Queensland Government

ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH C45
SHEET 1 of 2
REFERENCE No H11133

PROJECT Bruce Highway Upgrade (Cooroy to Curra) Section C
LOCATION Cut 11 COORDINATES 471333.5 E; 7095327.1 N
PROJECT No FG5799 SURFACE R.L. 79.70m PLUNGE DATE STARTED 22/08/11 GRID DATUM MGA94
JOB No 232/10A/2 HEIGHT DATUM AHD BEARING DATE COMPLETED 22/08/11 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 (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	79.70				**TOPSOIL:** Grey, moist, organic.								
	79.30				**Clayey SILT (Residual):** Mottled grey/brown, moist.		(ML)					Based on driller's logs only	
	78.85				**SILTSTONE (XW):** Exhibits engineering properties of a brown/orange, fine grained, moist, stiff to very stiff, intermediate to high plasticity silty clay.		XW					4,6,8 N=14	SPT
	77.05			B	**RHYOLITE (XW):** Exhibits engineering properites of a brown, moist, fine grained, very stiff, intermediate to high plasticity sandy clay.		XW					6,12,15 N=27	SPT
	75.70		(0)	C	**RHYOLITE (MW):** Grey/brown, fine to medium grained, massive, mainly high strength.		MW					5/0 N>50	SPT
			(0)		Defects: -Quartz veining and infill throughout. -Joint at 20°-25° (5/m) -Joint at 30°-35° (5/m) -Joint at 50°-55° (2-3/m) -Joint at 70° (1/m)							J, 70°, Pl, C, QZ	
			(29)		Defect spacing is generally close. Defect surfaces are planar, tight or closed, slightly rough, clay infilled, iron stained, quartz infilled.							XW Clay Seam J, 50°, Pl, T, QZ J, 70°, I, T, Clnf XW CLy BZ	
												DD = 2.39t/m³; MC = 4.1%; UCS=50.2MPa	UCS x
												J, 25°, Pl, C, QZ J, 25°, Pl, C, QZ	Is(50) = 1.50MPa Is(50) = 2.98MPa o
												J, 50°, Pl, T, Thinly Clnf, FeSt	
			(0)									XW Clay Seam XW Clay Seam	
	71.90				**SILICIOUS SILTSTONE (MW):** Grey/brown, fine grained, subtly foliated, medium to high strength, indurated and/or slightly metamorphosed.								
			65		Defects: -Joint at 10° (5-6/m) -Joint at 60°-65° (5-6/m) -Joint at subvertical (2-3/m)		MW					XW Clay Seam HFZ	
			(0)		Defect spacing is very close to close. Defect surfaces are planar or irregular, tight or closed, slightly rough, clay infilled, iron stained.							Is(50) = 1.17MPa	o

REMARKS

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QLD_DMR_LIB_01A.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY FG5799 - BRUCE HWY UPGRADE SECTION C.GPJ DWG46352.GDW Datgel CPT Tool gINt Add-In 12/12/2011 16:30

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10	69.70				**SILICIOUS SILTSTONE (MW):** Cont'd		MW					BZ		
			(0)											
11	68.63		(0)		**SILICIOUS SILTSTONE (SHEAR ZONE) (HW):** Grey/brown, fine grained, brecciated, extremely low to very low strength rock.							Is(50) = 3.39MPa	x	
			(0)		Defects: -Sheared and brecciated throughout.		HW					CLy SZ		
12			(0)		Defects are extremely closely spaced. Defect surfaces are irregular, tight or closed, slightly rough, clay infilled, iron stained.									
13			(0)									Rhyolite (HW)?		
	66.11				**SILICIOUS SILTSTONE (SW):** Grey/brown, fine grained, subtly foliated, high strength, indurated and/or slightly metamorphosed.									
14					Defects: -Joint at 10°-20° (2-3/m) -Joint at 30°-35° (2-3/m) -Joint at 70°-75° (~1/m) -Joint at 80°-90° (1/m)							J, 10°, Pl, O, SR, Thinly Clnf, FeSt, QZ		
			(28)									J, Subvertical, I, O, Thinly Clnf, FeSt		
15					Defect spacing is generally close to medium. Defect surfaces are planar or irregular, tight or open, slightly rough, clay infilled, iron stained.		SW					J, 60°, I, T, Thinly Clnf, FeSt		
16														
			(27)		Petrographic report identifies sample as a volcanoclastic siltstone and sandstone.							J, 80°, Pl, T, SR, Broken, Thinly Clnf, FeSt		
17	61.93													
18					Borehole terminated at 17.77m									
19														
20														

