

Submit within 45 days of well completion

State of New Mexico

Energy, Minerals and Natural Resources

Oil Conservation Division

1220 S. St Francis Dr.

Santa Fe, NM 87505

Revised February 15, 2012

1. WELL API NO:
30-045-25534

2. Well Name:
RICHARDSON GAS COM B #001E

3. Well Number:
001E

HYDRAULIC FRACTURING FLUID DISCLOSURE

☒ Original

☐ Amendment

4. Surface Hole Location:
Unit:F Lot:F Section:11 Township:27N Range:13W
Feet from:1625 Feet from:1575 N/S Line:N E/W Line:W

5. Bottom Hole Location:
Unit:F Lot:F Section:11 Township:27N Range:13W
Feet from:1625 Feet from:1575 N/S Line:N E/W Line:W

6. latitude:
36.5925524528372 longitude:
-108.192162894853

7. County:
San Juan

8. Operator Name and Address:
ENERGEN RESOURCES CORPORATION
2010 Afton Place
Farmington 87401

9. OGRID:
162928

10. Phone Number:
505-324-4154

11. Last Fracture Date:
8/23/2013 Frac Performed by: Baker Hughes

12. Production Type:
G

13. Pool Code(s):
97232

14. Gross Fractured Interval:
5,160 ft to 5,470 ft

15. True Vertical Depth (TVD):
6,204 ft

16. Total Volume of Fluid Pumped:
52,500 gals

17. HYDRAULIC FLUID COMPOSITION AND CONCENTRATION:

Trade Name	Supplier	Purpose	Ingredients	(CAS #) Chemical Abstract Service #	Maximum Ingredient Concentration in Additive (% by mass)	Maximum Ingredient Concentration in HF Fluid (% by mass)
Water	Operator	Carrier	Water	7732-18-5	100%	52.74215%
HCl, 10.1 - 15%	Baker Hughes	Acidizing	Hydrochloric Acid	7647-01-0	15%	0.34945%
			Water	7732-18-5	85%	1.98019%
Alpha 1427	Baker Hughes	Biocide	Didecyl Dimethyl Ammonium Chloride	7173-51-5	10%	0.00474%
			Ethanol	64-17-5	5%	0.00237%
			Glutaraldehyde	111-30-8	30%	0.01423%
			Quaternary Ammonium Compound	68424-85-1	5%	0.00237%
Enzyme G HT-I	Baker Hughes	Breaker	Tryptone	73049-73-7	5%	0.00126%
			Water	7732-18-5	100%	0.02512%
			Yeast Extract	08013-01-2	5%	0.00126%
BF-7L	Baker Hughes	Buffer	Potassium Carbonate	584-08-7	60%	0.10007%
ClayCare, tote	Baker Hughes	Clay Control	Choline Chloride	67-48-1	75%	0.04028%
			Water	7732-18-5	30%	0.01611%
CI-27	Baker Hughes	Corrosion Inhibitor	Fatty Acids	Trade Secret	30%	0.00161%
			Methanol	67-56-1	60%	0.00322%
			Olefin	Trade Secret	5%	0.00027%
			Polyoxyalkylenes	Trade Secret	30%	0.00161%
			Propargyl Alcohol	107-19-7	10%	0.00054%
			Thiourea Polymer	68527-49-1	30%	0.00161%
XLW-4	Baker Hughes	Crosslinker	Sodium Tetraborate	1303-96-4	30%	0.0192%
FAW-22	Baker Hughes	Foamer	Alkyl Sulfate (1 of 3)	Trade Secret	1%	0.00248%
			Alkyl Sulfate (2 of 3)	Trade Secret	1%	0.00248%
			Alkyl Sulfate (3 of 3)	Trade Secret	1%	0.00248%
			Ammonium Alkyl Ether Sulfate	Trade Secret	10%	0.02485%
			Ethoxylated Alcohol	Trade Secret	1%	0.00248%
			Isopropanol	67-63-0	30%	0.07454%
