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# GEOTECHNICAL BOREHOLE LOG

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

BH230

Sheet 1 of 3

BOREHOLE No

REFERENCE No

H12239

PROJE	ROJECT Mackay Ring Road												
LOCAT	ION	N Pioneer River Bridge, Pier 9 (RHS) COORDINATES 721331.8 E; 7660314.8 N											
PROJE	CT No	FG6184         SURFACE RL         3.45m         PLUNGE 90°         DATE STARTED         26/10/2015         GRID DATUM         GDA 94 / MGA Z52									/IGA Z55		
JOB N	0	242,	12/10G/906         HEIGHT DATUM A.H.D.         BEARING °         DATE COMPLETED 27/10/						TED 27/10/2015	DRILLER S	axon Drill	ing	
DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	ГІТНОГОGY	USCS WEATHERING	INTACT STRENGTH 표두ㅜㅜ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	DEFECT SPACING	Å	ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
	-0.05				Silty SAND trace gravel (Fill) Pale orange grey, moist to wet, loose to medium dense. Fine to coarse grained sand, fine to coarse grained gravel, rounded grains. Silty SAND (Alluvium) Grey, wet, loose.								
- 4 				A	Fine to medium grained sand.		(SM)					4, 3, 3 N=6 1, 4, 16 N=20	SPT 
- - - - - - - - - - - - - - - - - - -	-2.25	-		С	Medium to coarse grained sand. Silty SAND trace gravel trace clay (Alluvium) Pale grey, wet, medium dense. Fine to medium grained sand, fine to medium grained gravel, angular grains.							4, 10, 13 N=23	SPT
				D		xxxxxx	(SM)					7, 8, 9 N=17	SPT
- 8 				E		××~×~×~×~×~×~×~×~×~×~×~×~×~×~×~×~×~×~×			- - - - - - - - - -			7, 10, 12 N=22	SPT
- - - - - -	-6.05			F	Sandy CLAY (Alluvium)	×~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	(CL)		- - - - - -			8, 13, 13 N=26	SPT 
	0.00			_	Continued on next sheet	L.:	1	J		L			
RI	emar	KS:	Kgwu =	W	/undaru Granodiorite						LOGGED BY	REVIE	WED BY
											C.Boyes	S.I	Foley
	TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI												

