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| 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: 30-015-43841 | | | | |
| | | 2. Well Name: CAVERN 16 STATE #001H | | | | |
| | | 3. Well Number: 001H | | | | |
| HYDRAULIC FRACTURING FLUID DISCLOSURE <input checked="" type="checkbox"/> Original <input type="checkbox"/> Amendment | | 4. Surface Hole Location: Unit:L Lot:L Section:16 Township:23S Range:27E Feet from:2310 N/S Line:S Feet from:200 E/W Line:W | | | | |
| | | 5. Bottom Hole Location: Unit:L Lot:L Section:16 Township:23S Range:27E Feet from:202 N/S Line:S Feet from:2282 E/W Line:E | | | | |
| | | 6. latitude: 32.3039038 longitude: -104.2029242 | | | | |
| | | 7. County: Eddy | | | | |
| | | | | | | |
| 8. Operator Name and Address: RKI EXPLORATION & PRODUCTION, LLC 3500 One Williams Center Tulsa 74172 | | 9. OGRID: 246289 | 10. Phone Number: 539-573-5278 | | | |
| 11. Last Fracture Date: 10/2/2016 Frac Performed by: Elite | | 12. Production Type: G | | | | |
| 13. Pool Code(s): 76780 | | 14. Gross Fractured Interval: 9,120 ft to 13,715 ft | | | | |
| 15. True Vertical Depth (TVD): 9,110 ft | | 16. Total Volume of Fluid Pumped: 8,740,705 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 | RKI | Carrier/Base Fluid | Water | 7732-18-5 | 100% | 87.1520963% |
| Sand | Titan Sand | Proppant | Crystalline Silica | 14808-60-7 | 100% | 11.8982301% |
| 15% HCL | Roywell | Acidizing | Hydrochloric Acid | 7647-01-0 | 37% | 0.1619227% |
| | | | Water | 7732-18-5 | 63% | 0.2757062% |
| Chemplex 4-N-1 | Roywell | Acidizing, Iron Sequestrant | Acetic Acid | 64-19-7 | 85% | 0.0026366% |
| | | | Methanol | 67-56-1 | 10% | 0.0003102% |
| ClayBrake 220 | Innospec Oilfield Services | Clay Stabilizer | Choline Chloride | 67-48-1 | 50% | 0.0540375% |
| | | | Magnesium Chloride | 7791-18-6 | 30% | 0.0324225% |
| GelBrake 200 | Innospec Oilfield Services | Gel Degrading Agent | Diammonium Peroxodisulphate | 7727-54-0 | 100% | 0.0004779% |
| | | | Talc | 14807-96-6 | 5% | 2.38E-05% |
| | | | Silica, Crystalline-Quartz | 14808-60-7 | 10% | 4.77E-05% |
| HiRate 600W | Innospec Oilfield Services | Anionic Friction Reducer | Petroleum Distillates, Hydrotreated Light | 64742-47-8 | 30% | 0.0148048% |
| | | | Ammonium Chloride | 12125-02-9 | 15% | 0.0073975% |
| | | | Alcohols (C12-14), Ethoxylated | 68439-50-9 | 1.3% | 0.0006563% |
| | | | Alcohols (C12-16), Ethoxylated | 68551-12-2 | 1.3% | 0.0006563% |
| | | | Alcohols (C10-16), Ethoxylated | 68002-97-1 | 1.3% | 0.0006563% |
| LFC G4 | Innospec Oilfield Services | Guar Slurry | Solvent naphtha, (petroleum) heavy aliphatic | 64742-96-7 | 60% | 0.0771899% |
| MicroBreak GQ 123 | Innospec Oilfield Services | Biocide | n-Alkyl (80%C14, 40%C12, 10%C16) dimethyl benzyl ammonium chloride (32% active) | 68424-85-1 | 1.3% | 0.0003025% |
| | | | Didecyl dimethyl ammonium chloride (48% active) | 7173-51-5 | 1.9% | 0.0004422% |
| | | | Glutaraldehyde | 111-30-8 | 13.1% | 0.0030486% |
| | | | Ethanol | 64-17-5 | 0.8% | 0.0001745% |
| | | | Water | 7732-18-5 | 83% | 0.0193155% |
| Soda Ash | Innospec Oilfield Services | Soda Ash | Sodium Carbonate | 497-19-8 | 100% | 5.97E-05% |
| ScaleCease 7009 | Innospec Oilfield Services | Scale Inhibitor | Amino Methylene Phosphonic Acid Derivative | Proprietary | 38.5% | 0.0086445% |
| | | | Hydrochloric Acid | 7647-01-0 | 5% | 0.0011204% |
| Base Oil | Innospec Oilfield Services | Hydrotreated Light Distillate | Paraffinic Naphthenic Solvent | 64742-47-8 | 100% | 0.0012841% |
| N/A | | Other Chemicals | Water | 7732-18-5 | 0% | 0.104366% |
| | | | Guar Gum | 9000-30-0 | 0% | 0.0591918% |
| | | | Acrylamide P/W acrylic acid, ammonium salt | Proprietary | 0% | 0.0123373% |
| | | | Surfactant Blend | Proprietary | 0% | 0.0049349% |
| | | | Organophilic Clay | Proprietary | 0% | 0.002573% |
| | | | Phosphonic Acid | 13598-36-2 | 0% | 0.0006287% |
| | | | Propylene Carbonate | 108-32-7 | 0% | 0.0004503% |
| | | | Ammonium Acrylate | 10604-69-0 | 0% | 0.0002467% |
| | | | Phosphoric Acid | 7664-38-2 | 0% | 0.0002358% |
| | | | Alcohols, Ethoxylated | Proprietary | 0% | 0.0002316% |
| | | | Cured Acrylic Resin | Proprietary | 0% | 7.65E-05% |
| | | | Acrylamide | 79-06-1 | 0% | 4.93E-05% |
| 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: Kathy Rondeau | | Title: Engineering Technician | | |
| Date: 10/20/2016 | | | | | | |
| E-mail Address: kathy.rondeau@wpxenergy.com | | | | | | |

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