

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

000 Artesia

FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010

**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 reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMNM06764
2. Name of Operator CIMAREX ENERGY COMPANY OF CO Contact: HOPE KNAULS E-Mail: hknaults@cimarex.com		6. If Indian, Allottee or Tribe Name
3a. Address 600 NORTH MARIENFELD STREET SUITE 600 MIDLAND, TX 79701	3b. Phone No. (include area code) Ph: 918.295.1799	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 24 T19S R30E NWSW 2130FSL 180FWL 32.383997 N Lat, 103.560064 W Lon		8. Well Name and No. HACKBERRY 23 FEDERAL COM 3H
		9. API Well No. 30-015-42078-00-X1
		10. Field and Pool, or Exploratory WILDCAT
		11. County or Parish, and State EDDY COUNTY, NM

**12. CHECK 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
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original APD
	<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 shall 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 shall be filed once testing has been completed. Final Abandonment Notices shall 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 ENERGY RESPECTFULLY REQUEST APPROVAL TO CHANGE THE 13-3/8" CEMENT. PLEASE SEE ATTACHMENT WITH REVISIONS

Engineer was given verbal approval for 2 stage job from Chis Walls on 11/10/14 @ 8:00 A.M.

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

Accepted for record  
NMOCD TCS

DEC 01 2014

RECEIVED

14. I hereby certify that the foregoing is true and correct. <b>Electronic Submission #278110 verified by the BLM Well Information System</b> <b>For CIMAREX ENERGY COMPANY OF CO, sent to the Carlsbad</b> <b>Committed to AFMSS for processing by CHRISTOPHER WALLS on 11/21/2014 (15CRW0032SE)</b>	
Name (Printed/Typed) HOPE KNAULS	Title REGULATORY TECHNICIAN
Signature (Electronic Submission)	Date 11/11/2014

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

Approved By CHRISTOPHER WALLS	Title PETROLEUM ENGINEER	Date 11/21/2014
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 Carlsbad

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.

**Current approved Sundry (approved 10/23/14).**

Casing Depth From (ft)	Casing Setting Depth(ft) MD	Casing Setting Depth(ft) TVD	Open Hole Size (inches)	Casing Size (inches)	Casing Weight (lb/ft)	Casing Grade	Thread	Condition	SI Surface Pressure & BHP (psig)	Mud Weight (ppg)	Collapse SF (1.125)	Burst SF (1.125)	Cumulative Air Weight (lbs)	Tension SF (1.8)
Surface														
0'	325'	325'	26	20	94	H-40	ST&C	New	146	8.4	3.66	10.5	30550	22.0
Intermediate 1 (Collapse is figured for a 1/3 internal evacuation equal to the proposed TVD of the next section)														
0'	1930'	1930'	17 1/2	13 3/8	54.5	J-55	ST&C	New	869	10	1.13	3.2	105185	4.9
Intermediate 2 (Collapse is figured for a 1/3 internal evacuation equal to the proposed TVD of the next section)														
0'	3600'	3600'	12 1/4	9 5/8	36	J-55	LT&C	New	1620	8.6	1.25	2.2	129600	4.4
Production														
0'	9108'	8580'	8 3/4	7	26	P-110	LT&C	New	1973.4	9	1.55	5.0	228126	3.0
Completion System														
8355'	19010'	8580'	6 1/8	4 1/2	11.60	P-110	BT&C	New	3861	9	1.89	2.8	5046	72.7
<b>Casing Design Criteria and Casing Loading Assumptions:</b>														
<b>Surface, Production, and Casing System:</b>														
Tension:	A 1.8 design factor without effects of buoyancy.													
Collapse:	A 1.125 design factor with full internal evacuation.													
Burst:	A 1.125 design with a surface pressure equal to the fracture gradient at setting depth less gas gradient to surface.													
<b>Intermediate 1 &amp; 2 Casing:</b>														
Tension:	A 1.8 design factor without effects of buoyancy.													
Collapse:	A 1.125 design factor with 1/3 internal evacuation equal to the proposed TVD of the next section.													
Burst:	A 1.125 design with a surface pressure equal to the fracture gradient at setting depth less gas gradient to surface.													

<b>Surface</b>	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Tail	520	1.34	14.8	685	Class C + LCM
TOC: 0' 40% Excess Centralizers per Onshore Order 2.III.B.1f					

<b>Intermediate 1</b>	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Lead	860	1.88	12.9	1613	35:65 (poz/C) + Salt + Bentonite + LCM + retarder
Tail	270	1.32	14.8	358	Class C + retarder + LCM
TOC: 0' 57% Excess					

<b>Intermediate 2</b>	Stage 1				
	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
	300	1.88	12.9	564	35:65 (poz/C) + Salt + Bentonite + LCM + retarder
	230	1.32	14.8	304	Class C + retarder + LCM
TOC: 2000' 50% Excess DV Tool/ ACP set between 2000' - 2100'					

	Stage 2				
	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
	350	1.88	12.9	658	35:65 (poz/C) + Salt + Bentonite + LCM + retarder
	50	1.32	14.8	66	Class C + retarder + LCM
TOC: 0' 0% Excess					

<b>Production</b>	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Lead	404	2.4	11.9	970	Fluid Loss + Dispersant + LCM + Retarder
Tail	198	1.24	14.5	246	
TOC: 2400' 25% Excess					

<b>Completion System</b>	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Tail	850	1.24	14.5	1054	50:50 (poz/H) + Bentonite + Salt + Fluid Loss + Dispersant + LCM + Retarder
Cement volumes will be adjusted depending on hole size.					
TOC: 8355' 5% Excess					

**Requested Changes to the "Intermediate #1", 13-3/8" cement as follows:**

**Stage 1**

- Lead: 1220 sx Class C @ 13.7 ppg, 1.62 yield
- Tail: 320 sx Class C @ 15.0 ppg, 1.29 yield

ACP/DV Tool at 370' KBTVD, approximately 30' below the 20" surface casing shoe and approximately 20' above the loss zone.

**Stage 2**

- Lead: 350 sx Class C @ 13.7 ppg, 1.62 yield