

## Hydraulic Fracturing Fluid Product Component Information Disclosure

Last Fracture Date	06/07/2011
State:	California
County:	Colusa
API Number:	04-011-20767
Operator Name:	Venoco Incorporated
Well Name and Number:	South Sycamore 25
Longitude:	-121.907721
Latitude:	39.066159
Long/Lat Projection:	NAD83
Production Type:	Gas
True Vertical Depth (TVD):	6,700
Total Water Volume (gal)*:	33,012

### 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%	74.06719%	
X-Cide 207	Baker Hughes	Biocide	2-Methyl-4-Isothiazolin-3-One	2682-20-4	5.00%	0.00016%	
			5-Chloro-2-Methyl-4-Isothiazolin-3-One	26172-55-4	10.00%	0.00032%	
			Crystalline Silica: Cristobalite	14464-46-1	1.00%	0.00003%	
			Crystalline Silica: Quartz (SiO2)	14808-60-7	1.00%	0.00003%	
			Diatomaceous Earth, Calcined	91053-39-3	60.00%	0.00194%	
			Magnesium Chloride	7786-30-3	5.00%	0.00016%	
			Magnesium Nitrate	10377-60-3	10.00%	0.00032%	
Enzyme G-I	Baker Hughes	Breaker	Hemicellulase Enzyme Concentrate	9025-56-3	3.00%	0.00431%	SmartCare Product
			Water	7732-18-5	97.00%	0.13929%	
High Perm CRB	Baker Hughes	Breaker	Ammonium Persulphate	7727-54-0	100.00%	0.00807%	SmartCare Product
			Crystalline Silica Quartz	14808-60-7	15.00%	0.00121%	
BF-7L	Baker Hughes	Buffer	Potassium Carbonate	584-08-7	50.00%	0.05970%	SmartCare Product
XLW-32	Baker Hughes	Crosslinker	Boric Oxide	1303-86-2	20.00%	0.00993%	
			Methanol	67-56-1	90.00%	0.04467%	
GW-3LDF	Baker Hughes	Gelling Agent	Guar Gum	9000-30-0	40.00%	0.19677%	SmartCare Product
			Petroleum Distillate Blend	Trade Secret	70.00%	0.34435%	

[illegible]