



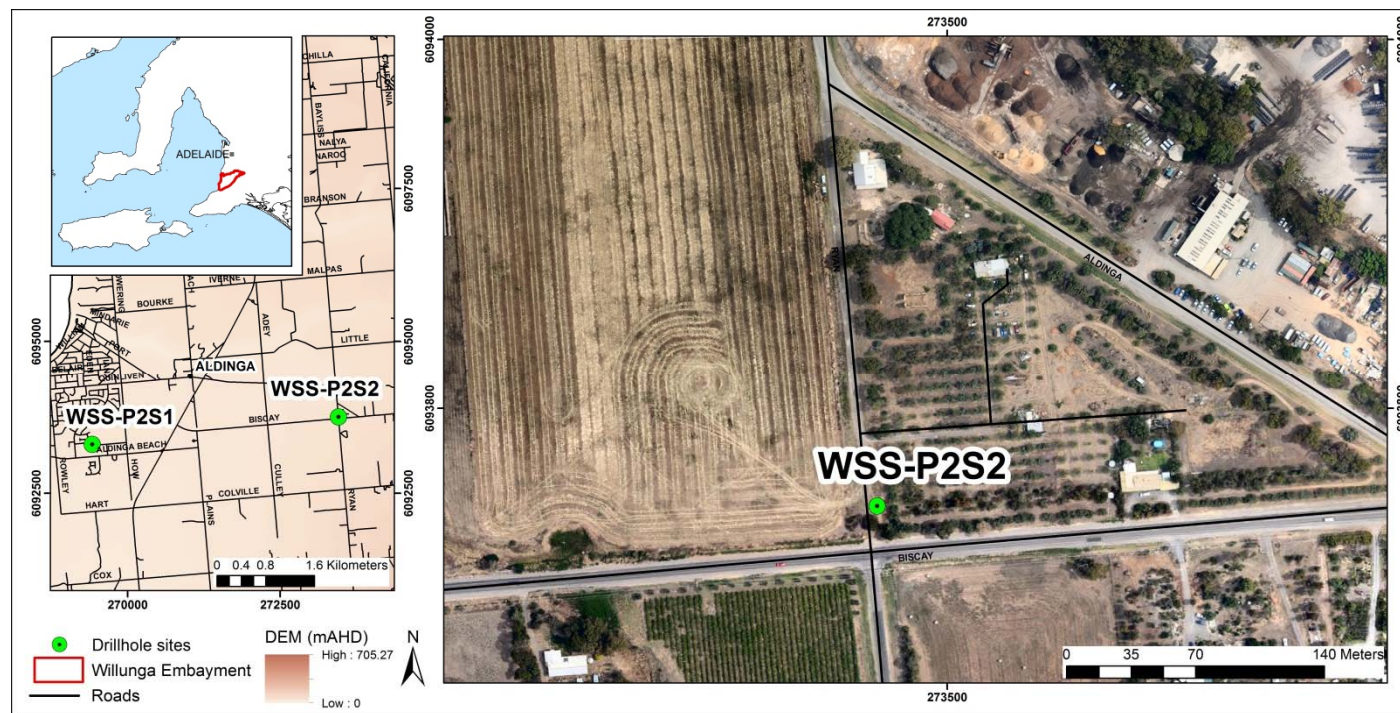
An Australian Government Initiative

Groundwater Education Investment Fund Project

Borehole Infrastructure Report

Borehole Type		Piezometer Monitoring Bore	Location	Willunga Super Science Site
Unique Well ID		WSS-P2S2-2	Installed By	Kangarilla Drilling
Completion Date		21/11/2012	Depth Installed	159 mBGS
Drilled By		Kangarilla Drilling	Depth Drilled	161 mBGS
Monument Type		Concrete gatic cover	Drilled Diameter/Method	200 mm (min)/RTA+RTM
Monument Diameter/Width		365 mm	Screen Depth	156-159 mBGS
T.O.M. offset from G.L. (Top of Open Monument)		0.125 m	Screen Size/Aperture/Type	101 mm/ 0.5 mm/ SST
PVC Casing to T.O.M offset		-0.115 m	Level of Cement/Bentonite	0-154 mBGS
Ground Elevation (mAHD)		39.938	Casing Size/Type	96 mm/ PVC
GPS Easting	(MGA-94 Zone 54)	273460	SWL after Development	17.56 mTOC
GPS Northing		6093772	Development Details	Airlift

Project Comments: WSS-P2S2-2 is a single completion piezometer completed in the South Maslin Sands. Six additional piezometers are completed at deeper and shallower depths at this site. This is site 2 of seven sites in a transect across the Willunga Basin.



