

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Last Fracture Date	10/04/2011
State:	California
County:	Sutter
API Number:	04-101-20788
Operator Name:	Venoco Incorporated
Well Name and Number:	Carroll 33-4
Longitude:	-121.872682
Latitude:	39.199487
Long/Lat Projection:	NAD83
Production Type:	Gas
True Vertical Depth (TVD):	5,100
Total Water Volume (gal)*:	38,808

## 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%	76.26447%	
X-Cide 207	Baker Hughes	Biocide	2-Methyl-4-Isothiazolin-3-One	2682-20-4	5.00%	0.00014%	
			5-Chloro-2-Methyl-4-Isothiazolin-3-One	26172-55-4	10.00%	0.00028%	
			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%	0.00170%	
			Magnesium Chloride	7786-30-3	5.00%	0.00014%	
			Magnesium Nitrate	10377-60-3	10.00%	0.00028%	
Enzyme G-I	Baker Hughes	Breaker	Hemicellulase Enzyme Concentrate	9025-56-3	3.00%	0.00336%	SmartCare Product
			Water	7732-18-5	97.00%	0.10865%	
High Perm CRB	Baker Hughes	Breaker	Ammonium Persulphate	7727-54-0	100.00%	0.00471%	SmartCare Product
			Crystalline Silica Quartz	14808-60-7	15.00%	0.00071%	
BC-3	Baker Hughes	Breaker Catalyst	Non-Hazardous Ingredient	Trade Secret	100.00%	0.00864%	
BF-7L, Tote	Baker Hughes	Buffer	Potassium Carbonate	584-08-7	50.00%	0.05917%	SmartCare Product
XLW-32	Baker Hughes	Crosslinker	Boric Oxide	1303-86-2	20.00%	0.01113%	
			Methanol	67-56-1	90.00%	0.05008%	
GW-3LDF	Baker Hughes	Gelling Agent	Guar Gum	9000-30-0	40.00%	0.10930%	SmartCare Product

[illegible]