



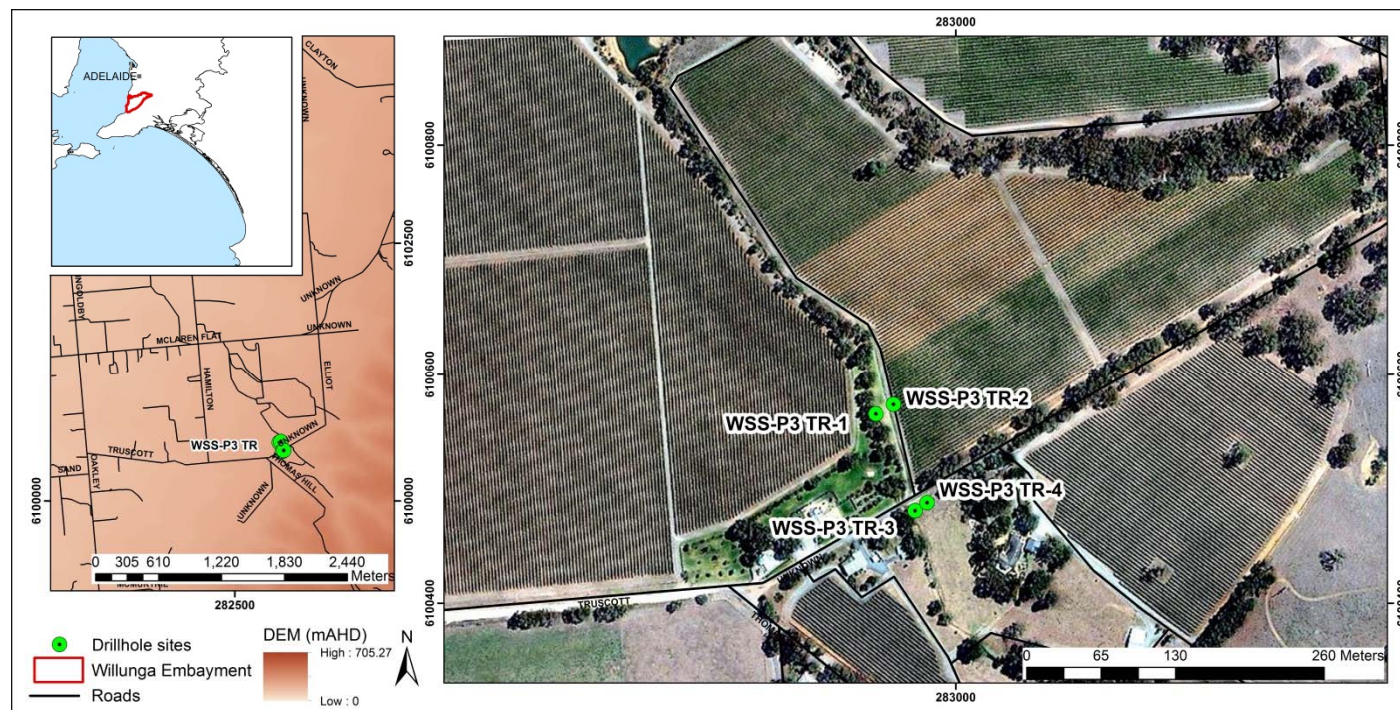
An Australian Government Initiative

# Groundwater Education Investment Fund Project

## Borehole Infrastructure Report

Borehole Type		Piezometer Monitoring Bore	Location	Willunga Super Science Site
Unique Well ID		WSS-P3TR-2	Installed By	Town & Country Drilling Services
Completion Date		06/08/2012	Depth Installed	10.12 mBGS
Drilled By		Town & Country Drilling Services	Depth Drilled	10.5 mBGS
Monument Type		Flush mounted	Drilled Diameter/Method	150 mm/Auger
Monument Diameter/Width		165 mm	Screen Depth	8.12-10.12 mBGS
T.O.M. offset from G.L. (Top of Open Monument)		0 m	Screen Size/Aperture/Type	50 mm/slotted/PVC 18
PVC Casing to T.O.M offset		-0.101 m	Level of Bentonite	7-7.5 mBGS
Ground Elevation (mAHD)		162.781	Casing Size/Type	50 mm/PVC 18
GPS Easting	(MGA-94 Zone 54)	282946	SWL after Development	7.9 mTOC
GPS Northing		6100574	Development Details	Air vacuum/submersible pump/bailer

**Project Comments:** WSS-P3TR-2 is a single piezometer monitoring bore, adjacent to Pedler Creek in the Gemtree vineyard on Truscott Road, McLaren Flat.



