



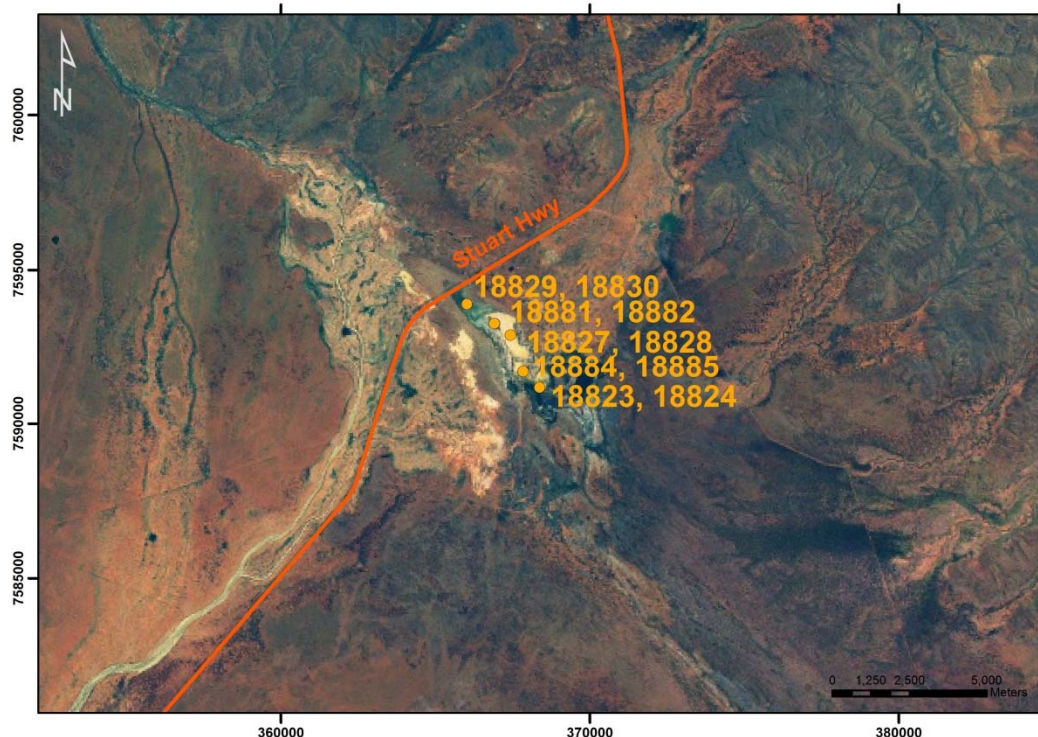
An Australian Government Initiative

# Groundwater Education Investment Fund Project

## Borehole Infrastructure Report

Borehole Type	Piezometer	GPS Easting	(MGA-94 Zone 53)	366015
Unique Well ID	18830	GPS Northing		7593897
Completion Date	30 May 2012	Location		Stirling Swamp, NT
Drilled By	NRETAS	Installed By		NRETAS
Monument Type	Round-Swing Top	Depth Drilled		5.0 m
Monument Diameter/Width	216 mm	Drilled Diameter/Method		200 mm (min), Rotary Air
Development Details	No airlift.			
Project Comments: 18830 is a single completion piezometer. It is located adjacent to 18829. 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
18830	50/PVC12	475.882	-0.96	5.0	50/0.5/UPVC18	3.4	3.7	4.3	4.7	3.28

