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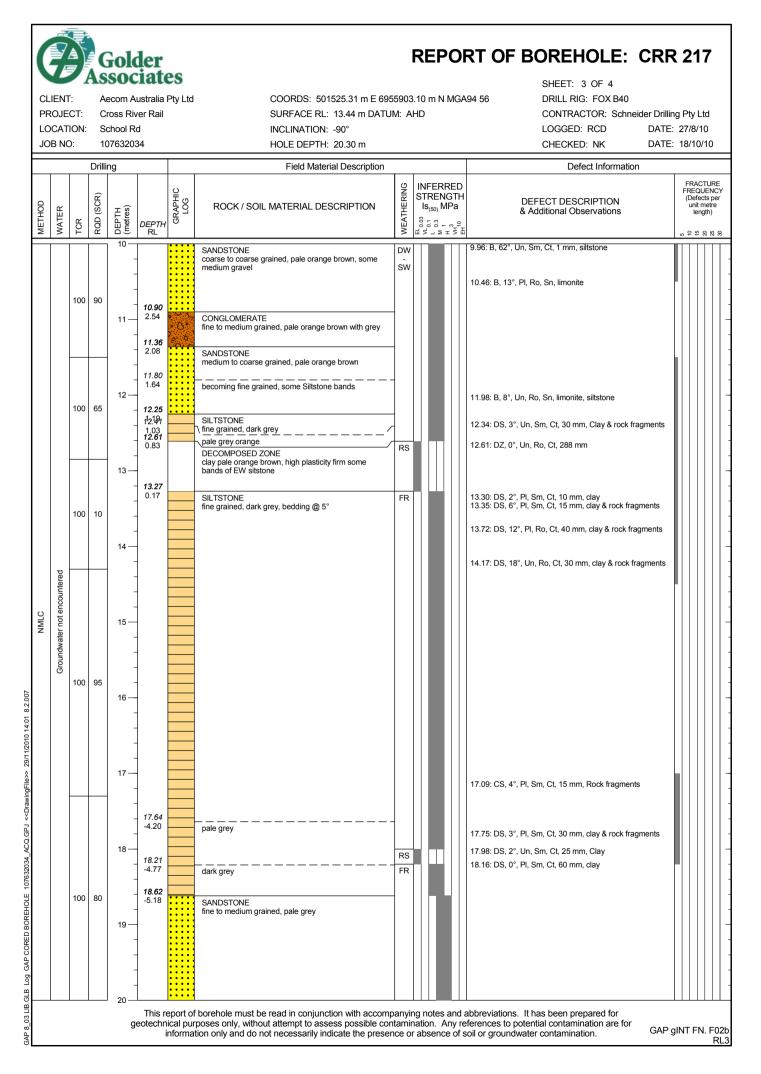
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			G	olde ocia	er ates				REPORT OF			EHOLE: CRR 217
PI L(LIEN ROJE OCAT OB N	ECT: FION:	Cros Scho	om Aust is River ool Rd 632034	ralia Pty Ltd Rail			SURF	RDS: 501525.31 m E 6955903.10 m N MGA94 56 FACE RL: 13.44 m DATUM: AHD INATION: -90° E DEPTH: 20.30 m	[(DRILL CONT LOGO	_ RIG: FOX B40 IRACTOR: Schneider Drilling Pty Ltd GED: RCD DATE: 27/8/10 CKED: NK DATE: 18/10/10
				532034				HOLE				KED: NK DATE. 16/10/10
METHOD	PENETRATION		DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC SYMBOL	Field Material De	•	CONSISTENCY U	STRUCTURE AND ADDITIONAL OBSERVATIONS
GAP 8_03 LB.GLB Log GAP NON-CORED FULL PAGE 107632034_ACQ.GPJ < <drawingfile>> 29/112010 13:40 8.2.007</drawingfile>		Groundwater not encountered						C-L- SM SC SM	ASPHALT Gravelly Clayey SAND fine to medium grained, brown, road base Sandy CLAY medium high plasticity, red brown, coarse sand SAND fine to medium grained, orange red brown, with some clay, residual soil For Continuation Refer to Sheet 2 and the set of t		VD	
GAP 8_03					echnical purposes or	nly, v	vithout	atten	not onjunction with accompanying notes and abbreviations npt to assess possible contamination. Any references to p ssarily indicate the presence or absence of soil or ground	potentia	l cont	amination are for

