**SourShield™ H₂S Control**

**ENVIRONMENTALLY CONSCIOUS TREATMENT TO PREVENT WELL SOURING AND MICROBIOLOGICALLY INFLUENCED CORROSION (MIC)**

**OVERVIEW**

SourShield H₂S control is an effective and environmentally conscious treatment exclusive to Multi-Chem to eliminate sulfate reducing bacteria (SRB) which cause souring and corrosion, with a proven track record of over seven years before having to retreat the well.

SRBs are often introduced into the formation during the drilling or hydraulic fracturing process, and are almost always present in a mature field. Once in the well and formation, SRB utilize naturally occurring nutrients, and in the process generate H₂S, souring produced oil and gas. The presence of ferrous ions may also lead to the formation of iron sulfide, impeding production and can facilitate under-deposit corrosion. SRB are also known to be associated with an aggressive metal pitting attack known as microbiologically influenced corrosion (MIC).

**HOW IT WORKS**

Multi-Chem’s SourShield H₂S control utilizes nitrate and nonhazardous, active, nitrate-reducing bacteria (NRB) to control SRB, providing a cost-effective and more environmentally-acceptable alternative to biocide treatments.

Selected to thrive in a reservoir’s particular conditions, reservoir-specific NRB are introduced on-the-fly into the well where they compete with SRB for the limited nutrient resources downhole. As the bacteria component of SourShield H₂S control consume nutrients and grow, nitrite is produced, a compound which directly inhibits SRB metabolic activity. This results in a well without SRB colonization.

Unlike traditional solutions, SourShield H₂S control competitively excludes detrimental bacteria, negating the requirement need for additional biocides.

**FEATURES**

- Eliminates sulfide production and SRB populations
- Live-strain NRB produce nitrite, a natural SRB inhibitor
- Controls biogenic hydrogen sulfide and iron sulfide buildup in production equipment
- Cures the effects of externally-induced contamination that can sour production
- Improves the ecological profile of the microbiological control program by reducing the need for biocide

**BENEFITS**

- Helps mitigate risks associated with H₂S as fields grow older, controlling maintenance costs associated with souring
- Protects against MIC for extended asset life
- Yields better quality of production water for re-use due to reduced sulfide production
- More environmentally-friendly than traditional biocide treatments
STIMULATION CHEMICAL SOLUTIONS

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

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