

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form C-101  
August 1, 2011  
Permit 185105

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

|                                                                                             |  |                               |
|---------------------------------------------------------------------------------------------|--|-------------------------------|
| 1. Operator Name and Address<br>COG OPERATING LLC<br>One Concho Center<br>Midland, TX 79701 |  | 2. OGRID Number<br>229137     |
| 4. Property Code<br>40079                                                                   |  | 3. API Number<br>30-015-42332 |
| 5. Property Name<br>GRAHAM CRACKER 16 STATE                                                 |  | 6. Well No.<br>007H           |

**7. Surface Location**

|                      |                      |                        |                     |         |                         |                      |                          |                      |                       |
|----------------------|----------------------|------------------------|---------------------|---------|-------------------------|----------------------|--------------------------|----------------------|-----------------------|
| UL - Lot<br><b>B</b> | Section<br><b>16</b> | Township<br><b>26S</b> | Range<br><b>28E</b> | Lot Idn | Feet From<br><b>135</b> | N/S Line<br><b>N</b> | Feet From<br><b>1810</b> | E/W Line<br><b>E</b> | County<br><b>Eddy</b> |
|----------------------|----------------------|------------------------|---------------------|---------|-------------------------|----------------------|--------------------------|----------------------|-----------------------|

**8. Proposed Bottom Hole Location**

|                      |                      |                        |                     |                     |                         |                      |                          |                      |                       |
|----------------------|----------------------|------------------------|---------------------|---------------------|-------------------------|----------------------|--------------------------|----------------------|-----------------------|
| UL - Lot<br><b>O</b> | Section<br><b>16</b> | Township<br><b>26S</b> | Range<br><b>28E</b> | Lot Idn<br><b>O</b> | Feet From<br><b>330</b> | N/S Line<br><b>S</b> | Feet From<br><b>1810</b> | E/W Line<br><b>E</b> | County<br><b>Eddy</b> |
|----------------------|----------------------|------------------------|---------------------|---------------------|-------------------------|----------------------|--------------------------|----------------------|-----------------------|

**9. Pool Information**

|                        |       |
|------------------------|-------|
| HAY HOLLOW;BONE SPRING | 30215 |
|------------------------|-------|

**Additional Well Information**

|                                  |                                    |                                        |                                |                                           |
|----------------------------------|------------------------------------|----------------------------------------|--------------------------------|-------------------------------------------|
| 11. Work Type<br><b>New Well</b> | 12. Well Type<br><b>OIL</b>        | 13. Cable/Rotary                       | 14. Lease Type<br><b>State</b> | 15. Ground Level Elevation<br><b>3056</b> |
| 16. Multiple<br><b>N</b>         | 17. Proposed Depth<br><b>13793</b> | 18. Formation<br><b>Bone Spring</b>    | 19. Contractor                 | 20. Spud Date<br><b>4/30/2014</b>         |
| Depth to Ground water            |                                    | Distance from nearest fresh water well |                                | Distance to nearest surface water         |

☒ We will be using a closed-loop system in lieu of lined pits

**21. Proposed Casing and Cement Program**

| Type | Hole Size | Casing Size | Casing Weight/ft | Setting Depth | Sacks of Cement | Estimated TOC |
|------|-----------|-------------|------------------|---------------|-----------------|---------------|
| Surf | 17.5      | 13.375      | 54.5             | 350           | 350             |               |
| Int1 | 12.25     | 9.625       | 36               | 2515          | 700             |               |
| Prod | 8.75      | 5.5         | 17               | 13793         | 2000            | 2300          |

**Casing/Cement Program: Additional Comments**

Plan to drill a 17-1/2" hole to 350' with Fresh Water. Run 13-3/8", 48#, J-55 csg and cmt to surface. Drill 12-1/4" hole to 2515' with Brine, and run 9-5/8", 36# J-55 and cement to surface. Drill 8-3/4" curve and lateral with cut brine to approx 13,793'MD. Run 5-1/2", 17#, P-110 csg and cement to 2,300'.

