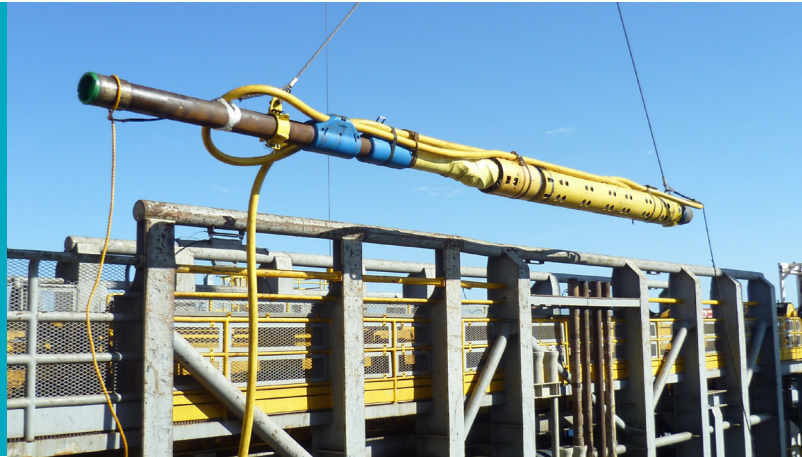


Expro Excellence

Delivery of Fast Response Landing String for safety critical functions in Australia

Subsea Well Access



Customer challenges

- Our client was looking to perform subsea completion operations from a moored semi-submersible at a water depth of 170m, with the requirement to flow back high rate gas to clean up the well
- In order to manage the risk of flowing high rate gas from a subsea well, our client required a subsea test tree safety system (SSTTA) with a quick Emergency Shutdown (ESD) response time
- The ESD times required to be comparable to a full Electro-Hydraulic (EH) control systems without the full functionality of an EH system as the tubing hanger and downhole lines were ideally to be operated direct hydraulically due to the water depth



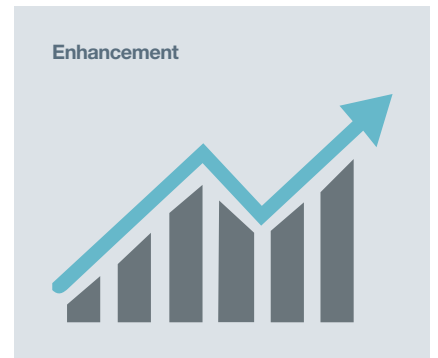
View of the Fast Response System (yellow) with the Lower Landing String (blue) in the rig's derrick

Expro Excellence

- Expro's Fast Response System (FRS) is an add-on to a direct hydraulic system to reduce the time required to perform SSTT closure and/or RV close and unlatch functions (i.e. ESD and/or EQD) without the requirement for a full Electro-Hydraulic (EH) system
- In normal operations the system is controlled in the same manner as a traditional direct hydraulic system (i.e. lines are manually pressurised and vented from surface via the HPU). When the ESD button is activated, the system activates the subsea accumulation within the FRS module to quickly close the SSTT ball valves, with or without coiled tubing. This ESD button can be activated multiple times during operations if / when required during operations
- The system provides redundancy on the safety critical functions with dual coil solenoid valve circuitry and has no subsea control electronics or power supply to maximise reliability
- The Fast Response System was developed within Expro utilising the philosophy from our SIL2 EH Express control systems

Value to the client

- Expro delivered the equipment on time and performed successful completion operations offshore over the 3 well campaign
- Our client commended Expro's performance when evaluating our service quality, delivery, equipment performance, HSE, communication, and personnel
- The use of the FRS allows the system to be operated direct hydraulically with the ability to perform a quick ESD within the shallow water without the need for an Electro-Hydraulic system
- Cost effective solution for the customer, based on the well parameters
- Provided the client the option and flexibility on future wells to operate the Expro SSTTA through DH, EH or FRS control systems depending on the well requirements



Fast Response Module being run in hole through the rotary table

Contact

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