Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Artesia
OCD

FORM APPROVED
OMB NO. 1004-0135
Expires. July 31, 2010

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.

5. Lease Serial No
NMNM103873

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No
CARIBOU 19 FEDERAL 1

2. Name of Operator
CONCHO OIL AND GAS
Contact: PHYLLIS EDWARDS
E-Mail. pedwards@conchoresources.com

9. API Well No.
30-015-36540

3a. Address
, TX 79701

3b. Phone No (include area code)
Ph: 432-685-4340

10. Field and Pool, or Exploratory
WOLFCAMP; DOG CANYON

4. Location of Well (*Footage, Sec., T., R., M., or Survey Description*)
Sec 19 T16S R28E 430FSL 430FEL

OCT 28 2008
OCD-ARTESIA

11. County or Parish, and State
EDDY COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

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 recomplete 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 recompletion 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 permission to change Field and Pool from Wolfcamp to Dog Canyon Abo;

To change proposed Casing & Cement Program;

Requests a variance to the 200' minimum tie back in order to set the pump as close to the formation as possible. The curve and horizontal are all located in the Abo Formation.

Attached is a revised For 3160-3 Drill Plan with changes reflected in shaded areas.

SEE ATTACHED FOR CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #63571 verified by the BLM Well Information System
For CONCHO OIL AND GAS, sent to the Carlsbad

Name (*Printed/Typed*) PHYLLIS EDWARDS — Title PERSON RESPONSIBLE

Signature (Electronic Submission) — Date 10/03/2008

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

APPROVED
2008
OCT 22

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 — 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.

PETROLEUM ENGINEER

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

Accepted for record - NMOCD

ENTERED 11-4-08

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 Department

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

AUG 15 2008
OCD-ARTESIA

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-36540	17970	DOG CANYON; ATOKA

Property Code	Property Name	Well Number
	CARIBOU "19" FEDERAL	1

OGRID No.	Operator Name	Elevation
229137	C.O.G. OPERATING L.L.C.	3558'

Surface Location

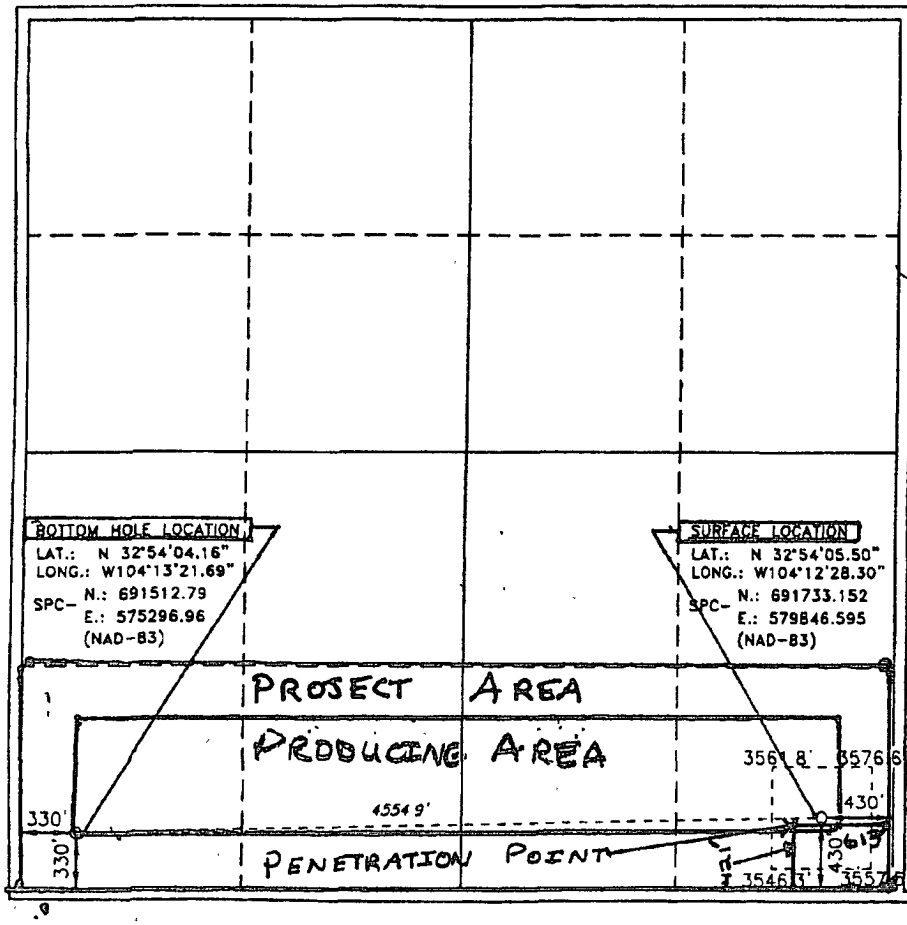
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	19	16 S	28 E		430	SOUTH	430	EAST	EDDY

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
M	19	16 S	28 E		330	SOUTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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.

Phyllis A. Edwards 8-14-08
Signature Date

Phyllis A. Edwards
Printed Name

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 supervison, and that the same is true and correct to the best of my belief.

