

Application Bulletin

LAKOS Removes Unwanted Sand, Increases Production

System Identification:

Oil production; produced water; protection of FWKO and Heater-Treater

Solids/Liquids:

Sand, silt, clay and hydrocarbons in oil/water emulsion

Problem:

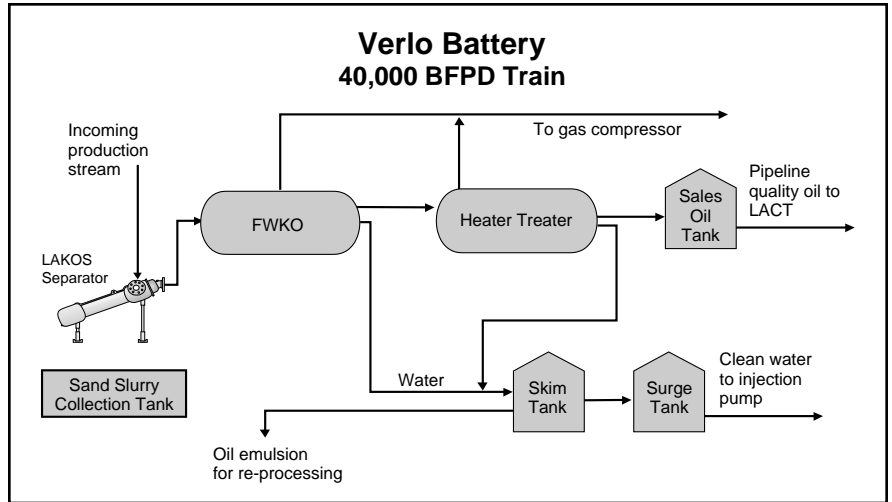
At the Renaissance Energy site in southwest Saskatchewan, a high level of sand in the Free Water Knock Out (FWKO) tank and heater-treater tank was causing

the plant to shut down for maintenance every 4-5 months. The produced water contains an oil/water emulsion mixed with sand, clay, silt and hydrocarbons. The sand was filling up in the tanks, leading to lower efficiencies, and inadequate retention time in the heater-treater. Renaissance had previously tried another type of separator, but was unhappy with the performance and durability of the unit.

Solution:

A LAKOS Separator was installed prior to the FWKO to remove the unwanted sand, silt and clay. Production Engineer Mike Briffett found that not only were the tanks protected, maintenance time was reduced significantly. This helped to lower maintenance costs and eliminate the previous plant shutdowns, thereby increasing production, resulting in cost savings exceeding \$100,000 at this site alone. With the LAKOS Separator in place, shutdowns are limited to a required annual inspection. Additionally, the consistent low pressure drop of the LAKOS Separator, maintains a consistent flow in the battery. Briffett also noted the ease of installation and the compact profile of the LAKOS unit.

The system has been in operation at the Verlo Battery for more than four years, and Renaissance is pleased with the performance, finding the LAKOS Separator an effective method for removing sand from produced water. An additional ten units have been purchased for installation in various production sites.



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