



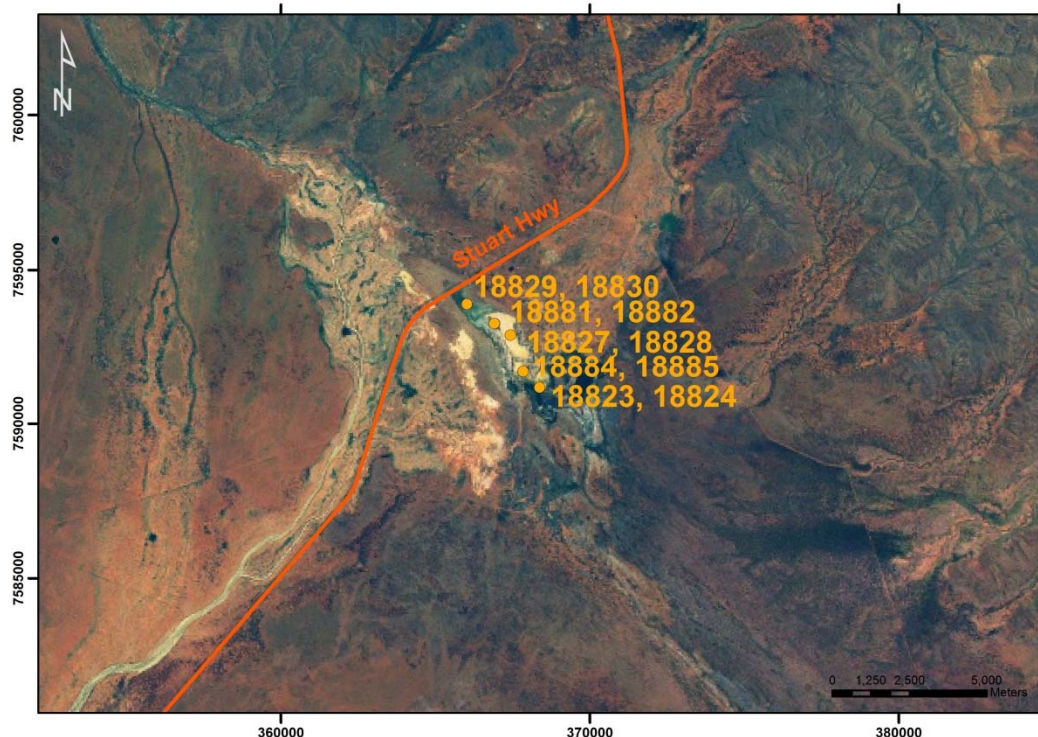
An Australian Government Initiative

Groundwater Education Investment Fund Project

Borehole Infrastructure Report

Borehole Type	Piezometer	GPS Easting	(MGA-94 Zone 53)	367841
Unique Well ID	18885	GPS Northing		7591685
Completion Date	2 June 2012	Location		Stirling Swamp, NT
Drilled By	NRETAS	Installed By		NRETAS
Monument Type	Round-Swing Top	Depth Drilled		3.4 m
Monument Diameter/Width	216 mm	Drilled Diameter/Method		200 mm (min), Rotary Air
Development Details	No airlift.			
Project Comments: 18885 is a single completion piezometer. It is located adjacent to 18884. Together, these bores provide a nest of four piezometers sampling different depths in the unconfined aquifer.				

Bore ID	Casing Size (mm)/ Type	TOC (mAHD)	Casing Depth (mBGL)		Screen Size (mm)/ Aperture (mm)/ Type	Cement (mBGL)		Screen Depth (mBGL)		SWL (mTOC)
	200/Steel		-1.0	1.0	NA	0.0	1.0	NA	NA	NA
18885	50/PVC12	475.781	-0.93	3.4	50/0.5/UPVC18	-0.96	1.0	2.2	2.7	2.33

