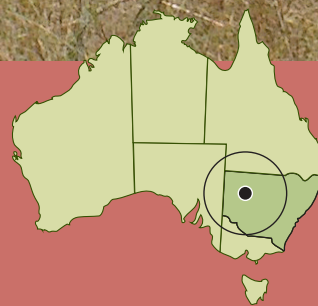


### Case study

**Property name:** Rosemere Grazing Company  
**Property location:** Wilcannia, northwest NSW  
**Property size:** 23,000ha  
**Enterprises:** Rangeland goats, Merino sheep  
**Annual rainfall:** 240mm  
**Soil:** Rolling red sands interspersed with clay flats, floodplain and Mallee



# Remote water monitoring slashes onsite man hours

A carefully planned, remotely monitored livestock watering system has enabled one family to successfully manage their rangeland goat and Merino sheep operation from their home base, six hours away, as **Pamela Lawson** discovers.

About six years ago, Stephen Dunbar and his family began a total redevelopment of their 23,000 hectare property near Wilcannia, in northwest NSW.

The property supports about 12,000 rangeland goats, depending on the available groundcover, and about 2000 Merino wethers each year which are brought in, grown out, shorn once and sold to the live export market, delivered Adelaide.

Trade wether numbers used to be up around 8000 each year, when the export market was more consistent.

The Dunbars previously ran a Boer goat herd, but they did not produce enough kilograms per hectare compared to the rangeland goats, so the Boers have been dispersed to make way for more rangeland genetics.

## REMOTE CONTROL

The property development plan aimed to achieve a remote management system to be

run from the Dunbar's home base, six hours away.

The rangeland goat enterprise already had a low, hands-on management requirement, but in addition to investments in fencing and goat-handling equipment, the development included a telemetry and solar-powered water system.

"The technology we engaged is part of an overall attempt to have total remote management, removing the need of onsite management to only the core elements of the enterprise," Stephen Dunbar explained.

"We are now approaching less than 200 onsite man hours per annum to complete the whole rangeland goat annual program.

"That is equal to one minute per animal per year.

## GETTING SET UP

"Six years ago, information about using telemetry in remotely monitored water systems was initially very hard to find.

"After an extensive web search we

stumbled upon an emerging company called Observant, based out of Melbourne.

"Their products were already being employed in remote situations all over Australia.

"They also understood we wanted a system based on 3G telecommunications, which we could access via the web and mobile phones. We also wanted to be able to gradually extend the system as we wished, with relative ease and cost-effectively.

## SYSTEM DETAILS

"The focus of our stock watering system is to deliver a regular, uninterrupted water supply to points across our property and for any failures or changed conditions are identified within two hours to our home base.

"We have built the system around a base station where there is good mobile phone coverage.

"As we have extended it, each new monitoring site in the system communicates back to the base station via UHF radio.



"The base station is located at a strategic bore, and consists of cameras that take photos of critical indicators around the water system, either hourly or every two hours.

"Other features of the base station include a water metering system, which relays

been designed to satisfy the requirements of the individual site," Stephen said.

"The cost of these additional units therefore depends on the different components required, but usually varies from \$2000 and \$5000.

## There is little to be gained by driving miles to continue to maintain old gear when a remote system is telling you it is broken all the time

the hourly pumping performance of the bore, a facility to monitor the power or battery output of the solar panels, storage tank depth indicators and outward flow monitors.

"The base station will send SMS alerts at trigger points for all these features, or the readings can be accessed on a website via the internet."

### COSTS AND TIME

According to Dunbar, the initial set-up cost of the system was the most expensive part, at about \$12,000 six years ago.

"Each additional unit we have added has

"The initial system did not take long to install and was undertaken by local contractors and Observant staff.

"Once the main base station is in place and you have seen one monitoring site set up, you can usually do any additional ones yourself.

### INTO THE FUTURE

"Our system has been running for six years now under very harsh, arid conditions.

"To date, the equipment we have onsite has not failed and does not look like failing.

"While we have been challenged twice

in the six years by technical issues, the Observant staff in Melbourne were quick to rectify these. We have four monitoring sites operating off the main base station.

"On the strength of the system's performance to date, we plan to install another four monitoring sites to complete the fully, remotely managed livestock water system.

### CONCLUSION

Dunbar advises other producers looking to use telemetry in a water system to carefully plan the features to be installed at each site, so that it delivers the information you require.

He also cautions producers not to expect this technology to relieve the problems associated with old equipment being relied upon in old watering facilities.

"There is little to be gained by driving miles to continue to maintain old gear when a remote system is telling you it is broken all the time."

FA

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