

## Hydraulic Fracturing Fluid Product Component Information Disclosure

<b>Last Fracture Date</b>	<b>05/02/2012</b>
<b>State:</b>	<b>California</b>
<b>County:</b>	<b>Kern</b>
<b>API Number:</b>	<b>04-030-46894</b>
<b>Operator Name:</b>	<b>Aera Energy Llc</b>
<b>Well Name and Number:</b>	<b>530P3-35</b>
<b>Longitude:</b>	<b>-119.6903196</b>
<b>Latitude:</b>	<b>35.4326587</b>
<b>Long/Lat Projection:</b>	<b>NAD83</b>
<b>Production Type:</b>	<b>Oil</b>
<b>True Vertical Depth (TVD):</b>	<b>1,593</b>
<b>Total Water Volume (gal)*:</b>	<b>65,898</b>

### 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	100.00%	78.06475%	
X-Cide 207	Baker Hughes	Biocide	2-Methyl-4-Isothiazolin-3-One	2682-20-4	5.00%	0.00030%	
			5-Chloro-2-Methyl-4-Isothiazolin-3-One	26172-55-4	10.00%	0.00060%	
			Crystalline Silica: Cristobalite	14464-46-1	1.00%	0.00006%	
			Crystalline Silica: Quartz (SiO2)	14808-60-7	1.00%	0.00006%	
			Diatomaceous Earth, Calcined	91053-39-3	60.00%	0.00358%	
			Magnesium Chloride	7786-30-3	5.00%	0.00030%	
			Magnesium Nitrate	10377-60-3	10.00%	0.00060%	
GBW-5	Baker Hughes	Breaker	Ammonium Persulfate	7727-54-0	100.00%	0.00568%	SmartCare Product
Enzyme G-I	Baker Hughes	Breaker	Hemicellulase Enzyme Concentrate	9025-56-3	3.00%	0.00114%	SmartCare Product
			Water	7732-18-5	97.00%	0.03677%	
Clay Master-5C (Tote)	Baker Hughes	Clay Control	Oxyakylated Amine Quat	138879-94-4	60.00%	0.04948%	
XLW-10A	Baker Hughes	Crosslinker	Ethylene Glycol	107-21-1	30.00%	0.02596%	SmartCare Product
			Sodium Hydroxide	1310-73-2	10.00%	0.00865%	
			Sodium Tetraborate	1330-43-4	30.00%	0.02596%	
GW-3LDF	Baker Hughes	Gelling Agent	Acyclic Hydrocarbon Blend	Trade Secret	60.00%	0.15501%	SmartCare Product
			Alcohols, C12-14, Ethoxylated Propoxylated	68439-51-0	5.00%	0.01292%	

			Crystalline Silica, Quartz	14808-60-7	5.00%	0.01292%	
			Guar Gum	9000-30-0	60.00%	0.15501%	
Sand, White, 20/40	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100.00%	21.34317%	
ScaleSorb 3, (25# pail)	Baker Hughes	Scale Inhibitor	Amino Alkyl Phosphonic Acid	Trade Secret	30.00%	0.00639%	SmartCare Product
			Crystalline Silica: Quartz (SiO <sub>2</sub> )	14808-60-7	1.00%	0.00021%	
			Diatomaceous Earth, Calcined	91053-39-3	100.00%	0.02131%	
			Phosphonic Acid	13598-36-2	1.00%	0.00021%	
<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>							
			Isotridecanol, Ethoxylated (TDA-6)	9043-30-5		0.0129171526%	
			Isotridecanol, Ethoxylated (TDA-9)	9043-30-5		0.0129171526%	
			Quaternary Ammonium Compounds bis[Hydrogenated Tallow Alkyl] Dimethyl Salts With Bentonite	68953-58-2		0.0129171526%	
			Water	7732-18-5		0.0302224287%	
* 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%  Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)							