

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/9/2013
Job End Date:	4/10/2013
State:	Texas
County:	Midland
API Number:	42-329-38342-00-00
Operator Name:	Fasken Oil and Ranch, Ltd.
Well Name and Number:	Fee BE 722
Longitude:	-102.26963620
Latitude:	32.03166660
Datum:	NAD27
Federal/Tribal Well:	NO
Total Base Water Volume (gal):	1,867,782
Total Base Non Water Volume:	68,796



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	Base Carrier Fluid					
			Water	7732-18-5	100.00000	92.70648	
PropStar Resin Coated Sand	Unimin Corporation	Proppant					
			Crystalline Silica in form of quartz	14808-60-7	98.00000	2.70073	
			Phenol-Formaldehyde Resin	9003-35-4	4.00000	0.11023	
Sand	Operator	Proppant					
			Silicon Dioxide	14808-60-7	100.00000	1.78446	
Sinterlite (Proppant)	Sintex Minerals Services	Proppant					
			Bauxite	1318-16-7	100.00000	1.38893	
7.5% Hydrochloric Acid	Reagent	Scale Dissolver					
			Water	7732-18-5	92.50000	0.92420	
			36% Hydrochloric Acid	7647-01-0	7.50000	0.07493	
SG-15M	ASK	Polymer					
			Guar Powder	9000-30-0	60.00000	0.07758	
			White Mineral Oil	8042-47-5	40.00000	0.05172	
			Proprietary	Proprietary	5.00000	0.00646	
			Bentonite	14808-60-7	5.00000	0.00646	
XL-335	ASK	Crosslinker					

			Proprietary	Proprietary	25.00000	0.01943	
			Potassium Hydroxide	1310-58-3	25.00000	0.01943	
			Ethylene Glycol	107-21-1	25.00000	0.01943	
			Proprietary	Proprietary	15.00000	0.01165	
			Proprietary	Proprietary	10.00000	0.00777	
GB-150	Chemplex, L.C.	Breaker					
			Non-hazardous ingredients	NA	100.00000	0.04264	
NE-227	CESI	Non-emulsifier					
			Ethoxylated Nonylphenol	9016-45-9	20.00000	0.00805	
			Isopropanol	67-63-0	15.00000	0.00603	
			Methanol	67-56-1	15.00000	0.00603	
Cortron R-2340	Champion	Scale Inhibitor					
			Methanol	67-56-1	60.00000	0.01507	
			Amines	Proprietary	10.00000	0.00251	
			Acetic Acid	64-19-7	5.00000	0.00126	
Gypton T-249	Champion	Scale Inhibitor					
			Amine Phosphonate 1	Proprietary	60.00000	0.01256	
			Hydrochloric Acid	7647-01-0	10.00000	0.00209	
			Phosphoric Acid	7664-38-2	1.00000	0.00021	
B-15	Water Science Tech	Biocide					
			Water	7732-18-5	80.00000	0.00818	
			Tetrakis (hydroxymethyl) phosphonium sulfate	55566-30-8	20.00000	0.00205	
CorrSorb 3500	Baker Hughes	Corrosion Inhibitor					
			Diatomaceous earth, calcined	091053-39-3	100.00000	0.00595	
			Quaternary ammonium compound	Proprietary	30.00000	0.00179	
			Acid phosphate ester	Proprietary	10.00000	0.00060	
			Ethanol	64-17-5	5.00000	0.00030	
			Crystalline silica: Quartz(SiO2)	14808-60-7	1.00000	0.00006	
EGB-16HT	CESI Chemical	Breaker					
			Ammonium Persulfate	7727-54-0	100.00000	0.00571	
			Silica, Crystalline-Quartz	14808-60-7	15.00000	0.00086	
FE-4	Chemplex, L.C.	Iron Control Additive					
			Water	7732-18-5	55.00000	0.00320	
			Citric Acid Anhydrous	77-92-9	55.00000	0.00320	
I-122	Chemplex,L.C.	Corrosion Inhibitor					
			Methanol	67-56-1	40.00000	0.00037	
			thiourea-formaldehyde copolymer	68527-49-1	30.00000	0.00028	
			Alcohol Ethoxylate Surfactants	Proprietary	30.00000	0.00028	
			n-olefins	Proprietary	10.00000	0.00010	
			Propargyl alcohol	107-19-7	8.00000	0.00008	
AGA-380	Chemplex, L.C.	Acid Gellant					
			Sodium Bisulfite(Trade Secret)	7631-90-5	64.00000	0.00036	

		Petroleum Distillate	64742-47-8	35.00000	0.00020	
		Acetic Acid	64-19-7	1.00000	0.00001	
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)