



**Enercat tools and technology solve a variety of problems in upstream downhole oil production, including applications in: paraffin, scale, asphaltenes, emulsion and heavy oil.**

## WHAT IT DOES

Enercat Downhole Tool Technology emits a frequency that conditions the oil and water at the molecular level. This results in an increase in API gravity, reduction in viscosity, reductions in the interfacial tension of the fluids and lower pour point temperature at which deposition occurs in paraffinic/asphaltic oils.

### Paraffin

Wax deposition in production tubulars, rods, flow-lines and pumping equipment is the principal cause of lost or reduced oil production and costly, periodically recurring maintenance in paraffinic crude oils. Wax deposition will be an issue whenever oilfield temperatures fall below a crude's Wax Appearance Temperature (WAT). Enercat 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.

### Scale

Mineral scale deposits restrict oil flow in the wellbore and clog perforations, casing, production tubing, valves, pumps and downhole equipment.

Calcite is the most common type of carbonate mineral scale found in oil fields and it crystallizes and deposits primarily due to changes in pressure and temperature. There are two other polymorphs of calcium carbonate minerals, aragonite and vaterite. Enercat prevents calcite scale because it causes aragonite to crystallize instead of the calcite, and aragonite crystals do not form scale deposits.

### Heavy Oil & Emulsion

Enercat tools are proven to lower the viscosity of heavy oil while increasing its API gravity, without the use of emulsion breaking chemicals, steam injection or diluents. Enercat breaks emulsion within hours of being installed, and many successful installations are supported by empirical laboratory evidence that demonstrate reductions in interfacial tension between the heavy oil and entrained water.

### Some of the economic benefits of Enercat are:

- Increased Production – 20%-100%
- Less downtime due to fewer workovers and hot oiling.
- Reduced costs for workovers and hot oiling.
- Elimination of chemical costs used for paraffin and emulsion.
- Increased and stabilized oil production due to no choking of production over time.
- Improved pump efficiencies due to lower well bore pressure and reduced friction.
- Lower flowline pressure to the tank battery and reduced pigging
- Lowers Green House Gas Emissions significantly in heavy oil situations due to Enercat's ability to increase API gravity, often by up to 5 degrees or more.
- Economic payback is often only 6-12 weeks

## CONTACT ENERCAT

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