

## Formation Squeeze Treatment with **InSol<sup>SM</sup>**

### Stimulation Procedure

Prior to squeezing InSol into the formation to remove organic formation damage, the well tubing and sump must be cleaned to prevent organic deposits from being pushed into the formation. Bull-heading stimulation fluids into the formation from the surface should be avoided in all circumstances but especially when the tubing and sump are not clean. The use of a coiled tubing unit (CTU) for the entire operation is recommended. There are two possibilities:

- i. Well is plugged completely (i.e., well is not flowing)
- ii. Well is not plugged completely (i.e., well is flowing)

#### **i. Well is plugged completely (i.e., well is not flowing)**

- Open the well to the clean-up facilities (i.e., not to the main production separator). With water flowing inside the CTU fitted with a small drill bit at its tip, slowly drill away all organic deposits from the tubing until oil begins to flow. The water may contain a water-soluble dispersant.
- After the tubing is drilled free from deposits and the well is flowing, continue with the following procedure for flowing wells.

#### **ii. Well is not plugged completely (i.e., well is flowing)**

- Open the well to the clean-up facilities (i.e., not to the main production separator). While well is flowing, use CTU fitted with organic deposit scratcher at its tip to slowly dislodge all organic deposits from the tubing.
- After tubing is scratched free from deposits, use InSol solution in a suitable solvent (e.g., diesel, xylene, etc.) to flush out all deposits from well sump while the well is flowing at a healthy flow rate.
- After the CTU cleans the sump and reaches the bottom of the well, shut the well in, spot the CTU tip across the perforations, and pump into the formation below fracturing pressure about 2 Barrels per foot of specially formulated InSol inhibitor/dispersant solution. Fill the well sump and tubing with InSol solution, let system soak for 4 hours, and then produce a minimum of two tubing volumes.
- Spot the CTU tip across the perforations, and pump into the formation below fracturing pressure about 3 Barrels per foot of the specially formulated InSol inhibitor/dispersant solution. Let system soak for 4 hours, and then produce a minimum of two tubing volumes.
- The previous step may be repeated in very severe organic deposition cases. Otherwise, the well may be placed into normal production.

### InSol Manufacturer

InSol is manufactured by Kosta Oil Field Technologies, Inc., an emerging company backed by talented professionals who have unparalleled state-of-the-art know-how in the area of asphaltenes, waxes, and well-bore related treatments. Currently, the company has distributors worldwide. The headquarters of Kosta Oil Field Technologies is in Stafford (a suburb of Houston), Texas.

For more details, please visit KostaTech's web site: [www.kostatech.com](http://www.kostatech.com)