Queensland Government

ENGINEERING BOREHOLE LOG

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

BOREHOLE No **BH122**
SHEET 1 of 4
REFERENCE No **12068**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION Peak Downs Hwy Overpass Abutment B; CH: 5652m; COORDINATES 720989.5 E; 7658004.6 N
PROJECT No FG6184 SURFACE R.L. 12.79m PLUNGE DATE STARTED 5/10/14 GRID DATUM GDA 94 /MGA Zone 55
JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 6/10/14 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	12.79				**Silty CLAY (TOPSOIL)** Dark brown, moist, soft to firm. Low plasticity.		(CL)							
0.60	12.19				**Silty CLAY (ALLUVIUM)** Brown-orange, moist, stiff. High plasticity.									
1				A								4,5,6 N=11		SPT
2				B			(CH)					2,4,6 N=10		SPT
3				C	3.00m; Colour change to dark brown-orange.							3,6,8 N=14		SPT
4.00	8.79													
4				D	**Sandy CLAY (ALLUVIUM)** Orange-brown, moist, firm to stiff. Medium plasticity. Fine grained sand.							5,6,9 N=15		SPT
5				E	5.00m: Increasing sand content with depth. Becoming low plasticity.		(CI)					2,2,4 N=6		SPT
5.90	6.89													
6				F	**Silty CLAY (ALLUVIUM)** Orange-brown, moist, mainly stiff to very stiff. High plasticity. Trace fine grained sand.							2,3,4 N=7		SPT
7				G	7.00m: Colour change to grey.							4,9,12 N=21		SPT
8				H			(CH)					3,5,6 N=11		SPT
9				J								3,4,7 N=11		SPT
10														

REMARKS Kgwu - Wundaru Granodiorite;
Sample failed along existing defect surface.

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BOREHOLE No **BH122**
SHEET 2 of 4
REFERENCE No **12068**

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LOCATION Peak Downs Hwy Overpass Abutment B; CH: 5652m; COORDINATES 720989.5 E; 7658004.6 N
PROJECT No FG6184 SURFACE R.L. 12.79m PLUNGE DATE STARTED 5/10/14 GRID DATUM GDA 94 /MGA Zone 55
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10	2.79			K	**Silty CLAY (ALLUVIUM)** (Cont'd) Colour change to mainly pale grey and brown.		(CH)					3,4,8 N=12		SPT
10.60	2.19				**Clayey SAND (ALLUVIUM)** Brown-orange mottled grey, moist, loose. Fine grained.									
11				L								3,3,5 N=8		SPT
12				M	12.00m: Colour change to pale grey.		(SC)					2,3,4 N=7		SPT
13				N	13.00m: Increase in clay content with depth. Colour change to grey-brown. Becoming medium dense.							4,5,5 N=10		SPT
13.70	-0.91				**Silty CLAY (ALLUVIUM)** Brown-orange mottled grey, moist, very stiff. High plasticity.									
14				P								6,8,10 N=18		SPT
15				Q			(CH)					6,8,10 N=18		SPT
15.80	-3.01				**Clayey SAND (ALLUVIUM)** Pale grey-brown, moist, medium dense. Fine to coarse grained.									
16				R								4,11,15 N=26		SPT
17				S			(SC)					8,14,13 N=27		SPT
18				T	18.00m: Increase in clay content with depth.							9,11,16 N=27		SPT
18.60	-5.81				**Sandy CLAY (RESIDUAL)** Pale grey, moist, very stiff. Low plasticity. Fine to coarse grained sand.									
19				U			(CL)					4,7,8 N=15		SPT
20														

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BOREHOLE No **BH122**
SHEET 3 of 4
REFERENCE No **12068**

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20	-7.21			V	**Sandy CLAY (RESIDUAL)** (Cont'd) Colour change to pale grey and brown mottled orange.		(CL)					6,11,12 N=23		SPT
21				W								6,9,12 N=21		SPT
21.90	-9.11			X	**Clayey SAND (RESIDUAL)** Red-brown and yellow, moist, dense to mainly very dense. Fine to coarse grained sand. Trace fine, angular gravel.							8,28,27 N=55		SPT
22				Y			(SC)					18,30/110		SPT
23				Z								12,17,15 N=32		SPT
24				AA								30/100		SPT
25.00	-12.21			AB	**GRANODIORITE (Kgwu)** **XW:** Recovered as dark brown, moist, dense to very dense Sandy GRAVEL. Fine, angular. Fine to coarse grained sand.		XW					13,15,27 N=42		SPT
25														
26														
26.90	-14.11			AC	**GRANODIORITE (Kgwu)** **HW:** Brown, white and grey, fine to coarse grained, massive, very low strength. Some XW zones throughout.							17,30/100		SPT
27														
28				AD			HW					30/120		SPT
29			(69)	AE								hb		SPT
30														

