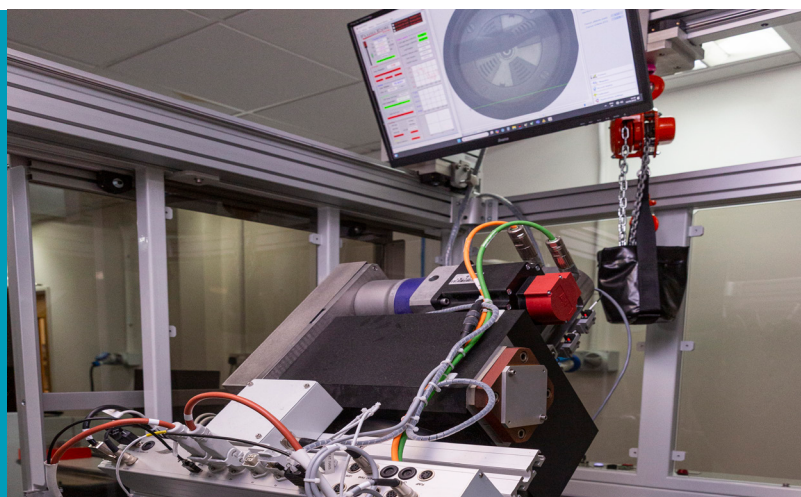


## Expro Excellence

# High value PVT data from multi-zone samples

## Well Flow Management | Fluids



### Objectives and background

- The customer required representative fluid property data to develop reservoir models for their development
- After initial analysis of the separator samples, it was identified that the reservoir contained a gas cap and that during the production test, separator flow rates indicated production from both gas and oil bearing zones
- The Mathematical recombinations of the separator samples highlighted that the separator flow rates would produce a highly oversaturated recombined fluid, consistent with the observed two-phase flow. A conventional approach to recombining the separator samples would not have provided meaningful data for either gas or oil zones
- The customer needed to understand the properties of the individual fluids for accurate production models

### Expro Excellence

- Expro worked with the customer to develop a laboratory recombination and testing program to recreate well conditions and provide discrete fluids representative of both the gas cap and the oil leg
- Expro conducted physical recombination using the quoted flow rates to produce a pseudo-reservoir sample
- The recombined sample was stabilised at reservoir conditions to restore the original reservoir equilibrium and composition of the gas cap and oil leg fluids
- The individual phases were then separated for further PVT and compositional analysis

### Value to the client

- Expro's work enabled physical testing to be conducted on representative fluids obtained from commingled samples
- This provided the customer with vital fluid property data for studies and forecasts, and allowed them to tune their fluid model to high quality PVT test results
- The data enabled the customer to validate their field's fluid compositions and properties through direct measurements, reducing uncertainty and improving confidence in the well development program

#### Enhanced production



#### Insight

