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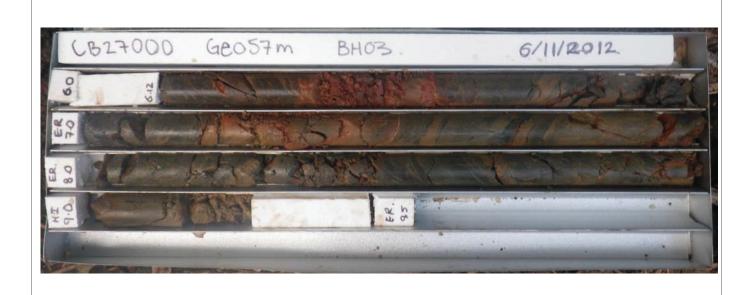
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	S	Ľ		1	В	OR	EH	DL	E ENGINEERING LOG HOLE NO : GE057M_BH03	
PRO	ENT : DJECT	: TN	RP	RT AND	MAIN I	ROAD	S		POSITION : E: 358893, N: 8136930 (56 MGA94) SURFACE ELEVATION : 303.1 (AHD) DATE DRILLED : 6/11/12 TO 6/11/12 DIP / AZIMUTH : 90° LOGGED BY : KMF	
-	OCATION : KENNEDY HWY (CAIRNS - MAREEBA) DRILLING MATERIAL CHECKED BY : AJ MATERIAL									
PROC										
DRILLING & CASING	WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	(E)	O DEPTH (m)	GRAPHIC	CLASSIFICATION	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components Secondary and Minor Components MATERIAL DESCRIPTION STRUCTURE & Other Observations	
1					303.1		0000	000	SANDY GRAVEL (GP): Grey, fine to coarse gravel, angular, fine to coarse grained sand.	
		Н					000	GP		
					-			0	0.50m SANDY CLAY (SC): Red brown, brown, medium to	
									high plasticity, fine to coarse grained sand.	
AD/T —					302.1-	-1.0		sc	D	
						_				
				1.50m SPT					1.50m	
				5, 3, 4 N=7		_			SILTY CLAY (CH): Red brown, brown, high plasticity, with fine to medium grained sub angular gravel, trace of cobbles.	
				1.95m		_			F	
				1.95111	301.1-	2.0				
*						_		СН		
		F								
					-	F				
			OBSERVED			-				
			r obse	3.00m SPT	300.1 - 3.0	3.0			3.00m SILTY CLAY (CH): Red brown, brown, high plasticity. COLLUVIUM	
			NOT	5, 6, 9 N=15		_			SILTY CLAY (CH): Red brown, brown, high plasticity, with fine to medium grained sub angular gravel, trace of cobbles.	
				3.45m		_				
				3.45111	1 -			СН	St	
						_				
					000.4					
- WB -					299.1-	4.0			4.20m	
						_			SILTY CLAY (CH): Grey brown, high plasticity, with fine to coarse grained angular gravel.	
				4.50m SPT	-	_				
				26, 30/80mm N=R		<u>-</u>				
				4.73m	1	_				
		Н			298.1-	5.0		СН	VSt -	
		.,								
						F				
						_				
					297.1-	6.0				
HA		d Auge		RR Ro	ock Rollir	ng	DS F	Disturb	SAMPLES & FIELD TESTS DENSITY (SPT N-value) ad Sample SPT Standard Penetration Test VL Very Loose 0 - 4 VS Very Soft < 12 kPa {0-2}	
AS Auger Screw AT Air Track ES Env Soil Sample U Undisturbed Tube Sample L Loose 4-10 S Soft									Sample U Undisturbed Tube Sample 1 4 40 0 6 7 10 10 0 10 10 0 10 10 10 10 10 10 10 10	
WB	Wasl	nbore		NQ NO NMLC N ETRATION	MLC Co		HP Ha	nd Per	D Dense 30 - 50 St Stiff 50 - 100 (8-15)	
	Very Easy	asy	F Fi H Ha	rm VH	Very	Hard	(P: Pe	ak Su Γblow	R: Residual Su) CO Compact >50/150mm H Hard > 200 kPa {>30}	
	<u> </u>	= Wate	r level (HW S	PT per	etration by hammer weight etration by rod weight	
	= Water level (during drilling) File: CB27000.F687 GE057M_BH03 Page 1 OF									

	S	Ľ		1	В	OR	EHC	DLI	E ENGINEERING LO	G		ı	HOLE NO : GE057M_BH03			
CLIE	ENT :	TRAN	ISPOF	RT AND	MAIN I	ROAD	S		POSITION : E: 358893, N: 8136930 (56 MGA94)				PAGE : 2 OF 3			
-)JEC1								SURFACE ELEVATION : 303.1 (AHD		DATE DRILLED: 6/11/12 TO 6/11/12					
_	NO :				Y (CAIR	NS - 1	//AREE	DIP / AZIMUTH: 90° LOGGED BY: KMF AREEBA) CHECKED BY: AJ								
			DRIL		(ATERIAL						
DRILLING SA & CASING	WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	RL (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Char Secondary and Minor Components		MOISTURE	CONSISTENCY	STRUCTURE & Other Observations			
WB			01	3,1	297.1-	6.0		CH	6.12m			Ŭ	RESIDUAL SOIL			
						-			Continued as Cored Drill Hole							
						-										
						F										
					296.1-	7.0							_			
						-										
					-	_							-			
						F										
						-										
					295.1-	8.0										
						-										
					.											