NOVEMBER 25, 2007
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977

W.O. [illegible] 41

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

ATTACHMENT TO FORM 3160-3
COG Operating LLC
Caribou "19" Federal # 1
SL: 430' FSL & 430' FEL Unit P
BHL: 330' FSL & 330' FWL Unit M
Sec 19, T16S, R28E
Eddy County, NM

REVISED 9/18/2008

1. Proration Unit Spacing: 160 Acres

2. Ground Elevation: 3558'

3. Proposed Depths: Pilot hole TD = 6740', Horizontal TVD = 6520', Horizontal MD = 10870'

4. Estimated tops of geological markers:

Quaternary	Surface
Yates/Seven Rivers	650'
Queens	1130'
San Andres	1845'
Glorietta	3372'
Abo	5300'
Top Basal Abo	6490'

5. Possible mineral bearing formations:

Water Sand	Fresh Water	150'
San Andres	Oil / Gas	1845'
Glorietta	Oil / Gas	3372'
Abo	Oil / Gas	5300'
Top Basal Abo	Oil / Gas	6490'

6. Casing Program

Hole size	Interval	OD of Casing	Weight	Cond.	Collar	Grade
17-1/2"	0' - +/-500'	13-3/8"	48#	New	STC	H40
Collapse sf - 2.98, Burst sf – 2.33, Tension sf – 13.42						
12 1/4"	0' - 1800'	9-5/8"	40#	New	STC	J-55
Collapse sf - 2. 86, Burst sf – 1.42, Tension sf – 7.22						
8-3/4"	0' – +/-6000'MD	7"	26#	New	LTC	P-110
Collapse sf - 2. 18, Burst sf – 1.53, Tension sf – 4.37						
6-1/8"	5900' – +/-10870'MD	4-1/2"	11.6#	New	LTC	P-110
Collapse sf – 2.47, Burst sf – 1.64, Tension sf – 4.48						

See COA

7. Cement Program — See COA

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

See COA — 9 5/8" Intermediate Casing set at +/- 1800', Circ. to Surf with +/- 600 sx 35/65 Poz "C", 2.05 yd. & 200 sx Class "C" w/ 2% CaCl2, 1.35 yd.

7" Production Casing set at +/- 6000' MD, Cement with +/- 500 sx. 50/50/10 "C", 2.45 yd & +/- 200 sx Class "H", 1.18 yd., Est. TOC @ 200' minimum tie back into intermediate casing.

4 ½" Production Liner set from +/- 5900' to +/-10870' MD, 6520' TVD. Liner run with +/- 5 isolation Packers and Sliding sleeves in un-cemented Lateral.

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.
See COA 500' - 1800'	9.1	30	NC	Fresh Cut brine mud, lime for PH and paper for seepage and sweeps.
1800' - 6520'	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.
6520' - 10870'	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:

See COA — Drill 8-3/4" pilot hole thru Top Basal Abo to +/- 6740', run open hole logs. Spot 350 sx. "H" Kick off plug from +/- 6500' to +/-5900'. Dress off to 6000' and set 7" production casing. Drill 6-1/8" hole and kick off at +/- 6150', building curve over +/- 350' to horizontal at 6520' TVD. Drill horizontal section in a Westerly direction for +/-4500' lateral to TD at +/-10870' MD / 6480' TVD. Run 4-1/2" production liner in Open hole lateral and set isolation packers and liner top packer @ +/- 5900' MD.

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 run 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 4 ½" production liner packers have been installed 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 November 1, 2008 with drilling and completion operations lasting approximately 90 days.

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG Operating LLC
LEASE NO.:	LC-100844
WELL NAME & NO.:	3-Reindeer 21 Federal
SURFACE HOLE FOOTAGE:	1980' FNL & 430' FWL
BOTTOM HOLE FOOTAGE	1980' FNL & 330' FEL
LOCATION:	Section 21, T. 16 S., R 28 E., NMPM
COUNTY:	Eddy County, New Mexico

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

High cave/karst area.
Possible lost circulation in the Grayburg and San Andres formations.
High pressure gas bursts possible within the Wolfcamp formation – applies to the pilot hole.

1. The **13-3/8** inch surface casing shall be set **in the Tansill Formation at approximately 500 feet** and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

    b. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    c. If cement falls back, remedial cementing will be done prior to drilling out that string.

Fresh water mud to be used to setting depth for the 9-5/8" casing.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

   ☒ Cement to surface. If cement does not circulate see B.1.a-c above. **Intermediate casing is to be set at approximately 2200' within the San Andres formation as it is a more competent formation than the Queen and Grayburg formations. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst concerns.**

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface with the wait on cement (WOC) time for a primary cement job to include the lead cement slurry due to cave/karst concerns.

3. The minimum required fill of cement behind the 7 inch production casing is:

   ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

A plug is required at the bottom of the pilot hole to 50' above the Wolfcamp formation top – plug to be a minimum of 170' in length. Plug is to be tagged. Recommend that operator consider placing plug from bottom of hole to kick-off point, which will eliminate the need for the tag on the bottom plug.

4. The minimum required fill of cement behind the **4-1/2** inch production liner is:

   ☒ No cement required – using packer system. No seal test required as the liner is entirely within the Abo formation. Liner tie-back of 100' approved.

5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

   a. The tests shall be done by an independent service company.

b. The results of the test shall be reported to the appropriate BLM office.

c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

f. A variance to test the surface casing and BOP/BOPE **(entire system)** to the reduced pressure of **1000** psi with the rig pumps is approved.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

WWI 102208