BEVERLEY ML 6321
BEVERLEY NORTH ML 6387
(Including Extractive Minerals Leases 6048-6052, 6384-85 and 6392)

ANNUAL COMPLIANCE REPORT 2014

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Department of the Environment

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1 INTRODUCTION

1.1 Context for this report

This Annual Compliance Report (**ACR**) has been prepared by Heathgate Resources Pty Ltd (Heathgate) who own and operate the Beverley Uranium Mine on Mineral Lease (**ML**) Number 6321) and the Beverley North Uranium Mine on ML 6387. Heathgate also own Extractive Minerals Leases (**EMLs**) 6048-6052, 6384-6385 and 6392. This report has been written in accordance with the "Minerals Regulatory Guidelines MG3 Guidelines for Miners: Preparation of a Mining and Rehabilitation Compliance Report Version 1.4 March, 2009" (PIRSA 2009). Heathgate has achieved the environmental outcomes for the 2014 calendar year required by conditions specified in the following:

- the Beverley Mine Program for Environment Protection & Rehabilitation, November 2013,
- the Beverley North Mine Program for Environment Protection & Rehabilitation, November 2013,
- the 1999 Mining and Rehabilitation Programs for EMLs 6048, 6049[1], 6050[1], 6051[1], 6052,
- the 2011 Mining and Rehabilitation Programs for EMLs 6384 & 6385 and
- the 2010 Mining and Rehabilitation Programs for EML 6392[1] (formerly MC 4131)

1.2 Project Background

Beverley Mine

Heathgate acquired the Beverley Project in 1990. An in-situ recovery (**ISR**) Field Leach Trial (**FLT**) was conducted in 1998 under a Declaration of Environmental Factors approval obtained in 1997. An Environmental Impact Statement (**EIS**) was prepared in 1998 (Heathgate 1998a,b) to satisfy both Commonwealth and South Australian Government requirements, resulting in approval of ML 6036, an export permit and other related requirements. The first commercial uranium was produced in late 2000. In 2007, Heathgate submitted a Mining Proposal for an extension of the area outside ML 6036 with the intention to replace ML 6036 with a larger ML. The extended ML 6321 includes the pre-existing camps, airstrip, Four Mile Bore and associated internal access roads as well as the pre-existing Beverley processing plant and wellfields on former ML 6036.

Beverley North Mine

Subsequent to the discovery of uranium mineralisation in 2009 north of Beverly ML 6321, a Mining Lease Proposal/Public Environment Report (**PER**) and a Retention Lease (**RL**) application for a Field Leach Trial (FLT) was submitted in April 2010 for the Beverley North project (Heathgate 2010a, 2010b and 2010c). Approvals for a FLT on RL 124 for the Pepegoona deposit were obtained on 16 July 2010 with a second stage approved in December 2010 for the commencement of FLT activities on the Pepegoona West deposit. The approval for the Beverley North ML 6387 was obtained on 28 January 2011.

[1] EMLs 6049, 6050, 6051 & 6392 have a combined PEPR currently under assessment with DSD (submitted on 24 March 2015).

1.3 Mineral Leases and Land Tenure

The location of the Beverley and Beverley North MLs is shown in Figure 1-1 and Figure 1-2 shows the current lease boundaries for the Beverley and Beverley North MLs. A location map for the EMLs is presented in Figure 2-4 in Section 2 of this document.

Beverley ML 6321 has an area of 117 km^2 and is located entirely within the Wooltana pastoral lease on the arid plains between the Northern Flinders Ranges and Lake Frome, approximately 550 km north of Adelaide and 300 km north-east of Port Augusta in South Australia.

Beverley North ML 6387 has an area of 61 km^2 with the majority occurring on Wooltana pastoral lease and a small portion of the northwest boundary located on the Arkaroola pastoral lease.

The Wooltana pastoral lease is owned by Heathgate and the Arkaroola pastoral lease is owned by the Sprigg family (also owners of the Arkaroola tourist resort the Arkaroola Wilderness Sanctuary). The title details are:

- Wooltana Pastoral Lease Parcel/Plan D42204/A34 Pastoral Lease No 2293 Crown Leasehold Volume 1289 Folio 38, and

- Arkaroola Pastoral Lease Hundred 833900 Pastoral Block 1108 Pastoral Lease No 2240, Crown Leasehold Volume 1278 Folio 43.

The closest communities include the tourist resort at Arkaroola and the Aboriginal community at Nepabunna (Figure 1-1), approximately 30 km and 80 km to the south-west respectively.

Figure 1-1: Location of the Beverley and Beverley North Mineral Leases

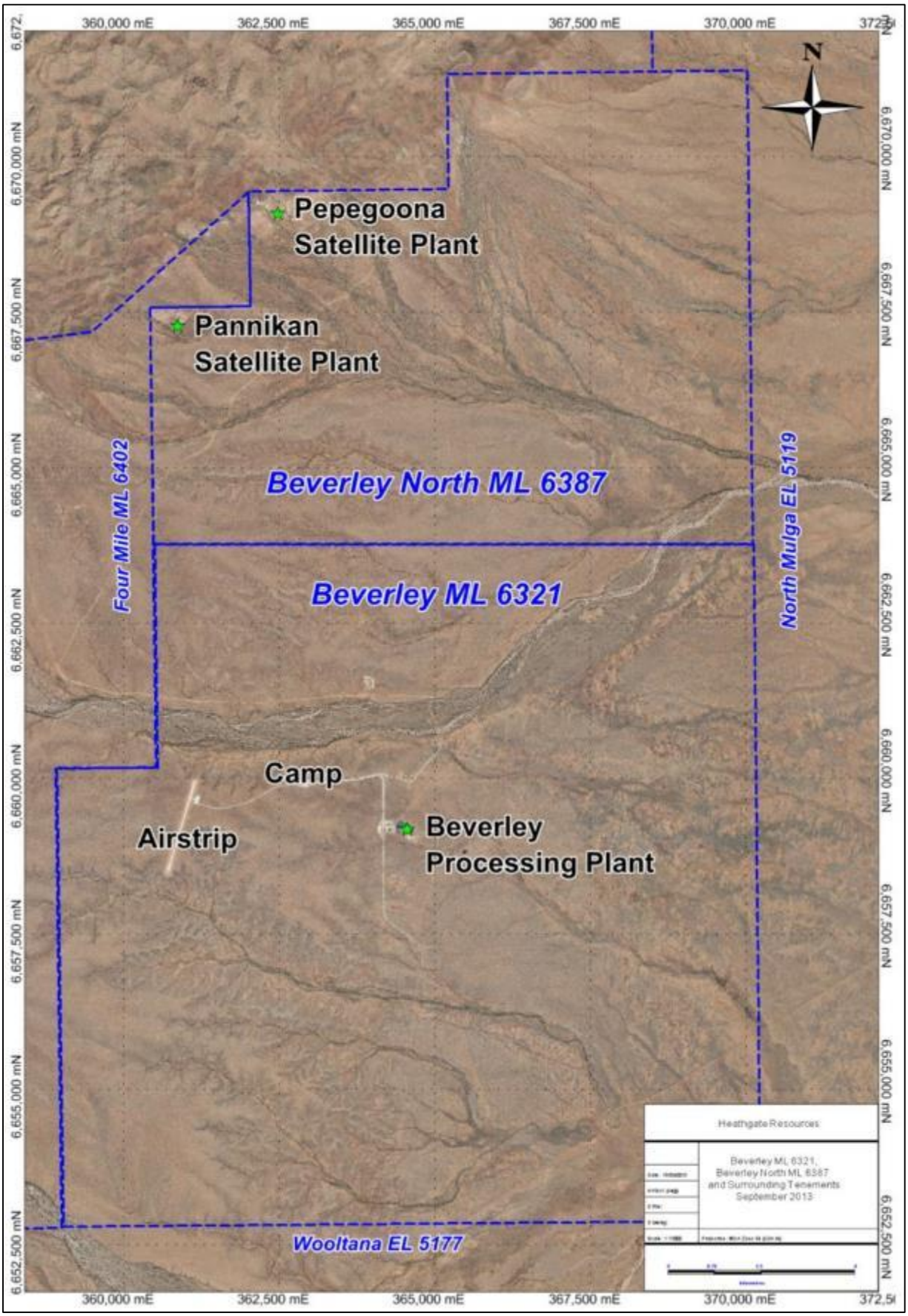


Figure 1-2: Beverley ML 6321, Beverley North ML 6387 and surrounding tenements

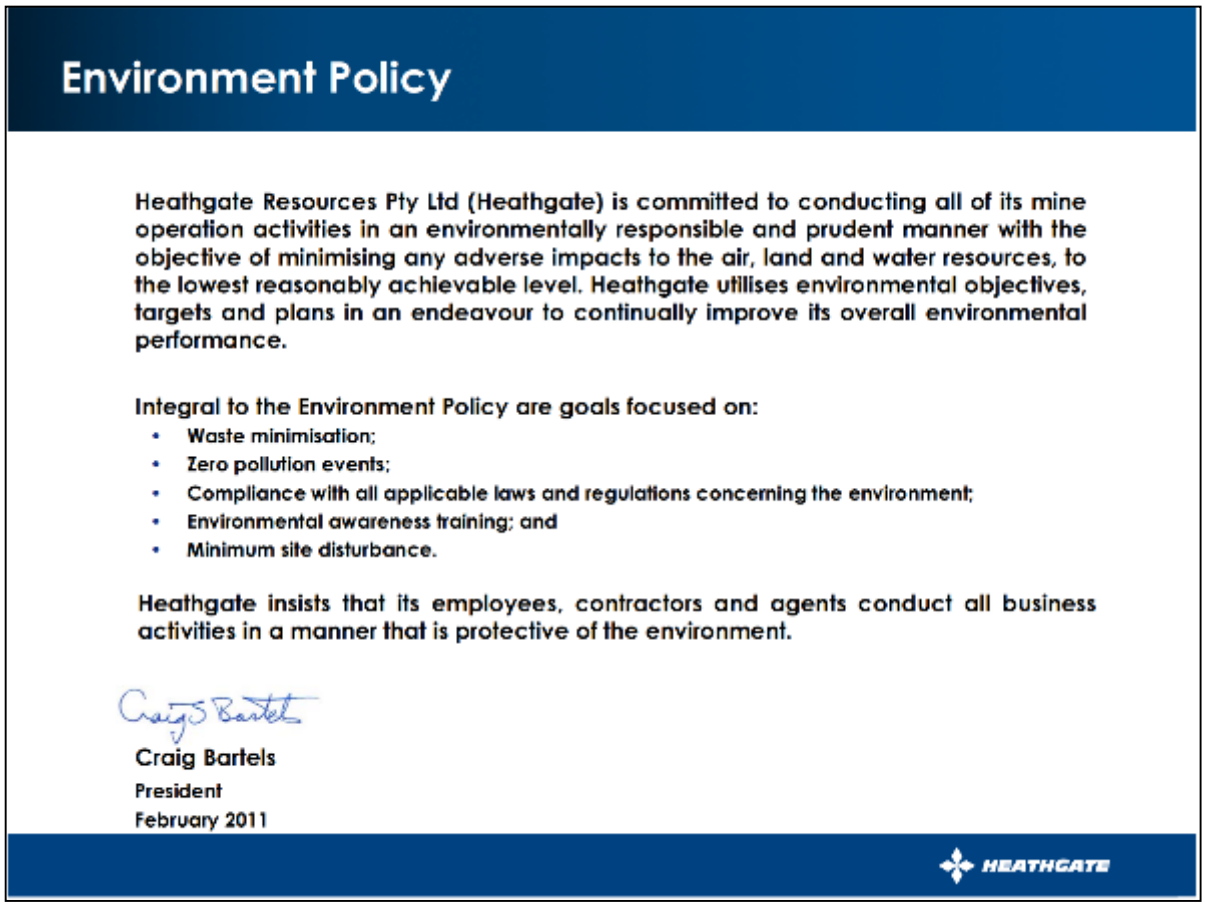
1.4 Heathgate Management Personnel

During 2014, the following Heathgate personnel were responsible for environmental management at the Beverley and Beverley North sites:

- President – Craig Bartels
- Operations Manager – Gary Birch
    - Health, Safety, Security and Environment Manager – Sue Carter
    - Production Managers - Chris Every and Chris Heinrich
- Manager – Regulatory and Compliance – Andrea Marsland-Smith
- Geology Manager – Brett Rava
    - Principal Geologist – Ben Packer
    - Chief Hydrogeologist – Aaron Smith

1.5 Environment Policy

Heathgate's Environment Policy, valid during the Reporting Period, is provided below.



Environment Policy

Heathgate Resources Pty Ltd (Heathgate) is committed to conducting all of its mine operation activities in an environmentally responsible and prudent manner with the objective of minimising any adverse impacts to the air, land and water resources, to the lowest reasonably achievable level. Heathgate utilises environmental objectives, targets and plans in an endeavour to continually improve its overall environmental performance.

Integral to the Environment Policy are goals focused on:

- Waste minimisation;
- Zero pollution events;
- Compliance with all applicable laws and regulations concerning the environment;
- Environmental awareness training; and
- Minimum site disturbance.

Heathgate insists that its employees, contractors and agents conduct all business activities in a manner that is protective of the environment.

Craig Bartels
President
February 2011

HEATHGATE

Figure 1-3: Heathgate's Environment Policy

2 DESCRIPTION OF ACTIVITIES

2.1 Drilling Activities

Beverley

Four delineation holes were drilled at Beverley East (Figure 2-4) as part of an investigation into the continuation/distribution of the channel sands to assess the capacity of this channel for further of Namba water supply for use in the plant.

No production well drilling conducted on the Beverley ML 6321 during 2014.

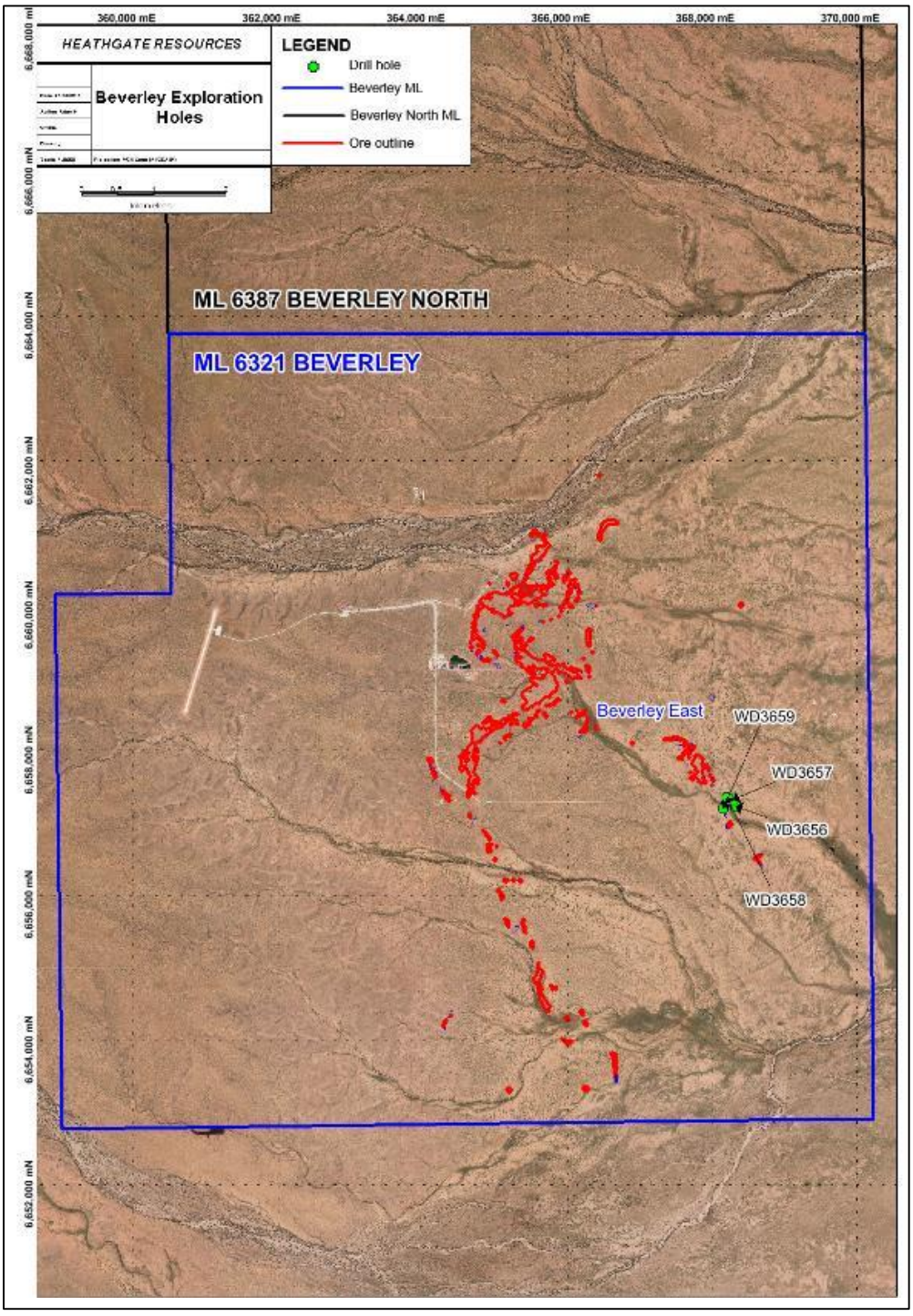


Figure 2-1: Drilling on Beverley ML 6321 - 2014

Beverley North

Eight production-style wells (5 in Pepegoona and 3 in Pannikan) were installed for the purpose of mining solution control at Pepegoona (Figure 2-2) and Pannikan (Figure 2-3). One water well was re-drilled at Pepegoona.

No other drilling was undertaken within the wider Beverley North ML during the Reporting Period.

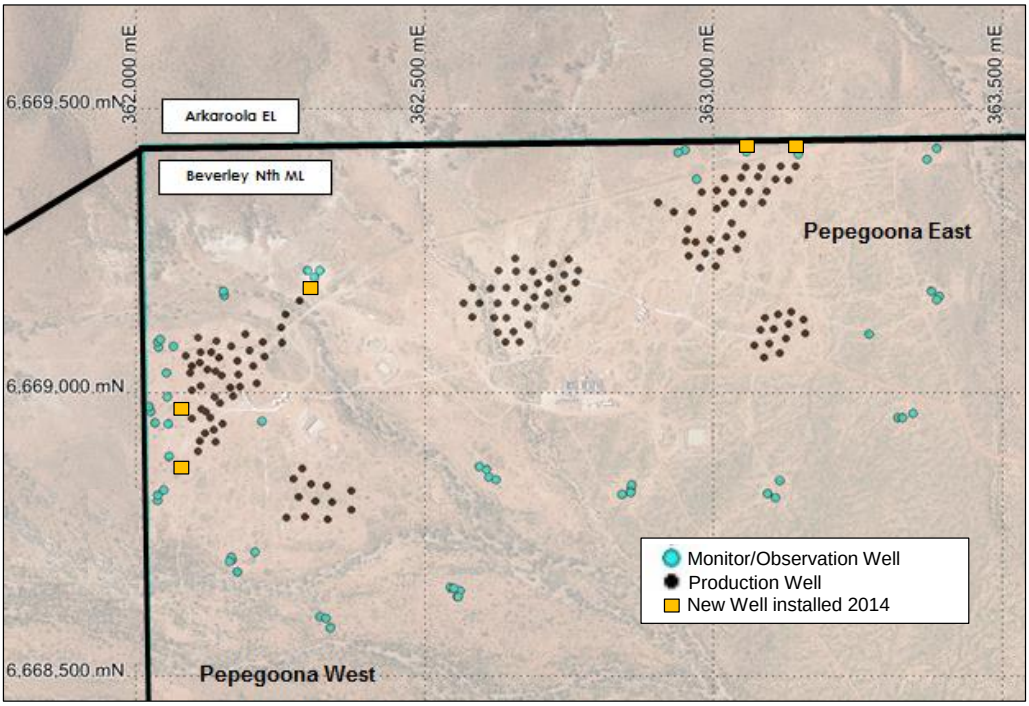


Figure 2-2: Drilling on Beverley North ML 6387 (Pepegoona) - 2014

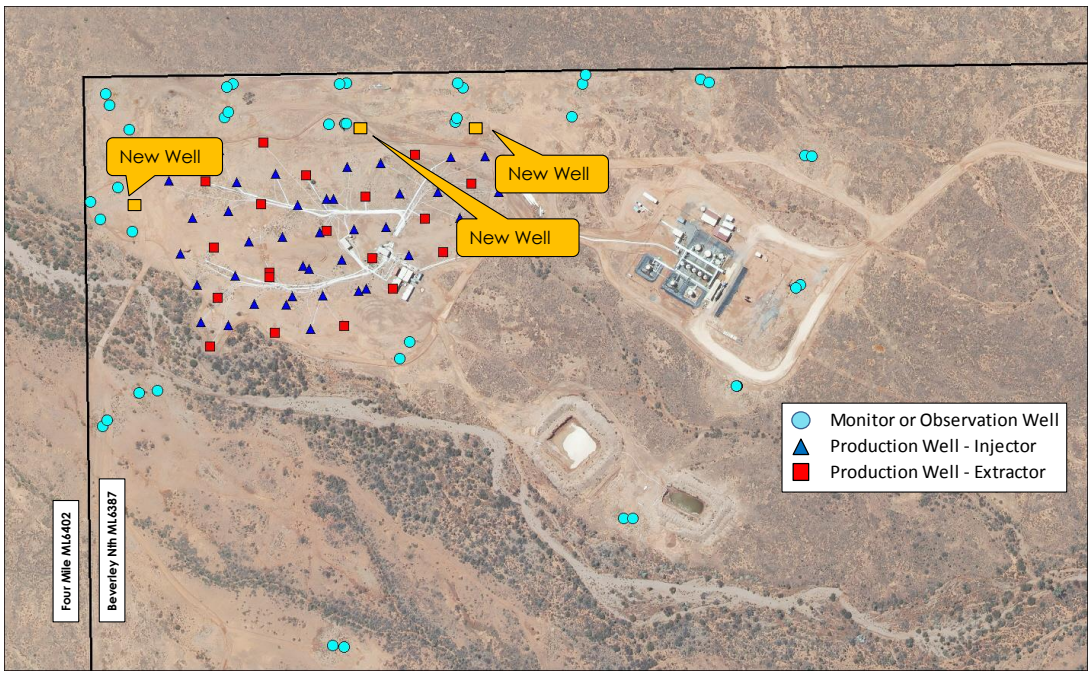


Figure 2-3: Drilling on Beverley North ML 6387 (Pannikan) - 2014

2.2 Wellfield

The Beverley wellfields are operated through the Beverley Processing Plant and the Beverley North wellfields are operated through the Pepegoona and Pannikan satellite plants. Loaded resin is transported from the Beverley North satellite plants to the Beverley Plant for processing.

Beverley

On 6 December 2013, all mining ceased from the Beverley wellfields. No mining was undertaken during the 2014 Reporting Period.

Beverley North

On 16 July 2013 mining ceased form the Pannikan wellfield. At Pepegoona wellfield Pepegoona East wellfield PE01, PE04 and PE05 and Pepegoona West wellfield PW02 were operated simultaneously until mining ceased on the 28 January 2014. No further mining was undertaken during the 2014 Reporting Period.

Barrier injection and wellfield extraction and transfer occurred throughout 2014 to assist in maintaining mining fluids within the wellfield area. There were no operational wellfields at Pannikan however a bleed extraction (~0.9L/sec) has been applied throughout 2014 in order to control any residual flare as a result of mining.

2.3 Extractive Mineral Leases (Borrow Pits)

Heathgate holds a number of EMLs for the purpose of extracting construction minerals, mainly calcrete, for use as road base. Seven of Heathgate's eight EMLs are located on Wooltana pastoral station with EML 6048 also being located within the Beverley ML (refer Figure 2-4). EML 6392 is located on Wertaloona pastoral station approximately 70 km from the Beverley Mine. EML 6394 was the only borrow pit that was excavated during the Reporting Period.

Table 2-1 below outlines the status of each of Heathgate's EMLs and the resource permitted to be extracted.

Table 2-1: Status of Borrow Pits at end of 2014

Tenement	Type of Resource	Status
EML 6048 (on Beverley ML 6321)	Sand and gravel	In use – nearly mined out, used for storage of material, crushing and screening
EML 6049 and EML 6050	Sand and gravel	In use
EML 6051	Sand and gravel	In use
EML 6052	Sand and gravel (Calcrete Pit 1)	Mined out and rehabilitated in 2007. External consultants, Outback Ecology, conducted **EFA** in September 2013 (the third survey of this type undertaken over time). The rehabilitated borrow pit has achieved all completion criteria required by its PEPR. Species richness has grown more than three times compared to the 2011 assessment which includes herbs, perennial, and annual grasses and forbs.

Tenement	Type of Resource	Status
EML 6385	Sand and gravel (Calcrete Pit 2)	Lease granted 2 December 2010 (PEPR in progress)
EML 6384	Sand and gravel (Calcrete Pit 3)	In use
EML 6392	Sand and gravel (Calcrete Pit 4)	Lease granted 3 November 2011 (PEPR A combined PEPR for EML6049, 6050, 6051 & 6392 –submitted 24 March 2015)

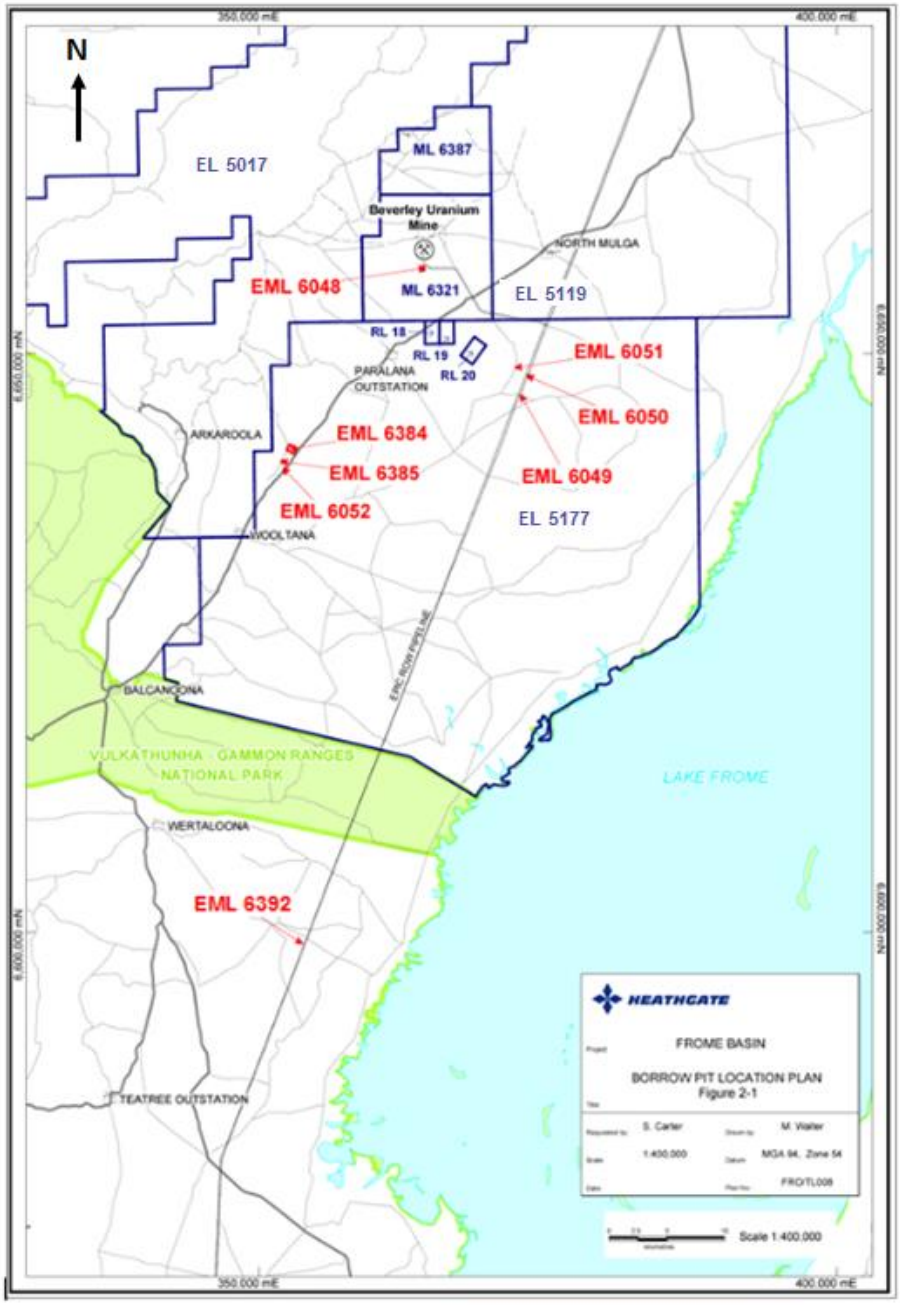


Figure 2-4: Borrow Pit Location Plan

2.3.1 EML 6384 (Calcrete Pit 3)

A total of 2225 tons of calcrete from existing stockpiles was transported to the Beverley site in several campaigns from the 25th February to 15th October 2014. A further 8600 tons of calcrete was excavated and stockpiled between the 9th and 17th December 2014.

No additional lateral disturbances/clearing occurred during excavations in 2014, therefore no additional SEB compensation required at this time. The area of disturbance is unchanged from that reported in the 2013 Reporting Period (Figure 2-2).

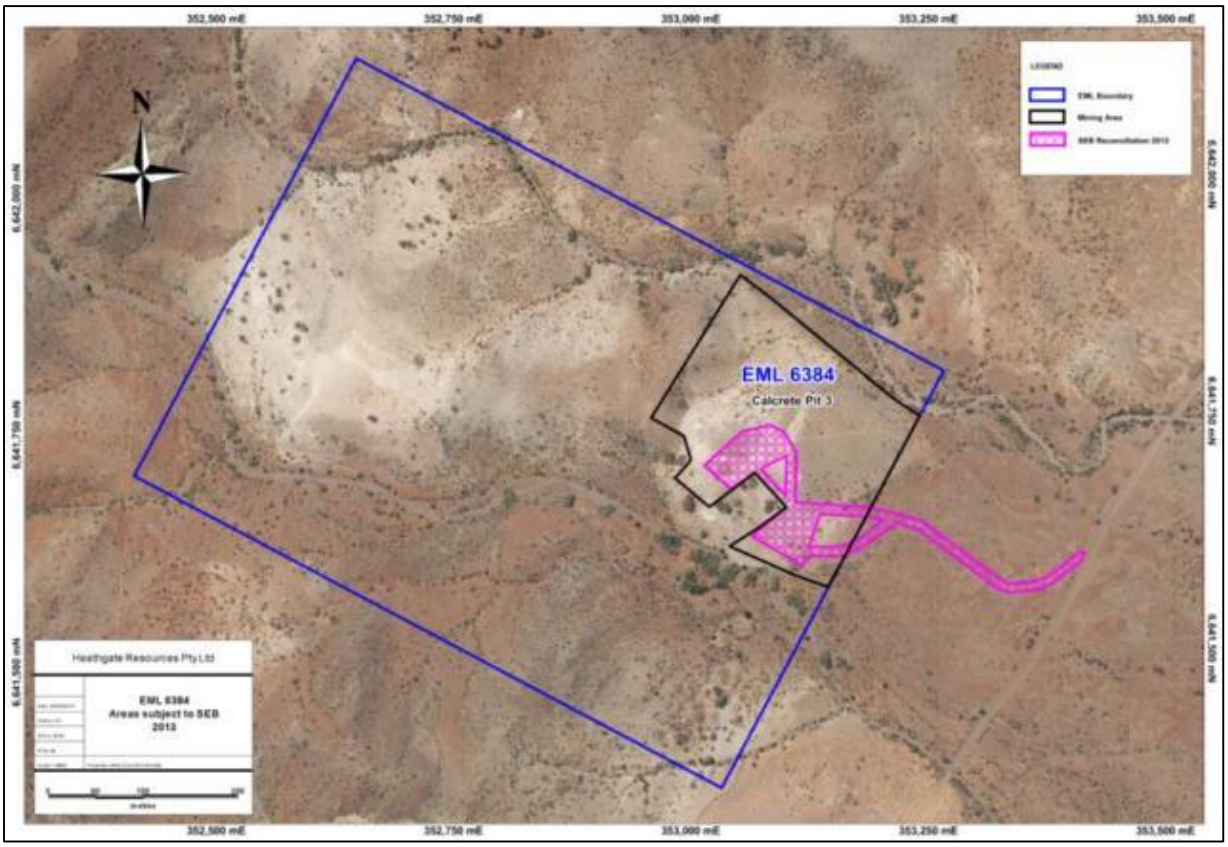


Figure 2-5: EML 6384 SEB area

2.4 Changes to Operation

2.4.1 Beverley Processing Plant

The Beverley Processing Plant was shut down in January 2014 to enable modifications to the resin transfer system and the elution process. The installation of an alternate iron removal system (a pin bed clarifier) was also undertaken. These modifications promote increased efficiency in processing uranium ore concentrate from loaded resin transported from the Pannikan satellite plant (Beverley North ML).

Two additional calibration pits (one water-filled, the other a mixture of water with ion-exchange resin loaded with sulphate, chlorides and uranyl compounds) were constructed to enable calibration of a new logging tool (APFN+) developed by the company.

2.4.2 Beverley North Satellite Plants & Wellfields

The Pepegoona satellite plant and wellfields were shut down in January 2014. In order to maintain mining fluids within the wellfield, barrier injection (on the margins of the wellfield),

extraction and transfer was the only activity carried out during 2014. Nine new wells and associated surface pipework was installed as part of this wellfield management system.

The Pannikan satellite plant and wellfields were shut down in July 2013. A bleed has been applied throughout 2014 in order to control any residual flare as a result of mining. Groundwater monitoring continued as per the company's compliance monitoring plan specified in the MARP.

In the first few months of the year modifications to the Pannikan satellite plant were completed for processing of Four Mile East (FME) mining solution and the connection of a trunkline from Pannikan to the FME wellfields. The Four Mile mining solution has been processed through the Pannikan plant since the operation commenced in April 2014.

2.4.3 Ore Reserves and Mine Life

Beverley

No new ore bodies were discovered or bought into production in 2014.

Beverley North

No new ore bodies were discovered or bought into production in 2014.

Other Tenements

Exploration was conducted by Heathgate adjacent exploration license (**EL**) 5177 (Wooltana). No new orebodies were discovered during these programs.

3 ENVIRONMENTAL AND SOCIAL COMPLIANCE ACTIVITIES

This section addresses the compliance monitoring, management activities and compliance status for the seven risk areas identified in the MARPs, they are:

- soil
- vegetation
- surface water
- hydrogeology
- fauna
- air quality, and
- heritage

The risks for the Beverley and Beverley North MLs are combined in a single compliance table for each risk area. If any item relates to a specific ML it is clearly stated.

3.1 Meteorological

Meteorological data is collected continuously at the Beverley site weather tower. Rainfall data is collected using a tipping bucket, tipping at 0.2 mm increments, and recorded every 10 minutes. An automated evaporation pan including precision water level meter and refill tank provide measurements of evaporation, and is logged every 24 hours. Monthly rainfall and evaporation is shown in

Figure 3-1. Comparative annual rainfall and evaporation since 2002 is shown in

Figure 3-3 and Figure 3-3.

There were no rainfall events over the 10-year ARI threshold during 2014. Temperature, wind speed (readings taken at 3m, Figure 3-4) and wind direction (Figure 3-5) data are collected at 3m, 20m and 28m and recorded every 10 minutes using a continuous data logging system. The weather station also contains a humidity sensor, with humidity logged every 10 minutes.

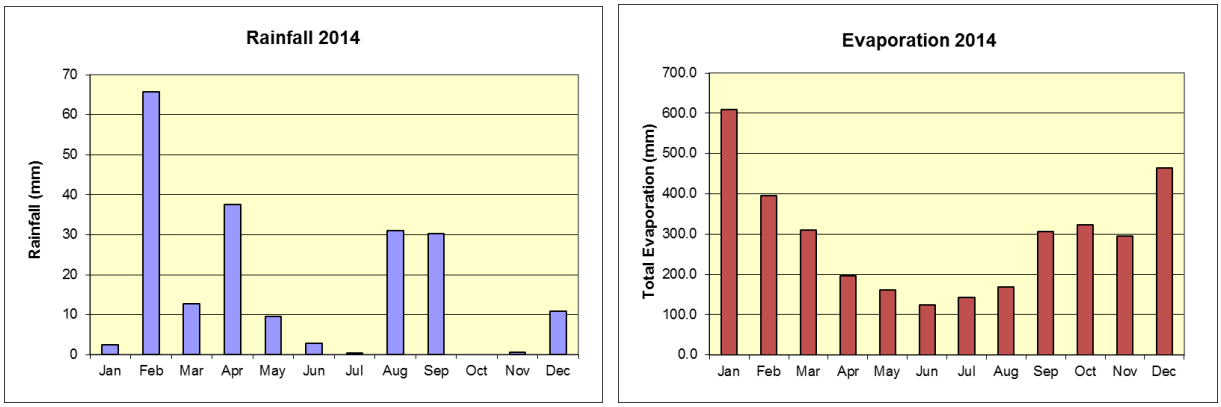


Figure 3-1: Monthly Rainfall and Evaporation

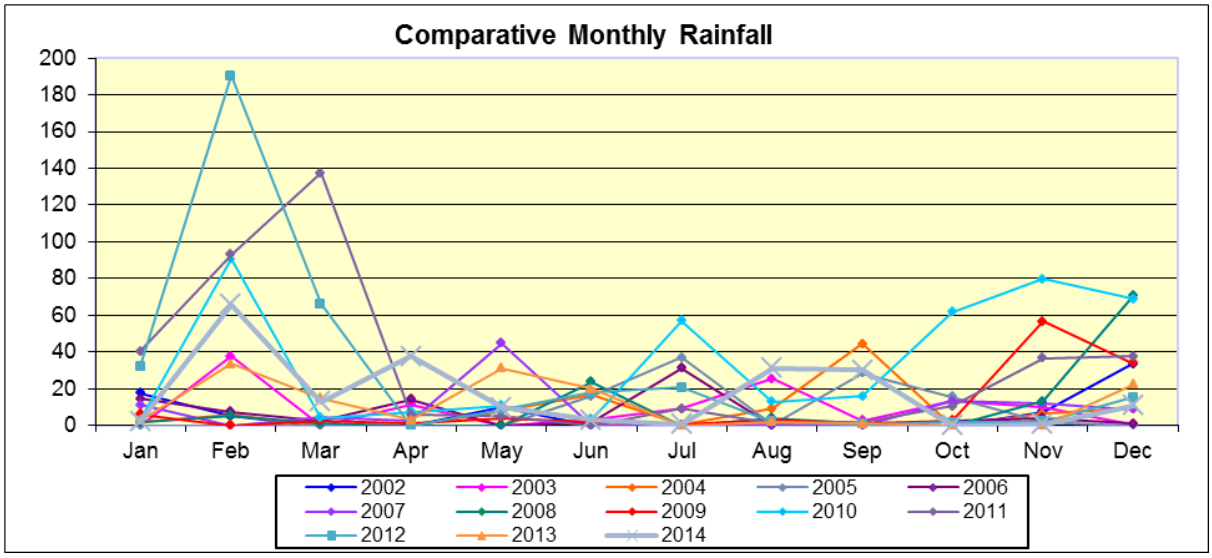


Figure 3-2: Comparative Annual Rainfall 2002 to 2014

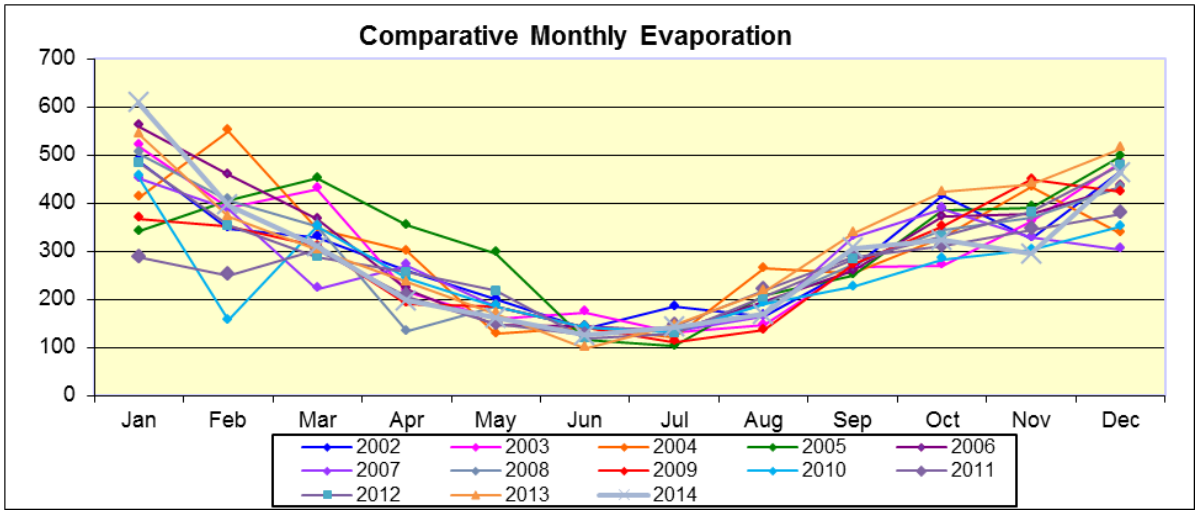


Figure 3-3: Comparative Annual Evaporation 2002 to 2014

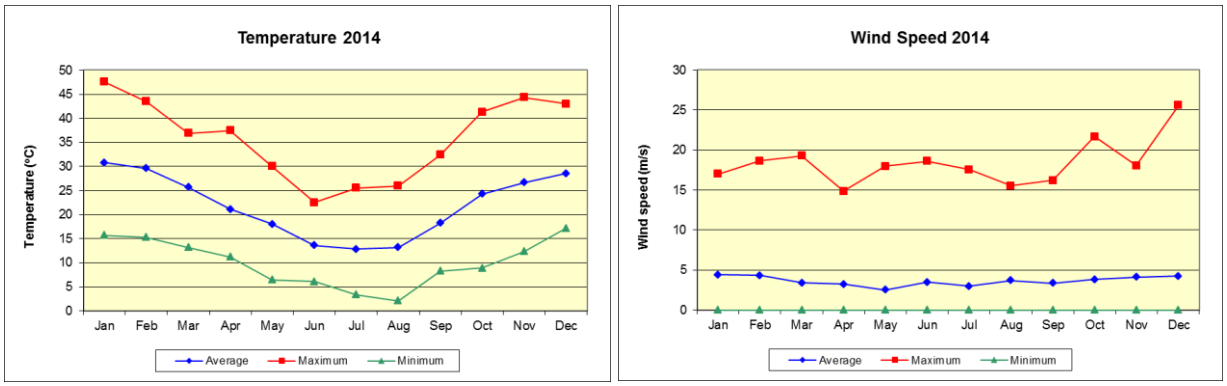


Figure 3-4: Monthly Average, Maximum and Minimum Temperature and Wind Speed

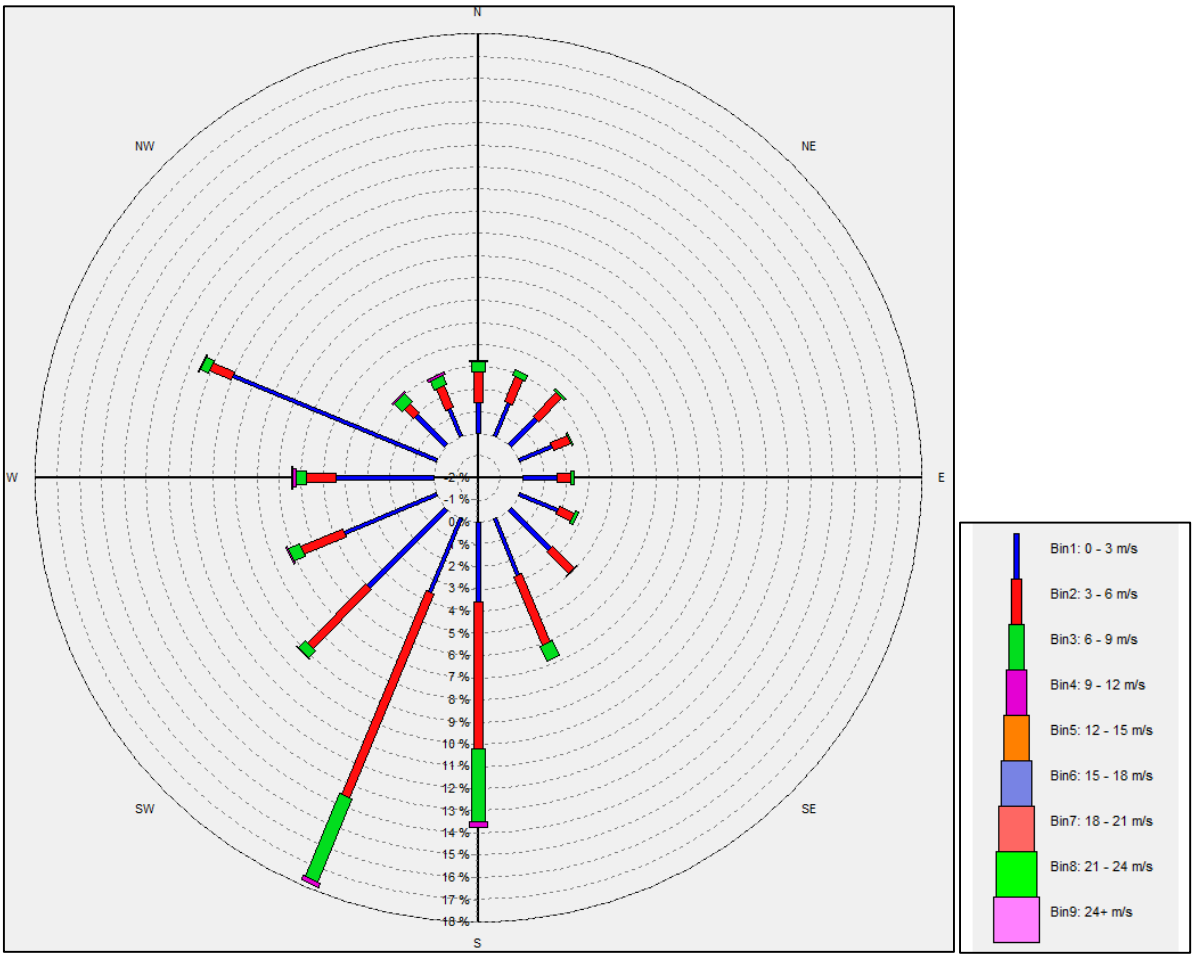


Figure 3-5: Wind Rose 2014

3.2 Soil

The compliance status at the end of 2014 against soil outcomes is shown in Table 3-1.

Table 3-1: Compliance Table – Soil

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
1.1	Chemical and radiological contamination of soil and watercourse sediments that would prevent its return to pastoral use arising from: a) Beverley - seepage from water management ponds through construction defects, wear and tear and accidental damage. b) Beverley - pond overflows of mining solutions and waste disposal solution due to high rainfall events or control system failure. c) escape of mining solution due to accidental breakages of piping from poor welds, vehicle damage or pipe defects. d) Beverley North - seepage from water management tanks through construction defects, wear and tear and accidental damage. e) Beverley North - Tank or bund overflows of mining solution from high rainfall events or control system failure.	Soil affected by mining activities is suitable for return to pastoral use.	For (a) and (d) only rehabilitation criteria apply. (b), (c) and (e), All sites subject to spills meet radiological criteria as defined in the RWMP.	f) Beverley - Leakage from double-lined ponds is compared to the Target Action Leakage Rate (TALR) of 22 mL/m^2/day. g) Beverley - water levels in ponds are checked at least weekly and after >10 mm of rainfall in a day and maintained at least 0.20 m below lowest level of rim. h) Any leaks detected by automatic systems or visual observation are logged as events and rectified. i) Beverley North - water levels in bunds and sumps are checked at least weekly and after >10 mm of rainfall in a day and maintained at least 0.20 m below lowest level of rim.	During 2014, no seepage from water management ponds due to construction defects, wear and tear and accidental damage nor did any pond overflows occur due to high rainfall events or control system failure. Beverley - Water levels in Evaporation Pond 5 and the Pregnant Lix Pond (PLP) are shown in Figure 3-6. Soil affected by spills of mining solution were assessed with a radiation survey and either taken to the low level radioactive waste facility (LLRW) for disposal or left undisturbed due to low radiological levels. Where spills occur in heavily vegetated areas, the soil is left undisturbed rather than causing unnecessary environmental damage. Annual sediment sampling was undertaken upstream and downstream of operations in October/November 2014 at locations shown for Beverley ML and Beverley North ML (Figure 3-8 & 3-9 respectively). All samples were analysed by a third party laboratory and the results of these analyses averaged over the classification are shown for Beverley in Figure 3-6 and Beverley North in Figure 3-7

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
1.2	Spillage of hazardous substances during transport, storage and handling resulting in contamination of soil that would prevent its return to pastoral use.	Soil affected by mining activities is suitable for return to pastoral use.	Spills of hazardous materials are assessed and if so determined cleaned up: a) Diesel spills to site-specific criteria to be established using NEPM Risk Assessment methodology as recommended by SA EPA. b) Acid or alkali spill sites returned to within local background range of pH.	• Beverley - Number and nature of spills and cleanups. • Beverley North - Water levels in bunds and sumps are checked at least weekly and after >10 mm of rainfall in a day and maintained at least 0.20 m below lowest level of rim. • Beverley North - Any leaks detected by automatic systems or visual observation are logged as events and rectified. • Beverley North - Number and nature of spills and cleanups and time taken to complete.	All spills are logged on our safety management system and are cleaned up immediately, as required. A Zero Spills Committee was developed in 2013 with targets set and with the focus on prevention of spills by working closely with personnel from project planning through to production. Soil affected by hydrocarbon spills was collected and taken to bioremediation bays on the Beverley ML.
1.3	Soil disturbance due to excessive off-road vehicle movement which may compromise rehabilitation for later pastoral use resulting from: • compaction of soil • exacerbated erosion.	Soil affected by mining activities is suitable for return to pastoral use.	Off-road vehicle movements not approved via an Heathgate's Environmental Clearance Permit (ECP) are investigated, reported and one of the following actions are undertaken: • fenced off to prevent reuse and rehabilitated, or • converted to an authorised road subject to SEB.	Number of non-compliant ECPs involving off-road incidents.	Nil reports for non-compliant ECPs involving off road incidents were received or logged in the incident management database during 2014.
1.4	Beverley North – Spillage of resin, chemicals or bleed stream solution during transport, storage and handling resulting in contamination of soil that would prevent its return to pre-mining use.	Soil affected by mining activities is suitable for return to pre-mining use.	All sites subject to spills meet radiological criteria as defined in the RWMP.	Number and nature of spills and cleanups and time taken to complete.	No reportable or recordable spills occurred during 2014.

The six water management (evaporation) ponds for the operation are located to the east and within the fenced area of the Beverley Processing Plant on the Beverley ML 6321. Bleed water from the satellite plants is disposed within these ponds. Water levels for all ponds were monitored throughout the year. No incidents occurred from seepage or overflow of water management ponds, bunds or tanks during rainfall events. Figure 3-6 below shows the pond levels for Evaporation Pond 5 and the Pregnant Lixiviant Pond (PLP).

No other reportable spills (as prescribed by the Bachmann Recording and Reporting Procedure for Incidents at South Australian Uranium Mines) occurred during the 2014 Reporting Period.

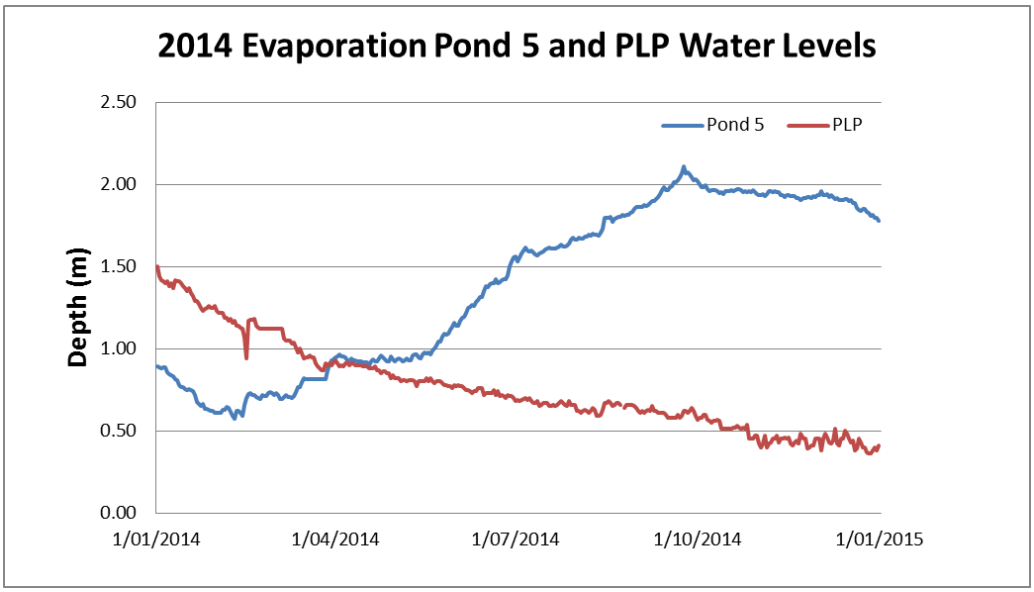


Figure 3-6: Evaporation Pond 5 and PLP water levels

Annual sediment sampling was undertaken upstream and downstream in creeks on ML 6321 and ML 6387 in October/November 2014. All sediment samples were analysed by a third party National Association of Testing Authorities (NATA) laboratory with chemistry results from sediment sampling showing consistency with baseline data. Comparisons of the up and down stream concentrations for the mine sites show no uncharacteristic results. Results of analysis averaged over the classifications are shown for Beverley in Figure 3-7 and in Figure 3-8 for Beverley North. The locations of sample sites are shown in Figure 3-9 for Beverley and Figure 3-10 Beverley North.

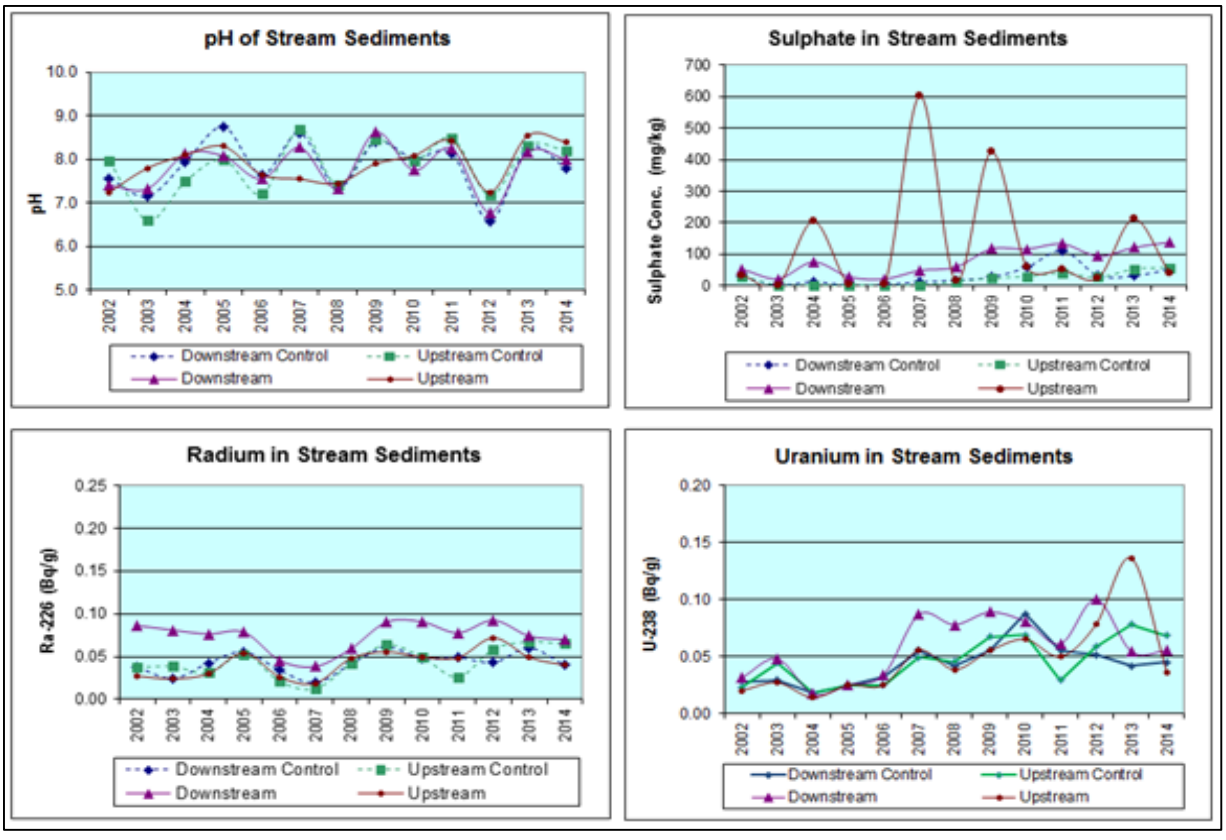


Figure 3-7: Chemical parameters for sediment samples on Beverley ML

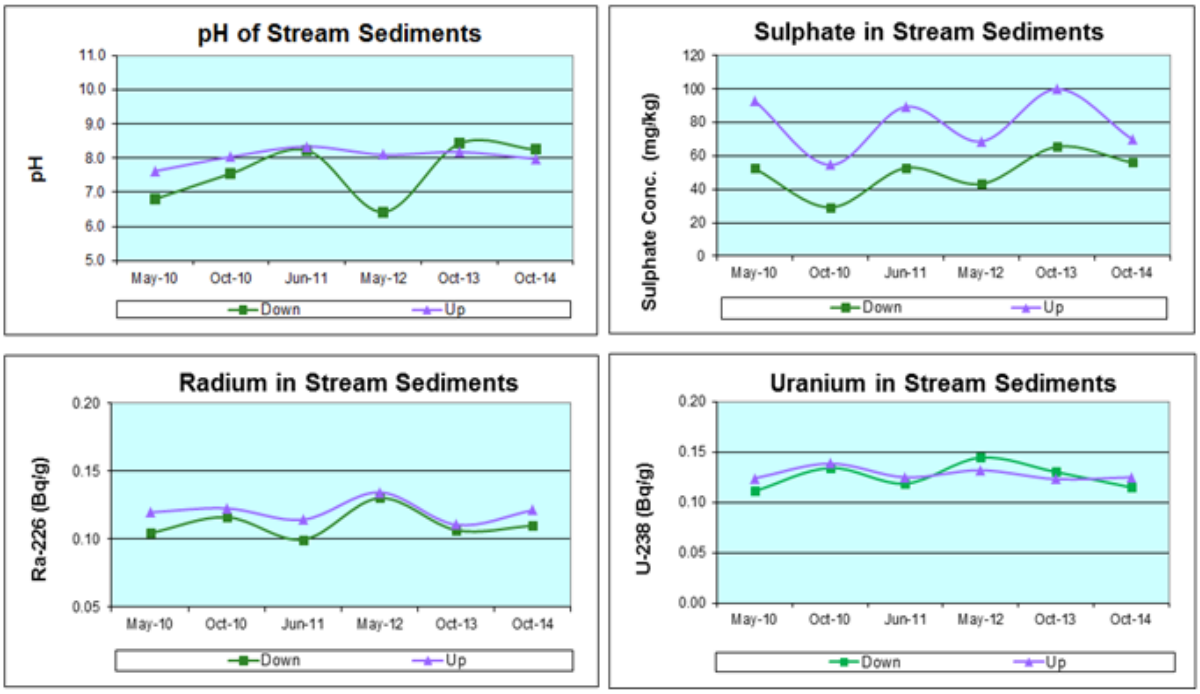


Figure 3-8: Chemical parameters for sediment samples on Beverley North ML

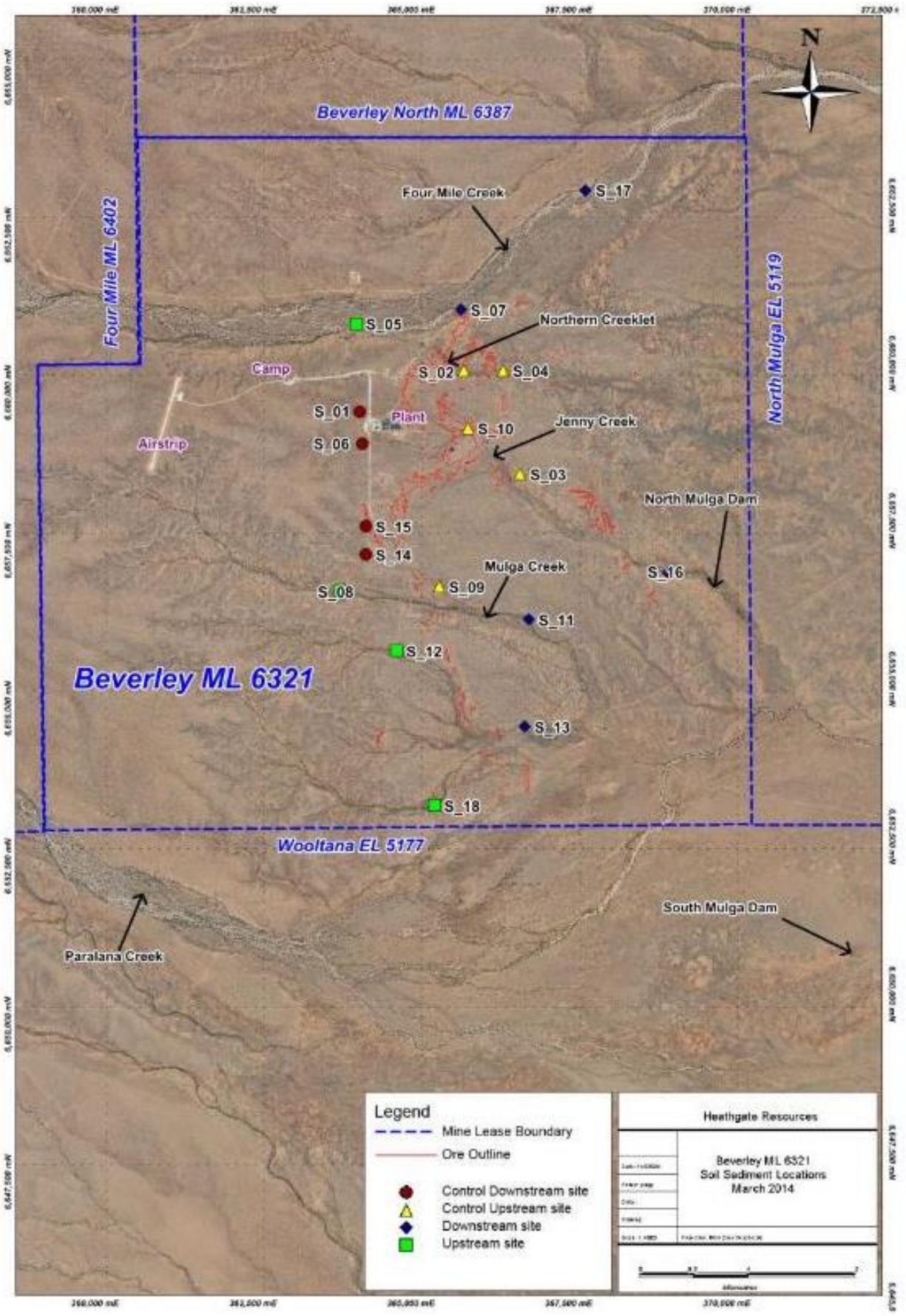


Figure 3-9: Beverley sediment sampling sites

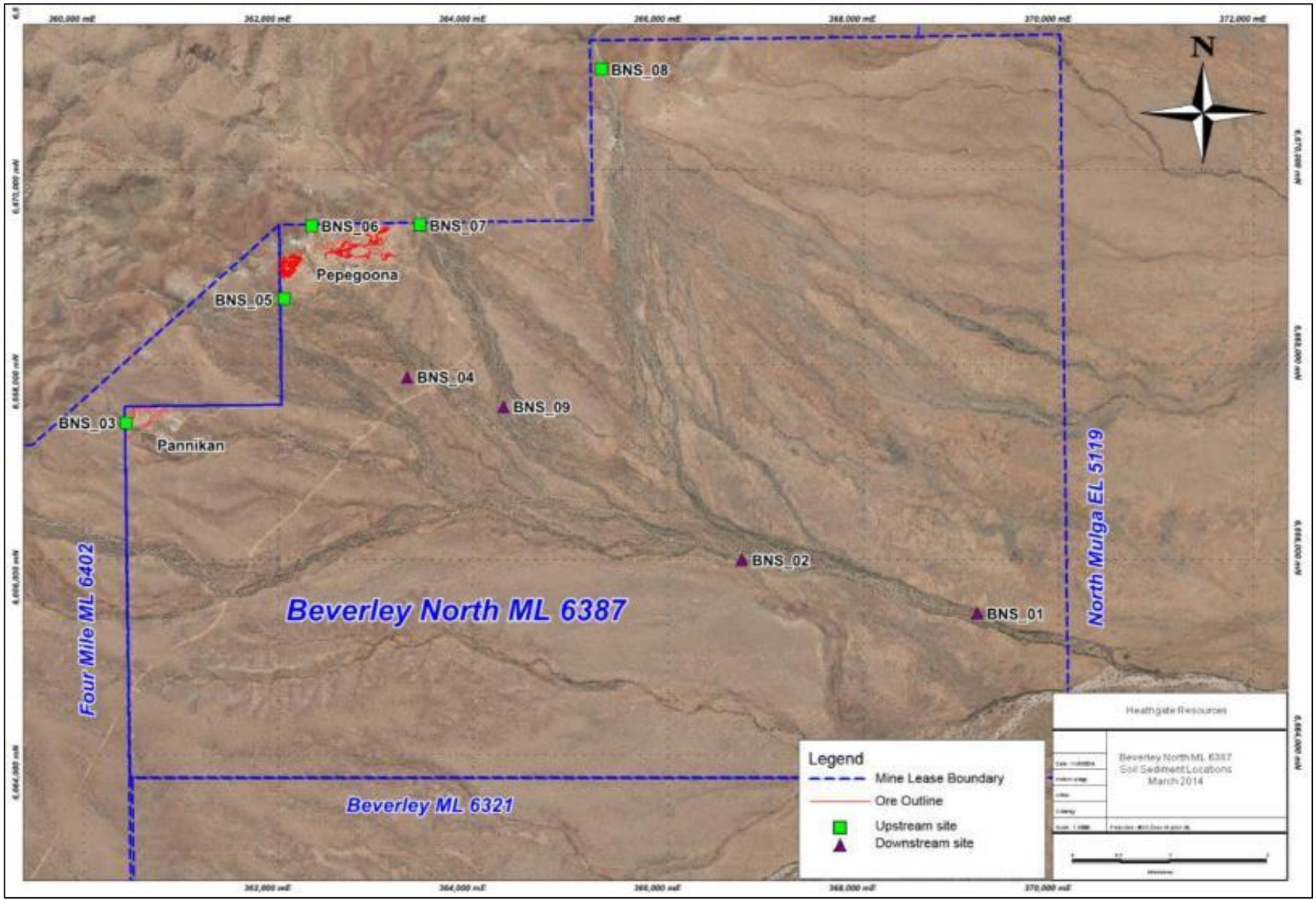


Figure 3-10: Beverley North sediment sampling site

3.3 Vegetation

To ensure minimal disturbance to vegetation and the landscape in general, Heathgate has an internal "Environmental Clearance Permit" system where a permit must be obtained prior to any work commencing in any undisturbed area or area under rehabilitation. This ensures access networks are planned and sensitive habitat and soaks are retained and outlines specific environmental and rehabilitation requirements. This system enables all new areas of disturbance to be measured by GPS at the end of every year and this information is then plotted on a map to enable calculations using mapping software to determine the total area disturbed for the year. All areas rehabilitated are also measured using a GPS and plotted to a map. These results are used for SEB accounting purposes (Section 3.3.1). Status of compliance with the vegetation outcomes is summarized below in Table 3-2.

