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## ENGINEERING BOREHOLE LOG

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

BOREHOLE No	BHP88
SHEET	_1_ of _2_
REFERENCE No	H9916

PRO.	JECT ATION				CHWAY BRIDGE DUPLICATION - HOUGHT							
	OCATION 24m RIGHT FROM EASTN PILE OF PIER 88 OF EXIST BRIDGE COORDINATES 39909.2 E; 54112.4 N  ROJECT No FG5423 SURFACE R.L1.20 PLUNGE DATE STARTED 06/06/06 GRID DATUM PROJECT DATUM											
JOB i					HEIGHT DATUM AHD BEARING						LLER CAIRNS DRIL	
o DEPTH (m)	R.L. (m)	SON HOUSE CORE REC % SO MATERIAL				LITHOLOGY	USC WEATHERING	I I	1 2000 (mm ORAPHIC LOG	ADDITIO ,	SAMPLES	
-	1.20			A	ESTUARINE SAND	П		<del></del>		pH <sub>E</sub> = 7.63	HW,1,2 N≃3	SPT
-1	-2.50				Dark grey, wet, very loose.  Fine grained sand; minor organic content.		(SM)	† † † † †		pH <sub>Fox</sub> = 6.45	ASS Sample stored at Herston Geotechnical Laboratory	311
-2	-3.70			В	RESIDUAL SANDY CLAY Pale orange grey to mottled dark red, moist, mainly soft to firm.		(CI)	+ + + + + + + + + + + + + + + + + + +		pH <sub>F</sub> = 7.95 pH <sub>FOX</sub> = 6.79	4,1,3 N=4	SPT
-3	0.70				RESIDUAL SILTY SAND Pale orange to white, moist, medium dense.			-			3,4,7 N=11	
-				С	Some relic rock structures.		(SM	† † †		pH <sub>F</sub> = 4.58 pH <sub>FOX</sub> = 3.34	ASS Sample stored at Herston Geotechnical Laboratory	SPT
0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-5.20 -6.70			D	SANDSTONE MEDIUM TO COARSE GRAINED MASSIVE TO SLIGHTLY LAMINATED POORLY CEMENTED SEDIMENTARY ROCK XW: Generally exhibits engineering properties of pale orange to pale brown, moist, medium dense silty sand.		xw				4,8,14 N=22	SPT
1	-0.70			E	HW: Pale orange becoming white with depth, mainly moist to dry, dense to very dense silty sand gradually grading into very low to low strength rock with depth.						7,15,19 N=34	SPT
8				F			HW				14,30/110 N>50	SPT
8 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-10.30		(84)	G	MW: Pale orange brown to pale brown, medium to coarse grained, massive to slightly laminated, mainly low strength with both very low strength and high strength bands.		MW		r [		30/100 	SPT x o x o
⟨ <u>[ 10  </u> RE	-11.20 EMARKS									_	LOGGED BY	
										_	BW / ADISS	



## ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/3-2005 BOREHOLE No \_\_BHP88\_\_\_

SHEET \_\_2\_ of \_\_2\_

REFERENCE NO \_\_H9916\_\_\_

PRO.	JECT	HQU	<u>IGHTON</u>	<u>1</u> Hiċ	SHWAY BRIDGE DUPLICATION - HOUGHT	<u>ON</u> !	HIGH	WAY UPGRADE PR	<u>OJE(</u>	ÇI		
	ATION				M EASTN PILE OF PIER 88 OF EXIST BRI						<u>39909.2 E; 54112.4 N</u>	
PRO, JOB					SURFACE R.L1.20 PLUNGE HEIGHT DATUMAHD BEARING						RID DATUM <u>PROJECT DA</u> DRILLER <u>CAIRNS DRIL</u>	
JOD	0.1				TEIGHT DATOM _ALID BEANING _		 		ñovoć	<u>0/UD</u>	DRILLER CAIMING DIVIS	_L  YQ
<u>ε</u>	R.L. (m)	IG BORING DRILLING	RQD ()%		MATERIAL		2	INTACT DEFECT STRENGTH SPACING	ဗ္ဂ	A	DDITIONAL DATA	
DEPTH (m)		SOR DRILL		اسا	DESCRIPTION	LITHOLOGY		STRENGTH SPACING (mm)	GRAPHIC LOG		AND	ES
10	-11.20	CASIN WASH CORE	CORE REC %	SAMPLE	52551W 116.1V	LTH	USC	#=====================================	GRAP		TEST RESULTS	SAMPLES
					MW: (As above.) Occasional siltstone rip-up clasts sizing up to 35mm.						ls(50)=0.11 MPa ls(50)=0.13 MPa	x o
-11					Defects: - Subhorizontal stress relieved famination / bedding partings <10° (1/2m).		MW				Is(50)=0.20 MPa Is(50)=0.19 MPa	0 X
					Occasional highly weathered seams     Somm around bedding / lamination		INIV				ls(50)=0.21 MPa ls(50)=0.19 MPa	X o
-					partings. - Joints @ 80° (1/3m).						Is(50)=0.09 MPa	0 -
					()						Is(50)=0.18 MPa	×
- 12	-13.30	_	100		Borehole terminated at 12.1m	::;		+			ls(50)=0.36 MPa	0
-								1 1				
								‡				
- 13								<u> </u>				
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- 14								†				
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- 19								‡				
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-15 16 17 18								<u> </u>				
	MARKS									-	LOGGED BY	
											BW / ADISS	

