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# GEOTECHNICAL BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 FINAL 18/03/2016

BH248

Sheet 1 of 3

BOREHOLE No

REFERENCE No

H12257

PROJEC	T	Ν	ack	ay Ring	Ro	ad								
LOCATI	ON	Pi	one	er Rive	r B	ridge, Pier 15 (RHS)					C	COORDINATES 721362.9	E; 766052	2.8 N
PROJEC	CT No	FC	561	84		SURFACE RL 3.36m	PLUNGE 90° DATE STARTED 23/11/201				RTED 23/11/2015	GRID DATUM	6DA 94 / N	/IGA Z55
JOB No	)	24	12/2	10G/90	6	HEIGHT DATUM A.H.D.	BEAF			DATE COMPLETED 25/11/2015		DRILLER Cairns Drilling		ing
DEPTH (m)	R.L. (m)	AUGER CASING		RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH 표근구구, 고, 거 권		,	ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
- - - - - -						SAND (Fill) Brown, moist, very loose to loose. Fine to coarse grained. (River Bund)								
- - - - - -					A	1.00m: becomes very loose				- 			2, 1, 1 N=2	SPT
- - - - - - -					В					_			1,1 N=1	SPT
- - - - - - - - - -					С			(SP)					, 1, 1 N=2	SPT
- - - - - - - - -					D	4.00m: becomes loose							1, 3, 3 N=6	SPT
- - - - - - - - - - - - - - - - -					E								6, 4, 3 N=7	SPT
- - - - - - - - -	-2.64	-			F	Gravelly Silty SAND (Alluvium) Brown, wet, medium dense. Fine to medium sand and gravel.	×××××××						6, 7, 8 N=15	SPT
- - - - - - - - - -					G		$\sim \times \times$	(SP)		- - - - - - - - -			10, 13, 14 N=27	SPT
- - - - - - - - -	-4.64				Н	Silty SAND (Alluvium) Grey, wet, medium dense. Fine to coarse grained sand. Trace	XXXXXXX						7, 10, 13 N=23	SPT
- - - - - - - - - - - - - - - - - - -					I	gravel.	XXXXXXXXX	(SM)		- - - - - - - - - - -			5, 12, 15 N=27	SPT
- [	-6.64					Continued on next sheet	×							_
RE	MAR	KS:	K	gwu =	W	undaru Granodiorite						LOGGED BY	REVIE	WED BY
												T.Goosey		oley
						74.00	OTEC	INUCAL D					L	,