The annual vegetation survey was undertaken by EBS Ecology from 27 October to 3 November 2014 covering the Beverley and the Beverley North ML areas and at selected 5 km distant control sites surveying eighty six 5m x 2m quadrats and four 1ha quadrats in total.

The location of vegetation monitoring sites is shown in Figure 3-11.

Table 3-2: Compliance Table – Vegetation

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
2.1	Reduction in regional native vegetation species density and diversity due to mining operations.	No loss of abundance or diversity on or off the Beverley and Beverley North mining leases to native vegetation through clearance or any other damage unless prior approval under the relevant legislation is obtained.	Demonstrate that all clearing undertaken is approved in accordance with the MARP.	Progressive SEB accounting in the annual MARCR.	All vegetation clearance has been undertaken utilising Heathgate's Environmental Clearance Permit system to minimise disturbance and in accordance with the approved MARP. Actual disturbance is measured by GPS and mapped to obtain the actual vegetation clearance which occurred during 2014 for the purpose of SEB accounting (refer Section 3.3.1).
2.2	Loss of local native vegetation (habitat) due to clearance for mining operations.				
2.3	Introduction of new or increase in abundance of existing weeds and pests (feral animals).	No introduction of new weeds, plant pathogens or pests (including feral animals), nor increase in abundance of existing weed or pest species in the lease area compared to adjoining pastoral areas.	Flora and fauna surveys demonstrate no new weeds or feral animals (due to mining activities) nor statistically significant increase in abundance of existing weed or pest species in the lease area compared to adjoining pastoral areas.	Trends noted in annual vegetation and fauna surveys	No spread of weeds caused by mining activities. The locations of annual vegetation monitoring sites are shown in Figure 3-11.
2.4	Loss of local native vegetation (habitat) due to mining-related fires.	Beverley - No uncontrolled fires caused by mining operations. Beverley North - No loss of abundance or diversity on or off the Beverley North mining lease to native vegetation through fire damage unless prior approval under the relevant legislation is obtained.	Any fires caused by mining operations are controlled within the ML boundary.		No fires caused by mining operations occurred during 2014.

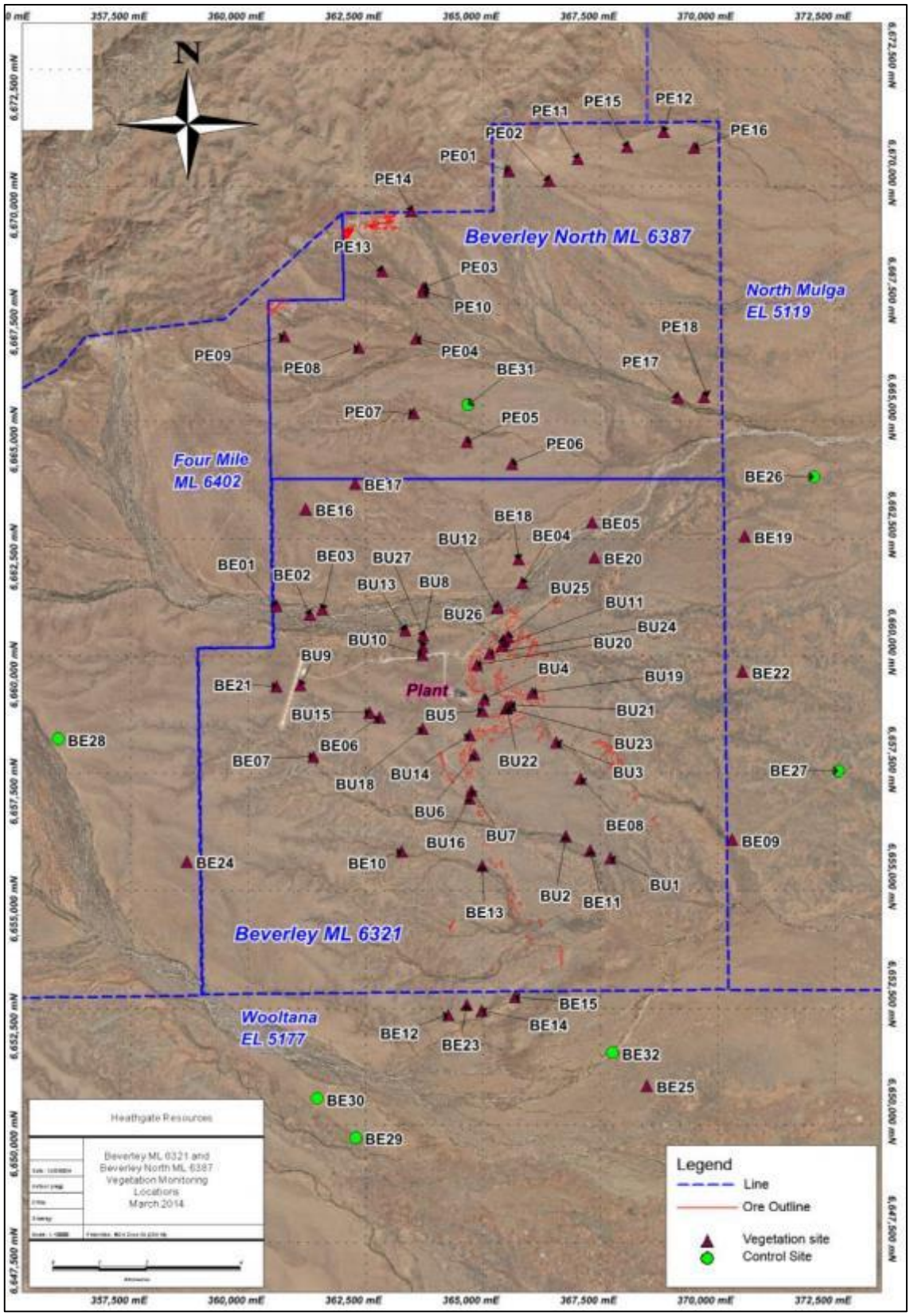


Figure 3-11: Vegetation monitoring sites

The results of the 2014 vegetation survey showed reductions in both overall cover and species richness, which was consistent across all sites on Beverley and Beverley North. The majority of reduction was due to withering of biennials and short lived perennial species, such as sub shrubs. This was deemed a typical response following previous years of exceptional rainfall where these shorter lived species respond to favourable conditions and then use the resources available to provide extensive quantities of seed until the next suitable period occurs. *Astrebla pectinata* (Barley Mitchell Grass) cover improved for the fourth successive year and is nearing cover values observed in 2000 prior to the extended dry period through the late 2000's. *Astrebla lappacea* (Curly Mitchell Grass) was also observed in 2014 at moderate densities in some areas where it had not been previously observed.

The two monitoring points for Calcrete Pit 3 (EML 6384), installed in 2013, were monitored for the second time in 2014, with no change in values observed for these sites.

One hectare quadrats surveyed annually on the Beverley mineral lease showed very limited changes in species richness in 2014 and few weed species were observed at these sites. One site (BU15) had one threatened species, *Swainsona oligophylla* present which had been previously recorded at the same location in 2010.

Weed species densities were also comparable with previous years data and no new weed species were observed in 2014, either as part of set monitoring points or opportunistically. Overall results show that the mineral leases and surrounding areas are returning to a similar condition to that recorded prior to the drought period in 2002 (EBS Ecology, February 2015).

3.3.1 Significant Environmental Benefit

All vegetation clearance since 25 August 2003 is subject to a Significant Environmental Benefit (SEB) compensation payment under the *Native Vegetation Act 1991*.

A vegetation assessment undertaken by Badman Environmental for the purposes of determining the ratio to be used when calculating the SEB compensation payment found the vegetation to fall within the 4:1 ratio i.e. for every hectare of vegetation cleared, the SEB compensation area would be four hectares with a 50% discount claimed for areas to be rehabilitated e.g. wellfields reduction the ratio to 2:1. SEB compensation is required to be paid to the Native Vegetation Council or to a project approved by the Native Vegetation Council.

On 31 January 2013, an amount of $183,167 (ex GST) was paid to the Nature Foundation SA for compensation due for the clearance of 228.2 ha of native vegetation from Beverley and Beverley North MLs combined. This compensation will be used by Nature Foundation SA for the management of the Witchelina Pastoral Lease by the Nature Foundation SA for biodiversity outcomes as an SEB, consistent with the terms of the Native Vegetation Act.

After the end of each calendar year, areas cleared within the year prior are measured via GPS with the aid of mapping software and a reconciliation of SEB compensation is undertaken to determine whether any additional areas have been cleared of native vegetation and hence whether any additional SEB compensation is required to be paid. Heathgate's Environmental Clearance Permit system assists in determining what areas have been cleared in a particular year.

During 2014, clearance of vegetation on the Beverley ML was restricted to the construction of a low level waste facility. Activity on the Beverley ML was minimal due to very limited mining activity on the lease. The total area cleared on the Beverley ML during 2013 was 0.55 ha (Table 3-3).

On the Beverley North ML, with both Pepegoona and Pannikan wellfields currently shut down, no new vegetation clearance occurred in 2014.

The calculation has used the 2013 unimproved land value for the 977 square mile (253,042 ha) Wooltana Pastoral Lease of $817,137 therefore a $3.23/ha unit cost has been used to calculate

the annual reconciliation of SEB compensating to end of 2014. A management cost of $800/ha has also been applied. The annual reconciliation performed in 2015 for the vegetation clearance during 2014 shows an amount of $443.55 for SEB compensation is to be paid. Heathgate currently pays its SEB contributions to the Nature Foundation SA for significant environment benefit of the Witchelina pastoral lease.

Table 3-3: SEB Calculation (actual cleared in 2014)

ML	Area Cleared (ha)	Management cost at $800/ha (based on area cleared)	SEB Area – area cleared times 2 (ha)	SEB value $3.23/ha** (based on SEB area)	2014 Reconciliation Compensation
Beverley	0.55	$440	1.1	$3.55	**$443.55**
Beverley North	0	$0	0	$0	**$0**
Total	**9**	**$440**	**1.1**	**$3.55**	**$443.55**

** Using a 50% discount for areas that will be rehabilitated eg wellfields*
*** Based on the 2013 unimproved land value of $817,137 for the Wooltana Pastoral Lease comprising 253,042 ha representing $3.23/ha unit cost*

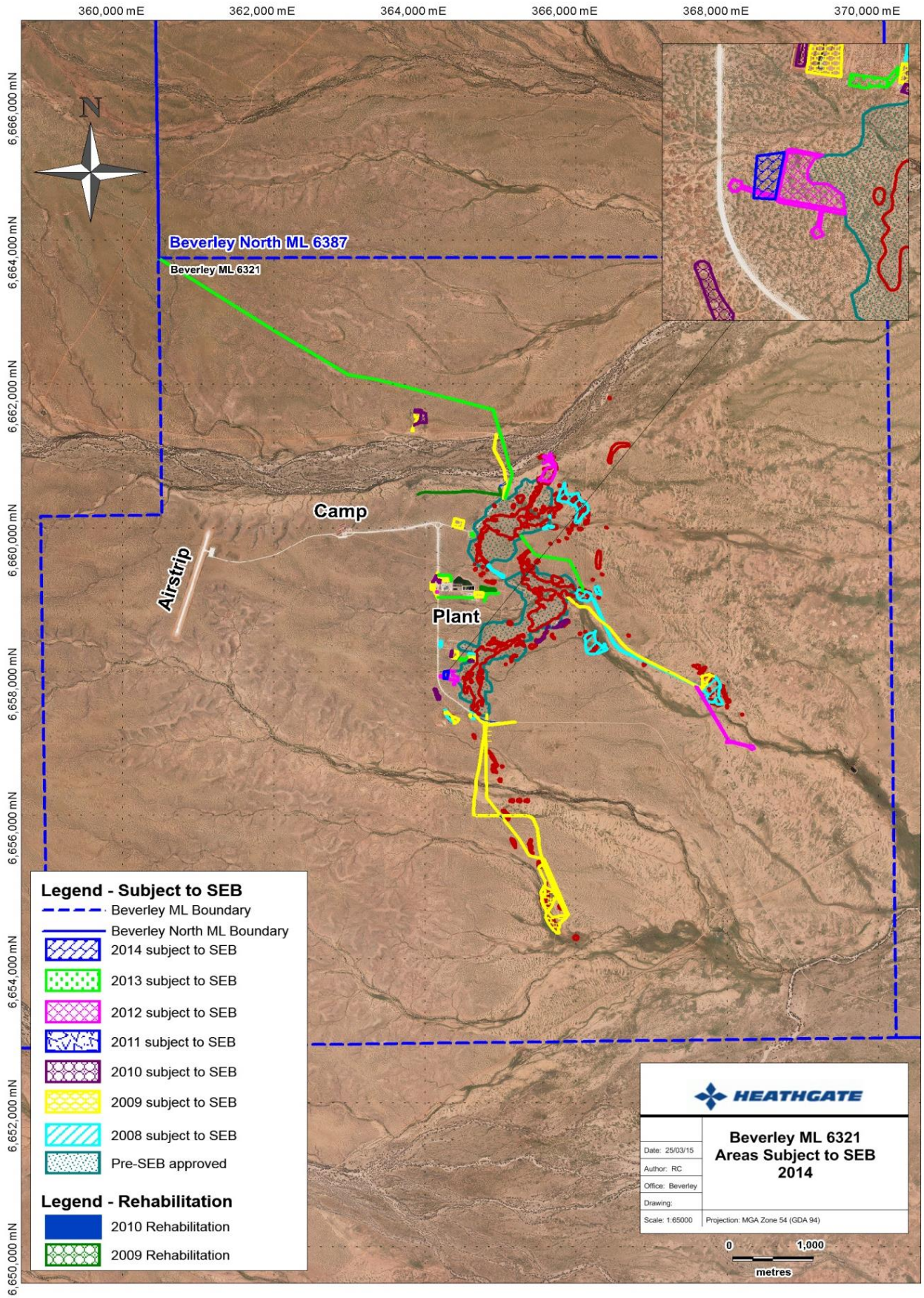


Figure 3-12: Beverley ML - SEB Reconciliation Map

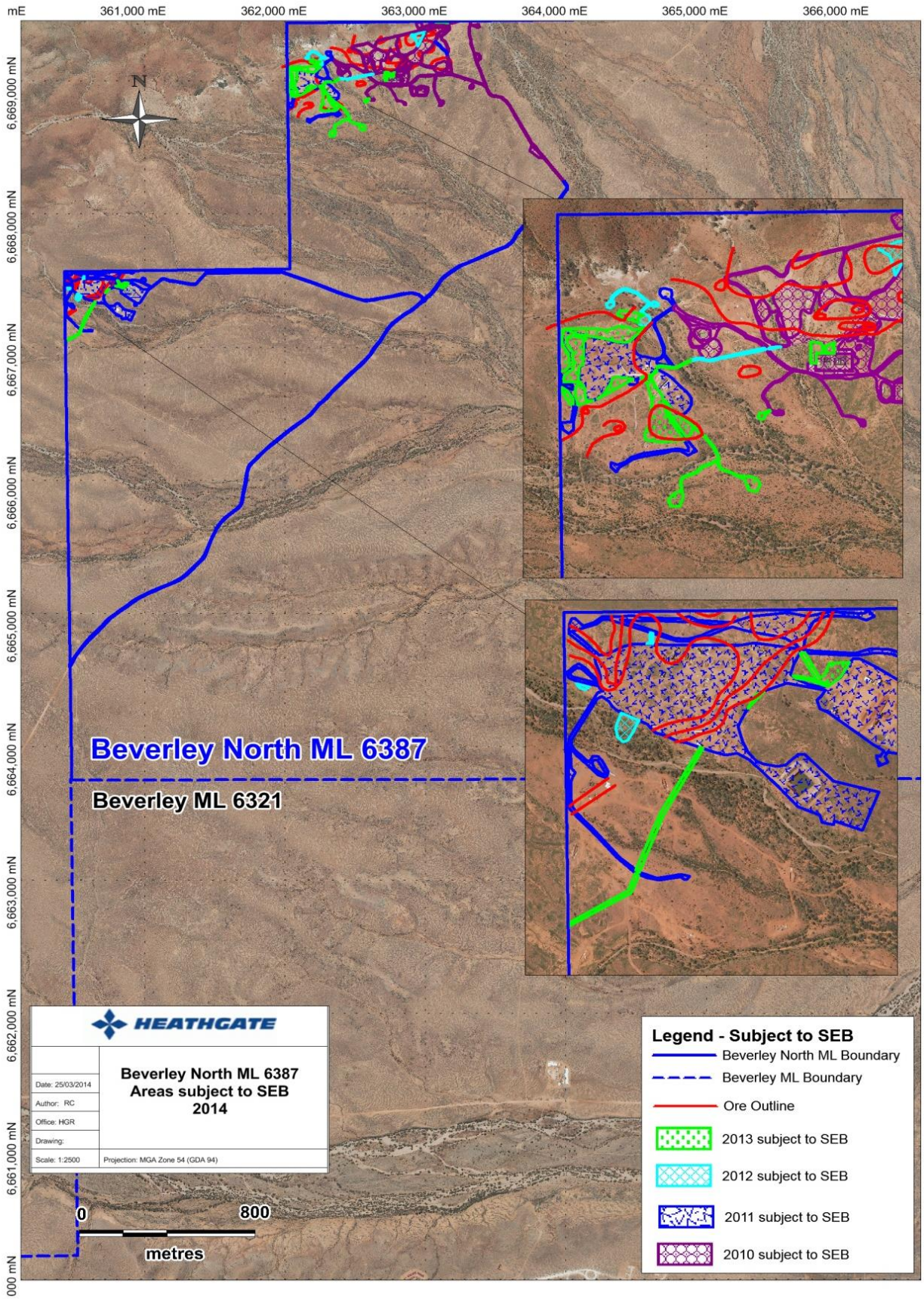


Figure 3-13: Beverley North ML–SEB Reconciliation Map

3.3.2 Ecosystem Function Analysis

EFA monitoring, supplementary monitoring committed to in the Beverley and Beverley North MARPs is used as a tool to assess and measure the progress of areas undergoing rehabilitation.

EFA surveys include a vegetation component which compliments the specialised vegetation monitoring done under the compliance monitoring program. EFA provides data relating to landscape functioning, vegetation establishment and habitat development which is done by assessing and measuring indices that assess and measure soil stability or resistance to erosion, water infiltration rate and nutrient cycling as well as vegetation dynamics.

In 2014 a total of twenty two (22) transects consisting of eleven (11) analogue/rehabilitation each were monitored at nineteen (19) sites. Sites were selected on the basis they had not reached the prescribed completion criteria. The location of the EFA transects which were monitored during 2014 are shown in Figure 3-14.

Total rainfall received at Beverley in the 12 months preceding the 2014 EFA survey was 215mm, 20mm above long term average recorded at Wooltana. The survey found an increase in grass species germination, in particular the dominant *Astrebla sp*. and a slight reduction in chenopod density due to lifespan. The result of this is organic material (patch proportions) remained similar or slightly decreased. Corresponding with this reduction in chenopod density overall landscape function indices remained similar or slightly decreased since the previous assessment at both analogue and rehabilitation transects (Outback Ecology 2014). Analogue transects are used for control or baseline purposes.

Completion criteria are achieved when all indices reach 80% of the analogue mean for at least three consecutive years (Outback Ecology, 2010). In the 2014 assessment, two (2) of the eleven (11) rehabilitated landform sites assessed achieved the 80% criteria threshold for all indices for three consecutive assessments that deems these to be rehabilitated. Another six (6) transects had achieved all four assessment criteria (EBS Ecology 2014).

The two rehabilitated transects to the east of Beverley were the only sites not to achieve any of the closure criteria as expected as the rehabilitation was completed in 2013.

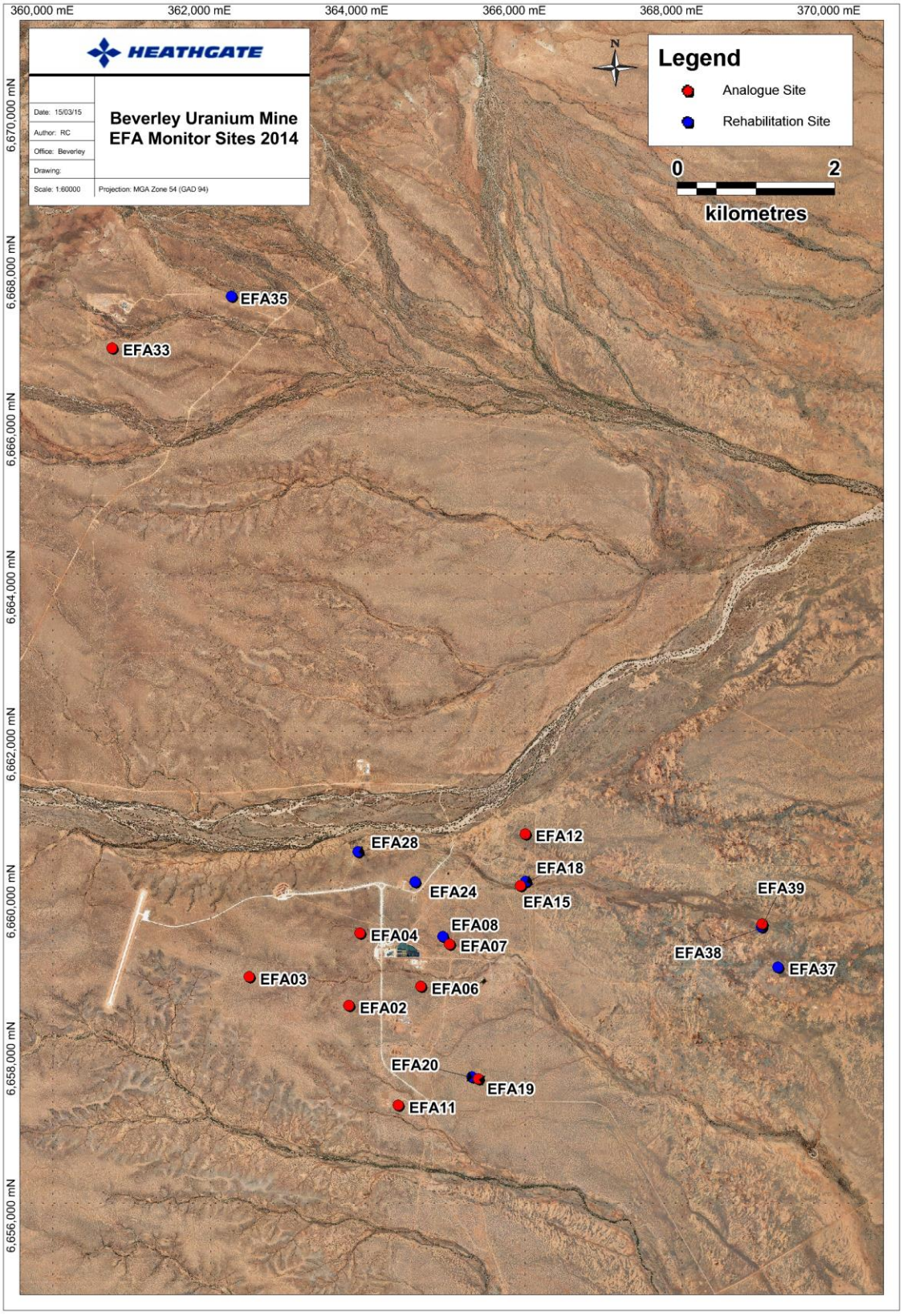


Figure 3-14: EFA transect locations monitored in 2014

3.4 Surface Water

Surface water assists in the recharge of the Willawortina Formation. Pastoralists use dams as, often intermittent, stock water supplies. Refer to compliance table being Table 3-4.

Table 3-4: Compliance Table – Surface Water

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
3.1	Beverley - Watercourse contamination (including radiological) arising from release of mining solution due to flood damage to Beverley - pipes, ponds and infrastructure, or from high rainfall causing overflow of ponds. Beverley North – pipes, bunds and infrastructure, or from high rainfall causing overflow of bunds.	Beverley North - No compromise of pastoral use of downstream surface water bodies.	Water quality in Beverley - North and South Mulga Dams Beverley North – downstream water storages (within 5 km of an individual mining/spill site, or the closest accessible significant temporary creek waterhole if there is no water storage within 5 km). shall be measured as soon as it is safe to do so following surface water flow, if there has been any Beverley - release of mining solution into a flowing stream. Beverley North – immediately reportable release of mining solution. This must show no compromise of pastoral use that it is attributable to mine operations. Beverley - A mass balance calculation using estimated spill volume and chemical quality and estimated stream flow shall be undertaken to ascertain if any compromise is plausibly due to the mine. Applicable ANZECC/ARMCANZ stock water guidelines are: • salinity (EC) – 4,000 mg/L (6,000 uS/cm) • sulphate – 1,000 mg/L • uranium – 0.2 mg/L.		No watercourse contamination (including radiological) occurred from the release of mining solution due to flood damage to infrastructure or overflow of ponds and bunds during 2014 (note: ponds are only present on at the Beverley Processing Plant on the Beverley ML).
3.2	Beverley North - Watercourse contamination (including radiological) arising during transport of resin or chemicals, resulting from an accidents and release of materials into a creek.		*Beverley North* - Water quality in downstream water storages (within 5 km of an individual mining/spill site, or the closest accessible significant temporary creek waterhole if there is no water storage within 5 km), will be measured as soon as it is safe to do so following surface water flow, if there has been any unremediated release of resin or chemicals. This must show no compromise of pastoral use that is attributable to mine operations. Applicable ANZECC/ARMCANZ stock water guidelines are: • salinity (EC) – 4,000 mg/L (6,000 uS/cm) • sulphate (SO_4)– 1,000 mg/L • uranium – 0.2 mg/L.		No watercourse contamination (including radiological) occurred arising from the transport of resin or chemicals resulting in accidents and release of materials into a creek.

3.5 Hydrogeology

Duplicate sampling of all monitor wells is undertaken on a quarterly basis and duplicates are sent to a NATA accredited laboratory. Results from Beverley's laboratory and the NATA accredited laboratory are compared for quality assurance purposes.

Monitoring results are presented and reported to regulators in the Quarterly Environment and Radiation Report.

3.5.1 Beverley

The hydrogeology in the vicinity of the Beverley Mine consists of three main aquifers:

- Willawortina Formation (surface to ~95 m below ground level (bgl)
- Beverley Sands and other minor sands in the Namba Formation (105 – 140 m bgl)
- Great Artesian Basin (GAB) – Cadna-Owie Formation (330 – 380 m bgl).

3.5.1.1 Willawortina Formation

The Willawortina Formation is the surficial aquifer that overlies the Namba Formation and is separated by an impervious clay layer. The Willawortina Formation comprises a number of thin aquifers of low water yield, separated by clay layers. Where water is present, the quality may not be suitable for general stock use. Pumping tests show there is no hydraulic connection with the Namba Formation aquifer. Table 3-5 shows the compliance status against the outcomes for the Willawortina Formation on Beverley ML 6321.

Table 3-5: Compliance Table – Hydrogeology - Willawortina Formation

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
4.3	Contamination (including radiological) of the Willawortina aquifer by leakage caused by over pressurisation of the Namba mining aquifer to the Willawortina aquifer that compromises it possible future pastoral use.	No compromise to pastoral use of the Willawortina aquifer.	Monitoring of ECL parameters and EC demonstrates that the category of pastoral use of the Willawortina aquifer does not change adversely in relation to ANZECC/ARMCANZ categories of water use, as a result of mining operations.	Water pressures in Namba injection and monitor wells. are less than the conservatively calculated aquitard fracture pressure of 760 kPa measured at the wellhead Trends of water level and ECL parameters and EC.	No contamination or over pressurisation of the Willawortina Formation has occurred – refer to Hydrographs: APPENDIX A Beverley ML Monitor Well Level Graphs APPENDIX B Beverley ML Monitor Well Chemistry Graphs APPENDIX C: Beverley ML Overlying Monitor Well EC Graphs
4.4	Radionuclide contamination of the Willawortina aquifer due to seepage from LLRW facilities. Note: Not a credible risk due to design of solid waste facilities, low rainfall and groundwater discharge, deep water table and presence of extensive clay in unsaturated zone.		Appropriate records show LLRW facilities built to design. Groundwater quality monitoring (ECL parameters and EC) shows no compromise of Willawortina that could be attributed to the LLRW facilities.	Cell sump monitoring confirms that no water has entered the cell.	Monthly monitoring of cell sumps resulted in some sumps containing samples of in the vicinity of 1L or less. All samples obtained were sent for third party analysis testing for radionuclides showing negligible levels of Ra-226. No contamination of the Willawortina aquifer from the low level radioactive waste (LLRW) facilities occurred (refer Figure 3-16).

Monitor wells screened in the Willawortina Formation are known as overlying monitor wells (Figure 3-15). No over pressurisation or contamination of the Willawortina occurred as evident from water chemistry results (Appendices B and C) and monitoring of the water levels (Appendix A).

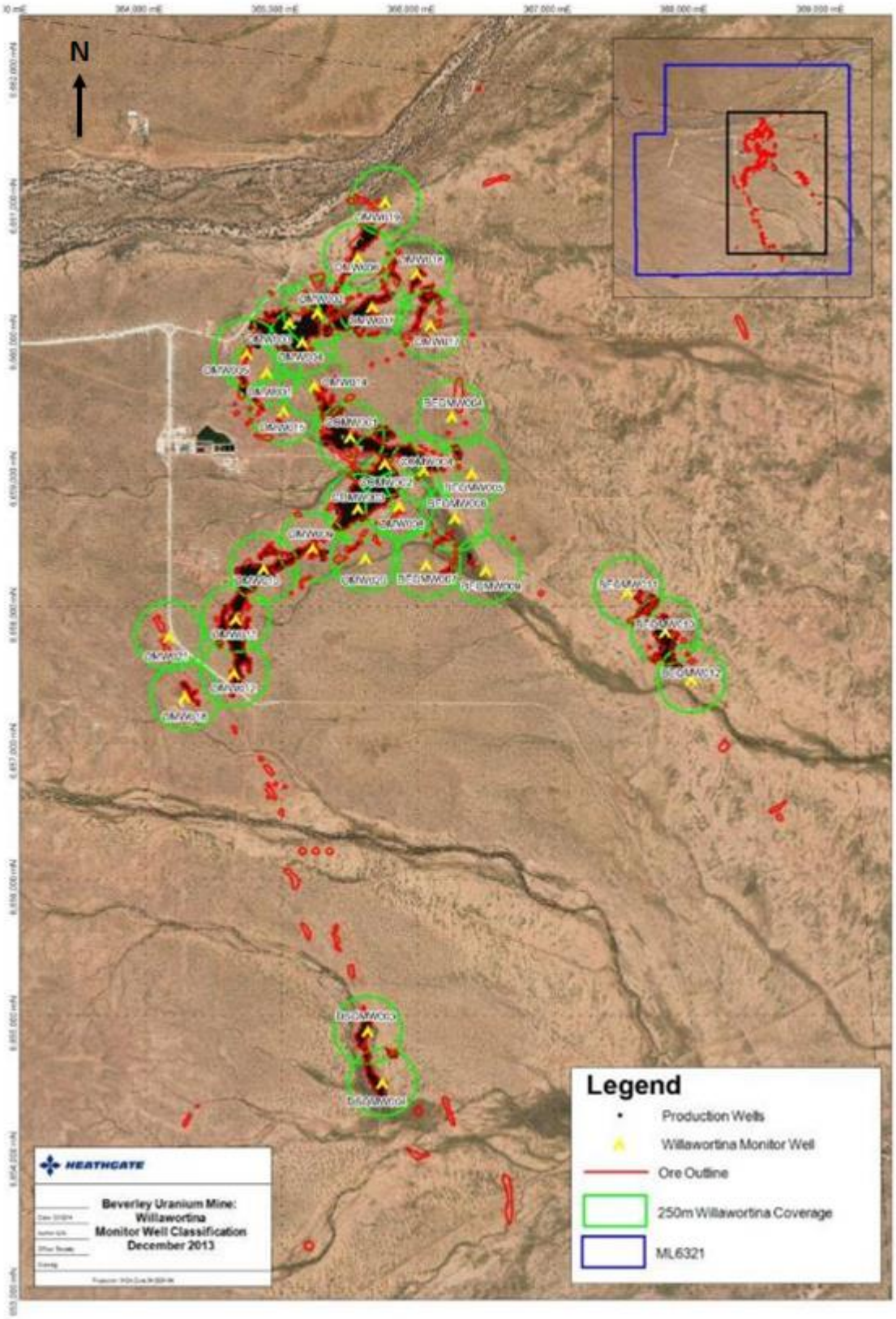


Figure 3-15: Willawortina Formation monitor well locations

Six overlying monitor wells surround the Low Level Radioactive Waste (**LLRW**) facility on the Beverley ML and monitor any changes to water quality due to seepage from LLRW cells. None of these wells are connected to the main aquifer thus sampling is done using a bailer. Water chemistry results (pH, EC, SO_4 & U) from sampling show no uranium concentrations above 1 ppm (Figure 3-16).

Waste dump monitor wells DMW005 through DMW007 were installed in the third quarter of 2012 to provide monitoring for an extension of the LLRW facility. The difference in water chemistry results for these wells compared with DMW001, DMW002 and DMW004 is due to the water chemistry returning to baseline levels having been drilled using fresh Great Artesian Basin (**GAB**) water. The locations of the all dump monitor wells are shown in Figure 3-17.

Dump sump bores (in the Willawortina Formation) are monitored monthly and are connected to the base of each waste facility. If a liquid sample is present, it is sent to a third party NATA accredited laboratory for analysis. To date, only low Ra-226 concentrations have been detected.

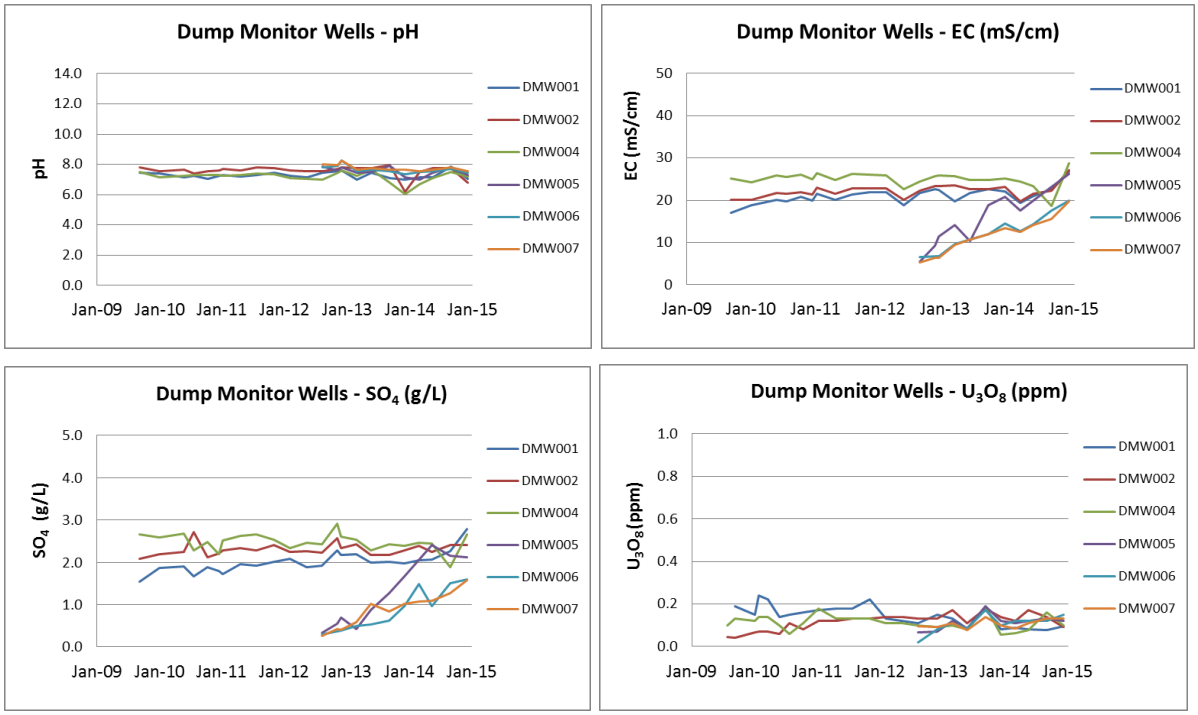


Figure 3-16: Dump Monitor Well chemical analysis
* U_3O_8 from 3rd party analysis.

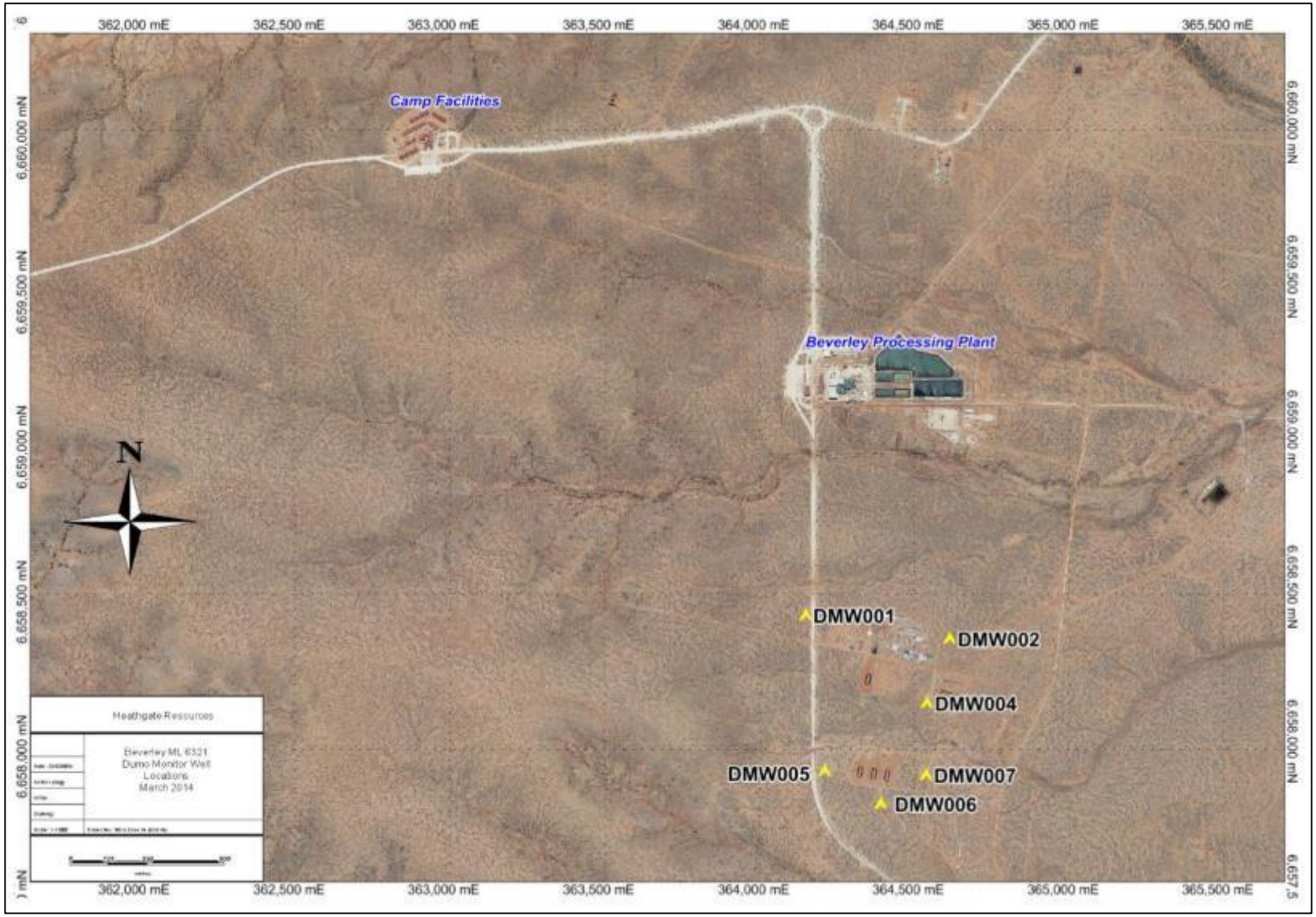


Figure 3-17: Dump Monitor Well locations

3.5.1.2 Namba Formation

Mining occurs in the Namba Formation aquifer at Beverley and is monitored via a network of lateral monitor wells (Figure 3-18) and the compliance status for the outcome to be achieved for the Namba Formation for the Beverley ML is outlined below in Table 3-6.

Table 3-6: Compliance Table – Hydrogeology - Namba Formation

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
4.5	Contamination (including radiological) of the Namba aquifer units outside the Beverley Mine Lease arising from mining activities.	No compromise of potential pastoral use (should it meet pastoral water quality standards) of the Namba aquifer outside the Beverley mining lease.	No migration of mining and disposal solutions outside the ML as demonstrated by ECL monitoring and response.	ECL monitoring trends	No contamination of Namba aquifer occurred. Also refer to hydrographs and water chemistry in: APPENDIX A Beverley ML Monitor Well WATER Level Graphs APPENDIX B Beverley ML Monitor Well Chemistry Graph

Namba Formation monitor wells are spaced and monitored according to four hydrogeological classifications summarised in Table 3-7. This ensures that monitoring is undertaken in the permeable sediments with known or likely hydraulic connection to the aquifer that is being mined or used for waste water disposal. Excursion Control Limits (**ECLs**) are set as leading indicators to the migration of mining and disposal solutions and are given in Table 3-8. No exceedences of ECLs were recorded on the Beverley ML in the Namba Formation.

Mining at Beverley ceased on 6 December 2013. Liquid waste disposal continued in the Central wellfield with extraction of Namba water continuing from Beverley East for water balance purposes. No mining solution excursions have occurred in the Namba Formation on the Beverley ML.

Table 3-7: Namba Formation - Well Classifications

Classification	Type
1	Well-connected across the channel
2	Well-connected lateral to the channel
3	Poorly connected
4	Unconnected

Table 3-8: ECLs for the Namba Formation

Excursion Control Parameters	Excursion Control Limits
pH	Minimum of 4.5
SO_4	Maximum of 3.6 g/L
U_3O_8	Maximum of 1 mg/L

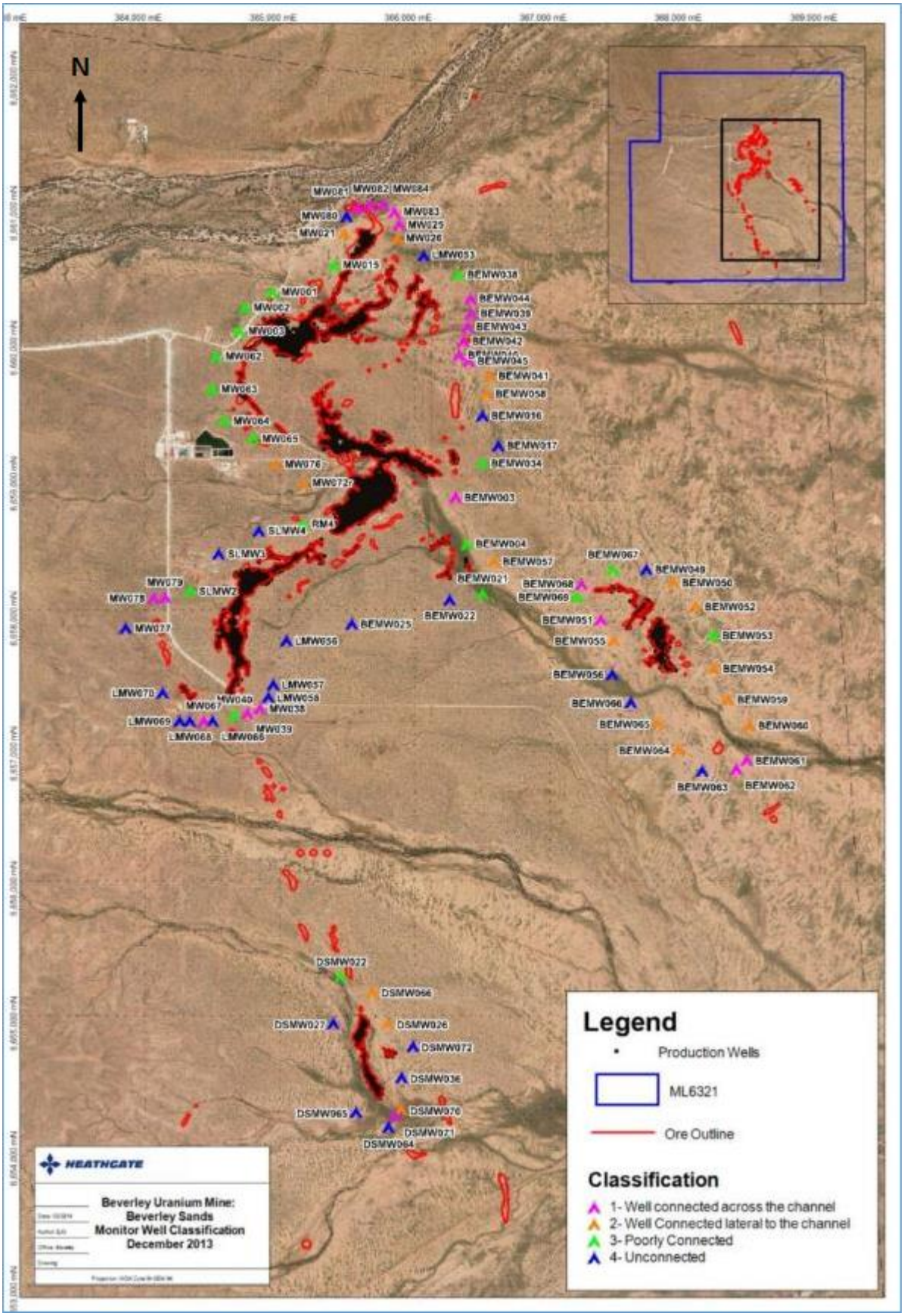


Figure 3-18: Namba Formation monitor well locations

3.5.1.3 Great Artesian Basin

Three GAB bores have been installed on the Beverley ML, they are called Four Mile (Old Camp Bore) GAB, Plant GAB 1 and Plant GAB 2 (Figure 3-19). Monitoring provides assurance that the outcome of 'no compromise to other existing GAB users within the Beverley Mine region' will be achieved. See compliance table being Table 3-9.

At the end of 2014, the combined volume of water extracted from the three GAB bores was 86.21 Megalitres which is within the licence allocation of 140 Megalitres per annum. Quarterly extraction from the three GAB bores for 2014 is shown in Figure 3-20 with the total annual extraction remaining below the allocation amount (Figure 3-21). The GAB pressure at the wellhead is taken monthly and the pressures for the three GAB bores is shown in

Figure **3-22**.

Table 3-9: Compliance Table – Hydrogeology - GAB

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
4.1	Drawdown and reduced flow in other pastoral bores that compromise their use, due to GAB water extraction for mining operations.	No compromise to other existing GAB users within the Beverley mine region.	GAB use not to exceed the allocated volume specified by license conditions which are issued according to the requirements of the approved Water Allocation Plan, Far North Prescribed Wells Area (DWLBC).	Volume of water progressively taken from GAB. Water pressures and pressure trends in GAB.	Department for Water Licence No. 162724 states a total water allocation from the GAB aquifer 140 ML per annum The combined volume of water extraction from the Four Mile GAB, Plant GAB 1 and Plant GAB 2 bores for 2014 was 86.21 ML. Graphs below show the quarterly extraction of GAB water (Fig 3-20) from the three bores and the total annual GAB water extraction since 2001(Fig 3-21) including the target annual allocation for 2014 of 140 ML. Pressure trends in the GAB bores are consistent with past years (Figure 3-22). There was no prolonged decrease in the pressure of the GAB bores.
4.2	Contamination (including radiological) of the GAB aquifer arising from prolonged pressure drop in the GAB to less than the Namba aquifer and the creation of a pathway that compromises current and future possible use of the GAB. NOTE: Not a credible risk due to small GAB extraction rates, pressure differential between aquifers and the vertical and lateral seals between credible pathways.	No compromise to other existing GAB users within the Beverley mine region.	The pressure in the GAB at the extraction bores remains higher than the maximum pressure in Namba aquifer. GAB use not to exceed the allocated volume specified by license conditions which are issued according to the requirements of the approved Water Allocation Plan, Far North Prescribed Wells Area (DWLBC).	As above. Trend of EC.	As above. Trends for EC are consistent with previous except for the EC result for October 2011 which was confirmed as anomalous with results to December 2014 being consistent with previous results Figure 3-23.

Figure 3-19: GAB bores in use are located on Beverley ML 6321

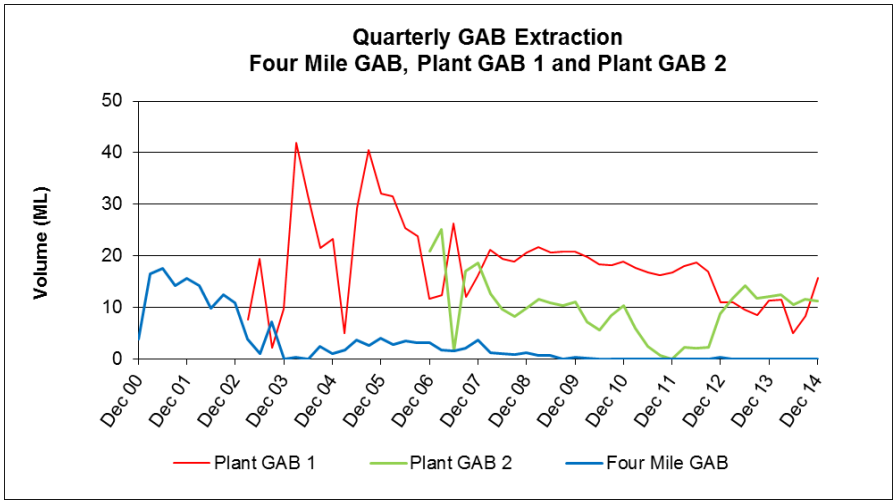


Figure 3-20: Quarterly extraction from the three GAB bores 2000-2014

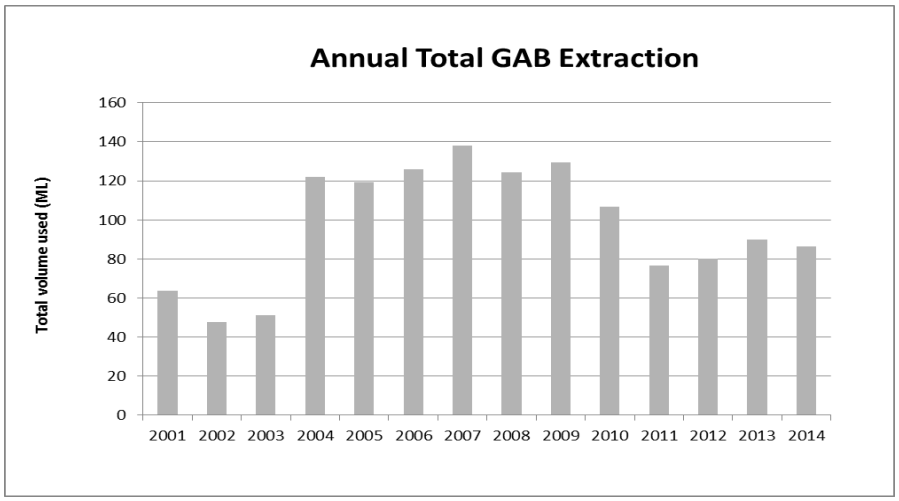


Figure 3-21: Annual total extraction of GAB from 2000 to 2014
Note: Plant GAB 2 estimated for quarters 1 and 2, 2012, due to flow meter malfunctioning

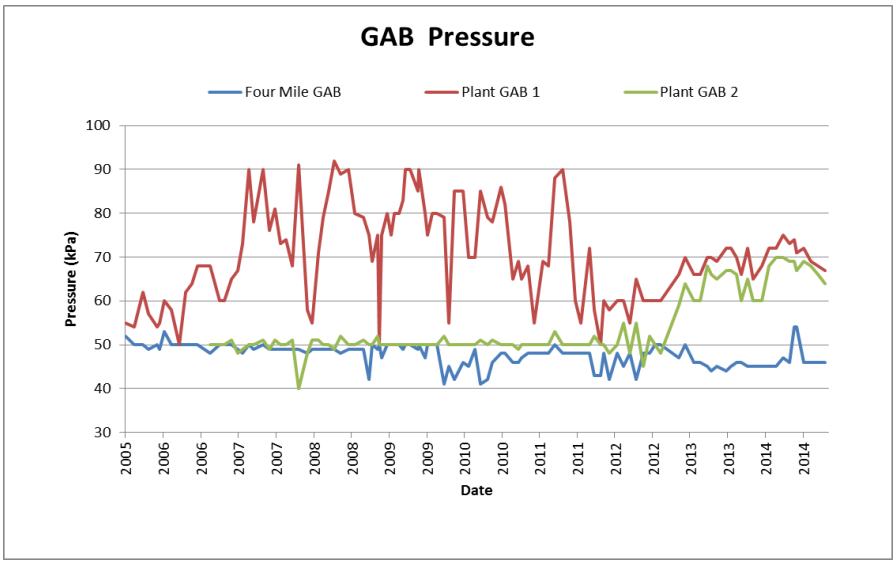


Figure 3-22: Pressure of GAB bores during 2014

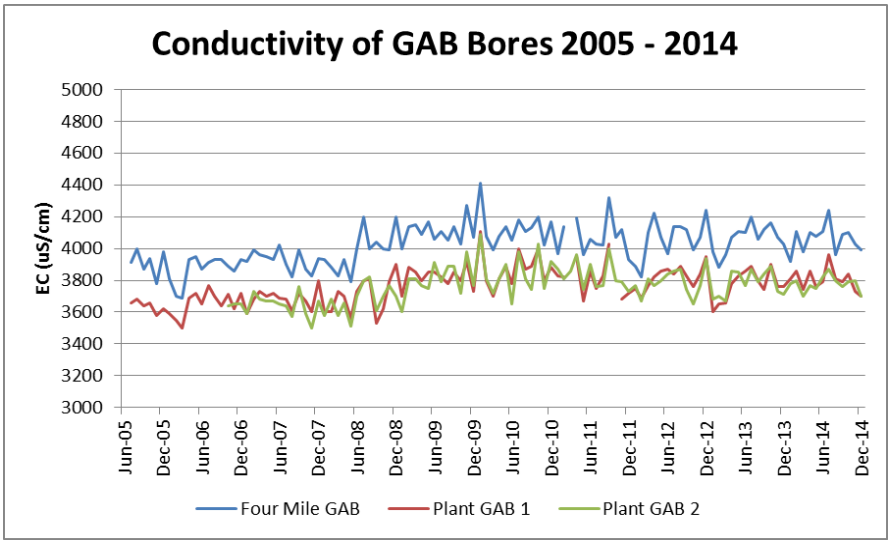


Figure 3-23: Electrical conductivity of the three GAB bores

3.5.2 Beverley North

The hydrogeology in the vicinity of the Beverley North Mine consists of five main aquifers:

- Willawortina Formation (surface to ~30 m below ground level (bgl))
- Namba Formation Sands (30 to ~175 m bgl)
- Lower Eyre Formation Sands (180 to ~250 m bgl)
- Bulldog shale (250 to 335 m bgl)
- Mt Painter Group Fractured Rock Aquifer (335+ m bgl).

A monitoring well network for the Pepegoona and Pannikan orebodies monitor groundwater in all aquifers above, below and adjacent to the mining zone (Eyre Formation) and comprises three types of wells:

- Overlying Monitor Wells –monitor the first permeable sand unit above the mining zone
- Lateral Monitor Wells – monitor the Eyre Formation sands lateral to the mining zone
- Underlying Monitor Wells –monitor the first aquifer that underlies the mining zone. In the case of the Pepegoona and Pannikan this is the Mt Painter Group Fractured Rock Aquifer (**FRA**).

The location of all monitor wells and their classifications are shown in Figure 3-24 for Pepegoona and Figure 3-25 for Pannikan.

3.5.2.1 Namba Formation

Overlying monitor wells are located within the Namba Formation which is the first permeable sand unit above the mining zone. Refer to compliance table (Table 3-10) for the compliance status against outcomes for the Namba Formation for Beverley North.

Table 3-10: Compliance Table – Hydrogeology – Namba Formation

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
4.2	Contamination (including radiological) of non-target overlying aquifer(s) (if locally existing) units near mined Beverley North deposits arising from mining activities.	No compromise to the environmental values of the overlying aquifer (Namba Formation).	Monitoring of ECL parameters and EC demonstrates no compromise of the environmental values of the overlying aquifer(s), should either be present and saturated, as a result of mining operations.	Water levels and level trends in overlying monitoring wells (ECL parameters).	No contamination of non-target overlying aquifers. APPENDIX D:Beverley North ML Monitor Well Level Graphs, and APPENDIX E:- Beverley North ML Monitor Well Chemistry Graphs

3.5.2.2 Eyre Formation

The mining zone is within the Eyre Formation at Pepegoona (East & West) and Pannikan. Lateral monitor wells form a network adjacent this zone. The status of compliance with the outcomes for the mining zone, Eyre Formation, on the Beverley North ML is summarised in Table 3-11.

Table 3-11: Compliance Table – Hydrogeology – Eyre Formation

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
4.1	Groundwater contamination of target aquifer(s) outside ML preventing stock watering	No compromise to the environmental values of the target aquifers (Eyre or Namba Formations) outside the ML.	No migration of mining solutions in the target aquifers outside the ML as demonstrated by Excursion Control Limit (ECL) and EC monitoring and response. Compliance with the Eyre and Namba Formation outcome will be demonstrated by either no exceedence of ECLs at lateral monitor wells or by demonstration of compliance with the contingency measures.	Water quality and quality trends in the mined aquifer monitoring and observation wells (ECL parameters).	Heathgate has ceased mining at Pannikan and Pepegoona. At Pannikan a bleed only program has been implemented to maintain a negative hydraulic gradient towards the wellfield. At Pepegoona a system of injection of groundwater from wells near the ML boundary and associated extraction form nearby extractors ensures no drift of residual mining solutions outside the ML boundary and no compromise to the environmental values of the Eyre or Namba formations outside of the Beverley North ML. Exceedences of ECLs in three compliance monitor wells at Pannikan and one monitor well at Pepegoona (refer Section 7 for rectification measures of these non-compliances). Water quality and quality trends remain monitored to measure leading indicator criteria in all monitor wells. Refer APPENDIX D: Beverley North ML Monitor Well Level Graphs Eyre Formation, and APPENDIX E:Beverley North ML Monitor Well Chemistry Graphs – Eyre Formation

The ECLs for the Eyre Formation are shown in Table 3-12 and are based on baseline sampling of the Eyre Formation lateral monitor wells.

During the Reporting Period, residual mining solution remain in contact with three compliance monitor wells during adjacent to the ML boundary at Pannikan (i.e. PAMW017, PAMW010 and PAMW012) and one well at Pepegoona (PRMW050) detected residual solution on 31 December 2014. The latter is the result of sustained management of water balances at this location since cessation of mining on 28 January 2014. Refer to section 7 of this document for more detail on rectification for these non-compliances.

As of 5 January 2015, the exceedence in PAMW012 at Pannikan was rectified and all excursion control parameters fell below the excursion control limits (Table 3-12).

Monitor well PRMW072, located >500 m from the western ML boundary at Pepegoona records evidence of residual mining solution. The contact of this well was not unexpected as a result of the rectification measures implemented to ensure compliance with no migration of mining solution or compromise to the environmental values of the Eyre Formation outside the ML boundary. Consultation with DSD on the location of PRMW072 and other similarly placed monitor wells is in progress.

There was no migration of mining solution outside the ML boundaries due to the maintenance of a negative hydraulic gradient towards wellfields by a bleed only program (i.e. extraction at ~0.9L/sec only from well(s) from within the wellfield). At Pepegoona a system of injection of native groundwater (extracted from a nearby Eyre Formation water well outside of the wellfield) from wells near the ML boundary coupled with extraction from nearby extractors ensures no drift of residual mining solutions or compromise to the environmental values of the Eyre Formation outside the ML boundary.

