Case Study

Restoring Lost Production After Frac Hits

Surfactant-Assisted Gas Lift in the Permian Basin

FA1705 is a powerful recovery chemical for gas-lifted wells impacted by frac hits, delivering fast, measurable production gains. By aggressively reducing inter facial tension and dismantling stubborn frac-fluid emulsions. FA1705 rapidly unloads trapped liquids, eliminates fluid holdup, and restores stable gas-lift performance. The result is accelerated cleanup, minimized downtime, and a quicker return to profitable hydrocarbon production—without costly mechanical intervention.

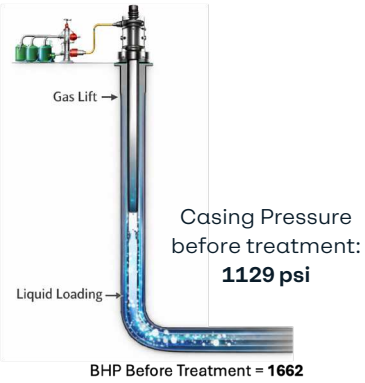
OVERVIEW

PROBLEM IDENTITY

Frac hits in closely spaced unconventional wells induced prolonged production impairment in offset gas-lifted wells.
Post-frac operating challenges included:

- Sustained liquid loading and inefficient fluid removal
- Elevated flowing and tubing pressures
- Compromised gas-lift injection efficiency
- Declining and unstable oil production rates

Conventional gas-lift optimization strategies alone were insufficient to recover well performance.



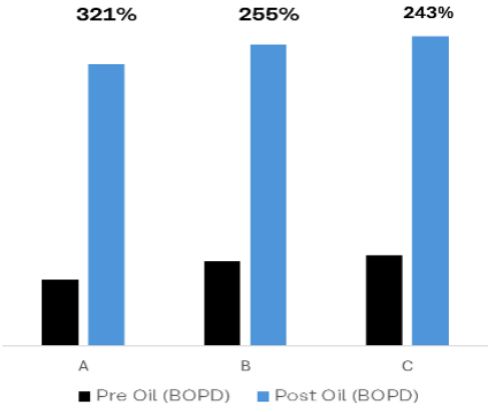
SOLUTION

A targeted surfactant package (FA1705) was deployed to maximize gas-lift efficiency by minimizing liquid holdup and enhancing multiphase flow behavior. Prior to field deployment:

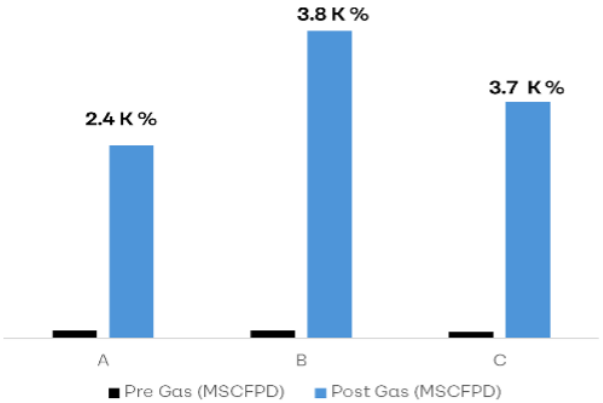
- Foam stability, collapse, and emulsion tests confirmed rapid and effective surfactant action
- No adverse impacts on oil quality or produced water integrity were observed
- Full compatibility with existing corrosion and scale inhibitors was verified

The FA1705 was then continuously injected into the three impacted gas-lift wells, enabling accelerated liquid unloading, improved lift performance, and faster restoration of production.

Oil Production



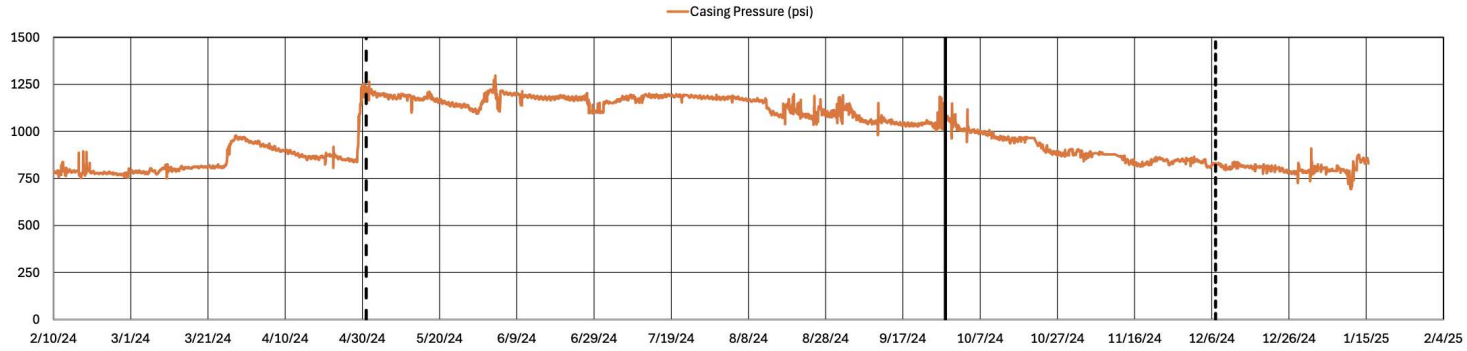
Gas Lift Efficiency = Increase Gas Production



Well	Metric	Pre (psi)	Post (psi)	Δ Pressure
A	Bottomhole Pressure	1662	1227	-436 psi
B	Casing Pressure	925	834	-91 psi
C	Casing Pressure	1129	832	-297 psi

CONCLUSION

Deployment of FA1705 treatment in frac-impacted gas-lift wells in the Permian Basin demonstrated a highly effective production-restoration strategy. By rapidly reducing liquid holdup and breaking persistent frac-fluid emulsions, the surfactant system promoted accelerated unloading, stabilized gas-lift performance, and delivered measurable reductions in wellhead and casing pressures.



The illustration above displays the casing pressure over time for well C following the deployment of FA1705. The vertical markers—dashed, solid, and dotted—represent the occurrence of the frac-hit event, the initiation of surfactant injection, and the conclusion of surfactant injection, respectively.

Utilizing the FA1705 package significantly reduced downtime, eliminated expensive mechanical repairs, and facilitated a quicker transition back to stable and profitable hydrocarbon production. This validates that surfactant-assisted gas lift is a practical and dependable technique for post-frac recovery in unconventional wells.

The added production alone paid for the treatment per day within the first

5 min

of incremental output per day

268%

of increased revenue for customer from increased oil production

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Revenue for customer from increased gas and oil production

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Sales Office
377-261-0796

Customer Service
800-456-3696

Email
CoastalCSRS@Brenntag.com

Website
coastalchem.com