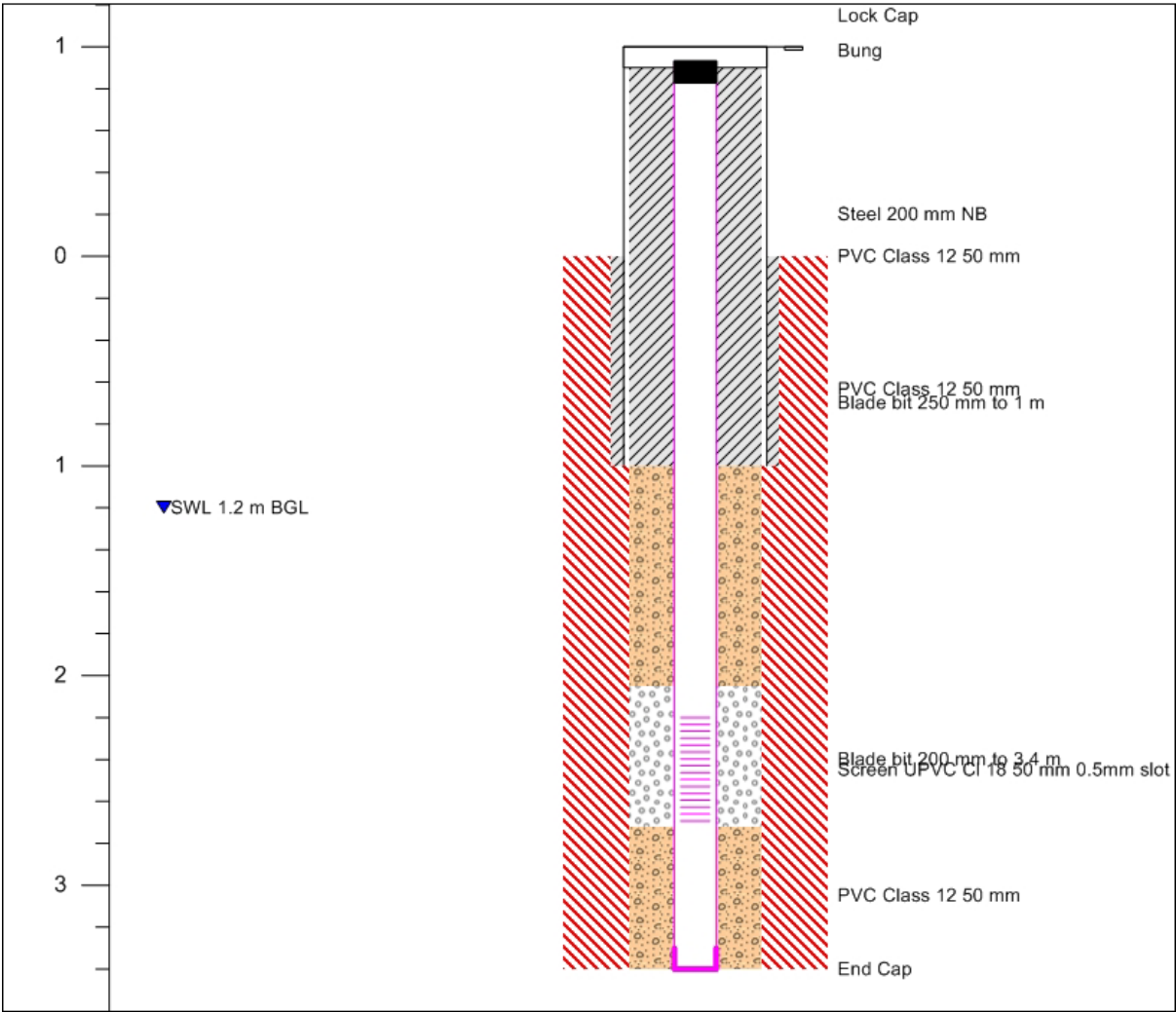


Map of Ti Tree Super Science Piezometer Locations, Stirling Swamp, NT.

