

“Can do” is no match for “have done”

Well Challenge:

Shallow extended reach heavy oil wells in Alberta, Canada. Typical wells ran between 600 to 800m TVD and 3100 to 3500m MD. As a result of the short vertical when drilling with 5” DP beyond 2500m torque and drag increased to the point that drilling has to be stopped short of the targeted measured depth.

Wells (6) were drill from a pad with either a single or dual lateral well bore. The rig would first drill and case all (6) vertical sections and then begin to drill the laterals to TD and run slotted liner completions.

In the case of dual laterals the first well would be drilled and completed with the slotted liner and then a window cut and the second lateral drilled and slotted liner run.

TD Solution™:

Caledus RotoTEC Friction Reducer® non-rotating drill pipe protectors were proposed to be run on 5” HW Drill Pipe when torque levels started to increase. Caledus field engineer and the company reps worked out an on-site placement program based on past experience and review of logs and survey data.

The operator typically would initiate drilling the lateral section with standard 5” drill pipe and when approaching torque limits start adding their HWDP with (2) RotoTEC®’s per joint. This configuration would address sideload forces and facilitate drilling both rotationally and by sliding pipe. The RotoTEC®’s were only run inside casing so typical requirements only ran 70-100 units per well.

The operator would skid the rig on the pad and had the luxury of being able to keep the RotoTEC® assemblies on the HWDP which also contributed in shortening the time required to drill each lateral section.

Result/Benefit:

As RotoTEC® units on the HWDP were added there was a 30 – 35% reduction in torque noted and the lateral legs wells were drilled to planned measured depth in 1-2 days whereas in the past it would take up to 4-5 days with no guarantee that they would reach TD. The benefits to the client were twofold in that the wells were drilled several days sooner and to full depth.

In one field the client used 8 5/8” casing and in another 9 5/8”, no ECD issues were encountered in either casing string, but as a contingency Caledus provided the client with a modified protector design that provided an additional 20%TFA inside the 8 5/8” wells should ECD become an issue.

To date the client has used Caledus RotoTEC® in (45) wells and continues to do so whenever torque values are seen to increase.

Success Story #101

Caledus UK Ltd Tel: +44 (0) 1224 659000
 4 Rubislaw Terrace Fax: +44 (0) 1224 659001
 Aberdeen
 AB10 1XE www.caledus.com