

UNITED STATES **NM OIL CONSERVATION**  
DEPARTMENT OF THE INTERIOR **ARTESIA DISTRICT**  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0137  
Expires: January 31, 2018

**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*

JAN 31 2018

RECEIVED

5. Lease Serial No.  
NMLC028784A

6. If Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

7. If Unit or CA/Agreement, Name and/or No.  
NMNM88525X

8. Well Name and No.  
BURCH KEELY UNIT 47

9. API Well No.  
30-015-03082-00-S1

10. Field and Pool or Exploratory Area  
GRAYBURG

11. County or Parish, State  
EDDY COUNTY, NM

1. Type of Well  
 Oil Well  Gas Well  Other

2. Name of Operator  
COG OPERATING LLC  
Contact: ABIGAIL MONTGOMERY  
E-Mail: Abbym@bcmmandassociates.com

3a. Address  
600 W ILLINOIS AVENUE  
MIDLAND, TX 79701  
3b. Phone No. (include area code)  
Ph: 432-580-7161

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Sec 24 T17S R29E NWNE 660FNL 1980FEL

**12. CHECK THE 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"/> Hydraulic Fracturing	<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
	<input type="checkbox"/> Change Plans	<input checked="" type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> 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 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 must 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 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

- Set 7" CIBP @ 2410'. Circulate hole w/ MLF. Pressure test csg. Spot <sup>35 min.</sup> 25 sx cmt @ 2410-2310'. 2209
- Perf & Sqz 50 sx cmt @ ~~1002-902~~. WOC & Tag (11 3/4" Shoe & Yates) 1002 - 902 OK
- Perf & Sqz 100 sx cmt @ ~~400-135~~. WOC & Tag (T/Salt & 16" Shoe) 435 - 135
- Perf & Sqz Perf & Sqz 20 sx cmt @ 60'-Surface.
- Cut off well head, weld on Dry Hole Marker.

SC 1-31-18  
Accepted for record - NMOCD

RECLAMATION PROCEDURE  
ATTACHED

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

*Below ground level dry hole marker Required*

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

Electronic Submission #399113 verified by the BLM Well Information System  
For COG OPERATING LLC, sent to the Carlsbad  
Committed to AFMSS for processing by JAMES AMOS on 01/02/2018 (18JA0099SE)

Name (Printed/Typed) ABIGAIL MONTGOMERY	Title AGENT
Signature (Electronic Submission)	Date 12/28/2017

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

Approved By *James A. Amos* Title *Supv. AET* Date *1-25-18*

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*

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.

# COG Operating, LLC

**Lease & Well #**

3001503082  
 Spud date 11-28-45  
 Completion date 9-3-47  
 Start re-entry 6/17/1971  
 Re-entry completed 7-11-71  
 Elevation - 3609

**Burch Keely Unit 47**

**Re-Entry**

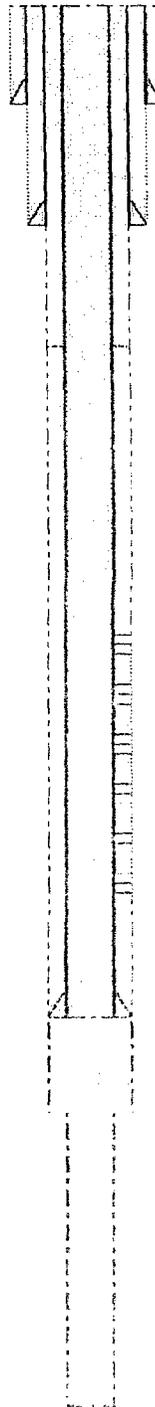
Sec 24 B T 17S R 29E, 660 FNL & 1980 FEL  
 EDDY CO., NM

Calc top of cmt @ 117' FS

Est TOC 492'

Sqz Lk @ 945' w/150 sx  
 4 Sqz perfs @ 1000' sqz w/ 775 sx

TOC @ 1060 by TS 4-10-64  
 4 Sqz perfs @ 1740' sqz w/ 500 sx  
 Initial TOC @ 1790' CBL



20" hole  
 16" 54# set @ 235', mudded up, no water flow

15" hole  
 11 3/4" 47# csg @ 952'. cmt w/400 sx  
 Mud log from 800' to 6653

**Casing cementing calculations**  
 11 3/4" 47# 15" Surface hole  
 Cement volume = 400 X 1.32 CF/SK = 528 cu. Ft. slurry  
 528 - 25% slurry loss for shoe joint & hole loss = 396 CF  
 396 CF X ann. Vol. of 2 1069 FT/CF = 835'  
 952 - 835 = 117' estimated (calculated) top of cement

