

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/17/2014
Job End Date:	12/11/2014
State:	Texas
County:	Reagan
API Number:	42-383-38968-00-00
Operator Name:	Callon Petroleum Operating Company
Well Name and Number:	University 27-34 #2LH
Longitude:	-101.71099300
Latitude:	31.27318800
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	7,500
Total Base Water Volume (gal):	12,553,086
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	89.03617	None
RAW - White/Brown Sand	Santrol	Proppant					
			Silica	14808-60-7	100.00000	9.33050	None
HA04-10-15% HCL	Reagent Chemical	Acidizing					
			Water	7732-18-5	85.00000	1.03154	None
			Hydrogen Chloride	7647-01-0	15.00000	0.18204	None
FR02-Cationic Friction Reducer	Economy Polymers	Cationic Friction Reducer					
			Trade Secret	Proprietary	100.00000	0.09086	None
			Petroleum Distillates	Proprietary	25.00000	0.02272	None
NE602-N/E Surfactant	Environmental Energy Service	N/E Surfactant					
			Trade Secret	Proprietary	100.00000	0.09505	None
CS01-Clay Stabilizer	Colossal Chemical	Clay Stabilizer					
			Methanol	67-56-1	100.00000	0.08647	None
K205-KCL Substitute	Colossal Chemical	KCL Substitute					
			Ammonium Acetate	631-61-8	40.00000	0.03549	None
			Benzenemethanaminium	56-93-9	13.00000	0.01154	None
			Methanol	67-56-1	10.00000	0.00887	None

			Sulfuric Acid	7664-93-9	1.50000	0.00133	None
SI300-Scale Inhibitor	Colossal Chemical	Scale Inhibitor					
			Methanol	67-56-1	30.00000	0.00732	None
			Sodium Chloride	7647-14-5	7.00000	0.00171	None
ParaSorb 5000	Baker Hughes	Paraffin Inhibitor					
			Diatomaceous earth, calcined	91053-39-3	60.00000	0.00515	None
			Mineral Oil	8042-47-5	30.00000	0.00257	None
			Crystalline silica: Quartz	14808-60-7	1.00000	0.00009	None
ACI266-Payzone 266	Catalyst	Corrosion Inhibitor					
			Methanol	67-56-1	20.00000	0.00128	None
			2-Hydroxy-1,2,3 Propanetricarboxylic Acid	77-92-9	20.00000	0.00128	None
			Polyoxyalkylenes	Proprietary	20.00000	0.00128	None
			Propargyl Alcohol	107-19-7	20.00000	0.00128	None
			DDBSA	68584-22-5	20.00000	0.00128	None
			Acetic Acid	64-19-7	20.00000	0.00128	None
SPD400-Scale Inh. (Solid)	Economy Polymers	Scale Inhibitor (Solid)					
			Bisexamethylenetriamine penta methylene phosphonic acid salt	35657-77-3	60.00000	0.00399	None
BR1-AP Breaker	Economy Polymers	AP Breaker					
			Ammonium Persulfate	7727-54-0	98.00000	0.00266	None
BioSorb 1250	Baker Hughes	Biocide					
			Diatomaceous earth, calcined	91053-39-3	60.00000	0.00149	None
			Glutaraldehyde	111-30-8	30.00000	0.00074	None
			Crystalline silica: Quartz	14808-60-7	1.00000	0.00002	None
BC1058-Liquid Biocide	Buckman Lab.	Liquid Biocide					
			Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione	533-74-4	24.00000	0.00148	None
			Sodium Hydroxide	1310-73-2	11.00000	0.00068	None
CorrSorb 6000	Baker Hughes	Corrosion Inhibitor					
			Diatomaceous earth, calcined	91053-39-3	80.00000	0.00099	None
			Quaternary ammonium chloride	Proprietary	15.00000	0.00019	None
			Acid phosphate ester	Proprietary	5.00000	0.00006	None
			Crystalline silica: Quartz	14808-60-7	1.00000	0.00001	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)

