

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/6/2014
Job End Date:	5/7/2014
State:	Oklahoma
County:	Hughes
API Number:	35-063-24425-00-00
Operator Name:	Silver Creek Oil & Gas, LLC
Well Name and Number:	Irving 8-4H
Longitude:	-96.37611711
Latitude:	35.01357542
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	2,804
Total Base Water Volume (gal):	2,845,710
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	Company 1	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	92.26181	None
Sand (Proppant)	Badger , Superior Silica	Proppant					
			Silica Substrate	14808-60-7	100.00000	7.35415	None
Hydrochloric Acid	Reagent	Acid					
			Water	7732-18-5	85.00000	0.15326	None
			Hydrogen Chloride	7647-01-0	15.00000	0.02705	None
Catsurf 109 KCL	Catalyst	KCL Clay Control					
			Water	7732-18-5	100.00000	0.09961	None
			Alkyl Dimethyl Ammonium Chloride , Methanol	67-56-1	19.00000	0.01893	None
Plexslick 957 FR	Chemplex	Friction Reducer					
			Water	7732-18-5	40.00000	0.01527	None
			Poly (acrylamide-co-acrylic acid). Partial sodium salt	62649-23-4	35.00000	0.01336	None
			Paraffinic ,Napthenic Solvant	64742-47-8	30.00000	0.01145	None
			Nonionic Surfactants	Proprietary	10.00000	0.00382	None
			Ammonium Chloride	12125-02-9	5.00000	0.00191	None
			Sodium Choride	7647-14-5	5.00000	0.00191	None
Payzone 814 BCD	Catalyst	Biocide					

			Water	7732-18-5	100.00000	0.02684	None
			Glutaraldehyde	111-30-8	14.00000	0.00376	None
			N-alkyldimethyl Benzyl Ammonium Chloride	68424-85-1	3.00000	0.00081	None
Payzone 268 NE	Catalyst	Non Emulsifier for Acids and Water					
			Water	7732-18-5	100.00000	0.00889	None
			Isopropanol	67-63-0	30.00000	0.00267	None
			Polyester Castor	Proprietary	20.00000	0.00178	None
			NP-9	Proprietary	10.00000	0.00089	None
Clayplex 306	Chemplex	Clay Stabilizer					
			Methyl Alcohol	67-56-1	14.00000	0.00413	None
Plexhib 256	Chemplex	Acid Inhibitor					
			Methyl Alcohol	67-56-1	60.00000	0.00043	None
			AlcoholEthoxylate Sufactants	Proprietary	20.00000	0.00014	None
			Thiourea-Formaldehyde Copolymer	68527-49-1	10.00000	0.00007	None
			N-Olefins	Proprietary	5.00000	0.00004	None
			Propargyl	107-19-7	5.00000	0.00004	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.

* 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)