

## Hydraulic Fracturing Fluid Product Component Information Disclosure

<b>Fracture Date:</b>	<b>7/6/2012</b>
<b>State:</b>	<b>California</b>
<b>County/Parish:</b>	<b>Kern</b>
<b>API Number:</b>	<b>0403047773</b>
<b>Operator Name:</b>	<b>Occidental of Elk Hills, Inc.</b>
<b>Well Name and Number:</b>	<b>81-24Z</b>
<b>Longitude:</b>	<b>-119.555517</b>
<b>Latitude:</b>	<b>35.309543</b>
<b>Long/Lat Projection:</b>	<b>NAD83</b>
<b>Production Type:</b>	<b>Oil</b>
<b>True Vertical Depth (TVD):</b>	<b>2,288</b>
<b>Total Water Volume (gal)*:</b>	<b>32,616</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
YF120 Flex (7% KCl)	Schlumberger	Activator , Surfactant , Breaker, Breaker Aid, Gelling Agent, Crosslinker, Clay Control Agent, Bactericide, Demulsifier, Propping Agent	Water (Including Mix Water Supplied by Client)*	-		83.02220%	
			Crystalline silica	14808-60-7	96.58144%	16.39741%	
			Phenolic resin	9003-35-4	4.82907%	0.81987%	
			Carbohydrate polymer	Proprietary	0.80754%	0.13710%	
			Oxyalkylated Alcohol (2)	Proprietary	0.72984%	0.12391%	
			Propan-2-ol	67-63-0	0.67976%	0.11541%	
			2,2',2''-nitrilotriethanol	102-71-6	0.58916%	0.10003%	
			Diammonium peroxodisulphate	7727-54-0	0.39480%	0.06703%	

			Methanol	67-56-1	0.34541%	0.05864%	
			Amine derivative	Proprietary	0.25609%	0.04348%	
			Zirconium dichloride oxide	7699-43-6	0.18061%	0.03066%	
			Aliphatic polyol	Proprietary	0.17926%	0.03043%	
			Potassium hydroxide	1310-58-3	0.08963%	0.01522%	
			Aliphatic co-polymer	Proprietary	0.07896%	0.01341%	
			Oxyalkylated Alkyl Alcohol (1)	Proprietary	0.05008%	0.00850%	
			Oxyalkylated Alcohol (1)	Proprietary	0.02504%	0.00425%	
			Quaternary ammonium compounds	Proprietary	0.02504%	0.00425%	
			Heavy aromatic naphtha	64742-94-5	0.02504%	0.00425%	
			Tetrakis(hydroxymethyl)p hosphonium sulfate	55566-30-8	0.01938%	0.00329%	
			Non-crystalline silica	7631-86-9	0.01938%	0.00329%	
			Naphtalene (impurity)	91-20-3	0.00501%	0.00085%	

\* 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)