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CLIENT	DMD					10	OLE DGGED BY	ACS	
CLIENT PROJECT	DMR IPSWIC	CH MOT(ORWA	Y UPGF	RADE - WACOL TO DARRA	CH	HECKED BY RILLED DATI		ug-07
CONTRACTOR DRILL MODEL DRILLER	Eds	rratest son 3000 ent Ormsl			ANGLE Vertical BEARING - HOLE DIAMETER 100mm ()	G L(ROUND LEVOCATION EVATION DAT DORDINATE S'	EL RL 1 3259 UM Austra	6.69m 8 E 151295 alian Height Dat
DRILLING		STRA	ATA		MATERIAL DESCRIPTION		CONDIT	ION	OBSERV
SAMPLE, TEST, BIT, SUPPORT, ETC.	R.L.	DEPTH	GROUP SYMBOL	LEGEND	SOIL TYPE Plasticity / Grain Size, Colour, Minor Components	WATER / MOISTURE	COHESIVE	NON COHESIVE	I ET
-	16.09	m - - - 0.60	GW		Silty Sandy GRAVEL (GW) loose, fine grained, angular to sub-angular, brown, sand fine to coarse grained, with grass rootlets at upper 150 mm.	D -	S ω π ω S	IN NOTE OF	FILI
-	16.09	-1	CL		Sandy CLAY (CL) soft, dark brown to black, sand fine to coarse grained, with gravel fine grained.	- -			СОНЕ
SPT at 1.8m N 1;3,3	15.03	1.66	CL		CLAY (CL) soft to firm, grey brown with some light brown mottling, with a trace of root fibres.	-	Ц		СОНЕ
-	14.59	2 2.10	CI		CLAY (CI) firm, grey-brown, with ironstone gravels fine to medium grained angular to sub-angular, with pockets of Sandy CLAY fine to medium grained grey.	-			СОНЕ
SPT at 3.22m N 12;30/140	13.69 -	3 3.00	CL	 ××	Silty CLAY (CL) very stiff to hard, grey.	 			СОНЕ
-	13.29	3.40	CL	 	Sandy CLAY (CL) very stiff to hard, red-brown mottled grey, sand fine grained.	D D			
SPT at 4.8m N 3;10,11	12.07	4.62	CL		CLAY (CL) stiff to very stiff, grey mottled red-brown, with ironstained and ironstone modules (that breakdown to sand coarse grained and gravel fine grained, sub-angular).				СОНЕ
SPT at 6.3m					6.00 hard 6.10 ironstained			1	СОНЕ
N 8;18,24	-	- - - - - - - -			6.30 some ironstone gravel, fine to medium grained	- - - -			
SPT at 7.8m N 9;19,21	9.04	7.65 - - 8	СН		7.55m - 7.65m - with bands of Sandy CLAY, fine grained, hard, grey, with some root fibres (black) present CLAY (CH) hard grey-brown.				СОНЕ
SPT at 9.3m N 8;18,24 NOTES Hole Dia 21m. No	7.69 - 7.60 - 7.34	9 9.00 9.09 9.35	CI		8.80 hard drilling Silty CLAY (CL) hard, brown-grey. Silty CLAY (Cl) hard, grey-black. CLAY (CL-CH) hard, black. Borehole continued as a Cored Drillhole				COHE

	CLIE	JECT	Ī .	DMR IPSWI	СН МОТС	RWA	Y UPGRADE - WACOL TO DARRA				CHE	GED CKE LED	D B	Y		CS 2-Aug-07
	DRII		CTOR DDEL	Ed	rratest son 3000 ent Ormsb	у	ANGLE BEARING HOLE DIAMETER	-	/ertical 00mm ()		LO	CATIO /ATIO	DN N DA	VEL ATUM SYST	3 A	LL 16.69m 2598 E 151295 ustralian Height Di ocal Grid
	DR	RILLIN	G		STRATA		MATERIAL DESCRIPTION							DIS	CONT	TINUITIES
rate)	(QC	% NS	S, etc)			FOG		SING)a)	ENCY (c		SPEC	CIFIC		GENERAL DESCI
TCR % (Drill rate)	SCR / (RQD)	FLUSH RETURN % (TYPE)	SAMPLES CaCO ₃ , SPT, UCS, etc)	R.L.	DEPTH	GRAPHIC LOG	ROCK TYPE Grain Size, Texture/Fabric, Colour, Minor Components	WEATHERING	ESTIMATED ROCK STRENGTH	Is 50 (MPa)	FREQUENCY (her m)		A ISINA	THICKNESS	(mm)	Planarity, Rough Coating, Int
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NO 1000					†		Continued from Borobelo									
1000	00	1		7.24	9.45		Continued from Borehole MUDSTONE, black, properties of a CLAY (CH) with	RS-XV	1							
I 👸	100/(100)						silt, very stiff to hard,.					:	1			

