

# Engineered Drilling Solution Mitigates Vibration and Reduces Non-Productive Time in the Montney

## MUD-PULSE TELEMETRY SERVICE HELPS OPERATOR ACHIEVE 100% OPERATING EFFICIENCY

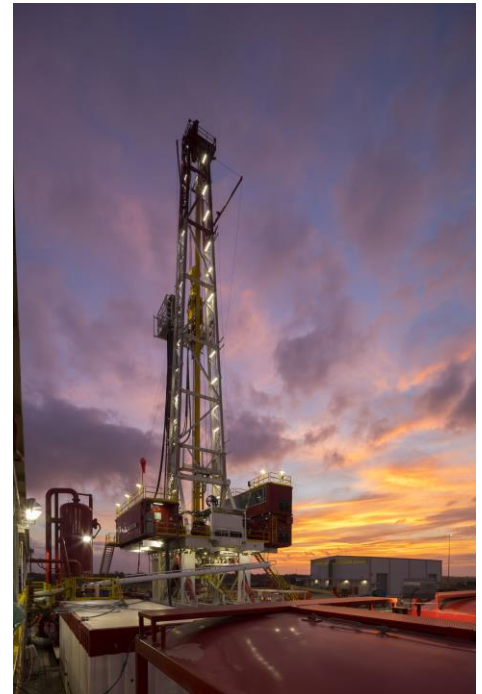
MONTNEY FORMATION, CANADA

### OVERVIEW

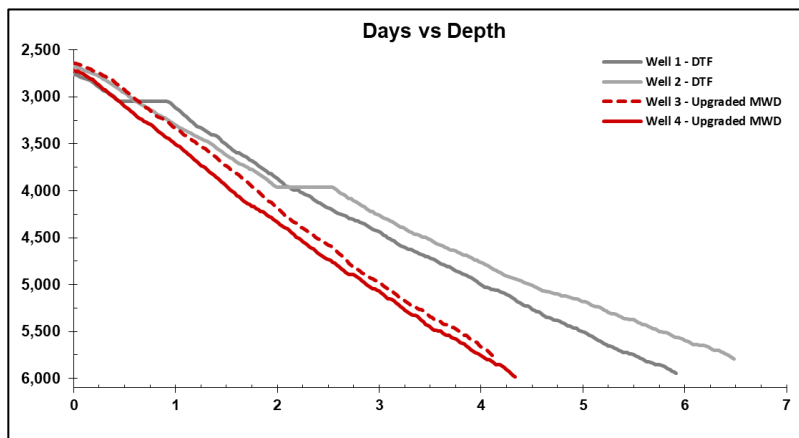
An operator drilling in the Montney Formation was experiencing technical challenges while drilling 156-mm production well sections. Recently, there had been an increase in mechanical damage to the mud-pulse telemetry components of the measurement-while-drilling (MWD) system, resulting in unplanned trips.

The Halliburton Sperry Drilling team collaborated closely with the operator to conduct an investigation and develop an engineered solution to the problem. Due to the rheological properties of traditional brine drilling fluids, there was minimal dampening effect between the MWD system and the collar interior diameter (ID), causing cross-axial vibrations. While drilling with a fluid of near Newtonian rheological properties, flow rates through tight IDs of internal bottomhole assembly (BHA) components become violent. This can lead to vibrations that are independent of the drilling operation and detrimental to performance.

The engineered drilling solution included new inspection equipment, re-work procedures to the collar ID, and specialized coatings added to the flow section of the MWD system. These engineering control changes reduced the internal cross axial vibrations and optimized operating efficiency to 100%, reduced well time with the upgraded MWD system.



*Positive pulse MWD system customized with an engineering fix to overcome the harsh drilling environment.*



*Data shows improved drilling performance with upgraded MWD system used on wells 3 and 4.*

© 2020 Halliburton. All rights reserved. Because the conditions of use of this product are beyond the seller's control, the product is sold without warranty either express or implied and upon condition that purchaser make its own test to determine the suitability for purchaser's application. Purchaser assumes all risk of use and handling of this product. This product will be replaced if defective in manufacture or packaging or if damaged. Except for such replacement, seller is not liable for any damages caused by this product or its use. The statements and recommendations made herein are believed to be accurate. No guarantee of their accuracy is made, however.