Table 3-12: ECLs for the Eyre Formation

Excursion Control Parameters	Excursion Control Limits
pH	Minimum of 4.5
SO_4	Maximum of 2.0 g/L
U_3O_8	Maximum of 1 mg/L

3.5.2.3 Mt Painter Group Fractured Rock Aquifer (FRA)

Underlying monitor wells are located within the FRA which underlies the mining zone. There was no contamination of the underlying aquifer. The status of compliance against outcomes for the FRA within the Beverley North ML is summarised in Table 3-13

Table 3-13: Compliance Table – Hydrogeology – Fractured Rock Formation

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
4.1	Contamination (including radiological) of underlying aquifer units underlying mined Beverley North deposits arising from mining activities.	No compromise to the environmental values of the underlying aquifers (Fractured Rock or GAB Aquifers)	Monitoring of ECL parameters and EC demonstrates no compromise of the environmental values of the underlying aquifer as a result of mining activities.	Water quality and quality trends in underlying aquifer monitoring wells (ECL parameters)	No contamination of underlying aquifer. Refer: APPENDIX D: Beverley North ML Monitor Well Level Graphs – Fractured Rock Formation and APPENDIX E: Beverley North ML Monitor Well Chemistry Graphs – Fractured Rock Formation

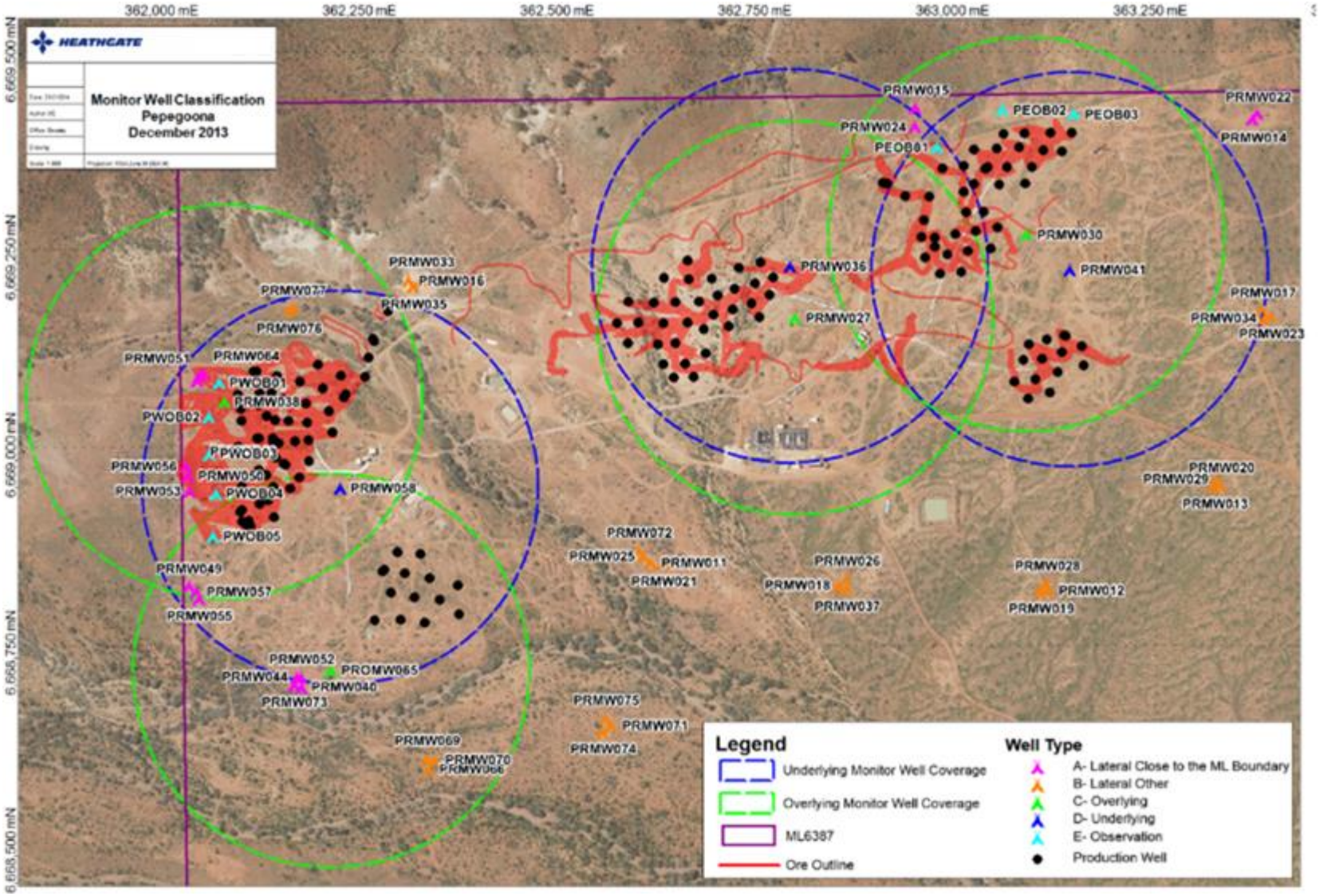


Figure 3-24: Monitor well locations and classification – Pepegoona and Pepegoona West

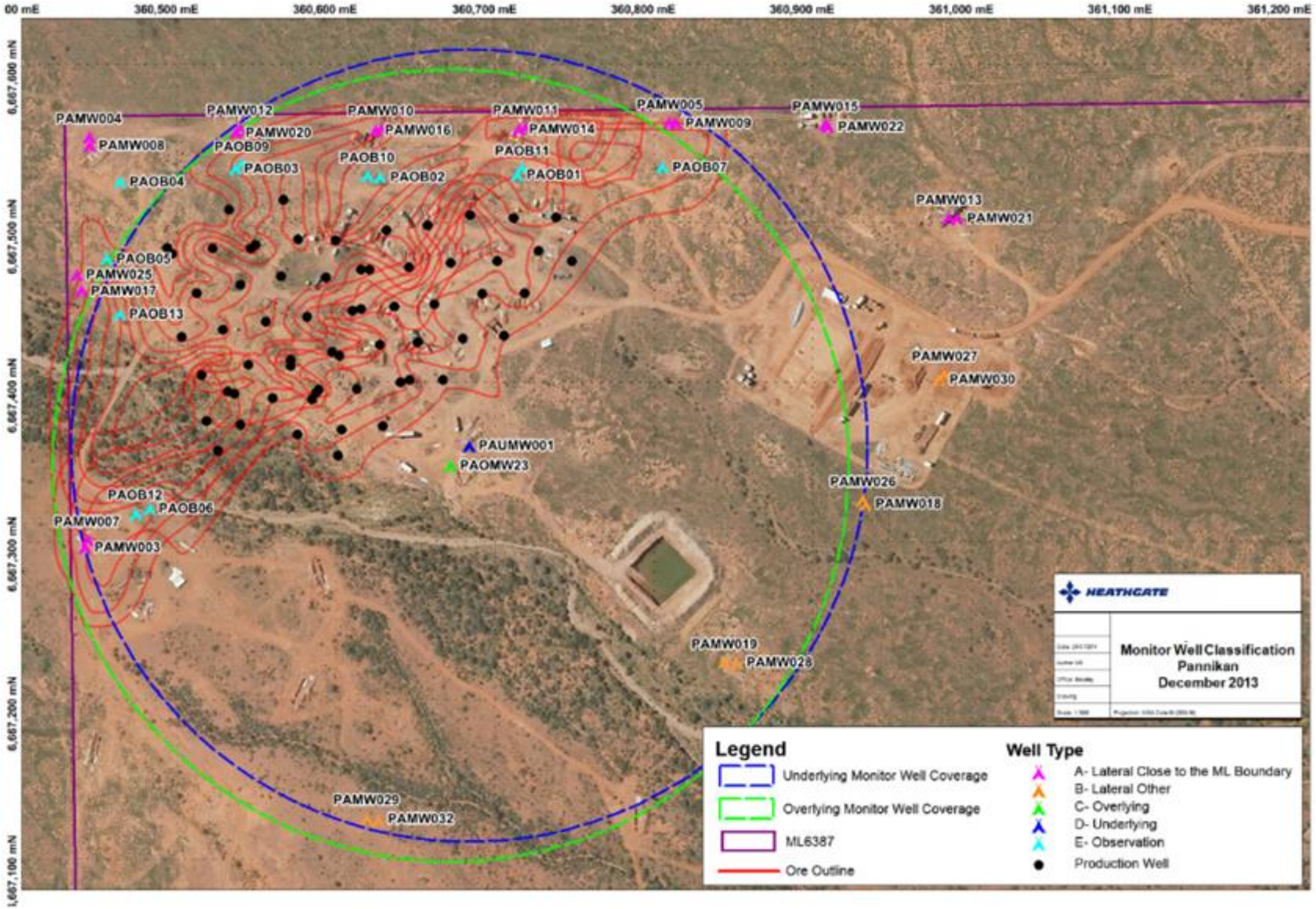


Figure 3-25: Monitor well locations and classification – Pannikan

3.6 Fauna

The outcomes related to fauna are measured in the annual fauna survey undertaken by consultants together with monthly bird and macropod transects carried out by Heathgate's Environment Advisors. Heathgate's status of compliance against the fauna outcomes is summarised in Table 3-14.

Table 3-14: Compliance Table – Fauna

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
5.1	Reduction in native vertebrate species density and diversity caused by wellfield development, access road construction and operations.	No net adverse impacts from the site operations on native fauna abundance or diversity in the lease area and in adjacent areas.	Results of monitoring program show no increase in feral vertebrates, compared with local area background, based on assessment by the appropriately qualified and experienced specialists engaged to undertake and assess the monitoring program.	Trends of the monitoring program.	No reduction in native vertebrate species occurred from wellfield construction, access road constructions and operations or feral animals. No complaints were received in 2014
5.2	Reduction in native vertebrate species density and diversity resulting from an increase in feral animals caused by creation of food sources, modified habitat and waste management operations.				
5.3	Reduction in adjacent pastoralist viability due to increase in feral animals due to mining operations.	No introduction of new weeds, plant pathogens or pests (including feral animals), nor increase in abundance of feral animals in the lease area compared to adjoining pastoral areas.	Beverley - All complaints from neighbours regarding feral animal control are investigated and are demonstrated to be not due to mining operations. Beverley North - Results of monitoring program show no increase in feral vertebrates, compared with local area background.		

A third party consultant, EBS Ecology, carried out the 2014 annual fauna survey for the Beverley and Beverley North MLs as part of the ongoing annual monitoring program to assess impacts caused by mining operations on fauna species composition and population. The survey was carried out from the 22 October to 7 November 2014 and included 25 previously surveyed sites and one additional control site (Figure 3-26). The sites are located within the three broad habitat types, namely major drainage, minor drainage and gibber plains.

One new control site was installed at a comparable location near to Calcrete Pit 3 (Figure 3-27) and monitored in accordance with the methodology outlined in the Biological Survey of South Australia for sites in the pastoral region of South Australia (Owens 2000).

Comparison between control and mine sites within each of the habitat types showed no apparent negative effect of mining on vertebrate fauna species diversity or abundance when compared with the control sites located outside of the mining area (EBS 2014). The 2014 fauna survey revealed species diversity at control and impact sites was similar within each of the habitat types (major drainage lines, minor drainage lines, gibber/gilgai). Destocking of cattle across the site also appears to provide an additional environmental benefit greater than any localised effects of the mine itself.

In 2014 the annual fauna survey of the Beverley and Beverley North MLs recorded a total of 4122 individuals from 120 species representing 54 families. Birds were the most diverse and abundant fauna group, with mammals being the least abundant and diverse group during the time of the survey. Only one amphibian, the Desert Tree Frog (*Litoria rubella*) was recorded during the 2014 survey, likely due to the dry conditions at the time. The diversity within the main faunal groups were 11 ground-dwelling mammal species, eight (possibly ten) bat species, 41 reptile species and 61 bird species.

Two state listed species were recorded in the survey; the Brolga (*Grus rubicunda*) listed as State vulnerable and the Peregrine Falcon (*Falco peregrinus*) listed as State rare. Two Commonwealth-listed migratory / marine species were recorded, Rainbow Bee-eater, (*Merops ornatus*) and the Australian Pratincole (*Stiltia isabella*).

Heathgate's Environmental Clearance Permit (ECP) process ensures all disturbances are kept to a minimum and that personnel working in a previously undisturbed area or an area previously under rehabilitation understand any special requirements and their individual responsibility.

Heathgate's induction requires personnel report uncommon sightings of animals and vegetation to the environment team. Annual environmental awareness sessions are held for all staff and personnel to pass on information and remind personnel of their environmental responsibilities when working at the mine. Information sheets, notices and identification photos are posted on the environmental noticeboard outside the Beverley plant reception area and also in the HSSE Department's office.

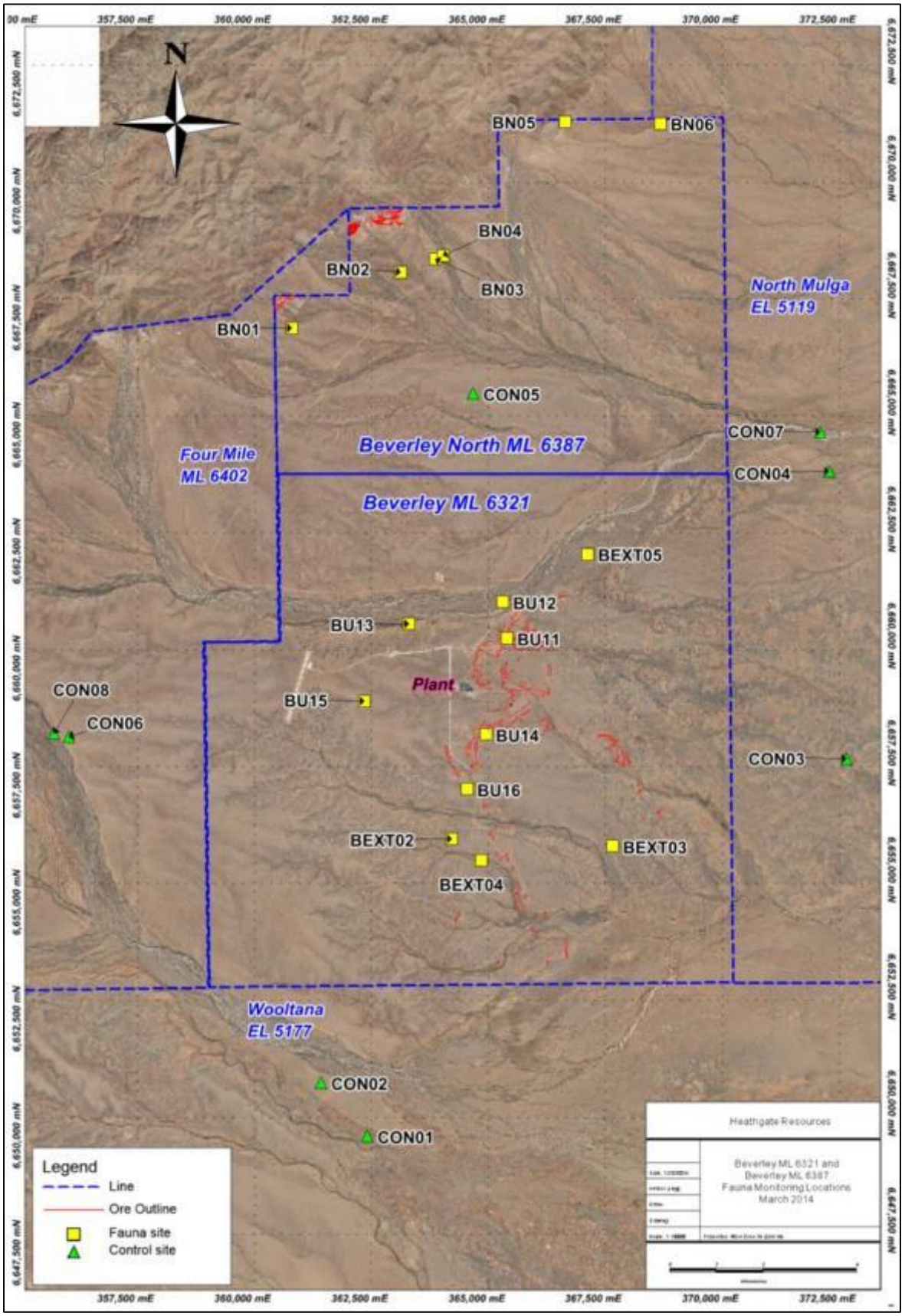


Figure 3-26: Fauna monitoring locations

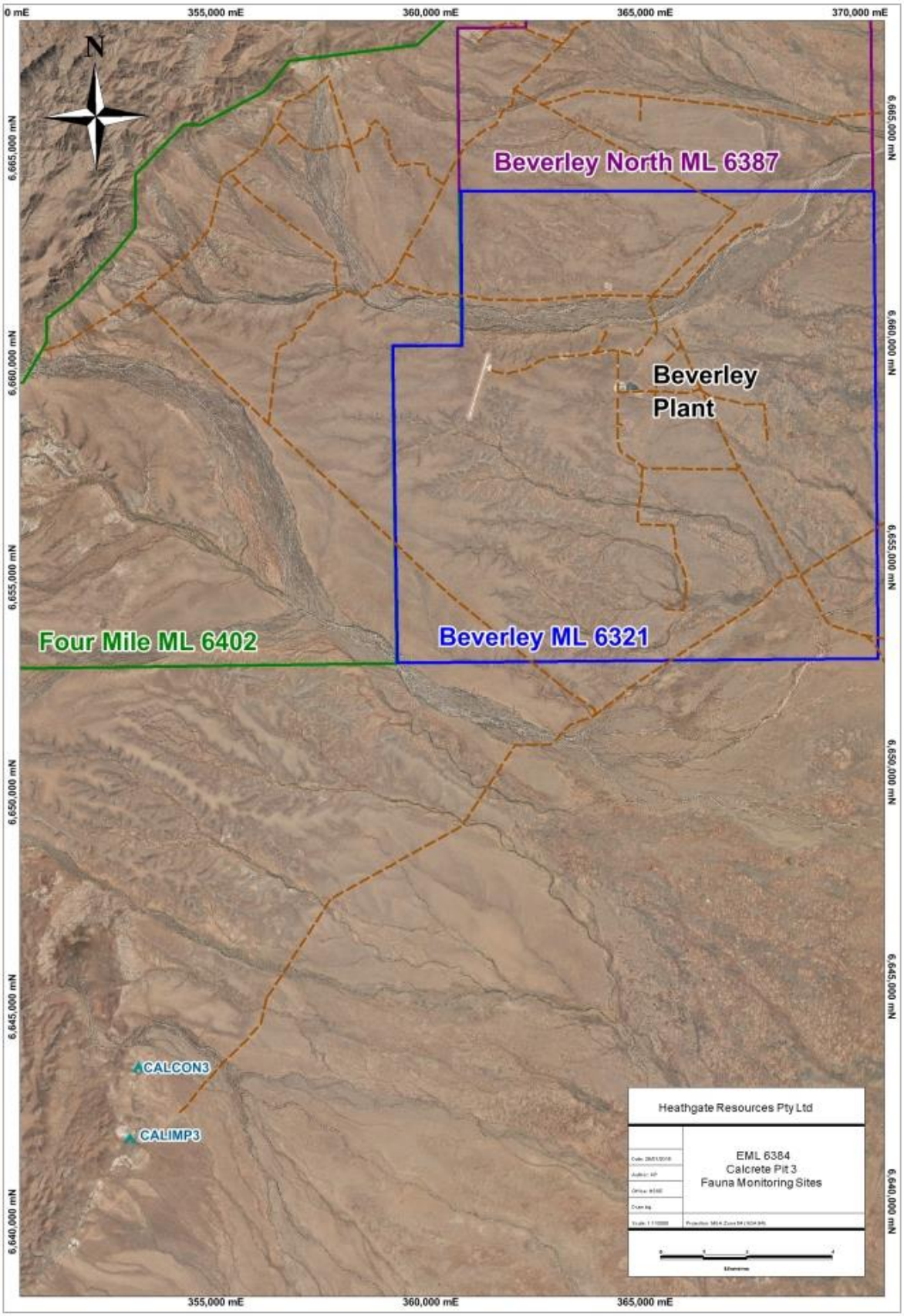


Figure 3-27: Calcrete Pit 3 impact and control fauna monitoring locations

3.7 Air Quality

The estimated radiation doses to both employees and public remained low and within the applicable limits defined under the RPC Act 1982. The average dose received by an employee during 2014 was 0.24 milliSieverts (**mSv**) and the maximum was 2.19 mSv, well below the applicable dose limit of 20 mSv. Employee average and maximum dose for 2001 to 2014 are shown in Figure 3-28. Refer to compliance Table 3-15.

The estimated dose to a person living at the accommodation camp is 0.28 mSv (excluding the contribution from natural background radon).

Table 3-15: Compliance Table – Air Quality

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
6.1	Beverley - Radon release from processing area and water management ponds (and other sources) increasing radiation doses to the environment or the public. Beverley North - Radon and uranium-bearing dust release increasing radiation doses to the environment or the public.	No adverse impacts to workers, public or the environment due to radon release, uranium bearing-dust, nor radiological aspects of seepages and spills.	Estimated radiation doses to the public (and workers) within applicable limits as defined under the RPC Act.	Trends from monitoring of radon decay products and uranium dust in the Beverley - processing plant, ponds and accommodation camp areas Beverley North - satellite plants and wellfields remain below the investigation levels	Radiation monitoring was carried out as per the approved monitoring plan. All the results remained very low. Estimated doses to members of the public and workers remained low and well below the annual limits.
6.2	Beverley - Uranium-bearing dust released from drier and packaging area increasing radiation doses to workers or the public.			Trends from monitoring of radon decay products and uranium dust in the processing plant, ponds and accommodation camp areas remain below the investigation levels	Uranium dust and radon decay products -monitored doses are calculated and are within applicable limits as defined under the RPC Act 1982.

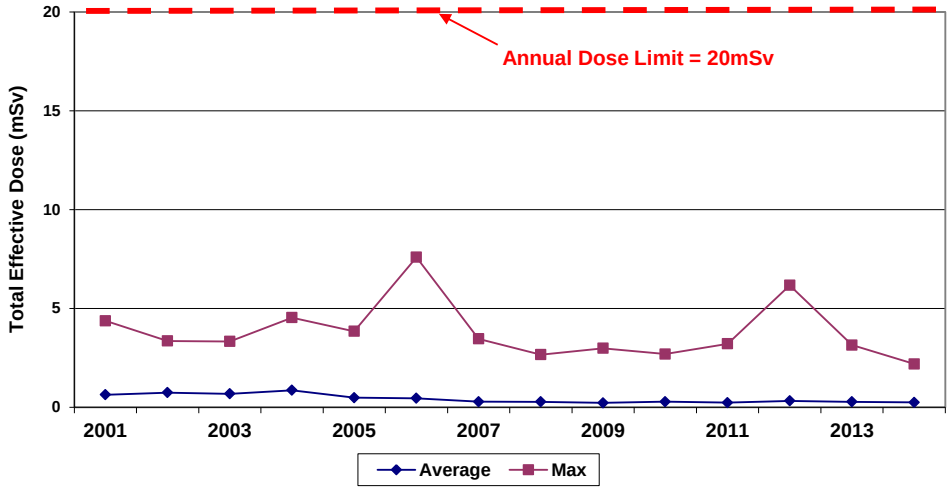


Figure 3-28: Employee dose from 2001 to 2014

Table 3-16 shows the separation of dust and radon dose in mSv. The nearest residence occupied by a member of public is the North Mulga Outstation and considering the distance from Beverley Mine area, the annual dose received by a person living there will be less than 0.281 mSv, well below the applicable annual dose limit of 1 mSv.

Table 3-16: Public dose details

	Dose (mSv)
Dust dose (including natural background)	0.024
Radon dose (excluding background)	0.257
Total dose	0.281
Public Dose limit (annual)	1.00

3.8 Heritage

All heritage sensitive sites are clearly recorded and a report is generated after every work area clearance survey. Areas of sensitivity are mapped after each survey and selected locations (near higher traffic areas) are fenced to avoid disturbance. These are checked for disturbance by Heathgate personnel. No disturbance occurred in 2014.

Heathgate's Aboriginal Liaison Officers are included in all routine environmental clearances as part of the ECP system to ensure that heritage issues are also considered. Refer to compliance table being Table 3-18.

Table 3-17: Compliance Table – Heritage

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
7.1	Impacts on Aboriginal heritage as a result of mine activity.	No disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained. Beverley - Commitments to Traditional Owners as set out in agreements are met.	Beverley - Documented Aboriginal Heritage Clearance surveys of all operational areas. Beverley - Commitments to Traditional Owners reviewed and discussed at the Beverley Advisory Committee to the satisfaction of members (as the agreement is confidential the measurement criterion will be the absence of disputes requiring legal action). Beverley North - Demonstration that documented Aboriginal Heritage Clearance surveys of all operational areas. Audits show flagged areas are not disturbed.	Near-miss incident reports relating to potential disturbance of flagged areas.	All heritage sensitive areas are clearly recorded after every work area clearance survey, and is only used for internal purposes only as requested by the Native Title Holders. There has been no disturbance to flagged sensitive areas, which are checked periodically in the year. Beverley Advisory Committee meetings have been held to review and discuss commitments to Traditional Owners.

3.9 Third Party Issues

There were no formal third party complaints in 2014 for either the Beverley or the Beverley North ML. Refer to compliance table being Table 3-18.

Table 3-18: Compliance Table – Public

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
8.1	Damage to adjacent public or private property and infrastructure, including that caused by fire, as a result of mine activity.	No unauthorised damage to adjacent public or private property and infrastructure, including that caused by fire, as a result of mine activity.	Any fires caused by mining operations are controlled within the ML boundary. Any accidental damage to infrastructure is made good as soon as practicable.		No reports of damage (including damage by fires caused by mining operations) to public or private property and infrastructure.

4 ONGOING COMMUNITY ENGAGEMENT PLAN

Thirty eight community consultations were recorded in Heathgate's community consultation database for 2014. Heathgate reports community consultations to State regulators each quarter in the Quarterly Environment and Radiation Report and to State and Federal regulators every six months at the Beverley Environmental Consultative Committee (**BECC**) meetings.

The number of community consultations for each quarter is shown in Table 4-1 and annual comparisons are shown in Figure 4-1.

Table 4-1: Quarterly Community Consultations for 2014

2014	No. of Community Consultations
1st Quarter	8
2nd Quarter	9
3rd Quarter	11
4th Quarter	10

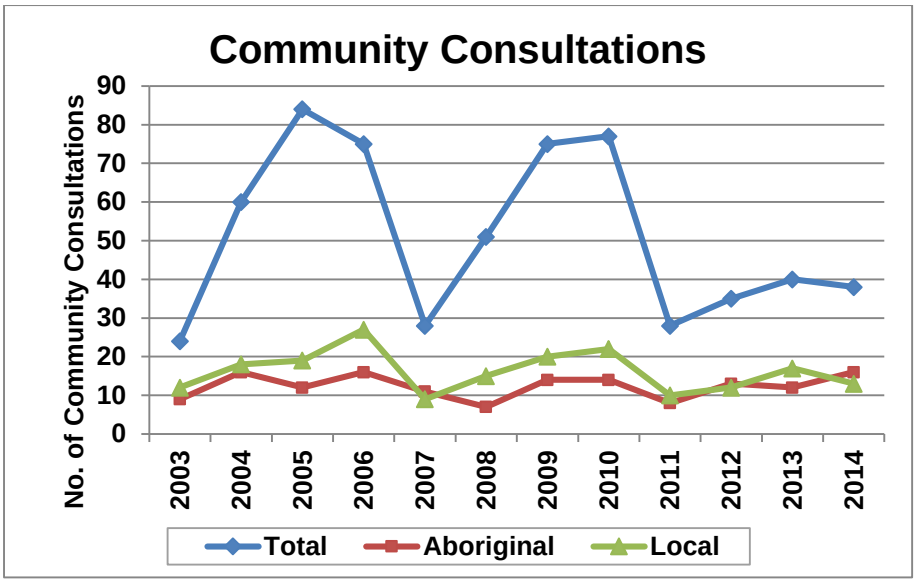


Figure 4-1: Community Consultations 2014

5 ENVIRONMENTAL RADIOLOGICAL MONITORING

Environmental radiation monitoring is undertaken in order to assess the environmental radiological impact due to the operation of the Beverley mines and includes:

- Radon activity concentration in air;
- Potential alpha energy concentration of radon daughters in air;
- Long-lived alpha activity of airborne dust.

5.1 Radon Activity Concentration

The radon concentration in air is measured using Passive Radon Monitors (PRM) with nuclear track detectors fixed at 20 different locations. The quarterly radon concentration results are given in Table 5-1 and Figure 5-1 shows a graph of monitoring trends since 1999. The average radon activity concentrations remained at background levels during 2014.

Table 5-1: Passive Radon Monitoring Results from Various Locations

Quarter	Radon Concentration (Bq/m^3)	
	Avg	Max
First	48.4	135.1
Second	66.1	200.4
Third	42.2	136.0
Fourth	69.7	106.6

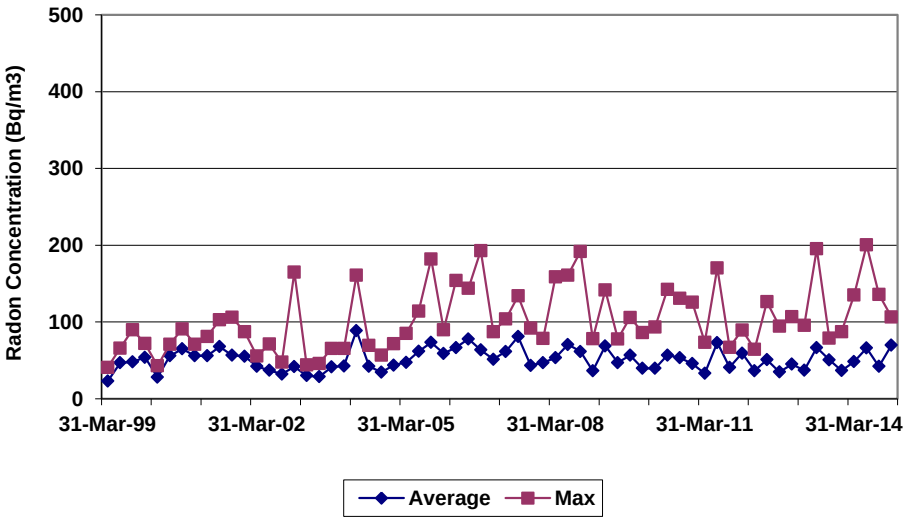


Figure 5-1: Passive Radon Activity Concentration Monitoring Trends

5.2 Radon Decay Product PAEC

The Potential Alpha Energy Concentration (**PAEC**) of radon decay products is measured continuously at the camp using an Environmental Radon Daughter Monitor (**ERDM**) which logs every 10 minutes with data downloaded every month. Results of 2014 monitoring are presented in Table 5-2 and a summary of monitoring compared with previous years is given in Figure 5-2. The average radon decay products concentrations at camp remained low during the year 2014.

Table 5-2: Radon Decay Products PAEC 2014

Month	PAEC (μJm^{-3})	
	Average	Maximum
January	0.04	0.37
February	0.02	0.10
March	0.11	0.71
April	0.13	0.67
May	0.15	0.80
June	0.08	0.67
July	0.08	0.58
August	0.07	0.50
September	0.07	0.40
October	0.07	0.41
November	0.05	0.46
December	0.05	0.29

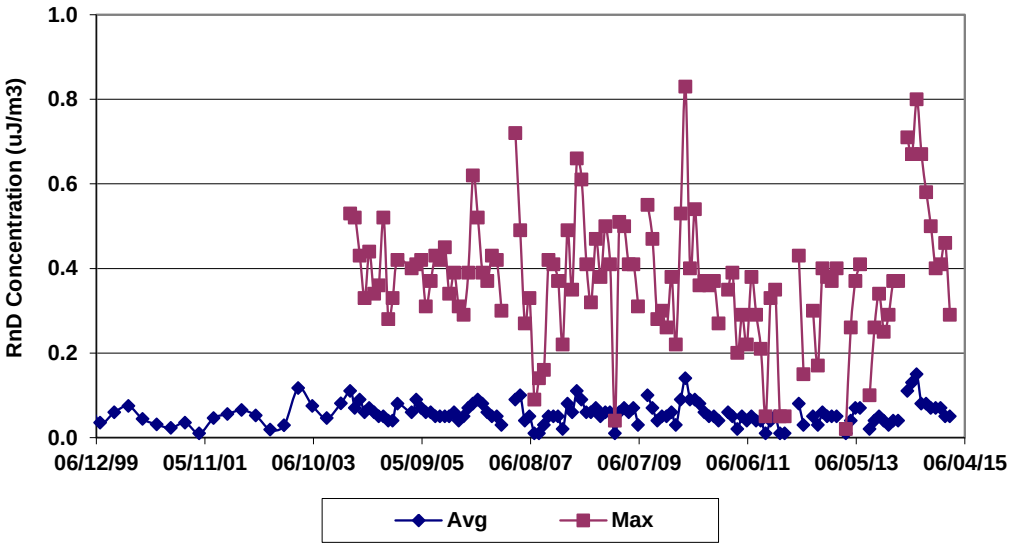


Figure 5-2: Radon Decay Products PAEC Monitoring Trends

(Note: Monitoring was incomplete during March and April 2007, December 2010, February, March and June 2012, January and June 2013 because of instrument failure)

5.3 Long Lived Alpha Activity in Dusts

Long-lived alpha activity (**LLAA**) in dust was conducted continually at the camp area using a High Volume Air Sampler. The filter paper was changed monthly and sent to an external NATA laboratory for radiometric analysis. Results of this monitoring are given in Table 5-3 and

comparison with previous years monitoring is shown in Figure 5-3. Radionuclide concentrations at accommodation camp remained low and comparable with previous year's monitoring results. Several risk areas involve radiological aspects and Table 5-4 outlines where these are within this document.

Table 5-3: High Volume Air Sampling Radiometric Analysis 2014

Month	Radionuclide Concentration (μBqm^{-3})		
	^{238}U	^{230}Th	^{226}Ra
January	11.6	220	2.0
February	23.0	360	2.2
March	8.6	110	3.3
April	9.7	110	1.8
May	8.8	86	1.5
June	10.2	220	1.9
July	9.3	90	1.5
August	16.0	140	1.94
September	9.1	93	2.2
October	7.4	120	2.6
November	23.0	230	2.8
December	9.3	110	3.9

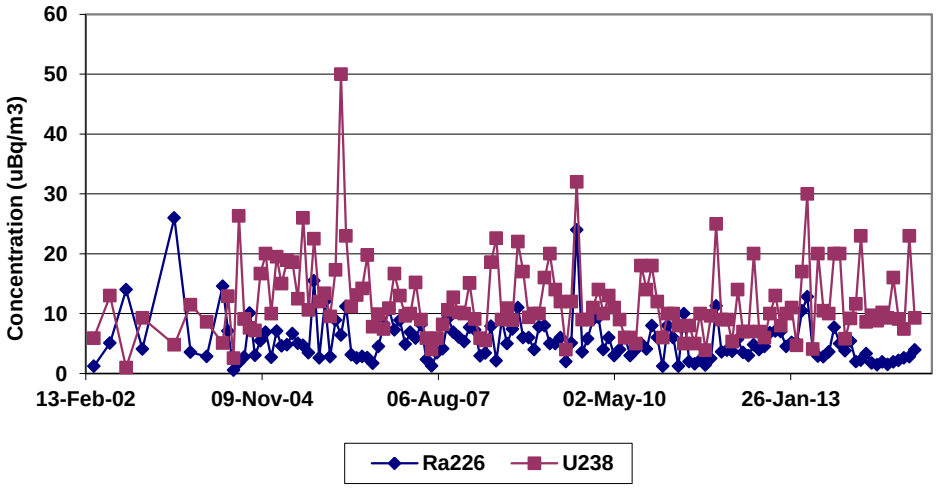


Figure 5-3: High Volume Air Sampling at Accommodation Camp

Table 5-4: Sections Relating to Radiological Aspects

Risk Areas	Sections	ID
Soil	3.2	1.1
Surface Water	3.4	3.1, 3.2
Hydrogeology	3.5	4.2, 4.3, 4.4, 4.5
Air Quality	3.7	6.1, 6.2

6 STATUS OF OBLIGATION OF STATE AND FEDERAL CONDITIONS

The status of obligations with State and Commonwealth approval conditions and reporting requirements including those of the Environmental Protection and Biodiversity Conservation Act for the Beverley ML 6321 and Beverley North ML 6387 are outlined in Appendices F and G respectively.

7 RECTIFICATION OF NON-COMPLIANCES

Beverley Mine

There were no non-compliances recorded on Beverley ML 6321.

Beverley North Mine

Pannikan

During the Reporting Period, exceedence of ECLs for pH, SO_4 and U_3O_8 in PAMW010 and PAMW017 and PAMW012 continued. Heathgate has ceased all mining from all zones in Pannikan (i.e. not just the zone affected) and an extraction bleed only program has been implemented to maintain a negative hydraulic gradient in the wellfield area. Detailed hydrogeological modeling is continually undertaken to choose the most effective well to use for extraction bleed. As part of continual optimisation, 3 additional extraction wells (see Figure 2-3) and associated pipework infrastructure was installed during the Reporting Period to ensure additional near-monitor well extraction can be turned on in response to continual monitoring and calibration of the wellfield hydrogeological model.

As of 5 January 2015, the exceedence in PAMW012 at Pannikan was rectified and all excursion control parameters fell below the excursion control limits

All wells are located within a high grade area of ore that will be mined when regulatory approvals to commence mining in this area have been obtained. There remains no risk to environmental values of the Eyre Formation aquifer classified as industrial use only due to radiological and fluoride above ANZECC & ARMCANZ stock water quality

The current status is that Pannikan remains offline with the extraction bleed in place. A long-term management plan was submitted to DSD (formerly DMITRE) on 3 December 2013. Ongoing actions relating to the current status of operations are:

- Water levels taken fortnightly to construct hydraulic gradient maps of the wellfield area and monitor network.
- Weekly sampling of all leading indicator wells in exceedence and their paired compliance well.
- Fortnightly progress reports to DSD on water chemistries for compliance wells in exceedence.
- Fortnightly sampling of all other leading indicator wells.
- Monthly sampling of all other compliance wells including overlying and underlying monitor wells
- Quarterly sampling all other lateral monitor wells.

Continuation of management of water balances and bleed will continue until such time approvals to commence mining in this area are obtained.

Pepegoona

On 31 December 2014, the regulatory monthly water sample from compliance well PRMW050 at Pepegoona West (Figure 7-1) returned concentrations of uranium, sulphate and pH (ECPs) in excess of ECLs described in the Beverley North Uranium Mine Program for Environment Protection and Rehabilitation (PEPR). It is situated within a high grade area of ore that will be mined when regulatory approvals to commence mining in this area have been obtained (Figure 7-1). There remains no risk to environmental values of the Eyre Formation aquifer classified as industrial use only due to radiological and fluoride above ANZECC & ARMCANZ stock water quality.

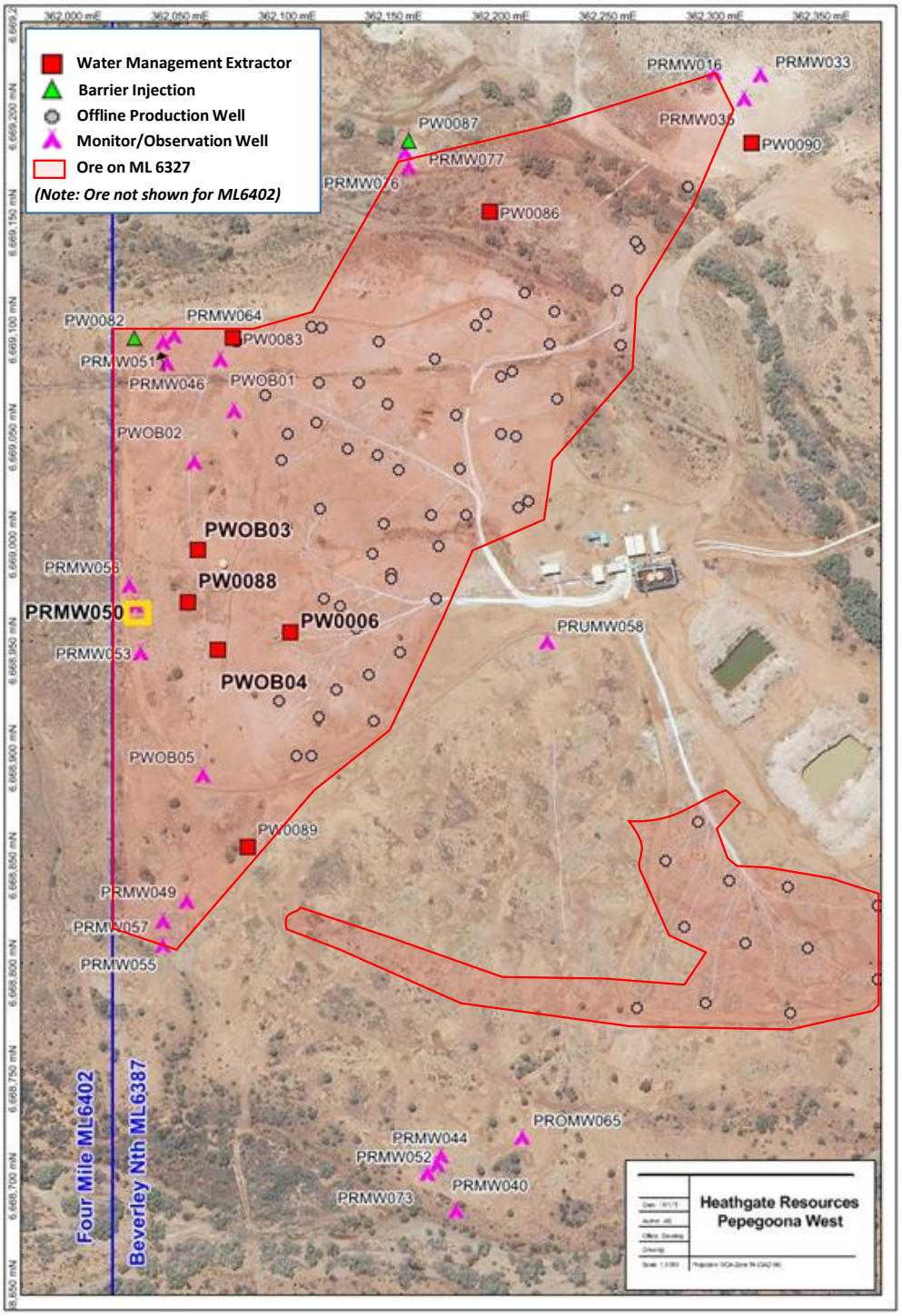


Figure 7-1: Pepegoona West – Location of PRMW050 and key water management wells.

Mining ceased at Pepegoona West on 28 January 2014. Management of the remaining lixiviant (using selected extractors and recirculation wells) has been ongoing since this date. Several additional actions in relation to management of PRMW050 have been implemented since 2 October 2014 which include:

- PWOB03 was brought on-line as an extractor on 2 October 2014 at an average rate of 2.5L/s due to an increasing sulphate in PRMW050.
- A new extractor well (PW0088) was drilled and completed 27m away from PRMW050 to assist with the management of residual lixiviant solution in this area.
- PWOB03 was switched off on the 24th October in order to use the downhole pump in PW0088 which was subsequently brought on-line on the 17th of November at 3L/s.
- Flow was increased to 4.5 L/s on the 4th of December and then to 7 L/s on the 9th of December once the poor result from a water sample on the 6th was obtained.
- Due to worsening chemistries in PRMW050, PW0088 was taken off-line on 22 December 2014.
- Two new extractors, PWOB03 and PW0006 were then brought on-line on the 23rd December, at approximately 4L/s each.
- Work was undertaken to plumb PWOB04 as an extractor due to hydrogeological flow path modelling indicating benefit in pulling back mining solution to the south east (in the direction of PWOB04).
- PWOB03 was switched off on the 29th December and PWOB04 was brought on-line at approximately 4.5L/s.

PW0088 has since been brought back online and ECP chemistries in PRMW505 have stabilised in particular sulphate which has shown improvement which is the typically the first ECP to improve before the other parameters due to its solubility & mobility. Continuation of management of water balances with a focus on the drawback of residual lixiviant in the vicinity of PRMW050 until such time approvals to commence mining in this area are obtained.

8 MANAGEMENT SYSTEM REVIEW

An internal audit was completed in February 2014 by the Senior Environment Advisor for conformance of the environmental management system against the Australian Standard AS/NZ ISO 14001 Environmental Management Systems (**EMS**).

The results including commendations and recommendations from the audit are outlined below:

- **Commendations**
  - EMS documentation has been reviewed within the last 6 months and updated.
- **Comments**
  - The EMS is well established and in general complies with the ISO 14001 standard. Some identified improvements regarding reviews of the EMS were noted.
- **Recommendations**
  - Review effectiveness and implement improved efficiencies of the EMS.
  - Schedule management review of the EMS documentation in our management system database.
  - Ensure historical calibration data for the onsite laboratory is securely retained so it is retrievable and legible.
  - There is a need to review the process to ensure personnel details, induction and licences/tickets are uploaded in a timely manner.

- The Communications Register needs further development to include more detail in the description of the events.
- There is no register that records where the EMS records are located.

- **Non-conformances**
  - Nil

9 FITNESS-FOR-PURPOSE REVIEW

Heathgate has a maintenance management system which allows the scheduling of regular servicing and maintenance of plant and equipment as well as ad-hoc repairs and maintenance. Heathgate's Work Health and Safety Management System is utilised to ensure repairs and maintenance related to safety are captured.

The entire Beverley project was subject to a thorough risk assessment prior to the lease extension in 2007 as was the Beverley North Project in 2009/2010.

Any new major equipment or facilities are subject to a Hazard and Operability Study (HAZOP) analysis.

10 NEW ENVIRONMENTAL HAZARDS

No new environmental hazards became evident or apparent during 2014.

11 INCIDENTS

No reportable incidents occurred during the Reporting Period.

12 OTHER

12.1 Public Liability Insurance

Public liability insurance for all Heathgate operations is current and a copy of the Certificate of Currency is available to be shown to DSD upon request.

12.2 PEPR Amendments

No PEPR amendments occurred for Beverley North ML or Beverly ML during the Reporting Period.

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APPENDIX A

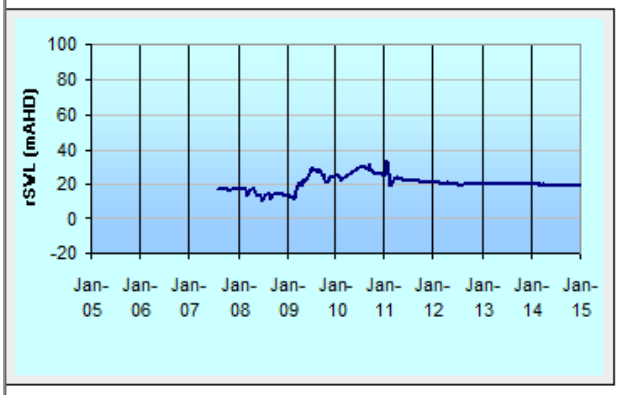
BEVERLEY ML MONITOR WELL WATER LEVEL GRAPHS

Discussion on Anomalous Monitor Well Water Levels

There are no anomalous water levels observed in the reporting period. In general water levels have responded to mining and water management activities that have occurred in the area. Well connected Beverley Sands wells such as BEMW051 and MW038 show distinct flattening of the water level trend post mining activities. Small pressure responses can be observed in Wells located close to ongoing water management actions such as Liquid Waste Disposal or Water Supply (e.g. BEMW052, BEMW054 and BEMW059).

Beverley Monitor Well Water Level Graphs – Namba Well Type 1

BEMW003



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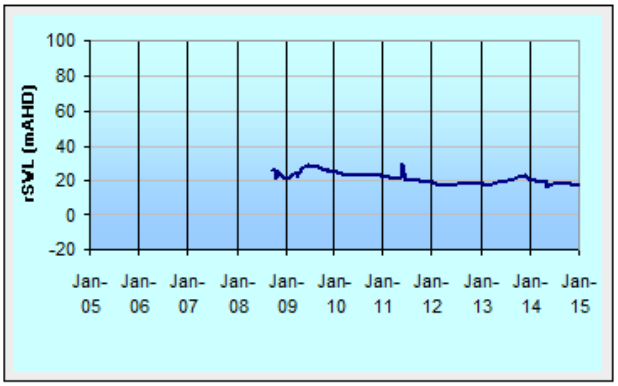

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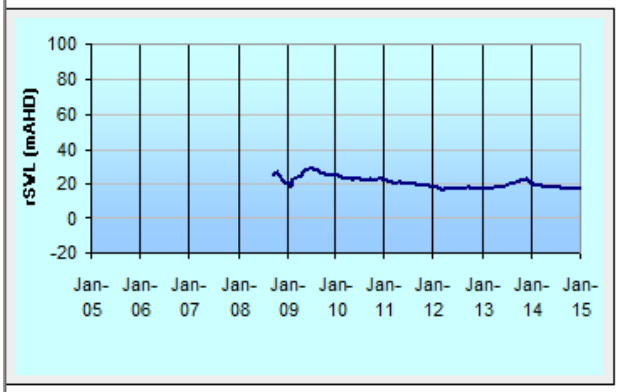

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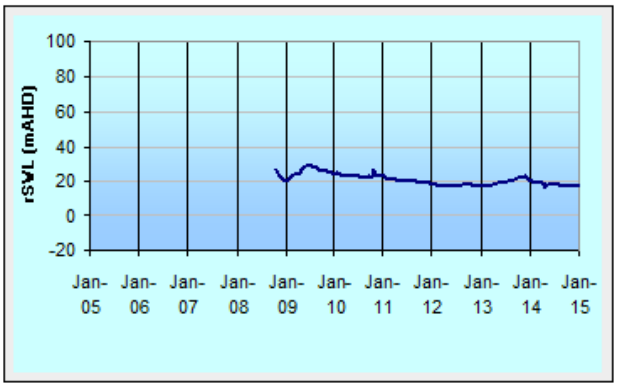

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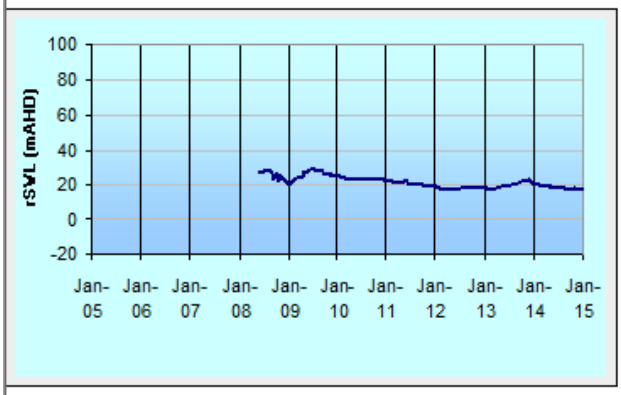
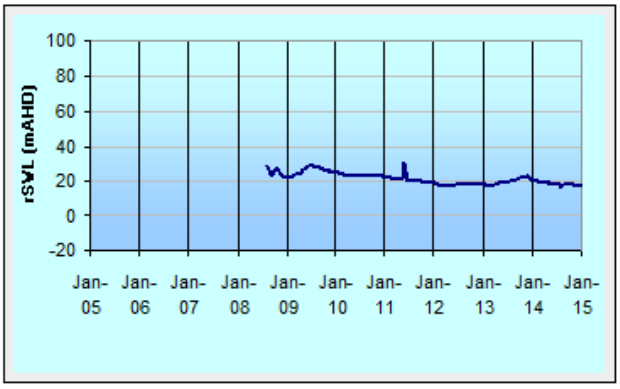


BEMW044



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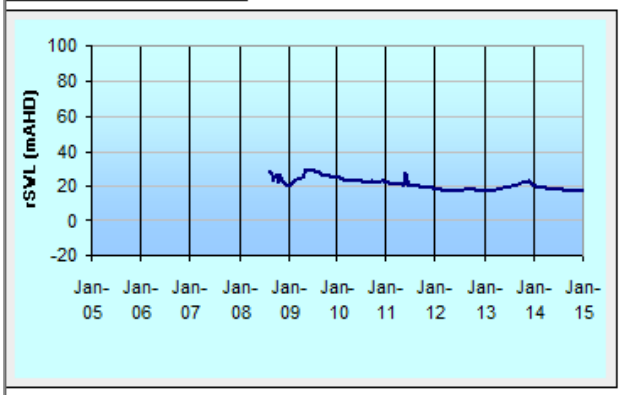
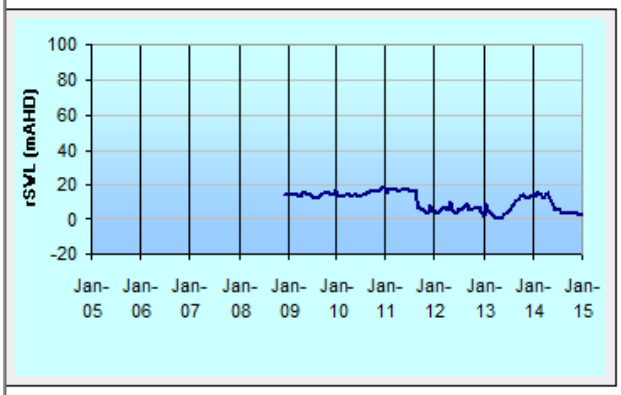


BEMW051

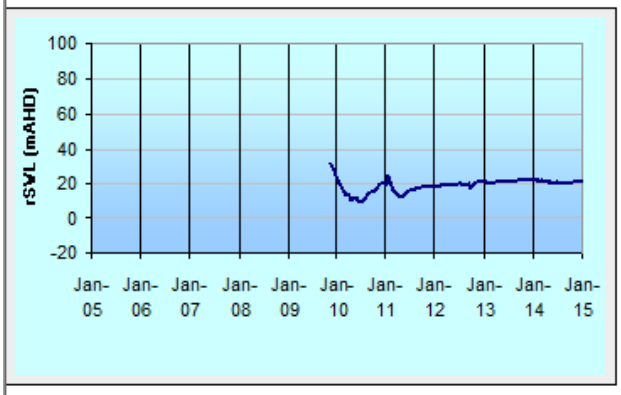
Beverley Monitor Well Water Level Graphs – Namba Well Type 1

BEMW061



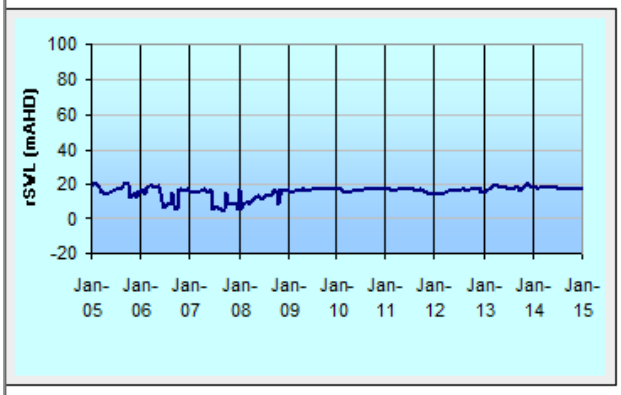
BEMW062

BEMW068



DSMW071

MW025



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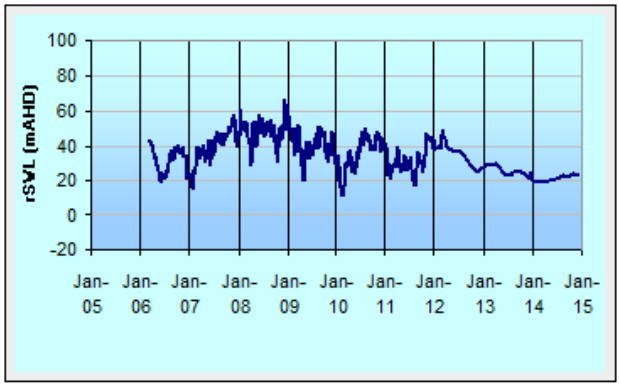

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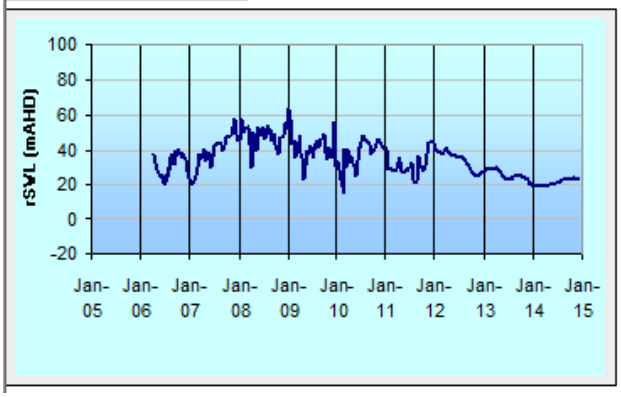

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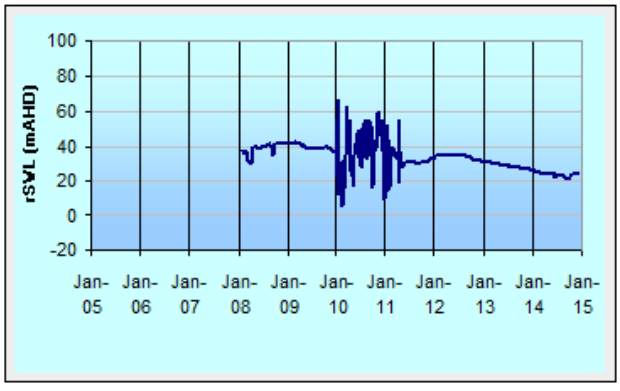
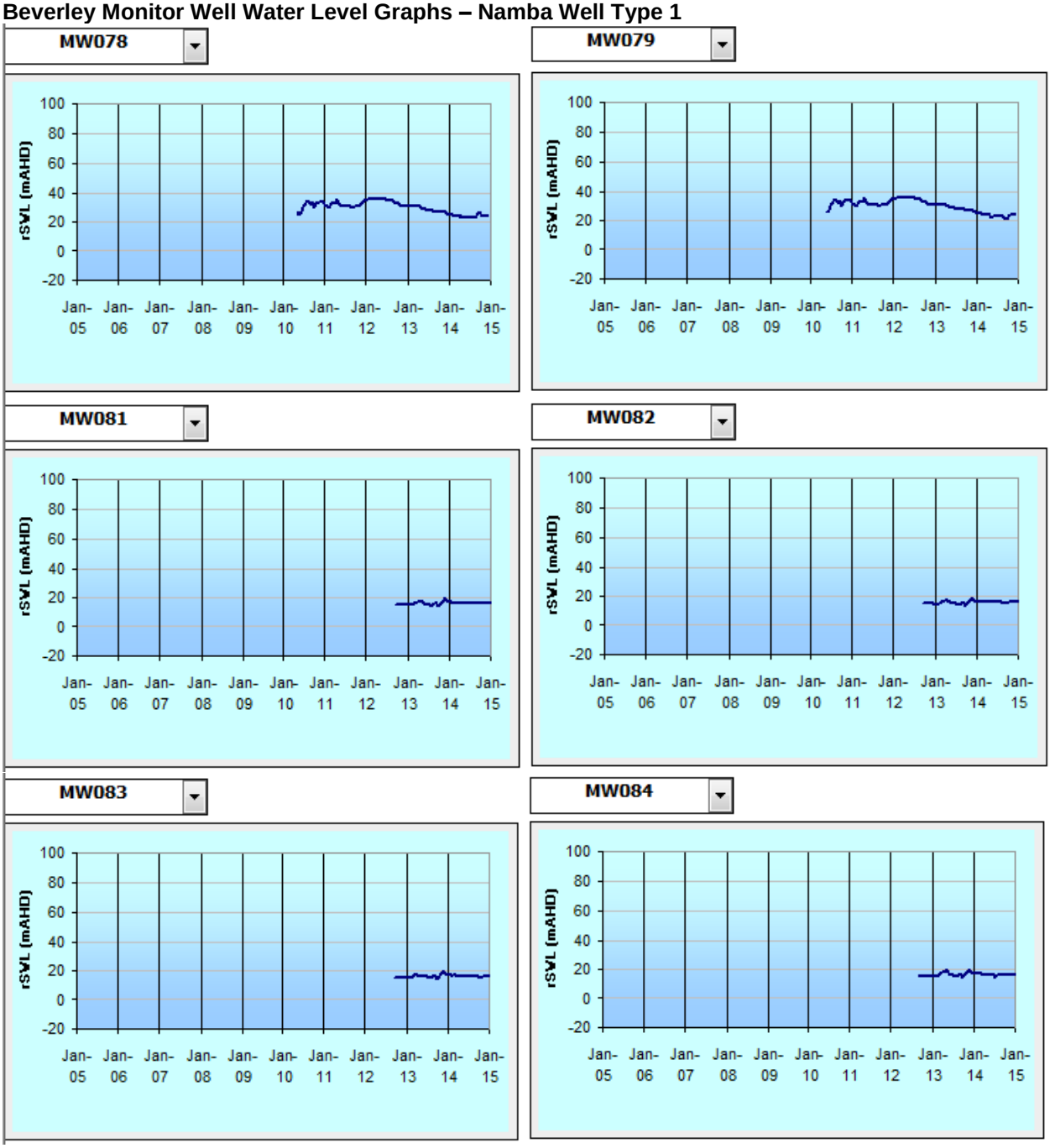
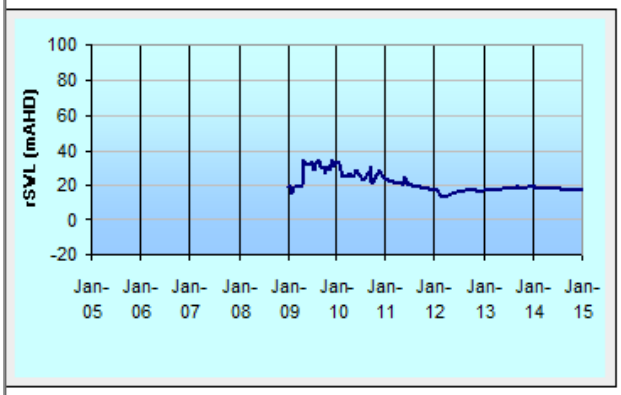


Beverley Monitor Well Water Level Graphs – Namba Well Type 1



Beverley Monitor Well Water Level Graphs – Namba Well Type 2

BEMW041



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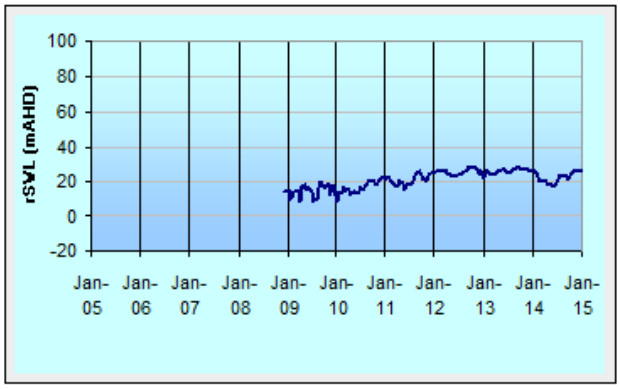
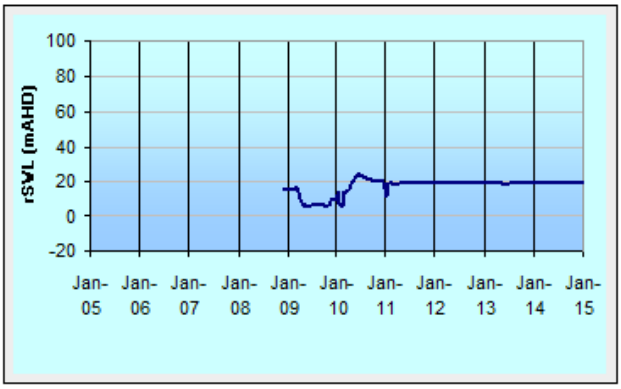


BEMW052

BEMW054

BEMW055

BEMW057



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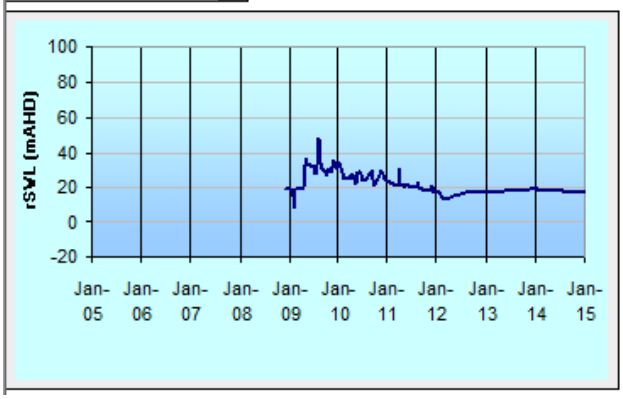

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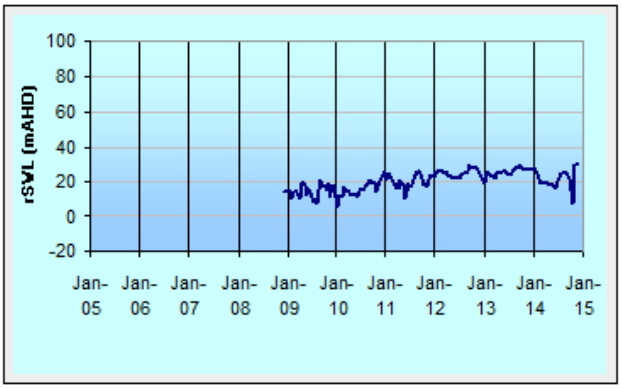
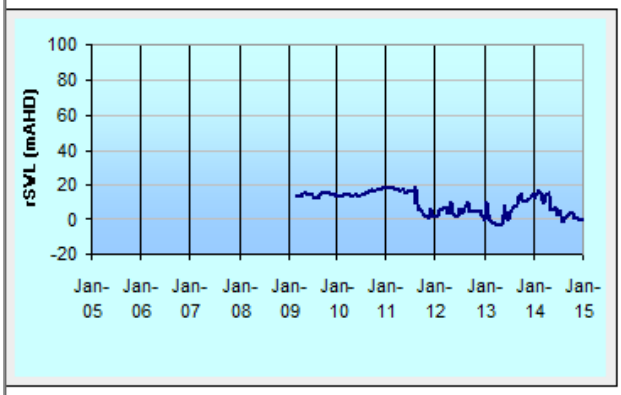


Beverley Monitor Well Water Level Graphs – Namba Well Type 2

BEMW060



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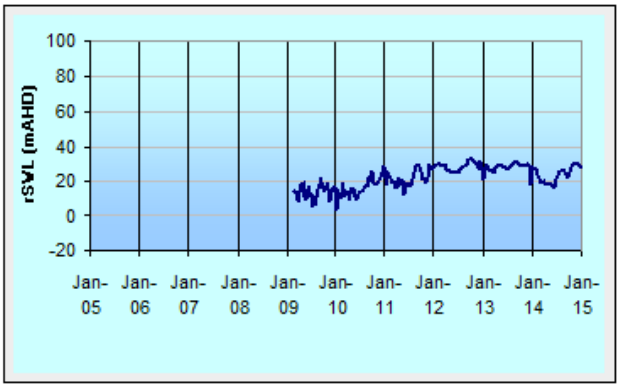

