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ENGINEERING BOREHOLE LOG

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

BOREHOLE No **BH149**
SHEET **1** of **2**
REFERENCE No **12090**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION QR North Coast Rail Overpass Abutment A; CH: 9927m; COORDINATES 721591.1 E; 7662237.6 N
PROJECT No FG6184 SURFACE R.L. 10.47m PLUNGE _____ DATE STARTED 23/10/14 GRID DATUM GDA 94 /MGA Zone 55
JOB No _____ HEIGHT DATUM AHD BEARING _____ DATE COMPLETED 1/11/14 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
0	10.47					Silty CLAY (ALLUVIUM) Dark brown, moist, soft to firm. High plasticity.							
1					A		(CH)					2,2,2 N=4	SPT
2					B	2.00m: Becoming grey mottled brown.						2,2,4 N=6	SPT
2.80	7.67												
3					C	Clayey SAND (ALLUVIUM) Brown, wet, medium dense. Fine grained sand. Trace fine gravel.	(SC)				▽ 23/10	3,6,6 N=12	SPT
3.70	6.77												
4					D	SAND (ALLUVIUM) Grey, wet, medium dense. Fine to coarse grained sand.	(SW)					4,8,5 N=13	SPT
4.40	6.07												
5					E	Silty CLAY (ALLUVIUM) Brown-grey, moist, stiff to very stiff. High plasticity.						3,5,7 N=12	SPT
6					F		(CH)					4,6,8 N=14	SPT
7					G							4,7,8 N=15	SPT
8					H							4,7,9 N=16	SPT
8.70	1.77												
9					J	Silty SAND (ALLUVIUM) Pale grey, moist to wet, medium dense to dense. Fine to medium grained sand.	(SM)					9,14,15 N=29	SPT
10													

REMARKS Kgwu - Wundaru Granodiorite;

Sample failed along existing defect surface.

LOGGED BY
ME

ENGINEERING BOREHOLE LOG

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

BOREHOLE No **BH149**
SHEET **2** of **2**
REFERENCE No **12090**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION QR North Coast Rail Overpass Abutment A; CH: 9927m; COORDINATES 721591.1 E; 7662237.6 N
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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
10	0.47				K	Silty SAND (ALLUVIUM) (Cont'd)							11,17,19 N=36	SPT
11	-0.73				L	GRANODIORITE (Kgwu) XW: Recovered as grey, brown and white, moist, hard Clayey SILT.							8,12,13 N=25	SPT
12					M				XW				7,19,30/150	SPT
13					N				HW				17,30/110	SPT
13.60	-3.13			100 (0)		GRANODIORITE (Kgwu) SW: Grey, pink and white, medium to coarse grained, generally high strength. Occasional calcite veins throughout (upto 20mm). Some alteration zones. Defects: - Js; 0°-30° (5/m); Pl/Ro, TI-OP; - Js; 30°-60° (1/m); Pl/Ro, TI-OP; - Js; 60°-90° (1/m); Pl/Ro, TI-OP;		SW					13.60m-13.80m: Microdiorite	
14				100 (15)				MW					Is(50) = 0.39MPa; # A (14.20m) Is(50) = 4.87MPa D (14.25m)	
15				100 (49)				SW					14.35m-14.46m: BZ Is(50) = 0.72MPa; # A (14.50m)	
16				100 (67)				MW					Is(50) = 1.96MPa D (15.35m)	
17				100 (53)				SW					16.35m-16.36m: Clay seam; CA; Is(50) = 2.44MPa A (16.20m) Is(50) = 2.96MPa A (16.60m) Is(50) = 1.20MPa D (16.90m)	
18				100 (28)									17.90m-17.92m: Clay seam; 20° Is(50) = 1.01MPa; # A (17.83m)	
18.40	-8.23			100 (0)				MW					18.40m-18.41m: Clay seam. 18.46m-18.47m: Clay seam.	
18.70				100		Borehole terminated at 18.7m.								
19														
20														

REMARKS Kgwu - Wundaru Granodiorite;

Sample failed along existing defect surface.

