

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date	01/30/2012
State:	Colorado
County:	San Miguel
API Number:	05-113-06159
Operator Name:	Patara Oil & Gas LLC
Well Name and Number:	Single Eagle 1
Longitude:	-108.72656
Latitude:	38.08498
Long/Lat Projection:	NAD27
Production Type:	Gas
True Vertical Depth (TVD):	9,464
Total Water Volume (gal)*:	9,366

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	Operator	Carrier	Water	7732-18-5	100.00%	50.00542%	0
Magnacide 575	Baker Hughes	Biocide	Tetrakis(Hydroxymethyl) Phosphonium Sulfate	55566-30-8	100.00%	0.01469%	SmartCare Product
Enzyme G-III	Baker Hughes	Breaker	Hemicellulase Enzyme Concentrate	9025-56-3	0.10%	0.00008%	0
0	0	0	Water	7732-18-5	99.90%	0.08001%	0
BioSealers MR	Baker Hughes	Degradable Sealers	Non-Hazardous Ingredient	Trade Secret	100.00%	0.04098%	0
GW-3LDF	Baker Hughes	Gelling Agent	Guar Gum	9000-30-0	40.00%	0.12791%	SmartCare Product
0	0	0	Petroleum Distillate Blend	Trade Secret	70.00%	0.22385%	0
Nitrogen	Baker Hughes	Nitrogen	Liquid Nitrogen	7727-37-9	100.00%	4.23753%	0
NE-900, drum	Baker Hughes	Non-emulsifier	Methanol	67-56-1	30.00%	0.02651%	SmartCare Product
0	0	0	Nonyl Phenyl Polyethylene Glycol Ether	9016-45-9	10.00%	0.00884%	0
Super LC, 20/40	Baker Hughes	Proppant	Hexamethylenetetramine	1009-7-0	0.01%	0.00442%	0
0	0	0	P/F Resin	9003-35-4	5.00%	2.20982%	0
0	0	0	Silicon Dioxide (Silica Sand)	14808-60-7	97.00%	42.87046%	0
ES-4A, Greenskeeper Solvent	Baker Hughes	Solvent	Petroleum Distillates Blend	Trade Secret	100.00%	0.09398%	0
InFlo 250W	Baker	Surfactant	2-Butoxyethanol	111-76-2	20.00%	0.00854%	0

	Hughes						
0	0	0	Methanol	67-56-1	30.00%	0.01281%	0
0	0	0	Surfactants	Trade Secret	80.00%	0.03417%	0
Additional Ingredients							
			Copolymer	Trade Secret			
			Crystalline Silica	14808-60-7			
			Ethylene Glycol Monobutyl Ether	111-76-2			
			Formaldehyde	50-00-0			
			Poly (oxy-1,2-ethanediyl)	24938-91-8			
			Quaternary Ammonium Compounds bis[Hydrogenated Tallow Alkyl] Dimethyl Salts With Bentonite	68953-58-2			
			Water	7732-18-5			

* 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.