ENGINEERING BOREHOLE LOG

Queensland Government

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014

BOREHOLE No **BH150**
SHEET 1 of 2
REFERENCE No **12091**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION QR North Coast Rail Overpass Pier 1; CH: 9961m; COORDINATES 721578.3 E; 7662271.0 N
PROJECT No FG6184 SURFACE R.L. 10.83m PLUNGE DATE STARTED 28/10/14 GRID DATUM GDA 94 /MGA Zone 55
JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 29/10/14 DRILLER Saxon 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) (EC VC C M W VW EW)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
0	10.83				**Silty CLAY (ALLUVIUM)** Dark brown, dry, firm. Medium plasticity. Trace sand and gravel.		(CI)							
1.00	9.83			A	**Silty CLAY (ALLUVIUM)** Dark grey, moist, firm. High plasticity.							2,3,3 N=6		SPT
2				B								2,2,2 N=4		SPT
3				C	3.00m: Becoming stiff.		(CH)					3,4,7 N=11		SPT
4				D	4.00m: Becoming very stiff. 4.40m: Sand lense.							3,8,10 N=18		SPT
4.70	6.13				**Silty CLAY (ALLUVIUM)** Brown-grey, moist, stiff. Medium plasticity.									
5				E								3,4,6 N=10		SPT
6				F			(CI)					3,6,8 N=14		SPT
7				G								4,6,8 N=14		SPT
7.60	3.23				**Silty SAND (ALLUVIUM)** Pale grey, moist, medium dense. Fine to medium grained sand. Low plasticity fines.									
8				H								5,6,13 N=19		SPT
9				J			(SM)					9,12,15 N=27		SPT
10														

REMARKS Kgwu - Wundaru Granodiorite;
Sample failed along existing defect surface.
Rock Roller used from 11.14m to 13.08m.

LOGGED BY ME

TMR JAN 15.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY FG6184 - BOREHOLES.GPJ <<DrawingFile>> Datgel CPT Tool gINt Add-In 04/03/2015 10:51

ENGINEERING BOREHOLE LOG

Queensland Government

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014

BOREHOLE No BH150
SHEET 2 of 2
REFERENCE No 12091

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION QR North Coast Rail Overpass Pier 1; CH: 9961m; COORDINATES 721578.3 E; 7662271.0 N
PROJECT No FG6184 SURFACE R.L. 10.83m PLUNGE DATE STARTED 28/10/14 GRID DATUM GDA 94 /MGA Zone 55
JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 29/10/14 DRILLER Saxon Drilling

DEPTH (m)	R.L. (m)	RQD ( ) % / CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USC	WEATHERING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
10	0.83		K	**Silty SAND (ALLUVIUM)** (Cont'd)	(SM)		10,11,13 N=24	SPT
10.70	0.13			**GRANODIORITE (Kgwu)** **HW:** Grey and brown, medium to coarse grained, very low strength. Silicified in parts.		HW		
11			L				30/135	SPT
12			M				30/95	SPT
							11.14m-13.08m: Rock Roller bit used.	
13			N				30/75	SPT
13.40	-2.57	(0) 100		**GRANODIORITE (Kgwu)** **SW:** Grey and pink, medium to coarse grained, massive, high to very high strength. Defects: - Js- 0°-30° (10/m); Pl/Sm, Tl; - Js; 30°-60° (5/m); Pl/Sm, Tl; - Js; 60°-90° (5/m); Pl/Sm, Tl;		SW		
		(29) 100				MW		
14		(0)				SW	Is(50) = 1.66MPa; #	D (14.32m)
						MW		
		100				SW		
15		(20)				MW		
15.80	-4.97					SW		
16		100		**MICRODIORITE (Kgwu)** **SW:** Grey, fine grained, massive, very high strength. Defects: - Js; 0°-30° (7/m); Pl/Sm, Tl; - Js; 30°-60° (5/m); Pl/Sm, Tl; - Js; 60°-90° (2/m); Pl/Sm, Tl;		SW	Is(50) = 3.75MPa; #	D (16.23m)
		(16)					16.58m-16.60m: VN; CA; 20°	
							16.63m-16.65m: Clay seam; 30°	
							16.70m: Clay seam;	
17		100					16.90m-16.97m: CA; 70°	
		(37)						
17.60	-6.77			**GRANODIORITE (Kgwu)** **HW:** Grey, medium to coarse grained, massive, medium to high strength.		HW	17.50m-17.95m: Breccia; CA;	
18								
18.53	-7.70	100				MW	Is(50) = 0.57MPa	A (18.35m)
							Is(50) = 0.76MPa	D (18.37m)
				Borehole terminated at 18.53m. .			Is(50) = 1.11MPa	A (18.45m)
19								
20								

REMARKS Kgwu - Wundaru Granodiorite;
Sample failed along existing defect surface.
Rock Roller used from 11.14m to 13.08m.

