

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

1. WELL API NO:  
30-025-42680

2. Well Name:  
THISTLE UNIT #109H

3. Well Number:  
109H

HYDRAULIC FRACTURING FLUID DISCLOSURE

☒ Original

☐ Amendment

4. Surface Hole Location:  
Unit/D:    Lot/D:    Section: 22    Township: 23S    Range: 33E  
Feet from: 250    N/S Line: N  
Feet from: 350    E/W Line: W

5. Bottom Hole Location:  
Unit/D:    Lot/D:    Section: 22    Township: 23S    Range: 33E  
Feet from: 250    N/S Line: N  
Feet from: 350    E/W Line: W

6. latitude:    32.296787    longitude:    -103.5676268

7. County:  
LBS

8. Operator Name and Address:  
DEVON ENERGY PRODUCTION COMPANY, LP  
333 W. Sheridan Avenue  
Oklahoma City 73102

9. OGRID:    6137    10. Phone Number:    405-228-8588

11. Last Fracture Date:    8/30/2016    Frac Performed by:    FTSI

12. Production Type:  
O

13. Pool Code(s):  
59900

14. Gross Fractured Interval:  
Confidential

15. True Vertical Depth (TVD):  
10,101 ft.

16. Total Volume of Fluid Pumped:  
81,358,682 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) |
|-------------------------|----------|--------------------------|-------------------------------------------------------------------------------------|-------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
| Water                   | Operator | Carrier                  | Water                                                                               | 7732-18-5                           |                                                          | 86.3228588%                                              |
| Hydrochloric Acid (HCl) | FTSI     | Acid                     | Hydrogen Chloride                                                                   | 7647-01-0                           | 37%                                                      | 0.0763012%                                               |
|                         |          |                          | Water                                                                               | 7732-18-5                           | 63%                                                      | 0.1299182%                                               |
| CI-150                  | FTSI     | Acid Corrosion Inhibitor | Isopropanol                                                                         | 67-63-0                             |                                                          | 0.000127%                                                |
|                         |          |                          | Dimethylformamide                                                                   | 68-12-2                             | 30%                                                      | 4.23E-05%                                                |
|                         |          |                          | Organic amine resin salt                                                            | Proprietary                         | 30%                                                      | 0.000127%                                                |
|                         |          |                          | Quaternary ammonium compound                                                        | Proprietary                         | 10%                                                      | 4.23E-05%                                                |
|                         |          |                          | Aromatic aldehyde                                                                   | Proprietary                         | 30%                                                      | 0.000127%                                                |
|                         |          |                          | Ethylene Glycol                                                                     | 107-21-1                            | 30%                                                      | 0.000127%                                                |
|                         |          |                          | Methanol                                                                            | 67-56-1                             | 60%                                                      | 0.000254%                                                |
|                         |          |                          | Aromatic Ketone compound                                                            | Proprietary                         | 30%                                                      | 0.000127%                                                |
|                         |          |                          | Aromatic Aldehyde                                                                   | Proprietary                         | 10%                                                      | 4.23E-05%                                                |
|                         |          |                          | Ethoxylated Alcohols                                                                | Proprietary                         | 10%                                                      | 4.23E-05%                                                |
|                         |          |                          | Oxyalkylated Alcohol                                                                | Proprietary                         | 5%                                                       | 2.12E-05%                                                |
|                         |          |                          | Acetic Acid                                                                         | 64-19-7                             | 5%                                                       | 2.12E-05%                                                |
|                         |          |                          | Acetophenone                                                                        | 98-38-2                             | 5%                                                       | 2.12E-05%                                                |
|                         |          |                          | Oxyalkylated Fatty Amine                                                            | Proprietary                         | 5%                                                       | 2.12E-05%                                                |
|                         |          |                          | Formaldehyde                                                                        | 50-00-0                             | 5%                                                       | 2.12E-05%                                                |
|                         |          |                          | Water                                                                               | 7732-18-5                           | 10%                                                      | 4.23E-05%                                                |
|                         |          |                          | Fatty Acid                                                                          | Proprietary                         | 0.1%                                                     | 4E-07%                                                   |
|                         |          |                          | Fatty Acid Salt                                                                     | Proprietary                         | 0.1%                                                     | 4E-07%                                                   |
|                         |          |                          | Aliphatic alcohol                                                                   | Proprietary                         | 0.1%                                                     | 4E-07%                                                   |
|                         |          |                          | Alkylene Oxide Block Polymer                                                        | Proprietary                         | 10%                                                      | 4.23E-05%                                                |
