



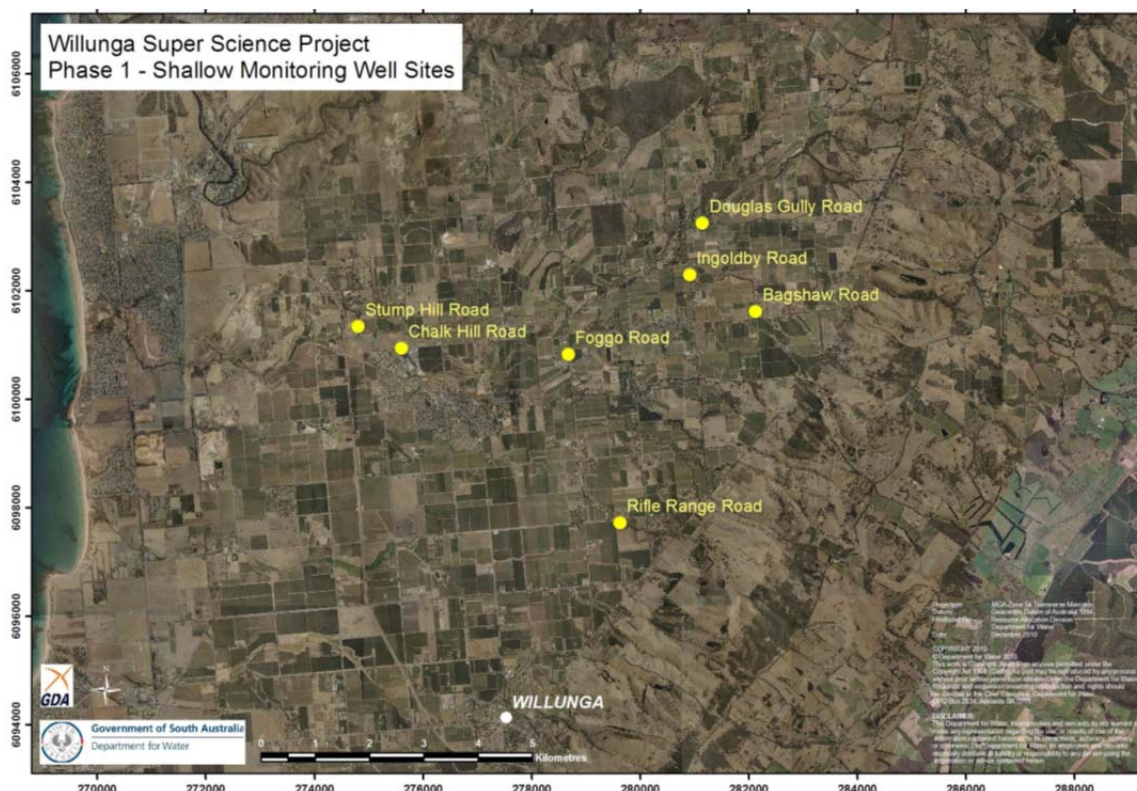
An Australian Government Initiative

# Groundwater Education Investment Fund Project

## Borehole Infrastructure Report

Borehole Type		Piezometer Monitoring Bore	Location	Willunga Super Science Site
Unique Well ID		WSS-RRR-1	Installed By	Geodrill
Completion Date		18/11/2010	Depth Installed	20 mBGL
Drilled By		Geodrill	Depth Drilled	20 mBGL
Monument Type		Lockable standpipe	Drilled Diameter/Method	125 mm, Auger
Monument Diameter/Width		80 mm	Screen Depth	17.0-20.0 mBGL
T.O.M. offset from G.L. (Top of Open Monument)		0.86 m	Screen Size/Aperture/Type	50 mm/0.4 mm/PVC18
PVC Casing to T.O.M offset		-7.0 cm	Level of Bentonite	15.5-16.5 mBGL
Ground Elevation (mAHD)		112.978	Casing Size/Type	50 mm/PVC18
GPS Easting	(MGA-94 Zone 54)	279634	SWL after Development	17.11 mTOC
GPS Northing		6097712	Development Details	Air lifted 2 hours

**Project Comments:** WSS-RRR-1 is a single piezometer monitoring bore, located approximately 50 m south of Rifle Range Road.