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-P3TR-2

mBGS

0.0

1.0

2.0

3.0

4.0

5.0

6.0

7.0

8.0

9.0

10.0

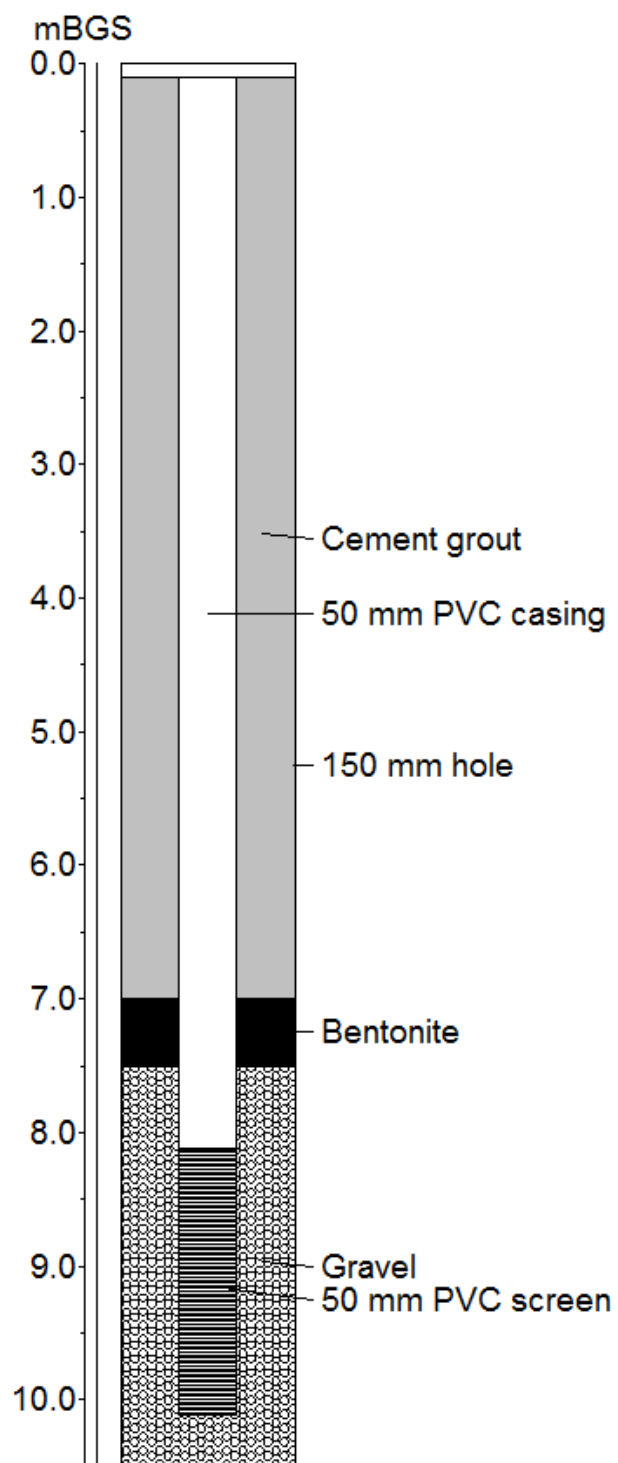
CLAY, silt: Clay. Dark brown. Medium Stiff. Significant siltstone gravels 1-3mm. Minor large siltstone gravels 20-30mm

CLAY, silt: Clay. Light brown. Medium Stiff. Significant siltstone gravels 1-3mm. Minor large siltstone gravels 20-30mm

CLAY, silt: Clay. Yellowish Orange. Low Stiff. Sticky. Significant siltstone gravels 1-5mm.

