

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010RECEIVED  
FEB 07 2011  
HOBBS**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.****SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMLC029509A
2. Name of Operator COG OPERATING LLC		6. If Indian, Allottee or Tribe Name
3a. Address 550 WEST TEXAS AVE STE 100 MIDLAND, TX 79701		7. If Unit or CA/Agreement, Name and/or No.
3b. Phone No. (include area code) Ph: 432-685-4332		8. Well Name and No. MC FEDERAL 4
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 21 T17S R32E 2310FSL 330FWL		9. API Well No. 30-025-34933
		10. Field and Pool, or Exploratory MALJAMAR;YESO,WEST
		11. County or Parish, and State LEA COUNTY, NM

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

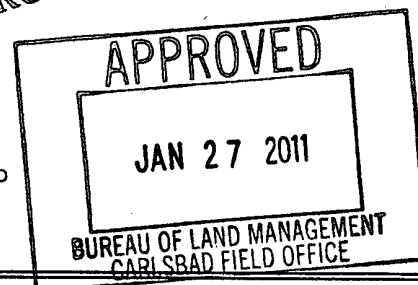
TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize
<input type="checkbox"/> Subsequent Report	<input checked="" type="checkbox"/> Deepen
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Fracture Treat
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Plug and Abandon
	<input type="checkbox"/> Plug Back
	<input type="checkbox"/> Production (Start/Resume)
	<input type="checkbox"/> Reclamation
	<input type="checkbox"/> Recomplete
	<input type="checkbox"/> Temporarily Abandon
	<input type="checkbox"/> Water Disposal
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Well Integrity
	<input type="checkbox"/> Other

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

COG Operating LLC respectfully requests to deepen to the Yeso as follows:

**MC FED #4 DEEPENING PROGRAM**1. Estimated Tops of Important Geologic Markers  
Yeso Group +/- 5350?2. Estimated Depths of Anticipated Fresh Water, Oil, and Gas  
Yeso Group +/- 5350?

This deepening originates in the Yeso and will finish at the base of the Yeso. The entire Yeso group is an oil and gas bearing interval.

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #101262 verified by the BLM Well Information System  
For COG OPERATING LLC, sent to the Hobbs

Name (Printed/Typed) KANICIA CASTILLO	Title PREPARER
Signature (Electronic Submission)	Date 01/25/2011

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

## **CONDITIONS OF APPROVAL**

**COG Operating LLC  
NMLC029509A  
MC Federal #4  
30-025-34933  
Section 21, T. 17 S., R 32 E., NMPM  
Lea County, New Mexico**

- 1. Surface disturbance beyond the existing pad must have prior approval.**
- 2. Closed loop system required.**
- 3. 3000 (3M) BOP to be used. All blowout preventer (BOP) and related equipment (BOPE) shall comply with reasonable well control requirements. A two ram system with a blind ram and a pipe ram designed for the size of the work string shall be adequate. Tapered work strings will require an additional pipe ram. The manifold shall comply with Onshore Oil and Gas Order #2 Attachment I (2M Diagrams of Choke Manifold Equipment). The accumulator system shall have an immediately available power source to close the rams and retain 200 psi above pre-charge. The pre-charge test shall follow requirements in Onshore Order #2.**
- 4. BOP to be tested to 1000 psi based on expected BHP**
- 5. Variance for stand-off of less than 0.422" is approved due to NMOCD classifying the formations in this area as the Yeso group - Pool 44500 (R-12899).**
- 6. Variance for not testing seal also approved based on NMOCD classification of formations in this area as the Yeso group - Pool 44500 (R-12899)**
- 7. Radial CBL to be run. Submit copy to BLM.**
- 8. Steel tanks to be used.**
- 9. Work to be completed in 90 days**
- 10. Subsequent sundry and completion report required when work is complete.**

**EGF 012711**

## MC FED #4 DEEPENING PROGRAM

### 1. Estimated Tops of Important Geologic Markers

Yeso Group +/- 5350'

### 2. Estimated Depths of Anticipated Fresh Water, Oil, and Gas

Yeso Group +/- 5350'

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

This deepening originates in the Yeso and will finish at the base of the Yeso. The entire Yeso group is an oil and gas bearing interval.