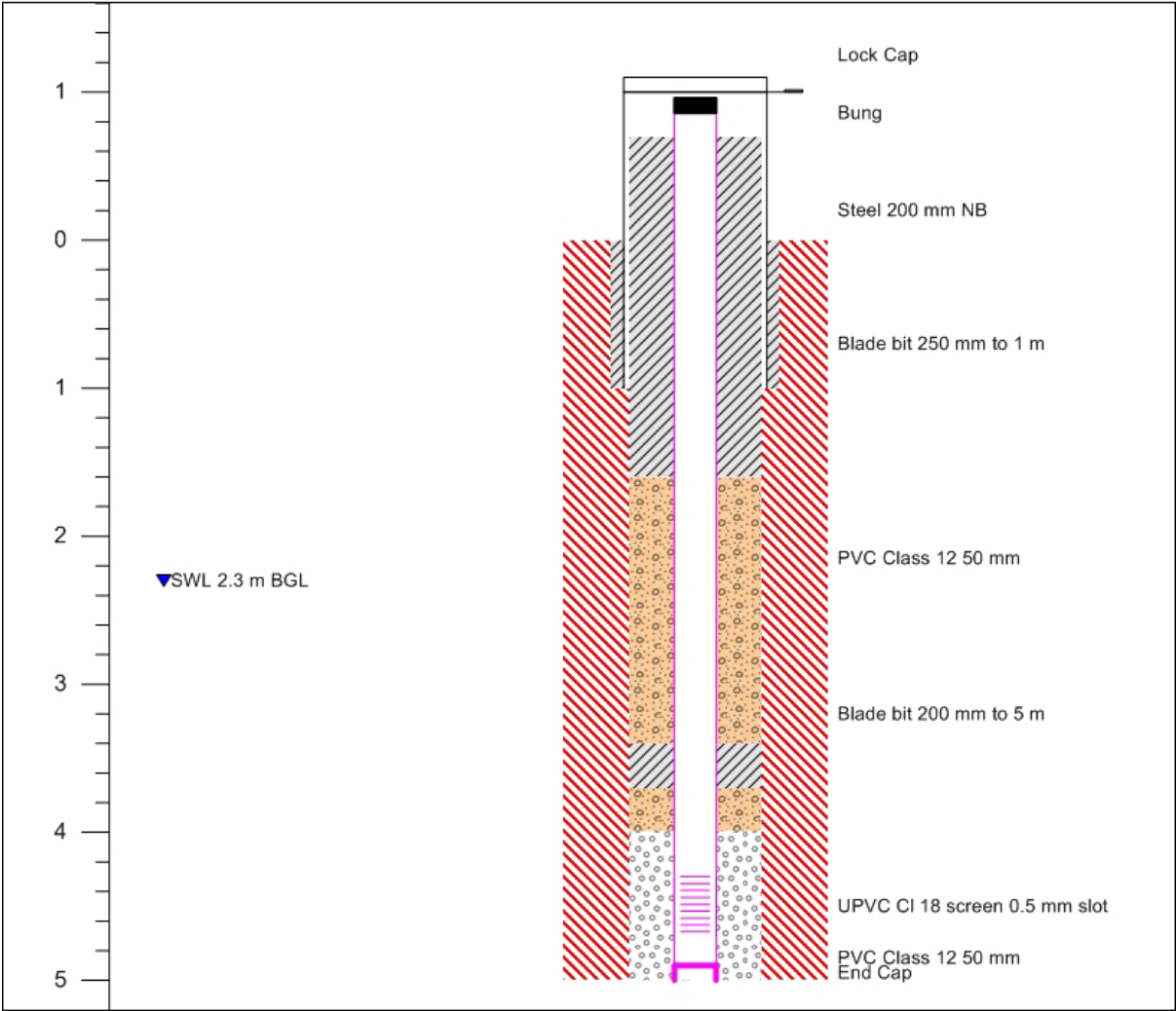


Map of Ti Tree Super Science Piezometer Locations, Stirling Swamp, NT.

