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ENGINEERING BOREHOLE LOG

BOREHOLE No	BHP61
SHEET	1 of3
REFERENCE No	<u>H9922</u>

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/3-2005

PROJEC	т -	HOUGHTON HIGHWAY BRIDGE DUPLICATION - HOUGHTON HIGHWAY UPGRADE PROJECT											
LOCATIC)N _	24m RIGHT, 1.0m NTH FROM EASTN PILE OF PIER 61 OF EXIST BRIDGE COORDINATES 39591.5 E; 53444.2 N											
PROJEC					SURFACE R.L1.19 PLUNGE								•
JOB No	-	165/	122/35		HEIGHT DATUM _AHD BEARING			DATE COM	PLETED	19/06	06 DRILLER	CAIRNS DRIL	LING
R. (rr OEPTH (m)	L. 1) 1.19	WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH มี>ี่±ร∍วีเป	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL I AND TEST RESU		SAMPLES TESTS
-1	<u>1.19</u>			A	ESTUARINE SAND / SILTY SAND Dark grey, wet, very loose. Very fine grained sand; occasional partly decomposed shell fragments; slightly organic throughout; sand becoming silty sand with depth.		SD (SP SM)			8	$pH_{F} = 7.29$ $pH_{FOX} = 6.50$ $pH_{FOX} = 6.50$	1,-,- N<1 1,1,- N=1	SPT
	<u>5.19</u>)		3	С	ESTUARINE SILTY CLAY Dark grey, moist to wet, mainly very soft to soft. High plasticity; high organic content; occasional partly decomposed shell fragments.						pH _{FOX} = 0.09 pH _F = 8.28 pH _{FOX} = 7.37	RW N<1	SPT
				D			00000000000000000000000000000000000000				pH _F = 8.66 pH _{FOX} = 6.93	RW N<1	SPT
				F			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				$pH_{F} = 8.19$ $pH_{FOX} = 6.49$ $pH_{FOX} = 8.13$ $pH_{FOX} = 6.10$	RW N<1 RW N<1	SPT SPT
ž –	1.19 RKS					333333	~~~~~		+ +- 			LOGGED BY	

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ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/3-2005

BOREHOLE No	BHP61
SHEET	2 of3
REFERENCE No	<u>H9922</u>

PROJ	OJECT HOUGHTON HIGHWAY BRIDGE DUPLICATION - HOUGHTON HIGHWAY UPGRADE PROJECT													
LOCA											39591.	5 E; 53444.2 N		
PRÓJ					SURFACE R.L <u>1,19</u> PLUNGE									
JOB N	ю	_165/	122/35		HEIGHT DATUMAHD BEARING		_ _	DATE COMPLE	ETED _	19/06	<u>/06</u>	DRILLER	CAIRNS DRIL	LING_
DEPTH (m)	R.L. (m) -11.19	CASING WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT DE STRENGTH SP (ゴチェミンラ道 88	EFECT PACING (mm) 000000 1 1 1 1	GRAPHIC LOG		OITIONAL AND EST RESU		SAMPLES TESTS
	-12.69			G	ESTUARINE SILTY CLAY (As above.)		(OH)				pH _F = 7.91 pH _{FOX} = 1.1	15	RW N<1 ASS Sample stored at Herston Geotechnical Laboratory	SPT
- 12				н	ALLUVIAL (?) SILTY CLAY Green grey green to mottled orange brown, moist, stiff. Medium to high plasticity; becoming slightly sandy with depth.						pH _F = 8.00 pH _{FOX} = 5.9	91	1,5,8 N=13	SPT
- 13				J			(CI- CH)						4,6,8 N=14	ŜPT
- - - - - - - - - - - - - - - - - - -	-16.39				ALLUVIAL SANDY GRAVEL Pale brown to orange brown, wet, medium dense becoming dense with depth. (Fine fraction < < Coarse fraction) Fine fraction - Angular to subangular	00000								
- 16				к	medium to coarse quartzo sand. Coarse fraction - Angular to subangular coarse quartzo gravel sizing up to 30mm.		(GP						7,11,11 N=22	SPT
1 19	-21.19			1-									11,10,20 N=30	SPT
RE	MARKS	s									- [LOGGED BY	