|                         |          |                          | Polyalkylene glycol                                                                 | Proprietary                         | 10%                                                      | 4.23E-05%                                                |
|                         |          |                          | Diethylene glycol                                                                   | 111-46-6                            | 10%                                                      | 0.0035660%                                               |
|                         |          |                          | 2-Butoxyethanol                                                                     | 111-76-2                            | 10%                                                      | 0.0035660%                                               |
|                         |          |                          | 2-Propanol                                                                          | 67-63-0                             | 10%                                                      | 0.0035660%                                               |
|                         |          |                          | Dodecylbenzenesulfonic acid                                                         | 27176-87-0                          | 5%                                                       | 0.0041783%                                               |
|                         |          |                          | Water                                                                               | 7732-18-5                           | 90%                                                      | 0.0752092%                                               |
| FE-200L                 | FTSI     | Iron Control             | Tetrasodium EDTA                                                                    | 64-02-8                             | 4%                                                       | 0.000229%                                                |
|                         |          |                          | Sodium hydroxide                                                                    | 1310-73-2                           | 2%                                                       | 1.12E-05%                                                |
|                         |          |                          | Trisodium Nitrotriacetic acid                                                       | 5064-31-3                           | 2%                                                       | 1.12E-05%                                                |
|                         |          |                          | Ethylenediaminetriacetic acid, trisodium salt                                       | 19019-43-3                          | 0.8%                                                     | 4.5E-06%                                                 |
|                         |          |                          | Water                                                                               | 7732-18-5                           |                                                          |                                                          |
|                         |          |                          | Diethylene glycol                                                                   | 111-46-6                            | 65%                                                      | 0.003631%                                                |
|                         |          |                          | Sodium formate                                                                      | 141-53-7                            | 0.6%                                                     | 3.4E-06%                                                 |
|                         |          |                          | Sodium glycolate                                                                    | 2836-32-0                           | 1.5%                                                     | 8.4E-06%                                                 |
|                         |          |                          | Iminodiacetate disodium salt                                                        | 17593-73-6                          | 0.2%                                                     | 1.1E-06%                                                 |
|                         |          |                          | Petroleum distillate                                                                | 64742-47-8                          | 30%                                                      | 0.0091274%                                               |
|                         |          |                          | hydro-treated light                                                                 |                                     |                                                          |                                                          |
|                         |          |                          | Oleic Acid Diethanolamide                                                           | 93-83-4                             | 1.5%                                                     | 0.004564%                                                |
|                         |          |                          | Acrylamide FW acrylic acid, ammonium salt                                           | 26100-47-0                          | 25%                                                      | 0.0076081%                                               |
|                         |          |                          | Water                                                                               | 7732-18-5                           |                                                          |                                                          |
|                         |          |                          | Sorbitan Monoleate                                                                  | 1338-43-8                           | 60%                                                      | 0.016254%                                                |
|                         |          |                          | Alcohols (C12-C14), ethoxylated                                                     | 68439-50-9                          | 4%                                                       | 0.001217%                                                |
|                         |          |                          | Alcohols (C12-C16), ethoxylated                                                     | 68551-12-2                          | 4%                                                       | 0.001217%                                                |
|                         |          |                          | Alcohols (C10-C16), ethoxylated                                                     | 68002-97-1                          | 4%                                                       | 0.001217%                                                |
|                         |          |                          | Acrylamide                                                                          | 79-06-1                             | 0.1%                                                     | 3.04E-05%                                                |
|                         |          |                          | Dewaxed heavy paraffinic                                                            | 64742-85-0                          | 1.5%                                                     | 0.004564%                                                |
|                         |          |                          | Ammonium Acrylate                                                                   | 10604-69-0                          | 0.5%                                                     | 0.0001521%                                               |
