GARD *U-line*™ Roller Enables Fiber-Optic HPHT log

UKCS

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Delivering Step-Change Efficiency
In a Green Energy Transition

COUNTRY: UK

U-line™ *Size:*
3.500”

Depth:
15,675ft

Deviation:
33°°

CHALLENGE

A Major North Sea Oil & Gas Operator was facing a unique set of challenges when attempting to conduct production logging in their HPHT wells, due to the presence of high-viscous residue and buckled tubing. These factors elevated the tool string friction, causing cable head tension to increase close to safe working limit (SWL) – as well as ‘clogging’ critical logging tool components.

In addition, due to the extremely high flow rates, prior attempts to log these wells required flow to be reduced to a quarter of natural output in order to eliminate toolstring lift, which led to sub-optimal data capture and poor R.O.I.

SOLUTION

The client opted to profile well production by conducting a DTS log using fiber-optic cable. By using this technique, the well could be flowed at double the flow rate compared to traditional production logging techniques. This methodology was identified by the client as the only way to ensure capture of critical data, whilst at the same time eliminating concerns around toolstring lift.

Previous success with *U-line*™ Roller Technology in the same field provided the end user with confidence to utilise *U-line*™ Rollers once again to ensure effective conveyance and positioning of cable across the reservoir, with the *U-line*™ Roller toolstring stationed below perforations, out of the flow path. In addition, *U-line*™ wheel design offered higher stand-off capability to overcome the residue and reduce friction to safe levels.

RESULTS

U-line™ Rollers were used to deploy a preliminary ‘smart’ drift on slickline, with wire tension reduced to manageable levels. The same set of *U-line*™ Rollers were used for the subsequent fiber-optic deployment with ‘stiction’ eliminated when pulling off-station after a 14-hour logging period. Cable-head tension was managed effectively, and most importantly, a well-defined log delivered!

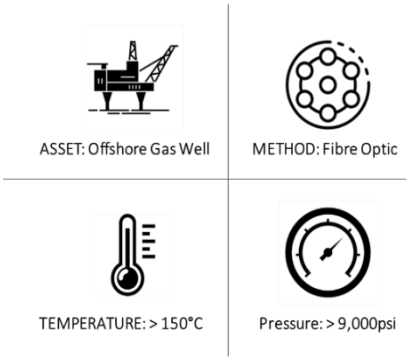
VALUE

By using *U-line*™ Roller Technology in combination with fiber optic cable, the Operator was able to achieve a successful log better understand reservoir contribution. Well intervention costs were reduced through the use of one set of universal *U-line*™ Rollers to convey both slickline and fiber services.

More detailed information can be provided upon request!

Intervention Programme

- Smart Drift using slickline
- Fiber Optic DTS logging



Operational Highlights

- **First deployment of FO cable using *U-line*™**
- **Stiction eliminated, head tension controlled**
- **Intervention risk reduced to manageable levels**