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

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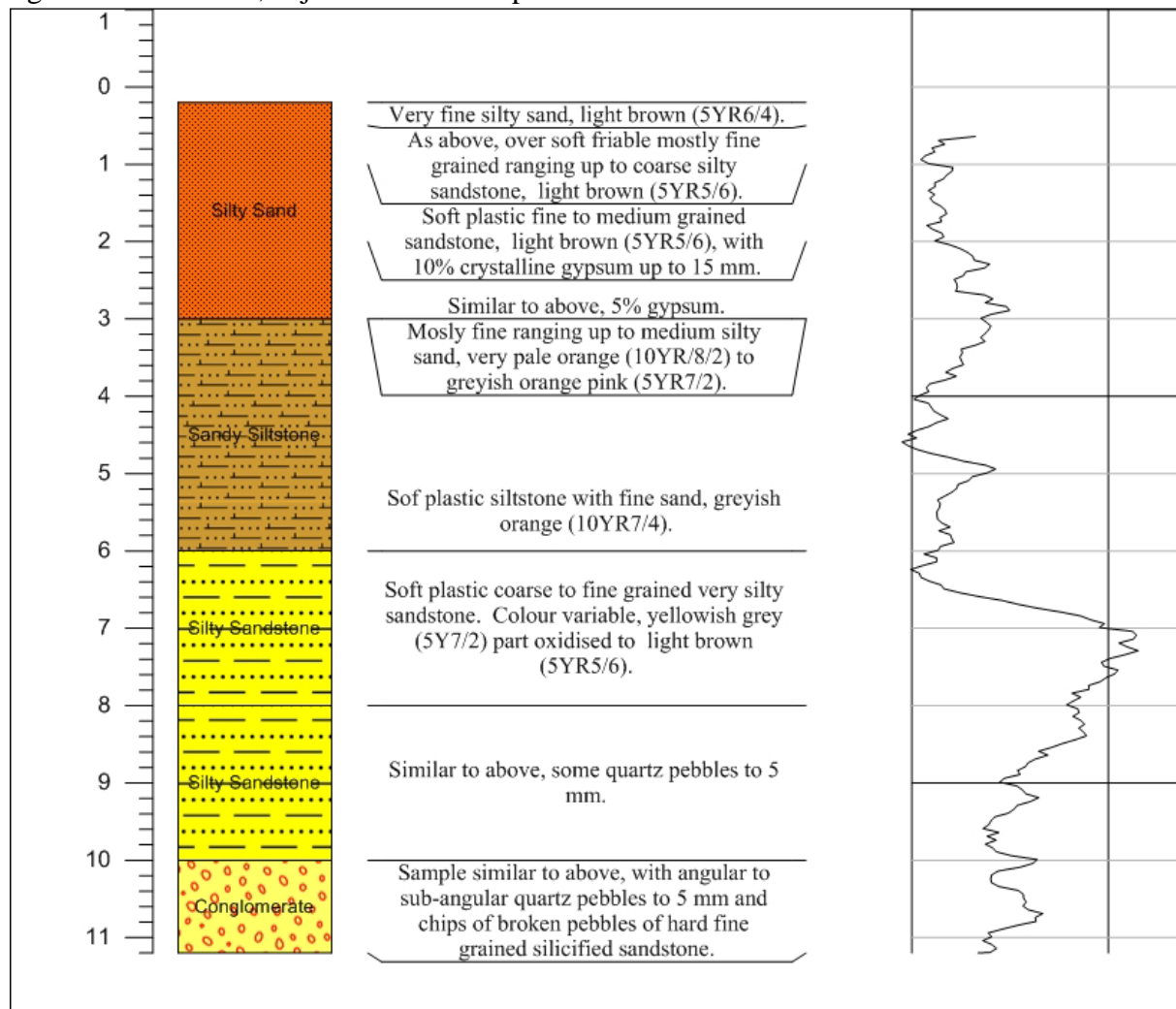
# Well Completion Log



Page 1 of 1			Construction Legend		
Date Start 24/05/2012	Steel	Gravel Pack	Creek Sand	Fall Back	
Completed 30/05/2012	PVC	Lock Cap	Bung	Soil	
Contractor NRETAS	Slots	End Cap	Cuttings	Screen	
	Hole	Bentonite			
	Cement				

# Lithology Log

Note: Log from well 18829, adjacent to and deeper than 18830.

