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

	07/27/2012
Last Fracture Date	
State:	California
County:	Kern
API Number:	04-030-47542
Operator Name:	Aera Energy Llc
Well Name and Number:	Lost Hills One 7288A
Longitude:	-119.7167487
Latitude:	35.6092963
Long/Lat Projection:	NAD83
Production Type:	Oil
True Vertical Depth (TVD):	2,610
Total Chemical Mass (lbs)*:	707,109
Total Max. Ingredient Mass (Ibs)*:	708,946
Total Product Volume (gal)*:	80,927
Total Water Volume (gal)*:	77,994



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%	650,298	
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%		SmartCare Product
Znzymo O i	Baker Hagnes	Dioanoi	Water	7732-18-5	97.00%	210.279316	
BF-7L	Baker Hughes	Buffer	Potassium Carbonate	584-08-7	60.00%		SmartCare Product
	Daner Hagnes		Potassium Hydroxide	1310-58-3	1.00%	32.520600	
			Water	7732-18-5	60.00%	1,951.236000	
XLW-32, 260 gal tote	Baker Hughes	Crosslinker	Boric Acid (H3BO3)	10043-35-3	30.00%	124.575000	
			Methanol	67-56-1	60.00%	249.150000	
			Methyl Borate	121-43-7	30.00%	124.575000	
GW-3LDF	Baker Hughes	Gelling Agent	1-Butoxy-2-Propanol	5131-66-8	5.00%		SmartCare Product
	J	0 0	Cyrstalline Silica, Quartz (SiO2)	14808-60-7	5.00%	150.727500	
			Guar Gum	9000-30-0	60.00%	1,808.730000	
			Isotridecanol, ethoxylated	9043-30-5	5.00%	150.727500	
			Paraffinic Petroleum Distillate	64742-55-8	30.00%	904.365000	
			Petroleum Distillates	64742-47-8	30.00%	904.365000	
Ferrotrol 300L (Totes)	Baker Hughes	Iron Control	Citric Acid	77-92-9	60.00%	151.304112	SmartCare Product
Sand, Brown, 8/40	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100.00%	49,580.000000	
ScaleSorb 3, (25# pail)			Amino Alkyl Phosphonic Acid	Trade Secret	30.00%	15.000000	SmartCare Product
			Crystalline Silica: Quartz (SiO2)	14808-60-7	1.00%	0.500000	
			Diatomaceous Earth, Calcined	91053-39-3	100.00%	50.000000	
			Phosphonic Acid	13598-36-2	1.00%	0.500000	

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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.	
2-Butoxy-1-Propanol 15821-83-7 2.411640	
Water 7732-18-5 100.869408	

^{*} 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)

^{*} 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%