PF LC	LIENT ROJE DCAT	Г: :СТ: 'ION:	Ae Cr Sc 10	ecom Al ross Riv chool Re 1763203	d		SURFACE RL: 13.44 m DAT INCLINATION: -90° HOLE DEPTH: 20.30 m			n N MGA	CONTRACTOR: Schneider Drilli LOGGED: RCD DATE CHECKED: NK DATE	: 27/	/8/1	10
			Drilli	ng			Field Material Description				Defect Information	FI	RAC	
	WATER	TCR	RQD (SCR)	OEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	STR Is _{(f}	ERRED ENGTH (50) MPa	I DEFECT DESCRIPTION & Additional Observations	FR (D	REQU Defer unit r len	UE mei ngth
		100	100		<u>3.00</u> 10.44		Continuation of Sheet 1 SANDSTONE medium to coarse grained, pale grey becoming orange brown, bedding @ 10°	DW			5.35: DS, 20°, Un, Ro, Ct, 15 mm, Clay & rock fragments			
	Groundwater not encountered	85	90		6.00 7.44 7.70 5.74 8.12 5.32 8.32 8.32 8.32 8.32 8.32 8.32 8.32 8		CORE LOSS SANDSTONE medium to coarse grained, pale orange brown, occasional conglomerate band CONGLOMERATE fine to coarse grained, pale orange brown SANDSTONE coarse to coarse grained, pale orange brown, some medium gravel band of conglomerate 80 mm band of conglomerate 9.0 to 9.3 coarse grained becoming coarse grained band of conglomerate		-		 6.00: CZ, 10°, Un, Ro, Ct, 150 mm, Rock fragments 6.25: DS, 25°, Un, Ro, Ct, 8 mm, clay & rock fragments 6.30: DS, 5°, Un, Ro, Ct, 30 mm, clay & rock fragments 7.05: IS, 60°, Un, Ro, Ct, 5 mm, clay & rock fragments 7.40: J, 37°, Un, Ro, Sn, limonite 8.87: CS, 30°, Un, Ro, Ct, 75 mm, Rock fragments 			



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				(As	Gol soc	der ciato	es			RI	ΞP	PC)F	RT OF BOREHOLE: (CRR	2	17	
						ustralia	Pty Ltd				m N	MG	GAS					
) JE (CT: ION:		ross Riv chool R	ver Rail d		SURFACE RL: 13.44 m DATUN INCLINATION: -90°	/I: A	HD				CONTRACTOR: Schneic LOGGED: RCD	der Drillin DATE:			
		B NC			076320			HOLE DEPTH: 20.30 m						CHECKED: NK	DATE:)
	_			Drilli	ng			Field Material Description						Defect Information				
METHOD		WATER	TCR	RQD (SCR)	DEPTH (metres)	DEPTH RL	GRAPHIC LOG	ROCK / SOIL MATERIAL DESCRIPTION	WEATHERING	STI Is	=ERI REN (50) ₪	GT 1Pa	H	DEFECT DESCRIPTION & Additional Observations		FRE (De ur	ACTU QUEI fects it met ength	NCY per re)
NMLC	_		100	80	20 —			SANDSTONE fine to medium grained, pale grey	FR			Г						
Ż	+					20.30 -6.86	••••	END OF BOREHOLE @ 20.30 m					$\left \right $					-
GAP 8_03 LIB.GLB Log GAP CORED BOREHOLE 107632034_ACQ.GPJ < <drawingfile>> 29/112010 14:01 8.2.007</drawingfile>																		
AP 8_03 LIB.GLB Log GAP (30 — 9	eotechn	ical pu	f borehole must be read in conjunction with accompa rposes only, without attempt to assess possible cont tion only and do not necessarily indicate the presend	amir	atic	n. A	٨ny	ref	ferences to potential contamination are for	GAP g	INT	=N. F	=02b



CLIENT: Aecom Australia Pty Ltd PROJECT: Cross River Rail LOCATION: School Rd JOB NO: 107632034

