

## Effective Barium Sulfate Scale Remediation in ESP Systems Using Enviro-Syn® BSD-40E™

### Permian Basin, Texas

#### CHALLENGE

An E&P company operating in the Permian Basin observed a significant production drop-off on two wells. This decline coincided with an increase in the motor temperature and pump intake pressure (PIP) of the electric submersible pump (ESP). Barium sulfate scaling in the ESP was suspected to be the issue. The client previously trialed other third-party sulfate dissolvers, but they failed due to the low fluid temperature in the ESP (90-100°F). On the South well, the client performed a xylene treatment followed by an acid treatment but did not see any recovery in production.

#### SOLUTION

Samples of barium sulfate scale from the ESP was sent to a third-party lab for solubility testing with BSD-40E™. Static test conditions at 150°F with a 24-hour soak time yielded 38% dissolution of the scale. In dynamic testing conditions where agitation was introduced, 99.5% of the scale dissolved.

Approximately 1,060 gallons of BSD-40E™ was pumped into each well and flushed through the ESP. The BSD-40E™ was left to soak for 24 hours and the ESP motor was turned on to heat the fluid, using heat and agitation to aid in solubilizing the scale.

#### FEATURES & BENEFITS

- High dissolution rate
- Low activation temperature
- Superior barium sulfate solubility
- Ready-to-use formulation with no extra additives required
- Built-in surfactant package lifts hydrocarbon coating off scale ensuring effective dissolution



#### HSE & ESG ADVANTAGES

Engineered to protect workers, equipment, and the environment.



Non-Corrosive to Skin



Lower pH than Competitor Products

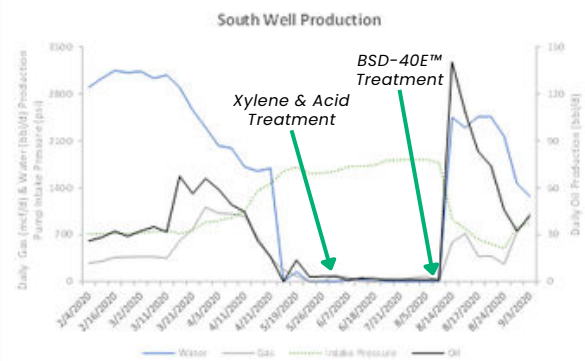
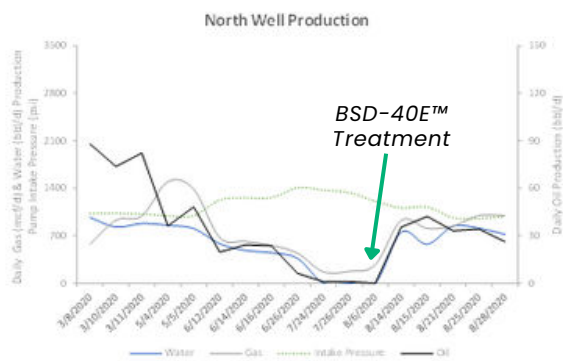


North Sea Approved Blend (BSD-40E™) for Offshore Applications

### RESULTS

Following the BSD-40E<sup>™</sup> treatment, the North well production recovered approximately all daily production, the ESP motor temperature returned to normal and the PIP dropped approximately 50% on average.

Following the BSD-40E<sup>™</sup> treatment, the South well production recovered to approximately 80% of average daily production, the ESP motor temperature returned to normal and the PIP dropped approximately 80% on average.



## PARTNER WITH FLUID FOR RESPONSIBLE SOLUTIONS

**Boost performance. Improve efficiency. Prioritize safety.** Discover how BSD-40E delivers results you can count on, reach out today to learn more.

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