



New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Joanna Prukop
Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division

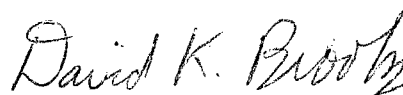


CERTIFICATION

TO WHOM IT MAY CONCERN:

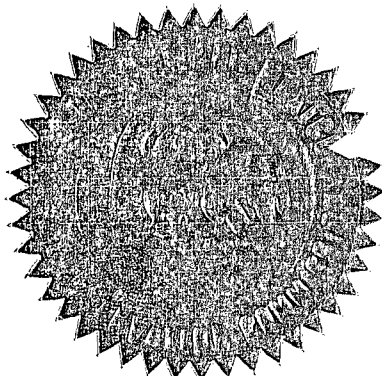
I, David K. Brooks, Assistant General Counsel of the Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department, do hereby certify that the attached are true and correct copies of the following documents from the online records found on the Oil Conservation Division's web page.

COG Operating, LLC permit to drill
the Blackhawk "11" Federal Com #1-H (API#30-015-36541)
First 9 pages of 45 total pages



David K. Brooks
Assistant General Counsel

August 18, 2009



STATE OF NEW MEXICO)

COUNTY OF SANTA FE)

The foregoing instrument was acknowledged before me this 18th day of August, 2009, by David K. Brooks, Assistant General Counsel of the Energy, Minerals and Natural Resources Department.



NOTARY PUBLIC

My Commission Expires:

3-24-2010

Before the Oil Conservation Division
Case 14323
Hearing August 20, 2009
Chesapeake Energy Corp.
Exhibit No. 



OCD-ARTESIA

H75-08-118
E1-08-1146Form 3160-3
(February 2005)

AUG - 6 2008

OCD-ARTESIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

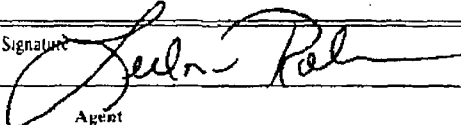
FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

1a. Type of work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM 400844 95630
1b. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator COG OPERATING, LLC 229137		7. If Unit or CA Agreement, Name and No
3a. Address 550 W. Texas Suite 1300 Midland, Texas 79701	3b. Phone No. (include area code) 432-683-7443	8. Lease Name and Well No. 37327 Blackhawk "11" Federal Com #1
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 430' FSL & 430' FWL At proposed prod zone 330' FSL & 330' FEL		9. API Well No. 30-015-36541
14. Distance in miles and direction from nearest town or post office*		10. Field and Pool, or Exploratory Wolfcamp- Crow Flats
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg unit line, if any) 330'		11. Sec, T R M or Blk and Survey or Area Section 11 T16S R28E
16. No. of acres in lease		12. County or Parish Eddy County
17. Spacing Unit dedicated to this well 160		13. State NM
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.		20. BLM/BIA Bond No. on file NMB 000215
19. Proposed Depth 11130' MD 6680' TVD		21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3570 GL
22. Approximate date work will start* 06/01/2008		23. Estimated duration 45 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form

- | | |
|---|--|
| 1. Well plat certified by a registered surveyor | 4. Bond to cover the operations unless covered by an existing bond on file (see item 20 above) |
| 2. A Drilling Plan | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office) | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature 	Name (Printed Typed) Lee Ann Rollins	Date 04/30/2008
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Approved by (Signature) /s/ James Stovall	Name (Printed Typed) /s/ James Stovall	Date AUG 04 2008
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Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE
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Application approval 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.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 USC Section 1001 and Title 43 USC Section 1212, make it a crime for any person knowingly and States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

NOTE: NEW PIT RULE

19-15-17 NMAC PART 17

A form C-144 must be approved before starting drilling operations.