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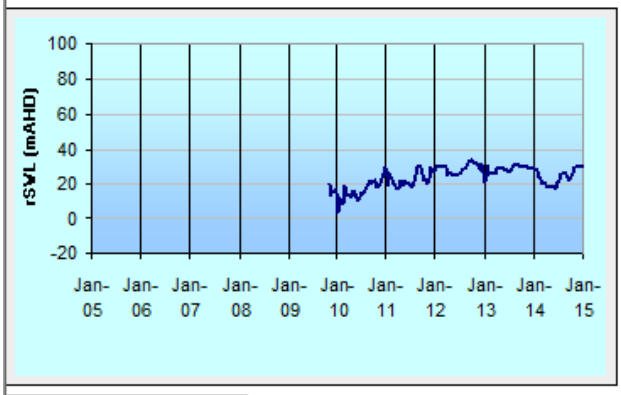

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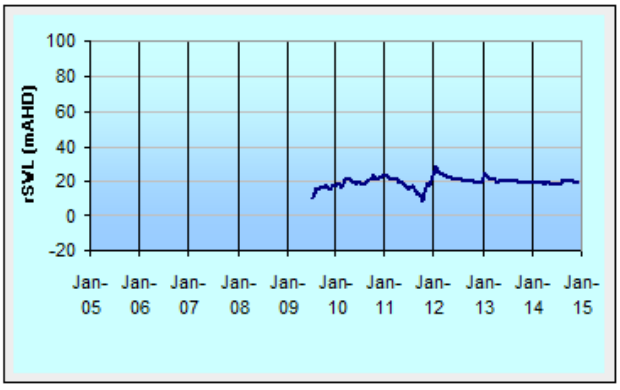

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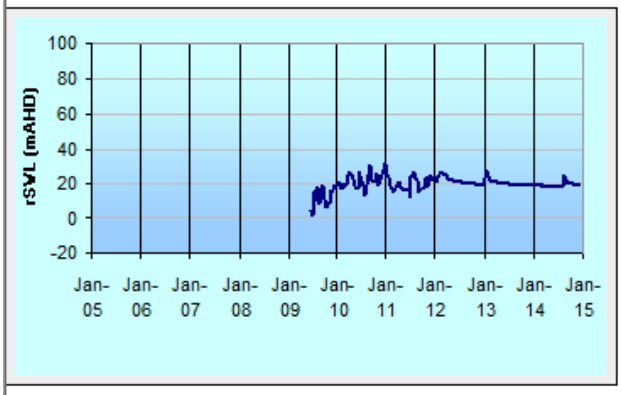

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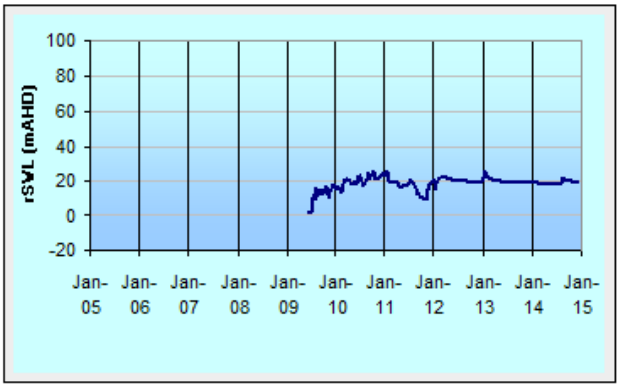

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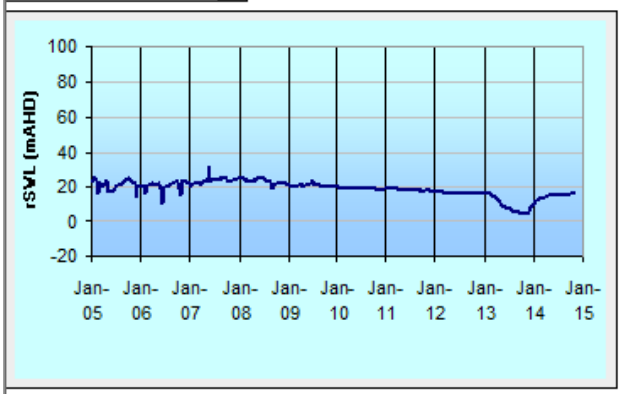

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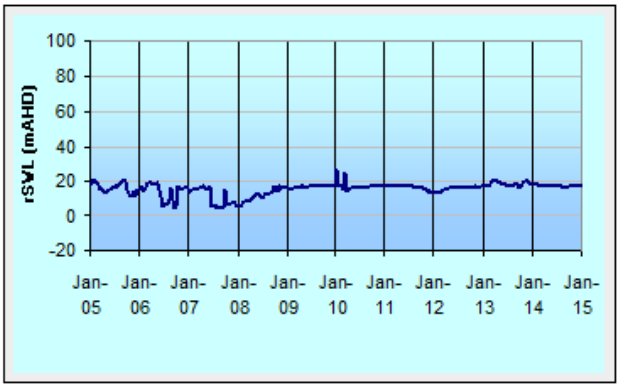
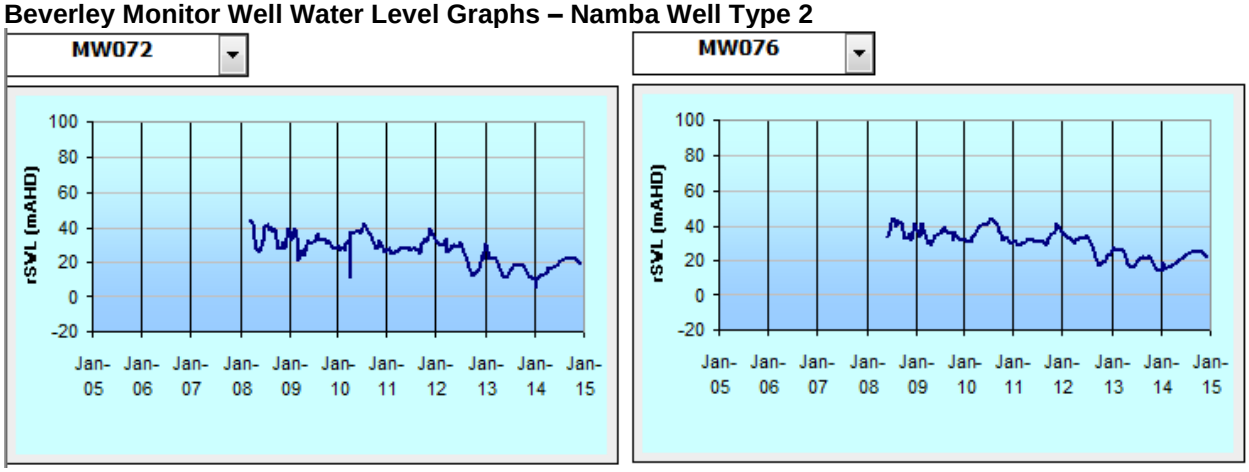
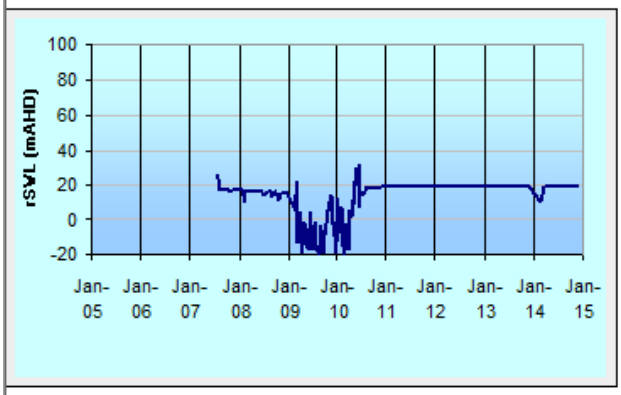


Beverley Monitor Well Water Level Graphs – Namba Well Type 2



Beverley Monitor Well Water Level Graphs – Namba Well Type 3

BEMW004



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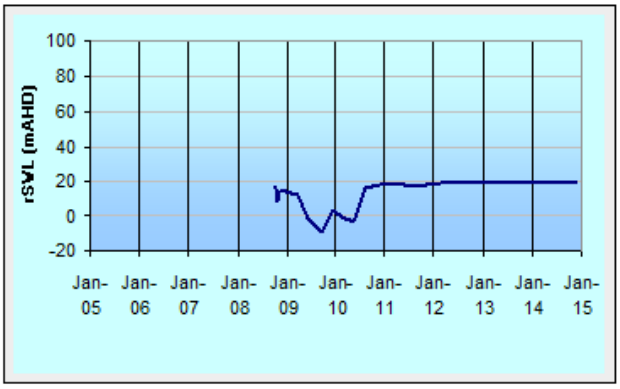

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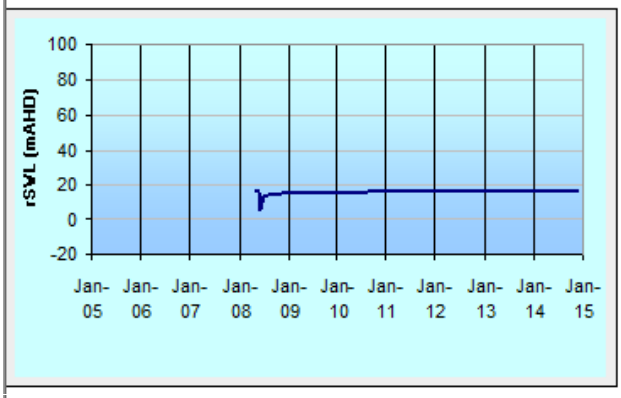

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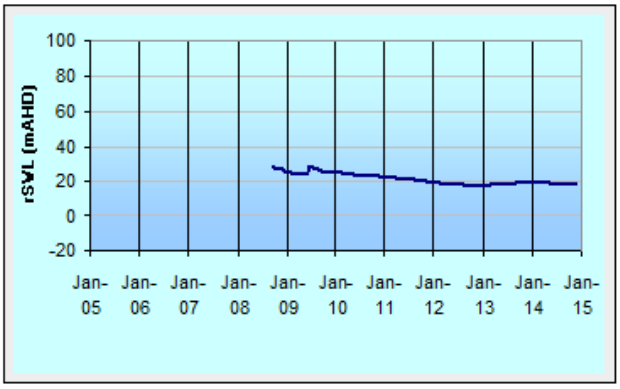
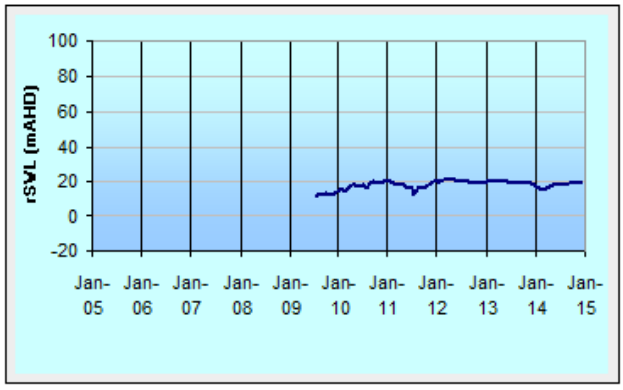


BEMW053

BEMW067

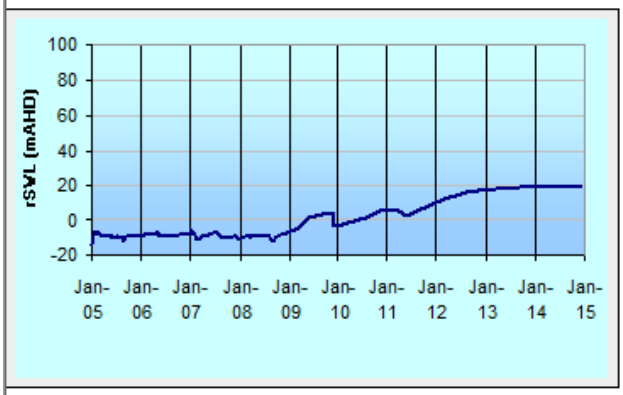
BEMW069

DSMW022



Beverley Monitor Well Water Level Graphs – Namba Well Type 3

MW001



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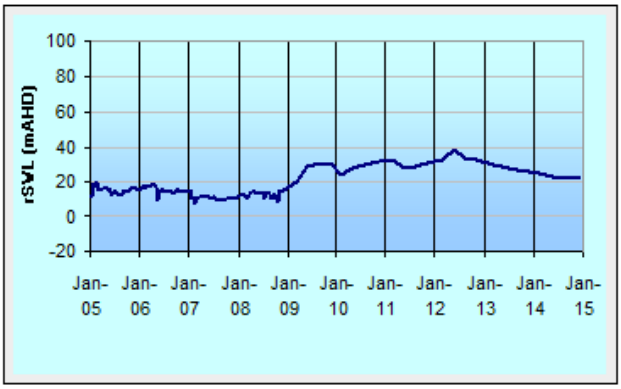
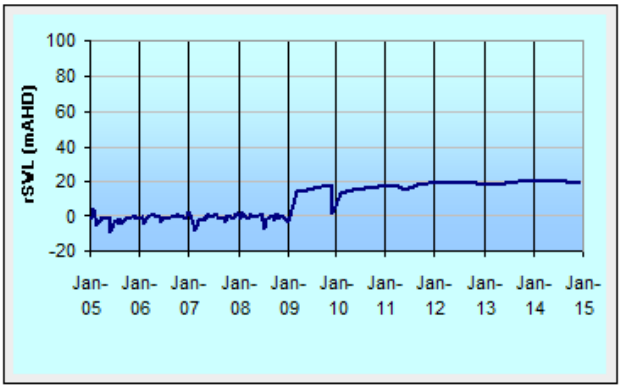


MW003

MW015



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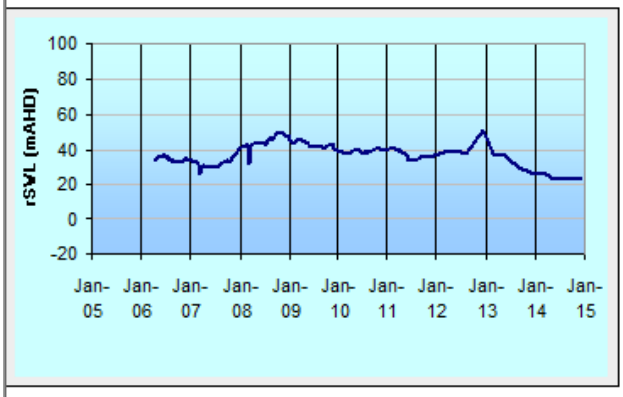

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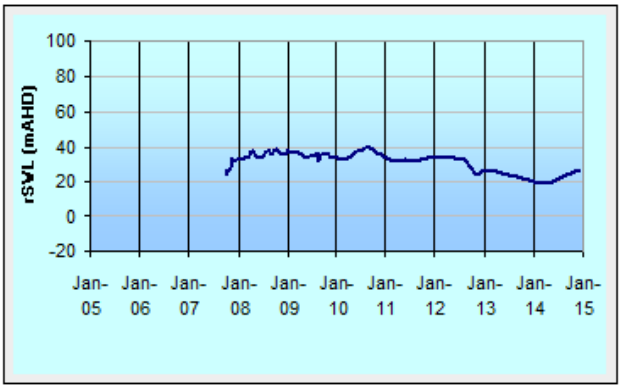
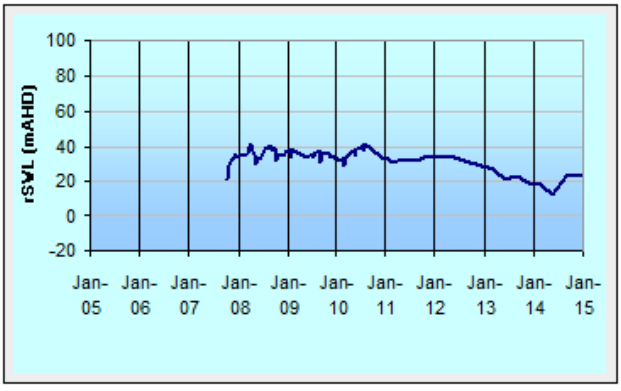
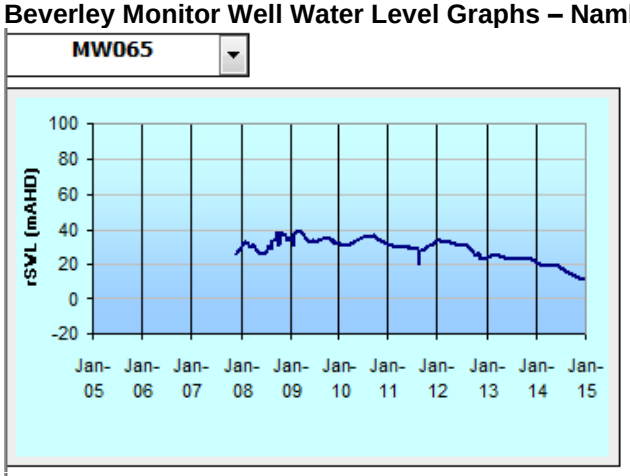


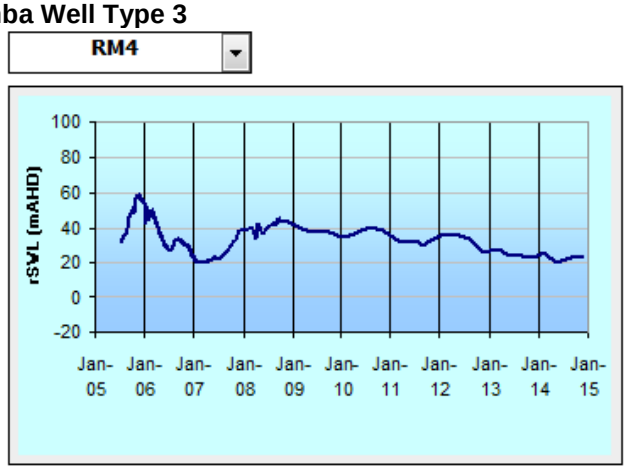
MW063

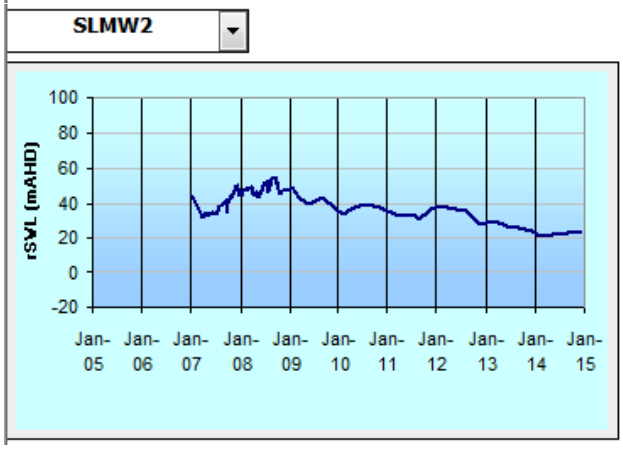
MW064



Beverley Monitor Well Water Level Graphs – Namba Well Type 3

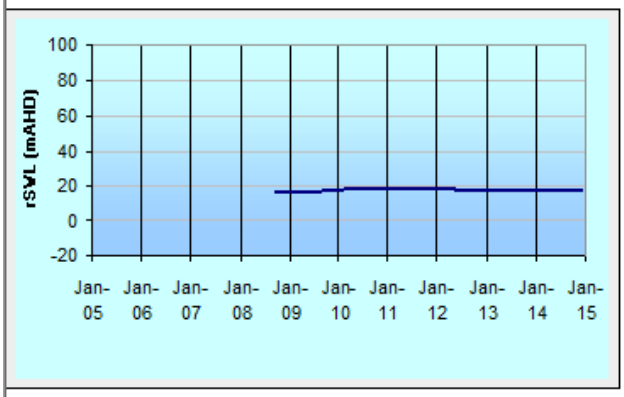




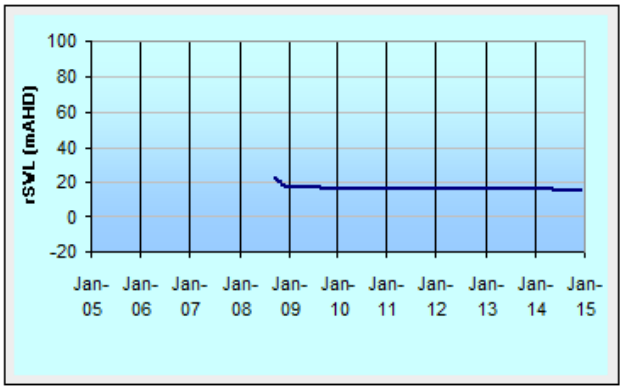


Beverley Monitor Well Water Level Graphs – Namba Well Type 4

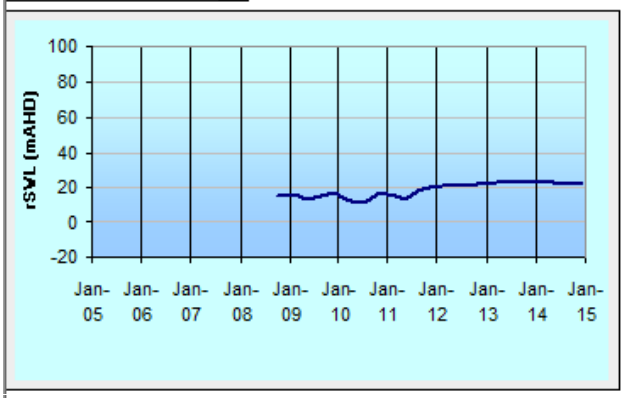
BEMW016



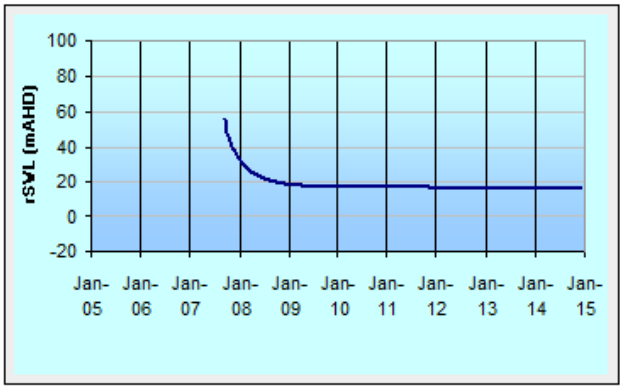
BEMW017



BEMW022



BEMW025



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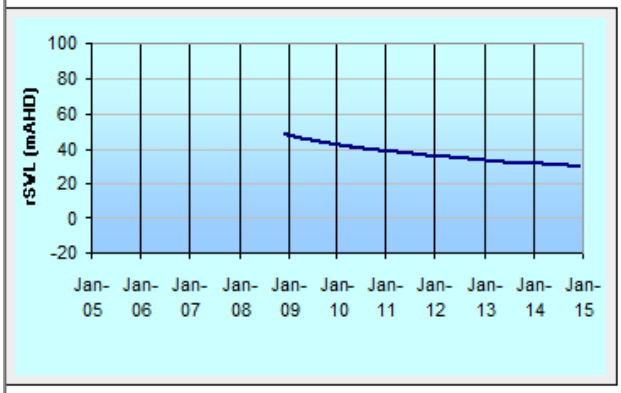

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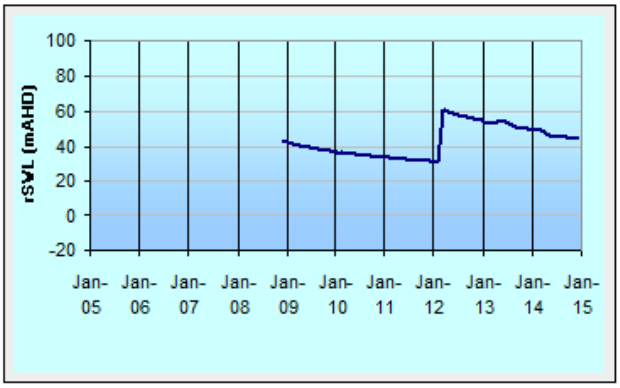

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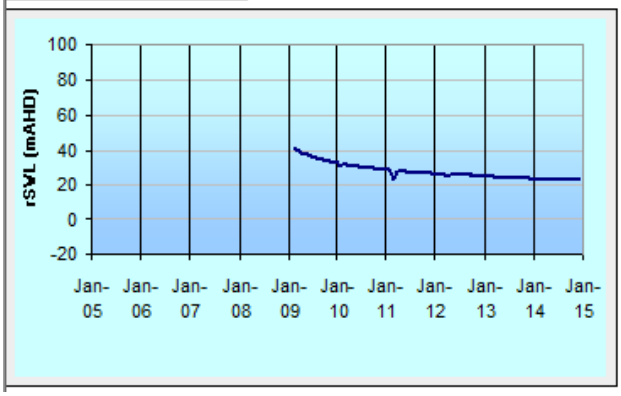

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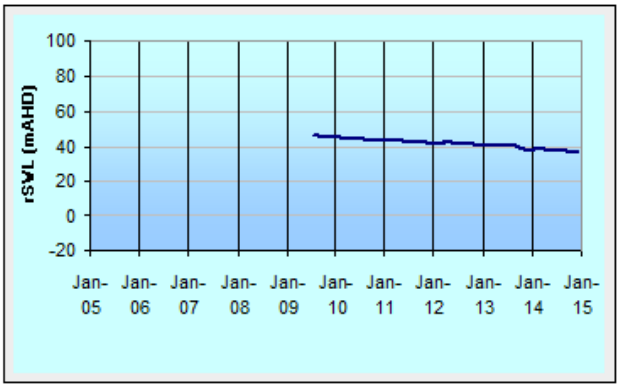
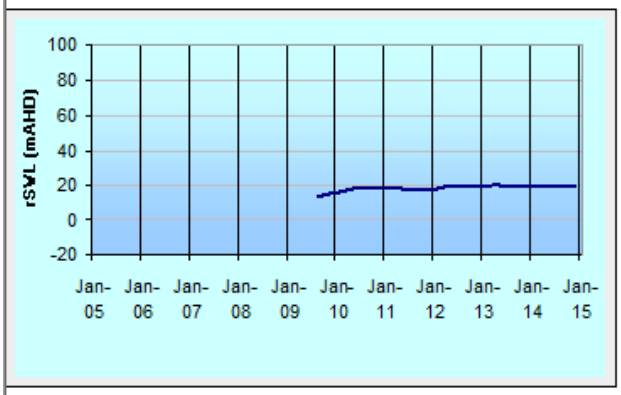
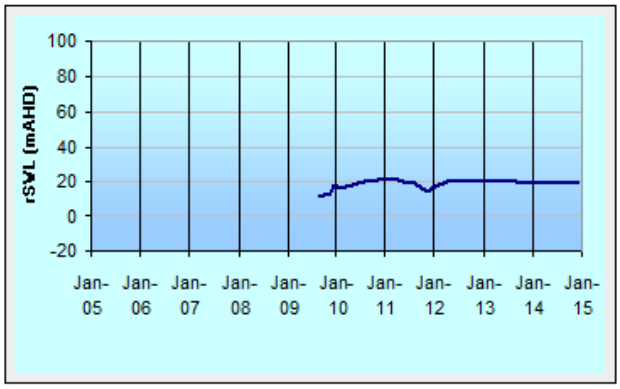


Beverley Monitor Well Water Level Graphs – Namba Well Type 4

DSMW027



DSMW036



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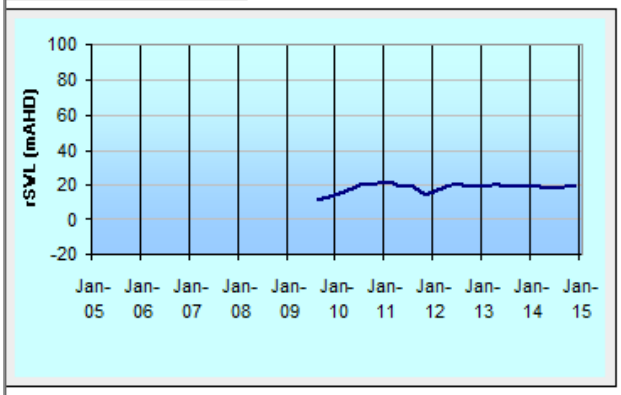
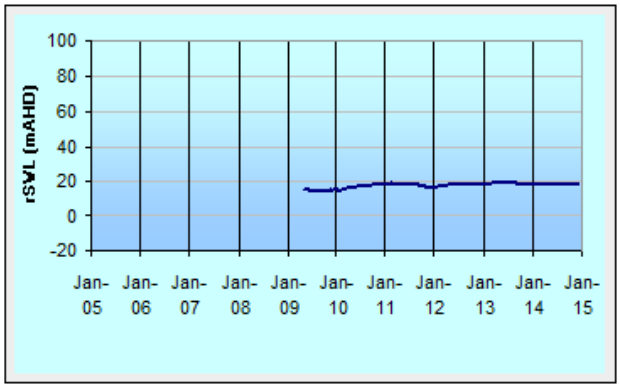
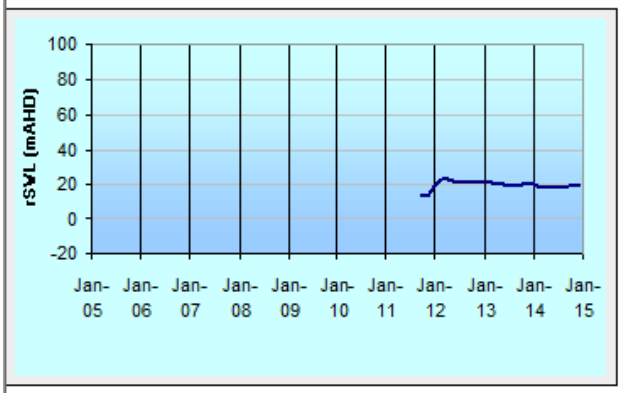


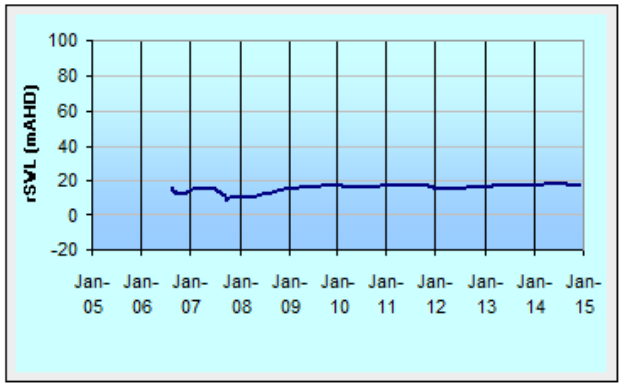
DSMW065



DSMW072



LMW053



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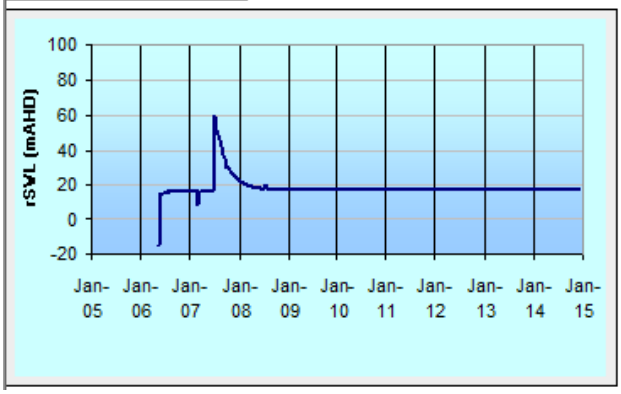

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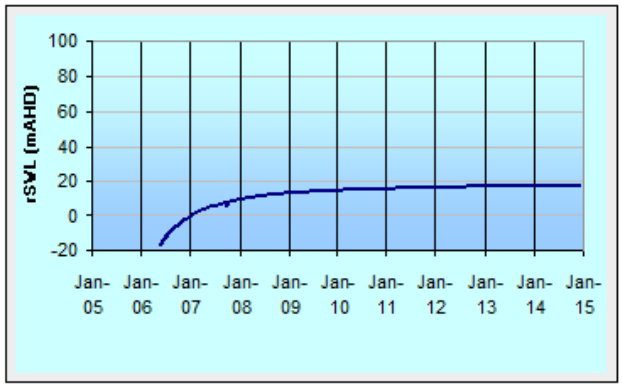
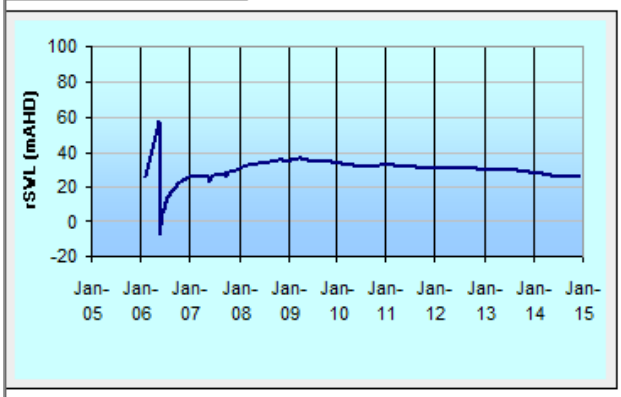


Beverley Monitor Well Water Level Graphs – Namba Well Type 4

LMW058



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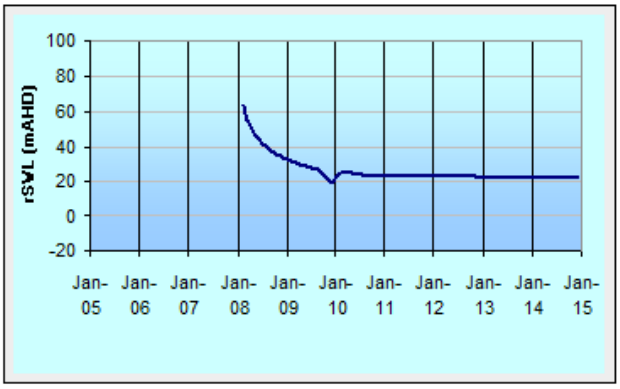

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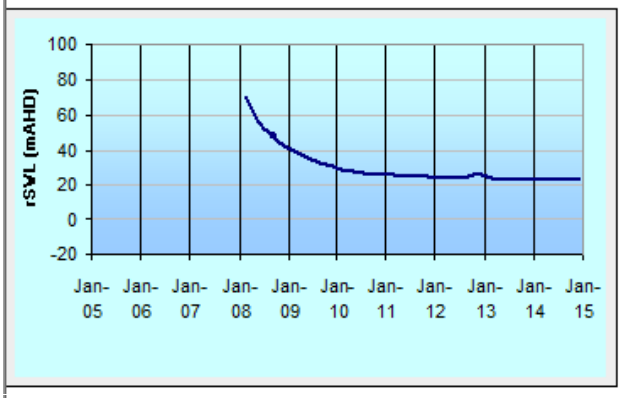

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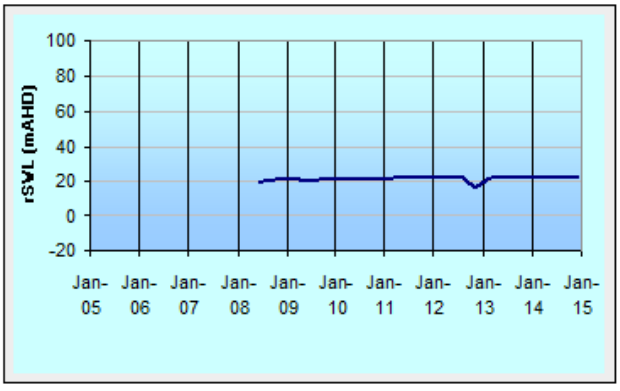

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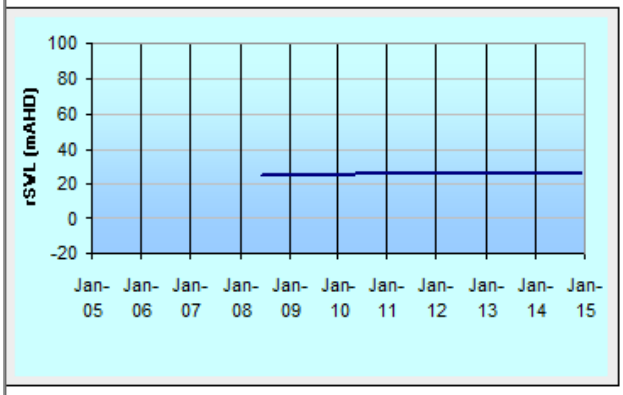

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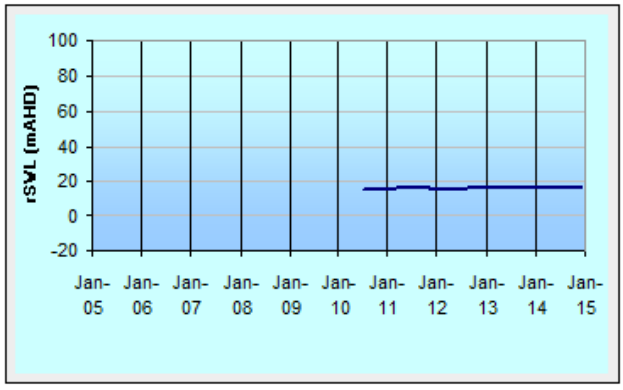

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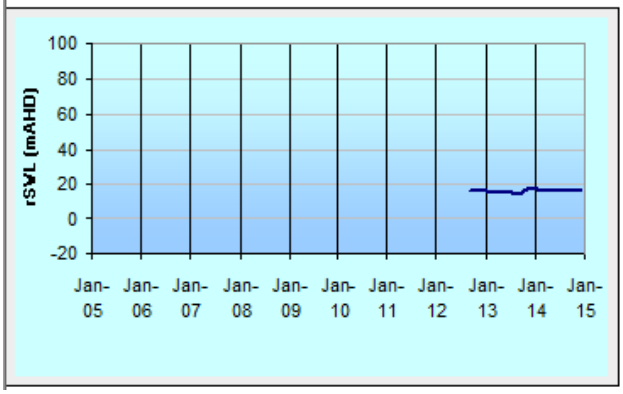

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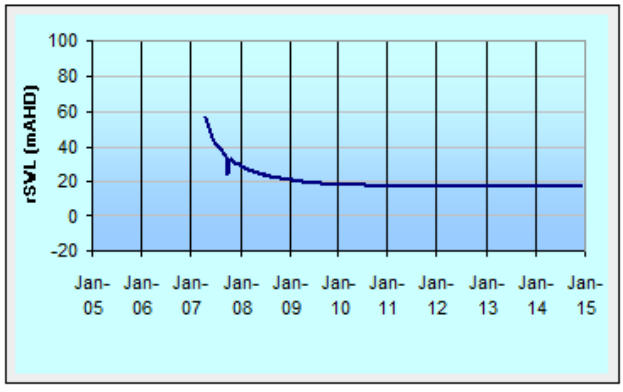
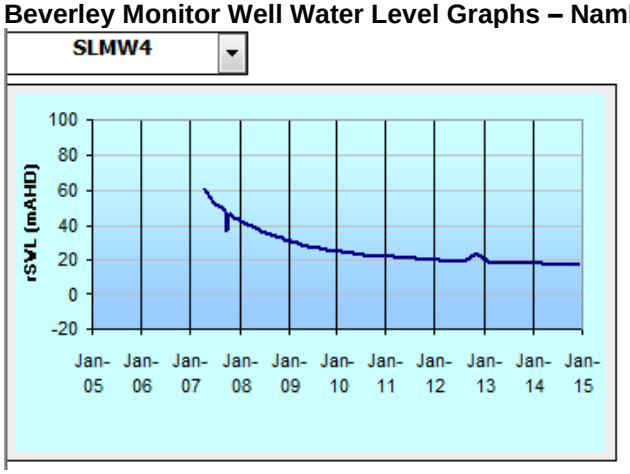


Beverley Monitor Well Water Level Graphs – Namba Well Type 4



Beverley Monitor Well Water Level Graphs – Willawortina Overlying Well

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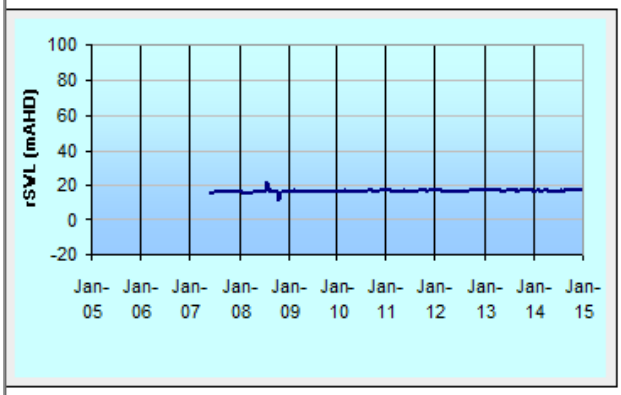

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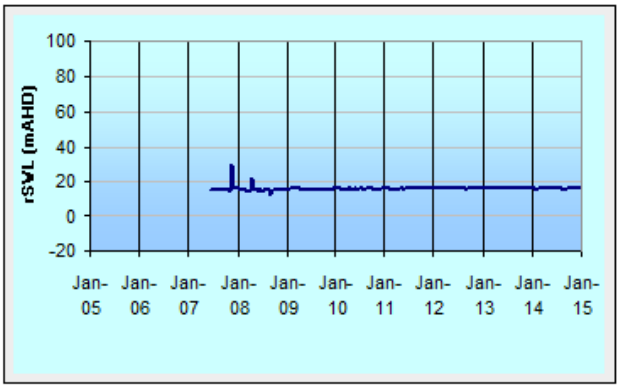

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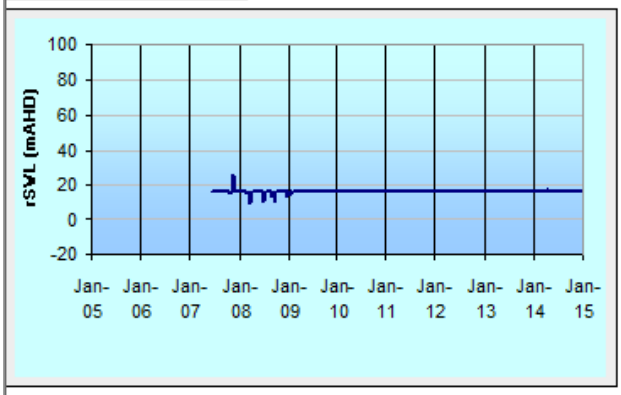

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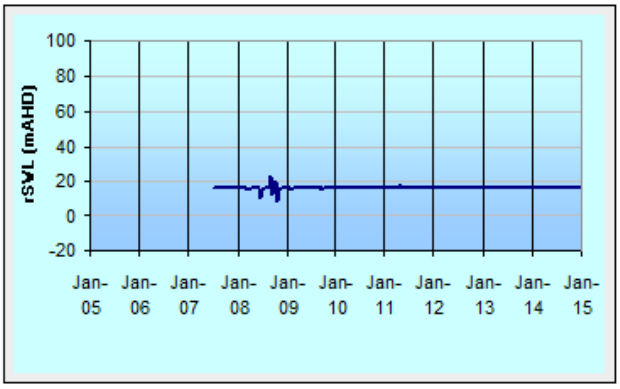

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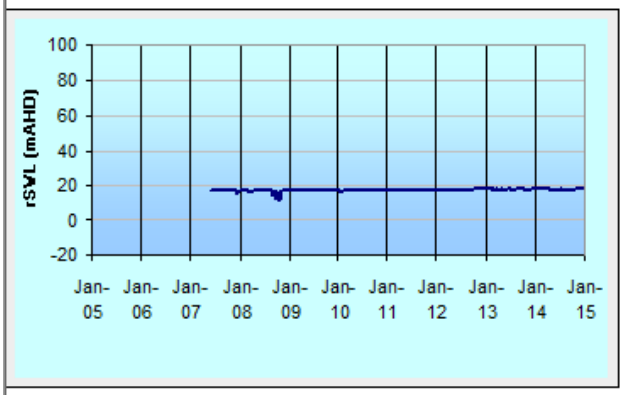

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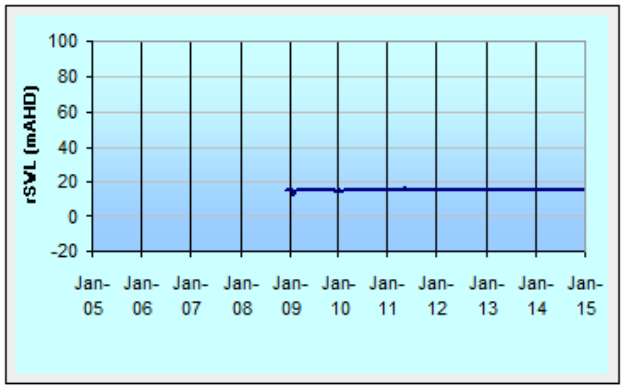

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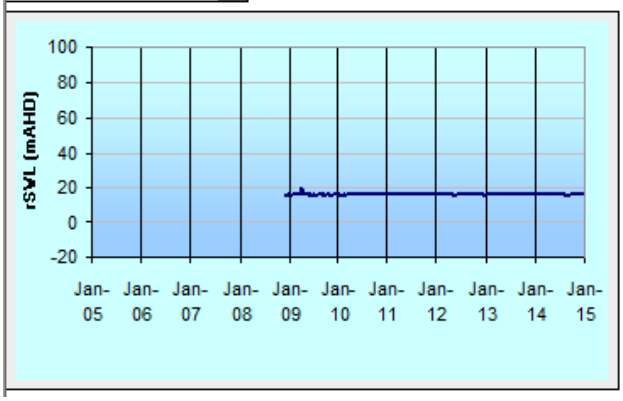

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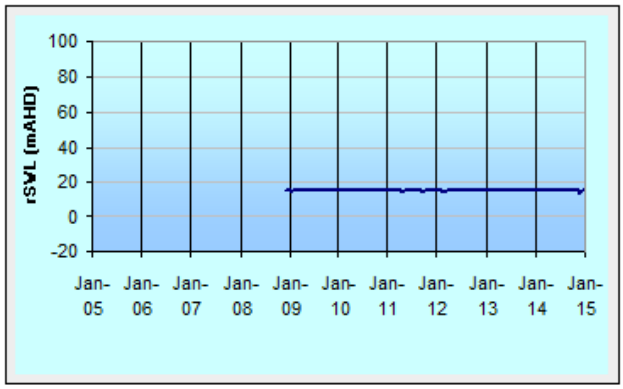

Beverley Monitor Well Water Level Graphs – Willawortina Overlying Well

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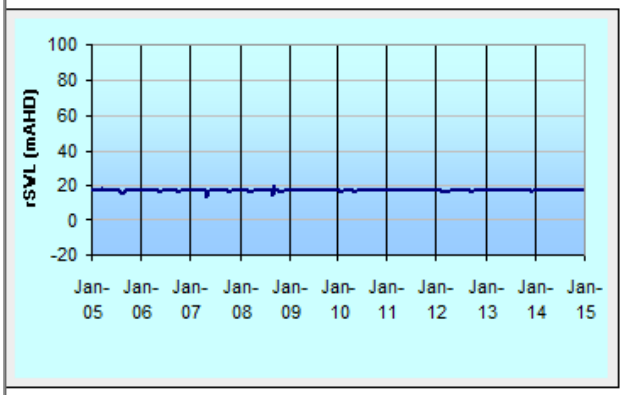

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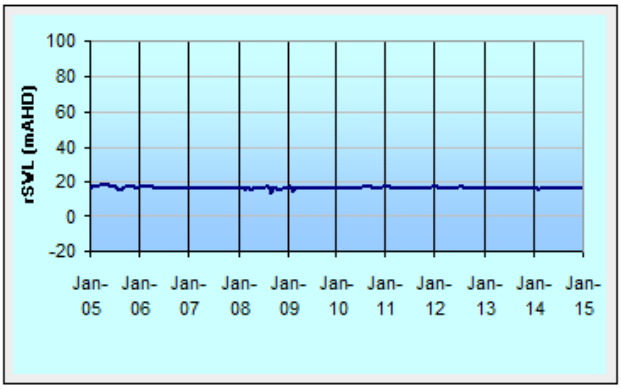

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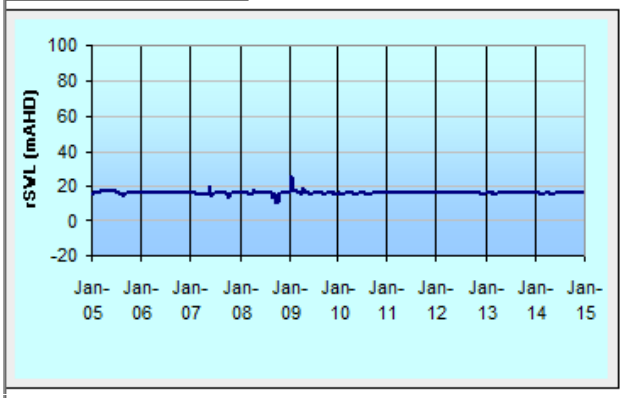

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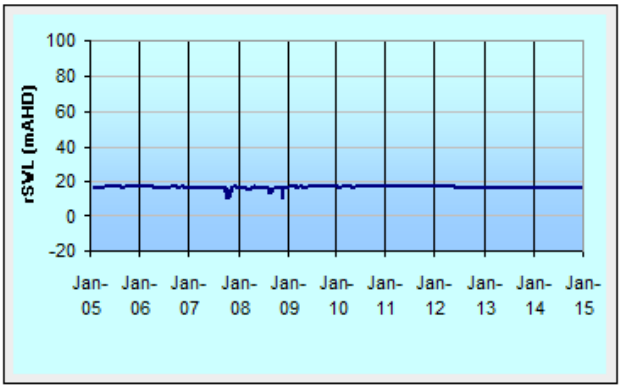

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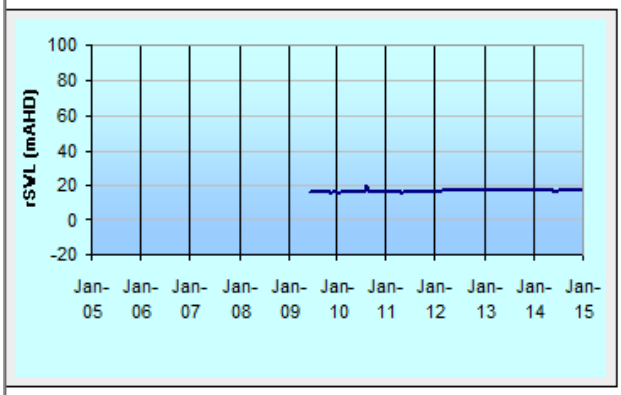

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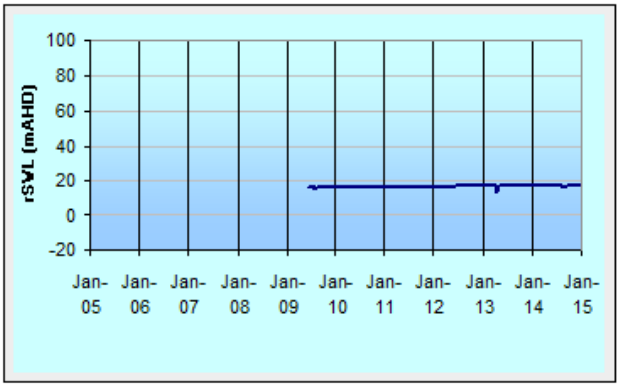

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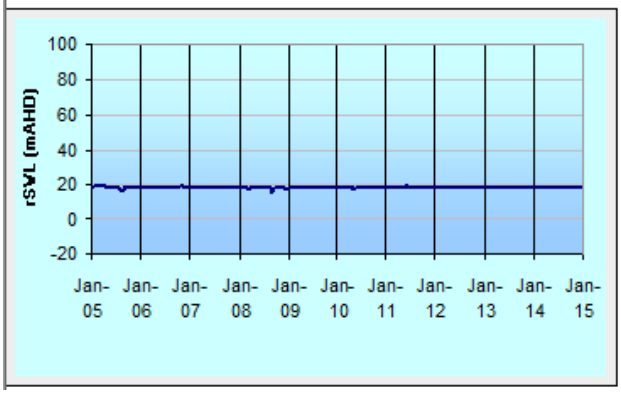

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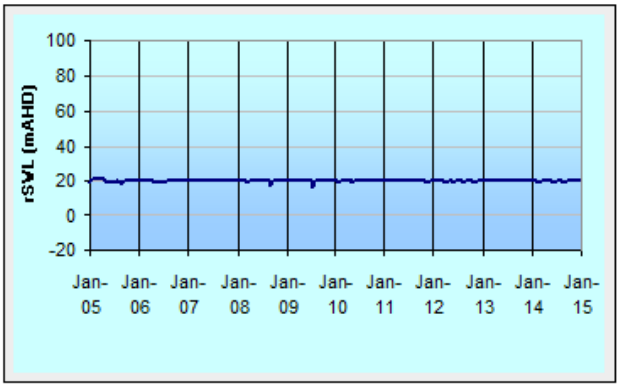

Beverley Monitor Well Water Level Graphs – Willawortina Overlying Well

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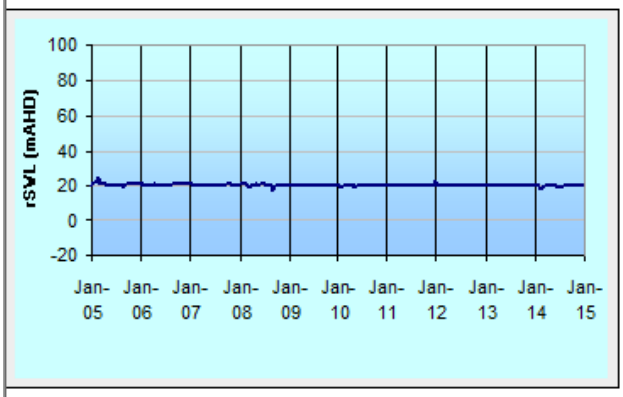

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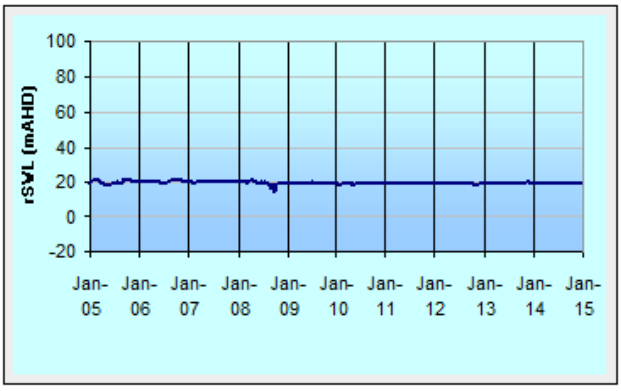

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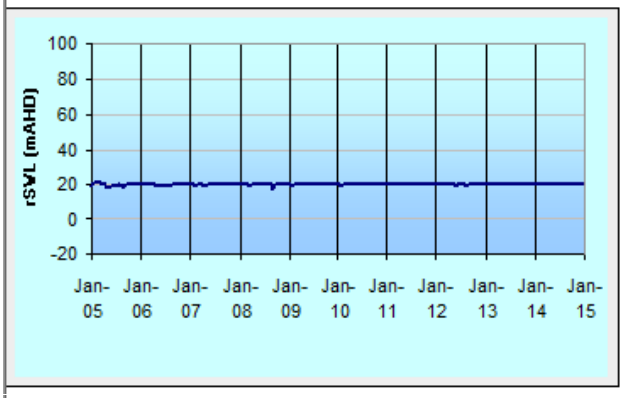

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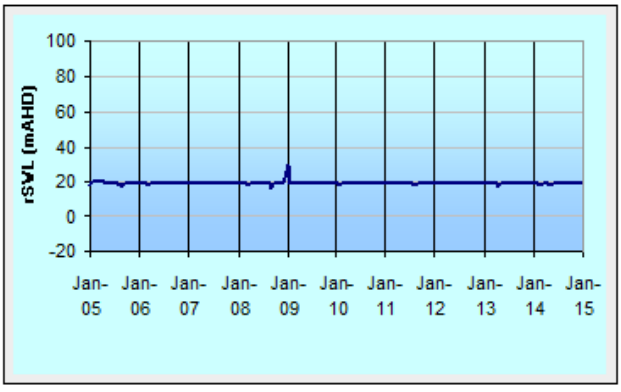

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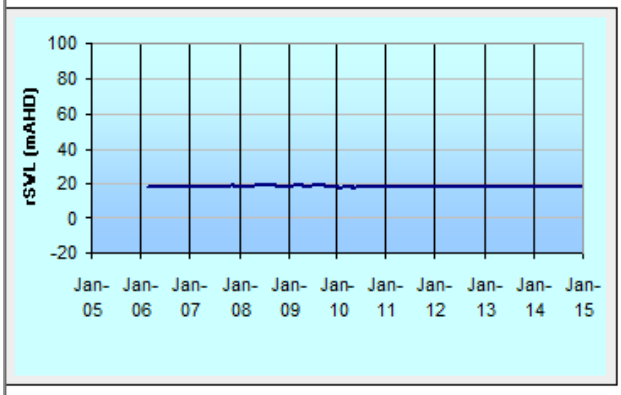

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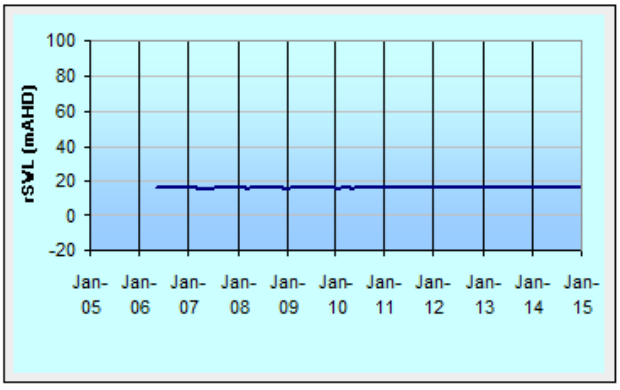

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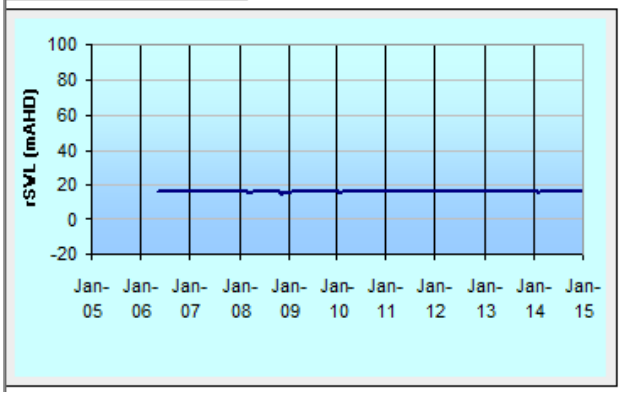

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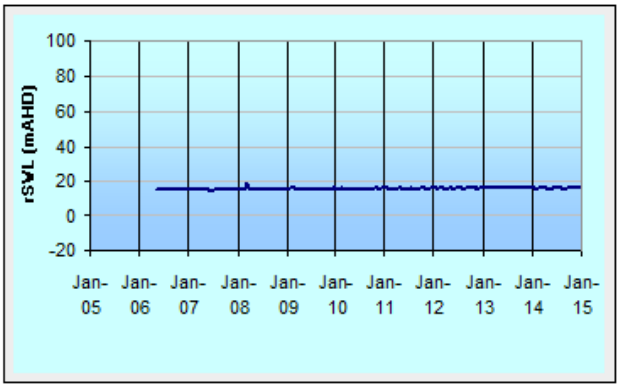
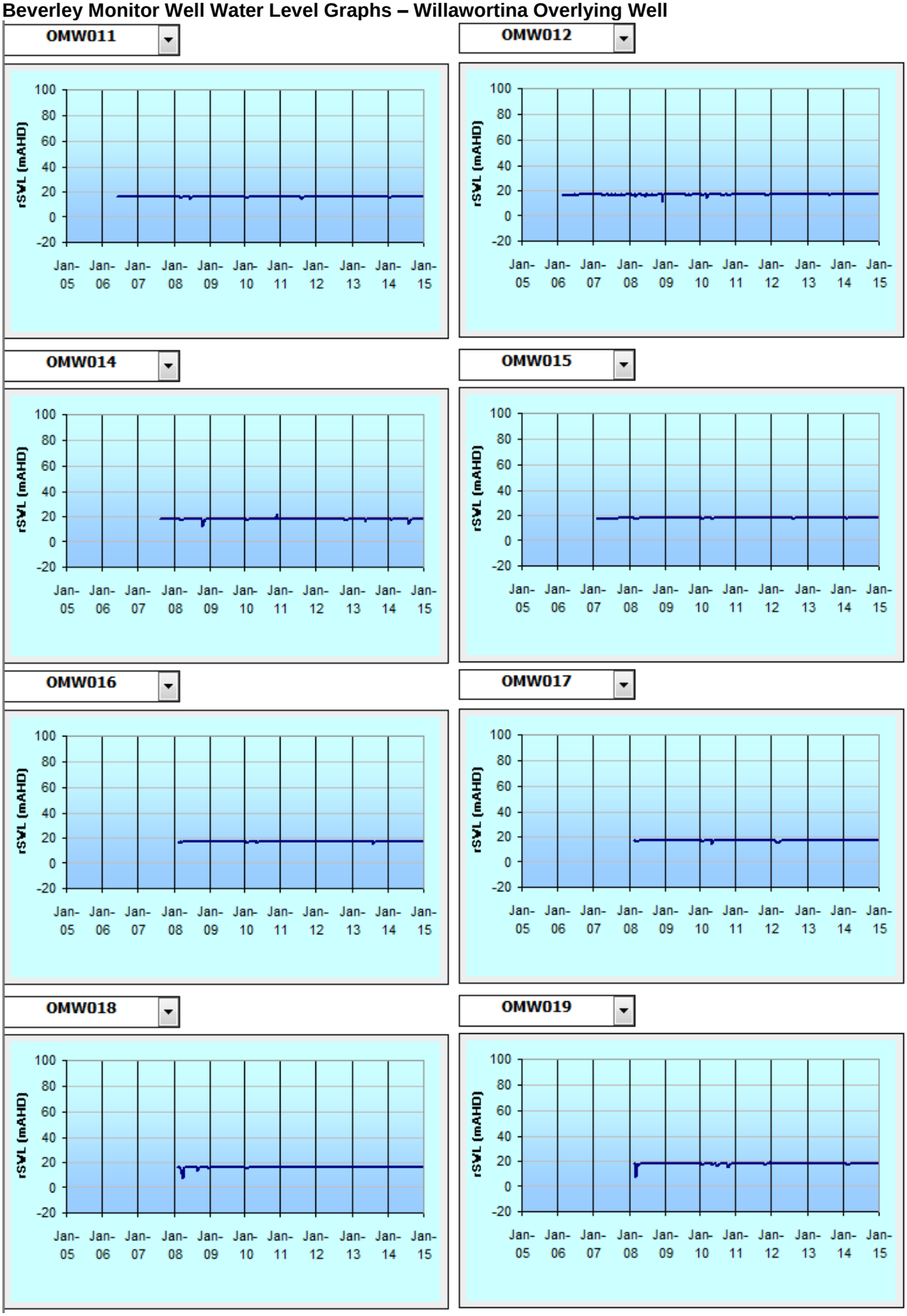
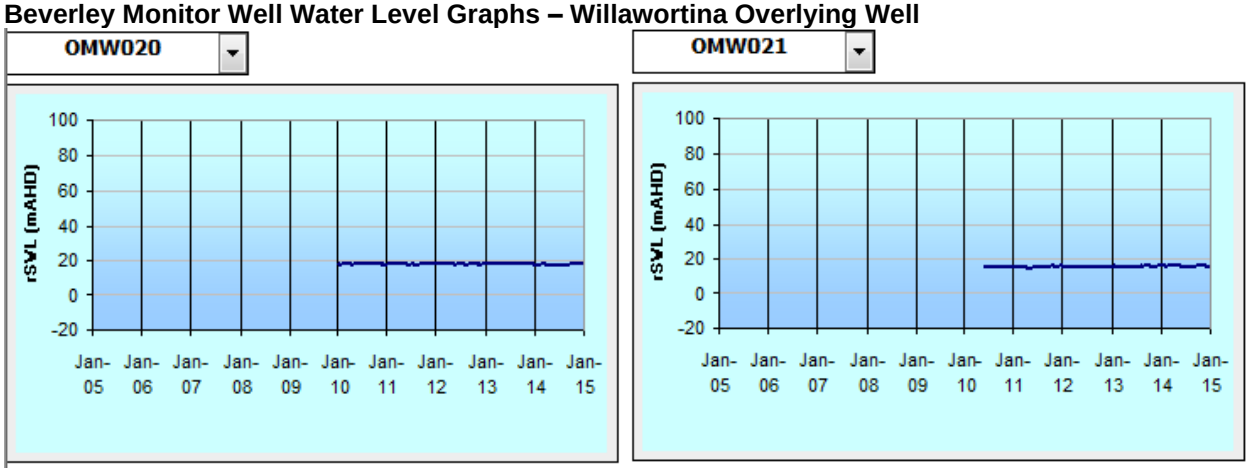


Beverley Monitor Well Water Level Graphs – Willawortina Overlying Well



Beverley Monitor Well Water Level Graphs – Willawortina Overlying Well



APPENDIX B

BEVERLEY ML MONITOR WELL CHEMISTRY GRAPHS

Discussion on Anomalous Monitor Well Chemistries

BEMW060

- Well connected Beverley Sands monitor well
- Early chemistries appear to be influenced by remnant drilling muds with pH levels >10
- Well re-airlifted 26/08/2011 at a rate of 0.2 L/s which appears to have been successful in obtaining formation representative pH levels

MW040

- Poorly connected Beverley Sands monitor with a very low airlift yield (0.1 L/s)
- Anomalous chemistries (pH around 10) likely to be related to remnant drilling muds which can be difficult to clear in very low yielding wells
- Well re-integrity tested and passed in March 2013
- Water used to integrity test well possibly influencing current SO4 levels due to the slow screen re-fresh rate
- Well to be re-airlifted.

