

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date	5/21/2013
State:	California
County:	Kern
API Number:	04-030-41186
Operator Name:	Chevron USA Inc
Well Name and Number:	4 4-7E
Longitude:	-119.718680066
Latitude:	35.606695149
Long/Lat Projection:	NAD27
Production Type:	Oil
True Vertical Depth (TVD):	2,844
Total Water Volume (gal)*:	31,724

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%	82.05338%	
WG-36	Halliburton	Gelling Agent	Guar gum	9000-30-0	100.00%	0.18596%	
BC-140	Halliburton	Crosslinker	Monoethanolamine borate	26038-87-9	60.00%	0.06518%	
			Ethylene glycol	107-21-1	30.00%	0.03259%	
MO-67	Halliburton	Buffer	Sodium hydroxide	1310-73-2	30.00%	0.01084%	
FE-1A	Halliburton	Iron Control Additive	Acetic anhydride	108-24-7	100.00%	0.01112%	
			Acetic Acid	64-19-7	60.00%	0.00667%	
CLA-WEB	Halliburton	Clay Stabilizer	Proprietary	Proprietary	60.00%	0.03412%	
CAT-3	Halliburton	Activator	EDTA/Copper chelate	Confidential Business Information	30.00%	0.02467%	
SP BREAKER	Halliburton	Breaker	Sodium persulfate	7775-27-1	100.00%	0.00124%	
SCALECHEK SCP-2	Halliburton	Scale Inhibitor	Glassy calcium magnesium phosphate	65997-17-3	100.00%	0.04649%	
Sand-Premium White-20/40	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00%	17.41794%	

\* 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%

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