			Sodium Sulfonate	68439-57-6	30%	0.07454%
GW-3LDF	Baker Hughes	Gelling Agent	1-butoxy-2-propanol	5131-66-8	5%	0.01551%
			Crystalline Silica: Quartz	14808-60-7	5%	0.01551%
			Guar Gum	9000-30-0	60%	0.18611%
			Isotridecanol, ethoxylated	9043-30-5	5%	0.01551%
			Paraffinic Petroleum Distillate	64742-55-8	30%	0.09305%
			Petroleum Distillates	64742-47-8	30%	0.09305%
Ferrotrol 300L	Baker Hughes	Iron Control	Citric Acid	77-92-9	60%	0.0076%
Nitrogen	Baker Hughes	Nitrogen	Liquid Nitrogen	7727-37-9	100%	22.07808%
NE-900, tote	Baker Hughes	Non-emulsifier	Methanol	67-56-1	30%	0.01526%
			Nonyl phenyl polyethylene glycol ether	9016-45-9	10%	0.00509%
Parasorb 5005, 50 lb bag	Baker Hughes	Paraffin Inhibitor	Calcined Diatomaceous Earth	91053-39-3	100%	0.12049%
			Complex Ester	Trade Secret	30%	0.03615%
			Crystalline Silica: Quartz (SiO2)	14808-60-7	1%	0.0012%
			Ethylene-Vinyl Acetate Copolymer	Trade Secret	5%	0.00602%
			Heavy Aromatic Naphtha	64742-94-5	10%	0.01205%
			Mineral Oil	8042-47-5	5%	0.00602%
			Naphthalene	91-20-3	1%	0.0012%
Sand, Brown, 20/40	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100%	20.10478%
Sand, White, 100 mesh	Baker Hughes	Proppant	Crystalline Silica (Quartz)	14808-60-7	100%	1.29164%
ScaleSorb 3, (25# pail)	Baker Hughes	Scale Inhibitor	Amino Alkyl Phosphonic Acid	Trade Secret	30%	0.00904%
			Crystalline Silica: Quartz (SiO2)	14808-60-7	1%	0.0003%
			Diatomaceous Earth, Calcined	91053-39-3	100%	0.03012%
			Phosphonic Acid	13598-36-2	1%	0.0003%
GasFlo G, 330 gal tote	Baker Hughes	Surfactant	Methanol	67-56-1	30%	0.01265%
			Oxyalkylated Alkylphenol (1)	Trade Secret	10%	0.00422%
			Oxyalkylated Alkylphenol (2)	Trade Secret	10%	0.00422%
			Oxyalkylated Amine	Trade Secret	3%	0.00127%
			Polyoxyalkylene	Trade Secret	10%	0.00422%
Ingredients shown above are subject to 29 CFR 1910			2-butoxy-1-propanol	15821-83-7	0%	0.0003102%
			Antifoam	Trade Secret	0%	5E-06%
			Copolymer	Trade Secret	0%	0.0203447%
			Ethylene Glycol	107-21-1	0%	0.0024846%
			Fatty Amide Derivative	70851-08-0	0%	0.0024846%
			Formaldehyde	50-00-0	0%	0.0024872%
			Glycerol	56-81-5	0%	0.0003767%
			Lactose	5989-81-1	0%	0.0002512%
			Potassium Hydroxide	1310-58-3	0%	0.0016679%
			Sodium Chloride	7647-14-5	0%	0.002637%
			Sodium Sulfate	7757-82-6	0%	0.0024846%
			Soy	8002-43-5	0%	1E-05%
			Water	7732-18-5	0%	0.3022846%

18. I, as Operator, hereby certify that the information shown on this disclosure form is true and complete to the best of my knowledge and belief.

Signature: Signed Electronically Printed Name: Anna Stotts Title: Regulatory Analyst

Date: 10/14/2013

E-mail Address: astotts@energen.com

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