

## PIPELINE & PROCESS NEW FIELD PRE-COMMISSIONING

Country: UK  
Field: Cayley and Shaw Fields  
Year: 2015/16  
Technologies: **Front End Engineering • Pig Loading • Flooding, Cleaning & Gauging  
High Speed Flushing • Intelligent Pigging • Barrier Testing • Strength  
Testing & Leak Testing • De-Watering & Conditioning**

MAKING INTERVENTION  
**SMARTER**

- 18 month campaign complete on time
- Research, development & supply of a new 690 bar subsea multi-channel leak testing manifold with through water upload capability greatly reducing client vessel time
- Successful completion of 12 DSVI campaigns

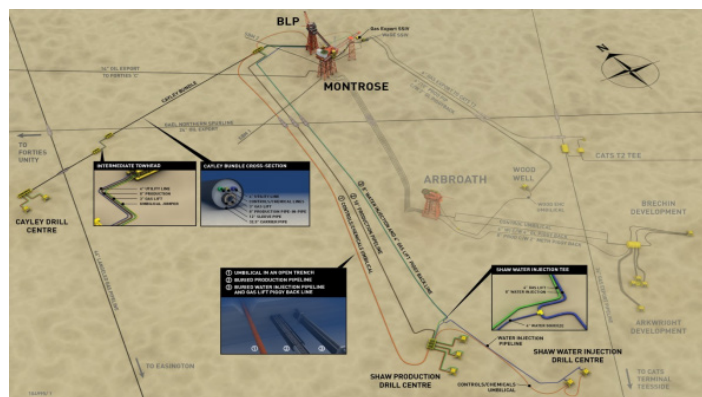
### CHALLENGE

Cayley Field – consists of two wells tied back to the Montrose BLP Platform via a bundle consisting of 8" Production, 4" Water Injection and 3" Gas lift.

Shaw Field – consists of three wells tied back to the Montrose BLP Platform via individual pipelines circa 17Km long consisting of 10" Production, 8" Water Injection and 4" Gas Lift.

- Flood, clean & gauging
- High velocity flushing
- Intelligent pigging
- Riser filling
- Leak testing
- Barrier testing
- Strength testing
- De-watering
- Nitrogen packing

Cayley and Shaw Field development drawing



Leak Testing – numerous requirements to carry out simultaneous pipeline and tie-in spool leak tests during the project to reduce schedule and vessel time.

Strength Testing – requirement to carry out simultaneous pipeline strength testing of the Shaw pipelines at different test pressures with through water data upload capability via ROV umbilical.

### SOLUTION

In addition to the mobilisation and utilisation of the 'standard' pigging and testing equipment, to get around the challenges of the intricate testing requirements, the Altus Test Manifold was designed and constructed in-house.

The manifold specification is:

- 690 barg max pressure
- 4 independent test systems
- Max flow rate of 100 litres/min per system
- Aquatec Aqua Logger plus optical modem for through water data transfer on each system
- Additional battery pack per logger
- Subsea digital displays on each system
- Single 2" Moffat hot stab tie-in for down line

## RESULTS

All work scopes were successfully carried out over an 18-month period and multiple vessel mobilisations, with excellent customer feedback upon completion of the overall project.

The Altus Intervention manifold was successfully designed and utilised multiple times throughout the project, including successful use of the optical through water data transfer. This greatly reduced vessel duration and overall client schedule

*Altus Intervention's designed and built manifold*

