

## Hydraulic Fracturing Fluid Product Component Information Disclosure

<b>Last Fracture Date</b>	<b>10/18/2012</b>
<b>State:</b>	<b>California</b>
<b>County:</b>	<b>Kern</b>
<b>API Number:</b>	<b>04-030-48373</b>
<b>Operator Name:</b>	<b>Aera Energy Llc</b>
<b>Well Name and Number:</b>	<b>983N-33</b>
<b>Longitude:</b>	<b>-119.7086384</b>
<b>Latitude:</b>	<b>35.45072</b>
<b>Long/Lat Projection:</b>	<b>NAD83</b>
<b>Production Type:</b>	<b>Oil</b>
<b>True Vertical Depth (TVD):</b>	<b>1,731</b>
<b>Total Water Volume (gal)*:</b>	<b>94,080</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%	75.29800%	
X-Cide 207	Baker Hughes	Biocide	2-Methyl-4-Isothiazolin-3-One	2682-20-4	5.00%	0.00012%	
			5-Chloro-2-Methyl-4-Isothiazolin-3-One	26172-55-4	10.00%	0.00023%	
			Crystalline Silica: Cristobalite	14464-46-1	1.00%	0.00002%	
			Crystalline Silica: Quartz (SiO2)	14808-60-7	1.00%	0.00002%	
			Diatomaceous Earth, Calcined	91053-39-3	60.00%	0.00138%	
			Magnesium Chloride	7786-30-3	5.00%	0.00012%	
			Magnesium Nitrate	10377-60-3	10.00%	0.00023%	
Enzyme G-I	Baker Hughes	Breaker	Hemicellulase Enzyme Concentrate	9025-56-3	3.00%	0.00103%	SmartCare Product
			Water	7732-18-5	97.00%	0.03338%	
Clay Master-5C (Tote)	Baker Hughes	Clay Control	Oxyakylated Amine Quat	138879-94-4	60.00%	0.05383%	
XLW-10A	Baker Hughes	Crosslinker	Ethylene Glycol	107-21-1	30.00%	0.02661%	SmartCare Product
			Sodium Hydroxide	1310-73-2	10.00%	0.00887%	
			Sodium Tetraborate	1330-43-4	30.00%	0.02661%	
GW-3LDF	Baker Hughes	Gelling Agent	1-Butoxy-2-Propanol	5131-66-8	5.00%	0.00868%	SmartCare Product
			Cyrstalline Silica, Quartz (SiO2)	14808-60-7	5.00%	0.00868%	
			Guar Gum	9000-30-0	60.00%	0.10417%	
			Isotridecanol, ethoxylated	9043-30-5	5.00%	0.00868%	