7" 23, 26, 29# 11" hole  
 Top of cemen. 1790' CBL

7" sqz @ 945'  
 Cement Volume-150 sxX1.32 CF/SK=196 CF  
 196-10% slurry loss-178 CF  
 178 CF X annular vol of 2 5464 FT/CF=453'  
 945-453=492' estimated TOC

P 56 BC 9 MCG 8 42 BW 6-18-64  
 2458 - 2540' frac w/40,000 GW 40,000# sd

2645 - 2670' acidized w/3,000 gal 20%

2642 - 2929' acidized w/4,000 gal 20%

2586 - 23058' frac w/40,000 GW 40,000# sd

3110 - 3168' 3# holes frac 40,000 gal 40,000# sd

3196 - 3218' frac 40,000 GW 40,000# sd

IP P 56 BC 100 MCF 6 100 BLW 7-20-71  
 100# CF

6 3/4" hole  
 7" 23, 26, & 29# @ 3620' Cmt w/700 sx H 10X 1750' CBL

75 sx cmt plug 3620 - 3750' 6-17-71

75 sx cmt plug 4800 - 5200' 6-17-71

11" hole to 4508'  
 8 5/8" 32# csg set @ 4509' w/ mud 6-2-46  
 POH w/ 8 5/8" casing Filled hole w/ mud TA's 9-3-47

Abc  
 PB in 4000' 3rd 60 15-75 w/ 100 gal 2-1-46  
 DO to 5696 4-3-47  
 50' oil & 500' SW in hole 5-20-47

7BD @ 668e

8" hole to 686A

# COG Operating, LLC

**Lease & Well #**

3001503082

Spud date 11-28-45

Completion date 9-3-47

Start re-entry 6/17/1971

Re-entry completed 7-11-71

Elevation - 3609

**Burch Keely Unit 47**

**Re-Entry**

Sec 24 B T 17S R 29E, 660 FNL & 1980 FEL  
EDDY CO. NM

*T/Salt 385*

*B/Salt H 839*

*Yates 1078*

*Qu 1919*

*GB 2259*

*SA 2650*

Calc top of cmt @ 117' FS

Est TOC 492'

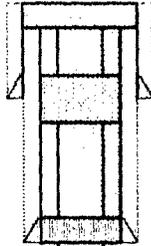
Sqz Lk @ 945' w/150 sx

4 Sqz perms @ 1000', sqz w/ 775 sx

TOC @ 1060' by TS, 4-10-54

4 Sqz perms @ 1740', sqz w/ 500 sx

Initial TOC @ 1790', CBL ✓



4. Perf & Sqz 20 sx cmt @ 60'-Surface.

20" hole

16" 54# set @ 235', mudded up, no water flow ✓

3. Perf & Sqz 100 sx cmt @ 400-135'. WOC & Tag. (T/Salt & 16" Shoe)

15" hole

11 3/4" 47# csg @ 952', cmt w/400 sx ✓

Mud log from 800' to 6853'

2. Perf & Sqz 50 sx cmt @ 1002-902'. WOC & Tag (11 3/4" Shoe & Yates)

Casing cementing calculations

11 3/4" 47# 15" Surface hole

Cement volume = 400 X 1.32 CF/SK = 528 cu Ft. slurry

528 25% slurry loss for shoe joint & hole loss = 396 CF

396 CF X ann Vol of 2 1089 FT/CF = 835'

952 - 835 = 117' estimated (calculated) top of cement.

7" 23,26,29 # 11" hole

Top of cement 1790', CBL

7" sqz @ 945'

Cement Volume - 150 sxs X 1.32 CF/SK = 198 CF

198 - 10% slurry loss - 178 CF

178 CF X annular vol of 2.5464 F/CF = 453'

945 - 453 = 492' estimated TOC

1. Set 7" CIBP @ 2410'. Circulate hole w/ MLF.

Pressure test csg. Spot 25 sx cmt @ 2410-2310'

P 56 BO, 9 MCG & 42 BW 6-18-84

2458 - 2540', frac w/40,000 GW, 40,000# sd

2645 - 2670' acidized w/3,000 gal 20%

2849 - 2929', acidized w/4,000 gal 20%

2989 - 23056' frac w/40,000 GW, 40,000# sd

3110 - 3169', 34 holes, frac 40,000 gal, 40,000# sd

3196 - 3218', frac 40,000 GW, 40,000# sd

IP P 56 BO, 100 MCF & 100 B.L.W 7-20-71

100# CP

8 3/4" hole

7" 23, 26, & 29# @ 3620' Cmt w/700 sx H TOC 1790' CBL ✓

11" hole to 4509'

6 5/8" 32# csg set @ 4509' w/ mud 5-2-46

POH w/ 8 5/8" casing. Filled hole with mud. Tag 9-3-47

Abc

PB to 6230' Shot 6215-75 w/150 q/s 2-13-47

DO to 6699 4-3-47

50' oil & 630' SW in hole 5-20-47

8" hole to 6666'

75 sx cmt plug 3620 - 3750' 6-17-71 ✓

75 sx cmt plug 4900 - 5200' 6-17-71 ✓

FED @ 6699'

*GI 3938 4063*

*Yeso 4153 Tubb 5552*

*Abc 6240*

BUREAU OF LAND MANAGEMENT  
Carlsbad Field Office  
620 East Greene Street  
Carlsbad, New Mexico 88220  
575-234-5972

Permanent Abandonment of Federal Wells  
Conditions of Approval (LPC Habitat)

Failure to comply with the following Conditions of Approval may result in a Notice of Incidents of Noncompliance (INC) in accordance with 43 CFR 3163.1.