|                         |          |                          | Ammonium Chloride                                                                   | 12125-02-9                          | 12%                                                      | 0.0036509%                                               |
|                         |          |                          | Polyethylene glycol monooleate                                                      | 9004-96-0                           | 3%                                                       | 0.0009127%                                               |
|                         |          |                          | Alkylloxypolyethyleneoxyethanol                                                     | 84133-50-6                          | 1%                                                       | 0.0003042%                                               |
|                         |          |                          | Sorbitol Tetraoleate                                                                | 61723-83-9                          | 2%                                                       | 0.0006085%                                               |
|                         |          |                          | Copolymer of acrylamide and sodium acrylate                                         | 25967-30-8                          | 33%                                                      | 0.0100401%                                               |
|                         |          |                          | Surfactant                                                                          | Proprietary                         | 7%                                                       | 0.0021297%                                               |
|                         |          |                          | Hydro-treated heavy paraffinic                                                      | 64742-54-7                          | 5%                                                       | 0.0015212%                                               |
|                         |          |                          | Sorbitan, monooctadecanoate, poly(oxy-1,2-ethanediyl) derivs                        | 9005-67-8                           | 5%                                                       | 0.0015212%                                               |
| CS POLYBREAK 210        | FTSI     | Polymer breaker          | Isopropanol                                                                         | 67-63-0                             | 0.3%                                                     | 8.19E-06%                                                |
|                         |          |                          | Sodium chlorite                                                                     | 7758-19-2                           | 12%                                                      | 0.003381%                                                |
|                         |          |                          | Water                                                                               | 7732-18-5                           | 95%                                                      | 0.0267659%                                               |
|                         |          |                          | Sodium Hydroxide                                                                    | 1310-73-2                           | 0%                                                       | 2E-07%                                                   |
| KCLS-4                  | FTSI     | Clay Control             | Chlorine Dioxide                                                                    | 10049-04-4                          | 0%                                                       | 3E-07%                                                   |
|                         |          |                          | No hazardous materials                                                              | Not applicable.                     | 0%                                                       | 0%                                                       |
|                         |          |                          | Water                                                                               | 7732-18-5                           | 30%                                                      | 0.0281573%                                               |
|                         |          |                          | Choline Chloride                                                                    | 67-48-1                             | 75%                                                      | 0.0703932%                                               |
| HVG-1 4.0               | FTSI     | Water gelling agent      | Guar gum                                                                            | 9000-30-0                           | 55%                                                      | 0.0646871%                                               |
|                         |          |                          | Raffinates, Sorption Process                                                        | 64741-85-1                          | 55%                                                      | 0.0646871%                                               |
|                         |          |                          | Quartz                                                                              | 14808-50-7                          | 4%                                                       | 0.0047045%                                               |
|                         |          |                          | Isotriecanol, ethoxylated                                                           | 9043-30-5                           | 35%                                                      | 0.0023523%                                               |
|                         |          |                          | Petroleum Distillate                                                                | 64742-47-8                          | 55%                                                      | 0.0646871%                                               |
|                         |          |                          | Suspending Agent                                                                    | 1302-78-9                           | 5%                                                       | 0.0058906%                                               |
| APB-1                   | FTSI     | Gel breaker              | Ammonium Persulfate                                                                 | 7727-54-0                           | 100%                                                     | 0.011062%                                                |
| B-10                    | FTSI     | High pH buffer           | Potassium carbonate                                                                 | 584-08-7                            | 48%                                                      | 0.0142989%                                               |
|                         |          |                          | Potassium hydroxide                                                                 | 1310-58-3                           | 20%                                                      | 0.0056676%                                               |
|                         |          |                          | Water                                                                               | 7732-18-5                           | 70%                                                      | 0.0208521%                                               |
| BXL-2                   | FTSI     | Borate crosslinker       | Potassium metaborate                                                                | 16481-66-6                          | 25%                                                      | 0.0061511%                                               |
