

Mining and Metals: Making Borehole Water Potable

Project specifics

- + Plant size: 270 m³/d
- + Feed water: Bore water
- + Recovery: 80 %
- + Process: Brackish water reverse osmosis

The challenge

A zinc and lead mine in North West Queensland needed to produce potable water from local boreholes, for use in the camp, to support the development of the mine. However, there were major problems with calcium sulphate scale and issues with pH, thus rendering the current antiscalants being used as ineffective.



The Genesys solution

A local water technology company identified that the pH issue was connected to the coagulant being used. They successfully used GenFloc GPF and PWF to offset this. Once the pH issue had been rectified, Genmine AS65 was used to prevent the formation of calcium sulphate scale.

Innovation

We use our robust knowledge of membrane fouling to design client-specific antiscalant and cleaning regimes, based on our innovative products and technologies.

Our range of antiscalants help to maximise recovery and our GenMINE™ cleaning range helps to reduce cleaning duration and frequency. Furthermore, our innovative Genairclean™ method uses dual generation air-bubble technology to improve membrane cleaning efficiency.

Forensic analysis of membranes from operational plants, led by the team at our recognised centre of excellence in Madrid, enable us to provide mining companies with tailored solutions to optimise plant performance.

Sustainability

We have a verified track record of treating challenging, variable effluent mine waters, ensuring that mining operators protect the environment.

In addition to cleaning water for reuse in the mines, where possible, we enable them to supply potable water to their own camps and even surrounding villages.

The results have included

- ✓ Improved production of clean drinking water
- ✓ Stabilised pH
- ✓ Inhibition of scaling
- ✓ Improved plant availability