

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
NMLC029519A**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No. MAS FEDERAL COM 2H
2. Name of Operator COG OPERATING LLC		9. API Well No. 30-025-44214-00-X1
3a. Address ONE CONCHO CENTER 600 W ILLINOIS AVENUE MIDLAND, TX 79701-4287		10. Field and Pool or Exploratory Area WILDCAT; WOLFCAMP
3b. Phone No. (include area code) Ph: 575-748-6945		11. County or Parish, State LEA COUNTY, NM
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 34 T20S R34E NENE 190FNL 660FEL 32.536324 N Lat, 103.541641 W Lon		

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	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	PD

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 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.

Intermediate 2
Drill 8-3/4" hole to 10,400'
Set 7" 29# HCP-110 BTC casing @ 10,400'
Cement to tie back minimum of 500' into intermediate casing. TOC=0'

Production
Drill 6-1/8" hole to TD?
Set 4-1/2" 13.5# HCP-110 CDC-HTQ liner from 9,900' to TD.
Cement to TOL.

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct. Electronic Submission #398695 verified by the BLM Well Information System For COG OPERATING LLC, sent to the Hobbs Committed to AFMSS for processing by MUSTAFA HAQUE on 12/28/2017 (18MH0037SE)	
Name (Printed/Typed) MAYTE X REYES	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 12/20/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>MUSTAFA HAQUE</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>01/09/2018</u>
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 Hobbs		

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)

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



Haque, Mustafa <mhaque@blm.gov>

FW: Mas Fed Com 2H INT and liner cement

2 messages

Carl Bird <CBird@concho.com>

Wed, Jan 3, 2018 at 2:37 PM

To: Mayte Reyes <MReyes1@concho.com>, Timothy Smith <TSmith@concho.com>, "Haque, Mustafa (mhaque@blm.gov)" <mhaque@blm.gov>

Cc: Carl Bird <CBird@concho.com>, Nasraddin Alarbi - Vendor <NAlarbi-Con@concho.com>, Nasraddin Alarbi <Nasraddin.Alarbi@halliburton.com>

Cement for 7": Lead: 1000 sacks NeoCem Class C (Composition details below), ~~11.00~~ ^{16.4} ppg, 2.80 cu ft/sx, 86% excess; surface to 9000'

Tail: 250 sacks Class C (additives below), 16.4 ppg, 1.08 cu ft/sx, 138% excess; 9000' to 10,400' TD

Cement for 4-1/2" liner: Lead: 300 sacks Class H/Poz/Gel (Composition details below), 14.4 ppg, 1.25 cu ft/sx, 35% excess; 9900' (TOL)-11,500'

Tail: 400 sacks Class H/Poz/Gel (Composition details below), 14.4 ppg, 1.25 cu ft/sx, 14% excess; 11,500'-TD

From: Nasraddin Alarbi [mailto:Nasraddin.Alarbi@halliburton.com]**Sent:** Wednesday, January 03, 2018 3:10 PM**To:** Carl Bird**Subject:** [External] Mas Fed Com 2H INT and liner cement

**** External email. Use caution. ****

Carl here is what we have planned for the Int and liner

Intermediate call sheet and labs attached. Loading instructions already sent.

11# NeoCem IL class C at 50% + 20 % POZ + 20 % SilicaLight + 10 % lightweight additive + 0.1 suspension agent + 5% strength enhancer + 0.15 antigelling agent + 2# LCM.

16.4# Halcem which is neat class C + 0.3 fluid loss control + 0.2 dispersant + 0.15 retarder.

For production liner

Both lead and tail are 14.4# VersaCem H which is (50% H: 50% POZ: 2% Gel) + 0.4 gas control+ 0.3 dispersant + 1% Salt + retarder. The tail has an extra 0.3% SuperCBL which is another gas control additive.

I attached the proposal too.

Thanks and best regards



4 1/2 13.50 lb (0.29) P110 HP

CONNECTIONS

	Pipe	CDC	CDC HTQ	
MECHANICAL PROPERTIES				
Minimum Yield Strength	125,000			psi
Maximum Yield Strength	140,000			psi
Minimum Tensile Strength	130,000			psi
DIMENSIONS				
Outside Diameter	4.500	5.000	5.250	in.
Wall Thickness	0.290			in.
Inside Diameter	3.920	3.920	3.920	in.
Drift - API	3.795	3.795	3.795	in.
Nominal Linear Weight, T&C	13.50			lbs/ft
Plain End Weight	13.05			lbs/ft
SECTION AREA				
Cross Sectional Area Critical Area	3.836	3.836	3.836	sq. in.
Joint Efficiency		97.3	97.3	%
PERFORMANCE				
Minimum Collapse Pressure	12,730	12,730	12,730	psi
External Pressure Leak Resistance		10,180	10,180	
Minimum Internal Yield Pressure	14,110	13,460	14,110	psi
Minimum Pipe Body Yield Strength	480,000			lbs
Joint Strength		467,000	467,000	lbs
Compression Rating		280,000	280,000	lbs
Reference Length		23,062	23,062	ft
Maximum Uniaxial Bend Rating		74.3	74.3	deg/100 ft
MAKE-UP DATA				
Make-Up Loss		4.44	4.44	in.
Minimum Make-Up Torque		7,500	8,000	ft-lbs
Maximum Make-Up Torque		9,000	11,000	ft-lbs
Connection Yield Torque		11,000	13,600	ft-lbs

Notes:

- 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 T&C weight or plain end with 1.5 safety factor
- 5) Connection external pressure resistance has been verified (API 5C5 Cal IV testing protocol).

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PECOS DISTRICT DRILLING OPERATIONS CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG OPERATING LLC.
LEASE NO.:	NMLC029519A
WELL NAME & NO.:	2H -MAS FEDERAL COM
SURFACE HOLE FOOTAGE:	190'/N & 660'/E
BOTTOM HOLE FOOTAGE:	200'/S & 660'/E
LOCATION:	Section 34 T.20 S., R.34E., NMP
COUNTY:	LEA County, New Mexico

Potash	<input type="radio"/> None	<input type="radio"/> Secretary	<input checked="" 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 checked="" type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP

All previous COAs still apply except for the following:

- The minimum required fill of cement behind the 7 inch production casing is:
 - Cement to surface. Operator shall provide method of verification.
- The minimum required fill of cement behind the 4 1/2 inch production liner is:
 - Cement should tie back at least 100 feet into previous casing string. Operator shall provide method of verification.

MHH 12282017

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.