

Sta-Live Extreme acid system increased oil production by more than 3,000 bpd in Brazil pre-salt formation

CHALLENGES

- Stimulating open hole long vertical well completed in a multizone with large variance in permeability
- Deep damage removal needing effective stimulation
- Deepwater offshore stimulation in a pre-salt carbonate formation
- Previous interventions had not met operator expectations

SOLUTION

- [Sta-Live Extreme™ polymer-free, single phase delayed acid system](#) was designed to:
 - Extend wormhole penetration into the reservoir
 - Simplify operations through on-the-fly mixing
- Combined with StimVision™ matrix acidizing simulation software to provide an engineered solution
- High-rate matrix acidizing bullhead treatment was performed
- Enhanced acid system (EAS) in-situ gelled acid diverter provided zonal coverage

RESULTS

- Achieved significant skin reduction from -0.8 to -4 with an increase in well oil recoverable reserves
- Achieved pumping rate of 25 bpm which helped to penetrate deeper into the formation and improves zonal coverage of the long horizontal well
- Improved operational efficiency by mixing the fluid system on-the-fly, eliminating non-productive time
- Eliminated the need for diesel phase and the associated HSE concerns
- Eliminated the risk of mixed emulsified acid disposal in case of job delays



Baker Hughes assembled a temporary stimulation plant on this supply vessel for this challenging deepwater offshore job.

“Sta-Live Extreme is considered a good candidate for treating multiple zones with permeability variations in Brazil pre-salt formations.”

- Head of well completions and intervention, TotalEnergies Brazil