

## Hydraulic Fracturing Fluid Product Component Information Disclosure

<b>Fracture Date:</b>	3/21/2011
<b>State:</b>	TEXAS
<b>County:</b>	TARRANT
<b>API Number:</b>	4243935364
<b>Operator Name:</b>	CHESAPEAKE
<b>Well Name and Number:</b>	BEEDY 2H
<b>Longitude:</b>	-97.210117
<b>Latitude:</b>	32.647507
<b>Long/Lat Projection:</b>	NAD27
<b>Production Type:</b>	GAS
<b>True Vertical Depth (TVD):</b>	7,925
<b>Total Water Volume (gal)*:</b>	3,659,082

### 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
Fresh Water		Carrier/Base Fluid				88.62092%	
Sand (Proppant)		Proppant				10.44191%	
15 hcl	TRICAN WELL SERVICE LP	Acid	Water	007732-18-5	85.00%	0.62254%	
			Hydrochloric Acid	007647-01-0	15.00%	0.10986%	
LAI-20	TRICAN WELL SERVICE LP	Corrosion Inhibitor	Methanol (Methyl Alcohol)	000067-56-1	40.00%	0.00047%	
			Propargyl Alcohol (2-Propynol)	000107-19-7	8.00%	0.00009%	
FEAC-20	TRICAN WELL SERVICE LP	Iron Control Agent	Acetic acid	000064-19-7	50.00%	0.00016%	
			Citric Acid	000077-92-9	30.00%	0.00010%	
FR-12 (Anionic Acrylamide)	TRICAN WELL SERVICE LP	Friction Reducer	Petroleum Distillates	064741-85-1	80.00%	0.05609%	
			Anionic Polyacrylamide Copolymer	N/A	25.00%	0.01753%	
			Ammonium Chloride	N/A	2.00%	0.00140%	
WG-111L	TRICAN WELL SERVICE LP	Gelling Agent	Petroleum Distillate Blend	N/A	60.00%	0.05221%	
			Polysaccharide blend	N/A	60.00%	0.05221%	
LBK-30 EP	TRICAN WELL SERVICE LP	Breaker	Ammonium Persulfate	007727-54-0	100.00%	0.02297%	
S-15 (Surfactant)	TRICAN WELL SERVICE LP	Surfactant	Alcohol Alkoxylate	N/A	20.00%	0.00011%	
			Methanol (Methyl Alcohol)	000067-56-1	20.00%	0.00011%	
LCL-21LTB	TRICAN WELL	Cross Linker	Potassium Metaborate	016481-66-6	30.00%	0.00008%	

	SERVICE LP						
			Ethylene Glycol	000107-21-1	10.00%	0.00003%	
			Potassium Hydroxide	001310-58-3	5.00%	0.00001%	
LBF-21	TRICAN WELL SERVICE LP	pH Adjusting Agent	Potassium Hydroxide	001310-58-3	23.00%	0.00002%	
LBF-20H	TRICAN WELL SERVICE LP	pH Adjusting Agent	Potassium Hydroxide	001310-58-3	23.00%	0.00001%	
B84	X CHEM OILFIELD CHEMICALS	Anti-Bacterial Agent	Glutaraldehyde (Pentanediol)	000111-30-8	27.00%	0.00988%	
			Didecyl Dimethyl Ammonium Chloride	007173-51-5	8.00%	0.00293%	
			Quaternary Ammonium Compound	068424-85-1	5.50%	0.00201%	
			Ethanol	000064-17-5	4.00%	0.00146%	
SC30	X CHEM OILFIELD CHEMICALS	Scale Inhibitor	Sodium polyacrylate	N/A	30.00%	0.00217%	

\* 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.