

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date	6/17/2012
State:	California
County:	Kern
API Number:	04-030-47350
Operator Name:	Vintage Prod of Cal
Well Name and Number:	Goodshow 5HB
Longitude:	-119.34406
Latitude:	35.63013
Long/Lat Projection:	NAD27
Production Type:	Oil
True Vertical Depth (TVD):	8288 ft
Total Water Volume (gal)*:	371,322

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%	72.27615%	
Super LC	BHI	Proppant	Silicon Dioxide (Silica Sand)	14808-60-7	97.00%	5.38993%	
			Phenol Formaldehyde Resin	9003-35-4	5.00%	0.27783%	
			Hexamethylenetetramine	1009-7-0	0.01%	0.00056%	
Frac Sand (All Meshes) [CWT]	BHI	Proppant	Crystalline Silica (Quartz)	14808-60-7	100.00%	20.67553%	
GLFC-1B	BHI	Gellant	Alkanes / Alkenes	Multiple	45.00%	0.31768%	
			Guar gum	9000-30-0	50.00%	0.35298%	
XLW-56	BHI	Crosslinker	Glyoxal	107-22-2	30.00%	0.05852%	
			Sodium Tetraborate	1330-43-4	10.00%	0.01951%	
			Sodium Hydroxide	1310-73-2	5.00%	0.00975%	
			D-Glucitol	50-70-4	10.00%	0.01951%	
Enzyme G-I	BHI	Breaker	Hemicellulase Enzyme Concentrate	9025-56-3	3.00%	0.00350%	SmartCare Product
			Water	7732-18-5	97.00%	0.11323%	
BC-3	BHI	Breaker Catalyst	Non-hazardous	-	100.00%	0.01928%	
GasFlo G	BHI	Surfactant	Methanol	67-56-1	30.00%	0.04505%	SmartCare Product
			Surfactants	CBI	60.00%	0.09010%	
			Water	7732-18-5	70.00%	0.10511%	
Alpha 125	BHI	Biocide	Glutaraldehyde	111-30-8	30.00%	0.00703%	SmartCare Product

