

# RED-X™ Single-Piece Centralizers Outperform Competing Designs in Multiple Well Types

## SINGLE-PIECE CENTRALIZERS HELP OPERATOR REACH TOTAL DEPTH FASTER AND REDUCE OVERALL OPERATING COST

NORTHEAST U.S. LAND

### CHALLENGE

- » Collect and analyze casing run speeds for multiple centralizer designs across two well types

### SOLUTION

- » Conduct side-by-side runs of RED-X™ single-piece centralizers and competing centralizers across 22 jobs
- » One centralizer per joint was applied to each casing string and run from total measured depth to planned top of cement

### RESULTS

- » Run speeds were calculated at specific intervals and graphed by well type and centralizer type
- » On average, RED-X centralizers ran faster than their competitors in wells with negative vertical sections
- » In wells with long tangents and minimal or no vertical sections, RED-X centralizers achieved the highest maximum run speed at 1,577 feet/hour (480 meters/hour)

ESTIMATED  
**5.5**  
HOURS  
RIG  
TIME  
SAVED



### OVERVIEW

Efficiently running casing to target depth in unconventional wells continues to bring new challenges as lateral lengths increase, along with the complexity of well designs. Achieving proper standoff to improve barrier integrity and cement bonds in these long laterals often requires the use of centralizers. Choosing the right centralizer for a given well design can help reduce the risk of casing drag on the formation and also improve overall casing running speeds.

### CHALLENGE

An operator in a northeastern region of the U.S. wanted to measure casing running speeds for multiple centralizer designs and materials across two different unconventional wellbore trajectories to determine the optimal choice for future operations. Normalized data was required to deliver a true 1-to-1 representation for cost vs. performance.

### SOLUTION

Halliburton teamed with the operator to gather side-by-side comparison data for RED-X™ single-piece centralizers vs. a variety of competing centralizer designs. Data was collected across 22 jobs, with well designs including long tangents with little to no vertical sections, and wells with negative vertical sections. For each centralizer design and well type, one centralizer was placed per joint and then run from the total measured depth to the planned top of cement (TOC). Electronic data was gathered from the rig and analyzed to normalize depth comparisons.

### RESULTS

Run speeds were calculated starting at 5,000 feet (1524 meters) measured depth (MD) and ending at 15,000 feet (4572 meters) MD and planned target depth. Run speeds were graphed based on well type definition and centralizer type. RED-X centralizers outperformed all other designs in wells with negative vertical sections, and ran an average of 111 feet/hour (34 meters/hour) faster than their closest competitor. The RED-X centralizers did not require rotation to reach target depth, while all competing designs did require rotation. For wells with long tangents and minimal or no vertical sections, RED-X centralizers achieved the highest maximum run speed at 1,577 feet/hour (480 meters/hour) and the second-highest average run speed at 1,209 feet/hour (368 meters/hour). Efficiency gains from faster run speeds with RED-X centralizers helped the operator save 5.5 hours of rig time, worth approximately USD 6,600.

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