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:

			Service Number (CAS #)	Ingredient Concentration in Additive (% by mass)**	Ingredient Concentration in HF Fluid (% by mass)**	
0	Operation	Water	7700 40 5	400,000/	00.755770/	
Operator	Carrier	vvater	7732-18-5	100.00%	83.75577%	
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 G	Gellant		'			
		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%	
DLII	Dranker Catalyst	New homestern		400,000/	0.045470/	
ВП	Breaker Catalyst	Non-nazardous	-	100.00%	0.01547%	
ВНІ	Biocide	Glutaraldehyde	111-30-8	30.00%	0.00794%	
RHI	Crosslinker	Glyoval	107-22-2	30 00%	0.04580%	
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		D-Glucitol	50-70-4	10.00%	0.00763%	
BHI	Buffer	Potassium Carbonate	584-08-7	50.00%	0.12991%	
	3HI 3HI 3HI	BHI Proppant BHI Gellant BHI Breaker BHI Breaker BHI Brocide BHI Crosslinker	BHI Proppant Crystalline Silica (Quartz) BHI Proppant Silicon Dioxide (Silica Sand) Phenol Formaldehyde Resin Hexamethylenetetramine BHI Gellant Alkanes / Alkenes Guar gum BHI Breaker Hemicellulase Enzyme Concentrate Water BHI Breaker Catalyst Non-hazardous BHI Biocide Glutaraldehyde BHI Glyoxal Sodium Tetraborate Sodium Hydroxide D-Glucitol	BHI Proppant Crystalline Silica (Quartz) 14808-60-7 BHI Proppant Silicon Dioxide (Silica Sand) 14808-60-7 Phenol Formaldehyde Resin 9003-35-4 Hexamethylenetetramine 1009-7-0 BHI Gellant Alkanes / Alkenes Multiple Guar gum 9000-30-0 BHI Breaker Hemicellulase Enzyme Concentrate 9025-56-3 Water 7732-18-5 BHI Broide Glutaraldehyde 111-30-8 BHI Biocide Glyoxal 107-22-2 Sodium Tetraborate 1330-43-4 Sodium Hydroxide 1310-73-2 D-Glucitol 50-70-4	Departor Carrier Water 7732-18-5 100.00%	Decided Carrier Water 7732-18-5 100.00% 83.75577% 83.71577% 83.7

Inflo 250W	BHI	Surfactant	Surfactants	CBI	80.00%	0.14649%	
			2-Butoxyethanol	111-76-2	20.00%	0.03662%	
			Methanol	67-56-1	30.00%	0.05493%	

^{*} Total Water Volume sources may include fresh water, produced water, and/or recycled water

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.

^{**} Information is based on the maximum potential for concentration and thus the total may be over 100%