



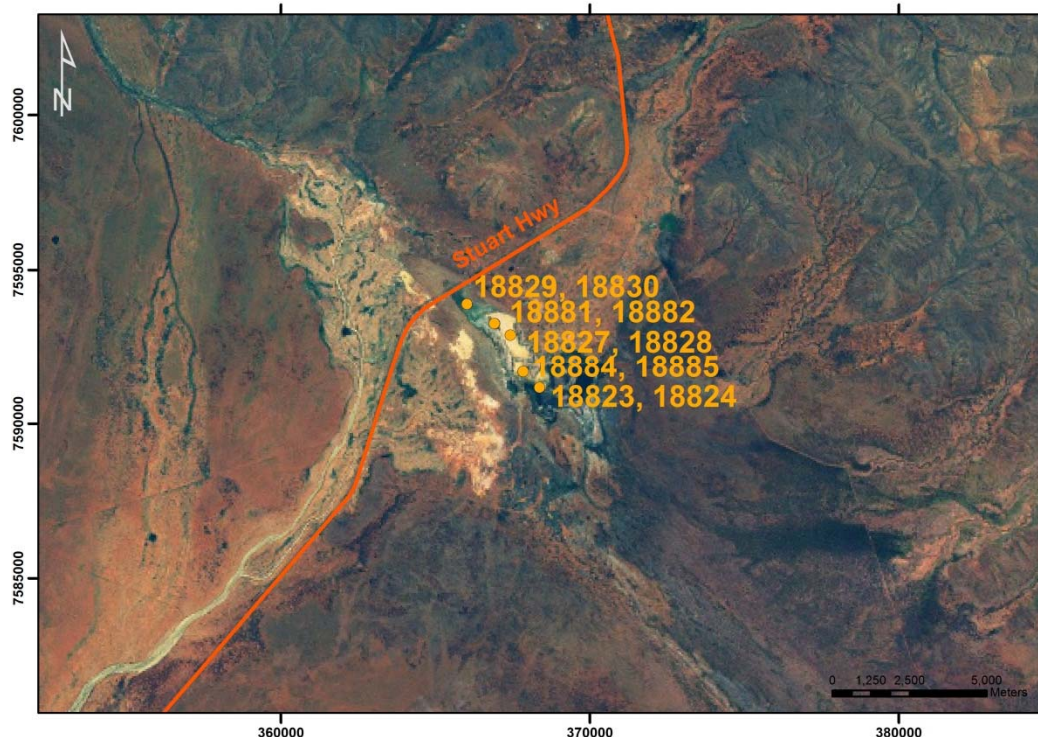
An Australian Government Initiative

Groundwater Education Investment Fund Project

Borehole Infrastructure Report

Borehole Type	Piezometer	GPS Easting	(MGA-94 Zone 53)	366910
Unique Well ID	18882	GPS Northing		7593265
Completion Date	31 May 2012	Location		Stirling Swamp, NT
Drilled By	NRETAS	Installed By		NRETAS
Monument Type	Round-Swing Top	Depth Drilled		3.5 m
Monument Diameter/Width	216 mm	Drilled Diameter/Method		200 mm (min), Rotary Air
Development Details	No airlift.			
Project Comments: 18882 is a single completion piezometer. It is located adjacent to 18881. 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
18882	50/PVC12	475.301	-0.97	3.15	50/0.5/UPVC18	1.5	1.95	2.4	2.8	2.36

