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**Queensland
Government**

**GEOTECHNICAL
BOREHOLE LOG**

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

BOREHOLE No **BH260**

Sheet 1 of 4

REFERENCE No **H12269**

PROJECT	Mackay Ring Road		
LOCATION	Pioneer River Bridge, Pier 19 (RHS)	COORDINATES 721381.0 E; 7660662.1 N	
PROJECT No	FG6184	SURFACE RL 5.50m	PLUNGE 90°
			DATE STARTED 05/07/2015
			GRID DATUM GDA 94 / MGA Z55
JOB No	242/10G/906	HEIGHT DATUM A.H.D.	BEARING °
			DATE COMPLETED 06/07/2015
			DRILLER Saxon Drilling

DEPTH (m)	R.L. (m)	AUGER CASING WASHBORING CORE DRILLING	RQD (%) CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS		
												EH	VH
4.80					Silty CLAY (Topsoil) Dark brown, moist, very soft. High plasticity.								
1				A	Silty Sandy CLAY (Alluvium) Dark brown, moist, very soft. Fine grained sand, medium plasticity.	(CI)				1, 1, 2 N=3	SPT		
2	3.30			B	2.00m: becomes very soft Clayey SAND (Alluvium) Dark brown, moist, very loose. Fine grained sand.	(SC)				1, rw, 1 N=1	SPT		
3	2.80			C	Silty Sandy CLAY (Alluvium) Dark brown, moist, firm. Fine grained sand, low to medium plasticity.	(CI)				3, 3, 4 N=7	SPT		
4	1.50			D	SAND trace clay (Alluvium) Pale brown grey, moist, medium dense. Fine to medium grained sand, poorly graded.	(SP)				3, 6, 5 N=11	SPT		
5	0.00			E	5.00m: Becomes wet, loose. Fine to coarse grained sand.					1, 1, 7 N=8	SPT		
6				F	Interbedded SAND and Sandy GRAVEL (Alluvium) Pale orange grey, wet, medium dense. Fine to coarse grained sand, fine to medium grained gravel, rounded and subangular grains.	(SW)				7, 11, 10 N=21	SPT		
7	-1.50			G	Sandy GRAVEL (Alluvium) Brown, wet, medium dense. Coarse grained sand, fine grained gravel, subrounded grained.					5, 8, 14 N=22	SPT		
8				H		(GP)				10, 7, 15 N=22	SPT		
9				I						6, 9, 10 N=19	SPT		
-4.50													

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REMARKS: Kgwu = Wundaru Granodiorite

LOGGED BY	REVIEWED BY
C.Boyes	S.Foley



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BOREHOLE No **BH260**

Sheet 2 of 4

REFERENCE No **H12269**

PROJECT	Mackay Ring Road		
LOCATION	Pioneer River Bridge, Pier 19 (RHS)	COORDINATES 721381.0 E; 7660662.1 N	
PROJECT No	FG6184	SURFACE RL 5.50m	PLUNGE 90°
			DATE STARTED 05/07/2015
			GRID DATUM GDA 94 / MGA 255
JOB No	242/10G/906	HEIGHT DATUM A.H.D.	BEARING °
			DATE COMPLETED 06/07/2015
			DRILLER Saxon Drilling

DEPTH (m)	R.L. (m)	FAUGER CASING WASHBORING CONE DRILLING	RQD (%) CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS		
												EH	VH
11	-5.90			J	Clayey SAND (Alluvium) Pale grey, wet, medium dense. Fine grained sand, medium to high plasticity.	(SC)					1, 4, 10 N=14	SPT	
				K	11.00m: clay component decreasing.						8, 10, 13 N=23	SPT	
12				L	SAND trace silt (Alluvium) Pale grey and orange grey, wet, medium dense. Fine to coarse grained sand, subrounded grains.	(SP)					7, 7, 9 N=16	SPT	
13	-7.60			M	13.00m: becomes dense. GRANODIORITE XW: Recovered as grey and dark grey, moist, dense, silty clayey sand. Fine to medium grained sand.						8, 14, 30 N=44	SPT	
14				N	14.00m: becomes very dense.	XW					23, 30, 30/140	SPT	
15				O							18, 30, 30 N=60	SPT	
16	-10.00			P	GRANODIORITE (Kgwu) HW: Recovered as speckled grey, dark grey, moist, very dense, silty sand. Fine to coarse grained sand. Pyrite throughout, rock structure evident.						30, 30/115	SPT	
17				Q	17.00m: becomes speckled grey, dark grey and pink. Pyrite content decreasing.						22, 30/120	SPT	
18				R	18.00m: pyrite throughout.	HW					30/110	SPT	
19	-14.40			S							30/60 hb	SPT	

