

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	2/6/2021
Job End Date:	2/23/2021
State:	Texas
County:	Winkler
API Number:	42-495-34479-00-00
Operator Name:	Pioneer Natural Resources
Well Name and Number:	UTL LJ Beldin 1211-17 3802VH
Latitude:	31.65687300
Longitude:	-103.21297900
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	11,146
Total Base Water Volume (gal):	21,672,388
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Operator	Carrier					
			Water	7732-18-5	100.00000	88.96092	None
Crystalline Silica Quartz / US Silica	Liberty Oilfield Services	Sand					
			Crystalline Silica (quartz)	14808-60-7	99.90000	10.70981	None
			Aluminum Oxide	1344-28-1	1.00000	0.10721	None
			Iron Oxide	1309-37-1	0.10000	0.01072	None
			Titanium Oxide	13463-67-7	0.10000	0.01072	None
HCL-15	Liberty Oilfield Services	Solvent					
			Water	7732-18-5	85.00000	0.06884	None
			Hydrochloric Acid	7647-01-0	15.00000	0.01215	None
ME 350	ACE Completions	Surfactant					
			Water	7732-18-5	90.00000	0.03836	None
			Ethylene oxide/propylene oxide copolymer	9003-11-6	10.00000	0.00426	None
			Alcohol	68609-68-7	5.00000	0.00213	None
			Proprietary	Proprietary	5.00000	0.00213	None
			Isotridecanol, ethoxylated	9043-30-5	5.00000	0.00213	None

			Proprietary	Proprietary	5.00000	0.00213	None
FRP-1S	Liberty Oilfield Services	Friction reduction					
			Petroleum distillates, hydrotreated light	64742-47-8	45.00000	0.04372	None
			Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched	69011-36-5	3.00000	0.00291	None
Produced Brine Water	Operator	Carrier					
			Produced Brine Water	7732-18-5	100.00000	0.04314	None
SI D100	Ace Completions	Scale Inhibitor					
			Water	7732-18-5	90.00000	0.02399	None
			Diethylenetriamine penta methyl phosphoric acid	15827-60-8	20.00000	0.00533	None
			Ammonium chloride	12125-02-9	5.00000	0.00133	None
BioSuite GQ12-3	Biosuite	Biocide					
			Glutaraldehyde	111-30-8	15.00000	0.00344	None
			Didecyl dimethyl ammonium chloride	7173-51-5	5.00000	0.00115	None
			Alkyl dimethyl benzyl ammonium chloride (C12-16)	68424-85-1	5.00000	0.00115	None
BLR-18	Liberty Oilfield Services	Powder Breaker					
			Ammonium Persulfate	7727-54-0	100.00000	0.00461	None
ACI-97	Liberty Oilfield Services	Corrosion Inhibitor					
			Ethylene glycol	107-21-1	40.00000	0.00007	None
			Dipropylene glycol, monomethyl ether	34590-94-8	20.00000	0.00003	None
			Cinnamaldehyde	104-55-2	10.00000	0.00002	None
			Ethoxylated alcohol	Proprietary	10.00000	0.00002	None
			Tar bases, quinoline derivs., benzyl chloride-quaternized	72480-70-7	10.00000	0.00002	None
			Formic acid	64-18-6	10.00000	0.00002	None
			Isopropyl alcohol	67-63-0	5.00000	0.00001	None
ICI-5L	Liberty Oilfield Services	Iron Sequestering Agent					
			Citric acid	77-92-9	60.00000	0.00011	None
ASF-67	Liberty Oilfield Services	Nonionic Non-Emulsifier					
			Methanol	67-56-1	50.00000	0.00003	None
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
		Other Chemicals					
			Diethylene glycol	111-46-6			
			Isopropyl ether	108-20-3			
			Polyalkylene glycol	52624-57-4			
			Polyglycol	9082-00-2			
			Acrylamide (residual)	79-06-1			
			Acetaldehyde	75-07-0			
			Surfactant blend	Proprietary			
			Tar bases, quinoline derivs.	68513-87-1			

			Sodium acetate	127-09-3			
			Water	7732-18-5			
			n-Propyl alcohol	71-23-8			
			2-Propenoic acid, polymer with 2-propenamide, sodium salt	25987-30-8			

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

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

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)