

Solutions for an Oilfield Disposal Well

Background

A treatment, recovery, and disposal (TRD) facility in Alberta was experiencing significant scaling and fouling on their disposal well. This caused increased pressure and decreased injection volume. Prior to ChemTreat involvement, the customer was performing acid stimulations every 2–3 weeks.



ChemTreat's Solution

After extensive bench testing and sample analysis, ChemTreat developed a two-program approach to minimize the scaling and fouling issues. As shown in Figure 1, untreated (on left) and treated (on right) injection water samples were taken during multiple service visits and retained for visual observations. Predominant scales were CaCO_3 , BaSO_4 , and FeS . ChemTreat was able to recommend a scale inhibitor and dispersant specifically formulated for oil and gas operations.

Figure 2 below compares samples that were observed 4 months after ChemTreat's treatment.

Results

Within one and a half years, ChemTreat was able to help the facility reduce acid stimulations from once every 2–3 weeks (18–26 per year) to 1–2 per year. This is an 85 percent decrease in acid stimulations. ChemTreat was also able to provide operational recommendations and chemical solutions, increasing volume throughput to the disposal well by 25 percent. Injection pressure improved (Figure 3) once chemistries were applied, allowing the flow rate to stay consistent with minimal scaling and fouling. ChemTreat and the customer have documented \$2.08M in annual cost benefit to the facility.

Figure 1



Figure 2 (Before and After)



Results are examples only. They are not guaranteed. Actual results may vary.

Figure 3

