

**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 154565

**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     |
|                                                                                             |                                     | 3. API Number<br>30-015-40658 |
| 4. Property Code<br>38913                                                                   | 5. Property Name<br>EMPIRE 23 STATE | 6. Well No.<br>008            |

**7. Surface Location**

| UL - Lot | Section | Township | Range | Lot Idn | Feet From | N/S Line | Feet From | E/W Line | County |
|----------|---------|----------|-------|---------|-----------|----------|-----------|----------|--------|
| D        | 23      | 17S      | 28E   | D       | 330       | N        | 405       | W        | 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>3691          |
| 14. Multiple<br>N            | 15. Proposed Depth<br>5500 | 16. Formation<br>Yeso Formation                  | 17. Contractor          | 18. Spud Date<br>11/30/2012                 |
| Depth to Ground water<br>110 |                            | Distance from nearest fresh water well<br>> 1000 |                         | Distance to nearest surface water<br>> 1000 |

**19. Proposed Casing and Cement Program**

| Type | Hole Size | Casing Type | Casing Weight/ft | Setting Depth | Sacks of Cement | Estimated TOC |
|------|-----------|-------------|------------------|---------------|-----------------|---------------|
| Surf | 17.5      | 13.375      | 48               | 250           | 300             | 0             |
| Int1 | 11        | 8.625       | 24               | 850           | 400             | 0             |
| Prod | 7.875     | 5.5         | 17               | 5500          | 900             | 0             |

**Casing/Cement Program: Additional Comments**

COG proposes to drill a 17-1/2" hole to 250' w/fr wtr mud system, wt 8.5, vis 28, set 13-3/8" casing & cement to surface. Drill an 11" hole to 850' w/fr mud system, wt 10, vis 30. Set 8-5/8" casing & cement to surface. Drill 7-7/8" hole to 5500' 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 NMOC 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>               |                                 |
|                                                                                                                                                                                                                                                                                                                                                                      | Approved By: Randy Dade                        |                                 |
|                                                                                                                                                                                                                                                                                                                                                                      | Title: District Supervisor                     |                                 |
|                                                                                                                                                                                                                                                                                                                                                                      | Approved Date: 9/11/2012                       | Expiration Date: 9/11/2014      |
|                                                                                                                                                                                                                                                                                                                                                                      | Email Address: dkuykendall@conchoresources.com |                                 |
| Date: 9/6/2012                                                                                                                                                                                                                                                                                                                                                       | Phone: 432-683-7443                            | Conditions of Approval Attached |

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**State of New Mexico**  
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**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form C-102  
August 1, 2011  
Permit 154565

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

|                               |                                       |                                       |
|-------------------------------|---------------------------------------|---------------------------------------|
| 1. API Number<br>30-015-40658 | 2. Pool Code<br>96210                 | 3. Pool Name<br>EMPIRE; GLORIETA-YESO |
| 4. Property Code<br>38913     | 5. Property Name<br>EMPIRE 23 STATE   | 6. Well No.<br>008                    |
| 7. OGRID No.<br>229137        | 8. Operator Name<br>COG OPERATING LLC | 9. Elevation<br>3691                  |

**10. Surface Location**

|               |               |                 |              |         |                  |               |                  |               |                |
|---------------|---------------|-----------------|--------------|---------|------------------|---------------|------------------|---------------|----------------|
| UL - Lot<br>D | Section<br>23 | Township<br>17S | Range<br>28E | Lot Idn | Feet From<br>330 | N/S Line<br>N | Feet From<br>405 | E/W Line<br>W | County<br>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: Production Reporting Mgr  
Date: 9/6/2012

**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: James E. Tompkins  
Date of Survey: 6/9/2012  
Certificate Number: 14729

## Permit Comments

**Operator:** COG OPERATING LLC , 229137

**Well:** EMPIRE 23 STATE #008

**API:** 30-015-40658

| Created By | Comment                                                                                                             | Comment Date |
|------------|---------------------------------------------------------------------------------------------------------------------|--------------|
| kholly1    | H2S concentrations of wells in this area from surface to TD are low enough that a contingency plan is not required. | 9/6/2012     |
| CSHAPARD   | Land p/S                                                                                                            | 9/10/2012    |

# Permit Conditions of Approval

**Operator:** COG OPERATING LLC , 229137

**Well:** EMPIRE 23 STATE #008

**API:** 30-015-40658

| 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 |