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# GEOTECHNICAL BOREHOLE LOG

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

BH230

Sheet 2 of 3

BOREHOLE No

REFERENCE No

H12239

PROJEC	T	N	/lac	kay Ring	g Ro	ad								
LOCATI	ON	Р	ion	eer Rive	er B	ridge, Pier 9 (RHS)					0	COORDINATES 721331.8	E; 766031	L4.8 N
PROJEC	T No	F	G61	L84		SURFACE RL 3.45m	PLUNGE 90° DATE STARTED 26/10/2015 GRID DATUM GDA 94 / MG						/IGA Z55	
JOB No		2	42/	10G/90	6	HEIGHT DATUM A.H.D.	BEAF			DATE COMPLE	TED 27/10/2015	TED 27/10/2015 DRILLER Saxon Drill		
DEPTH (m)	R.L. (m)	NUGER	WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH 표구구구주구경교	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
					G	Sandy CLAY (Alluvium) (Cont'd) Pale grey mottled brown, moist, hard. Fine grained sand, low plasticity.		(CL)					8, 13, 19 N=32	SPT
11	-8.05	-			н	CLAY trace sand (Alluvium) Pale green grey, moist, stiff.							9, 10, 11 N=21	SPT
- 12 	-9.25				I	Fine to medium grained sand, medium plasticity.		(CI)		- - - - - - -			3, 6, 9 N=15	SPT
13 						Gravelly Sandy CLAY (Residual) Pale white grey, moist, soft. Fine to medium grained gravel, angular grains, high plasticity.	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	(CH)		- 			5, 2, 2 N=4	SPT
14 	-10.70				к	14.0m: Becoming very dense. GRANODIORITE (Kgwu) XW: Recovered as grey, moist, very dense, silty sand trace clay. Fine to		xw		- 			9, 26, 27 N=53	SPT
- 15 - 15 	<u>-11.35</u>	-				medium grained sand. MICRODIORITE (Kgwu) XW: Recovered as green grey, moist, very dense, clayey sandy gravel. Fine to medium grained gravel, angular grains, medium to high plasticity.	▶ <b>+</b> + - + +	xw		- - - - - - - - -			19, 20, 30/90 hb	SPT
- 16 	-13.25				M		+ + + + + + + + + +			- 			30/70 hb	
- 17 - 17 					N	GRANODIORITE (Kgwu) XW: Recovered as grey, moist, very dense, silty sand trace clay. Fine to coarse grained sand.		xw		- - - - - - - - - - -			30/80 hb	
- 18 -	-14.75	╎┝		(11)		GRANODIORITE (Kgwu)	+ + + +			VC	18.00m: No sample r	recovere	hb	
- - - - - - - - - - - - - - - - - - -	-15.09					HW: Grey and dark grey, medium to coarse grained, medium strength. GRANODIORITE (Kgwu) SW: Grey and dark grey, medium to	+ + + + + + + + + + + + + + + + + + + +	нw мw	M	vc	□ 18.49m-18.53m: HW	ls( ls(	50)=0.75 MPa 50)=2.40 MPa 50)=1.30 MPa	D (18.45m)
-	-16.55			100 (40)		coarse grained, porphyritic, very high strength. Js: 5° to 15°; (5/m); PI/Sm; OP; Cn or Sinf;	+ + + + + + + + + + + + + + + + + + + +	SW	VH	M		ls(	50)=1.30 MPa 50)=4.30 MPa 50)=3.60 MPa	A (19.14m) 
						Continued on next sheet							1	
RE	MAR	KS:	k	(gwu =	= W	'undaru Granodiorite						LOGGED BY		WED BY
							OTEC		DREHOLE LOG - CREATED W			C.Boyes	S.I	Foley
						TMR GE	JUIECH	INICAL BO	UNCHOLE LOG - CREATED W	INT HULEBASE SI				

