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ENGINEERING BOREHOLE LOG

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

BOREHOLE No **BH138**
SHEET 1 of 2
REFERENCE No **H10897**

PROJECT WALKERSTON BYPASS PROJECT GEOTECHNICAL INVESTIGATION - BERGMANS ROAD OVERPASS
LOCATION Abutment B - Middle (Ch.74541.9, 9.5m R of Control Line) COORDINATES 711794.1 E; 7655437.6 N
PROJECT No FG5635 SURFACE R.L. 32.76m PLUNGE -90° DATE STARTED 15/11/10 GRID DATUM _____
JOB No 242/33B/6 HEIGHT DATUM AHD BEARING _____ DATE COMPLETED 15/11/10 DRILLER Cairns Drilling

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USC WEATHERING	INTACT STRENGTH				DEFECT SPACING (mm)			GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
								EH	VH	HM	JL	EL	20	60			
0	32.76																
32.46						Gravelly Silty CLAY (RESIDUAL) Black, moist.	(CH)								- Based on Driller's logs only		
						Organic content.									Medium to coarse gravel layer 200mm		
31.66						Clayey SILT (RESIDUAL) Yellowish-brown, moist, stiff.	(MH)								- Based on Driller's logs only		
						VOLCANICLASTIC SANDSTONE Fine to medium grained, predominately massive, crystalline, sedimentary rock. HW: Brown, moist, hard clayey sandy silt gradually grading into extremely low to mainly low strength rock with depth.	HW								Water table	30/50mm N>50	SPT
30.31																	
			(48)			SW: Grey, indurated, high to very high strength. Strongly altered (sericitic). Defects: - Joints @ 10-20° (7/m) Defects are generally planar, rough and closed, with some clay infill.	SW HW SW MW								Cly seam, 10°, Cly gravel, 50mm	Is(50) = 5.60MPa Is(50) = 2.12MPa Is(50) = 6.84MPa	x o x
			100													Is(50) = 9.24MPa Is(50) = 3.53MPa	x o
			(56)			Contact: - Gradual	SW								Cly seam, 5°, Cly gravel, 30mm	Is(50) = 4.99MPa	o
27.65						MW: Grey to grey-brown, fine to medium grained, generally medium strength.	MW SW MW								Gradual contact & Cly seam, 10°, 10-20mm	Is(50) = 0.80MPa Is(50) = 0.35MPa	x o
			(36)			Defects: - Joints @ 10-45° (>5/m) Defects are generally planar, smooth and closed, with minor clay infill. Defects below 6.8m:	SW MW SW MW									Is(50) = 1.41MPa	x
			100			- Joints @ 10-50° (>20/m)	SW MW								Contact, gradual	Is(50) = 0.80MPa	o
			(0)			Defects are generally planar, smooth and closed, with minor clay infill.	MW HW									Is(50) = 0.03MPa	x
			100				MW									Is(50) = 0.54MPa	x
			(34)													Is(50) = 0.77MPa	o
23.63						BASALT Extrusive, fine grained, massive, crystalline, basic igneous rock. SW: Grey, generally high to very high strength.	SW									Is(50) = 0.35MPa Is(50) = 1.47MPa	o x
			100														

REMARKS _____

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ENGINEERING BOREHOLE LOG

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

BOREHOLE No	<u>BH138</u>
SHEET	<u>2</u> of <u>2</u>
REFERENCE No	<u>H10897</u>

PROJECT WALKERSTON BYPASS PROJECT GEOTECHNICAL INVESTIGATION - BERGMANS ROAD OVERPASS

LOCATION Abutment B - Middle (Ch.74541.9, 9.5m R of Control Line) COORDINATES 711794.1 E; 7655437.6 N

PROJECT No FG5635 SURFACE R.L. 32.76m PLUNGE -90° DATE STARTED 15/11/10 GRID DATUM _____

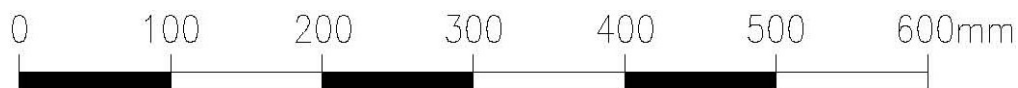
JOB No 242/33B/6 HEIGHT DATUM AHD BEARING _____ DATE COMPLETED 15/11/10 DRILLER Cairns Drilling

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USC WEATHERING	INTACT STRENGTH						DEFECT SPACING (mm)			GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
								EH	VH	H	M	J	VL	EL	20	60			
10	22.76		(100)			BASALT SW: (Cont'd) Dark grey, fine to medium grained, massive, generally high to very high strength. Defects: Rare - Drilling-induced subhorizontal breaks @ 10-20° (1-2/m)	SW											Is(50) = 4.10MPa Is(50) = 4.67MPa	x o
11	21.36		100																
12						Defects are generally curved, smooth and closed. Borehole terminated at 11.4m													
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			

REMARKS _____

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Project: **Walkerston Bypass Geotechnical Investigation**
Borehole No: BH138 (Bergmans Road., Ch. 74542 Right)
Start Depth: 2.45 m
Finish Depth: 11.40 m
Project No: FG5635
H No: H10897



SCALE 1:5

F:GEO043/1