MW062

- Poorly connected Beverley Sands monitor
- The change in SO4 (from 2.4 to 0.8 g/L) observed in sample obtained 10 November 2012
- The low flow pump was removed from the well and inspected, all equipment was clean and in good working order
- The well was re-sampled on 13 November 2012, with repeated results (SO4 0.7 g/L)
- Well integrity tested and passed on 24 November 2012
- Another re-sample was obtained on 13 December 2012 with once again similar results (SO4 0.6 g/L)
- The well was airlifted in April 2013 which returned SO4 to similar levels observed prior to November 2012.

MW063

- Poorly connected Beverley Sands monitor
- The change in SO4 (from 3 to 2.1 g/L) observed in sample obtained 10 November 2012
- The low flow pump was removed from the well and inspected, all equipment was clean and in good working order
- The well was re-sampled on 13 November 2012, with repeated results (SO4 2.2 g/L)
- Well integrity tested and passed on 25 November 2012
- Another re-sample was obtained on 13 December. Sample indicating integrity test water likely to be influencing result
- The well was airlifted in April 2013 with SO4 levels returning to 2.5 mg/L.

MW065

- Poorly connected Beverley Sands monitor
- The change in SO4 (from 1.6 to 0.8 g/L) observed in sample obtained 8 December 2014
- Sample obtained 23 December 2014 returned similar result (SO4 0.7 g/L)
- Under investigation which will include a check on sampling equipment and well integrity.

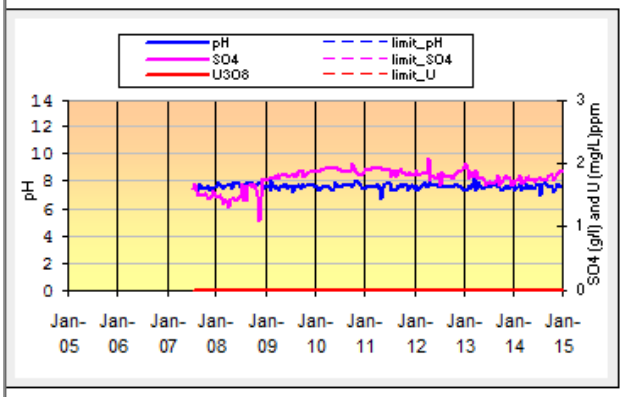
COMW004

- Willawortina monitor well
- Well located in low lying area subject to flooding. Erratic SO4 readings appear to be due to the periodic freshening from inundation during rain events

- The low formation permeability and screen re-fresh rate has resulted in extended periods of diluted samples
- Casing stick-up (height above ground level) and integrity to be reviewed.

Beverley Monitor Well Water Chemistry Graphs – Namba Well Type 1 *ECLs - pH 4.5; SO_4 3.6; U_3O_8 1.0*

BEMW003



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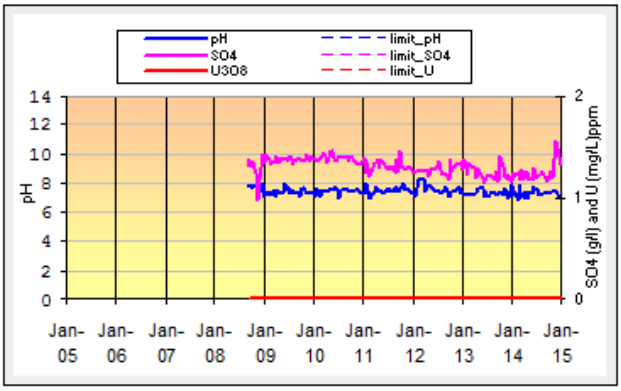

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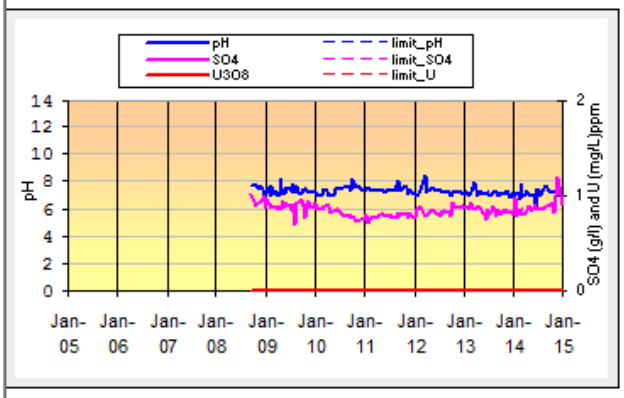

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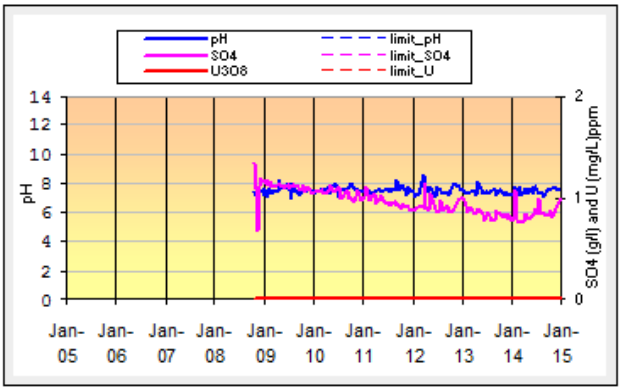

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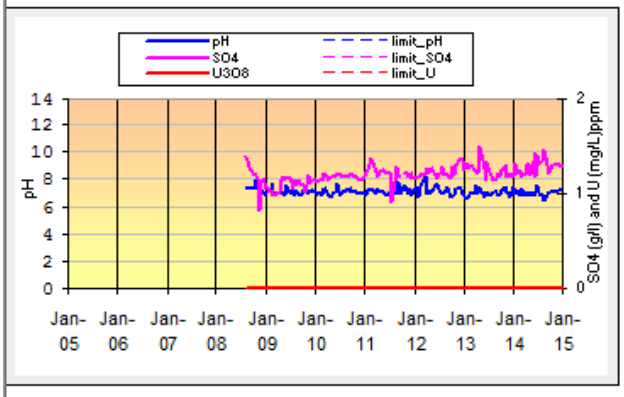

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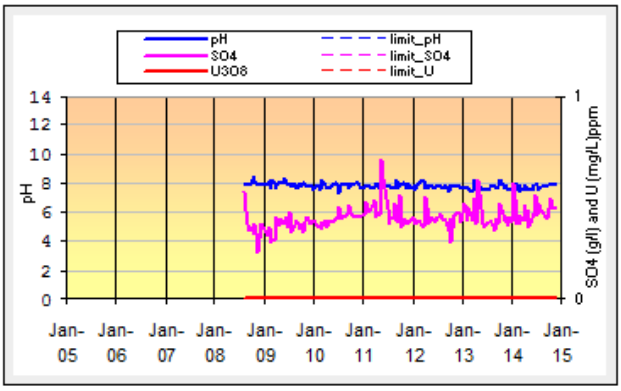

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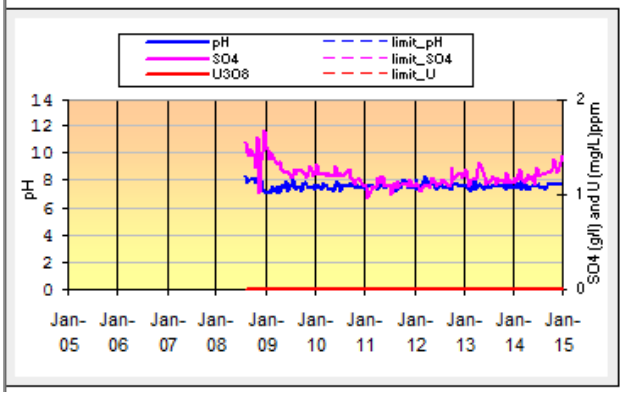

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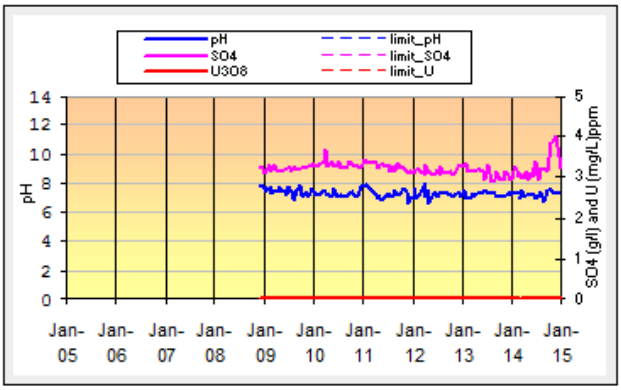
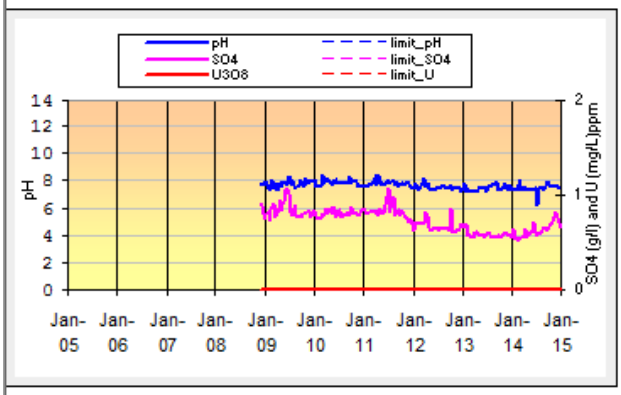


Beverley Monitor Well Water Chemistry Graphs – Namba Well Type 1 *ECLs - pH 4.5; SO_4 3.6; U_3O_8 1.0*

BEMW061



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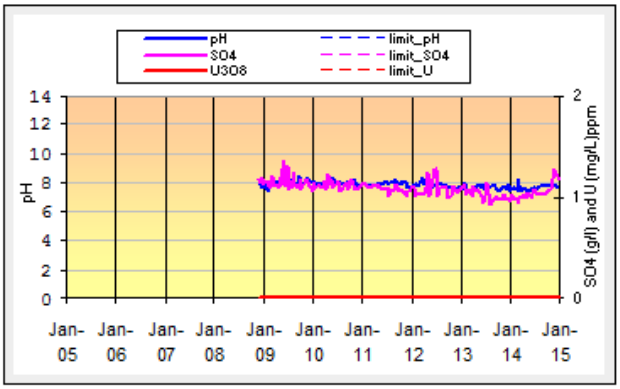

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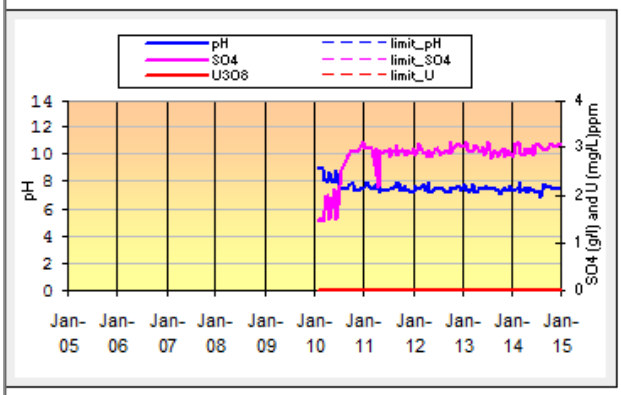

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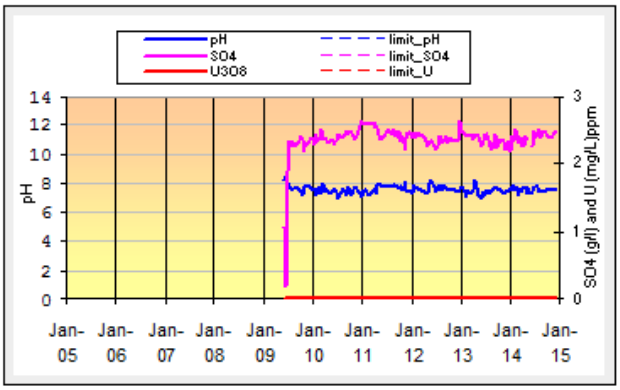

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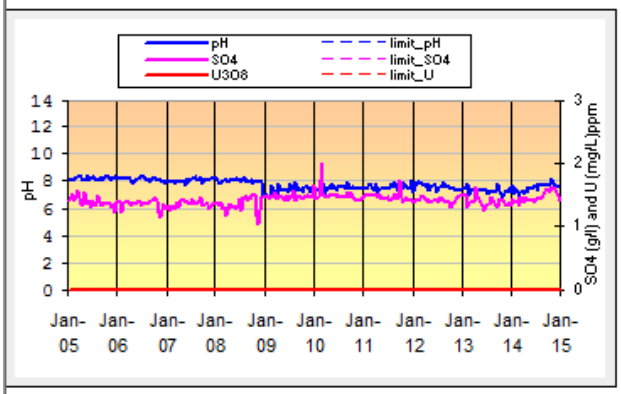

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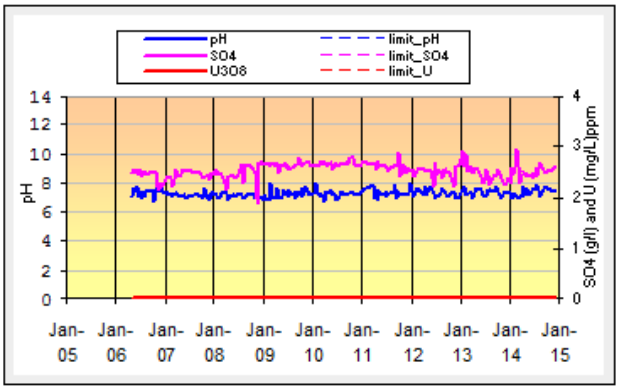

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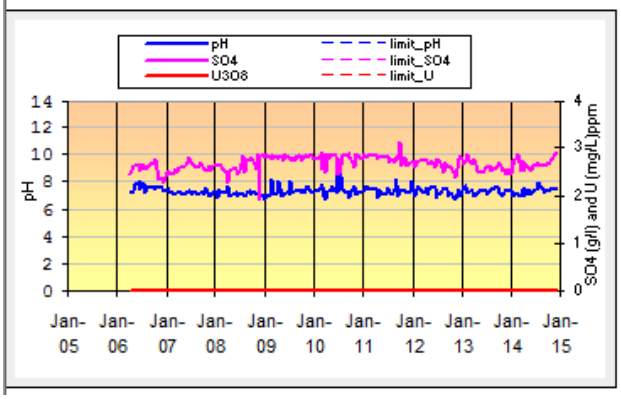

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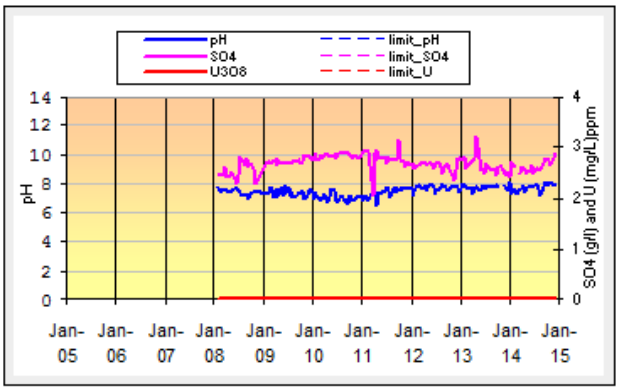

Beverley Monitor Well Water Chemistry Graphs – Namba Well Type 1 *ECLs - pH 4.5; SO_4 3.6; U_3O_8 1.0*

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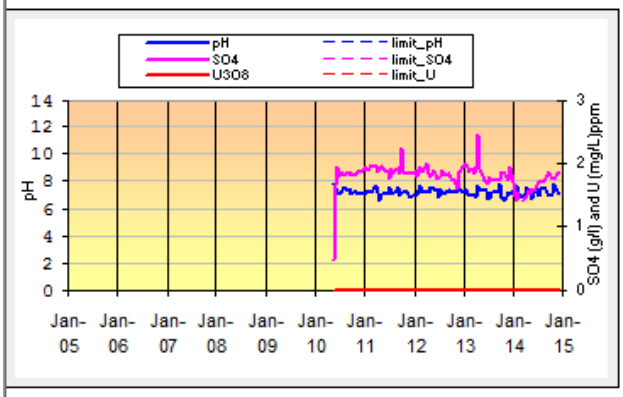

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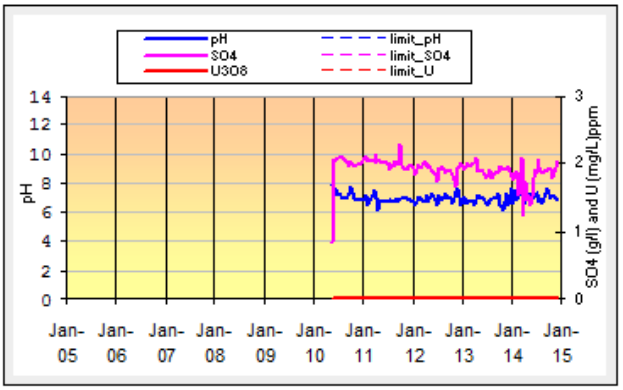

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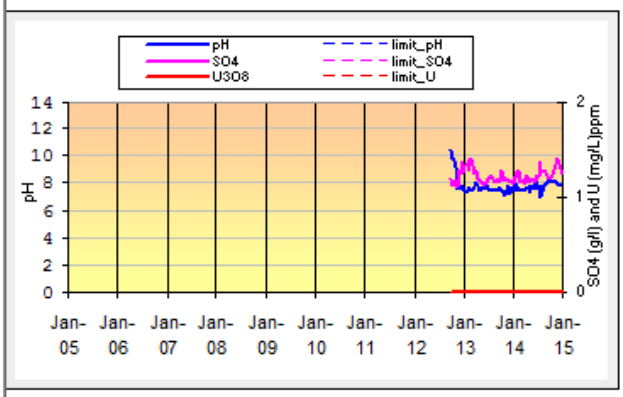

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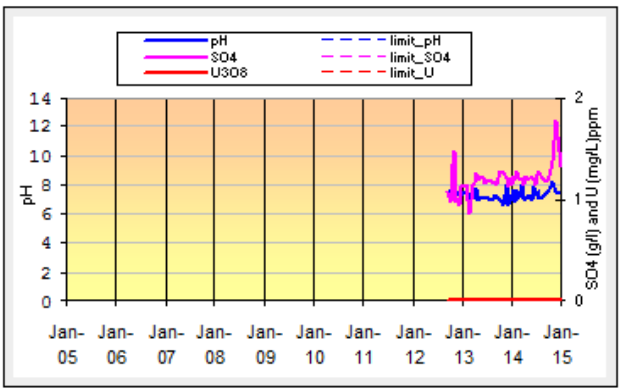

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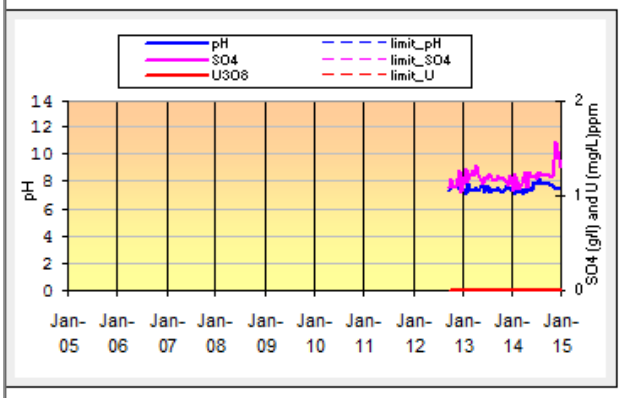

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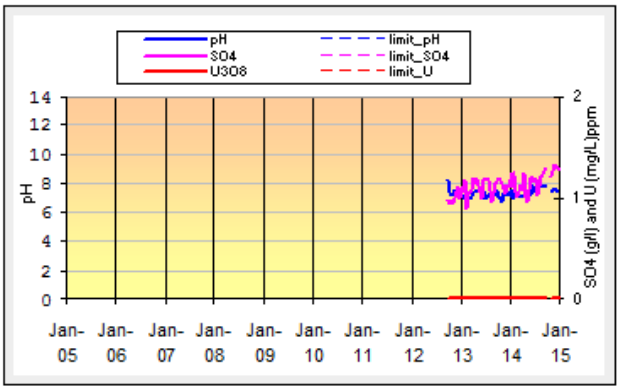
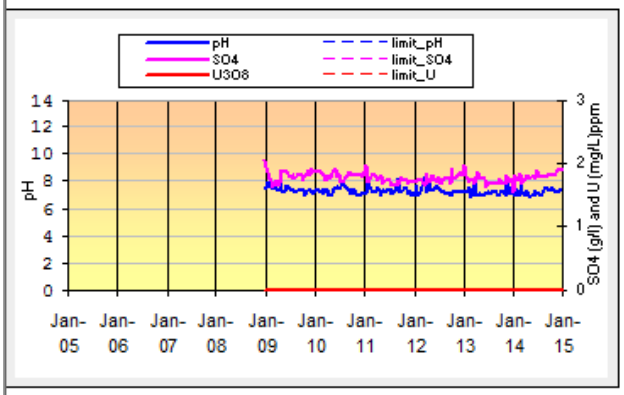


Beverley Monitor Well Water Chemistry Graphs – Namba Well Type 2 *ECLs - pH 4.5; SO_4 3.6; U_3O_8 1.0*

BEMW041



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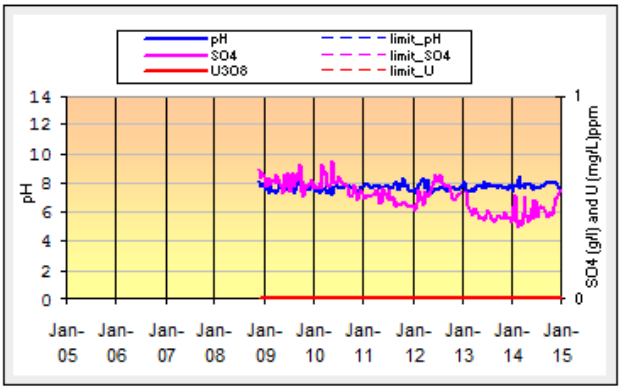

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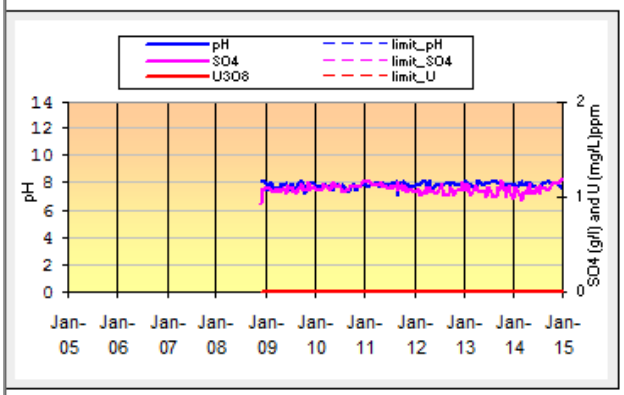

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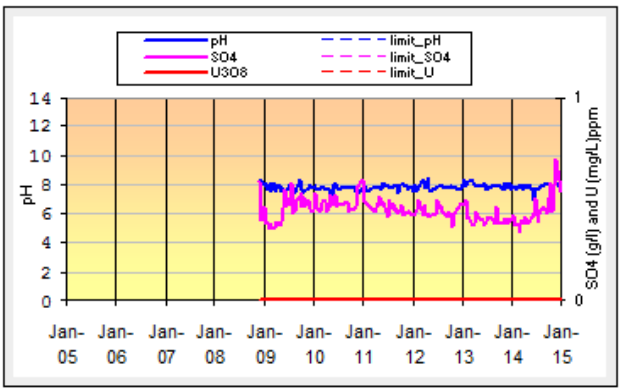

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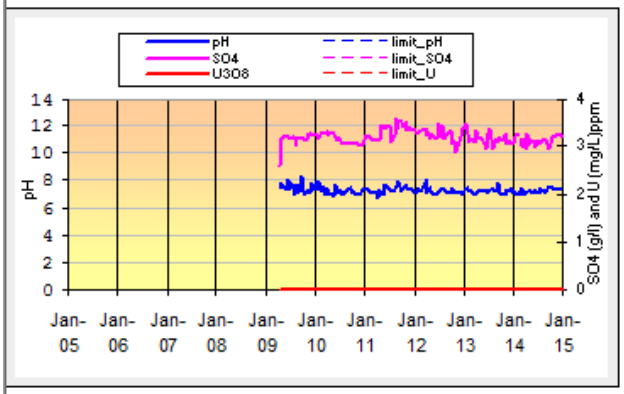

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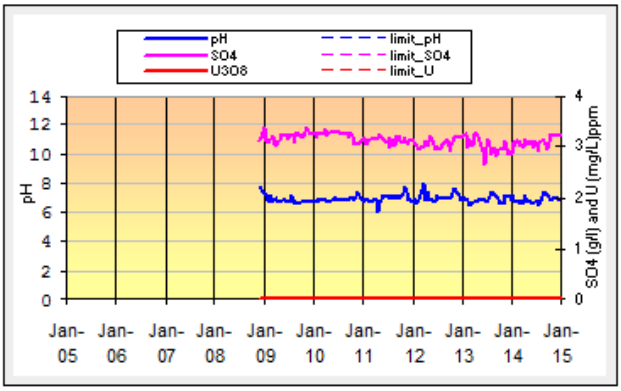

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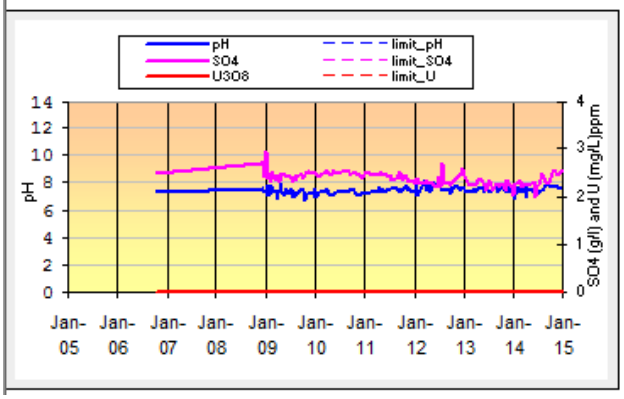

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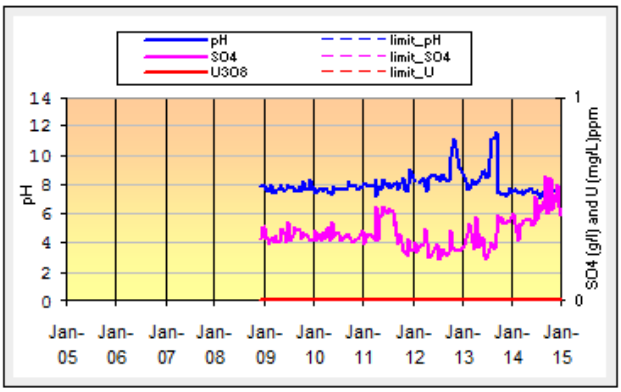
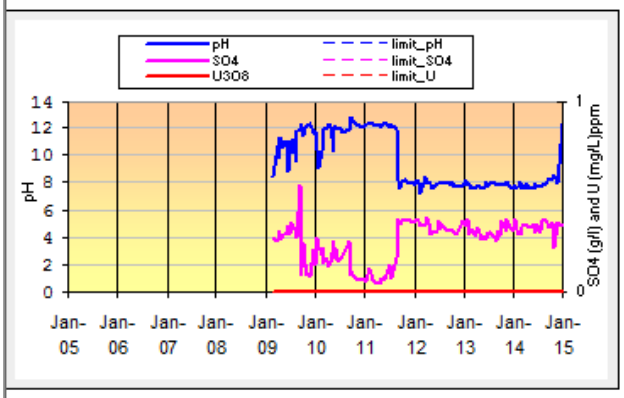


Beverley Monitor Well Water Chemistry Graphs – Namba Well Type 2 *ECLs - pH 4.5; SO_4 3.6; U_3O_8 1.0*

BEMW060



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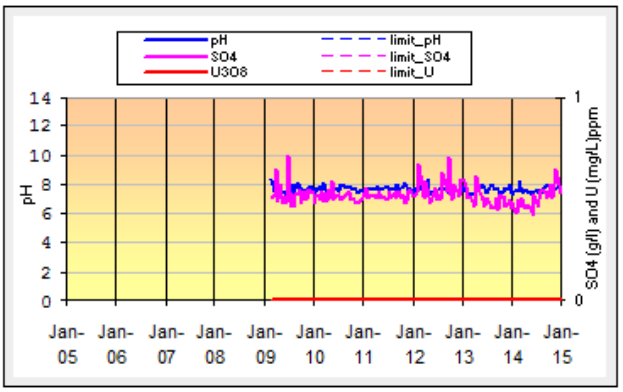

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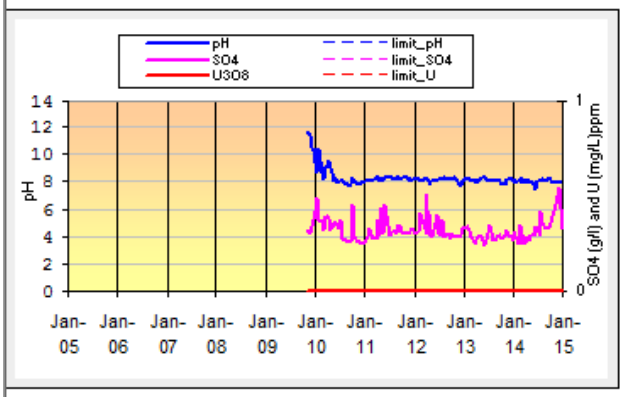

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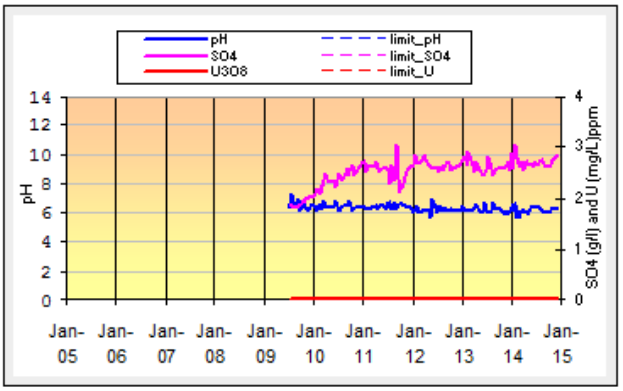

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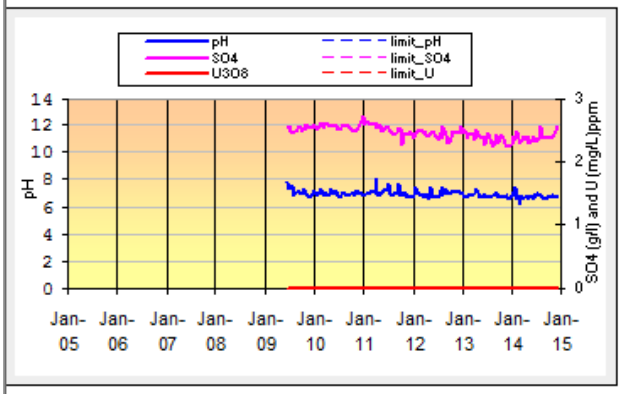

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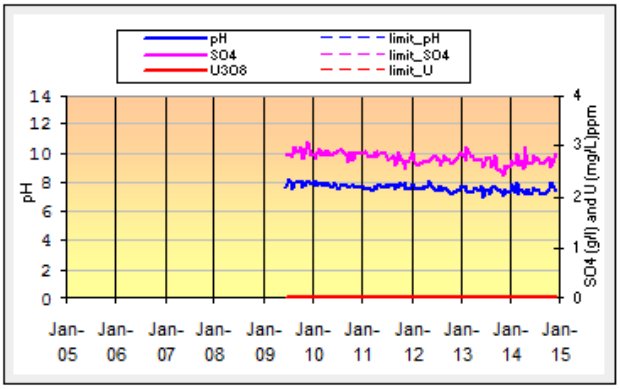

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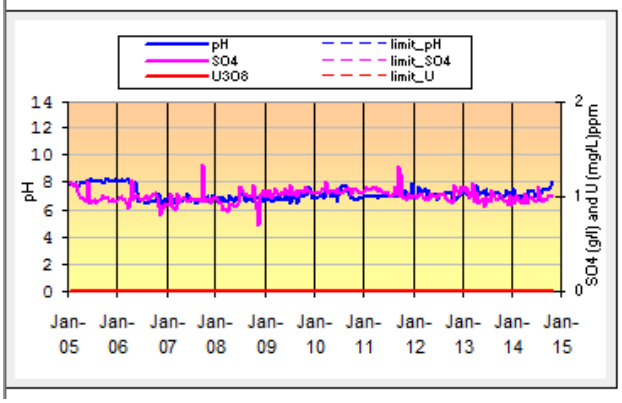

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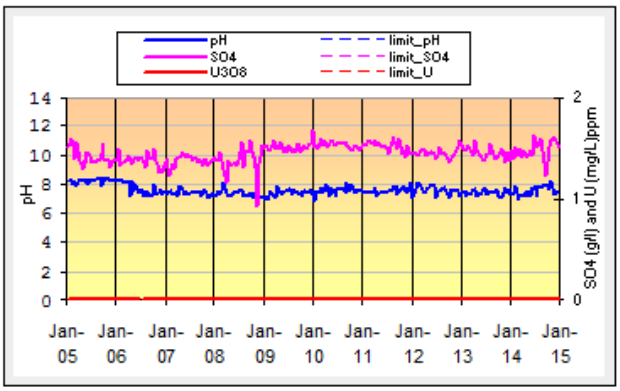
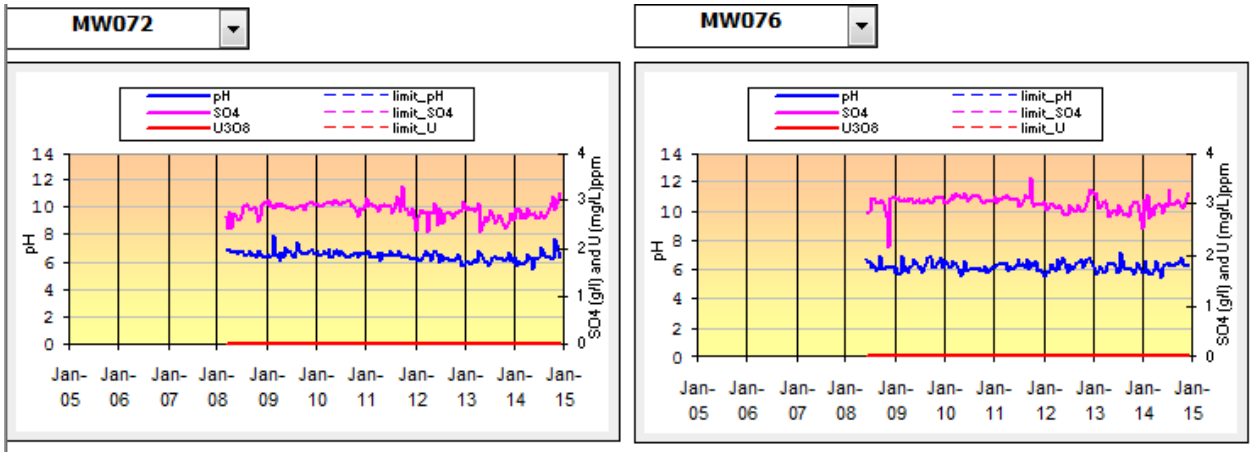


Beverley Monitor Well Water Chemistry Graphs – Namba Well Type 2 *ECLs - pH 4.5; SO_4 3.6; U_3O_8 1.0*



Beverley Monitor Well Water Chemistry Graphs – Namba Well Type 3 *ECLs - pH 4.5; SO_4 3.6; U_3O_8 1.0*

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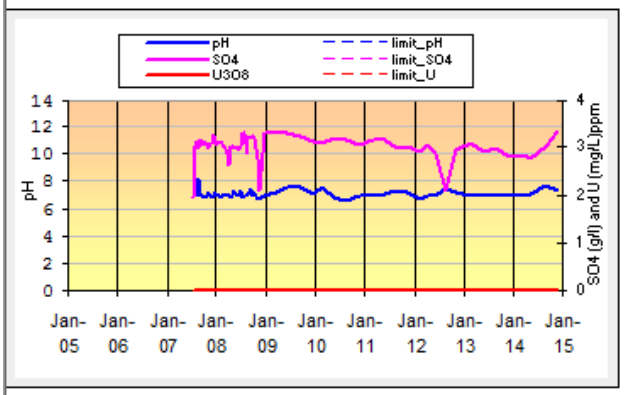

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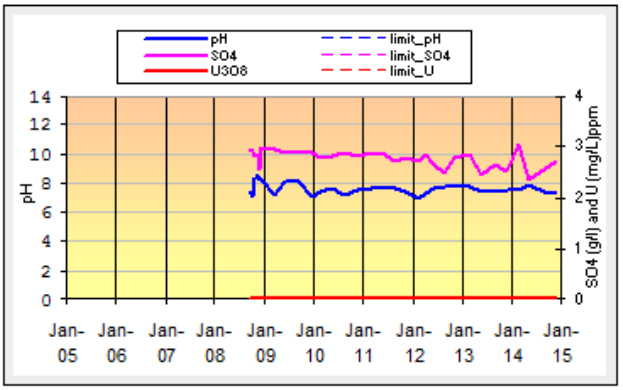

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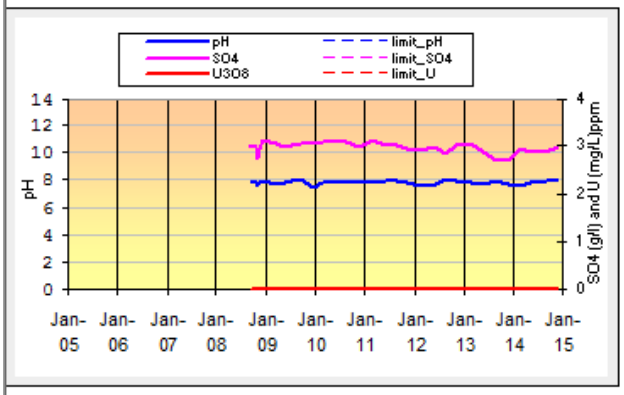

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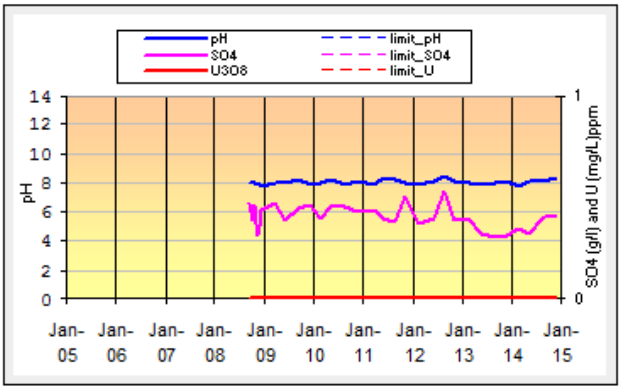

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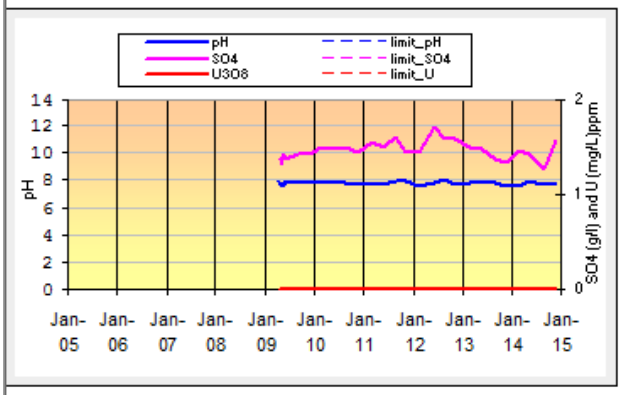

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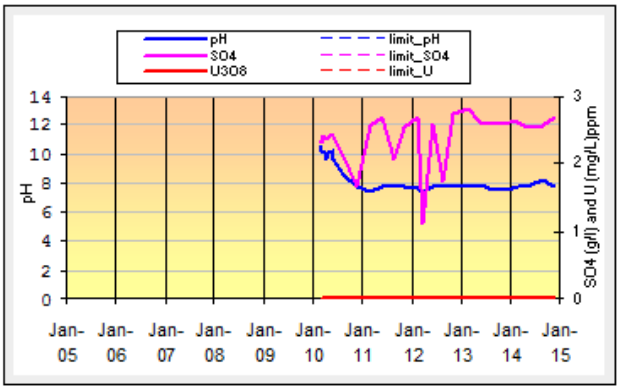

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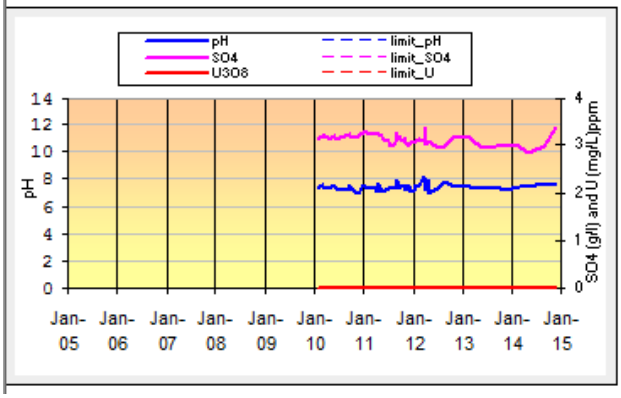

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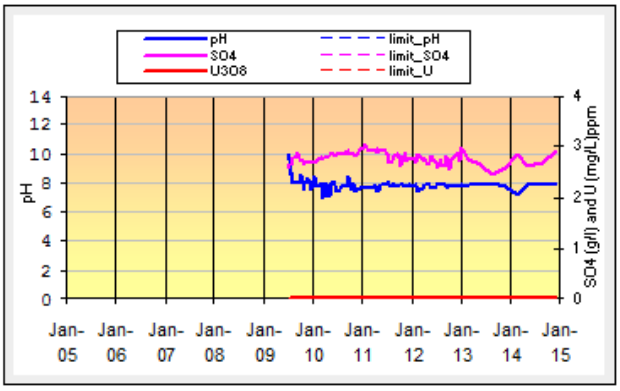
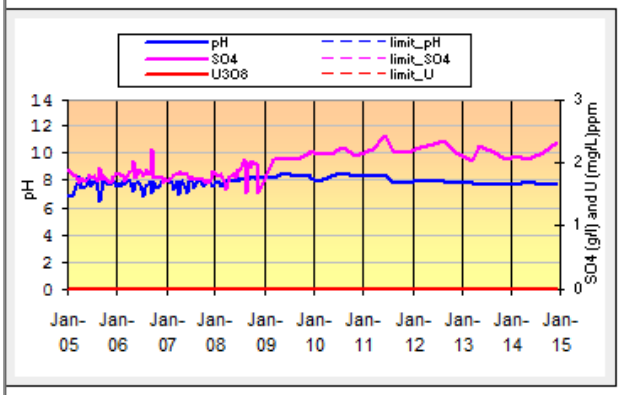


Beverley Monitor Well Water Chemistry Graphs – Namba Well Type 3 *ECLs - pH 4.5; SO_4 3.6; U_3O_8 1.0*

MW001



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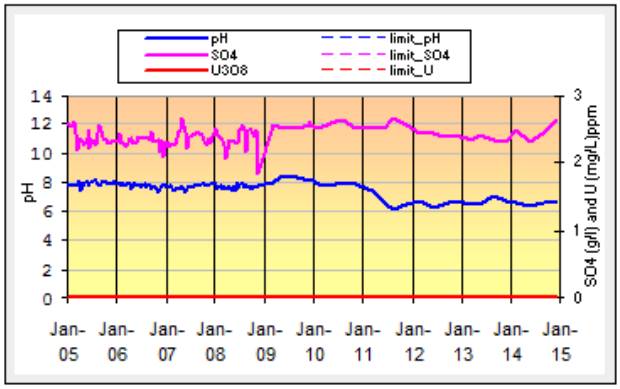

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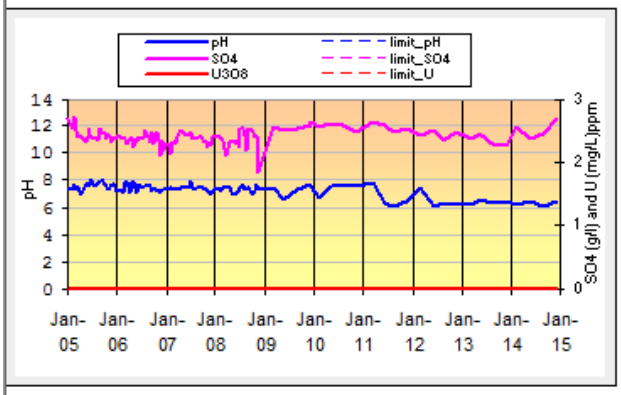

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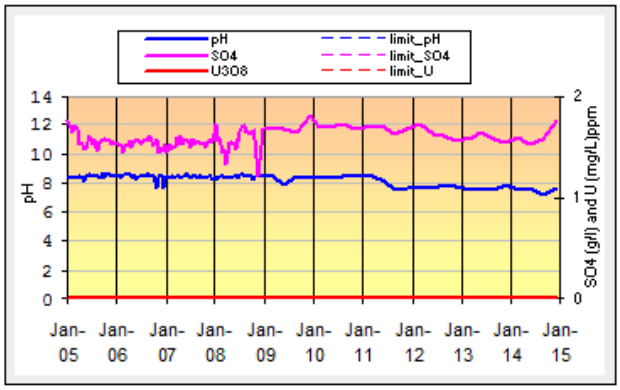

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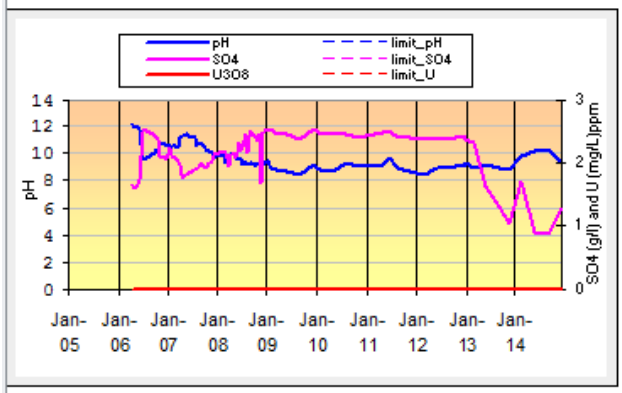

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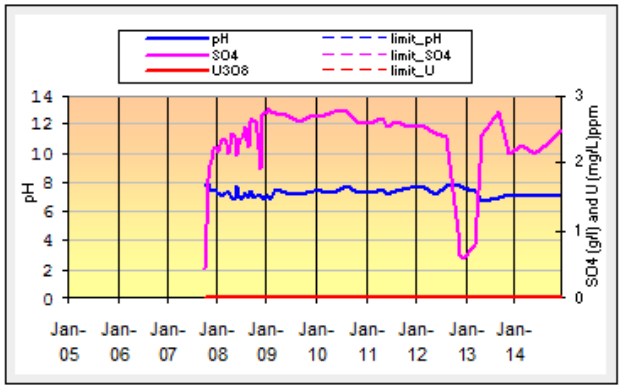

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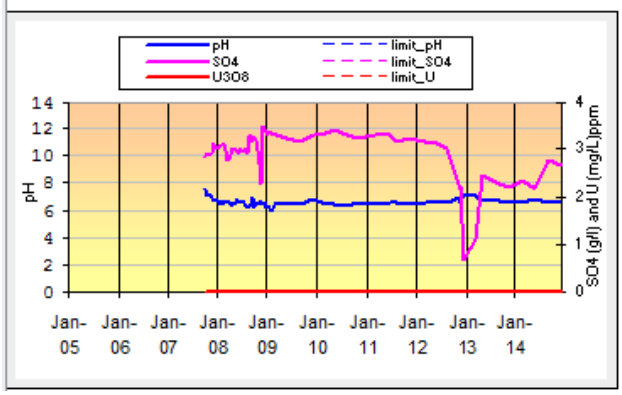

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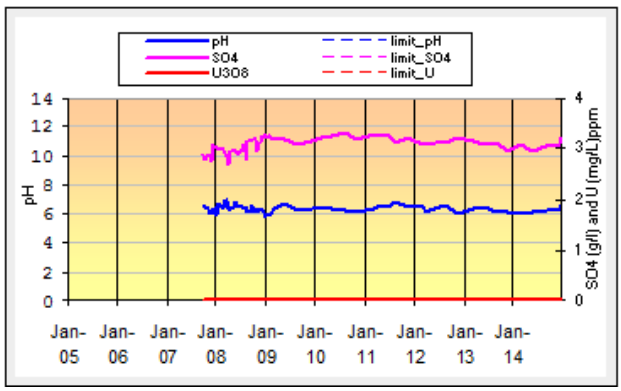
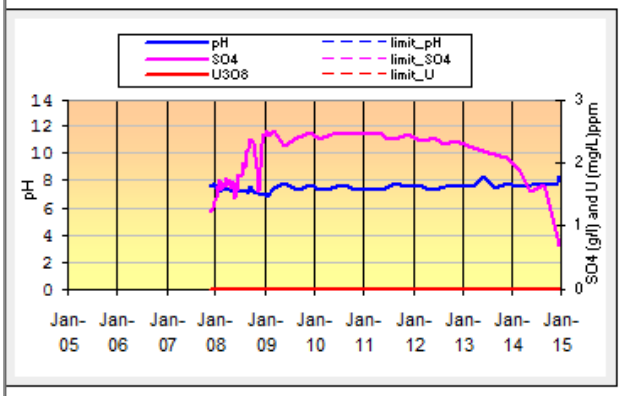


Beverley Monitor Well Water Chemistry Graphs – Namba Well Type 3 *ECLs - pH 4.5; SO_4 3.6; U_3O_8 1.0*

MW065



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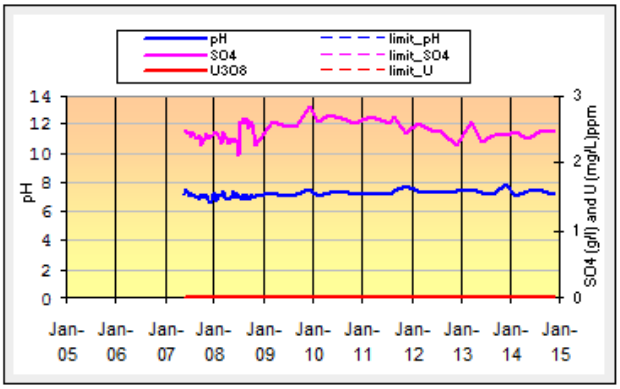
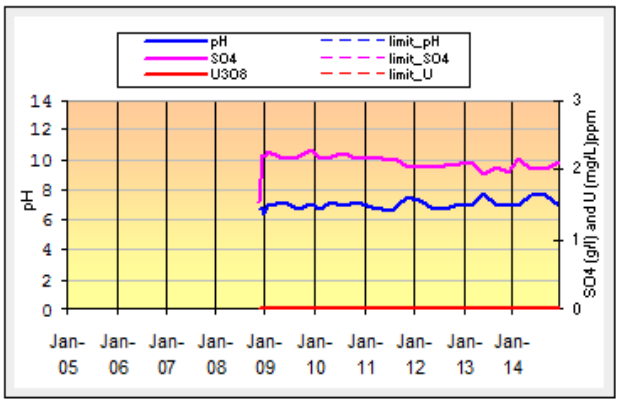
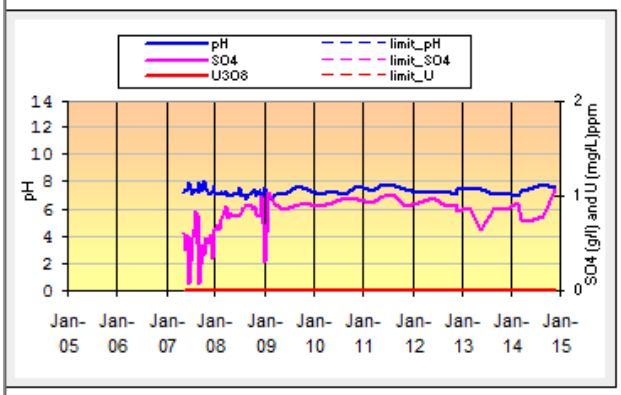


SLMW2

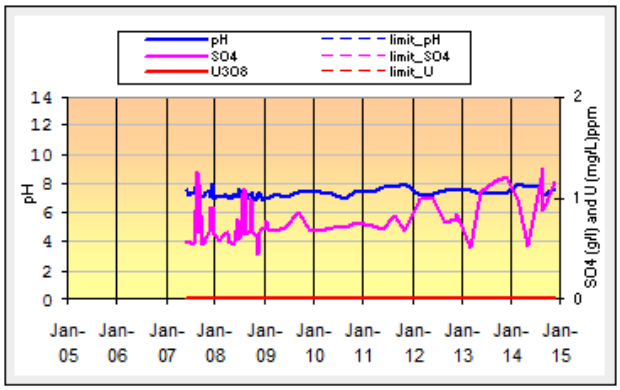


Beverley Monitor Well Water Chemistry Graphs – Willawortina Overlying – *ECLs pH 4.5; SO_4 3.6; U_3O_8 1.0*

BEOMW04



BEOMW05



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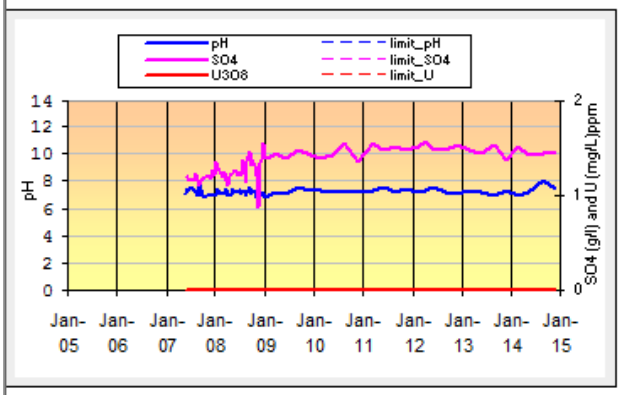

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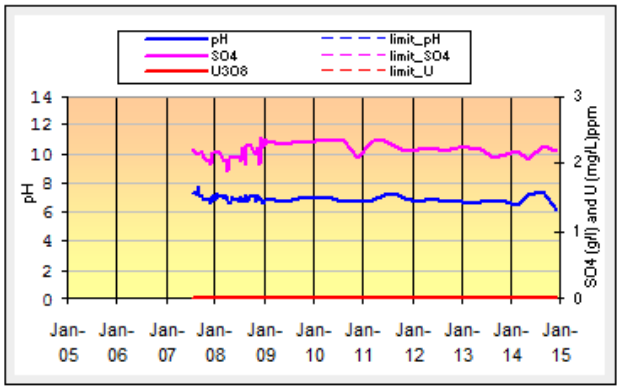

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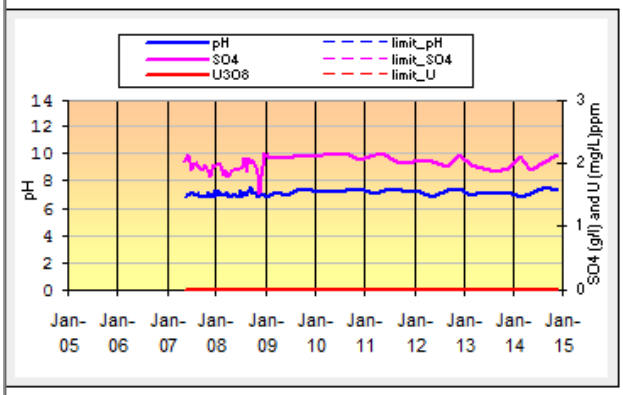

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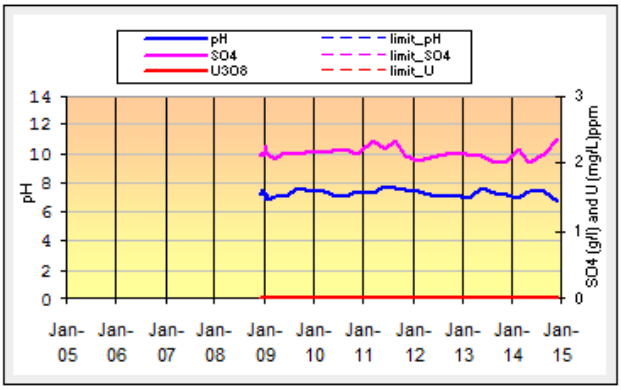

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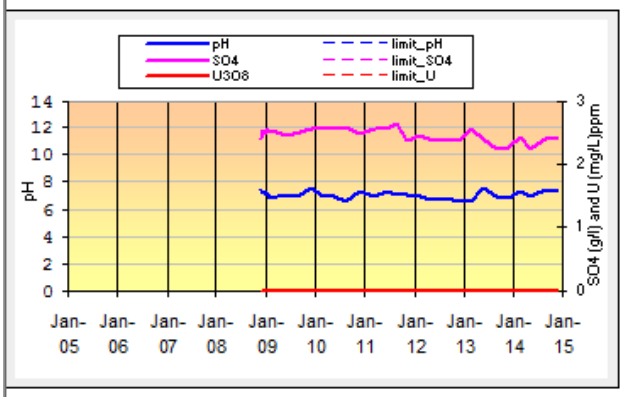

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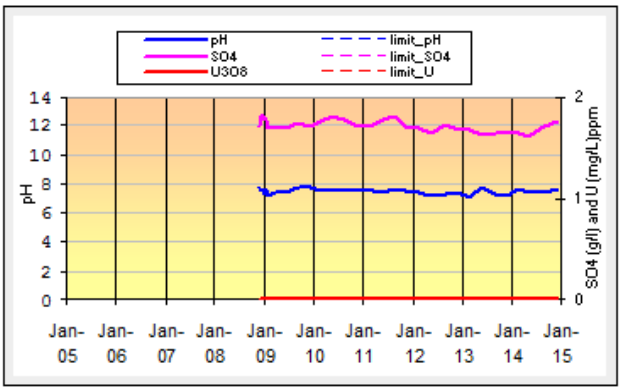
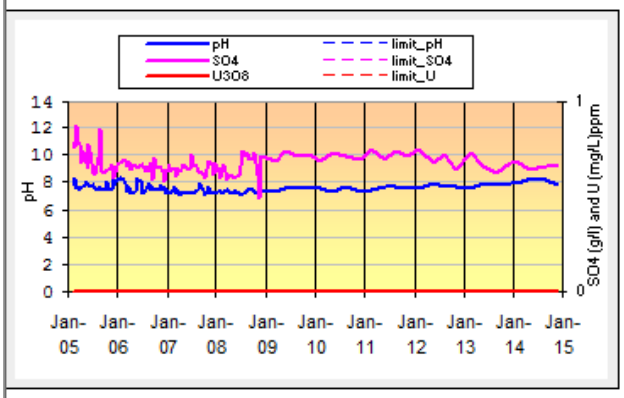
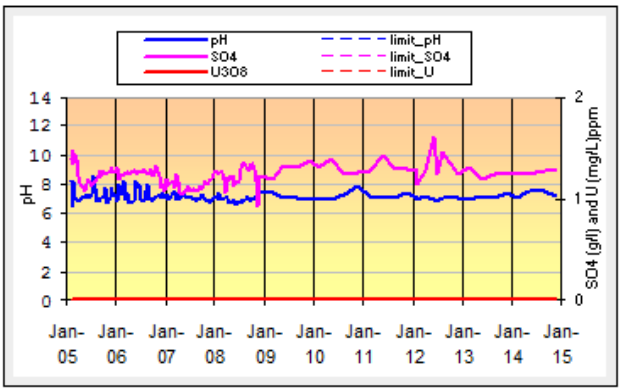


Beverley Monitor Well Water Chemistry Graphs – Willawortina Overlying – *ECLs pH 4.5; SO_4 3.6; U_3O_8 1.0*

COMW001



COMW002



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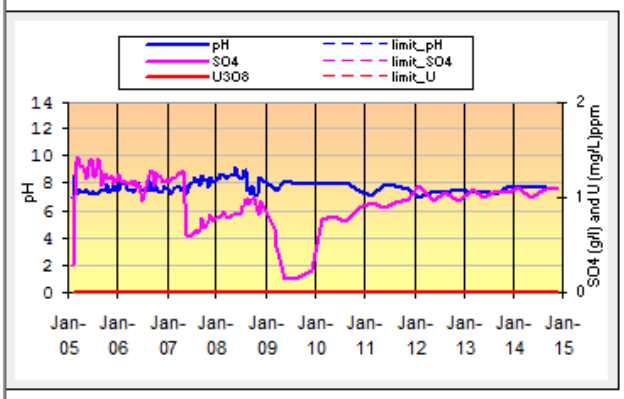
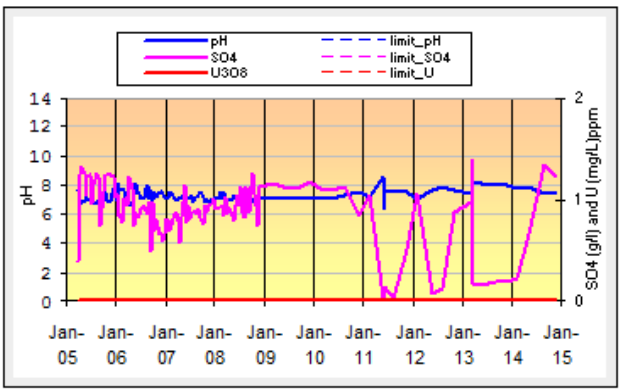


COMW004



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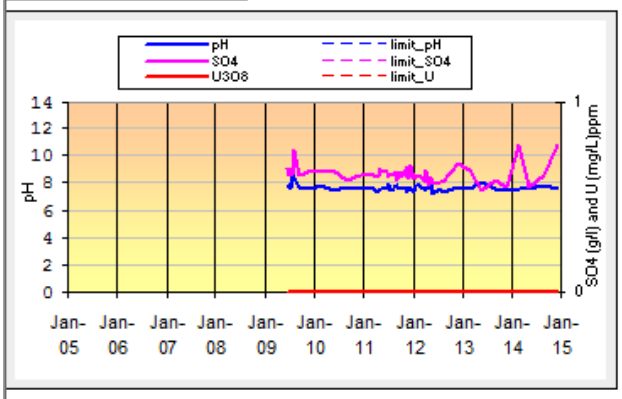

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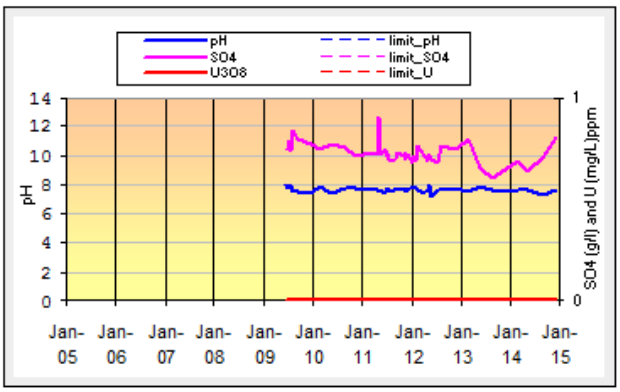

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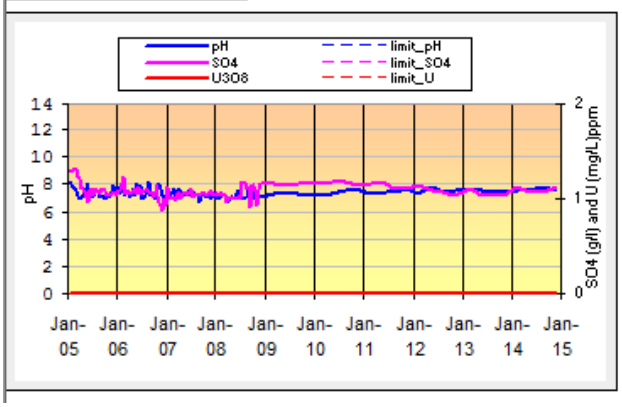

