COPYRIGHT NOTICE

This geotechnical log and its associated data (the Document) is licensed by the Queensland Department of Transport and Main Roads under the <u>Creative Commons Attribution 4.0 Licence</u> (CC BY 4.0). When reusing the Document, in whole or in part, please attribute the Department as follows: "(c) State of Queensland (Department of Transport and Main Roads) 2020, licensed under the CC BY 4.0 Licence". This licence does not apply to the Queensland Government logo or trademarks.

LIMITATION OF LIABILITY

The CC BY 4.0 Licence contains a comprehensive Disclaimer of Warranties and Limitation of Liability. In addition, please note that this Document was prepared for Departmental use only. Reuse of the Document by anyone for any other purpose could result in error and/or loss. You should obtain professional advice before making decisions based on the contents of the Document.

When reproducing any part of this Document, you must also reproduce this limitation of liability notice in addition to the italicised attribution statement above.

Retrieved from the Queensland Geotechnical Database http://qgd.org.au/



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	BH403
SHEET	_1_ of _3_
REFERENCE No	H11491

PRO.	JECT	_T	<u>owr</u>	<u>sville R</u>	ing [Road Section 4						
LOC	ATION	_ <u>G</u>	<u>ear</u>	ney Lane	<u> Ov</u>	erpass					C	COORDINATES 464716.7 E; 7871665.1 N
PRO.	JECT No	No <u>FG6020</u> SURFACE R.L. <u>14.12m</u> PLUNGE										/4/13 GRID DATUM <u>GDA 94</u>
JOB No						HEIGHT DATUM <u>AHD</u> BEARING _						
DEPTH (m)	R.L. (m)	JGER	ASH BORING ORE DRILLING	RQD ()%	SAMPLE	MATERIAL DESCRIPTION	ПТНОГОСУ	SC	EATHERING	INTACT DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS WWS
0	14.12	20	≩ઇ	REC %	SA	Claver CAND (FILL)	<u>5</u>	3	Š	N	<u>ค</u>	5
- - - - - - - -	13.17				Α	Clayey SAND (FILL) Dark grey, moist, loose. Sand is medium to coarse grained. Trace gravel.		(S(1,3,6 N=9 SPT
1 - - - - - - - -					В	Silty CLAY (FILL) Dark grey to brown, moist, firm. Low plasticity.		(C	L)			MC = 16.4%; LL=33.8% PI=19.2% LS=11.2% 1,3,3 N=6
-2 - - - -	11.82				С	Clayey SAND Pale brown to brown, moist, dense to				<u> </u>		30/110
- - - - 3 - -						mainly very dense. Generally fine to medium grained sand with coarse grained bands throughout.						N>50
 - - - - -4 -					D							30/70 N>50
- - - - - - - 5 - -					E							30/150 N>50 SPT -
- - - - - - - 6 - -					F	Becoming medium to coarse grained sand.		(S	C)			30/120 N>50
- - - - - 7 - - - -						6.5-9.2m: High silt content. Becoming fine grained sand.						
- - - - - 8 - - - - - -					G							19,30/145 N>50 SPT -
- - - - - - - - - - - - - - - - - - -					Н	Becoming medium to coarse grained sand.						12,30/125 N>50 SPT =
	EMARK	S	_				<u> </u>	_	_'			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	BH403
SHEET	$-\frac{2}{2}$ of $-\frac{3}{2}$
REFERENCE No	H11491

