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 6, 2013

1. WELL API NO. 30-025-41362
2. Well Name: JAMES FEDERAL #021H
3. Well Number: 021H

HYDRAULIC FRACTURING FLUID DISCLOSURE

☒ Original

☐ Amendment

4. Surface Hole Location:
Unit:B Lot:B Section:29 Township:23S Range:32E
Feet from:185 N/S Line:N
Feet from:1980 E/W Line:E

5. Bottom Hole Location:
Unit:B Lot:B Section:29 Township:23S Range:32E
Feet from:185 N/S Line:N
Feet from:1980 E/W Line:E

6. latitude: 32.2822364043981 longitude: -103.694566657651

7. County: Lea

8. Operator Name and Address:
CIMAREX ENERGY CO.
600 N MARIENFELD STREET
SUITE 600
MIDLAND 79701

9. OGRID: 215099

10. Phone Number:

11. Last Fracture Date: 2/24/2015 Frac Performed by: Halliburton

12. Production Type: O

13. Pool Code(s): 53805

14. Gross Fractured Interval: 9,033 ft to 9,250 ft

15. True Vertical Depth (TVD): 9,250 ft

16. Total Volume of Fluid Pumped: 6,745,941 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	100%	89.01538%
Premium White Sand	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100%	10.85898%
PermVis VFR-10	Halliburton	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8	30%	0.0212%
			Alcohols, C12-16, exhoxylated	68551-12-2	10%	0.00707%
			Ammonium chloride	12125-02-9	10%	0.00707%
			9-Octadecenamide, n,n-bis-2 (hydroxy-ethyl)-,(Z)	93-83-4	5%	0.00353%
LoSurf-360W	Halliburton	Surfactant	Complex alkylamine	Proprietary	5%	0.00436%
			Glycerine	56-81-5	10%	0.00872%
			Poly(oxy-1,2-ethanediyl), .alpha.-isodecyl-.omega.-hydroxy-	61827-42-7	30%	0.02615%
OptiKleen-WF	Halliburton	Concentrate	Sodium perborate tetrahydrate	10486-00-7	100%	0.0042%
HCL 15%	Petroplex	Acid	Hydrochloric Acid	7647-01-0	15%	0.00615%
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 Polyo-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%	0.00205%
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%	0.00015%
Non MSDS Ingredients			Alkane	Proprietary	0%	0%
			Ethylenediaminetetraacetic acid, tetrasodium salt	64-02-8	0%	0%
			Hydrogen peroxide	7722-84-1	0%	0%
			Nitrotriacetic acid, trisodium salt monohydrate	5064-31-3	0%	0%
			Sodium bicarbonate	144-55-8	0%	0%
			Sodium glycollate	2836-32-0	0%	0%
			Sodium hydroxide	1310-73-2	0%	0%
			Water	7732-18-5	0%	0%

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 Title: Manager Stimulation Operations

Date: 4/13/2015

E-mail Address: sherring@cimarex.com

NMOCD does not require the reporting of information beyond MSDS data as described in 29 CFR 1910.1200. NMOCD does not require the reporting or disclosure of proprietary, trade secret or confidential business information.