

Case study: Northeast United States

Baker Hughes drilled the fastest well in the basin with a record 10,067 ft in 24 hours

Baker Hughes and a major operator have long been one of the most successful partnerships in Northeast US Land, consistently drilling record Mile-A-Day (MAD) wells. Beginning in 2016, the partnership have drilled over 140 MAD wells, including 12 over 8,000 ft, and the previous record of 9,649 ft in a single day.

The team faced challenges mitigating dogleg severity (DLS) in the lateral to reduce torque while drilling, deliver a smooth well profile, and have a trouble-free casing run. The operational goal is to drill the fastest and most consistent wells in the basin.

The team held bi-weekly meetings to discuss performance and optimization options. The Baker Hughes Drilling Services and Drill Bit teams have been collaborating consistently with the operator to develop optimal bottom hole assembly (BHA) and drill bit configurations.

The optimized drilling package included the **AutoTrak™ Curve high build-up rate rotary steerable system (RSS)**, the **Navi-Drill™ Ultra™ MIXL-RS high performance motor**, and customized **Dynamus™ ATD505X extended-life drill bit**. This combination provided the drilling performance and efficiency required to meet the operational goal.

During drilling operations, optimization of the the hydraulics and drilling parameters combined with the Dynamus drill bit AutoTrak Curve and NaviDrill Ultra motor provided a smooth well profile with an average dog leg severity (DLS) of 1.4°/100 ft in the lateral section. The exceptional teamwork and execution delivered the unprecedented result of 10,067 ft in 24 hours, a new perceived world record, saving the operator a full day of drilling.

The record setting achievements highlight Baker Hughes and the operator's teamwork and continuous improvement culture, working together daily to solve problems, improve performance, and deliver results.

Challenges

- Mitigate DLS in lateral
- Trouble-free casing run
- Drill the fastest, most consistent wells in the basin
- Reduce days on well

Results

- A smooth well profile with an average DLS of 1.4°/100 ft in the lateral
- Drilled a perceived record of 10,067 ft in 24 hours
- The fastest well in the basin
- Saved a full day of drilling