Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carlsbad Field Office
OCD Artesia

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 proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM114348

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.
POPULUS FEDERAL 2H

2. Name of Operator
COG OPERATING LLC
Contact: MAYTE X REYES
E-Mail: mreyes1@concho.com

9. API Well No.
30-015-44102

3a. Address
2208 WEST MAIN STREET
ARTESIA, NM 88210

3b. Phone No. (include area code)
Ph: 575-748-6945

10. Field and Pool or Exploratory Area
WC-015 G-03 S252636M;BS

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 29 T25S R27E NWNE 115FNL 2310FEL

11. County or Parish, State
EDDY COUNTY, NM

12. CHECK THE 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	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original A PD
	☐ 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 must 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 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.

NM OIL CONSERVATION
ARTESIA DISTRICT
APR 17 2017
RECEIVED

COG Operating LLC, respectfully requests approval for the following changes to the original approved APD.

Operator request approval for following as a contingency plan to the original approved APD. If hydrocarbon gas is encountered in the Delaware, as was the case on the offset well Populus Federal 3H, then the below contingency plan would take effect.

Contingency Plan:
Operator requests approval for the following drilling changes to the original approved APD if contingency is necessary.
Original APD would apply until the well has reached a depth of 6,800?.
Operator will run 7? 29# HCP-110 LTC casing to 6800?.
LP 8 3/4" hole

SEE ATTACHED FOR CONDITIONS OF APPROVAL

DC 4-18-17
Accepted for record - NMOCD

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

Electronic Submission #372577 verified by the BLM Well Information System
For COG OPERATING LLC, sent to the Carlsbad
Committed to AFMSS for processing by DEBORAH MCKINNEY on 04/11/2017 ()

Name *(Printed/Typed)* MAYTE X REYES — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 04/10/2017

APPROVED
APR 12 2017
PETROLEUM ENGINEER
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Mustafa Hague — Title — Date 4/12/2017

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 CFO

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)

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

Additional data for EC transaction #372577 that would not fit on the form

32. Additional remarks, continued

1st Stage Cement
Lead: 310 sx Halliburton tuned light blend @ 11.5 ppg, 2.1 cf/sx
Tail: 200 sx Class H @ 16.4 ppg, 1.08 cf/sx
2nd Stage Cement
Lead: 265 sx Class C @ 12.7 ppg, 2.01 cf/sk
Tail: 100 sx Class C @ 14.8 ppg, 1.33 cf/sk
DVT/ECP @ 3350?
Operator will drill out and drill curve and lateral with 6-1/8? hole size to TD as per original well plan shows.
Operator will run a 4-1/2? 13.5# HCP-110 CDC HTQ liner from planned TD to 6,500?.
Operator will cement liner with 605 sx 50:50:2 H Blend @ 14.4 ppg, 1.24 cf/sk

U. S. Steel Tubular Products

4.500" 13.50lbs/ft (0.290" Wall) P110 HC USS-CDC HTQ®

MECHANICAL PROPERTIES	Pipe	USS-CDC HTQ®	
Minimum Yield Strength	110,000	--	psi
Maximum Yield Strength	140,000	--	psi
Minimum Tensile Strength	125,000	--	psi
DIMENSIONS	**Pipe**	**USS-CDC HTQ®**	
Outside Diameter	4.500	5.250	in.
Wall Thickness	0.290	--	in.
Inside Diameter	3.920	3.920	in.
Standard Drift	3.795	3.795	in.
Alternate Drift	--	--	in.
Coupling Length	--	8.875	in.
Nominal Linear Weight, T&C	13.50	--	lbs/ft
Plain End Weight	13.05	--	lbs/ft
SECTION AREA	**Pipe**	**USS-CDC HTQ®**	
Critical Area	3.836	3.836	sq. in.
Joint Efficiency	--	100.0	%
PERFORMANCE	**Pipe**	**USS-CDC HTQ®**	
Minimum Collapse Pressure	11,810	11,810	psi
External Pressure Leak Resistance	--	9,450	psi
Minimum Internal Yield Pressure	12,420	12,420	psi
Minimum Pipe Body Yield Strength	422,000	--	lbs
Joint Strength	--	442,600	lbs
Compression Rating	--	265,600	lbs
Reference Length	--	21,857	ft
Maximum Uniaxial Bend Rating	--	70.5	deg/100 ft
MAKE-UP DATA	**Pipe**	**USS-CDC HTQ®**	
Make-Up Loss	--	4.44	in.
Minimum Make-Up Torque	--	7,000	ft-lbs
Maximum Make-Up Torque	--	10,000	ft-lbs
Connection Yield Torque	--	12,400	ft-lbs
Verification of connection shoulder required. Typical shoulder range		N/A	ft-lbs

1. *Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional* design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness and Specified Minimum Yield Strength (SMYS).
2. Uniaxial bending rating shown is structural only, and equal to compression efficiency.
3. Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
4. Reference length is calculated by joint strength divided by nominal threaded and coupled weight with 1.5 safety factor.
5. Connection external pressure leak resistance has been verified to 80% API pipe body collapse pressure following the guidelines of API 5C5 Cal II.

U. S. Steel Tubular Products
10343 Sam Houston Park Dr. #120
Houston, TX 77064

1-877-893-9461
connections@uss.com
www.usstubular.com

PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG Operating LLC
LEASE NO.:	NM114348
WELL NAME & NO.:	Populus Federal – 2H
SURFACE HOLE FOOTAGE:	115'/FNL & 2310'/FEL
BOTTOM HOLE FOOTAGE	200'/FSL & 1980'/FEL
LOCATION:	Sec. 29, T. 25 S, R. 27 E
COUNTY:	Eddy County

All previous COAs still apply except for the following:

A. 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.

High Cave/Karst
Possible water flows in the Rustler and Delaware
Possible lost circulation in the Delaware.

A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE IS REQUIRED IN HIGH CAVE/KARST AREAS. THE CEMENT MUST BE IN A

SOLID SHEATH. THEREFORE, ONE INCH OPERATIONS ARE NOT SUFFICIENT TO PROTECT CAVE KARST RESOURCES. A CASING DESIGN THAT HAS A ONE INCH JOB PERFORMED DOES NOT COUNT AS A SOLID SHEATH. IF THE PRIMARY CEMENT JOB ON THE SURFACE CASING DOES NOT CIRCULATE, THEN THE NEXT TWO CASING STRINGS MUST BE CEMENTED TO SURFACE.

1. The minimum required fill of cement behind the **7** inch second intermediate casing is:

Operator has proposed DV tool at depth of 3350', 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. 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 or approved top of cement on the next stage.

b. Second stage above DV tool:

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

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

☒ Cement as proposed. Operator shall provide method of verification.

MHH 04122017