

Iron Control for Enhanced Oil-Water Separation and Water Injection

In production and midstream operations, enhancing oil-water separation is crucial for the off-sale of oil or water injection. However, contaminants such as iron can threaten the separation process, ultimately impacting the bottom line.

Verza360 is a series of multifunctional, organic acid-based chelating agents that enable high iron control and cost efficiency across the oil and gas value chain. It can be used as a complement to or replacement for traditional chelating agents, such as THPS, EDTA, and citric acid.

In production and midstream saltwater disposal (SWD) applications, Verza360 can:

- ✓ Prevent or remediate iron scaling and fouling
- ✓ Improve water quality and injection
- ✓ Reduce filter replacement frequency
- ✓ Improve oil-water interface and quality
- ✓ Enable lower overall chemical usage, treatment costs, and GHG emissions

Stability Constants

Cation	Verza360	Citric Acid	Na ₄ EDTA
Ca ⁺²	2.2	8.1	15.0
Fe ⁺³	37.2	11.2	25.0
Mg ⁺²	0.7	3.2	18.2

Verza360 has a higher affinity for Ferric Iron than either citric acid or EDTA.

Case Study: Preventing & Remediating Iron Fouling to Improve Water Injection

An operator faced daily fouling and plugging of an inline SWD filter due to iron sulfides. If left unchecked, the plugging would increase inlet line pressures and potentially curtail ESP well production upstream.

Verza360 was deployed to address the iron sulfide formation. This solution effectively eliminated iron sulfides, leading to a stable water injection operation and preserving the production of high-yield wells.



Before

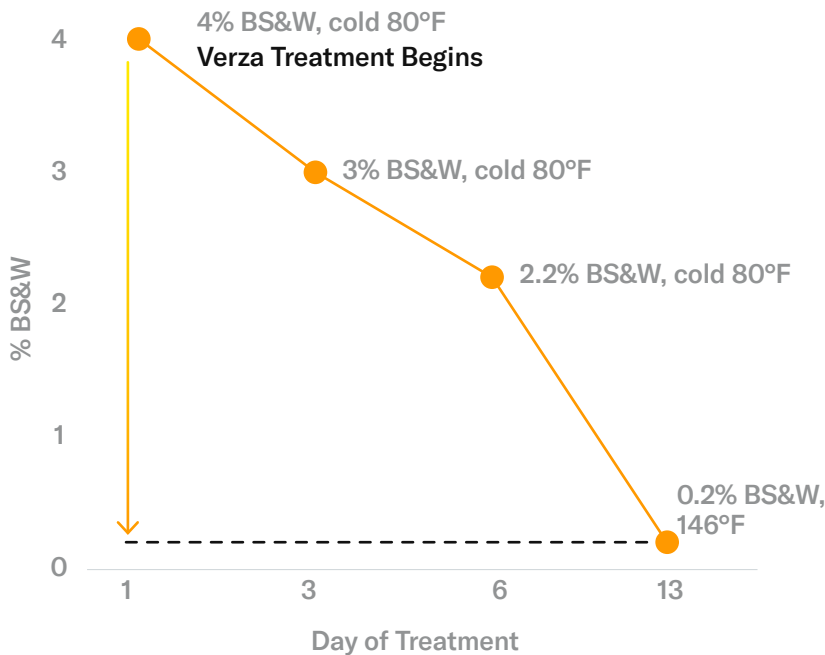
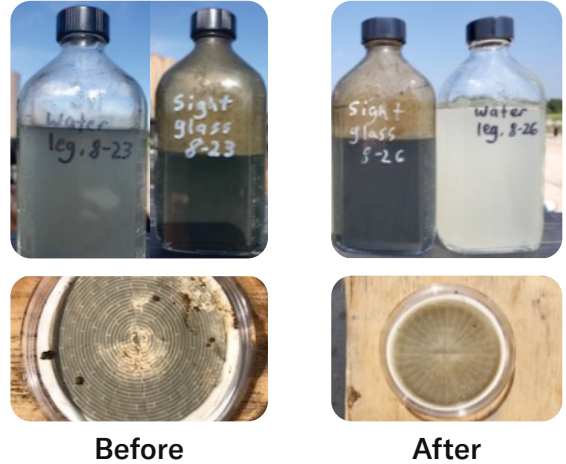
After

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Case Study: Enhancing Oil-Water Separation, Water & Interface Quality

For one operator, the collection of iron sulfides, water, and paraffin on a heater treater tank's emulsion pad were contributing to high basic sediment and water (BS&W) content, adversely affecting oil-water phase separation and filtration.

While not a substitute for an emulsion breaker, Verza was introduced to remediate iron sulfide formation, reduce BS&W, and enhance oil-water separation and filtration.



For a complete case study or additional information on our Verza360 product line, visit solugen.com/oilandgas or contact us at energysolutions@solugen.com. Pricing available upon request.