay Seam
3.21	J	40	PI	S	O	FeSt	
3.24	J	70	PI	S	O	FeSt	
3.42	J	60	PI		C	CI	5mm Thick
3.46	J	90	PI		C	CI	200mm Long
3.48	J	70	PI		C	CI	
3.55	J	70	PI		C	CI	
3.58-3.65	WS						Clay Seam
3.65	J	10	PI	S	O	CI	
3.67	J	60	PI	S	O	FeSt	
3.78	J	60	PI	S	O	CI	
3.91	J	30	PI	S	O	Cn	
4.0	J	45	PI		C	CI	
4.06-4.10	WS						Clay seam
4.10	J	50	PI		C	CI	
4.34	J	50	PI	S	O	FeSt	
4.38	J	50	PI	S	O	FeSt	
4.45	J	50	PI	S	O	FeSt	

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

ROUGHNESS		WALL ALTERATIONS		TYPE		OTHER	
R	Rough	FeSt	Iron Stained	J, Js	Joint, Joints	CI	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	MnSt	Manganese Stained	LP	Lamination Parting	SI	Sand Infill
PLANARITY		APERTURE		CLV	Cleavage	QZ	Quartz
PI	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.

BOREHOLE NO.:	BH55
SHEET:	2 of 2
REFERENCE NO.:	H10614

DEPTH	DEFECT TYPE	DIP°	PLANARITY	ROUGHNESS	APERTURE	WALL ALTERATION	OTHER
4.48	J	50	PI	S	O	FeSt	
4.50	J	50	PI	S	O	Cl	
4.56	J	60	PI	S	O	Cl	
4.69	J	60	PI	S	O	Cl	
4.78-5.00	BZ/DI						
5.03	J	30	PI	S	O	FeSt	
5.05	J	30	PI	S	O	FeSt	
5.20	J	50	PI	S	O	FeSt	
5.24-5.42	WS	0				Clay seam	
5.45		40	PI	S	O	FeSt	
5.48-5.53	WS						Clayey
5.70	J	30	PI	S	O	FeSt	
5.74-5.75	WS						Clay Seam
5.80-5.86	WS						Clay seam
5.91	J	40	PI	SR	O	FeSt	
5.96	J	40	PI	S	O	FeSt	
6.0	J	40	PI		C	Cl	8mm thick
6.08	J	40	PI		C	Cl	5mm Thick
6.13-6.19	WS						Clay Seam
6.20	J	40	PI	SR	O	FeSt	
6.24	J	40	PI	S	O	FeSt	
6.27	J	40	PI	S	O	FeSt	
6.30	J	40	PI	S	O	FeSt	
6.33	J	40	PI	S	O	FeSt	
6.45	J	30	PI	S	O	Slight Cl	
6.52	J	40	PI	S	O	Slight Cl	
6.55	J	45	PI	SR	O	FeSt	
6.58	J	40	PI	S	O	FeSt	
6.66	J	40	PI	S	O	Slight Cl	
6.68	J	20	PI	S	O	Slight Cl	
6.74	J	30	Cu	SR	O	FeSt	
6.82	J	35	PI	S	O	FeSt	
6.87-7.03	WS						Clay seam
7.11-7.20	WS						Clay seam
7.24	J	10	PI		C	Cl	
7.26-7.28	WS						Clay seam
7.34	J		Ir	R	O	Cl	
7.51	J	10	Ir	R	O	Cl	
7.55	J	20	PI	R	O	Cn	
7.67	J	10	PI	S	O	Cl	
7.70	J	10	PI	S	O	Cl	
7.71	J	30	PI		C	Cl	5mm thick
7.78	J	40	PI	SR	O	Cl	
7.78-7.87	WS						Clay Seam
7.90	J	40	PI		C	FeSt	
7.96	J	30	PI		C		
8.0-8.05	WS						