

TECH REPORT

HOWARD COUNTY, TEXAS

MIDLAND BASIN, WOLFCAMP SHALE

Lithology	Shale
ROP	162 ft/h
MD	15,053 ft

Technologies

- MEGADRIL* oil-based temperature-stable invert-emulsion drilling fluid system
- MEGADRIVE P* primary high-performance emulsifier
- MEGADRIVE S* secondary high-performance emulsifier

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Drilling Fluid System and Emulsifiers Help Drill 3-Mile Lateral in One Run

Operator sets records for ROP and distance in Midland Basin

Background

An operator in the Midland Basin used MEGADRIL oil-based temperature-stable invert-emulsion drilling fluid system combined with MEGADRIVE P primary high-performance emulsifier and MEGADRIVE S secondary high-performance emulsifier. The combination helped the casing run to bottom easily and enabled drilling a 3-mile lateral in one bit run at an average ROP of 162 ft/h, setting operator records for ROP and distance drilled in a single run. The total distance drilled was 15,053-ft MD in 92.58 drilling hours at an average of 3,680 ft/d.

Date	Depth, ft	TVD, ft	Fluid Weight, lbm/galUS	Plastic Viscosity, cP
Mar 22, 2020	7,713	7,618	8.5	10
Mar 23, 2020	8,219	7,810	8.55	11
Mar 24, 2020	9,121	7,808	8.5	15
Mar 25, 2020	13,763	7,763	8.6	11
Mar 26, 2020	17,224	7,751	8.7	13
Mar 27, 2020	20,002	7,727	8.7	14
Mar 28, 2020	22,802	7,693	8.8	14
Mar 29, 2020	23,390	7,689	8.7	11
Mar 30, 2020	23,390	7,689	8.9	11
Mar 31, 2020	23,390	7,689	8.7	11

Using MEGADRIL drilling fluid system, MEGADRIVE P emulsifier, and MEGADRIVE S emulsifier, the Midland Basin operator achieved stable plastic viscosity throughout the well.