

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.*

5. Lease Serial No.  
NMLC063613

6. If Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

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

8. Well Name and No.  
CRESCENT HALE 1 FED COM 1H 1H

9. API Well No.  
30-015-37652

10. Field and Pool, or Exploratory  
BONE SPRING WILDCAT

11. County or Parish, and State  
EDDY COUNTY COUNTY, NM

1. Type of Well  
 Oil Well  Gas Well  Other

2. Name of Operator  
CIMAREX ENERGY COMPANY  
Contact: CRISTEN BURDELL  
E-Mail: cburdell@cimarex.com

3a. Address  
202 S. CHEYENNE AVE STE 1000  
TULSA, OK 74103

3b. Phone No. (include area code)  
Ph: 918-560-7038

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Sec 1 T19S R30E NWNW 330FNL 330FWL

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input 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 checked="" 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	
	<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.)

H2S gas analysis for facility as requested

Accepted for record  
NMOCD4119116  
AB

**NM OIL CONSERVATION**  
ARTESIA DISTRICT  
APR 18 2016  
RECEIVED

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

Electronic Submission #273972 verified by the BLM Well Information System  
For CIMAREX ENERGY COMPANY, sent to the Carlsbad  
Committed to AFMSS for processing by LINDA DENNISTON on 01/13/2015 ()

Name (Printed/Typed) CRISTEN BURDELL Title REGULATORY ANALYST

Signature (Electronic Submission) Date 10/27/2014

*Accepted For Record* THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By *James P. Cross* Title *SPE* Date *4-10-16*

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 enable the applicant to conduct operations thereon.

Office *140*

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.

**\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\***

Eddy

North Permian Basin Region  
 P.O. Box 740  
 Sundown, TX 79372-0740  
 (806) 229-8121  
 Lab Team Leader - Sheila Hernandez  
 (432) 495-7240

## Water Analysis Report by Baker Petrolite

Company:	CIMAREX ENERGY	Sales RDT:	33521
Region:	PERMIAN BASIN	Account Manager:	STEVE HOLLINGER (575) 910-9393
Area:	ARTESIA, NM	Sample #:	559286
Lease/Platform:	CRESCENT HALE 1 FED COM	Analysis ID #:	115284
Entity (or well #):	1 H	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	HEATER TREATER		

Summary		Analysis of Sample 559286 @ 75 F					
Sampling Date:	12/10/11	<b>Anions</b>	mg/l	meq/l	<b>Cations</b>	mg/l	meq/l
Analysis Date:	12/19/11	Chloride:	76082.0	2146.	Sodium:	39693.7	1735.28
Analyst:	JENNIFER HARDELL	Bicarbonate:	183.0	3.	Magnesium:	902.0	74.2
TDS (mg/l or g/m3):	125842.6	Carbonate:	0.0	0.	Calcium:	6560.0	327.35
Density (g/cm3, tonne/m3):	1.085	Sulfate:	962.0	20.03	Strontium:	211.0	4.82
Anion/Cation Ratio:	1	Phosphate:			Barium:	0.9	0.01
		Borate:			Iron:	53.0	1.92
Carbon Dioxide:	250 PPM	Silicate:			Potassium:	994.0	25.42
Oxygen:		Hydrogen Sulfide:		0	Aluminum:		
Comments:		pH at time of sampling:		6.4	Chromium:		
RESISTIVITY: 0.062 OHM-M @ 75° F		pH at time of analysis:			Copper:		
		pH used in Calculation:		6.4	Lead:		
					Manganese:	1.000	0.04
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> *2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press
		Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	0	0.13	3.72	-0.23	0.00	-0.24	0.00	0.03	7.75	0.76	0.31	0.52
100	0	0.22	6.51	-0.29	0.00	-0.23	0.00	0.01	3.41	0.58	0.31	0.65
120	0	0.32	9.30	-0.33	0.00	-0.19	0.00	0.01	2.17	0.41	0.31	0.79
140	0	0.41	12.39	-0.36	0.00	-0.13	0.00	0.01	3.10	0.27	0.31	0.94

- Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.
- Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.
- Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.