CHALLENGE

A North Sea operator encountered a leaking Side Pocket Mandrel (SPM) with a Gas Lift Valve (GLV) insert, and was required to replace it. A Kickover Tool (KOT) was unable to latch onto the GLV due to barium sulphate (BaSO4) scale build-up on the SPM/GLV and in the tubing. Brushes, downhole jars and exercise tools were attempted without success. The operator then decided to mobilise Blue Spark's WASP® technology with its ability to remove scale from complex downhole completion equipment without risking any damage to them.

HIGHLIGHTS
Producing oil well

LOCATION
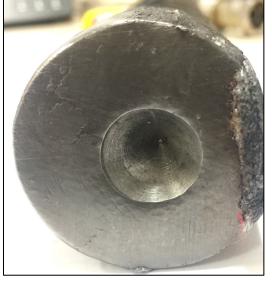Offshore Denmark, North Sea

CONDITIONS
Offshore Platform
Wireline Deployment
Depth: 8,000 ft (2,400 m)
Temp: 80°C (176 °F)
Horizontal well
Approx. 58° deviation at SPM

OUTCOME

- Blue Spark successfully performed its first scale removal operation on a Side Pocket Mandrel (SPM) with Gas Lift Valve (GLV) in the North Sea using our innovative WASP® technology.
- The Lead Impression Block (LIB) confirmed that the scale was removed from the SPM/GLV (see photo below)
- The KOT was re-run and was able to latch onto the GLV
- A successful pressure test was performed on the SPM/GLV
- The operation demonstrated the ability of WASP® to remove scale from complex completion components and tubing
- The well was returned to production with fully compliant integrity status without the requirement for a workover

Well returned to production with fully compliant status without requirement for a workover

Scale Removal

LIB used to show top of GLV after WASP® treatment. Photo provided by Operator.

SOLUTION

Return a critical downhole completion item back into operation for an oil producer in the North Sea using electro-hydraulic stimulation technology

- Blue Spark's WASP® service was mobilised at short notice and run on operator's preferred wireline provider
- The service required no chemicals, explosives or controlled goods
- 20 ft (6 m) interval across the SPM/GLV, including the tubing above and below it, was treated with WASP®
- A Lead Impression Block (LIB) was run to confirm whether the top of the GLV was accessible and clear of scale

BLUESPARK