1. Plugging operations shall commence within ninety (90) days from the approval date of this Notice of Intent to Abandon.

**If you are unable to plug the well by the 90<sup>th</sup> day provide this office, prior to the 90<sup>th</sup> day, with the reason for not meeting the deadline and a date when we can expect the well to be plugged. Failure to do so will result in enforcement action.**

**The rig used for the plugging procedure cannot be released and moved off without the prior approval of the authorized officer. Failure to do so may result in enforcement action.**

2. Notification: Contact the appropriate BLM office at least 24 hours prior to the commencing of any plugging operations. For wells in Chaves and Roosevelt County, call 575-627-0272; Eddy County, call 575-361-2822; Lea County, call 575-393-3612.

3. Blowout Preventers: A blowout preventer (BOP), as appropriate, shall be installed before commencing any plugging operation. The BOP must be installed and maintained as per API and manufacturer recommendations. The minimum BOP requirement is a 2M system for a well not deeper than 9,090 feet; a 3M system for a well not deeper than 13,636 feet; and a 5M system for a well not deeper than 22,727 feet.

4. Mud Requirement: Mud shall be placed between all plugs. Minimum consistency of plugging mud shall be obtained by mixing at the rate of 25 sacks (50 pounds each) of gel per 100 barrels of brine water. Minimum nine (9) pounds per gallon.

5. Cement Requirement: Sufficient cement shall be used to bring any required plug to the specified depth and length. Any given cement volumes on the proposed plugging procedure are merely estimates and are not final. Unless specific approval is received, no plug except the surface plug shall be less than 25 sacks of cement. Any plug that requires a tag will have a minimum WOC time of 4 hours.

In lieu of a cement plug across perforations in a cased hole (not for any other plugs), a bridge plug set within 50 feet to 100 feet above the perforations shall be capped with 25 sacks of cement. If a bailer is used to cap this plug, 35 feet of cement shall be sufficient. Before pumping or bailing cement on top of CIBP, tag will be required to verify depth. Based on depth, a tag of the cement may be deemed necessary.

Unless otherwise specified in the approved procedure, the cement plug shall consist of either Neat Class "C", for up to 7,500 feet of depth or Neat Class "H", for deeper than 7,500 feet plugs.

6. Below Ground Level Cap (Lesser Prairie-Chicken Habitat): All casing shall be cut-off at the base of the cellar or 3 feet below final restored ground level (whichever is deeper). The BLM is to be notified a minimum of 4 hours prior to the wellhead being cut off to verify that cement is to surface in the casing and all annuluses. Wellhead cut off shall commence within ten (10) calendar days of the well being plugged. If the cut off cannot be done by the 10<sup>th</sup> day, the BLM is to be contacted with justification to receive an extension for completing the cut off. Upon the plugging and subsequent abandonment of wells that are located in lesser prairie-chicken habitat, the casings shall be cut-off at the base of the cellar or 3 feet below final restored ground level (whichever is deeper). The well bore shall then be covered with a metal plate at least ¼ inch thick and welded in place. A weep hole shall be left in the plate and/or casing.

NMOCD also requires the operator to notify NMOCD when this type of dry hole marker is used. This can be done on the subsequent report of abandonment which is submitted to the BLM after the well is plugged. State that a below ground cap was installed as required in the COA's from the BLM.

7. Subsequent Plugging Reporting: Within 30 days after plugging work is completed, file one original and three copies of the Subsequent Report of Abandonment, Form 3160-5 to BLM. The report should give in detail the manner in which the plugging work was carried out, the extent (by depths) of cement plugs placed, and the size and location (by depths) of casing left in the well. Show date well was plugged.

8. Trash: All trash, junk and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

Following the submission and approval of the Subsequent Report of Abandonment, surface restoration will be required. See attached reclamation objectives.

