

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

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

|                                                                                       |  |                               |
|---------------------------------------------------------------------------------------|--|-------------------------------|
| 1. Operator Name and Address<br>COG OPERATING LLC<br>550 W TEXAS<br>MIDLAND, TX 79701 |  | 2. OGRID Number<br>229137     |
| 4. Property Code<br>37882                                                             |  | 3. API Number<br>30-015-37507 |
| 5. Property Name<br>FIRECRACKER STATE                                                 |  | 6. Well No.<br>001            |

**7. Surface Location**

| UL - Lot | Section | Township | Range | Lot Idn | Feet From | N/S Line | Feet From | E/W Line | County |
|----------|---------|----------|-------|---------|-----------|----------|-----------|----------|--------|
| O        | 14      | 17S      | 28E   | O       | 330       | S        | 2310      | E        | EDDY   |

**8. Pool Information**

|                       |       |
|-----------------------|-------|
| EMPIRE; GLORIETA-YESO | 96210 |
|-----------------------|-------|

**Additional Well Information**

|                                                                                                                                                                                                                                                                                                                                                                   |                            |                                                  |                         |                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------------|-------------------------|---------------------------------------------|
| 9. Work Type<br>New Well                                                                                                                                                                                                                                                                                                                                          | 10. Well Type<br>OIL       | 11. Cable/Rotary                                 | 12. Lease Type<br>State | 13. Ground Level Elevation<br>3615          |
| 14. Multiple<br>N                                                                                                                                                                                                                                                                                                                                                 | 15. Proposed Depth<br>5400 | 16. Formation<br>Yeso Formation                  | 17. Contractor          | 18. Spud Date<br>2/28/2010                  |
| Depth to Ground water<br>110                                                                                                                                                                                                                                                                                                                                      |                            | Distance from nearest fresh water well<br>> 1000 |                         | Distance to nearest surface water<br>> 1000 |
| Pit: Liner: Synthetic <input checked="" type="checkbox"/> 12 _____ mils thick Clay <input type="checkbox"/> Pit Volume: 5000 _____ bbls Drilling Method:<br>Closed Loop System <input type="checkbox"/> Fresh Water <input checked="" type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/> |                            |                                                  |                         |                                             |

**19. Proposed Casing and Cement Program**

| Type | Hole Size | Casing Type | Casing Weight/ft | Setting Depth | Sacks of Cement | Estimated TOC |
|------|-----------|-------------|------------------|---------------|-----------------|---------------|
| Surf | 11        | 8.625       | 32               | 250           | 300             | 0             |
| Prod | 7.875     | 5.5         | 17               | 5400          | 900             | 0             |

**Casing/Cement Program: Additional Comments**

COG proposes to drill a 11" hole to 250' w/fr wtr mud system, wt 8.5, vis 28, set 8-5/8" casing & cement to surface. Drill a 7-7/8" hole to 5400' w/cut brine mud system, wt 9.1, vis 29-32. Test Yeso formation. Run 5-1/2" casing & cement to surface. Note: On production string, a caliper will be run, COG will attempt to circulate cement.

**Proposed Blowout Prevention Program**

| Type      | Working Pressure | Test Pressure | Manufacturer |
|-----------|------------------|---------------|--------------|
| DoubleRam | 2000             | 2000          |              |

|                                                                                                                                                                                                                                                                                                                                                                       |                                  |                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------|
| I hereby certify that the information given above is true and complete to the best of my knowledge and belief.<br>I further certify that the drilling pit will be constructed according to NMOCD guidelines <input checked="" type="checkbox"/> a general permit <input type="checkbox"/> , or an (attached) alternative OCD-approved plan <input type="checkbox"/> . | <b>OIL CONSERVATION DIVISION</b> |                            |
| Printed Name: Electronically filed by Diane Kuykendall                                                                                                                                                                                                                                                                                                                | Approved By: Jacqueta Reeves     |                            |
| Title: Regulatory Analyst                                                                                                                                                                                                                                                                                                                                             | Title: District Geologist        |                            |
| Email Address: dkuykendall@conchoresources.com                                                                                                                                                                                                                                                                                                                        | Approved Date: 1/19/2010         | Expiration Date: 1/19/2012 |
| Date: 1/7/2010                                                                                                                                                                                                                                                                                                                                                        | Phone: 432-683-7443              |                            |

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(505) 393-6161 Fax:(505) 393-0720

**District II**  
1301 W. Grand Ave., Artesia, NM 88210  
Phone:(505) 748-1283 Fax:(505) 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

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**Santa Fe, NM 87505**

Form C-102  
Permit 106351

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

|                               |                                       |                                       |
|-------------------------------|---------------------------------------|---------------------------------------|
| 1. API Number<br>30-015-37507 | 2. Pool Code<br>96210                 | 3. Pool Name<br>EMPIRE; GLORIETA-YESO |
| 4. Property Code<br>37882     | 5. Property Name<br>FIRECRACKER STATE | 6. Well No.<br>001                    |
| 7. OGRID No.<br>229137        | 8. Operator Name<br>COG OPERATING LLC | 9. Elevation<br>3615                  |

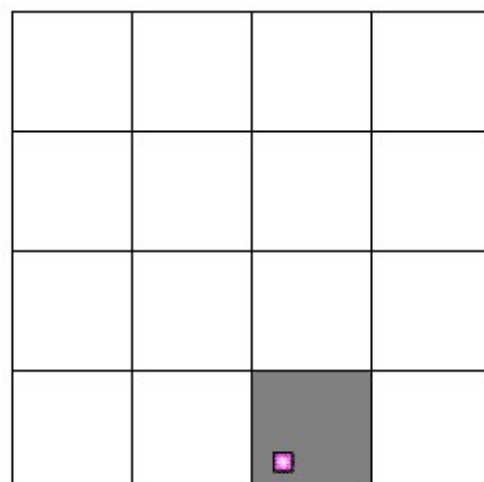
**10. Surface Location**

| UL - Lot | Section | Township | Range | Lot Idn | Feet From | N/S Line | Feet From | E/W Line | County |
|----------|---------|----------|-------|---------|-----------|----------|-----------|----------|--------|
| O        | 14      | 17S      | 28E   |         | 330       | S        | 2310      | E        | EDDY   |

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

| UL - Lot                     | Section | Township            | Range | Lot Idn                | Feet From | N/S Line      | Feet From | E/W Line | County |
|------------------------------|---------|---------------------|-------|------------------------|-----------|---------------|-----------|----------|--------|
| 12. Dedicated Acres<br>40.00 |         | 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**



**OPERATOR CERTIFICATION**

*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.*

E-Signed By: Diane Kuykendall  
Title: Regulatory Analyst  
Date: 1/7/2010

**SURVEYOR CERTIFICATION**

*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.*

Surveyed By: Ronald Eidson  
Date of Survey: 12/28/2009  
Certificate Number: 3239

## Permit Comments

**Operator:** COG OPERATING LLC , 229137

**Well:** FIRECRACKER STATE #001

**API:** 30-015-37507

| Created By | Comment                                                                                                             | Comment Date |
|------------|---------------------------------------------------------------------------------------------------------------------|--------------|
| rodan      | H2S concentrations of wells in this area from surface to TD are low enough that a contingency plan is not required. | 12/8/2009    |