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Image: Signed bit of the construction of the construle of the construction of the construction															FINAL 1	.8/03/2016
		1. 20	àc.			235			GE	OTECH	NICAL			BOREHOLE No	В	H230
Table         Control (Control)         Control (Control)         Control (Control)           Process         Former River (River, River, River, River, River, Stat)         Sectors (Control)         Control (Control)         Control (Control)           Process         Sectors (Control)         Sectors (Control)         Sectors (Control)         Control (Control)         Sectors (Contro)         Sectors (Contro)         Sectors (Contro)         Sectors (Control)	ME.		S S	<sup>i</sup> Qu	e	ensland			BC	REHOL	e log			She	et 3 of 3	
Marchay King Kood         Toologo King Kood         Toologo King King Kood         Tool King Kood         Tool King King Kood         Tool King King Kood         Tool King King Kood         Tool King Kood         Tool King Kood         Tool Kood King Kood         Tool Kood King Kood         Tool Kood King Kood         Tool Kood Kood Kood Kood Kood Kood Kood K	1	S.		Go	Ve	ernment		SY						REFERENCE No	н	12239
Control         Revere Theor Indigs. Pler 9 (In 5)         Control 021111.1.1.7.7660314.8.110           Note Trive         REG164         server.e.s., 345m         runner 90°         control 021111.0.1.7.7660314.8.110           Or No         222050705         server.e.s., 345m         runner 90°         control 021111.0.1.7.7660314.8.110           Mage         Internet notes, 345m         server.e.s., 345m         runner 90°         control 02111.0.1.7.7660314.8.110           Mage         Internet notes, 345m         server.e.s., 345m         server.e.s., 345m         server.e.s., 345m           Mage         Internet notes, 345m         server.e.s., 345m         server.e.s., 345m         server.e.s., 345m           Mage         Internet notes, 345m         server.e.s., 345m         server.e.s., 345m         server.e.s., 345m           Mage         Internet notes, 345m         server.e.s., 345m         server.e.s., 345m         server.e.s., 345m           Mage         Internet notes, 345m         Internet notes, 345m         server.e.s., 345m         server.e.s., 345m         server.e.s., 345m           Server.e.s.         Internet notes, 35m         Internet notes, 35m         server.e.s., 345m         server.e.s., 345m         server.e.s., 345m           Server.e.         Internet notes, 35m         Internet notes, 35m         server.e.s., 345m	PROJECT		Mac	kay Ring	σ Rc	ad										
NUME         ESSER         NUMEOR IS         NUMEOR													COORD	NINIATES 721331	8 F· 76603	14 8 N
Disk         22/102(NDL         Miller (MLALALIZ)         Miller         DISK Constraints         Mathematical Constraints         Mathematiconstraints         Mathematical Constraints							3 45m	PII	INGE C	90°	DATE STA	 ARTED 26/10/201				
Ethics         Control         Control <thcontrol< th=""> <thcontrol< th=""> <thco< td=""><td></td><td>NO</td><td></td><td></td><td>)6</td><td>_</td><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></thco<></thcontrol<></thcontrol<>		NO			)6	_			-							
REMARKS:         Kgwu = Wundaru Granodiorite									-							
And American Strate         Strate Strate         St	DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING						USCS WEATHERING	INTACT STRENGTH 표준도도	SPACING			AND		SAMPLES TESTS
- 28       - 29       - 20       - 20       - 20	22			<u>100</u> (69)		¢A Vr or Cn, some Sii GRANODIORITE (Kgw SW: (Cont'd) 21.16m: Defects bec Js: 5° to 20°; (<2/m); Cn; 22.95 to 23.10m: MII (SW): Grey, fine grai high strength. Fractu Upper contact: 40°; 1 Lower contact: 40°; 1 Lower contact: 40°; 1 22.95m: Defects bec Js: 5° to 15°; (~10/m OP; Cn; Js: 50° to 60°; (~3/m CA Vr or Cn;	nf; ru) oome: PI/Sm; OP; PI/Sm; OP; CRODIORITE ned, massive, red. Jn/Ro; Jn/Ro; Jn/Ro; j; PI-Un/Sm; ); PI-Un/Sm;		SW	VH	C C M M	→ 20.48m-20.51m: k	BZ;		UCS=57.20 MPa E=46.7 GPa v= 0.15 IS(50)=8.50 MPa IS(50)=4.70 MPa	(22.08m) - A (22.20m) D (22.30m)-
REMARKS: Kgwu = Wundaru Granodiorite  REMARKS: Kgwu = Wundaru Granodiorite  REMARKS: Kgwu = S.Foley  C.Boyes S.Foley	- - - - - - - - - - -									-						
REMARKS: Kgwu = Wundaru Granodiorite          Image: C.Boyes       S.Foley	- - - 28 - - - - - -									-						
C.Boyes S.Foley	- - 29 - - - -									-						
C.Boyes S.Foley	-										+					-
C.Boyes S.Foley																
	REI	MAR	KS: k	<gwu =<="" td=""><td>= W</td><td>/undaru Granodio</td><td>rite</td><td></td><td></td><td></td><td></td><td></td><td>L</td><td></td><td></td><td></td></gwu>	= W	/undaru Granodio	rite						L			
TIVIK GEUTECHNICAL BUKEHULE LUG - CKEATED WITH HULEBASE ST							TMI	GEOTE	HNICAI R	OREHOLE LOG - CREATE	) WITH HOLEBASE SI			C.Boyes	S.	Foley

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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 Name Project No.	FG6184	Date	27/10/15
Borehole No.	BH 230	TMR H No.	H12239
Location	Pioneer River Bridge	Start Depth (m)	18.20
Detail	Pier 9, RHS	Finish Depth (m)	23.70
Chainage		Submitted By	M.Ensor
Remarks		Submitted By	M.LIISOI
R6184			
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