

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

NMOCD  
Hobbs

FORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2014

**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

2. Name of Operator  
BC Operating, Inc. <160825>

3a. Address  
P.O. Box 50820  
Midland, Texas 79710

3b. Phone No. (include area code)  
432-684-9696

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Surface 240' FNL & 2180' FEL of UL B, Section 31, T-20S, R-34E  
At proposed prod. zone 240' FNL & 1980' FEL of UL B, Section 30, T-20S, R-34E

5. Lease Serial No.  
NMNM038467/NMNM086168 <BHL>

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.  
Topaz 30 Federal Com #3H <313044>

9. API Well No.  
30-025-42626

10. Field and Pool or Exploratory Area  
WC-025 G-08 S213304D; Bone Spring <97895>

11. County or Parish, State  
Lea, New Mexico

**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"/> Fracture Treat	<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 <u>Change drilling plan</u>
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	<u>add drilling of pilot hole</u>
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	<u>w/ 5M, and plug back</u>

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.)

Add pilot hole drilling with 5,000 lb BOPE system then plug back to KOP after logging.

See the attached revised drilling plan and BOP drawing for information.

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)  
Deane Durham

Title Sr. Drilling Engineer

Signature

Date 10/14/2015

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

Office

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 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)

FEB 15 2016



# BC Operating, Inc., Topaz 30 Federal Com #3H

## 1. Geologic Formations

TVD of target	11150	Pilot hole depth	12000
MD at TD:	16189	Deepest expected fresh water:	485

### Reef

Formation	Depth (TVD) from KB)	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Alluvium	Surface	Water	
Rustler	1500	Water	
Top of Salt	1800	Salt	
Tansill	3200		
Capitan	3575	Water	
Delaware Sands	5700	Oil/Gas	
Bone Spring Lime	8600	Oil/Gas	
First BS Sand	9700	Oil/Gas	
Second Carbonate	10000	Oil/Gas	
Second BS Sand	10250	Oil/Gas	
Third Carbonate	10650	Oil/Gas	
Third BS Sand	11000	Target Zone	
Wolfcamp	11350		
TD Pilot Hole	12000		

\*H2S, water flows, loss of circulation, abnormal pressures, etc.

## 2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
16"	0	1635	13.375"	54.5	J55	STC	1.58	1.01	6.29
12.25"	0	5490*	9.625"	40	N80	LTC	1.14	1.12	3.54
8.75"	0	16189	5.5"	17	P110 HC	SEMI BUTT	1.51	2.06	3.00
						BLM Minimum Safety Factor	1.125	1	1.6 Dry 1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

\*9 5/8" Intermediate casing will utilize a DV/ECP to be set in the Seven Rivers at approximately 3475' to better insure cement to surface in this string of casing.



**BC Operating, Inc., Topaz 30 Federal Com #3H**

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	Y
If yes, are the first three strings cemented to surface?	Y
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	Y
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	



**BC Operating, Inc., Topaz 30 Federal Com #3H**

**Cementing Program**

Casing	# Sks	Wt. lb/gal	Yld ft <sup>3</sup> /sack	H <sub>2</sub> O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	640	13.5	1.73	9.1	10	Lead: Class C + 4.0% Bentonite + 1% CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake
	260	14.8	1.35	6.3	8	Tail: Class C + 2% CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake
Inter. STG 1 *3475'	500	12.6	2.01	11	15	Lead: Class C 35/65 + 0.25 lb/sk Cello-Flake + 6% Bentonite + 6% salt (BWOW)
	200	14.8	1.33	6.3	11	Tail: Class C + 0.15% R-20
Inter. STG 2	680	12.6	2.01	11	15	Lead: Class C 35/65 + 0.25 lb/sk Cello-Flake + 6% Bentonite + 6% salt (BWOW)
SFC	290	14.8	1.33	6.3	11	Tail: Class C + 0.15% R-20
Prod.	1820	11.8	2.39	14	22	Lead: 50/50 Class H + 10% Bentonite + 0.4% R-20 + 0.25 lb/sk Cello-Flake + 3% salt (BWOW)
	700	14.2	2.57	11	25	Tail: 50/50 Class H + 100% CaCO <sub>3</sub> + 0.5% FL-16 + 0.1% CD-37 + 0.3% R-20 + 4% Bentonite + 0.5% TSM-1 + 0.2% AS-3 + 5% salt (BWOW)
						Prod. CMT Acid Soluble Blend

DV tool depth(s), if used, will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	*3475' and 0'	100% both stages
Production	0'	50%

Include Pilot Hole Cementing specs:

**Pilot hole depth 12000**

**KOP 10577**

Plug top	Plug Bottom	% Excess	No. Sacks	Wt. lb/gal	Yld ft <sup>3</sup> /sack	Water gal/sk	Slurry Description and Cement Type
10700	11050	20	150	15.6	1.18	5	Class H + 0.3% R-20
11240	11450	15	90	15.6	1.18	5	Class H + 0.3% R-20
11780	12000	15	90	15.6	1.18	5	Class H + 0.3% R-20



#### 4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
16"	20"	2M	Annular	x	50% of working pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other*		
12-1/4"	13-5/8"	2M	Annular	x	50% testing pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other*		
8-3/4"	13-5/8"	5M	Annular	X	50% testing pressure
			Blind Ram	X	5M
			Pipe Ram	X	
			Double Ram		
			Other*		

