

# Texas Operator Saves >6 Days on Cleanouts after Fracturing

ReacXion Complete plugs eliminate 96% of CT milling for 344 frac plugs and accelerate cleanout time and time to production for five wells

**Switching to Schlumberger dissolvable frac plugs saved a Permian Basin operator time and money—including 44% faster CT milling.**

## Save time and money on multistage fractured wells

After a series of time-consuming coiled tubing operations to mill out conventional composite plugs from Permian Basin wells, an independent operator needed a more efficient way to complete multistage wells and limit or eliminate milling risks. With milling and cleanout operations taking as long as 70 hours per well, the operator needed to significantly reduce the cost and time consumed by CT milling and cleanout operations and accelerate time to production.

## Reduce time and cost of postfrac CT cleanouts

The operator initially used another manufacturer’s composite plugs or dissolvable plugs but wanted to use more dissolvable plugs to facilitate removal of any preset plugs and improve access to lower perforations in the event of a screenout. After changing to dissolvable-only completions, the operator wanted to bundle the cost of postfracturing CT drillout and cleanout operations. However, the operator’s prior CT vendor was unwilling to bundle the jobs because of limited experience with dissolvable technology.

## Eliminate milling with an all-dissolvable approach

Schlumberger recommended using ReacXion Complete\* fully dissolvable frac plugs with a bundled CT cleanout operation. ReacXion Complete plugs isolate zones for multistage stimulation and then dissolve to minimize postfrac operations. For these wells, the freshwater, ball-drop variant was chosen because it most ideally matched the downhole fluids (<5,000-ppm chlorides) and temperature (155 degF).

Based on historical experience with the ReacXion Complete plugs, Schlumberger offered a package with the plugs and low-cost-per-stage coiled tubing cleanout services, which eliminated risks of unexpected costs related to reopening the well for production.



*The average CT operation time was reduced by 31 hours because 96% of the ReacXion Complete plugs dissolved after as little as 3 days.*

## Save 31 hours per well and eliminate CT cleanout risks

The operator installed 344 ReacXion Complete plugs in five wells. All of the subsequent hydraulic fracturing operations were completed without incident or isolation concerns. Plugs then remained in the well after fracturing for as little as 3 days before the CT cleanouts began.

Based on the cleanouts, engineers determined that 330 plugs (96%) completely dissolved. Average milling time for the remaining plugs was 2.92 min per plug, and all but one well was cleaned out in a single run. The average cleanout time was 39 hours.

In all, the average CT operation time was reduced by 31 hours (44%) as compared with the third-party completion solution, saving 155 hours—more than 6 days—for all five wells.

### Cleanout Operations

Well	Number of Runs	Cleanout Time, h	Completion Stages
1	1	30	67
2	2	59 <sup>†</sup>	70
3	1	34	70
4	1	50	69
5	1	34	68

<sup>†</sup> BHA failure, trip, and rerun