APPENDIX K: IDP-433 TECHNICAL DATA SHEET

IDP-433

Viscosifier/Borehole Stabilizer

Description

IDP-433, liquid polymer dispersion, is a high solids, partially hydrolyzed polyacrylamide/polyacrylate (PHPA) copolymer, used primarily as a viscosifier and borehole stabilizer to prevent reactive shale and clay from swelling and sloughing. IDP-433, liquid polymer dispersion, can be used to provide friction reduction, inhibition and lubricity in freshwater, KCL and saltwater based drilling fluids.

Applications/Functions

- Enhances viscosity development in fresh water drilling fluids
- Promotes clay and shale stabilization to prevent swelling and/or dispersion
- Minimizes rotational torque and circulating pressure
- Promotes enhancement of air-foam system capabilities
- Enhances core recovery in continuous wireline coring operations

Advantages

- Mixes easily with minimum shear in fresh water
- Efficient shale/clay stabilizer and viscosifier
- Cost effective - small amounts produce desired results
- Breaks down chemically with bleach (sodium hypochlorite)
- Compatible with other Baroid drilling fluid additives when added in proper sequence
- Non-fermenting

Typical Properties

Appearance	Milky white
Specific Gravity @ 20 C (Water=1)	1.08 – 1.12
Percent Activity	50%
Bulk density @ 20°C, lb/ft^3	68.6
pH of a 0.5% solution	6-8

Recommended Treatment

- Using a Venturi Mixer, or into vortex of a high-speed stirrer, add slowly and uniformly to the entire circulating system.

Approximate Amounts of IDP-433 Added to Water Based Fluids

Drilling Application/Desired Property	Quart/bbl	Quart/100 gal	Liter/m^3
To Formulate a Clay-Free Drilling Fluid	0.5 – 1	1 – 2.5	2.5 – 6.5
Added to QUIK-GEL® or BORE-GEL® drilling fluids	0.25 – 0.5	0.5 - 1	1.25 – 2.5
To improve foam performance and hole conditions	0.25 – 0.5	0.5 – 1	1.25 – 2.5

© Copyright 2007 Halliburton
IDP-433 is a product of Halliburton
QUIK-GEL and BORE-GEL are registered trademarks of Halliburton

Because the conditions of use of this product are beyond the seller's control, the product is sold without warranty either express or implied and upon condition that purchaser make its own test to determine the suitability for purchaser's application. Purchaser assumes all risk of use and handling of this product. This product will be replaced if defective in manufacture or packaging or if damaged. Except for such replacement, seller is not liable for any damages caused by this product or its use. The statements and recommendations made herein are believed to be accurate. No guarantee of their accuracy is made, however.

Additional Information

- Make-up water used to mix IDP-433 should meet the following quality:
  total chloride less than 1500 ppm (mg/L)
  total hardness less than 100 ppm as calcium
  total chlorine less than 50 ppm
  water pH between 8.5-9.5
- Reduce total hardness of make-up water by adding soda ash (sodium carbonate) at 0.5 to 1 pound per 100 gallons (0.6 - 1.2 kg/m^3) of make-up water.

IDP-433 can be chemically broken down with regular household liquid bleach (5% sodium hypochlorite). Use one gallon of liquid bleach per 100 gallons (10 liters/m^3) of fluid formulated with IDP-433.

Do not use perfumed liquid bleach or solid calcium hypochlorite.

Packaging

IDP-433 is packaged in 5-gal (19-liter) plastic containers.

Availability

IDP-433 can be purchased through any Baroid Industrial Drilling Products Retailer. To locate the Baroid IDP retailer nearest you contact the Customer Service Department in Houston or your area IDP Sales Representative.

Baroid Industrial Drilling Products
Product Service Line, Halliburton
3000 N. Sam Houston Pkwy. E.
Houston, TX 77032

Customer Service	(800) 735-6075 Toll Free	(281) 871-4612
Technical Service	(877) 379-7412 Toll Free	(281) 871-4613