Map of Willunga Super Science Project Shallow Monitoring Well Sites

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

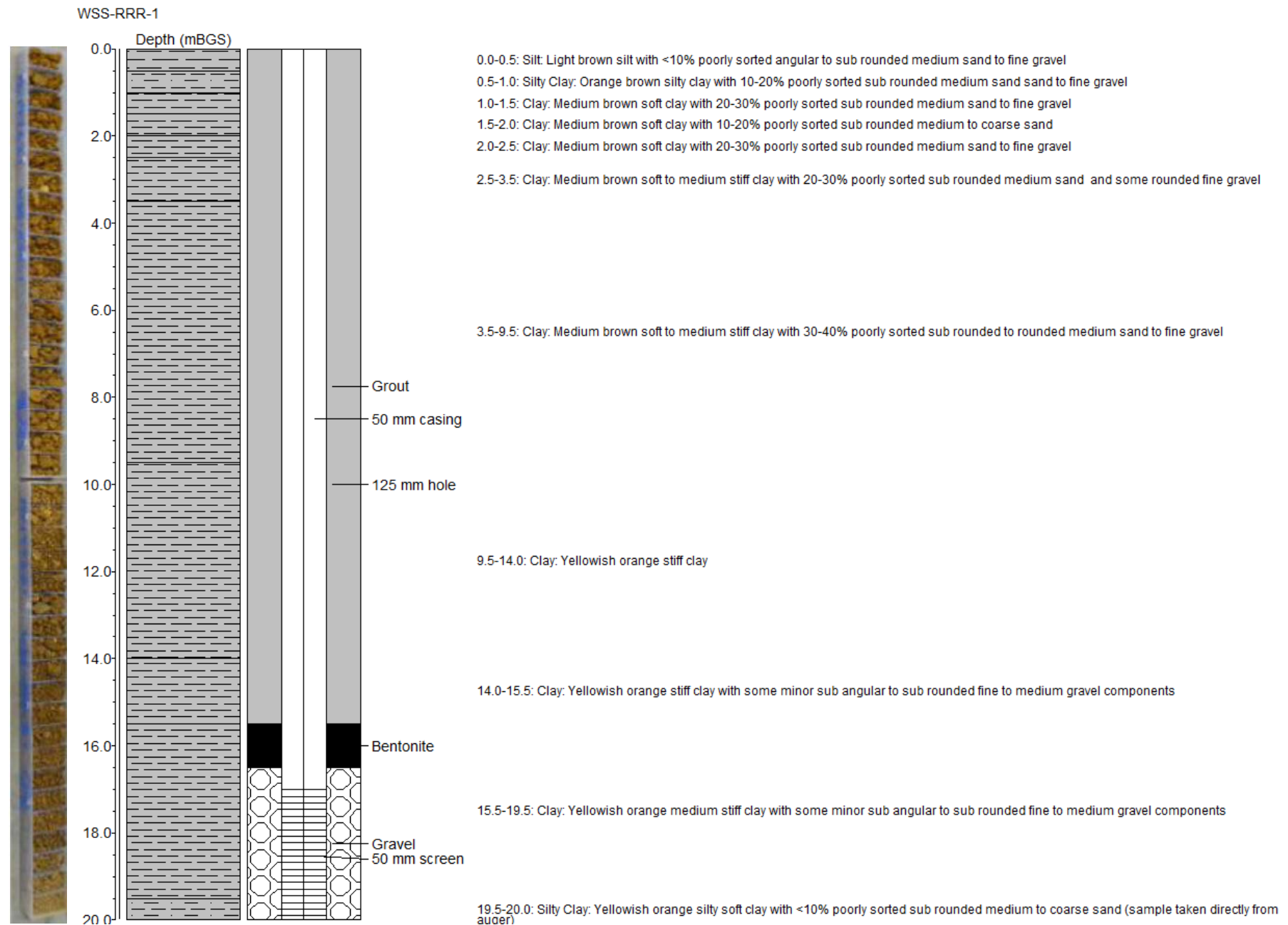
