

FLUIDS

Four wear-free years

Fluid maker Quaker Chemical’s products and expertise are helping to keep the longwall at Bridger Coal’s Wyoming complex running smoothly.

Longwall fluid is the lifeblood of any longwall operation. The performance of this fluid is critical to all components throughout the longwall system, from filters to pumps to valves and more.

Fluid instability, bacteria or deposit buildup may cause major damage and threaten productivity.

For example, bacteria buildup over time can destabilize longwall fluid, causing oil separation, corrosion and odors. Further problems occur as longwall supports, pumps and related equipment begin to clog, stick and corrode, leading to unscheduled and costly downtime, and component failures.

In 2007, when Bridger Coal was looking to select a longwall fluid supplier, it chose Quaker Chemical to supply its high performance longwall hydraulic fluid. Quaker longwall fluid was approved by the original equipment manufacturer’s warranty requirements and met Bridger’s own quality standards.

Bridger Coal also selected Quaker for the support structure offered, including on-site service and support and access to a team with a dedicated mining lab.

Quaker’s proposed solution for maintaining problem-free longwall equipment was Quintolubric 814-01, a fire-resistant, biodegradable hydraulic fluid that prevents

bacteria buildup and helps to keep the system running clean. Quaker also provided an engineering solution for the Bridger Coal mixing system, which included water treatment and automated mix control.

Since first integrating Quintolubric 814-01 into its mining operations in March 2007, Bridger Coal says it has experienced virtually no problems throughout its longwall system: its Caterpillar longwall and Hauhinc pumps have remained problem-free, solenoid sticking and other hydraulic failures have never occurred, and there has been no need for solenoid valve replacement due to fluid-related issues.

“The hydraulics have performed beyond our expectations,” underground maintenance coordinator Lee Israel said. “The 478 solenoid valves we have changed out on the supports since installation were all due to electrical malfunction, not sticking or other hydraulic failure.”

After more than four years, 11,396 cycles and 12,001,605 tons of coal mined – as well as tearing down and inspecting the various shield components – “the equipment is in excellent condition with no signs of any wear,” Israel said.

Another mining operation recently visited Bridger Coal to evaluate its system and the performance of its longwall fluid. They, too, decided to switch to Quaker longwall fluids.



Bridger underground maintenance coordinator Lee Israel

“Quaker Quintolubric longwall fluids such as the Quintolubric 814 series have set the industry standard for premium quality longwall fluids in the market,” global business development manager mining Kevin Dickey said, adding that the latest synthetic solution technology introduced into the market, Quintolubric 818 series, is setting the standard again for technology and longwall fluid performance. **CU**

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