



An Australian Government Initiative

Groundwater Education Investment Fund Project

Borehole Infrastructure Report

Borehole Type		Piezometer Monitoring Bore	Location	Willunga Super Science Site
Unique Well ID		WSS-P3LR-1	Installed By	Town & Country Drilling Services
Completion Date		02/08/2012	Depth Installed	8.96 mBGS
Drilled By		Town & Country Drilling Services	Depth Drilled	9.0 mBGS
Monument Type		Lockable standpipe	Drilled Diameter/Method	150 mm/Auger
Monument Diameter/Width		100 mm	Screen Depth	6.96-8.96 mBGS
T.O.M. offset from G.L. (Top of Open Monument)		0.601 m	Screen Size/Aperture/Type	50 mm/slotted/PVC 18
PVC Casing to T.O.M offset		+ 0.005 m	Level of Bentonite	6.0-6.5 mBGS
Ground Elevation (mAHD)		82.152	Casing Size/Type	50 mm/PVC 18
GPS Easting	(MGA-94 Zone 54)	277211	SWL after Development	3.3 mTOC
GPS Northing		6095218	Development Details	Air vacuum/submersible pump

Project Comments: WSS-P3LR-1 is a single piezometer monitoring bore, located on Little Road, Willunga.



Map of Willunga Super Science Project Shallow Monitoring Well Sites

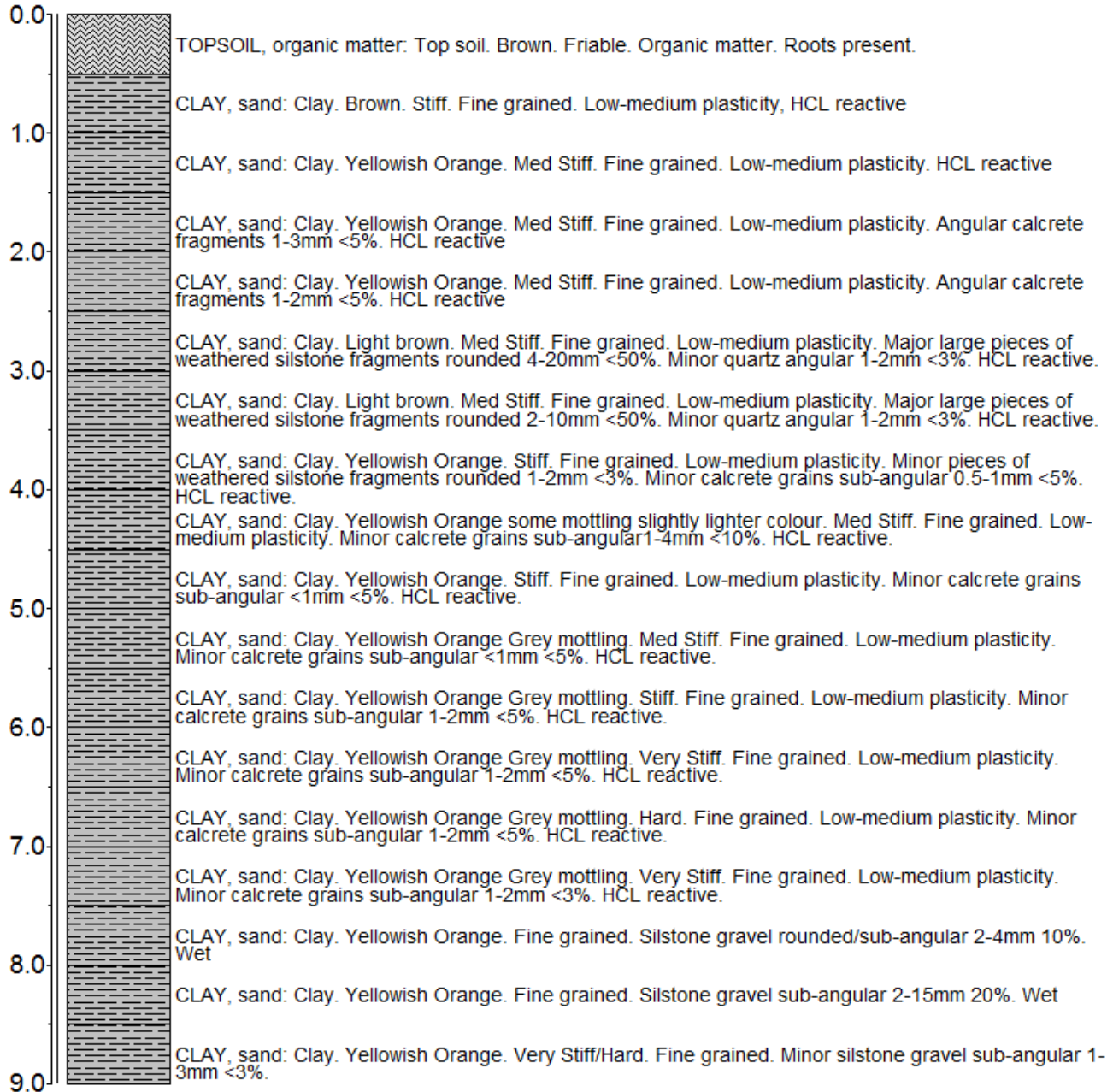
Note* Appendix includes Lithology and Well Completion Logs, Geophysical Logs, Hydraulic Test and Chemical Analysis.