Infrastructure Report prepared by:	Contact Details:	Checked by:
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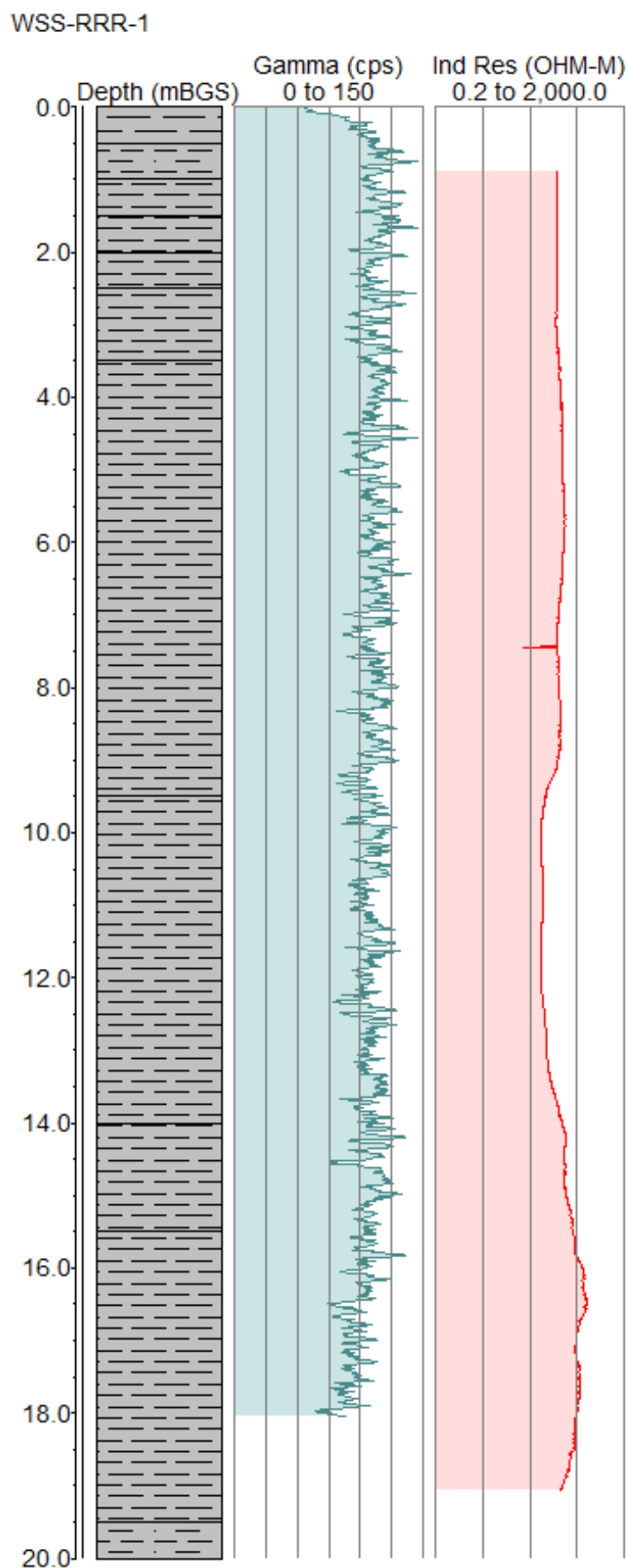
Location and Well Installation of WSS-RRR-1

