

**STINGER™ DISSOLVABLE PLUG FIELD TRIAL**

# An engineered solution, every foot of the way



## EFFECTIVE ZONAL ISOLATION IN THE PERMIAN

**Scenario:** In Q1/Q2 2020, Nine deployed 123 Stinger Dissolvable Frac Plugs in three wellbores. All three were full wellbores.

**Results:** Under widely varying BHTs and frac fluid chloride count, all plugs successfully achieved zonal isolation and degradation.

### Dissolving the one-size-fits-all myth

To state the obvious for any operator, there is no “typical” wellbore. BHT and chloride count can vary widely due to the formation cooling from frac fluid and the amount of reuse water pumped.

That fact figured largely into the recent drillout strategy of a major operator in Howard County, Texas. With three wellbores averaging 20,000 feet MD, the company was looking for a way to reduce the significant costs and risks associated with using composite plugs.

### Performance, made to order

To address these challenges, Nine Energy Service recommended the Stinger Dissolvable Frac Plug. Applying decades of expertise in completion-tool development and material-selection expertise, the Stinger is only 3.5 inches long, which results in a minimalist isolation barrier. Instead of requiring a mandrel to set the plug, the element uses a wedge component to set and hold pressure. These features combine to dramatically reduce the material compared to other dissolvable frac plugs, saving money and time for drillout.

Unlike any other dissolvable on the market, the Stinger can be materially configured to address specific wellbore conditions from one stage to the next throughout the frac—a crucial factor, especially when you’re running full wellbores of dissolvable frac plugs. This custom-engineered approach leads to

better, more predictable performance in both freshwater and high-salinity environments.

### No tags, no snags

In all three wellbores, 123 Stinger plugs were successfully deployed—all achieved zonal isolation and degradation, as advertised. The operator concluded that it was the best ball action they had seen in awhile. Temperatures ranged from 100° to 150° F, with chlorides of approximately 20,000 ppm.

**“The best results I’ve experienced with dissolvable frac plugs.”**

– Cleanout Representative

Overall, there were no down-hole tags during the cleanout run. While a few plugs had one-or two-minute drill times, our onsite E&P representatives were confident these were sand bridges.