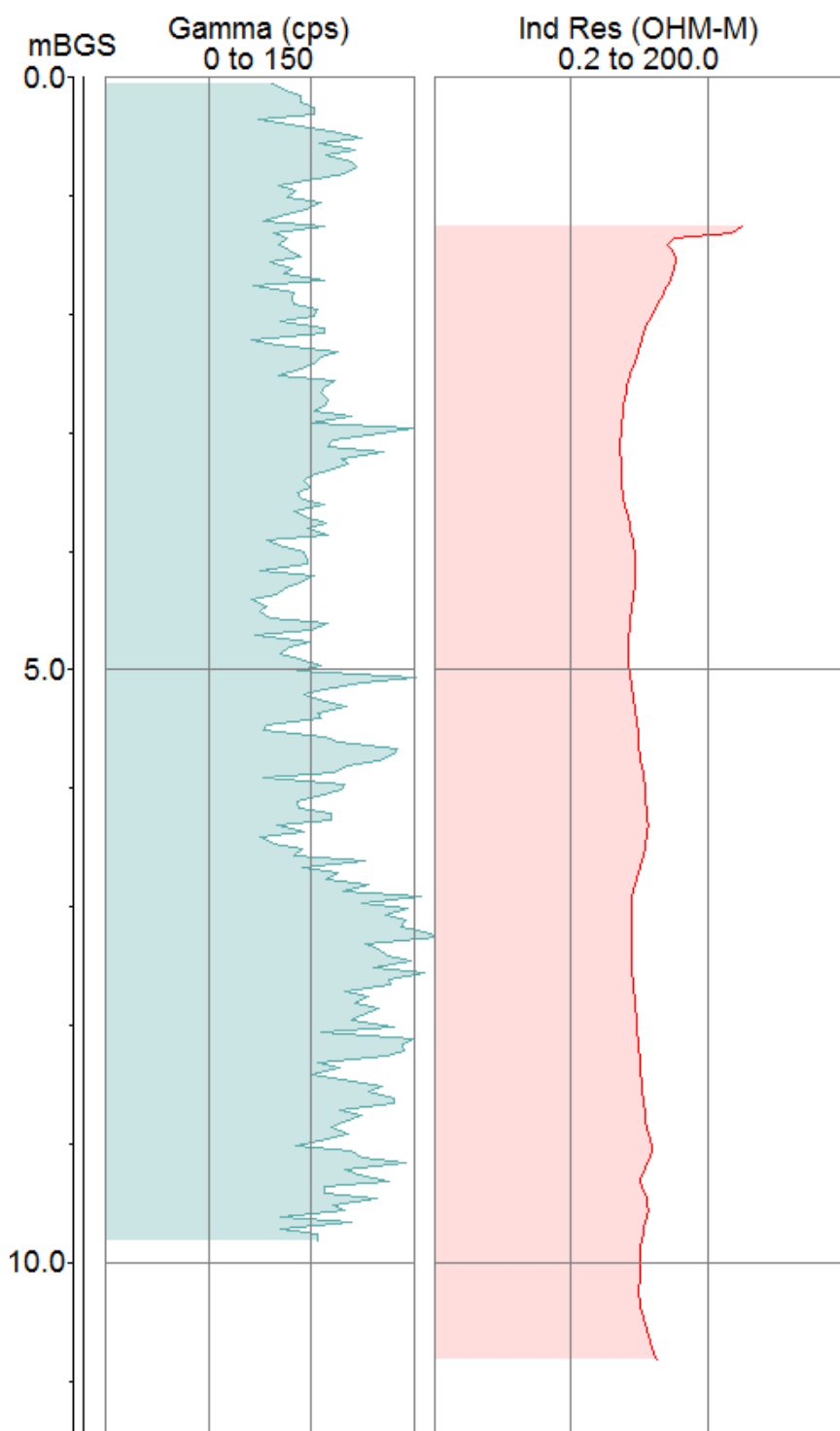


Page 1 of 1	Air Lift Yield L/s	0.5	60	110
Date Start 24/05/2012	Electrical Conductivity $\mu$ Siemens/cm	105000	Gamma cps	
Completed 30/05/2012	Standing Water Level m BGL	2.3	Depth of casing at logging 1 m	
Contractor NRETAS	Status	Piezometer		

