

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/3/2016
Job End Date:	5/3/2016
State:	Texas
County:	Andrews
API Number:	42-003-47268-00-00
Operator Name:	XTO Energy/ExxonMobil
Well Name and Number:	FCU 7442
Longitude:	-102.76659400
Latitude:	32.41493800
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	7,500
Total Base Water Volume (gal):	252,082
Total Base Non Water Volume:	21,170



## 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	83.13948	
Sand	Multiple Suppliers	Proppants					
			Silicon Dioxide	14808-60-7	100.00000	9.50046	
SLC,SDC,TLC,THS,PowerProp,OptiProp,Spe arProp,CoolSet	Santrol Proppants	Proppants					
			Crystalline Silica(Quartz)	14808-60-7	98.00000	6.16666	
			Phenol-formaldehyde Novolak Resin	9003-35-4	5.00000	0.31463	
SG-15G	ACE Completions	Gelling Agents					
			Petroleum Distillate	64742-47-8	60.00000	0.27710	
			Guar Gum	9000-30-0	50.00000	0.23092	
			Surfactant	68439-51-0	10.00000	0.04618	CAS # Proprietary
			Bentonite Clay	14808-60-7	10.00000	0.04618	Ace Completions 1301 W. 1st St. Odessa, Tx 79763 Jeff Louis 713-703-2172
15% Hydrochloric Acid	Reagent	Scale Dissolver					
			Water	7732-18-5	85.00000	0.09040	
			36% Hydrochloric Acid	7647-01-0	15.00000	0.01595	
Gypton T-249	Nalco Champion	Scale Inhibitors					

			Amine Phosphonate 1	Proprietary	60.00000	0.08633	7705 Hwy 90-A Sugar Land, Tx 77478 Daljinder Woloch 713-332-1693
			Hydrochloric Acid	7647-01-0	10.00000	0.01439	
			Phosphoric Acid	7664-38-2	1.00000	0.00144	
BF-200	Ace Completions	Buffers / Ph Control					
			Water	7732-18-5	80.00000	0.06795	
			Potassium Hydroxide	1310-58-3	35.00000	0.02973	Ace Completions 1301 W. 1st St. Odessa, Tx 79763 Jeff Louis 713-703-2172
CX-14G	Magnablend	Crosslinkers					
			Ulexite	1319-33-1	50.00000	0.02874	
			Petroleum Distillates, hydrotreated light	64742-47-8	40.00000	0.02299	
GB-150	Chemplex	Gel Breakers/Delayed Breakers					
			Water	7732-18-5	90.00000	0.03918	
			Sodium Chloride	7647-14-5	15.00000	0.00653	
			Ethylene Glycol	107-21-1	5.00000	0.00218	
			Mannanase Enzymes	37288-54-3	1.00000	0.00044	
CX-10	PfP	Crosslinkers					
			Glycerol	56-81-5	50.00000	0.01736	
			Sodium Tetraborate Decahydrate	1310-58-3	30.00000	0.01042	PfP Mo Hossain 14227 Fern Houston, Tx 77079 281-589-0047
			Water	7732-18-5	20.00000	0.00695	
NE-227	ACE Completions	Non and De-Emulsifiers					
			Proprietary	Proprietary	25.00000	0.02253	Proprietary Data
PAS-C	Rockwater Energy Solutions	Solvents					
			Isopropanol	67-30-0	100.00000	0.00270	% Confidential used 100
			Dodecylbenzene Sulfonic Acid	27176-87-0	100.00000	0.00270	% Confidential used 100
			Ethylene Glycol monbutyl Ether	111-76-2	100.00000	0.00270	Tom Roland 7904 W. Hwy 80 Midland, Tx 79706 432-560-5600 (FE Green)
			Alkyl Aryl Sulfonate	26264-05-1	100.00000	0.00270	% Confidential used 100
			Glacial Acetic Acid	64-19-7	100.00000	0.00270	% Confidential used 100
Bactron K-139	Nalco Champion	Biocides					
			Benzyl-C12-16-alkyldimethyl-Ammonium chloride	68424-85-1	30.00000	0.00627	
			Glutaraldehyde	111-30-8	10.00000	0.00209	
			Ethanol	64-17-5	5.00000	0.00104	
NE-217	PfP	Non and De-Emulsifiers					
			Water	7732-18-5	91.00000	0.00484	
			Mixture of surfactants and copolymers	Proprietary	40.00000	0.00213	PfP Mo Hossain 14227 Fern Houston, Tx 77079 281-589-0047

			Propylene Glycol	57-55-6	10.00000	0.00053	
FE-360	Chemplex	Iron Controller / Reducers					
			2-Mercaptoethanol	60-24-2	100.00000	0.00544	
			Water	7732-18-5	7.00000	0.00038	Dr. Ed Vinson 506 CR 1071 Snyder, Texas 79549 325- 572-7298
			Aqua Ammonia	1336-21-6	5.00000	0.00027	
			Cupric Chloride Dihydrate	10125-13-0	5.00000	0.00027	
			Potassium Iodide	7681-11-0	1.00000	0.00005	
GB-2	Fritz Industries	Gel Breakers/Delayed Breakers					
			Ammonium Persulfate	7727-54-0	100.00000	0.00479	
EMS-44 Plus	Flotek Chemistry	Surfactants					
			Citrus Terpenes	68647-72-3	30.00000	0.00141	
			Denatured Ethyl Alcohol	64-17-5	30.00000	0.00141	Jason White Chemical 1004 S. Plainsman Road Marlow, OK 73055 580-658- 6608
			Isopropyl Alcohol	67-63-0	30.00000	0.00141	
			Methyl Alcohol	67-56-1	5.00000	0.00023	
			Methylisobutyl Ketone	108-10-1	0.50000	0.00002	
I-122	Chemplex	Acid Corrosion Inhibitors					
			Methanol	67-56-1	80.00000	0.00068	Dr. Ed Vinson 506 CR 1071 Snyder, Texas 79549 325- 572-7298
			Alcohol, C14-15, Ethoxylated	68951-67-7	25.00000	0.00021	
			Propargyl alcohol	107-19-7	10.00000	0.00009	
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)