### 3. Casing Program

Hole Size	Interval	OD Casing	Weight	Grade**	Jt./Condition	Burst/collapse/tension
4-3/4"	5720' - 7100'	4"	11.3#	L-80 or P-110	ULT-FJ/New	3.98/4.09/3.21 (L80) 5.47/5.23/4.25 (P110)

\*\* Due to casing shortages, either L-80 or P-110 will be run. The exact grade is unknown at time of requesting permit.

**NOTE: COG OPERATING LLC REQUESTS A VARIANCE TO THE 0.422" STAND OFF RULE BETWEEN CASING AND WELLBORE.**

### 4. Cement Program

4" Liner: Class C, 120 sxs, yield 1.37. 200' minimum tie back to production casing.

**NOTE: COG OPERATING LLC REQUESTS A VARIANCE TO THE LINER TOP FLUID ENTRY OR PRESSURE TEST BECAUSE THE DEEPENED WELL WILL BE COMPLETED IN THE SAME ZONE AS THE CURRENT PERFS AND THE ENTIRE INTERVAL IS RECOGNIZED BY THE OCD AS ONE INTERVAL (YESO). AS PER ONSHORE ORDER NO. 2 SECT III: REQUIREMENTS, PART B. CASING AND CEMENTING REQUIREMENTS, SUBPART b. "NO TEST SHALL BE REQUIRED FOR LINERS THAT DO NOT INCORPORATE OR NEED A SEAL MECHANISM." COG BELIEVES WE MEET THE CRITERIA TO NOT BE REQUIRED TESTING THE LINER TOP BECAUSE THERE IS NO NEED FOR A SEAL MECHANISM.**

### 5. Minimum Specifications for Pressure Control

The BOP equipment will be a 3000 psi double ram type manually operated preventer. This equipment will be nipple up to a 7-1/16" 3K flange. The pipe rams are located above blind rams. There is no choke or kill manifold. The BOP is tested to 500 psi prior to drilling new formation. Access to the annulus will be through the valves on the 5-1/2" casing head. *See COA*

### 6. Types and Characteristics of the Proposed Mud System

This well will drilled from end of the existing 5-1/2" casing to TD with 2% KCl.

### 7. Auxillary Well Control and Monitoring Equipment

- A. A full opening drill pipe-stabbing valve with proper drill pipe connections will be on the rig floor at all times.

### 8. Logging, Testing, and Coring Program

- A. The electric logging program will consist of GR, Spectral Density, Dual Spaced Neutron, CSNG Log and will be run from TD to 5-1/2" production casing shoe.
- B. No drill stem tests.

- C. No conventional coring anticipated.
- D. Further testing procedures will be determined after the 4" liner has been cemented at TD, based on drill shows and log evaluation.

#### **9. Abnormal Conditions, Pressure, Temperatures, and Potential Hazards**

No abnormal pressures or temperatures are anticipated. The estimated bottomhole temperature at TD is 110 degrees and the estimated maximum bottomhole pressure is 2300 psig. The drilling starts in the Yeso and ends in the Yeso. The section of Yeso being drilled has very low permeability (less than 1 md).

#### **10. Anticipated Starting Date and Duration of Operations**

There will be no road or location work required as this is an existing well location. Once commenced, drilling operations should be finished in approximately 14 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made.

#### **11. Centralizer Program**

Fixed blade stabilizer subs will be utilized in the casing string to insure adequate isolation and seal throughout the wellbore. These stabilizer subs are positive fixed blade type. These subs will actually be screwed into the casing string. A diagram of the fixed blade stabilizer sub is located at the end of this program.

