

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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.***Carlsbad Field Office**
OCD Hobbs
HOBBS OCD

NMNM077090

6. If Indian, Allottee or Tribe Name

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

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

JUN 27 2018

8. Well Name and No.

MORTARBOARD FEDERAL COM 13H

2. Name of Operator

COG OPERATING LLC

Contact: MAYTE X REYES

E-Mail: mreyes1@concho.com

RECEIVED

9. API Well No.

30-025-44725

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

RED HILLS; BONE SPRING, N

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 1 T24S R34E NENW 210FNL 1980FWL

11. County or Parish, State

LEA COUNTY, NM

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 checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input 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 recompleat 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 recompleat 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.

We encountered heavy drilling fluid losses on this well at a MD of 1,037? and attempted to heal with 2 LCM squeezes which were not successful. We are requesting to change the cement job to two stage with a DV tool and ECP. More detail is given in the attached sundry and current wellbore diagram.

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

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

**Electronic Submission #425192 verified by the BLM Well Information System
For COG OPERATING LLC, sent to the Hobbs
Committed to AFMSS for processing by MUSTAFA HAQUE on 06/25/2018 ()**

Name (Printed/Typed) MAYTE X REYES

Title SENIOR REGULATORY ANALYST

Signature (Electronic Submission)

Date 06/25/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By MUSTAFA HAQUE
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.

Title **Petroleum Engineer**
Carlsbad Field Office
Office

Date 6/25/2018

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 ****MHB/CD 6/28/2018

COG Operating LLC, Mortarboard Federal Com 13H

COG, Operating, LLC respectfully requests the following changes to the approved drilling plan.

Due to drilling fluid losses encountered while drilling the 12-1/4" intermediate hole, it is proposed to run a DV tool with an ECP and perform a two stage cement job on the 9-5/8" intermediate casing string. Details are as follows:

Surface casing was set and cement circulated at 854'.

Intermediate casing point will remain the same at 5305'.

Both stages are designed to circulate cement across the entire respective intervals.

The DV tool will be set at +/- 909' (>50' below surface casing) with the ECP placed ~ 920' – 937'.

Casing String	TOC	% Excess
Intermediate – Stage 1	909'	80%
Intermediate – Stage 2	0'	662%

String Type	Lead/Tail	Stage Tool Depth	Bottom MD	Quantity (sx)	Yield	Density	Cu Ft	Excess %	Cement Type	Additives
Int Stg 1	Lead	909'	4750'	1200	1.97	12.7	2364	80	35:65:6 C blend	5% salt & 0.4% HR-800 & 1/8# PEF
	Tail	909'	5305'	250	1.33	14.8	333	80	Class C	None
Int Stg 2	Lead	909'	850'	250	1.97	12.7	493	662	35:65:6 C blend	5% salt & 0.4% HR-800
	Tail	909'	909'	150	1.35	14.8	200	662	Class C	2% CaCl ₂

Mortarboard Fed Com 13H
3rd Bone Spring Sand
Suspend Wellbore
API: 30-025-44725

Rig:	NorAm 23
Dir Drig:	Integrity
Cmt:	Halliburton
Mud:	Nova
WH:	AFS
Well Type:	DBS No PH 1.5M
AFE Days:	31
AFE M\$:	\$3,718
SHL Lat:	32.253109° N
SHL Long:	103.425393° W

210' FNL & 1980' FWL
S1,T24S, R34E
Lea County, NM

Spud: 06/17/2017, Rig Rel: 07/20/2018

KB: 2924.5', GL: 2894.0'

20" Conductor 151'

Bit Size: 17-1/2"

13-3/8" 54.5# J55 BTC @ 854'
w/ 375 sx C w/ 4% gel, 2% CaCl₂ &
1/8# PEF (13.5/1.74)
250 sx C w/ 2% CaCl₂ (14.8/1.36)
Circ 193 sx, AHS = 17.56", WO = 2%

13.0# FIT @ 874'

DV @ 909'

ECP: 920' - 937'

Baffle @ 982'

L Circ @ 1037'

T/ Salt @ 1137'