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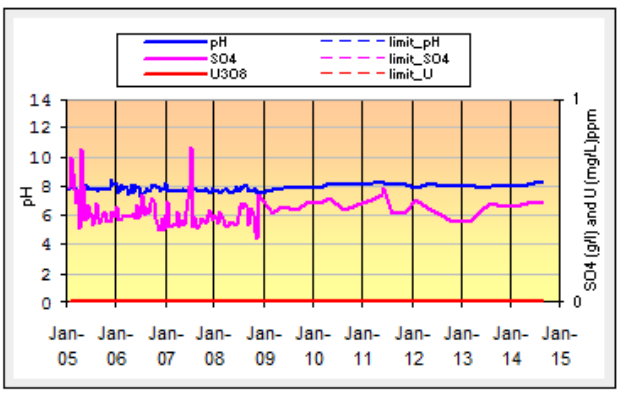
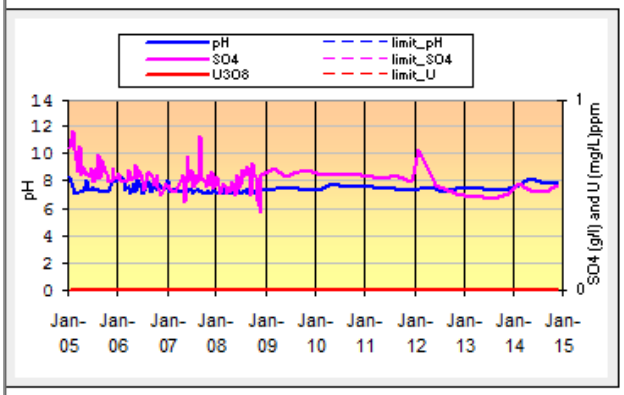
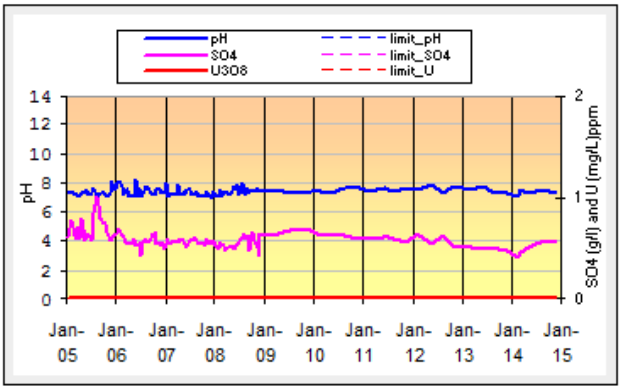


Beverley Monitor Well Water Chemistry Graphs – Willawortina Overlying – *ECLs pH 4.5; SO_4 3.6; U_3O_8 1.0*

OMW003



OMW004



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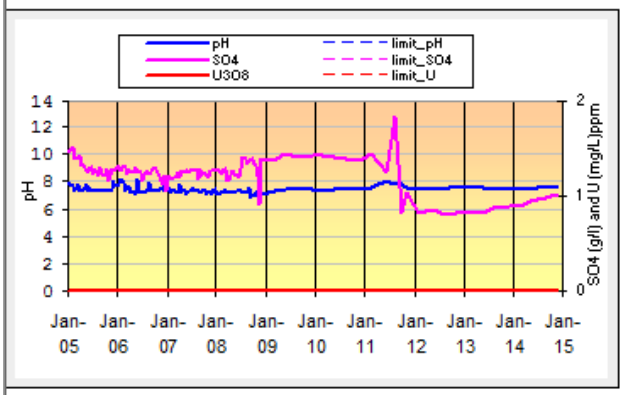

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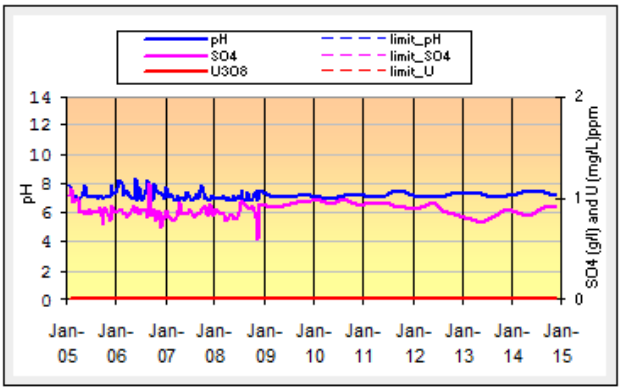

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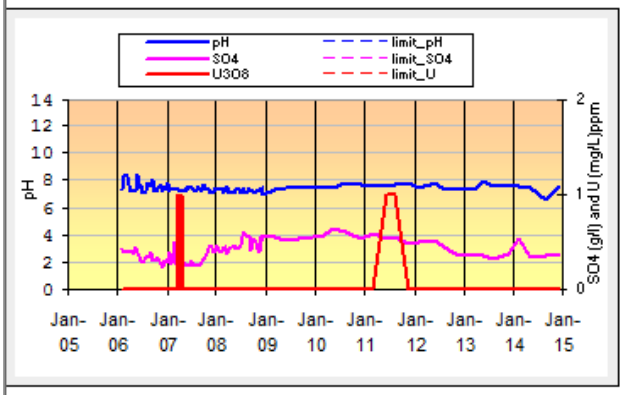

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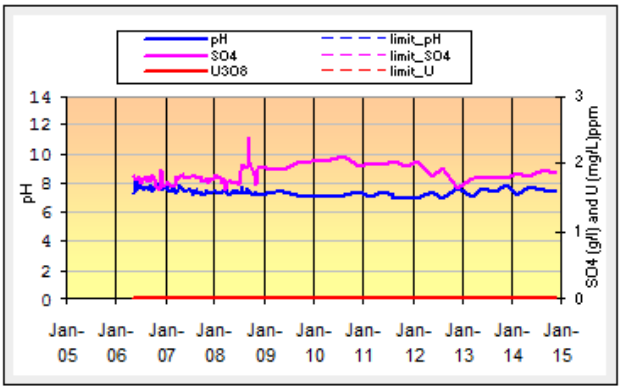

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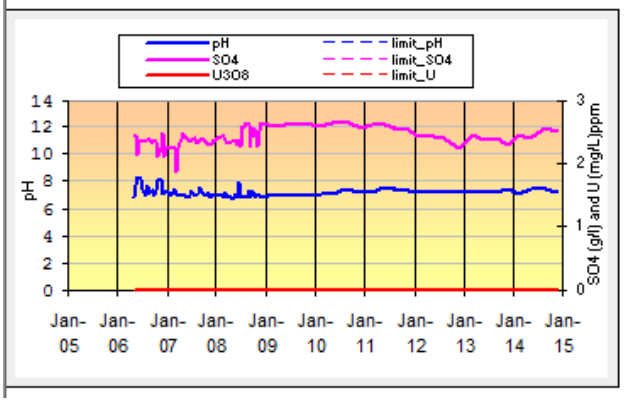

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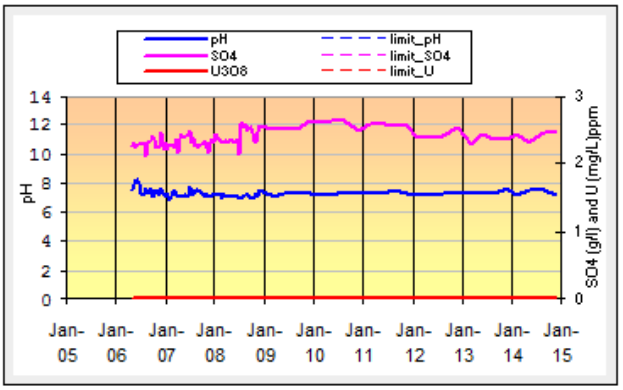
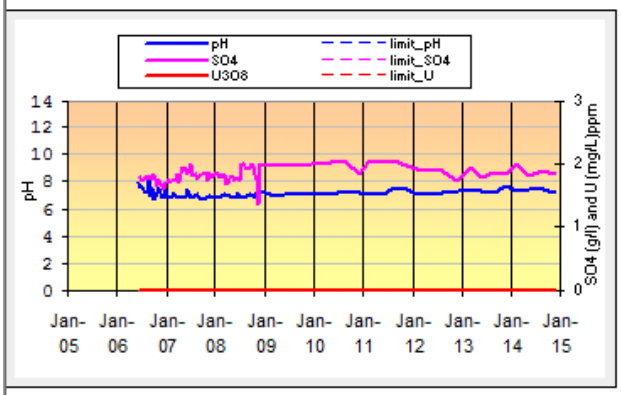


Beverley Monitor Well Water Chemistry Graphs – Willawortina Overlying – *ECLs pH 4.5; SO_4 3.6; U_3O_8 1.0*

OMW011



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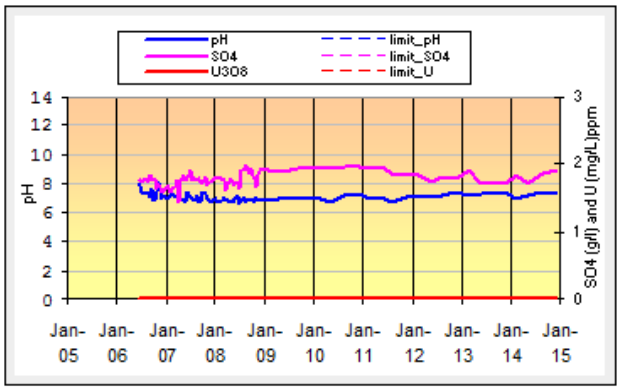

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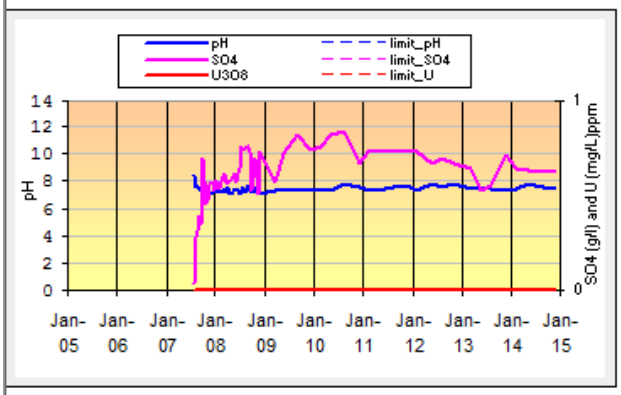

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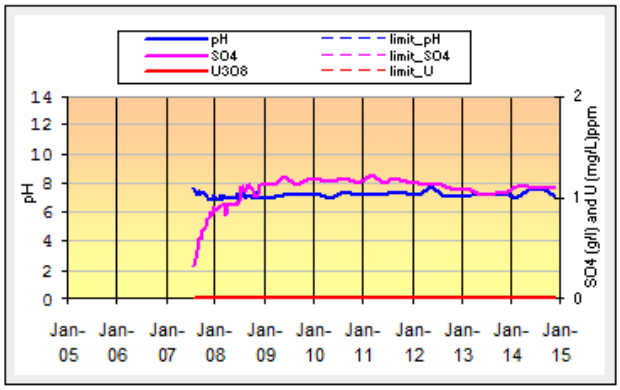

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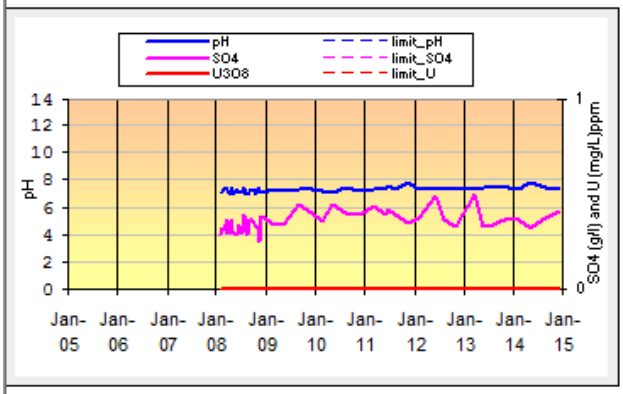

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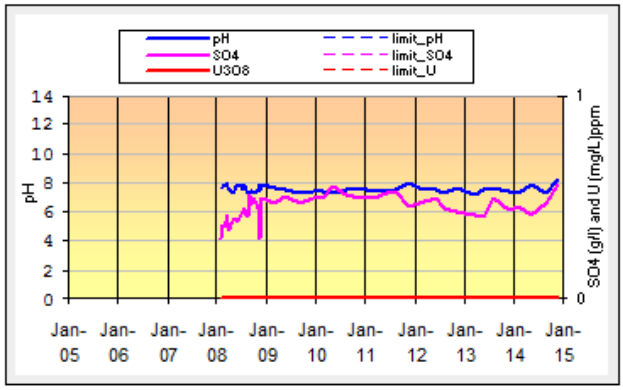

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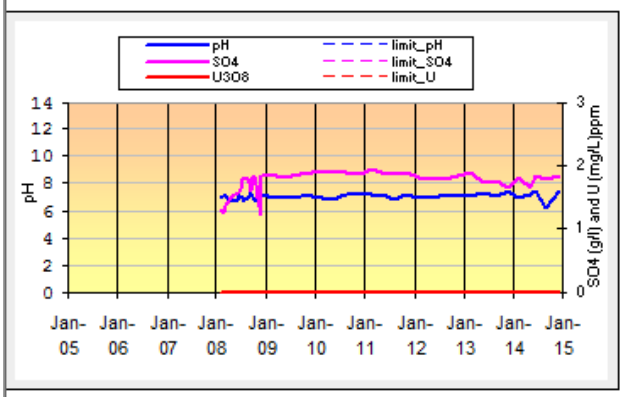

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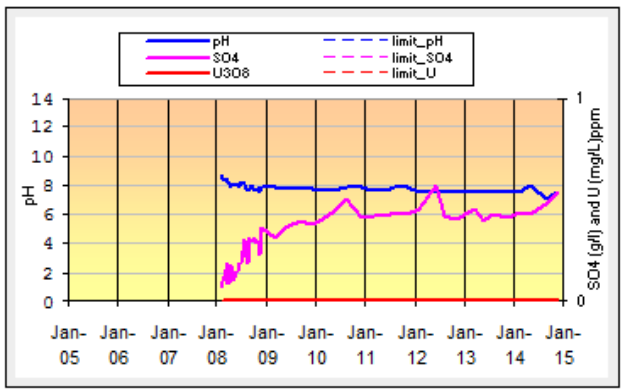
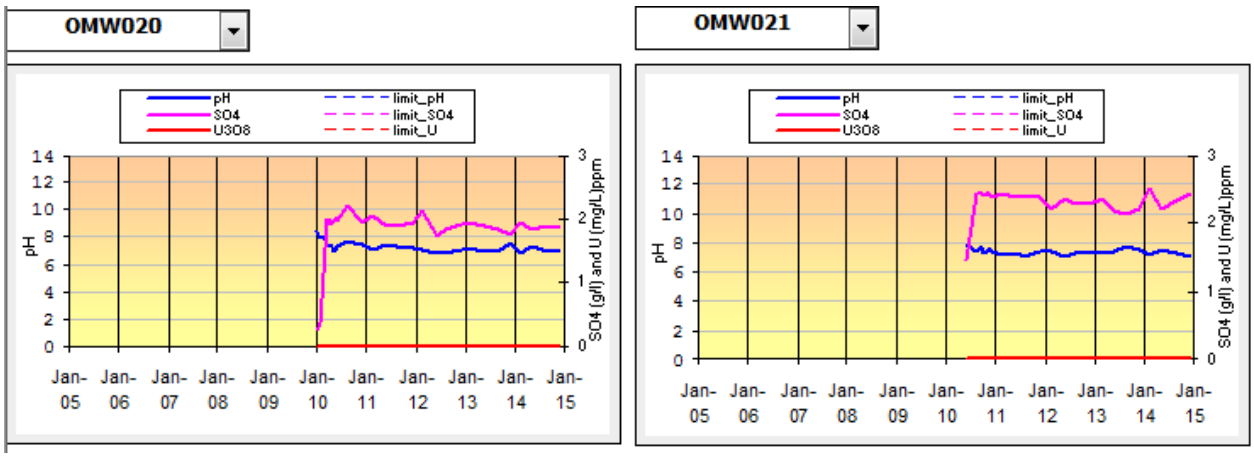


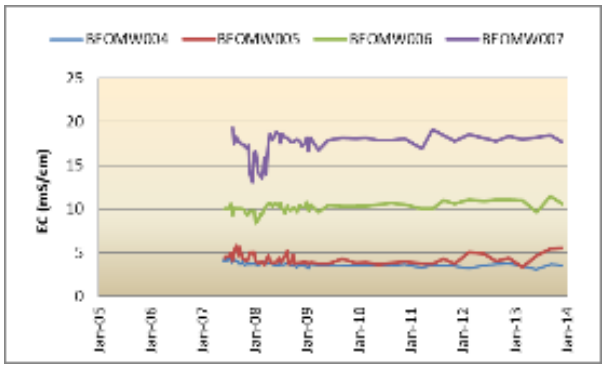
Beverley Monitor Well Water Chemistry Graphs – Willawortina Overlying – *ECLs pH 4.5; SO_4 3.6; U_3O_8 1.0*

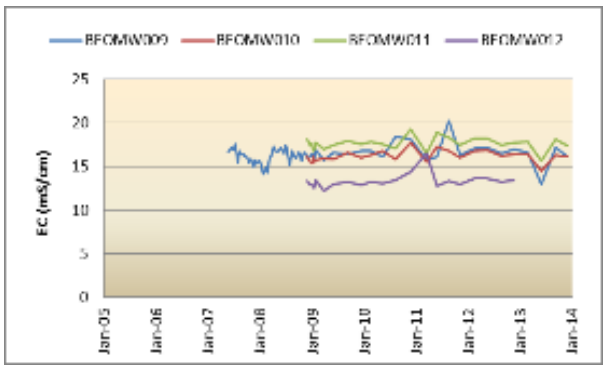


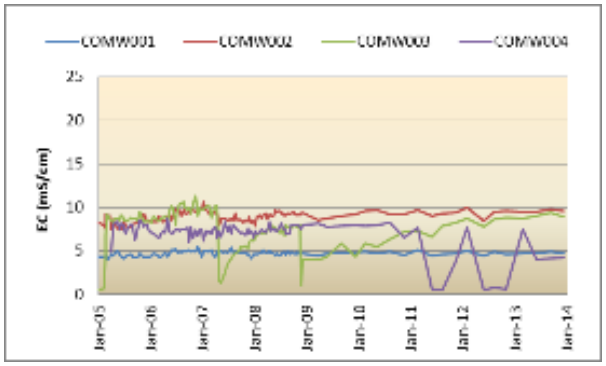
APPENDIX C

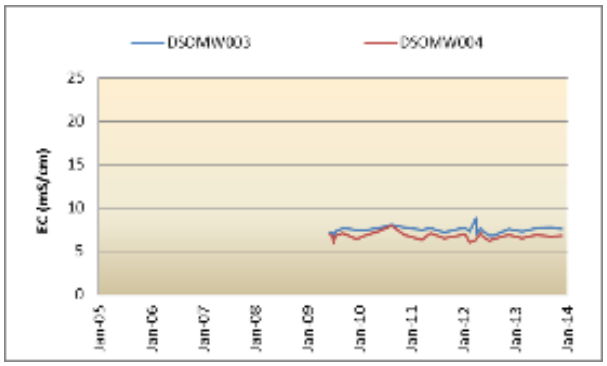
BEVERLEY ML OVERLYING MONITOR WELL EC GRAPHS – WILLAWORTINA FORMATION

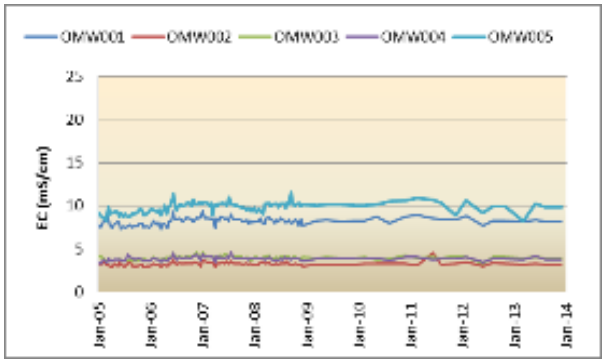
Beverley Monitor Well Conductivity – Overlying Well

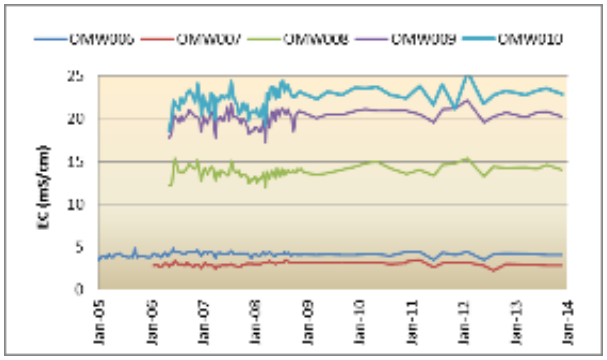


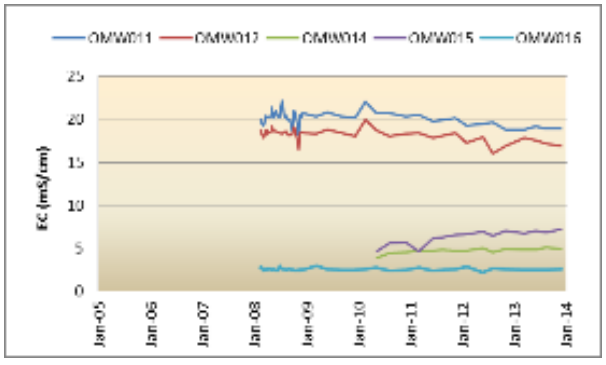


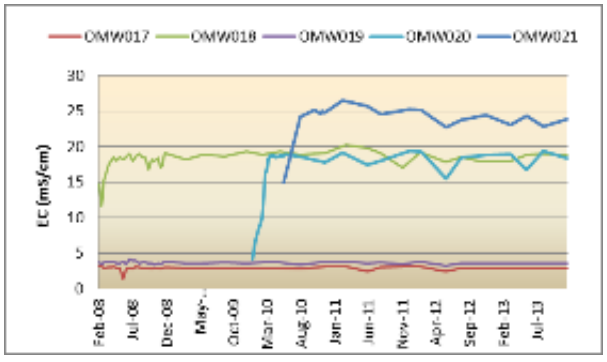












APPENDIX D

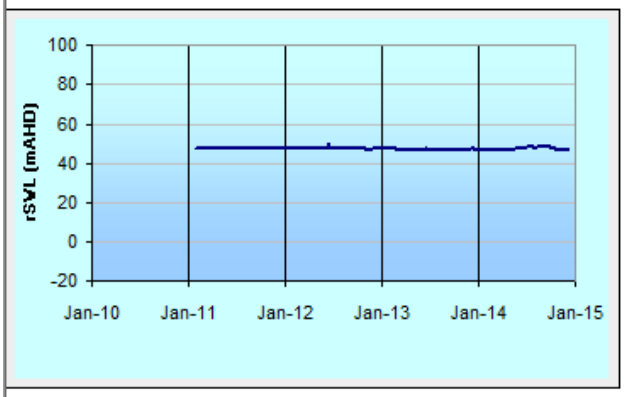
BEVERLEY NORTH ML MONITOR WELL LEVEL GRAPHS

Discussion on Anomalous Monitor Well Water Levels

There are no anomalous water levels observed in the reporting period. Pressure responses can be observed in Pepegoona West wells such at PRMW050, PRMW064, PRMW076 and PRMW077 located near Barrier Injection and/or Wellfield Extraction as part of the ongoing Wellfield Management.

Beverley North Monitor Well Water Level Graphs
Eyre Formation - Type A – Lateral Well Close to ML Boundary

PAMW003



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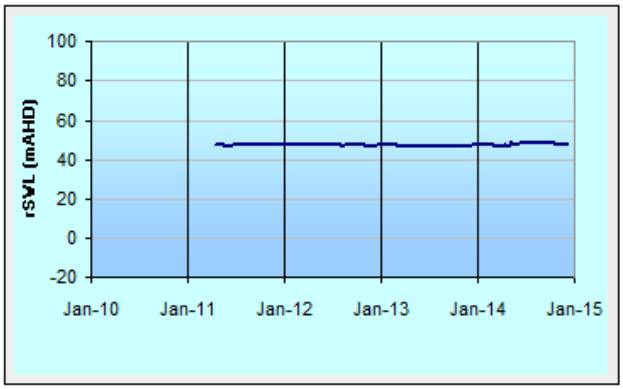

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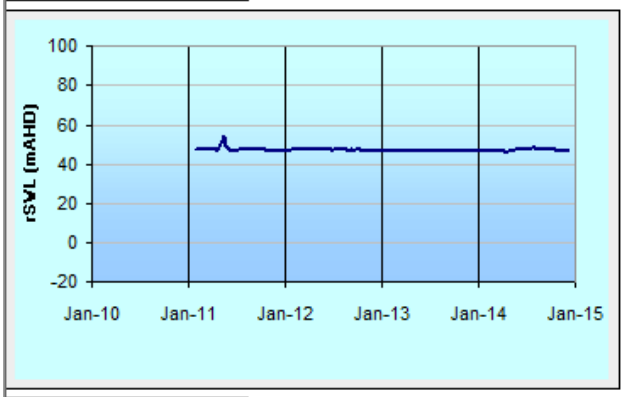

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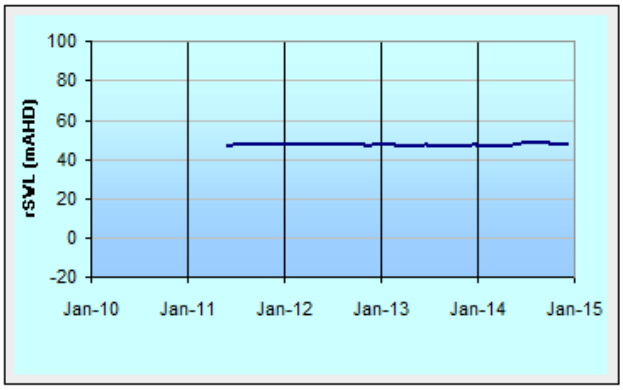

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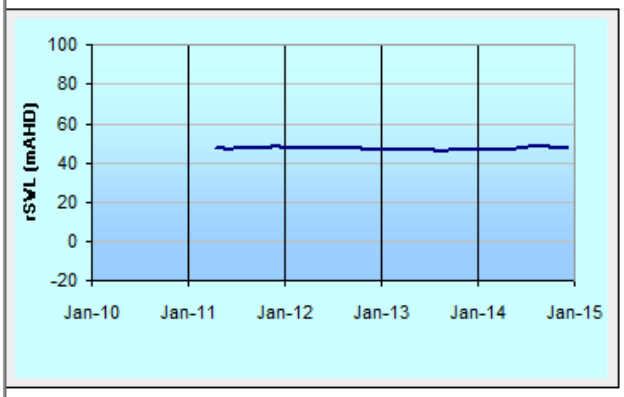

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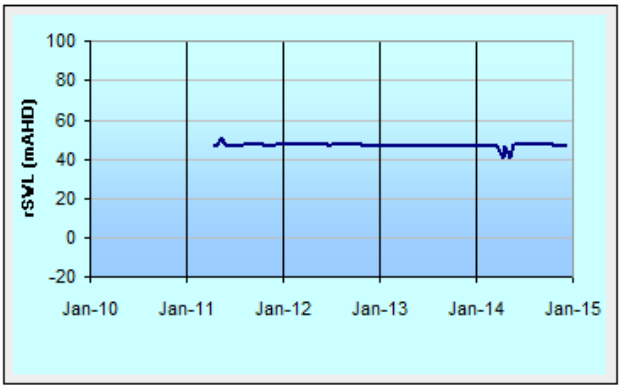

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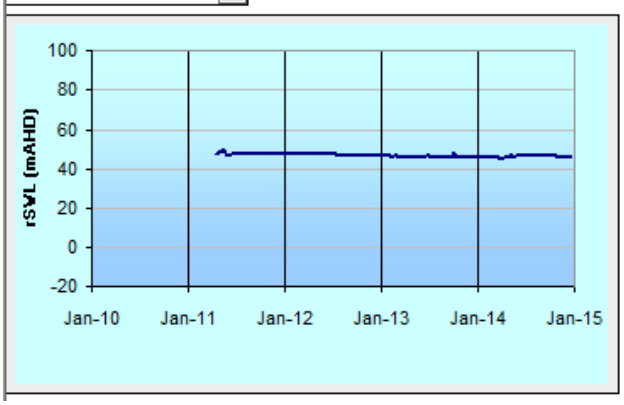

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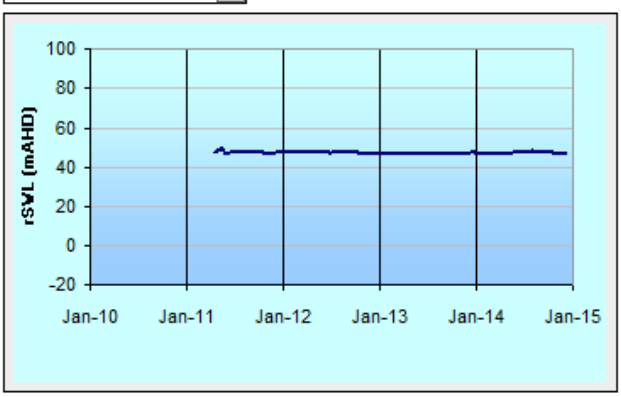
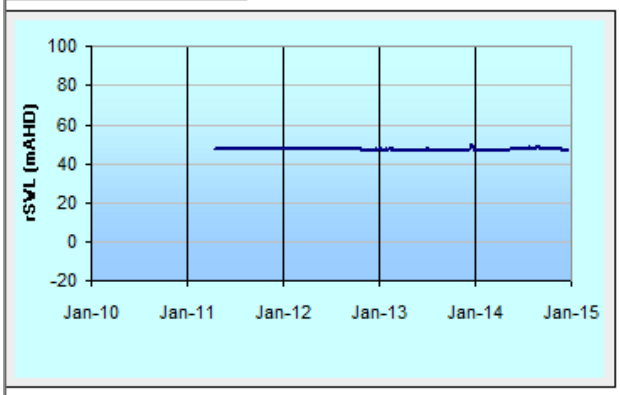


Beverley North Monitor Well Water Level Graphs
Eyre Formation - Type A – Lateral Well Close to ML Boundary

PAMW012



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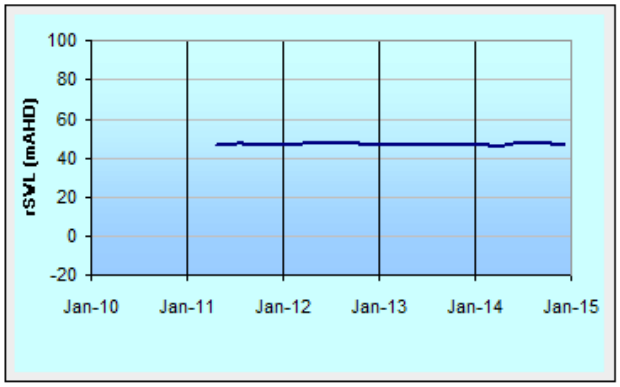

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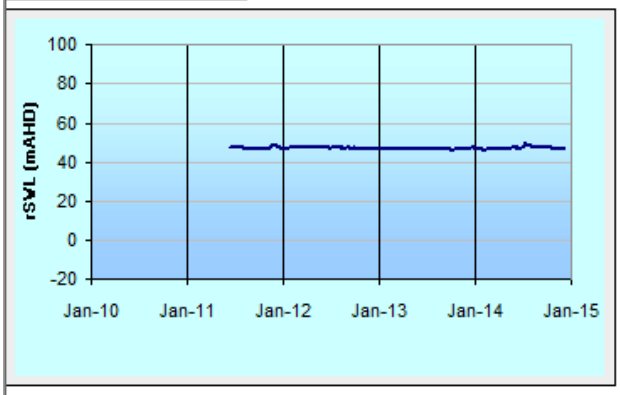

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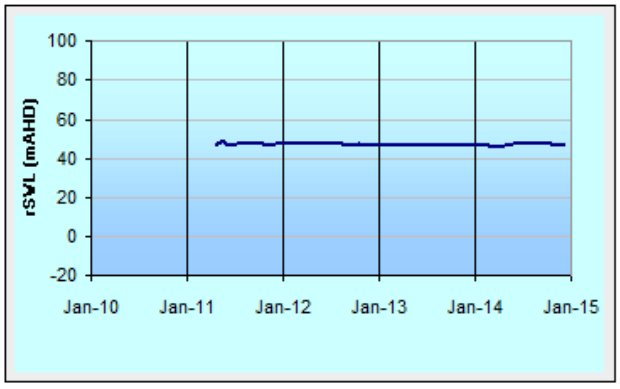

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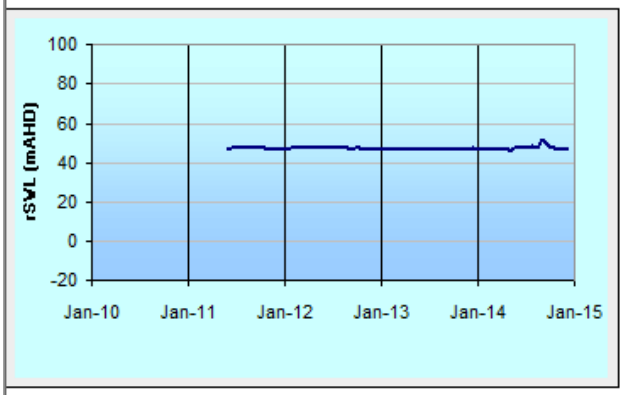

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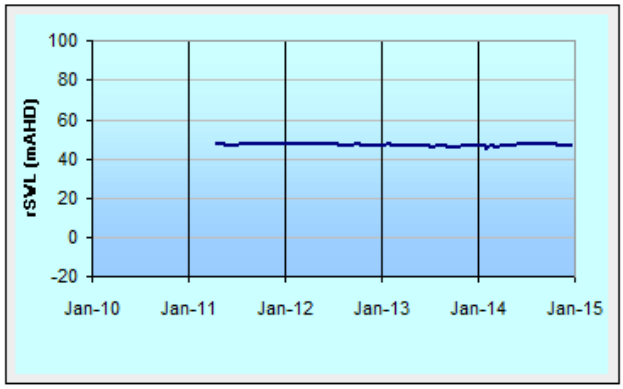

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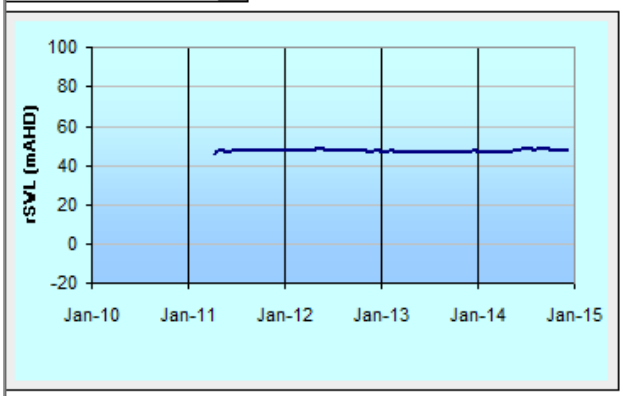

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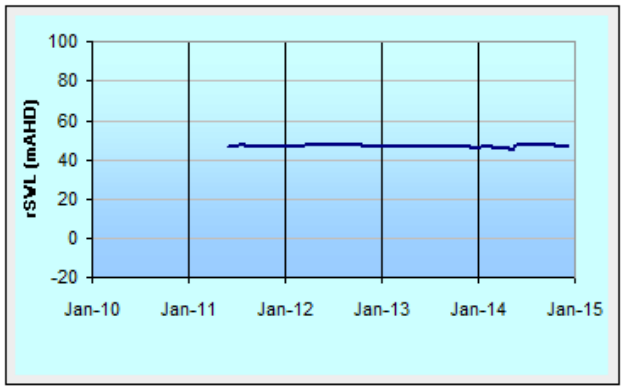
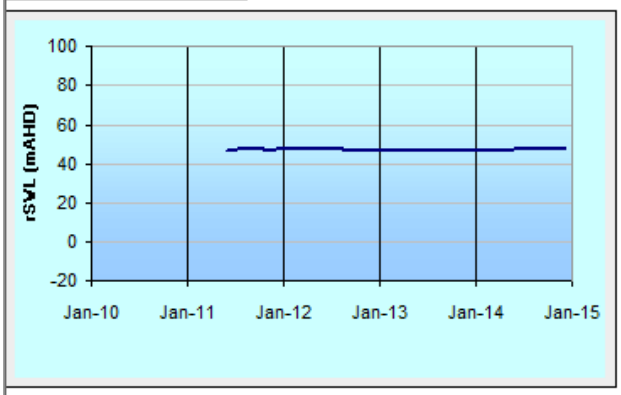


Beverley North Monitor Well Water Level Graphs
Eyre Formation - Type A – Lateral Well Close to ML Boundary

PAMW022



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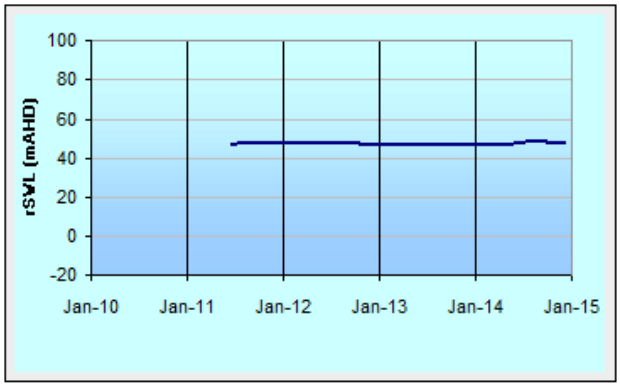

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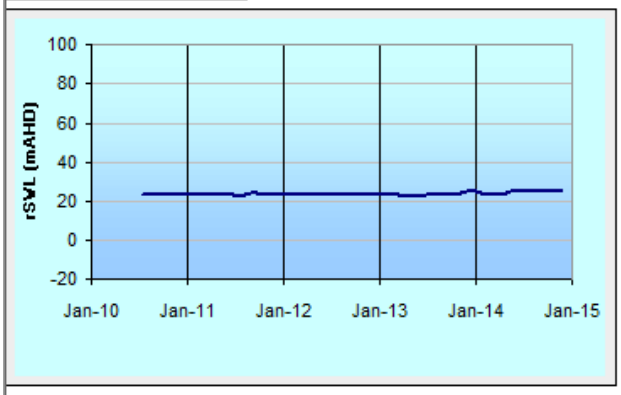

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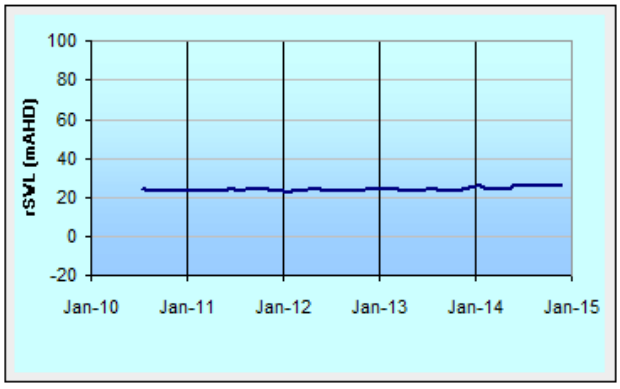

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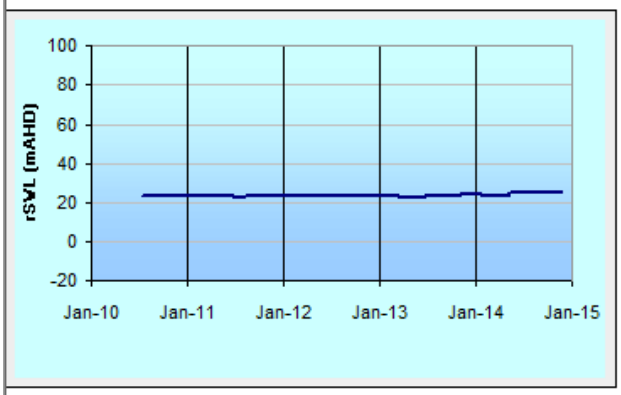

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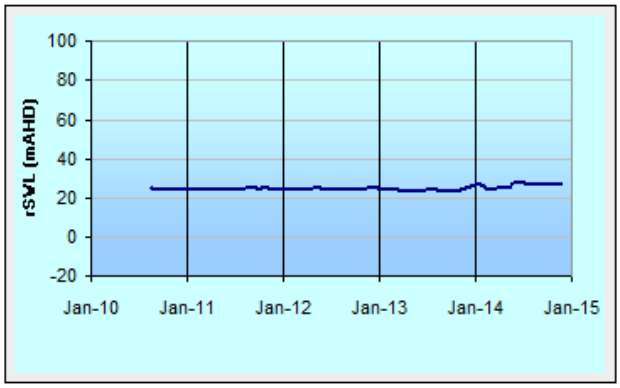

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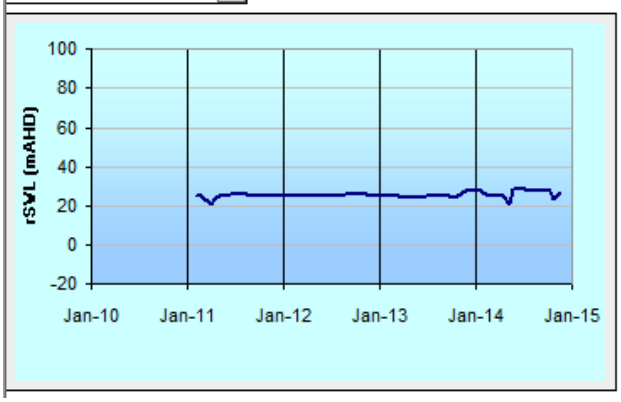

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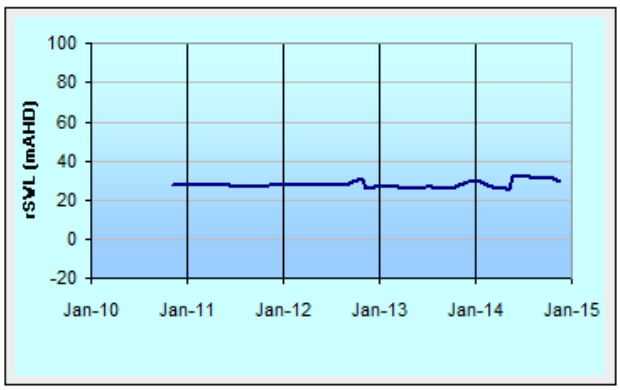
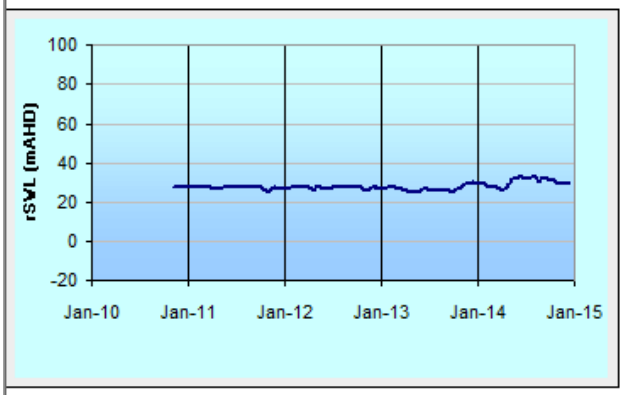


Beverley North Monitor Well Water Level Graphs
Eyre Formation - Type A – Lateral Well Close to ML Boundary

PRMW046



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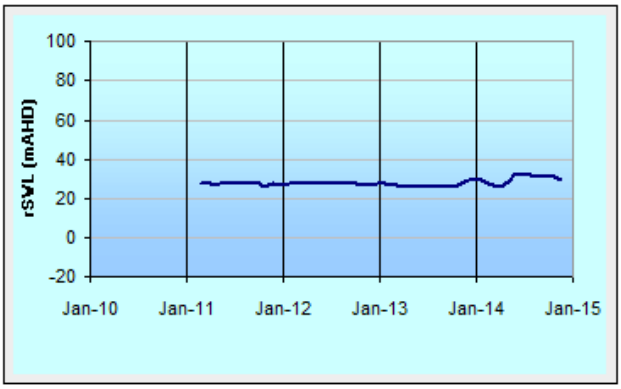

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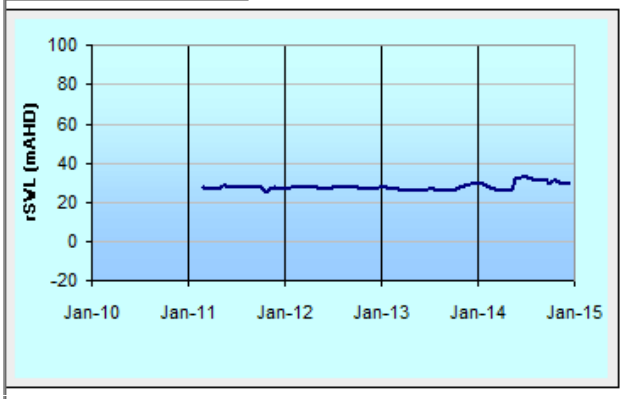

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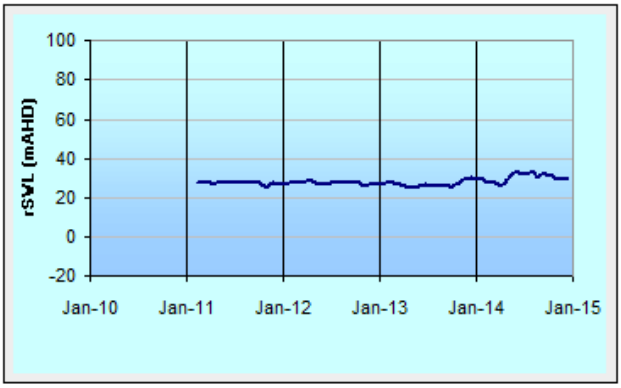

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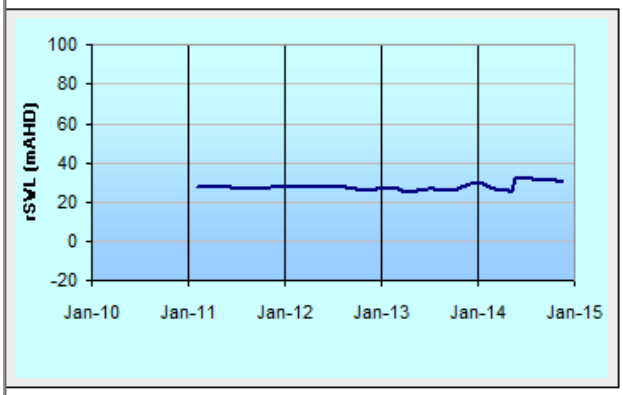

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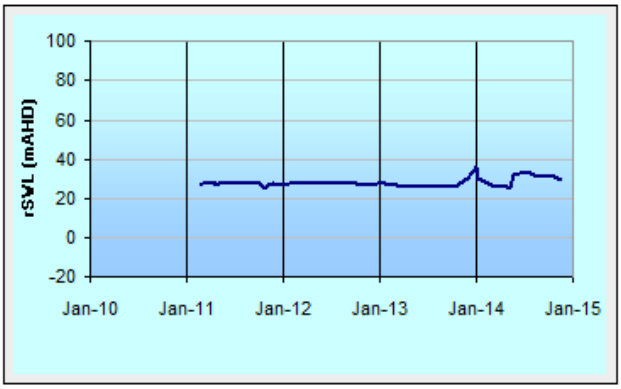

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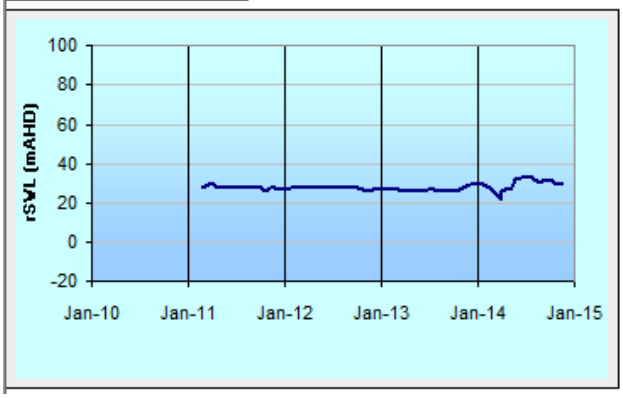

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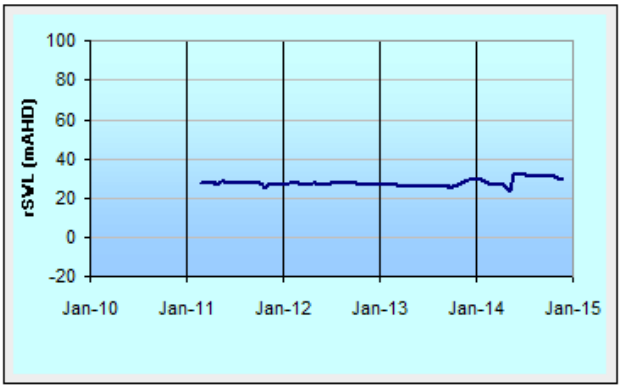
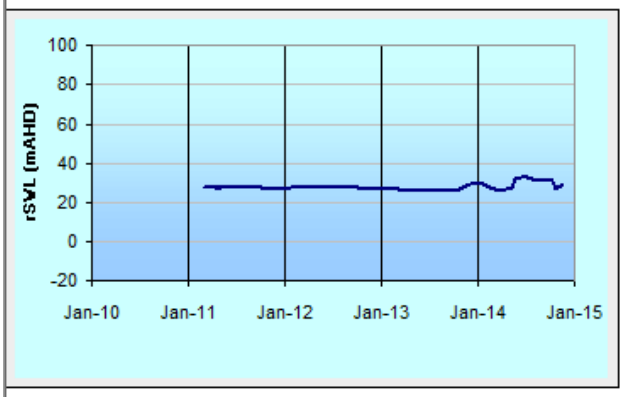


Beverley North Monitor Well Water Level Graphs
Eyre Formation - Type A – Lateral Well Close to ML Boundary

PRMW057



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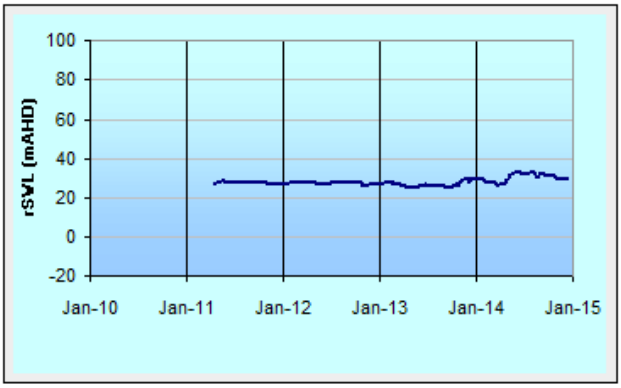

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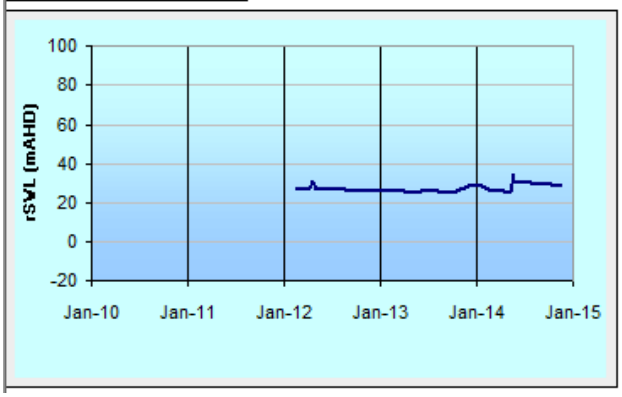
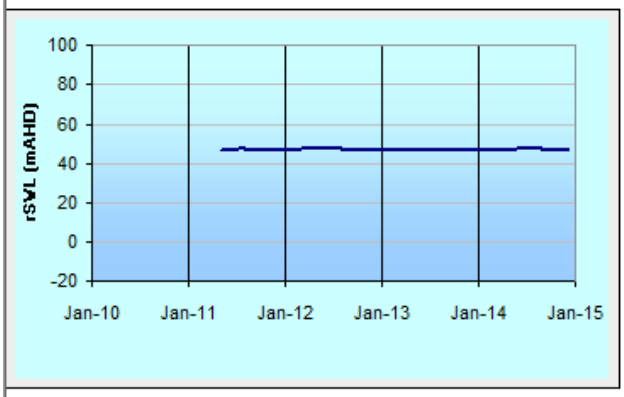


Beverley North Monitor Well Water Level Graphs – Eyre Lateral Well – Type B

PAMW018



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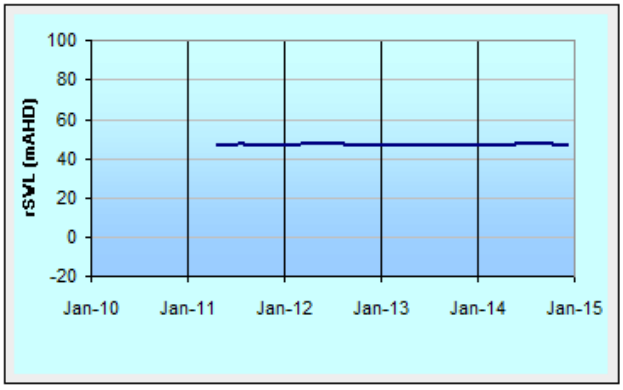

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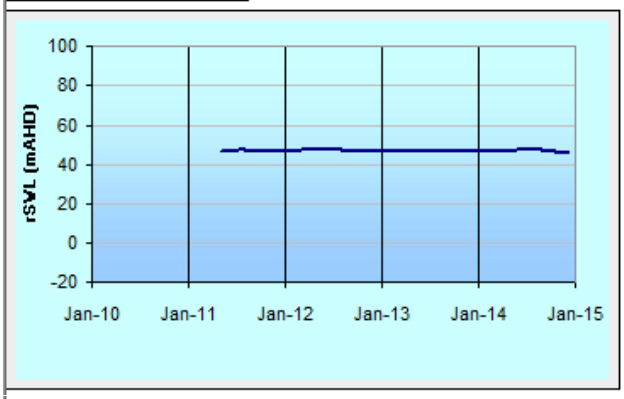

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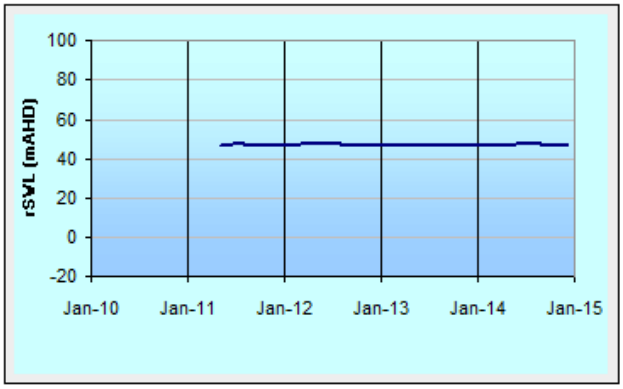

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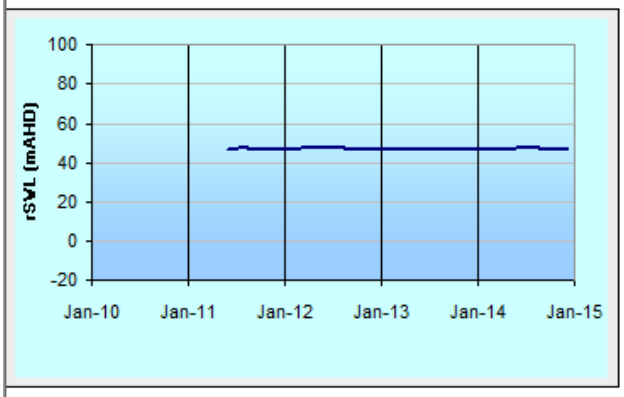

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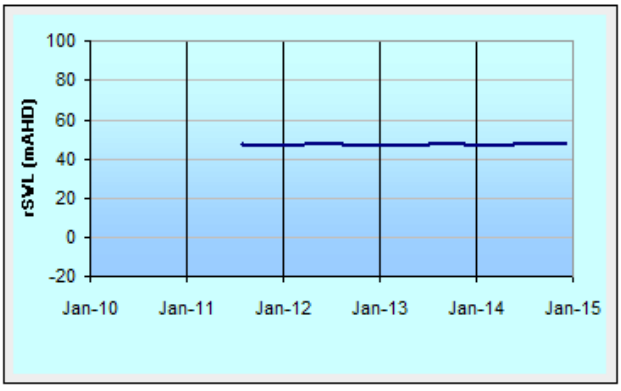

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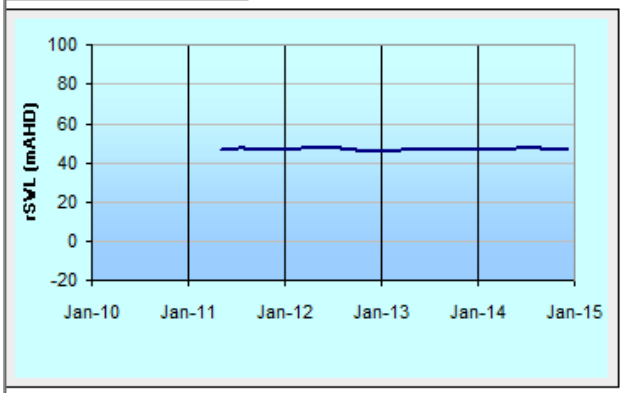

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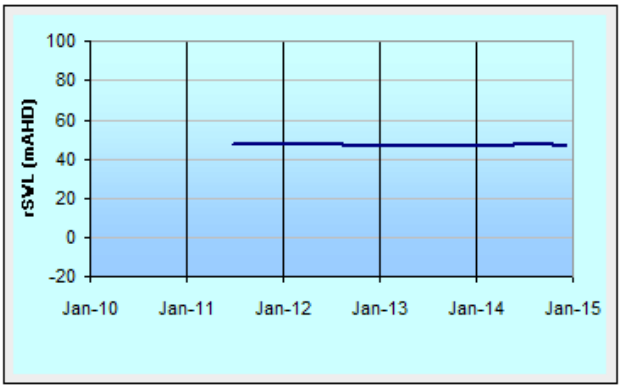
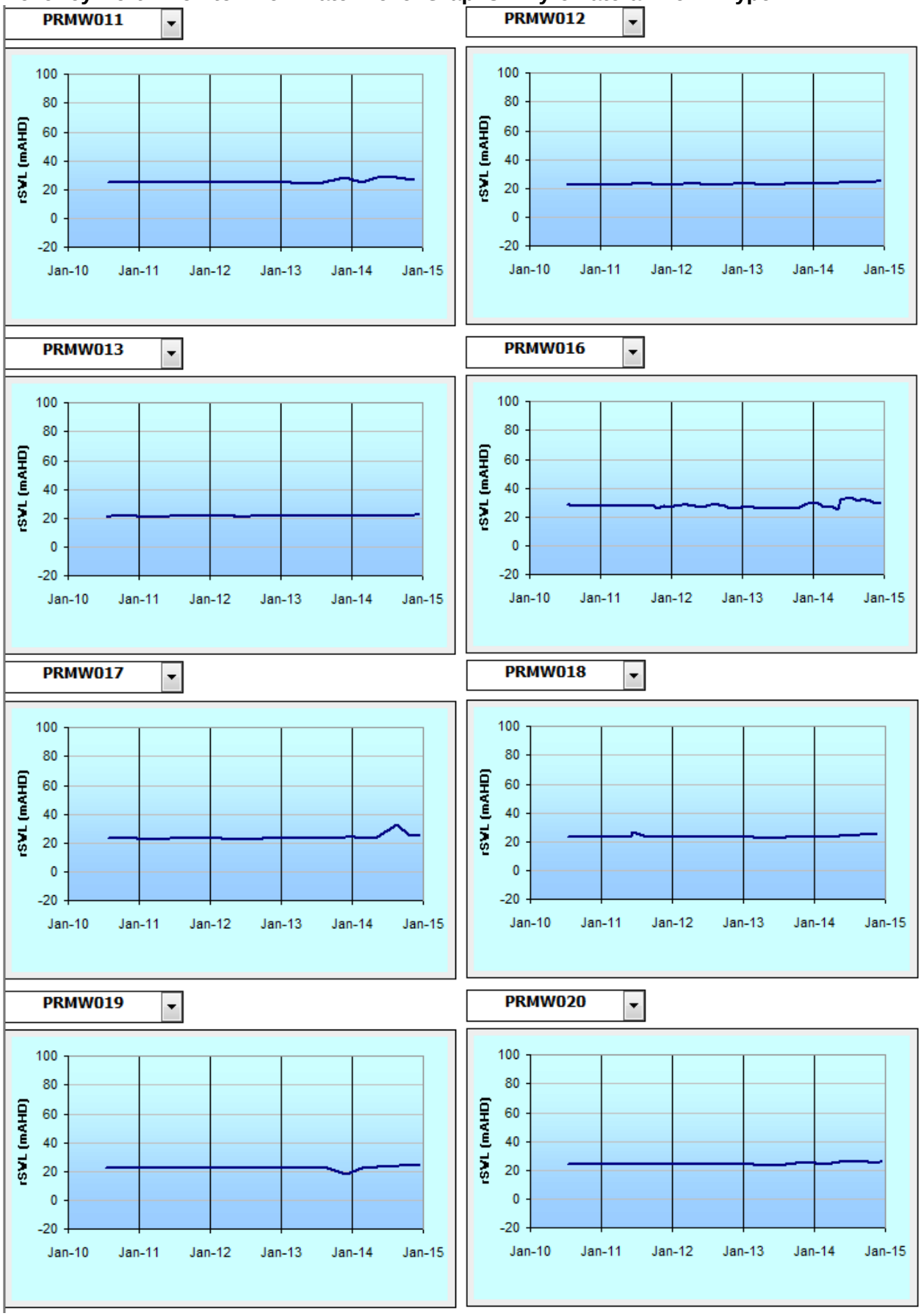
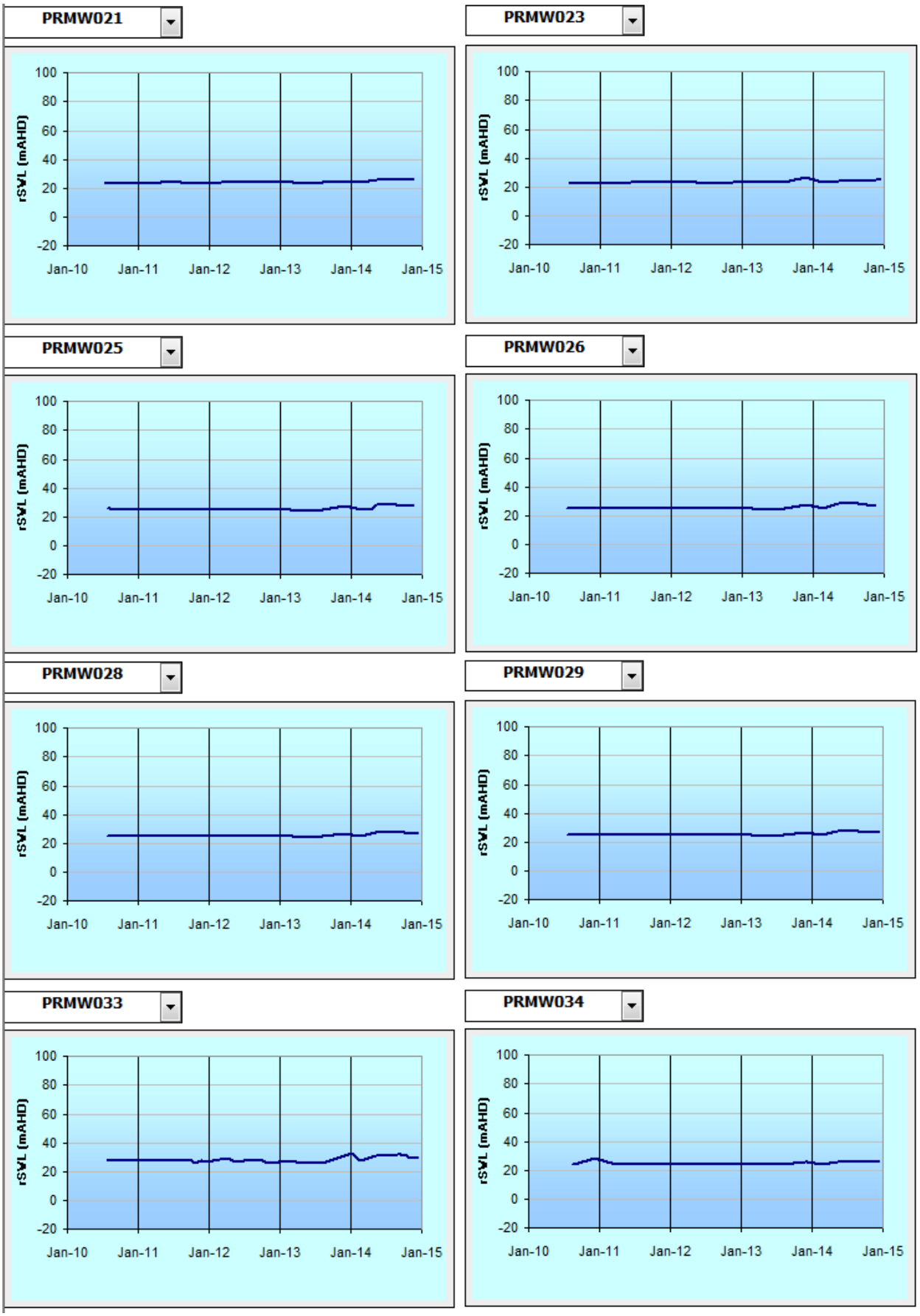


