

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/19/2015
Job End Date:	6/5/2015
State:	Texas
County:	Upton
API Number:	42-461-39977-00-00
Operator Name:	Pioneer Natural Resources
Well Name and Number:	UNIVERSITY 3-19 34H
Longitude:	-101.78910000
Latitude:	31.27020000
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	8,623
Total Base Water Volume (gal):	14,781,354
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	Pioneer Natural Resources	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	93.00656	
SAND (WHOLE GRAIN)	Pioneer Natural Resources Pumping Services LLC	Proppant					
			Crystalline Silica Quartz	14808-60-7	99.50000	6.67255	
Hydrochloric Acid, 33-40%	Pioneer Natural Resources Pumping Services LLC	Stimulation					
			Water	7732-18-5	67.00000	0.05527	
			Hydrogen chloride	7647-01-0	40.00000	0.03299	
StimOil EN	Pioneer Natural Resources Pumping Services LLC	Surfactant					
			Isopropyl alcohol	67-63-0	30.00000	0.02546	
			Citrus terpenes	94266-47-4	5.00000	0.00424	
StimLube W	Pioneer Natural Resources Pumping Services LLC	Friction Reducer					
			Hydrotreated Light Distillate	64742-47-8	30.00000	0.01688	
KSIW-625N	Pioneer Natural Resources Pumping Services LLC	Scale Inhibitor					

			Water	7732-18-5	70.70000	0.01335	
			Methanol	67-56-1	10.00000	0.00189	
			Ethylene glycol	107-21-1	5.00000	0.00094	
POLYfrac PLUS M-4.0	Pioneer Natural Resources Pumping Services LLC	Gelling Agent					
			Petroleum distillate	64742-47-8	55.00000	0.00478	
			Guar Gum	9000-30-0	50.00000	0.00435	
			Clay -	1302-78-9	5.00000	0.00043	
			Surfactant -	154518-36-2	1.00000	0.00009	
KBW-507 Biocide	Pioneer Natural Resources Pumping Services LLC	Biocide					
			Glutaraldehyde	111-30-8	25.00000	0.00684	
PROCAP MC-AP	Pioneer Natural Resources Pumping Services LLC	Gel Breaker					
			Ammonium persulfate	7727-54-0	76.00000	0.00290	
			Cured Resin	Proprietary	24.00000	0.00092	Fritz Industries, 500 Sam Houston Road, Mesquite, TX 75149. Contact: Laurie Meeks, 972-285-5471
X-Corr HT-W	Pioneer Natural Resources Pumping Services LLC	Corrosion Inhibitor					
			2-Butoxy ethanol	111-76-2	60.00000	0.00121	
			Aromatic Aldehyde	Proprietary	30.00000	0.00060	Nalco Champion, 3200 SW Freeway, Suite 2700, Houston, TX 77027. Contact: Michael Powell, 713-627-9011
			Fatty alcohol Ethoxylate	Proprietary	5.00000	0.00010	Nalco Champion, 3200 SW Freeway, Suite 2700, Houston, TX 77027. Contact: Michael Powell, 713-627-9011
VERSENE 100 Chelating Agent Liquid	Pioneer Natural Resources Pumping Services LLC	Scale Inhibitor					
			Water	7732-18-5	56.00000	0.00102	
			tetrasodium ethylenediamine tetraacetate	64-02-8	39.00000	0.00071	
			Sodium hydroxyacetate	2836-32-0	3.00000	0.00005	
			Sodium hydroxide	1310-73-2	1.60000	0.00003	
			Nitrilotriacetate, trisodium salt (NTA)	5064-31-3	1.00000	0.00002	
Sodium Erythorbate	Pioneer Natural Resources Pumping Services LLC	Iron Control					
			Sodium erythorbate	6381-77-7	100.00000	0.00062	
Product 6191X	Pioneer Natural Resources Pumping Services LLC	Surfactant					
			Isodecylalcohol, ethoxylated	61827-42-7	24.00000	0.00013	

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				
			Water - TS	7732-18-5		0.05941
			Acrylamide Polymer - TS	Proprietary		0.05625
						CESI Chemical, 1004 S. Plainsman Road, Marlow OK, 73055. Contact: Jason White, 580-658-6608
			Polyamine Polyethers - TS	Proprietary		0.02546
						CESI Chemical, 1004 S. Plainsman Road, Marlow, OK 73055. Contact: Jason White, 580-658-6608
			Water - TS	7732-18-5		0.02052
			Organic polyol - TS	Proprietary		0.01103
						CESI Chemical, 1004 S. Plainsman Road, Marlow OK, 73055. Contact: Jason White, 580-658-6608
			Nonionic Alkoxylate - TS	Proprietary		0.00849
						CESI Chemical, 1004 S. Plainsman Road, Marlow, OK 73055. Contact: Jason White, 580-658-6608
			Surfactants - TS	Proprietary		0.00424
						CESI Chemical, 1004 S. Plainsman Road, Marlow OK, 73055. Contact: Jason White, 580-658-6608
			Amines, Phosphonomethylated - TS	Proprietary		0.00208
						Kel-Tech, Inc, PO Box 11383, Midland TX 79702. Contact: Dennis Wallace, 432-684-4700
			Fatty amino compound salt - TS	Proprietary		0.00101
						Nalco Champion, 3200 SW Freeway, Suite 2700, Houston, TX 77027. Contact: Michael Powell, 713-627-9011
			Ammonium chloride - TS	12125-02-9		0.00062
			Ethoxylated alcohols - TS	Proprietary		0.00060
						Nalco Champion, 3200 SW Freeway, Suite 2700, Houston, TX 77027. Contact: Michael Powell, 713-627-9011
			Water - TS	7732-18-5		0.00036
			Water - TS	7732-18-5		0.00010
			2-hydroxy-N,N-bis(2-hydroxyethyl)-N-methylethanaminium chloride - TS	7006-59-9		0.00004
			Acetophenone - TS	98-86-2		0.00002
			Methanol - TS	67-56-1		0.00002
			Quaternary Ammonium compounds, dicoco alkylmethyl, chlorides - TS	61789-77-3		0.00001
			Formaldehyde - TS	50-00-0		0.00000
			2-Propanol - TS	67-63-0		0.00000
			Triethanolamine - TS	102-71-6		0.00000
			Triethanolamine hydrochloride - TS	637-39-8		0.00000
			Amines, dicoco alkylmethyl, Hydrochloride - TS	Proprietary		0.00000
						Corsitech, 3200 Southwest Freeway, ste. 2700, Houston TX 77027. Contact: Curtis Sitz, 713-423-7899

		Amines, dicoco alkylmethyl - TS	61788-62-3		0.00000	
		Methyl chloride - TS	74-87-3		0.00000	

* 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)