

ForeSite[®] Sense Reservoir Monitoring

Provides Real-Time Monitoring, Optimization, and Daily Allocation for 37 Offshore Wells

Objectives

- Provide a safe, efficient, and simple fieldwide monitoring solution to obtain reliable and accurate measurements of phase flowrates including pressure and temperature (P/T)
- Fulfill operator requirements that the solution remains functional for the life of the field and supports plans for its future expansion

Our Approach

- Following a thorough pre-job analysis, a Weatherford team recommended ForeSite Sense reservoir-monitoring solution, including ForeSite Sense flowmeters, optical P/T sensors, a single topside-instrumentation system, and continuous technical support.
- The team installed the solution on 27 wells. The P/T gauges enabled drawdown management and sand control while providing the data necessary for distributed temperature profiling. This created the basis for calibration and flow correlation for the in-well performance modeling as well as gas-lift monitoring and injection-point management. The measurements are bidirectional and independent of fluid type, which allows the operator to change any well from producer to injector.
- Once installed, the client received real-time production monitoring, optimization, and allocation data. The project was expanded to include an additional 10 wells based on the system's performance, reliability, and flexibility.

Value to Customer

- The Weatherford ForeSite Sense reservoir-monitoring solution delivered real-time production monitoring, optimization, and daily allocation. The system became essential for determining well performance and provided better well-integrity management, such as leak detection. The solutions supported advanced problem diagnostics by enabling the client to identify any mismatch between the real-time values and model predictions.
- The single topside instrumentation system enabled the flexibility to add new wells beyond the initial 27 wells, reducing the cost of field management. Furthermore, the solution enabled conversion from producer to water injector with no additional cost.
- ForeSite Sense allowed the client to reduce the frequency of test-separator tests from once a month to once every three months, which lowered deferment costs by about 5 percent.



The Weatherford ForeSite Sense reservoir-monitoring solution provided safe and reliable real-time production monitoring and optimization for 37 offshore wells.

LOCATION

North Sea

WELL TYPE

Offshore Oil

NUMBER OF WELLS

37

PRODUCTS/SERVICES

ForeSite Sense reservoir monitoring
ForeSite Sense flowmeters
ForeSite Sense optical sensors