REPORT OF CORE PHOTOGRAPHS: CRR 217

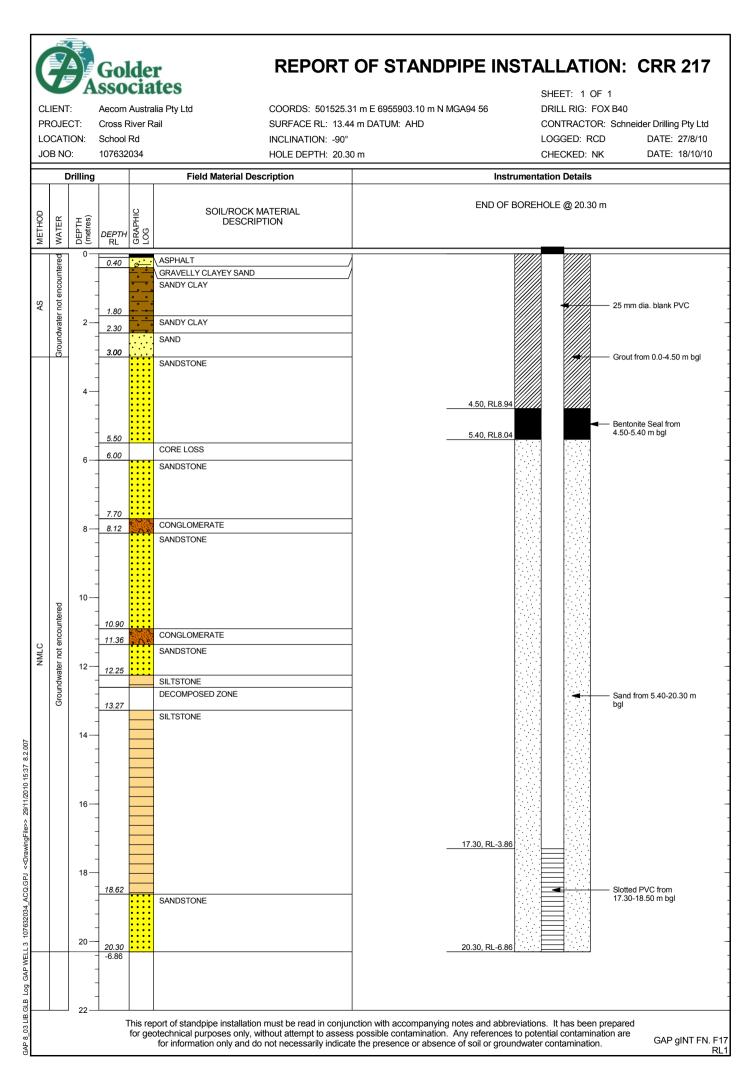
 COORDS:
 0501525 m E
 6955903 m N

 SURFACE RL:
 13.44
 DATUM:
 AHD

 INCLINATION:
 -90°
 HOLE DEPTH:
 20.30 m

DEPTH RANGE: 3.00-20.30 m DRILL RIG: Fox B40 DRILLER: Schneider Drilling Pty Ltd LOGGED: RCD DATE: 27/08/10 CHECKED: NK DATE: 4/10/10

