

Gold fields - St Ives Gold Mine - Belleisle mine 2007**Waterproofing mine**

The Belleisle decline's portal is situated at the bottom of an open pit in the middle of a saltpan, Lake Lefroy – 50 Km south of Kalgoorlie, Western Australia.

There is a paleo-channel at the top of the Belleisle Shear Zone which is the source of brine water leaking down between two impermeable porphyry contacts. The sheared rock in between these lenses was intersected during mining development and a large rock has burst out due to hydraulic fracturing, opening a 90 litre per second / 12 bar water leak (21 US Gallon per second / 174 P.S.I). This situation resulted in a serious flood risk due to the unexpected high pumping load.

Conventional grouting was not considered due to the high flow rate and brine content of the water. Sovereign was called in and after some dye tests a short drilling program was initiated, accessing the shear zone. Sovereign used 12 tons of their special water proofing emulsion grout, NOH₂O to plug the single leak. The site was handed back to the mine management within 4 days of intensive grouting.

Sovereign returned to the mine in 2008 to help with the development through the shear zone on other levels, sealing water.