



SWELLPLUG ZI

SUCCESS STORY

SEAL THE DEAL: REPAIR CASING DAMAGE TO STAY ON SCHEDULE

Permian Basin, West Texas, USA

\$350k

COST SAVINGS

7-10

OPERATIONAL DAYS AVOIDED

SwellPlug ZI consists of patent protected water swellable particulate material pumped in a slurry that swells to isolate the target area. Unlike other water swellable elastomers, the TAQA swellable material remains swollen regardless of the time or condition making the seal permanent.

THE CHALLENGE

During Frac operations in the Delaware Basin, a client faced repeated WL hang-ups at 18,130' MD. An intervention revealed a casing breach, with ~4.5MM lbs of proppant already pumped past the damage zone. The extent of the damage was unknown, but significant losses were observed, necessitating a rapid repair to continue the frac.



THE SOLUTION

The client agreed to trial SwellPlug ZI Super Coarse material to seal the damaged zone. The plan was to pump a blend of Super Coarse and Coarse SwellPlug ZI pills into the area, allowing the material to swell and isolate the zone, with an applied treating pressure of 7,500 psi.

THE RESULT

Four 100 lb SwellPlug ZI Super Coarse pills were pumped, followed by one 100 lb SwellPlug ZI Coarse pill. These were pumped at 22 BPM with an observed pressure of 6,250 PSI on contact. The well was then shut in to allow full swelling of SwellPlug ZI material.

Siesmos was on location, utilizing controlled acoustic pulse technology to measure the Near-Field Connectivity Index (NFCI), they provided live NFCI updates, which directly measure flow resistance in the near-wellbore region of a fractured well. Evaluation of pre and post-treatment data indicated an 87%-88% reduction in flow resistance after the treatment. To expedite operations and avoid delays in obtaining more SwellPlug ZI, a PLA pill was pumped to complete the seal and continue operations.

WELL DATA

- Basin: Permian
- Well Type: Oil Producer
- Treatment Date: June 2024

