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. 30-015-42078
2. Well Name: HACKBERRY 23 FEDERAL COM #003H
3. Well Number: 003H

## HYDRAULIC FRACTURING FLUID DISCLOSURE

☒ Original

☐ Amendment

4. Surface Hole Location:
Unit:L Lot:L Section:24 Township:19S Range:30E
Feet from:2130 N/S Line:S
Feet from:180 E/W Line:W

5. Bottom Hole Location:
Unit:L Lot:L Section:24 Township:19S Range:30E
Feet from:2130 N/S Line:S
Feet from:180 E/W Line:W

6. latitude: 32.6444208194421 longitude: -103.933598063892

7. County: Eddy

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: 2/2/2015 Frac Performed by: Schlumberger

12. Production Type: O

13. Pool Code(s): 97020

14. Gross Fractured Interval: 8,376 ft to 8,529 ft

15. True Vertical Depth (TVD): 8,529 ft

16. Total Volume of Fluid Pumped: 3,846,654 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) |
|---|---|---|---|---|---|---|
| WF120, YF120Flex | Schlumberger | Surfactant , Breaker, Gelling Agent, Crosslinker, Propping Agent | Water (Including Mix Water Supplied by Client) | NA | 0% | 83.54474% |
| | | | Crystalline silica | 14808-60-7 | 96.4475% | 15.8506% |
| | | | Guar gum | 9000-30-0 | 1.22133% | 0.20072% |
| | | | Potassium borate | 1332-77-0 | 0.53289% | 0.08758% |
| | | | Phenolic resin | 9003-35-4 | 0.4718% | 0.07754% |
| | | | Formaldehyde, polymer with phenol and 1,3,5,7-tetraazatricyclo [3.3.1.13,7]decane | 37337-65-8 | 0.22202% | 0.03649% |
| | | | Potassium hydroxide | 1310-58-3 | 0.19692% | 0.03236% |
| | | | Glycerol | 56-81-5 | 0.17376% | 0.02856% |
| | | | Diammonium peroxidisulphate | 7727-54-0 | 0.1241% | 0.0204% |
| | | | Polyethylene glycol monohexyl ether | 31726-34-8 | 0.05619% | 0.00923% |
| | | | Vinylidene chloride/methylacrylate copolymer | 25038-72-6 | 0.01984% | 0.00326% |
| | | | Non-crystalline silica (impurity) | 7631-86-9 | 0.00308% | 0.00051% |
| | | | Dicoco dimethyl quaternary ammonium chloride | 61789-77-3 | 0.00236% | 0.00039% |
| | | | Magnesium silicate hydrate (talc) | 14807-96-6 | 0.0006% | 0.0001% |
| | | | Propan-2-ol | 67-63-0 | 0.00048% | 8E-05% |
| | | | poly (tetrafluoroethylene) | 9002-84-0 | 0.00024% | 4E-05% |
| HCL 15% | Petroplex | Acid | Hydrochloric Acid | 7647-01-0 | 0.09297% | 0.01528% |
| Cronox AK-50 | Petroplex | Corrosion Inhibitor | Oxyalkylated Alkylphenol | Proprietary | 0.00033% | 5E-05% |
| | | | Heavy Aromatic Naptha | 64742-94-5 | 0.00033% | 5E-05% |
| | | | Isopropanol | 67-63-0 | 0.00033% | 5E-05% |
| | | | Fatty Acids | Proprietary | 0.00011% | 2E-05% |
| | | | Complex Alkylaryl Polyo-Ester | Proprietary | 0.00011% | 2E-05% |
| | | | Tar Bases, Quinoline Derivatives, Benzyl Chloride-Quaternized | 72480-70-7 | 0.00011% | 2E-05% |
| | | | Formaldehyde | 50-00-0 | 0.00011% | 2E-05% |
| | | | Acetylenic Alcohol | Proprietary | 6E-05% | 1E-05% |
| | | | Propargyl Alcohol | 107-19-7 | 6E-05% | 1E-05% |
| | | | Napthalene | 91-20-3 | 6E-05% | 1E-05% |
| Citric Acid | Petroplex | Iron Control | Citric Acid | 77-92-9 | 0.03102% | 0.0051% |
| EC9546A | Petroplex | Surfactant | Heavy Aromatic Naptha | 64742-94-5 | 0.00011% | 2E-05% |
| | | | Isopropanol | 67-63-0 | 0.00064% | 0.00011% |
| | | | Polyethylene Glycol | 25322-68-3 | 5E-05% | 1E-05% |
| | | | Napthalene | 91-20-3 | 1E-05% | 0% |
| | | | Phosphoric Acid Ester | Proprietary | 0.00011% | 2E-05% |
| | | | Oxyalkylated Alcohol | Proprietary | 0.00011% | 2E-05% |
| | | | Oxyalkylated Alkyl Alcohol | Proprietary | 0.00011% | 2E-05% |
| ClO2 | Bosque | Biocide | Chlorine Dioxide | 10049-04-4 | 0.00063% | 0.0001% |
| † Proprietary Technology | | | | | 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: 2/26/2015

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.