

NO BLOK® NON-EMULSIFIERS

Challenge

Emulsion block is a type of formation damage. Mixtures of water and oil can be emulsified by mixing and may be stabilized by native surfactants, fluid additives or solids. These emulsions may remain strongly associated with the formation and can impede flow and reduce productivity. Drilling fluid filtrate and completion brine are potential sources of water for emulsion block. The oil portion may arise from drilling fluid filtrate, base fluid spacers or native hydrocarbon fluids.

Overview

NO BLOK® additives are mixtures of surface active agents which discourage and prevent the formation of damaging emulsions. Laboratory tests can indicate the emulsion potential of oil and brine mixtures. Mixtures which form stable emulsions can be treated with varying concentrations of NO BLOK non-emulsifier. By examining the separation of the oil and water, the concentration of the NO BLOK treatment can be optimized for field application.

- **NO BLOK® Z** non-emulsifier is formulated for use in high density calcium and zinc brines
- **NO BLOK® C** non-emulsifier is used to treat all brines other than those containing zinc
- **CFS™- 461** non-emulsifier is suitable for all brines, including formates

Features

- Prevents the formation of damaging emulsions
- Product range is suitable for all brines
- Effective at low concentrations
- Treatment can be customized to requirements

Untreated brine

Brine treated with NO BLOK
non-emulsifier*Strong emulsion tendency controlled with NO BLOK treatment.***Benefits**

NO BLOK treatment will prevent brine-oil emulsions at every potential point of contact. NO BLOK treatment will maximize brine-oil separation, avoid emulsion block and maximize productivity. Water-wetting of the formation is encouraged, maximizing the relative permeability of the produced fluids. The reduction in surface tension also assists the flow back.

NO BLOK treatment can be used to minimize the effects of emulsions whenever there is the potential for oil and water to mix.

Conclusion

The potential for emulsion formation should be examined during the development of fluids programs. Mixtures which exhibit a strong emulsion potential could produce formation damage. Formation damage can be minimized with an optimized NO BLOK treatment.