

# Red Eye Subsea Water-Cut Meter

## Simplifies Metering Design, Eliminates MPFMs on 18 Wet-Gas Wells, Saves \$12 Million CAPEX

### Objectives

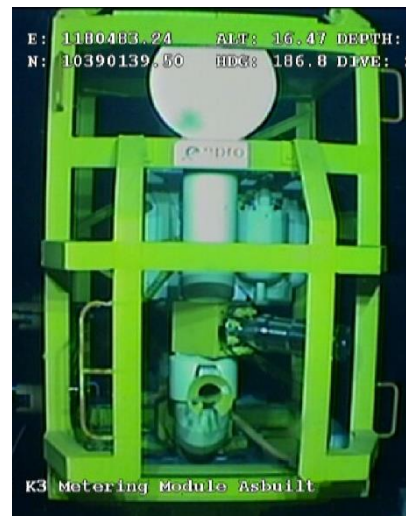
- An international operator of 18 wet-gas wells in Azerbaijan required baseline water-cut and water-breakthrough detection for a subsea wellhead within the Caspian Sea. Topside facilities were not designed to handle any produced water hence any potential water breakthrough had to be monitored through very sensitive water-measurement technology. The industry status quo for this is utilization of a subsea MPFM (multiphase flow meter). However, they are substantially expensive to install individually on wellheads and traditionally do not provide extremely accurate water-cut measurements. There was potential of manifolding, however this was not implemented as it would make the client blind to the source well of the produced water.

### Our Approach

- Following a thorough review of the operator's needs and well environments, the Weatherford flow-measurement team recommended Red Eye subsea water-cut meter—the world's only standalone water-cut meter that provides water detection for inhibitor injection rates at a subsea well. Red Eye technology accurately monitors water breakthrough with continuous water-cut measurements along with hydrate formation mitigation—even in an extremely high GVF (gas-volume fraction) flow regime. Red Eye provides each well with continuous redundancy support for its topside multiphase metering.

### Value to Customer

- The simplified Red Eye solution did not require additional CAPEX investments in subsea MPFMs or well testing at the seafloor since it was then possible to establish baseline water cut and subsequently monitor water cut in real time. This saved the operator \$12 million in CAPEX since each well no longer needed individual MPFM installations.



The Weatherford Red Eye subsea water-cut meter created a simplified well-metering architecture on 18 wells including real-time data feeds—significantly reducing CAPEX by \$12 million due to the elimination of subsea MPFMs on each well.

#### LOCATION/FIELD

Azerbaijan/Caspian Sea

#### WELL TYPE

Offshore/Wet Gas

#### PRODUCTS/SERVICES

- Red Eye Subsea Water-Cut Meter
- Flow Measurement

