Power Horse Chemical

PRISTINE

POWER HORSE CHEMICAL

Objective

- H2S Mitigation in Crude
- Non-Amine Solution
- Non solids producing
- Remove TANs
- Remove Supply Chain Concerns
- Ease of Application

Conclusion

- Eliminated H2S Completely
- Greatly Reduced Mercaptans
- Zero Solids
- TANs Removed
- Readily Available Supply
- Easily Applied
- Stable Pricing

POWER HORSE CHEMICAL

Certificate of Analysis

[redacted]
Minco, OK 73059
Unite States of America

PHC Reference Number: US180-0006737
Lab Reference Number: 2021-CUSH-000289
Customer Reference Number: US180-0006737

Customer Product Description:	Crude Oil	Sample ID:	2021-CUSH-000289-001
Location:	Cushing, OK USA, Cushing, Oklahoma, United States	Date Sampled:	21-Jul-2021
Sample Representing:	117 Auto Submitted Composite	Date Submitted:	21-Jul-2021
Drawn By:	Client	Date Tested:	28-Jul-2021

Method	Property	Result	Units
ASTM D5623	Hydrogen Sulfide	<1.0	ppm Wt
	Carbonyl Sulfide	20.8	ppm Wt
	Methyl Mercaptan	<1.0	ppm Wt
	Ethyl Mercaptan	<1.0	ppm Wt
	Dimethyl Sulfide	47.3	ppm Wt
	Carbon Sisulfide	25.7	ppm Wt
	Isopropyl Mercaptan	27.7	ppm Wt
	Tert-Butyl Mercaptan	32.4	ppm Wt

Summary

The removal of H2S has plagued the oilfield for generations. H2S is a major risk to public and personnel safety. The negative operational outcomes reduce market demands and cause relative price discounts. Traditional treatments, while effective in treating H2S, are overpriced, supply chain restricted, and produce ***negative*** side effects requiring additional chemical treatments. Our objective was to develop a simple, robust and economical solution that produced, or limited, negative operational outcomes. The result of these development efforts:

- **Cost/BBL treated lower up to 50%**
- **ZERO negative production outcomes post treatment (no solids)**
- **Chemical production in the US**
- **No supply chain constraints**
- **On demand delivery options: Tote/truck/rail/ocean**