

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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.*

5. Lease Serial No.  
NMLC064200

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**

8. Well Name and No.  
RIVERBOAT 12 1 WOPA FEDERAL CO 1H

9. API Well No.  
30-015-45305

10. Field and Pool or Exploratory Area  
PURPLE SAGE;WOLFCAMP(GAS)

11. County or Parish, State  
EDDY COUNTY, NM

1. Type of Well  
 Oil Well  Gas Well  Other

2. Name of Operator  
CIMAREX ENERGY COMPANY  
Contact: FATIMA VASQUEZ  
E-Mail: fvasquez@cimarex.com

3a. Address  
600 N MARIENFELD ST SUITE 600  
MIDLAND, TX 79701

3b. Phone No. (include area code)  
Ph: 432-620-1933

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Sec 12 T24S R26E SESE 285FSL 449FEL  
32.225282 N Lat, 104.239429 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 Change to Original APD
	<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 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.

Cimarex respectfully submits a contingency plan for the 5.5" long string. Ryan Hempton has discussed this with Zota Stevens. Please see the attached.

**Carlsbad Field Office  
OCD Artesia**

RECEIVED

JAN 10 2019

DISTRICT II-ARTESIA O.C.D.

*See attached COA*

14. I hereby certify that the foregoing is true and correct.  
Electronic Submission #448510 verified by the BLM Well Information System For CIMAREX ENERGY COMPANY, sent to the Carlsbad

Name (Printed/Typed) FATIMA VASQUEZ Title REGULATORY ANALYST

Signature (Electronic Submission) Date 12/19/2018

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

Approved By /s/ Zota Stevens Title PETROLEUM ENGINEER Date 12/20/18

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 \*\***

*Ref 1-18-19.*

**1. Geological Formations**

TVD of target 8,843  
MD at TD 18,544

Pilot Hole TD N/A  
Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Salado	1030	N/A	
Castille	1660	N/A	
Bell Canyon	2000	Hydrocarbons	
Cherry Canyon	2874	Hydrocarbons	
Brushy Canyon	3792	Hydrocarbons	
Bone Spring	5372	Hydrocarbons	
1st Bone Spring SS	6386	Hydrocarbons	
2nd Bone Spring SS	6918	Hydrocarbons	
3rd Bone Spring Carb	7054	Hydrocarbons	
Top Harkey SS	7801	Hydrocarbons	
3rd Bone Spring SS	8306	Hydrocarbons	
Wolfcamp	8666	Hydrocarbons	
Wolfcamp Y SS	8752	Hydrocarbons	

**2. Casing Program**

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	425	425	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	3.76	8.80	15.78
12 1/4	0	1980	1980	9-5/8"	36.00	J-55	LT&C	1.92	3.35	6.36
8 3/4	0	8263	8263	5-1/2"	17.00	L-80	LT&C	1.44	1.77	2.25
8 3/4	8263	18544	8843	5-1/2"	17.00	L-80	BT&C	1.34	1.65	40.26
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

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

	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.	N
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?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	N
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 3rd string cement tied back 500' into previous casing?	N
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	N
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	N
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	N
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	N
Is AC Report included?	N

**3. 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
Surface	98	14.80	1.34	6.32	9.5	Lead: Class C + LCM
	195	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	375	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	116	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	591	10.50	3.45	22.18	N/A	Lead: NeoCem
	2198	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	32
Intermediate	0	50
Production	1780	16

**4. Pressure Control Equipment**

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
12 1/4	13 5/8	3M	Annular	X	50% of working pressure  3M
			Blind Ram		
			Pipe Ram	X	
			Double Ram	X	
			Other		
8 3/4	13 5/8	5M	Annular		50% of working pressure  5M
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other		

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.
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?

**5. Mud Program**

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 425'	FW Spud Mud	8.40 - 8.90	30-32	N/C
425' to 1980'	Brine Water	9.70 - 10.20	30-32	N/C
1980' to 18544'	Brine Water	9.70 - 10.20	30-32	N/C

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?
	Coring?

Additional Logs Planned	Interval

**7. Drilling Conditions**

Condition	
BH Pressure at deepest TVD	4690 psi
Abnormal Temperature	No

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.	
X	H2S is present
X	H2S plan is attached

**8. Other Facets of Operation**

**9. Wellhead**

A multi-bowl wellhead system will be utilized.

After running the 13-3/8" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi test. Annular will be tested to 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2.

The multi-bowl wellhead will be installed by vendor's representative. A copy of the installation instructions has been sent to the BLM field office.

The wellhead will be installed by a third-party welder while being monitored by the wellhead vendor representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

The casing string utilizing steel body pack-off will be tested to 70% of casing burst.

If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

**PECOS DISTRICT  
DRILLING CONDITIONS OF APPROVAL**

<b>OPERATOR'S NAME:</b>	<b>CIMAREX ENERGY COMPANY</b>
<b>LEASE NO.:</b>	<b>NMLC064200</b>
<b>WELL NAME &amp; NO.:</b>	<b>1H – RIVERBOAT 12/1 W0PA FED COM</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>285'/S &amp; 449'/E</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>330'/N &amp; 380'/E</b>
<b>LOCATION:</b>	<b>Section 12.,T24S., R.26E., NMP</b>
<b>COUNTY:</b>	<b>EDDY County, New Mexico</b>

COA

**All previous COAs still apply expect the following:**

H2S	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input type="radio"/> Low	<input checked="" type="radio"/> Medium	<input type="radio"/> High
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP

**A. CASING**

**CONTINGENCY PLAN**

**Operator shall notify BLM (575) 361-2822 if before commencing contingency plan.**

1. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

**ZS 122018**