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

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other	5. Lease Serial No. NMNM113937
	6. If Indian, Allottee or Tribe Name
	7. If Unit or CA/Agreement, Name and/or No.
	8. Well Name and No. CRAIG FEDERAL COM 12H
2. Name of Operator COG OPERATING LLC Contact: MAYTE X REYES E-Mail: mreyes1@concho.com	9. API Well No. 30-015-44208
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 1 T26S R26E NWNW 675FNL 790FWL	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 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 ther... 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 ... 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.

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

Drilling changes attached.

NM OIL CONSERVATIO
ARTESIA DISTRICT
JUL 24 2017

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

RECEIVED

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

Electronic Submission #381021 verified by the BLM Well Information System
For COG OPERATING LLC, sent to the Carlsbad
Committed to AFMSS for processing by MUSTAFA HAQUE on 07/12/2017 ()

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

Signature (Electronic Submission) — Date 07/11/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

APPROVED

Approved By Mustafa Haque — Title PETROLEUM ENGINEER — Date 7-18-2017

JUL 18 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

BUREAU OF LAND MANAGEMENT
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)

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

7.11.17

Sundry Request - Craig Federal Com Federal #12H API 30-015-44208

The purpose of this Sundry Request is to:

(1) Request change in our Surface Casing setting depth from the approved depth of 155' to ~~400'~~ 450' to provide a better casing seat as we drill our Intermediate Hole Section. The Rustler in this area is very shallow (~130'). The original APD Application requested a Surface Casing set depth of 155' based on the Rustler top. The Top of Salt is ~449'. We feel that setting at 400' will get us our optimal surface casing depth without penetrating the Salt.

(2) Request change our approved Intermediate Casing Setting depth from 2050' to ~~2750'~~ 2350' to get a deeper casing seat for Delaware contingencies. We have the COG- Cottonwood 36 SWD #1 (API 30-015-29560) approximately ~~0.25~~ 0.5 miles NE of our location. This well is injecting into the Delaware from 3595' – 4550'.

(3) Request a 2 Stage Cementing Program for the Intermediate Casing with a 2nd Stage cancellation plug contingency. The 1st Stage of our cementing program is designed for cement to surface. However, we propose we be allowed to run a Stage Tool (DV Tool) at ~800'. If in fact, we do successfully get cement to surface, with our 1st Stage cement job, we intend on dropping a DV Tool cancellation plug and abort the 2nd Stage. We would also like to place an External Casing Packer (ECP) at 2030' (Lamar Limestone) which should be a near gauge hole for a good packer seat for the ECP. The purpose of the ECP is to facilitate a successful 2nd Stage job if required. The Stage Tool (DV Tool) will be set at 800' to allow ample separation of the DV Tool from the Tail Cement of the 1st Stage. We expect to get 1st Stage Lead Cement at least to this depth (800'). The ECP will be inflated upon bumping the plug on the 1st Stage and will be energized regardless if the 2nd Stage job is needed or is cancelled.

Casing Program

Surface Casing Program
Set Depth was 155' **Request ~~400'~~ 450'**
OD – No change 13-3/8" Weight – No Change 54.5 Grade – No Change
Condition – New – No Change Joint – STC - No Change
Burst/Collapse/Tension **2.29/6.17/23.58/23.58**

Intermediate Casing Program -
Set Depth was 2050' **Request ~~2750'~~ 2350'. (DV Tool at 800' ECP Tool at 2030')**
OD – No change 9-5/8" Weight – 40# No Change Grade – J-55 No Change
Condition – New – No Change Joint – LTC
Burst/Collapse/Tension **1.75/1.135/4.58/5.67**

Production Casing – No Change

Cementing Program

Surface Casing Cementing

Lead: Was None – No Change

Tail: Was : 250 sx Class C + 2% CaCl2 Yield 1.34 cf/sx 14.8 ppg
Tail: Now: 415 sx Class C + 2% CaCl2 Yield 1.34 cf/sx 14.8 ppg
Design Coverage Was: 0' – 155'
Design Coverage Now: 0' – 400'
100% Excess 17-1/2" x 13-3/8"

Intermediate Casing Cementing

1st Stage

Lead: Was 310 sx Class C Blend 35:65:6 Yield 2.0 cf/sx 12.5 ppg
Lead Now: 600 sx Class C Blend 35:65:6 Yield 2.0 cf/sx 12.5 ppg
Design Coverage:
0 – 400' 13-3/8" Csg X 9-5/8" Csg 5% Excess
400' – 2050' 12-1/4" OH X 9-5/8" Csg 100% Excess

Tail: Was : 250 sx Class C + 2% CaCl2 Yield 1.34 cf/sx 14.8 ppg
Tail: Now: 250 sx Class C + 2% CaCl2 Yield 1.34 cf/sx 14.8 ppg
Design Coverage: 2050' – 2750'
50% Excess 12-1/4" x 9-5/8"

2nd Stage (Contingency - will cancel, if we get cement to surface on 1st Stage)

Lead: 265 sx Class C Blend 35:65:6 Yield 2.0 cf/sx 12.5 ppg
Design Coverage: 0 – 800'
5% Excess 13-3/8" X 9-5/8" Casing X Casing Annulus (0' – 400')
200% Excess 12-1/4" OH X 9-5/8" Csg (400' – 800')

Tail: 150 sx Class C + 2% CaCl2 Yield 1.34 cf/sx 14.8 ppg
Design Coverage: 400' – 800'
100% Excess 12-1/4" x 9-5/8"

Production Casing Cementing Program – No Change

Attachments: None

PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG Operating LLC
LEASE NO.:	NMNM113937
WELL NAME & NO.:	12H – Craig Federal Com
SURFACE HOLE FOOTAGE:	675'/N & 790'/W
BOTTOM HOLE FOOTAGE	200'/N & 330'/W, 25
LOCATION:	Section 01 T.26 S., R.26 E., NMPM
COUNTY:	Eddy County, New Mexico

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.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

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

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.

High Cave Karst
Possibility of water flows in the Castile and Salado
Possibility of lost circulation in the Castile, Salado and Delaware

1. The **13-3/8** inch surface casing shall be set at approximately **450** feet and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**

    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 **2350** feet, is:

Operator has proposed DV tool at depth of 800', 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 to surface. If cement does not circulate, contact the appropriate BLM office.

MHH 07182017