

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD 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		8. Well Name and No. CRESCENT HALE 10 FEDERAL 3H
2. Name of Operator CIMAREX ENERGY COMPANY OF CO Contact: PAULA BRUNSON E-Mail: pbrunson@cimarex.com		9. API Well No. 30-015-40784-00-X1
3a. Address 600 NORTH MARIENFELD STREET SUITE 600 MIDLAND, TX 79701	3b. Phone No. (include area code) Ph: 432-571-7848	10. Field and Pool, or Exploratory HACKBERRY
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 11 T19S R30E NESW 2250FSL 2025FWL		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 Change to Original A PD
	<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 shall 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 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.)

Due to potential losses in the Capitan Reef, Cimarex requests approval to change 8-5/8" casing depth to 4200' to ensure that all of the Capitan Reef is put behind 8-5/8" casing. Cimarex also requests approval to change permitted one-stage cement job on the 8-5/8" casing to a two-stage job as described below:

After drilling 10-5/8" hole to 4200' set 8-5/8" casing with DV-Tool and ECP at +/- 3500' or depending on the depth of losses between 200' of the current shoe (4200') and 50' of the previous shoe (2000') and cement as follows:

Stage 1: 200 sacks Class C, 1.33 cuft/sk, 14.8 ppg, 6.34 gps  
Stage 2: Lead 750 sacks Class C, 1.88 cuft/sk, 12.9 ppg, 9.61 gps; Tail 50 sacks Class, C 1.33 cf/sk, 14.8 ppg, 6.34 gps

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

**RECEIVED**  
MAR 13 2013  
NMOCD ARTESIA

**APPROVED**  
*[Signature]*  
MAR 11 2013  
BUREAU OF LAND MANAGEMENT  
CARLSBAD FIELD OFFICE

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

**Electronic Submission #201132 verified by the BLM Well Information System For CIMAREX ENERGY COMPANY OF CO, sent to the Carlsbad Committed to AFMSS for processing by KURT SIMMONS on 03/11/2013 (13KMS5386SE)**

Name (Printed/Typed) PAULA BRUNSON	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 03/08/2013

Accepted for record  
NMOCD

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>Fernandez</u> (BLM Approver Not Specified)	Title PETROLEUM ENGINEER	Date 03/11/2013
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.

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***  
**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

**Additional data for EC transaction #201132 that would not fit on the form**

**32. Additional remarks, continued**

Cimarex respectfully requests approval to change the production casing and cement plans as indicated below for the Crescent Hale 10 Federal 3H:

5-1/2" 17 lb/ft LTC P-110 Surface to approx 8000'  
4-1/2" 11.6 lb/ft BTC P-110 8000' to 15292'

400 sacks Class H @ 11.9 ppg, 2.46 cuft/sk,  
1500 sacks Class H @ 14.5 ppg, 1.23 cuft/sk,

## CONDITIONS OF APPROVAL

Sundry dated 3/8/2013

OPERATOR'S NAME:	CIMEREX ENERGY
LEASE NO.:	NM0560353      30-015-40784
WELL NAME & NO.:	3H-CRESCENT HALE 10 FEDERAL
SURFACE HOLE FOOTAGE:	2250'/S. & 2050'/W.
BOTTOM HOLE FOOTAGE:	1980'/S. & 0330'/W. (Sec. 10)
LOCATION:	Section 11, T. 1925 S., R. 30 E., NMPM
COUNTY:	Eddy County, New Mexico

**Original COA still applies with the following changes:**

### **R-111- Potash**

**Possible brine and water flows in the Artesia and Salado Groups.**

**Possible lost circulation in the Capitan Reef (if encountered) and the Artesia Group.**

1. The minimum required fill of cement behind the 11-3/4 inch intermediate or surface casing **which is to be set in the base of the Tansill at approximately 2000'** is:

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

**If 75% or greater lost circulation occurs while drilling the 10-5/8" hole for 8-5/8" intermediate casing, (Capitan Reef (if encountered)) notify BLM.**

2. The minimum required fill of cement behind the 8-8/5 inch intermediate casing **which is to at approximately 4200' as proposed** is:

**Operator has proposed DV tool at depth of 3500', 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.**

- a. First stage to DV tool:

- Cement to circulate. If cement does not circulate, 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. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

**Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every 2<sup>nd</sup> joint in curve and lateral doglegs may require greater spacing between centralizers (every 100').**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
  - Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.
4. 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.
5. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

**EGF 031113**