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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

ENGINEERING BOREHOLE LOG

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

BOREHOLE No	BH173
SHEET	<u>1</u> of <u>3</u>
REFERENCE No	12114

PROJECT	_Macka	ay Ring F	Road_	Geotechnical Investigation - Stage 1										
LOCATION	_Fursd	en Creek	<u>Ove</u>	<u>rflow Bridge Pier 1; CH: 8710m;</u>						COO	RDINATES .	721432	<u>.6 E; 7661030.</u>	<u>2 N</u>
PROJECT N	lo <u>FG61</u>	84	. — -	SURFACE R.L 7.34m_ PLUNGE			DAT	TE ST	ARTED 2	<u> </u>	4. GRID DA	ATUM	GDA 94 /MG/	<u> </u>
JOB No				HEIGHT DATUM <u>AHD</u> BEARING			DATE C	COMF	PLETED 2	<u>1/10/1</u>	<u>4</u> DR	ILLER	Saxon Drilling	L
R.L. (m)	CORE DRILLING		SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	INTAC STRENG	T GTH	DEFECT SPACING (mm)	GRAPHIC LOG		AND RESUL		SAMPLES
0 7.34	1111	TKLO 70	•,	Silty CLAY (TOPSOIL)	7/1/		>							
- - - - - - - - -				Dark brown, moist, stiff. Medium plasticity. Some roots.		(C)							- - - - - -
- - - 1.50 5.84	1		Α		<u> </u>								4,5,7 N=12	SPT -
- - - - - - -				Silty SAND (ALLUVIUM) Brown, moist, mainly loose to medium dense. Fine to medium grained sand.										-
- - - - - -			В	Tille to medium grained sand.									2,4,4 N=8	SPT =
- - - - 3 - -			С										3,3,5 N=8	SPT
- - - - - - -4													Ν σ	- - - - -
- * 			D			(SI	1)						4,4,4 N=8	SPT -
5 			Е										4,5,6 N=11	SPT :
- - - - - - - - -			F										2,4,5 N=9	SPT :
	<u> </u>		G	7.00m: Becoming medium to coarse grained sand. Trace medium subangular gravel.									6,7,8 N=15	SPT =
- - - 8 -			Н	Sandy GRAVEL (ALLUVIUM) Brown and black, moist to wet, medium dense to dense. Fine to medium, subrounded gravel. Trace fine to coarse grained sand.									16,17,15 N=32	SPT =
- - - -						(GI	2)						14-32	- - - - -
-9 - - - - - - - 9.50 -2.16	5		J	Sile. CLAV (ALL INGUAN)	0000								4,5,6 N=11	SPT =
- - - - 10				Silty CLAY (ALLUVIUM)		(CI	1)							
•				ranodiorite; ng existing defect surface.		_						L	OGGED BY MS	
				21 60m to 22 00m		_								



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ENGINEERING BOREHOLE LOG

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

BOREHOLE No	BH173
SHEET	_2_ of _3_
REFERENCE No	12114

PROJECT	_ <u>Ma</u>	cka	y Ring F	Road	Geotechnical Investigation - Stage 1							
LOCATION	_Fur	sde	n Creek	<u>Ove</u>	<u>rflow Bridge Pier 1; CH: 8710m;</u>				COORDI	NATES <u>72143</u>	2. <u>6 E; 7661030.</u>	<u>2 N</u>
PROJECT N	o <u>FG</u>	<u>618</u>	84		SURFACE R.L 7.34m_ PLUNGE			DATE STARTED _	20/10/14	GRID DATUM	GDA 94 /MG/	<u> Zone 55</u>
JOB No					HEIGHT DATUM <u>AHD</u> BEARING			DATE COMPLETED _	<u>21/10/14</u>	DRILLER	Saxon Drilling	L
R.L. (m)	AUGER CASING WASH BORING	SORE DRILLING	RQD ()%	SAMPLE	MATERIAL DESCRIPTION	ПТНОГОВУ	USC	THE SUSCIENT OF SERVICES SERVI	EW GRAPHIC LOG	ADDITIONAL AND TEST RESU		SAMPLES
	11		IXEO 70	K	Silty CLAY (ALLUVIUM) (Cont'd) Brown, yellow and pale grey, moist, very		-1-				3,7,9	SPT -
- - - - - -					stiff. High plasticity.						N=16	
- - - - - - -				L							6,10,12 N=22	SPT :
- - - - - 12 -				M							5,9,11	SPT -
- - - - - -							(CH)			N=20	- - - - -
13 				N							6,10,13 N=23	SPT =
- - - - 14 - -				Р							6,13,12 N=25	SPT -
 											9,13,15	- - - -
- - - 15.50 -8.16	<u> </u>			Q	Silty Sandy CLAY (RESIDUAL)						N=28	SPT :
- - - - - - - -				R	Pale brown and pale grey, moist, hard. Medium plasticity.		(CI)				9,15,20 N=35	SPT
-16.50 -9.16 - - - - - -					GRANODIORITE (Kgwu) XW: Recovered as grey-brown, moist to dry, dense to very dense Clayey SAND. Fine to medium grained sand. Clay content	+ + +						- - - -
- - - - - -				S	decreases with depth.	+ + + + + + + + + + + + + + + + + + + +					11,19,26 N=45	SPT =
- - - 18 - - - - -				Т		+ + + + + + + + + + + + + + + + + + + +	xw				19,27,30/110	SPT]
- - - - - - 19				U	19.00m: Becoming Silty SAND.	+ + + + + + + + + + + + + + + + + + + +					30/90	SPT -
- - - - - - 20						+ + + + + + + + + + + + + + + + + + + +						- - - - - - -
-	(S Kg\	<u>~</u> u ⋅	- Wunda	<u>iru</u> G	ranodiorite;		_				OGGED BY	
					ng existing defect surface.						MS	
					1 21 60m to 22 00m							



