

The Unique Chemistry of Soltex® Additives Delivers Extraordinary Results in Oil-Based Muds



Soltex® additives can be the difference between success and failure.

Traditionally, Soltex® additive have been recognized worldwide as a shale stabilizer, well-bore lubricant and high-temperature/high-pressure (HTHP) fluid-loss control additive for water-based muds. Since few operators who use oil-based mud systems (OBMs) had prior experience using Solute® additive-treated OBMs, we conducted independent laboratory studies, followed by a series of field trials.

This research demonstrated that Soltex® additive significantly enhanced the filtration, filter cake, lubricity and well productivity in OBM systems. Additionally, in the field where the muds were routinely tested at 325oF, the Soltex® additive-treated muds consistently maintained HTHP fluid loss of 4.0 cc or less. The trials have now led to the use of Soltex® additive inhibitor in hundreds of oil- and synthetic-based mud systems around the world.

The major benefits of treating OBM and synthetic systems with Soltex® additives are:

- Lubricity - 12% to 26% reductions in metal-to-formation contact and 5% to 12% reductions in metal-to-metal (critical in extended reach wells)
- Improves return permeability
- Superior hole stability
- Increases temperature stability (safely lowers HTHP fluid loss)
- Improves filter cake quality
- Reduces torque and drag
- Improves ROP (rate of penetration)
- Meets toxicity regulations for offshore discharge

The unique chemistry of Soltex® additives means that the same product which has performed so well in water-based muds for years can be applied in oil-based and synthetic muds with extraordinary results. The fact is, if you're committed to cutting back on drilling fluid costs, reducing trips and avoiding re-drilling -- and if success is critical to your drilling project -- it's time to consider Soltex® additives. They can mean the difference between success and failure.

Case History #1

An offshore rig drilling approximately 14,000 ft made an addition of 4 ppb Soltex® additive with the following results:

	Before	After
Mud Wt.	12.2 ppg	2.2 ppg
O/W Ratio	64/36	65/35
PV/YP	36/14	38/13
Gels	10/18	10/19
HTHP (250°F)	3.6 cc	1.6 cc
Electrical Stability	359 v	385 v

Case History #2

A jack-up rig drilling at 12,500 ft made an addition of 6.0 ppb Soltex[®] additive with the following results:

	Before	After
Mud Wt.	15.6 ppg	15.6 ppg
O/W Ratio	79/21	79/21
PV/YP	35/13	37/13
Gels	10/17	9/18
HTHP (300°F)	5.0 cc	2.0 cc
Electrical Stability	560 v	545 v

Case History #3

A jack-up rig drilling at 12,000 ft made an addition of 2 ppb Soltex[®] additive with the following results:

	Before	After
Mud Wt.	10.6 ppg	10.6 ppg
O/W Ratio	75/25	75/25
PV/YP	24/14	23/12
Gels	5/14	6/12
HTHP (250° F)	4.8 cc	3.6 cc
Electrical Stability	515 v	550 v

Rheological, Electrical Stability, HTHP @ 300°F and Lubricity Test Results

Sample	Base Mud	Base + 4 lb/bbl Soltex[®] Additive
Mud Wt.	11.1 ppg	11.1 ppg
600 rpm @ 120°F	59	64
300 rpm	35	35
200 rpm	26	24
100 rpm	17	14
6 rpm	6	3
3 rpm	5	2
Plastic Viscosity, cP	24	29
Yield Point, #/100 ft ²	11	6
Gels, 10 sec/10 min.	8/12	4/10
Electrical Stability, volts	350	303
HTHP @ 300°F, ml.	4.2	2.8
Lubricity Tests (Avg. C. F.)		
Metal-to-Metal Contact	0.2979	0.2437
Metal-to-Sandstone Contact	0.4207	0.3480