

# Hydraulic Fracturing Fluid Product Component Information Disclosure: Maximum Ingredient Weight in Pounds Format



# BAKER HUGHES

	07/19/2012
Last Fracture Date	
State:	California
County:	Kern
API Number:	04-030-47003
Operator Name:	Aera Energy Llc
Well Name and Number:	743GU-29
Longitude:	-119.7349039
Latitude:	35.4662634
Long/Lat Projection:	NAD83
Production Type:	Oil
True Vertical Depth (TVD):	1,483
Total Chemical Mass (lbs)*:	243,745
Total Max. Ingredient Mass (lbs)*:	243,999
Total Product Volume (gal)*:	25,310
Total Water Volume (gal)*:	22,764

## Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Weight in HF Fluid (lbs mass)	Comments
Water	Operator	Carrier	Water	7732-18-5	100.00%	189,802	
GBW-5	Baker Hughes	Breaker	Ammonium Persulfate	7727-54-0	100.00%	15.000000	SmartCare Product
Enzyme G-I	Baker Hughes	Breaker	Hemicellulase Enzyme Concentrate	9025-56-3	3.00%	6.253350	SmartCare Product
			Water	7732-18-5	97.00%	202.191650	
Clay Master-5C (Tote)	Baker Hughes	Clay Control	Oxyakylated Amine Quat	138879-94-4	60.00%	141.658560	
XLW-10A	Baker Hughes	Crosslinker	Ethylene Glycol	107-21-1	30.00%	72.450000	SmartCare Product
			Sodium Hydroxide	1310-73-2	10.00%	24.150000	

			Sodium Tetraborate	1330-43-4	30.00%	72.450000	
GW-3LDF	Baker Hughes	Gelling Agent	1-Butoxy-2-Propanol	5131-66-8	5.00%	53.113500	SmartCare Product
			Cyristalline Silica, Quartz (SiO <sub>2</sub> )	14808-60-7	5.00%	53.113500	
			Guar Gum	9000-30-0	60.00%	637.362000	
			Isotridecanol, ethoxylated	9043-30-5	5.00%	53.113500	
			Paraffinic Petroleum Distillate	64742-55-8	30.00%	318.681000	
			Petroleum Distillates	64742-47-8	30.00%	318.681000	
Sand, White, 20/40	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100.00%	52,180.000000	
<b>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.</b>							
			2-Butoxy-1-Propanol	15821-83-7		0.849816	
			Water	7732-18-5		48.300000	

\* Total Chemical Mass is the total amount of Trade Name volume, supplied to the customer, converted to pounds.  
 \* Total Max. Ingredient Mass is the summation of all masses listed in the Maximum Ingredient Weight (pounds) column.  
 \* Total Product Volume is the total amount of Water plus Trade Name volume in gallons supplied to the customer or Baker Hughes.  
 \* Total Water Volume is the total amount of water volume in gallons used on the hydraulic fracture treatment.  
 \*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

Ingredient information for chemicals subject to 29 CFR 1910.1200(j) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)