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ENGINEERING BOREHOLE LOG

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

BOREHOLE No **BH165**
 SHEET 1 of 2
 REFERENCE No **12106**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
 LOCATION QR Port Rail Overpass Abutment A; CH: 11056m; COORDINATES 721196.2 E; 7663285.6 N
 PROJECT No FG6184 SURFACE R.L. 19.61m PLUNGE _____ DATE STARTED 6/11/14 GRID DATUM GDA 94 /MGA Zone 55
 JOB No _____ HEIGHT DATUM AHD BEARING _____ DATE COMPLETED 7/11/14 DRILLER Saxon Drilling

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD () %	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	INTACT STRENGTH											DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS											
								EH	VH	H	M	J	L	VL	EL	EC	VC	C					W	VW	WW	EW							
0	19.61																																
0.20	19.41					Silty CLAY (TOPSOIL) Dark brown, moist, soft. Low plasticity. Trace sand. Rootlets throughout.	(CL)																										
1					A	Silty CLAY (FILL) Pale brown, moist, stiff to very stiff. Medium plasticity. Trace sand.	(CI)																							3.7.7 N=14	SPT		
2.20	17.51				B	Clayey GRAVEL with sand (FILL?) Grey-brown, moist, medium dense to dense. Gravel is angular, <25mm, very high strength.	(GC)																							4.12.16 N=28	SPT		
3					C																										20.16.14 N=30	SPT	
3.50	16.11				D	Clayey SAND with gravel (RESIDUAL) Grey-brown, moist, medium dense. Fine to medium grained sand. Fine, angular to subangular gravel <10mm.	(SC)																									12.12.15 N=27	SPT
5.00	14.61				E	GRANODIORITE (Kgwu) XW: Recovered as grey, black and white, moist, very stiff to hard Silty CLAY with sand. Fine grained sand.																										5.6.10 N=16	SPT
6					F																											10.12.17 N=29	SPT
7					G																											11.19.28 N=47	SPT
8					H																											26.30/80	SPT
9.00	10.61				(97)																											hb	
9.40	10.21					MICRODIORITE (Kgwu) SW: Dark grey, fine grained, massive, very high strength.	SW																									9.13m: J; 20°; Pl/Ro, TI, Cn; Is(50) = 3.99MPa; # 9.15m: J; 65°; Pl/Sm, TI, CA; 9.28m: J; 20°; Pl/Ro, TI, Cn; 9.40m: UCS=195MPa Contact at 55°; Pl/Ro, TI, Cn; Is(50) = 11.73MPa	D (9.23m)
10						GRANODIORITE (Kgwu) SW: Dark grey, medium to coarse grained, massive, very high to extremely high strength.	SW																										D (9.80m)

REMARKS Kgwu - Wundaru Granodiorite;

Sample failed along existing defect surface.

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JA



Queensland
Government

ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH165

SHEET 2 of 2

REFERENCE No 12106

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
 LOCATION QR Port Rail Overpass Abutment A; CH: 11056m; COORDINATES 721196.2 E; 7663285.6 N
 PROJECT No FG6184 SURFACE R.L. 19.61m PLUNGE DATE STARTED 6/11/14 GRID DATUM GDA 94 /MGA Zone 5
 JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 7/11/14 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								DEFECT SPACING (mm)								GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
									EH	VH	H	M	J	VL	EL	EC	VC	W	WW	VW	EW	EC	VC	W			
10	9.61					GRANODIORITE (Kgwu) SW: (Cont'd) Defects - Js; 0°-20° (2/m); PI/Ro, TI-OP, Cn or slight CA; Trace Pyrite throughout ground mass.																					
11			100 (96)																							Is(50) = 10.70MPa D (11.10m) Is(50) = 11.45MPa A (11.14m)	
12			100 (100)					SW																		11.82m: J; 35°, PI/Ro, FL, CA; Is(50) = 12.75MPa D (12.50m)	
13			100 (100)																								
14	4.96		100																							Is(50) = 5.52MPa D (14.50m) Is(50) = 7.15MPa A (14.55m)	
14.65						Borehole terminated at 14.65m .																					

