Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date	12/3/2012
State:	California
County:	Kern County
API Number:	0403046130
Operator Name:	Occidental of Elk Hills,
	Inc.
Well Name and Number:	358X-35R
Longitude:	-119.471931
Latitude:	35.268045
Long/Lat Projection:	NAD83
Production Type:	Oil
True Vertical Depth (TVD):	8,740
Total Water Volume (gal)*:	68,223

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
Brine (8.53 ppg 4%KCI), YF130 Flex	Schlumberge r	Surfactant , Breaker, Gelling Agent, Crosslinker, INDUSTRIAL ANTIMICROBIAL, Emulsion Preventer, Fluid Loss Additive , Propping Agent	Water (Including Mix Water Supplied by Client)*	-		77.14752%	
			Crystalline silica	14808-60-7	98.01350%	22.39852%	
			Carbohydrate polymer	Proprietary	1.41034%	0.32230%	
			Aliphatic polyol	Proprietary	0.41054%	0.09382%	
			Potassium hydroxide	1310-58-3	0.18730%	0.04280%	
			Diammonium peroxidisulphate	7727-54-0	0.13026%	0.02977%	
			Propan-2-ol	67-63-0	0.10784%	0.02464%	
			Polyethylene glycol monohexyl ether	31726-34-8	0.09635%	0.02202%	
			Aliphatic co-polymer	Proprietary	0.02605%	0.00595%	
			Dioctyl sulfosuccinate sodium salt	Proprietary	0.01797%	0.00411%	
			Alkylalcohol ethoxylated	Proprietary	0.01797%	0.00411%	
			Oxyalkylated Alcohol (1)	Proprietary	0.01797%	0.00411%	
			Tetrakis(hydroxymethyl)phosphonium sulfate	55566-30-8	0.00853%	0.00195%	
			Non-crystalline silica	7631-86-9	0.00853%	0.00195%	

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

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

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