Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date	8/22/2012
State:	California
County:	Kern County
API Number:	04-030-22893
Operator Name:	Chevron USA Inc
Well Name and Number:	17Z 714
Longitude:	-119.638871
Latitude:	35.319683
Long/Lat Projection:	NAD83
Production Type:	Oil
True Vertical Depth (TVD):	10,836
Total Water Volume (gal)*:	1,509,948

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
Water	Chevron	Base Fluid			100.00%	72.85099%	
WG-36	Halliburton	Gelling Agent	Guar gum	9000-30-0	100.00%	0.36997%	
BE-3S	Halliburton	Biocide	2-Monobromo-3- nitrilopropionamide	1113-55-9	5.00%	0.00012%	
			2,2 Dibromo-3-nitrilopropionamide	10222-01-2	100.00%	0.00241%	
BA-20	Halliburton	Buffer	Ammonium acetate	631-61-8	100.00%	0.03296%	
			Acetic acid	64-19-7	30.00%	0.00989%	
LOSURF-300M	Halliburton	Surfactant	Ethanol	64-17-5	60.00%	0.03362%	
			Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	10.00%	0.00560%	
			Naphthalene	91-20-3	1.00%	0.00056%	
			1,2,4 Trimethylbenzene	95-63-6	1.00%	0.00056%	
			Heavy aromatic petroleum naphtha	64742-94-5	30.00%	0.01681%	
GEL-STA L	Halliburton	Gel Stabilizer	Sodium thiosulfate	7772-98-7	60.00%	0.08077%	
BA-40L	Halliburton	Buffer	Potassium carbonate	584-08-7	60.00%	0.03768%	
MO-67	Halliburton	Buffer	Sodium hydroxide	1310-73-2	30.00%	0.02640%	
CL-28M X-LINKER	Halliburton	Crosslinker	Borate salts	Confidential Business Information	60.00%	0.04537%	
			Crystalline silica, quartz	14808-60-7	5.00%	0.00378%	
VICON NF	Halliburton	Breaker	Chlorous acid, sodium salt	7758-19-2	10.00%	0.00332%	
			Sodium chloride	7647-14-5	30.00%	0.00997%	
K-38	Halliburton	Crosslinker	Disodium octaborate tetrahydrate	12008-41-2	100.00%	0.00009%	
Sand-Premium White-20/40	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00%	23.69123%	
Prop-Ceramic-20/40	Halliburton	Proppant	Silica, amorphous - fumed	7631-86-9	30.00%	0.77801%	
			Crystalline silica, cristobalite	14464-46-1	30.00%	0.77801%	
			Mullite	1302-93-8	100.00%	2.59338%	
Sand-Common	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00%	0.00867%	

White-100 Mesh			

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

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.

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