Hydraulic Fracturing Fluid Product Component Information Disclosure

9/8/2011	Fracture Date
Texas	State:
Mitchell	County:
42-335-33654	API Number:
Energen Resources Corporation	Operator Name:
North Westbrook Unit/Well No. 5007 (RF)	Well Name and Number:
-101.04787	Longitude:
32.42684	Latitude:
NAD27	Long/Lat Projection:
Oil	Production Type:
3,080	True Vertical Depth (TVD):
28,896	Total Water Volume (gal)*:

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
F105, J567, J589, J590, L064, S012	Schlumberger	Base Fluid, Breaker, Gelling Agent	Water	-		62.44551%	
	Schlumberger	Sand	Crystalline silica	14808-60-7	96.54%	36.25411%	
	Schlumberger		Polyethoxylated alkanol (1)	Proprietary	0.85%	0.32027%	
	Schlumberger	Gelling Agent	Fatty acid amidoalkyl betaine	Proprietary	0.75%	0.28266%	
	Schlumberger	Reology Modifer	Propan-2-ol	67-63-0	0.58%	0.21807%	
	Schlumberger	Surfactant	2-butoxyethanol	111-76-2	0.43%	0.16013%	
	Schlumberger	Clay Stabilizer	Tetramethylammonium chloride	75-57-0	0.28%	0.10373%	
	Schlumberger	Surfactant	Butan-1-ol	71-36-3	0.18%	0.06939%	
	Schlumberger	Surfactant	Polyethoxylated alkanol (2)	Proprietary	0.14%	0.05338%	
	Schlumberger	Breaker	Sulfonated polystyrene	Proprietary	0.03%	0.01298%	

* 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 1910.1200(i) and Appendix D.