

## Hydraulic Fracturing Fluid Product Component Information Disclosure

<b>Fracture Date:</b>	<b>5/12/2012</b>
<b>State:</b>	<b>California</b>
<b>County/Parish</b>	<b>Kern County</b>
<b>API Number:</b>	<b>0403047061</b>
<b>Operator Name:</b>	<b>Occidental of Elk Hills, Inc.</b>
<b>Well Name and Number:</b>	<b>5-6A-1C</b>
<b>Longitude:</b>	<b>-119.454504</b>
<b>Latitude:</b>	<b>35.172387</b>
<b>Long/Lat Projection:</b>	<b>NAD83</b>
<b>Production Type:</b>	<b>Oil</b>
<b>True Vertical Depth (TVD):</b>	<b>2,885</b>
<b>Total Water Volume (gal)*:</b>	<b>62,715</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
YF125ST	Schlumberger	Surfactant , Breaker, Crosslinker, Gelling Agent, Clay Control Agent, Bactericide, Demulsifier, Propping Agent	Water (Including Mix Water Supplied by Client)*	-		61.59913%	
			Crystalline silica	14808-60-7	98.99577%	38.01524%	
			Guar gum	9000-30-0	0.50026%	0.19210%	
			1, 2, 3 - Propanetriol	56-81-5	0.11817%	0.04538%	
			Methanol	67-56-1	0.09006%	0.03458%	
			Diammonium peroxidisulphate	7727-54-0	0.08766%	0.03366%	
			Sodium tetraborate decahydrate	1303-96-4	0.07090%	0.02723%	
			Decyl-dimethyl amine	2605-79-0	0.04156%	0.01596%	

			oxide				
			Alcohol, C7-9-iso, C8, ethoxylated	78330-19-5	0.01426%	0.00548%	
			Alcohol, C9-11-iso, C10, ethoxylated	78330-20-8	0.01426%	0.00548%	
			Vinylidene chloride/methylacrylate copolymer	25038-72-6	0.01281%	0.00492%	
			Ethoxylated propoxylated 4-nonylphenol-formaldehyde resin	30846-35-6	0.01066%	0.00409%	
			Cationic polymer	Proprietary	0.00829%	0.00318%	
			Heavy aromatic naphtha	64742-94-5	0.00720%	0.00277%	
			Alcohol, C11-14, ethoxylated	78330-21-9	0.00706%	0.00271%	
			Quaternary ammonium compounds chlorides derivatives	68989-00-4	0.00706%	0.00271%	
			Non-crystalline silica	7631-86-9	0.00688%	0.00264%	
			Tetrakis(hydroxymethyl)phosphonium sulfate	55566-30-8	0.00552%	0.00212%	
			Poly(oxy-1,2-ethanediyl)	25322-68-3	0.00317%	0.00122%	
			Naphthalene (impurity)	91-20-3	0.00144%	0.00055%	
			Magnesium silicate hydrate (talc)	14807-96-6	0.00067%	0.00026%	
			Decyldimethyl amine (impurity)	1120-24-7	0.00066%	0.00026%	
			Hydrogen peroxide (impurity)	7722-84-1	0.00040%	0.00015%	

\* 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)