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								_		FINAL 1	.8/03/2016
3.4	<b>M</b>	<b>h</b>				GE	OTECHNICAL		BOREHOLE No	В	H248
		🖉 Qu	le	ensland		BC	REHOLE LOG		Sheet	2 of 3	
B		, Go	V	ernment	SI		S GEOTECHNICAL TERMS AND S REFER FORM F:GEOT 017/8-2014		REFERENCE No	H	12257
PROJECT	M	ackay Rin	g Ro								
LOCATION				Bridge, Pier 15 (RHS)					COORDINATES 721362.9	F: 76605	22.8 N
PROJECT No											
JOB No		12/10G/90	)6	HEIGHT DATUM A.H.D.		ARING		<sub>ETED</sub> 25/11/2015		airns Dril	
			T			- T					
(m) R.L (m) Eb_TH		RQD ()% ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	ГІТНОГОĞY	USCS WEATHERING	INTACT DEFECT STRENGTH SPACING 표는 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
	<u></u>	: 0		CLAY (Alluvium)	1	-	<u>+</u>			10, 18, 28 N=46	SPT
-			J	Brown, moist, hard. Low to medium plasticity. Trace	E	(CI)	<u> </u>			N=40	
				sand.	E	_	+				
- 11 -7.6	4		к	Sandy SILT (Residual)	×.	×			27	7, 30/120mm	SPT
				Dark grey to pale grey, moist, hard Fine to medium grained. Granite	. ×	(ML)	I I				-
				rock fabric visible.	×	×	+				-
- 12 -8.6	4		t	Silty SAND (Residual)		>				30/50mm	SPT
				Dark grey to pale grey, moist, very dense.	××	2					-
-				Fine to coarse grained sand. Grani	te 🔆	2					
13			M	rock fabric evident.	×	2				30/110mm	SPT
					××		+				-
_					××						
- - 14			N		×××	2	±			30/80mm	SPT
					×	2					
-					××	2	+				
-					××	(SM)				20/20	-
- 15			0		×××					30/70mm	SPT 
-					×	\$	+				
					××	2					-
16 			P		××		+			30/0mm hb	<u></u>
					×	2	<u> </u>				-
					××						-
17 			Q	-	××					30/50mm hb	SPT -
-					×××						-
- - 14.5	54				×	2	+				
- 18 -14.7	79	(33)		MICRODIORITE MW: Grey, fine grained, massive,	¥	) MW		18.15m-18.21m: XW	/ zone. Is(5	0)=1.70 MPa	D (17.95m)
				medium to high strength.	_/[+]	• MW			Is(5	0)=0.14 MPa 0)=0.66 MPa	A (18.26m)– D (18.34m) <sup>–</sup>
-				GRANODIORITE (Kgwu )	-	+	м vс-с	18.65m-19.10m: HW	/ zone		-
- - 19 -		100		MW: Brown to pale grey, course grained, porphyritic, medium to	÷	нw •		19.00m-19.10m: BZ; 19.10m-19.20m: CO			
		(24)		high strength. -J's: 5°-15° (6-7/m), PI/Ro, OP, FeSt	- 14 4	•	c		Is(5	0)=0.38 MPa	. ,
				some Sinf. -J's: 25°-35° (1-2/m), Pl/Ro, OP, Fe	1	• MW			ls(5	0)=0.25 MPa	A (19.50m)_ 
16.6	64			Continued on next sheet	+		VC-C				
REMA	RKS:	Kgwu	= V	Vundaru Granodiorite					LOGGED BY	REVIE	EWED BY
		-							T.Goosey		Foley

TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

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										FIN	NAL 1	8/03/2016
1. 9.6	àc.			G	GEO	TECHN	IICAL		BOREHOLE	No	BI	H248
Queensland					BOREHOLE LOG					Sheet 3 of 3		
139	🗶 Gove	ernment		FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014			REFERENCE	No	H1	12257		
PROJECT	Mackay Ring Ro	ad						[				
LOCATION		Bridge, Pier 15 (RHS)							COORDINATES 72	1362.9 F: 7	66052	22.8 N
PROJECT No	FG6184	SURFACE RL	3 36m	PLUNG	ge 90°		DATE ST	 Arted 23/11/201		DATUM GDA		
JOB No	242/10G/906	HEIGHT DATUM		BEARIN				LETED 25/11/201		RILLER Cairr		
			A.H.D.				DATE COMP				13 0111	
(E) HL R.L. M) O	AUGER ACSING COSSING COSSING CORE COSSING CORE REC % REC % COSSING COSSINO	MATERIAL DESI	CRIPTION	LITHOLOGY	WEATHERING _EH	INTACT STRENGTH 북 <sub>구구</sub> 독고,국교		;	ADDITIONAL DATA AND TEST RESULTS	Δ		SAMPLES TESTS
-		GRANODIORITE (Kgw	/u	F 71	лw	MH		20.10m-20.20m: H	W zone			-
		, MW: (Cont'd)		┢┿╞╸	W	LM	VC-C	20.35m-20.50m: H	W zone	Is(50)=0.	41 MPa	_ A (20.51m)_
-	100 (54)	-		+		мн						-
21				++			с	→ 21.23m-21.25m: B		Is(50)=0.	.16 MPa	A (21.10m)
-				+ + <sup>™</sup>	лw		с	loss.	z; lotal water	Is(50)=0.	.60 MPa	D (21.36m)_
				++		н	м			UCS=2.	.39 MPa	 (21.77m) –
- 22 -18.64		GRANODIORITE (Kgw	/u	++++	łW	L	VC	22.00m-22.20m: H				-
	100 (0)	-) HW: Brown grey, cou	rse grained.	ŀ‡F				22.20m-22.30m: C 22.30m-22.76m: H gravel.				-
-		porphyritic, low to m strength.	-	++++			c					-
- 23		-J's: 75°-85° (5-6/m),		• + +		LM	VC-C			ls(50)=0.	.39 MPa	D (22.85m)
		Clay and sand infill, F	eSt.	++			EC- VC					-
-				▶ + ⊦ +	łW							-
- 24	100	-					VC-C					-
-				++		LM						-
21.29				++			VC-C			Is(50)=0.	.21 MPa	l (24.35m) _ 
	100	GRANODIORITE (Kgw	/u	++		н						-
- 25 -	(69)	SW: Pale grey, coarse	-	++		-		== 25.07m-25.11m: B	Z; DI?			
-		porphyritic, high to v strength.	ery high							Is(50)=1. Is(50)=4.		A (25.34m) D (25.45m)
		-J's: 5°-15° (4-5/m), F -J's: 25°-35° (2/m), Pl		,++			с					- (20.45m)_
26		-J's: 75°-85° (1/m), Pl		+ + + +		H-VH						-
-		~10mm thick, FeSt		+++++++++++++++++++++++++++++++++++++++			м			UCS=64.	.80 MPa	 (26.40m) <sup></sup>
				++			c					(20.4011)
- 27	100 (89)	-				H-VH	с					
		From 27.22m: Defect	ts	r •	SW		E	27.11m-27.22m: B	Z; Fe St;	Is(50)=3. Is(50)=1.		A (27.22m)
		-J's: 5°-15° (2-3/m), and CA		• + +			c			13(50)-1.	ou wira	D (27.32m)- 
		-J's: 25°-35° (1-2/m) FeSt	, PI/Ro, TI,	++			с					
- 28 -				++			м					
-				+		VH	IVI			Is(50)=1. Is(50)=2.		A (28.40m) D (28.50m)
				++			с					D (28.3011)= - -
- - 29 -				ţ.								-
				+			м					-
26.49	100			[+]			M	━ 29.58m-29.60m: B	Ζ;	Is(50)=6.		A (29.70m)
-		Borehole complete	ed at 29.85m	ſŢ		_	-			Is(50)=6.	.∠∪ MPa	D (29.80m)_
REMAR	KS: Kgwu = W	/undaru Granodio	rite						LOGGED	BY F	REVIE	WED BY
	0								T.Goose			Foley
			TMR	GEOTECHNIC	CAL BOREH	IOLE LOG - CREATED V	VITH HOLEBASE SI			/	5.	1

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### CORE PHOTO LOG

DEPARTMENT OF TRANSPORT AND MAIN ROADS Geotechnical Section 35 Butterfield Street, Herston Qld 4006 Phone 07 3066 3336



Project Name	Mackay – Ring Road (Stage 2)		
Project No.	FG6184	Date	23/11/15
Borehole No.	BH 248	TMR H No.	H12257
Location	Pioneer River Bridge	Start Depth (m)	17.90
Detail	Pier 15, RHS	Finish Depth (m)	29.85
Chainage		Submitted By	M.Ensor
Remarks			
		2.42	
		M.K. BOX 3	
0 100	200 300 400 SCALE 1:5	500 600	700

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DEPARTMENT OF TRANSPORT AND MAIN ROADS Geotechnical Section 35 Butterfield Street, Herston Qld 4006 Phone 07 3066 3336



Project Name	Mackay – Ring Road (Sta	age 2)		
Project No.	FG6184		Date	23/11/15
Borehole No.	BH 248		TMR H No.	H12257
Location	Pioneer River Bridge		Start Depth (m)	17.90
Detail	Pier 15, RHS		Finish Depth (m)	29.85
Chainage			Submitted By	M.Ensor
Remarks			<b>,</b>	
Remarks			M.K. BOX	
0 100		400 CALE 1:5	500 600	700

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