## Geophysical Logs

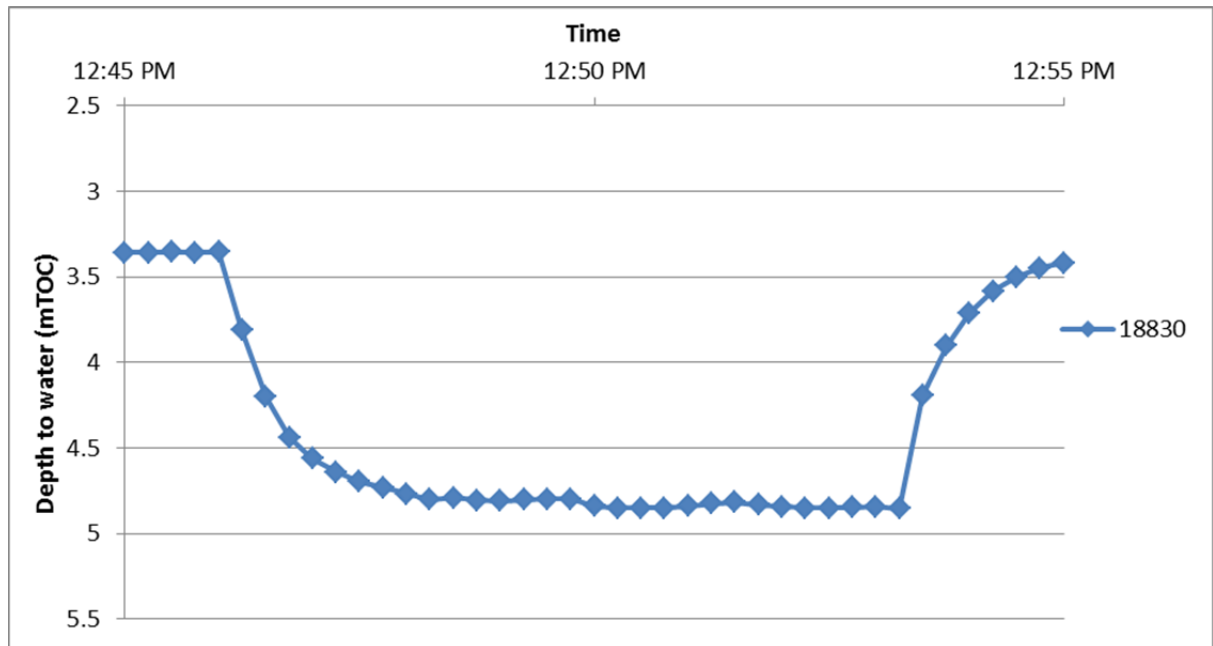
The portable Mount Sopris logging system was used to collect geophysical data from bore 18829-3, the deepest peizometer in the adjacent bore. The 2PGS probe was used to collect natural gamma measurements, and the 2PIA probe was used to measure conductivity/induced resistivity.

18829-3



## Pumping Test

A pumping test was performed on piezometer 18830 on 27/06/2012 by attaching a level logger to a submersible Whale pump, lowering the pump to a depth of 5 mTOC and using a flow rate of 5.68 L/min. The results of the test are presented below. 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 <sup>2+</sup>	K <sup>+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	Si	Cl <sup>-</sup>	NO <sub>3</sub> <sup>-</sup>	SO <sub>4</sub> <sup>2-</sup>
		TOC		μS/cm	°C	mg/L CaCo <sup>3</sup>	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
18830	27/06/2012	3.282	7.1	93,900	26.5		731	3550	3740	22700	<10	36435	66	20896