



## CASE STUDY: CFC ANNUAL COST SAVINGS

West Texas well operators experiencing high costs due to produced water corrosion can achieve significant savings with the FHE Corrosion-Free Connection (CFC).





#### PROBLEM: CORROSION IN WEST TEXAS WELL OPERATIONS

Highly corrosive produced water, a byproduct of oil and gas production, is increasingly used in well intervention processes, particularly in West Texas. This exposes pressure control equipment, especially unions, to harsh conditions that lead to rapid degradation through stress corrosion cracking, pitting, and localized corrosion. Frequent maintenance, equipment replacement, and safety concerns arise due to this corrosion. These issues translate to increased operational costs for well operators.

#### KEY FINDINGS:

**0.0 in.**

Measurable  
Material Loss

**\$108,000**

Annual Savings

Lubricator stack of 7 unions

**ZERO**

Replacements  
Needed

**5+ Years**

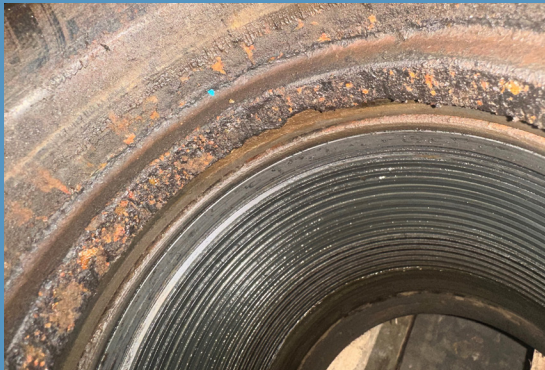
Estimated  
Life of Product



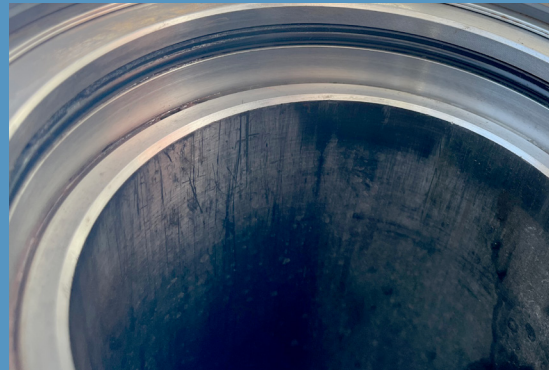


### SOLUTION: THE FHE CORROSION-FREE CONNECTION (CFC)

The FHE CFC is a revolutionary pressure control technology designed to address the challenges posed by produced water. This patent-pending solution boasts exceptional resistance to corrosion, protecting against the very issues that plague traditional unions. The CFC's innovative design ensures the longevity and integrity of critical well components in produced water environments.



TRADITIONAL UNIONS AFTER 1 MONTH



CORROSION-FREE CONNECTIONS AFTER 2 MONTHS

### CASE STUDY RESULTS: SIGNIFICANT COST SAVINGS DEMONSTRATED

A two-month field trial was conducted at a West Texas well utilizing produced water injection to assess the cost-effectiveness of the CFC compared to traditional unions.

- **Superior Corrosion Resistance:** The CFC exhibited no measurable material loss throughout the trial, signifying its exceptional ability to withstand the corrosive properties of produced water.
- **Elimination of Replacement Needs:** Traditional unions typically require service or replacement at least five times per year due to corrosion. The CFC entirely eliminated this requirement during the trial.
- **Extended Product Lifespan:** Based on the trial results, the CFC is projected to possess a product life exceeding five years, far surpassing that of traditional unions.

**Cost Savings Analysis:** The FHE CFC eliminates the need for recurring costs of service or replacement, generating substantial annual cost savings of \$108,000 for a single lubricator stack (comprising 7 unions). This figure reflects a potential adjustment based on the specific situation encountered during the case study.

**Conclusion:** The successful field trial of the FHE CFC demonstrates its effectiveness in extreme corrosive environments utilizing produced water. By eliminating the requirement for frequent maintenance and replacement of traditional unions, the CFC offers significant cost savings and enhanced operational efficiency for well operators in this region and others facing similar produced water challenges.



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