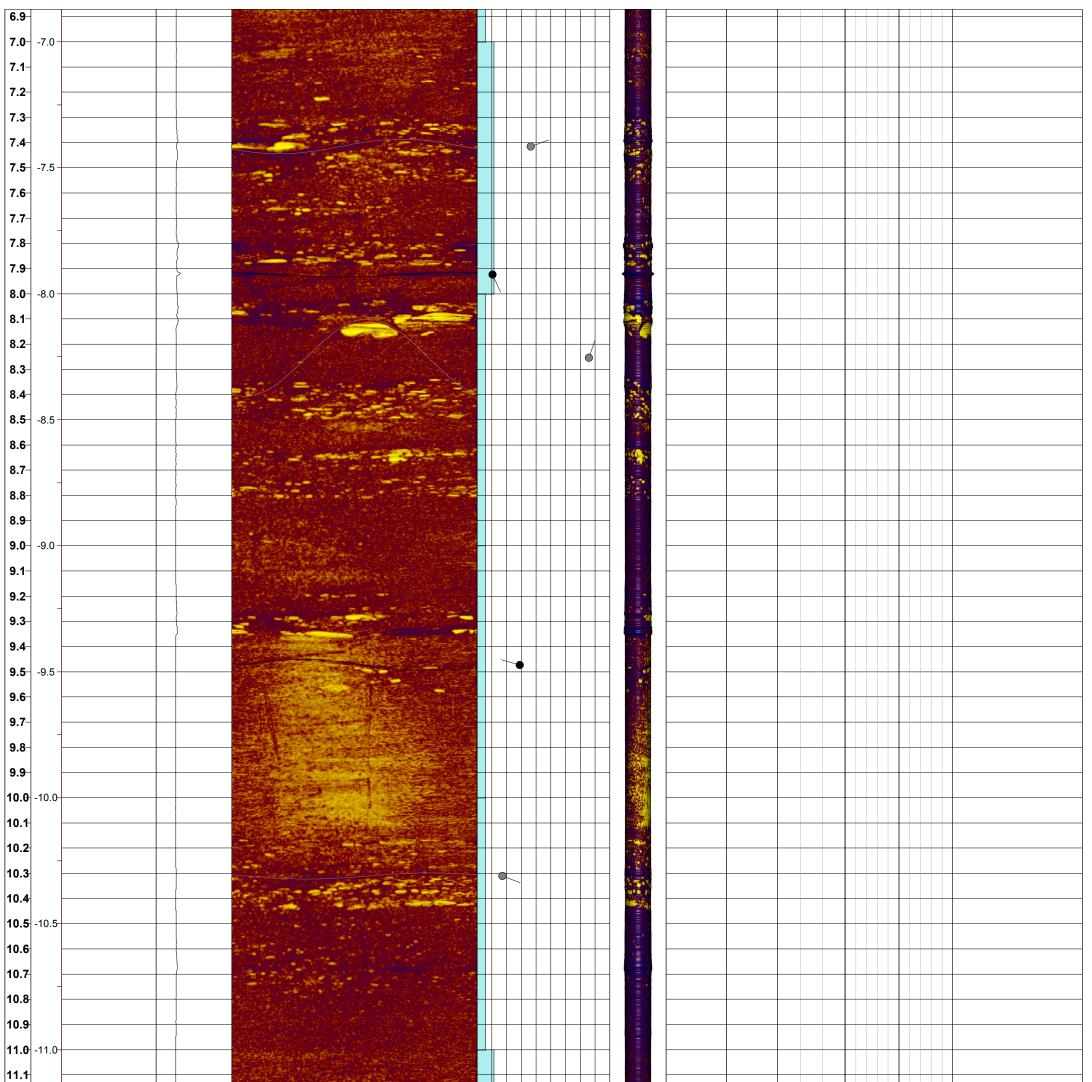




		GEOPHYSICAL RECORD OF BOREHOLE: CRR 217													DEVIATION DATA								
	older sociates	PROJECT Cross River Rail									F	PROJE	CT #	1076320	34	330° 50° MN 10° 20° 30° 30° 30° 320° 40° 270							
	sociates	CLIENT Department of Transport and Main Roads DATE								12/10/20	10	310° 300°	0.1			50°		210					
CATION-	School Road		L	LOGGED B	BY- RCD					Li	ithol	ogy				290° 280°	0.1	HAXX	0,1 0,1	70°			
STING- ORTHING-	501525.00 m E 6955905.00 m I			LOGGED D	DATE- 27/8/10 DATUM-							0,				1:2 [m] -0,1 260° 250°	-0.0 -0.0 -0.1		Ħ	90 10 110)°		1 C 2 C 13 C 14 C
EVATION-				.OGGED D		n										240° 230°	-0.1 -0.1 -0.1 -0.1		H.	120° 130°			15.0 16.0 17.0
RILLED DEPT	H- 20.30 m -90°	DIAMETER- AZIMUTH-		DRAWN BY												220	210° -0.2 200° 190° 11	30° 170° ^{160°}	140° 50°	•• Unit			19 0
