

# CASE STUDY



## LONGWALL ROOF SUPPORT

### QUINTOLUBRIC® 814-01

#### CHALLENGES

Bridger requires their longwall hydraulic fluid to provide high performance characteristics that comply not only with O.E.M. warranty requirements, but also their own high quality standards, they want a longwall fluid to:

- » Keep their systems problem free
- » Keep roof supports and pumps trouble free
- » Reduce solenoid valve replacements

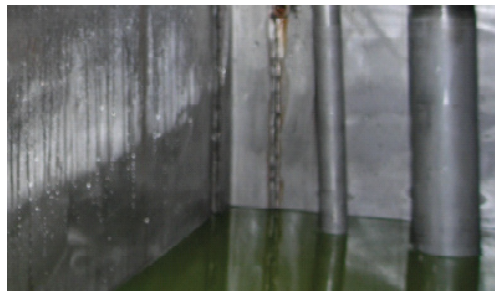
Quaker proposed using QUINTOLUBRIC® 814-01 in their systems and providing engineering support for their mixing system to meet the required performance standards and reduce maintenance requirements.

#### THE SOLUTION

Since selecting QUINTOLUBRIC® 814-01 Bridger Coal has achieved the following:

- » No valve or other hydraulic problems on Bucyrus Longwall, Hauhinc pumps and other related equipment
- » Elimination of solenoid sticking and other hydraulic failures
- » Reduced solenoid valve replacement since installation
- » Less than 12 solenoid valves needed to be replaced since QUINTOLUBRIC® 814-01 was put into service
- » Replacements were due to electrical malfunctions and not problems with QUINTOLUBRIC® 814-01

Quaker also provided an engineering solution for Bridger's mixing system, which was producing low mix ratios. Quaker was able to identify and fix the problem. Even at low mix concentrations, QUINTOLUBRIC® 814-01 did not separate, scum or show signs of bacterial growth.



#### THE PRODUCT

QUINTOLUBRIC® is Quaker Chemical's family of specialty, fire-resistant hydraulic fluids. For more than 30 years, Quaker Chemical has been a leading supplier of specialty hydraulic fluids, and the QUINTOLUBRIC® brand is recognized around the world as the name for high-quality, high performance, fire-resistant and environmentally compatible fluids. Accomplishments in the longwall industry include no reported incidence of bacterial and fungal growth for over 15 years. In addition to these accomplishments, QUINTOLUBRIC® has an exemplary record of customer retention, among the highest for longwall hydraulic fluid suppliers.

#### THE EXPERTISE

HFA fluids are hydraulic fluids for use in equipment designed to operate with low-viscosity high water content fluids. QUINTOLUBRIC® 814-01 is a high water based (HFA) hydraulic fluid concentrate designed for use in longwall shields. Quaker's QUINTOLUBRIC® "Clean Green" Longwall Fluids offer these seven major benefits:

- » Biodegradable
- » No bacteria scum
- » No corrosion
- » Non-toxic
- » Non-hazardous
- » Fire resistant
- » Odor free

Quaker Chemical markets several HFA products for various applications including the brand names QUINTOLUBRIC® 807 for commercial applications, and QUINTOLUBRIC® 814 and QUINTOLUBRIC® 818 for longwall mining applications. These products outperform competitive products in stability, bioresistance and corrosion prevention with low applied costs.