

Customer Case Study:

Improving Gas Production Economics with Smart Field Automation

Company:

McMurry Energy Company

Application:

- Gas Wells in Pinedale Anticline Field, Green River Basin, Southwestern Wyoming
- Remote monitoring, alarming, and control

System:

- Integrated iGateway I/O and solar power radios
- Solar powered radio SCADA network
- iSCADA well monitoring and control automation service

Benefits:

- Increased production through predictive/ preventative maintenance
- Reduced operating costs with smart routes for pumpers
- Improved well performance via remote control
- Instantaneous alarm reporting & downtime immediate response

iSCADA Enhances Production and Reduces Operating Costs by Remotely Monitoring and Controlling Gas Wells

McMurry Energy Company (MEC) is an Exploration and Production (E&P) company with assets in Wyoming.

On average, MEC's gas wells produce 2,000 mscf/d or more, and a typical well location consists of a wellhead, production unit, tank battery, and a meter tube with EFM.



Challenges:

MEC's operations require pumpers to visit each well every day to adjust equipment settings and record information. These records are gathered and sent to a production engineer for review.

Engineers and operators then make decisions using data that is at least 24 hours old. When down stream conditions affect the performance of the well, there is no ability to notify the pumper or engineer on a real-time basis. Without realtime alarm notifications, producers cannot respond to operational upsets in a timely fashion.

Running blind on day old data was unacceptable to MEC. Downtime costs were exceeding hundreds of dollars per hour per well. Accordingly, MEC sought out an affordable smart field system to get data in the hands of engineers and operators on a real-time basis.

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The Project:

The iSCADA real-time well monitoring system was selected as a quick, low overhead way to continuously monitor MEC wells. iSCADA gave MEC immediate access to operating parameters such as pressures, temperatures, production, and EFM data without pumpers having to travel to the site. The iSCADA system quickly became a core MEC tool for confirming operability and alerting pumpers when problems occur.

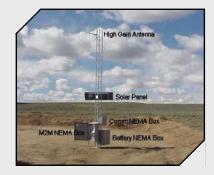
Onsite, rugged M2M iGateways manage the link between field systems and the M2M iSCADA data center. The iGateways insulate the system from environmental and communications issues, and optimize data transport to control communications usage and associated costs.

The turnkey M2M iSCADA system includes complete SCADA functionality, application hosting and management, radio communications, and all field hardware and services. The iSCADA system provides MEC:

- Rapid deployment through a packaged system that is engineered, integrated, and tested before the field hardware is shipped.
- → Flexible I/O supports a broad range of sensors, PLCs, and electronic flow meters.
- Secure Web browser access from anywhere in the world, for viewing real-time and historical operations, alarm data, and reports.
- Alarms to immediately alert pumpers and operations personnel to problems, allowing pumpers to respond quickly to the site. Notification given over phone, cell phone, pager, or Internet 24hours a day ensures complete coverage for remote or unattended operations.



M2M iGateway's link wells by solar powered radios NEMA-4 enclosures endure extreme exposure to the elements

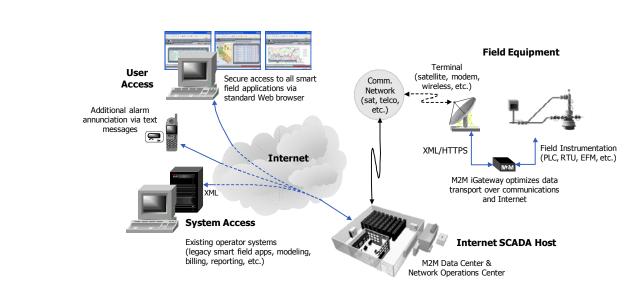


Solar-powered radios provide connectivity from wells to M2M's data center in Denver.



M2M data center hosts the application and data, and around-the-clock monitoring from a network operations center ensures maximum availability, backup, and automatic recovery – providing the basis for guaranteed service.

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Results:

- → Provides MEC with use of high-resolution, multi-parameter well data to optimize production, betterdefine reservoir performance, and increase estimated reserves, enabling operators to made wellinformed decisions
- Reduces MEC well operating costs and production downtime by running pumper "smart" routes: prioritizing wells based on real-time alarms, 24/7 via cell phone, PDA, and email. Pumpers go where they are needed, when they are needed.
- → Allows geographically dispersed production expertise (Denver, CO, Casper, WY and Pinedale, WY) to interact with geographically dispersed assets.
- \rightarrow Rapid deployment minimizes field resources so that more wells can be automated more quickly.
- Single source, fully integrated system means less hardware to buy, less fieldwork, and simple coordination of a cost effective, reliable system.

Ongoing Annual Net Savings = \$42,600 to \$45,000



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