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QLD_DMR_LIB_01A GLB Log A_ENGINEERING BOREHOLE LOG WLITHOLOGY TOWNSVILLE RING ROAD 4 GEANEY LANE.GPJ <<DrawngFile>> Datgel CPT Tool gilnt Add-In 17/10/2013 11:47

ENGINEERINGBOREHOLE LOG

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

BOREHOLE No	BH402
SHEET	_1_ of _3_
REFERENCE No	H11490

PROJ	ECT	Townsville Ring Road Section 4											
LOCA	TION										OORDINATES 464704.7 E; 7871646.0	N	
PROJ		No <u>FG6020</u> SURFACE R.L. <u>12.48m</u> PLUNGE DATE STARTED <u>2/5/13</u> GRID D								GRID DATUM GDA 94			
JOB N						HEIGHT DATUMAHD BEARING							
DЕРТН (m)	R.L. (m)	0	RILLING	RQD ()%		MATERIAL			П	INTACT DEFECT STRENGTH SPACING (mm) □ STENGTH SPACING (mm) □ STENGTH SPACING (mm)		ADDITIONAL DATA AND	S
DEP		SING	REL	CORE REC %	SAMPLE	DESCRIPTION	로	ပ	ATH	0000	APH	TEST RESULTS	SAMPLES
0	12.48	₹8	\$8	REC %	SA		트	S	M	NØNØN M<∟ZI <m< td=""><td>R.</td><td>TEST NEODETS</td><td>SA</td></m<>	R.	TEST NEODETS	SA
-	12.18		1			Clayey SAND (TOPSOIL) Pale brown, dry, loose.	7/1/v.			<u> </u>			-
-	12.10					Clayey SAND		r			†		-
-					Α	Pale brown, dry, very dense.				::::::::::::::::::::::::::::::::::::::		12,28,30/90	SPT -
-						Fine to medium grained sand.						N>50	-
-1										:::::::			-
-										::::: <u></u>			-
-		H	ı		В					<u> </u>		30/135	SPT -
-			Н							<u> </u>		N>50 -	-
-2			Н							<u> </u>			_
-			Н					(5	SC)	::::: <u>+</u> :::::			-
-			Н					(,,,	<u> </u>		30/110	CDT -
-			Н		С					:::::::		N>50	SPT _
- - -3			Н							<u> </u>			
-			Н							<u> </u>			-
-			Н							<u> </u>		20422	-
-			Н		D					<u> </u>		30/100 N>50	SPT
-			Н							<u> </u>]
-4			Н							<u> </u>			_
-	8.18		Н					L	_		 		-
-			Н		Е	Silty SAND Brown, slightly moist, very dense.				<u> </u>		30/140	SPT -
-			Н			Fine to medium grained sand.						N>50 -	<u> </u>
- -5			Н										-
-			Н										-
-			Н							<u> </u>			
-			Н										-
-			Н										-
-6			Н		F					::::::::::::::::::::::::::::::::::::::		19,30/120 N>50	SPT]
-			Н							<u> </u>		N>50	
-			Н							= = = = = = = = = = = = = = = = = = = =			-
-			Н							:::::::		14/06/13	-
-7 -7			Н					_		:::::: [::::::			-
-			Н					(5	SM)				-
-			Н		_					<u> </u>		18,30/100	
			Н		G							N>50 L	SPT _
- 8			Н							<u> </u>			_
-			Н										-
-			Н							<u> </u>			=
-			Н										-
-			Н										-
-9 -			Н							: : : : : T : : : : :		23,30/130	CDT
-					Н							23,30/130 N>50	SPT -
-										:::::::::::::::::::::::::::::::::::::::			
-													=
10				nine Di-		nter Installed	HH			· · · · · · · · T · · · · · ·	1	LOCOED BY	
RI	EMARK	S <u>S</u> t	andj	pipe Pie	zome	eter Installed		_	-			LOGGED BY VP	
		_						_	_			. VF	



QLD_DMR_LIB_01A.GLB Log A_ENGINEERING BOREHOLE LOG WLITHOLOGY TOWNSVILLE RING ROAD 4 GEANEY LANE.GFJ <<DrawingFile>> Datgel CPT Tool gibt Add-in 17/10/2013 11:47