*(Instructions on page 2)

ROSWELL CONTROLLED WATER BASIN

SEE ATTACHED FOR
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

RWD

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

C.O.G. Operating, LLC (229137)
550 W. Texas Avenue, Ste. 1300
Midland, TX 79701

The undersigned accepts all applicable terms, conditions, stipulations and restrictions covering operations conducted on the leased land or portion thereof, as described below:

Lease No – Surface Location: State Of New Mexico
Lease No – Bottom Hole Location: NM 103873

Well Name: Blackhawk "11" Federal #1

Legal Description of Land: SL: 430' FSL & 430' FWL, Unit M
BHL: 330' FSL & 330' FWL, Unit P
Sec 11, T16S, R28E
Eddy County, New Mexico

Formation(s) (if applicable): Wolfcamp – Crow Flats

Bond Coverage: \$25,000 statewide bond of C.O.G. Operating, LLC

BLM Bond File No: NMB 000215

Date

5-2-08



John Coffman
C.O.G. Operating, LLC

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED
OM B No. 1004-0137
Expires March 31, 2007**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
☐ Oil Well ☐ Gas Well ☐ Other

AUG - 6 2008

2. Name of Operator
COG Operating LLC

OCD-ARTESIA

3a. Address
550 W. Texas Ave., Suite 1300 Midland, TX 797013b. Phone No. (include area code)
432-685-4340

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

VARIOUS NM COUNTY LOCATIONS

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

9. API Well No.

10. Field and Pool, or Exploratory Area

11. County or Parish, State

Various NM Counties

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"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other Drill with
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Closed Loop
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> System

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 recompleat 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 recompleat 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.)

OK
B. Hunt
6/25/08COG Operating LLC respectfully requests permission to drill the attached list of
Eddy County wells with a closed loop system.14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Phyllis Edwards

Title Regulatory Analyst

Signature

Date

06/23/2008

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

SEPS

Date

6-27-08

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.

Office

CARLSBAD FIELD OFFICE

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.

(Instructions on page 2)