Map of Willunga Super Science Basin Transect Sites

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

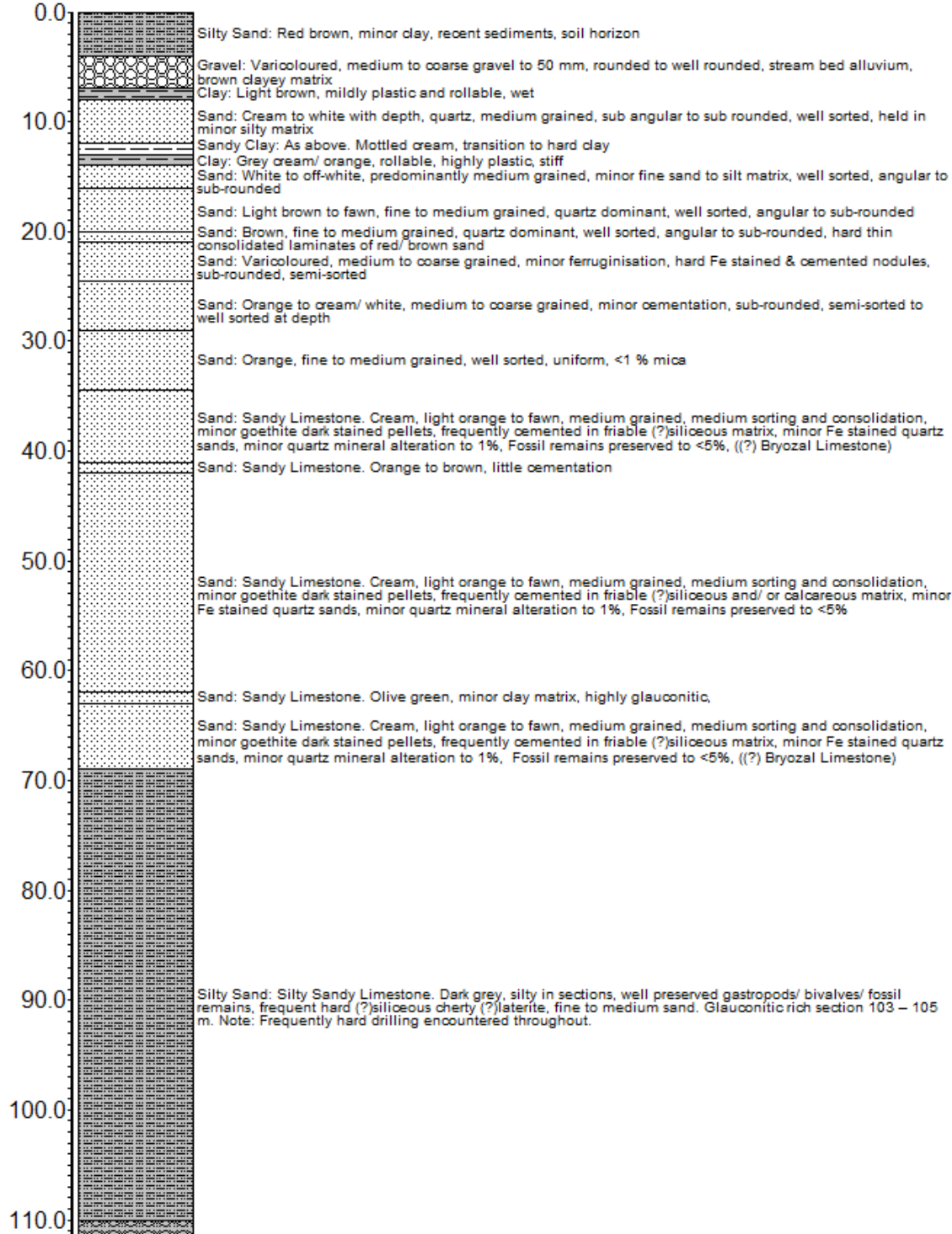
Infrastructure Report prepared by:	Contact Details:	Checked by: Prof Peter Cook
	stephanie.villeneuve@flinders.edu.au Office: 08 8201 2724	