The standard location of the stabilizers will be the following:

##### *Shoe Location*

Guide shoe, 1 jt casing, stabilizer sub, float collar, 1 jt casing, stabilizer sub

##### *Perf Interval Location – between perf intervals*

Stabilizer sub, 1 jt casing, stabilizer sub

##### *Top of Liner Location*

DV tool, 1 jt casing, stabilizer sub, 1 jt casing, stabilizer sub

#### **12. Summary Drilling and Completion Program**

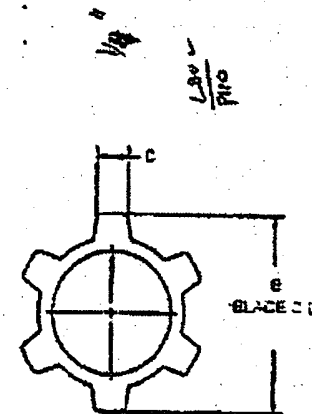
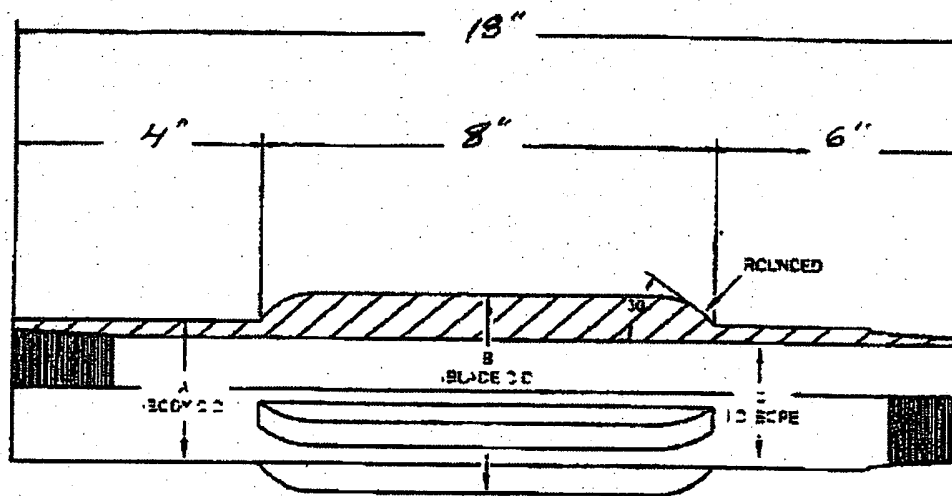
##### **Deepening Procedure**

1. MIRU rig.
2. Sqz upper Yeso w/ +/- 400 sx of Class C neat. Drill out squeeze.
3. PU 4-3/4" bit and drill 4-3/4" hole from 5982' to 7100'.
4. POOH w/ bit and drillstring.
5. RIH w/ logs and log from TD to 5350'.
6. RIH w/ 4", 11.3# casing. See section 11 for general centralizer program.
7. Cement casing from TD to 5720' w/ 120 sxs Class C cmt. Drop plug and open DV tool. Circ cmt off DV tool. Drop plug to close DV tool.
8. PU workstring and RIH and drill out DV tool. POOH and LD workstring.
9. RDMO rig.


### Completion Procedure

1. MIRU rig.
2. RIH/ w/ perforating guns and perforate Yeso from 6800 – 7000 w/ 2 spf, 30 holes.
3. Acidize w/ 2500 gals of 15% HCl. Frac zone w/ 179,800 # of sand. Set plug at 6750'.
4. RIH w/ perforating guns and perforate Yeso from 6500' – 6700'.
5. Acidize w/ 2500 gals of 15% HCl. Frac zone w/ 179,800 # of sand. Set plug at 6450'.
6. RIH w/ perforating guns and perforate Yeso from 6200' – 6400'.
7. Acidize w/ 2500 gals of 15% HCl. Frac zone w/ 179,800 # of sand.
8. RIH and drill out plug at 6450' and 6750'.
9. RIH and cut or back off 4" casing at 5720'. POOH w/ 4" casing. Leave 4" liner from 5720' to 7100' (TD).
10. RIH w/ tbg and locate end of tbg at 5670'.
11. RIH w/ rods and pump.
12. RDMO rig.

Centralizer Diagram



SIZE	A	B	C	D	E	F	G	DRIFT
4" x 3 1/4" 116"	4.050	4.750	3.347	3/4"				3.303"

 <b>RAY OIL TOOL CO.</b>	
CENTRALIZED INTERCASING	
CLIENT	CONCHO RES
WELL NAME & NO	
CASING	4" P115 116"
MATERIAL	4 3/4 x 3 1/4 x 18" Q115
PREPARED BY	10