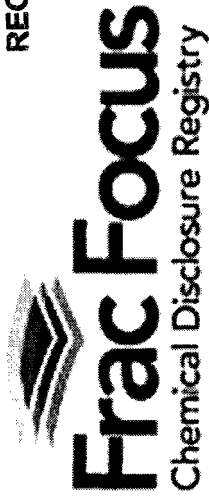


Hydraulic Fracturing Fluid Product Component Information Disclosure

NM OIL CONSERVATION
ARTESIA DISTRICT

MAR 20 2018

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	12/20/2017
	12/27/2017
	New Mexico
	Eddy
	30-015-43687-00-00
	CHISHOLM ENERGY OPERATING, LLC
	Cottonwood 28-33 Fed WCA 3H
	32.02102900
	-104.29259800
	NAD83
	YES
	NO
	8,450
	5,138,554
	0

Hydraulic Fracturing Fluid Composition:

Water	Schlumberger	Corrosion Inhibitor, Non-Emulsifying Agent, B536 Biocide C-Quat 1440, Acid, Friction Reducer, Scale Inhibitor, Chelating Agent, Propping Agent, Fluid	

				Water (Including Mix Water Supplied by Client)*	7732-18-5		81.50835	
Items above are Trade Names with the exception of Base Water. Items below are the individual ingredients.								
				Quartz, Crystalline silica	14808-60-7	99.26126	18.35505	
				Hydrochloric acid	7647-01-0	0.43931	0.08124	
				Distillates, petroleum, hydrotreated light	64742-47-8	0.07688	0.01422	
				Acrylamide/ammonium acrylate copolymer	26100-47-0	0.05858	0.01083	
				Alkyl(C12-16) dimethylbenzyl ammonium chloride	68424-85-1	0.05685	0.01051	
				Ammonium chloride	12125-02-9	0.03661	0.00677	
				Calcium magnesium sodium phosphate frit	65997-18-4	0.02570	0.00475	
				Sorbitan monooleate	1338-43-8	0.00732	0.00135	
				Ethoxylated oleic acid	9004-96-0	0.00732	0.00135	
				Ethanol	64-17-5	0.00711	0.00131	
				Tetrasodium ethylenediaminetetraacetate	64-02-8	0.00367	0.00068	
				Methanol	67-56-1	0.00278	0.00051	
				Sorbitol Tetraoleate	61723-83-9	0.00220	0.00041	
				Sodium sulfocyanate	540-72-7	0.00190	0.00035	
				Alcohols, C10-16, ethoxylated	68002-97-1	0.00178	0.00033	
				2-Propenoic acid, ammonium salt	10604-69-0	0.00179	0.00033	
				Reaction product of: acetophenone, formaldehyde, cyclohexylamine, methanol and acetic acid	224635-63-6	0.00115	0.00021	
				Alcohols, C12-C16, ethoxylated	68551-12-2	0.00110	0.00020	
				Alcohols, C12-C14, ethoxylated	68439-50-9	0.00110	0.00020	

			C14 alpha olefin ethoxylate	84133-50-6	0.00110	0.00020	
			Isopropyl alcohol	67-63-0	0.00084	0.00015	
			Polymer of fatty acid	Proprietary	0.00071	0.00013	
			Cinnamaldehyde	104-55-2	0.00064	0.00012	
			Alcohol, C9-C11, Ethoxylated	68439-46-3	0.00048	0.00009	
			Alcohols, C11-14-iso, C13-rich, ethoxylated	78330-21-9	0.00038	0.00007	
			2-Propenamid (impurity)	79-06-1	0.00033	0.00006	
			Sodium Glycolate (impurity)	2836-32-0	0.00030	0.00006	
			Trisodium Ethylenediaminetetraacetate (impurity)	150-38-9	0.00010	0.00002	
			Amines, tallow alkyl, ethoxylated	61791-26-2	0.00010	0.00002	
			Acetic acid(impurity)	64-19-7	0.00012	0.00002	
			Disodium Ethylene Diamine Tetra Acetate (impurity)	139-33-3	0.00010	0.00002	
			Sodium hydroxide	1310-73-2	0.00012	0.00002	
			Acetophenone	98-86-2	0.00012	0.00002	
			Trisodium nitrilotriacetate (impurity)	5064-31-3	0.00005	0.00001	
			Formaldehyde (impurity)	50-00-0	0.00008	0.00001	

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)