Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

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.
NMLC029415A

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.
PUCKETT 13 FEDERAL COM 38H

2. Name of Operator
COG OPERATING LLC
Contact: KELLY J HOLLY
E-Mail: kholly@concho.com

9. API Well No.
30-015-43074-00-X1

3a. Address
ONE CONCHO CENTER 600 W ILLINOIS AVENUE
MIDLAND, TX 79701

3b. Phone No. (include area code)
Ph: 432.685.4384

10. Field and Pool, or Exploratory
FREN

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 12 T17S R31E SESE 1180FSL 470FEL

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 to Original APD
	☐ 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 the production casing design from straight 5 1/2" 17# LTC P80 to tapered 7" 29# LTC L80 x 5 1/2" 17# LTC L80. The change is requested in order to allow installation of larger pumping equipment.

PLEASE SEE ATTACHMENT FOR DETAILS

NM OIL CONSERVATION
ARTESIA DISTRICT
MAY 11 2015
RECEIVED

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Accepted for record
NMOCD 5/11/15

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #300959 verified by the BLM Well Information System
For COG OPERATING LLC, sent to the Carlsbad
Committed to AFMSS for processing by JENNIFER SANCHEZ on 05/07/2015 (15JAS0348SE)

Name *(Printed/Typed)* KELLY J HOLLY — Title PERMITTING TECH

Signature (Electronic Submission) — Date 05/07/2015

APPROVED
MAY 7 2015
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

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. 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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Puckett 13 Federal Com #38H Sundry

COG Operating LLC requests permission to change production casing design from straight 5 ½" 17 # LTC L80 to tapered 7" 29# LTC L80 X 5 ½" 17# LTC L80. The change is requested in order to allow installation of larger pumping equipment. Details are as follows:

Old Production casing details:

Hole Size	Interval MD	OD Casing	Weight	Grade	Condition	Jt.	Brst/clps/ten
8 3/4"	0-5776'	5 1/2" 0-5776'	17#	L80	New	LT&C	3.01/2.45/1.75
7 7/8"	5776'-11385'	5½" 5776'-11385'	17#	L80	New	LT&C	3.01/2.45/1.75

Old Production casing cement details:

Hole Size	Interval MD	OD Casing	Sacks	Yield Cf/sk	Weight ppg	Mixing Wtr gps	Cement Recipe	500 psi Compressive hours
8 3/4"	0-5776'	5 1/2"	1500	2.01	12.5	11.4	35:65:6 C Poz Gel w/additives	22
7 7/8"	5776'-11385'	5 ½"	2000	1.37	14.0	14.4	50:50:2 C:PozGelw/5% salt+ 3 pps LCM+ 0.6% SMS+ 0.125 pps CF+1% FL-25+1% BA-58	10

New Production casing details:

Hole Size	Interval MD	OD Casing	Weight	Grade	Condition	Jt.	Brst/clps/ten
8 3/4"	0- 4949'	7"	29#	L80	New	LT&C	1.33/2.97/2.33
8 ¾"	4949'-5776'	5 ½"	17#	L80	New	LT&C	1.26/2.66/3.09
7 7/8"	5776'-11385'	5 ½"	17#	L80	New	LT&C	1.26/2.66/6.16

New Production casing cement details:

Single Stage:

Hole Size	Interval MD	OD Casing	Sacks	Yield Cf/sk	Weight ppg	Mixing Wtr gps	Cement Recipe	500 psi Compressive hours	Excess
8 3/4"	0-4949'	7"	550	2.01	12.5	11.4	35:65:6 C Poz Gel w/additives	25	45%
8 ¾"	4949'-5776'	5 ½"	200	1.37	14.0	6.4	50:50:2 C Poz Gel w/additives	12	31%
7 7/8"	5776'-11385'	5 ½"	950	1.37	14.0	6.4	50:50:2 C Poz Gel w/ additives	12	34%

Multi- Stage: DV Tool @ 3841'

See COA

Hole Size	Interval MD	OD Casing	Sacks	Yield Cf/sk	Weight ppg	Mixing Wtr gps	Cement Recipe	500 psi Compressive hours	Excess
8 3/4"	0-3413'	7"	350	2.01	12.5	11.4	35:65:6 C Poz Gel w/additives	25	33%
8 ¾"	3413'-3841'	7"	150	0.99	16.8	4.8	Class "C" w/0.3% R-3 + 1.5% CD-32	4	131%
8 ¾"	3841'-4949'	7"	150	2.01	12.5	11.4	35:65:6 C Poz Gel w/additives	25	81%
8 ¾"	4949'-5776'	5 ½"	200	1.37	14.0	6.4	50:50:2 C Oz Gel w/additives	12	31%
7 7/8"	5776'-11385'	5 ½"	900	1.37	14.0	6.4	50:50:2 C Poz Gel w/ additives	12	27%

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**COG Operating, LLC**
LEASE NO.:	**NMLC-029415A**
WELL NAME & NO.:	**Puckett 13 Federal Com 38H**
SURFACE HOLE FOOTAGE:	**1180' FSL & 0470' FEL**
BOTTOM HOLE FOOTAGE	**0330' FSL & 0330' FEL Sec. 13, T. 17 S., R 31 E.**
LOCATION:	**Section 12, T. 17 S., R 31 E., NMPM**
COUNTY:	**Eddy County, New Mexico**
API:	**30-015-43074**

The original COAs still stand with the following drilling modifications:

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

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

1. A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Grayburg** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

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

Wait on cement (WOC) for Water Basin:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. 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.

Possibility of water flows in the Artesia group and Salado.
Possibility of lost circulation in the Rustler, Artesia Group, and San Andres.

1. The **13-3/8** inch surface casing shall be set at approximately **790** feet **(in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt)** 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 surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. 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.

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

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing, which shall be set at approximately **2035** feet (base of the Tansill formation), is:

Option #1(Single Stage):

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Option #2:

DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

3. The minimum required fill of cement behind the **7 X 5-1/2** inch production casing is:

Option #1(Single Stage):

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

Option #2:

Operator has proposed DV tool at depth of 3841', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range.

a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Excess calculates to negative 21% - Additional cement will be required.**

4. 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 53.

2. **In the case where the only BOP installed is an annular preventer, it shall be tested to a minimum of 2000 psi (which may require upgrading to 3M or 5M annular).**

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

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

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

    c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

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

    e. 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.**

    f. 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. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

JAM 050715