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BOREHOLE No **BH260**

Sheet 3 of 4

REFERENCE No **H12269**

PROJECT	Mackay Ring Road				COORDINATES	721381.0 E; 7660662.1 N	
LOCATION	Pioneer River Bridge, Pier 19 (RHS)						
PROJECT No	FG6184	SURFACE RL	5.50m	PLUNGE	90°	DATE STARTED	05/07/2015
						GRID DATUM	GDA 94 / MGA 255
JOB No	242/10G/906	HEIGHT DATUM	A.H.D.	BEARING	°	DATE COMPLETED	06/07/2015
						DRILLER	Saxon Drilling

DEPTH (m)	R.L. (m)	FAUGER CASING WASHBORING CORE DRILLING	RQD (%) CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH										DEFECT SPACING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS	
								EH	VH	H	M	J	VJ	EU	EC	VC	C				M
-14.80				CORE LOSS	CORE LOSS																
-15.45			60 (9)		GRANODIORITE (Kgwu) XW: Recovered as grey, moist, very dense, sand. Medium to coarse grained sand.	XW															
			100 (0)		CORE LOSS																
			100 (0)		GRANODIORITE (Kgwu)	XW															
-16.50			100 (0)		XW: Recovered as grey, moist, very dense, sandy gravel. Coarse grained sand, fine grained gravel.																
-16.66			60 (20)		CORE LOSS																
			100 (89)		GRANODIORITE (Kgwu) HW: Grey, dark grey and pale red, coarse grained, porphyritic, low to medium strength. Js: 5° to 20°; (5/m); PI/Ro; TI-OP; Fe St; Js: 20° to 50°; (1/m); PI/Sm; OP; Fe St;	MW HW MW															
-17.94			100 (89)		GRANODIORITE (Kgwu) SW: Speckled grey, dark grey and pale red, coarse grained, massive, very high strength. Js: 30° to 45°; (~1/m); PI/Ro; OP; Cn; Js: 5° to 15°; (<2/m); PI/Ro; OP; Cn;	SW															
-19.92			100 (67)		MICRODIORITE (Kgwu)																
			100 (90)		SW: Grey speckled dark grey, fine grained, massive, high to very high strength. Js: 5° to 15°; (<3/m); PI-Un/Ro; OP; Cn; Js: 50° to 80°; (2/m); PI/Sm-Ro; CD; CA VN <5mm;	SW															
-21.91			100 (87)		GRANODIORITE (Kgwu) SW: Speckled grey, dark grey and pale red, medium to coarse grained, massive, high to very high strength. Js: 35° to 50°; (4/m); PI/Ro-Sm; CD-OP; Cn; Js: 5° to 15°; (<2/m); PI-Un/Ro; OP; Cn;																
			100 (100)		29.52 to 29.73m: Microdiorite (SW): grey, fine grained, massive, very high strength.																
-24.50																					

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REMARKS: Kgwu = Wundaru Granodiorite

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BOREHOLE No **BH260**

Sheet 4 of 4

REFERENCE No **H12269**

PROJECT	Mackay Ring Road		
LOCATION	Pioneer River Bridge, Pier 19 (RHS)	COORDINATES 721381.0 E; 7660662.1 N	
PROJECT No	FG6184	SURFACE RL 5.50m	PLUNGE 90°
			DATE STARTED 05/07/2015
			GRID DATUM GDA 94 / MGA Z55
JOB No	242/10G/906	HEIGHT DATUM A.H.D.	BEARING °
			DATE COMPLETED 06/07/2015
			DRILLER Saxon Drilling

DEPTH (m)	R.L. (m)	FAUGER CASING WASHBORING CORE DRILLING	RQD (%) CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS		
												EH	VH
31	-25.61		100	(93)	GRANODIORITE (Kgwu) SW: (Cont'd)	+	SW			Is(50)=8.30 MPa	D (30.10m)		
32					MICRODIORITE (Kgwu) SW: Grey, fine grained, massive, very high strength. Some calcite veining throughout <1mm thick. Js: 0° to 30°; (1/m); Pl/Sm-Ro; OP; Cn or CA Ct; Js: 50° to 70°; (<1/m); Pl/Sm-Ro; OP; Cn or CA Ct;	∇	SW	VH	w	Is(50)=15.00 MPa Is(50)=9.10 MPa	D (31.10m) A (31.25m)		
33										Is(50)=1.50 MPa Is(50)=5.70 MPa	D (32.27m) A (32.40m)		
34	-28.60		100		34.06 to 34.10m: GRANODIORITE (SW): pink, coarse grained, very high strength. Borehole completed at 34.10m				M	33.24m: J: 70°; Pl/Sm; OP; CA VN; UCS=53.10 MPa Is(50)=4.60 MPa	(33.57m) A (33.98m)		

