ENGINEERING BOREHOLE LOG

Queensland Government

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No **BH109**
SHEET 1 of 3
REFERENCE No **H10864**

PROJECT WALKERSTON BYPASS PROJECT GEOTECHNICAL INVESTIGATION - BAKER'S CREEK BRIDGE
LOCATION Pier 2, RHS COORDINATES 718783.8 E; 7655016.5 N
PROJECT No FG5635 SURFACE R.L. 7.37m PLUNGE DATE STARTED 13/10/10 GRID DATUM MGA94 Zone 55
JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 14/10/10 DRILLER Cairns Drilling

DEPTH (m)	R.L. (m)	AUGER / CASING / WASH BORING / CORE DRILLING	RQD ( ) % CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (mm) (20 60 200 600 2000)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
0	7.37													
				AS1	**Silty SAND (ALLUVIAL)** Brown, moist, very loose, minor tree roots.		(SM)					Based on Driller's logs only Pushed SPT sample		SPT
	6.97				**Clayey SAND (ALLUVIAL)** Brown, moist, medium dense.		(SC)							
1	6.17			A	**Silty Sandy CLAY (ALLUVIAL)** Dark brown, moist, mainly firm to occasionally stiff. Medium to high plasticity; fine grained sand; roots.							3,4,7 N=11; pH_F = 5.3 pH_{Fox} = 6.3		SPT
2				B								2,2,4 N=6		SPT
							(CH)					PP=75kPa		U50
3				C								2,2,4 N=6		SPT
	3.47											PP=140kPa		U50
4					**Silty Clayey SAND (ALLUVIAL)** Dark grey-brown, wet, very loose.									
				D								0,0,0 N<1		SPT
5				E			(SC)					1,1,1 N=2; pH_F = 5.8 pH_{Fox} = 3.2		SPT
														U50
6	1.37			F	**Silty Gravelly SAND (ALLUVIAL)** Grey-orange-brown, moist, medium dense. Fine to coarse grained sand.		(SM)					4,11,14 N=25; pH_F = 6.9 pH_{Fox} = 5.2		SPT
7	0.37				**GRANODIORITE** **Intrusive, coarse grained, massive, crystalline, acidic igneous rock**									
				G	**XW:** Generally exhibits the engineering properties of brown, moist, very stiff to hard, clayey sandy silt.		XW					8,12,17 N=29		SPT
8														
9				H								6,10,15 N=25		SPT
10														

REMARKS

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BOREHOLE No BH109
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10	-2.64				**GRANODIORITE** **XW:** (Cont'd)									
				J				XW				8,14,19 N=33		SPT
11														
	-4.44			K								11,21,30/120mm N>50		SPT
					GRANODIORITE **HW:** Grey, yellow, orange-brown, moist, dense to very dense, gravelly silty sand.									
12				L								11,21,29 N=50		SPT
13														
				M								20,30/149mm N>50		SPT
14														
				N								8,16,19 N=35		SPT
15														
				O				HW				10,12,16 N=28		SPT
16														
17				P								10,16,16 N=32		SPT
18				Q								8,15,18 N=33		SPT
					Becoming more gravelly @ 18.80m.									
19				R								30/120mm N>50		SPT
					Becoming very low strength rock with depth.									
20														

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20	-12.64		(0)		**GRANODIORITE** **HW:** (Cont'd)							30/50mm N>50		SPT
			33											
			(0)											
21			100									Is(50) = 0.04MPa		o
			(0)											
			100									Is(50) = 0.05MPa		o
			(0)											
22			100											
			(0)					HW						
			100											
23			(0)											
												Is(50) = 0.05MPa Is(50) = 0.01MPa		x o
												Is(50) = 0.08MPa Is(50) = 0.04MPa		o x
24														
	-17.09		100		**DOLERITE / BASALT** **Extrusive, fine grained, massive, crystalline, mafic igneous rock** **MW:** Dark grey, fine grained, massive, mainly medium to high strength.							Is(50) = 0.37MPa		o
			(46)					MW						
25	-17.94				Defects: - Clay infilled joints @ 5-90°, generally 5mm thick.			SW				UCS = 45.3 MPa Is(50) = 10.58MPa		x
	-18.64		100		**DOLERITE / BASALT** **SW:** Dark grey, fine grained, massive, crystalline, very high to extremely high strength.							Is(50) = 7.30MPa		o
26					Borehole terminated at 26m									
27														
28														
29														
30														

REMARKS

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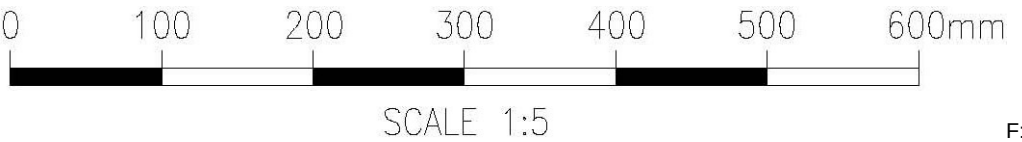
Project: **Walkerston Bypass (Bakers Ck)**

Borehole No: **BH109**

Start Depth: 20.05 m
Finish Depth: 26.00 m
Project No: FG5635
H No:



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