Queensland Government

ENGINEERING BOREHOLE LOG

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

BOREHOLE No **BH307**
SHEET 1 of 3
REFERENCE No **11485**

PROJECT Townsville Ring Road Section 4
LOCATION Stony Creek Bridge COORDINATES 464709.8 E; 7871566.4 N
PROJECT No FG6020 SURFACE R.L. 12.32m PLUNGE DATE STARTED 24/4/13 GRID DATUM GDA 94
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING DATE COMPLETED 30/4/13 DRILLER Saxon 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	12.32				**Silty CLAY (TOPSOIL)** Brown, moist, soft. Medium plasticity. Some tree roots.									
	12.02			A	**Sandy CLAY** Brown, dark grey, moist, stiff to very stiff. Medium plasticity.		(CI)					3,4,7 N=11		SPT
1				B	Some calcareous material at 1.5m.							7,11,15 N=26		SPT
2	10.32			C	**Silty SAND** Pale grey, pale brown, moist, very dense. Fine grained sand. Some white calcareous material.		(SM)					10,28,30/140mm N>50		SPT
3	8.82			D	**Sandy SILT** Brown, dark grey, moist, hard.							27,30/100mm,HB N>50		SPT
4				E								30,30/30mm,HB N>50		SPT
5				F	At 5.5m, minor layer of silty sand. Very dense. Fine to coarse grained.		(ML)					25,30/90mm,HB N>50		SPT
6														
7				G								15,25,30/115mm N>50		SPT
	4.82				**Clayey SAND** Pale brown, pale yellow, pale grey, moist, dense. Fine to coarse grained sand.									
8				H			(SC)					10,15,17 N=32		SPT
9														
10	2.32													

REMARKS

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QLD_DMR_LIB_01A.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY TOWNSVILLE RING ROAD 4 STONY CREEK.GPJ <<DrawingFile>> Datgel CPT Tool gINt Add-In 17/10/2013 11:55

ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH307
SHEET 2 of 3
REFERENCE No 11485

PROJECT Townsville Ring Road Section 4
LOCATION Stony Creek Bridge COORDINATES 464709.8 E; 7871566.4 N
PROJECT No FG6020 SURFACE R.L. 12.32m PLUNGE DATE STARTED 24/4/13 GRID DATUM GDA 94
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING DATE COMPLETED 30/4/13 DRILLER Saxon 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
10	2.32			J	**Clayey SAND (Cont'd)**		(SC)					8,14,23 N=37	SPT
11	1.32			K	**Sandy SILT** Pale yellow, brown, pale grey, moist, hard. High content of fine grained sand.		(SM)					8,14,20 N=34	SPT
12													
13				L								9,14,20 N=34	SPT
14	-1.68			M	**Clayey SAND** Pale grey, pale brown, moist, dense. Fine to coarse grained sand.							11,13,20 N=33	SPT
15													
16				N			(SC)					9,15,20 N=35	SPT
17													
18	-5.88			P	Becoming pale grey, white, pale brown, very dense clayey sand.							16,20,30/130MM N>50	SPT
19	-6.78		(0)	Q	**VOLCANIC BRECCIA** **Pyroclastic rock consisting of angular fragments embedded in a finer grained matrix.** **XW:** Generally exhibits the engineering properties of brown, yellow, red, moist, very dense clayey sand. Fine to coarse grained.		XW					30/50MM,HB N>50	SPT
			75 (0)		**HW:** (See over)		HW					Broken Zone	
20	-7.68		100									Is(50) = 0.08MPa	o

REMARKS

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SHEET 3 of 3
REFERENCE No 11485

PROJECT Townsville Ring Road Section 4
LOCATION Stony Creek Bridge
COORDINATES 464709.8 E; 7871566.4 N
PROJECT No FG6020 SURFACE R.L. 12.32m PLUNGE DATE STARTED 24/4/13 GRID DATUM GDA 94
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING DATE COMPLETED 30/4/13 DRILLER Saxon 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
20	-7.68												
	-7.78		(0)		**VOLCANIC BRECCIA**		HW				~~Is(50) = 0.28MPa~~		o
			100		**HW: (Cont'd)**						J, 40°, Pl, O, Clnf		
			(71)		Brown, pink, medium to coarse grained, massive, very low to low strength. Defects: Broken throughout.								
											UCS=10.2MPa		
			100		**MW:**Brown to pink, medium to coarse						Is(50) = 0.85MPa		o
21			(40)		grained, massive, medium to high strength.						XW clay seam		
					Defects:						Is(50) = 0.85MPa		o
					- Joints @ 10° - 30° (3/m)								
					- Joints @ 40° (3/m)								
					- Joints @ 70° (1/m)								
			100		- Clayey seams								
22			(43)								Broken Zone		
			100		Defect spacing is mainly medium.						Is(50) = 2.60MPa		o
			(25)		Defect surfaces are generally planar, open, rough, clay infilled.								
							MW				Is(50) = 2.29MPa		o
23													
											Is(50) = 0.21MPa		o
			100										
24			(0)								Is(50) = 0.87MPa		o
					24.30 - 24.90m : Becoming brown, fine to								
			100		medium grained, high strength.								
			(27)								Is(50) = 0.85MPa		o
25					Becoming grey brown to pink, medium to						Is(50) = 2.61MPa		o
					coarse grained, high to very high strength.						J, 30°, Ir, O, Clnf, 20mm		
	-13.38		100										
					Borehole terminated at 25.7m								
26													
27													
28													
29													
30													

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REMARKS

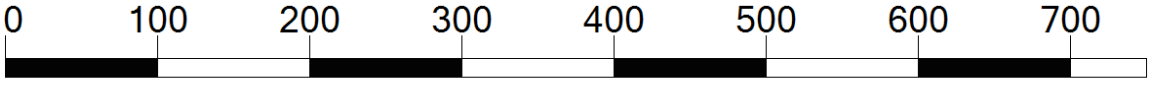
LOGGED BY JA

CORE PHOTO LOG

DEPARTMENT OF TRANSPORT & MAIN ROADS
Geotechnical Branch
35 Butterfield Street, HERSTON Qld 4006
Phone 07 3066 3336

Queensland Government
Department of Transport and Main Roads

Project Name	**Townsville Ring Road Section 4**		
Project No	FG 6020	Date	30/04/13
Borehole No	BH 307	TMR H No	11485
Location	Stony Creek Bridge	Start Depth (m)	19.10
Detail	Pier 3 (Right)	Finish Depth (m)	25.70
Chainage		Submitted By	MS
Remarks			



SCALE 1:5

GEOT043/1