

Verza360® Series

Bio-Based Iron Control Agents for Iron in Oil Removal

Removing Iron from Oil in SWD Systems to Improve Oil Quality & Profitability

The Problem

Midstream operators face rising challenge of gathering, storing and shipping off-spec oil. As oil contaminants, such as iron, increase, maintenance costs increase, ultimately impacting the bottom line.

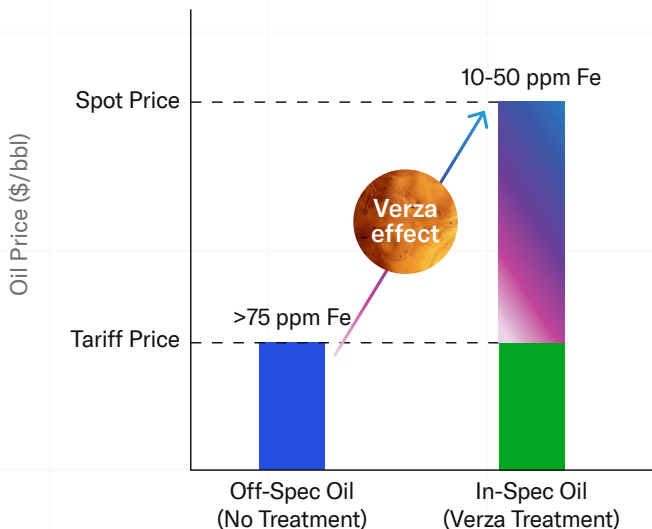
The Impact

- Reject oil, salability, and profitability
- Bottlenecks oil movement and operation
- Increased maintenance costs and NPT to meet spec
- Unsafe exposure to H₂S and corrosive chemicals
- Loss of revenue (deductions)
- Increased risk of production/disposal curtailment
- Poor SWD performance
- Costly expense for storage tanks

The Solution – Verza360® (Verza)

- Bio-organic acid chemistry
- Highly selective iron removal solution
- Robust product line to suit various application conditions
- Effective treatment with or without wash water
- Compatible with other production chemicals
- Effective carbon-negative solution to replace corrosive products
- Debottlenecks stacked inventory, enabling oil movement and gathering to facility
- Enables custody transfer of marketable oil
- Reduces other divalent metal contaminants

Mitigate Deductions and Recover Oil Price with Verza-Based Treatment



The Verza-based treatment is a proven solution to mitigate off-spec crude deductions, debottleneck operations and improve profitability.



Case Study: Verza Enables **99% Reduction of Fe** in Eagle Ford Oil*

The Problem

- Midstream trader achieving marginal performance in reducing 4,500 ppm Fe in oil to <50 ppm with heat, centrifuge, and incumbent chemistries
- Corrosive chemical use causing pump failures
- Limited oil storage, long settling times

Field/Lab Evaluation

- Pre-conditioned crude through high-speed centrifuge to remove bulk sediment and water reduces Fe in oil content to 2,390 ppm
- 90:10 ratio of Verza360® G5 and a cationic surfactant is applied at 4,000 ppm with heat for Fe removal

The Outcome

- Field trial with Verza-based treatment plus heat successfully reduces Fe in oil by 99% within 24 hours (Figure 1)



*Full case study available upon request.

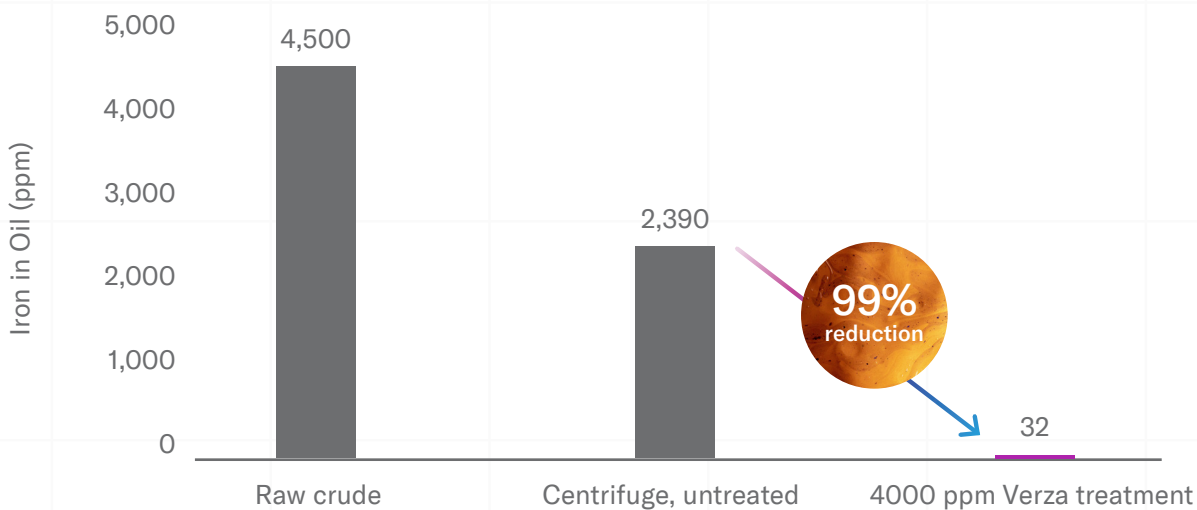


Figure 1. Field trial result post co-injection of iron chelant (Verza) and surfactant plus heat

About Solugen

Solugen is a bio-based specialty chemicals manufacturer and supplier whose mission is to decarbonize the chemical industry by revolutionizing the way chemicals are made for use across a variety of markets and applications.