

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date	3/16/2013
State:	California
County:	Kern
API Number:	0403048686
Operator Name:	Chevron USA Inc
Well Name and Number:	32F 12-11ER
Longitude:	-119.732877366
Latitude:	35.621805858
Long/Lat Projection:	NAD83
Production Type:	Oil
True Vertical Depth (TVD):	2,490
Total Water Volume (gal)*:	320,692

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%	74.11709%	
WG-36	Halliburton	Gelling Agent	Guar gum	9000-30-0	100.00%	0.16877%	
BC-140	Halliburton	Crosslinker	Monoethanolamine borate	26038-87-9	60.00%	0.02496%	
			Ethylene glycol	107-21-1	30.00%	0.01248%	
MO-67	Halliburton	Buffer	Sodium hydroxide	1310-73-2	30.00%	0.00414%	
FE-1A	Halliburton	Iron Control Additive	Acetic anhydride	108-24-7	100.00%	0.00273%	
			Acetic Acid	64-19-7	60.00%	0.00164%	
CLA-WEB	Halliburton	Clay Stabilizer	Proprietary	Proprietary	60.00%	0.02515%	
CAT-3	Halliburton	Activator	EDTA/Copper chelate	Confidential Business Information	30.00%	0.00404%	
SP BREAKER	Halliburton	Breaker	Sodium persulfate	7775-27-1	100.00%	0.00180%	
SCALECHEK SCP-2	Halliburton	Scale Inhibitor	Glassy calcium magnesium phosphate	65997-17-3	100.00%	0.01246%	
Sand-Premium White-20/40	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00%	25.58636%	

* 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)

