| Submit within 45 days of well completion                                              |                           | State of New Mexico<br>Energy, Minerals and Natural Resources |                                                       |                                                        |                          | Revised November 6, 2013  1. WELL API NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                       |                                       |                        |
|---------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------|------------------------|
|                                                                                       |                           |                                                               |                                                       |                                                        |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                       |                        |
| Santa Fe, NM 87505                                                                    |                           |                                                               |                                                       |                                                        |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                       | 3. Well Number:<br>009 |
| HYDRAULIC FRACTURING FLUID DISCLOSURE                                                 |                           |                                                               |                                                       |                                                        |                          | 4. Surface Hole Location: Unit:A Lot:A Section:17 Township:22S Range:37E Feet from:910 N/S Line:N Feet from:990 E/W Line:E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                       |                                       |                        |
| ⊠ Original                                                                            |                           |                                                               |                                                       | 5. Bottom Hole L<br>Unit:A Lot:A                       | ocation:                 | ownship:22S Range:37E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |                                       |                        |
| □ Amendment                                                                           |                           |                                                               |                                                       |                                                        |                          | Feet from:910<br>Feet from:990<br>6. latitude:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | t from:990 E/W Line:E |                                       |                        |
|                                                                                       |                           |                                                               |                                                       |                                                        |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 965906922443          | 103.179707452849                      |                        |
|                                                                                       |                           |                                                               |                                                       |                                                        |                          | Lea                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                       |                                       |                        |
| 8. Operator Name and Address:<br>VANGUARD PERM<br>5847 San Felipe, S<br>Houston 77057 |                           | 9. OGRID:                                                     |                                                       | 258350                                                 | 10. Phone Numi           | per: 832-327-2252                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                       |                                       |                        |
| 11. Last Fracture Date: 11/8 13. Pool Code(s):                                        |                           |                                                               | 12. Productio                                         | ctured Interval:                                       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                                       |                        |
| 50350<br>15. True Vertical Depth (TVD):                                               |                           | 3,658 ft to 3,730 ft  16. Total Volume of Fluid Pumped:       |                                                       |                                                        | sed:                     | -1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                       |                                       |                        |
| 4,300 ft                                                                              |                           |                                                               |                                                       |                                                        | 61                       | 61,829 gals<br>t of Re-Use Water in Fluid Pumped:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                       |                                       |                        |
| N/A  19. HYDRAULIC FLUID COMPOSITION AND CONCENTRATION:                               |                           |                                                               |                                                       |                                                        |                          | Not Disclosed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                       |                                       |                        |
| 19. HYDRAULIC FLUID Trade Name                                                        | Supplier Supplier         | Purpose Purpose                                               | Ingredients                                           | (CAS #) Chemi                                          | cal Abstract             | Maximum Ingred                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       | Maximum Ingredient                    |                        |
|                                                                                       | 1977                      |                                                               |                                                       | Service #                                              |                          | Concentration in<br>mass)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Section and Paris .   | Concentration in HF Fluid (% by mass) |                        |
| Water<br>Sand                                                                         |                           | Carrier / Base Fluid<br>Proppant                              | Silicon Dioxide                                       | 7732-18-5<br>14808-60-7                                |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 100%<br>100%          | 81.98388%<br>9.17833%                 |                        |
| B-15                                                                                  | Water Science Tech        | Biocide                                                       | Tetrakis<br>(hydroxymethyl)<br>phosphonium<br>sulfate | 55566-30-8                                             |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20%                   | 0.00173%                              |                        |
| 15% Hydrochloric Acid                                                                 | Reagent                   | Scale Dissolver                                               | Water<br>37% Hydrochloric                             | 7732-18-5<br>7647-01-0                                 |                          | ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 80%<br>15%            | 0.00694%<br>0.53448%                  |                        |
| 15% Hydrodilone Add                                                                   | Reagent                   | Scale Dissolver                                               | Acid<br>Water                                         | 7732-18-5                                              |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 85%                   | 3.02873%                              |                        |
| I-122                                                                                 | Chemplex,L.C.             | Acid Corrosion<br>Inhibitor                                   | Methonol                                              | 67-56-1                                                |                          | ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 70%                   | 0.00137%                              |                        |
|                                                                                       |                           |                                                               | Propargyl alcohol                                     | 107-19-7                                               |                          | ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 8%                    | 0.00027%                              |                        |
