

# MICROCAPS

## Encapsulated Scale and Corrosion Inhibitors

### DESCRIPTION

MICROCAPS\* weighted, slow-release, encapsulated scale and corrosion inhibitor products have been developed for direct application within the Rat Hole of the well to protect the well, downhole pumps and production tubing infrastructure during well production.

Active inhibitors are contained within a gelatinous inhibitor capsule which slowly releases active material into the produced water in the flowing well stream fluids.

### APPLICATION

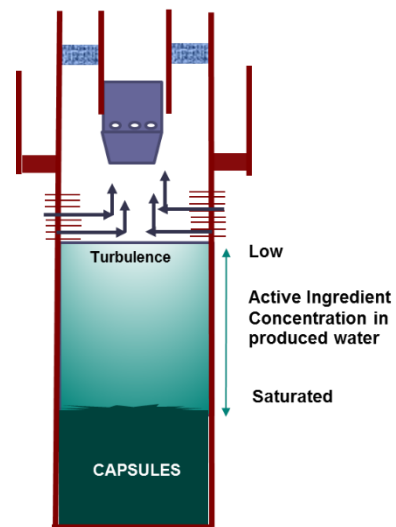
MICROCAPS can be applied through the tubing or the casing, depending on the well completion and if a downhole pump is in the well. MICROCAPS can also be applied during a workover before any downhole pump unit is re-installed.

MICROCAPS are flushed into the rat hole where they are allowed to settle and develop an inhibitor concentration gradient, as indicated in the diagram (right).

The well is shut-in for a pre-calculated time, depending on well depth, then returned to production, protected.

MICROCAPS active inhibitor continuously releases into the flowing well production at a low concentration but sufficient to inhibit scale and/or corrosion.

Improved well security delivered – chemical is directly in the treated well, not deployed from surface.



### BENEFITS

Easy to apply and with no risk of formation damage.

Long term, controlled, release of the inhibitor from the Rat Hole into the well bore at an effective concentration.

Protection is guaranteed from the well (Rat Hole) to downstream.

Stable up to 375 °F (190 °C).

Suitable for low pressure wells and those produced via Artificial Lift (ESP pumps).

Downhole equipment (ESP) is protected such that run life can be extended:

ESPs are protected from Scale and Corrosion (primary source of ESP issue) therefore pump failures will reduce significantly.

Expected Run Life of an ESP can be extended significantly.

Ideal for remote locations where:

Locating pumps and tanks is problematic.

Electricity supply is difficult.

Frequent inhibitor tank refill is not always possible.

Eliminates the necessity to install surface chemical injection facilities and capillary tubing - no CAPEX.

Where capillary tubing is installed it can now be freed for delivery of other types of chemicals to improve well production.