\*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or 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. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
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**BC Operating, Inc., Topaz 30 Federal Com #3H**

X	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.	
	N	Are anchors required by manufacturer?
N	<p>A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.</p> <ul style="list-style-type: none"> <li>• Provide description here</li> </ul> <p>See attached schematic.</p>	

**5. Mud Program**

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. shoe	FW Gel	8.5-9.2	28-34	N/C
Surf csg	Int shoe	Brine	9.6-10	28-34	N/C
Int shoe	TD	Cut Brine/EVO	8.4-8.9	28-34	<15

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
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**6. Logging and Testing Procedures**

Logging, Coring and Testing.	
X	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned		Interval
X	Resistivity	Int. shoe to KOP
X	Density	Int. shoe to KOP
X	CBL	Production casing
X	Mud log	Intermediate shoe to TD
	PEX	

## 7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	3900 psi
Abnormal Temperature	Yes/No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
	H2S is present
X	H2S Plan attached

## 8. Other facets of operation

Is this a walking operation? N If yes, describe.

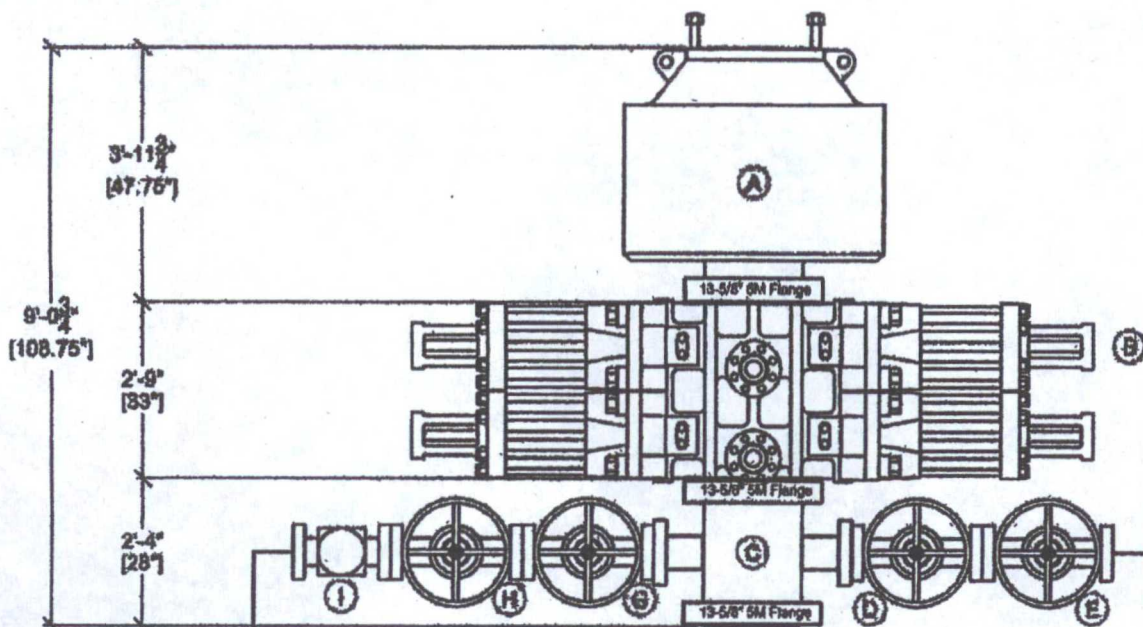
Will be pre-setting casing? N If yes, describe.

Attachments

   Directional Plan

X Other, describe - 13-5/8" 5M BOPE





*not  
remotely  
operated  
choke.*

ITEM	DESCRIPTION	MADE	SCOPE
A	HEAD/AD-BSF	TOOOL	13-5/8" 5M
B	HEAD/BSF-BSF	CONTROL ALONG	13-5/8" 5M
C	HEAD-BSF	STOP-STOP	13-5/8" 5M
D	STOP VALVE	CANISTER	4-1/8" 5M FLS Manual
E	STOP VALVE	CANISTER	4-1/8" 5M HCR
F			
G	FLS VALVE	CANISTER	2-1/8" 5M FLS Manual
H	FLS VALVE	CANISTER	2-1/8" 5M FLS Manual
I	STOP VALVE	CANISTER	2-1/8" 5M "R" Check
J	CHOKER LINE		4-1/16" Hardline
K	KILL LINE		2-1/16" Hardline
L			



## PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BC Operating, Inc.
LEASE NO.:	NMNM-86168
WELL NAME & NO.:	Topaz 30 Federal Com 3H
SURFACE HOLE FOOTAGE:	0240' FNL & 2180' FEL
BOTTOM HOLE FOOTAGE:	0240' FSL & 1980' FEL
LOCATION:	Section 30, T. 20 S., R 34 E., NMPM
COUNTY:	Lea County, New Mexico

**The Original COAs still stand with the following drilling modifications:**

Pilot hole is required to have a plug at the bottom of the hole. If two plugs are set, the BLM is to be contacted (575-393-3612) prior to tag of bottom plug, which must be a minimum of 200' in length. Operator can set one plug from bottom of pilot hole to kick-off point and save the WOC time for tagging the first plug.

**A. 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. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **5000 (5M) psi. 5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**



5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
- a. In potash areas, 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. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
  - 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.
  - g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

## **B. DRILLING MUD**

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

## **C. DRILL STEM TEST**

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



**D. 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 012516**