B/ Salt (Fletcher) @ 4906'

Lamar Lime @ 5285'

5305'

Bell Canyon @ 5330'

Cherry Canyon @ 6153'

Brushy Canyon @ 7569'

Bone Spring @ 8815'

U Avalon Shale @ 9060'

L Avalon Shale @ 9210'

Basal Avalon @ 9726'

1st Bone Spring Sand @ 9850'

2nd Bone Spring Sand @ 10373'

Base/ 2nd BSS @ 10840'

SJ: 11050' - 11065'

3rd Bone Spring Sand @ 11275'

9-5/8" 40# J55 BTC 0' - 4000'

9-5/8" 40# L80 BTC 4000' - 5305'

1) 1200 sx 35:65:6 Poz:C:Gel w/ 5% salt & 0.4% HR-800 & 1/8# PEF (12.7/1.97), TT: 4:00+
250 sx C neat (14.8 / 1.33), TT: 3:00+

Est. 14.00" Hole Size, 80% WO, BHST @ 5305' = 115° F

2) 250 sx 35:65:6 Poz:C:Gel w/ 5% salt & 0.4% HR-800 (12.7 / 1.97), TT: 3:00+
150 sx C w/ 2% CaCl₂ (14.8/1.35), TT: 2:30+

Est. 23.00" Hole Size, 662% WO, BHST @ 919' = 78° F

SHC w/ GR

11.0# FIT @ 5325'

Bit Size: 12-1/4"

Int Mud

Sat Brine

10.0 ppg

FV = 28

WL - NC

Formation Evaluation

Have Mud Loggers operational by 4000'

OH Logs: Quad Combo @ KOP - Schlumberger

MWD GR in curve and lateral

Bit Size: 8-3/4"

Prod Mud

Cut Brine

ICP - ~ 11,150'

8.6 - 9.0 ppg

FV 28 - 29

WL NC

Cut Brine

11,150' - 15,000'

9.0 - 9.1 ppg

FV 28 - 29

WL NC

Cut Brine / Poly-Oil

15,000' - TD

9.0 - 9.3 ppg

6% - 16% Oil

FV 30 - 31

WL NC

Conv Dir BHA w/ GR

NCS Floatation Collar @ 11050'

KOP @ 11150' SDI Gyro @ KOP

EOC @ 11882' MD

11627' TVD

87.87° Incl, 179.37° Az

SJ: 15400' - 15415'

EOL @ 18940' MD

11860' TVD

89.34° Incl, 179.43° Az

7,514' VS Lateral

Wolfcamp @ 11655'

TD: 18,940'

PBTD: 18,885'

5-1/2" 17# P110 CDC-HTQ @ 18930'

1210 sx Tuned Lite w/ 2# kolseal, 1.5# Calseal, 1/8# PEF, 0.5# Halad-9, & 1/4#
D-Air 5000 (10.3/3.54), TT: 7:00+

2155 sx Howco Neocem (13.2 / 1.47), TT: 4:30+

Est. 10.50" Hole, 91% WO, BHST = 161° F @ 11860'

Wet Shoe, NCS Floatation Collar

Strawn @ 12270'

MEE: 06/22/2018

PECOS DISTRICT DRILLING OPERATIONS CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG Operating
LEASE NO.:	NM77090
WELL NAME & NO.:	13H – Mortarboard Federal Com
SURFACE HOLE FOOTAGE:	210'N & 1980'W
BOTTOM HOLE FOOTAGE:	200'S & 1980'W, sec. 12
LOCATION:	Sec. 1, T. 24 S, R. 34 E
COUNTY:	Lea County

Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input checked="" type="radio"/> Conventional	<input type="radio"/> Multibowl	
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP

All previous COAs still apply except for the following:

A. CASING

1. The minimum required fill of cement behind the 9 5/8 inch second intermediate casing is:

Operator has proposed DV tool at depth of 909', 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 off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

MHH 06252018

GENERAL REQUIREMENTS

A. CASING

1. 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.
2. Wait on cement (WOC) for Potash Areas: 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 for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.
3. 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.
4. 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.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. 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.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.