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**Queensland
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Main Roads

ENGINEERING BOREHOLE LOG

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

BOREHOLE No **BHP09**

SHEET **1** of **3**

REFERENCE No **H9918**

PROJECT **HOUGHTON HIGHWAY BRIDGE DUPLICATION - HOUGHTON HIGHWAY UPGRADE PROJECT**

LOCATION **24m RIGHT, 1.5m STH FROM EASTN PILE OF PIER 9 OF EXIST BRIDGE** COORDINATES **38978.5 E; 52152.9 N**

PROJECT No **FG5423** SURFACE R.L. **-0.75** PLUNGE DATE STARTED **08/06/06** GRID DATUM **PROJECT DATUM**

JOB No **165/122/35** HEIGHT DATUM **AHD** BEARING DATE COMPLETED **08/06/06** DRILLER **CAIRNS DRILLING**

DEPTH (m)	R.L. (m)	CASING WASH BORING	ROD () % CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
0	-0.75											
1				A	ESTUARINE SAND AND SHELL Dark grey, moist to mainly wet, very loose to loose. Fine grained sand becoming loose below 2.3m; slightly organic throughout; some partly decomposed shell fragments.						pH _r = 8.15 pH _{FOX} = 6.09 HW,1,1 N=2 ASS Sample stored at Herston Geotechnical Laboratory	SPT
2				B							pH _r = 8.04 pH _{FOX} = 5.98 HW,1,2 N=3	SPT
3				C		(SP-SM)					pH _r = 7.78 pH _{FOX} = 6.46 4,5,3 N=8	SPT
4				D							pH _r = 7.55 pH _{FOX} = 6.24 2,3,3 N=6	SPT
5												
6	-6.45			E	ESTUARINE SILTY CLAY Dark grey, moist, very soft. (Driller's records only.) ALLUVIAL SILTY CLAY Pale grey to mottled yellow brown, moist, firm. High plasticity.	(OH)					pH _r = 7.62 pH _{FOX} = 0.69 ASS Sample stored at Herston Geotechnical Laboratory	JAR
7	-6.75					(CH)					pH _r = 6.74 pH _{FOX} = 6.17 RW,3,4 N=7	SPT
8	-7.50			F	ALLUVIAL SILTY CLAY Pale green grey to mottled orange brown, moist, stiff to mainly very stiff. Occasional lateritic and concreted zones; medium to high plasticity.						pH _r = 7.55 pH _{FOX} = 7.51 3,7,10 N=17 ASS Sample stored at Herston Geotechnical Laboratory	SPT
9				G		(CI-CH)					pH _r = 6.68 pH _{FOX} = 6.36 5,7,10 N=17	SPT
10	-10.75											

REMARKS

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SHEET 2 of 3

REFERENCE No H9918

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LOCATION 24m RIGHT, 1.5m STH FROM EASTN PILE OF PIER 9 OF EXIST BRIDGE COORDINATES 38978.5 E; 52152.9 N

PROJECT No FG5423 SURFACE R.L. -0.75 PLUNGE DATE STARTED 08/06/06 GRID DATUM PROJECT DATUM

JOB No 165/122/35 HEIGHT DATUM AHD BEARING DATE COMPLETED 08/06/06 DRILLER CAIRNS DRILLING

DEPTH (m)	R.L. (m)	CASING WASH BORING	ROD () % CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
10	-10.75				ALLUVIAL SILTY CLAY (As above.)							
11												
12				H							3,6,8 N=14	SPT
13												
14						(Cl- CH)						
15				J							4,7,10 N=17	SPT
16												
17												
18	-18.55			K	ALLUVIAL GRAVELLY SAND Pale grey to pale grey brown, wet, medium dense. (Fine fraction > Coarse fraction)		(SP)				6,8,9 N=17	SPT
19	-19.55				Fine fraction - Medium to coarse grained sand with some clay. Coarse fraction - Subangular to subrounded quartz particles sizing upto 25mm.		(CI)					
20	-20.55				ALLUVIAL SILTY CLAY (Driller's record only.)							
	-20.75				ALLUVIAL GRAVELLY SAND		(SP)					

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LOCATION 24m RIGHT 1.5m STH FROM EASTN PILE OF PIER 9 OF EXIST BRIDGE COORDINATES 38978.5 E; 52152.9 N

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JOB No 165/122/35 HEIGHT DATUM AHD BEARING DATE COMPLETED 08/06/06 DRILLER CAIRNS DRILLING

DEPTH (m)	R.L. (m)	CASING WASH BORING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH (MPa)	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
20	-20.75					ALLUVIAL GRAVELLY SAND (As above.) (Driller's record only.)		(SP)					
21	-21.45				L	SANDSTONE FINE TO MEDIUM GRAINED, LAMINATED, POORLY CEMENTED SEDIMENTARY ROCK HW: Pale grey brown to pale orange, moist, very dense silty sand with some relic rock structures and low strength rock kernels.		HW				6,19,30/100 N>50	SPT
22					M							30/75 N>50	SPT
23	-23.75					MUDSTONE (?) HW: Dark grey, dry, hard silty clay with frequent relic rock structures.		HW					
24	-24.85				N							Blade bit refusal on top of MW bedrock at 24.1m. 23,30/90 N>50	SPT
Borehole terminated at 24.1m													
25													
26													
27													
28													
29													
30													

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