

Underground Coal Mine : \$500,000 Savings via Longwall Fluid Conversion

QUINTOLUBRIC® 818-02

The Challenge

A large underground longwall coal mine located in Australia was having issues with their longwall fluid due to the local water supply they were using to mix with the product.

- Due to flooding events there was a sediment buildup in the local water supply
- The current raw water filter system being used by the mine was not adequate enough to keep up with the increased sediment
- This local water supply was used to mix with the longwall fluid, and the increased sediment not only caused the fluid to split, but also had negative effects on filtration and all longwall components

The Solution

To help mitigate the effects of the local water supply Quaker Houghton recommended the mine convert to QUINTOLUBRIC® 818-02, a full synthetic longwall fluid that can withstand the spikes in water hardness. Additionally, Quaker installed a new mixing station to filter the sediment from the water more effectively, and provide tighter controls on the longwall fluid concentration.

The Product

QUINTOLUBRIC® 818-02 is a full solution synthetic, high water-based (HFA) hydraulic fluid concentrate designed for use in longwall shields. This fully-synthetic concentrate has been specially engineered to pass the severe tests developed by Caterpillar, Joy and other major longwall shield OEMs.

- MSHA Approved
- Biodegradable in accordance with ISO 7827
- Compatible with all commonly used longwall fluids for easy conversion
- Dyed for easy underground leak detection
- Safer for the environment
- Can be mixed at a 2% concentration for less consumption

The Benefits

With the conversion to QUINTOLUBRIC® 818-02, and the new mixing tank the mine was able to achieve the following:

- Reduction in fluid consumption – from 4% to 2%
- Reduction in the amount of filters used – using a fully synthetic longwall fluid allowed for increased contamination capacity and longer fluid lifetime
- Improved pump station and solenoid valve performance – decrease in fluid contamination resulted in longer component lifetime, lower maintenance costs and reduced maintenance downtime
- Reduction in maintenance downtime and monitoring needed for the mixing tank

All of these reductions resulted in a \$500,000 savings for the mine.

