

Emerson's ROC800-Series and Distributed RTU™ Network Help Colorado Producer Get to First Oil Faster, and More Efficiently

RESULTS

- Maintained the leanest operations possible with the automation package executed in a turnkey fashion; no in-house resources were required
- One control and measurement platform reduced “cost of ownership” (training, software licenses and spare parts)
- Modular and Scalable changes to fix 4 to 32 well pads
- Time to first oil greatly reduced due to plug and play design



APPLICATION

Onshore oil production with 4 to 16 horizontal wells per pad. The producer needed a comprehensive control and measurement solution to ensure safety, environmental, compliance, and accurate measurement for allocation and custody transfer

CUSTOMER

An Active Producer in the Denver Julesburg Basin

CHALLENGE

The customer needed to deploy wellpads quickly and consistently, to maximize efficiency and reduce time to first oil. They needed a strategy that provides all the key requirements – including safety for the environment and workers, accurate measurement for allocation, and custody transfer with resources that can be redeployed as wells decline.

“The modular approach allowed us to create a standardized and improved efficiency while increasing safety.”

SOLUTION

The monitoring and control was accomplished using Emerson's Distributed RTU™ Network. This included ROC800-Series RTUs, meters, sensors, control relays, HMIs and software, and services to support installation, configuration and training. The system consisted of four subsystems: wellheads, separators, emissions, and tanks.

At the wellhead, the designated ROC800 RTU for the wireless network monitored casing and tubing pressures at each wellhead and if unsafe conditions were detected, the wells will be shut-in. There is one RTU with the Distributed RTU Network for every four wells and it also provided plunger lift control to optimize production.

At the separator, the ROC800 monitored the health of the separator, along with taking measurements and calculations for wellpad allocation and production that reported back via a SCADA system. The system used a well test application for bulk/test pad configuration.

The designated ROC800 at the tanks was used to monitor production with Rosemount™ wireless guided wave level sensors and wireless tank levels to provide shut-in alarms to the wellheads and separators. The ROC800 also provided multiple remote hauling stations with electronic hauling tickets and a printer.

The ROC800 designated for environmental compliance measured gas produced by the Vapor Recovery Units (VRUs) and monitored the status of the VRUs, Combustors, and the Gas pipeline meters for total sales data.

Emerson addressed the producer's concerns by getting to first oil faster, more efficiently, and keeping their personnel safe.

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