



FDR-1100

Formation Damage Removal

FDR-1100 is an anionic surfactant package that is low in pH and is designed to break existing damage caused by previous stimulation treatments.

FDR-1100 is used as preventative of stimulation damage by spearheading in front of acid jobs and/or fracturing treatments. Thus allowing for leak-off and cleaning up any residue left behind from the stimulation treatment as it is being produced back.

FDR-1100 has the capability of recovering many of the gelled fluids used in fracturing treatments that have tendencies to plug pore-throats and may have been lost in and into the formation face.

FDR-1100 is an excellent carrier of fines and other insolubles left behind from previous stimulation treatments. It is also used for the removal of swollen clays that have had invasion of foreign fluids.

FDR-1100 delivers superior water wetting characteristics in both carbonate and sandstone reservoirs that aid in the recovery of insitu-fluids that have been trapped in matrix of the formation.

FDR-1100 is excellent in the penetration and breaking of existing sludges created by previous acid jobs.

Specific Gravity:	1.12
Appearance/Odor:	Amber/Vinegar
Solubility:	Water
pH:	1.0 to 1.5

FDR-1100 recommended as a pre-soak or as a stimulation treatment to aid in the clean up of contamination by other foreign fluids to the reservoir. Recommended volume of 50 to 100 gallons per foot of net pay. Volumes may change based on the severity of the damage and desired penetration in and into the formation.

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