Case Study: Modified HEX Tubing Packer with 3M™ Ceramic Sand Screens

Challenge

A North Sea client required a specifically designed high expansion packer to pass through a tight restriction in the production tubing, with the ability to anchor erosion resistant ceramic sand screens to reduce sand production.

Solution

Interwell modified its existing High Expansion Anchored Production Straddle (HEX-APS), by utilizing its existing upper and lower modules, to develop a HEX Tubing Packer. The 430-700 HEX Tubing Packer with a 4.30" OD and a 2.047" ID flow-through was designed, developed and tested in a short lead time. It was then successfully run through a 4.6" ID restriction in the 5-1/2" tubing and set in the 7" 29# tubing ID while anchoring the 40ft of 3M Ceramic Sand Screens below. The 200µm slot opening ceramic sand screen had an OD/ID of 4.248" and 2.441". The screen was set across the perforations in order to maximize the productivity. Erosion issues caused by jetting are mitigated by the utilization of erosion resistant 3M ceramic Sand screens, providing longevity and reliability to the installation.

Value Created

The client needed a creative alternative to shut off excessive sand production and avoid damage and costly repairs to production processing equipment. The customer required a high expansion packer, capable of passing the restriction with the ability to hang ceramic sand screens. Interwell designed and developed a bespoke solution in a short lead time which successfully met the client's well challenge requirements for a cost efficient sand reduction solution, with expected production rates through the screen of 32MMscf/day.

Date:
April 2016

Region/Field:
North Sea

Key Capabilities:

- Highest expansion retrievable bridge plug on the market
- Short tool length
- Slim design (small OD)

interwell

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