Paraffin Crude Oil Applications

THE ISSUE

Wax deposition in production tubulars, rods, flowlines and pumping equipment is the principal cause of lost or reduced oil production and costly, periodically recurring remedial maintenance in paraffinic crude oils. The 3 phases of wax solidification that results in this wax deposition are precipitation, crystallization & gelling, all of which are temperature dependent. Wax deposition will be an issue whenever ambient oilfield temperatures fall below a crude's Wax Appearance Temperature (WAT).

THE SOLUTION

Enercat Technology Inc has a novel yet proven technology – Enercat™ Downhole Tool – that changes the paradigm because it can reduce the WAT & Pour Point of paraffinic crudes by weakening the intermolecular London Dispersion forces that govern precipitation, crystallization, and wax deposition in paraffinic crudes. Thousands of successful Enercat™ installations supported by empirical laboratory evidence demonstrate that the Enercat™ tool suppresses all 3 phases of wax solidification by lowering the Wax Appearance and Pour Point Temperatures and impeding the crystallization process.

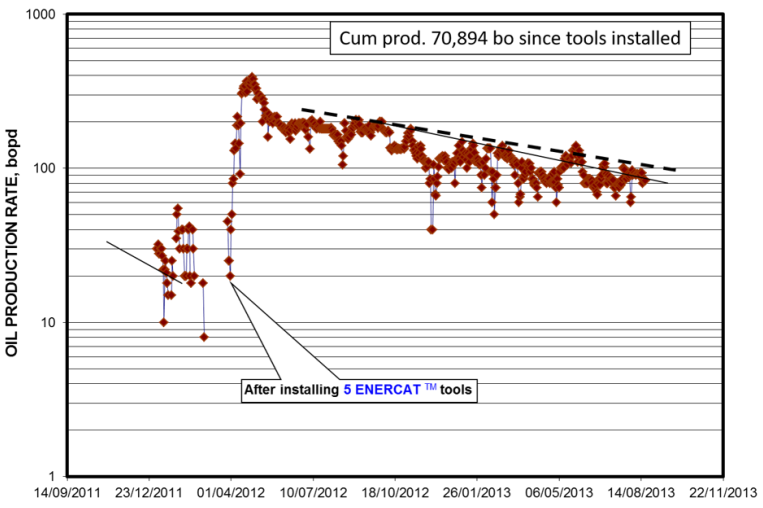
Enercat™ eliminates the need for recurrent hot oiling and chemical treatments of polymers or solvents.

DEMONSTRATING ENERCAT™ COMMERCIAL APPLICATION

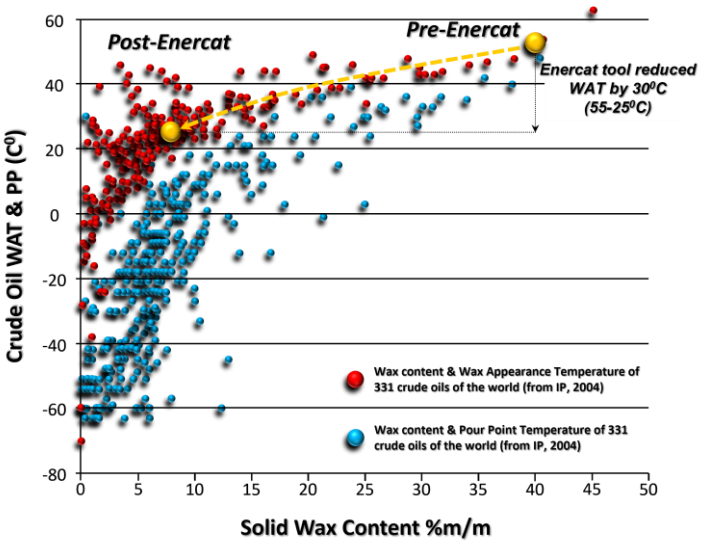
Prior to Enercat™ installation, the La Vela field, Venezuela produced erratically from 8 to 50 bopd (depending on the time since hot oiling treatments were applied). After tool installation, daily oil production increased initially to more than 400 bopd but was choked back to 200 bopd to avoid potential for water coning and then stabilised to a normal production decline for a pressure depleting reservoir.

A producer in the New Mexico 2nd Bone Springs, Delaware Basin was experiencing severe paraffin deposition requiring hot H_2O, chemicals, and workovers to strip paraffin from production equipment. Inspection of the rods and flowlines 131 days after tool installation showed paraffin deposition was eliminated.

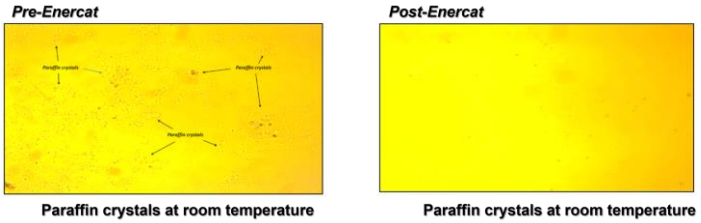
INCREASING/STABIIZING PRODUCTION AT LA VELA FIELD (VE)



REDUCING WAX APPEARANCE TEMPERATURE



IMPEDING PARAFFIN PRECIPITATION & CRYSTALLIZATION



Thin section of paraffinic crude under normal light x50 magnification

ELIMINATING PARAFFIN FROM RODS & FLOWLINES