LOGGED BY
ME

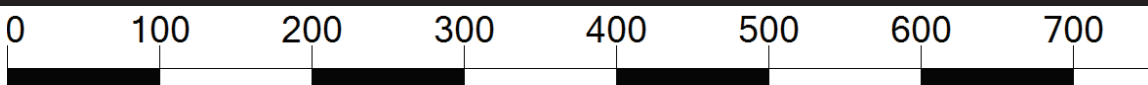
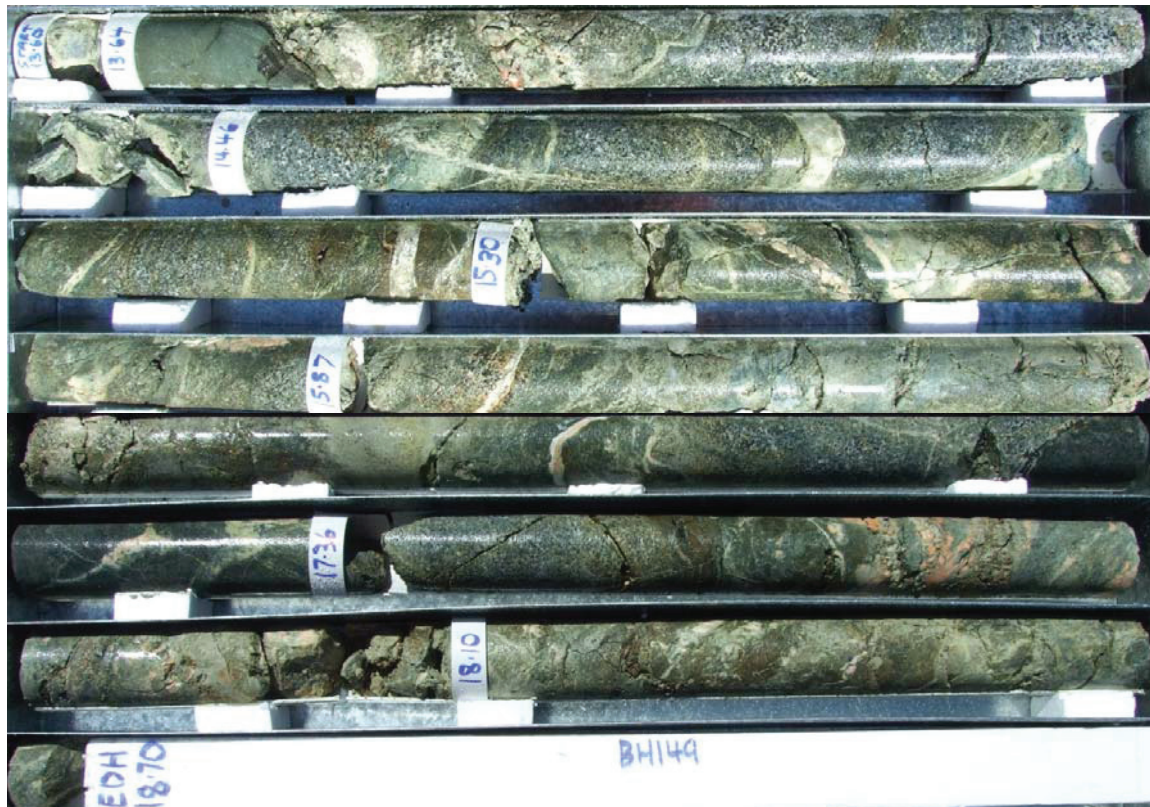
CORE PHOTO LOG

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	01/11/14
Borehole No	BH149	TMR H No	12090
Location	QR North Coast Rail Overpass	Start Depth (m)	13.6
Detail	Abutment A	Finish Depth (m)	18.7
Chainage	9927m	Submitted By	M.Ensor
Remarks			



SCALE 1:5