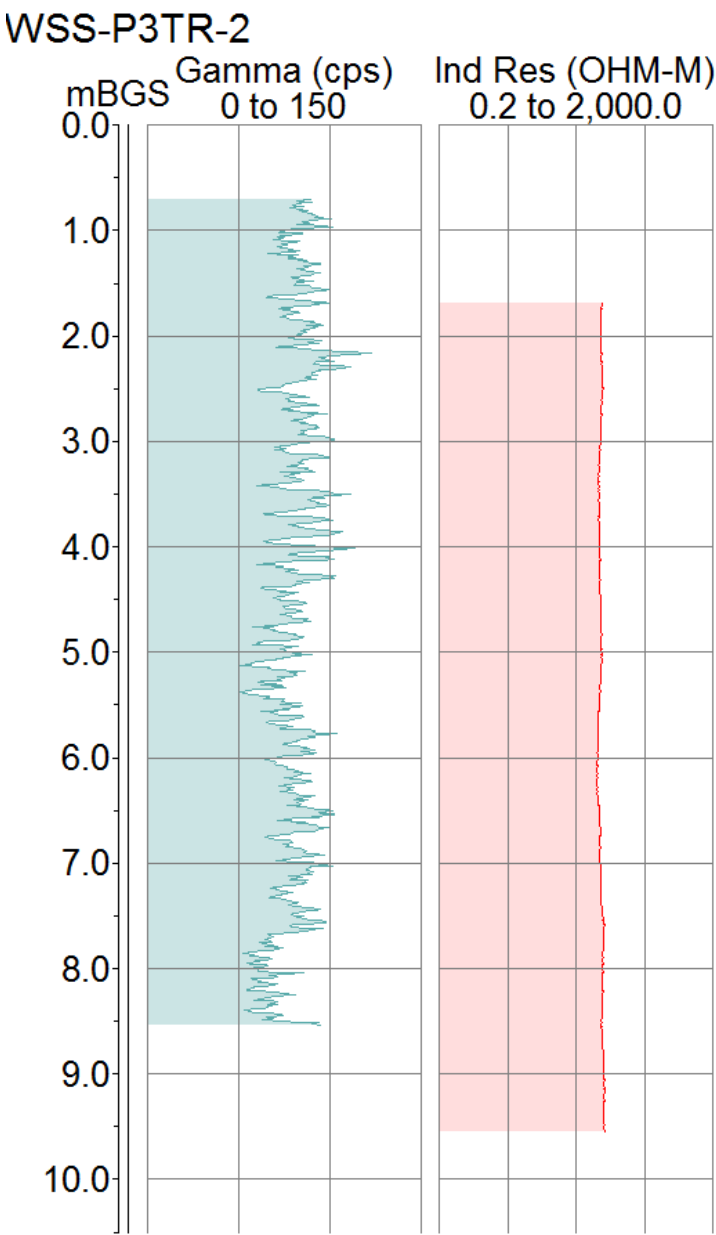
# Well Completion Log

## WSS-P3TR-2



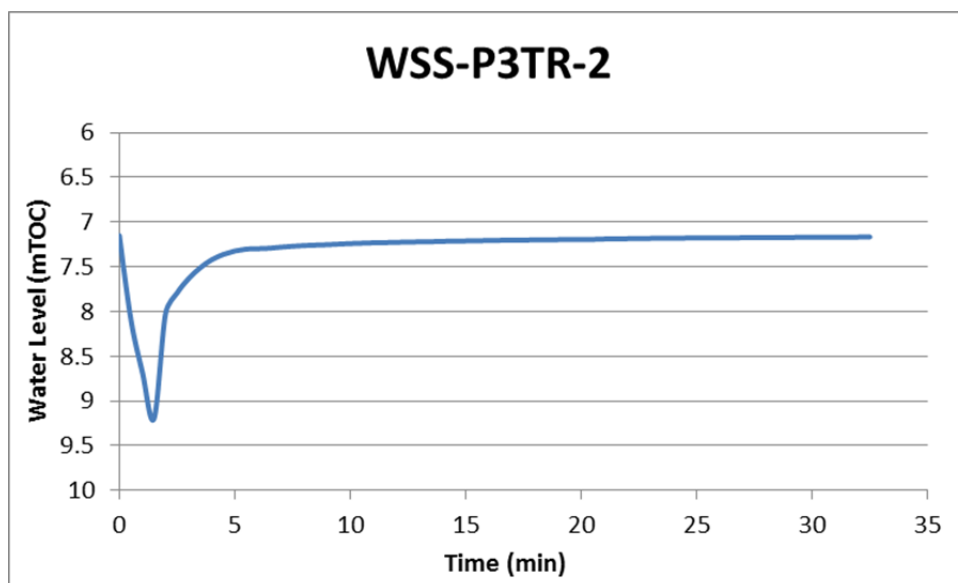
# Geophysical Logs

The portable Mount Sopris logging system was used to collect geophysical data from bore WSS-P3TR-2. The 2PGS probe was used to collect natural gamma measurements, and the 2PIA probe was used to measure conductivity/induced resistivity.



## Pumping Test

A pumping test was performed on piezometer WSS-P3TR-2 on 01/11/2012 with a water level logger and a submersible pump using a flow rate of 5.5 L/min until the pump went dry. 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-P3TR-2 are presented below, along with chemical parameters measured in the field.

Well ID	Date Sampled	SWL mTOC	Field Parameters				Laboratory Analyses @ CSIRO ASU											
			pH	EC	Temp	Alkalinity	pH	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	Mg	
				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-P3TR-2	21/11/2012	7.90	6.80	2350	18.8	NA	7.5	2548	5.2	0.2	670	1.7	1.2	66	114	9.86	98.9	
							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	
							277	21	0.355	<0.05	0.12	<0.05	<0.05	<0.05	<0.05	0.61	<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	8.46	0.575	<0.05			