

Smart Rod-Lift Solution Boosts Uptime, Increases Production by 37% for 40 Reciprocating Rod-Lift Wells, Redefines Production Strategy for 200-Well Field

Objectives

- Optimize production in horizontal wells throughout a mature, 200-well, reciprocating-rod-lift asset. The operator currently pumps the well at fixed speeds and low strokes per minute (SPM) rate as a result of rod-string float and fluid-pound problems.
- Reduce downtime caused by premature equipment wear. Pump failures averaged 15 days of downtime.

Our Approach

- Weatherford production-optimization experts assessed production in the asset along with the failure history. To combat ongoing fluid-pound issues, the team recommended upgrading the automation systems from fixed speed to variable speed.
- The Weatherford team recommended a WellPilot® variable-speed drive (VSD) and rod-pump controller (RPOC) unit to regulate the pump speed throughout each stroke. Because optimal pump speed varies stroke by stroke depending on fluid-column conditions and mechanical factors that include the length of the rod string and height of the fluid column in each well, the team recommended a real-time monitoring system driven by the Weatherford production optimization software platform.
- At the wellsite, the Weatherford team installed VSD and RPOC equipment and communication links on 40 wells. They next performed a unit-performance analysis to configure the VSD and RPOC to automatically change pump speed based on pump fillage and alleviation of fluid-pound and rod-string-float problems.
- The team also installed production optimization software platform to enable the operator to monitor real-time well performance.

Value to Customer

- The smart rod-lift solution, featuring WellPilot VSD and RPOC automation technology, helped the operator to optimize production in a 200-well field. The solution automatically adjusted lift parameters to help the operator increase production by 37%.
- The Weatherford production optimization software platform enabled remote monitoring and management, which enabled a faster response to dynamic well conditions. This resulted in a 42% increase in uptime by preventing rod failures.
- The solution redefined the production strategy for the field, and the operator is currently installing the smart rod-lift solutions on the remaining 160 wells.



The Weatherford smart rod-lift solution helped the operator to monitor and remotely respond to dynamic well conditions, resulting in a 42% increase in uptime by preventing rod failures.

LOCATION

Riau, Sumatra, Indonesia

WELL TYPE

Onshore horizontal heavy oil producer

FORMATION

Miocene sands

PRODUCTS/SERVICES

- WellPilot rod-pump controller
- WellPilot variable speed drive
- Production optimization software platform

