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- OTC ASIA # C401
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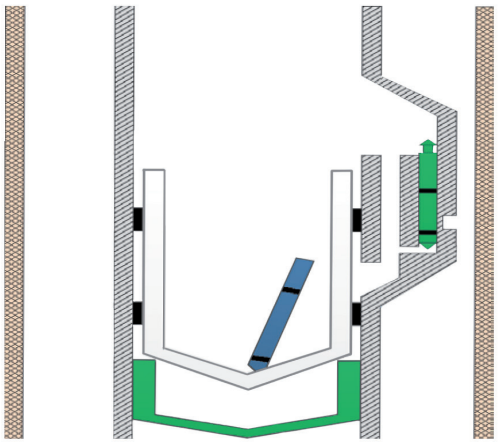
- Technical Paper presentation at OTC ASIA; OTC-28218-MS – Verification of Barriers in a Suspension or Abandonment Phase

Using Anchored Production Straddle (APS) to recover stuck valve

The well was completed with two Dual Side Pocket Mandrels. Soon after completion there was a requirement to change out a valve in the uppermost of the two Dual Side Pocket Mandrels.



This valve had become unseated whilst efforts were made to shear open the Tubing To Casing Barrier Valve set in the pocket. Multiple wireline runs were carried out to attempt to change out the faulty valve, however each attempt failed to recover the valve. A camera and further investigation tools were run to attempt to improve the recovery efficiency. It was then concluded that a systematic machining deficiency within the Dual Side Pocket Mandrel was causing the Kick Over Tool to pre-activate meaning that it did not locate correctly in the pocket. This was eventually confirmed with subsequent testing.

SOLUTION

A specially designed single run Anchored Production Straddle (APS). The elements on this straddle were both located near the top of the device, perfectly spaced out to straddle the bottom communication port and seal again at the midpoint of the pocket leaving the upper part of the pocket free of any obstruction. The straddle also had a perforated catcher sub fitted to the bottom of the system. The straddle was correlated to depth by the client firstly setting a Medium Expansion (ME) retrievable bridge plug below the side pocket mandrel using the Kick Over Tool to place the plug on depth. Once set pressure was applied to the annulus and the problematic valve was pumped out of the pocket and caught within the APS. The APS was then pulled to surface with the valve inside.

VALUE CREATED

By using the specially designed Interwell straddle, the gas lift function in the well is now re-established. An expensive work over was avoided and most importantly, the well integrity has again been fully established.

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