Accurate Real-Time Flow Rates

Achieved for Gas Lift and ESP Wells with Virtual Flow Metering

Objectives

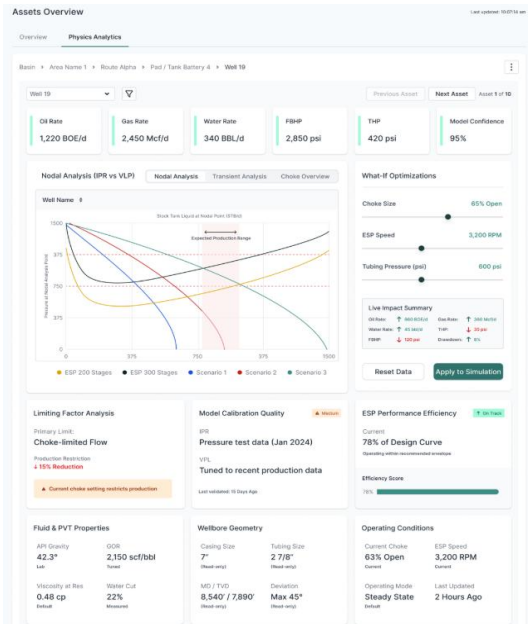
- Cut reliance on costly, time-consuming well tests with faster, proactive monitoring.
- Avoid the limitations of multiphase flow meters, which are expensive, intrusive, and prone to drift.
- Gain clear visibility between tests, eliminating blind spots and opaque AI solutions.

Our Approach

- Deployed the MetaFlow virtual flow meter that combines physics and machine learning.
- Leveraged extensive historical well data and existing real-time sensors—pressure, temperature, and choke size—for continuous input.
- Applied proven physics models, including inflow performance curves and nodal analysis; integrated with machine learning to calculate accurate, real-time oil, water, and gas flow rates.
- Delivered precise measurements without adding hardware or interrupting production.

Value to Customer

- Provided continuous visibility of well performance and early detection of problem wells.
- Reduced crew travel and HSE exposure through remote monitoring and optimized personnel planning.
- Lowered CAPEX and OPEX with a scalable solution for expansion to Canadian assets.



MetaFlow virtual flow meter dashboard

LOCATION
US land

FIELD
Permian Basin and Anadarko Basin

WELL TYPE
ESP and gas lift

PRODUCTS/SERVICES
MetaFlow virtual flow meter

Weatherford®

