

## OilMAX

## Diversions and conformance control for matrix treatments

## APPLICATIONS

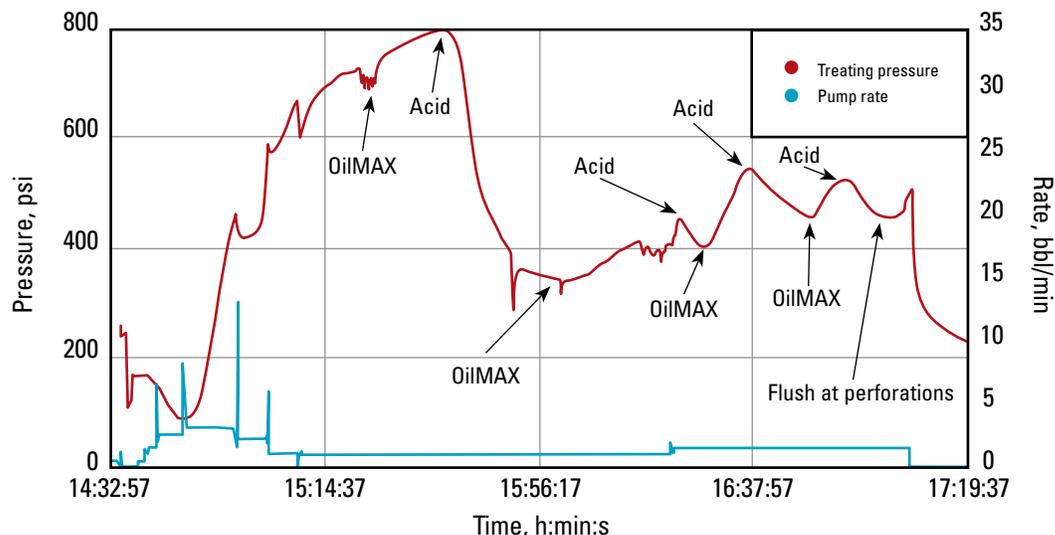
- Brown- or mature-field stimulation
- Water control
- Matrix treatments

## BENEFITS

- Minimizes incremental treatment cost
- Reduces water cut, increases oil production

## FEATURES

- Compatibility with acids
- Easy field preparation
- Reduced permeability to acid and water without affecting permeability to oil and gas
- Applicability for treatments bullheaded from surface



Surface pressure response during OilMAX matrix stimulation—When the OilMAX fluid is injected, the pressure drops and acid permeates the untreated interval, making for a uniform injection rate.

For stimulation operations, the OilMAX\* matrix acidizing diverter directs treating fluids away from intervals with high water cut. Applying this fluid to acid treatments provides complete zonal coverage and reduces the effective permeability of high-water-cut intervals, maximizing crude production and minimizing the volume of produced water. For water control treatments, it ensures complete zonal coverage of the low-viscosity treating fluids.

#### NEW-GENERATION RELATIVE PERMEABILITY MODIFIER

The OilMAX fluid is composed of a new-generation viscous relative permeability modifier (RPM), which allows complete

zonal coverage and reduced water production when matrix treatments are performed in sandstone formations with high water production.

Injection of the viscous OilMAX diverter into the formation matrix results in an increased resistance to flow and the adsorption of the RPM polymer onto the surface of the pore spaces. The polymer adsorption lowers the effective permeability to water- and acid-base fluids with little change in the effective permeability to oil. The combination of the reduced permeability to water and increased resistance to flow diverts the acid stage to an untreated interval. When the well is put on production after the

treatment, the result is more oil with lower water cut.

The new-generation RPM continues to block the flow of water while reducing clay sensitivity to cation exchange. The ionic nature of the OilMAX diverter polymer enhances the adsorption characteristics and minimizes desorption during the production cycle, prolonging the effective life of the treatment.

#### WIDE RANGE OF TEMPERATURES AND PERMEABILITIES

The OilMAX diverter service has proved to be effective in reservoirs with temperatures as high as 300 degF [149 degC] and in reservoirs with permeabilities ranging from 50 mD to 2 D.