

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 November 8, 2013

1. WELL API NO:
30-015-42646

2. Well Name:
MARQUARDT FEDERAL #017H

3. Well Number:
017H

HYDRAULIC FRACTURING FLUID
DISCLOSURE

☒ Original

☐ Amendment

4. Surface Hole Location:
Unit:O Lot:O Section:12 Township:25S Range:26E
Feet from:330 N/S Line:S
Feet from:1650 E/W Line:E

5. Bottom Hole Location:
Unit:O Lot:O Section:12 Township:25S Range:26E
Feet from:330 N/S Line:S
Feet from:1650 E/W Line:E

6. latitude: 32.138092 longitude: -104.2432785

7. County: Eddy

8. Operator Name and Address:
CIMAREX ENERGY CO. OF COLORADO
202 S. Cheyenne Ave, Ste 1000
Tulsa 74103

9. OGRID: 162683

10. Phone Number: 918-295-1763

11. Last Fracture Date: 2/2/2016 Frac Performed by: Halliburton

12. Production Type:

13. Pool Code(s):
97494

14. Gross Fractured Interval:
7,431 ft to 7,471 ft

15. True Vertical Depth (TVD):
7,471 ft

16. Total Volume of Fluid Pumped:
4,072,993 gals

17. Total Volume of Re-Use Water Pumped:
N/A

18. Percent of Re-Use Water in Fluid Pumped:
Not Disclosed

19. 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)
Fresh Water	Operator	Base Fluid	Fresh Water	7732-18-5		83.48967%
BA-40L, BC-140 X2, LOSURF-360W, OPTIFLO-IIIa, Opti	Halliburton	Breaker, Buffer, Friction Reducer, Gelling Agent, Proppant, Surfactant	Crystalline silica, quartz	14808-60-7	100%	15.84191%
			Formic acid	64-18-6	100%	0.33903%
			Water	7732-18-5	100%	0.11618%
			Guar gum	9000-30-0	100%	0.08145%
			Poly(oxy-1,2-ethanediyl), ,alpha.-isodecyl-, omega.-hydroxy-	61827-42-7	30%	0.02055%
			Monoethanolamine borate	26038-87-9	100%	0.00921%
			Inorganic salt	Proprietary	30%	0.00735%
			Hydrotreated light petroleum distillate	64742-47-8	30%	0.00732%
			Polyacrylate	Proprietary	30%	0.00732%
			Glycerine	56-81-5	10%	0.00685%
			Bentonite, benzyl(hydrogenated tallow alkyl) dimethylammonium stearate complex	121888-68-4	5%	0.00407%
			Complex alkylamine	Proprietary	5%	0.00343%
			Potassium carbonate	584-08-7	60%	0.00296%
			Sodium perborate tetrahydrate	10486-00-7	100%	0.00292%
			Ethylene glycol	107-21-1	30%	0.00276%
			Alcohols, C12-16, ethoxylated	68551-12-2	10%	0.00244%
			Ammonium chloride	12125-02-9	10%	0.00244%
			Ammonium persulfate	7727-54-0	100%	0.00243%
			Surfactant mixture	Proprietary	1%	0.00163%
			9-Octadecenamide, n,n-bis-2 (hydroxy-ethyl)-, (Z)	93-83-4	5%	0.00122%
			Fatty acid ester	Proprietary	5%	0.00122%
			Sodium persulfate	7775-27-1	100%	0.00106%
			Silica gel	112926-00-8	1%	0.00081%
			Polymer	Proprietary	30%	0.00073%
			Alkane	Proprietary	1%	0.00069%
			Crystalline Silica, Quartz	14808-60-7	0.1%	8E-05%
			Talc	14807-96-6	1%	2E-05%
			2,7-Naphthalenedisulfonic acid, 3-hydroxy-4-[(4-sulfur-1-naphthalenyl) azo] -, trisodium salt	915-67-3	0.1%	1E-05%
			Ethylenediaminetetraacetic acid, tetrasodium salt	64-02-8	0.01%	1E-05%
			Hydrogen peroxide	7722-84-1	0.01%	1E-05%
			Nitrotriactic acid, trisodium salt monohydrate	5064-31-3	0.01%	1E-05%
			Sodium bicarbonate	144-55-8	0.01%	1E-05%
			Sodium glycolate	2836-32-0	0.01%	1E-05%
			Sodium hydroxide	1310-73-2	0.01%	1E-05%
			Sodium sulfate	7757-82-6	0.1%	0%
HCL 15%	Petroplex	Acid	Hydrochloric Acid	7647-01-0	15%	0.00597%
Cronox AK-50	Petroplex	Corrosion Inhibitor	Oxyalkylated Alkylphenol	Proprietary	30%	2E-05%
			Heavy Aromatic Naptha	64742-94-5	30%	2E-05%
			Isopropanol	67-63-0	30%	2E-05%
			Fatty Acids	Proprietary	10%	1E-05%
			Complex Alkylaryl Poly-Ester	Proprietary	10%	1E-05%
			Tar Bases, Quinoline Derivatives, Benzyl Chloride-Quaternized	72480-70-7	10%	1E-05%
			Formaldehyde	50-00-0	10%	1E-05%
			Acetylenic Alcohol	Proprietary	5%	0%
			Propargyl Alcohol	107-19-7	5%	0%
			Napthalene	91-20-3	5%	0%
Citric Acid	Petroplex	Iron Control	Citric Acid	77-92-9	100%	0.00199%
EC9546A	Petroplex	Surfactant	Heavy Aromatic Naptha	64742-94-5	10%	1E-05%
			Isopropanol	67-63-0	60%	4E-05%
			Polyethylene Glycol	25322-68-3	5%	0%
			Napthalene	91-20-3	1%	0%
			Phosphoric Acid Ester	Proprietary	10%	1E-05%
			Oxyalkylated Alcohol	Proprietary	10%	1E-05%
			Oxyalkylated Alkyl Alcohol	Proprietary	10%	1E-05%
ClO2	Bosque	Biocide	Chlorine Dioxide	10049-04-4	100%	0.00023%

20. 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: Skipper Herring

Manager Stimulation

Title: Operations

Date: 2/22/2016

E-mail Address: sherring@cimarex.com

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