

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date	10/26/2011
State:	LOUISIANA
County:	BEAUREGARD
API Number:	17-011-21104
Operator Name:	ELPASO E&P
Well Name and Number:	OLYMPIA 36-1
Longitude:	-93.649722
Latitude:	30.491944
Long/Lat Projection:	NAD27
Production Type:	Gas
True Vertical Depth (TVD):	13,997
Total Water Volume (gal)*:	401,389

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
CL-31	HALLIBURTON	CROSSLINKER	POTASSIUM METABORATE	13709-94-9	60.00%	0.05480%	
CL-31	HALLIBURTON	CROSSLINKER	POTASSIUM HYDROXIDE	1310-58-3	5.00%	0.00460%	
LGC-36 UC	HALLIBURTON	GELLING AGENT	NAPHTHA, HYDROTREATED HEAVY	64742-48-9	60.00%	0.32570%	
LGC-36 UC	HALLIBURTON	GELLING AGENT	GUAR GUM	9000-30-0	60.00%	0.32570%	
CL-28M	HALLIBURTON	CROSSLINKER	BORATE SALTS	NOT LISTED	60.00%	0.04420%	
CL-28M	HALLIBURTON	CROSSLINKER	CRYSTALLINE SILICA, QUARTZ	14808-60-7	5.00%	0.00370%	
BA-20	HALLIBURTON	BUFFER	AMMONIUM ACETATE	631-61-8	100.00%	0.03600%	
BA-20	HALLIBURTON	BUFFER	ACETIC ACID	64-19-7	30.00%	0.01080%	
LOSURF-300D	HALLIBURTON	SURFACTANT	ETHOXYLATED NONYLPHENOL	NOT LISTED	10.00%	0.00860%	
LOSURF-300D	HALLIBURTON	SURFACTANT	LIGHT AROMATIC SOLVENT	64742-95-6	30.00%	0.02580%	
LOSURF-300D	HALLIBURTON	SURFACTANT	ISOPROPANOL	67-63-0	60.00%	0.05150%	
GEL-STA-L	HALLIBURTON	GEL STABILIZER	SODIUM THIOSULFATE	7772-98-7	60.00%	0.28820%	
MO-67	HALLIBURTON	CAUSTIC	SODIUM HYDROXIDE	1310-73-2	30.00%	0.04070%	
VICON NF	HALLIBURTON	BREAKER (OXIDANT)	CHLOROUS ACID, SODIUM SALT	7758-19-2	10.00%	0.00580%	

VICON NF	HALLIBURTON	BREAKER (OXIDANT)	SODIUM CHLORIDE	7647-14-5	30.00%	0.01730%	

\* 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)