# Lithology and Well Completion Log



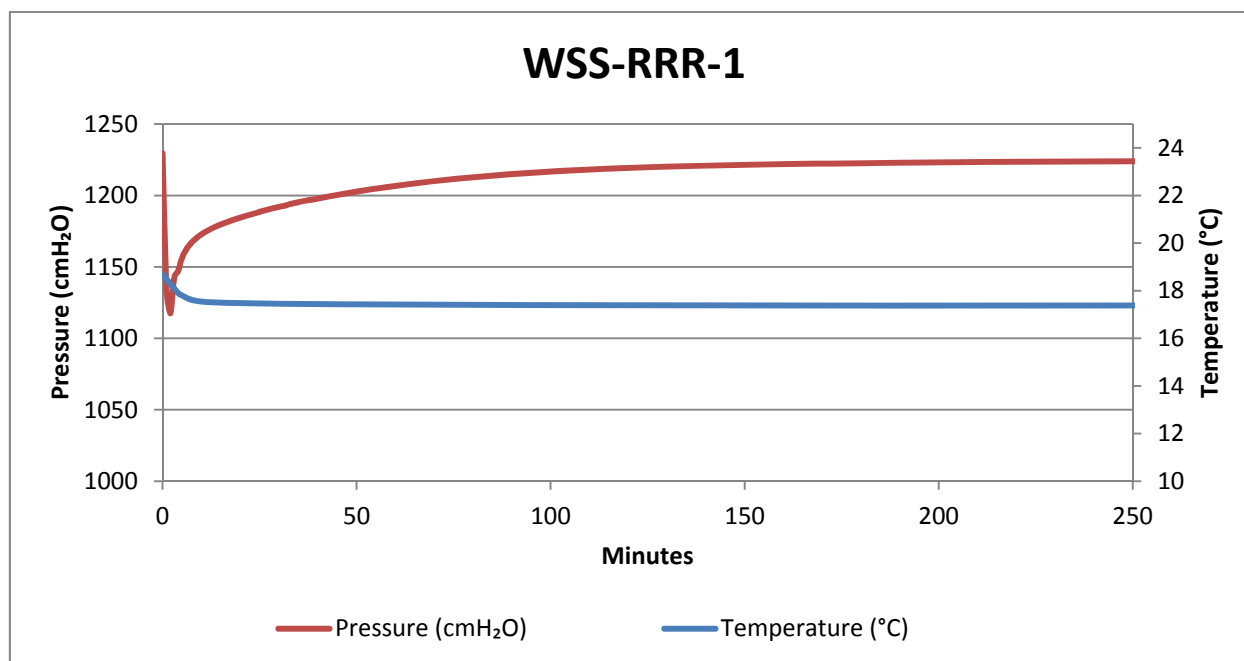
## Geophysical Logs

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



## Slug Test

A slug test was performed on WSS-RRR-1 by placing a level logger at a depth of 20.6 mTOC and using a pump (19.75 mTOC) to remove the standing water column above the pump. 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-RRR-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	E.C.	Total Alkalinity	F <sup>-</sup>	Cl <sup>-</sup>	Br <sup>-</sup>	NO <sub>3</sub> <sup>-</sup>	SO <sub>4</sub> <sup>=</sup>	Ca	K	
		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
WSS-RRR-1	13/12/2011	18.55	6.61	2775	20.3	8.8	2874	8.5	0.4	750	2.4	0.3	120	97.2	6.14	
							Mg	Na	S	Al	As	B	Cd	Co	Cr	
							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
							87.5	354	33	0.08	<0.05	0.16	<0.05	<0.05	<0.05	
							Cu	Fe	Mn	Mo	Ni	P	Pb	Sb	Se	
							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
							<0.05	0.382	0.06	<0.05	0.05	<0.1	0.05	<0.1	<0.05	
							Si	Sr	Zn							
							mg/L	mg/L	mg/L							
11.2	1.15	0.07														