BH214 SHEET 3 **CORED BOREHOLE RECORD** OF 4 LOGGED BY ACS CLIENT CHECKED BY IPSWICH MOTORWAY UPGRADE - WACOL TO DARRA **PROJECT** DRILLED DATE 02-Aug-07 CONTRACTOR Vertical **GROUND LEVEL** RL 16.69m Terratest **DRILL MODEL BEARING** LOCATION 32598 E 151295 N Edson 3000 Brent Ormsby HOLE DIAMETER **DRILLER** 100mm () **ELEVATION DATUM** Australian Height Datum COORDINATE SYSTEM Local Grid **DRILLING STRATA** MATERIAL DESCRIPTION DISCONTINUITIES **SPECIFIC** GENERAL DESCRIPTION FREQUENCY WEATHERING TCR % (Drill rate) HETURN TYPE) SCR / (RQD Is 50 (MPa) SAMPLES CaCO₃, SPT, UCS, Ê **ESTIMATED** HICKNESS R.L. DEPTH GRAPHIC **ROCK TYPE** ANGLE (per ROCK Planarity, Roughness, Grain Size, Texture/Fabric, Colour, Minor Components STRENGTH FLUSH Coating, Infill MUDSTONE, black, properties of a CLAY (CH) with silt, very stiff to hard,. (continued) (Tuff polymer + water) 100 % O PL Ro1 CL 100/(100) 1000 11.28m - 11.33m - gravel inclusions, white, medium grained, sub-rounded SPTLS C .. 11.79m - 11.88m - white-grey cobble inclusion 12 13.21 12.45 12.53 CORE LOSS: 0.08m, (mud return is black) MUDSTONE, black, properties of a CLAY (CH) with silt, very stiff to hard, (Tuff polymer + water) 50 \circ (96)/96 096 PL-UN Ro1 14.29m - 14.47m - white Siltstone (a possible cobble sized inclusion) 14.80m - 14.86m - white Siltstone inclusion . 14.97m - 15.00m - Sandstone - XL, XW, fine to 1.49 15.20 medium grained, grey, massive CORE LOSS: 0.52m, (mud return is black) 0.97 15.72 SANDSTONE, fine to coarse grained, massive, grey. (Tuff polymer + water) 50 % O 81/(81) bechnicsiginthmaster w2d(14.112.07),gpj Nechnicsiginthgint libraryaus_library_[2 (04.10.007),glb NDE LOG (rev 22Jan08 checked AB/ACP Feb 2006) an08 10.47 SPTLSC ·18 ^{18.00} -1.31 SANDSTONE, fine to coarse grained, massive grey 18.25 MUDSTONE, massive black properties of a CLAY (CH) with silt, very stiff to hard,. -1.68 (Tuff polymer + water) 70 % -1.94 SANDSTONE, fine to medium grained, massive Grey.

CORE LOSS: 2.37m, (mud return is grey with a sand, medium to coarse grained), 13/(13) 30 JOB NOTES Hole Diameter 100mm to 21.12m depth. (Solid Flight Augering to 9m. HW casing to 9.2m. NMLC coring from 9.45m to 21m. No free groundwater observed during drilling.) 86015

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	CLIE			JP DMR							HOLE	ED F	BY		OF 4
		JEC7	-		СН МОТС	RWA	/ UPGRADE - WACOL TO DARRA				CHECK	KED	BY	Ē	02-Aug-07
	DRILL MODEL Edso		rratest son 3000 ent Ormsb	у	ANGLE Vertical BEARING - HOLE DIAMETER 100mm ()				GROUND LEVE LOCATION ELEVATION DATU COORDINATE SYS				EL RL 16.69m 32598 E 151295 UM Australian Height Di		
	DR	ILLIN	G		STRATA		MATERIAL DESCRIPTION							DISCO	ONTINUITIES
(e)		%	, etc)			90		g g			JC Y	SP	ECIF		GENERAL DESC
TCR % (Drill rate)	SCR / (RQD)	FLUSH RETURN % (TYPE)	SAMPLES CaCO ₃ , SPT, UCS, etc)	R.L.	DEPTH m	GRAPHIC LOG	ROCK TYPE Grain Size, Texture/Fabric, Colour, Minor Components	WEATHERING	ESTIMATED ROCK STRENGTH	Is 50 (MPa)	30 FREQUENCY 3 (per m)	TYPE	ANGLE	THICKNESS (mm)	Planarity, Rou Coating, I
13() —	— 13/(13) ——			2	- - - -		CORE LOSS: 2.37m, (mud return is grey with a sand, medium to coarse grained),. (continued)	-							
- - - - -	↓	*	SPTLS N 30/1208	-4.31 -4.43	-21 21.00 21.12 - - - - - - - - - - - -		Sandy Gravelly CLAY (CL) black-grey then becoming grey, sand fine to medium grained, grey. End of Borehole at 21.12m								
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BOREHOLE PHOTOGRAPHS



PROJECT: Upgrade Centenary Highway CLIENT: Department of Main Roads PROJECT NUMBER: 86015

Hole: BH 214



Depth:9.45m - 15m



Depth:15.2m - 21m