

ForeSite® Edge

Boosts Production 2%, Reduces Wellsite Visits 80%, Reduces Failures 15%, Increases Revenue \$250K per Year

Objectives

- Improve uptime in five reciprocating-rod-lift wells that are prone to failure, each of which can only be detected by visual inspection. Each well is equipped with a variable frequency drive (VFD), run at high speeds, and prone to intermittently low pump fillage.
- Increase personnel efficiency by enabling remote data monitoring, reducing wellsite visits, and supporting remote well management.
- Increase production through continuous optimization.

Our Approach

- A Weatherford team consisting of production software experts and engineers conducted an optimization analysis. To enhance well visibility and data availability, the team recommended ForeSite Edge—a next-generation controller that leverages high-frequency data and modelling at the wellsite—to be installed alongside each well's VFD.
- Deployed to the field, ForeSite Edge devices enabled remote monitoring for key performance measurements such as strokes per minute (SPM), pump fillage, effective runtime, strokes per day, and more. This data led to optimization opportunities in each well.
- High-frequency data and automated card-pattern matching helped determine pump-fillage trends and detect cyclic gas interference, which led to gas pounding, increased equipment wear, and downtime. Using system recommendations, the operator used ForeSite Edge remote-management capabilities to change VFD minimum SPM, the minimum number of pump-off strokes, and SPM reduction settings.
- These changes increased production by an average of 2%, reduced wellsite visits by 80%, reduced strokes by more than 500,000 per well per year, and reduced failures by 15%.

Value to Customer

- ForeSite Edge improved uptime in five rod-lift wells with a history of failure. High-frequency data enabled a diagnosis of cyclic gas interference, which led to gas pounding and frequent failures. By making recommended changes remotely, failures were reduced by 15%, or 1.5 pump failures per year that cost \$25,000 per failure.
- Remote management capabilities increase personnel efficiency and reduces wellsite visits by 80%, which saved nearly \$150,000 per year.
- ForeSite Edge production-uplift recommendations increased production by 2%, which is an increase of \$120,000 in incremental revenue.
- Based on the success of the five-well installation, the client will expand the ForeSite Edge solution to 11 more wells.



ForeSite Edge increased incremental revenue by \$250,000 per year for 5 rod-lift wells.

LOCATION
Wyoming, USA

BASIN
Powder River

ARTIFICIAL LIFT TYPE
Reciprocating rod lift

TOTAL WELLS
5 scaling to 16

AVERAGE FAILURE RATE
1.5 per well per year

AVERAGE DEPTH
11,500 ft (3,505 m)

PRODUCTS/SERVICES

- ForeSite Edge
- Production optimization consulting

