

Maximizing SWD Asset Value

HALLIBURTON MULTI-CHEM PROVIDES CHEMICAL, EQUIPMENT AND SERVICE SOLUTIONS TO OPERATORS OF SALTWATER DISPOSAL WELLS

OVERVIEW

Halliburton Multi-Chem's approach to treating saltwater disposal (SWD) wells focuses on maximizing operators' injection rates while helping to control operating costs. There are many challenges and risks to safely and responsibly disposing of produced water. They include:

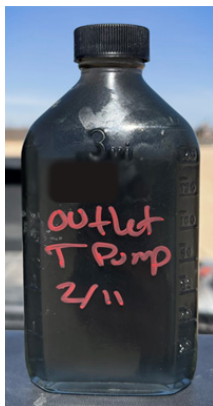
- » Poor water quality showing elevated iron sulfide content.
- » Solids limiting throughput.
- » Solids and scale accumulation requiring frequent mechanical remediation.
- » Poor fluids separation leading to oil being injected downhole.
- » H₂S presence increasing safety risks.
- » Oxygen and bacteria levels contributing to corrosion and solids formation.

Multi-Chem uses chemical application expertise and superior service to tackle these challenges. This begins with a detailed assessment of your operations and the fluids present at your SWDs. A custom risk assessment is developed and comprehensive solutions recommended before the treatment program is implemented. We then monitor operations and look for opportunities to improve performance and control costs.

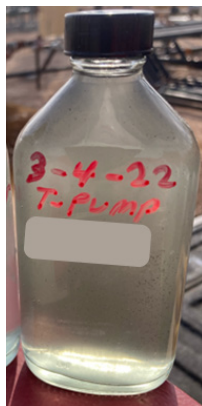
Our product portfolio covers the full spectrum of treating needs. This includes solids removers to improve water quality; corrosion inhibitors, biocides and oxygen scavengers to extend asset life; scale control chemistries to maximize throughput; phase separation products to salvage sellable oil; and surfactants to enhance injection.

Tank level monitors and adjustable rate pumps work with our in-house digital chemical management platform to track inventories, plan deliveries, reduce manpower costs and limit HSE exposure to personnel with remote data collection and injection rate adjustments.

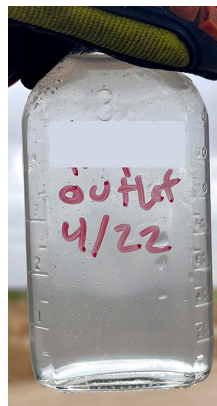
Photos show improvement in water quality following continuous treatment with an iron sulfide dissolver at a customer's SWD.



Before Treating



After 10 Days



After 2 Months

FEATURES

- » An extensive suite of specialty chemicals to improve water quality, inhibit scale, minimize solids, prevent corrosion and enhance phase separation. This includes combination products designed for multiple applications.
- » Technical expertise in the water quality, flow assurance and asset integrity challenges specific to SWD operations.
- » Onsite service as required to ensure program performance and identify and execute projects to improve operations.
- » Automation solutions to monitor chemical volumes and optimize chemical injections.
- » Operational experience treating central gathering facilities and SWDs in various basins across the United States.

BENEFITS

- » Maximized asset value and improved injection well performance.
- » Combination products reduce the number of tanks, containments and pumps required to treat the assets.
- » Tank level monitors and chemical injection controllers help manage inventories and make treatment adjustments to enhance performance and proactively control costs.
- » Dedicated account teams to facilitate an efficient transition and execute on customized technical applications.

For more information, contact your local Halliburton representative
or visit us on the web at www.halliburton.com/multichem

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