

Emerson's Integrated Solution Helps Optimize Shale Production for Producer in Permian Basin

RESULTS

- Reduced installation time and cost
- Improved facility coordination as per current production rates
- Reduced onsite cost and efforts with wireless automation
- Separator automation allowed for improved insight and visibility



APPLICATION

Onshore production — portable separator skid packages

CUSTOMER

Major producer in the Permian Basin

CHALLENGE

The rapid decline rate of shale wells requires tailoring of facilities to achieve precision with current production. Facilities that are designed for early heavy flow rates are not optimally utilized for lesser rates. These lesser rates can occur in as early as two years after initial production. Portable separators allow the units to be deployed where they are most effective.

Timely and accurate information in the separator process is vital for better reservoir modeling and local well control.

“We wanted to reduce installation time and cost — and we got it.”

SOLUTION

A Coriolis Interface Module (CIM) mounted in a FloBoss™107 gives inexpensive access to Coriolis meters mounted on each of the three legs of the separator output. The operator has real time surveillance of the well's performance. The data can be sent to the reservoir engineers so they can build better models. Diagnostics collected via the CIM are used to determine if the separator is operating efficiently.

The FloBoss107 is used to control, gather data, and perform well monitoring for reservoir management. They are also using one FloBoss107 on the separator and one on the wellhead. The wellhead unit reads the tubing and casing pressures and will shut in the well if it exceeds the set point pressures. The wireless function communicates the pressures back to the separator for monitoring and reporting to SCADA. If they have a shutdown situation on the separator, it communicates with the wellhead RTU to shut in the well remotely. Once the error has been fixed at the separator and the wellhead unit is reset, it takes and overrides from the operator to bring the well back on line.

In addition, separator levels are being controlled with the PID control loops implemented in the FloBoss107. Well shutdowns are controlled by using the Emerson SmartProcess™ Oil & Gas Application Suite's Surface Control Manager. This allows the setup of trigger points from multiple points. Surface Control Manager allows the user to configure the FloBoss107 to perform simplified control, logic, and mathematical functions using easy-to-configure pre-designed menus.

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