						-										
						F										
					294.1-	9.0							_			
						-										
						_										
					-								_			
						-										
						-										
					293.1-	10.0										
						-										
					-	F										
						-										
						F										
					292.1-	11.0							_			
						-										
						-										
					-	_							_			
						-										
						-										
	DRILLING SAMPLES & FIELD TESTS DENSITY (SPT N-value) CONSISTENCY (Su) {N-value}										value) CONSISTENCY (Su) {N-value}					
HA AS AD/	HA Hand Auger RR Rock Rolling DS Disturbed Sample SPI Standard Penetration Lest VL Very Loose 0 - 4 VS Very Soft < 12 kPa AS Auger Screw AT Air Track ES Env Soil Sample U Undisturbed Tube Sample L Loose 4 - 10 S Soft 12 - 25 {										- 4 VS Very Soft < 12 kPa {0-2} - 10 S Soft 12 - 25 {2-4}					
AD/\ WB	AD/V Auger Drill V-bit NQ NQ Coring WD Washbore NMLC NMLC Coring HP Hand Penetrometer MOISTLIRE CONDITION D Dense 30 - 50 St Stiff 50 - 100									0 - 50 St Stiff 50 - 100 {8-15}						
DRILLING PENETRATION HV Hand Vane Shear VE Very Easy F Firm VH Very Hard (P: Peak Su R: Residu:								nd Var ik Su F	e Shear D = Dry M = Moist W = Wet	VD Very CO Com			0 - 100 VSt Very Stiff 100 - 200 {15-30} 50/150mm H Hard > 200 kPa {>30}			
	(GROUN		ER SYMI	BOLS		N SPT HW SP RW SP	DIOWS T pen	per 300mm ´ etration by hammer weight etration by rod weight							
			r level (r level (static) (during dri	lling)		TAVY OF	, hell	Stration by rod weight							
	File: CB27000.F687 GE057M_BH03 Page 2 OF 3															

	S	1		1	C	ORE	BOREHOLE ENGIN	IEEI	RIN	IG LO	OG	НО	LE I	NO :	GE057N	_BH03	
PR	OJEC	CT : T			ND MAII	N ROADS	POSITION : E: 358893, N: 81 SURFACE ELEVATION : 303 DIP / AZIMUTH : 90°		•	GA94)		PAGE: 3 OF 3 DATE DRILLED: 6/11/12 TO 6/11/12 LOGGED BY: KMF					
-	CATIO	ON : K	ENNE		WY (CA	IRNS - MAR	EEBA)							DBY:			
		DRILL	ING				MATERIAL			ESTIMATED ST	RENGTH	DEF	ECT	EFECT	S & COMM	IENTS	
DRILLING	WATER DETAIL	TCR/RQD	(m) 297.1	DEPTH (m)	GRAPHIC LOG	(texture	DESCRIPTION (TYPE : Colour, Grain size, Structure , fabric, mineral composition, hardness atton, cementation, etc as applicable)		Weathering	Is(50)	tral	SPA (m	CING im)		ription of joints defects, additi vations and c	onal	GENERAL
			207.1	- 0.0			ING AT 6.12m ark grey green, grey green, orange brown, indistinct	t to	MW			 	 	6.12	JT 10° CU RF		
					~~~	distinct beddi	ng at 20° to 30°.					H		6.28	JT 80° PR RF JT 60° PR RF SS GC 210 mi	n	-
		100% TCR	-	L	~~~				EW -						SM Clay 70 m	m	
		11% RQD		-	~~~				MW			15		$\leq$ 6.67	JT 20° UN RF JT 20° UN RF JT 60° PR RF		-
