

Increased Well Measurement with Micro Motion Coriolis Technology

RESULTS

- Multivariable measurement: instant volume, flow, totalized volume flow, temperature, density, mass, water cut
- Easy to install and low maintenance
- Well measurement has tripled since start up



APPLICATION

A major national oil company in Mexico measures wells for oil content.

CHALLENGE

The company had daily operational challenges with a reservoir with low oil content, low permeability and low pressure, which led to a decrease of production. The company had an urgent need to increase production to meet annual goals; though, there were some challenges. Measurement became a critical point for operational decisions and the Government Hydrocarbon Measurement Regulator published new guidelines in June 2011. These guidelines stated that all wells must be measured for the correct mass balance from the early to final stages of transportation and commercialization.

The company needed a more accurate and easier way to measure wellhead data.

SOLUTION

The company developed a fleet of “Portable Oil Well Production Measurement Systems” to help reduce measurement costs and increase the number of measured wells for reliable information of oil and gas daily production. In the development process, Emerson and the company performed tests in wellhead areas and different clusters using Micro Motion Coriolis technology. After testing, the company chose to purchase over 100 Micro Motion F-Series Coriolis meters with 3700 Net Oil Computer Capabilities for over 100 portable oil well production measurement systems.

www.micromotion.com



Mature oil wells in Northern Mexico



For more information:
www.MicroMotion.com/oil-and-gas
www.MicroMotion.com



Emerson's Micro Motion F-Series Coriolis meters with 3700 Net Oil Computer Capabilities provided the company with the following benefits:

- Multivariable measurement: instant volume flow, totalized volume flow, temperature, density, mass, water cut
- High measurement accuracy
- No moving parts to wear out
- Low maintenance
- Easy installation
- Not easily broken by rough handling or transport

Now, the Portable Oil Well Production Measurement Systems provide the company accurate information to make the best decisions for:

- Well shutdowns
- Workovers
- Conversion to mechanical lift pumping
- Fracturing
- Thermal cleaning
- Chemical additive injection

- Optimization of mechanical lift pumping
- Natural flowing well optimization
- Hydraulic optimization

The number of measured wells has tripled since the startup. Also, there has been a significant reduction in the cost of measurement per well. The cost of the measurement per well was reduced from \$4,000 to \$350 USD. This innovation has resulted in efficiency of data analysis. For example, in 2011 it had risen from monthly measurements of 1197 to 3500.

Due to success with Micro Motion Coriolis meters, the company is currently testing more Micro Motion meters in another region so they can extend the "Portable Oil Well Production Measurement System" program.



Mobile and compact oil separation system utilizing Micro Motion Coriolis technology