

## Expro Excellence

# Flowline integrity and leak detection surveillance

## Well Flow Management | Flow Surveillance



### Objectives and background

- Expro was approached to measure stabilised crude oil and entrained water from eight flow stations
- The customer previously experienced leaks on their pipelines and were now looking to monitor volumetric rates to detect or identify any leaks real time to avoid pollution to the environment
- The project involved the monitoring of volumetric rates at point of export and volumetric rates at point of import at each successive flow station in the field
- The customer was interested in using a non-intrusive clamp on metering to avoid any facility modifications or production shut downs

### Expro Excellence

- Expro provided turnkey operation, where Expro undertook site survey and operations planning and execution across the Nigeria delta, with limited accessibility
- Rapid mobilisation of SONAR Meters to meet customers urgency in identifying leaks in system and minimise environmental impact
- Meters left unattended for extended period of surveillance to ensure any discrepancies in instantaneous rates were averaged across the desired period of investigation
- Meters worked in process conditions not always single phase, with oil, water and at times free gas, identified in the SONAR meter on-board diagnostics

### Value to the client

- SONAR Meter installed without facility modifications or production shut downs
- Multiple lines surveyed simultaneously to get a field wide balance on volumetric rates
- Multiple flow line sizes and volumetric rates without dedicated meter sizes
- Customer identified a discrepancy of 2,000 bopd in a 5,000 bopd line

#### Cost saving



#### Enhanced production

