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# ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND  
SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No BH C34

SHEET 1 of 3

REFERENCE No H11124

PROJECT Bruce Highway Upgrade (Coogoy to Curra) Section C

LOCATION Cut 9

COORDINATES 471778.6 E; 7094432.3 N

PROJECT No FG5799

SURFACE R.L. 86.10m

PLUNGE ---

DATE STARTED 11/07/11

GRID DATUM MGA94

JOB No 232/10A/2

HEIGHT DATUM AHD

BEARING ---

DATE COMPLETED 12/07/11

DRILLER Drillsure Pty Ltd

DEPTH (m)	R.L. (m)	AUGER CASING 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	86.10					<b>TOPSOIL:</b> Dark brown, moist, organic, high plasticity.								
0.85.80						<b>Silty CLAY (Residual):</b> Orange/brown, moist, hard, high plasticity.								
1					A		(CH)						30/145 N>50	SPT
2	84.20		(0)			<b>SANDSTONE (MW):</b> Brown, fine to medium grained, generally massive, high strength, indurated and/or slightly metamorphosed.								
3			100			Defects: -Joint at 10°-15°(2/m) -Joint at 30°-35°(4-5/m) -Joint at 65°-70°(2/m) -Joint at 75°-80°(2/m)								
4			(15)			Defect are generally close to medium spaced. Defect surfaces are planar, tight or open, smooth, clay infilled. Occasional pebbles up to 20mm.							Is(50) = 1.40MPa Is(50) = 1.99MPa	
5			100										XW Clay Seam, ~10° Coarse grained conglomerate IB Siltstone IB Coarse grained conglomerate IB Siltstone IB Clay Seam, 40° J, ~70°, Pl, QZ	
6			(19)										Siltstone Interbed J, 35°, Pl, S, Clnf	
7			100				MW						DD = 2.54t/m³; WD = 2.58t/m³; MC = 2%; UCS=20.3MPa Is(50) = 2.48MPa Is(50) = 2.30MPa	UCS
8			(67)											
9			100										Conglomerate bed with clasts up to 20mm	
10	77.55		(7)			<b>SILTSTONE (MW):</b> Brown/grey, fine grained, subtly foliated, generally medium strength, indurated and/or slightly metamorphosed.							Is(50) = 0.50MPa; *	
11			(10)										XW Clay Seam J, 80°-90°, I, T, Clnf J, 85°-90°, I, T, Clnf	
12			100			(See over)								

REMARKS \*Point load failed along existing defect

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# ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND  
SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No BH C34  
SHEET 2 of 3  
REFERENCE No H11124

PROJECT Bruce Highway Upgrade (Cooroy to Curra) Section C  
LOCATION Cut 9 COORDINATES 471778.6 E; 7094432.3 N  
PROJECT No FG5799 SURFACE R.L. 86.10m PLUNGE \_\_\_\_\_ DATE STARTED 11/07/11 GRID DATUM MGA94  
JOB No 232/10A/2 HEIGHT DATUM AHD BEARING \_\_\_\_\_ DATE COMPLETED 12/07/11 DRILLER Drillsure Pty Ltd

DEPTH (m)	R.L. (m)	AUGER Casing Wash Boring Core Drilling	RQD ( ) %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
			CORE REC %					EH VH H M L VL EL		20 60 200 600 2000				
10	76.10													
			(7)		<b>SILTSTONE (MW):</b> Cont'd	X								
					Defects: ~Joint at 20° (3/m) ~Joint at 45° (2/m) ~Joint at 60° (1/m) ~Joint at 75° (3/m) ~Joint at 85°-90° (3/m)	X								
11			100 (9)		Defect spacing is generally very close to closely. Defect surfaces are generally planar or irregular, tight or closed, smooth, clay infilled.	X						XW Clay Seam		
12			100 (7)			X						Fractured Clayey Zone		
13						X	MW							
14			100 (8)			X								
15	70.77		100 (40)		<b>SANDSTONE (SW):</b> Grey, fine grained, massive, high strength, indurated and/or slightly metamorphosed.	X						J, 30°, Pl, T, S, Clnf		
16					Defects: ~Joint at 30° (1/m) ~Joint at 60° (~2/m) ~Joint at 75° (~2/m) ~Joint at 85° (<1/m)	X						DD = 2.53t/m³; MC = 1%; UCS=42.8MPa	UCS	x
17			100 (32)		Defect spacing is generally close to medium. Defect surfaces are generally planar, tight or open, smooth, clay infilled.	X						Is(50) = 1.39MPa Is(50) = 2.33MPa		o
18			100 (38)			X	SW					J, 75°, Pl, O, S, Clnf		
19			100 (0)			X						J, 75°, Pl, O, S, Clnf		
20			100 (60)			X						J, 75°, Pl, T, S, Clnf		

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# ENGINEERING BOREHOLE LOG

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SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No BH C34

SHEET 3 of 3

REFERENCE No H11124

PROJECT Bruce Highway Upgrade (Cooroy to Curra) Section C

LOCATION Cut 9 COORDINATES 471778.6 E; 7094432.3 N

PROJECT No FG5799 SURFACE R.L. 86.10m PLUNGE          DATE STARTED 11/07/11 GRID DATUM MGA94

JOB No 232/10A/2 HEIGHT DATUM AHD BEARING          DATE COMPLETED 12/07/11 DRILLER Drillsure Pty Ltd

DEPTH (m)	R.L. (m)	AUGER CASING 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
										EH	VH	H	N	L	S	20	60	200	800	2000		
20	66.10					SANDSTONE (SW): Cont'd																
				100 (36)																		Is(50) = 1.97MPa x
21																						Is(50) = 0.75MPa x Is(50) = 1.37MPa o
22				100 (6)																		
23								SW														
24				100 (20)																		
25				100 (17)																		Is(50) = 2.40MPa x Is(50) = 1.34MPa o
26	60.30			100		Borehole terminated at 25.8m																
27																						
28																						
29																						
30																						

REMARKS \*Point load failed along existing defect

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## CORE PHOTO LOG - BH C34

Project Name:	BRUCE HIGHWAY UPGRADE - SECTION C		
Project No.:	FG5799	Date:	08/09/2011
Details:	Cut 9	Start Depth (m):	1.90
Reference No.:	H11124	Finish Depth (m):	25.80



SCALE 1:5



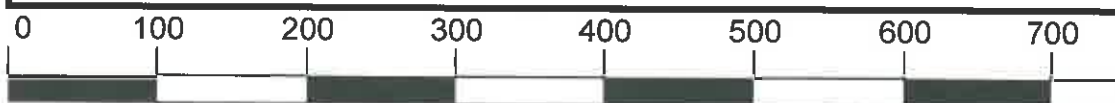
**CORE PHOTO LOG - BH C34**

Project Name:	BRUCE HIGHWAY UPGRADE - SECTION C		
Project No.:	FG5799	Date:	08/09/2011
Details:	Cut 9	Start Depth (m):	1.90
Reference No.:	H11124	Finish Depth (m):	25.80



## CORE PHOTO LOG - BH C34

Project Name:	BRUCE HIGHWAY UPGRADE - SECTION C		
Project No.:	FG5799	Date:	08/09/2011
Details:	Cut 9	Start Depth (m):	1.90
Reference No.:	H11124	Finish Depth (m):	25.80



SCALE 1:5