

## Hydraulic Fracturing Fluid Product Component Information Disclosure

<b>Fracture Date:</b>	<b>8/30/2012</b>
<b>State:</b>	<b>California</b>
<b>County/Parish:</b>	<b>Kern County</b>
<b>API Number:</b>	<b>0403047085</b>
<b>Operator Name:</b>	<b>Occidental of Elk Hills, Inc.</b>
<b>Well Name and Number:</b>	<b>7-8-36B</b>
<b>Longitude:</b>	<b>-119.450464</b>
<b>Latitude:</b>	<b>35.181864</b>
<b>Long/Lat Projection:</b>	<b>NAD83</b>
<b>Production Type:</b>	<b>Oil</b>
<b>True Vertical Depth (TVD):</b>	<b>3,523</b>
<b>Total Water Volume (gal)*:</b>	<b>57,890</b>

### 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
4% KCl (Produced Water Oxy Provided), YF125-Flex	Schlumberger	Surfactant , Breaker, Gelling Agent, Crosslinker, Clay Control Agent, Bactericide, Demulsifier, Propping Agent	Water (Including Mix Water Supplied by Client)*	-		62.27479%	
			Crystalline silica	14808-60-7	99.16911%	37.41176%	
			Carbohydrate polymer	Proprietary	0.45061%	0.16999%	
			Diammonium peroxidisulphate	7727-54-0	0.11265%	0.04250%	
			Aliphatic polyol	Proprietary	0.11253%	0.04245%	
			Methanol	67-56-1	0.11234%	0.04238%	
			Amine derivative	Proprietary	0.10940%	0.04127%	
			Potassium hydroxide	1310-58-3	0.05627%	0.02123%	

			Aliphatic co-polymer	Proprietary	0.02253%	0.00850%	
			Oxyalkylated Alcohol (2)	Proprietary	0.01730%	0.00653%	
			Oxyalkylated Alkyl Alcohol (1)	Proprietary	0.01730%	0.00653%	
			Heavy aromatic naphtha	64742-94-5	0.00865%	0.00326%	
			Quaternary ammonium compounds	Proprietary	0.00865%	0.00326%	
			Oxyalkylated Alcohol (1)	Proprietary	0.00865%	0.00326%	
			Tetrakis(hydroxymethyl)p hosphonium sulfate	55566-30-8	0.00737%	0.00278%	
			Non-crystalline silica	7631-86-9	0.00737%	0.00278%	
			Naphtalene (impurity)	91-20-3	0.00173%	0.00065%	

\* Total Water Volume sources may include fresh water, produced water, and/or recycled water

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

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Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)