Expro Excellence

QPulse® Revolutionizing Production Testing with Non-Intrusive Multiphase Flow Measurement

Well Flow Management | Flow Surveillance



Objectives and background

- A customer in the Middle East was seeking a non-intrusive solution to accurately test production flow rates for unconventional wells
- The field was producing critical oil with a high water cut and a Gas Void Fraction (GVF) ranging from 65% to 75%
- A high turndown testing solution was required, with minimal pressure drop, alongside the capability to measure a wide range of liquid production rates., This was essential to identify potential liquid loading and water influx in individual wells
- The solution needed to be operational even on remote wellheads with limited access

Expro Excellence

- Expro provided its QPulse® solution, a non-intrusive, portable multiphase flow surveillance system that integrates proprietary SONAR clamp-on technology with MultiTrace® technology
- **SONAR Technology:** The Expro SONAR Meter effectively operates in multiphase flow, offering a total volumetric flow rate and accurately measuring gas flow
- **MultiTrace® Technology:** This system directly measures condensate and water flow rates, utilizing a non-radioactive tracer dilution technique for precise results
- The use of QPulse® enabled testing at actual flowing conditions without any production interruption. The data gathered was compared to conventional test separator data as part of the field setup, ensuring consistency and accuracy
- Key parameters like Gas-to-Oil Ratio (GOR2) and shrinkage were measured onsite as part of the standard QPulse® dataset, enabling accurate reporting of both total and "separator" gas

Value to the client

- **Direct, Accurate Measurements:** QPulse® provided precise and independent measurements for gas, condensate, and water rates, eliminating the need for PVT or water cut computations
- **Enhanced Production Profile Understanding:** The solution gave the client vital data to better understand the production profile of the assets
- **Lower Carbon Footprint:** QPulse® is a compact, mobile solution, resulting in a reduced environmental impact compared to traditional testing methods
- **Proven Performance:** The technology was validated during pilot testing against a test separator, meeting key performance indicators (KPIs) with an accuracy of within 5% for gas, oil, and water measurements

Time saving



Decreased costs



Lower carbon footprint



To find out more, contact **flow.surveillance@expro.com** or visit **expro.com**

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