**22. Proposed Blowout Prevention Program**

| Type       | Working Pressure | Test Pressure | Manufacturer |
|------------|------------------|---------------|--------------|
| Double Ram | 3000             | 3000          | Cameron      |

|                                                                                                                                                                                                                                                                                                                        |                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.<br>I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> , if applicable.<br><br>Signature: | <b>OIL CONSERVATION DIVISION</b>                         |
| Printed Name: Electronically filed by Diane Kuykendall                                                                                                                                                                                                                                                                 | Approved By: Randy Dade                                  |
| Title: Production Reporting Mgr                                                                                                                                                                                                                                                                                        | Title: District Supervisor                               |
| Email Address: dkuykendall@conchoresources.com                                                                                                                                                                                                                                                                         | Approved Date: 4/24/2014      Expiration Date: 4/24/2016 |
| Date: 4/23/2014      Phone: 432-683-7443                                                                                                                                                                                                                                                                               | Conditions of Approval Attached                          |

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**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form C-102  
August 1, 2011  
Permit 185105

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

|                               |                                             |                                        |
|-------------------------------|---------------------------------------------|----------------------------------------|
| 1. API Number<br>30-015-42332 | 2. Pool Code<br>30215                       | 3. Pool Name<br>HAY HOLLOW;BONE SPRING |
| 4. Property Code<br>40079     | 5. Property Name<br>GRAHAM CRACKER 16 STATE | 6. Well No.<br>007H                    |
| 7. OGRID No.<br>229137        | 8. Operator Name<br>COG OPERATING LLC       | 9. Elevation<br>3056                   |

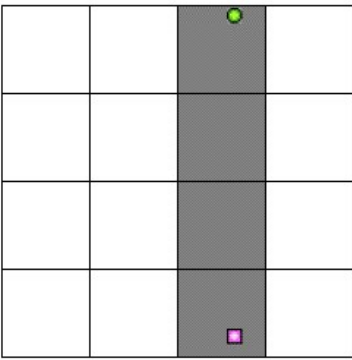
**10. Surface Location**

|               |               |                 |              |         |                  |               |                   |               |                |
|---------------|---------------|-----------------|--------------|---------|------------------|---------------|-------------------|---------------|----------------|
| UL - Lot<br>B | Section<br>16 | Township<br>26S | Range<br>28E | Lot Idn | Feet From<br>135 | N/S Line<br>N | Feet From<br>1810 | E/W Line<br>E | County<br>Eddy |
|---------------|---------------|-----------------|--------------|---------|------------------|---------------|-------------------|---------------|----------------|

**11. Bottom Hole Location If Different From Surface**

|                               |                     |                 |              |                        |                  |               |                   |               |                |
|-------------------------------|---------------------|-----------------|--------------|------------------------|------------------|---------------|-------------------|---------------|----------------|
| UL - Lot<br>O                 | Section<br>16       | Township<br>26S | Range<br>28E | Lot Idn                | Feet From<br>330 | N/S Line<br>S | Feet From<br>1810 | E/W Line<br>E | County<br>EDDY |
| 12. Dedicated Acres<br>160.00 | 13. Joint or Infill |                 |              | 14. Consolidation Code |                  |               |                   | 15. Order No. |                |

**NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION**

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p style="text-align: center;"><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location(s) or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p>E-Signed By: Diane Kuykendall<br/>Title: Production Reporting Mgr<br/>Date: 4/23/2014</p> <hr/> <p style="text-align: center;"><b>SURVEYOR CERTIFICATION</b></p> <p><i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i></p> <p>Surveyed By: Chad Harcrow<br/>Date of Survey: 2/20/2014<br/>Certificate Number: 17777</p> |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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Form APD Comments

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Permit 185105

**PERMIT COMMENTS**

|                                                                                                    |                                        |
|----------------------------------------------------------------------------------------------------|----------------------------------------|
| Operator Name and Address:<br>COG OPERATING LLC [229137]<br>One Concho Center<br>Midland, TX 79701 | API Number:<br>30-015-42332            |
|                                                                                                    | Well:<br>GRAHAM CRACKER 16 STATE #007H |

| Created By | Comment                                                                                                                                                                                                                                                                                                                                                              | Comment Date |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| mreyes1    | OIL: COG Operating has conducted a review to determine if an H2S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal. H2S concentrations of wells in this area from surface to TD are low enough; therefore we do not believe that an H2S Contingency Plan would be necessary. | 4/23/2014    |
| CSHAPARD   | Land s/s                                                                                                                                                                                                                                                                                                                                                             | 4/23/2014    |

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Form APD Conditions  
Permit 185105

**PERMIT CONDITIONS OF APPROVAL**

|                                                                                                    |  |                                        |
|----------------------------------------------------------------------------------------------------|--|----------------------------------------|
| Operator Name and Address:<br>COG OPERATING LLC [229137]<br>One Concho Center<br>Midland, TX 79701 |  | API Number:<br>30-015-42332            |
|                                                                                                    |  | Well:<br>GRAHAM CRACKER 16 STATE #007H |

|                 |                                                                                                                                                                                                                                                                      |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OCD<br>Reviewer | Condition                                                                                                                                                                                                                                                            |
| CSHAPARD        | Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string |