DROVER ENERGY SERVICES

Salt Accumulation/Deposits

Solutions

YOUR PROBLEM

Eliminate downhole salt accumulations that can decrease or halt production and require expensive intervention such as wireline broaching or coil tubing jetting.

SOLUTION

Drover Energy Service provides a capillary installation for pumping or siphoning of a fresh water chemical solution to eliminate salt deposits and increase gas production.

Chemical Injection Technique

Chemicals are stored on location in different size tanks, depending on the need and the method of treatment. For salting wells, the storage volume must be greater, usually 100- 150 barrels. The tanks are either near the wellhead or in the firewall with other production tanks. The tank is equipped with a Drover siphon manifold system, fluid control valve and sight glass for setting rates.

The amount of water injected depends on the well. Usually, a higher rate producing well will salt faster than a lower rate well. The amount of chemical typically ranges from two barrels per day (BPD) to eight BPD. As the gas rate and bottom hole pressure (BHP) decline, the rate is reduced and the lower amount is normally sufficient to take care of the salt deposition. Foamers and other chemicals may be mixed with fresh water. Compatibility of water and chemicals should be tested by your chemical provider.

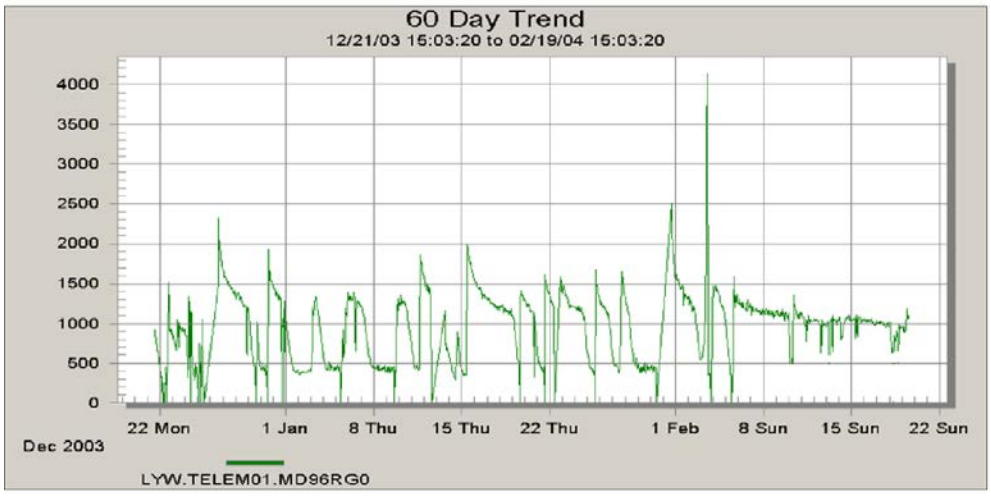
DROVER EXPERIENCES

Salt Accumulation decreases production and requires expensive intervention such as wireline broaching or coil tubing jetting. Batch treatments effective at times, still require periodic shut-ins, large amounts of pumped fresh water and after shut in, the flush production does not normally equal the production lost.

Backside "trickle down" of chemicals/fresh water also have limited success for treating salt deposits. In many cases, salt forms below the injection point when introduced at or near the end of the production tubing, as opposed to introduction into the perforated interval of the wellbore via capillary siphoning. Backside "trickle down" treatments also have serious limitations due to the concentrations needed to effectively treat and fall down the backside annular, especially when gas is present.

VALUE TO CUSTOMER

Maximize production and reduce lifting cost by delivering chemical solutions directly to the perforations.



Drover Energy Corporate
Kilgore, TX

International Headquarters
South Australia, Australia

info@droverenergy.com
+1-903-986-8911

Practical Considerations and Observations for a Successful Capillary Siphon Program

Proper alloy selection Understanding temperatures, yield strengths, chlorides and pH of chemicals is critical in determining the type of alloy used. Drover's Lasso program provides a detailed analysis and serves as a valuable tool in selecting the proper tubing. This program in conjunction with years of experience provide a proven process in deploying the proper metallurgies in your well.

Clean water and storage tanks are essential for a successful salt siphon program. Too much iron, TDS or the presence of excessive bacteria could plug the strings causing expensive procedures to pull and unplug the strings by making cuts and pumping through the sections. Reducing risk of contamination must be a priority of the producer and the chemical company.

Maintenance must be considered, as with any form of artificial lift. A periodic inspection of capillary tubing helps guarantee that the alloy is the right product for the environment and can also let you know if your water injection rate is correct, by the presence of or lack of salt. Pumping a solvent periodically can also help eliminate plugging problems. Drover Energy maintenance programs provide our customers with capillary flush test, pull and inspection programs and visual inspections to ensure the proper working integrity of your system. Filters must be installed and inspected weekly at the tanks and preferably a second at the well head.

Drover Energy Corporate
Kilgore, TX

International Headquarters
South Australia, Australia

info@droverenergy.com
+1-903-986-8911