LOGGED BY ME

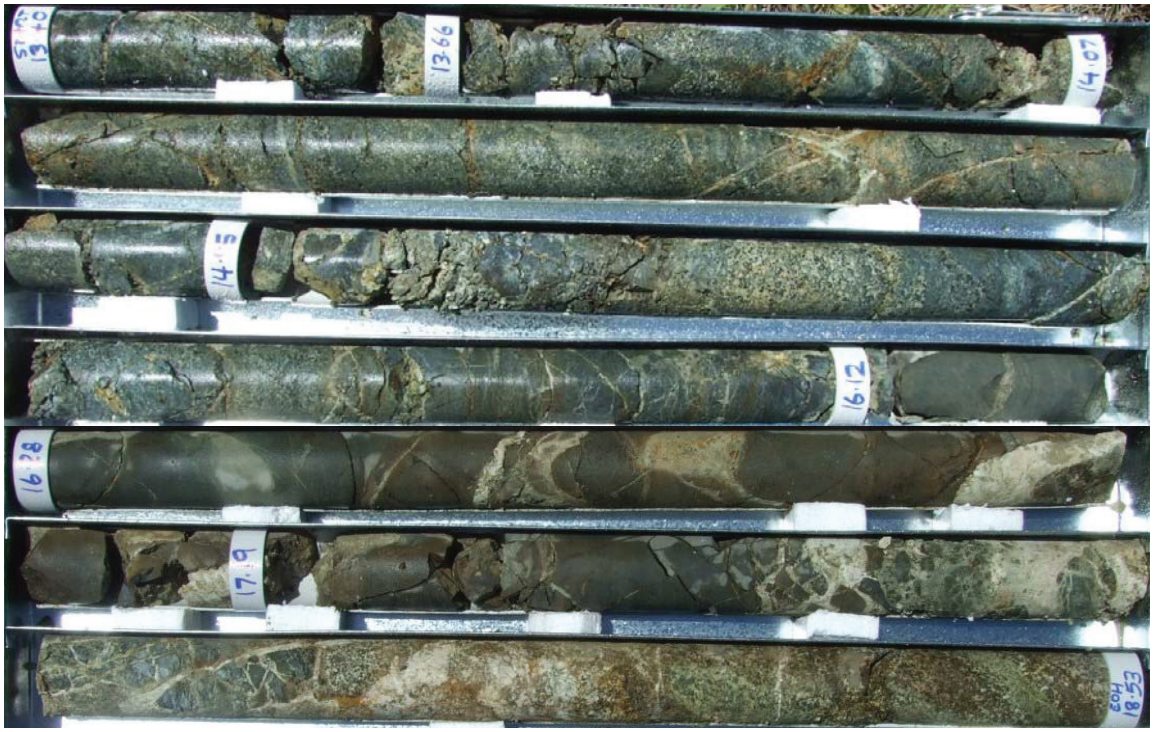
CORE PHOTO LOG

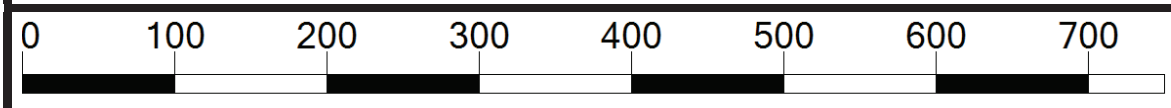
DEPARTMENT OF TRANSPORT & MAIN ROADS
Geotechnical Branch
35 Butterfield Street, HERSTON Qld 4006
Phone 07 3066 3336

Queensland Government

Department of Transport and Main Roads

Project Name	**Mackay – Ring Road**		
Project No	FG6184	Date	29/10/14
Borehole No	BH150	TMR H No	12091
Location	QR North Coast Rail Overpass	Start Depth (m)	13.4
Detail	Pier 1	Finish Depth (m)	18.53
Chainage	**9961m**	Submitted By	M.Ensor
Remarks			





SCALE 1:5

GEOT043/1