

# I.C.E.™ LUBRICANT TECHNOLOGIES

Waterbase Systems 3X More Slick Than Oilbase Systems

1

## CONVENTIONAL CHALLENGES >>>

Transfer of weight to the bit in sticky shales

Transfer of weight to the bit in high perm formations

Transfer of weight to the bit on extended reach wells and tortuous wellbores

## Improved Drilling Efficiency

Planned instantaneous penetration rates demand efficient transfer of weight to the bit while sliding or drilling. This translates into optimized directional control and well construction. Minimizing the coefficient of friction, as it relates to torque and drag associated with contact between the tubulars and formations is key. This is where I.C.E.™ lubricant technologies deliver on ROI performance.

## Improved Shale Inhibition

Another primary benefit of the I.C.E.™ lubricants is its ability to inhibit reactive shale formations.

2

## THE I.C.E. EFFECT >>>

Tenaciously coats out on reactive clays mitigating their hydration

Dramatically reduces API spurt loss and fluid loss optimizing filtercake quality

Delivers coefficients of friction in waterbase fluids that are 60 – 75 percent lower than oilbase fluids. (Reduces the coefficient of friction in oilbase fluids by as much as 30 – 40 percent)

## MORE BENEFITS

Biodegradable

Does not support aerobic or anaerobic bacterial activity

Mitigates corrosion by coating metal surfaces & preventing oxidization

Compatible with most waterbase & oilbase fluids

Reduces oxidation of polymers extending their temperature limit and performance

## INTRODUCING NEW I.C.E.™ LUBRICANT TECHNOLOGIES

When your transfer of "weight to bit" issues are costing you rig time and money the I.C.E.™ family of lubricants deliver results. Tacky shales, high perm formations, extended bores, associated borehole tortuosity or any combination of these hinder deviated well construction performance. The I.C.E.™ family of lubricants deliver synergistic features to ensure the results you are looking for. Whether the proper I.C.E.™ product is employed as a percentage component of the system or as a sweep when hole conditions dictate they are designed to address the issues at hand.

**Shale I.C.E.™** delivers ultra low coefficients of friction while actively enhancing shale inhibition at a very low system concentration of 1.5 percent.

**I.C.E.™ Slide** is used as a sweep employing the drilling fluid as the base for the pill. The sweep is pumped when string drag is sufficient to compromise efficient transfer of weight to the bit.

**I.C.E.™ Extreme** is best suited for wells of extended length or high path tortuosity. As a system component ranging from 1.5 – 3.0 percent by volume it delivers the lowest coefficient of friction.

**The I.C.E.™** product line can be custom designed to optimize performance in almost any drilling situation.

Vitalize Production

+1-713-331-0534  
ARCfluids.com

