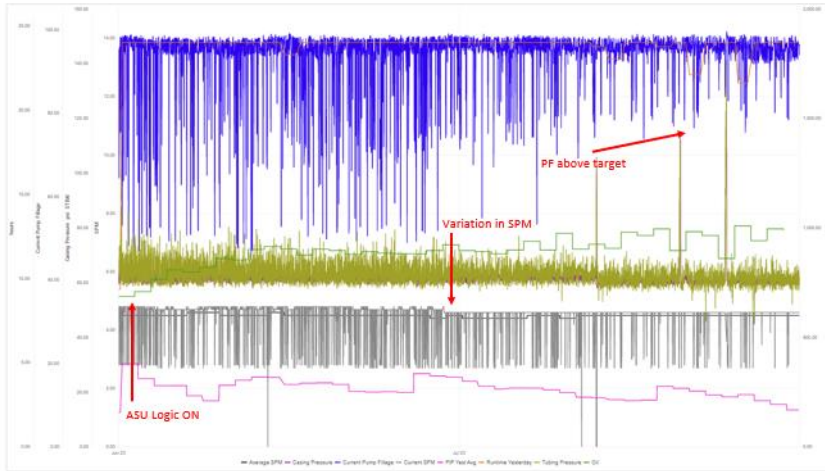


ForeSite® Autonomous Control

Increases Production by 20 STBPD, Simplifies Rod-Lift Operations, Improves Response Time



Autonomous control based on speed change met to stabilize the well and optimize production.

Objectives

- Implement autonomous control (AUC) for reciprocating rod-lift (RRL) wells to continuously optimize the well performance and reduce failures.

Our Approach

- In close collaboration with the end users, a team of Weatherford production software and petroleum engineering consultants developed a logic that can autonomously optimize RRL well operations by controlling setpoints using ForeSite and CygNet®.
- The project was set to develop, test, and configure the automated setpoint control script.
- The AUC script utilized three distinct controller types on both conventional and Rotaflex® surface units and was operated in both Recommendation Mode and Control Mode for 20 wells in pilot.
- Ongoing support after deployment was provided.

Value to Customer

- The deployed AUC optimized strokes per minute (SPM) by checking controllers and ForeSite setpoints. The control logic functions mitigated under-pumping and over-pumping conditions by operating the well at peak performance conditions.
- During the project, one pilot well showed pump fillage above target after the AUC made a minor speed adjustment, increasing oil production by 20 STBPD. Another well faced surface restriction, which, once removed, allowed the AUC to restore optimal performance conditions.
- The customer expanded this solution to over 700 rod-lift wells that share the same controller type.

LOCATION

USA, North Dakota

WELL TYPE

Reciprocating rod-lift

PRODUCTS/SERVICES

- ForeSite® Autonomous Control
- CygNet® Platform
- Production Optimization Consulting

