

Expro Excellence

Eliminating Sustained Casing Pressure in a Centraliser Constrained, Low-Injectivity Annulus

Well Intervention & Integrity



Objectives and background

- An offshore operator in the Middle East identified sustained casing pressure (SCP) in the C annulus following difficulties during the 13¾" Stage 2 cement job, where zonal isolation was not achieved
- SCP remediation was required before the well could be safely handed over to the production team
- An annulus sealing material was considered but ruled out due to insufficient annulus injectivity, preventing effective placement into the micro-annulus. The well also presented a significant mechanical constraint, with multiple bow spring centralisers creating a restricted annulus access profile and increasing deployment risk

Expro Excellence

- The Octopoda® 11.5 mm OD hose was successfully deployed into the C annulus, passing 11 bow spring centralisers and reaching a circulating depth of 249 ft. Circulation was established at depth without annulus pressure cycling, enabling controlled placement of calcium chloride (CaCl₂) brine into the annular fluid column
- A brine density above the required kill weight was deliberately selected to overbalance the source formation. This leveraged in-situ dilution and miscibility with the existing annulus fluids to maintain effective overbalance at the achieved circulation depth
- A total of 69 bbl of CaCl₂ brine was circulated in stages over approximately 24 hours, avoiding repeated high-pressure annulus cycles. Intermittent shut-in periods totalling 2.5 days were then used to monitor pressure response, confirming elimination of the initial 106 psi SCP

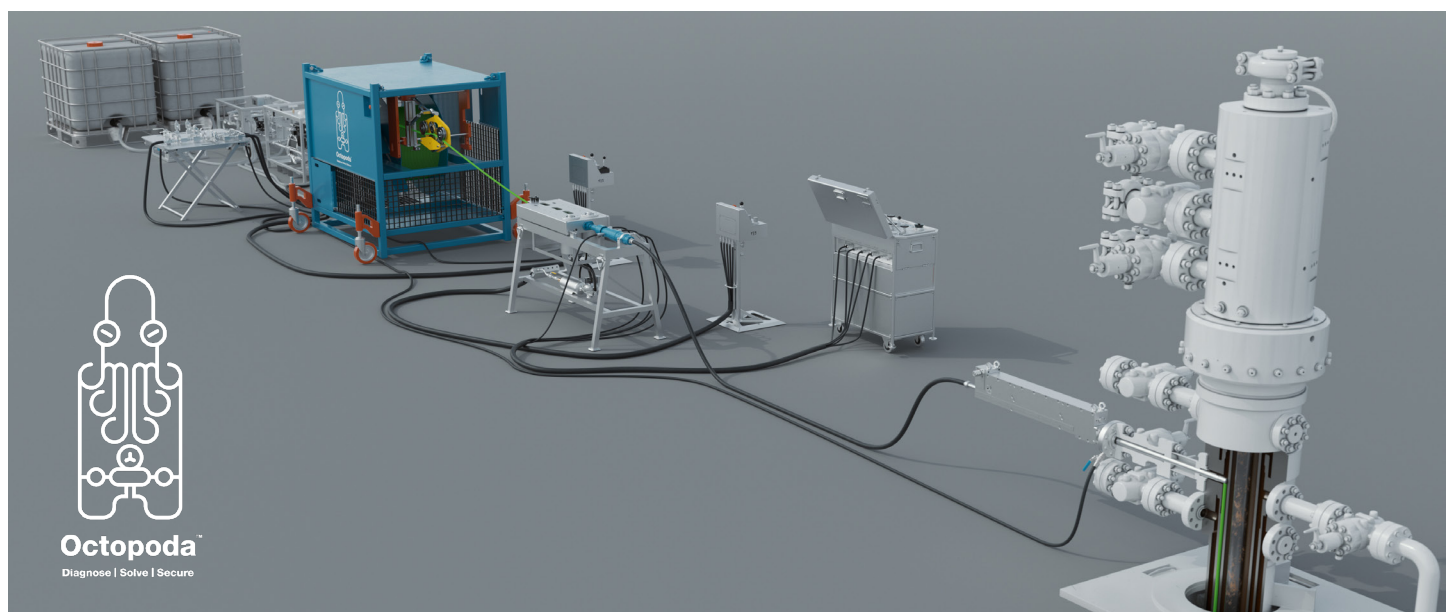
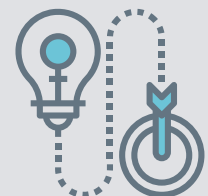
Value to the client

- **Restored well integrity:** Sustained casing pressure in the C annulus was eliminated by re-establishing hydrostatic overbalance, enabling safe handover to production
- **Efficient remediation:** Circulating kill fluid from depth reduced required fluid volumes and shortened the intervention timeline, providing a viable intervention solution where low injectivity ruled out resin-based isolation methods
- **Reliable deployment in constrained geometry:** The Octopoda® hose successfully navigated a complex annulus environment with 11 bow spring centralisers, providing a low-risk, efficient alternative to lubricate-and-bleed techniques

Operational efficiency



Innovative solution



Octopoda™
Diagnose | Solve | Secure