

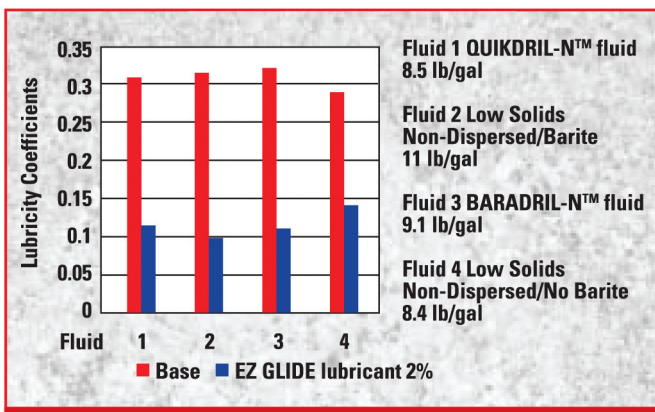
EZ GLIDE™ Lubricant

Environmentally Friendly Lubricant Helps Meet Aggressive Well Profile Challenges

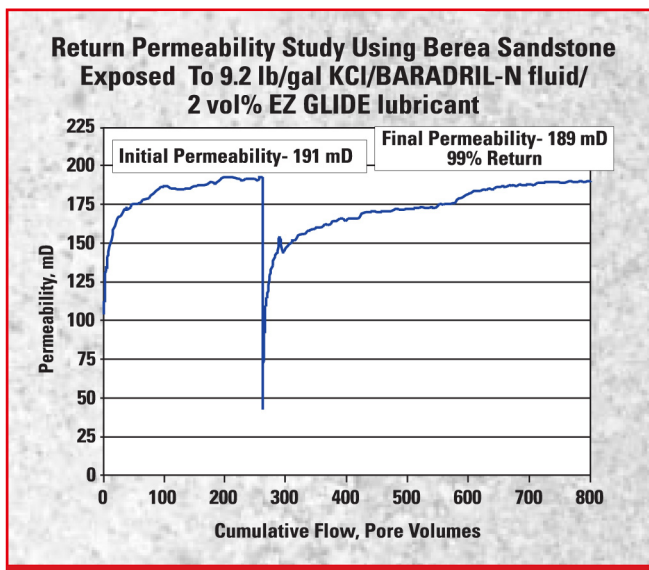
EZ GLIDE™ lubricant from Baroid, a blend of special synthetic oils and surfactants, is designed specifically for low shear environment well profiles to help reduce friction in water-based fluids. Engineered for performance drilling, EZ GLIDE lubricant is non-damaging to producing formations and demonstrates minimal impact on return permeability and outstanding resistance to oil-wetting problems. Containing no petroleum hydrocarbons, EZ GLIDE lubricant is also ideal for applications in environmentally sensitive areas.

Performance Advantages

- Can improve the lubricity of drilling and completion fluids
- Designed specifically for added lubricity on difficult extended reach drilling (ERD) wells
- Can lower drilling costs by providing excellent performance at reduced concentrations
- Minimal effect on rheological properties
- Will not oil-wet the solids
- Helps prevent bit balling and foaming
- Non-damaging to production formations
- May be used in fresh water fluids, sea water fluids, sodium chloride, potassium chloride, or calcium chloride brines
- Non-flammable and biodegradable



EZ GLIDE™ lubricant reduces lubricity coefficients



EZ GLIDE™ lubricant increases return permeability

Case History 1

EZ GLIDE™ Lubricant Helps Operator Reach Total Depth in High-Angle Injector Well

An operator wanted to reduce the risk of oil-wetting barite while providing ample lubrication for a high-angle injector well with a monobore profile, having a total depth (TD) of 11,396' and an 8,000'+ tangent section of 80+ degrees. A concentration of 4% by volume of EZ GLIDE lubricant was added to allow sliding and weight transfer to the bit. On an identical well, an application of 5.5% by volume of a competitor's lubricant was required to give comparable results. The operator conducted extensive torque and drag readings on the wells and approved EZ GLIDE lubricant for use on all future wells. By effectively eliminating the potential for oil-wetting barite, EZ GLIDE lubricant provided the operator with significant cost savings on several problem wells.

Case History 2

EZ GLIDE™ Lubricant Solves Alaskan Operator's Oil-Wetting and Barite Settling Problem

A commonly used lubricant in Alaska proved particularly susceptible to inducing oil-wetting of solids in well designs with inherent low shear conditions, resulting in several serious barite settling situations. The EZ GLIDE lubricant was rigorously tested in the laboratory and field, in order to meet the operator's requirements for lubricity under low shear conditions. HSE impact, elastomer compatibility, and reservoir compatibility were also considered. Following application of the product, the operator found that EZ GLIDE lubricant provided better lubricity at lower product concentrations than the original lubricant, without oil-wetting solids, and reduced non-productive time was realized through the mitigation of negative lubricant side effects. By achieving effective lubricity at reduced concentrations of lubricant, the operator also substantially reduced drilling costs.

EZ GLIDE™ Lubricant Overview

Description	<ul style="list-style-type: none">■ Blend of special synthetic oils and surfactants■ Formulated to provide friction reduction in water-based fluids■ Can prevent amalgamation of added solids
Applications	<ul style="list-style-type: none">■ Can reduce lubricity coefficient■ Can reduce torque■ Can decrease drag■ Helps eliminate bit balling
Typical Properties	<ul style="list-style-type: none">■ Specific gravity @ 68°F (20°C) : 0.93■ Flash point, COC, °F (°C) : >248 (>120)■ Solubility in water : Insoluble■ Pour point, °F (°C) : 20 to 40 (-7 to 4)
Recommended Treatment	<ul style="list-style-type: none">■ Add 2% to 7% by volume directly to the system
Packaging	<ul style="list-style-type: none">■ 55-gal (189-L) drums containing 426-lb (193-kg) net weight■ Also available in bulk

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