

**EXPRO**

WELL FLOW MANAGEMENT™

# / Expro Excellence Subsea

Expro develop a hybrid, rapid EH response control system, focussed on safety critical functions



## Objectives/background

- Expro commenced work for BP in Azerbaijan in 2007, for the provision of an ELSA DH completion landing string on the Azeri-Chirag-Deepwater Gunashli (ACG) fields; in 2013, BP required a 15K EH ELSA HP completion landing string for the Shah Deniz Stage 2 Project
- BP required a subsea completion safety system for the well commissioning of Shah Deniz Stage 2, one of their largest investments requiring a 12 year drilling programme to access 50 trillion cubic feet of gas
- Specifically, BP required a fast response system for the high rate wells, suitable for the harsh environment with pressures up to 15,000 psi and potential debris

## Expro Excellence

- Expro developed a hybrid, rapid EH response control system, focussed on safety critical functions – a system usually designed for deepwater operations
- Developed a new 15K lubricator valve, based on Expro's unique high intensity ball valve (HIBV) technology
- In response to a request for a system that could monitor the pressure and temperature in the production bore, Expro developed the pressure monitoring system, which is positioned between the

two lubricator valves (LV), to monitor the lower LV sealing capacity once closed (which also minimises the potential for differential opening of the ball valve)

- Commitment from Expro: a new, purpose-built facility has been designed to allow all equipment maintenance and testing to take place undercover; overhead cranes allowing tandem operations; a clean room and hyperbaric test cell enabling EH control systems to be maintained and tested to wellbore conditions

## Value to client

- Delivery of a system that will enable the safe completion and flow back of high rate, high pressure wells
- A system that has met BP's exacting technical requirements and has passed through BP's TRAP (Technical Risk Assurance Process)
- BP found a partner that would support and encourage the development of Azeri nationals (has increased from four to 11 Azeri nationals)

Direct-hydraulic (DH)  
Electro-hydraulic (EH)  
Expro Landing String Assembly (ELSA)  
High pressure (HP)  
High debris (HD)

**EXPRO  
AND BP IN  
AZERBAIJAN****>10 YEARS  
SINCE 2007****SHAH DENIZ  
STAGE 1 & STAGE 2****29  
COMPLETIONS****0 LTI's****40% AZERI  
NATIONALS**

## Contact

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