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ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH173

SHEET _3_ of _3_

REFERENCE No _12114___

PRO.	JECT	_Mack	ay Ring F	Road_	Geotechnical Investigation - Stage 1						_		
LOC	ATION	_Furso	den Creel	<u>c Ove</u>	rflow Bridge Pier 1; CH: 8710m;					(CO	ORDINATES <u>721432.6 E; 7661030.</u>	<u>2 N</u>
PRO.	JECT No	<u>FG61</u>	184		SURFACE R.L 7.34m PLUNGE				DATE STARTED	20/	10	/14 GRID DATUM <u>GDA 94 /MG</u> /	<u> Zone 55</u>
JOB	No				HEIGHT DATUM <u>AHD</u> BEARING				DATE COMPLETED	21/	10	/14 DRILLER Saxon Drilling	L
DEPTH (m)	R.L. (m)	NÜGER SASING VASH BORING SORE DRILLING		SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	VEATHERING	INTACT DEFECT SPACING (mm)	EW MA	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
20	-12.66	1	REC %	V	GRANODIORITE (Kgwu)	+		>				30/120	SPT -
- - - - - - - 21 - -	-14.26			W	XW: (Cont'd)	+ + + + + 	XI	w				30/100	SPT
-					GRANODIORITE (Kgwu) HW: Grey, white and pink, fine to coarse	<u></u> +	Н١	w				21.60m-22.00m: Rock Roller bit used.	-
-22	11 06	4	(90)		grained, very low strength.	+	M	W			ŀ		1
22.20	-14.86				22.00m: Becoming MW with high strength. MICRODIORITE (Kgwu) SW: Black, fine to medium grained, massive, high to very high strength. Some thin calcite veins throughout. Defects:	+ + + + + + + + + + + + + + + + + + + +	-	•				Is(50) = 2.37MPa; #	A (22.35m)-
-			100 (85)		- Js; 5°-15° (2/m); PI/Ro, OP, some CA Ct; - Js; 30° (1/m); PI/Ro, OP, some CA Ct;	+-+-						UCS=140MPa Is(50) = 6.53MPa Is(50) = 8.56MPa	A _(23.40m) A _(23.45m) .
- 24 24 			100			+	SI	w				ls(50) = 3.47MPa; # ls(50) = 1.92MPa	D _(23.90m) A _(23.95m)
- - - - - 25 - -			(93)			- - - - - - - - - - -						Is(50) = 5.44MPa	A _(24.80m)
25.80	-18.46					+						Is(50) = 10.46MPa Is(50) = 12.08MPa	D (25.59m)
- 26	10.10		100		GRANODIORITE (Kgwu)	+	SI	$\overline{}$					(25.62M)_
			(57)		SW: Pink, white and grey, fine to coarse grained, massive, medium to high strength.	+	M'	\neg			\bigvee	26.00m-26.15m: HW zone. 26.15m-26.45m: MW Microdiorite, medium strength.	-
- - -	-19.56					+	SI	w				Is(50) = 0.52MPa; #	D (26.65m)
26.90 - 27 - - - - - - - - - - - - - - - -	-20.24		100		MICRODIORITE (Kgwu) SW: Black, fine to medium grained, massive, very high strength. Defects:	+ + + + + + + + + + + + + + + + + + + +	SI	w				Is(50) = 7.21MPa	D (27.10m)
- - - -28					- Js; 20° (1/m); PI/Ro, OP, Cn; - Js; 30°-40° (2/m); PI/Ro, OP, Cn; Borehole terminated at 27.58m.				± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ±				-
- 29													
R	EMARK	S <u>Kgw</u> ı	u - Wund	aru G	ranodiorite;		_	_				LOGGED BY	
		# Sa	mple faile	ed alo	ng existing defect surface.		_	_				MS	
		Rock	roller bit	used	1 21.60m to 22.00m.		_	_					

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



Project Name Project No	Mackay - Ring Poad			
	Mackay – Ring Road FG6184		Date	21/10/14
Borehole No	BH173		TMR H No	12114
_ocation	Fursden Creek Overflow Bri	idae	Start Depth (m)	22.0
Detail	Pier 1	ago	Finish Depth (m)	27.58
Chainage	8710m		Submitted By	J. Lopez
Remarks			· · · · · · · · · · · · · · · · · · ·	
FG 6	184	Вн173	80x 1	
30,000	T P P P P P P P P P P P P P P P P P P P			
			27.0	8 /12
FG61	84 BA	Эн173	Box	2