

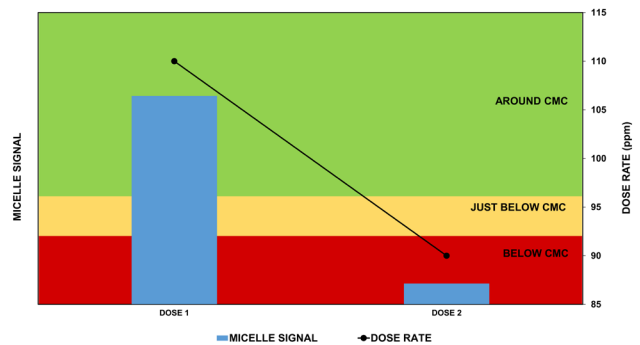
**CASE STUDY**


# CoMic™ – Optimisation of Wetting Agent at High H<sub>2</sub>S Facility

**BACKGROUND** An onshore US facility producing high levels of corrosive H<sub>2</sub>S in the crude extraction process, required chemical optimisation. Traditional film-forming corrosion inhibitors were ineffective against the highly corrosive H<sub>2</sub>S, leading the operator to use a ‘wetting agent’ in order to prevent iron sulphide build up. Wetting agents have similar characteristics to film-forming corrosion inhibitors, forming micelles when the ‘Critical Micelle Concentration’ has been achieved. The use of CoMic™ to determine micelle presence was required at this production facility to inform optimal chemical management.

**TESTING** CoMic™ was performed on samples onsite to determine micelle presence and the wetting agent dose rate was altered according to the results.

The analysis showed that when a dose rate of 110 ppm was being applied to the system there was evidence of micelles, providing confidence that the system was well dosed. The wetting agent dose was then reduced to determine if too much product was being applied. As the results show, reducing the dose rate resulted in a loss of micelle signal, indicating there was limited scope to reduce the dosage and still provide optimal protection.



**SUMMARY** Onsite CoMic™ testing afforded near real-time results to be achieved, giving confidence that the system in question was at an optimal dose rate when 110 ppm of the wetting agent was being applied. A recommendation was made that this dose rate should be maintained for optimal protection. This information was then fed into a corrosion management review.

PROBLEM	SOLUTION	RESULT
Understanding if the wetting agent was being applied at a dose offering optimal corrosion protection	CoMic™, a unique onsite analysis, to determine the CMC and therefore optimal dose	Valuable dose information for asset integrity management was provided

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