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ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM F:GEOT 017/3-2005

BOREHOLE No	BHP61
SHEET	<u>3</u> of <u>3</u>
REFERENCE No	H9922

					NTH FROM EASTN PILE OF PIER 61 OF E							E; 53444.2 N	
OB 1	JECT No FG5423 SURFACE R.L119 PLUNGE DATE STARTED 19/06/06 No165/122/35 HEIGHT DATUMAHD BEARING DATE COMPLETED 19/06/06										CAIRNS DRIL		
20 DEPTH (m)	R.L. (m) -21.19	CASING WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING		DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DA AND TEST RESULT		SAMPLES
20	-21.19	T	ILEO /8		ALLUVIAL SANDY GRAVEL (As above.)	20		<u></u> * *		0			•,
- 21 - 22 - 22 - 23				M	Normal grading with depth.	0000000000	(GP)					9,25,30/90 N>50	SP
24	-25.59	540			SANDSTONE FINE GRAINED MAINLY MASSIVE TO SLIGHTLY LAMINATED POORLY CEMENTED SEDIMENTARY ROCK HW: (Driller's record only.)	0000	н₩		-				
26			(100)		SW: Pale grey, fine grained, mainly massive, medium to high strength. Occasional carbonaceous laminations with thickness sizing up to 20mm. Defects: Generally rare.						ls(5	0)=0.73 MPa 0)=0.72 MPa 0)=0.74 MPa 0)=0.82 MPa	
27					 Occasional drillling-induced lamination partings <15° (1-2/m). Occasional joints @ 40° (1/2m). 		sw				ls(5	0)≈0.84 MPa 0)=1.02 MPa	
											ls(5	0)=0.51 MPa 0)=0.39 MPa	
28											ls(5 ls(5	0)=1.12 MPa 0)=1.58 MPa	
26 27 28 29 30	-29.69		100		Borehole terminated at 28.5m								
30	EMARKS							L Ŧ				GGED BY	

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Houghton Highway Bridge Duplication Project:

Borehole No: BHP61 Start Depth: Finish Depth: Project No: H No:

25.50m 28.50m FG5423 9922





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Main Roads Department Geotechnical Branch 35 Butterfield St Herston QLD 4006

Point Load Strength Index - Test Report

Project: Houghton Highway Bridge Investigation Project No: FG5423

> Date Sampled 19/06/06 Feature: N/A Sample Type: NMLC Core

Date Tested 28/06/06

Report No. FG5423/GS06-563/AS4133.4.1

Sample Number	Sample Location	Depth (m)	Test Type D,A,B,I*	ls (MPa)	ls50 (MPa)	Strength Descriptor*	Lithology
GS06/563.A GS06/563.B GS06/563.C GS06/563.D GS06/563.E GS06/563.F GS06/563.G GS06/563.H GS06/563.J	BHP 61 BHP 61 BHP 61 BHP 61 BHP 61 BHP 61 BHP 61 BHP 61 BHP 61	25.61 25.63 26.16 26.19 27.05 27.07 27.65 27.67 28.04	D A D A D A D A D	0.73 0.75 0.74 0.86 0.84 1.11 0.52 0.43 1.12	0.73 0.72 0.74 0.82 0.84 1.02 0.51 0.39 1.12	M M M M M M H H	Sandstone Sandstone Sandstone Sandstone Sandstone Sandstone Sandstone Sandstone Sandstone Sandstone
GS06/563.K	BHP 61	28.07	A	1.69	1.58		Ganastono

Sample Remarks

* D - Diametral; A - Axial; 8 - Block; I - Irregular;

** EL - Extremely Low; VL - Very Low; L - Low; M - Medium; H - High; VH - Very High; EH - Extremely High (taken from AS1726 Table 8A)

(Mr Peter Reynolds

Remarks / Variations to Test Procedures:

Test Method: AS4133.4.1 Software Version 2.03 April 2005

Client Name: Department of Main Roads Client Address: PO Box 70, Spring Hill QLD 4004

Signatory

A coreditation Number: 2302

Accretized for compliance with ISO/IEC 17025

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