



A UFS FIRST—EXTENDED-REACH WELL WITH 12,500-FOOT LATERAL SECTION DRILLED WITH WATER BASED M2-PLUS* FLUID SYSTEM

- » The Operator anticipated the potential for a large fluid losses and was quite concerned about the cost associated with significant amounts of expensive oil based drilling fluid being lost to the formation.
- » A saturated brine *M2-PLUS* fluid system was selected to inhibit clays, keep the drilling fluid as clean as possible, minimize torque, and maximize the rate of penetration.
- » The Drilling Operator was able to drill their well, including the 12,500' lateral section, and contain torque under 30k.

SITUATION

A Universal Fluid Services (UFS) customer in Reeves County, West Texas was preparing to drill an extended reach well with a 12,500-foot lateral section. Due to the prevalence of shale-sensitive zones and the length of the laterals, oil based fluids are typically used in this area. In this instance however, the Operator anticipated the potential for a large volume of fluid losses and was quite concerned about the cost associated with significant amounts of expensive oil based drilling fluid being lost to the formation. Because of the long lateral drilling section, the customer was also concerned about alternative fluids, especially typically high friction coefficient water based drilling fluids, due to their potential for high torque and a specified maximum torque limit of 30k Hm for this well.

SOLUTION

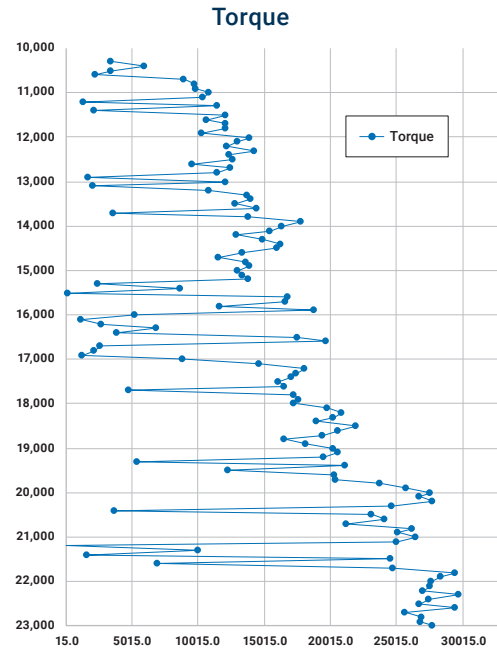
Our Universal Fluid Service Drilling Fluid Specialist proposed implementation of the *M2-PLUS** inhibited water based drilling fluid system. Specifically, a saturated brine *M2-PLUS* fluid system was selected in order to inhibit clays in the formation from swelling and migrating, keep the drilling fluid as clean as possible, minimize torque and thereby create the lowest possible friction factor, and maximize the rate of penetration. The components of the system included 10.0ppg brine base fluid, minimal clay minerals (attapulgate), polymers, 1% bv *M2-SS** shale stabilizer, and 3% bv *M2-Lube** lubricant. The drilling fluid weight at TD was 11ppg.

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NOTES:

RESULTS

By utilizing the *M2-PLUS* fluid system, the Drilling Operator was able to drill their well, including the 12,500' lateral section, and contain torque under 30k Hm. Torque was maintained under 27k Hm while rotating and it peaked at a high of 29k Hm when rotating after long slides (hole cleaning) as cuttings were once again brought back to the top part of the hole and torque rebuilt within the drilling process.



CONCLUSIONS

The customer indicated that they were unaware of a lateral of this length successfully being drilled previously in Reeves County using a water based fluid system. They were delighted that all of their objectives were met and exceeded without delays or adverse consequences.

As a result of this success, the Operator has asked Universal Fluid Services (UFS) to continue utilizing the *M2-PLUS* fluid system on future projects, including several planned long laterals over 10k.

To enjoy the benefits of *Application Excellence*® let Universal Fluid Services (UFS) provide the fluid management services on your next well.