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

	09/18/2012
Last Fracture Date	
State:	California
County:	Kern
API Number:	04-030-47528
Operator Name:	Aera Energy Llc
Well Name and Number:	Lost Hills One 6049
Longitude:	-119.7236937
Latitude:	35.6148762
Long/Lat Projection:	NAD83
Production Type:	Oil
True Vertical Depth (TVD):	2,250
Total Chemical Mass (lbs)*:	1,080,090
Total Max. Ingredient Mass (Ibs)*:	1,082,212
Total Product Volume (gal)*:	106,348
Total Water Volume (gal)*:	91,308



## 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 (Ibs mass)	Comments
Water	Operator	Carrier	Water	7732-18-5	100.00%	761,308	
X-Cide 207	Baker Hughes	Biocide	2-Methyl-4-Isothiazolin-3-One	2682-20-4	5.00%	1.500000	
			5-Chloro-2-Methyl-4-Isothiazolin-3-One	26172-55-4	10.00%	3.000000	
			Crystalline Silica: Cristobalite	14464-46-1	1.00%	0.300000	
			Crystalline Silica: Quartz (SiO2)	14808-60-7	1.00%	0.300000	
			Diatomaceous Earth, Calcined	91053-39-3	60.00%	18.000000	
			Magnesium Chloride	7786-30-3	5.00%	1.500000	

			Magnesium Nitrate	10377-60-3	10.00%	3.000000
Enzyme G-I	Baker Hughes	Breaker	Hemicellulase Enzyme Concentrate	9025-56-3	3.00%	18.259782 SmartCare Product
			Water	7732-18-5	97.00%	590.399618
BF-7L	Baker Hughes	Buffer	Potassium Carbonate	584-08-7	60.00%	2,721.264000 SmartCare Product
			Potassium Hydroxide	1310-58-3	1.00%	45.354400
			Water	7732-18-5	60.00%	2,721.264000
Clay Master-5C (Tote)	Baker Hughes	Clay Control	Oxyakylated Amine Quat	138879-94-4	60.00%	607.951320
XLW-32, 260 gal tote	Baker Hughes	Crosslinker	Boric Acid (H3BO3)	10043-35-3	30.00%	221.970000
			Methanol	67-56-1	60.00%	443.940000
			Methyl Borate	121-43-7	30.00%	221.970000
GW-3LDF	Baker Hughes	Gelling Agent	1-Butoxy-2-Propanol	5131-66-8	5.00%	199.056000 SmartCare Product
			Cyrstalline Silica, Quartz (SiO2)	14808-60-7	5.00%	199.056000
			Guar Gum	9000-30-0	60.00%	2,388.672000
			Isotridecanol, ethoxylated	9043-30-5	5.00%	199.056000
			Paraffinic Petroleum Distillate	64742-55-8	30.00%	1,194.336000
			Petroleum Distillates	64742-47-8	30.00%	1,194.336000
Ferrotrol 300L	Baker Hughes	Iron Control	Citric Acid	77-92-9	60.00%	548.477406 SmartCare Product
Sand, Brown, 8/40	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100.00%	306,860.000000
ScaleSorb 3, (25# pail)	Baker Hughes	Scale Inhibitor	Amino Alkyl Phosphonic Acid	Trade Secret	30.00%	30.000000 SmartCare Product
			Crystalline Silica: Quartz (SiO2)	14808-60-7	1.00%	1.000000
			Diatomaceous Earth, Calcined	91053-39-3	100.00%	100.000000
			Phosphonic Acid	13598-36-2	1.00%	1.000000
Ingredients shown abo	ove are subject	to 29 CFR 1910.1200	O(i) and appear on Material Safety Data Sho	eets (MSDS). Ingredients	s shown below are Non-N	ISDS.
			2-Butoxy-1-Propanol	15821-83-7		3.184896
			Water	7732-18-5		365.651604

<sup>\*</sup> Total Chemical Mass is the total amount of Trade Name volume, supplied to the customer, converted to pounds.

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

<sup>\*</sup> Total Max. Ingredient Mass is the summation of all masses listed in the Maximum Ingredient Weight (pounds) column.

<sup>\*</sup> Total Product Volume is the total amount of Water plus Trade Name volume in gallons supplied to the customer or Baker Hughes.

<sup>\*</sup> Total Water Volume is the total amount of water volume in gallons used on the hydraulic fracture treatment.

<sup>\*\*</sup> Information is based on the maximum potential for concentration and thus the total may be over 100%