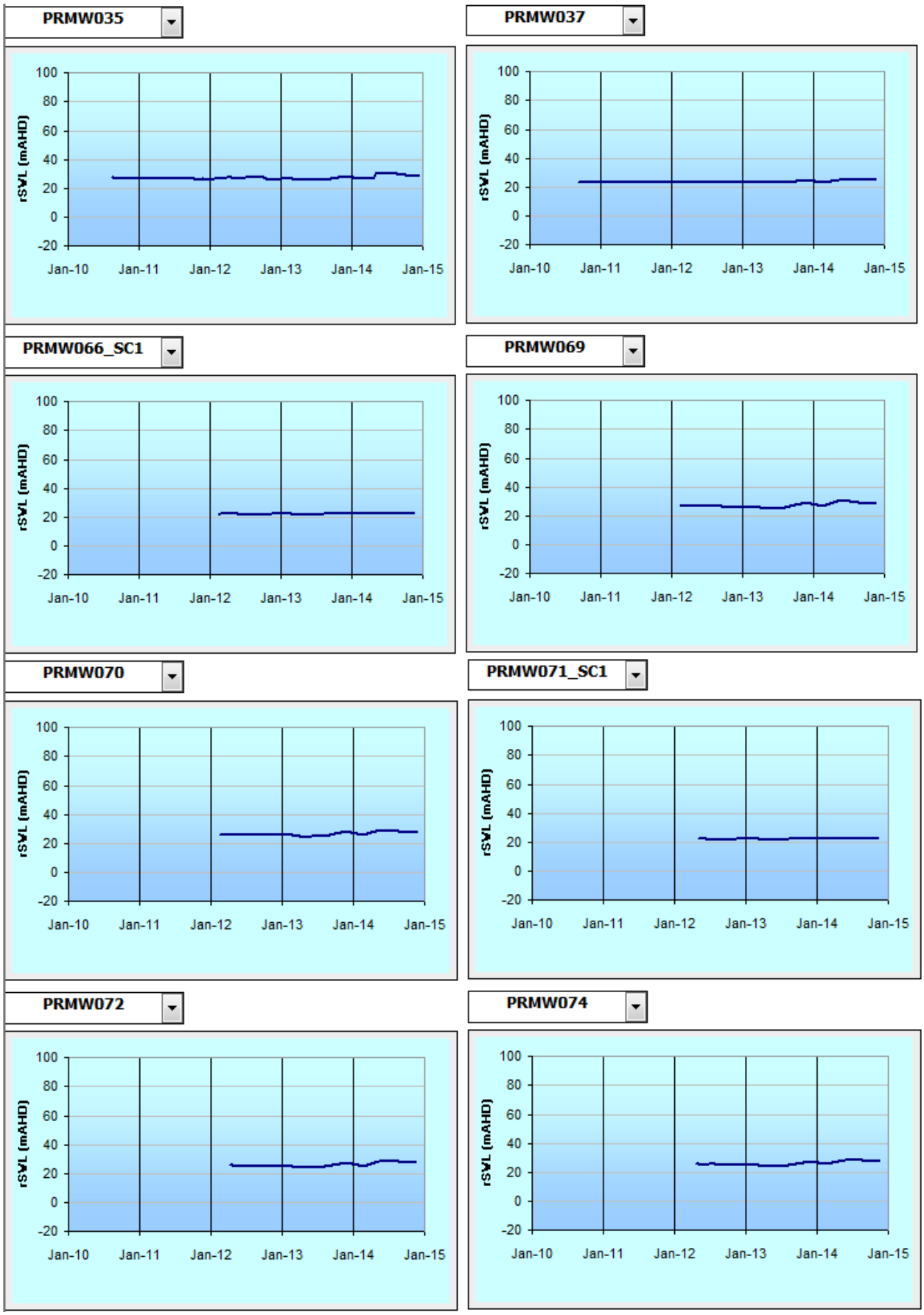
Beverley North Monitor Well Water Level Graphs – Eyre Lateral Well – Type B



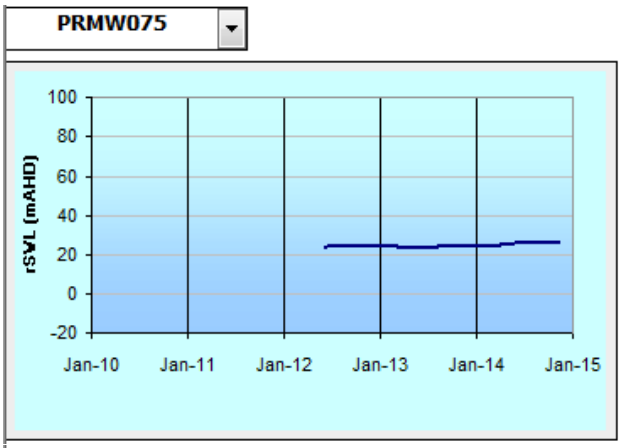
Beverley North Monitor Well Water Level Graphs – Eyre Lateral Well – Type B



Beverley North Monitor Well Water Level Graphs – Eyre Lateral Well – Type B



Beverley North Monitor Well Water Level Graphs – Eyre Lateral Well – Type B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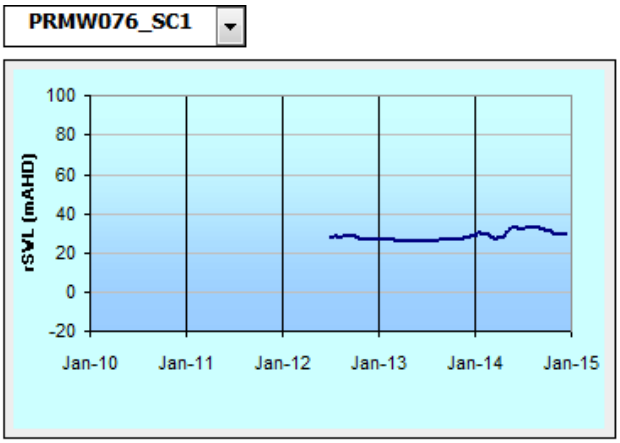
80
60
40
20
0
-20
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15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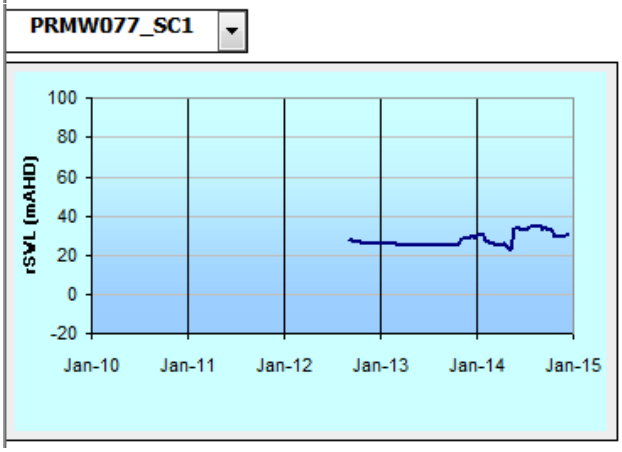
-20
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15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rSWL (mAHD)
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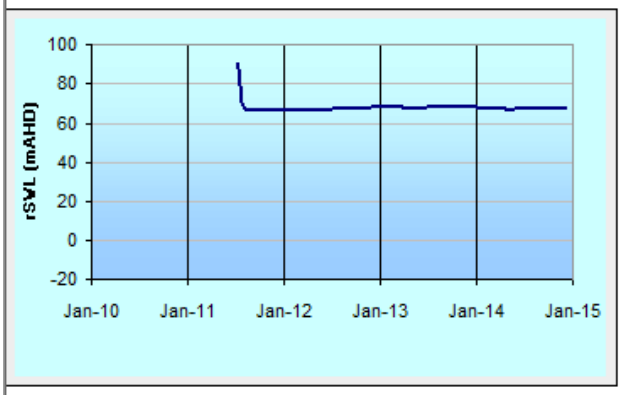
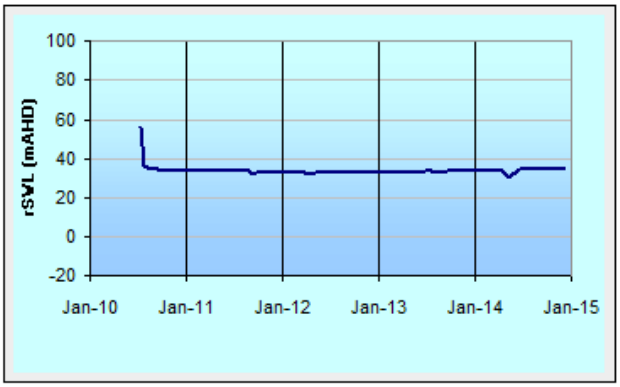
0
-20
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15

Beverley North Monitor Well Water Level Graphs – Namba Overlying Well Type C

PAOMW023



PROMW027



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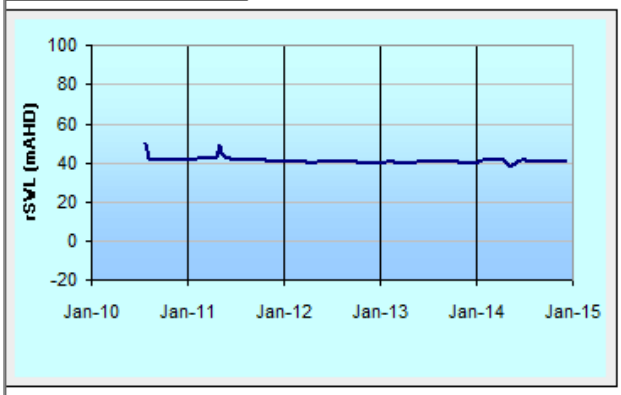
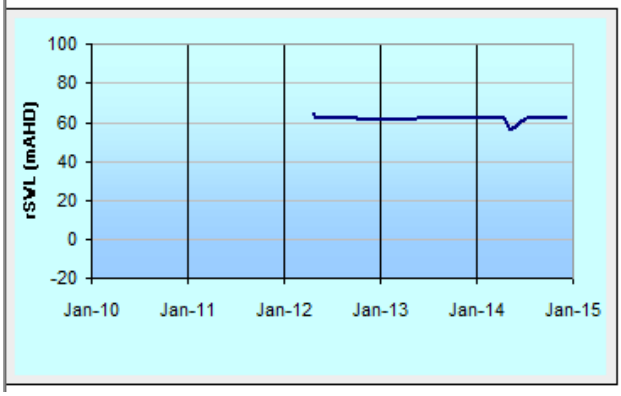
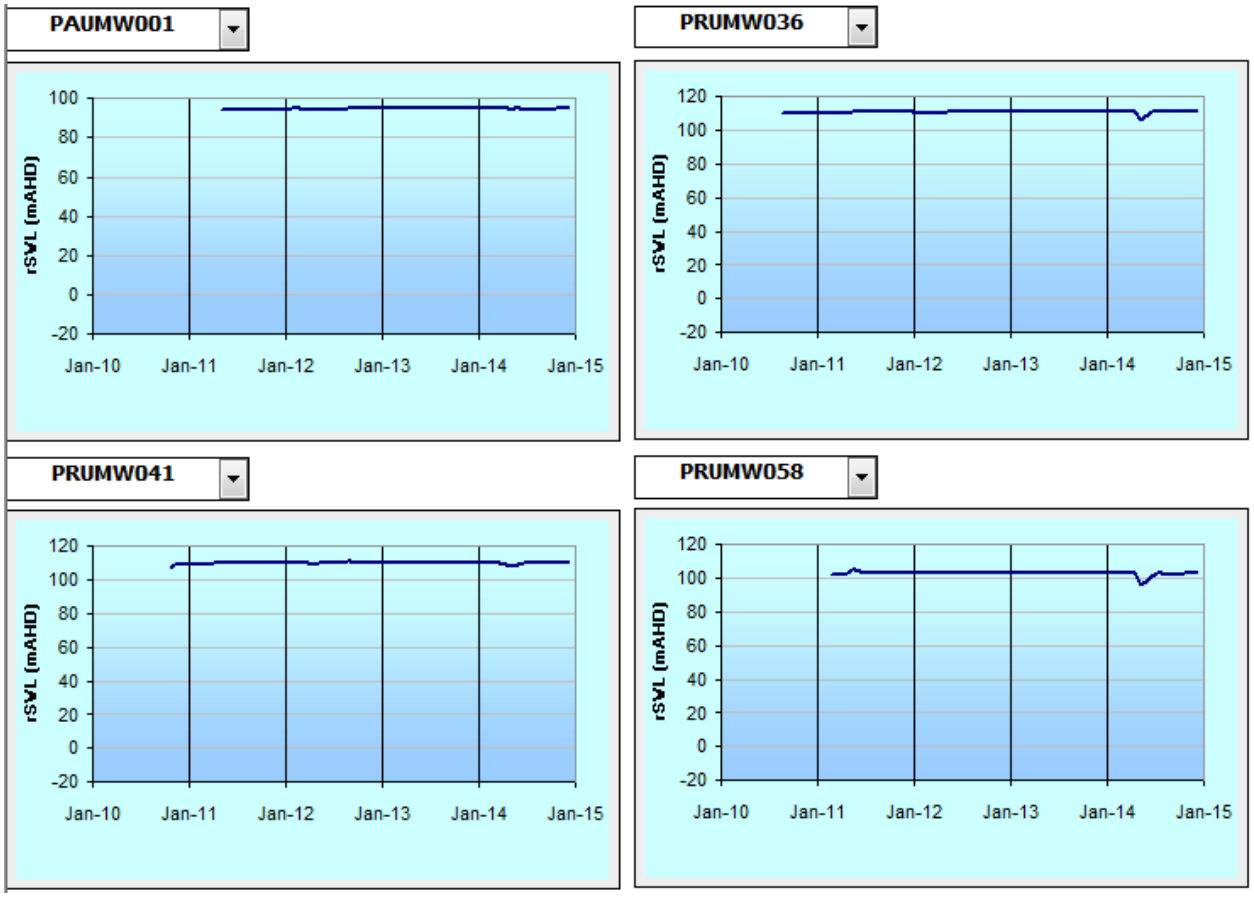


PROMW038

PROMW065



Beverley North Monitor Well Water Level Graphs – Fractured Rock Underlying Well Type D



APPENDIX E

BEVERLEY NORTH ML MONITOR WELL CHEMISTRY GRAPHS

Discussion on Anomalous Monitor Well Chemistries

PAMW010, PAMW012 and PAMW017
The status and current actions are discussed in section 3.5.2 & section 7

PRMW050
The status and current actions are discussed in section 3.5.2 & section 7

PRMW017
The status and current actions are discussed in section 3.5.2 & section 7

PRMW077
The status and current actions are discussed in section 3.5.2 & section 7

PRMW064, PRMW076

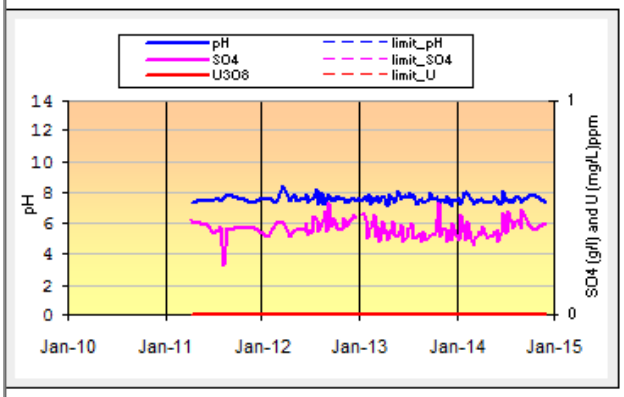
- Lateral (Eyre Formation) Compliance Monitor Wells
- The observed chemistries show periods of elevated SO4, pH and at times U308 due to contact by residual lixiviant.
- Parameters of SO4 and pH have been returned to near baseline levels
- U308 has continued to be observed in PRMW064 due to the well being located in strong uranium mineralisation
- Management actions including Barrier Injection and Wellfield Extraction/Recirculation.

PROMW027, PROMW030 and PROMW038

- Overlying (Namba Formation) Compliance Monitor Wells
- Anomalous chemistries (pH >10 and SO4 >0.7 g/L) related to remnant drilling muds which can be difficult to clear in very low yielding wells
- Airlifting has generally resulted in a short-term lowering of the pH and SO4 levels.

Beverley North Monitor Well Chemistry Graphs – Eyre Well Type A - ECLs pH 4.5; SO_4 2.0; U_3O_8 1.0

PAMW003



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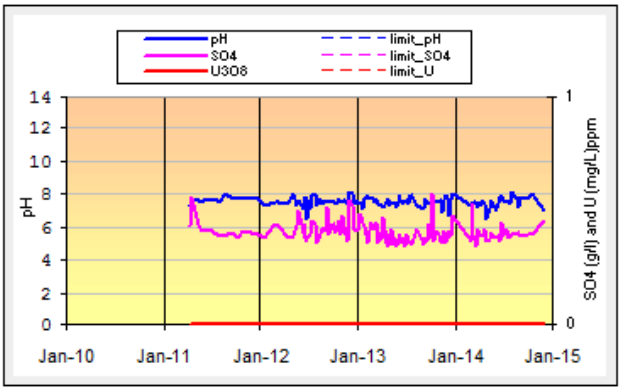

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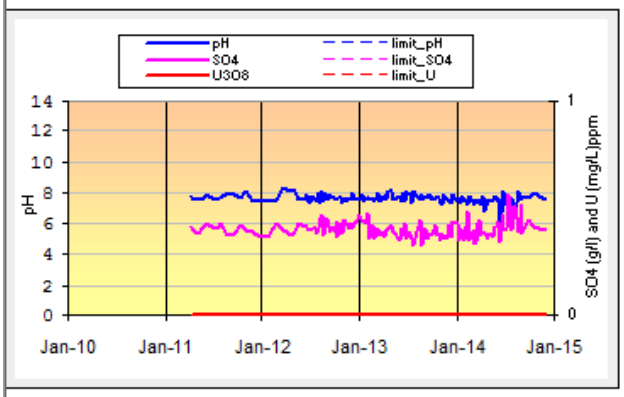

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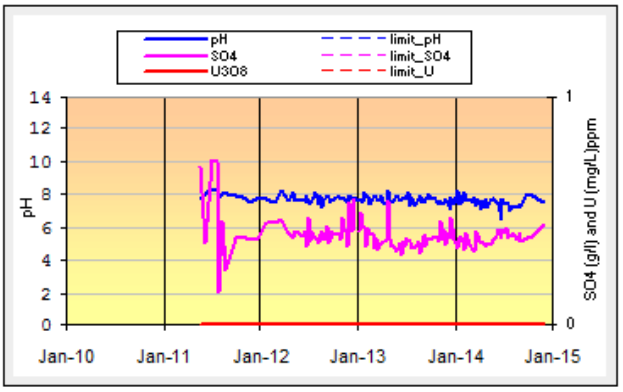

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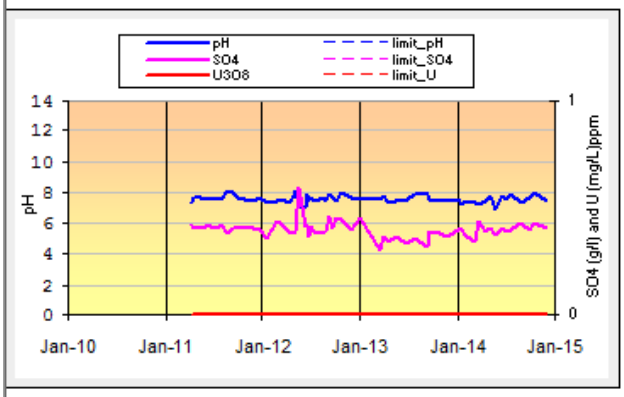

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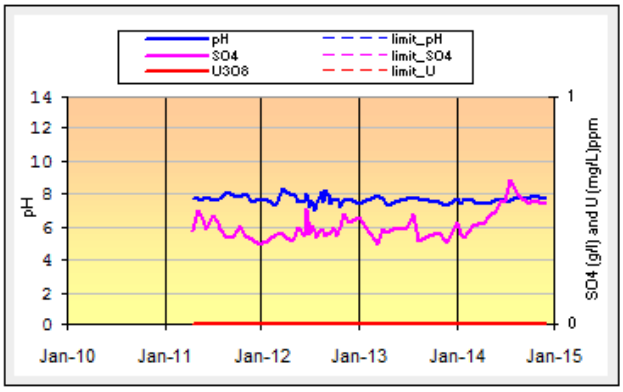

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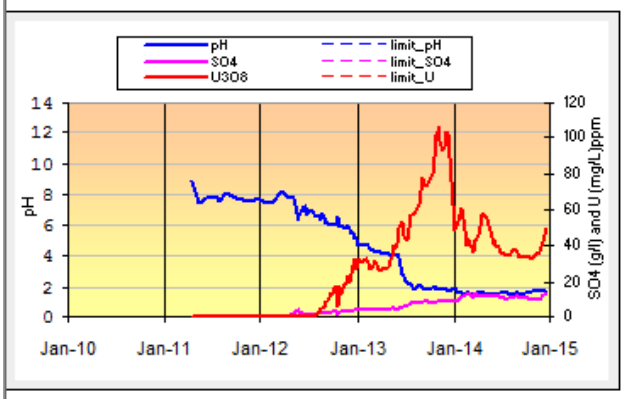

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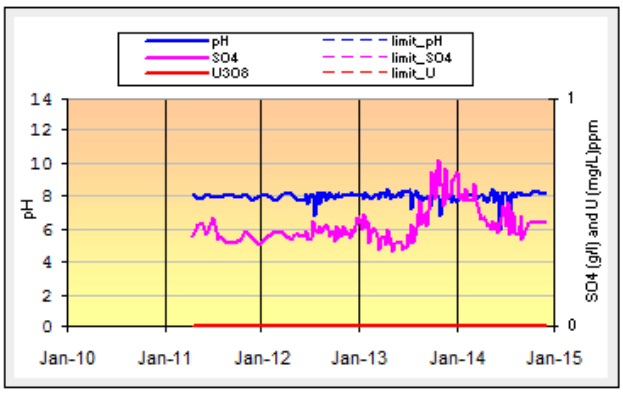
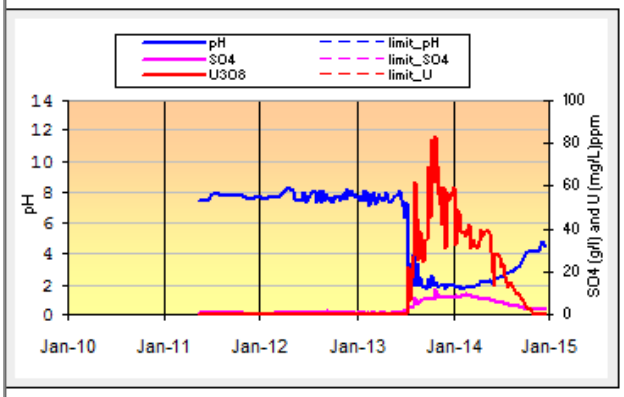


Beverley North Monitor Well Chemistry Graphs – Eyre Well Type A - ECLs pH 4.5; SO_4 2.0; U_3O_8 1.0

PAMW012



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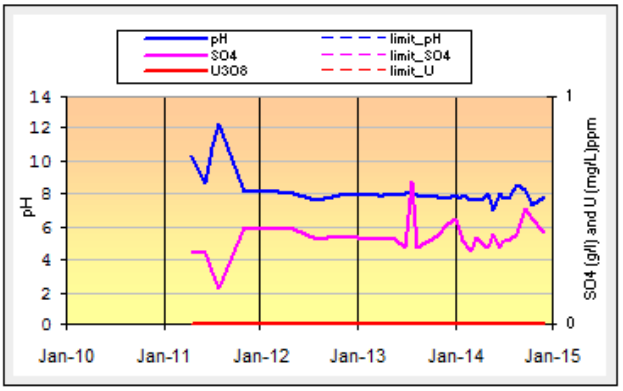

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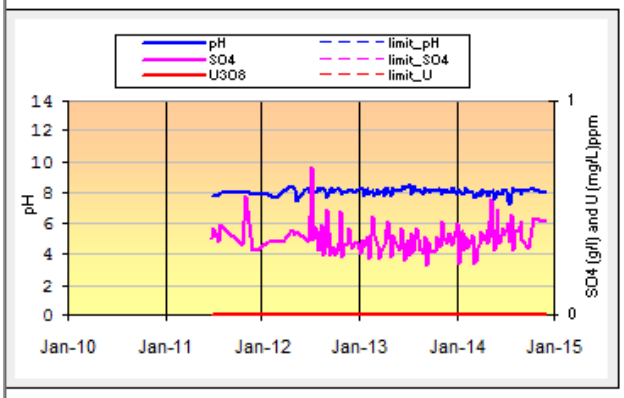

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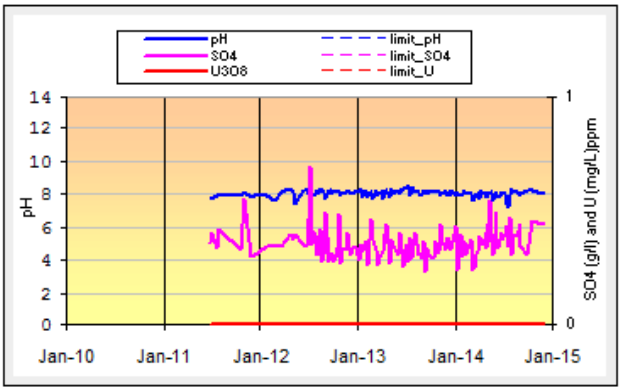

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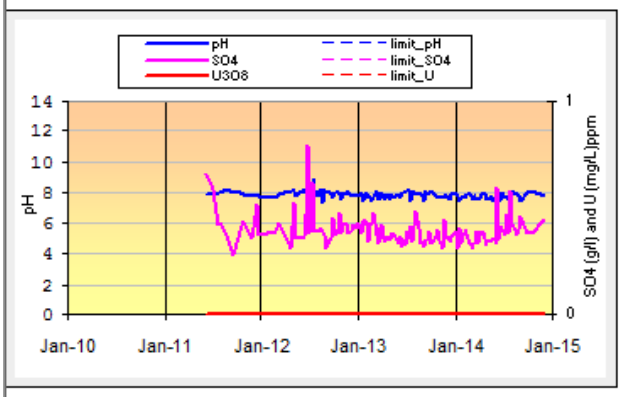

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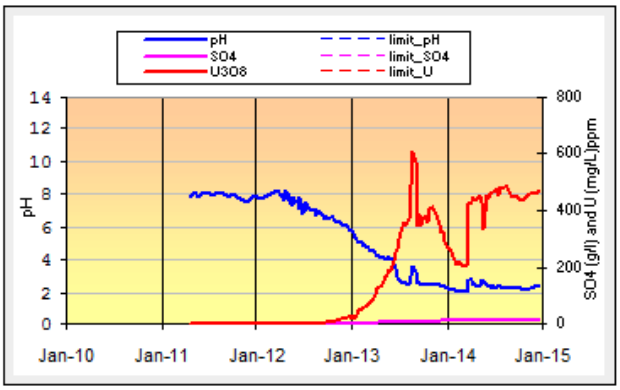

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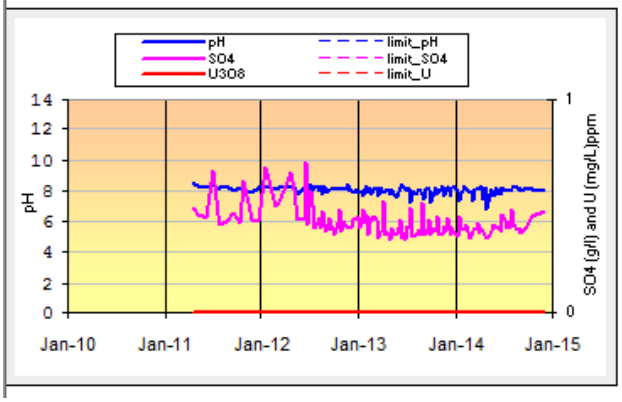

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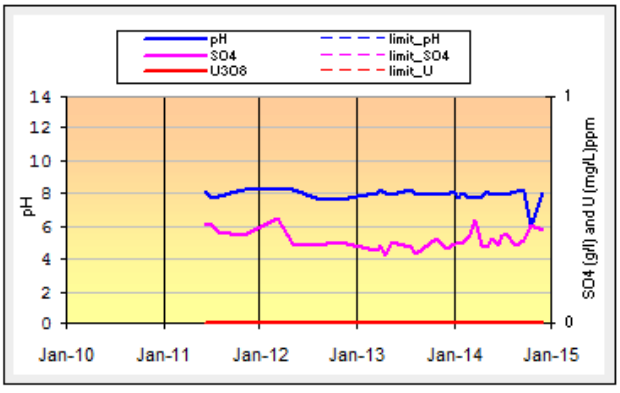
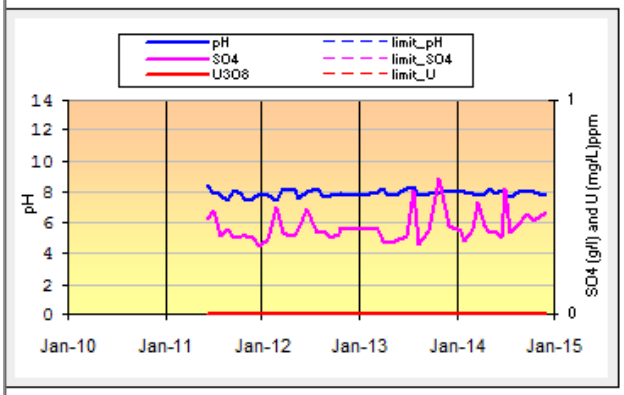


Beverley North Monitor Well Chemistry Graphs – Eyre Well Type A - ECLs pH 4.5; SO_4 2.0; U_3O_8 1.0

PAMW022



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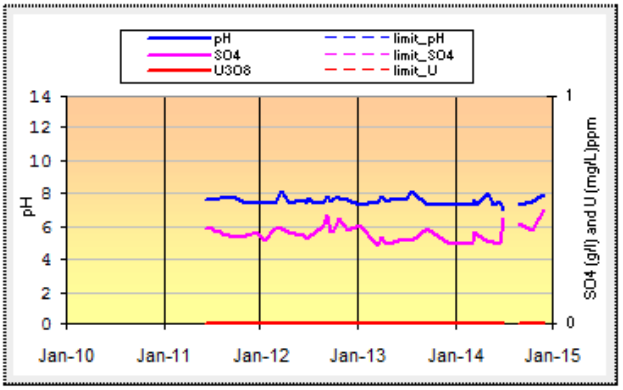

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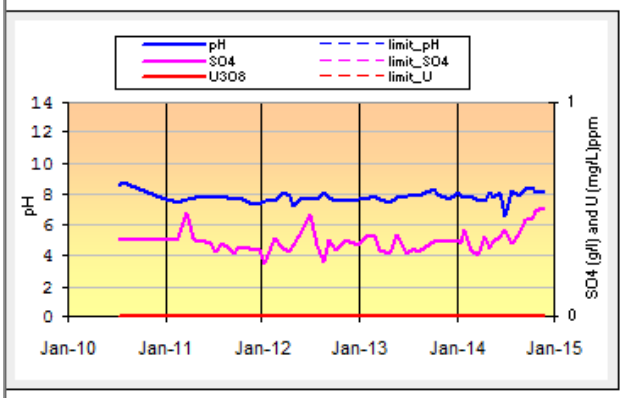

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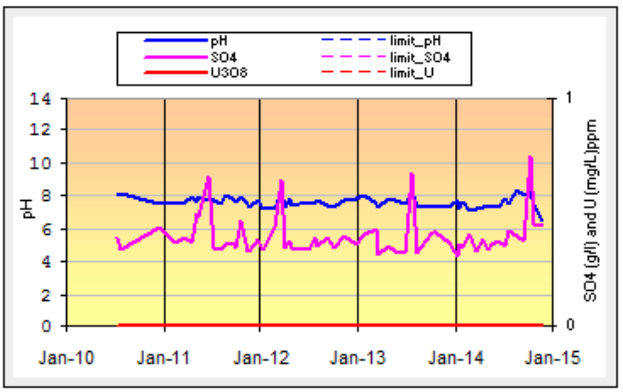

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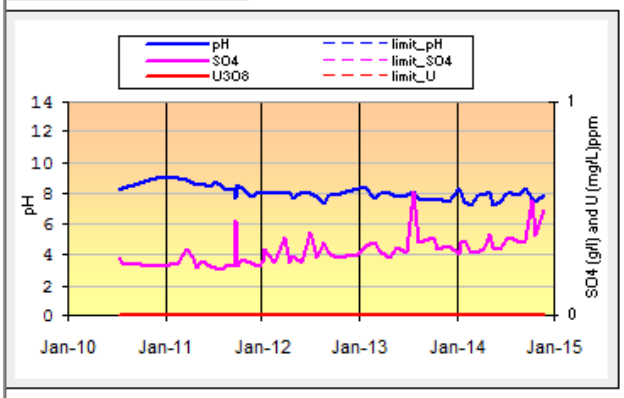

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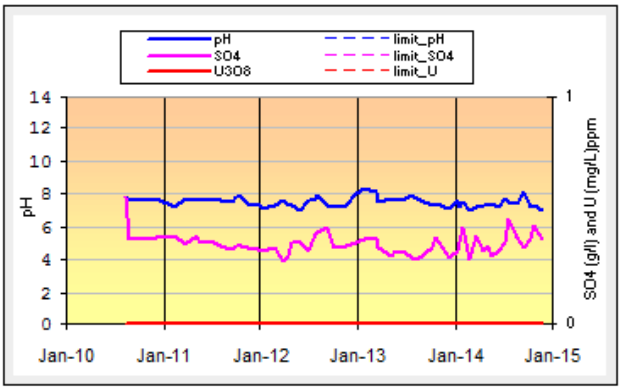

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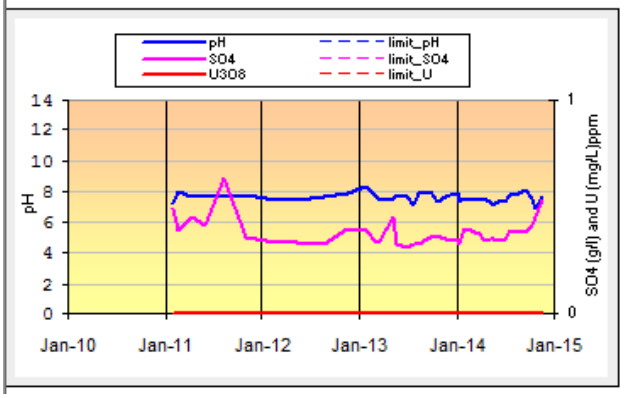

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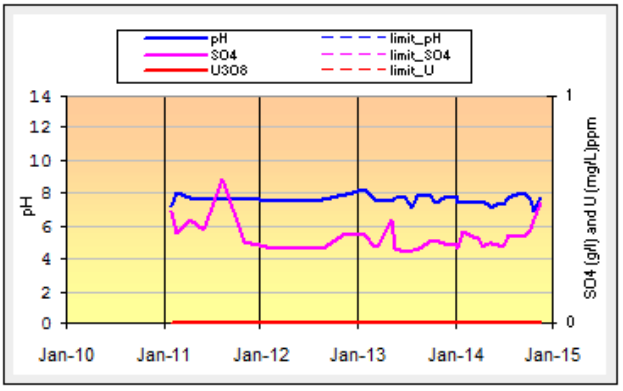
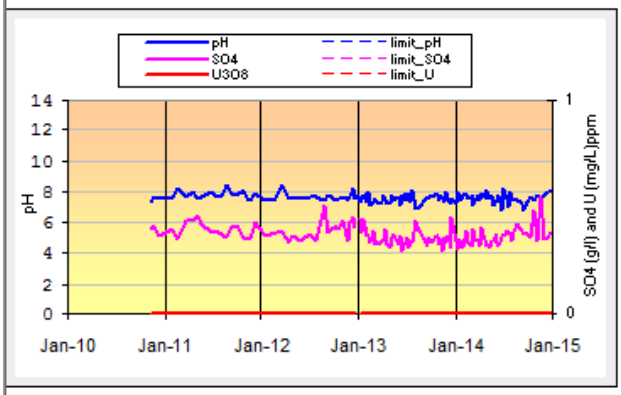


Beverley North Monitor Well Chemistry Graphs – Eyre Well Type A - ECLs pH 4.5; SO_4 2.0; U_3O_8 1.0

PRMW046



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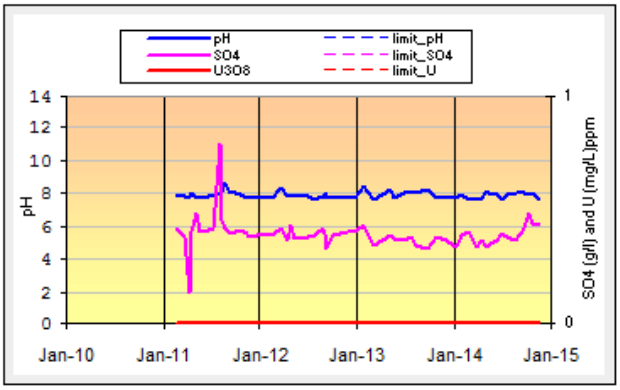

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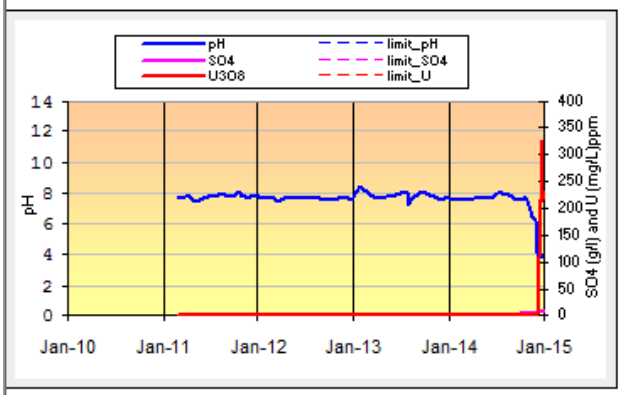

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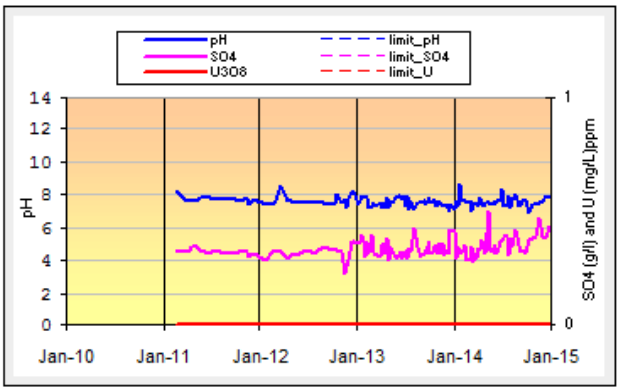

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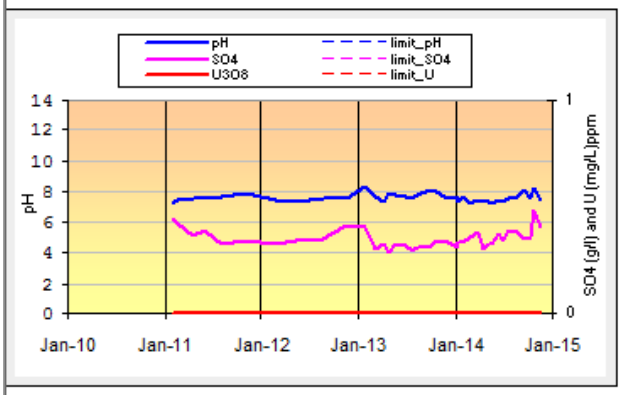

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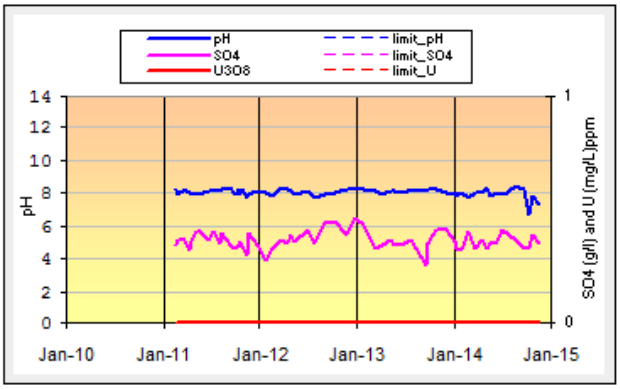

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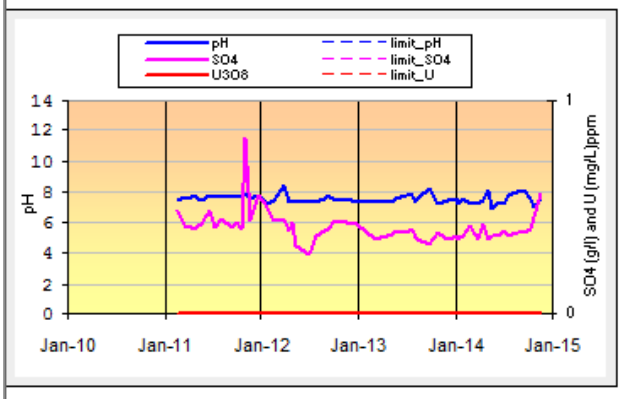

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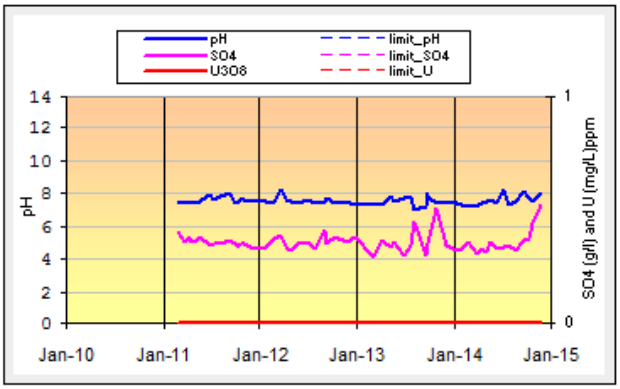
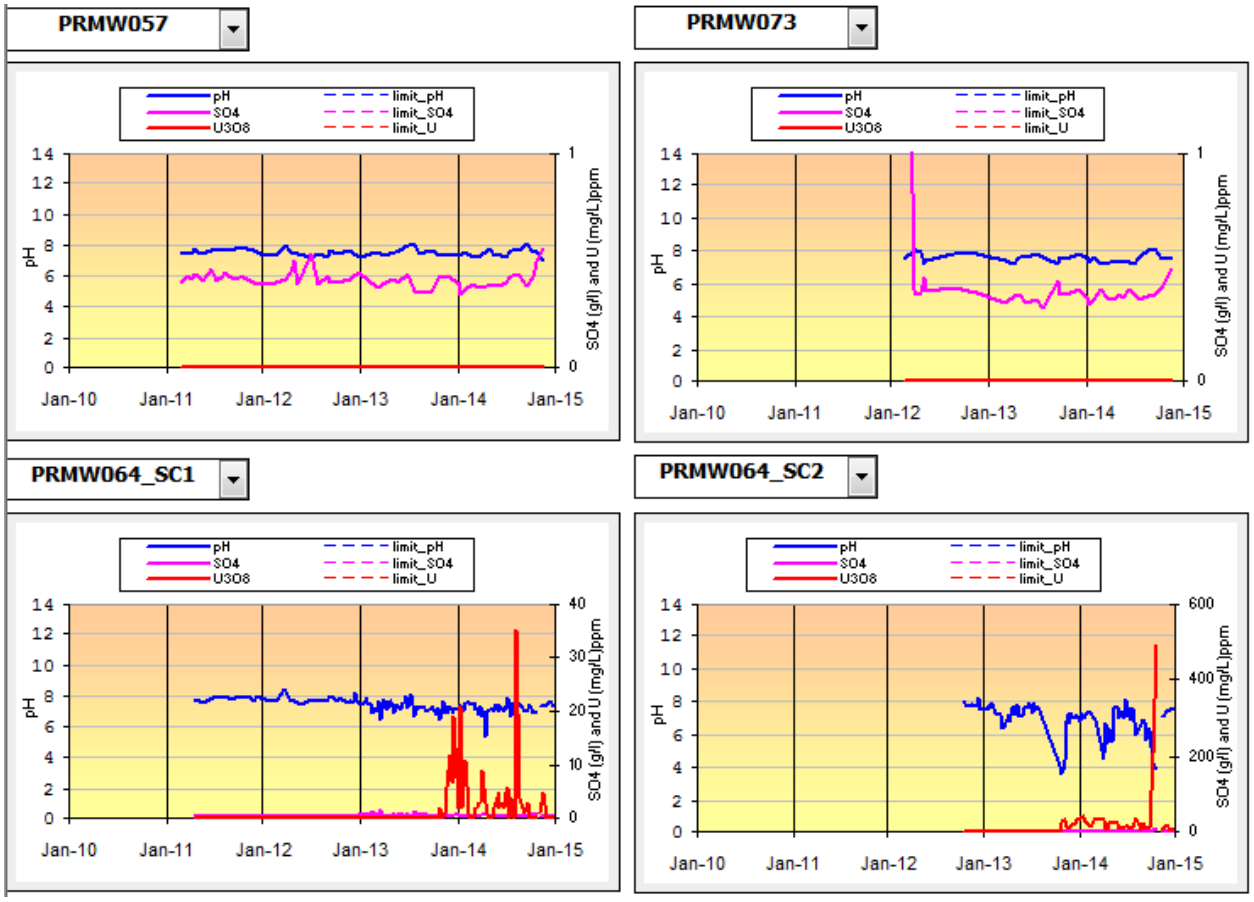


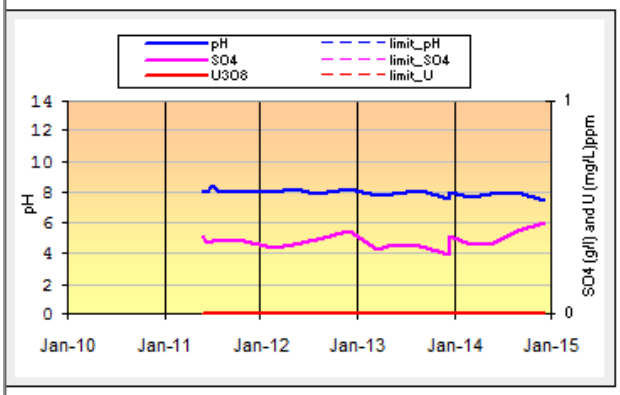
Beverley North Monitor Well Water Chemistry Graphs – Eyre Well Type A
ECLs pH 4.5; SO_4 2.0; U_3O_8 1.



Beverley North Monitor Well Water Chemistry Graphs – Eyre Well Type B

ECLs pH 4.5; SO_4 2.0; U_3O_8 1.0

PAMW018



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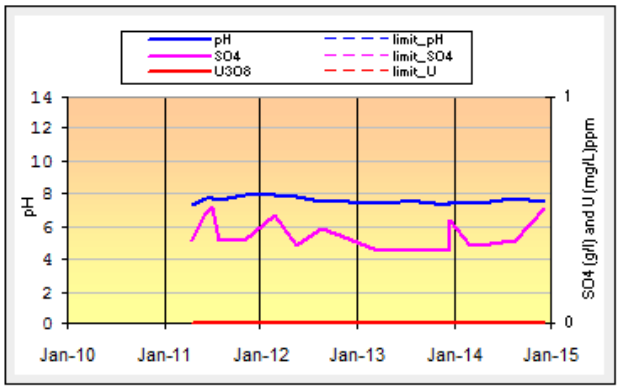

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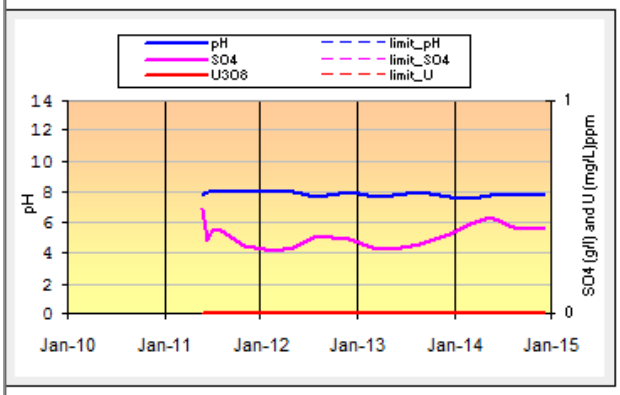

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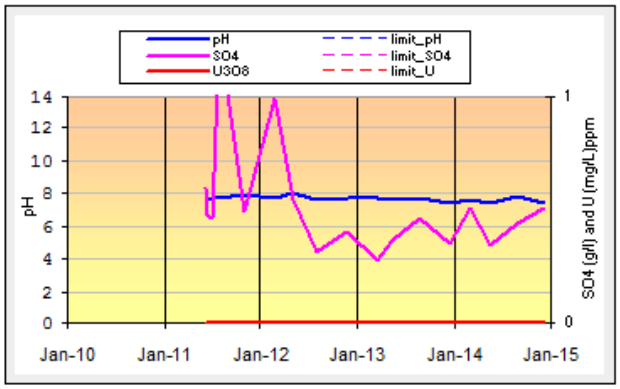

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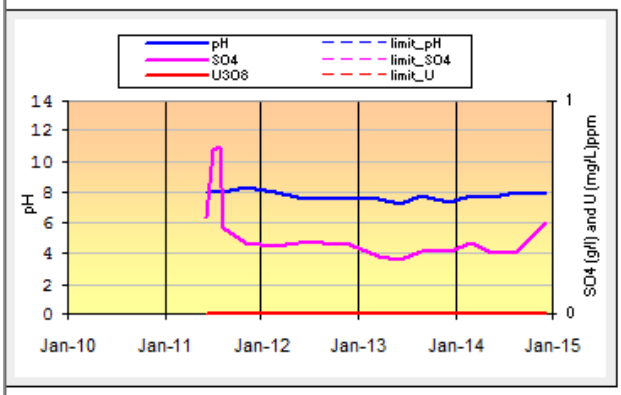

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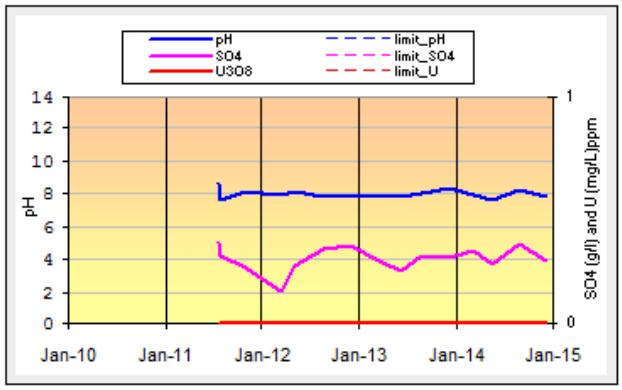

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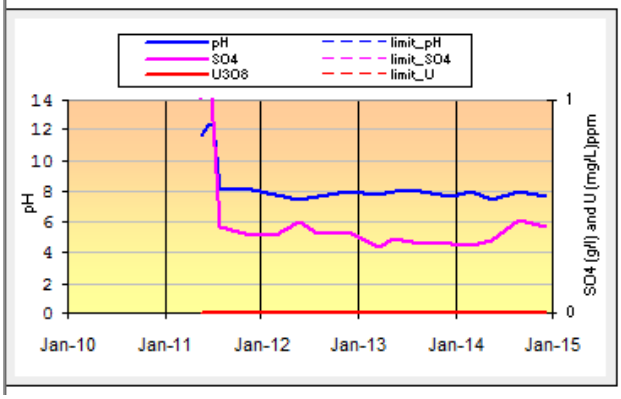

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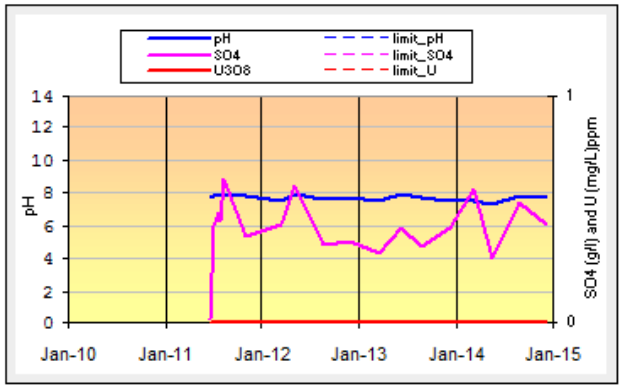
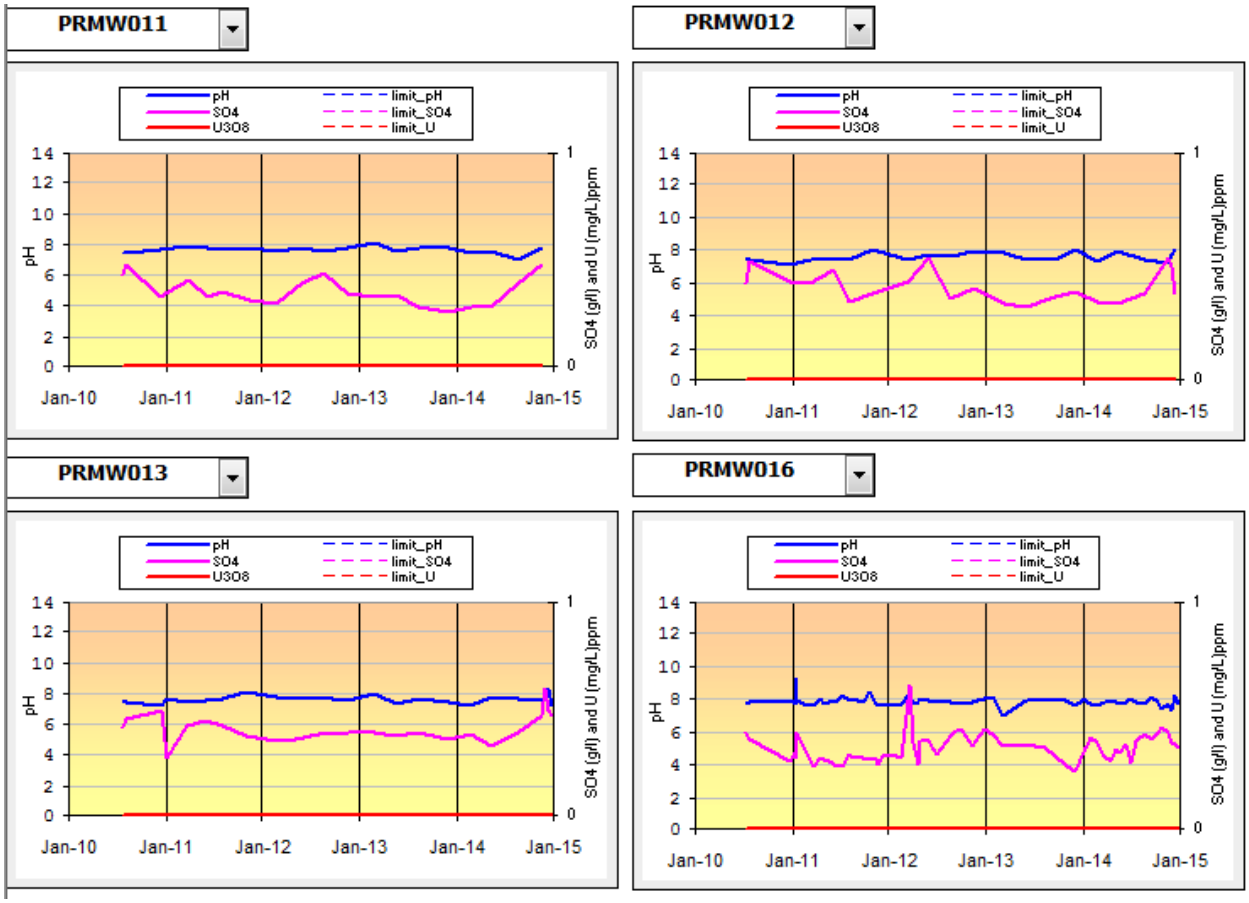


Beverley North Monitor Well Water Chemistry Graphs – Eyre Well Type B
ECLs pH 4.5; SO_4 2.0; U_3O_8 1.0



Beverley North Monitor Well Water Chemistry Graphs – Eyre Well Type B

ECLs pH 4.5; SO_4 2.0; U_3O_8 1.0

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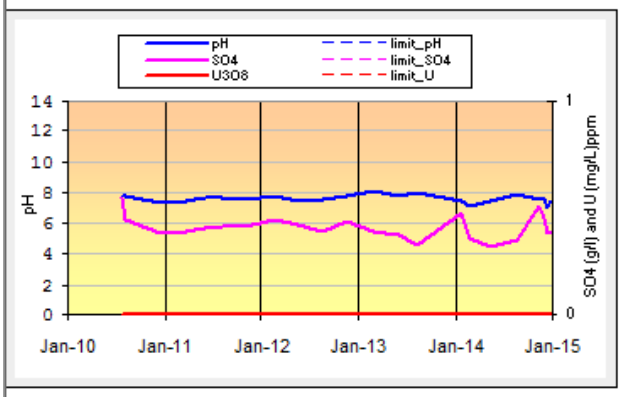

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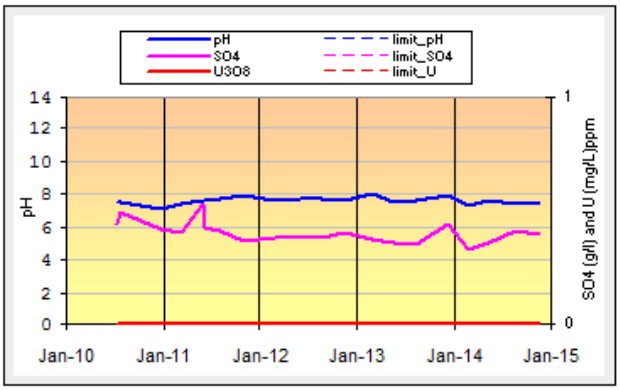

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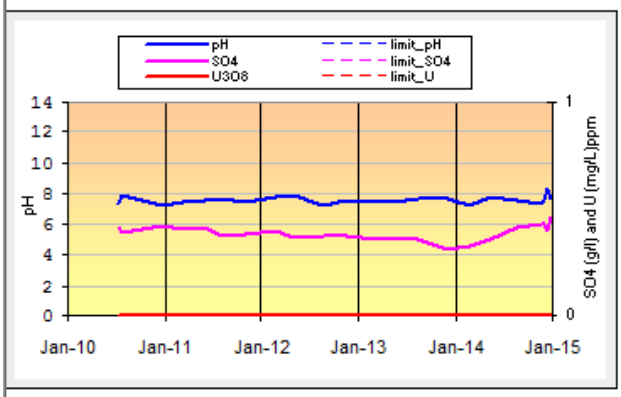

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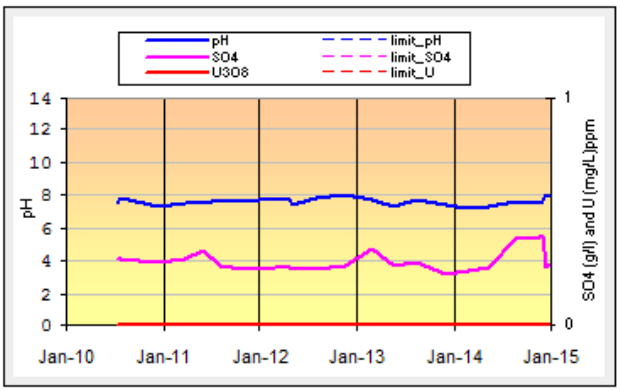

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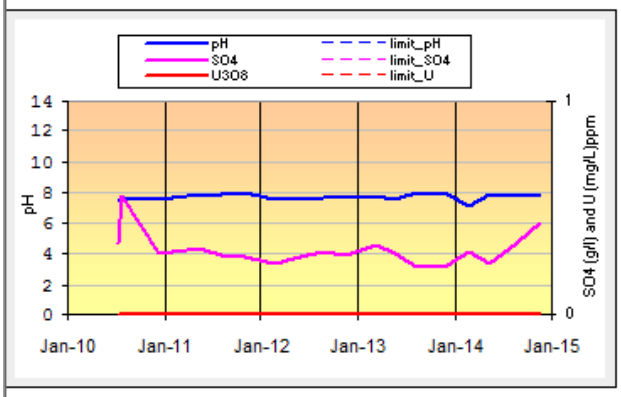

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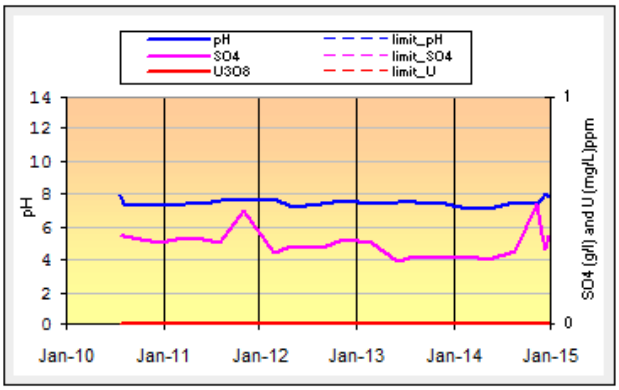

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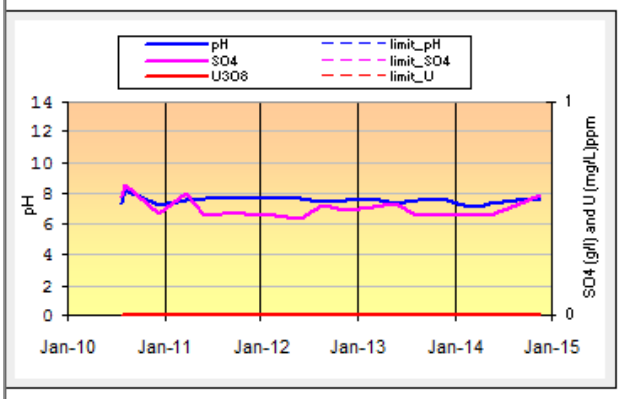

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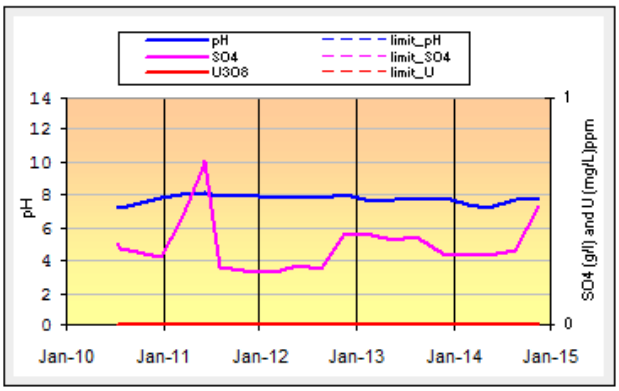
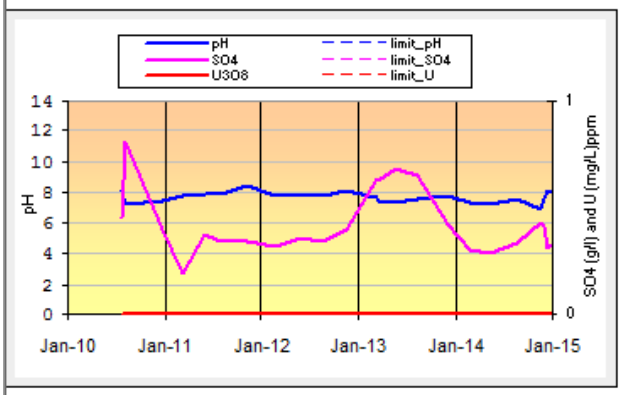


**Beverley North Monitor Well Water Chemistry Graphs – Eyre Well Type B **
ECLs pH 4.5; SO_4 2.0; U_3O_8 1.0

PRMW028



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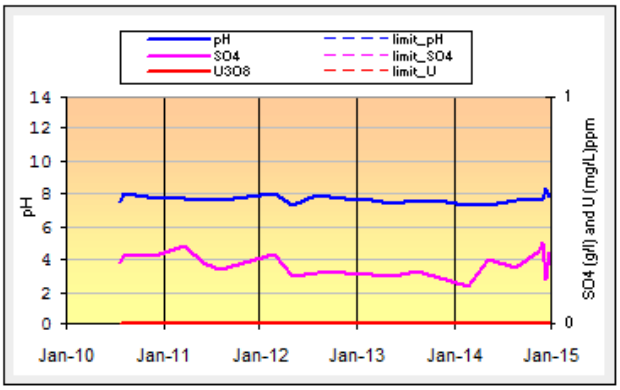

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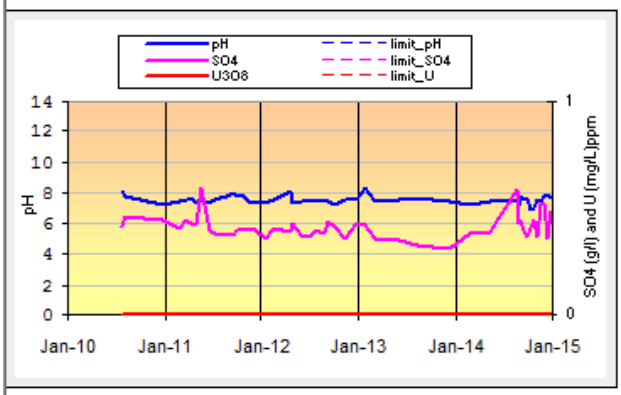