Note* Appendix includes Well Completion, Lithology and 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	

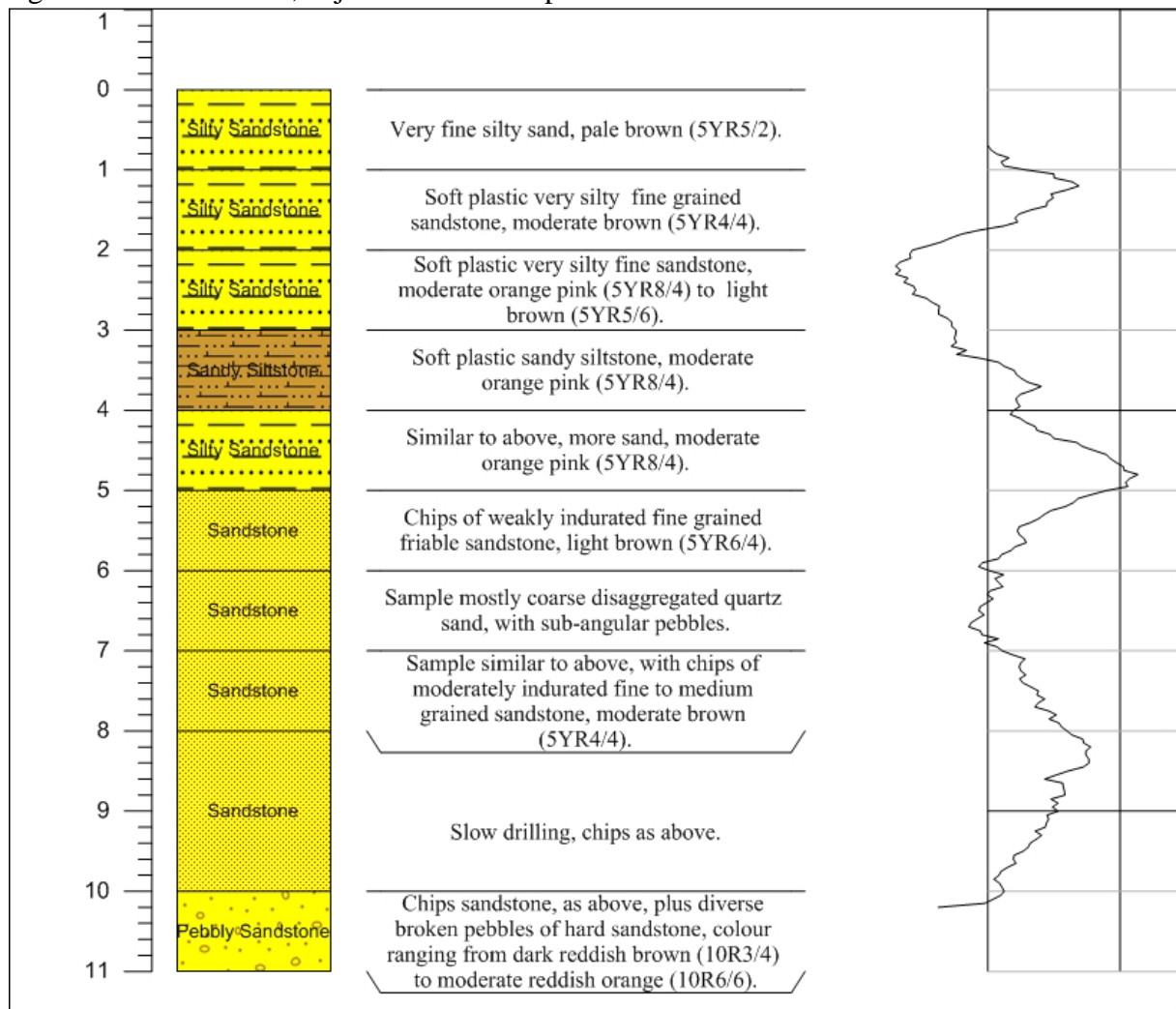
Well Completion Log



Page 1 of 1		Construction Legend		
Date Start 24/05/2012	Steel	Gravel Pack	Creek Sand	
Completed 2/06/2012	PVC	Lock Cap	Fall Back	
Contractor NRETAS	Slots	Bung	Soil	
	Hole	End Cap	Cuttings	
	Cement	Bentonite	Screen	

Lithology Log

Note: Logs are for well 18884, adjacent to and deeper than 18885.



