

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date:	11/2/2011
State:	Louisiana
County:	Caddo
API Number:	1701735086
Operator Name:	Indigo Minerals LLC
Well Name and Number:	Hunter 26H 1
Longitude:	-92.877528
Latitude:	32.253306
Long/Lat Projection:	NAD27
Production Type:	Gas
True Vertical Depth (TVD):	9,960
Total Water Volume (gal)*:	1,586,237

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 (NaCl)	Operator	Clay Control	Sodium Chloride, water		100.00%	85.68017%	Density = 8.620
HCL Acid	Halliburton	Breakdown formation			100.00%	0.94324%	Density = 8.960
PRC SAND PREMIUM	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00%	11.87564%	
			Hexamethylenetetramine	1009-7-0	2.00%	0.23751%	
			Phenol / formaldehyde resin	900303-35-4	5.00%	0.59378%	
LGC-36 UC	Halliburton	Gelling Agent	Guar gum	9000-30-0	60.00%	0.38075%	
			Naphtha, hydrotreated heavy	64742-48-9	60.00%	0.38075%	
BA-20 BUFFERING AGENT	Halliburton	Buffer	Acetic acid	64-19-7	30.00%	0.00433%	
			Ammonium acetate	631-61-8	100.00%	0.01444%	
BE-9	Halliburton	Biocide	Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00%	0.00111%	
GasPerm 1100	Halliburton	Non-ionic Surfactant	Ethanol	64-17-5	60.00%	0.04662%	
			Terpenes and Terpenoids, sweet orange-oil	68647-72-3	5.00%	0.00388%	
VICON NF BREAKER	Halliburton	Breaker	Chlorous acid, sodium salt	7758-19-2	10.00%	0.02385%	
			Sodium chloride	7647-14-5	30.00%	0.07154%	
CL-28M CROSSLINKER	Halliburton	Crosslinker	Crystalline silica, quartz	14808-60-7	5.00%	0.00341%	
			Borate salts	Confidential Business Information	60.00%	0.04094%	
MO-67	Halliburton	Buffer	Sodium hydroxide	1310-73-2	30.00%	0.02607%	
CL-31 CROSSLINKER	Halliburton	Crosslinker	Potassium hydroxide	1310-58-3	5.00%	0.00277%	
			Potassium metaborate	13709-94-9	60.00%	0.03318%	
FR-66	Halliburton	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8	30.00%	0.00000%	
GEL-STA L STABILIZER	Halliburton	Stabilizer	Sodium thiosulfate	7772-98-7	60.00%	0.18853%	

* 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%

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