		7.00		F	$\sim\sim$				HW			<del> </del>			JT 10° IR RF SS GC 190 mi	m	-
		7.00	296.1-	<del>-</del> 7.0	$\sim$				MW			1		7.07 ·	JT 40° ST RF JT 50° UN RF		_
				L					HW			녆		7.19 7.22	JT 30° UN RF JT 30° UN RF		-
		100% TCR		-	~~~							Ä		7.33	JT 60° IR RF JT 80° IR RF JT 80° IR RF		-
		20% RQD	-	F					MW					7.42 7.48	JT 80° PR RF JT 60° PR RF		7
NMLC —		KQD		-	~~								]     	7.70	JT 60° PR RF JT 50° PR RF JT 40° PR RF		_
\ <u>\{\text{Z}}{}</u>		8.00	005.4	-	$\sim\sim$									<del></del> 7.86 .	JT 80° PR RF JT 50° PR RF		-
			295.1-	<del>-</del> 8.0	$\sim\sim$										JT 60° PR RF		7
				-	$\sim$							K		≥8.22	JT 40° UN RF JT 40° UN RF JT 30° PR RF		
			_	Ŀ					HW		,	1		8.29	JT 50° UN RF SS 30° GC IR SS 40° GC IR		_
		67%		-	~~~				MW			<u> </u> 		8.45	SS 40° GC IR SS 50° GC IR JT 40° ST RF		-
		TCR		Ė											JT 40° CU RF JT 80° UN RF		=
		14% RQD	294.1-	9.0	~~							Ŋ		8.86 8.92	JT 40° IR RF JT 30° IR RF		
				-	$\sim\sim$							لز		9.15	JT 30° IR RF JT 70° PR RF		-
					$\sim$	CORE LOSS	0.25m (9.25-9.50)		HW				<u> </u>	9.18	SS GC 70 mm		
lacksquare		9.50	_			Carad Dall II	ala Tarrair atad at 0 50 as		$\triangle$			++		+		_	
				-		Corea Drill H	ole Terminated at 9.50 m.										
				-													-
			293.1-	10.0													_
				-									 				
				-													-
			-	-													-
				ļ													+
				F													-
			292.1-	11.0													-
				Ė													-
				L													
			-	-													-
				-													-
				ļ.													
$\vdash$	DRILLING SAMPLES & FIELD TESTS DEFECT ABBREVIATIONS ROCK STRENGTH (Is50 MPa)																
	NMLC NMLC Coring HQ HQ Coring D Disturbed Sample ES Env Soil Sample CS Crushed Seam CN Clean Cu Curved 0-0.03 Extremely Low																
^	NQ NQ Coring PQ PQ Coring W Water Sample EW Env Water Sample CZ Crushed Zone CT Coating IR Irregular 0.03-0.1 Very Low DB Drill Break SN Stain PR Planar 0.1-0.3 Low FZ Fractured Zone VR Veneer ST Stepped 0.3-1.0 Medium																
RQD % core run > 100mm long  JT Joint  Un Undulated 1.0-3.0 High IS Infilled Seam POL Polished 3.0-10 Very High																	
		,		•	SYMBOL	•		5	SZ She /N Veir	ar Zone า	RF Rou	igh ooth				- 7 3	
	7	<b>V</b> = V	Vater le	vel (stati	c)						SL Slic	kensid	ed				



	SINCLAIR KNIGHT MERZ	Client: Transport and Main Roads  Project: Transport Network Reconstruction Program					
drawn	KMF						
date	8/11/2012	Core Photograph – GE057M_BH03					
scale	NTS	Project no. CB27000	Photo No: GE057M_BH03 1 of 1				