



ThinFrac™ MP Reduced Footprint and Costs in Marcellus Shale

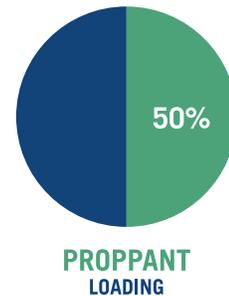
Technology: ThinFrac MP | Basin: Marcellus | Application: Shale

OVERVIEW & CHALLENGE

An operator conducting a hydraulic fracturing operation using produced water in the Marcellus Shale experienced low water quality that affected the friction reducer's performance. The produced water quality was near the maximum threshold for chlorides and total iron content for use with traditional polyacrylamide-based friction reducers. Additionally, the two pad areas were compact with difficult roads to navigate. Therefore, the operator needed to reduce the footprint and simplify logistics at the wellsite.

SOLUTION

A total of six wells were completed on the two pads. Three wells used a conventional friction reducer and guar hybrid system at a loading of 1.5 gpt (1.5 L/m³). BJ Services recommended replacing the linear gel system with ThinFrac MP. This enhanced polymer has been proven to improve efficiency and increase production for fracturing operations. The two set of wells had similar measurements with an average measured depth of 14,820 ft (4,517 m), an average true vertical depth of 8,099 ft (2,469 m) and BHT ranging from 140–142°F (60–61°C). ThinFrac MP was delivered at 0.75 gpt (0.75 L/m³), and yielded a similar pressure response as the hybrid system. Only 182 gal (689 L) of ThinFrac MP was needed, while the conventional friction reducer required 564 gal (2,135 L).



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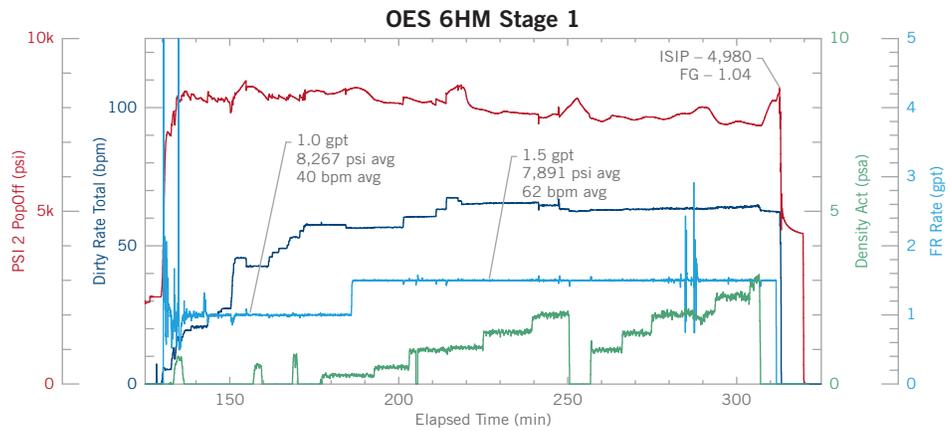


Figure 1: Stage treated with conventional friction reducer

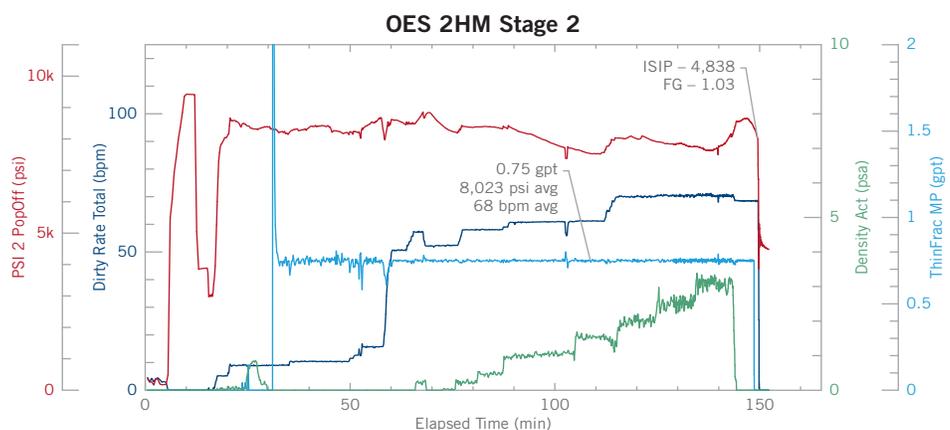


Figure 2: Stage treated with ThinFrac MP

RESULTS

The operator had reduced costs using ThinFrac MP because the technology required only half of the loading when compared to the conventional friction reducer. Also, switching from a hybrid system to a single-fluid system reduced the equipment footprint and simplified logistics since less equipment was required.