PROJECT				Road Section 4						
				erpass						OORDINATES <u>464716.7 E; 7871665.1 N</u>
				SURFACE R.L. <u>14.12m</u> PLUNGE _						
JOB No	<u>268/1</u>	<u>10M/5</u>		HEIGHT DATUM <u>AHD</u> BEARING _				DATE COMPLETED _	<u> 20/4/</u>	13 DRILLER <u>Cairns Drilling</u>
R.L. (m) HEADO	AUGER CASING WASH BORING CORE DRILLING	RQD ()% CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS ADDITIONAL DATA AND SERVICE RESULTS
-				Clayey SAND (Cont'd)						
- - - - - - - - - - - - - - - - - - -			J	Becoming dense.						13,21,25 N=46 SPT
12 12			К							11,18,28 N=46 SPT
- 13 			L	Becoming very dense.						13,24,30/110 N>50 SPT
15 15 			M			(SC	(2)			14,30/130 N>50 SPT
16			N	Becoming fine to medium grained sand.						14,27,30/110 N>50 SPT
- 18 - 18 			P							17,30/125 N>50 SPT
	3		Q	Silty CLAY Pale grey, moist, hard. Low plasticity.		(CL	L)			16,26,30/110 N>50
REMARK	S				 	 	_ ·			LOGGED BY VP



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

ENGINEERING BOREHOLE LOG

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

BOREHOLE No ___BH403 ___

SHEET __3 __ of __3 __

REFERENCE No ___H11491 ___

PROJE					Road Section 4erpass									
LOCAT PROJE					SURFACE R.L. <u>14.12m</u> PLUNGE				DATE S1	– – TARTED		OORDINATES 13 GRID	DATUM GDA 94	<u></u>
JOB No					HEIGHT DATUM <u>AHD</u> BEARING								ORILLER Cairns Drilling	_ — — —
TH (m)	R.L. (m)	SORING	RQD ()%	SAMPLE	MATERIAL DESCRIPTION		П		INTACT FRENGTH	DEFECT	GRAPHIC LOG	ADD	ITIONAL DATA AND ST RESULTS	SAMPLES
20	-3.00		1120 70	"	Silty CLAY (Cont'd)		(CL)							-
21	-6.38			S	VOLCANIC BRECCIA Pyroclastic rock consisting of angular fragments embedded in a finer grained matrix. XW: Generally exhibits engineering properties of a pale brown to red brown, slightly moist, very dense Clayey Sand. Medium to coarse grained sand. Minor fine to medium, subangular gravel.		xw					— Rockroller us	ed. 30/100 N>50 30/135 N>50	SPT -
- - - 24 -	-9.88	Щ	(58)	T	MW: Brown, red brown, fine to coarse	Δ		-					30/50_ N>50 Is(50) = 0.33MPa	SPT 0
- - - - - - - - - - - - - - -					grained, massive, mainly medium strength. Some low & high strength zones. Clasts (sizing from 2mm to 50mm diameter) in a finer grained matrix. Defects: - Joints @ 30° (1/m) - Joints @ 45° (1/m) - Joints @ 60°-70°(2/m) - Irregular Jonts (1/m) Defects are generally mainly planar to							— Clayey band.	Is(50) = 0.33Mir a UCS=5.64 MPa Is(50) = 1.14MPa Is(50) = 0.14MPa	0 -
- - -26 - - - - - - -					Irregular, rough, open, clay caoted. Defect spacing: close to medium.							— Clayey band.	Is(50) = 0.50MPa Is(50) = 1.01MPa	0 -
- - - 27 - - -			100 (0) 100 (62)				MW						Is(50) = 0.72MPa	0 -
- - - - - - 28													ls(50) = 1.26MPa	0 -
- - - - - - - - - - 29													Is(50) = 1.14MPa Is(50) = 0.43MPa	0 -
- - -	-15.48												ls(50) = 1.53MPa	0 -
-					ANDESITE(MW): Brown, grey, fine grained, massive, low to medium strength.	/\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	MW					HW Band: —		
	<u>-15.88</u> MARKS	S	100		Borehole terminated at 30m	<u>/ </u>		_					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 Section	on 4		
Project No	FG 6020		Date	20/04/13
Borehole No	BH 403		TMR H No	11491
Location	Geaney Lane Overpass		Start Depth (m)	24.00
Detail	Pier 1 (Right)		Finish Depth (m)	30.00
Chainage Remarks			Submitted By	MS
	O O O O O O O O O O O O O O O O O O O		29.0	
0 100	200 300	400	500 600	700