CLOSED LOOP SYSTEM - ATTACHMENT TO BLM SUNDRY DATED 6-23-08

<u>WELL NAME</u>	<u>CTY</u>	<u>LEASE #</u>	<u>API #</u>	<u>FOOTAGES</u>	<u>SECTION, TWN, RNG, UL</u>
Andromeda Federal #1H	Chaves	NM105887	3000527975	660 FNL, 330 FEL	Sec 14, T15S, R31E, Unit A
Andromeda Federal #2H	Chaves	NM105887	3000527976	1980 FNL, 850 FEL	Sec 14, T15S, R31E, Unit H
Andromeda Federal #3H	Chaves	NM105887	3000527977	1650 FSL, 330 FWL	Sec 14, T15S, R31E, Unit L
Gemini Federal #1H	Chaves	NM105886	3000527972	330 FSL, 330 FEL	Sec 12, T15S, R31E, Unit P
Hercules Federal Com #2H	Chaves	NM105885		660 FNL, 430 FWL	Sec 15, T15S, R31E, Unit D
Hercules Federal Com #3H	Chaves	NM105885		1980 FSL, 430 FWL	Sec 15, T15S, R31E, Unit L
Hercules Federal Com #4H	Chaves	NM105885		660 FSL, 330 FEL	Sec 15, T15S, R31E, Unit P
Orion Federal #1H	Chaves	NM105887	3000527978	1980 FNL, 330 FEL	Sec 13, T15S, R31E, Unit H
Orion Federal #2H	Chaves	NM105887	3000527994	1980 FSL, 330 FEL	Sec 13, T15S, R31E, Unit I
Orion Federal #3H	Chaves	NM105887	3000528001	660 FSL, 330 FEL	Sec 13, T15S, R31E, Unit P
Polaris Federal #1	Chaves	NM105885	3000527999	1980 FNL, 330 FWL	Sec 15, T15S, R31E, Unit E
Taurus Federal #1H	Chaves	NM105885	3000528000	330 FSL, 330 FWL	Sec 10, T15S, R31E, Unit M
✓ Blue Thunder 5 Fed #2	Eddy	LC069033	3001535550	1200 FNL, 1980 FWL	Sec 5, T19S, R31E, Unit C
✓ Blackhawk 11 Federal 1	Eddy	NM 45625		430 FSL, 430 FWL	Sec 11, T16S, R28E, Unit M
✓ Blitzen 35 Federal 1	Eddy	NM103876	3001536044	330 FNL, 990 FEL	Sec 35, T16S, R28E, Unit A
✓ Blitzen 35 Federal 2	Eddy	NM103876	3001536058	1800 FNL, 330 FEL	Sec 35, T16S, R28E, Unit H
✓ Caribou 19 Federal #1	Eddy	NM103872		430 FSL, 430 FEL	Sec 19, T16S, R28E, Unit P
✓ Caribou 19 Federal #2	Eddy	NM103872		1980 FSL, 790 FEL	Sec 19, T16S, R28E, Unit I
✓ Comet 22 Federal #1	Eddy	NM100844	3001535832	660 FSL, 330 FWL	Sec 22, T16S, R28E, Unit
✓ Comet 22 Federal #2	Eddy	NM100844	3001535818	1980 FSL, 330 FWL	Sec 22, T16S, R28E, Unit
✓ Comet 22 Federal #3	Eddy	NM100844	3001535821	1980 FNL, 330 FWL	Sec 22, T16S, R28E, Unit
✓ Comet 22 Federal #4	Eddy	NM100844	3001535716	330 FNL, 1650 FWL	Sec 22, T16S, R28E, Unit C
✓ Donner 30 Federal #1	Eddy	NM054856	3001535826	330 FSL, 330 FEL	Sec 30, T16S, R28E, Unit
✓ Donner 30 Federal #2	Eddy	NM054856	3001535819	1800 FSL, 330 FEL	Sec 30, T16S, R28E, Unit
✓ Donner 30 Federal #3	Eddy	NM054856	3001535807	1800 FNL, 1980 FEL	Sec 30, T16S, R28E, Unit
✓ Donner 30 Federal #4	Eddy	NM054856	3001535715	330 FNL, 330 FEL	Sec 30, T16S, R28E, Unit A
✓ High Lonesome 23 Fed Com 1H	Eddy	LC118710	3001535949	900 FSL, 330 FEL	Sec 23, T16S, R29E, Unit P
✓ High Lonesome 26 Fed Com 1H	Eddy	LC118710	3001535893	660 FNL, 1150 FEL	Sec 26, T16S, R29E, Unit A
✓ High Lonesome 26 Fed Com 2H	Eddy	LC118710	3501535894	2030 FNL, 530 FEL	Sec 26, T16S, R29E, Unit H
✓ Reindeer 21 Federal #3	Eddy	NM100844	77874	1980 FNL, 430 FWL	Sec 21, T16S, R28E, Unit E
✓ Reindeer 21 Federal #4	Eddy	NM100844		1980 FSL, 430 FWL	Sec 21, T16S, R28E, Unit L
Eagle Feather State #1	Lea	LC13430	3002538272	1650 FSL, 1600 FEL	Sec 16, T26S, R36E, Unit J
Eagle Feather State #2	Lea	LC13430	3002538885	660 FNL, 1630 FEL	Sec 21, T26S, R36E, Unit H

DISTRICT I

1625 N. French Dr., Hobbs, NM 88240

DISTRICT II

1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources DepartmentForm C-102
Revised October 12, 2005Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

AUG 15 2008

OCD-ARTESIA AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-	Pool Code 97102	Pool Name CROW FLATS: WOLFCAMP
Property Code	Property Name BLACKHAWK "11" FEDERAL COM	Well Number 1
OGRID No. 229137	Operator Name C.O.G. OPERATING L.L.C.	Elevation 3570'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	11	16 S	28 E		430	SOUTH	430	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	11	16 S	28 E		330	SOUTH	330	EAST	EDDY
Dedicated Acres 160	Joint or Infill	Consolidation Code	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 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. Signature: <i>Phyllis A. Edwards</i> Date: 8-14-08 Printed Name: Phyllis A. Edwards Regulatory Analyst	
		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. DECEMBER 16, 2007 Date Surveyed: <i>W. O. Jones</i> Signature: <i>W. O. Jones</i> Professional Surveyor Certificate No. Gary L. Jones 7977 BASIN SURVEYS	

ATTACHMENT TO FORM 3160-3
COG Operating LLC
Blackhawk "11" Federal Com # 1
Page 2 of 3

7. Cement Program

13 3/8" Surface Casing set at +/- 500', Circ to Surf with +/- 500 sx Class "C" w/ 2% CaCl₂, 1.35 yd.

