



BaraLube® W-511 Lubricant Overcomes Tight Clearance to Help Perforating Guns Reach Pay Zone in Deep Lateral

LUBRICANT SAVES TIME AND BECOMES STANDARD ADDITIVE FOR WELLS IN VISUND FIELD

VISUND FIELD, NORWEGIAN NORTH SEA

CHALLENGES

- » Limited clearance between the drillpipe and the casing
- » 500-meter (1,640-foot) perforation gun string below the drillpipe

SOLUTION

Adding 2 percent by volume of BaraLube® W-511 lubricant provided rapid friction reduction.

RESULTS

- » BaraLube W-511 lubricant helped the operator save approximately 12 hours of operational time.
- » This solution enabled the perforation guns to successfully reach the target zone.
- » BaraLube W-511 lubricant is now a standard additive for perforation operations in the Visund field.

TIGHT CLEARANCE BETWEEN CASING AND DRILLPIPE HINDERS PERFORATION OPERATIONS

An operator in the North Sea's Visund field needed to run perforation guns in an extended-reach wellbore with a high stepout and a horizontal section over 1,000 meters (3,281 feet) in length.

Clearance between the drillpipe and the casing was extremely limited, creating a high-friction environment. The drillpipe could be rotated, but the gun string – which was almost 500 meters (1,640 feet) long – was installed below a swivel at the bottom of the drillpipe and could not be rotated. Working the pipe and gun assembly down the deviated wellbore was extremely time consuming, and there was a significant risk that the guns would not reach the target zone.

This situation was not unique to this well, and a reliable solution was needed for use on subsequent perforation operations.

BARALUBE® W-511 SOLUTION ENABLES GUNS TO REACH TARGET ZONE

The Baroid team recommended adding BaraLube® W-511 drilling lubricant at a 2 percent concentration to help reduce the friction. The BaraLube W-511 treatment adsorbs strongly to steel surfaces to lubricate metal-to-metal contact. BaraLube W-511 lubricant performs well in highly deviated wells and can be used in a range of base fluids, including divalent brines.

The BaraLube W-511 treatment was spotted in just under three hours. As soon as the lubricant was in place, its effects were clearly noticeable, with improvements in both the overpull and weight transmission.

UPTO 12 HOURS OF TIME SAVED ON WORKING PIPE DOWNHOLE

The perforation guns were run to total depth (TD) without further difficulties, allowing the operator to complete the operation without spending excessive time on working the pipe – potentially saving up to 12 hours of operational time.

The tight clearance issue and the BaraLube W-511 solution were noted in the planning phase for subsequent wells, ensuring that the lubricant remains available on the rig when required.

The BaraLube W-511 lubricant treatment is now the standard recommendation for this type of operation in the Visund field.

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