SING-		DEPTH-		FILE NAME		ED.WCL														Onit	s - m		
•	Joint - Lo	ow Con	fidence	9	● Join	t - Medi	ium Co	nfidence	/	Joint		h Con		ures _{ce}									
oth RL 15					TE	LEVI	EWE	RDA	TA									COP	RE	DA	ATA	۱	
			ATV - Ca				mplitude	0700				/ FF		3D log	Core Photo	Lithology			RQ				Defect Description
	0 cps	300	0 mm	n 300	0° 90		180° ted Struc	270° tures	0°			nts/m Drientati	16 ons	251°			0			100		100	
1				,	0° 90)°	180°	270°	0°	0			90				(Refer to	detailed o	core lo	og, pro	ovided	separ	ately)
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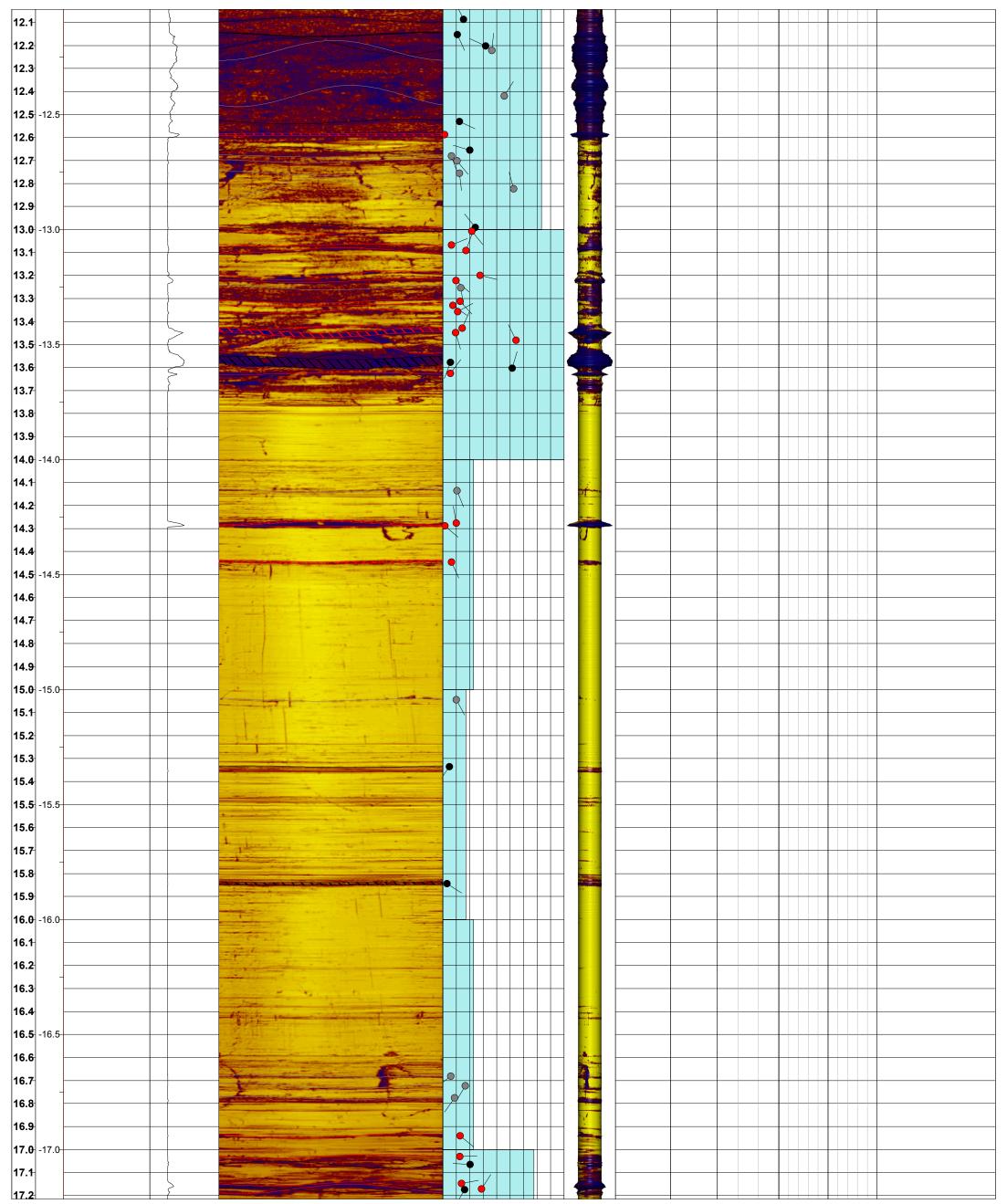
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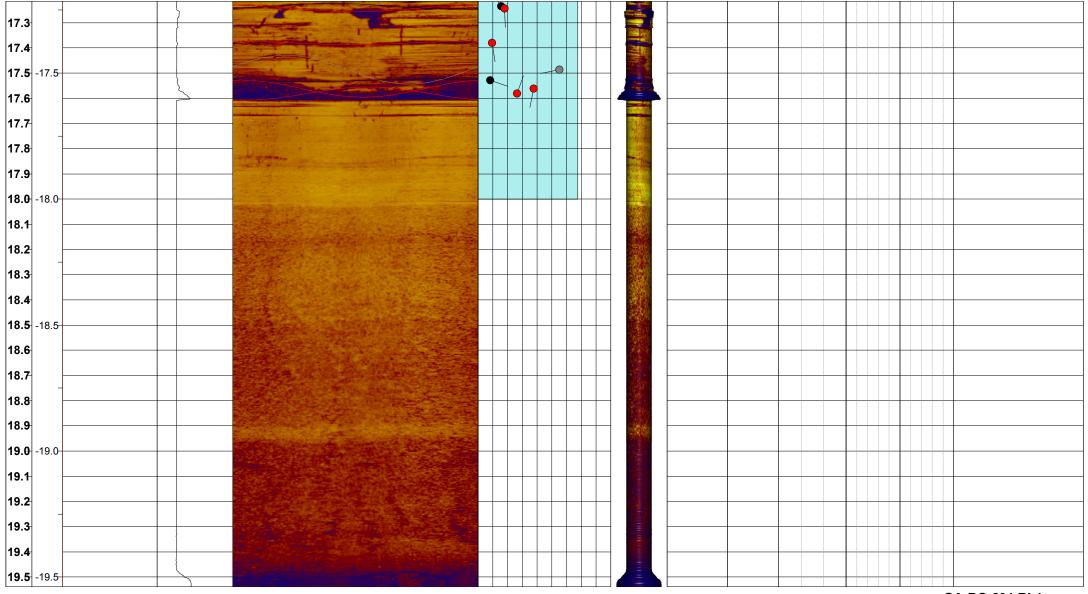
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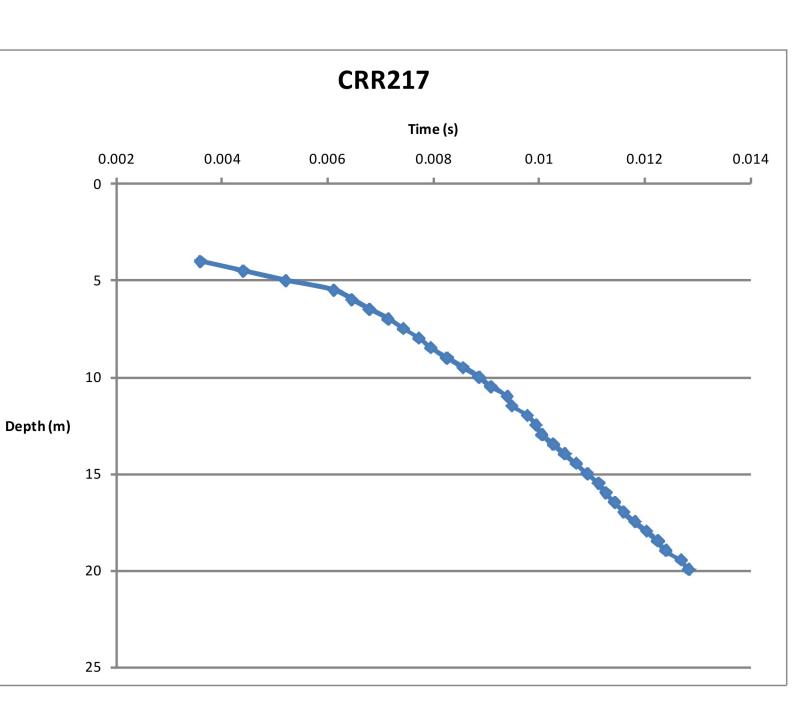
GA-BQ-291 RL1 Issued 31/03/10

