**Swellpacker® Sleeve and Anchor Enables Well Abandonment**

**Location:** North Sea

**CHALLENGE** – An operator in the North Sea was unable to permanently abandon a well due to the inability to access the main wellbore to mill out scale, circulate the well to kill weight mud, and set cement plugs. The annulus casing was leaking and the control line that was holding open the tubing-retrievable safety valve (TRSV) was parted, further complicating the situation. In order to allow access to the well, a sleeve was required to hold open the safety valve flapper and be “locked” in place during multiple coiled tubing runs in the well.

**SOLUTION** – Halliburton designed and manufactured a hold-open sleeve (HOS) to straddle the safety valve with integral no-go and Swellpacker® tool element designed to swell and anchor the sleeve in place. The sleeve had to withstand multiple coiled tubing runs to enable scale mill-out, plug retrieval, and cement plug placement. As such, the swellable anchor was designed to hold a pull force of nine tons, with a rapid swelling time.

The Swellpacker system was chosen over a traditional mechanical anchor as the wellbore tubulars were scaled up and the customer was skeptical as to whether access to the safety valve was possible and whether a seal/anchor could be achieved. In addition, the Swellpacker anchor provided increased ID through the sleeve enabling them to maximize the coiled tubing OD and mill size.

**RESULT** – The hold-open sleeve with Swellpacker anchor was successfully run on coiled tubing and deployed using a GS flow release tool without any problems. After sufficient time to swell and anchor up in the safety valve, the HOS was successfully pull tested to 2,000 pounds. Over 60 coiled tubing runs were conducted with no issues relating to the sleeve. The well was circulated to kill weight mud and cement plugs placed to successfully abandon the well.

Had permanent access to the main wellbore not been achieved by utilizing the improvised HOS with Swellpacker anchor, an additional relief well would have been required to enable the existing well to be abandoned, according to statutory industry regulations.

For more information on any of the details featured here, please contact: completions@halliburton.com.

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