9 5/8" Intermediate Casing set at +/- 2300', Circ. to Surf with +/- 700 sx 50/50 Poz "C", 2.45 yd. & 200 sx Class "C" w/ 2% CaCl₂, 1.35 yd.

5 1/2" Production Casing set at +/- 11130' MD, 6680' TVD, Cement with +/- 200 sx. 50/50/2 "C", 1.37 yd & +/- 650 sx Class "H", 1.18 yd. Est. TOC @ 6000'. *See COA*

8. Pressure Control Equipment:

After setting 13 3/8" casing and installing 3000 psi casing head, NU 13 5/8" 3000 psi annular BOP. Test annular BOP, casing and manifold with clear fluid to 1000 psi w/ rig pump.

After setting 9 5/8" casing and installing 3000 psi casing spool, NU 3000 psi double ram BOP and 3000 psi annular BOP. Test double ram BOP and manifold to 3000# with clear fluid and annular to 1500 psi using an independent tester, this equipment will be used continuously until TD is reached. Blind rams will be operationally checked on each trip out of hole. Pipe rams will be operationally checked each 24 hour period. These checks will be noted on daily tour sheets. Other accessories to the BOP equipment include a Kelly cock and floor safety valves, choke lines and choke manifold with 3000 psi WP rating.

9. Proposed Mud Circulating System

Interval	Mud Wt.	Visc.	FL	Type Mud System
0' - 500'	8.5	28	NC	Fresh water native mud w/ paper for seepage and sweeps. Lime for PH.
<i>500' - 1800'</i> <i>2300</i>	9.1	30	NC	Cut brine mud, lime for PH and paper for seepage and sweeps. <i>See COA</i>
<i>1800' - 5300'</i> <i>2300</i>	9.1	29	NC	Drill section with fresh water/cut brine circulating the reserve utilizing periodic sweeps of paper as needed for seepage control and solids removal.
<i>5300' - 11130'</i> <i>10856</i>	9.5	36	10	Drill horizontal section with XCD polymer / cut brine / starch.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the well site at all times.

10. Production Hole Drilling Summary:

Drill 8-3/4" hole thru Wolfcamp, run open hole logs. Spot 150 sx. "H" Kick off plug from +/- 6500' to +/- 6100'. Time drill and kick off 7-7/8" hole at +/- 6100', building curve over +/- 475' to horizontal at 6610' TVD. Drill horizontal section in an easterly direction for +/-4500' lateral. Run production casing and cement.

**ATTACHMENT TO FORM 3160-3
COG Operating LLC
Blackhawk "11" Federal # 1
Page 3 of 3**

11. Auxiliary Well Control and Monitoring Equipment

- A. Kelly cock will be kept in the drill string at all times.
- B. A full opening drill pipe-stabbing valve with proper drill pipe connections will be on the rig floor at all times.

12. Logging, Testing and Coring Program:

- A. The electric logging program will consist of GR-Dual Laterolog, Spectral Density, Dual Spaced Neutron, CSNG Log and will be ran from T.D. in Pilot hole to 9 5/8" casing shoe.
- B. The mud logging program will consist of lagged 10' samples from intermediate casing point to T.D. in vertical pilot hole and from Kick off point to TD in Horizontal hole.
- C. Drill Stem test is not anticipated.
- D. No conventional coring is anticipated.
- E. Further testing procedures will be determined after the 5 1/2" production casing has been cemented at TD based on drill shows and log evaluation.

13. Abnormal Conditions, Pressures, Temperatures and Potential Hazards:

No abnormal pressures or temperatures are anticipated. The estimated bottom hole at TD is 110 degrees and estimated maximum bottom hole pressure is 2838 psig. Low levels of Hydrogen sulfide have been monitored in producing wells in the area, so H2S may be present while drilling of the well. An H2S plan is attached to the Drilling Program. No major loss of circulation zones has been reported in offsetting wells.

14. Anticipated Starting Date

Drilling operations will commence approximately on July 1, 2008 with drilling and completion operations lasting approximately 45 days.

COG Operating LLC

Eddy County

S11T16S R28E

Blackhawk 11 Federal Com 1

Original Hole

Plan: Plan #1

Pathfinder Survey Report

21 February, 2008