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Pty Ltd.



Note:

* - 1st arrival not clear due to noise

Calculations done without accounting for borehole deviation

	Geo	phone	Depth (n	n)	Interval velocity (P wave m/s)
	fro	m	to			
	4	1	4.5		619	
	4.	5	5		619	
	5	5	5.5		552	
	5.	5	6		1481	
	6	5	6.5		1490	
	6.	5	7		1419	
0.014	7	7	7.5		1723	
0.014	7.	5	8		1729	
	8	3	8.5		2201	
	8.	5	9		1634	
	9)	9.5		1637	
	9.	5	10		1668	
		0	10.5		2206	
		.5	11		1613	
		1	11.5		5785	
		.5	12		1706	
		2	12.5		3016	
		.5	13		4643	
		3	13.5		2302	
		.5	14		2303	
	1		14.5		2301	
		.5	15		2401	
		5	15.5		2402	
		.5	16		3593	
		6	16.5		2960	
		.5	17		2961	
		7	17.5		2293	
		.5	18		2321	
		8	18.5	-+	2321	
		.5	10.0	-+	3294	
		9	19.5	-+	1749	
		.5	20		3429	
	and Main Roc	ads		PROJECT	Cross River Ro	li
Golder Associates	CHECKED TD	DATE O	OCT 4	TITLE	CRR21	7 VSP
Associates	CHECKED TR SCALE NTS	DATE		PROJECT	™ 000-107632034	FIGURE No REV No