TMR JAN 15.GLB Log_A_ENG ENGINEERING BOREHOLE LOG W LITHOLOGY FG6184 - BOREHOLES.GPJ <<DrawingFile>> Datget CPT Tool gINT Add-In 04/03/2015 10:52

REMARKS Kgwu - Wundaru Granodiorite;
 # Sample failed along existing defect surface.
 LOGGED BY **JA**

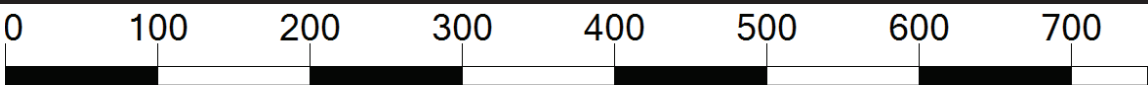
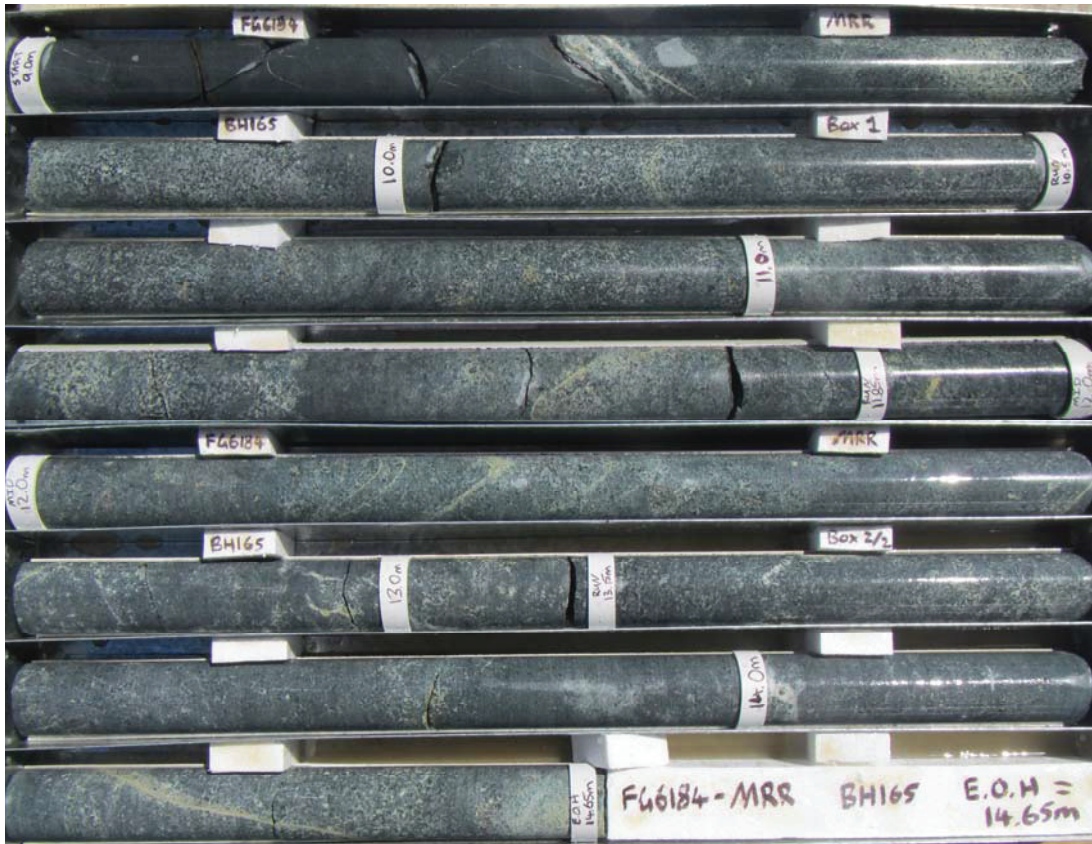
CORE PHOTO LOG

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



Department of
 Transport and Main Roads

Project Name	Mackay – Ring Road		
Project No	FG6184	Date	07/11/14
Borehole No	BH165	TMR H No	12106
Location	QR Port Rail Overpass	Start Depth (m)	9.00
Detail	Abutment A	Finish Depth (m)	14.65
Chainage	11056m	Submitted By	JA
Remarks			



SCALE 1:5