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REMARKS

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DEPARTMENT OF TRANSPORT & MAIN ROADS
Geotechnical Branch
35 Butterfield Street, HERSTON Qld 4006
Phone 07 3115 3035 Fax 07 3115 3011

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CORE PHOTO LOG - BH C45

Project Name:	BRUCE HIGHWAY UPGRADE - SECTION C		
Project No.:	FG5799	Date:	08/09/2011
Details:	Cut 11	Start Depth (m):	4.00
Reference No.:	H11133	Finish Depth (m):	17.77

SCALE 1:5

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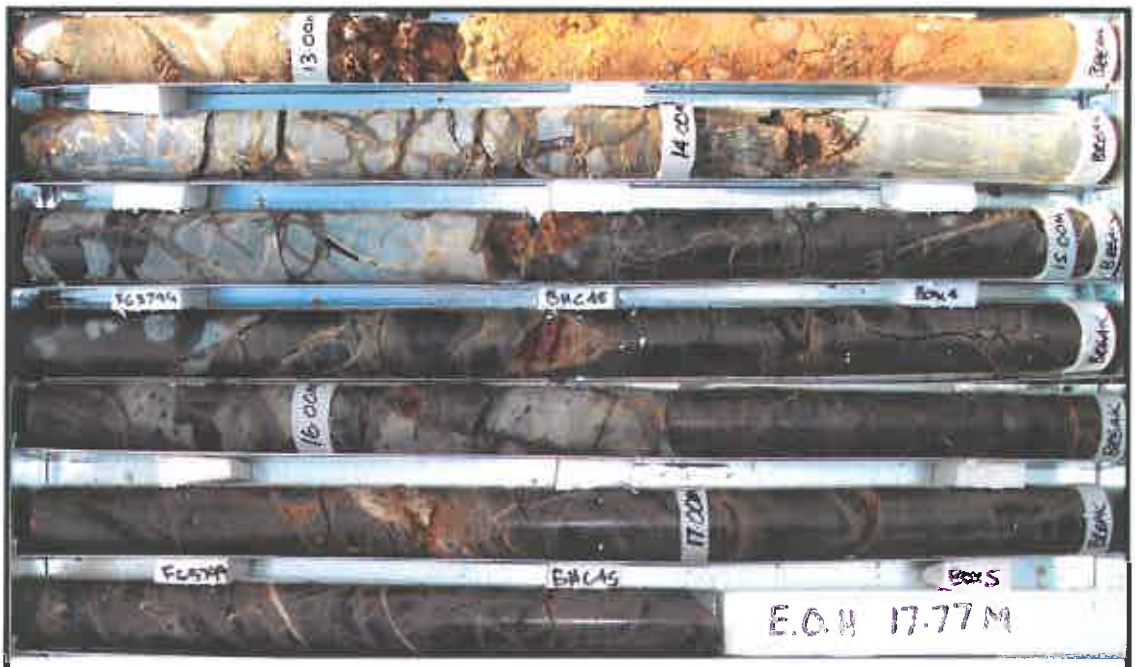

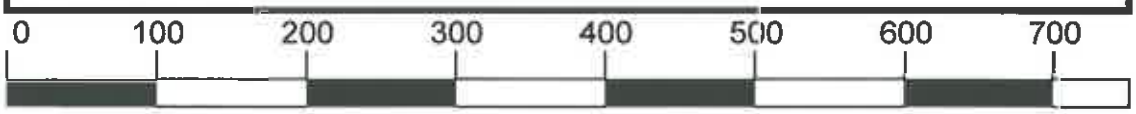

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