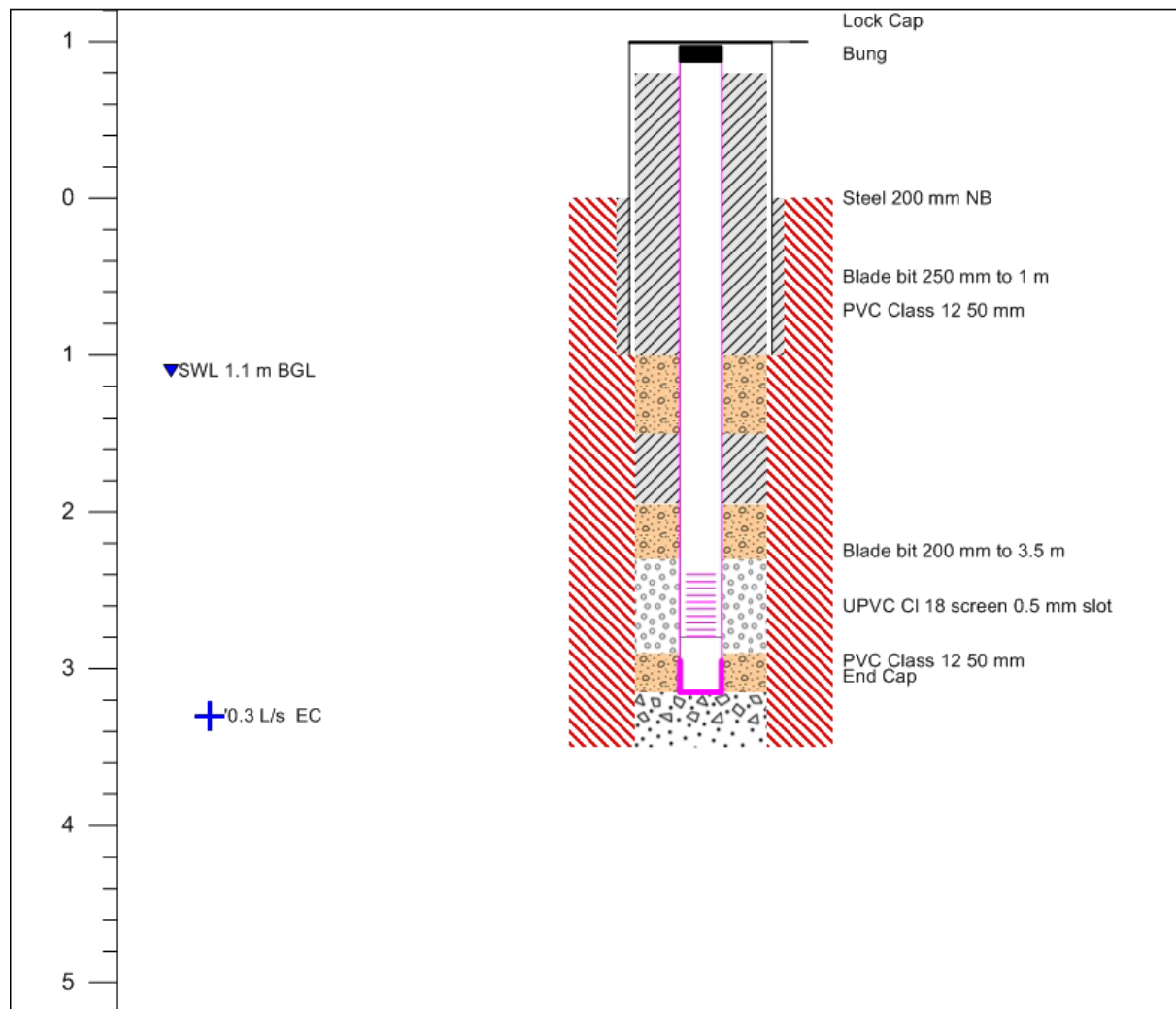


Map of Ti Tree Super Science Piezometer Locations, Stirling Swamp, NT.

