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BOREHOLES.GP.

THOLOGY

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Log

ENGINEERING BOREHOLE LOG

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

BH160 **BOREHOLE No** SHEET <u>1</u> of <u>2</u> REFERENCE No.

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1 Ring Road Stage 2 Overpass Abutment A; CH: 10976m; COORDINATES 721230.1 E; 7663212.1 N LOCATION PROJECT No_FG6184_____ SURFACE R.L. <u>14.28m</u> PLUNGE _____ DATE STARTED 12/12/14 GRID DATUM GDA 94 /MGA Zone 55 BEARING _ _ _ __ DATE COMPLETED 16/12/14 JOB No HEIGHT DATUM __AHD ___ DRILLER ND Drilling Pty Ltd INTACT DEFECT R.L. ROD STRENGTH SPACING ADDITIONAL DATA (m) ()% 90 Ξ MATERIAL (mm) LITHOLOGY DEPTH AND SAMPLES DESCRIPTION TESTS CORE USO COCOLOR MEDICAL ME **TEST RESULTS** REC % 0 14.28 <u>x11//</u> (SC) Clayey SAND (TOPSOIL) 14.08 Black, dry, medium loose. Fine to coarse grained. Roots & root fibres. Sandy CLAY (RESIDUAL) Orange, grey, moist, stiff. (CH) High plasticity. Fine to coarse grained sand. 4,5,8 Clayey sand band between 1.00-1.50m. SPT 12.78 GRANODIORITE (Kgwu) XW: Recovered as white, grey, orange, brown, moist, hard, Sandy CLAY. +17 24 20 В SPT + N=44 XW + . 3 3.00m: Becoming stiff. 7.5.8 SPT +N = 1310.78 3.50 GRANODIORITE (Kgwu) $\overline{+}$ MW:Grey, orange, white and black, SPT medium grained, weakly foliated, mainly +5/0 Add-In (72) very high strength. Defects: - Js; 0°-15° (4/m); Pl/Ro, Tl; - Js; 15°-30° (4/m); Pl/Ro, Tl; - Js; 30°-60° (5/m); Pl/Ro, Tl; ls(50) = 6.69MPaA _(4.40m) – D _(4.41m) – Is(50) = 5.97MPa+ 100 (99) 5.00-7.51m Defects: - Js; 0°-30° (8-10/m); PI-St/Ro, TI, Fe St, + Is(50) = 3.85MPaA (5.46m - Js; 30°-60° (6/m); PI-St/Ro, TI, Fe St, MW + some CA; 100 - Js; 60°-90° (2/m); Pl-St/Ro, TI, Fe St, (83) some CA; + Is(50) = 5.64MPa D (6.70m) +Is(50) = 3.45MPaL (6.70m) + ls(50) = 6.22MPa ls(50) = 5.48MPa A _(7.37m) – D _(7.41m) +7 30m-7 65m Altered/silicified 100 MW Is(50) = 2.73MPaA _(7.44m) (15) +-8 ++MW -8.40m-8.90m: BZ: 5.38 HW 8.90 44 -8.90m-9.05m: Fine grained band. GRANODIORITE (Kgwu) SW: Grey, + - 9 (100) ∇ white, black, medium to coarse grained, 9.10m-9.25m: Fine grained band. massive, very high strength. + ls(50) = 4.28MPaSW A (9.39m) D (9.40m) Is(50) = 9.19MPa+ 100 4.38 REMARKS Kgwu - Wundaru Granodiorite; LOGGED BY ML



TMR JAN 15.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY FG6184 - BOREHOLES.GPJ <<DrawingFile>> Datgel CPT Tool glNt Add-In 04/03/2015 10:52

ENGINEERINGBOREHOLE LOG

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

BOREHOLE No __BH160 __
SHEET __2 _ of __2 __
REFERENCE No __12101 ___

PRO.					Geotechnical Investigation - Stage 1										
				age 2 Overpass Abutment A; CH: 10976m;											
				HEIGHT DATUM <u>AHD</u> BEARING											
DEPTH (m)	R.L. (m)	AÚGER CASING WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	HK-ZHKH JC-ZHKH	DEFEC SPACIN (mm)	NG) MA	GRAPHIC LOG	ADDITIONAL DA AND TEST RESULT		SAMPLES
- - -10.33	3.95	' '	(66)		GRANODIORITE (Kgwu) XW: Recovered as brown, moist, soft, Sandy Silty CLAY.	+	χV	1							- - - -
- - - - - - 11 - -			100 (100)		MICRODIORITE (Kgwu) SW: Dark grey, fine grained, massive, very high strength. With granodiorite zones up to 0.6m wide.	+ + + + + + + + +			-				ls(50) = 7.49MPa	D (11 23m)
- - - - - - - 12			100 (100)		Defects: - Js; 15°-30° (1/m); PI/Ro, TI, some healed; - Js; 30°-45° (1/m); PI/Ro, TI, some healed; - Js; 45°-60° (2/m); PI/Ro, TI, some healed, some CA; - Js; 60°-75° (2/m); PI/Ro, TI, some healed,	++++++	SV	v					Is(50)	= 10.60MPa	A (11.37m)
- - - - - - - 13	0.00				some CA;	+ + + + + + + + + + + + + + + + + + + +									-
13.30 - - - - - - - - 14.15	0.98		100		GRANODIORITE (Kgwu) SW: Grey to dark grey, medium to coarse grained, massive, very high strength. Defects: - Js; 0°-20° (2/m); PI/Ro, TI;	+	SV	v							
-15 -15 -1617171819191919					Borehole terminated at 14.15m										
	EMARK	S <u>Kgw</u> u	u - Wund	aru G	Granodiorite;	- - -				 	-	<u>-</u> -	LO	OGGED BY	

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



Project Name	Mackay – Ring	Road							
Project No	FG6184		Date	16/12/14					
Borehole No	BH160		TMR H No	12101					
Location	Ring Road Stag	e 2 Overnass	Start Depth (m)	4.0					
Detail	Abutment A	e 2 Overpass	Finish Depth (m)	14.15					
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