REMARKS: Kgwu = Wundaru Granodiorite

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C.Boyes	S.Foley

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	06/07/15
Borehole No.	BH 260	TMR H No.	H12269
Location	Pioneer River Bridge	Start Depth (m)	19.90
Detail	Pier 19, RHS	Finish Depth (m)	34.10
Chainage		Submitted By	M.Ensor
Remarks			

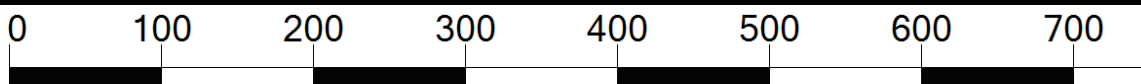
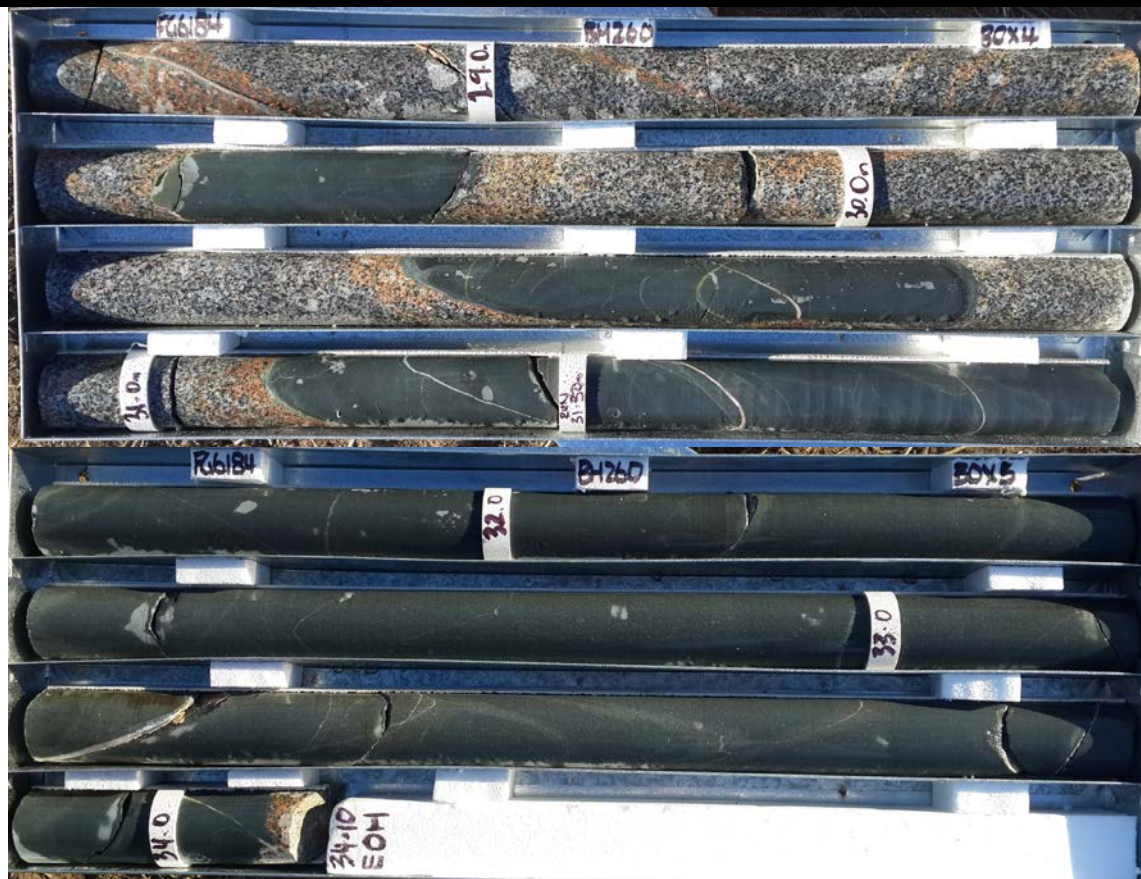
The photograph shows a series of soil core samples arranged in a tray. Each sample is labeled with its depth in meters (e.g., 19.90, 20.30, 20.90, 21.40, 21.90, 22.40, 22.90, 23.0, 23.4, 24.0, 24.5, 25.0, 25.3, 26.0, 26.5, 27.0, 27.5, 28.0) and some are marked 'LOSS'. The samples are contained in a tray with a scale bar at the bottom ranging from 0 to 700 mm. The scale is labeled 'SCALE 1:5'. The tray is also labeled with 'FG6184', 'BH260', and 'BOX 1' through 'BOX 3'.