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

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Well Completion Log



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Date Start 24/05/2012

Completed 31/05/2012

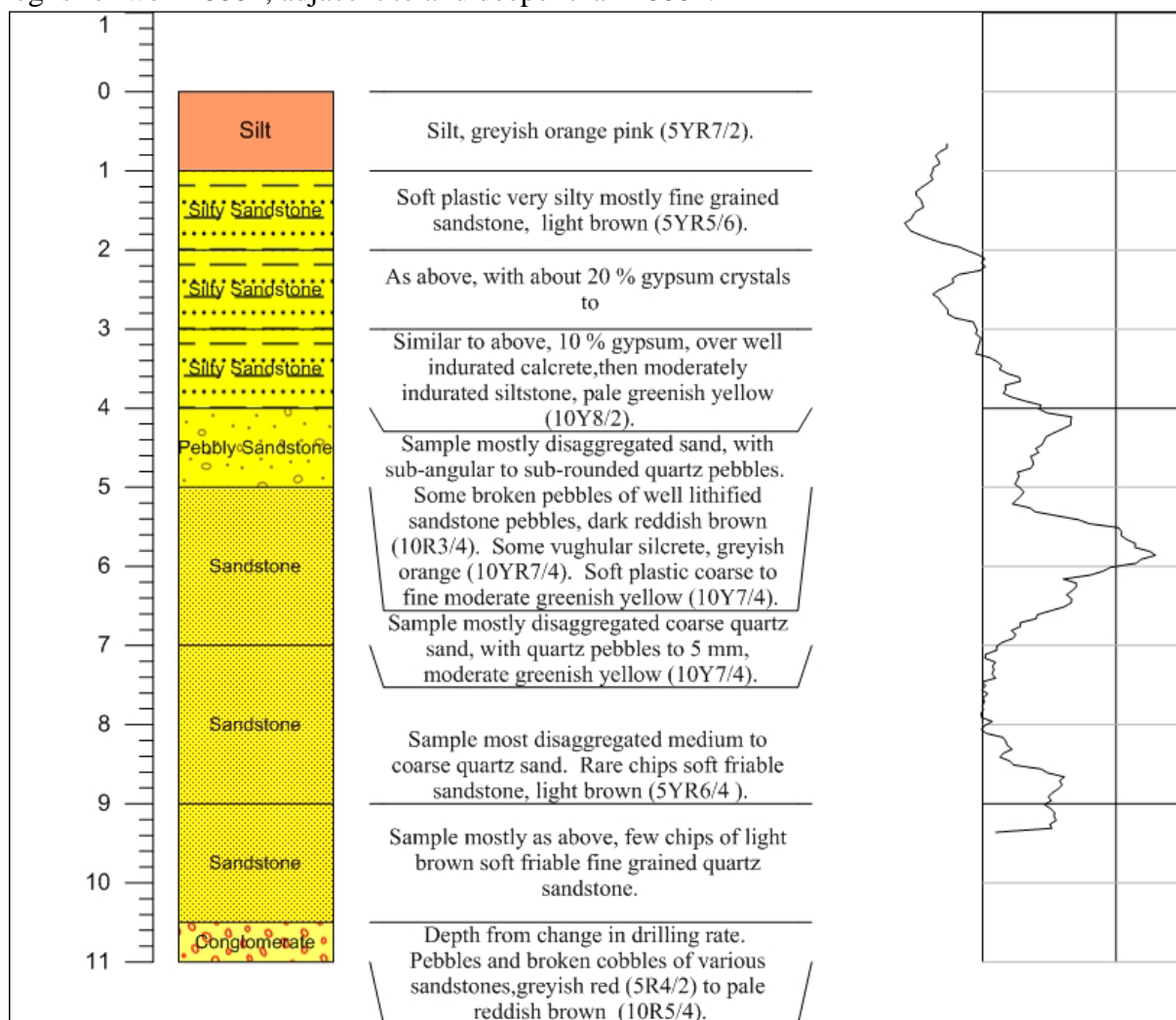
Contractor NRETAS

Construction Legend

Steel	Gravel Pack	Creek Sand
PVC	Lock Cap	Fall Back
Slots	Bung	Soil
Hole	End Cap	Cuttings
Cement	Bentonite	Screen

Lithology Log

Note: Log is for well 18881, adjacent to and deeper than 18882.