Page 1 of 1

Air Lift Yield L/s 1.3

Date Start 24/05/2012 Electrical Conductivity μ Siemens/cm 142000

Completed 2/06/2012 Standing Water Level m BGL 1.2

Contractor NRETAS

Status Piezometer

60

110

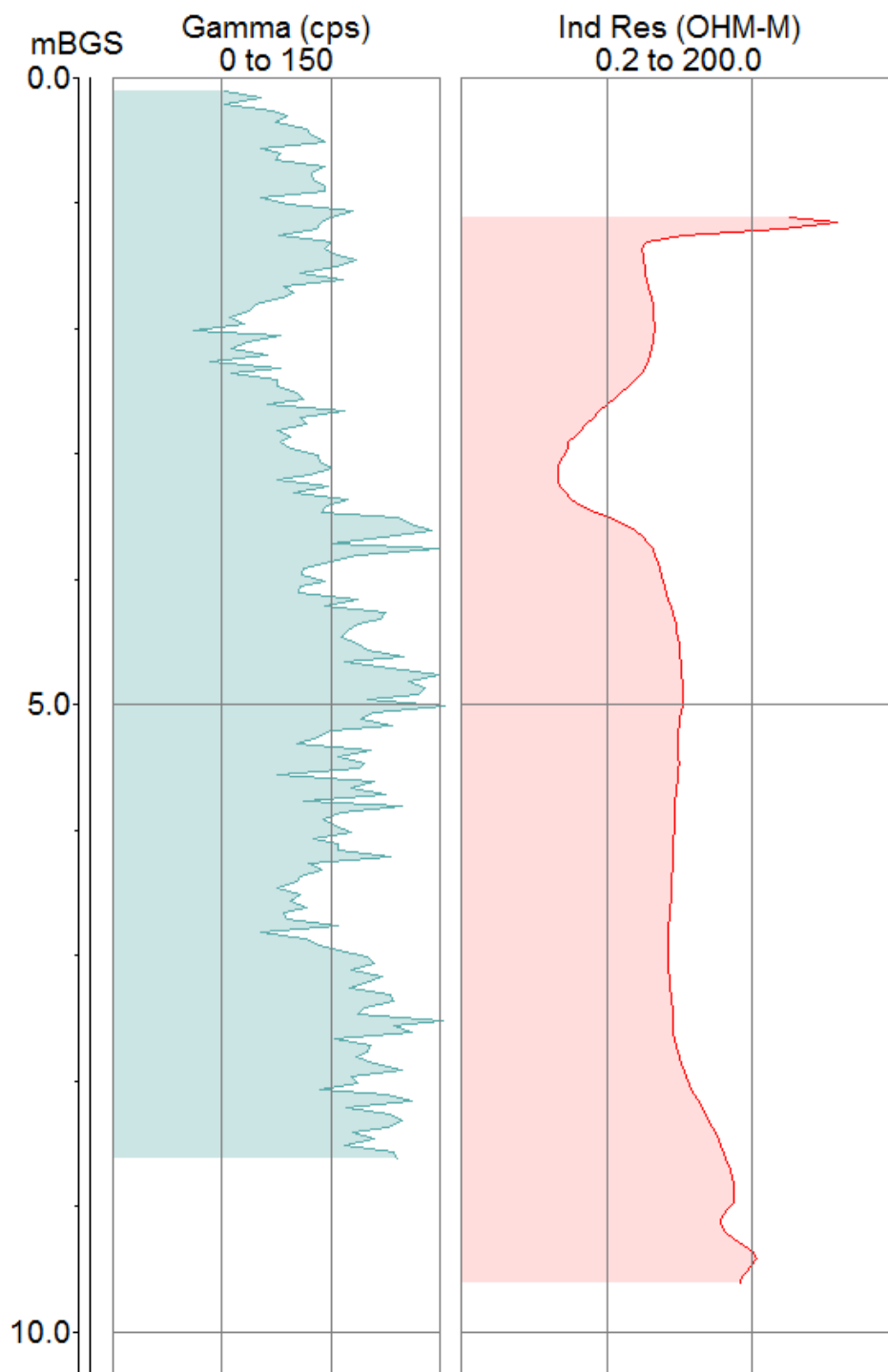
Gamma cps

Depth of casing at logging 1 m

Geophysical Logs

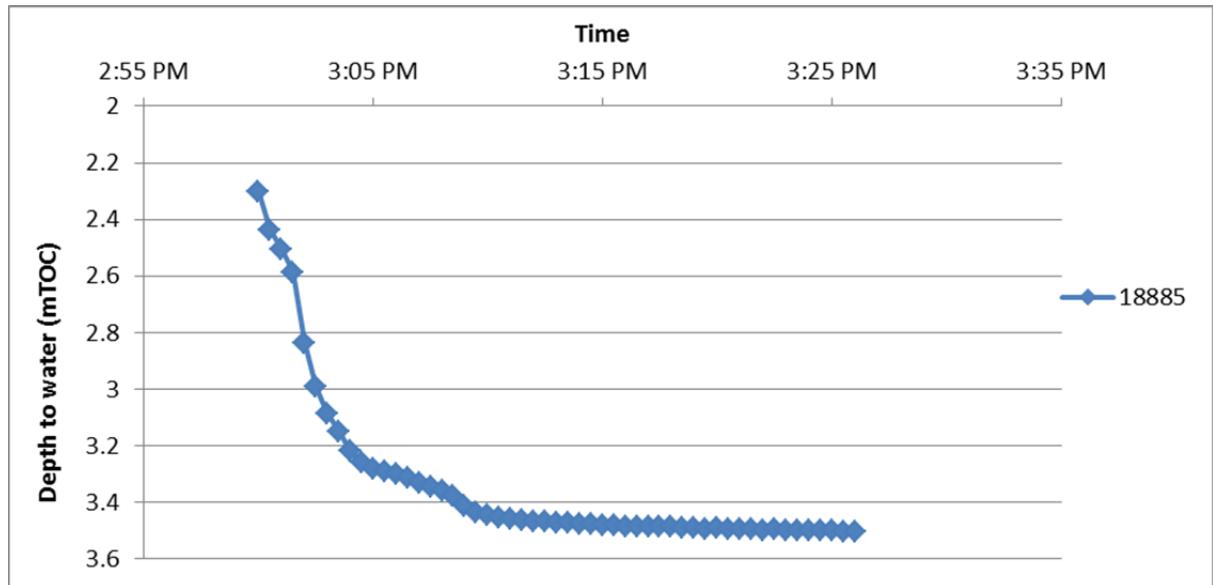
The portable Mount Sopris logging system was used to collect geophysical data from bore 18884-3, the deepest peizometer in the adjacent bore. The 2PGS probe was used to collect natural gamma measurements, and the 2PIA probe was used to measure conductivity/induced resistivity.

18884-3



Pumping Test

A pumping test was performed on piezometer 18885 on 29/06/2012 by attaching a level logger to a submersible Whale pump, lowering the pump to a depth of 4 mTOC and using a flow rate of 4.1 L/min. The results of the test are presented below. Note that only the drawdown data is presented. The report author may be contacted for the full data set.



Chemical Analysis

Basic chemical analysis of the dissolved solutes and concentration of ions in the borehole was performed. The testing also included hydrogen ion activity (pH) and fluid electrical conductivity (EC). Data from the chemical analysis is shown below.

Well ID	Date Sampled	SWL	Field Parameters				Laboratory Analyses							
		m	pH	EC	Temp	Alkalinity	Ca ²⁺	K ⁺	Mg ²⁺	Na ⁺	Si	Cl ⁻	NO ₃ ⁻	SO ₄ ²⁻
		TOC		μS/cm	°C	mg/L CaCo ³	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
18885	29/06/2012	2.324	7.32	119,700	23.9	2120	691	4640	3730	32300	<10	50894	1542	25184