|                                                                                       |                           |                                                               | Alcohol Ethoxylate<br>Surfactants                     | Trade Secret                                           |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 30%                   | 0.00103%                              |                        |
|                                                                                       |                           |                                                               | n-olefins                                             | Trade Secret                                           |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10%                   | 0.00034%                              |                        |
|                                                                                       |                           |                                                               | thiourea-<br>formaldehyde<br>copolymer                | 68527-49-1                                             |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 30%                   | 0.00103%                              |                        |
| SG-15G                                                                                | PfP Technology            | Polymer                                                       | Guar Gum                                              | 9000-30-0<br>64742-47-8                                |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 50%                   | 0.19306%                              |                        |
|                                                                                       |                           |                                                               | Petroleum Distillate<br>(Mineral Oil)                 |                                                        |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 55%                   | 0.21237%                              |                        |
|                                                                                       |                           |                                                               | Bentonite Clay                                        | 14808-60-7                                             | 14808-60-7<br>68439-51-0 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2%                    | 0.00772%                              |                        |
| XL-335                                                                                | ASK                       | Crosslinker                                                   | Surfactant<br>Ethylene Glycol                         | 107-21-1                                               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2%<br>25%             | 0.00772%<br>0.01675%                  |                        |
| AE 300                                                                                |                           |                                                               | Potassium<br>Hydroxide                                | 1310-58-3 Proprietary Proprietary Proprietary 102-71-6 |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 25%                   | 0.01675%                              |                        |
|                                                                                       |                           |                                                               | Proprietary                                           |                                                        |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 25%                   | 0.01675%                              |                        |
|                                                                                       |                           |                                                               | Proprietary                                           |                                                        |                          | E-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 15%                   | 0.01005%                              |                        |
| DO 4                                                                                  | Danahasada                | Deceler Ostobet                                               | Proprietary                                           |                                                        |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10%                   | 0.0067%                               |                        |
| BC-1                                                                                  | Benchmark                 | Breaker Catalyst                                              | Triethanolamine<br>Diethanolamine                     | 111-42-2                                               |                          | 100%<br>30%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                       | 0.03924%<br>0.01177%                  |                        |
| GB-2                                                                                  | Fritz Industries, Inc.    | Breaker                                                       | Ammonium                                              | 7727-54-0                                              |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 99.9%                 | 0.00716%                              |                        |
| NE-227                                                                                | CESI                      | Non-emulsifier                                                | Persulfate<br>Isopropanol                             | 67-63-0<br>67-56-1                                     |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 15%                   | 0.01083%                              |                        |
|                                                                                       |                           |                                                               | Methanol                                              |                                                        |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 15%                   | 0.01083%                              |                        |
|                                                                                       |                           |                                                               | Ethoxylated<br>Nonylphenol                            | 9016-45-9                                              |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20%                   | 0.01444%                              |                        |
| FE-4                                                                                  | Chemplex, L.C.            | Iron Control Additive  RCS Proppants                          |                                                       | 77-92-9<br>7732-18-5<br>14808-60-7                     |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 55%                   | 0.01122%                              |                        |
|                                                                                       | 8                         |                                                               | Water                                                 |                                                        |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 55%                   | 0.01122%                              |                        |
| Garnett,Pearl RCS                                                                     | Preferred Sands           |                                                               | Quartz(SiO2)                                          |                                                        |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 98%                   | 4.57694%                              |                        |
|                                                                                       |                           |                                                               | Polyurethane Resin<br>Colorant                        | Proprietary Proprietary                                |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 5%<br>1%              | 0.23352%<br>0.0467%                   |                        |
| 20. Las Operator hereby certific                                                      | that the information show | n on this disclosure form is                                  |                                                       |                                                        | edge and helic           | I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1 70                  | 0.0407%                               |                        |
| 20. I, as Operator, hereby certify Signature: Signed E  Date: 3/25/201                | lectronically Prin        | n on this disclosure form is<br>nted Name: Randall Hid        |                                                       | e pest of my knowl                                     | eage and belie           | AND THE RESERVE OF THE PARTY OF | tions Engineer        |                                       |                        |

E-mail Address: rhicks@vnrllc.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.