

## Hydraulic Fracturing Fluid Product Component Information Disclosure

<b>Fracture Date:</b>	<b>2/7/2012</b>
<b>State:</b>	<b>California</b>
<b>County/Parish</b>	<b>Kern County</b>
<b>API Number:</b>	<b>0403045982</b>
<b>Operator Name:</b>	<b>Occidental Oil &amp; Gas</b>
<b>Well Name and Number:</b>	<b>7-5H-1C</b>
<b>Longitude:</b>	<b>-119.4521979497</b>
<b>Latitude:</b>	<b>35.1712139929301</b>
<b>Long/Lat Projection:</b>	<b>NAD83</b>
<b>Production Type:</b>	<b>Oil</b>
<b>True Vertical Depth (TVD):</b>	<b>2,913</b>
<b>Total Water Volume (gal)*:</b>	<b>194,525</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
WF120, YF120ST	Schlumberger	Surfactant , Breaker, Stabilizing Agent, Crosslinker, Gelling Agent, Clay Control Agent, Bactericide, Demulsifier, Propping Agent	Water (Including Mix Water Supplied by Client)*	-		71.20967%	
			Crystalline silica	14808-60-7	98.36632%	28.31999%	
			Guar gum	9000-30-0	0.60068%	0.17294%	
			1, 2, 3 - Propanetriol	56-81-5	0.25883%	0.07452%	
			2,2',2"-nitritotriethanol	102-71-6	0.15792%	0.04547%	
			Sodium tetraborate decahydrate	1303-96-4	0.15530%	0.04471%	
			Diammonium peroxidisulphate	7727-54-0	0.12737%	0.03667%	
			Methanol	67-56-1	0.12029%	0.03463%	

			Decyl-dimethyl amine oxide	2605-79-0	0.06262%	0.01803%	
			Zirconium dichloride oxide	7699-43-6	0.02982%	0.00858%	
			Alcohol, C9-11-iso, C10, ethoxylated	78330-20-8	0.02138%	0.00616%	
			Alcohol, C7-9-iso, C8, ethoxylated	78330-19-5	0.02138%	0.00616%	
			Ethoxylated propoxylated 4-nonylphenol-formaldehyde resin	30846-35-6	0.01598%	0.00460%	
			Vinylidene chloride/methylacrylate copolymer	25038-72-6	0.01433%	0.00413%	
			Heavy aromatic naphtha	64742-94-5	0.01080%	0.00311%	
			Quaternary ammonium compounds chlorides derivatives	68989-00-4	0.01058%	0.00305%	
			Alcohol, C11-14, ethoxylated	78330-21-9	0.01058%	0.00305%	
			Non-crystalline silica	7631-86-9	0.00804%	0.00231%	
			Tetrakis(hydroxymethyl)phosphonium sulfate	55566-30-8	0.00640%	0.00184%	
			Poly(oxy-1,2-ethanediyl)	25322-68-3	0.00475%	0.00137%	
			Naphtalene (impurity)	91-20-3	0.00216%	0.00062%	
			Decyldimethyl amine (impurity)	1120-24-7	0.00100%	0.00029%	
			Magnesium silicate hydrate (talc)	14807-96-6	0.00075%	0.00022%	
			Hydrogen peroxide (impurity)	7722-84-1	0.00060%	0.00017%	

\* 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)