Lithology Log

Lithology was logged for WSS-P2S2-1, adjacent to WSS-P2S2-2, by Nico Kruger, Department of Environment, Water and Natural Resources.

WSS-P2S2-1

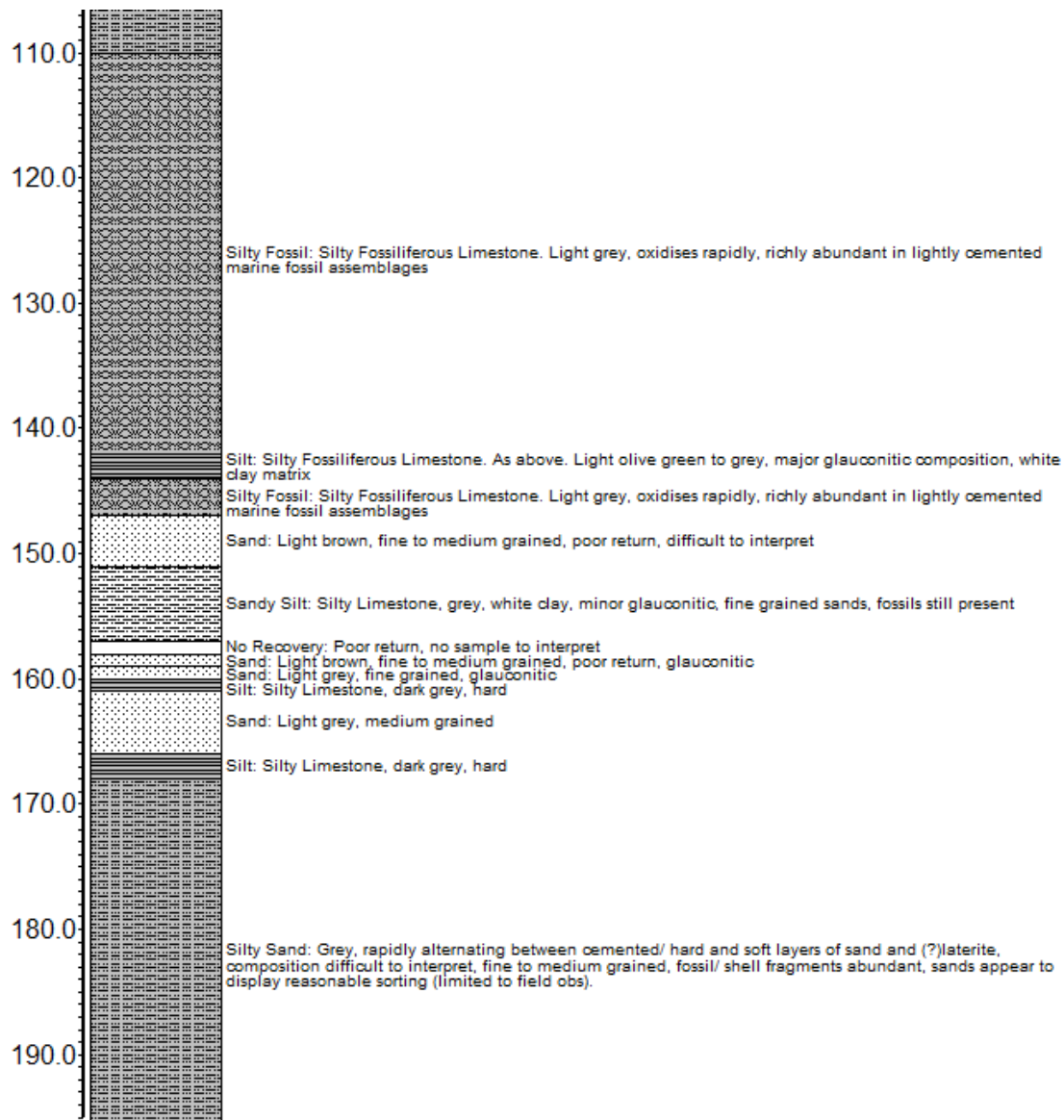
mBGS



Quaternary

Port Willunga
Formation

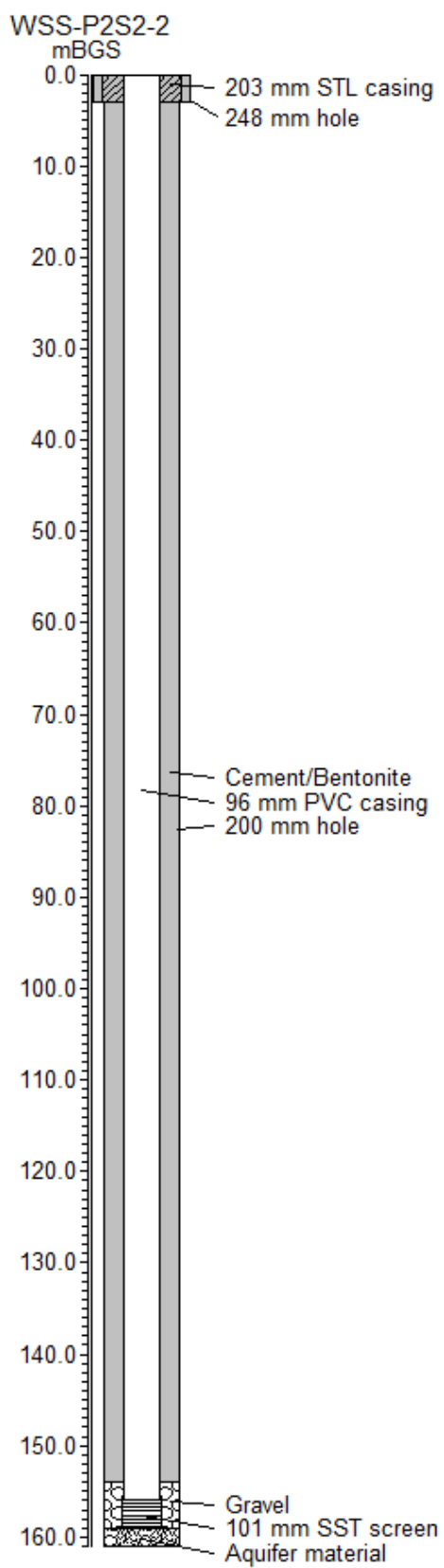
Blanche Point
Formation



Blanche Point
Formation

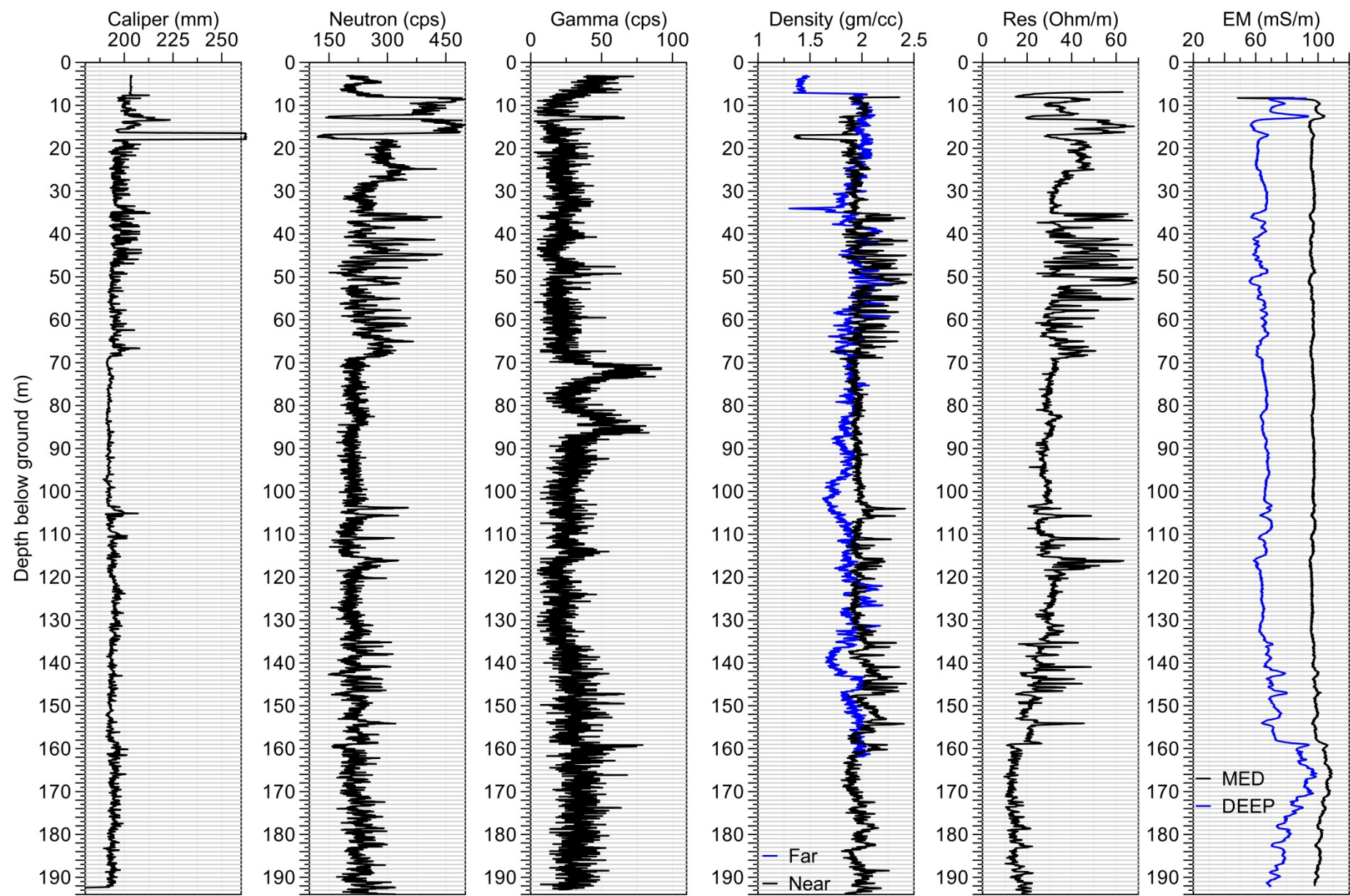
(?) Blanche Point
Formation/ South
Maslin Sands

Well Completion Log

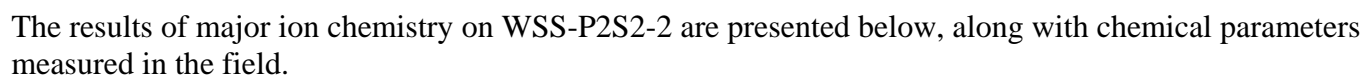


Geophysical Logs

The Department of Environment, Water and Natural Resources conducted geophysical well logging on WSS-P2S2-1, adjacent to WSS-P2S2-2.



A pumping test was performed on piezometer WSS-P2S2-2 on 24/01/2013 with a water level logger and a submersible Grundfos SQ1 pump using a flow rate of 5 L/min. The results of the test are presented below. The break in the recovery occurred when the pump was removed and logger re-lowered. The report author may be contacted for the full data set.



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
WSS-P2S2-2	24/01/2013	17.31	6.96	1441	24.3	9.4	7.7	1572	9.0	<0.2	224	0.6	0.3	31	64.1	6.77	32.4
							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
							229	9.99	<0.05	<0.05	0.232	<0.05	<0.05	<0.05	<0.05	2.69	0.06
							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	19.2	0.49	<0.05		