enventives

CLEAN SQUEEZE™

RECOMMENDATIONS

A 100 bbl slurry should be pumped at thief zone. Fill backside with water. Close BOPs and begin applying soft squeeze at 50 psi up to 250 psi and hold for 4 to 6 hours

A fluid technician is available to assist in specific recommendations based on actual hole conditions. The key factors to obtaining a successful Clean Squeeze™:

First, a slurry with an extremely high solids content and high fluid loss must be prepared. Second, the slurry must be placed at the proper location in the wellbore.

Tables are provided for typical formulations of 1 bbl of Clean Squeeze™ slurry. If saturated saltwater is used, barite should be decreased by 0.6 sacks per barrel.

Due to variations in base oils and synthetic base oils and the effects on barite, pilot testing is highly recommended to determine precise formulations. Slurries that become to thick should have up to 1.0 bbl of of wetting agent added to aid in thinning the slurry.

BENEFITS

Fastest mix times in the industry.
Cures complete loss circulation.
Replaces costly cement squeezes.
Will not harden in the drill string.
Can be used in Water, Oil and Synthetic Muds.
Prevents sidetracking of wellbore.
No additional LCM's required.
Works with conventional rig mixing and pumping equipment.
Cleaned up through standard acid treatments.

GENERAL INFORMATION

Our Clean Squeeze™ has been developed as an improved acid soluble solution for severe to complete loss of returns. Clean Squeeze™ incorporates our newest "Quick2Mix™" technology during the manufacturing process. Clean Squeeze™ has been specifically developed to mix on site up to twice as fast as our best selling premium products which already mix faster than our competitions premium squeeze products. The Clean Squeeze™ unique chemistry will produce a hardenable slurry designed to be squeezed into down-hole loss zones. The high fluid loss and high solids content properties of the slurry combined with the large particle size distribution of the bridging and sealing materials in Clean Squeeze™ quickly form a solid plug allowing wellbore returns to be established and to remain throughout extended drilling operations. Clean Squeeze™ may be utilized in Water-based, Oil-based and Synthetic-based fluid systems, pilot testing is recommended to ensure compatibility. A typical 100 pumpable barrel application can be prepared on-site utilizing conventional rig mixing equipment in less than 2 hours. A soft squeeze should be held at 50-250 psi for 4-6 hours. Clean Squeeze™ may cause contamination of the drilling fluid and when necessary can be cleaned up by standard acid treatments. Clean Squeeze™ seals are capable of withstanding swab and surge pressures incurred during normal drilling and pipe tripping operations. No additional products are required. No special mixing equipment is required. Clean Squeeze™ provides a quick, effective and economical response to severe loss circulation events.

TYPICAL PROPERTIES

Composition	:	Wide range of graded particles, bridging and sealing agents
Form	:	Powder
Color	:	Gray to White
Bulk Density (lb/cu. ft)	:	Compacted 20-35
		Uncompacted 10-25
pH	:	5.5 - 8.0
Solubility:	:	Partially soluble in water

PACKAGING

Clean Squeeze™ is packaged in 25 lb. Kraft paper bags, 50 bags per pallet. Special packaging requirements will be quoted upon request.

PRECAUTIONS

See the Safety Data Sheet for more detailed information concerning storage, handling, transportation, disposal and safety requirements.

1.0 BBL FORMULATION TABLE — FRESH AND SEA WATER FLUIDS

Density lb/gal	pounds of Clean Squeeze™	sacks of barite	bbls of Water, Fresh or Sea
9	60	0.0	0.93
10	60	0.6	0.89
11	58	1.2	0.86
12	50	1.8	0.82
13	48	2.3	0.79
14	43	2.9	0.76
15	38	3.5	0.72
16	35	4.0	0.69
17	30	4.6	0.66
18	28	5.2	0.62
19	23	5.8	0.59

1.0 BBL FORMULATION TABLE — OIL AND SYNTHETIC BASE FLUIDS

Density lb/gal	pounds of Clean Squeeze™	sacks of barite	bbls of Water, Fresh or Sea
8	55	0.0	0.880
9	50	0.0	0.855
10	48	1.2	0.830
11	43	1.8	0.805
12	40	2.3	0.770
13	38	2.9	0.745
14	33	3.5	0.720
15	30	4.0	0.695
16	28	4.6	0.670
17	25	5.2	0.645
18	20	5.8	0.610

REV. No.: 01   REVIEWED/REVISED: 11/17