

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/16/2017
Job End Date:	7/30/2017
State:	Texas
County:	Reagan
API Number:	42-383-39859-00-00
Operator Name:	PT Petroleum, LLC.
Well Name and Number:	University Orange No.1042A
Latitude:	31.15749200
Longitude:	-101.73472500
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,712
Total Base Water Volume (gal):	16,323,720
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/Base Fluid	Water	7732-18-5	100.00000	87.08168	None
Sand	Sanrol	Proppant	Silica	14808-60-7	100.00000	11.85032	None
HA04-10-15% HCL	Reagent Chemical	Acidizing	Water	7732-18-5	85.00000	0.56052	None
			Hydrogen Chloride	7647-01-0	15.00000	0.09891	None
K205-KCL Substitute	Solnexus	KCL Substitute	Water	7732-18-5	80.00000	0.13504	None
			Calcium Chloride	10043-52-4	20.00000	0.03376	None
			Trade Secret	Proprietary	1.50000	0.00253	None
			Isopropyl Alcohol	67-63-0	0.10000	0.00017	None
NE601-NE/Surfactant	Solnexus	Surfactant	Methanol	67-56-1	70.00000	0.06196	None
			Diethanolamide	111-42-2	70.00000	0.06196	None
			Polyoxyalkylene glycol butyl ether	9004-77-7	50.00000	0.04426	None
SI300-Scale Inhibitor	Solnexus	Scale Inhibitor					

			Phosphoric Acid Salt	35657-77-3	35.00000	0.01599	None
			Glacial Acetic Acid	64-19-7	12.00000	0.00548	None
FR300-Anionic Friction Reducer	Solnexus	Anionic Friction Reducer					
			Petroleum Hydrotreated Light Distillate	64742-47-8	25.00000	0.01724	None
BR1-AP Breaker	Rockwater	AP Breaker					
			Ammonium Persulfate	7727-54-0	99.00000	0.00947	None
IC5-Iron Control	Solnexus	Iron Control					
			Acetic Acid	64-19-7	60.00000	0.00190	None
			Water	7732-18-5	60.00000	0.00190	None
			Citric Acid	77-92-9	30.00000	0.00095	None
BC300-Liquid Biocide	Solnexus	Liquid Biocide					
			Tributyltetradecyl Phosphonium Chloride	81741-28-8	2.80000	0.00061	None
			Poly[oxyethylene (dimethyliminio)ethylene (dimethyliminio) ethylenedichloride]	31512-74-0	2.20000	0.00049	None
NE116-Plexbreak 116	Chemplex	N/E Surfactant					
			Methanol	67-56-1	50.00000	0.00049	None
			Alkyl Quarternary Ammonium Chlorides	7173-51-5	25.00000	0.00024	None
			Isopropanol	67-63-0	5.00000	0.00005	None
			Diethanolamide	111-42-2	2.00000	0.00002	None
CI200-Corrosion Inhibitor	Economy Polymers	Corrosion Inhibitor					
			Methanol	67-56-1	60.00000	0.00056	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)