

# Mechanical Thruster with RSS in 8.50” Laterals

Delaware Basin

## Mechanical Thruster

### Challenge

A Delaware Basin operator experienced constant damage to their RSS and MWD assemblies in the 8.50” lateral sections. Cougar Drilling Solutions was contacted to help them increase BHA reliability and consistency in their lateral sections.

### Solution

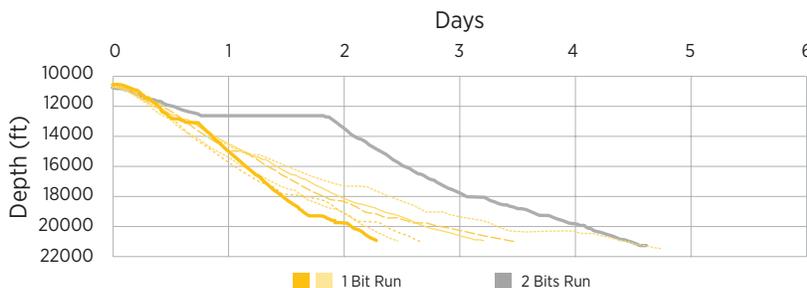
We discussed the following goals with the operator’s drilling team:

- Reduce RSS damage and extend BHA life.
- Maintain constant drilling parameters.
- Drill the section in a single BHA run for well quality and cost-effectiveness.

Cougar Drilling Solutions analyzed the operator’s BHA, well profile and drilling performance requirements. We recommended adding the dual-acting Mechanical Thruster, MT6-675, to the BHA to reduce damage by absorbing shock and vibration and to maintain constant drilling parameters by keeping the bit engaged to formation. The Mechanical Thruster was then going to be used in seven wells in the same formation, along with a motor assisted RSS.

### Results

With the addition of the Mechanical Thruster, the operator was able to drill six out of the seven laterals in a single bit run. The average lateral length was 10,400 feet, and the average first bit footage was 9,500 feet. This was the first time Cougar’s MT6-675 was used in 8.50” lateral sections with a motor assisted RSS BHA, and it significantly increased the operator’s drilling consistency and cost-effectiveness.



### MT6-675 BHA Placement

| BHA                    | Size |
|------------------------|------|
| Bit                    | 8 ½” |
| RSS                    | 6 ¾” |
| MWD                    | 6 ¾” |
| <b>Cougar Thruster</b> | 6 ¾” |
| Mud Motor              | 6 ¾” |