M-I Lube* additive is a general purpose lubricant that reduces the coefficient of friction, and decreases the torque, drag and bit/stabilizer balling in all water-base fluids.

By reducing the friction between the drillstring and the wall cake, M-I Lube product will minimize the possibility of differential sticking. M-I Lube additive has application in extended reach, deviated and horizontal wellbores.

**Typical Physical Properties**
- Physical appearance: Black liquid
- Odor: Hydrocarbon
- Specific gravity: 0.9 to 0.93
- Solubility: Slightly soluble in water
- Flash point: 99°F (37.2°C)

**Applications**
M-I Lube additive is a lubricant formulated for water-base fluids to minimize torque and drag encountered in directional wellbores.

M-I Lube agent will preferentially coat the BHA to prevent the buildup of balling, and reduce the instance of wall sticking by lubricating the metal and wall cake interaction. M-I Lube product has application in all types of water-base fluids and can be added to all densities.

Avoid using the lubricant to prevent “greasing” at conditions where high pH and soluble hardness are noted.

Typical treatment levels are from 1 to 3% by volume. Fresh additions of M-I Lube additive made on a daily basis will enhance the lubricating properties of the drilling-fluid system. Increased concentrations will be needed at higher densities.

M-I Lube additive can be used in concentrated slug volumes to lower torque and drag conditions.

M-I Lube product can be used as a pretreatment additive in situations where a high coefficient of friction is anticipated.

**Advantages**
- Can be used in all types of water-base fluids
- Effective lubricant for torque and drag reduction
- Will not adversely affect mud properties
- Reduces bit and stabilizer balling

**Limitations**
- Treat out cement prior to adding M-I Lube additive
- Avoid usage where high pH and hardness coexist

**Toxicity and Handling**
Bioassay information is available upon request.

Handle as an industrial chemical, wearing protective equipment and observing the precautions as described on the Material Safety Data Sheet (MSDS).
Packaging and Storage
M-I Lube additive is packaged in 5-gal (18.9-L) cans and 55-gal (208-L) drums.

Store in a dry location away from sources of heat or ignition, and minimize dust.