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Air Lift Yield L/s

2

Date Start 24/05/2012 Electrical Conductivity μ Siemens/cm 106400

Completed 31/05/2012 Standing Water Level m BGL 1.1

Contractor NRETAS

Status

Piezometer

80

110

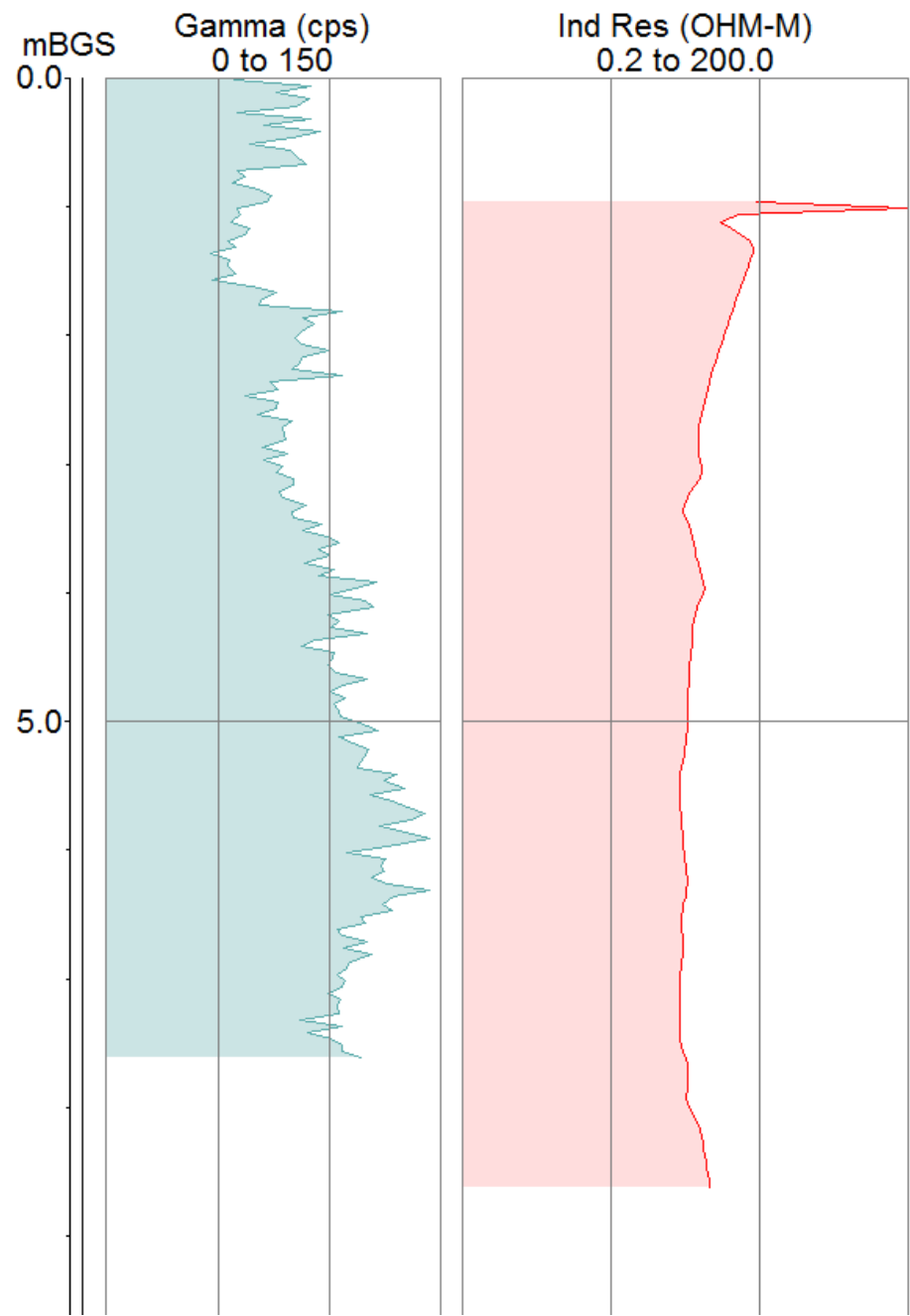
Gamma cps

Depth of casing at logging 1 m

Geophysical Logs

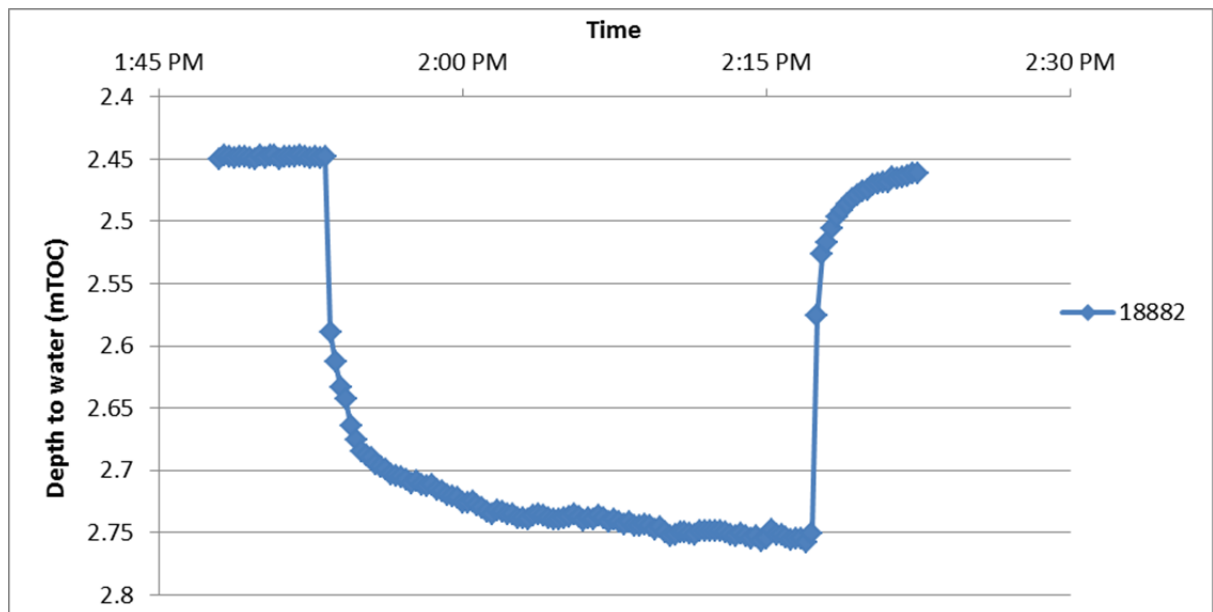
The portable Mount Sopris logging system was used to collect geophysical data from bore 18881-3, the deepest peizometer in the adjacent bore. The 2PGS probe was used to collect natural gamma measurements, and the 2PIA probe was used to measure conductivity/induced resistivity.

18881-3



Pumping Test

A pumping test was performed on piezometer 18882 on 27/06/2012 by attaching a level logger to a submersible Whale pump, lowering the pump to a depth of 3 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 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
18882	27/06/2012	2.36	7.99	40,025	25.5	1750	662	1360	944	8710	<5	11488	37	10060