|                         |          |                          | Boric acid                                                                          | 10043-35-3                          | 5%                                                       | 0.0012302%                                               |
|                         |          |                          | Potassium hydroxide                                                                 | 1310-58-3                           | 15%                                                      | 0.0136906%                                               |
|                         |          |                          | Water                                                                               | 7732-18-5                           | 75%                                                      | 0.0184532%                                               |
| BXL-3                   | FTSI     | Crosslinker              | proprietary (borate) Salt                                                           | 1319-33-1                           | 40%                                                      | 0.0253756%                                               |
|                         |          |                          | Hydrated aluminium-magnesium silicate (polyborosilite)                              | 12174-11-7                          | 5%                                                       | 0.003172%                                                |
|                         |          |                          | Calcium carbonate                                                                   | 1317-85-3                           | 5%                                                       | 0.003172%                                                |
|                         |          |                          | Ethane-1,2-Diol                                                                     | 107-21-1                            | 0%                                                       | 0%                                                       |
|                         |          |                          | Sodium Borate                                                                       | 1303-96-4                           | 0%                                                       | 0%                                                       |
|                         |          |                          | Acrylic Polymer                                                                     | 9003-04-7                           | 0.9%                                                     | 0.000571%                                                |
|                         |          |                          | Polysaccharide                                                                      | 11138-66-2                          | 0.2%                                                     | 0.0001269%                                               |
|                         |          |                          | polyanionic cellulose                                                               | 9004-32-4                           | 1%                                                       | 0.0006344%                                               |
|                         |          |                          | modified polyacrylate                                                               | trade secret                        | 1%                                                       | 0.0006344%                                               |
|                         |          |                          | magnesium                                                                           | 16389-88-1                          | 1%                                                       | 0.0006344%                                               |
|                         |          |                          | water                                                                               | 7732-18-5                           | 50%                                                      | 0.0317195%                                               |
|                         |          |                          | potassium formate                                                                   | 590-29-4                            | 35%                                                      | 0.022523%                                                |
|                         |          |                          | crystalline silica, quartz                                                          | 14808-60-7                          | 0.05%                                                    | 3.17E-05%                                                |
|                         |          |                          | sodium chloride                                                                     | 7647-14-5                           | 0.01%                                                    | 3.2E-06%                                                 |
| LTB-1                   | FTSI     | Breaker                  | Ammonium Persulfate                                                                 | 7727-54-0                           | 84%                                                      | 0.0010087%                                               |
|                         |          |                          | Cured acrylic resin                                                                 | 25085-19-2                          | 22%                                                      | 0.0002642%                                               |
|                         |          |                          | Talc                                                                                | 14807-96-6                          | 0.6%                                                     | 0.0001643%                                               |
| ICI-3240                | FTSI     | Biocide                  | Dazomet (Tetrahydro-3, 5-dimethyl-2H-1, 3, 5-thiadiazine-2-thione, Sodium Hydroxide | 533-74-4                            | 24%                                                      | 0.0059614%                                               |
|                         |          |                          | Water                                                                               | 1310-73-2                           | 23%                                                      | 0.005713%                                                |
|                         |          |                          | Sodium Hydroxide                                                                    | 7732-18-5                           | 55%                                                      | 0.0136615%                                               |
| 100 Mesh Sand           | FTSI     | proppant                 | Silica, Quartz                                                                      | 14808-60-7                          | 100%                                                     | 2.2475782%                                               |
| 40/70 White             | FTSI     | proppant                 | Silica, Quartz                                                                      | 14808-60-7                          | 100%                                                     | 2.6700531%                                               |
| 30/50 White             | FTSI     | proppant                 | Silica, Quartz                                                                      | 14808-60-7                          | 100%                                                     | 8.0536949%                                               |

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:    Rebecca Deal

Title:    Regulatory Professional

Date:    9/29/2016

E-mail Address:    rebecca.deal@dvn.com

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