

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date	7/27/2011
State:	California
County:	Kern
API Number:	04-030-43766
Operator Name:	Occidental Petroleum Corp
Well Name and Number:	Jacobsen 34-3H
Longitude:	-119.265441
Latitude:	35.525379
Long/Lat Projection:	NAD83
Production Type:	Oil
True Vertical Depth (TVD):	7,342
Total Water Volume (gal)*:	643,650

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%	83.75577%	
Frac Sand (All Meshes) [CWT]	BHI	Proppant	Crystalline Silica (Quartz)	14808-60-7	100.00%	12.59772%	
Super LC	BHI	Proppant	Silicon Dioxide (Silica Sand)	14808-60-7	97.00%	2.26928%	
			Phenol Formaldehyde Resin	9003-35-4	5.00%	0.11697%	
			Hexamethylenetetramine	1009-7-0	0.01%	0.00023%	
GLFC-1B	BHI	Gellant	Alkanes / Alkenes	Multiple	45.00%	0.29954%	
			Guar gum	9000-30-0	50.00%	0.33282%	
Enzyme G-I	BHI	Breaker	Hemicellulase Enzyme Concentrate	9025-56-3	3.00%	0.00457%	
			Water	7732-18-5	97.00%	0.14777%	
BC-3	BHI	Breaker Catalyst	Non-hazardous	-	100.00%	0.01547%	
Alpha 125	BHI	Biocide	Glutaraldehyde	111-30-8	30.00%	0.00794%	
XLW-56	BHI	Crosslinker	Glyoxal	107-22-2	30.00%	0.04580%	
			Sodium Tetraborate	1330-43-4	10.00%	0.01527%	
			Sodium Hydroxide	1310-73-2	5.00%	0.00763%	
			D-Glucitol	50-70-4	10.00%	0.01527%	
BF-7L	BHI	Buffer	Potassium Carbonate	584-08-7	50.00%	0.12991%	