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Lithology

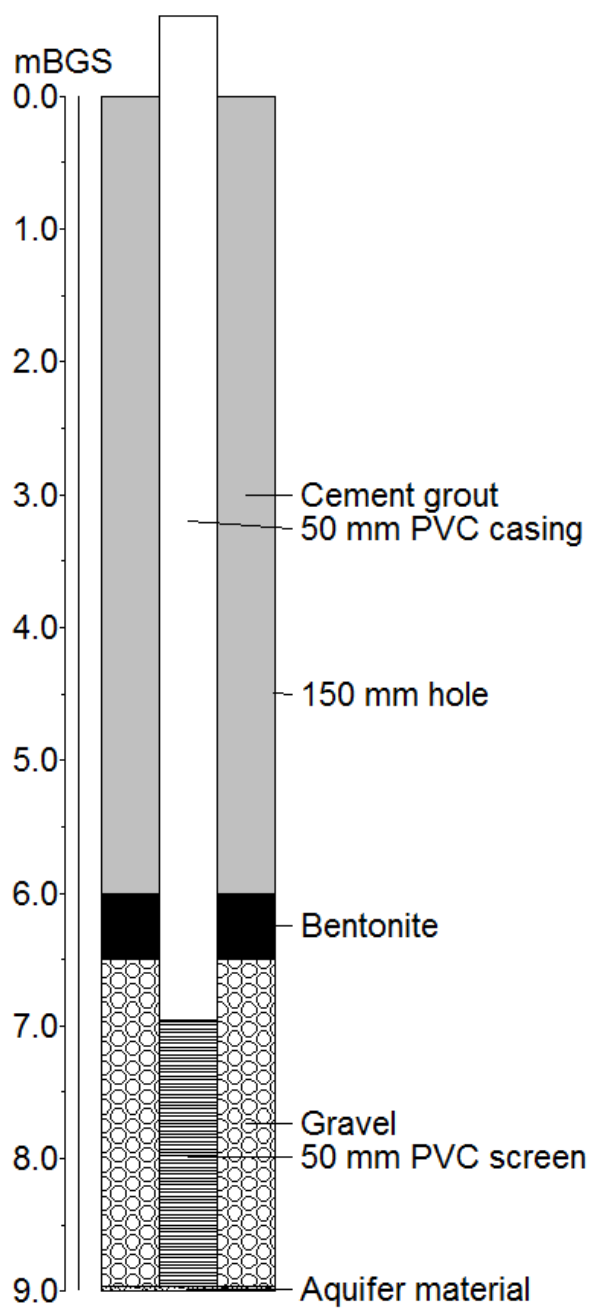
WSS-P3LR-1

mBGS



Well Completion Log

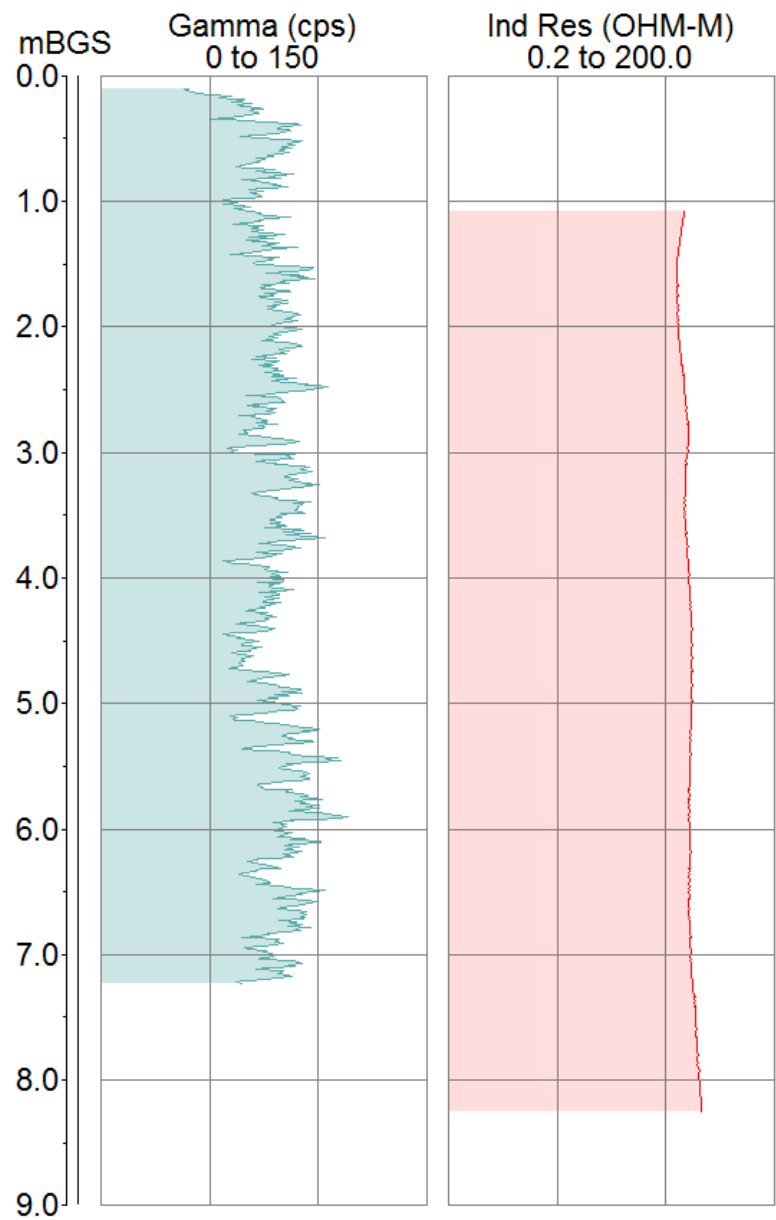
WSS-P3LR-1



Geophysical Logs

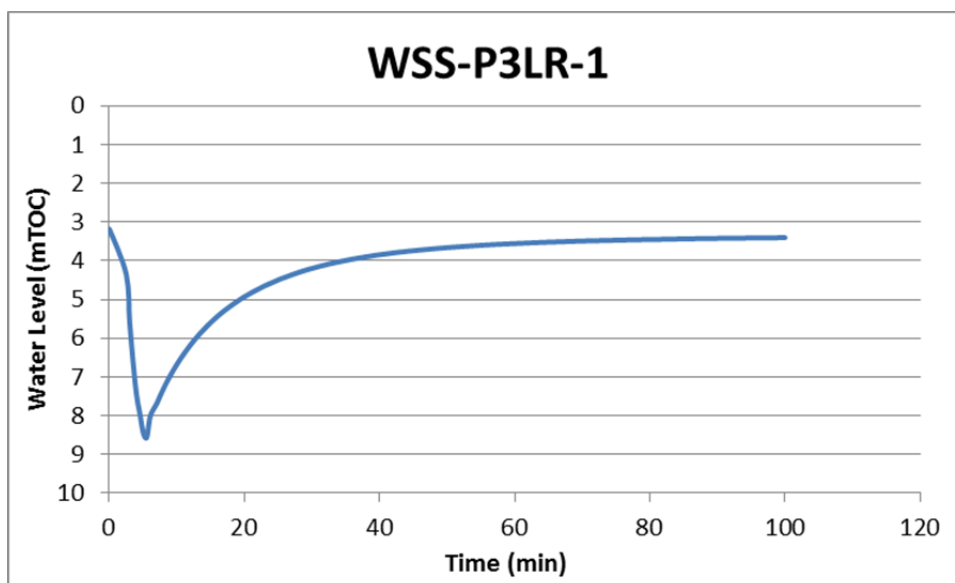
The portable Mount Sopris logging system was used to collect geophysical data from bore WSS-P3LR-1. The 2PGS probe was used to collect natural gamma measurements, and the 2PIA probe was used to measure conductivity/induced resistivity.

WSS-P3LR-1



Pumping Test

A pumping test was performed on piezometer WSS-P3LR-1 on 16/10/2012 with a water level logger and a submersible pump using a flow rate of 6 L/min. The results of the test are presented below. The report author may be contacted for the full data set.



Chemical Analysis

The results of major ion chemistry on WSS-P3LR-1 are presented below, along with chemical parameters measured in the field.

Well ID	Date Sampled	SWL	Field Parameters				Laboratory Analyses @ CSIRO ASU											
			pH	EC	Temp	Alkalinity	pH	E.C.	Total Alkalinity	F ⁻	Cl ⁻	Br ⁻	NO ₃ ⁻	SO ₄ ⁼	Ca	K	Mg	
		mTOC		μS/cm	°C	meq/L		μS/cm	meq/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
WSS-P3LR-1	17/10/2012	3.30	7.2	2877	18.1	8.7	7.7	2812	8.3	0.7	662	1.7	0.2	69	84.7	7.1	309	
							Na	S	Al	As	B	Cd	Co	Cr	Cu	Fe	Mn	
							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
							75.4	19.3	<0.05	<0.05	0.333	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	
							Mo	Ni	P	Pb	Sb	Se	Si	Sr	Zn			
							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L			
							<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	7.32	1.48	<0.05			