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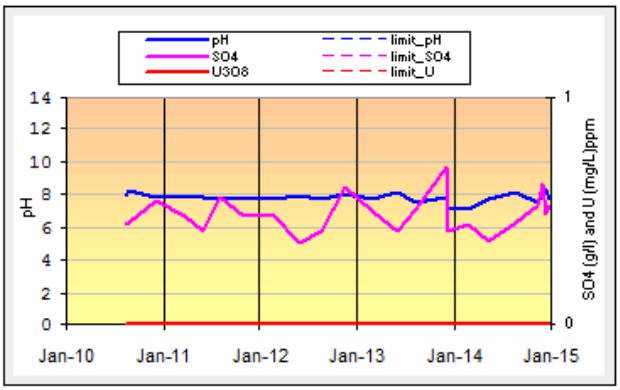

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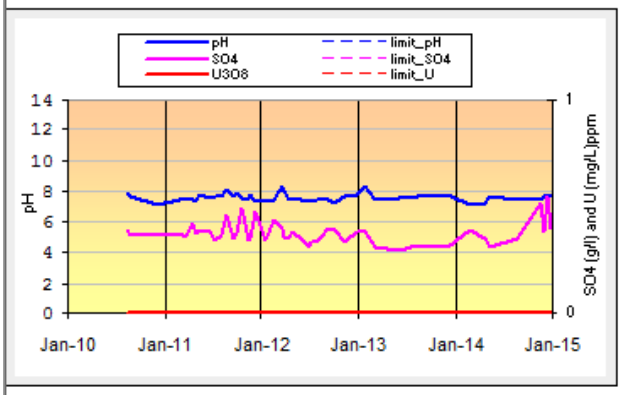

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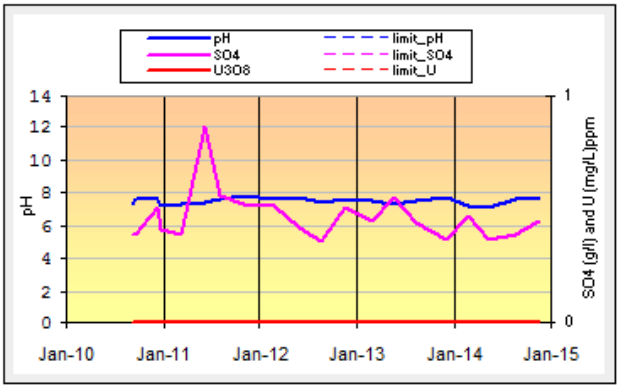

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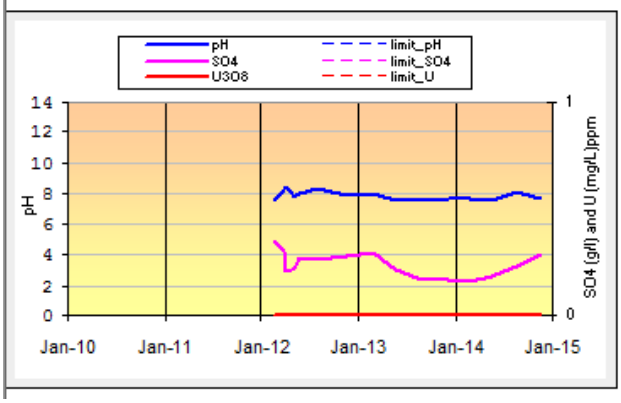

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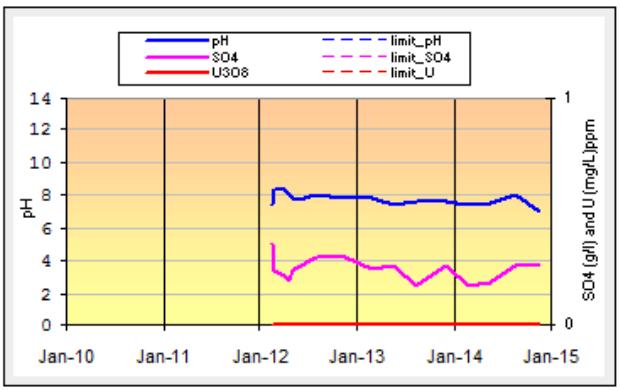
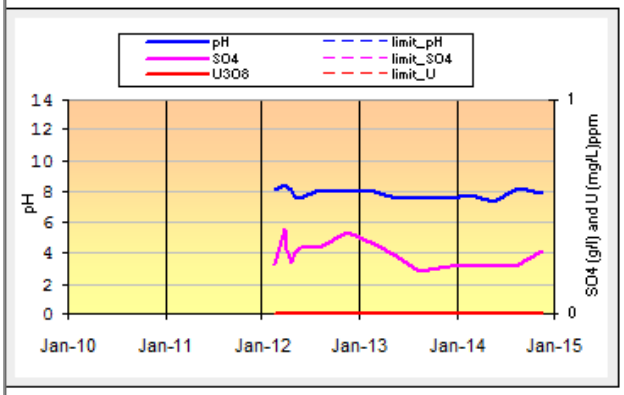


Beverley North Monitor Well Water Chemistry Graphs – Eyre Well Type B

ECLs pH 4.5; SO_4 2.0; U_3O_8 1.0

PRMW069



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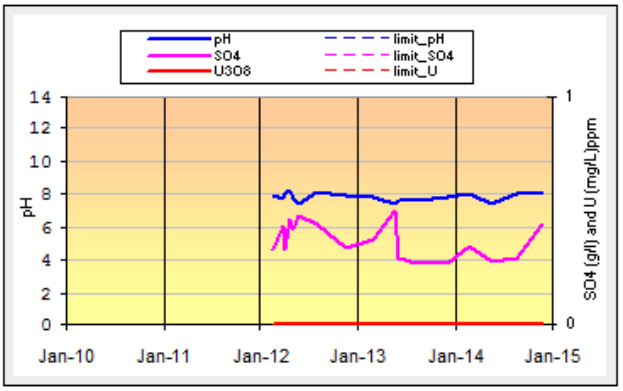

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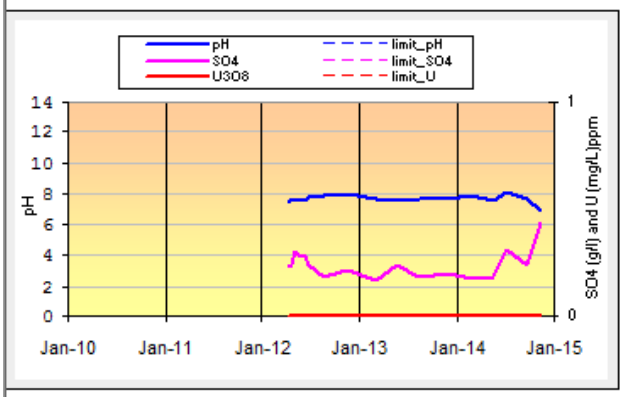

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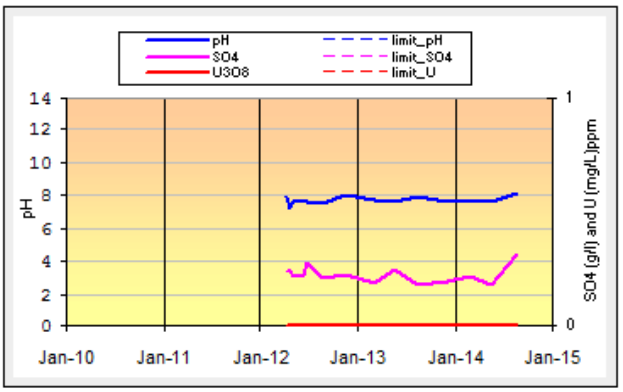

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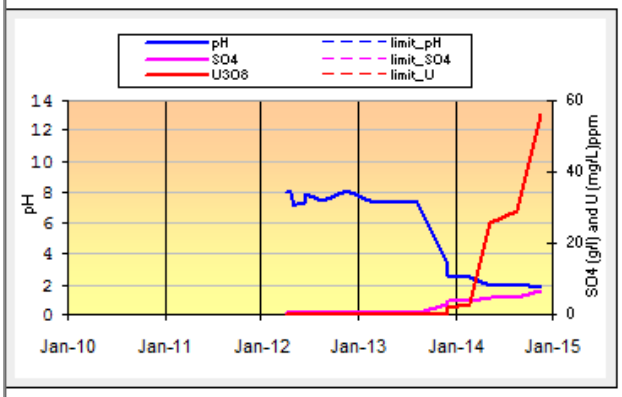

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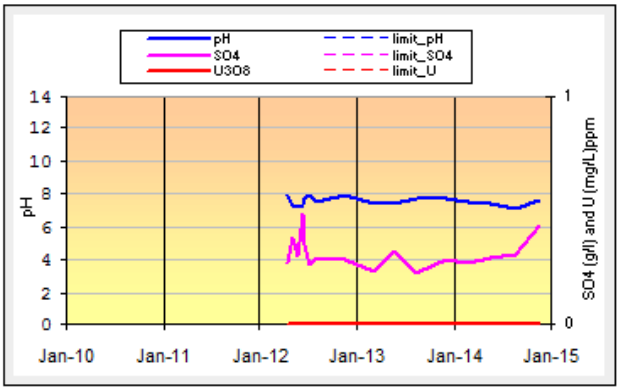

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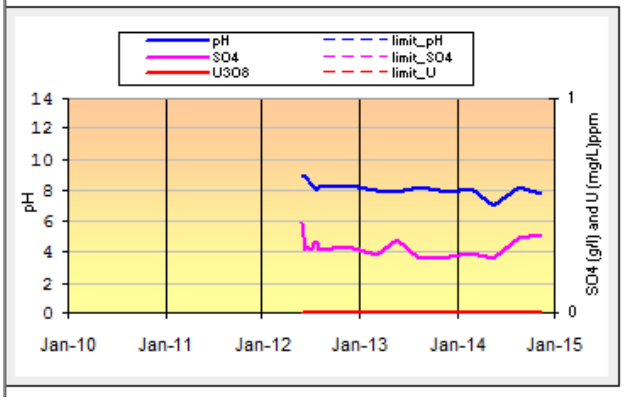
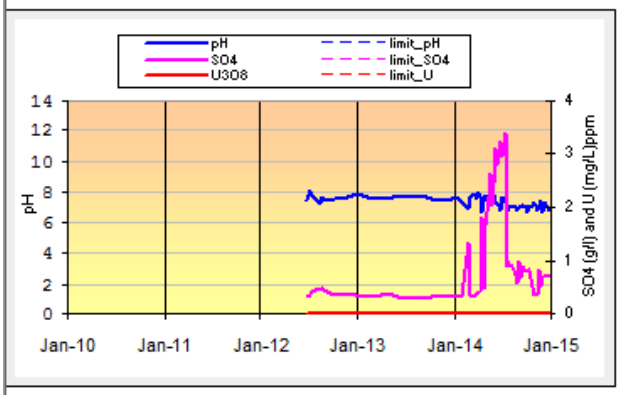


Beverley North Monitor Well Water Chemistry Graphs – Eyre Well Type B

ECLs pH 4.5; SO_4 2.0; U_3O_8 1.0

PRMW076_SC1



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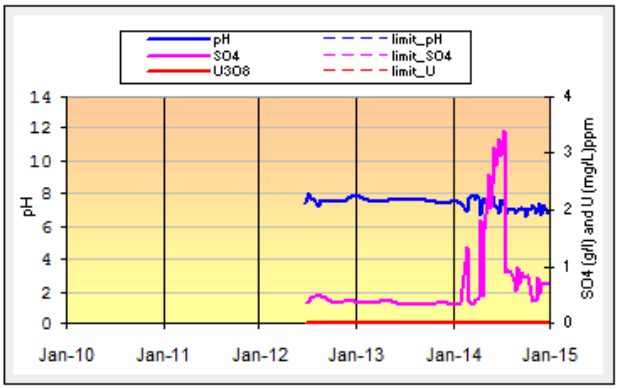

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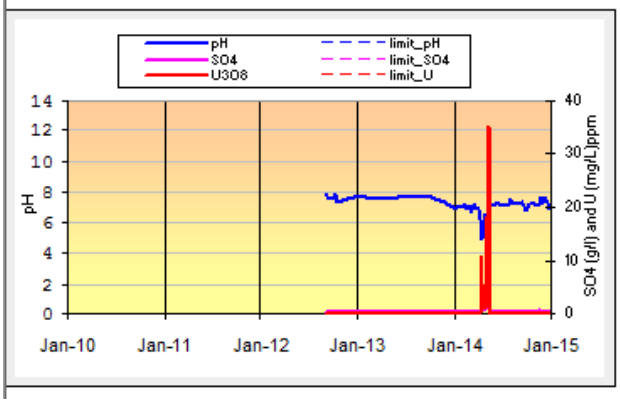

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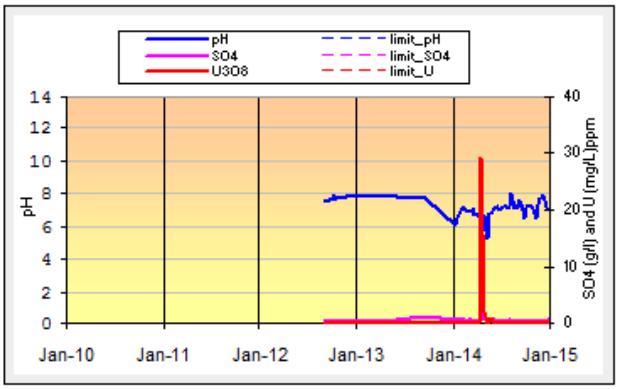
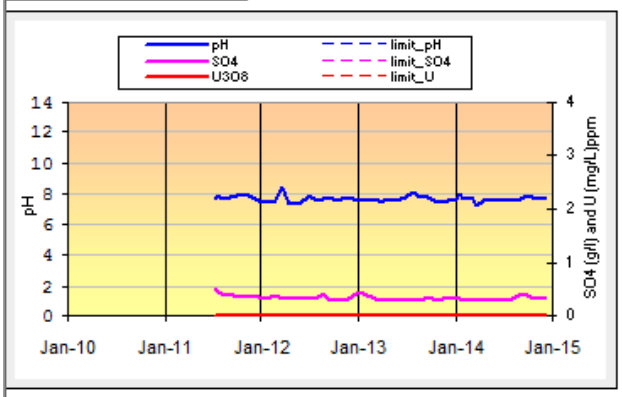


Beverley North Monitor Well Water Chemistry Graphs – Namba Overlying Well
ECLs pH 4.5; SO_4 2.0; U_3O_8 1.0

PAOMW023



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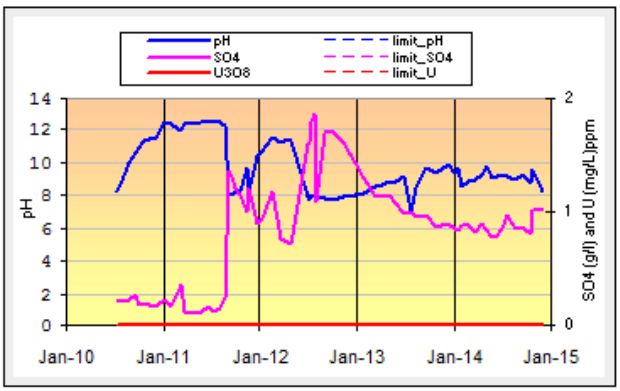

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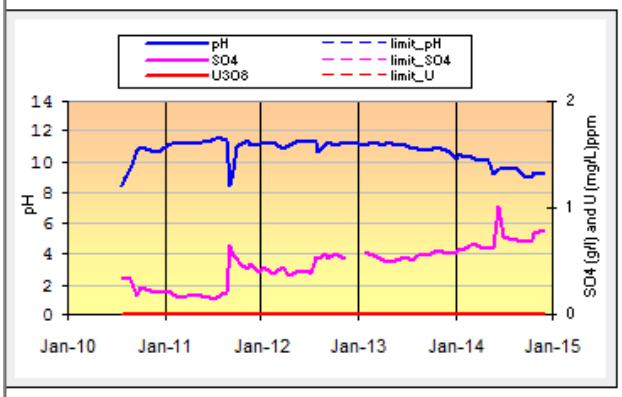

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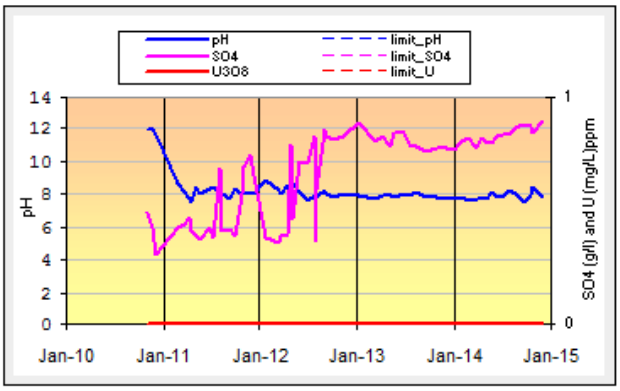

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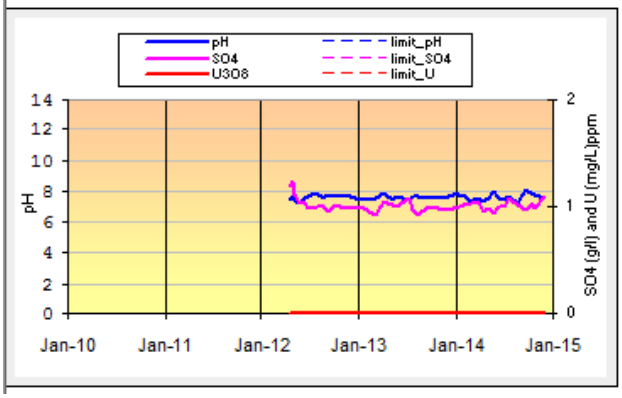

Beverley North Monitor Well Water Chemistry Graphs – Fractured Rock Underlying Well
ECLs pH 4.5; SO_4 2.0; U_3O_8 1.0

APPENDIX F

STATUS OF OBLIGATIONS - BEVERLEY ML 6321

Obligation Origin	Condition		Status of Obligations
State (PIRSA) Approval: First Schedule	1	Mining operations authorised by this lease must be only for the recovery of Uranium.	Compliant.
	2	The Lessee must keep accurate records of the quantity, value and manner of disposition of all minerals mined and, whenever required to do so, submit the records for inspection by any person authorised by the Director of Mines.	Compliant. No records requested for inspection.
	3	The Lessee must not conduct any mining operations on the land until a Mining and Rehabilitation Program (**MARP**) has been approved by the Minister.	A review of the 2008 MARP was approved on 9 December 2013 i.e. the 2013 Beverley PEPR - MP-011v7.
	4	The MARP must comply with the requirements of guidelines approved by the Director of Mines and include environmental outcomes and criteria that are developed in consultation with relevant stakeholders.	The 2013 PEPR was approved on 9 December 2013.
	5	The Lessee agrees to the approved MARP being made available for public inspection.	The 2013 Beverley PEPR is available to the public on the DSD website http://www.minerals.dmitre.sa.gov.au/mines__and__developing_projects/approved_mines/beverley.
	6	The Lessee must demonstrate upon request and to the Director of Mines, the Lessee's capability and competence to comply with the requirements of the *Mining Act, 1971*, the conditions of this lease and the MARP.	Heathgate considers its record gives good confidence in its ability and competence and will provide further demonstration on the appropriate request from the Director of Mines.
	7	The Lessee accepts that the Director of Mines may withdraw a MARP approval if, in the Director's opinion, the Lessee has not complied with the approval, or has not demonstrated satisfactory capability to comply with the approval.	Accepted.
	8	The Lessee must provide to the Director of Mines, a Mining and Rehabilitation Compliance Report (MARCR) on operations carried out on the lease and compliance with the approved MARP. The MARCR must be submitted every year, within 3 months after the anniversary of the date the lease was granted, or at some other time agreed with the Director of Mines in accordance with guidelines approved by the Director of Mines. The Lessee agrees to the MARCR being made available for public inspection.	Compliant. The 2013 Beverley and Beverley North Annual compliance Report was submitted to DSD on 9 May 2014 as per DSD approval to extend the submission deadline from 31 Mar 2014 to 9 May 2014. Copies were provided to the Department for the Environment.
	9	The Lessee must, if requested by the Director of Mines, undertake an independent audit of achievement of the environmental outcomes in the MARP, by an independent expert approved by the Director of Mines. The audit will be made available to the public, in a manner and form as determined by the Director of Mines.	An internal audit was undertaken in March 2014 and the findings are included in the 2013 Annual Compliance Report.
	10	The Lessee must provide to PIRSA a Mine Completion Report prior to lease relinquishment, in accordance with guidelines approved by the Director of Mines.	Mining not completed.

Obligation Origin	Condition		Status of Obligations
State (PIRSA) Approval: First Schedule (cont)	11	The Lessee must, prior to commencing operations under this lease and for the duration of the lease maintain public liability insurance to cover all operations under the lease in the name of the Lessee for a sum not less than $50 million or such greater sum as specified by the Director of Mines and make such amendments to the terms and conditions of the insurance as the Director of Mines may require. A copy of the cover note of certificate of currency for the insurance must be provided to the Director of Mines upon request. If requested by the Director of Mines, the Lessee must engage a independent and reputable risk assessor to prepare a risk assessment report detailing the public liability risks arising out of the conduct of mining operations on the lease and recommending the level of amount of public liability cover (in respect of any one occurrence) that should be effected and maintained by the lessee. In preparing the risk assessment report, the assessor must consult with the landowner and the Director of Mines. In specifying the level of insurance required, the Director of Mines accepts no liability for the completeness, adequacy of the sum insured, the limit of liability, the scoped coverage, the conditions or exclusions of the insurance in respect of how the Lessee may or may not respond to any loss, damage or liability.	Compliant.
	12	The Lessee must report any non-compliant criteria that demonstrate a breach of the environmental outcomes to be achieved (as detailed in the MARP) to the Director of Mines. A report must be provided after the Lessee becomes aware of the non-compliance, by the close of the next business day or such time period as specified in the MARP.	Compliant.
	13	The Lessee must, before commencing operations under this lease, lodge a bond in accordance with the Mining Act, 1971 of such an amount of the surety as determined from time to time by the Minister, to cover the full cost of rehabilitation liability assessed by an independent third party at any time. In requesting a review of the bond, the Minister may request that written quotes from a third party are obtained by the lessee for the cost of rehabilitating the site to the requirements specified in the approved MARP. The Lessee must meet all the charges and costs in obtaining and maintaining the Bond.	1.8% CPI adjusted bond amount of $10,690,040 received by DSD and duly endorsed in the Mining Register as per letter from DSD dated 5 November 2014.
State (PIRSA) Approval: Second Schedule - Soil	1	The Lessee must in constructing and operating the lease ensure that soil affected by mining activities is suitable for a return to pastoral use.	Compliant - fulfilled through PEPR obligations.

Obligation Origin	Condition		Status of Obligations
State (PIRSA) Approval: Second Schedule - Waste disposal and hazardous substances	2	The Lessee must, in constructing and operating the lease, ensure that there is no contamination of land and soils either on or off the site caused by waste products and hazardous materials used in the mine operations.	Compliant - fulfilled through PEPR obligations.
State (PIRSA) Approval: Second Schedule - Waste disposal and hazardous substances (cont)	3	The Lessee must in constructing and operating the lease ensure that there are no adverse impacts to the environment due to radon release, uranium-bearing materials, or radiological aspects of seepages and spills.	Compliant - fulfilled through PEPR obligations.
State (PIRSA) Approval: Second Schedule - Vegetation	4	The Lessee must, in constructing and operating the lease ensure no loss of abundance or diversity on or off the Beverley mining lease to native vegetation through clearance or any other damage unless prior approval under the relevant legislation is obtained.	Compliant - fulfilled through PEPR obligations.
State (PIRSA) Approval: Second Schedule - Weeds and Pests (feral animals)	5	The Lessee must in constructing and operating the lease ensure no introduction of new weeds, plant pathogens or pests (including feral animals), nor increase in abundance of existing weed or pest species in the lease area compared to adjoining pastoral properties.	Compliant - fulfilled through PEPR obligations.
State (PIRSA) Approval: Second Schedule - Stormwater	6	The Lessee must in constructing and operating the lease ensure no compromise of pastoral use of downstream surface water bodies.	Compliant - fulfilled through PEPR obligations.
State (PIRSA) Approval: Second Schedule - Groundwater	7	The Lessee must, in constructing and operating the lease ensure that there is no compromise to other existing Great Artesian Basin users within the Beverley mine region.	Compliant - fulfilled through PEPR obligations.
	8	The Lessee must, in constructing and operating the lease ensures that there is no compromise to pastoral use of the Willawortina aquifer.	Compliant – fulfilled through PEPR obligations - noting that most Willawortina wells on the lease do not meet stock water quality guidelines (Section 6.5.8.4 of the PEPR)
	9	The Lessee must, in constructing and operating the lease ensure that there is no compromise of potential pastoral use (should it meet pastoral water quality standards) of the Namba aquifer outside the Beverley mining lease.	Compliant - fulfilled through PEPR obligations.
State (PIRSA) Approval: Second Schedule - Native Fauna	10	The Lessee must in constructing and operating the lease ensure that there are no net adverse impacts from the site operations on native fauna abundance or diversity in the lease area and in adjacent areas.	Compliant - fulfilled through PEPR obligations.

Obligation Origin	Condition		Status of Obligations
State (PIRSA) Approval: Second Schedule - Aboriginal and European Heritage	11	The Lessee must in constructing and operating the lease, ensure that there is no disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained.	Compliant - fulfilled through PEPR obligations.
State (PIRSA) Approval: Second Schedule - Fire	12	The Lessee must in constructing and operating the lease ensure that there are no uncontrolled fires caused by mining operations.	Compliant - fulfilled through PEPR obligations.
State (PIRSA) Approval: Second Schedule - Unauthorised Access	13	The Lessee must in constructing and operating the lease ensure that there are no public injuries and or deaths resulting from unauthorised entry to the site that could have been reasonably prevented.	Compliant - fulfilled through PEPR obligations.
State (PIRSA) Approval: Second Schedule - Landholder Liaison	14	Where the pastoral lease holder differs from the mining lease holder, the Lessee must ensure that the occupier of the land is fully advised of their program of activities, particularly in regard to the impact of operations on the land and rehabilitation progress.	Heathgate is the relevant pastoral lease holder.
State (PIRSA) Approval: Second Schedule - Infrastructure	15	The Lessee must, in constructing and operating the lease, ensure that there is no unauthorised damage to adjacent public or private infrastructure.	Compliant
State (PIRSA) Approval: Second Schedule - Closure and Rehabilitation	16	The Lessee must demonstrate prior to lease expiry or surrender that the following outcomes (in so far as they may be affected by mining operations) will be achieved indefinitely post mine closure to the satisfaction of the Director of Mines.	Mining not completed.
	16a	No change, outside of natural background variation, to the water quality of the GAB.	Mining not completed.
	16b	No change, outside of natural background variation, to the water quality of the Willawortina Formation.	Mining not completed.
	16c	No compromise of potential pastoral use (should it meet pastoral water quality standards) of the Namba aquifer outside the Beverley mining lease.	Mining not completed.
	16d	The external visual amenity of the site is acceptable to relevant stakeholders.	Mining not completed.
	16e	Risks to the health and safety of the public and fauna are as low as reasonably achievable.	Note: with respect to radiological risks to fauna, it is deemed that the “As Low As Reasonably Achievable (ALARA)” protection of the public means that fauna are similarly protected. Mining not completed.
	16f	Ecosystem and landscape function is resilient, self-sustaining and indicating that the pre-mining ecosystem and landscape function will ultimately be achieved	Mining not completed.
	16g	All waste materials left onsite are chemically and physically stable	Mining not completed.

Obligation Origin	Condition		Status of Obligations
State (PIRSA) Approval: Second Schedule - Leading Indicators	17	The MARP must include additional leading indicator criteria for the following outcomes:	
	17a	Ensure that soil affected by mining activities is suitable for a return to pastoral use.	Compliant – leading indicator criteria included in the approved PEPR.
	17b	Ensure that there is no compromise to other existing Great Artesian Basin users within the Beverley mine region.	Compliant – leading indicator criteria included in the approved PEPR.
	17c	Ensure that there is no compromise to pastoral use of the Willawortina aquifer.	Compliant – leading indicator criteria included in the approved PEPR.
	17d	Ensure that there is no compromise of potential pastoral use (should it meet pastoral water quality standards) of the Namba aquifer outside the Beverley mining lease.	Compliant – leading indicator criteria included in the approved PEPR.
Federal Approval Conditions	1	The person taking the action must ensure that, in undertaking the action, the following outcomes are achieved (in so far as they may be affected by mining operations):	
	1(a)	No compromise to other existing Great Artesian Basin users within the Beverley mine region	Compliant - PEPR obligation.
Federal Approval Conditions (cont)	1(b)	No compromise to pastoral use of the Willawortina aquifer.	Compliant, noting that most Willawortina wells on the lease do not meet stock water quality guidelines (Section 6.5.8.4 of the PEPR) – PEPR obligation.
	1(c)	No compromise of potential pastoral use (should it meet pastoral water quality standards) of the Namba aquifer outside the Beverley mining lease.	Compliant – leading indicator criteria included in the approved PEPR.
	1(d)	No loss of abundance or diversity on or off the Beverley mining lease to native vegetation through clearance or other damage unless prior approval under relevant legislation is obtained.	Compliant- PEPR obligation.
	1(e)	No net adverse impacts from the site operations on native fauna abundance or diversity in the lease area and adjacent areas.	Compliant- PEPR obligation.
	1(f)	No introduction of new weeds, plant pathogens or pests (including feral animals), or increase in abundance of existing weed or pest species in the lease area compared to adjoining pastoral areas.	Compliant- PEPR obligation.
	1(g)	No uncontrolled fires caused by mining operations.	Compliant.
	1(h)	No disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained.	No heritage listed sites on ML 6321.
	1(i)	No compromise of pastoral use of downstream surface water bodies.	Compliant- PEPR obligation.
	1(j)	Soil affected by mining activities is suitable for return to pastoral use.	Bioremediation bays are in use. Scanning of soils for surface contamination occurs.
	1(k)	No adverse impacts to the environment due to radon release, uranium-bearing materials, or radiological aspects of seepages and spills.	Compliant- PEPR obligation.

Obligation Origin	Condition		Status of Obligations
	1(l)	No contamination of land and soils either on or off the site caused by waste products and hazardous materials used in the mine operations that would compromise a return to pastoral use.	Compliant- PEPR obligation.
	2	The person taking the action must develop a Monitoring Plan to measure the achievement of each outcome in Condition 1. The Monitoring Plan must specify:	The Monitoring Plan exists as Chapter 6 of the PEPR.
	2(a)	criteria to demonstrate the clear and unambiguous achievement of the outcomes specified above	Compliant.
	2(b)	the parameters to be monitored	Compliant.
	2(c)	how frequency of monitoring will be determined	Compliant.
	2(d)	the responsibility for interpreting the monitoring results	Compliant. Results are interpreted by appropriate environmental specialists, either external or internal to Heathgate and documented in the Annual Compliance Report. The 2013 results are summarised in the 2013 Annual Compliance Report submitted on 9 May 2014.
	2(e)	the threshold triggers and the response activities	Compliant.
	2(f)	an outline of control and management strategies that may be used to achieve the groundwater outcomes in Condition 1	Compliant.
	2(g)	reporting arrangements to management, external stakeholders and the public, including procedures for reporting non-compliance	Compliant.
		The action cannot commence until the Monitoring Plan is approved by the Minister. The approved Plan must be implemented.	Compliant. The monitoring plan was integrated into the reviewed PEPR and approved by the Minister on 11 November 2008 with approval of a PEPR revision MP-011v7 in 2013 given on 9 December 2013.
	3	The person taking the action must develop a Mine Closure and Completion Plan. The Plan must demonstrate that the following outcomes, in so far as they may be affected by mining operations, will be achieved indefinitely post mine closure:	
	3(a)	No change, outside of natural background variation, to the water quality of the Great Artesian Basin.	Compliant. The Mine Closure and Completion Plan was integrated into the PEPR and includes this condition (3a).
	3(b)	No change, outside of natural background variation, to the water quality of the Willawortina formation.	Compliant. The Mine Closure and Completion Plan was integrated into the PEPR and includes condition 3(b).
	3(c)	No compromise of potential pastoral use (should it meet pastoral water quality standards) of the Namba aquifer outside the Beverley mining lease.	Compliant. The Mine Closure and Completion Plan was integrated into the PEPR and includes condition 3(c).

Obligation Origin	Condition		Status of Obligations
	3(d)	Risks to the health and safety of the public and fauna are as low as reasonably achievable.	Compliant. The Mine Closure and Completion Plan was integrated into the PEPR and includes condition 3(d) with respect to radiological risks to fauna, it is deemed that the "As Low As Reasonably Achievable (ALARA)" protection of the public means that fauna are similarly protected.
	3(e)	Ecosystem and landscape function is resilient, self-sustaining and indicating that the pre-mining ecosystem and landscape function will ultimately be achieved.	Compliant. The Mine Closure and Completion Plan was integrated into the PEPR and includes condition 3(e).
	3(f)	All waste materials left onsite are chemically and physically stable.	Compliant. The Mine Closure and Completion Plan was integrated into the PEPR and includes condition 3(f).
		The action cannot commence until the Mine Closure and Completion Plan is approved by the Minister. The approved Plan must be implemented.	A Mine Closure and Completion Plan was approved by the Minister on 11 November 2008 with approval of a PEPR revision MP-011v7 in 2013 given on 9 December 2013. A formal Closure Plan will require the Minister's approval. The 2013 Beverley and Beverley North Annual Compliance Report submitted to DSD on 9 May 2014 documented progressive rehabilitation.
	4	The person taking the action must prepare a Community Engagement Plan to enable open dialogue with stakeholders on compliance with the approval conditions. The action cannot commence until the Plan is approved by the Minister. The Plan must be implemented.	The Community Engagement Plan is integrated into the PEPR and approved by the Minister on 11 November 2008 with approval of a PEPR revision MP-011v7 in 2013 given on 9 December 2013.
	5	Within 14 days of commencement of the action, the person taking the action must advise the Department of the actual date of commencement.	Compliant.
	6	Within three months of the anniversary of the date of commencement of the action and each year after, the person taking the action must provide a report to the Department addressing compliance with the conditions of this approval. Annual reports must be provided until the Minister is satisfied that the proponent has complied with all conditions of the approval.	Compliant.
	7	If at any time after five years from the date of this approval, the Minister notifies the person taking the action in writing that the Minister is not satisfied that there has been substantial commencement of the action, the action must not thereafter be commenced without the written agreement of the Minister.	Compliant.

Obligation Origin	Condition		Status of Obligations
	8	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	Accepted. The Minister has not directed for an independent audit to be undertaken. An independent audit of Lease Holder capabilities and systems was however requested by the State Minister Hon Tom Koutsantonis MP and was submitted to the Director of Mines – DSD (then DMITRE) with copies provided to the Department of the Environment, prior to commencement of mining on 14 April 2014.
	10	If the Minister believes that it is necessary or desirable for the better protection of the environment to do so, the Minister may request the person taking the action to make specified revisions to the plan approved pursuant to Conditions 2, 3 and 4 and to submit a revised plan for the Minister's approval. The person taking the action must comply with any such request. If the Minister approves the revised plan pursuant to this paragraph, the person taking the action must implement this plan instead of the plan originally approved.	Heathgate understands that regular discussion with regulators (i.e. quarterly with State regulators and six-monthly with both State and Federal regulators) will mean any such revisions will be made progressively with consultation.
	11	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the above conditions of approval and make them available upon request to the Department. Such records may be subject to audit by the Department and used to verify compliance with the conditions of approval.	Compliant – all records being maintained.
Licence to Mine and Mill Conditions State EPA – Radiation Protection Branch	1	The Licensee shall comply with the "Code of Practice for Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing (2005)": Radiation Protection Series No 9; ARPANSA (August 2005), and any amendments thereof or any codes, standards or recommendations substituted therefore.	Compliant.
	2	This licensee shall submit to the Environment Protection Authority, together with the application for renewal: 1. A plan showing areas in which new wellfield development is planned in the next licence period; 2. Any significant changes in the plant layout, major equipment or processes introduced during the preceding period; 3. Estimates of the quantities of wastes produced in the previous licence period	Compliant. Licence LM4 includes Beverley and Beverley North MLs expires 3 August 2015.

APPENDIX G

STATUS OF OBLIGATIONS - BEVERLEY NORTH ML 6387

Obligation Origin	Condition		Status of Obligations
State (PIRSA) Approval: First Schedule	1	Mining operation authorised by this lease must only be for the recovery of Uranium in accordance with the mining lease proposal document dated 8 April 2010 and subsequent response document dated 30 July 2010.	Compliant.
	2	The Lessee must not commence or undertake any mining operations the land until a Mining and Rehabilitation Program (MARP) has been approved by the Minister and a bond has been paid in accordance with Section 62 of the *Mining Act 1971*.	A review of the 2011 MARP was approved on 9 December 2013 - 2013 Beverley North PEPR - MP-20v11.
	3	The Lessee must prepare a MARP that complies with the requirements of guidelines approved by the Director of Mines and include criteria that are developed in consultation with relevant stakeholders.	The 2013 PEPR was approved on 9 December 2013
	4	The criteria included in the MARP must demonstrate clear and unambiguous achievement of the environmental and mine closure outcomes specified in the Second Schedule by • Including the specific parameters to be measured and monitored by the Lessee • Specifying the locations that the parameters will be measured, or how these locations will be determined • Clearly stating the acceptable values for demonstrating achievement of the outcome, with consideration of any inherent errors of measurement • Specifying the frequency of monitoring by the Lessee • Identifying what background[25]	Compliant. Fulfilled through the 2013 PEPR.
	5	The Lessee Must implement and comply with the approved MARP.	Compliant.
	6	The Lessee must review the MARP on request of the Director of Mines within a time specified in the request and submit the revised MARP for approval to the Director of Mines.	The January 2011 MARP was reviewed and approved as the Beverley North PEPR November 2013 (MP-20 v11) by DMITRE (now DSD) on 9 December 2013.
	7	The Lessee agrees to the approved MARP being made available for public inspection.	The 2013 PEPR is available to the public on the DMITRE and Heathgate website. Heathgate provides electronic copies on request. http://www.minerals.dmitre.sa.gov.au/mines__and__developing_projects/approved_mines/beverley_north
State (PIRSA) Approval: First Schedule (cont)	8	The Lessee must provide information as requested by and to the Director of Mines, on the Lessee's capability and competence to comply with the requirements of the *Mining Act, 1971*, the conditions of this lease, and the MARP in accordance with approved guidelines or as otherwise specified by the Director of Mines	Heathgate considers its record gives confidence in its ability and competence and will provide further demonstration on the appropriate request from the Director of Mines.

Obligation Origin	Condition		Status of Obligations
	9	The lessee must provide to the Director of Mines a Mining and Compliance Report (MARCR) on operations carried out on the Lease and compliance with the approved MARP. The MARCR must be submitted every year, within 2 months after the anniversary of the date the Lease was granted, or at some other time agreed with the Director of Mines in accordance with guidelines approved by the Director of Mines. The Lessee agrees to the MARCR being made available for public inspection.	Compliant. The 2013 Beverley and Beverley North MARCR was submitted to DSD on 9 May 2014. Approval was obtained from DSD to extend the submission deadline from 31 Mar 2014 to 9 May 2014. Copies also provided to Department of the Environment.
	10	The Lessee must, if requested by the Director of Mines, undertake an independent audit of achievement of the environmental outcomes in the MARP, by an independent expert approved by the Director of Mines and submit the audit to the Director of Mines. The lessee agrees to the audit being made available for public inspection. The Lessee must meet all the charges and costs in undertaking the independent audit.	An internal audit was undertaken in March 2014 and the findings are included in the 2013 Annual Compliance Report.
	11	At least 3 months prior to Lease relinquishment or expiry, the Lessee must provide to the Minister a Mine Completion Report prepared in consultation with the landowner and in accordance with guidelines approved by the Director of Mines, which demonstrates achievement of the closure criteria as specified in the current MARP.	Mining not completed.
State (PIRSA) Approval: First Schedule (cont)	12	The Lessee must, prior to commencing operations under this Lease and for the duration of the lease maintain public liability insurance to cover all operations under the Lease in the name of the Lessee for a sum not less than $50 million or such greater sum as specified by the Director of Mines, and make such amendments to the terms and conditions of the insurance as the Director of Mines may require. A copy of the cover note of certificate of currency for the insurance must be provided to the Director of Mines upon request. If requested by the Director of Mines, the Lessee must engage an independent and reputable risk assessor to prepare a risk assessment report detailing the public liability risks arising out of the conduct of operations on the lease, and recommending the level of amount of public liability cover (in respect of any one occurrence) that should be effected and maintained by the Lessee. In preparing the risk assessment report, the assessor must consult with the landowner and the Director of Mines. In specifying the level of insurance required, the Director of Mines accepts no liability for the completeness, adequacy of the sum insured the limit of liability, the scoped coverage, the conditions or exclusions of the insurance in respect of how the Lessee may or may not respond to any loss, damage or liability.	Compliant.

Obligation Origin	Condition		Status of Obligations
	13	The Lessee must report any non-compliance with these conditions and approved MARP to the Director of Mines. A verbal notification must be provided within 24 hours, after the Lessee becomes aware of the non-compliance. A written report must be provided within 3 calendar days or such time period as approved by the Director of Mines.	Compliant. Two compliance monitor wells, PAMW017, PAMW010 at Pannikan and one compliance well at Pepegoona exceedences ECLs in pH, SO_4 and U_3O_8. All wells are situated within a high grade area of ore that will be mined when regulatory approvals to commence mining in this area have been obtained. There remains no risk to environmental values of the Eyre Formation aquifer classified as industrial use only due to radiological and fluoride above ANZECC & ARMCANZ stock water quality. Reporting and actions to the satisfaction of EPA-RPB and Department of State Development (DSD).
	14	In requesting a review of the bond required under the *Mining Act 1971* the Minister may request that written quotes from a third party are obtained by the Lessee for the cost of rehabilitating the site to the requirements specified in the approved MARP. The Lessee must meet all the charges and costs in obtaining and maintaining the Bond.	Accepted
State (PIRSA) Approval: Second Schedule - Soil	1	The Lessee must, in constructing and operating the Lease ensure that soil affected by mining activities is suitable for a return to pre-mining use.	Compliant – fulfilled through PEPR obligations
State (PIRSA) Approval: Second Schedule - Waste disposal and hazardous substances	2	The Lessee must not dispose of any waste within the lease unless prior approval under the relevant legislation is obtained.	Compliant – fulfilled through PEPR obligations
	3	The Lessee must in constructing and operating the lease ensure that there are no adverse impacts to the environment due to radon release, uranium-bearing materials, or radiological aspects of seepages and spills.	Compliant – fulfilled through PEPR obligations

Obligation Origin	Condition		Status of Obligations
State (PIRSA) Approval: Second Schedule – Native Vegetation	4	The Lessee must, in constructing and operating the Lease ensure no loss of abundance or diversity of native vegetation on or off the Lease to native vegetation through: • clearance, • dust/contaminant deposition • fire or • other damage unless prior approval under the relevant legislation is obtained.	Compliant – fulfilled through PEPR obligations
State (PIRSA) Approval: Second Schedule - Weeds and Pests (feral animals)	5	The Lessee must, in constructing and operating the lease ensure no introduction of new species of weeds[26], plant pathogens or pests (including feral animals), nor increase in abundance of existing weed or pest species in the lease area compared to adjoining pastoral properties.	Compliant – fulfilled through PEPR obligations
State (PIRSA) Approval: Second Schedule – Surface Water	6	The Lessee must in constructing and operating the lease ensure no compromise of pastoral use of downstream surface water bodies.	Compliant – fulfilled through PEPR obligations
State (PIRSA) Approval: Second Schedule - Groundwater	7	The Lessee must, in constructing and operating the lease ensure that there is no compromise to the environmental values of the Willawortina aquifer.	Compliant – fulfilled through PEPR obligations
	8	The Lessee must, in constructing and operating the lease ensure that there is no compromise to the environmental values of the Namba aquifer outside of the mining lease.	Compliant – fulfilled through PEPR obligations
	9	The Lessee must, in constructing and operating the lease ensure that there is no compromise to the environmental values of the Eyre Formation aquifer outside the mining lease.	Heathgate ceased mining at Pannikan and has implemented a bleed only program to maintain a negative hydraulic gradient and control the drift of mining solution. This will not compromise the environmental values of the Eyre Formation outside of the Mine lease. Mining ceased at Pepegoona West on 28 January 2014. Management of the remaining lixiviant (using selected extractors and recirculation wells) has been ongoing since this date. This has not compromised the environmental values of the Eyre Formation outside of the Mine Lease.

Obligation Origin	Condition		Status of Obligations
	10	The Lessee must, in constructing and operating the lease ensure that there is no compromise to the environmental values of the Fractured Rock aquifer.	Compliant – fulfilled through PEPR obligations.
	11	The Lessee must, in constructing and operating the lease ensure that there is no compromise to the environmental values of the Great Artesian Basin aquifer.	Compliant – fulfilled through PEPR obligations.
State (PIRSA) Approval: Second Schedule - Native Fauna	12	The Lessee must in constructing and operating the lease ensure that there are no net adverse impacts from the site operations (including fire) on native fauna abundance or diversity in the lease area and in adjacent areas.	Compliant – fulfilled through PEPR obligations
State (PIRSA) Approval: Second Schedule - Aboriginal Heritage	13	The Lessee must, in constructing and operating the Lease, ensure that there is no disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained.	Compliant – fulfilled through PEPR obligations
State (PIRSA) Approval: Second Schedule – Protection of Third Party Property	14	The Lessee must, in constructing and operating the Lease, ensure that there is no unauthorised damage (including that caused by fire) to adjacent public or private property and infrastructure.	Compliant – fulfilled through PEPR obligations
State (PIRSA) Approval: Second Schedule – Closure and Rehabilitation	15	The Lessee must demonstrate that the following outcomes (in so far as they may be affected by mining operations) are expected to be achieved indefinitely post mine closure to the satisfaction of the Director of Mines: (a) No compromise to the environmental values of the Willawortina Formation, Namba aquifer, Eyre Formation, Fractured Rock and Great Artesian Basin aquifers (b) The external visual amenity of the site is acceptable to relevant stakeholders (c) Risks to the health and safety of the public and fauna are as low as reasonably achievable (d) Ecosystem and landscape function is resilient, self-sustaining and indicating that the pre-mining ecosystem and landscape function will ultimately be achieved (e) The site is physically stable (f) All waste materials left on site are chemically and physically stable (g) No compromise to the ability of other existing mining lessees with an approved MARP to achieve their approved groundwater closure criteria[27]	Mining not completed.
	16	The Lessee must specify closure criteria that will be used to demonstrate (within 10 years of the cessation of mining) the clear and unambiguous achievement of the closure outcomes	Mining not completed. Compliant – leading indicator criteria included in the approved PEPR.

Obligation Origin	Condition		Status of Obligations
State (PIRSA) Approval: Second Schedule – Leading Indicators		The MARP must include additional leading indicator criteria for the Second Schedule lease conditions 1 and 7 – 11. Notes: Environmental Values the environmental values recognised in 'ANZECC & ARMCANZ 2000. Australian and New Zealand guidelines for fresh and marine water quality. National Water Quality Management Strategy Paper No 4, Australian and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand, Canberra.'	Compliant – leading indicator criteria included in the approved PEPR.
State (PIRSA) Approval: Second Schedule - Landholder Liaison	17	Where the pastoral lease holder differs from the mining lease holder, the Lessee must ensure that the occupier of the land is fully advised of their program of activities, particularly in regard to the impact of operations on the land and rehabilitation progress.	Heathgate is the pastoral lease holder for the majority of the Beverley North ML and is in close contact with Arkaroola pastoral lease holders who are leaseholders for a small portion of the ML.
State (PIRSA) Approval: Second Schedule – Other legislation	19	The above environmental outcomes do not derogate from the operation of any other Acts that may be applicable to this operation including (but not limited to): • *Aboriginal Heritage Act* 1988 • *Environment Protection Act* 1993	Accepted.

Obligation Origin	Condition		Status of Obligations
Federal Approval Conditions	1	The proponent must ensure that the action achieves the following outcomes: *Groundwater* (a) no compromise of the Environmental Values of the Willawortina Formation, Fractured Rock or Great Artesian Basin aquifers; (b) no compromise of the Environmental Values of the Namba Formation and Eyre Formation aquifers outside the Beverley North Mining Lease; *Biodiversity* (c) no loss of abundance or diversity of native vegetation on or off the Beverley North Mining Lease through clearance, or any other damage, unless prior approval under the relevant legislation is obtained; (d) no net adverse impacts (including from fire) from the site operations on native fauna abundance or diversity in the Beverley North Mining Lease area and adjacent areas; (e) no introduction of new weeds, plant pathogens or pests (including feral animals), or increase in abundance of existing weed or pest species in the Beverley North Mining Lease compared to adjoining land; *Aboriginal Heritage* (f) no disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained; *General* (g) no compromise of pastoral use of downstream surface water bodies; (h) soil affected by mining activities is suitable for return to pre-mining land use following mine closure; (i) no adverse impacts to the public or the environment from radiological aspects of the action; and no disposal of waste within the Beverley North Mining Lease unless prior approval under the relevant legislation is obtained.	Compliant. Heathgate ceased mining at Pannikan on 17 July 2013 and a bleed only program has been implemented to maintain a negative hydraulic gradient toward the wellfield. This will not compromise the environmental values of the Eyre Formation outside of the Mining Lease. Mining ceased at Pepegoona West on 28 January 2014. Management of the remaining lixiviant (using selected extractors and recirculation wells) has been ongoing since this date. This has not compromised the environmental values of the Eyre Formation outside of the Mining Lease.

Obligation Origin	Condition		Status of Obligations
Federal Approval Conditions (cont)	2	The proponent must implement control and management strategies to achieve the outcomes in condition 1. The control and management strategies may include the following in relation to the outcomes required under: (a) condition 1(a) & (b) – the measures indicated at section 7.7.3 of the Public Environment Report; (b) condition 1(c), & (e) – the measures indicated at section 7.5.3 of the Public Environment Report; (c) condition 1(d) – the measures indicated at section 7.8.3 of the Public Environment Report; (d) condition 1(f) – the measures indicated at section 7.10.3 of the Public Environment Report; (e) condition 1(g) – the measures indicated at section 7.6.3 of the Public Environment Report (f) condition 1(h) – the measures indicated at section 7.4.3 of the Public Environment Report; (g) condition 1(i) – the measures indicated at sections 7.4.3, 7.6.3, 77.3 & 7.9.3 of the Public Environment Report; and (h) condition 1(j) – the measures indicated at section 7.4.3 of the Public Environment Report. Alternative control and management strategies may be implemented if they will achieve the outcomes in condition 1.	Compliant – PEPR obligation.
Federal Approval Conditions – Monitoring and Management Plans	3	The proponent must develop a Monitoring and Management Plan (the Monitoring Plan) to measure the achievement of each outcome in condition 1. The Monitoring Plan must specify: (a) the area to which the Monitoring Plan applies; (b) criteria to demonstrate the clear and unambiguous achievement of the outcomes in condition 1; (c) the parameters to be monitored; (d) frequency of monitoring; (e) the responsibility for interpreting the monitoring results; (f) leading indicator criteria and the response activities that will be implemented if a leading indicator is reached; (g) an outline of control and management strategies that may be used to achieve the outcomes in condition 1; and (h) reporting arrangements to management, external stakeholders and the public.	Compliant. The monitoring plan is integrated into the PEPR and approved by the Minister on 14 February 2011. A review of the PEPR occurred in 2013 with the 2013 PEPR MP-020v11 approved on 9 December 2013.
	4	The Monitoring Plan must also include a program for obtaining monitoring data to validate predictions of enhanced natural attenuation of mining fluids and determine the impact of groundwater flush. The program must also take into account any cumulative impacts on groundwater arising from other *in situ* recovery mining activities.	Compliant. The monitoring plan is integrated into the PEPR and approved by the Minister on 14 February 2011. A review of the PEPR occurred in 2013 with the 2013 PEPR MP-020v11 approved on 9 December 2013.

Obligation Origin	Condition		Status of Obligations
Federal Approval Conditions – Monitoring and Management Plans (cont)	5	The action must be confined to the area specified in the Monitoring Plan. The action cannot commence operation within the area designated in the Monitoring Plan until the Plan is approved by the Minister. The approved Monitoring Plan must be implemented.	Compliant. The monitoring plan is integrated into the PEPR and approved by the Minister on 14 February 2011. A review of the PEPR occurred in 2013 with the 2013 PEPR MP-020v11 approved on 9 December 2013.
Federal Approval Conditions – Mine Closure Plan	6	The proponent must develop a Mine Closure Plan for the Beverley North Mining Lease (the Mine Closure Plan). The Mine Closure Plan must describe how the following outcomes, in so far as they may be affected by mining operations, will be achieved indefinitely post mine closure: (a) no compromise to the Environmental Values of the Willawortina Formation, Namba Formation, Eyre Formation, Fractured Rock and Great Artesian aquifers; (b) risks to the health and safety of the public and fauna are as low as reasonably achievable; (c) ecosystem and landscape function is resilient, self-sustaining and indicating the pre-mining ecosystem and landscape function will ultimately be achieved; (d) the site is physically stable; and (e) all waste materials left on site are chemically and physically stable. (f) no compromise to the ability of other existing mine lease operators to achieve their approved closure criteria.	Progressive rehabilitation is documented in the Annual Compliance Report. The Mine Closure and Completion Plan is integrated into the PEPR and includes conditions 6(a)-(f) and was approved by the Minister on 14 February 2011. A formal Closure Plan will require the Minister's approval. A review of the PEPR occurred in 2013 with the 2013 PEPR MP-020v11 approved on 9 December 2013.
	7	The action cannot commence operation until the Mine Closure Plan is approved by the Minister. The approved Mine Closure Plan must be implemented.	Compliant. The monitoring plan is integrated into the PEPR and approved by the Minister on 14 February 2011. A review of the PEPR occurred in 2013 with the 2013 PEPR MP-020v11 approved on 9 December 2013.
	8	The Mine Closure Plan must be revised by the proponent prior to mine closure to take into account the results of the monitoring in Condition 4 to validate predictions of enhanced natural attenuation of mining fluids. The revised Mine Closure Plan must: (a) specify closure criteria that will be used to demonstrate the clear and unambiguous achievement of the closure outcomes; (b) show how closure criteria can be achieved within 10 years of the cessation of mining; (c) include a program for monitoring progress towards achievement of closure criteria; and (d) include remedial actions to be taken in the event that monitoring demonstrates that closure criteria will not be achieved in a 10 year period.	Accepted.
	9	The revised Mine Closure Plan must be submitted to the Minister for approval. The approved revised Mine Closure Plan must be implemented.	Compliant. The monitoring plan is integrated into the MARP (now PEPR) and approved by the Minister on 14 February 2011. A review of the PEPR occurred in 2013 with the 2013 PEPR MP-020v11 approved on 9 December 2013.

Obligation Origin	Condition		Status of Obligations
Federal Approval Conditions – Provision of Bond	10	To secure compliance with Conditions 1 and 6 of this approval, the proponent must, before commencing operation of the mine, comply with any requirement under the relevant approval granted by the government of South Australia to provide a bond in accordance with s 62 of the *Mining Act 1971* (SA).	1.8% CPI adjusted bond amount of $4,169,000 received by DSD and duly endorsed in the Mining Register as per letter from DSD dated 5 November 2014.
Federal Approval Conditions – Provision of Bond (cont)	11	If at any time the Minister determines in writing that s/he is not satisfied that either the Monitoring and Management Plan or the Mine Closure Plan is being or will be implemented, the Minister may require the proponent to provide a bond in favour of the Commonwealth for up to the full cost of rehabilitation liability.	Accepted.
	12	In setting a bond amount in condition 11, the Minister may take account of any bond required under condition 10.	Accepted.
	13	The Minister may vary the bond amount required under these conditions to cover the full cost of rehabilitation liability at any time. The Minister may also decrease the bond amount required where the proponent has decreased the rehabilitation liability through undertaking rehabilitation.	Accepted.
	14	In providing for or varying a bond amount in accordance with these conditions, the Minister may request that the proponent obtain written quotes for the cost of rehabilitation liability under the Mine Closure Plan from a third party approved by the Minister.	Accepted.
	15	The proponent must meet all the charges and costs in obtaining and maintaining the bond.	Accepted.
Federal Approval Conditions – Community engagement plan	16	The proponent must prepare a Community Engagement Plan to enable open dialogue with all stakeholders on compliance with the approval conditions. The action cannot commence operation until the Community Engagement Plan is approved by the Minister. The Community Engagement Plan must be implemented.	A Community Engagement Plan was integrated into the MARP (now PEPR) and approved by the Minister on 14 February 2011. A review of the PEPR occurred in 2013 with the 2013 PEPR MP-020v11 approved on 9 December 2013.
Federal Approval Conditions – Publication of Plans	17	All plans approved by the Minister under these conditions must be published on the proponent's website within 20 business days of approval by the Minister, unless the plans are published within this time on an appropriate South Australian Government website.	All the plans approved by the Minister under these conditions are integrated into the MARP published on http://www.minerals.dmitre.sa.gov.au/mines__and__developing_projects/approved_mines/beverley_north
	18	The Department may require the proponent to publish on the internet a plan in a specified location or format and with specified accompanying text. The proponent must comply with any such requirement.	Accepted.

Obligation Origin	Condition		Status of Obligations
Federal Approval Conditions – Notification of commencement	19	Within 10 business days of commencement, the proponent must advise the Department in writing of the actual date of commencement.	Compliant.
Federal Approval Conditions – Request for variation of plans by proponent	20	If, at any time after five years from the date of this approval, the Minister notifies the proponent in writing that the Minister is not satisfied that there has been commencement of the action, the action must not commence without the written agreement of the Minister.	Action in progress.
	21	If the proponent wants to act other than in accordance with a plan approved by the Minister under these conditions, the proponent must submit a revised plan for the Minister's approval.	Accepted.
	22	If the Minister approves the revised plan, then that plan must be implemented instead of the plan originally approved.	Accepted.
	23	Until the Minister has approved the revised plan, the proponent must continue to implement the original plan.	Accepted.
	24	If the Minister believes that it is necessary or desirable for the better protection of a relevant controlling provision for the action, the Minister may require the proponent to make, within a period specified by the Minister, revisions to a plan approved under these conditions.	Accepted.
	25	If the Minister requires a revision to a plan, the proponent must: (a) comply with the requirement; and (b) submit the revised plan to the Minister for approval within the period specified in the request.	Accepted.
	26	The proponent must implement the revised plan on approval of the Minister.	Accepted.
	27	Until the Minister has approved the revised plan, the proponent must continue to implement the original plan.	Accepted.
Federal Approval Conditions – Minimum timeframes for consideration of plans	28	For any plan required to be approved by the Minister under these conditions, the proponent must ensure the Minister is provided at least 20 business days for review and consideration of the plan, unless otherwise agreed in writing between the proponent and the Minister. This does not apply to urgent changes required to protect the environment.	Accepted.

Obligation Origin	Condition		Status of Obligations
Federal Approval Conditions – Timeframes	29	If these conditions require the proponent to provide something by a specified time, a longer period may be specified in writing by the Department.	Accepted.
Federal Approval Conditions – Auditing	30	On the request of and within a period specified by the Department, the proponent must ensure that: (a) an independent audit of compliance with these conditions is conducted; and (b) an audit report, which addresses the audit criteria to the satisfaction of the Department, is published on the Internet and submitted to the Department.	Accepted. The Minister has not directed for an independent audit to be undertaken. An independent audit of Lease Holder capabilities and systems was however requested by the State Minister Hon Tom Koutsantonis MP and was submitted to the Director of Mines – DSD (then DMITRE) with copies provided to the Department of the Environment, prior to commencement of mining on 14 April 2014.
	31	Before the audit begins, the following must be approved by the Department: (a) the independent auditor; and (b) the audit criteria	Accepted.
	32	The audit report must include: (a) the components of the project being audited; (b) the conditions that were activated during the period covered by the audit; (c) a compliance/non-compliance table; (d) a description of the evidence to support audit findings of compliance or noncompliance; (e) recommendations on any non-compliance or other matter to improve compliance; (f) a response by the proponent to the recommendations in the report (or, if the proponent does not respond within 20 business days of a request to do so by auditor, a statement by the auditor to that effect); and (g) certification by the independent auditor of the findings of the audit report.	Accepted.
	33	The financial cost of the audit will be borne by the proponent.	Accepted.
	34	The proponent must: (a) implement any recommendations in the audit report, as directed in writing by the Department; (b) investigate any non-compliance identified in the audit report; and (c) if non-compliance is identified in the audit report - take action as soon as practicable to ensure compliance with these conditions.	Accepted.

Obligation Origin	Condition		Status of Obligations
	35	If the audit report identifies any non-compliance with the conditions, within 20 business days after the audit report is submitted to the Department, the proponent must provide written advice to the Minister setting out the: (a) actions taken by the proponent to ensure compliance with these conditions; and (b) actions taken to prevent a recurrence of any non-compliance, or implement any other recommendation to improve compliance, identified in the audit report. Note 1: To avoid doubt, independent third party auditing may include audit of the proponent's performance against the requirements of any plan required under these conditions. Note 2: Audit criteria should focus on compliance with the outcomes specified in conditions 1 and 6.	Accepted.
Federal Approval Conditions – Reporting Compliance	36	Within three months of every anniversary of the action commencing operation, or by a date otherwise agreed by the Minister, the proponent must provide a report to the Department addressing compliance with each of the conditions of this approval.	Compliant.
	37	The proponent must ensure that the report is publicly available on the internet within 20 days of it being submitted to the Minister.	Accepted.
	38	Reports must be provided until the Minister is satisfied that the closure outcomes in Condition 3 have been met.	Accepted.
Federal Approval Conditions – Reporting Non-Compliance	39	The proponent must, when first becoming aware of a non-compliance with these conditions, or a plan required to be approved by the Minister under these conditions: (a) report the non-compliance business days; and (b) bring the matter into compliance within a reasonable time frame specified in writing by the Department.	Accepted.
Federal Approval Conditions – Submission of Plans and Reports	40	To avoid doubt, a plan or report prepared to address State requirements may also be submitted to address the requirements of these conditions provided that the plan or report addresses the relevant matters identified in these conditions. This includes audit reports required under condition 30 and compliance reports required under condition	Accepted.
Federal Approval Conditions – Record keeping	41	The proponent must: (a) maintain accurate records substantiating all activities associated with or relevant to these conditions of approval, including measures taken to implement a plan approved under these conditions; and (b) make those records available on request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with these conditions. Note: Audits or summaries of audits carried out under these conditions, or under section 458 of the EPBC Act, may be posted on the Department's website. The results of such audits may also be publicised through the general media.	Accepted.

Obligation Origin	Condition		Status of Obligations
Federal Approval Conditions – Dictionary	42	In these conditions, unless otherwise indicated: ***As low as reasonably achievable*** has the meaning given in the Code of Practice and Safety Guide: Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing, ARAPNSA 2005. ***Beverley North Mining Lease*** is the area for which Heathgate Resources has applied for a mining lease and which currently comprises part of Exploration Lease EL 4387 granted by the South Australian Government. ***Commencement of the action*** is any preparatory works required to be undertaken, including clearing of vegetation, the erection of any on-site temporary structures and/or the use of construction or excavation equipment on site for the purposes of breaking the ground. ***Conditions*** means these conditions attached to the approval of the action; ***Department*** is the Australian Government department responsible for administering Part 4 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). ***EPBC Act*** is the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). ***Environmental Values*** are the environmental values recognised in =*ANZECC & ARMCANZ 2000. Australian and New Zealand guidelines for fresh and marine water quality.* National Water Quality Management Strategy Paper No 4, Australian and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand, Canberra' and as described in the Public Environment Report for the Beverley North Mining Project. ***Minister*** means the Minister responsible for Part 4 of the EPBC Act, and includes a delegate of the Minister under s.133 of the EPBC Act. ***Plan*** includes a report, study, or strategy (however described). ***Proponent*** means the holder of the approval to which these conditions relate, and includes any person acting on behalf of the proponent. ***Public Environment Report*** means the *Beverley North Project Mining Lease Proposal and Draft Public Environment Report* prepared for Heathgate Resources Pty Ltd by URS, dated 8 April 2010. ***Significant Environmental Benefit*** has the meaning defined in regulations under the *Native Vegetation Act 1991* (SA).	Accepted.
	43	Unless otherwise indicated, words in these conditions have the same meaning as in the EPBC Act.	Accepted.
	44	Unless the contrary is indicated, in these conditions: (a) words in the singular number include the plural and words in the plural number include the singular; and (b) condition headings are inserted for convenient reference only and have no effect in limiting or extending the language of condition to which they refer.	Accepted.

Obligation Origin	Condition		Status of Obligations
Licence to Mine and Mill Conditions State EPA – Radiation Protection Branch		This licensee shall submit to the Environment Protection Authority, together with the application for renewal: 4. A plan showing areas in which new wellfield development is planned in the next licence period; 5. Any significant changes in the plant layout, major equipment or processes introduced during the preceding period; Estimates of the quantities of wastes produced in the previous licence period	Compliant. Licence LM4 includes Beverley and Beverley North MLs expires 3 August 2015.