



## MULTIPHASE METERS DETECTING FRACK WATER CROSS-CONTAMINATION IN THE PERMIAN BASIN IN NORTH AMERICA

### Customer

An operator in the Permian Basin in North America

### Application

Unconventional oil well production

### Challenge

Fracking activities often take place in proximity to other, existing well infrastructure. Fracking involves high pressure injection of water and chemicals to create fissures in the rock and allow production of the hydrocarbon. It is important for operators that these activities do not put the integrity of existing, flowing wells in danger. Identifying cross-contamination in a well due to nearby fracking is of key importance, to allow operators to take appropriate action to protect their operations.

### Solution

An operator in the Permian basin had two Roxar™ 2600 Multiphase Flow Meters (MPFM) installed, performing rotational well testing of 9 individual well streams. The operator was also taking advantage of Roxar 2600 MPFM Performance Monitoring. This is a service in which data is made accessible, and Emerson experts perform data analysis, diagnostics on meter health, and identify unusual changes of flowing conditions, in order to support the operator with actionable data insights.

On one occasion, when the Emerson expert was reviewing data from the Roxar 2600 MPFMs, a marked increase in water production was noted on 7 of the 9 wells, indicating cross contamination from nearby fracking and the operator was notified. The operator was not performing any fracking activities in the area, but after some quick enquiries found that another operator was indeed performing fracking close by.

### Results

- Actionable data provided by Roxar 2600 Multiphase Flow Meters
- Unusual and potentially hazardous flow events quickly identified
- Value of Roxar Performance Monitoring demonstrated



*Image 1. The Roxar 2600 Multiphase Flow Meter*

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The operator quickly took action and shut-in 6 of the 7 affected wells. The well least affected by the fracking was left flowing, as no risk of integrity damage was anticipated, and it would also provide valuable insight regarding when fracking activities stopped.

By using the high resolution, real-time data from the Roxar 2600 MPFM along with the Emerson expertise available through Roxar Performance Monitoring, the operator was able to take quick action in order to protect their operations.

## Resources

Multiphase Flow Measurement  
[Emerson.com/RoxarMultiphaseFlowMeasurement](https://emerson.com/RoxarMultiphaseFlowMeasurement)

Roxar 2600 Multiphase Flow Meter  
[Emerson.com/Roxar2600MPFM](https://emerson.com/Roxar2600MPFM)



*Image 2. Harnessing the power of Emerson expertise with Roxar 2600 MPFM Performance Monitoring*

For more information, visit  
[Emerson.com/Roxar](https://emerson.com/Roxar)

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