Timing Limitation Stipulation/ Condition of Approval for Lesser Prairie-Chicken:

From March 1<sup>st</sup> through June 15<sup>th</sup> annually, abandonment activities will be allowed except between the hours from 3:00 am and 9:00 am. Normal vehicle use on existing roads will not be restricted



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Carlsbad Field Office  
620 E. Greene St.  
Carlsbad, New Mexico 88220-6292  
[www.blm.gov/nm](http://www.blm.gov/nm)



In Reply Refer To: 1310

### Reclamation Objectives and Procedures

**Reclamation Objective:** Oil and gas development is one of many uses of the public lands and resources. While development may have a short- or long-term effect on the land, successful reclamation can ensure the effect is not permanent. During the life of the development, all disturbed areas not needed for active support of production operations should undergo “interim” reclamation in order to minimize the environmental impacts of development on other resources and uses. At final abandonment, well locations, production facilities, and access roads must undergo “final” reclamation so that the character and productivity of the land and water are restored.

The long-term objective of final reclamation is to set the course for eventual ecosystem restoration, including the restoration of the natural vegetation community, hydrology, and wildlife habitats. In most cases this means returning the land to a condition approximating or equal to that which existed prior to the disturbance. The final goal of reclamation is to restore the character of the land and water to its pre-disturbance condition. The operator is generally not responsible for achieving full ecological restoration of the site. Instead, the operator must achieve the short-term stability, visual, hydrological, and productivity objectives of the surface management agency and take steps necessary to ensure that long-term objectives will be reached through natural processes.

To achieve these objectives, remove any and all contaminants, scrap/trash, equipment, pipelines and powerlines (**Contact service companies, allowing plenty of time to have the risers and power lines and poles removed prior to reclamation, don't wait till the last day and try to get them to remove infrastructure**). Strip and remove caliche, contour the location to blend with the surrounding landscape, re-distribute the native soils, provide erosion control as needed, rip and seed as specified in the original APD COA. This will apply to well pads, facilities, and access roads. Barricade access road at the starting point. If reserve pits have not reclaimed due to salts or other contaminants, submit a plan for approval, as to how you propose to provide adequate restoration of the pit area.

1. The Application for Permit to Drill or Reenter (APD, Form 3160-3), Surface Use Plan of Operations must include adequate measures for stabilization and reclamation of disturbed lands. Oil and Gas operators must plan for reclamation, both interim and final, up front in the APD process as per Onshore Oil and Gas Order No. 1.
2. For wells and/or access roads not having an approved plan, or an inadequate plan for surface reclamation (either interim or final reclamation), the operator must submit a proposal describing the procedures for reclamation. For interim reclamation, the appropriate time for submittal would be when filing the Well Completion or Recompletion Report and Log (Form 3160-4). For final reclamation, the appropriate time for submittal would be when filing the Notice of Intent, or the Subsequent Report of Abandonment, Sundry Notices and Reports on Wells (Form 3160-5). Interim reclamation is to be completed within 6 months of well completion, and final reclamation is to be completed within 6 months of well abandonment.
3. The operator must file a Subsequent Report Plug and Abandonment (Form 3160-5) following the plugging of a well.
4. Previous instruction had you waiting for a BLM specialist to inspect the location and provide you with reclamation requirements. If you have an approved Surface Use Plan of Operation and/or an approved Sundry Notice, you are free to proceed with reclamation as per approved APD. If you

have issues or concerns, contact a BLM specialist to assist you. It would be in your interest to have a BLM specialist look at the location and access road prior to the removal of reclamation equipment to ensure that it meets BLM objectives. Upon conclusion submit a Form 3160-5, Subsequent Report of Reclamation. This will prompt a specialist to inspect the location to verify work was completed as per approved plans.

5. The approved Subsequent Report of Reclamation will be your notice that the native soils, contour and seedbed have been reestablished. If the BLM objectives have not been met the operator will be notified and corrective actions may be required.
6. It is the responsibility of the operator to monitor these locations and/or access roads until such time as the operator feels that the BLM objective has been met. If after two growing seasons the location and/or access roads are not showing the potential for successful revegetation, additional actions may be needed. When you feel the BLM objectives have been met submit a Final Abandonment Notice (FAN), Form 3160-5, stating that all reclamation requirements have been achieved and the location and/or access road is ready for a final abandonment inspection.
7. At this time the BLM specialist will inspect the location and/or access road. If the native soils and contour have been restored, and the revegetation is successful, the FAN will be approved, releasing the operator of any further liability of the location and/or access road. If the location and/or access road have not achieved the objective, you will be notified as to additional work needed or additional time being needed to achieve the objective.

If there are any questions, please feel free to contact any of the following specialists:

Jim Amos  
Supervisory Petroleum Engineering Tech  
575-234-5909, 575-361-2648 (Cell)

Arthur Arias  
Environmental Protection Specialist  
575-234-6230

Henryetta Price  
Environmental Protection Specialist  
575-234-5951

Shelly Tucker  
Environmental Protection Specialist  
575-234-5979

Trishia Bad Bear, Hobbs Field Station  
Natural Resource Specialist  
575-393-3612