

Background

In March of 2022 a Texas operator ran a head-to-head trial with the Lonestar ONEplug and a competitor. The well was one of three on a pad in La Salle County. For composite frac plugs, South Texas proves to be a good testing ground due to its higher pressures, temperatures, and deeper TVDs. Data was gathered on location as well as commentary from field service personnel and onsite operator representatives.

The 5.500" 23.0# wellbore had a TVD of 10,062' and a TMD of 17,862'. Injection pressures were between 6,500 psi and 8,500 psi, with breakdown pressures exceeding 10,000 psi. The operator pumped a small volume of acid after breakdown followed by five stages of sand, flow diverters and six more stages of sand. For plug deployment the operator used a standard E4 style setting tool with greaseless wireline and lubricator.

The operator decided to run five ONEplugs in the heel of one well, the previous stages were run by a direct competitor. Running five plugs simultaneously gives the operator a good idea of the overall pump down ability, pressure holding capability and drill-ability of the plugs. All five plugs were run in the ball-on-seat configuration, eliminating the need to drop or pump down a frac ball.

Pump Down

To make a direct comparison between plug types and their pump down efficiencies, the wireline crew pumped down each plug keeping the line tension and pump rate constant. It could then be determined which plug pumped down easier by comparing the wireline speed. The ONEplug line speed on average was 12% faster than the competition leading directly to savings in time and water usage. Over the course of an entire well, this will add up to significant savings as compared to the competition. It was also noted that the ONEplug pumped down "smoother" as the wireline operator commented. This meant that the ONEplug stayed in the flow path of the fluid and didn't get hung up or have frictional losses against the casing ID. Proving that the efficient lightweight design aids in the overall deployment of the plug.

Fracking

During the fracking operations it was noted that all five plugs performed as intended. During one of the five stages a screen-out event happened, and line pressures exceeded 12,850 psi. It was noted by the operators on-site representative that the plug continued to hold despite the over-pressure event.

Drill Out

During the drill-up operation each ONEplug was tagged at the exact setting depth recorded, indicating that the plugs performed as desired and didn't slip downhole during pumping. The drill-up times recorded averaged three minutes per plug which was noted as being faster and smoother than the competitions plugs while maintaining a manageable cutting size.

Ultimately the operator was ecstatic with the plugs performance and switched to the ONEplug for their next installation.