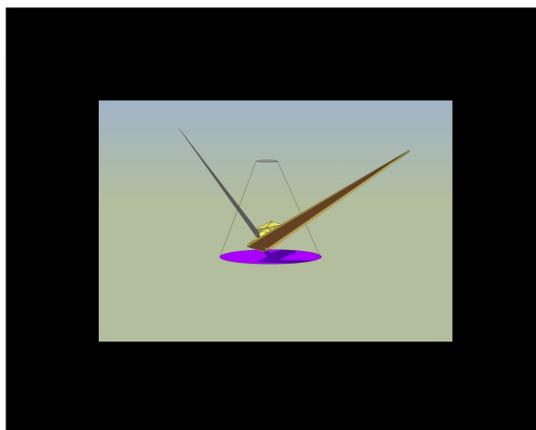


# UNIQUE DRILLING FLUIDS

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## PRODUCT DATA



### **TOTAL-EASE™**

Synthetic Oil Base Drilling Fluid system

Oil based drilling fluids are ideal in special drilling conditions such as drilling high-temperature deep wells, drilling through NaCl, anhydrite and gypsum formations. It is also favorable in special cases such as drilling through water-sensitive shale sections, drilling through producing zones and it rids the worries of stuck pipe. Field engineers love when they are assigned to mix the fluid system because of the minimum maintenance required. Some refer to it as easy money, which is how our trademark name TOTAL-EASE derived.

The system relies on an external and internal phase whereby oil is continuous or external and water is internal. It is an invert emulsion system whereby the water content exceeds 15% by volume. TOTAL-EASE's reverse osmotic migration, removal of water from shale, prevents shale swelling. Nonetheless, the system is carefully designed so that the shale is not overly dehydrated which can lead to another set of problems. An organophillic clay, a clay that has had its surface chemistry changed do to the quarternary amine's attraction to clay's negative surface, allows oil wettability. This vital component of TOTAL-EASE is considered an essential bodying agent. UDF's emulsifier package consists of UNI-EASE and BI-EASE by which they emulsify any formation H<sub>2</sub>O entering the system. These two special products provide exceptional emulsion stability throughout the drilling process. Weighting material and colloidal fluid loss additives are added to our system to create the optimum density and premier

wall plastering characteristics. This is accomplished by the aggregation of colloidal additives and their ability to form micelle networks throughout the continuous phase. Consequently H<sub>2</sub>O molecules are tied up in the network and filtration is maximized. TOTAL-EASE is a cost effective solution to wellbore stability and increased drill time. Please contact UDF, Inc. technical division for consultation on our quality products and systems.