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30	-17.21				**GRANODIORITE (Kgwu)** **HW:** (Cont'd)						
			100 (11)				HW				
31.00	-18.21				**GRANODIORITE (Kgwu)** **MW:** Pink, white and grey, fine to coarse grained, massive, medium strength. Defects: - Js; 10°-20° (4/m); Pl/Ro, OP; - Js; 50° (1/m); Pl/Ro, OP;						
			100 (61)				MW			Is(50) = 0.07MPa	A (31.35m)
31.80	-19.01				**GRANODIORITE (Kgwu)** **SW:** Grey-white, fine to coarse grained, massive, high to mainly very high strength. Defects: - Js; 10°-20° (3/m); Pl/Ro, OP, Cn; - Js; 30° (2/m); Pl/Ro, OP, Cn; - Js; 45° (1/m); Pl/Ro, OP, Cn; - Js; 70° (1/m); Pl/Ro, OP, Cn;					Is(50) = 0.78MPa; # Is(50) = 0.81MPa; # Is(50) = 3.79MPa; # UCS=97.3MPa;	D (31.95m) A (32.13m) D (32.16m)
			100 (33)				SW			Is(50) = 2.95MPa; #	D (33.30m)
			100 (76)							Is(50) = 5.91MPa Is(50) = 11.01MPa Is(50) = 7.30MPa	D (34.40m) A (34.46m) D (34.50m)
			100 (64)							Is(50) = 8.38MPa	A (35.55m)
					36.20m: Becoming MICRODIORITE.						
37.15	-24.36		100							Is(50) = 7.13MPa Is(50) = 6.13MPa	A (36.83m) D (36.88m)
					Borehole terminated at 37.15m. .						

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TMR JAN 15.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY FG6184 - BOREHOLES.GPJ <<DrawingFile>> Datgel CPT Tool gINt Add-In 04/03/2015 10:50

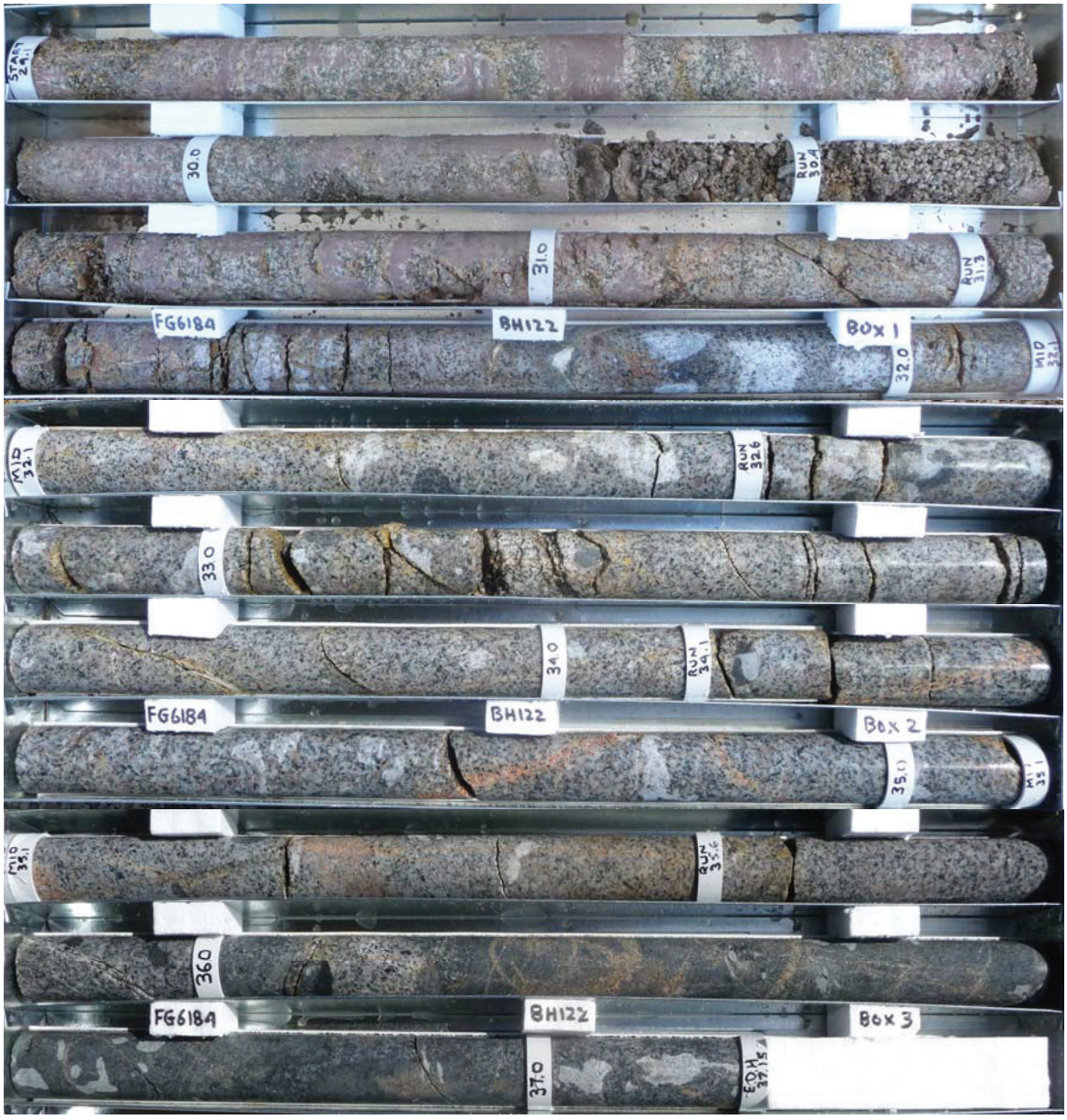
CORE PHOTO LOG

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	06/10/14
Borehole No	BH122	TMR H No	12068
Location	Peak Downs Hwy Overpass	Start Depth (m)	29.1
Detail	Abutment B	Finish Depth (m)	37.15
Chainage	**5652**	Submitted By	J. Lopez
Remarks			



0 100 200 300 400 500 600 700

SCALE 1:5

GEOT043/1