

CASE STUDY 801 | CRUDE OIL & LIQUIDS | Pro3® HT

# METAL BASED SCAVENGER **Pro3® HT** OUTPERFORMS TRIAZINE & ALKYLAMINE CONDENSATE-BASED SCAVENGERS IN RIGOROUS LAB & LONG-TERM FIELD TRIALS.

**Q2 Technologies**, a former subsidiary of Quaker Chemical which developed the MEA-Triazine scavengers used world-wide today, has brought the next iteration to its established **Pro3®** series of non-amine/non-triazine H<sub>2</sub>S & mercaptan, **Pro3® HT**, an oil soluble scavenger capable of withstanding high operating temperatures.

In an established producing zone along the shelf in the Gulf of Mexico, a mid-30 API sour crude and gas with low BS&W had long desired an alternative to traditional scavengers. Systematically tested **Pro3® HT** against several other products in the lab prior to field trial. Lab results proved and established what the field trial ultimately would corroborate: **Pro3® HT** showed expansive outcomes resulting in ~50% better reduction of H<sub>2</sub>S than triazine and was still effective when exposed to >350°F/178°C.

## CHALLENGES

- Tasked with quickly removing H<sub>2</sub>S to <1ppm/v by using less chemicals than current usage.
- Utilize existing equipment in fully operating facility.
- Identifying where in the infrastructure configuration was the best fit: Multiple separators and contactors.
- Significant levels of H<sub>2</sub>S even after mechanical agitation along the continuum: 30,000 – 40,000 ppm or 3-4% H<sub>2</sub>S present at the oil contactor.

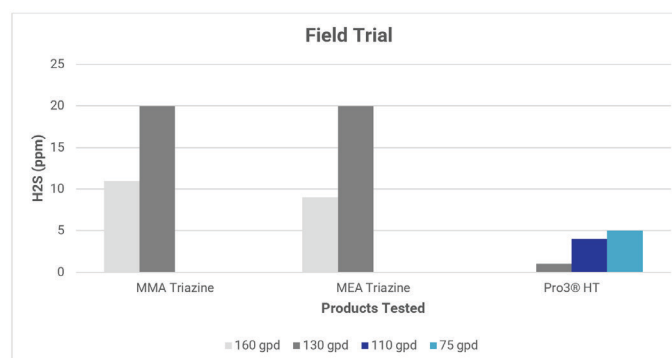
## TAKE-AWAY:

- **Pro3® HT** is effective at low H<sub>2</sub>S levels even with >1% BS&W.
- Quick reaction time (< 5 min).
- Remains effective at high temperatures >350°F/178°C.
- Long-term test location (3+ years of treatment) shows no evidence of sulfide scaling.
- **Pro3® HT** reactive metal-base compound is a fast-acting, oil-soluble H<sub>2</sub>S scavenger proven both in the laboratory and the field.

## SOLUTION

- As the initial lab findings indicated, the same was true in the field: **Pro3® HT** was the superior product in reacting against H<sub>2</sub>S versus traditional triazine- and alkylamine condensate-based products.
- Compared to the other products at trial, even at lower gpd rates, **Pro3® HT** was significantly below the others.

## RESULTS



- Post-treatment H<sub>2</sub>S level: <10 ppm