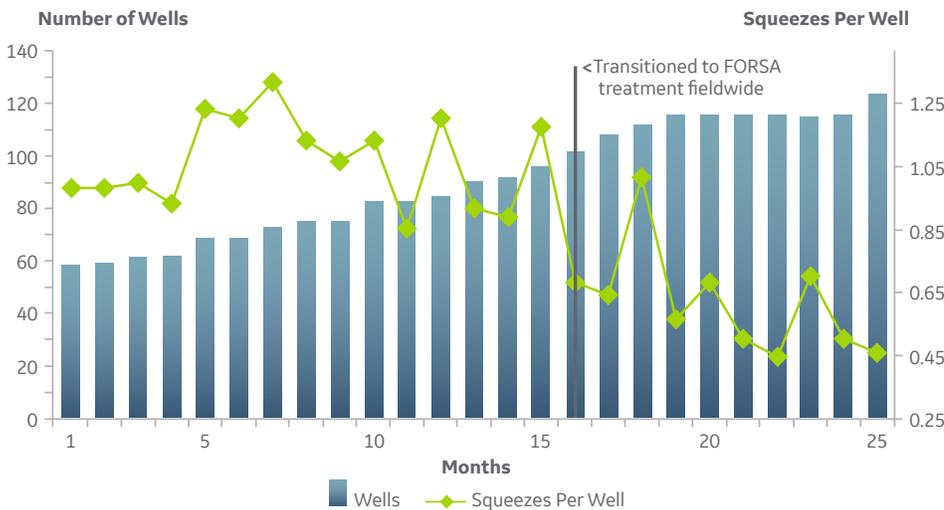




FORSA Asphaltene Inhibitor Saved More Than USD 2.5 Million in Annual Treatment Costs

Well Squeeze Analysis



A major producer operating a CO₂ flood operation in the southeast United States experienced a production decrease in many of their wells. These wells were producing 42° API gravity crude oil from depths ranging from 4,500 to 5,500 ft (1372–1676 m). Asphaltene deposition at the surface and bottomhole resulted in shut-ins and deferred production.

Baker Hughes, a GE company (BHGE) implemented a new cost-effective FORSA™ asphaltene inhibition program to optimize treatment rates, increase squeeze life, enhance production, and eliminate downtime. The success of this treatment

program prompted the operator to implement it fieldwide.

Since the transition to the FORSA asphaltene inhibitor use in the entire field, the number of squeezes per well decreased by 38% in a nine month period. Asphaltene treatment cost dropped from USD 2.22 per bbl/oil to USD 1.53 per bbl/oil, which resulted in a cost savings of more than USD 2.5 million per year.

This case history is presented for illustration purposes only, as results may vary between applications.

Results

- Decreased well intervention and treatments approximately 60%
- Saved more than USD 2.5 million in annual treatment costs based on 10,000 BOPD production
- Cut deferred production by more than 10,000 bbl per year by reducing shut-in time

Challenges

- CO₂ flood operation, 42° API gravity crude
- Decreased production caused by asphaltene deposition
- Limited application options because of well construction profile
- Wellbore chemical squeeze was the only viable option
- Treatment frequency and related costs were outside the scope of the operator's budget

BHGE solution

- FORSA asphaltene inhibition program
- Nonemulsifying in produced water
- No upset in oil or water treating

bhge.com

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