CORE PHOTO LOG

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Project No.	FG6184	Date	06/07/15
Borehole No.	BH 260	TMR H No.	H12269
Location	Pioneer River Bridge	Start Depth (m)	19.90
Detail	Pier 19, RHS	Finish Depth (m)	34.10
Chainage		Submitted By	M.Ensor
Remarks			



SCALE 1:5

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Project Name	Mackay – Ring Road (Stage 2)		
Project No.	FG6184	Date	06/07/15
Borehole No.	BH 260	TMR H No.	H12269
Location	Pioneer River Bridge	Start Depth (m)	19.90
Detail	Pier 19, RHS	Finish Depth (m)	34.10
Chainage		Submitted By	M.Ensor
Remarks			

0 100 200 300 400 500 600 700

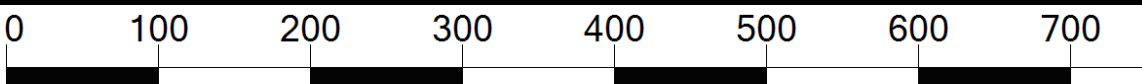
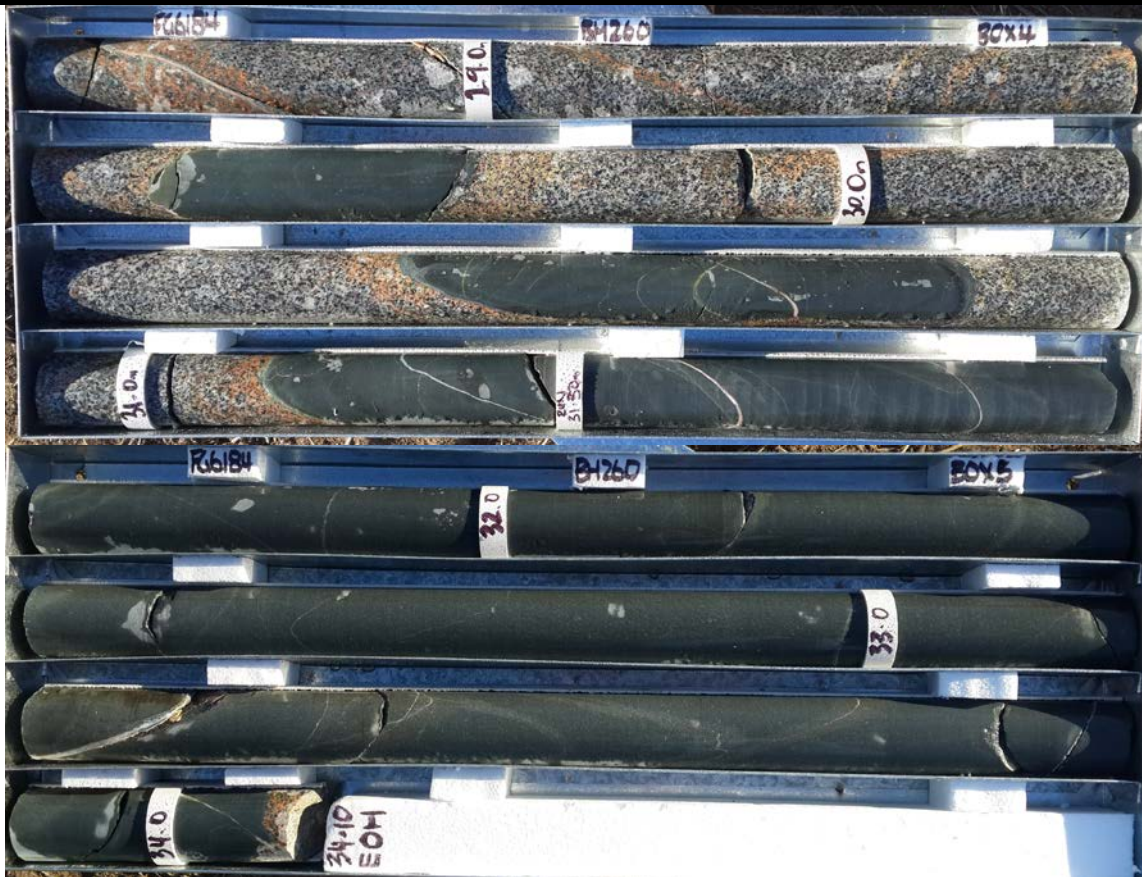
SCALE 1:5

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Project Name	Mackay – Ring Road (Stage 2)		
Project No.	FG6184	Date	06/07/15
Borehole No.	BH 260	TMR H No.	H12269
Location	Pioneer River Bridge	Start Depth (m)	19.90
Detail	Pier 19, RHS	Finish Depth (m)	34.10
Chainage		Submitted By	M.Ensor
Remarks			



SCALE 1:5