

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	12/21/2014
Job End Date:	1/7/2015
State:	Texas
County:	Reagan
API Number:	42-383-39225-00-00
Operator Name:	Devon Energy Production Company L.P.
Well Name and Number:	University 43-15 11H
Longitude:	-101.29282000
Latitude:	31.10765000
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,901
Total Base Water Volume (gal):	7,992,054
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	BTT	Carrier/Base Fluid	Water	7732-18-5	100.00000	88.03019	None
Sand (Proppant)	TSS	Proppant	Silica Substrate	14808-60-7	100.00000	10.47962	None
Hydrochloric Acid (7.5%)	Trinity	Acidizing	Hydrochloric Acid	7647-01-0	10.00000	0.10984	None
Plexslick 957	Chemplex	Friction Reducer	Poly (acrylamide-co-acrylic acid), partial sodium salt	62649-23-4	35.00000	0.03268	None
			Paraffinic, Naphtehenic Solvent	64742-47-8	30.00000	0.02801	None
			Ammonium Chloride	12125-02-9	5.00000	0.00467	None
			Nonionic Surfactants	Proprietary	1.50000	0.00140	None
Plexsurf 240E	Chemplex	Non Ionic Surfactant	Methyl Alcohol	67-56-1	20.00000	0.01664	None
			Alcohol Alkoxyolate	Proprietary	20.00000	0.01664	None
Plexcide 24B	Chemplex	Biocide	Tetrahydro-3, 5-Dimethyl-2H-1,3,5-thiadiazine-2-thione.	533-73-2	24.00000	0.01186	None
			Sodium Hydroxide	1310-73-2	12.00000	0.00593	None

Greenhib 679	Chemplex	Scale Inhibitor					
			Trade Secret	Proprietary	35.00000	0.00918	None
			Glycerine	56-81-5	20.00000	0.00525	None
Plexgel Breaker XPA	Chemplex	Breaker					
			Hydrogen Peroxide	7722-84-1	8.00000	0.00713	None
Hydrochloric Acid (15%)	Trinity	Acidizing					
			Hydrochloric Acid	7647-01-0	15.00000	0.00625	None
AI-265	Reef	Acid Inhibitor					
			Isooctyl Alcohol Bottoms	68526-88-5	25.00000	0.00103	None
			Xylene	1330-20-7	25.00000	0.00103	None
			Propargyl Alcohol	107-19-7	20.00000	0.00082	None
			Isopropanol	67-63-0	15.00000	0.00062	None
			Methanol	67-56-1	15.00000	0.00062	None
			Formaldehyde	50-00-0	0.10000	0.00000	None
AC-307	Reef	Iron Control					
			Other Non-Hazardous Ingredients	Proprietary	30.00000	0.00101	None
			Isopropanol	67-63-0	1.50000	0.00005	None
			Glacial Acetic Acid	64-19-7	1.00000	0.00003	None
ANG-2077	Reef	Non-Emulsifier					
			Other Non-Hazardous Ingredients	Proprietary	15.00000	0.00021	None
			Peptide Derivative	Proprietary	1.50000	0.00002	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)