Project: Houghton Highway Bridge Duplication

Borehole No: BHP88
Start Depth: 9.10m
Finish Depth: 12.1m

Project No: FG5423 H No: 9916





ROAD SYSTEM & ENGINEERING GEOTECHNICAL BRANCH 35 Butterfield St Herston Q 4006

# Point Load Strength Index - Test Report

Project: Houghton Highway Bridge Investigation

Project No: FG5423

Date Sampled 06/06/06

Feature: N/A

Sample Type: NMLC Core

Report No. FG5423/GS06-484/AS4133.4.1

**Date Tested 13/06/06** 

			D				
Sample Number	Sample Location	Depth (m)	Test Type D,A,B,I*	ls (MPa)	ls50 (MPa)	Strength Descriptor*	Lithology **
GS06/484.A	BHP 88	9.17	D	0.12	0.12	L	Sandstone
GS06/484.B	BHP 88	9.20	Α	0.10	0.10	VL	Sandstone
GS06/484.C	BHP 88	9.46	D	0.12	0.12	L	Sandstone
GS06/484.D	BHP 88	9.48	Α	0.11	0.11	L	Sandstone
GS06/484.E	BHP 88	10.21	D	0.11	0.11	L	Sandstone
GS06/484.F	BHP 88	10.23	Α	0.13	0.13	L	Sandstone
GS06/484.G	BHP 88	10.64	Α	0.19	0.20	L	Sandstone
GS06/484.H	BHP 88	10.67	Ð	0.19	0.19	L	Sandstone
GS06/484.J	BHP 88	11.18	D	0.21	0.21	L.	Sandstone
GS06/484.K	BHP 88	11.20	Α	0.18	0.19	L	Sandstone

Sample Remarks

>>17>11

Remarks / Variations to Test Procedures:

Software Version 2.03 April 2005

Client Name: Department of Main Roads

Client Address: PO Box 70, Spring Hill QLD 4004

Signatory .

(P.REYNOLDS)

A cereditation Number: 2302 Accredited for compliance with ISO/IEC 17025

This slocument is issued in accordance with NATA's of attached cover page!

<sup>\*</sup> D - Diametral; A - Axial; 8 - Block; I - Irregular;

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



ROAD SYSTEM & ENGINEERING GEOTECHNICAL BRANCH 35 Butterfield St Herston Q 4006

## Point Load Strength Index - Test Report

Project: Houghton Highway Bridge Investigation

Project No: FG5423

Date Sampled 06/06/06

Feature: N/A

Sample Type: NMLC Core

Report No. FG5423/GS06-484/AS4133.4.1

Date Tested 13/06/06

Sample	Sample	Depth	Test Type	ls	ls50	Strength	Lithology
Number	Location	(m)	D,A,B,1*	(MPa)	(MPa)	Descripto	0,
GS06/484.L	BHP 88	11.50	Α	0.10	0.09	VL	Sandstone
GS06/484.M	BHP 88	11.85	D	0.18	0.18	L	Sandstone
GS06/484.N	BHP 88	11.88	Α	0.36	0.36	M	Sandstone

Sample Remarks

\* D - Diametral; A - Axial; B - Block; I - Irregular;

\*\* EL - Extremely Low; VL - Very Low; L - Low; M - Medium; H - High; VH - Very High; EH - Extremely High ( taken from A\$1726 Table 8A )

Remarks / Variations to Test Procedures:

1321333333333

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 .

(P.REYNOLDS)