ENGINEERINGBOREHOLE LOG

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

BOREHOLE No	BH402
SHEET	$-\frac{2}{3}$ of $-\frac{3}{3}$
REFERENCE No	H11490

PRO.	JECT	Townsville Ring Road Section 4										
LOC	ATION	N Geaney Lane Overpass COORD									7 E; 7871646.0	<u>N</u>
PRO.	JECT No	No <u>FG6020</u> SURFACE R.L12.48m_ PLUNGE DATE STARTED <u>2/5/13</u>								GRID DATUM <u>GDA 94</u>		
JOB	No	268/	10M/5	- — -	HEIGHT DATUM <u>AHD</u> BEARING			DATE COMPLETED	3/5/13	DRILLER	Cairns Drilling	
DEPTH (m)	R.L. (m)	AÚGER CASING WASH BORING CORE DRILLING		SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	INTACT DEFECT STRENGTH SPACING (mm) UNITACT DEFECT STRENGTH SPACING (mm) UNITACT DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL E AND TEST RESUL		SAMPLES TESTS
- 10					Silty SAND (Cont'd)	ाव.	(SN					
- - - - - - - 11	2.18			J	Clayey SAND Brown to pale brown, moist, very dense. Fine to medium grained sand.				+-+		15,29,30/105 N>50	SPT -
12 12 				К	Becoming medium to coarse grained sand and iron stained.						19,30/100 N>50	SPT :
- 13 - - - - - - - - - - - - - - - - - - -				L	Trace fine gravel.		(SC				25,30/100 N>50	SPT :
- - - - - - - - - - - - - -				M							19,30/125 N>50	SPT I
16 17 				N							18,30/140 N>50	SPT [
 - - - 18 - - -	-5.77			Р	VOLCANIC BRECCIA Pyroclastic rock consisting of angular						15,30/135 N>50	SPT
- - - - - - - - - - - - - - - - - - -				Q	Very low strength HW bands throughout.		XW	1			30/50 N>50	SPT
R	EMARK	S <u>Stan</u> o	a <u>pipe Pie</u>	zom	eter Installed						OGGED BY VP	



QLD_DMR_LIB_01A.GLB Log A_ENGINEERING BOREHOLE LOG WLITHOLOGY TOWNSVILLE RING ROAD 4 GEANEY LANE.GFJ <<DrawingFile>> Datgel CPT Tool gibt Add-in 17/10/2013 11:47

ENGINEERINGBOREHOLE LOG

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

BOREHOLE No	BH402
SHEET	_3_ of _3_
REFERENCE No	H11490

PRO	JECT	Townsville Ring Road Section 4											
LOC	ATION												<u> </u>
PRO	JECT No	T No <u>FG6020</u> SURFACE R.L. <u>12.48m</u> PLUNGE DATE STARTED <u>2/5/13</u> C										GRID DATUM GDA 94	
JOB No <u>268/10M/5</u> H					HEIGHT DATUM <u>AHD</u> BEARING								
OEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD ()%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	nsc	WEATHERING	INTACT DEFE STRENGTH SPAC (mr	ECT ZING m)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES
			NEO %	0,7	VOLCANIC BRECCIA XW:(Cont'd)		XV						-
- 21 - - - - - - - -	-8.52	٦	(32)	R	MW: Pink, red brown, medium to coarse grained, massive, mainly low to medium strength. Some very low strength zones. Sub angular clasts up to 5cm diameter. Defects:						- + -	30/30 N>50 Is(50) = 0.80MPa	SRT
- 22 - - - -					- Joints @ 10°-20° (1/m) - Joints @ 40°-50°(1/m) - Joints @ 60°-70° (1/m) - Irregular Joint (2/m) Defects are generally planar (some							Is(50) = 0.76MPa Is(50) = 0.67MPa UCS=2.79 MPa	0 -
- - - -23 - -					irregular), rough, open, clay infilled (some up to 2mm). Defect spacing: close to medium.							Is(50) = 0.28MPa	0 -
 - - - - 24 -			100 (40)				M\	w				Is(50) = 0.08MPa	0 _
- - - - - - - -25												Is(50) = 0.58MPa	0 -
- - - - -												ls(50) = 0.53MPa	0 -
- -26 - - -												ls(50) = 0.39MPa	0 -
-	-14.32		100			Δ				: :		Is(50) = 0.11MPa	0 -
- 27 					Borehole terminated at 26.8m								
R	KEMARK	<u> </u>			eter Installed	 	_			· — -		LOGGED BY VP	

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



Project Name	Townsville Ring Road Secti	ion 4	
Project No	FG 6020	Date	03/05/13
Borehole No	BH 402	TMR H No	11490
Location	Geaney Lane Overpass	Start Depth (m)	21.00
Detail	Abutment A (Left)	Finish Depth (m)	26.80
Chainage	, ,	Submitted By	MS
Remarks		,	1
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