



# PRODUCTION OPTIMISATION

Providing a wealth of experience in well flow management, to help you produce, optimise and maximise the value from your assets.

# WELL FLOW MANAGEMENT APPROACH

Maximising the production potential from oil and gas assets requires an intricate combination of activities that are constrained by the prevailing reservoir characteristics, flow performance of the wells and pipelines network, and capacities of the surface facilities.

Expro understand that while optimising individual components within a production system may yield immediate improvements, it will not necessarily optimise the whole system. This can be due to a complex number of reasons which require detailed understanding and further data analyses.

Taking into account cost constraints, determining the optimal operating conditions requires a complex interaction between these elements. If we want to deliver more, we need to optimize the system as a whole.

Expro utilises a proven methodology, services and technology to improve recovery and production rates, while lowering lifting costs – extending the life of our clients’ assets.

Through our integrated Well Flow Management approach we provide innovative mature field solutions in a commercially flexible framework, including:

- Reservoir monitoring and testing
- Flow measurement, surveillance, fluid sampling and analysis
- Well intervention, well integrity, data acquisition and management
- Production and process engineering

Our continued engagement maintains an effective, continuous improvement process, ensuring our clients leave no hidden, future low-cost-per-barrel opportunities.

# RECOVERY PERFORMANCE

In an optimisation exercise, the main data requirements are generally centred on the collection of pressure, temperature and flow information along key points of the production conduit and ancillary process. These data sets are enhanced by the collection of information associated with the well fluids, such as compositional information, or data concerning well integrity. If artificial lift is being operated, or indeed is the focus of the optimisation exercise, then parameters associated with the artificial lift method are crucial.

## Reservoir depletion management

We appreciate that any production optimisation exercise first begins with an unrivalled understanding of the hydrocarbon journey - from the reservoir to the well bore. In order to facilitate this crucial phase of the optimisation process, Expro provide the following services:

- Well testing
- Fluid sampling and analysis
- Pressure, temperature and flow surveillance
- Advanced reservoir testing (Expro’s CaTS™)

## Near wellbore and sand face

Increasing reservoir contact, bypassing formation damage and improving overall completion efficiency at the sand face are key priorities when operating in the near wellbore space.

In order to address this key area, Expro offers an extensive range of services that acquires the necessary data to understand the system potential and then takes action to deliver the optimised system. These services are:

- Cased hole services
- Perforating
- Well intervention
- Zonal isolation and recompletion

# PRODUCTION PERFORMANCE

In order to deliver clear value, production surveillance is the first step in the optimization process. This takes into consideration the data collected from the reservoir, wells and process plants, together with recognition of any system constraints, anomalies and behaviours. Expro provides surveillance and data collection via its sonar, wet gas, and multi-trace flow measurements, complemented by advanced surface and down-hole measurements, sampling, analysis and intervention services.

## Well completion and lift

In order to deliver optimum well lifting performance, operators must take in to account completion design and vertical lift performance, artificial lift optimisation, solids exclusion, and flow assurance. Expro supports this through services centred around:

- Well data surveillance
- Inflow and outflow performance analysis
- Water and gas injection optimisation
- Well intervention services

## Surface facilities

Once production reaches the surface, process constraints associated with the pipeline network and facilities are a key priority to delivering maximum flow assurance. We provide a range of solutions that deliver:

- Plant operational audits
- Plant system data acquisition, surveillance and diagnoses through the use our unique non-intrusive metering systems
- Enhancement systems encompassing seawater injection, produced water re-injection, gas compression and Well Unloading Units
- Facility upgrades such as debottlenecking, bulk water removal systems and mercury and H2S removal

In order to address late life production optimisation solutions, Expro provide fast-track modular systems that are bespoke to our clients’ needs.

