

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/7/2012
Job End Date:	6/7/2012
State:	Oklahoma
County:	Logan
API Number:	35-083-23990-00-00
Operator Name:	Sooner Oil and Gas Mgt Inc
Well Name and Number:	Cassiday C F 1-3H
Longitude:	-97.50940000
Latitude:	35.98287000
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	5,986
Total Base Water Volume (gal):	557,424
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					
			Water	7732-18-5	100.00000	82.48489	
HCl, 10.1 - 15%	Baker Hughes	Acidizing					
			Water	7732-18-5	85.00000	14.58371	SmartCare Product
			Hydrochloric Acid	7647-01-0	15.00000	2.57360	SmartCare Product
AG-12, 330 gl tote	Baker Hughes	Gelling Agent					
			Acrylic Polymers	26006-22-4	60.00000	0.04911	
			Distillates, Petroleum, Hydrotreated middle	64742-47-8	30.00000	0.02455	
CI-27	Baker Hughes	Corrosion Inhibitor					
			Methanol	67-56-1	60.00000	0.01582	SmartCare Product
			Polyoxyalkylenes	Trade Secret	30.00000	0.00791	SmartCare Product
			Fatty Acids	Trade Secret	30.00000	0.00791	SmartCare Product
			Propargyl Alcohol	107-19-7	10.00000	0.00264	SmartCare Product
			Olefin	Trade Secret	5.00000	0.00132	SmartCare Product
Ferrotrol 300L	Baker Hughes	Iron Control					
			Citric Acid	77-92-9	60.00000	0.03357	SmartCare Product
FRW-20	Baker Hughes	Friction Reducer					
			Petroleum Distillates	64742-47-8	30.00000	0.01638	SmartCare Product
NE-900, tote	Baker Hughes	Non-emulsifier					

			Methanol	67-56-1	30.00000	0.01072	SmartCare Product
			Nonyl phenyl polyethylene glycol ether	9016-45-9	10.00000	0.00357	SmartCare Product
GBW-5	Baker Hughes	Breaker					
			Ammonium Persulfate	7727-54-0	100.00000	0.01171	SmartCare Product
Alpha 125	Baker Hughes	Biocide					
			Glutaraldehyde	111-30-8	30.00000	0.00497	SmartCare Product
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.							
		Other Chemicals					
			Water	7732-18-5		0.11203	
			Vinyl Copolymer	Trade Secret		0.01528	
			Copolymer	Trade Secret		0.01429	
			Aliphatic Hydrocarbon	Trade Secret		0.01272	
			Modified Thiourea Polymer	68527-49-1		0.00290	
			Sodium Chloride	7647-14-5		0.00232	
			Oxyalkylated alkylphenol	9016-45-9		0.00164	
			Fatty Acid Esters	67701-32-0		0.00164	
			Oxyalkylated Alcohol	Trade Secret		0.00109	
			Fatty Acid Oxyalkylate	70142-34-6		0.00082	
			Diester of Sulfosuccinic Acid Sodium Salt	2673-22-5		0.00082	
			Xylene	1330-20-7		0.00082	
			Polyol Ester	Trade Secret		0.00060	
			Polyglycol Ester	Trade Secret		0.00049	
			Formaldehyde	50-00-0		0.00013	
			Methanol	67-56-1		0.00004	

\* 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)